Lab 9 Practice

Task 1

a. Crossover cable

b. Straight-through cable

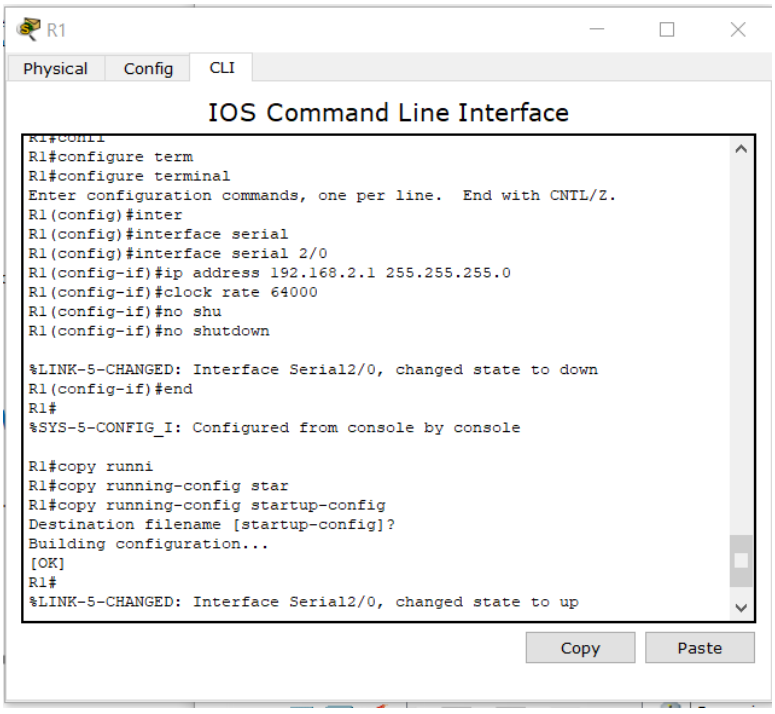
c. Straight-through cable

Task 3

a. Switch to Router: Straight-through

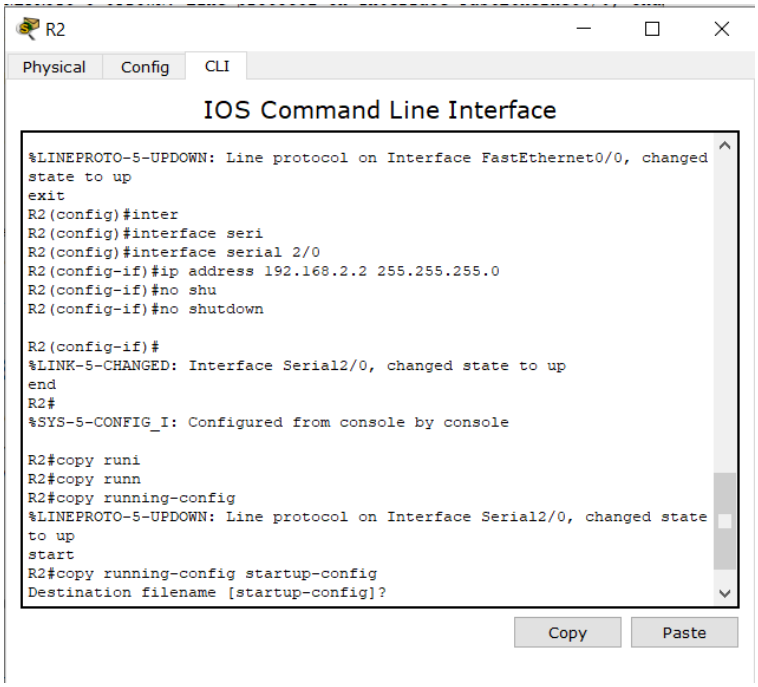
Router to Router: Crossover

```
**********
AUTHORIZED ACCESS ONLY
**********


R1>
```



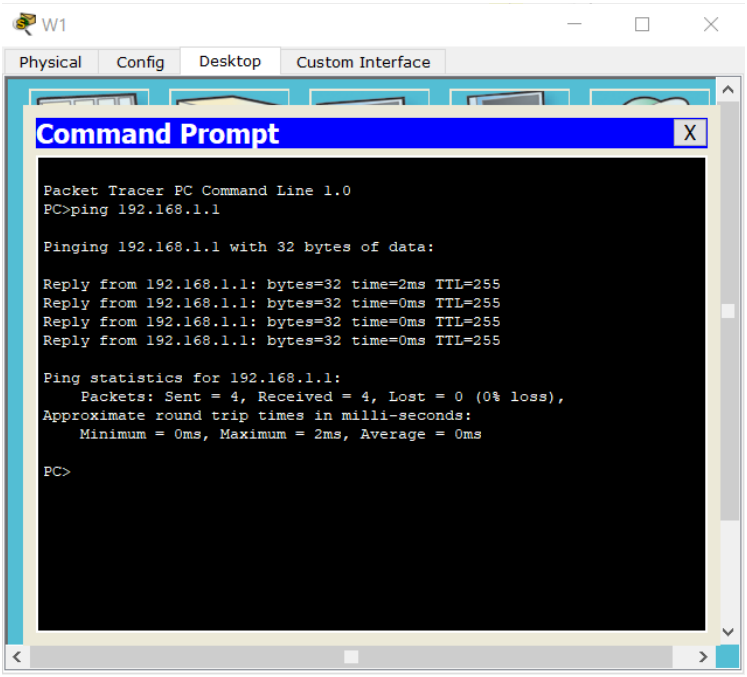
R1 Configuration

Task 4

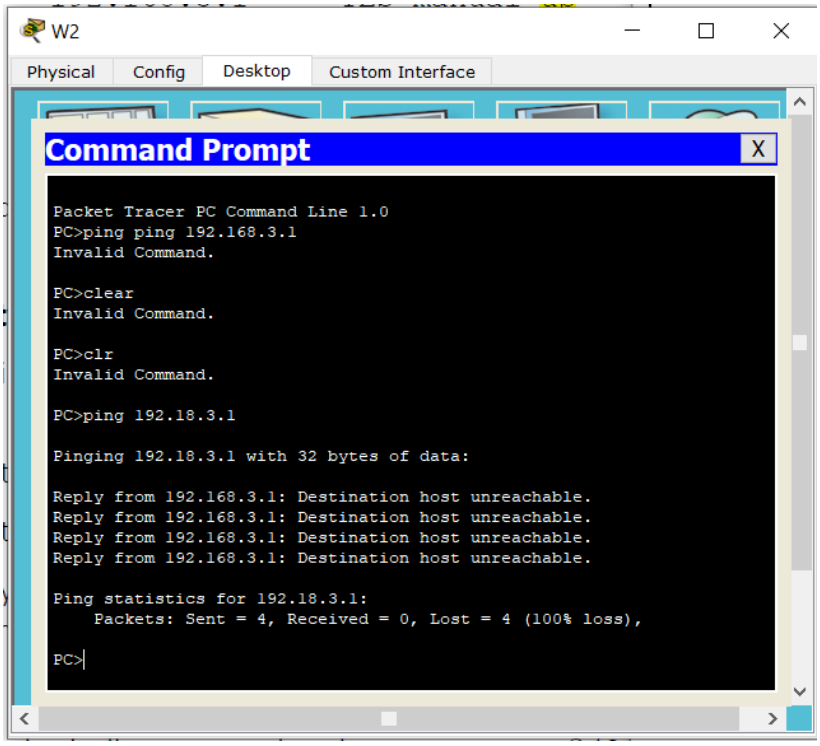


R2 Configuration

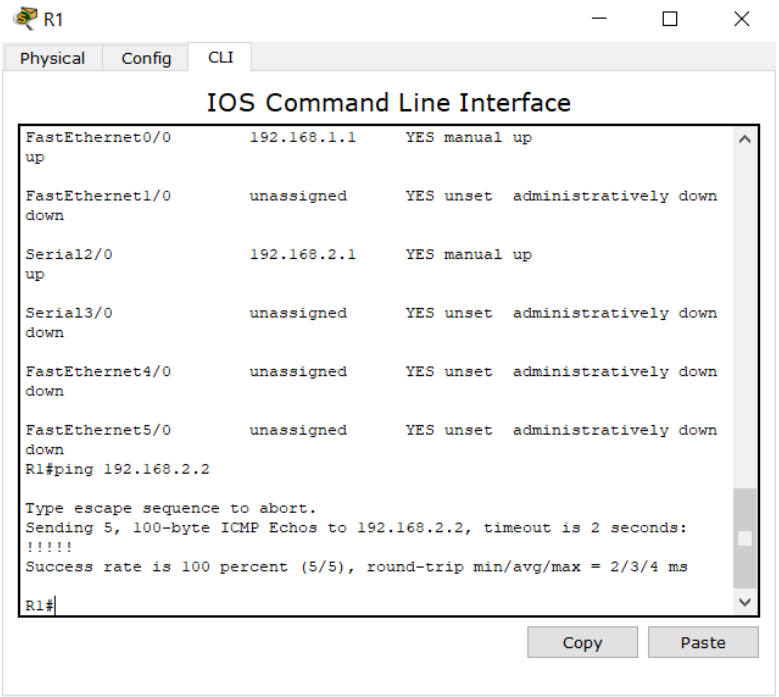
Task 5



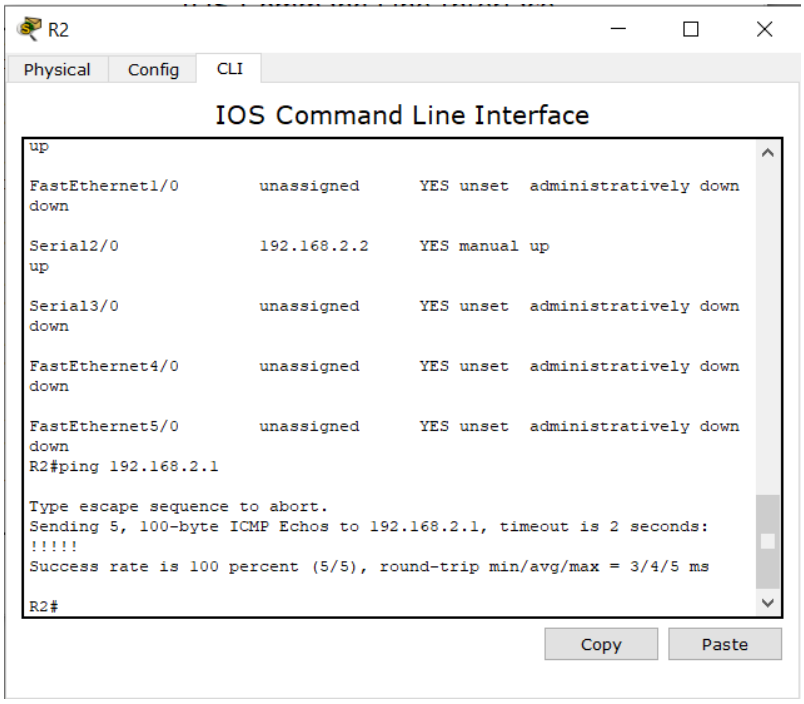
WS1 able to ping gateway 192.168.1.1



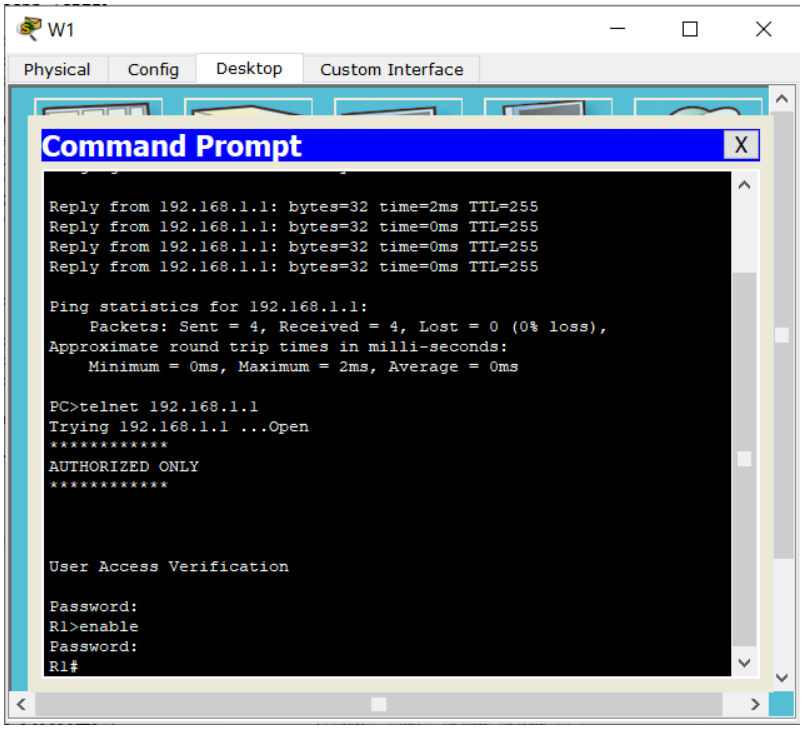
WS2 able to ping gateway 192.168.3.1



R1 able to ping 192.168.2.2



R2 able to ping 192.168.2.1



WS1 using telnet to connect to R1

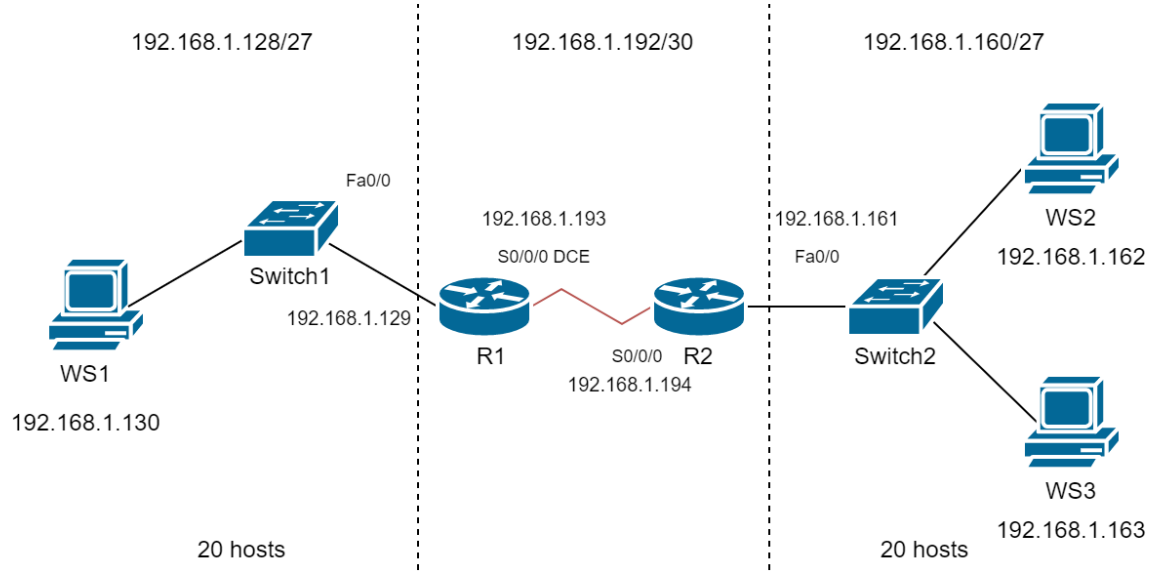
Task 7

a. What is missing from the network that is preventing communication between these devices?

There is no ip route for hosts on different routers to be able to communicate back and forth. R1 does not know how to return packet to host on R2, which is the same as R2 which does not know how to return packet to host on R1.

Lab 9 Exercise

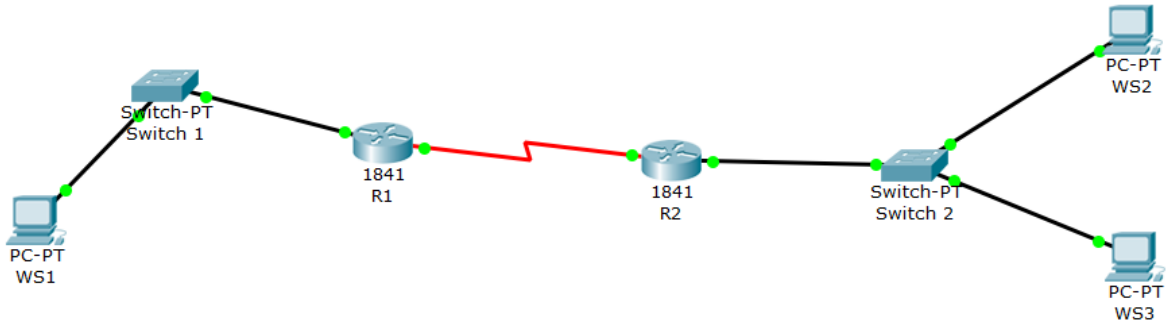
Topology diagram



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
Router 1	Fa0/0	192.168.1.129	255.255.255.224/27	N/A
	S0/0/0	192.168.1.193	255.255.255.252/30	N/A
Router 2	Fa0/0	192.168.1.161	255.255.255.224/27	N/A
	S0/0/0	192.168.1.194	255.255.255.252/30	N/A
WS1	NIC	192.168.1.130	255.255.255.224/27	192.168.1.129
WS2	NIC	192.168.1.162	255.255.255.224/27	192.168.1.161
WS3	NIC	192.168.1.163	255.255.255.224/27	192.168.1.161

Packet Tracer



IP route on Router 1:

```
Gateway of last resort is not set

     192.168.1.0/24 is variably subnetted, 3 subnets, 2 masks
C       192.168.1.128/27 is directly connected, FastEthernet0/0
S       192.168.1.160/27 [1/0] via 192.168.1.194
C       192.168.1.192/30 is directly connected, Serial0/0/0
R1#
```

Interface on Router 1:

```
R1#show ip interface brief
Interface              IP-Address      OK? Method Status
Protocol

FastEthernet0/0        192.168.1.129   YES manual up
up

FastEthernet0/1        unassigned      YES unset  administratively down
down

Serial0/0/0            192.168.1.193   YES manual up
up

Serial0/0/1            unassigned      YES unset  administratively down
down

Vlan1                  unassigned      YES unset  administratively down
down
R1#
```

IP route on Router 2:

```
Gateway of last resort is not set

     192.168.1.0/24 is variably subnetted, 3 subnets, 2 masks
S       192.168.1.128/27 [1/0] via 192.168.1.193
C       192.168.1.160/27 is directly connected, FastEthernet0/0
C       192.168.1.192/30 is directly connected, Serial0/0/0
R2#
```

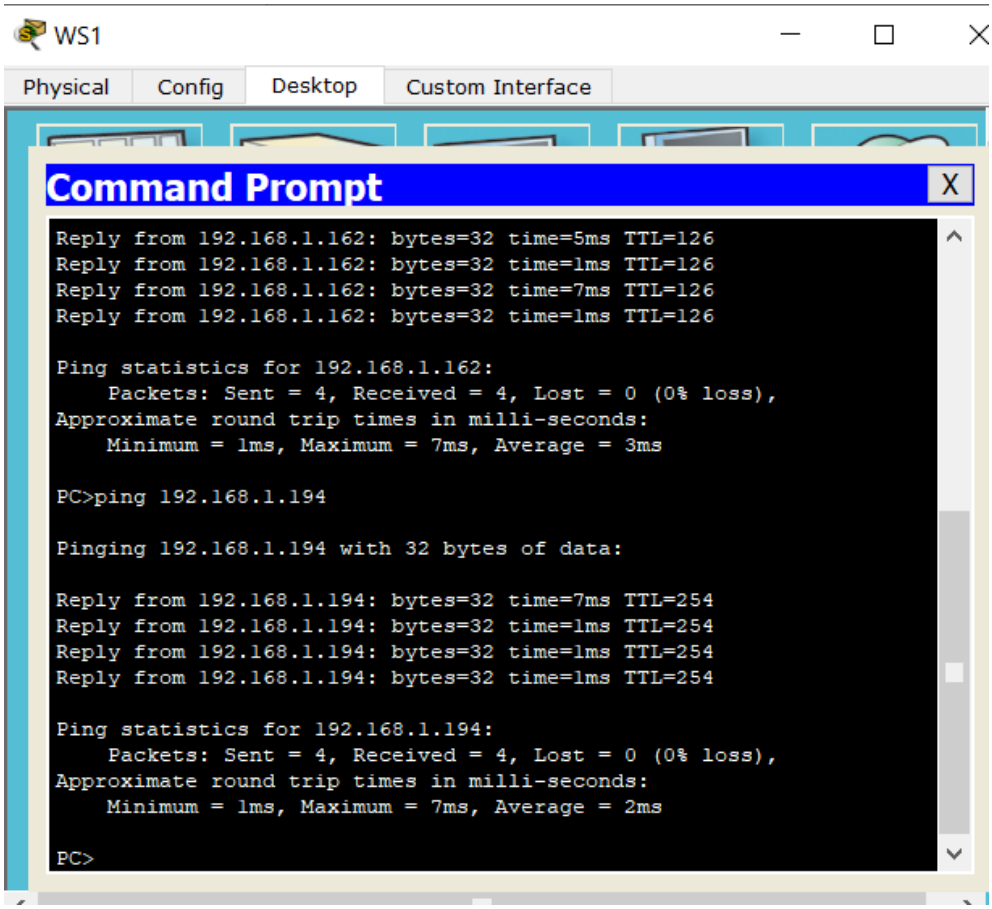
Interface on Router 2:

```
R2#show ip interface brief
Interface              IP-Address      OK? Method Status
Protocol

FastEthernet0/0        192.168.1.161   YES manual up
up

FastEthernet0/1        unassigned      YES unset  administratively down
down

Serial0/0/0            192.168.1.194   YES manual up
up

Serial0/0/1            unassigned      YES unset  administratively down
down

Vlan1                  unassigned      YES unset  administratively down
down
R2#
```

Reflection

All devices are pingable with their corresponding IP

WS1 pinging serial interface on Router 2:



WS2 pinging serial interface on Router 1: