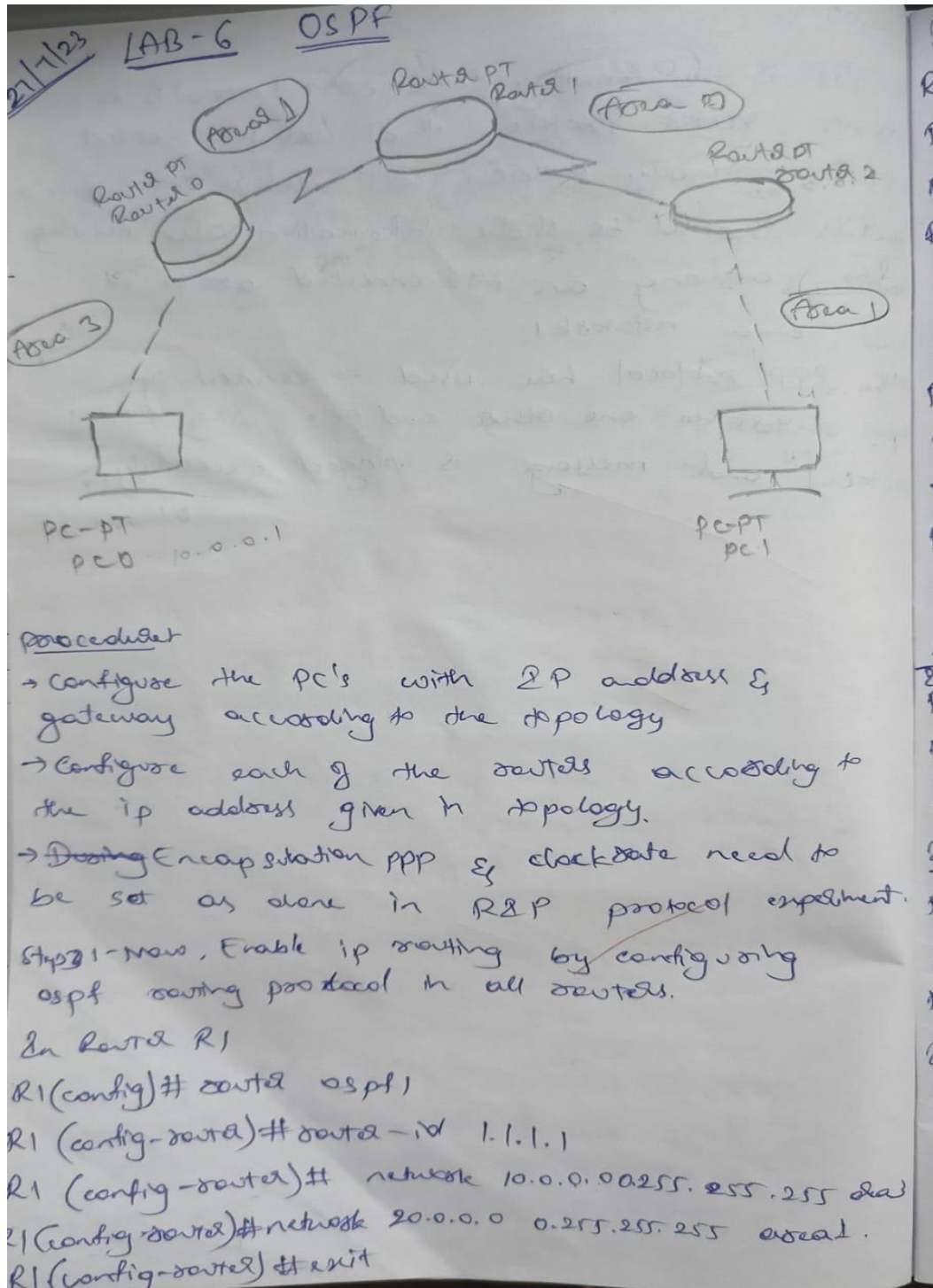


LAB 7

Configure OSPF routing protocol.

OBSERVATION:



In Router R2,

R2(config)#router ospf 1.

R2(config-router)#router-id 2.2.2.2

R2(config-router)#network 20.0.0.0 0.255.255.255 area 1

R2(config-router)#network 30.0.0.0 0.255.255.255 area 0

R2(config-router)#exit

In Router R3,

R3(config)#router ospf 1

R3(config-router)#router-id 3.3.3.3

R3(config-router)#network 30.0.0.0 0.255.255.255 area 0

R3(config-router)#network 40.0.0.0 0.255.255.255 area 2

R3(config-router)#exit

Step 4:- Loopback in serial interface

Interface R1

R1(config-if)#interface loopback 0

R1(config-if)#ip address 172.16.1.252 255.255.0.0

R1(config-if)#no shut.

Interface 2 in serial interface

R2(config-if)#interface loopback 0

R2(config-if)#ip address 172.16.1.253 255.255.0.0

R2(config-if)#no shut

Interface 3

R3(config-if)#interface loopback 0

R3(config-if)#ip address 172.16.1.254 255.255.0.0

R3(config-if)#no shut.

Step 5 - Virtual Link

In router R1

R1(config)#router ospf 1

R1(config-router)#area 1 virtual-link 2.2.2.2

~~R1(config-router)#~~ ~~R1(config)#~~ ~~exit~~

In router R2

R2(config)#router ospf 1

R2(config-router)#area 1 virtual-link 1.1.1.1

R2(config-router)#^{exit} exit

→ show ip router

0/24 10.0.0.0/8 [110/129] via 30.0.0.1 serial 3/0

0/24 20.0.0.0/8 [110/128] via 30.0.0.1 serial 3/0

30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks

C 30.0.0.0/8 is directly connected, serial 3/0

C 30.0.0.1/32 is directly connected, serial 3/0

C 40.0.0.0/8 is directly connected, ~~serial 3/0~~
FastEthernet 0/0

C 172.16.0.0/16 is directly connected, Loopback 0

Ping output

pinging 40.0.0.10 with 32 bytes of data

Reset timeout

Reply from 40.0.0.10 bytes=32 time=2ms TTL=125

Reply from 40.0.0.10 bytes=32 time=9ms TTL=125

Reply from 40.0.0.10 bytes=32 time=10ms TTL=125

ping statistics for 40.0.0.10:

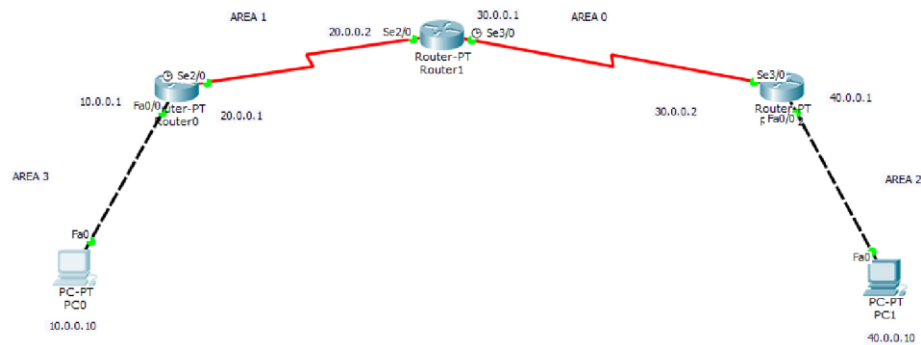
packets: sent = 4, Received = 3, Lost = 1 (25% loss),

Approx round trip in ms:

min = 2ms, max = 10ms, Average = 7ms

Lee
11/8/23

TOPOLOGY:



OUTPUT:

```
PC0
Physical Config Desktop Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Request timed out.
Reply from 40.0.0.10: bytes=32 time=4ms TTL=125
Reply from 40.0.0.10: bytes=32 time=6ms TTL=125
Reply from 40.0.0.10: bytes=32 time=12ms TTL=125

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 12ms, Average = 7ms

PC>
```

