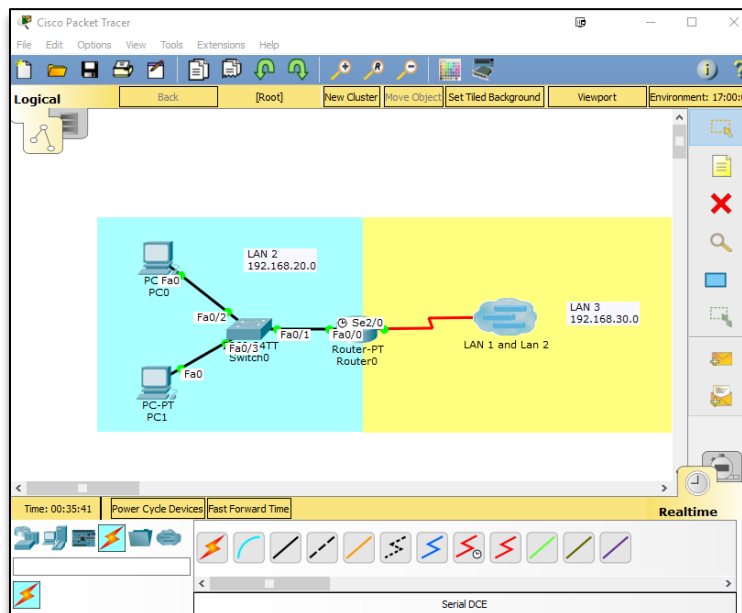
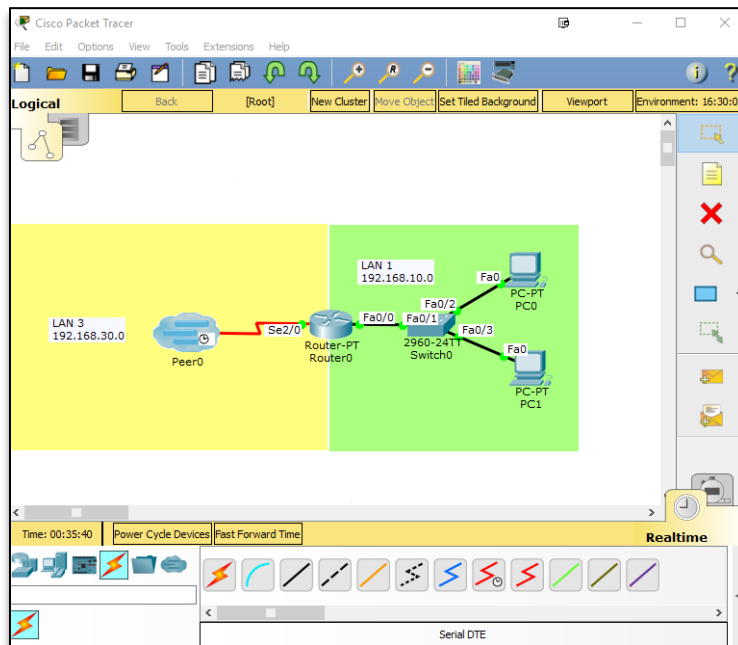


Packet Tracer Mini-Lab 13: Supplement Using the Packet Tracer Multiuser Connection

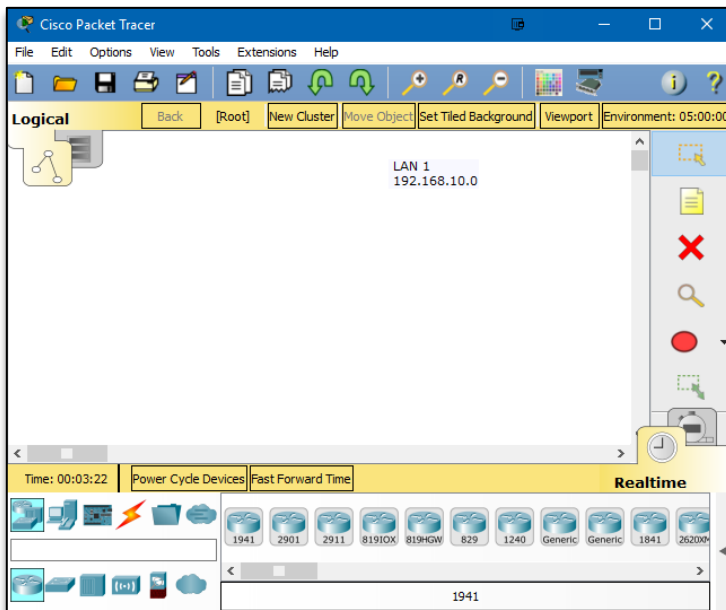
Mini-Lab 13 Objective

The lab provides further practice in a simulated environment using **Cisco's Packet Tracer** application.

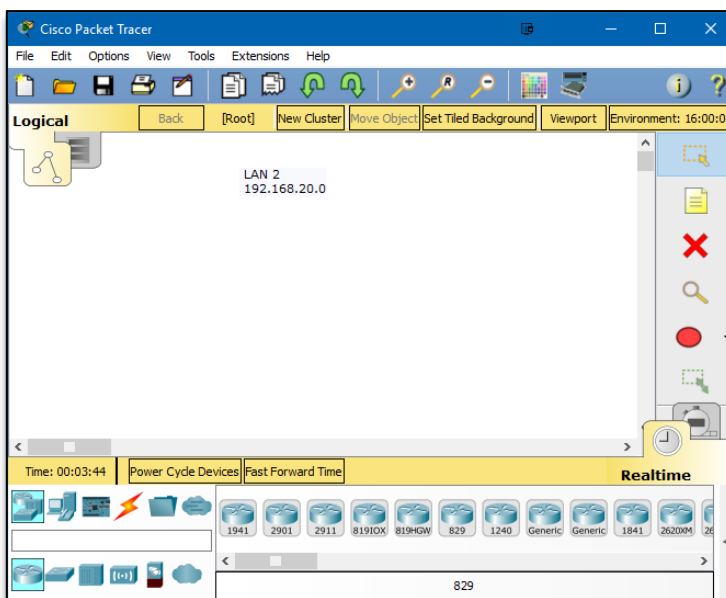


In this mini-lab we will learn how to connect one Packet Tracer LAN with another Packet Tracer LAN using the Packet Tracer multiuser function. We will create two different LANs, LAN 1 and LAN 2, from two running instances of Packet Tracer and connect them using routers and the multiuser function.

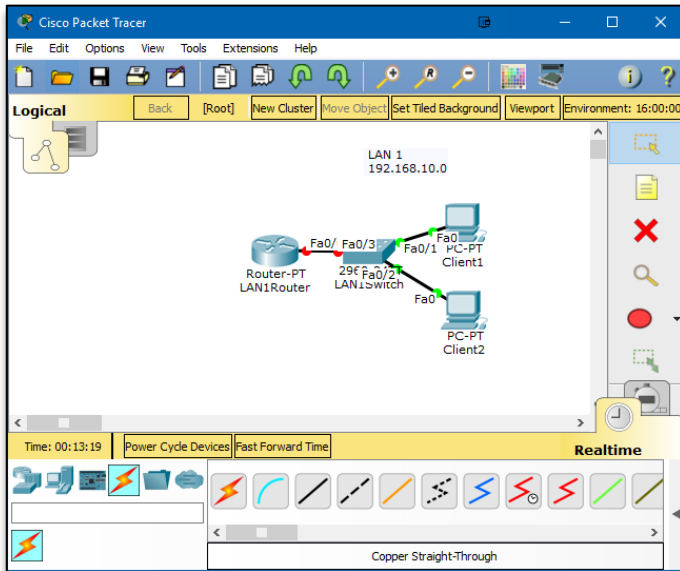
1. Open an instance of Packet Tracer to be used for **LAN 1**.
Using the **Place Note** tool, label it **LAN 1** with a network address of **192.168.10.0**



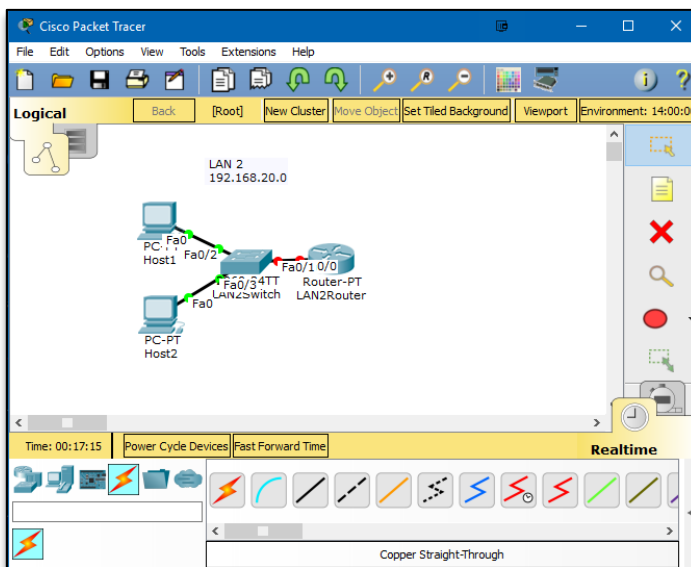
2. Open a second instance of Packet Tracer to be used for **LAN 2**.
Using the **Place Note** tool, label it **LAN 2** with a network address of **192.168.20.0**



- In **LAN 1**, add a **generic router (Router-PT)** and change its label to **LAN1Router**
- In **LAN 1**, add a **2960 switch** and change its name to **LAN1Switch**
- In **LAN 1**, add two (2) **generic PCs (PC-PT)** and change their names to **Client1** and **Client2**
- In **LAN 1**, use **copper straight-through cable** to connect the two **PCs** to the **switch** and the switch to the **router (Fa0/0)**.

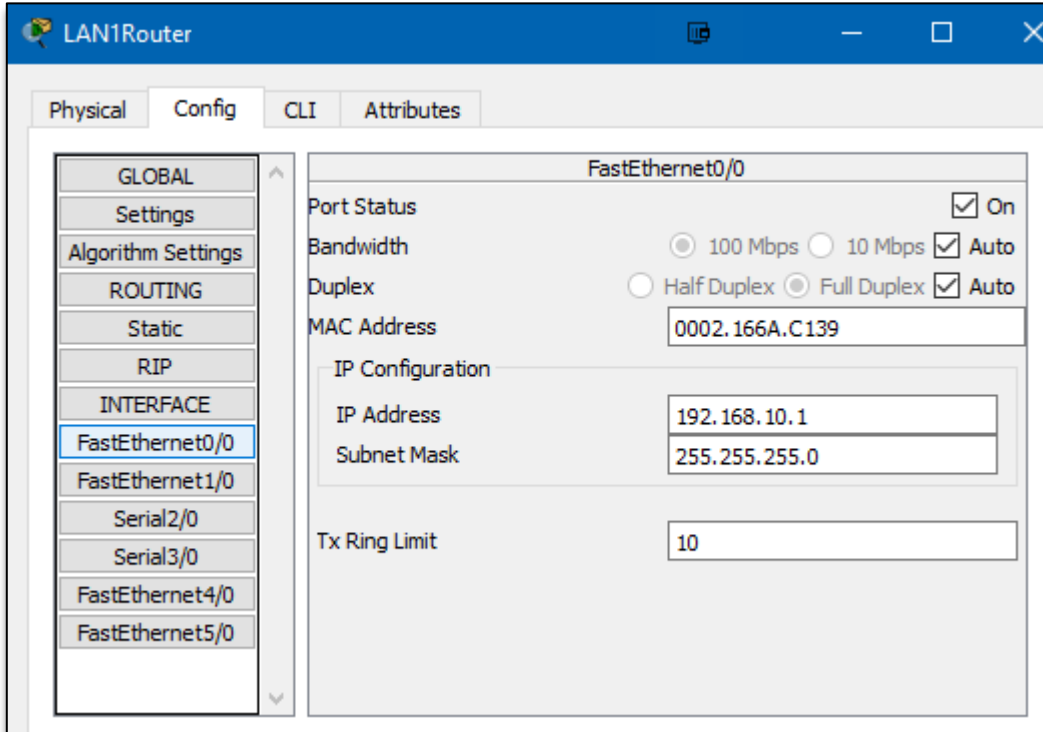


- Repeat this same setup in **LAN 2**, changing the names to **LAN2Router**, **LAN2Switch**, and **Host1** and **Host2**

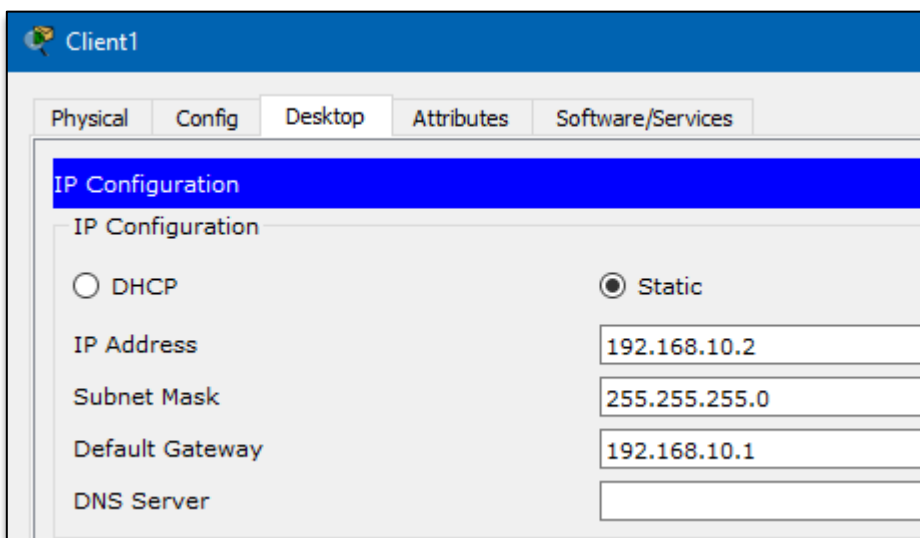


8. Return to **LAN 1**, and click on the **router** and select the **Config** tab.

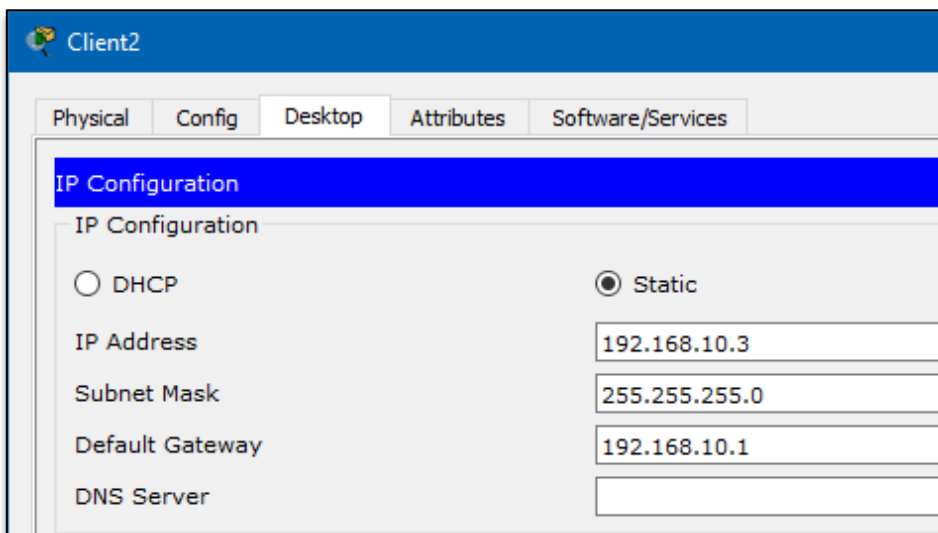
Select **FastEthernet0/0**, check on the **Port Status**, and enter **192.168.10.1** for the IP Address and **255.255.255.0** for the Subnet Mask.



9. Click on the **Client1 PC**, select **Desktop**, select **IP Configuration** from the upper left-hand corner, and enter the following:



10. Click on the **Client2 PC**, select **Desktop**, select **IP Configuration** from the upper left-hand corner, and enter the following:

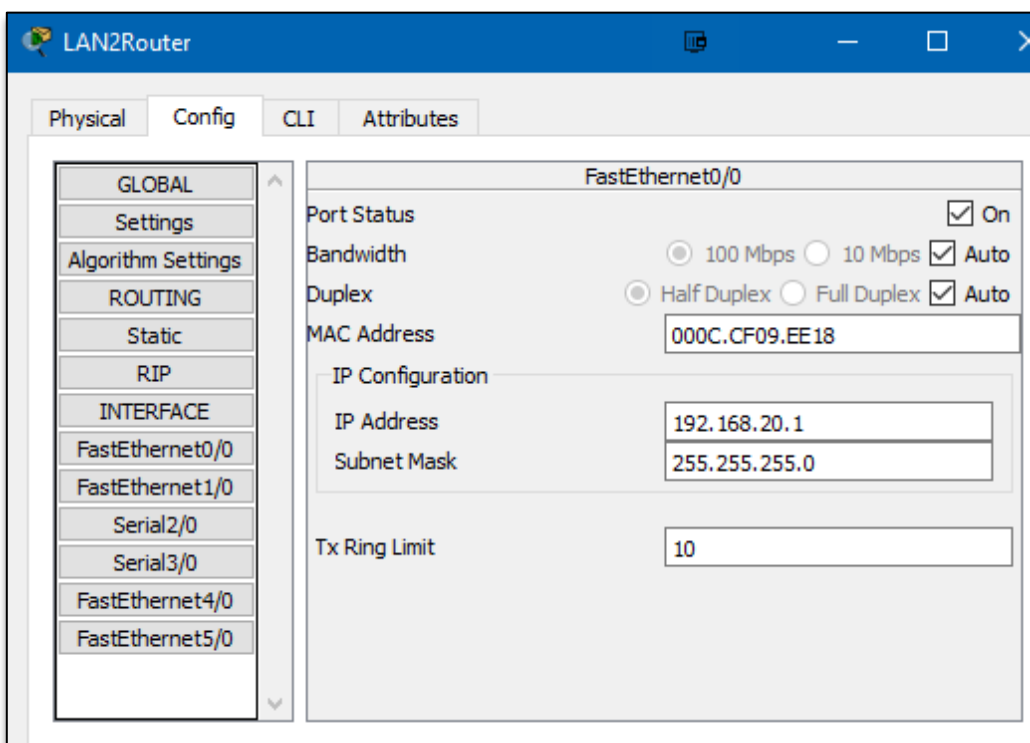


The screenshot shows the 'Client2' window with the 'Desktop' tab selected. The 'IP Configuration' section is highlighted in blue. Below it, the 'IP Configuration' settings are displayed:

IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IP Address	192.168.10.3
Subnet Mask	255.255.255.0
Default Gateway	192.168.10.1
DNS Server	

11. Return to **LAN 2**, and click on the **router** and select the **Config** tab.

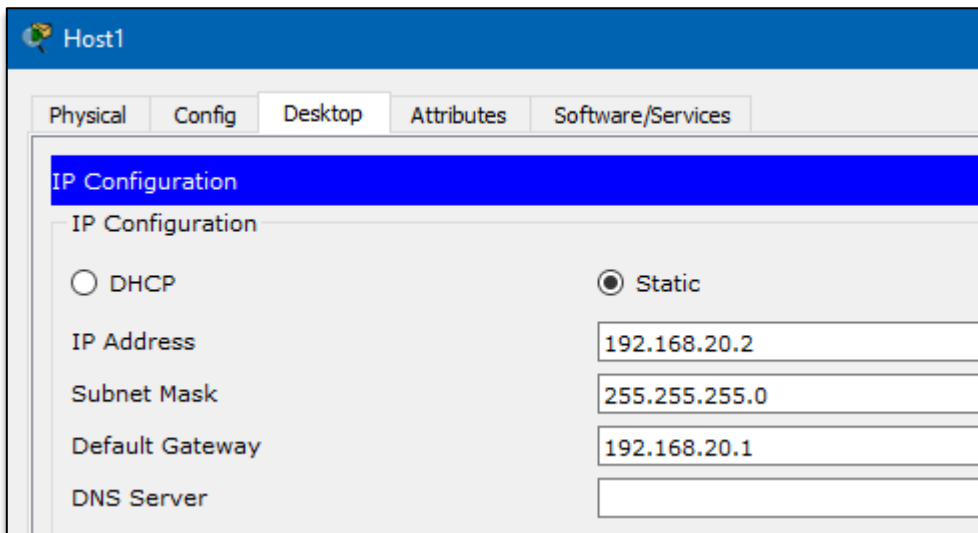
Select **FastEthernet0/0**, check on the **Port Status**, and enter **192.168.20.1** for the IP Address and **255.255.255.0** for the Subnet Mask.



The screenshot shows the 'LAN2Router' window with the 'Config' tab selected. The 'FastEthernet0/0' interface is selected in the left-hand tree view. The configuration settings for this interface are displayed:

FastEthernet0/0	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input checked="" type="radio"/> Half Duplex <input type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	000C.CF09.EE18
IP Configuration	
IP Address	192.168.20.1
Subnet Mask	255.255.255.0
Tx Ring Limit	10

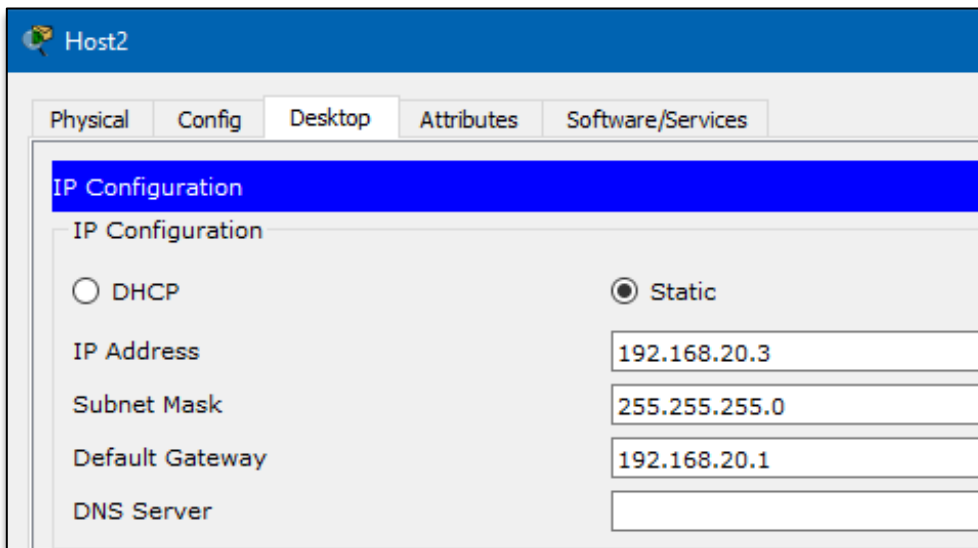
12. Click on the **Host1 PC**, select **Desktop**, select **IP Configuration** from the upper left-hand corner, and enter the following:



The screenshot shows the IP Configuration window for Host1. The 'Desktop' tab is selected, and 'IP Configuration' is highlighted in the left-hand menu. The 'Static' radio button is selected. The IP Address is 192.168.20.2, Subnet Mask is 255.255.255.0, and Default Gateway is 192.168.20.1. The DNS Server field is empty.

Field	Value
IP Configuration	<input type="radio"/> DHCP <input checked="" type="radio"/> Static
IP Address	192.168.20.2
Subnet Mask	255.255.255.0
Default Gateway	192.168.20.1
DNS Server	

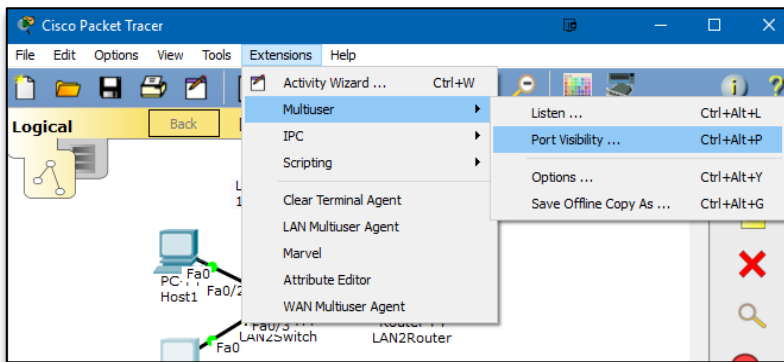
13. Click on the **Host2 PC**, select **Desktop**, select **IP Configuration** from the upper left-hand corner, and enter the following:



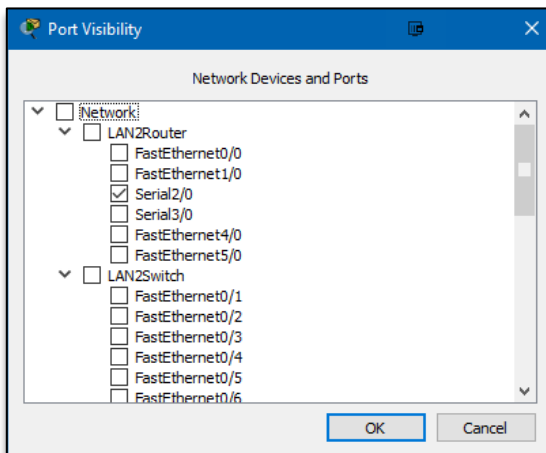
The screenshot shows the IP Configuration window for Host2. The 'Desktop' tab is selected, and 'IP Configuration' is highlighted in the left-hand menu. The 'Static' radio button is selected. The IP Address is 192.168.20.3, Subnet Mask is 255.255.255.0, and Default Gateway is 192.168.20.1. The DNS Server field is empty.

Field	Value
IP Configuration	<input type="radio"/> DHCP <input checked="" type="radio"/> Static
IP Address	192.168.20.3
Subnet Mask	255.255.255.0
Default Gateway	192.168.20.1
DNS Server	

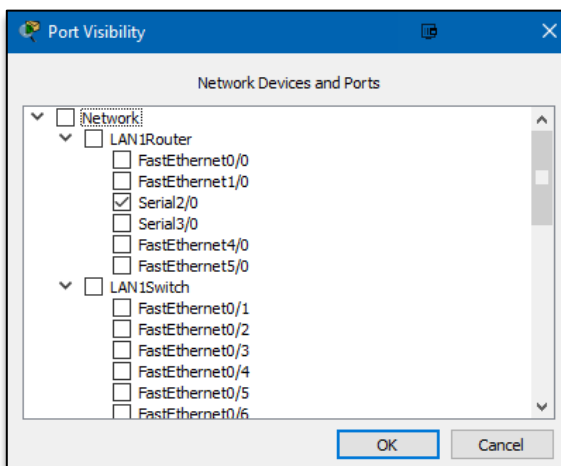
14. Still in **LAN 2**, click on **Extensions** from the menu bar and select **Multuser**, then **Port Visibility...**



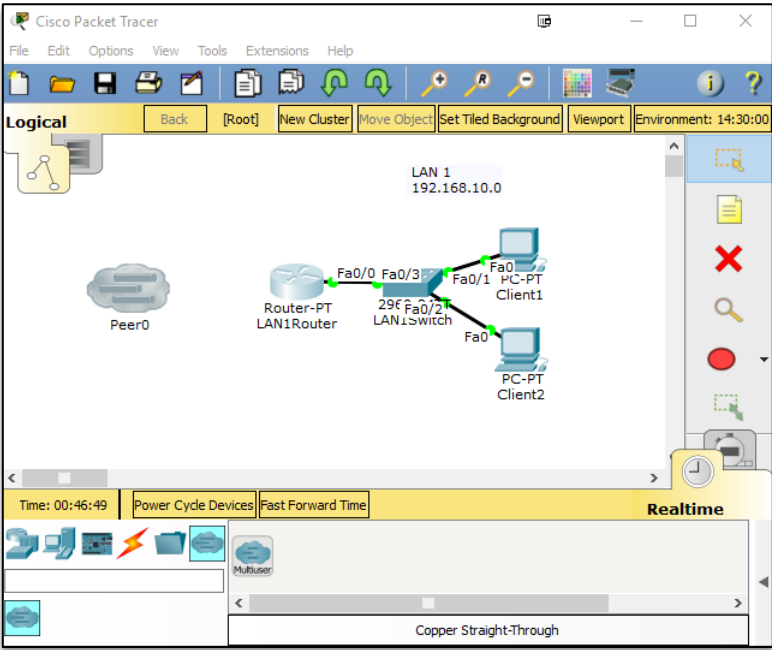
15. Under **LAN2Router**, check to select **Serial2/0**



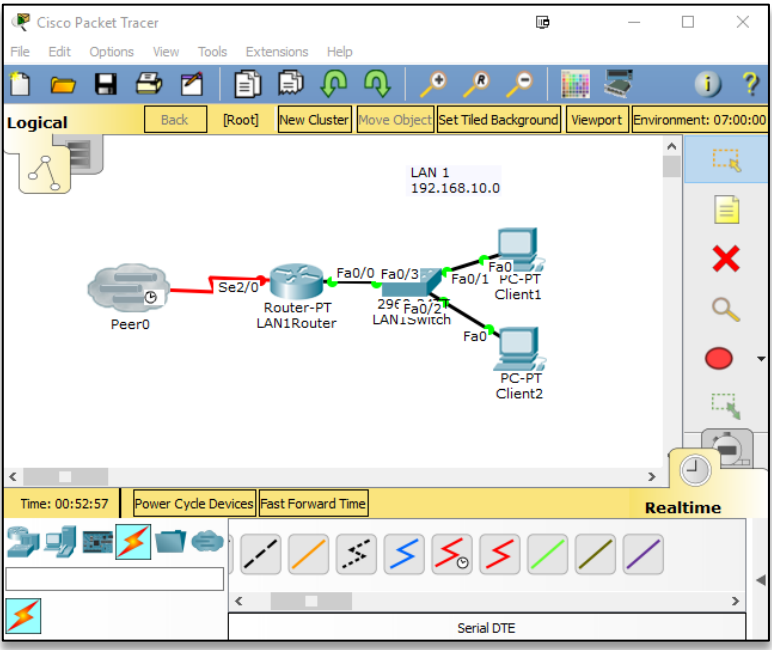
16. Repeat this same procedure in **LAN 1** with the **LAN1Router**, also selecting **Serial2/0**



17. Still in LAN 1, select the **Multuser Connection** cloud and drag an instance of **Multuser** to LAN 1

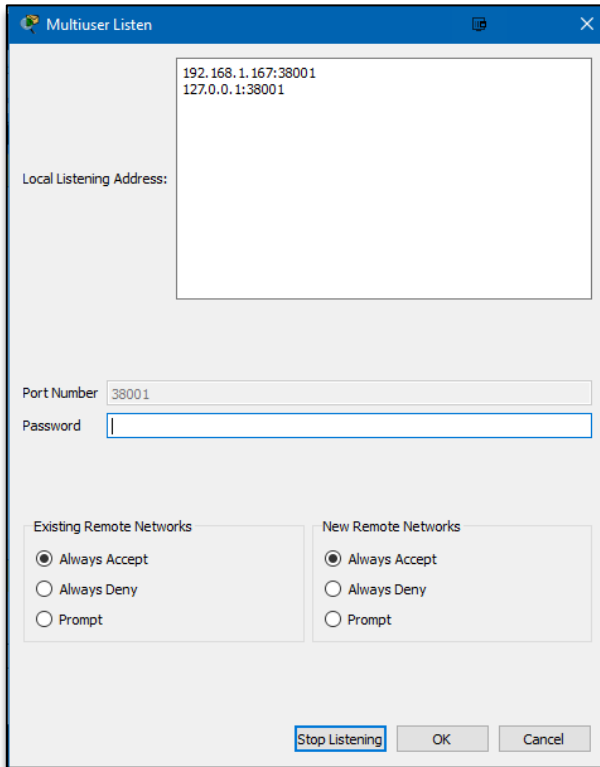


18. Select the **Connections** icon, the select the **Serial DTE cable** and connect to the **LAN1Router** under **Serial2/0** and the **Peer0** cloud to **Create New Link**. The link will be made showing a little **clock** icon in the cloud representing the Serial DCE connection that will be made on the router in LAN 2.



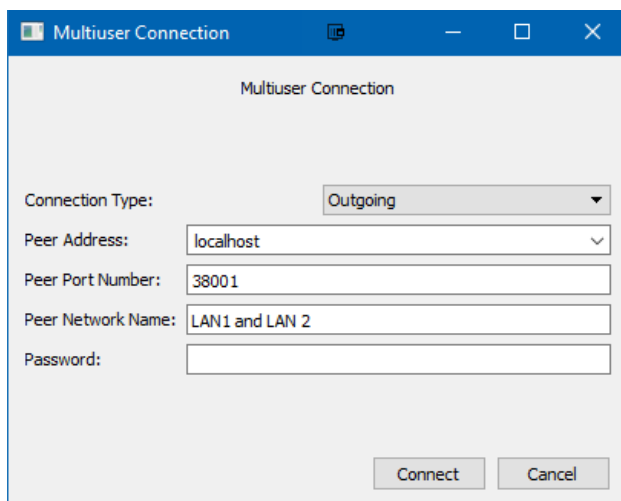
19. Return to **LAN 2**, and select **Extensions** from the menu bar, then **Multouser**, then **Listen...**

Remove the password from the **Password** box, and change both the Existing and Remote Networks to **Always Accept**, then click **OK** button



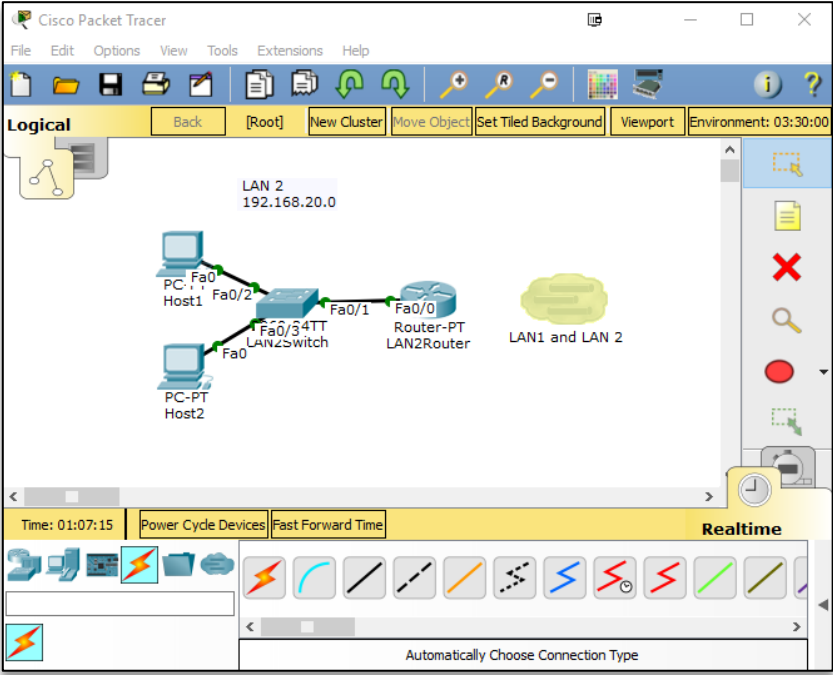
The screenshot shows the 'Multouser Listen' dialog box. The 'Local Listening Address' field contains two entries: '192.168.1.167:38001' and '127.0.0.1:38001'. The 'Port Number' is set to '38001'. The 'Password' field is empty. Under 'Existing Remote Networks', the 'Always Accept' radio button is selected. Under 'New Remote Networks', the 'Always Accept' radio button is also selected. At the bottom, there are three buttons: 'Stop Listening', 'OK', and 'Cancel'.

20. In **LAN 1**, click on the **Peer0** cloud and change the **Connection Type** to **Outgoing**, change the port number to match the port number in LAN 2 (38000 or 38001), give the **Peer Network** a name (for example, **LAN 1 and LAN 2**), then **Connect**

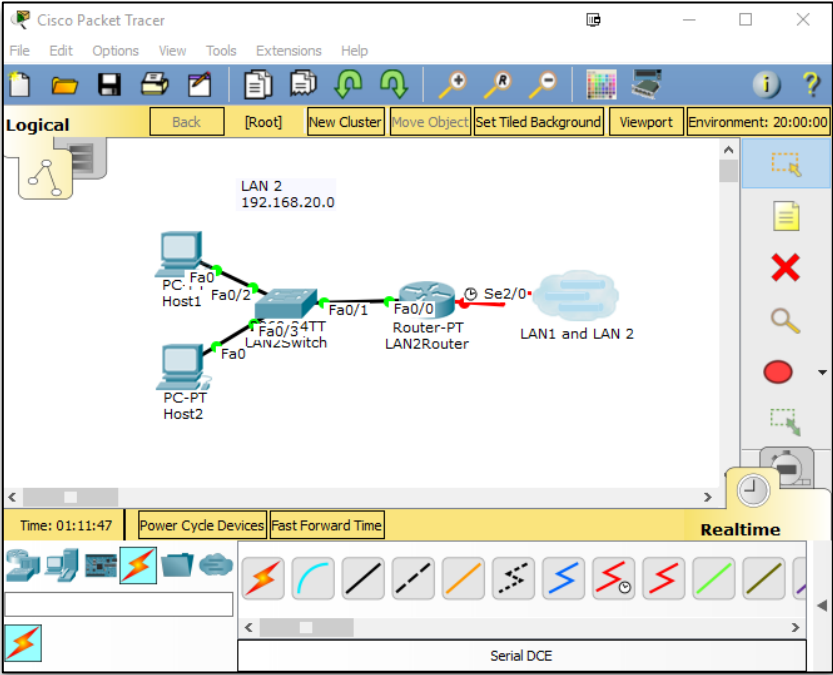


The screenshot shows the 'Multouser Connection' dialog box. The 'Connection Type' dropdown is set to 'Outgoing'. The 'Peer Address' dropdown is set to 'localhost'. The 'Peer Port Number' is '38001'. The 'Peer Network Name' is 'LAN1 and LAN 2'. The 'Password' field is empty. At the bottom, there are two buttons: 'Connect' and 'Cancel'.

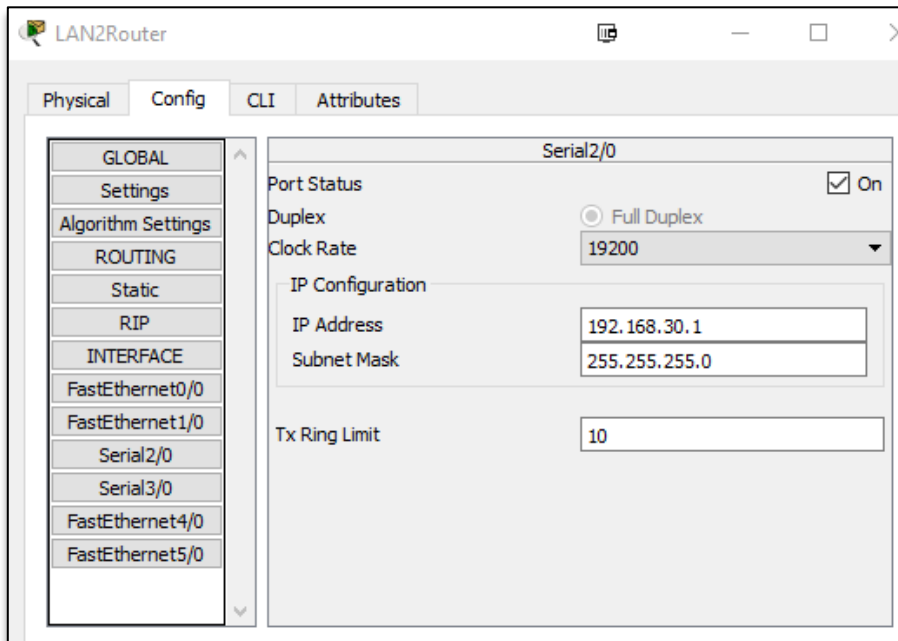
21. A **yellow cloud** will appear in **LAN 2** with the **Peer Network** name you gave it.



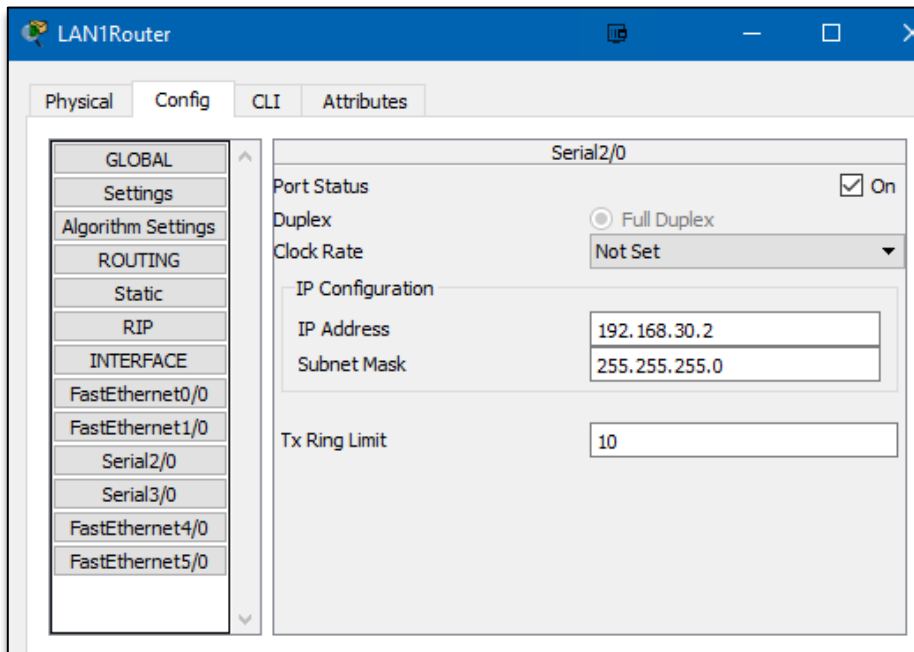
22. In **LAN 2**, under the **Connections** icon, select the **Serial DCE** cable (with the little clock) and connect to the **LAN2Router** using **Serial2/0** to the yellow cloud using **Link 0**. When linked the cloud will turn blue.



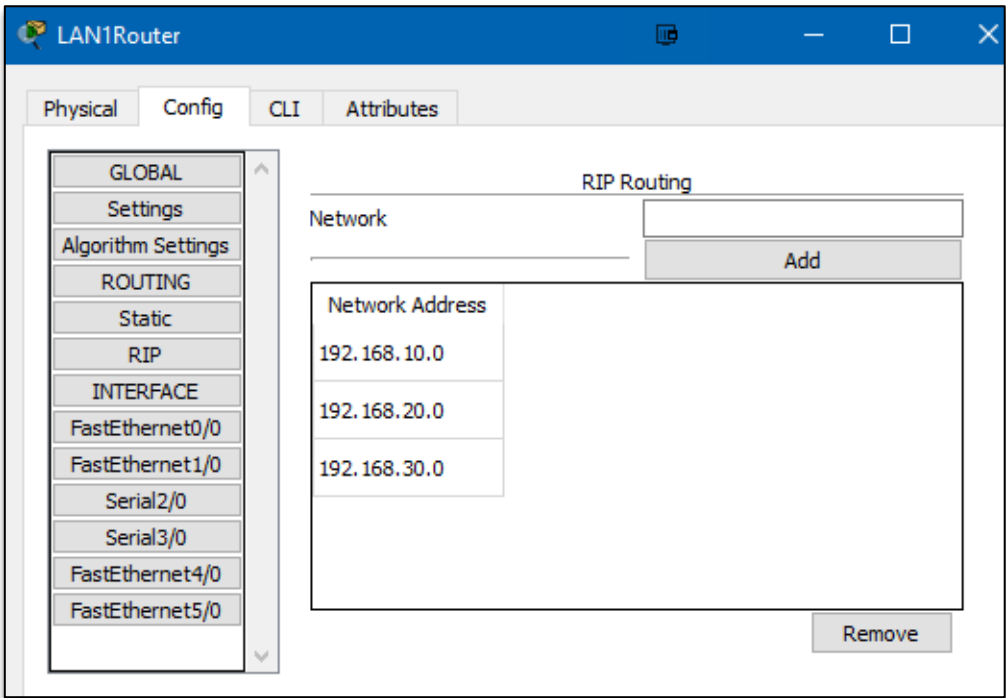
23. In **LAN 2**, click on the **LAN2Router**, select **Config**, then the **Serial2/0** bar. Turn on the **Port Status**, change **Clock Rate** to **19200**, then enter **192.168.30.1** for the **IP Address** and **255.255.255.0** for the **Subnet Mask**.



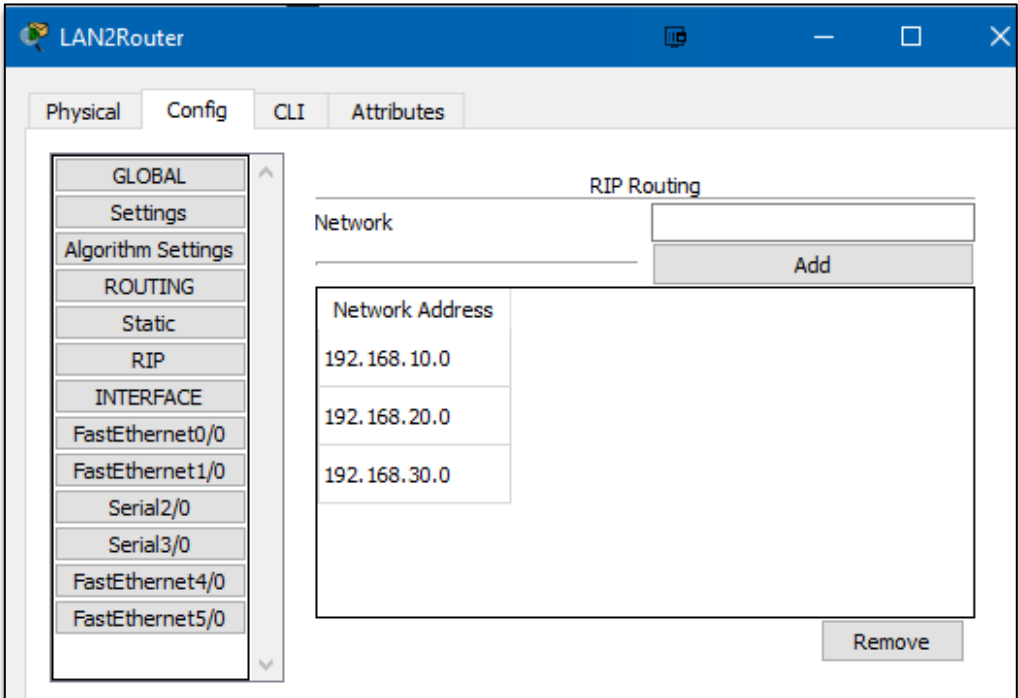
24. In **LAN 1**, click on the **LAN1Router**, select **Config**, then the **Serial2/0** bar. Turn on the **Port Status**, then enter **192.168.30.2** for the **IP Address** and **255.255.255.0** for the **Subnet Mask**.



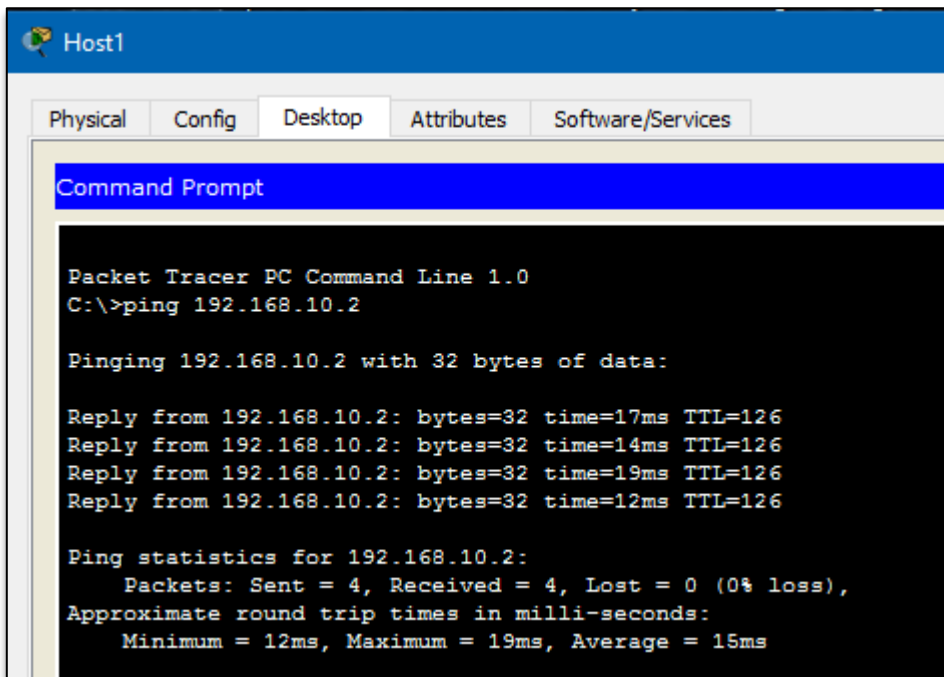
25. In the **LAN1Router**, select the **RIP** bar and add the three network IP Addresses: **192.168.10.0**, **192.168.20.0**, **192.168.30.0**



26. Return to **LAN 2**, and do the same thing in the **LAN2Router**.



27. In **LAN 2**, click on the **Host1 PC**, select **Desktop**, then **Command Prompt**, and try **pinging** the **Client2 PC** in **LAN 1**



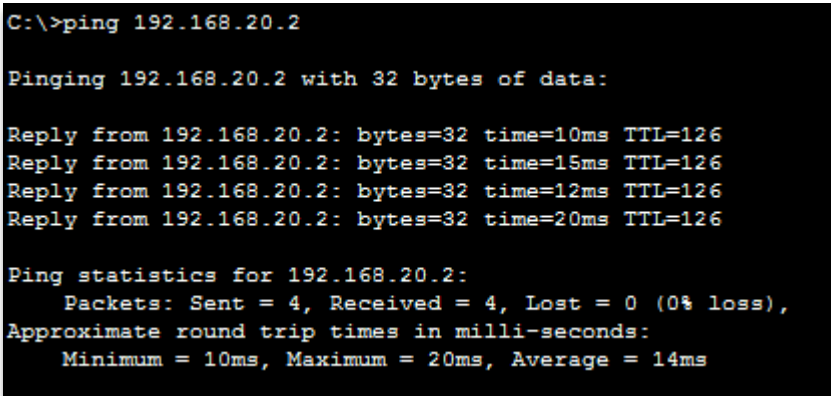
```
Host1
Physical Config Desktop Attributes Software/Services
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

Reply from 192.168.10.2: bytes=32 time=17ms TTL=126
Reply from 192.168.10.2: bytes=32 time=14ms TTL=126
Reply from 192.168.10.2: bytes=32 time=19ms TTL=126
Reply from 192.168.10.2: bytes=32 time=12ms TTL=126

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 12ms, Maximum = 19ms, Average = 15ms
```

28. In **LAN 1**, click on the **Client 1 PC**, and try **pinging** the **Host2 PC** in **LAN 2**.



```
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time=10ms TTL=126
Reply from 192.168.20.2: bytes=32 time=15ms TTL=126
Reply from 192.168.20.2: bytes=32 time=12ms TTL=126
Reply from 192.168.20.2: bytes=32 time=20ms TTL=126

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 10ms, Maximum = 20ms, Average = 14ms
```

29. You can also experiment by pinging both the router Ethernet connects from any of the PCs in either LAN.

END OF MINI-LAB 13