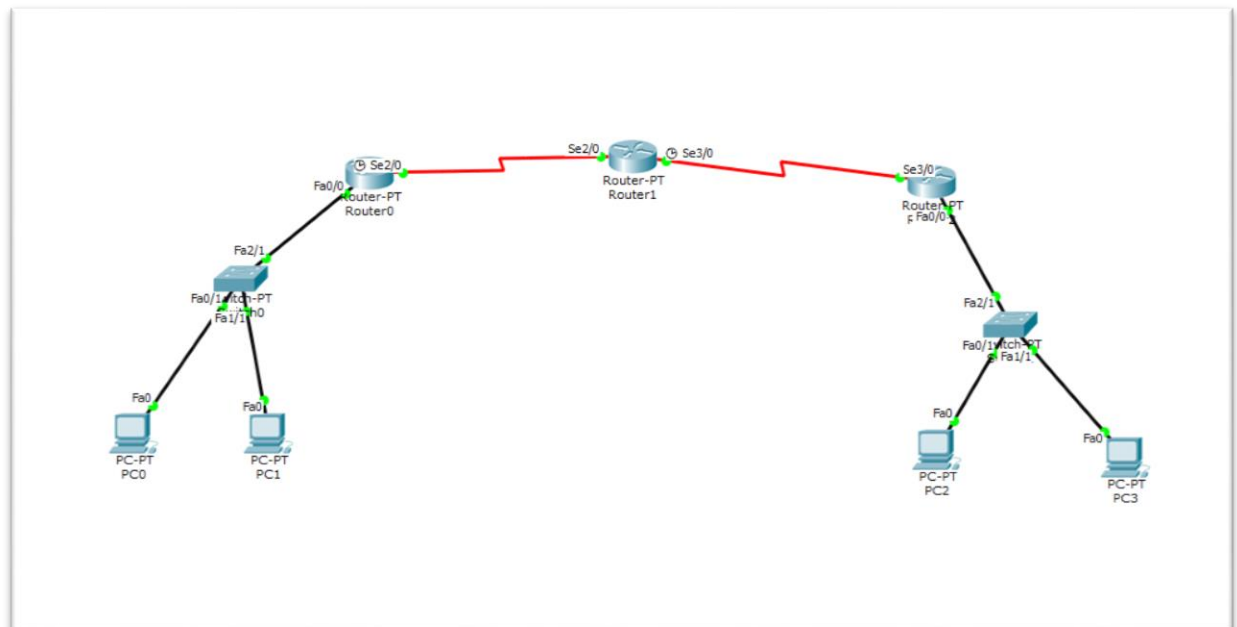


## LAB-04

### 1. Configuring Default Route

Topology:



```
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=1ms TTL=255
Reply from 20.0.0.1: bytes=32 time=2ms TTL=255
Reply from 20.0.0.1: bytes=32 time=0ms TTL=255
Reply from 20.0.0.1: bytes=32 time=0ms TTL=255

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

PC>ping 20.0.0.2

Pinging 20.0.0.2 with 32 bytes of data:

Reply from 20.0.0.2: bytes=32 time=3ms TTL=254
Reply from 20.0.0.2: bytes=32 time=3ms TTL=254
Reply from 20.0.0.2: bytes=32 time=4ms TTL=254
Reply from 20.0.0.2: bytes=32 time=3ms TTL=254

Ping statistics for 20.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 4ms, Average = 3ms
```

## Command Prompt

X

```
Ping statistics for 20.0.0.2:  
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
Approximate round trip times in milli-seconds:  
Minimum = 3ms, Maximum = 4ms, Average = 3ms
```

```
PC>ping 30.0.0.1
```

```
Pinging 30.0.0.1 with 32 bytes of data:
```

```
Reply from 30.0.0.1: bytes=32 time=4ms TTL=254  
Reply from 30.0.0.1: bytes=32 time=5ms TTL=254  
Reply from 30.0.0.1: bytes=32 time=4ms TTL=254  
Reply from 30.0.0.1: bytes=32 time=5ms TTL=254
```

```
Ping statistics for 30.0.0.1:  
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
Approximate round trip times in milli-seconds:  
Minimum = 4ms, Maximum = 5ms, Average = 4ms
```

```
PC>ping 30.0.0.2
```

```
Pinging 30.0.0.2 with 32 bytes of data:
```

```
Reply from 30.0.0.2: bytes=32 time=7ms TTL=253  
Reply from 30.0.0.2: bytes=32 time=7ms TTL=253  
Reply from 30.0.0.2: bytes=32 time=9ms TTL=253  
Reply from 30.0.0.2: bytes=32 time=11ms TTL=253
```

```
Ping statistics for 30.0.0.2:
```

## Command Prompt

X

```
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=7ms TTL=125  
Reply from 40.0.0.10: bytes=32 time=2ms TTL=125  
Reply from 40.0.0.10: bytes=32 time=3ms 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 = 2ms, Maximum = 7ms, Average = 4ms
```

```
PC>ping 40.0.0.11
```

```
Pinging 40.0.0.11 with 32 bytes of data:
```

```
Request timed out.  
Reply from 40.0.0.11: bytes=32 time=9ms TTL=125  
Reply from 40.0.0.11: bytes=32 time=5ms TTL=125  
Reply from 40.0.0.11: bytes=32 time=9ms TTL=125
```

```
Ping statistics for 40.0.0.11:  
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),  
Approximate round trip times in milli-seconds:  
Minimum = 5ms, Maximum = 9ms, Average = 7ms
```

```
PC>
```

## 2.Configuring RIP protocol to a router

Topology:



For Router1

```
Router1
Physical Config CLI
IOS Command Line Interface
%LINK-5-CHANGED: Interface Serial12/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial12/0, changed state to up
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
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

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        20.0.0.0/8 is directly connected, Serial12/0
C        20.0.0.2/32 is directly connected, Serial12/0
R    30.0.0.0/8 [120/1] via 20.0.0.2, 00:00:15, Serial12/0
R    40.0.0.0/8 [120/2] via 20.0.0.2, 00:00:15, Serial12/0
Router#
```

For Router2

Router1

Physical Config CLI

### IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Router(config)#router rip
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
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 20.0.0.1, 00:00:26, Serial2/0
     20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C     20.0.0.0/8 is directly connected, Serial2/0
C     20.0.0.1/32 is directly connected, Serial2/0
     30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C     30.0.0.0/8 is directly connected, Serial3/0
C     30.0.0.2/32 is directly connected, Serial3/0
R    40.0.0.0/8 [120/1] via 30.0.0.2, 00:00:19, Serial3/0
Router#
```

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## For Router3

Router2

Physical Config CLI

### IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
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

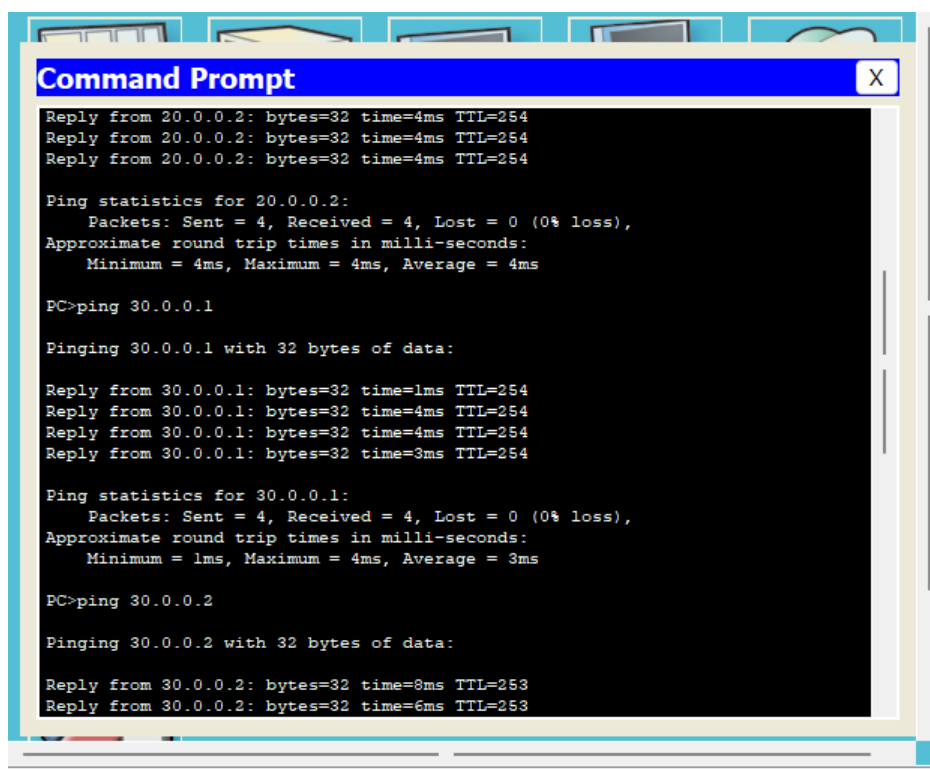
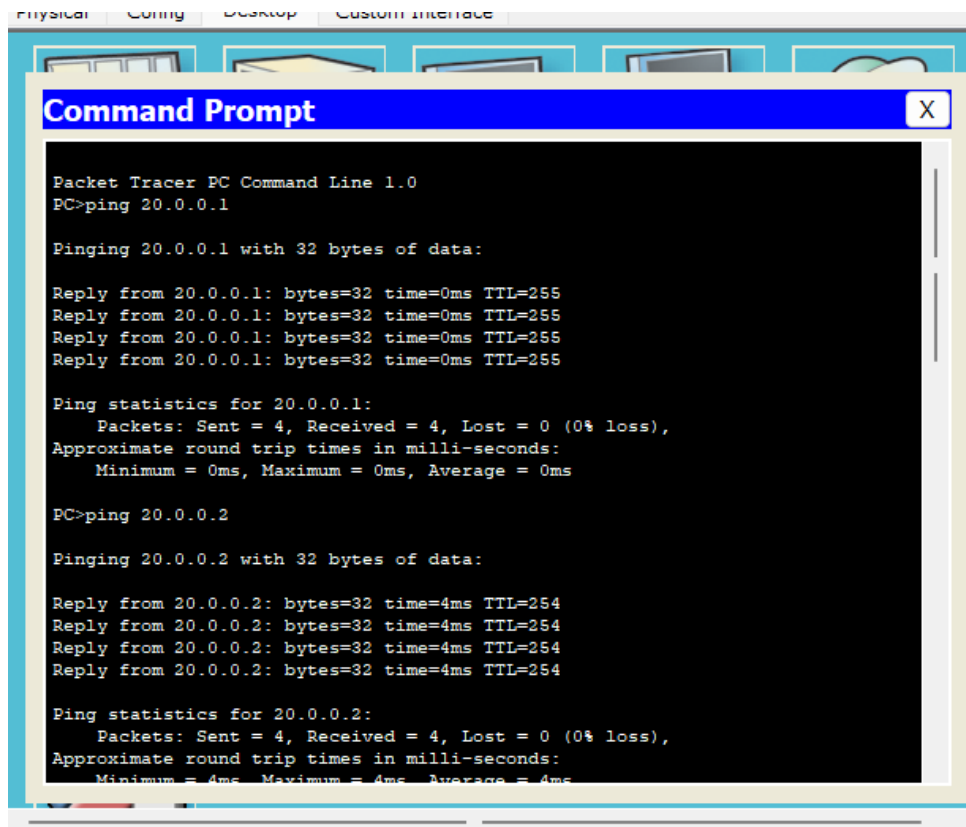
Gateway of last resort is not set

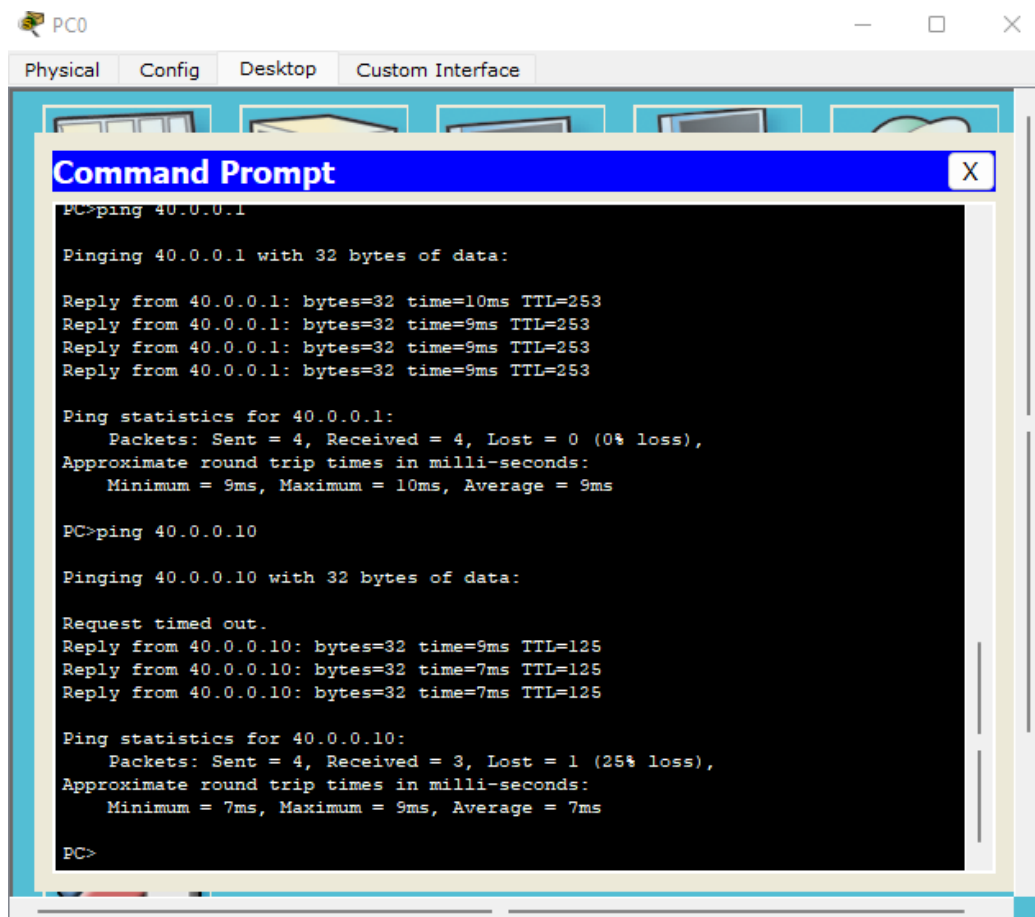
R    10.0.0.0/8 [120/2] via 30.0.0.1, 00:00:09, Serial2/0
R    20.0.0.0/8 [120/1] via 30.0.0.1, 00:00:09, Serial2/0
     30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C     30.0.0.0/8 is directly connected, Serial2/0
C     30.0.0.1/32 is directly connected, Serial2/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0
Router#
```

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Output:

End Device with ip address 10.0.0.10





End Device with ip address 40.0.0.10

