



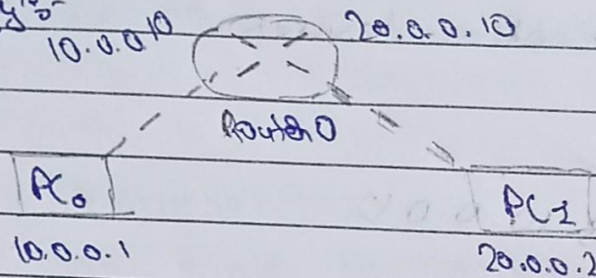
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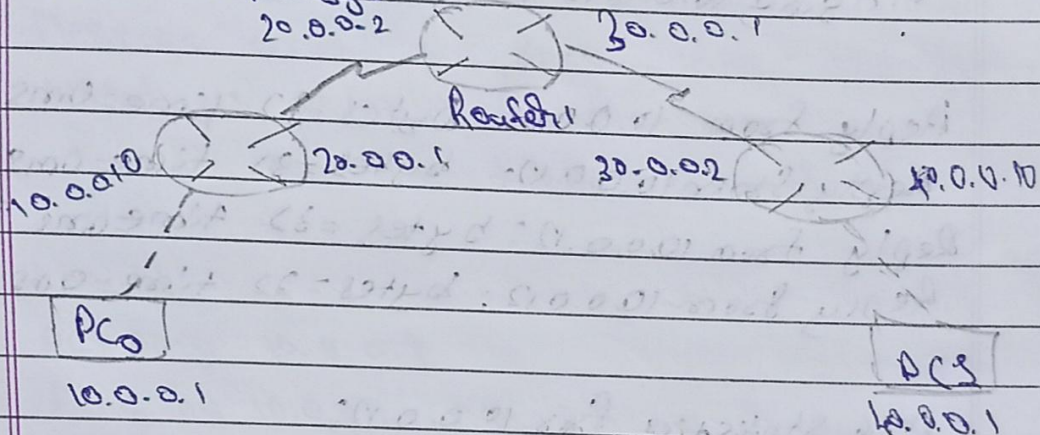
## Experiment - 2

Aim: Configuring IP address to Router in packet tracer; Explore the following messages ping Responses, Destination unreachable, Request timed out, Reply.

### Topology:-



### Final Topology:-



### Procedure:-

⇒ For 1-Router and 2-PC's

(i) Using a copper cross-over wire connect the two PC's to the router

(ii) Configure each PC with a specific IP address. Also enter gateway for both PC's





(iii) Open Router CLI and do the following:-

Router > enable

Router# config t

Router(config)# interface fastethernet 0/0

Router(config-if)# ip address 10.0.0.1 255.0.0.0

Router(config-if)# no shut

Router(config-if)# exit

Router(config)# interface fastethernet 1/0

Router(config-if)# ip address 20.0.0.1 255.0.0.0

Router(config-if)# no shut

Router(config-if)# exit

Router(config)# exit

Router# exit

(iv) After entering these commands the lights between PC and Router will become green

⇒ For 3-Router & 2-PC's

(i) Add 3 routers and 2 PC's to workspace and connect PC's with router by using copper crossover and connect Router's by using serial PC.

(ii) Each PC is configured by a specific IP address and IP address is given by clicking specific K after that enter gateway for both PC's

(iii) Follow the following command in CLI of 3-routers after setting IP address & gateway



## Router# config -

Rough (config) of interface Post ethernet 0/0

Router (Config-if) # ip address 10.0.0.10 255.0.0.0

Router (config-if) # no shut

Router (config-1) # exit

Router (config)# interface serial 2/0

Router Config - if # ip address 20.0.0.1 255.0.0.0

Router (config-if) # no shut

Router (config-if)# exit

Router (config) # exit

Router #2

- (10) Now for routers follow the same above commands with ip address of 200.0.2.200 & 240 and 20.0.0.1 for s0/0.

- (v) Now for routers follow same commands with ip address of 30.0.0.1 for ge 3/0 and 30.0.0.10 for fast ethernet 0/0

- (vi) After entering all these commands all the lights are turned green.

- (vii) Teaching 'router' of all the networks:-

Round 0:- if route 20.0.0.0 ~~255.0.0.0~~ 20.0.0.2  
if route 20.0.0.0 255.0.0.0 20.0.0.2

Router 3 :- ip route 10.0.0.0 255.0.0.0 20.0.0.1

```
ip route 40.0.0.0 255.0.0.0 20.0.0.2
```

Router 2 :- Ip route 10.0.0.0 255.0.0.0 30.0.0.1

ip route 20.0.0.0 255.0.0.0 30.0.0.1



(iii) Now Ping between any two PCs

Observation:-

=> For Single Router:-

Learning Outcome:-

We used router to set a connection between two end devices at first it shows "Request timed out". Later pinging again shows the following result

Result:-

Ping 20.0.0.2

Pinging 20.0.0.2 with 32 bytes of data

Reply from 20.0.0.1 bytes=32 time=0ms TTL=127

Reply from 20.0.0.2 bytes=32 time=0ms TTL=127

Reply from 20.0.0.2 bytes=32 time=0ms TTL=127

Reply from 20.0.0.2 bytes=32 time=0ms TTL=127

Ping Statistics for 20.0.0.2:

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

Approximate round trip time in milli-seconds.

Minimum=0ms, Maximum=0ms, Average=0ms.

=> For three routers:-

Outcome:-

- (i) Initially we get Request timed out then later we get the result.





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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=5ms TTL=125

Reply from 10.0.0.1: bytes=32 Time=11ms TTL=125

Ping statistics for 10.0.0.1

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

Approximate round trip time in milliseconds

Minimum = 5ms, Maximum = 11ms Average = 7ms

8/12/22