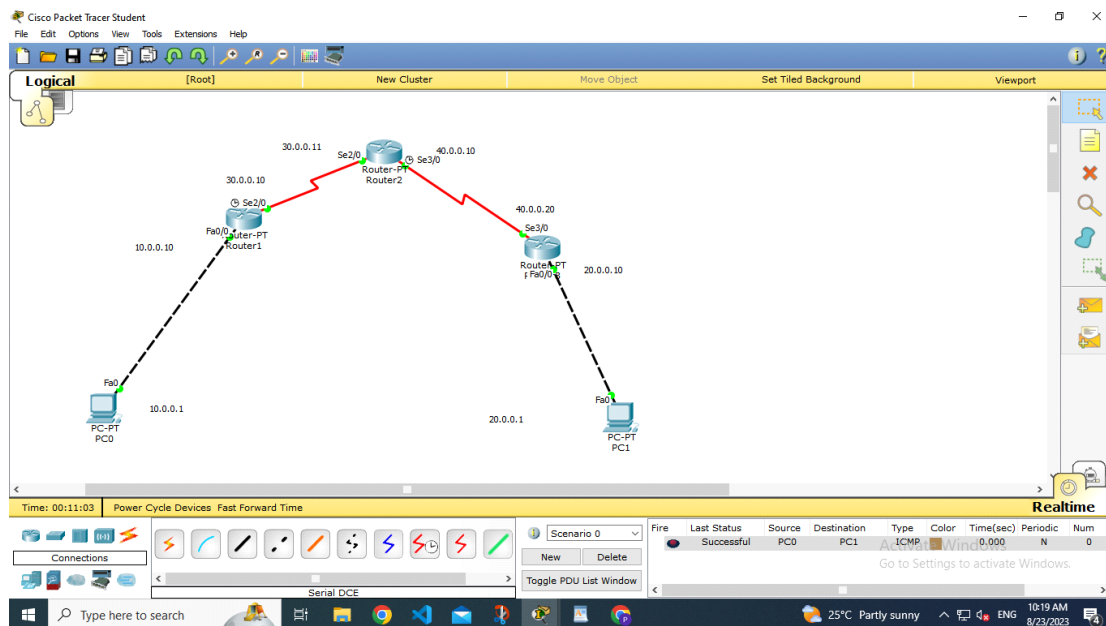


# ROUTING INFORMATION PROTOCOL

## TOPOLOGY:



## ROUTER1

```
Router1
Physical Config CLI
IOS Command Line Interface

Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.0.0.10 255.0.0.0
Router(config-if)#no shutdown

Router(config)#
%LINK-6-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 30.0.0.10 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if)#no shutdown

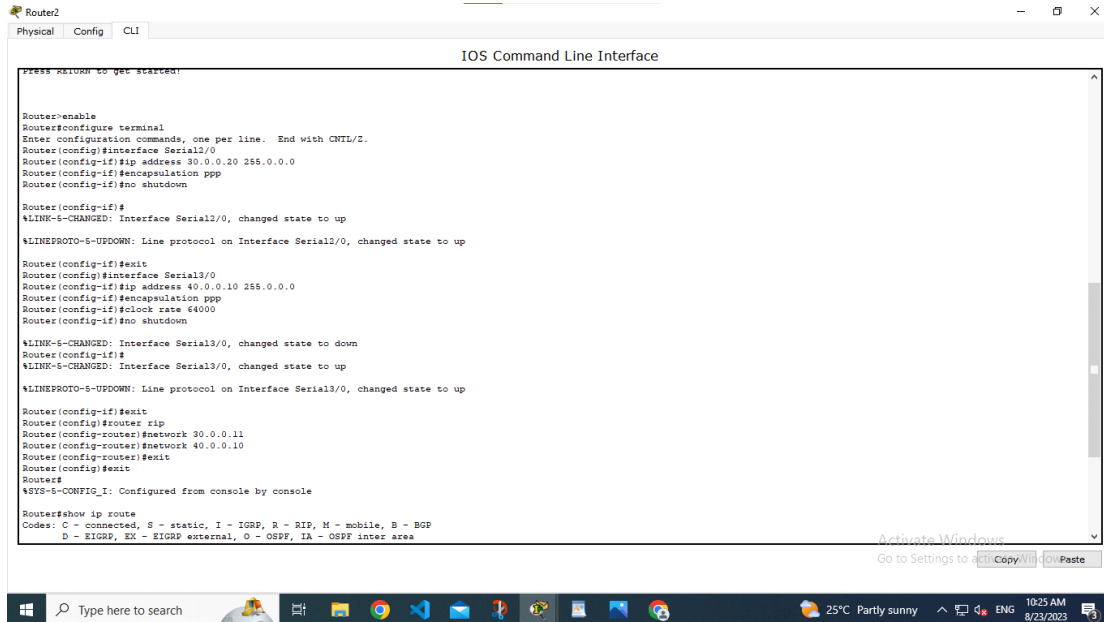
%LINK-6-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#
%LINK-6-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 10.0.0.1
Router(config-router)#network 30.0.0.10
Router(config-router)#network 10.0.0.10
Router(config-router)#exit
Router(config)#exit
Router#
RVS-5-CONFIG_I: Configured from console by console

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

0.0.0.0/0 [1/0] via 0.0.0.0
10.0.0.0/24 [0/0]
30.0.0.0/24 [0/0]
```

## ROUTER 2



```
Router2
Physical Config CLI

IOS Command Line Interface

Press RETURN to get started!

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#ip address 30.0.0.20 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#no shutdown

Router(config-if)#
%LINK-6-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#ip address 40.0.0.10 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if)#no shutdown

Router(config-if)#
%LINK-6-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
%LINK-6-CHANGED: Interface Serial3/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

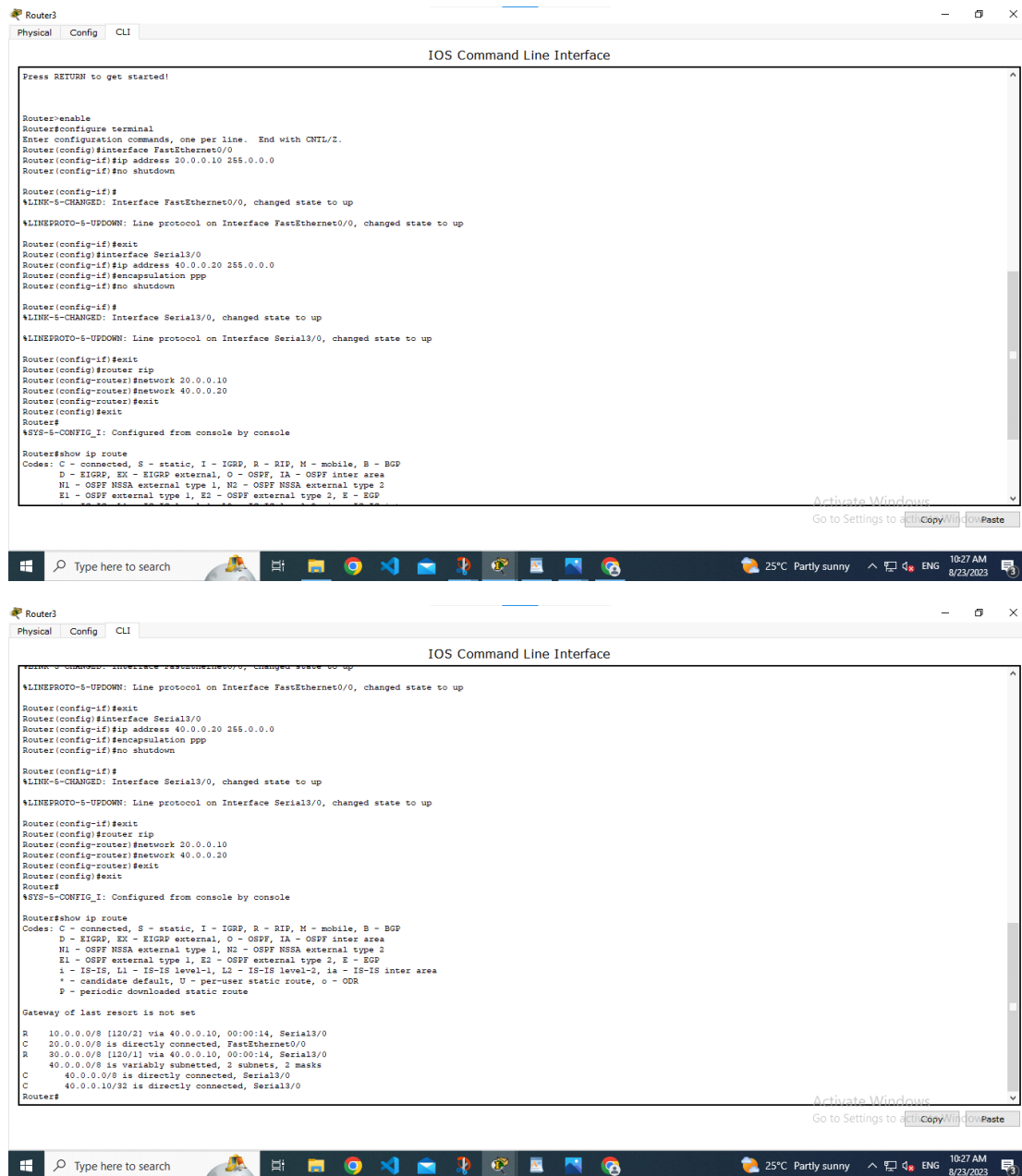
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 30.0.0.11
Router(config-router)#network 40.0.0.10
Router(config-router)#exit
Router(config)#exit
Router#
*SYS-5-CONFIG_I: Configured from console by console

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

R 10.0.0.0/8 [120/1] via 30.0.0.10, 00:00:22, Serial2/0
R 20.0.0.0/8 [120/1] via 40.0.0.20, 00:00:13, Serial3/0
C 30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 30.0.0.0/8 is directly connected, Serial2/0
C 30.0.0.10/32 is directly connected, Serial2/0
C 40.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 40.0.0.0/8 is directly connected, Serial3/0
C 40.0.0.20/32 is directly connected, Serial3/0
Router#
```

## ROUTER 3



PING FROM P0 TO P1

Cisco Packet Tracer Student

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

PC0

Physical Config Desktop Custom Interface

Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data:

Reply from 20.0.0.1: bytes=32 time=14ms TTL=125
Reply from 20.0.0.1: bytes=32 time=2ms TTL=125
Reply from 20.0.0.1: bytes=32 time=15ms TTL=125
Reply from 20.0.0.1: bytes=32 time=12ms TTL=125

Ping statistics for 20.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 15ms, Average = 10ms

PC>
```

Time: 00:19:41 Power Cycle Devices Fast Forward Time

Connections

Serial DCE

Toggle PDU List Window

Realtime

Destination	Type	Color	Time(sec)	Periodic	Num
PC1	ICMP: Echo (ping)	Blue	0.000	N	0

Go to Settings to activate Windows.

25°C Partly sunny 10:28 AM 8/23/2023