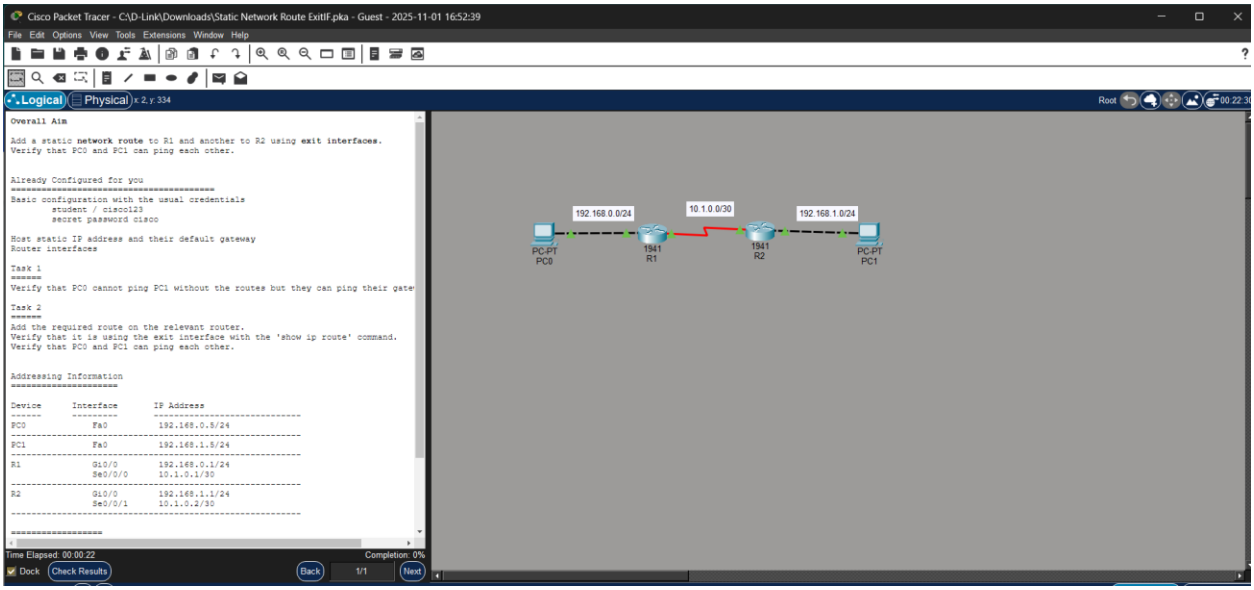
Assignment 8:

Introduction

In this assignment, you will:

1. Add a static network route to R1 and another to R2 using exit interfaces.
2. Verify that PC0 and PC1 can ping each other.

Already Configured for you:



- Basic configuration with the usual credentials
    - student / cisco123
    - secret password cisco
- Host static IP address and their default gateway
- Router interfaces

Instructions

Complete the following tasks:

1. Task 1

    1. Verify that PC0 cannot ping PC1 without the routes but they can ping their gateways.

2. Task 2

    1. Add the required route on the relevant router.
    2. Verify that it is using the exit interface with the 'show ip route' command.
    3. Verify that PC0 and PC1 can ping each other.

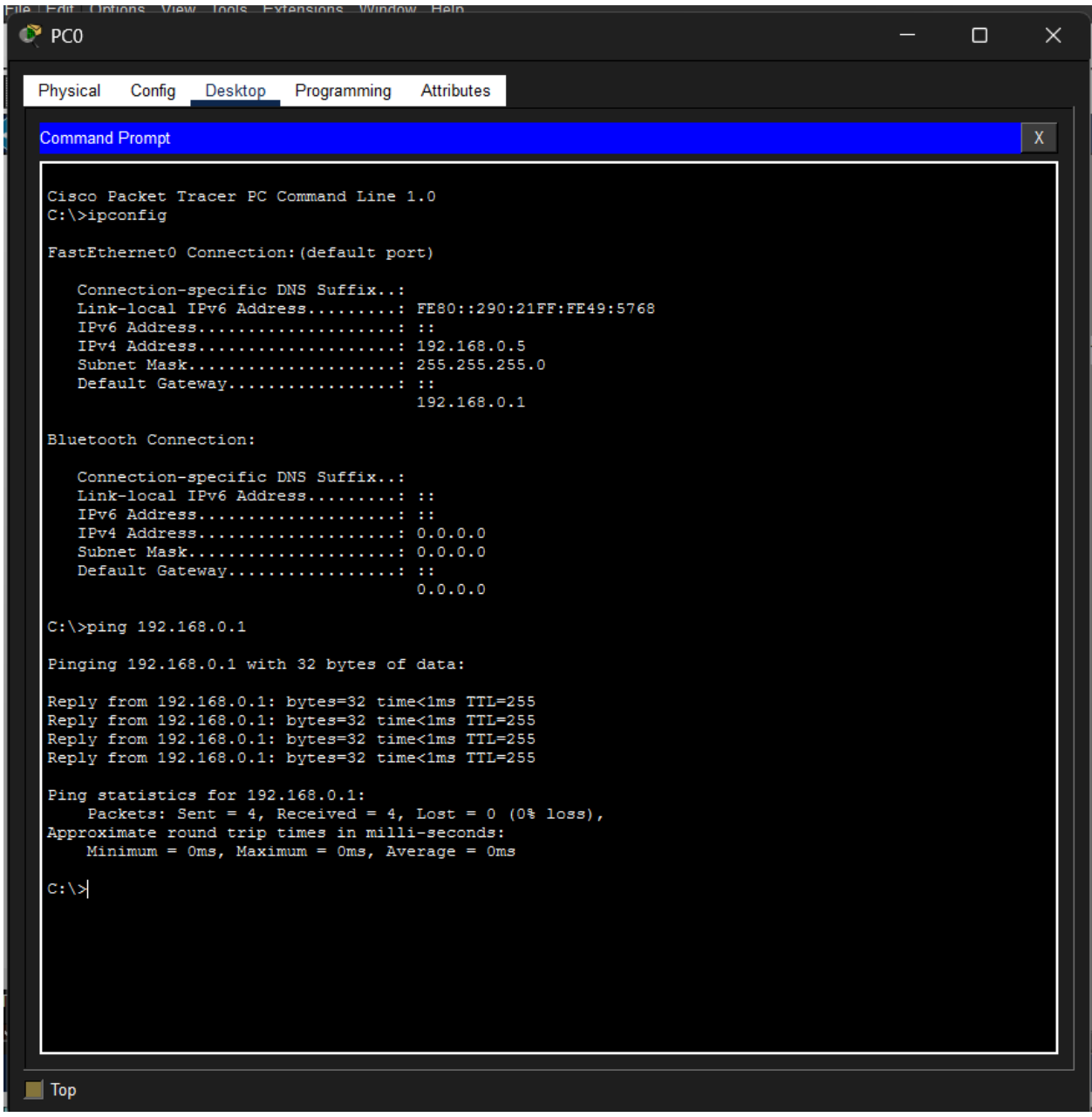
Addressing Information:

Addressing Information:

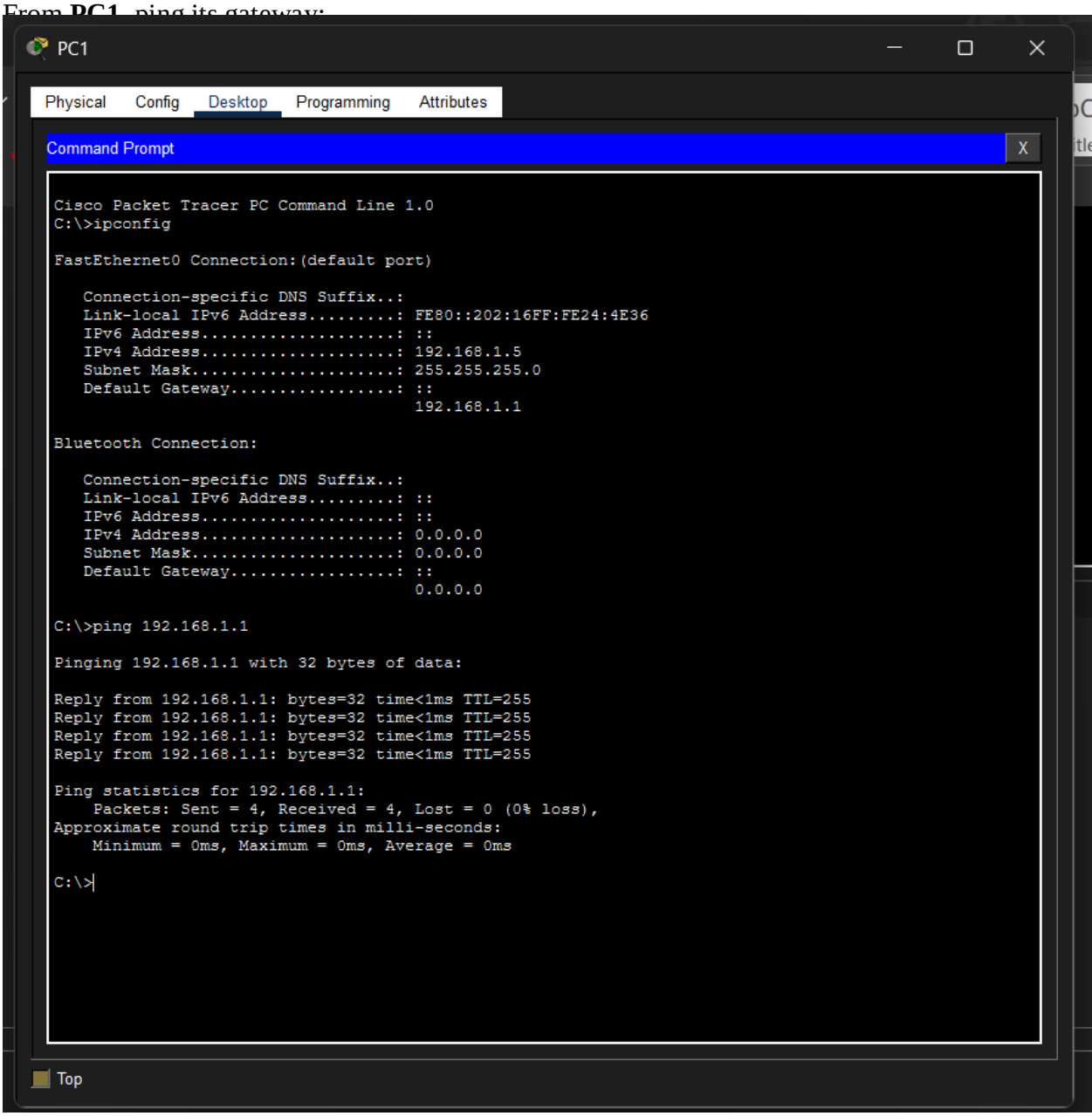
Device	Interface	IP Address
PC0	Fa0	192.168.0.5/24
PC1	Fa0	192.168.1.5/24
R1	Gi0/0	192.168.0.1/24
	Se0/0/0	10.1.0.1/30
R2	Gi0/0	192.168.1.1/24
	Se0/0/1	10.1.0.2/30

TASK 1: Verify initial connectivity.

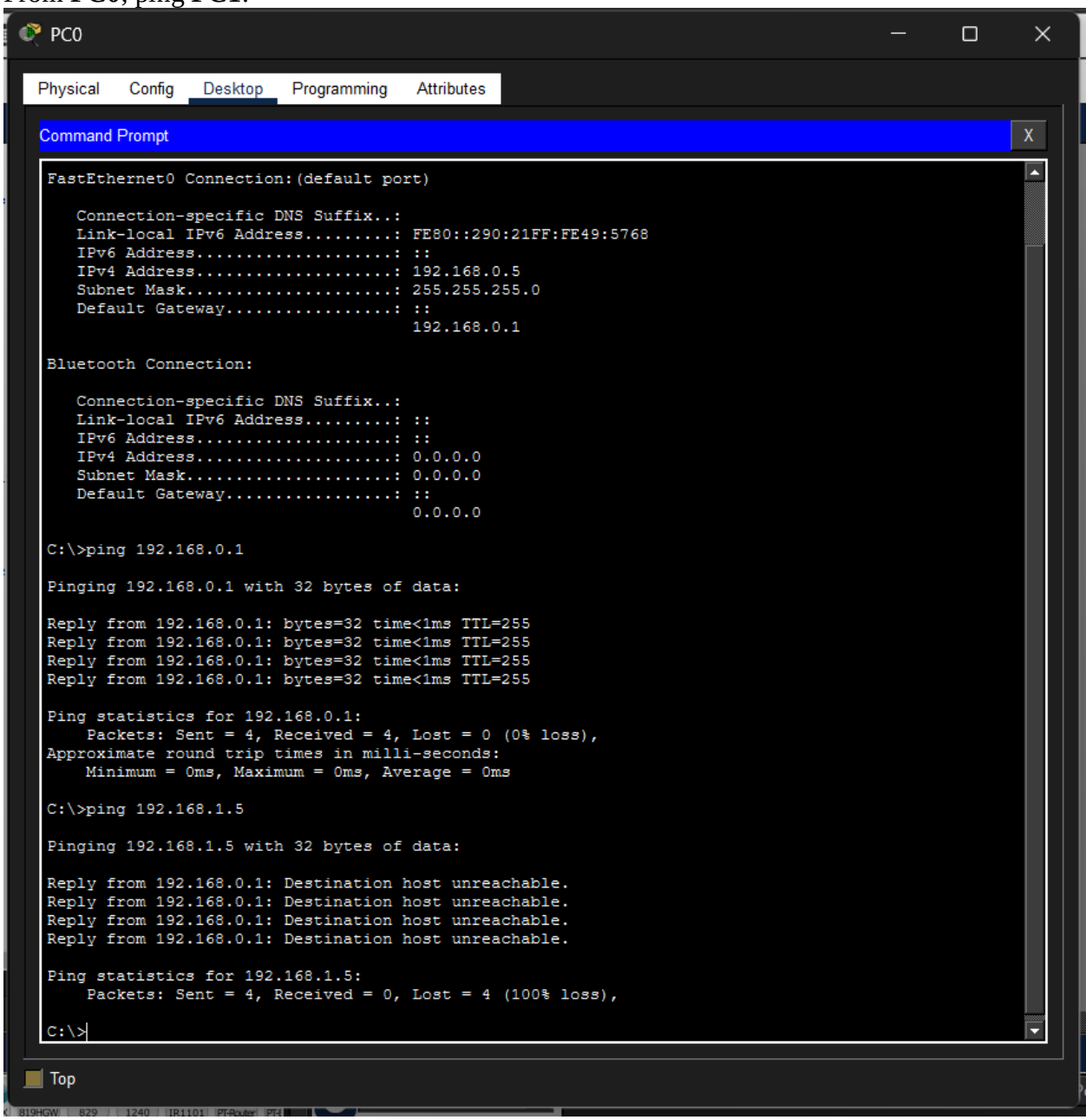
1) From **PC0**, ping its gateway:



2) From **PC1**, ping its gateway:

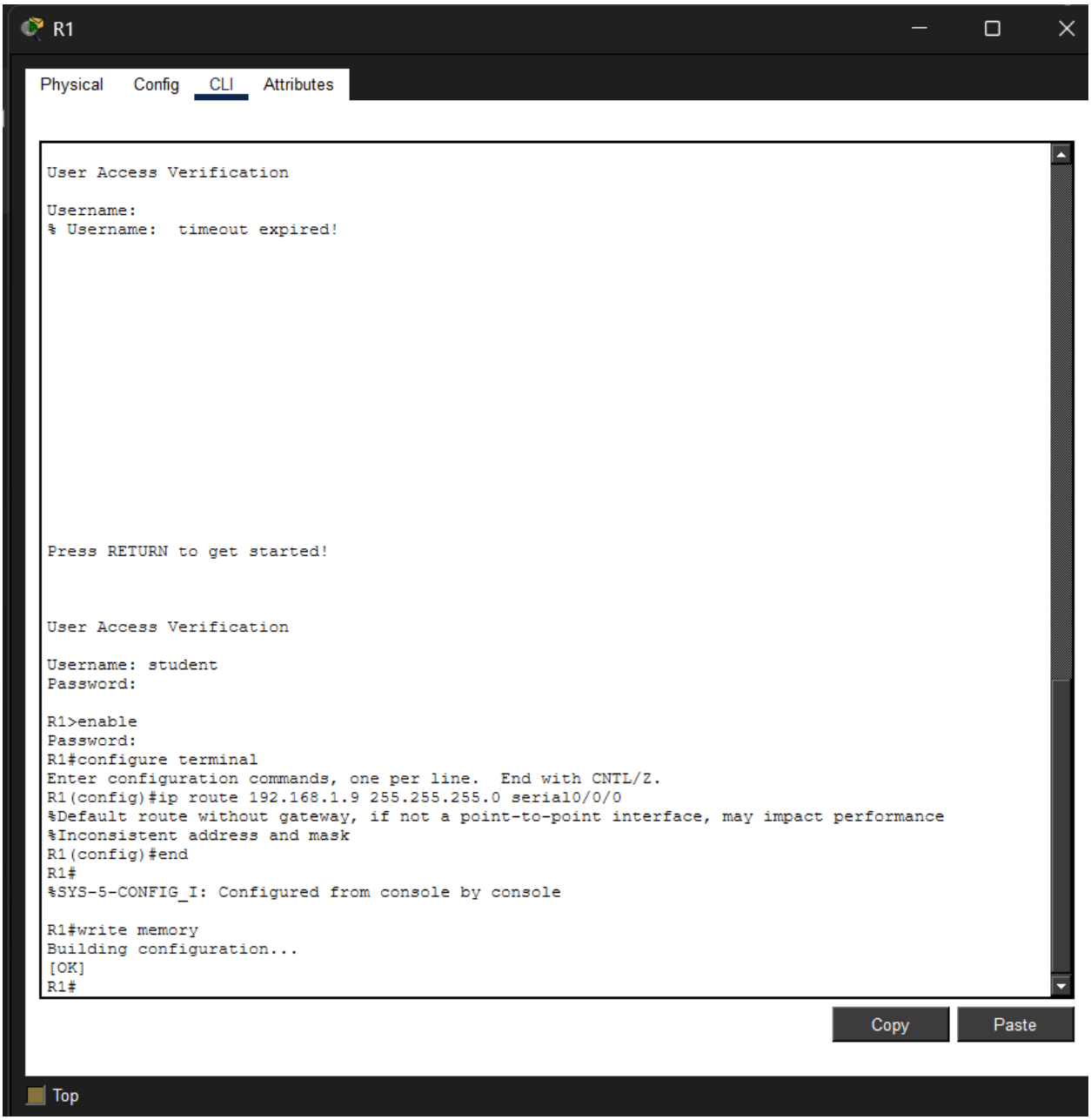


3) From **PC0**, ping **PC1**:

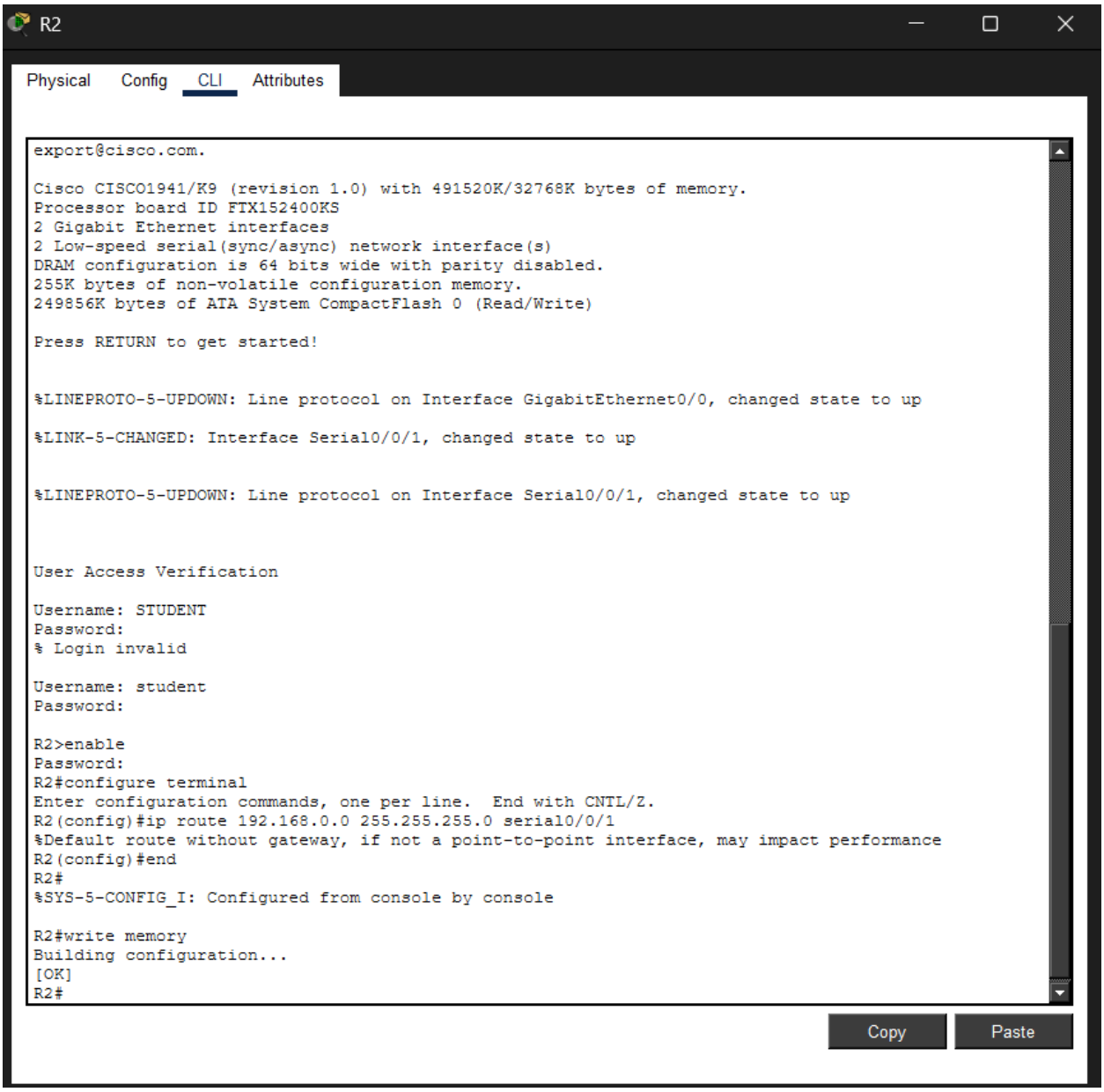


Failed!

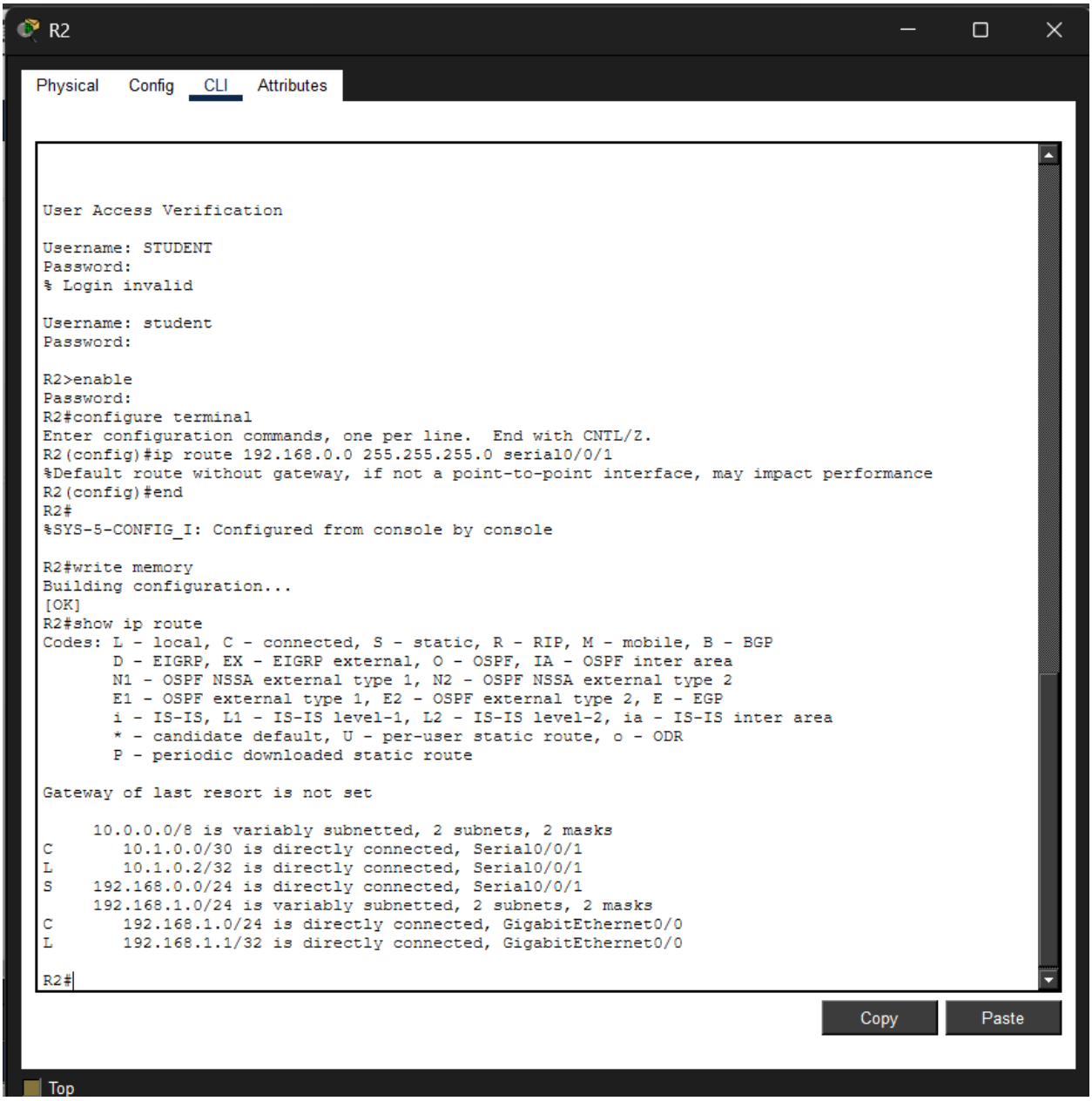
TASK 2: – Add static routes using **exit interfaces.**
We must tell each router how to reach the *remote LAN* via the *point-to-point interface*.
On R1:



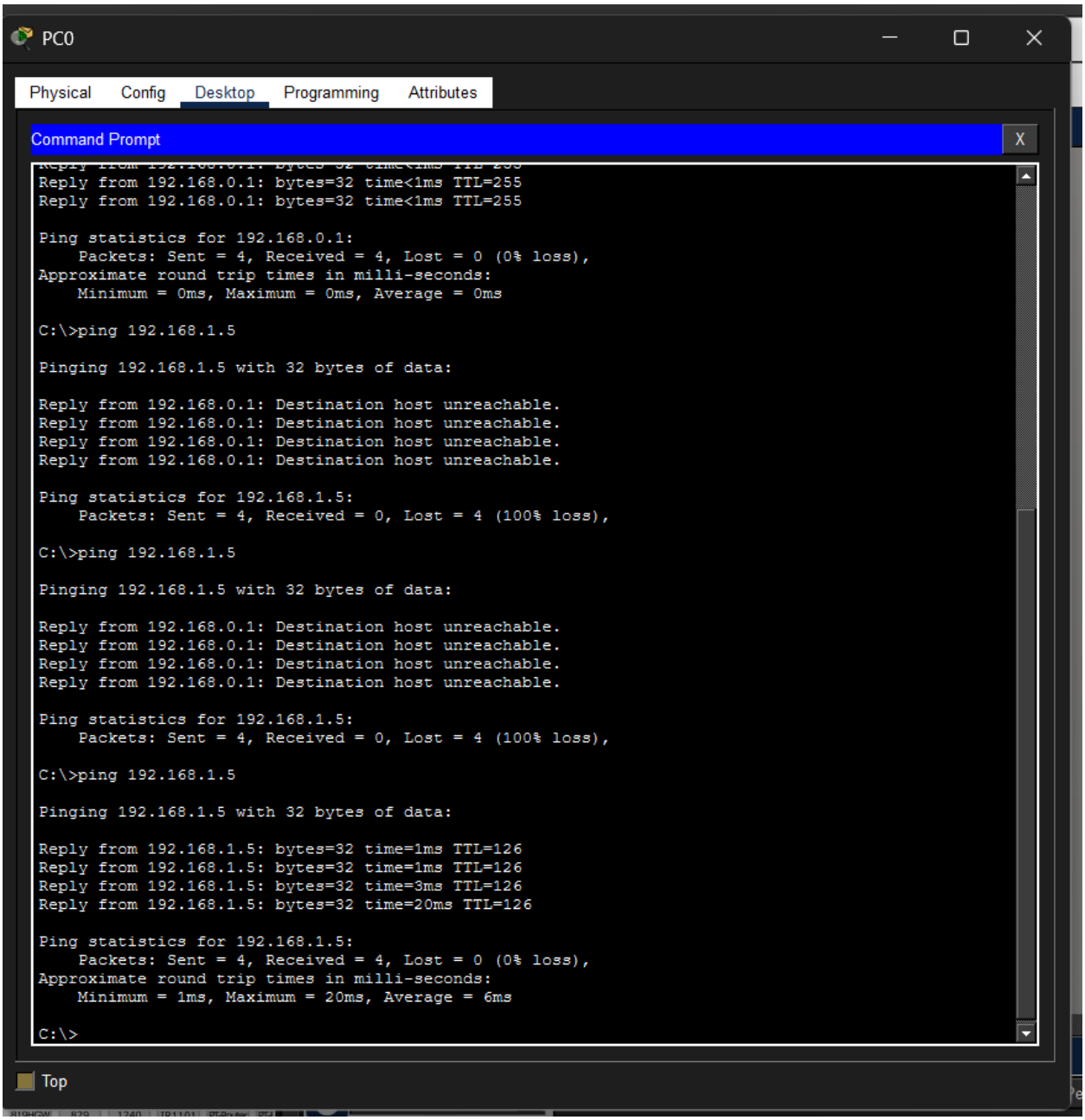
On R2:


R2
Physical
Config
CLI
Attributes
export@cisco.com.
Cisco CISCO1941/K9 (revision 1.0) with 491520K/32768K bytes of memory.
Processor board ID FTX152400KS
2 Gigabit Ethernet interfaces
2 Low-speed serial(sync/async) network interface(s)
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)
Press RETURN to get started!
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to up
User Access Verification
Username: STUDENT
Password:
% Login invalid
Username: student
Password:
R2>enable
Password:
R2#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#ip route 192.168.0.0 255.255.255.0 serial0/0/1
%Default route without gateway, if not a point-to-point interface, may impact performance
R2(config)#end
R2#
%SYS-5-CONFIG_I: Configured from console by console
R2#write memory
Building configuration...
[OK]
R2#
Copy
Paste

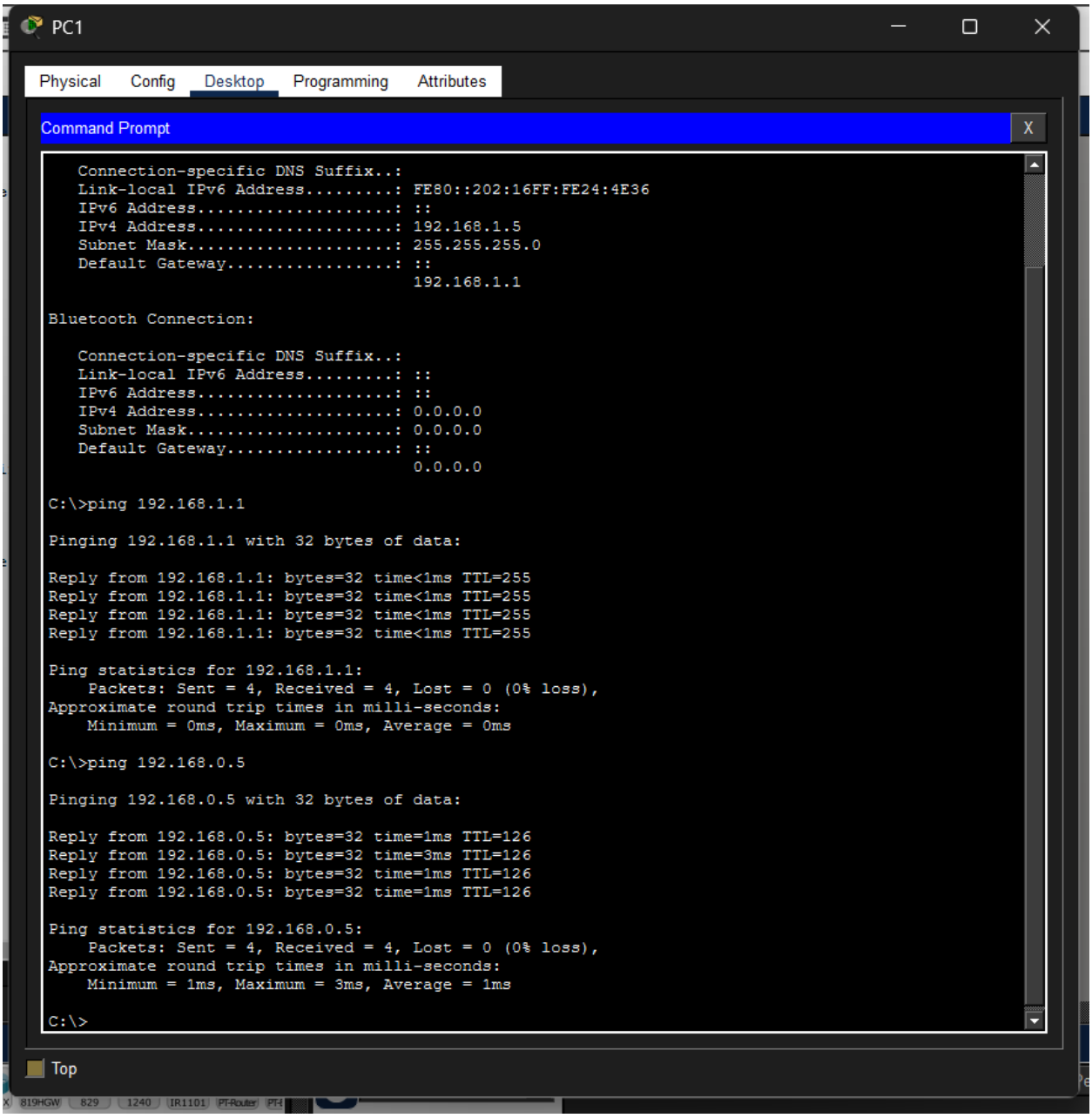
VERIFICATIONS: On both routers.


R2
Physical
Config
CLI
Attributes
User Access Verification
Username: STUDENT
Password:
% Login invalid
Username: student
Password:
R2>enable
Password:
R2#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
R2(config)#ip route 192.168.0.0 255.255.255.0 serial0/0/1
%Default route without gateway, if not a point-to-point interface, may impact performance
R2(config)#end
R2#
%SYS-5-CONFIG_I: Configured from console by console
R2#write memory
Building configuration...
[OK]
R2#show ip route
Codes: L - local, C - connected, S - static, 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
10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 10.1.0.0/30 is directly connected, Serial0/0/1
L 10.1.0.2/32 is directly connected, Serial0/0/1
S 192.168.0.0/24 is directly connected, Serial0/0/1
192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.1.0/24 is directly connected, GigabitEthernet0/0
L 192.168.1.1/32 is directly connected, GigabitEthernet0/0
R2#
Copy
Paste
Top

From PC0 ping PC1:



From PC1 ping PC0:



100% Completion of pka: