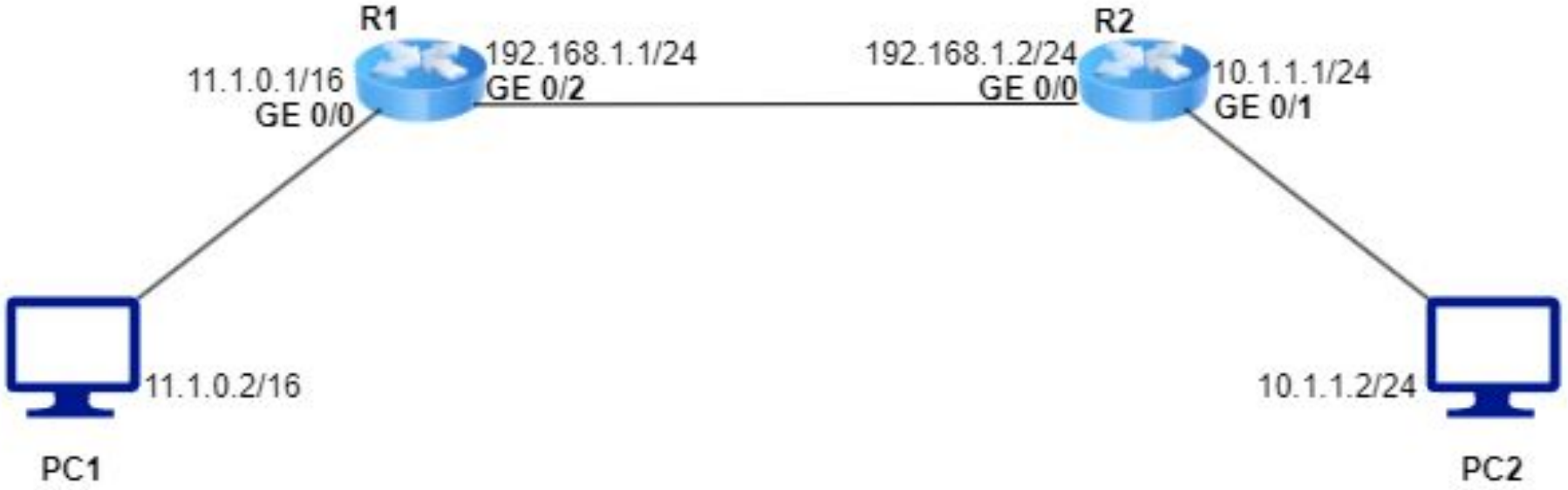
Demo - Network Setup and Route Configuration in Router

Network Setup -



Network Setup - (Contd.)

- 2 Cisco Routers (Model 2900), 3 LAN cables, 1 Console cable(serial to USB) and 3 generic PCs (1 to connect to console port for router configuration).
- Connect one LAN cable from PC1 to GE 0/0 of R1.
- Similarly connect another LAN cable from PC2 to GE 0/1 of R2.
- Connect GE 0/2 of R1 with GE 0/0 of R2 using the third LAN.

Network Setup -

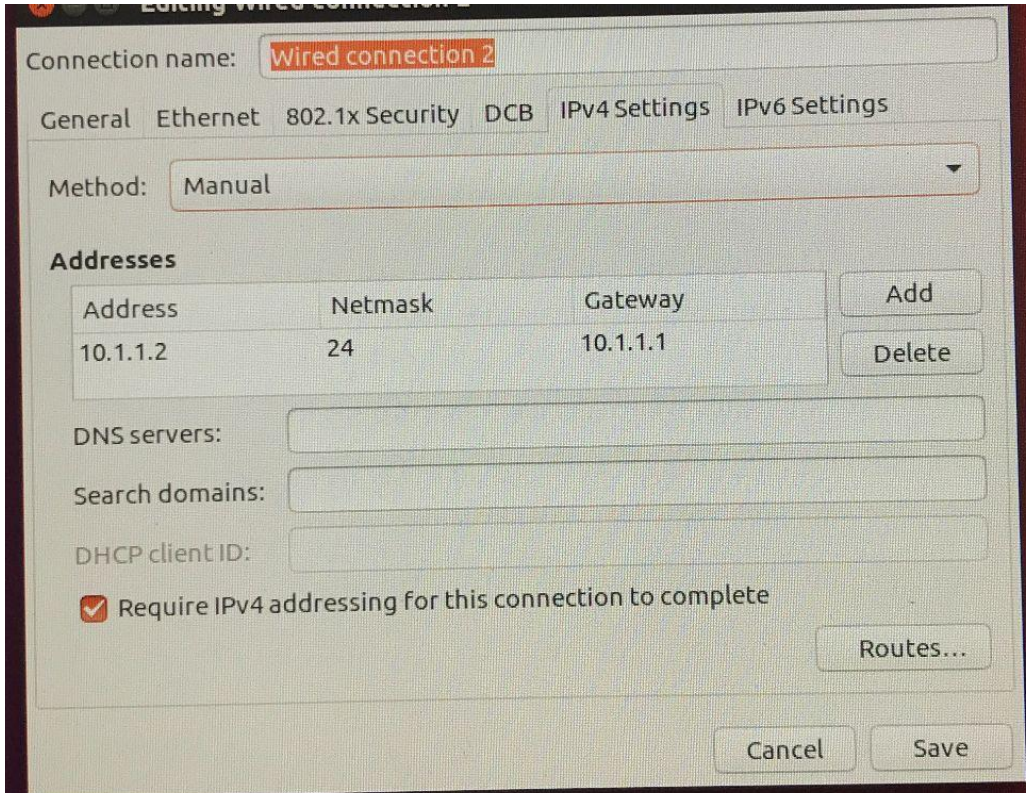
Distribution of IP across respective interfaces -

Devices	IP	Subnet Mask	Gateway	Interfaces
PC1	11.1.0.2	255.255.0.0	11.1.0.1	Ethernet
PC2	10.1.1.2	255.255.255.0	10.1.1.1	Ethernet
Router (R1)	11.1.0.1	255.255.0.0		GE 0/0
Router (R1)	192.168.1.1	255.255.255.0		GE 0/2
Router (R2)	10.1.1.1	255.255.255.0		GE 0/1
Router (R2)	192.168.1.2	255.255.255.0		GE 0/0

Static IP allocation - (for PC1 & PC2)

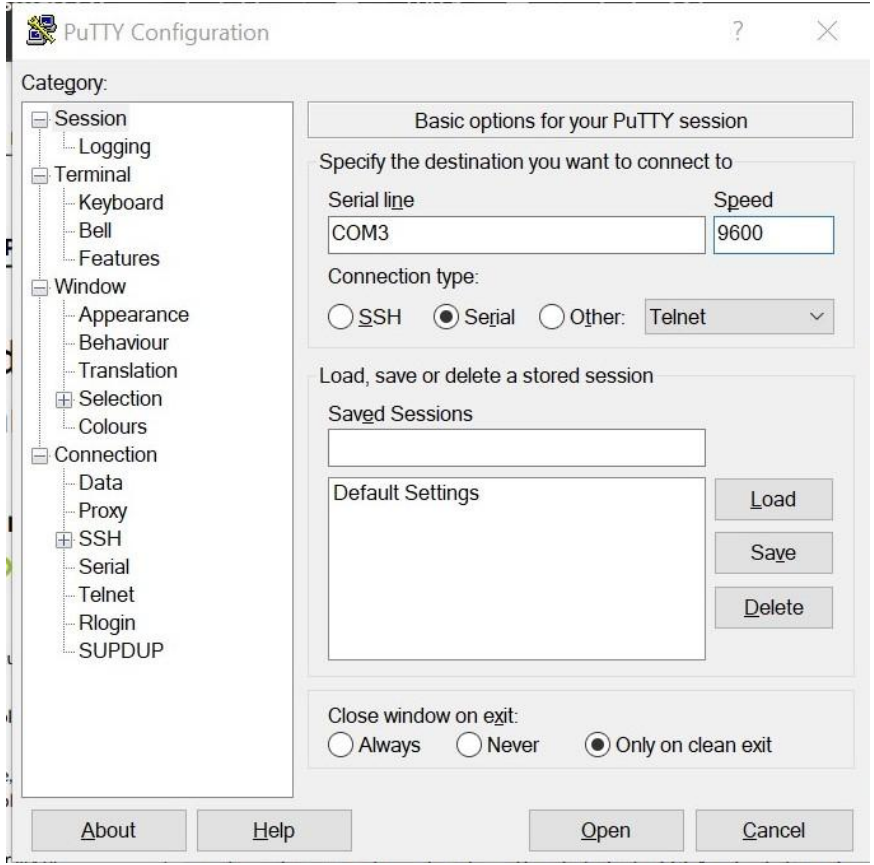
PC1

PC2



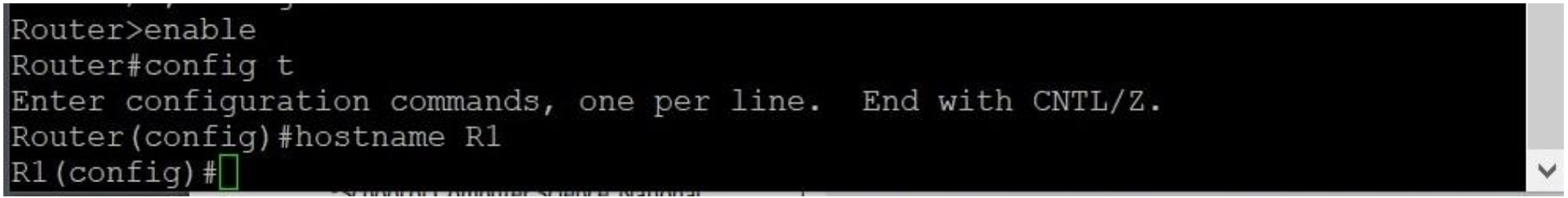
Router Configuration (For R1) -

Configure PuTTY -



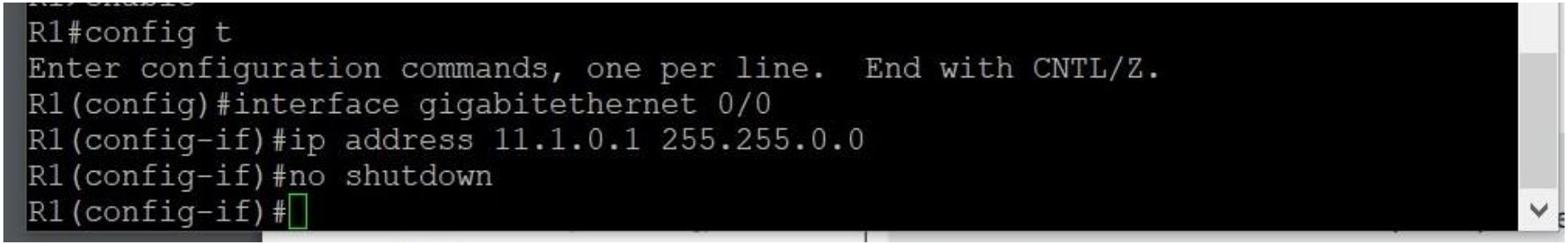
Router Configuration (For R1) -

Set Router Name-



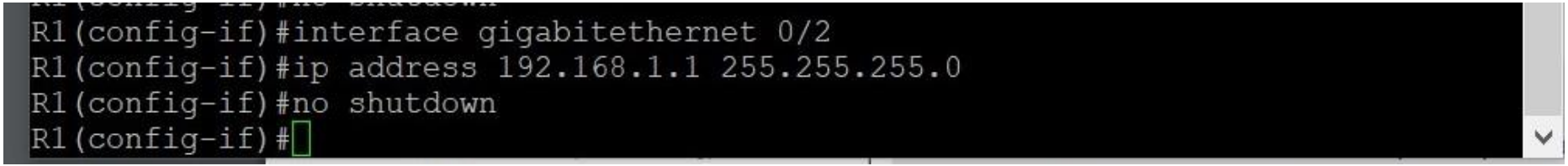
Router Configuration (For R1) -

Assign IP address to interface GE 0/0



Router Configuration (For R1) -

Assign IP address to interface GE 0/2

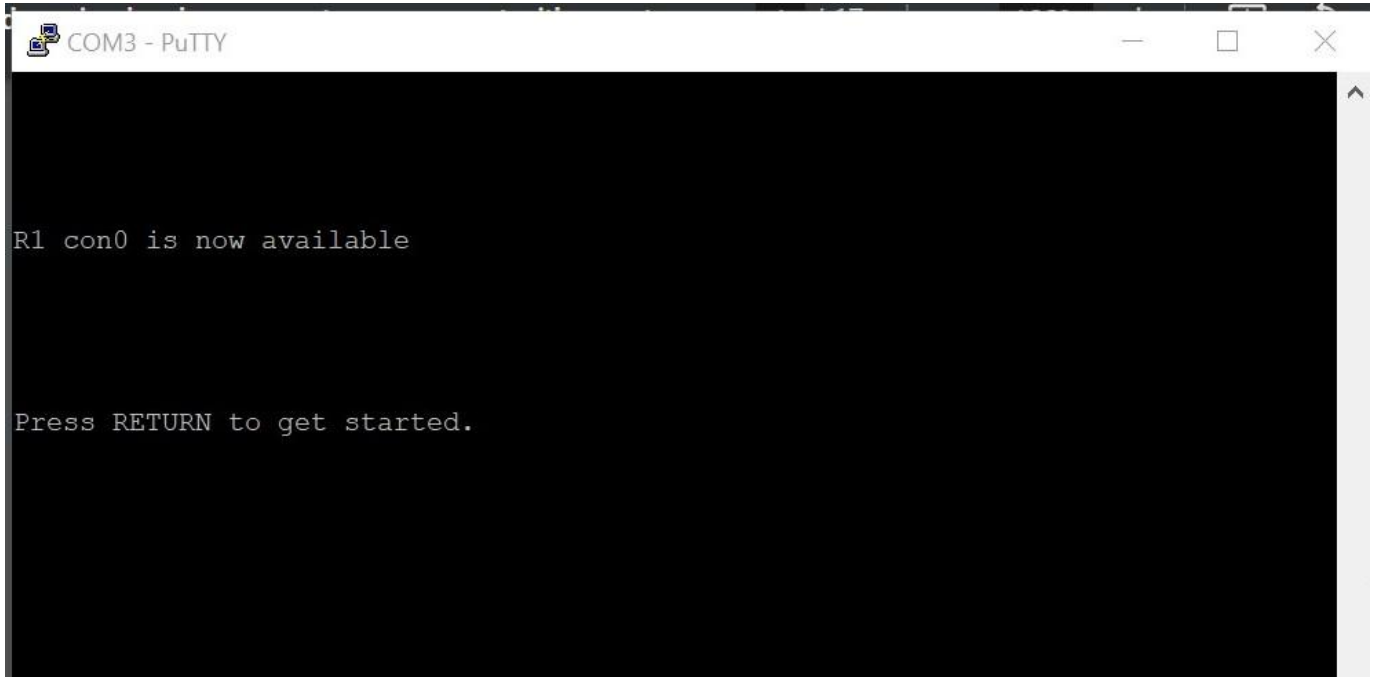


Router Configuration (For R1) -

Set static IP Route -

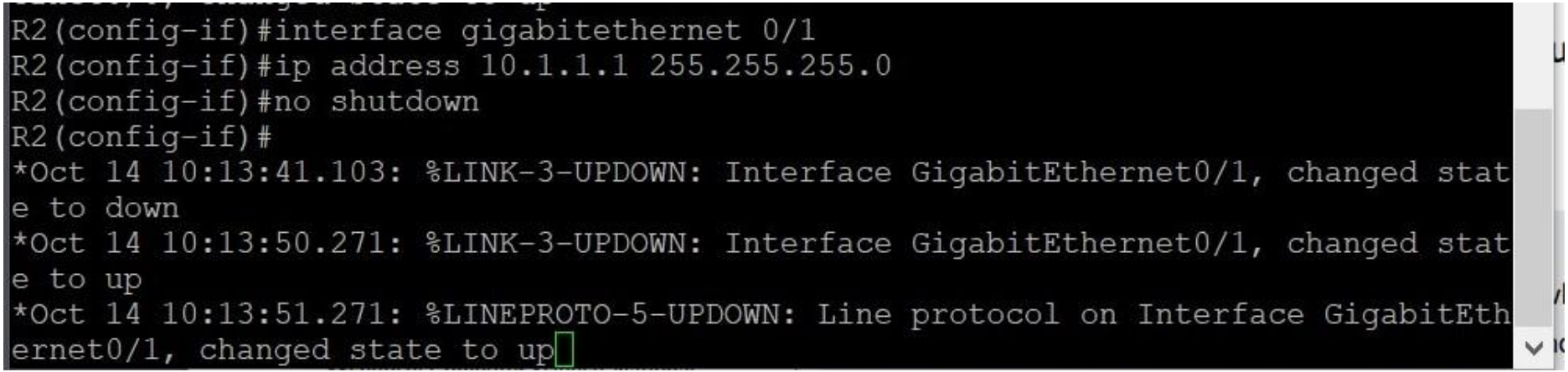
Router Configuration (For R1) -

Switch from the Configuration mode and move to user mode using exit command



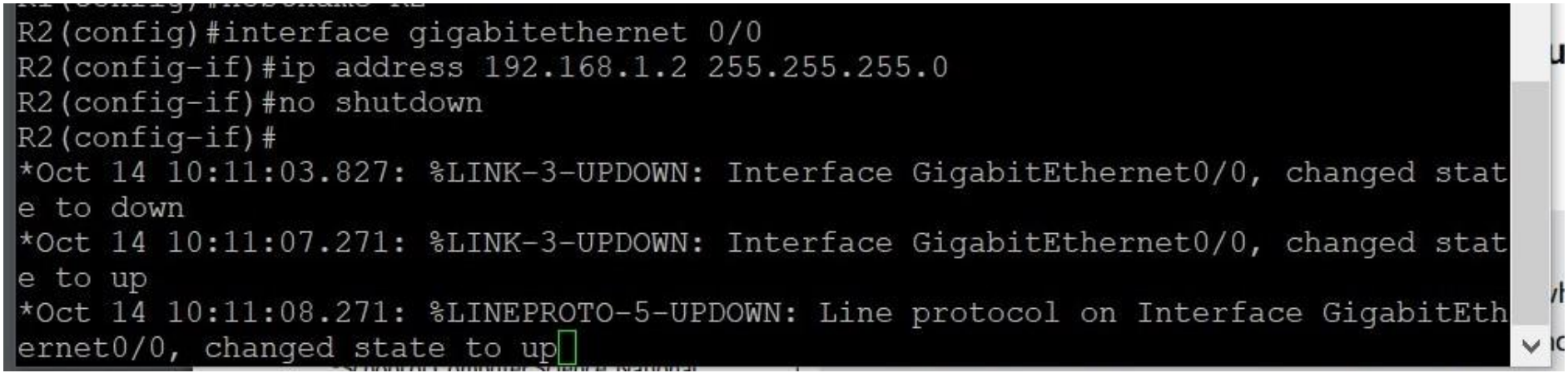
Router Configuration (For R2) -

Plug in the console cable to Router R2 and assign IP address to interface GE 0/1



Router Configuration (For R2) -

Assign IP address to interface GE 0/0



Router Configuration (For R2) -

Set static IP route -

Testing-

```
C:\WINDOWS\system32>ping 10.1.1.2

Pinging 10.1.1.2 with 32 bytes of data:
Reply from 10.1.1.2: bytes=32 time=1ms TTL=62
Reply from 10.1.1.2: bytes=32 time=1ms TTL=62
Reply from 10.1.1.2: bytes=32 time=1ms TTL=62
Reply from 10.1.1.2: bytes=32 time=1ms TTL=62

Ping statistics for 10.1.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\WINDOWS\system32>
```

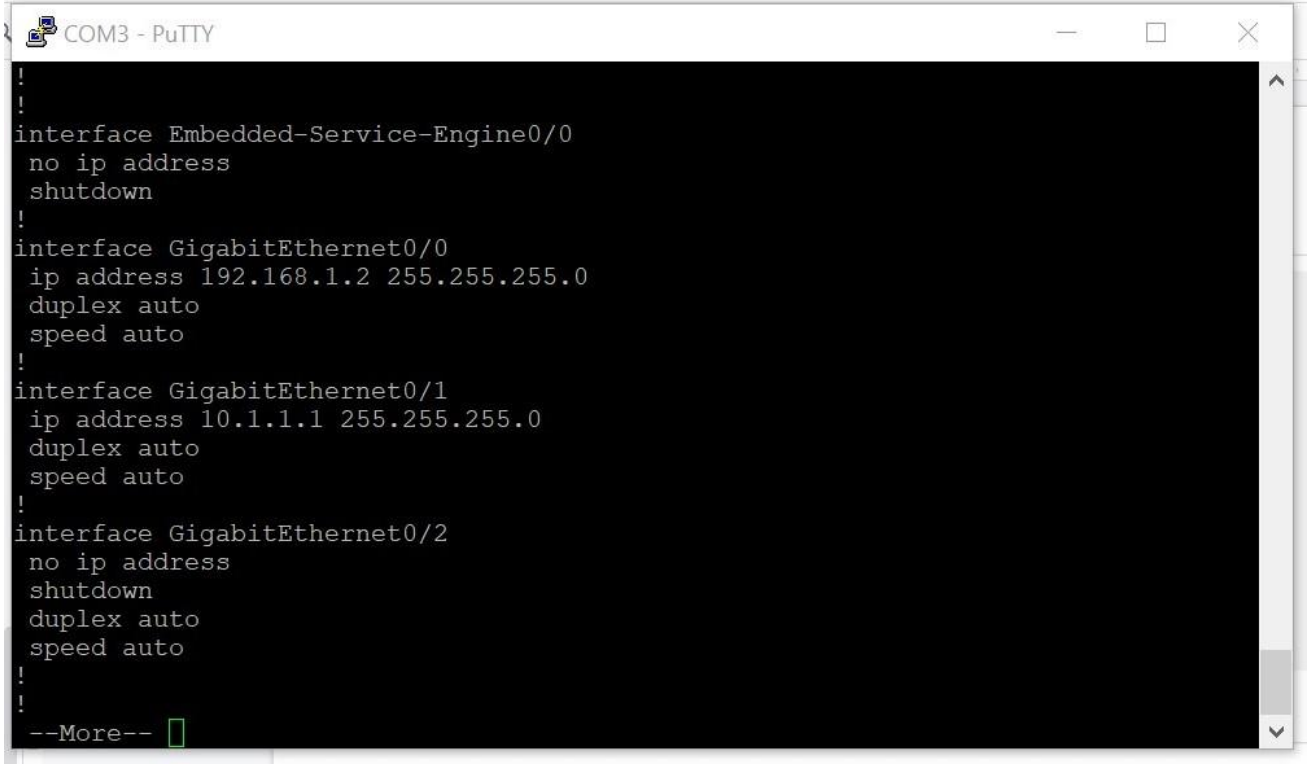
```
oem@dell-desktop:~$ ping 11.1.0.2
PING 11.1.0.2 (11.1.0.2) 56(84) bytes of data.
64 bytes from 11.1.0.2: icmp_seq=1 ttl=126 time=1.37 ms
64 bytes from 11.1.0.2: icmp_seq=2 ttl=126 time=1.79 ms
64 bytes from 11.1.0.2: icmp_seq=3 ttl=126 time=1.63 ms
64 bytes from 11.1.0.2: icmp_seq=4 ttl=126 time=1.46 ms
64 bytes from 11.1.0.2: icmp_seq=5 ttl=126 time=1.22 ms
64 bytes from 11.1.0.2: icmp_seq=6 ttl=126 time=1.32 ms
64 bytes from 11.1.0.2: icmp_seq=7 ttl=126 time=1.63 ms
64 bytes from 11.1.0.2: icmp_seq=8 ttl=126 time=1.10 ms
64 bytes from 11.1.0.2: icmp_seq=9 ttl=126 time=2.51 ms
64 bytes from 11.1.0.2: icmp_seq=10 ttl=126 time=2.41 ms
64 bytes from 11.1.0.2: icmp_seq=11 ttl=126 time=2.67 ms
64 bytes from 11.1.0.2: icmp_seq=12 ttl=126 time=2.15 ms
64 bytes from 11.1.0.2: icmp_seq=13 ttl=126 time=2.15 ms
^C
--- 11.1.0.2 ping statistics ---
13 packets transmitted, 13 received, 0% packet loss, time 12022ms
rtt min/avg/max/mdev = 1.101/1.804/2.677/0.504 ms
oem@dell-desktop:~$
```

Testing(Trace Route)

```
C:\WINDOWS\system32>tracert 10.1.1.2

Tracing route to 10.1.1.2 over a maximum of 30 hops

  1     1 ms    <1 ms    <1 ms  11.1.0.1
  2     1 ms    <1 ms    <1 ms  192.168.1.2
  3     2 ms     2 ms     1 ms  10.1.1.2

Trace complete.

C:\WINDOWS\system32>
```

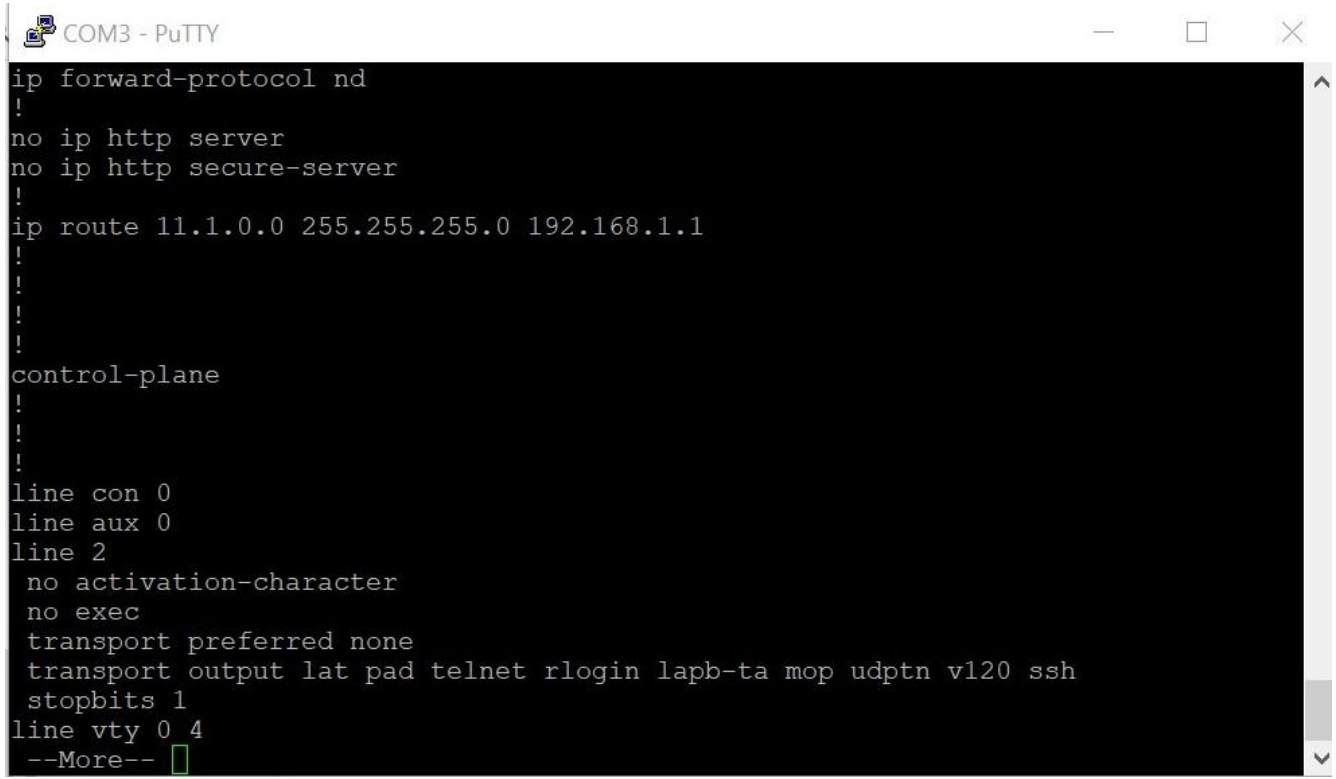
Testing (Check router configuration using ‘sh run’ command)

For IP -



Testing (Check router configuration)

For static Route -



Thank you