

Lab 9 Practice

Task 1

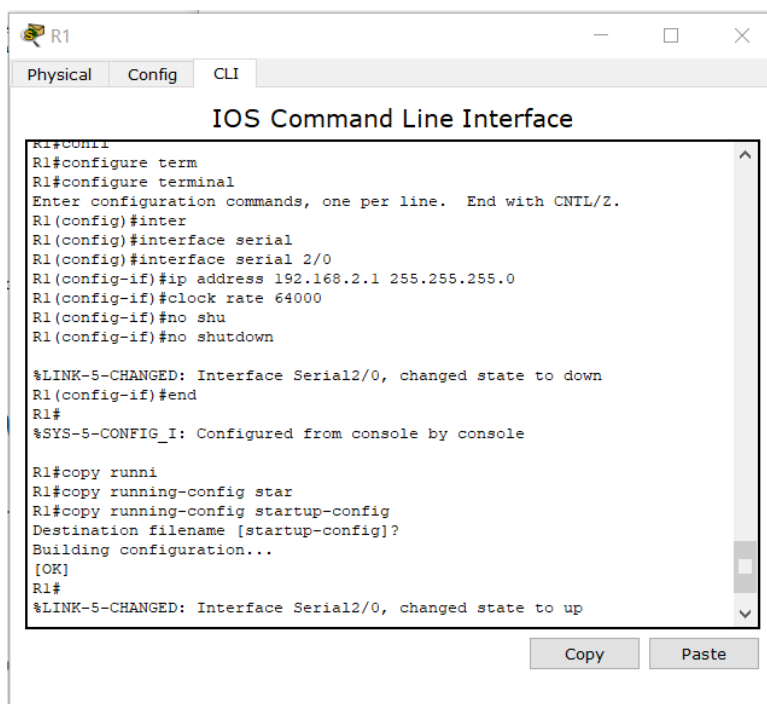
- a. Crossover cable
- b. Straight-through cable
- c. Straight-through cable

Task 3

- a. Switch to Router: Straight-through
Router to Router: Crossover

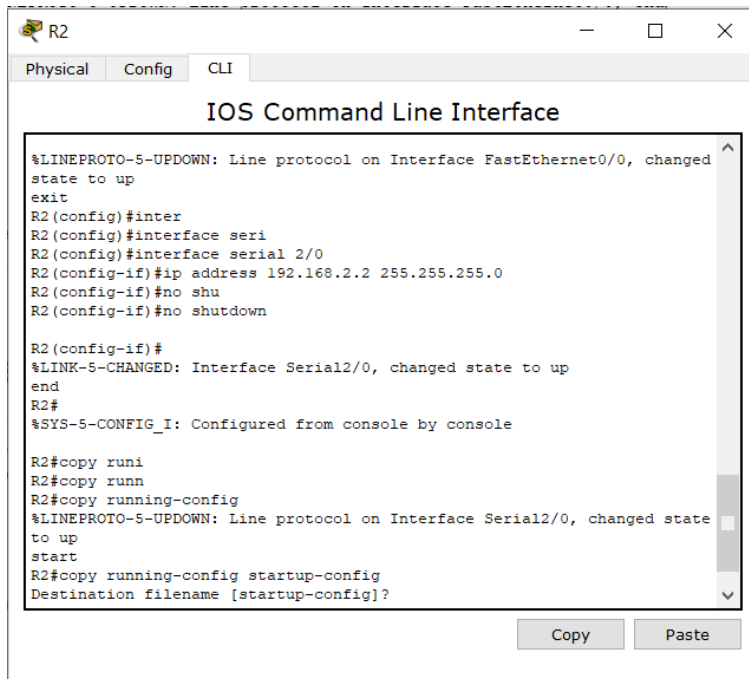
```
*****  
AUTHORIZED ACCESS ONLY  
*****
```

```
R1>
```



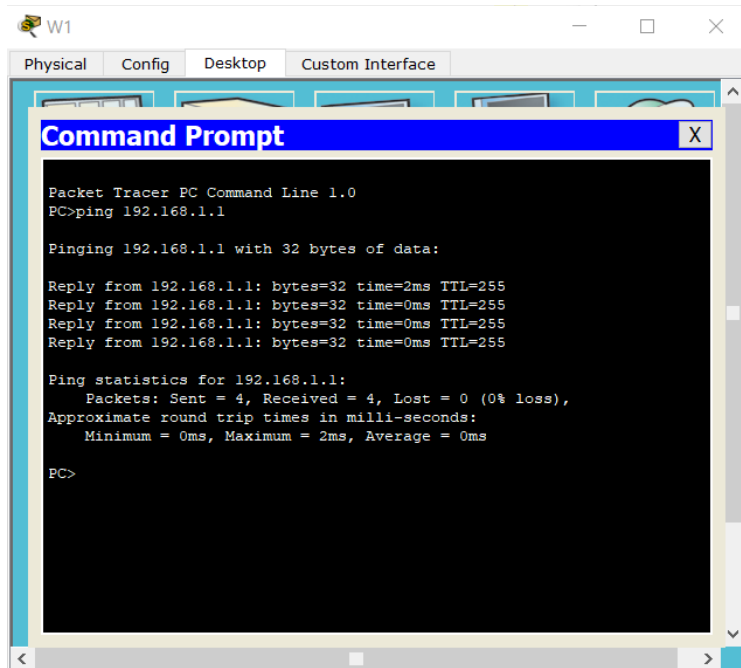
R1 Configuration

Task 4

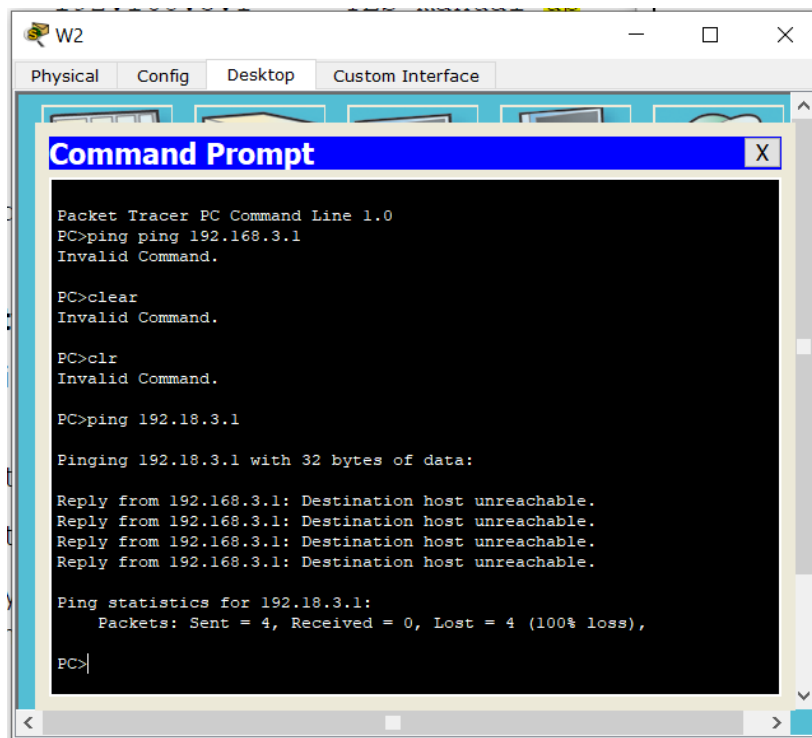


R2 Configuration

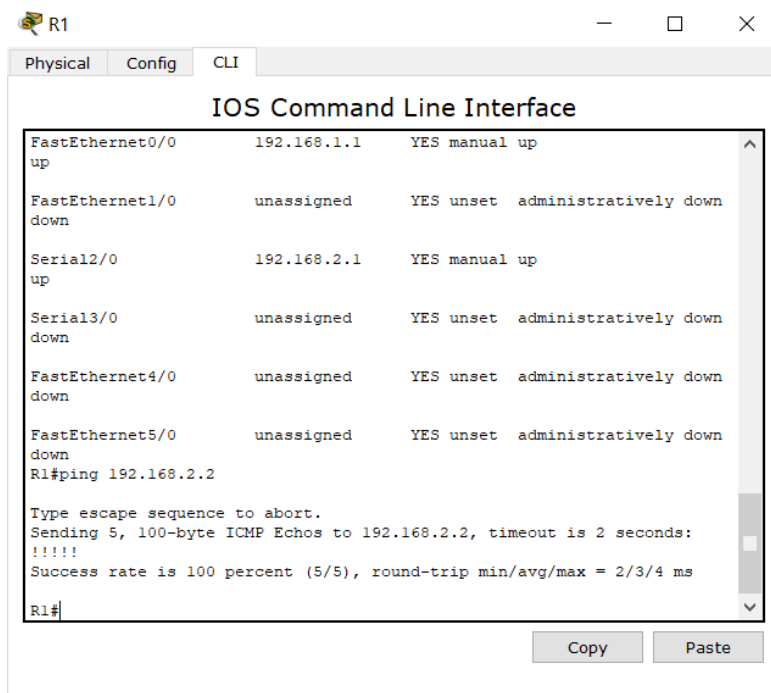
Task 5



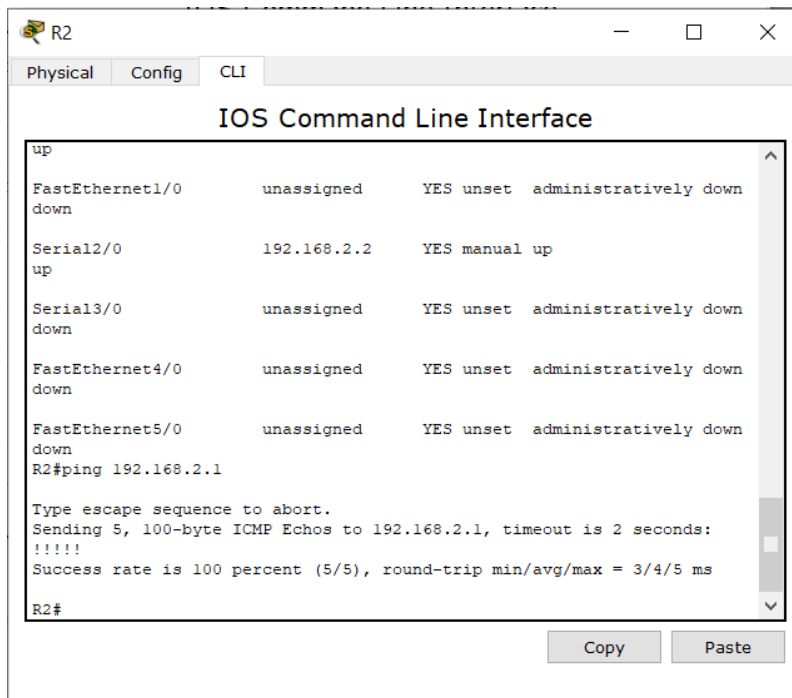
WS1 able to ping gateway 192.168.1.1



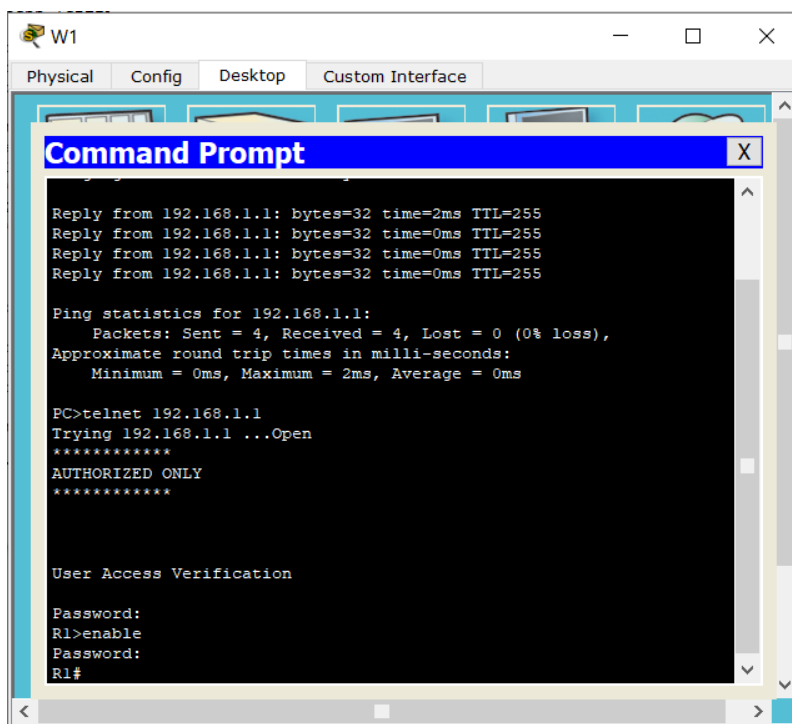
WS2 able to ping gateway 192.168.3.1



R1 able to ping 192.168.2.2



R2 able to ping 192.168.2.1



WS1 using telnet to connect to R1

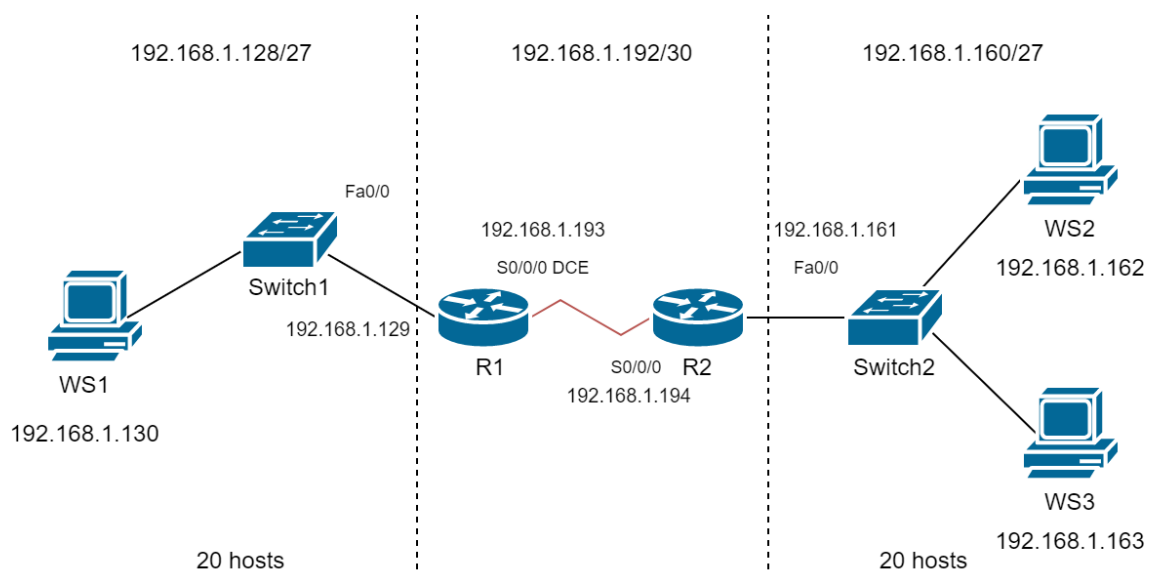
Task 7

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

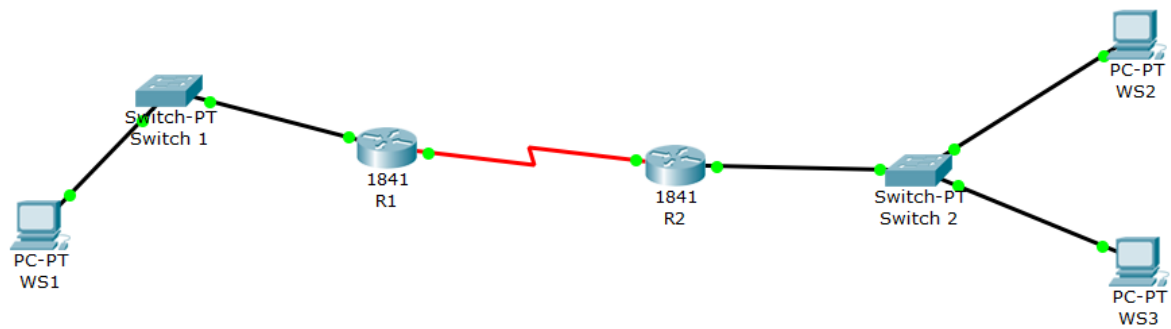
Topology diagram



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#
```

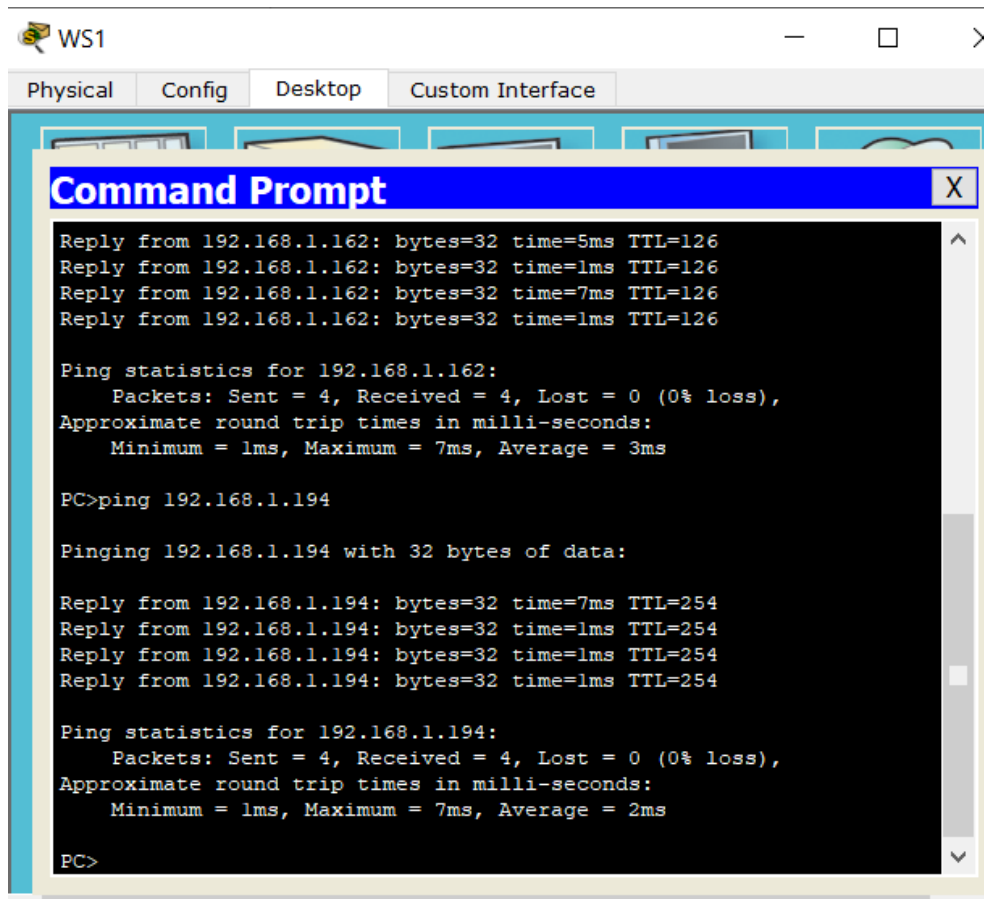
Interface on Router 2:

```
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:



```
WS1
Physical Config Desktop Custom Interface
Command Prompt
Reply from 192.168.1.162: bytes=32 time=5ms TTL=126
Reply from 192.168.1.162: bytes=32 time=1ms TTL=126
Reply from 192.168.1.162: bytes=32 time=7ms TTL=126
Reply from 192.168.1.162: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.1.162:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 7ms, Average = 3ms

PC>ping 192.168.1.194

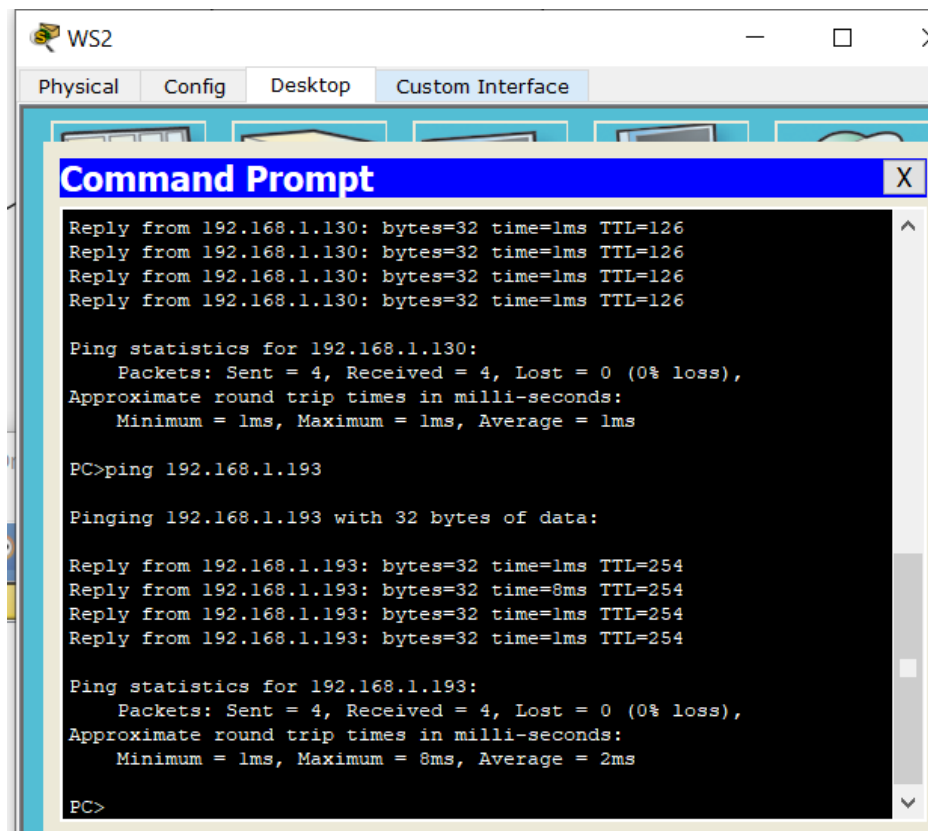
Pinging 192.168.1.194 with 32 bytes of data:

Reply from 192.168.1.194: bytes=32 time=7ms TTL=254
Reply from 192.168.1.194: bytes=32 time=1ms TTL=254
Reply from 192.168.1.194: bytes=32 time=1ms TTL=254
Reply from 192.168.1.194: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.1.194:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 7ms, Average = 2ms

PC>
```


WS2 pinging serial interface on Router 1:



The screenshot shows a window titled "WS2" with tabs for "Physical", "Config", "Desktop", and "Custom Interface". The "Custom Interface" tab is active, displaying a network diagram. Overlaid on this is a "Command Prompt" window. The Command Prompt shows the results of a ping command from a PC to the serial interface of Router 1 (192.168.1.193). The output includes four successful replies with 32 bytes, 1ms time, and TTL=254, followed by ping statistics showing 0% loss and an average round trip time of 2ms.

```
WS2
Physical Config Desktop Custom Interface

Command Prompt X

Reply from 192.168.1.130: bytes=32 time=1ms TTL=126
Reply from 192.168.1.130: bytes=32 time=1ms TTL=126
Reply from 192.168.1.130: bytes=32 time=1ms TTL=126
Reply from 192.168.1.130: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.1.130:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms

PC>ping 192.168.1.193

Pinging 192.168.1.193 with 32 bytes of data:

Reply from 192.168.1.193: bytes=32 time=1ms TTL=254
Reply from 192.168.1.193: bytes=32 time=8ms TTL=254
Reply from 192.168.1.193: bytes=32 time=1ms TTL=254
Reply from 192.168.1.193: bytes=32 time=1ms TTL=254

Ping statistics for 192.168.1.193:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 8ms, Average = 2ms

PC>
```