

CSE 1004 - (Networks and Communication) LAB

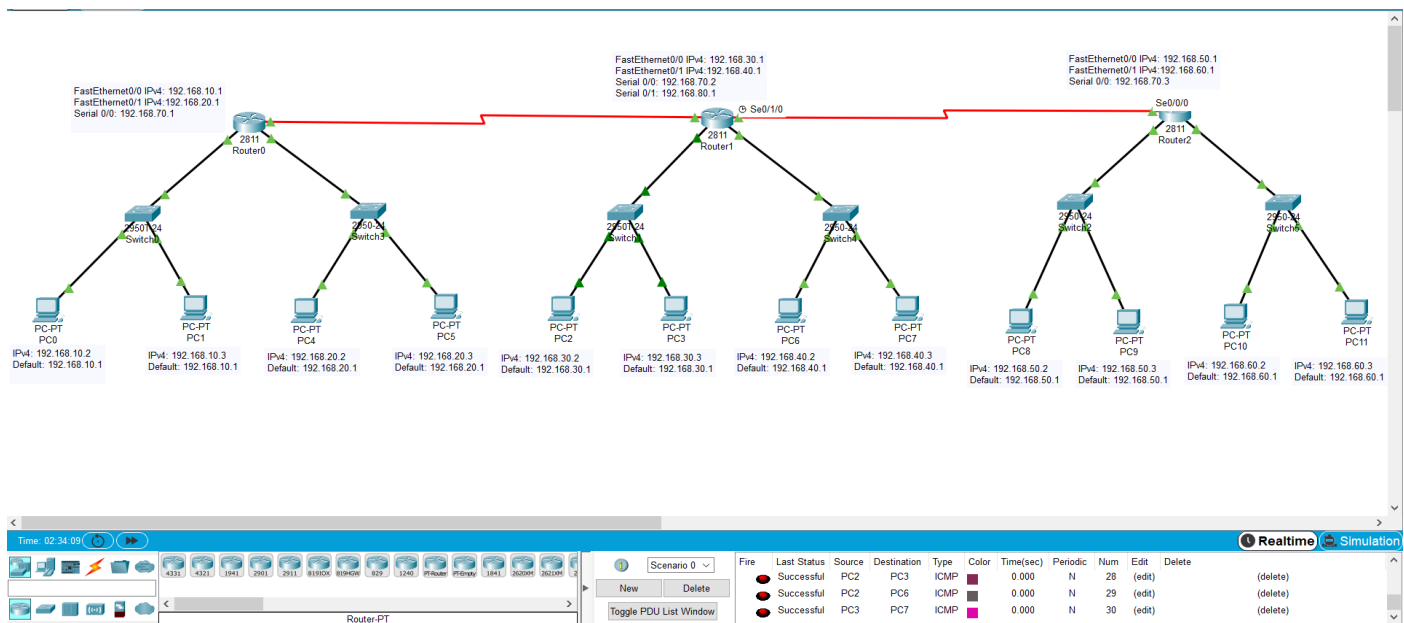
Name: Karthick Raghul V

Slot: L61+62

Reg No: 19BCE1660

LAB – 9

Q1) Construct a topology using 3 routers, 6 switches and 12 machines.
Implement RIP.





PC2



Physical

Config

Desktop

Programming

Attributes

Command Prompt



Packet Tracer PC Command Line 1.0

C:\>ping 192.168.30.2

Pinging 192.168.30.2 with 32 bytes of data:

Reply from 192.168.30.2: bytes=32 time=1ms TTL=128

Reply from 192.168.30.2: bytes=32 time=7ms TTL=128

Reply from 192.168.30.2: bytes=32 time=1ms TTL=128

Reply from 192.168.30.2: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.30.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 7ms, Average = 2ms

C:\>



Top

Command Prompt

Packet Tracer PC Command Line 1.0

C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

Reply from 192.168.10.2: bytes=32 time=55ms TTL=128

Reply from 192.168.10.2: bytes=32 time=6ms TTL=128

Reply from 192.168.10.2: bytes=32 time=4ms TTL=128

Reply from 192.168.10.2: bytes=32 time=32ms TTL=128


Ping statistics for 192.168.10.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 4ms, Maximum = 55ms, Average = 24ms

C:\>|

 Router0

Physical Config CLI Attributes

IOS Command Line Interface

```
C 192.168.20.0/24 is directly connected, FastEthernet0/1
C 192.168.70.0/24 is directly connected, Serial0/0/0

Router>ip route 0.0.0.0 0.0.0.0 192.168.70.2
      ^
% Invalid input detected at '^' marker.

Router>
Router>show ip route 192.168.10.1
Routing entry for 192.168.10.0/24
Known via "connected", distance 0, metric 0 (connected, via
interface)
  Routing Descriptor Blocks:
    * directly connected, via FastEthernet0/0
      Route metric is 0, traffic share count is 1

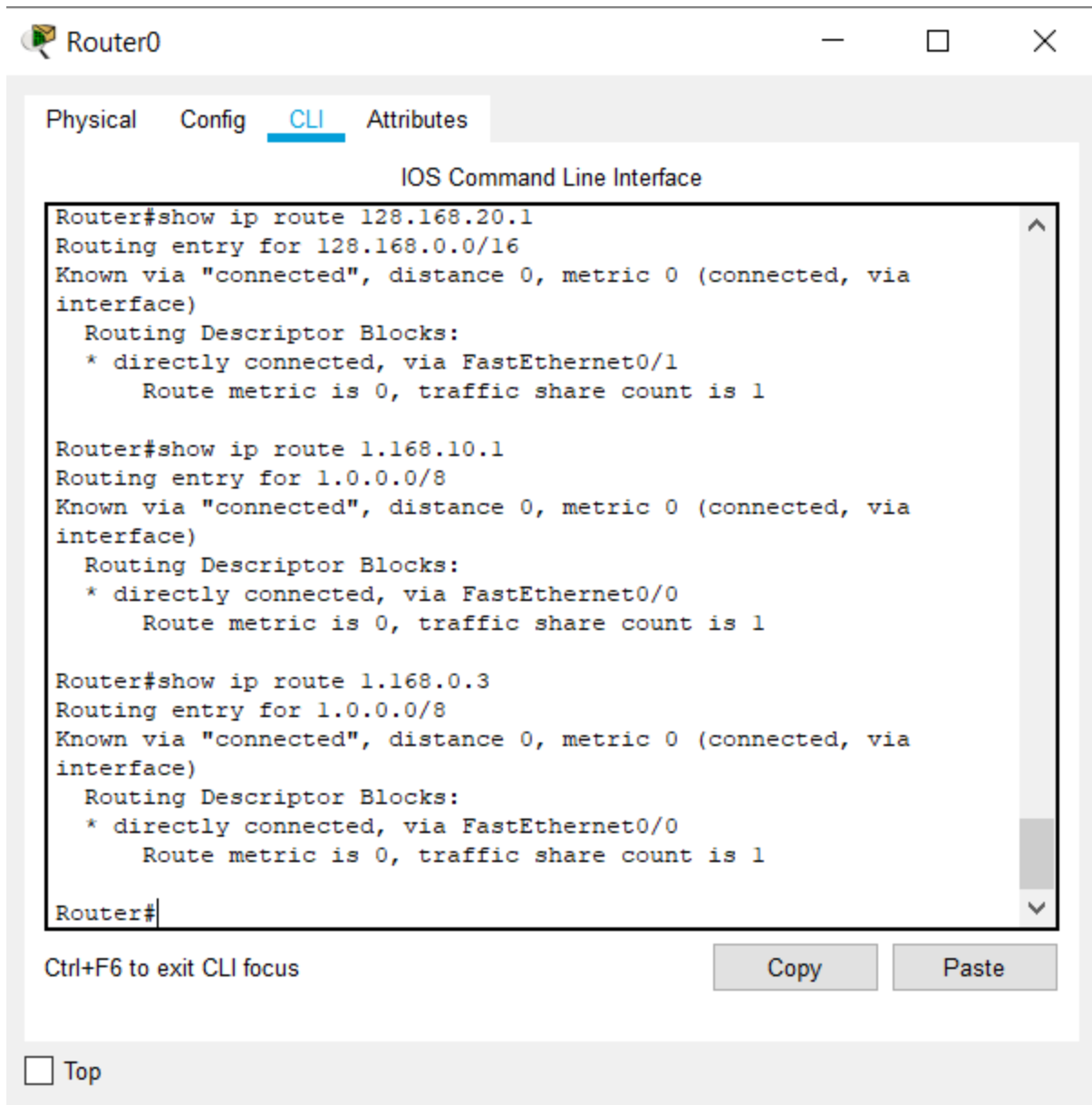
Router>show ip route 192.168.10.2
Routing entry for 192.168.10.0/24
Known via "connected", distance 0, metric 0 (connected, via
interface)
  Routing Descriptor Blocks:
    * directly connected, via FastEthernet0/0
      Route metric is 0, traffic share count is 1

Router>
```

Ctrl+F6 to exit CLI focus

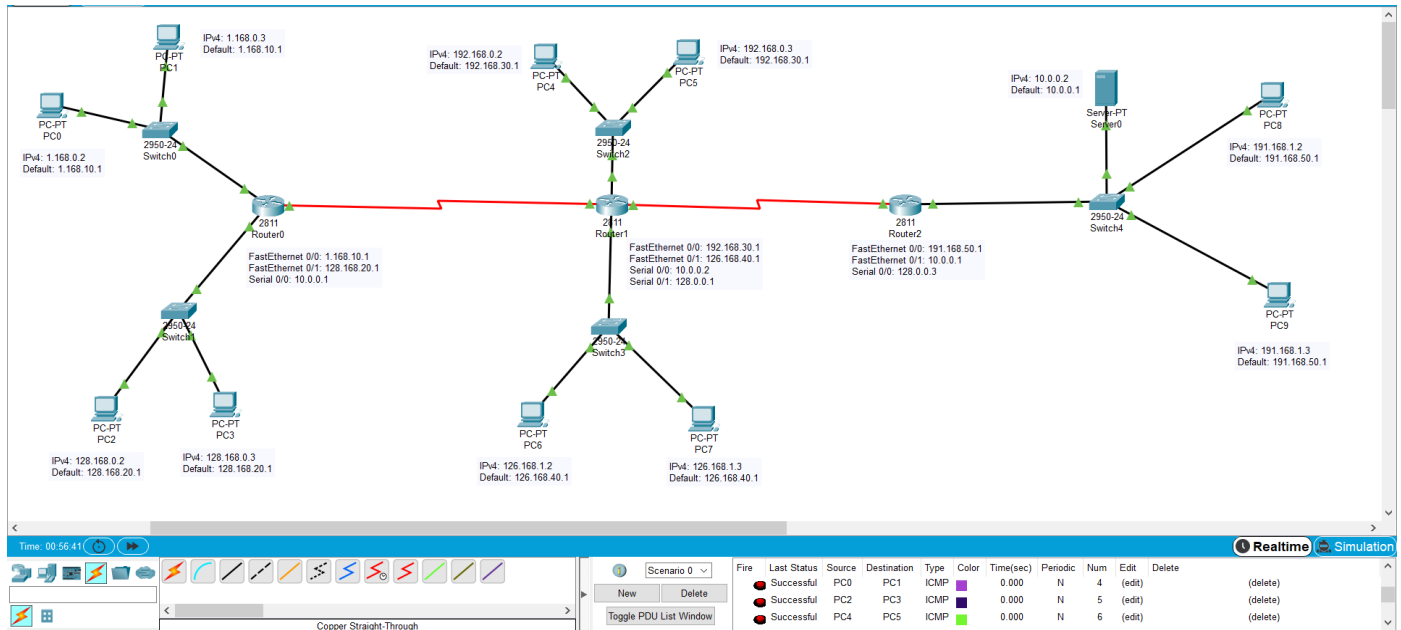
Copy Paste

☐ Top



Q2)

(a) Construct the topology given below using CISCO packet tracer.

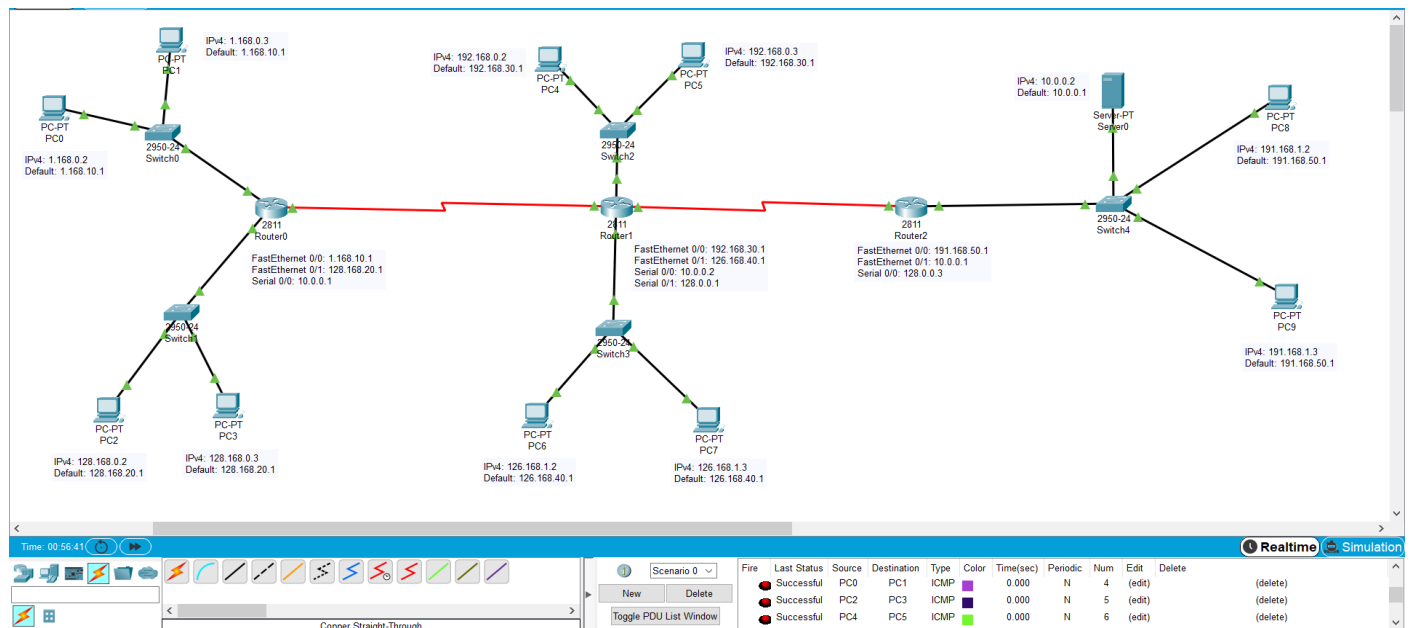


(b) Fill the Configuration details of each device in the table given below.

Devices	Interface	IP Address
Router 0	<i>Fast Ethernet 0/0:</i> <i>1.168.10.1</i> <i>Fast Ethernet 0/1:</i> <i>128.168.20.1</i>	<i>10.0.0.1</i>
Router 1	<i>Fast Ethernet 0/0:</i> <i>192.168.30.1</i> <i>Fast Ethernet 0/1:</i> <i>126.168.40.1</i>	<i>Serial 0/0: 10.0.0.2</i> <i>Serial 0/1: 128.0.0.1</i>
Router 2	<i>Fast Ethernet 0/0:</i> <i>191.168.50.1</i> <i>Fast Ethernet 0/1:</i> <i>10.0.0.1</i>	<i>128.0.0.3</i>
PC0	<i>1.168.10.1</i>	<i>1.168.0.2</i>
PC1	<i>1.168.10.1</i>	<i>1.168.0.3</i>

PC2	<i>128.168.20.1</i>	<i>128.168.0.2</i>
PC3	<i>128.168.20.1</i>	<i>128.168.0.3</i>
PC4	<i>192.168.30.1</i>	<i>192.168.0.2</i>
PC5	<i>192.168.30.1</i>	<i>192.168.0.3</i>
PC6	<i>126.168.40.1</i>	<i>126.168.1.2</i>
PC7	<i>126.168.40.1</i>	<i>126.168.1.3</i>
PC8	<i>191.168.50.1</i>	<i>191.168.1.2</i>
PC9	<i>191.168.50.1</i>	<i>191.168.1.3</i>
Server0	<i>10.0.0.1</i>	<i>10.0.0.2</i>

(c) Configure Routing Information Protocol (RIP) routing in CISCO packet tracer for the constructed topology in (a) using the IP details assigned in (b) and show the successful packet transmission between the any two PCs (print the details using “show ip route” command)





PC0



Physical

Config

Desktop

Programming

Attributes

Command Prompt



Packet Tracer PC Command Line 1.0

C:\>ping 1.168.0.2

Pinging 1.168.0.2 with 32 bytes of data:

Reply from 1.168.0.2: bytes=32 time=77ms TTL=128

Reply from 1.168.0.2: bytes=32 time=4ms TTL=128

Reply from 1.168.0.2: bytes=32 time=2ms TTL=128

Reply from 1.168.0.2: bytes=32 time=22ms TTL=128

Ping statistics for 1.168.0.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

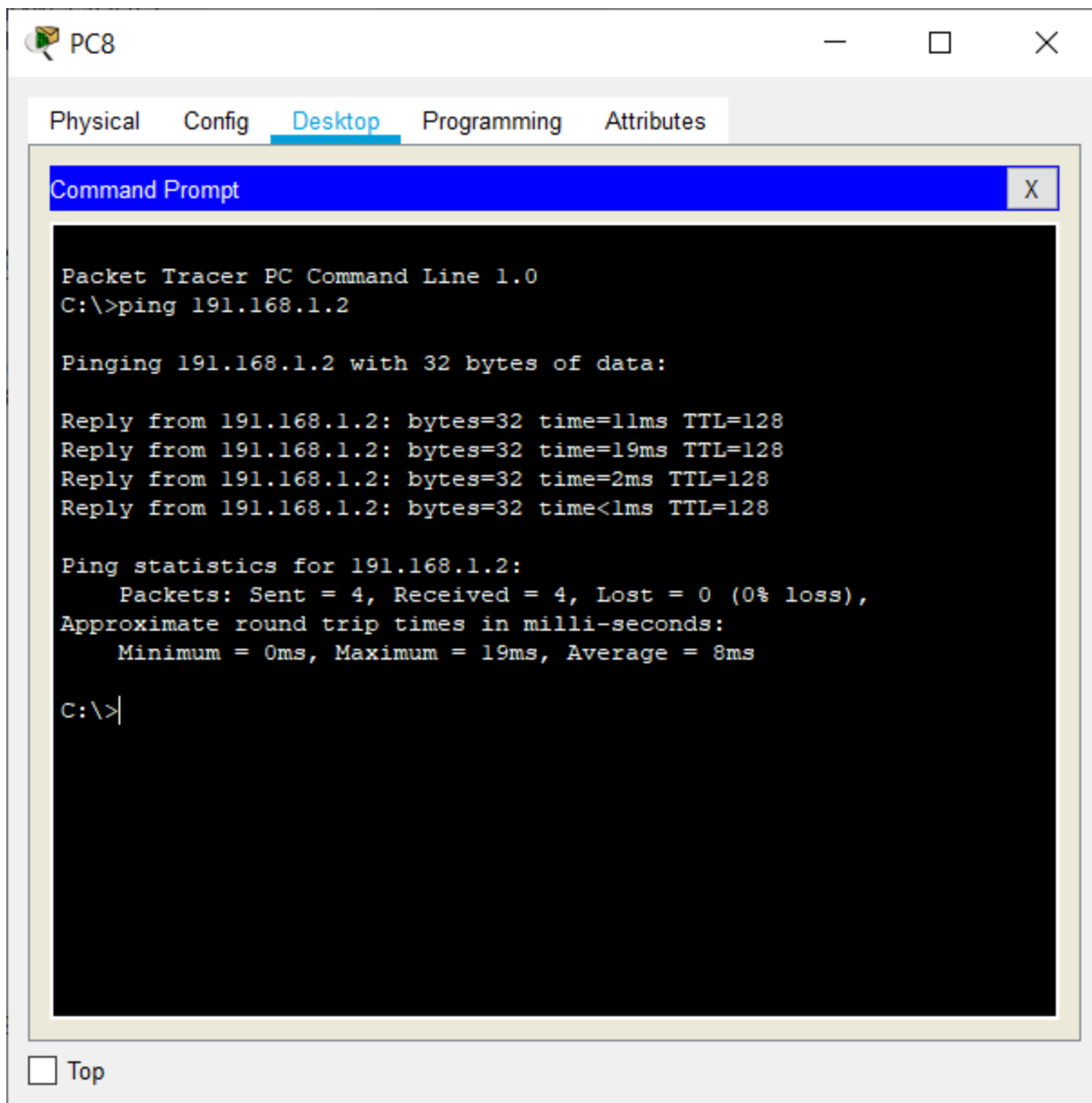
Approximate round trip times in milli-seconds:

Minimum = 2ms, Maximum = 77ms, Average = 26ms

C:\>



Top





Router1



Physical

Config

CLI

Attributes

IOS Command Line Interface

%SYS-5-CONFIG_I: Configured from console by console

Router#show ip route 192.168.0.2

% Network not in table

Router#show ip route 192.168.30.1

Routing entry for 192.168.30.0/24

Known via "connected", distance 0, metric 0 (connected, via interface)

Routing Descriptor Blocks:

* directly connected, via FastEthernet0/0

Route metric is 0, traffic share count is 1

Router#show ip route 192.168.40.1

% Network not in table

Router#show ip route 126.168.40.1

Routing entry for 126.0.0.0/8

Known via "connected", distance 0, metric 0 (connected, via interface)

Routing Descriptor Blocks:

* directly connected, via FastEthernet0/1

Route metric is 0, traffic share count is 1

Router#

Ctrl+F6 to exit CLI focus

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Top

IOS Command Line Interface

```
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip route 128.168.20.1
Routing entry for 128.168.0.0/16
Known via "connected", distance 0, metric 0 (connected, via
interface)
  Routing Descriptor Blocks:
    * directly connected, via FastEthernet0/1
      Route metric is 0, traffic share count is 1

Router#show ip route 1.168.10.1
Routing entry for 1.0.0.0/8
Known via "connected", distance 0, metric 0 (connected, via
interface)
  Routing Descriptor Blocks:
    * directly connected, via FastEthernet0/0
      Route metric is 0, traffic share count is 1

Router#
```

Ctrl+F6 to exit CLI focus

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