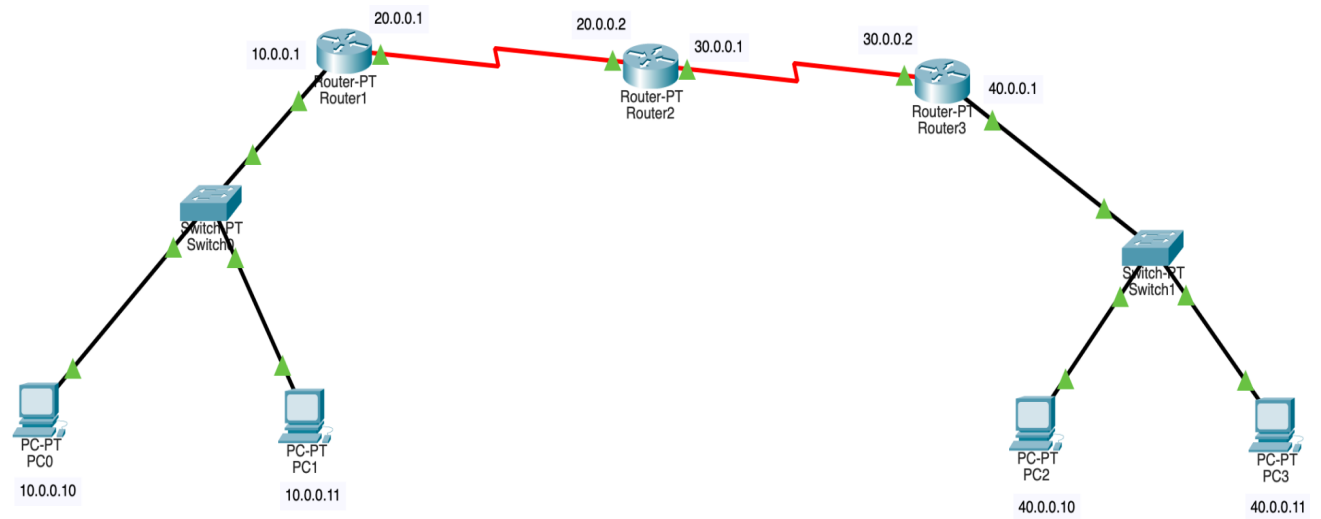
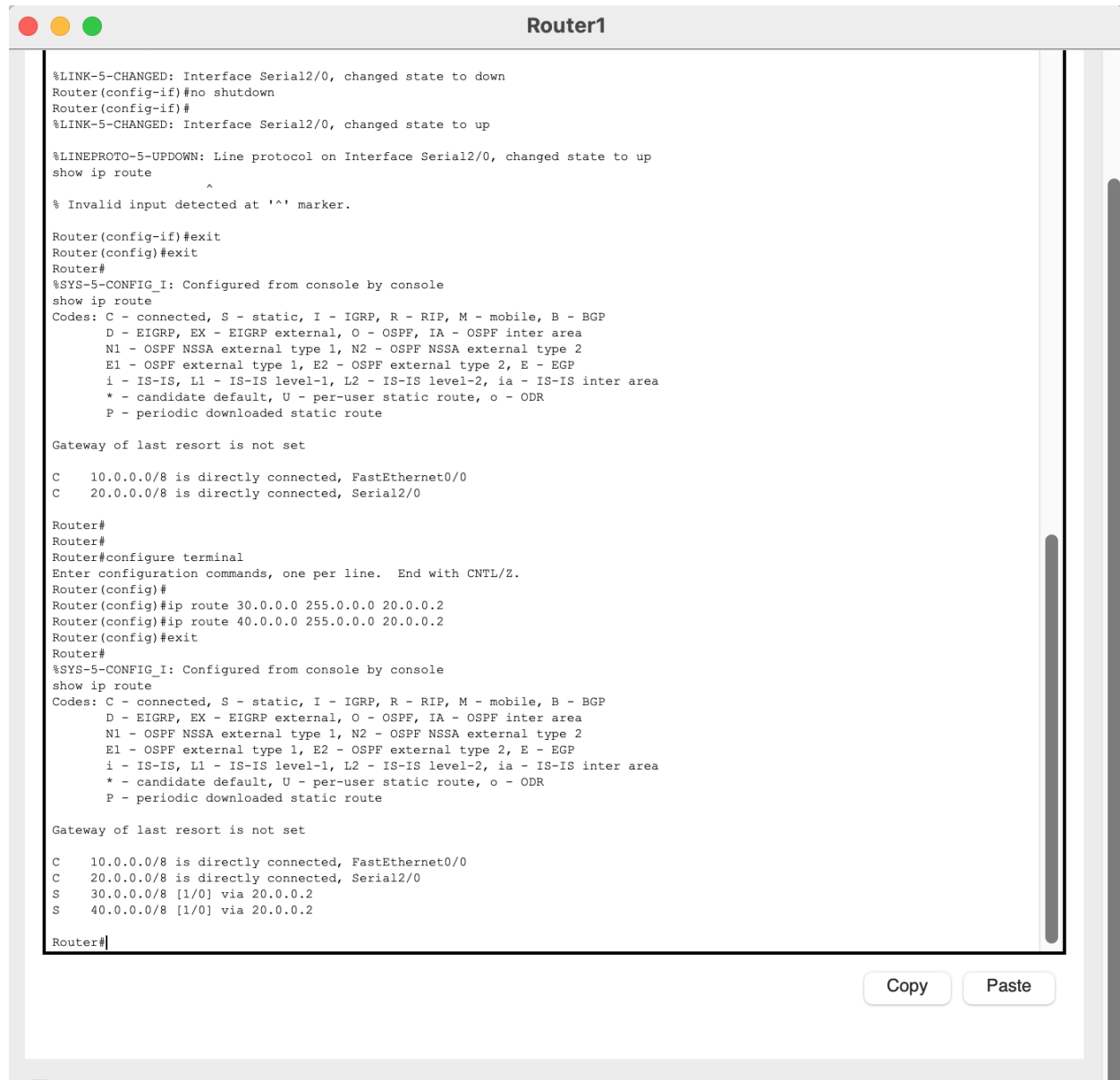


Title: Configure default route, static route to the Router

Topology:



IP Route for all routers:



```
Router1

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
show ip route
      ^
% Invalid input detected at '^' marker.

Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
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 directly connected, Serial2/0

Router#
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#ip route 30.0.0.0 255.0.0.0 20.0.0.2
Router(config)#ip route 40.0.0.0 255.0.0.0 20.0.0.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
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 directly connected, Serial2/0
S    30.0.0.0/8 [1/0] via 20.0.0.2
S    40.0.0.0/8 [1/0] via 20.0.0.2

Router#
```

Copy Paste

Router2

PhysicalConfigCLIAttributes

IOS Command Line Interface

```
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

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

^
% Invalid input detected at '^' marker.

Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
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    20.0.0.0/8 is directly connected, Serial3/0
C    30.0.0.0/8 is directly connected, Serial2/0

Router#
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#ip route 10.0.0.0 255.0.0.0 20.0.0.1
Router(config)#ip route 40.0.0.0 255.0.0.0 30.0.0.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
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

S    10.0.0.0/8 [1/0] via 20.0.0.1
C    20.0.0.0/8 is directly connected, Serial3/0
C    30.0.0.0/8 is directly connected, Serial2/0
S    40.0.0.0/8 [1/0] via 30.0.0.2

Router#
```

Router3

```

Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
show ip route
      ^
% Invalid input detected at '^' marker.

Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
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    30.0.0.0/8 is directly connected, Serial2/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0

Router#
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#ip route 20.0.0.0 255.0.0.0 30.0.0.1
Router(config)#ip route 10.0.0.0 255.0.0.0 30.0.0.1
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
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

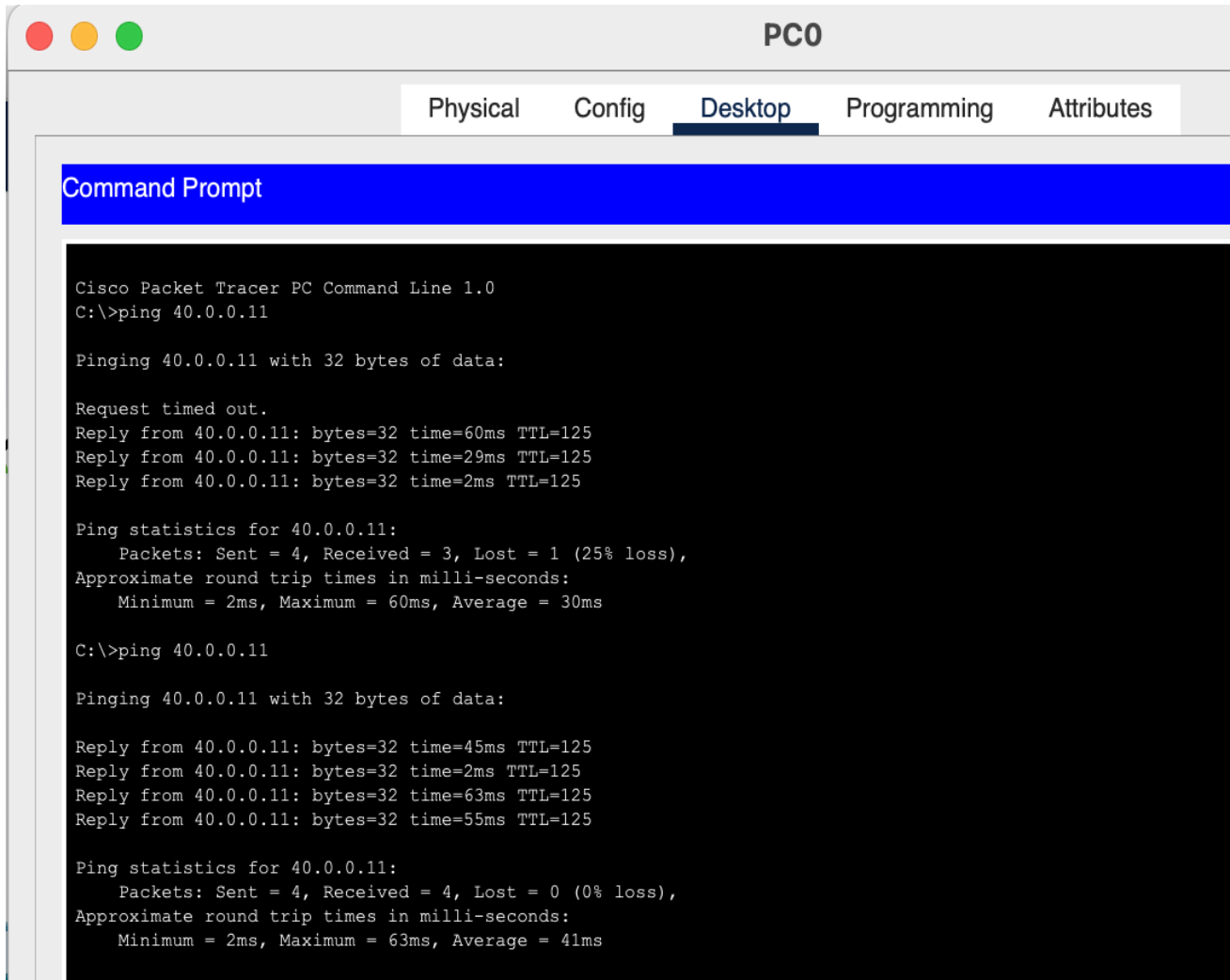
S    10.0.0.0/8 [1/0] via 30.0.0.1
S    20.0.0.0/8 [1/0] via 30.0.0.1
C    30.0.0.0/8 is directly connected, Serial2/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0

Router#

```

Pinging end devices in different network:

Ping PC3 from PC0



The screenshot shows a Packet Tracer interface for PC0. The 'Desktop' tab is active, displaying a 'Command Prompt' window. The window title is 'Cisco Packet Tracer PC Command Line 1.0'. The user has entered the command 'C:\>ping 40.0.0.11'. The output shows the first ping attempt failing with a 'Request timed out.' message, while the subsequent three attempts succeed. The statistics for the first attempt show 1 packet loss (25%), and the statistics for the second attempt show 0 packet loss (0%).

```
Cisco Packet Tracer PC Command Line 1.0
C:\>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=60ms TTL=125
Reply from 40.0.0.11: bytes=32 time=29ms TTL=125
Reply from 40.0.0.11: bytes=32 time=2ms 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 = 2ms, Maximum = 60ms, Average = 30ms

C:\>ping 40.0.0.11

Pinging 40.0.0.11 with 32 bytes of data:

Reply from 40.0.0.11: bytes=32 time=45ms TTL=125
Reply from 40.0.0.11: bytes=32 time=2ms TTL=125
Reply from 40.0.0.11: bytes=32 time=63ms TTL=125
Reply from 40.0.0.11: bytes=32 time=55ms TTL=125

Ping statistics for 40.0.0.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 63ms, Average = 41ms
```

Ping PC1 from PC2

