

Code: 1665432

Packet Tracer - Connect a Wired and Wireless LAN

Addressing Table

Device	Interface	IP Address	Connects To
Cloud	Eth6	N/A	F0/0
	Coax7	N/A	Port0
Cable Modem	Port0	N/A	Coax7
	Port1	N/A	Internet
Router0	Console	N/A	RS232
	F0/0	192.168.2.1/24	Eth6
	F0/1	10.0.0.1/24	F0
	Ser0/0/0	172.31.0.1/24	Ser0/0
Router1	Ser0/0	172.31.0.2/24	Ser0/0/0
	F1/0	172.16.0.1/24	F0/1
WirelessRouter	Internet	192.168.2.2/24	Port 1
	Eth1	192.168.1.1	F0
Family PC	F0	192.168.1.102	Eth1
Switch	F0/1	172.16.0.2	F1/0
Netacad.pka	F0	10.0.0.254	F0/1
Configuration Terminal	RS232	N/A	Console

Objectives

Part 1: Connect to the Cloud

Part 2: Connect Router0

Part 3: Connect Remaining Devices

Part 4: Verify Connections

Part 5: Examine the Physical Topology

Background

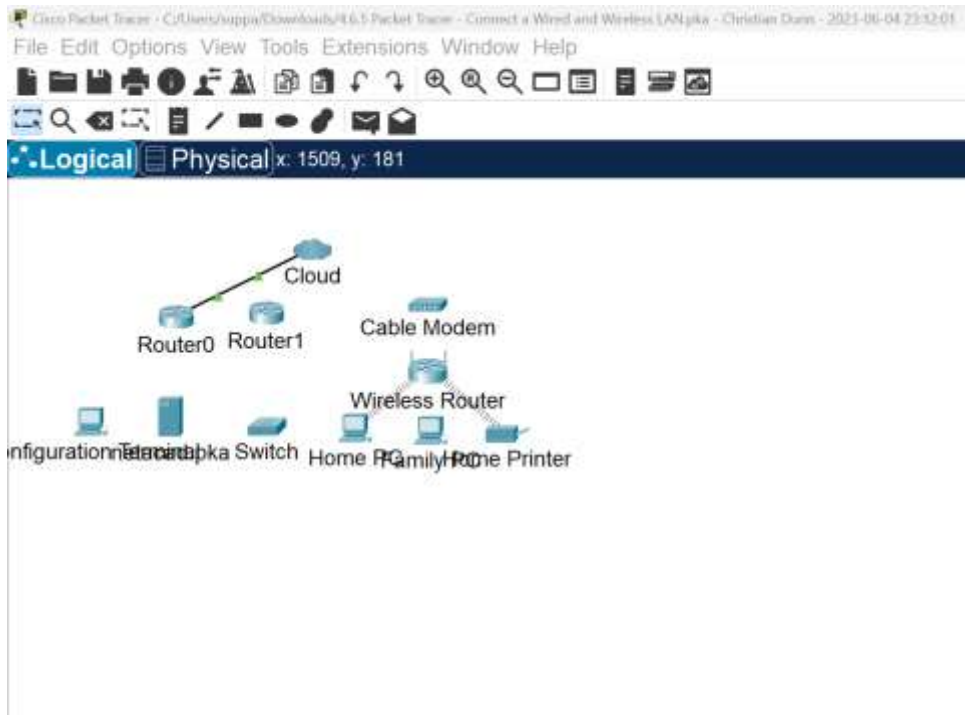
When working in Packet Tracer (a lab environment or a corporate setting), you should know how to select the appropriate cable and how to properly connect devices. This activity will examine device configurations in Packet Tracer, selecting the proper cable based on the configuration, and connecting the devices. This activity will also explore the physical view of the network in Packet Tracer.

Instructions

Part 1: Connect to the Cloud

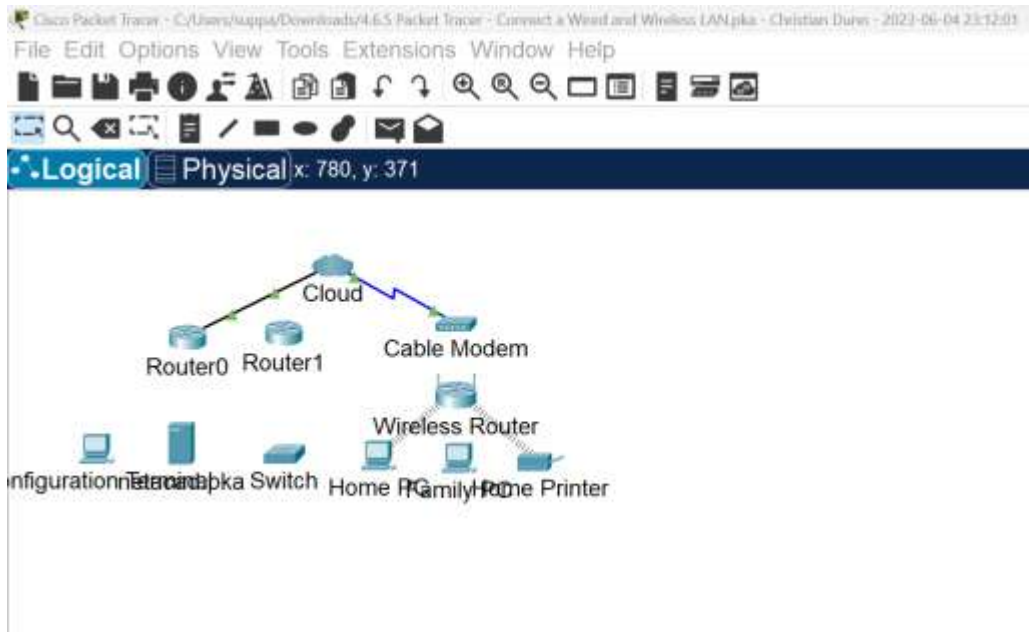
Step 1: Connect the cloud to Router0.

- At the bottom left, click the orange lightning icon to open the available **Connections**.
- Choose the correct cable to connect **Router0 F0/0** to **Cloud Eth6**. **Cloud** is a type of switch, so use a **Copper Straight-Through** connection. If you attached the correct cable, the link lights on the cable turn green.



Step 2: Connect the cloud to Cable Modem.

- Choose the correct cable to connect **Cloud Coax7** to **Modem Port0**.
- If you attached the correct cable, the link lights on the cable turn green.

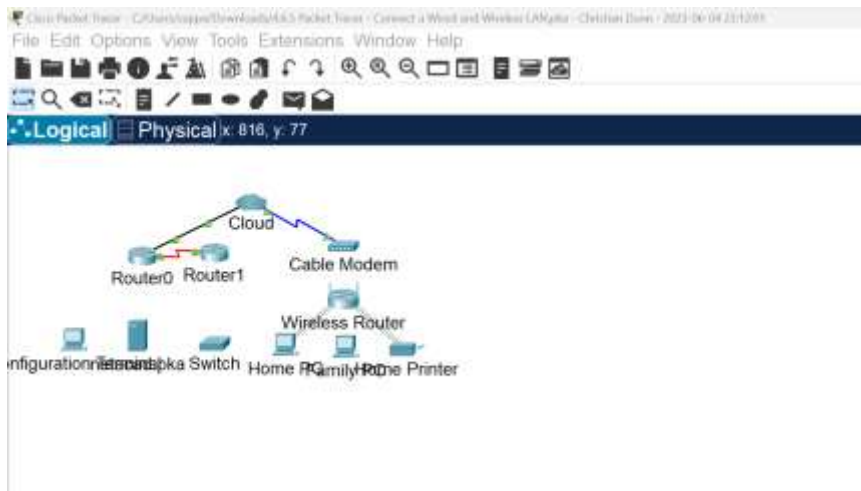


Part 2: Connect Router0

Step 1: Connect Router0 to Router1.

Choose the correct cable to connect **Router0 Ser0/0/0** to **Router1 Ser0/0**. Use one of the available **Serial** cables.

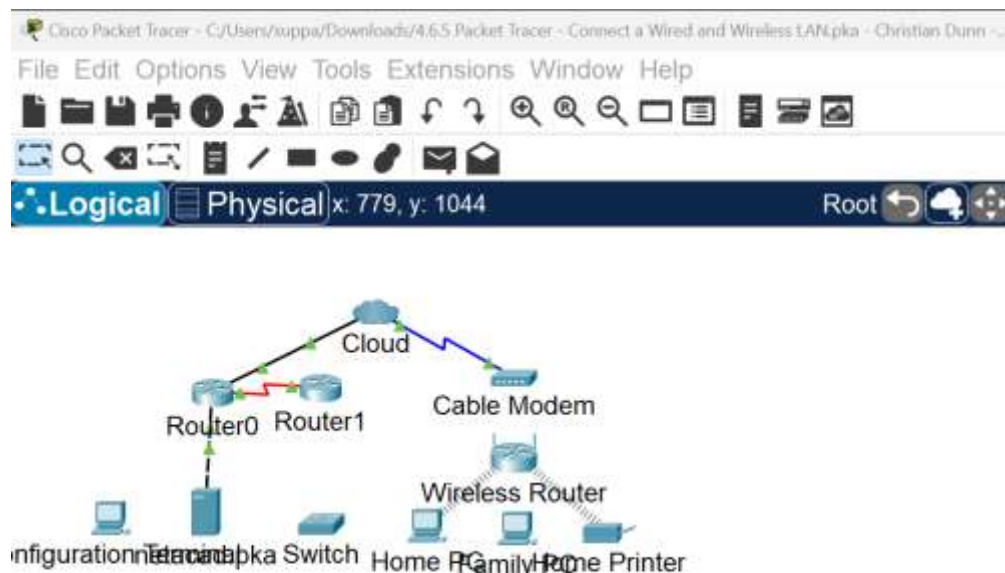
If you attached the correct cable, the link lights on the cable turn green.



Step 2: Connect Router0 to netacad.pka.

Choose the correct cable to connect **Router0 F0/1** to **netacad.pka F0**. Routers and computers traditionally use the same wires to transmit (1 and 2) and receive (3 and 6). The correct cable to choose consists of these crossed wires. Although many NICs can now autosense which pair is used to transmit and receive, **Router0** and **netacad.pka** do not have autosensing NICs.

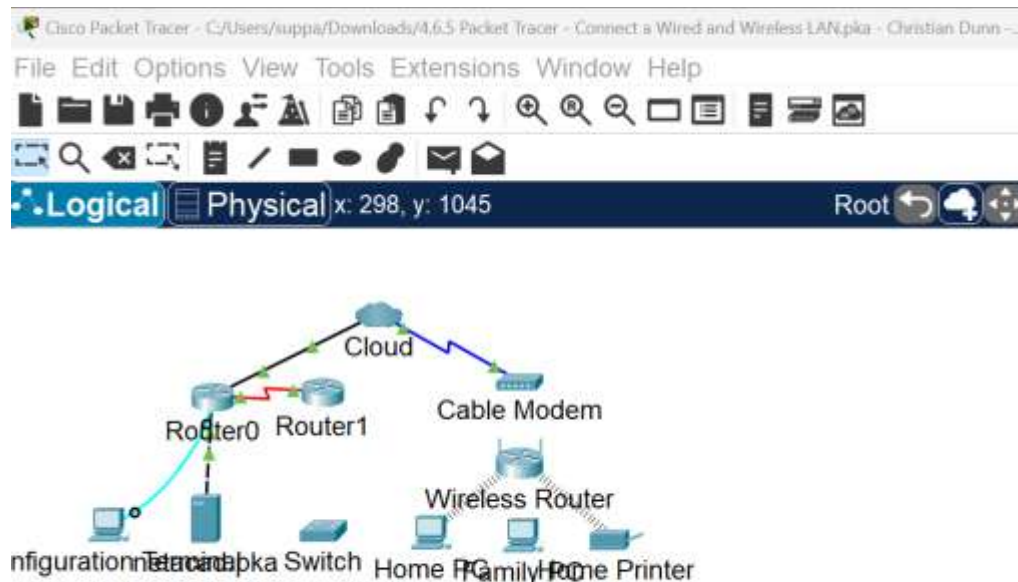
If you attached the correct cable, the link lights on the cable turn green.



Step 3: Connect Router0 to the Configuration Terminal.

Choose the correct cable to connect **Router0 Console** to **Configuration Terminal RS232**. This cable does not provide network access to **Configuration Terminal**, but allows you to configure **Router0** through its terminal.

If you attached the correct cable, the link lights on the cable turn black.

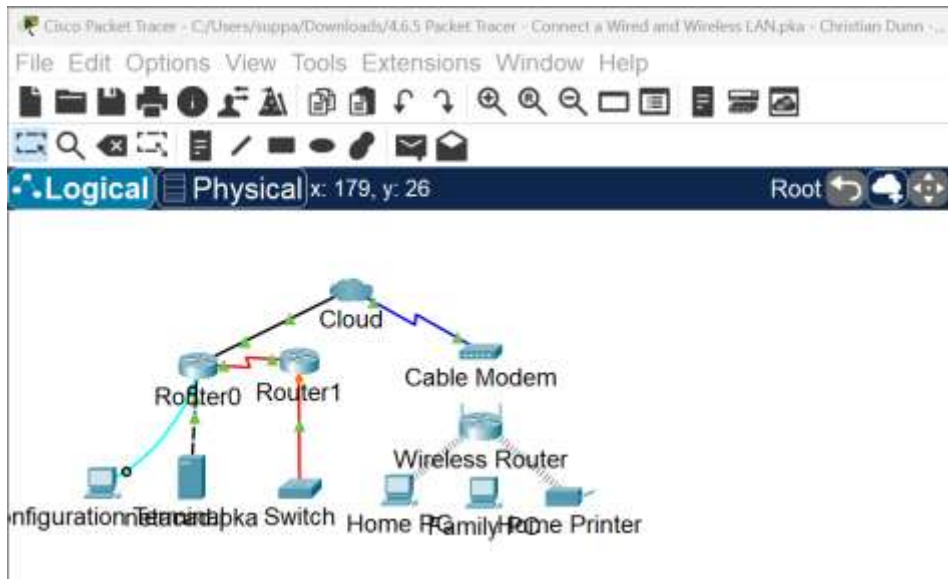


Part 3: Connect Remaining Devices

Step 1: Connect Router1 to Switch.

Choose the correct cable to connect **Router1 F1/0** to **Switch F0/1**.

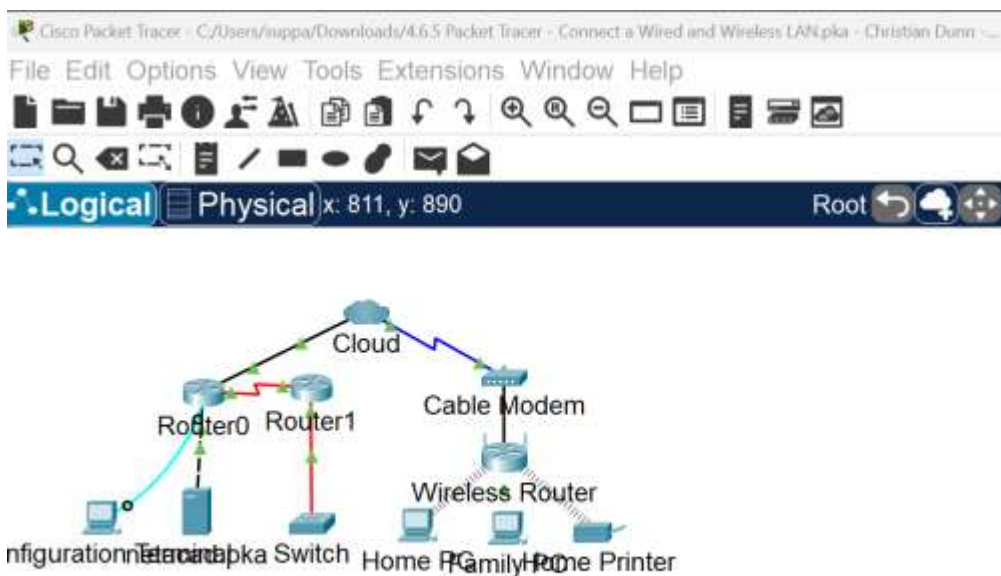
If you attached the correct cable, the link lights on the cable turn green. Allow a few seconds for the light to transition from amber to green.



Step 2: Connect Cable Modem to Wireless Router.

Choose the correct cable to connect **Cable Modem Port1** to **Wireless Router Internet** port.

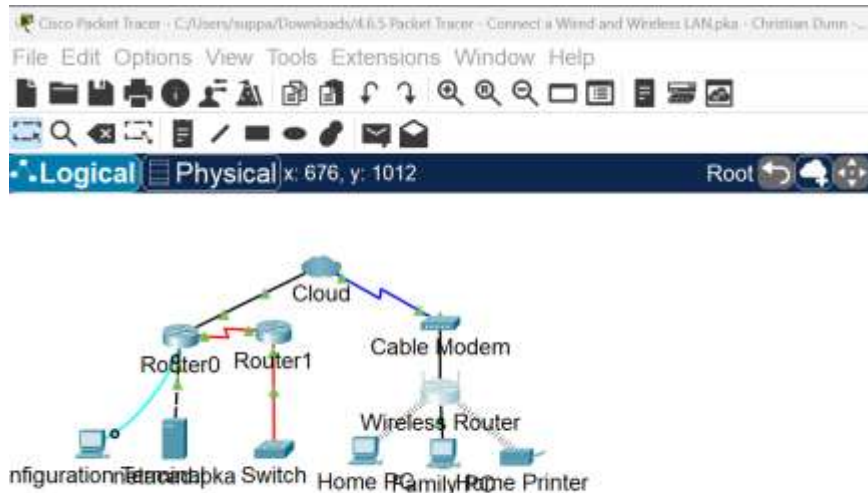
If you attached the correct cable, the link lights on the cable will turn green.



Step 3: Connect Wireless Router to Family PC.

Choose the correct cable to connect **Wireless Router Ethernet 1** to **Family PC**.

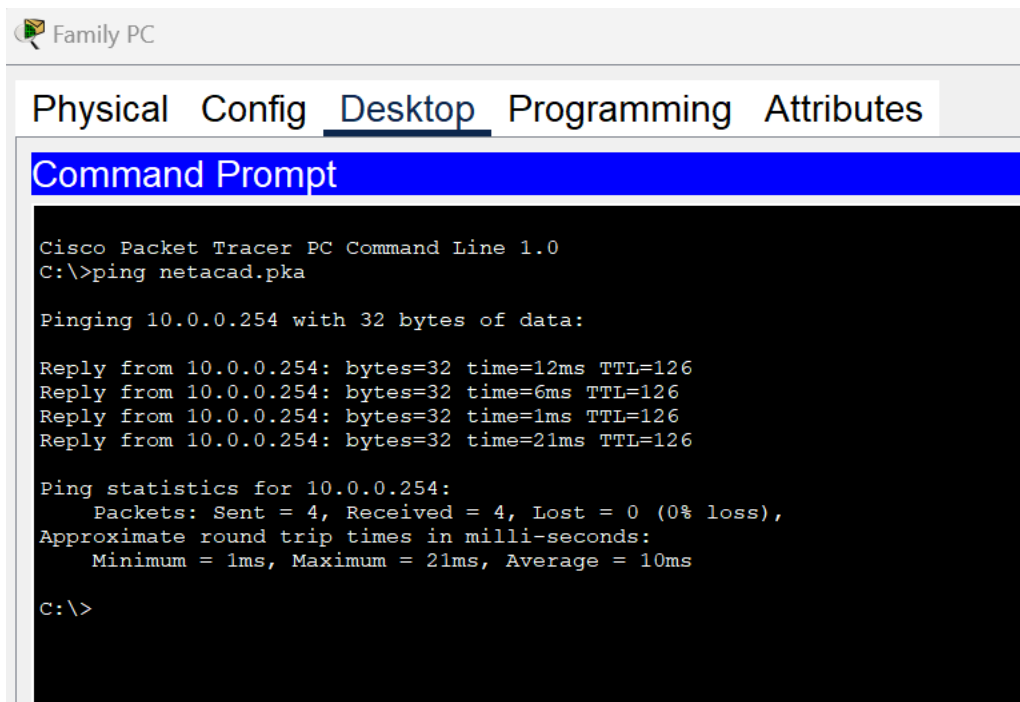
If you attached the correct cable, the link lights on the cable turn green.



Part 4: Verify Connections

Step 1: Test the connection from Family PC to netacad.pka.

- Open the **Family PC** command prompt and ping **netacad.pka**.

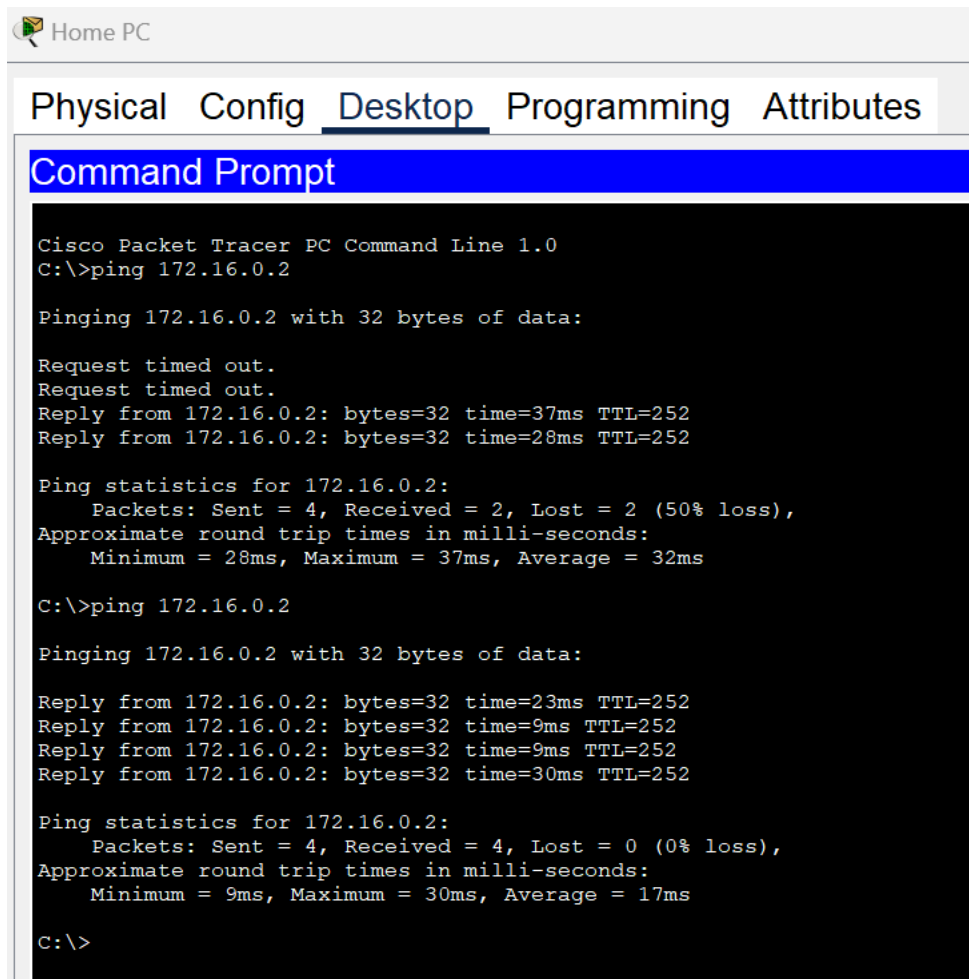


- Open the **Web Browser** and the web address <http://netacad.pka>.



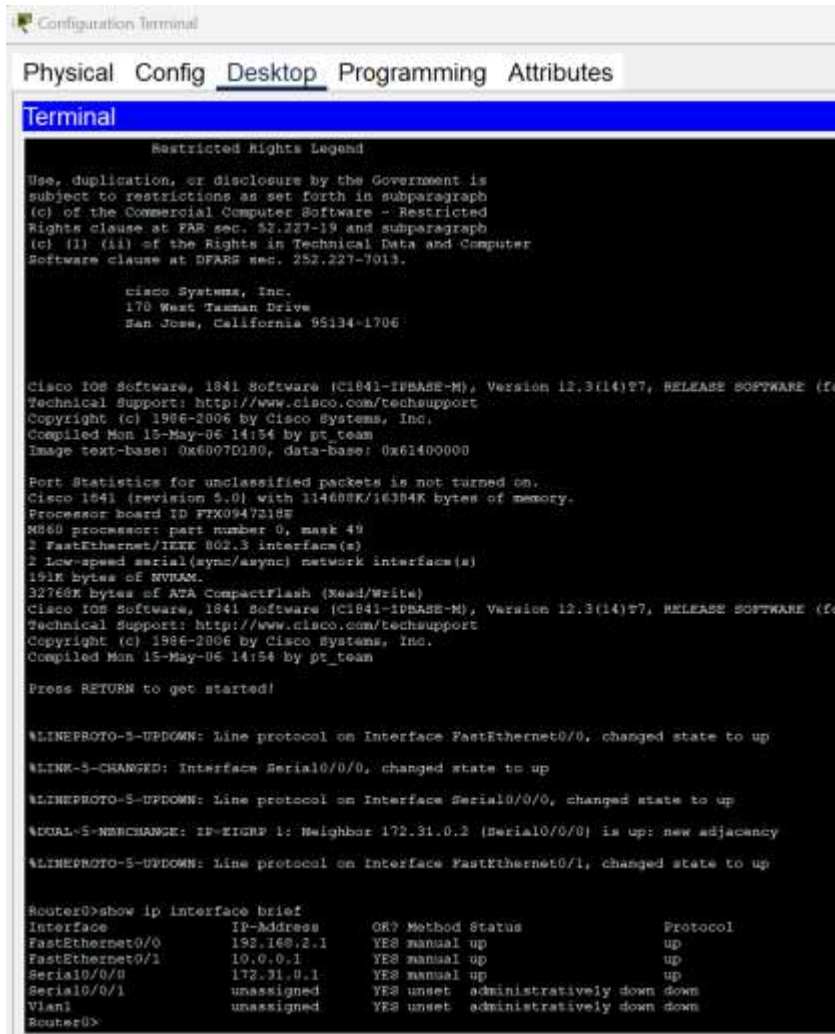
Step 2: Ping the Switch from Home PC.

Open the **Home PC** command prompt and ping the **Switch** IP address of to verify the connection.



Step 3: Open Router0 from Configuration Terminal.

- Open the **Terminal** of **Configuration Terminal** and accept the default settings.
- Press **Enter** to view the **Router0** command prompt.
- Type **show ip interface brief** to view interface statuses.



```

Configuration Terminal
Physical Config Desktop Programming Attributes
Terminal
Restricted Rights Legend
Use, duplication, or disclosure by the Government is
subject to restrictions as set forth in subparagraph
(c) of the Commercial Computer Software - Restricted
Rights clause at FAR sec. 52.227-19 and subparagraph
(c) (1) (ii) of the Rights in Technical Data and Computer
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Cisco IOS Software, 1841 Software (C1841-IPBASE-M), Version 12.3(14)T7, RELEASE SOFTWARE (fc
Technical Support: http://www.cisco.com/techsupport
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Compiled Mon 15-May-06 14:54 by pt_team
Image text-base: 0x6007D180, data-base: 0x61400000

Port Statistics for unclassified packets is not turned on.
Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947218E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
191K bytes of NVRAM.
32768K bytes of ATA CompactFlash (Read/Write)
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Press RETURN to get started!

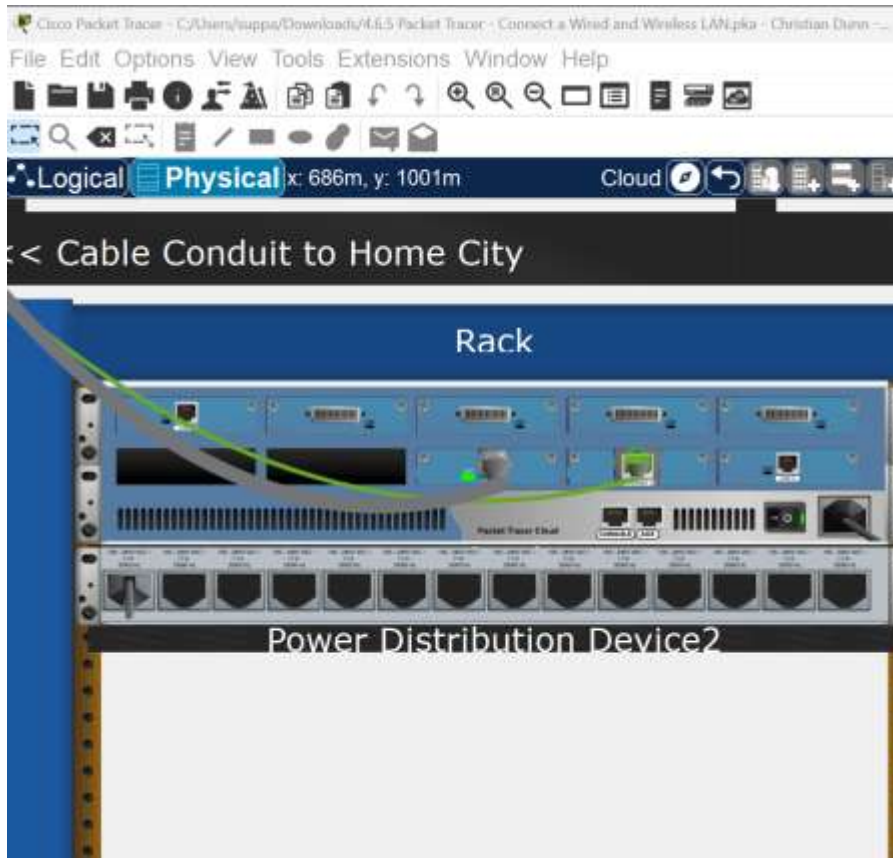
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-3-CHANGED: Interface Serial0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up
%CDL-5-NEIGHCHANGE: IP-ADDR 1: Neighbor 172.31.0.2 (Serial0/0/0) is up: new adjacency
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Router0>show ip interface brief
Interface IP-Address OK? Method Status Protocol
FastEthernet0/0 192.168.2.1 YES manual up up
FastEthernet0/1 10.0.0.1 YES manual up up
Serial0/0/0 172.31.0.1 YES manual up up
Serial0/0/1 unassigned YES unset administratively down down
Vlan1 unassigned YES unset administratively down down
Router0>
  
```

Part 5: Examine the Physical Topology

Step 1: Examine the Cloud.

- Click the **Physical Workspace** tab or press **Shift+P** and **Shift+L** to toggle between the logical and physical workspaces.
- Click the **Home City** icon.
- Click the **Cloud** icon.



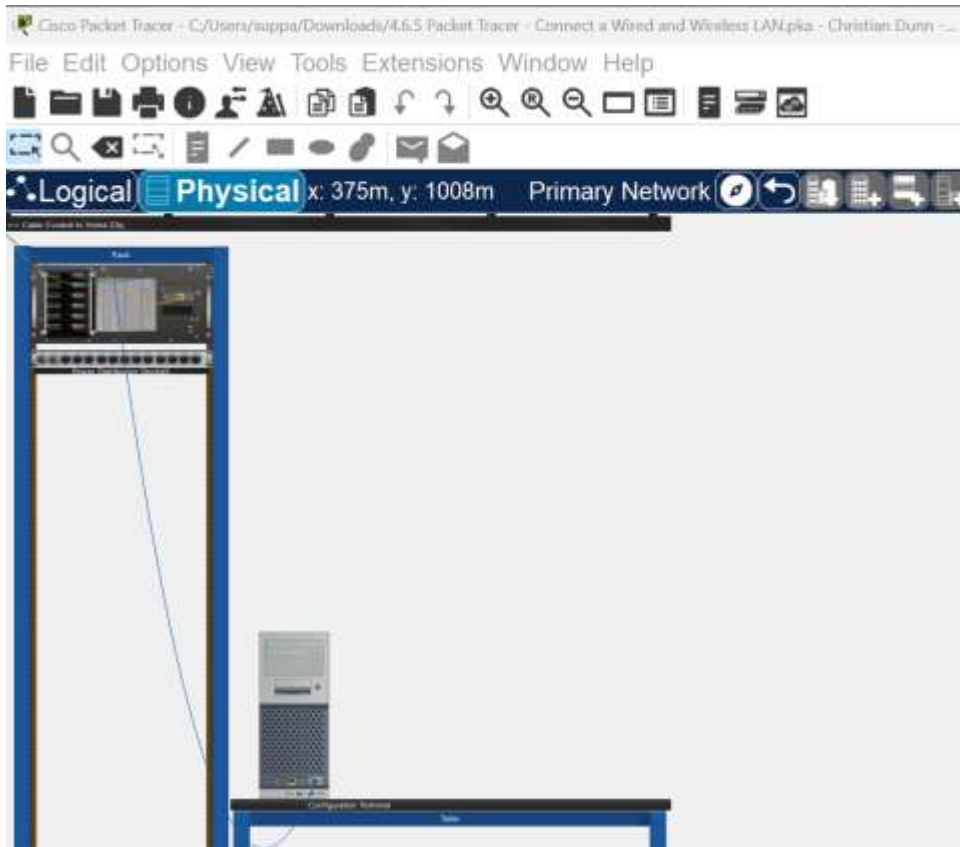
How many wires are connected to the switch in the blue rack?

There is 1 Coaxial cable and 1 Ethernet cable.

- d. Click **Back** to return to **Home City**.

Step 2: Examine the Primary Network.

- a. Click the **Primary Network** icon. Hold the mouse pointer over the various cables.



What is located on the table to the right of the blue rack?

The Configuration Terminal with a Copper Roll-over cable connected to the RS 232 port on the table.

- b. Click **Back** to return to **Home City**.

Step 3: Examine the Secondary Network.

- a. Click the **Secondary Network** icon. Hold the mouse pointer over the various cables.



Why are there two orange cables connected to each device?

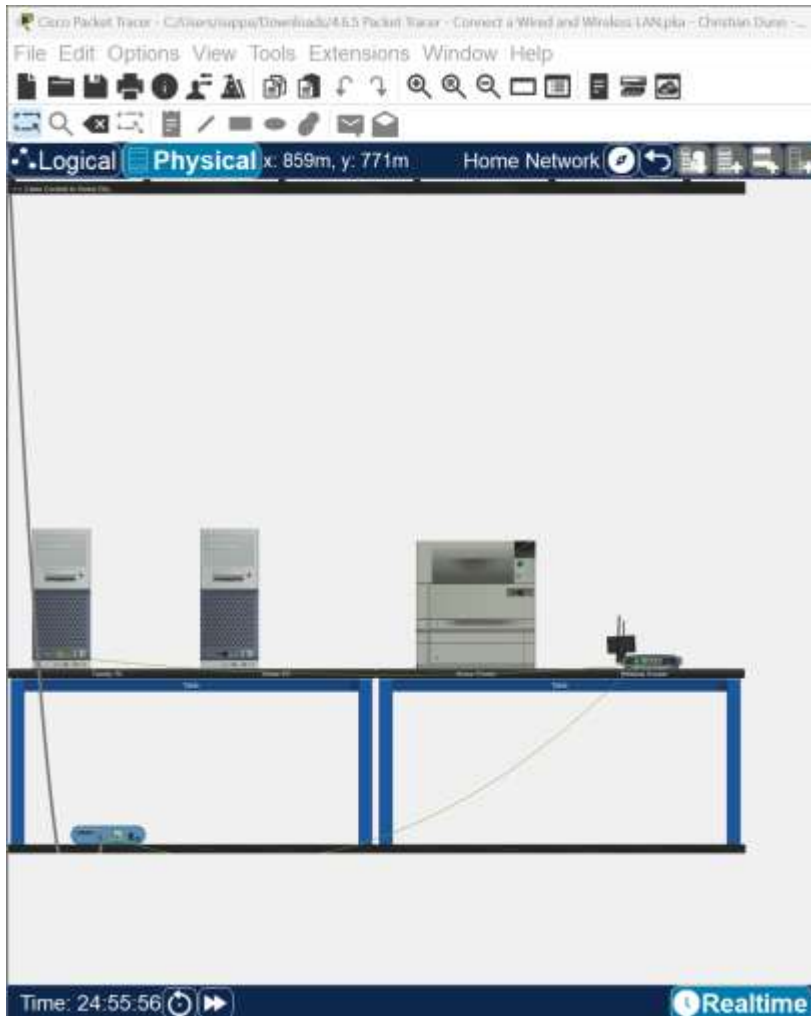
I assume it is because the fiber cables used come in pairs.

- b. Click **Back** to return to **Home City**.

Step 4: Examine the Home Network.

- a. Click the **Home Network** icon.

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b.

Why is there no rack to hold the equipment?

There is no rack to hold the equipment because there aren't typically racks for home networks.

c. Click the **Logical Workspace** tab to return to the logical topology.