

Computer Networks: Lab Record

Week 3

Experiment 3: Routers Configuration and Messages

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

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Date: Page: 17

16/10/24 LAB No-3
2 ROUTERS

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

TOPOLOGY:

```
graph LR
    R1[Router-PT Router 1] --- S1[30.0.0.1 Ser0]
    R2[Router-PT Router 2] --- S2[30.0.0.2 Ser0]
    S1 --- S2
    R1 --- F1[10.0.0.1 Fa0/0]
    F1 --- PC1[PC-PT 10.0.0.10]
    R2 --- F2[20.0.0.1 Fa0/0]
    F2 --- PC2[PC-PT 20.0.0.10]
    PC1 --- DG1[Def Gateway 10.0.0.1]
    PC2 --- DG2[Def Gateway 20.0.0.1]
```

PROCEDURE:

- 1.] Add two PC's and two generic Routers
- 2.] Configure end devices 10.0.0.10 & 20.0.0.10 and define gateways
- 3.] Connect PC to Router using copper cross over
Connect the routers to each other using Serial DCE
- 4.] Configure the routers:
Click on Router → CLI
- Configure to end devices similar to last experiment

- connecting the router:

Commands:

Router > enable

Router # config terminal

Router(config) # interface serial 2/0

Router(config-if) # ip address 30.0.0.1

Router(config-if) # no shut

5.] give appropriate naming

6.] ping the device 20.0.0.1 from 10.0.0.1

OBSERVATIONS:

1.] The connections were done properly and green lights were displayed

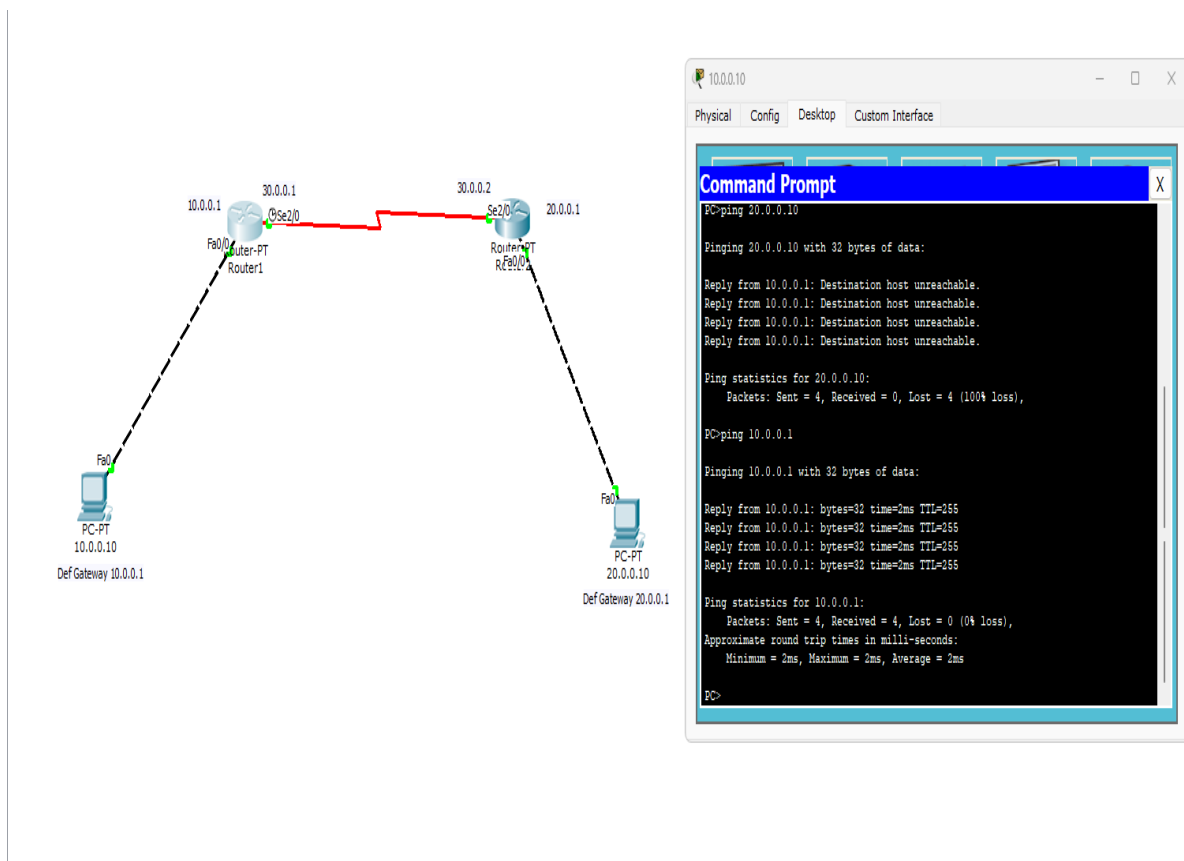
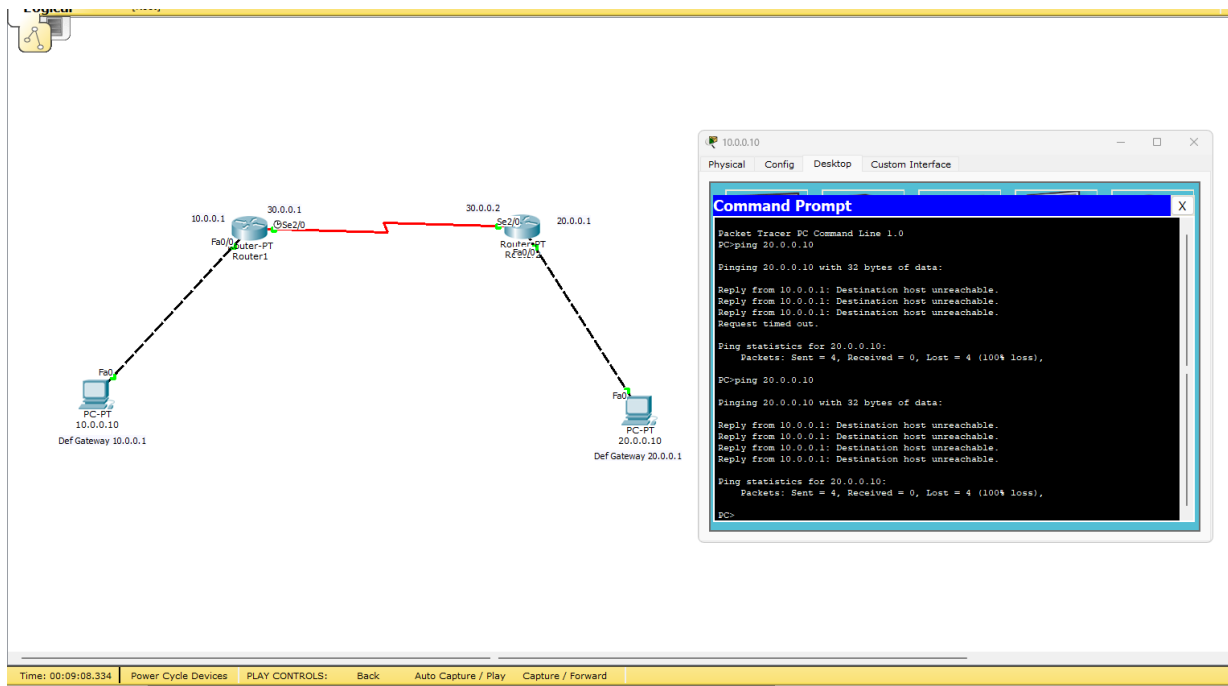
2.] But when the device 10.0.0.10 pinged 20.0.0.10, the output showed that the host was unreachable

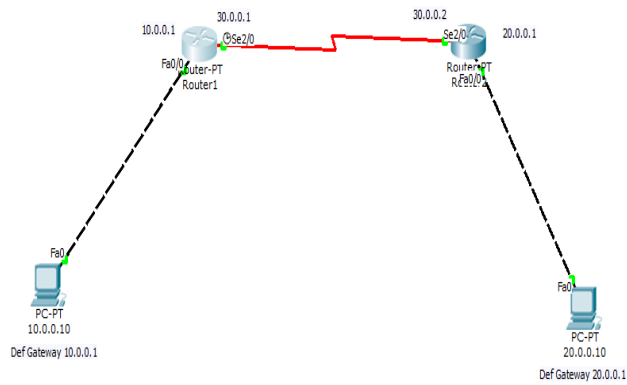
3.] Since the networks are not direct neighbours / directly connected, the data sent was failed (Not)

4.] Pingging the same networks was a success since they are directly connected, pingging 30.0.0.1 from 10.0.0.10 was a success

23/10

Screenshots:





```
Router1
Physical Config CLI
IOS Command Line Interface

Router>enable
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 not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    30.0.0.0/8 is directly connected, Serial2/0
Router#
```