QUESTION: Routing Traffic using RIP Protocol

AIM: To Route traffic through different routers using Distance Vectoring RIP protocol

Exp-6

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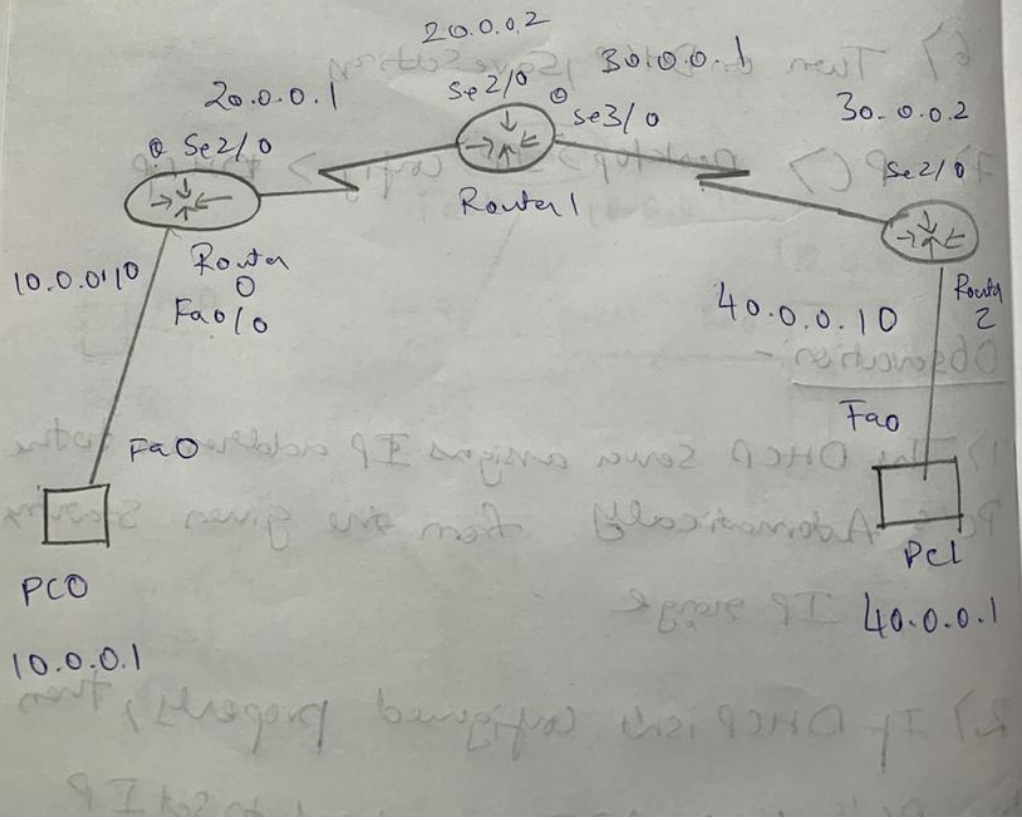
Aim: To Route traffic through different router using distance vectoring RIP protocol

Topology:-



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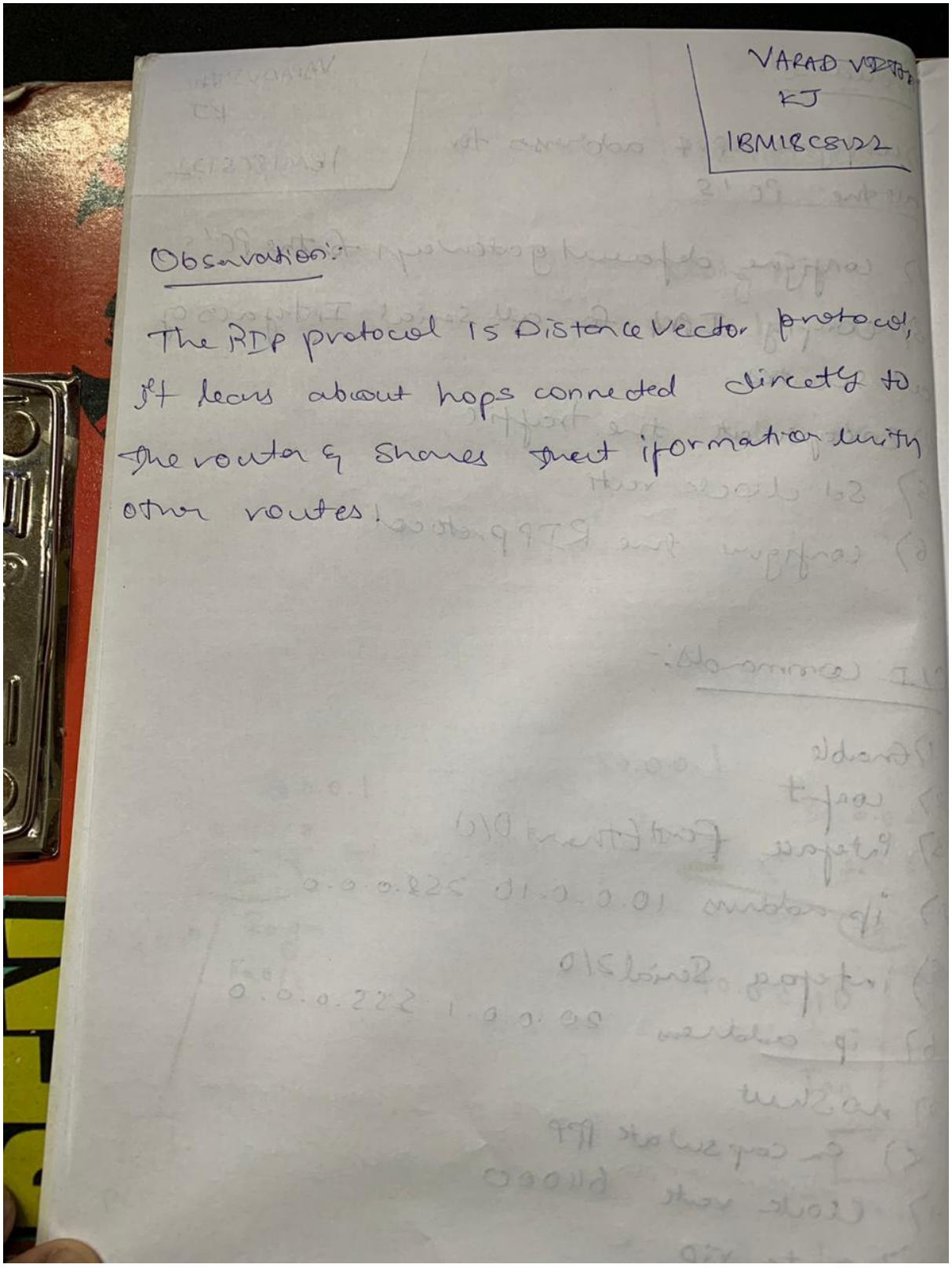
Procedure:-

1) configure IPv4 address for all the PC's
2) configure default gateways for the PC's
3) config IPv4 for all serial Interfaces of all routers.
4) Encapsulate the traffic
5) Set clock rate
6) configure the RIP protocol

CLI commands:-

1) Enable
2) conf t
3) inteface fastEthernet 0/0
4) ip addrss 10.0.0.10 255.0.0.0
5) inteface Serial 2/0
6) ip address 20.0.0.1 255.0.0.0
7) no Shut
8) encapsulate PPP
9) Clock rate 64000
10) router rip
11) network 10.0.0.0
12) network 20.0.0.0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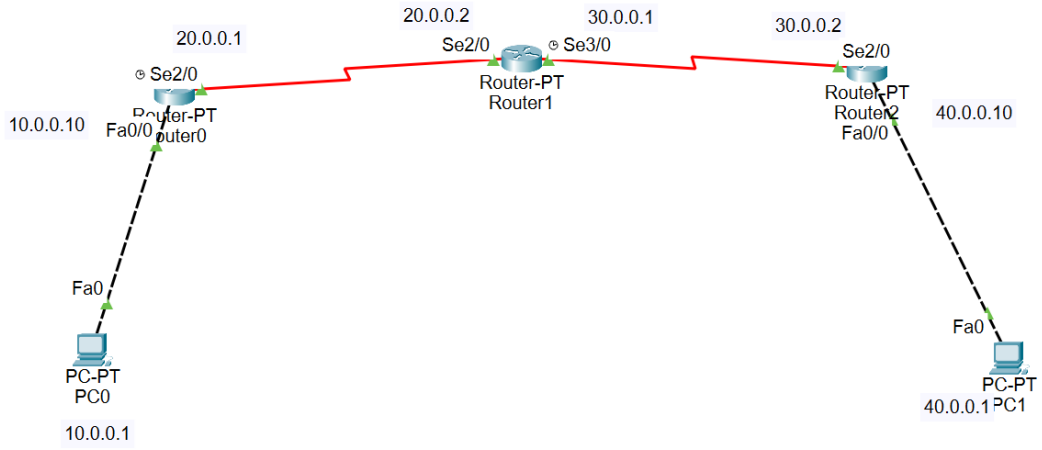
Observation:
The RIP protocol is Distance Vector protocol, It learns about hops connected directly to the router & shares that information with other routes.

TOPOLOGY:



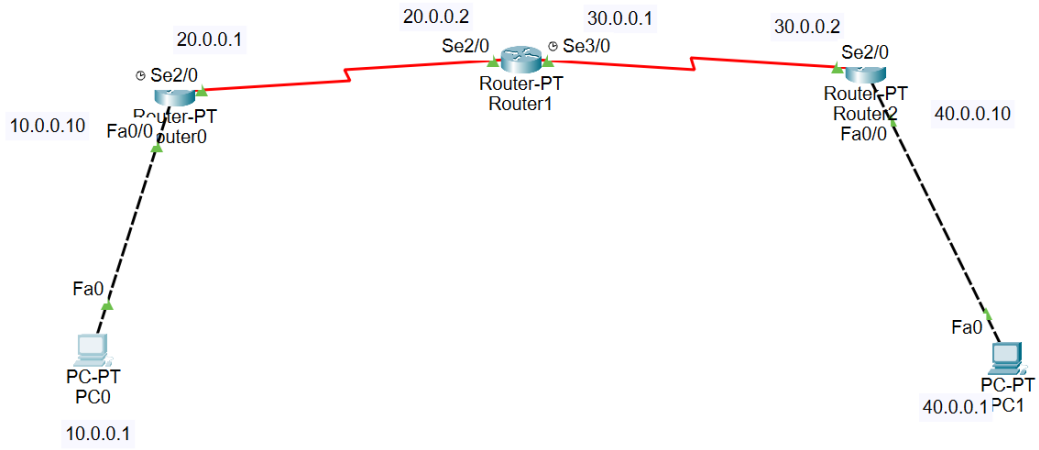
PROCEDURE:

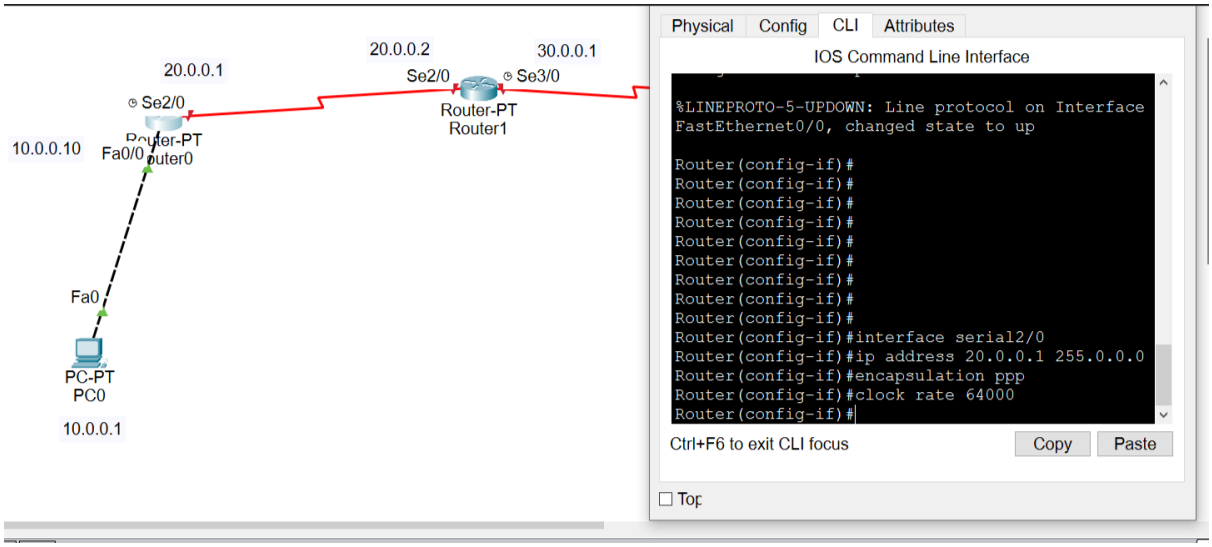
1. Configure IPV4 Addresses for the PC's
2. Configure Default Gateways for the PC's
3. Configure IPV4 for all Serial Interfaces of all routers
4. Encapsulate the traffic
5. Set clock rate
6. Configure the RIP protocol

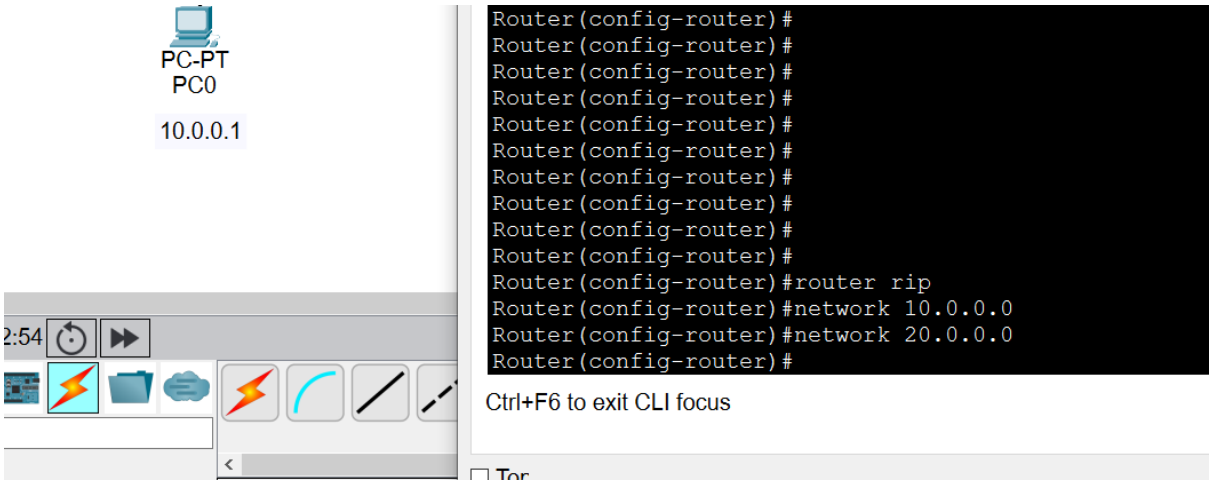
CLI COMMANDS – FOR ONE ROUTER

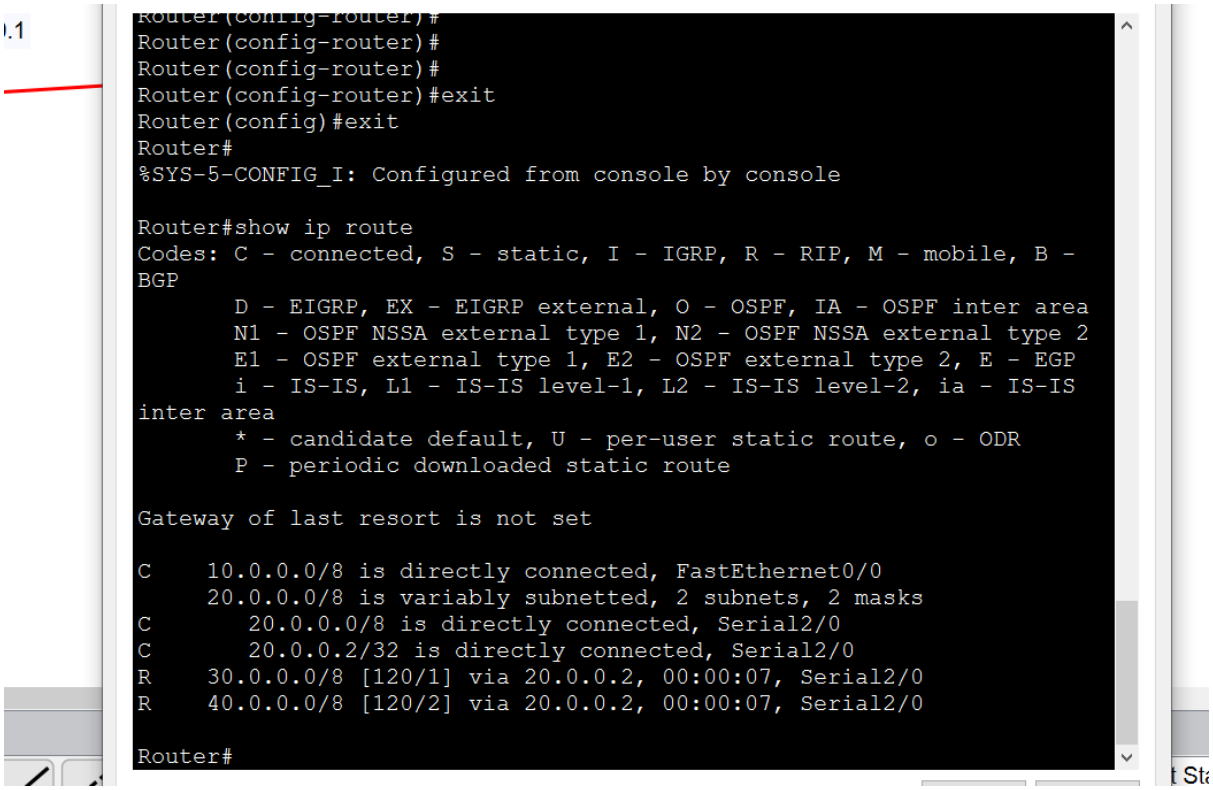
1. Enable
2. configure terminal
3. interface FastEthernet0/0
4. ip address 10.0.0.10 255.0.0.0
5. interface Serial2/0
6. ip address 20.0.0.1 255.0.0.0
7. no shut
8. encapsulate ppp
9. clock rate 64000
10. router rip
11. network 10.0.0.0
12. network 20.0.0.0

SCREENSHOTS

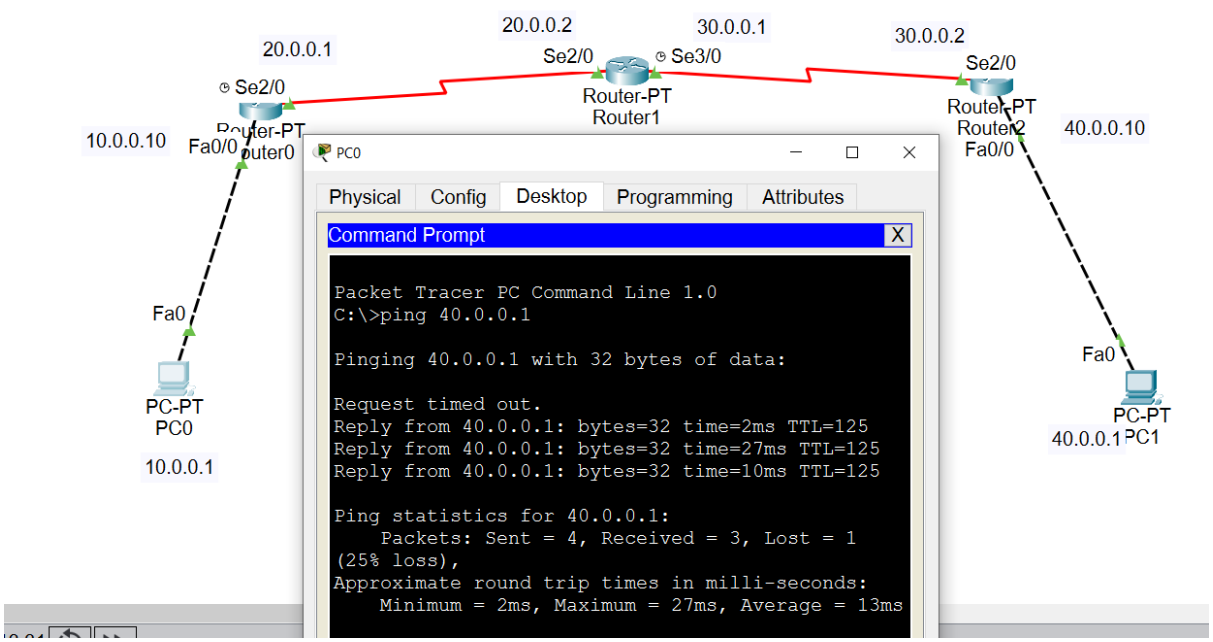

20.0.0.1
20.0.0.2
30.0.0.1
30.0.0.2
Se2/0
Se3/0
Router-PT
Router1
Router-PT
Router2
Fa0/0
10.0.0.10
40.0.0.10
Fa0
PC-PT
PC0
10.0.0.1
PC-PT
PC1
40.0.0.1


Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#
Router(config-if)#interface serial2/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


PC-PT
PC0
10.0.0.1
Router(config-router)#
Router(config-router)#
Router(config-router)#
Router(config-router)#
Router(config-router)#
Router(config-router)#
Router(config-router)#
Router(config-router)#
Router(config-router)#
Router(config-router)#
Router(config-router)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#
Ctrl+F6 to exit CLI focus



PING



OBSERVATION

The RIP protocol is Distance Vector protocol, it learns about hops connected directly to the router and shares that information with other routers