Lab 7: Implement static routing in Cisco packet Tracer.

Routing is simply a process of choosing route for delivering data to its destination. All hosts who can generate a routing table can do a routing. Routing process is needed when we are going to deliver packets of data to a network that isn't directly connected with the sender.

For easier configuration process, let's send the data between 2 PCs across just 2 routers like the following network topology.

Basic Topology.

Step 1 : Place the routers.

Fist thing first, we need to place the routers on the workspace. We can pick one of them from ***Network Devices > Routers > 4331*** in bottom panel.

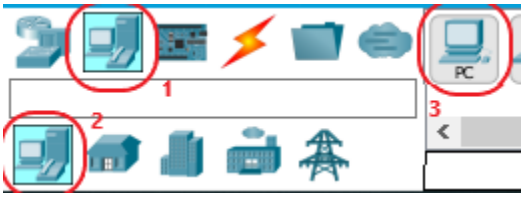
Any type of routers will do, **4331** is just the nearest to our cursor's current position.

Bottom Panel : Routers

Retrack the same step for another router, or copy paste the existing one.

Step 2 : Place the PCs.

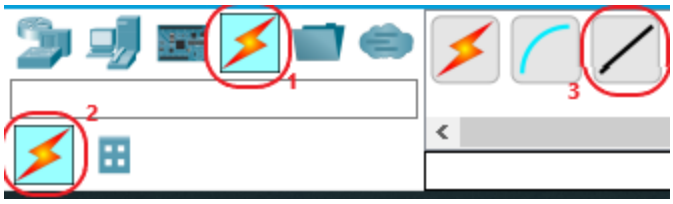
PC can be picked from ***End Deivces*** > ***End Devices*** > ***PC***. Place them on the workspace.



Bottom Panel : PC

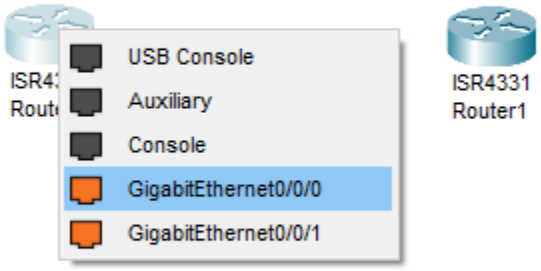
Step 3 : Connect all hosts physically, and accordingly.

We can pick one of the physical media from ***Connections*** > ***Connections***.
We are going to use ethernet connection, so we pick between **Straight-Through** or **Cross-Over** copper cable (choose **Straight** if unsure).



Bottom Panel : Copper Straight-Through

Next, click on one of the hosts, and choose one of the available ethernet ports. Then click on the another host while we see the cable being dragged.

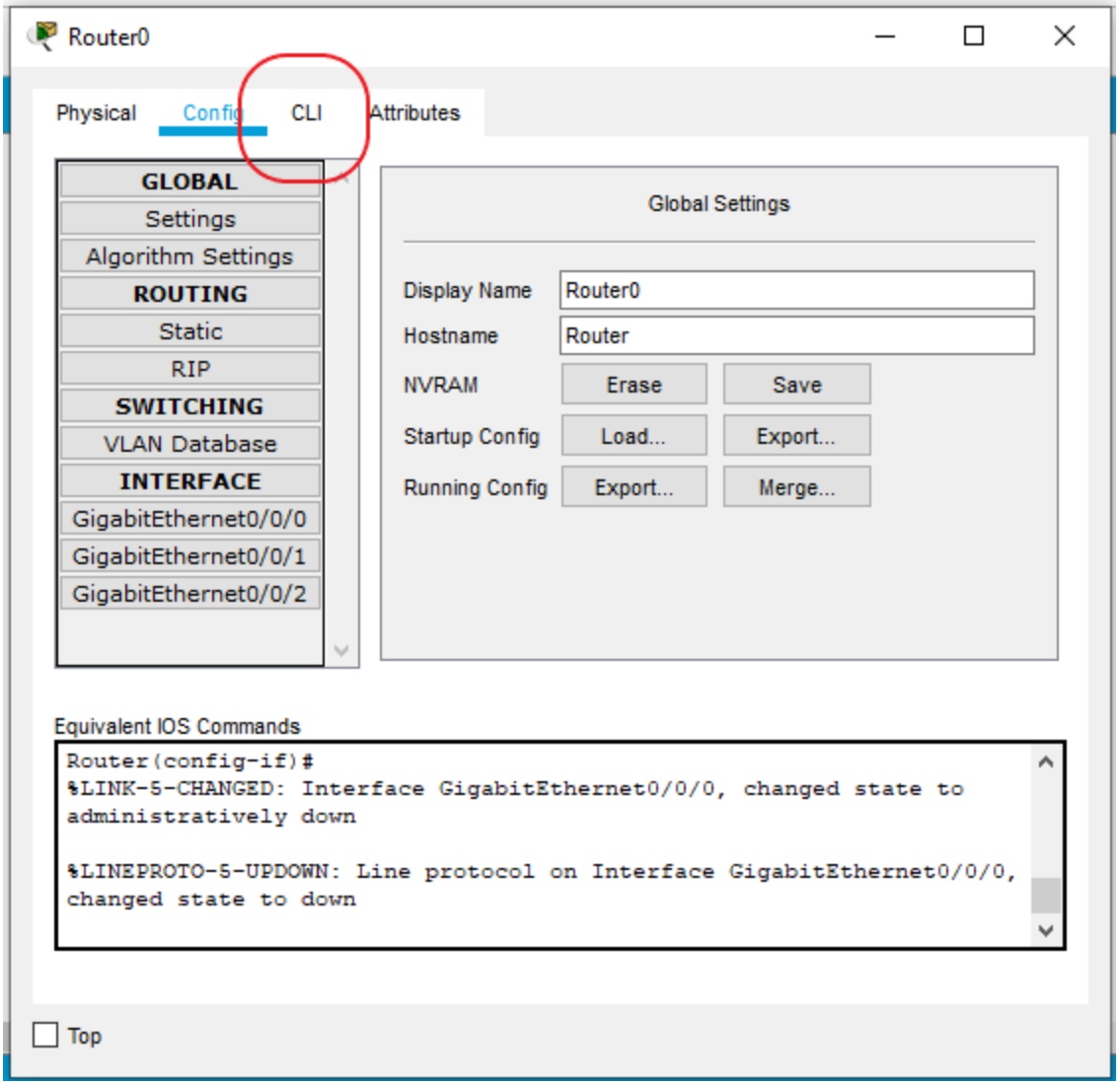


Choosing physical port.

Repeat the similar steps for connecting a PC and one of the routers.

Step 4 : Configure the routers.

Click on a router to bring up a pop-up window. Then open CLI tab.



Router : Pop-up window

In Routero CLI, paste the following script.

en
conf t
int gio/o/o

ip address 10.10.10.1 255.255.255.248
no shutdown

exit
int gio/o/1

ip address 192.168.1.1 255.255.255.0

no shutdown

exit
ip route 192.168.2.0 255.255.255.0 10.10.10.2

And the following into Router1.
en
conf t
int gi0/0/0

ip address 10.10.10.2 255.255.255.248
no shutdown

exit
int gi0/0/1

ip address 192.168.2.1 255.255.255.0

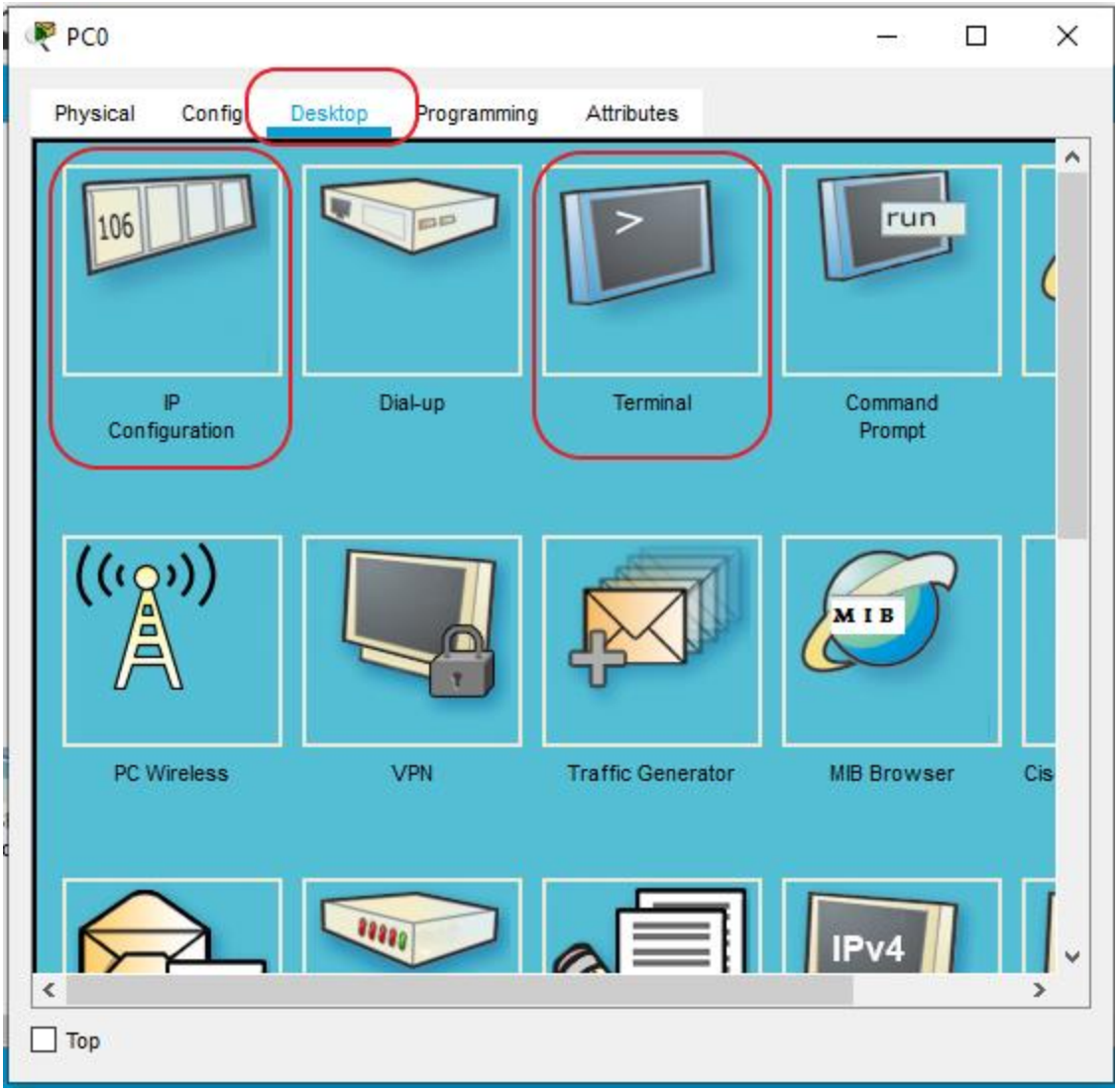
no shutdown

exit
ip route 192.168.1.0 255.255.255.0 10.10.10.1

Type “no” for answering the following question beforehand if popping up.
Would you like to enter the initial configuration dialog? [yes/no]:

Step 5 : Configure the PCs.

There is Desktop tab in each PC’s pop-up window. We are going to use IP Configuration and Command Prompt application here.



Choose IP Configuration to do IP configurations, and insert the following information.

For PCo.

IP Address : 192.168.1.2

Netmask : 255.255.255.0

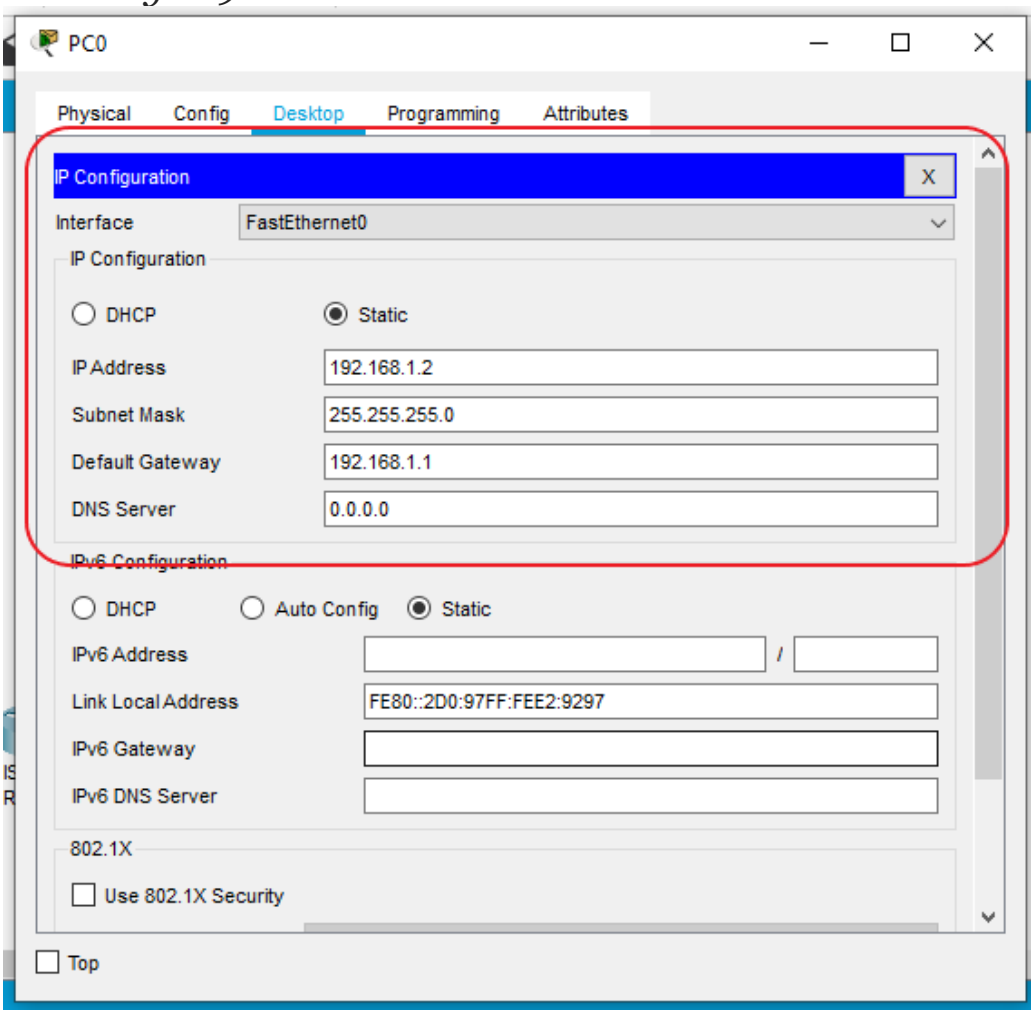
Gateway : 192.168.1.1

For PC1.

IP Address : 192.168.2.2

Netmask : 255.255.255.0

Gateway : 192.168.2.1



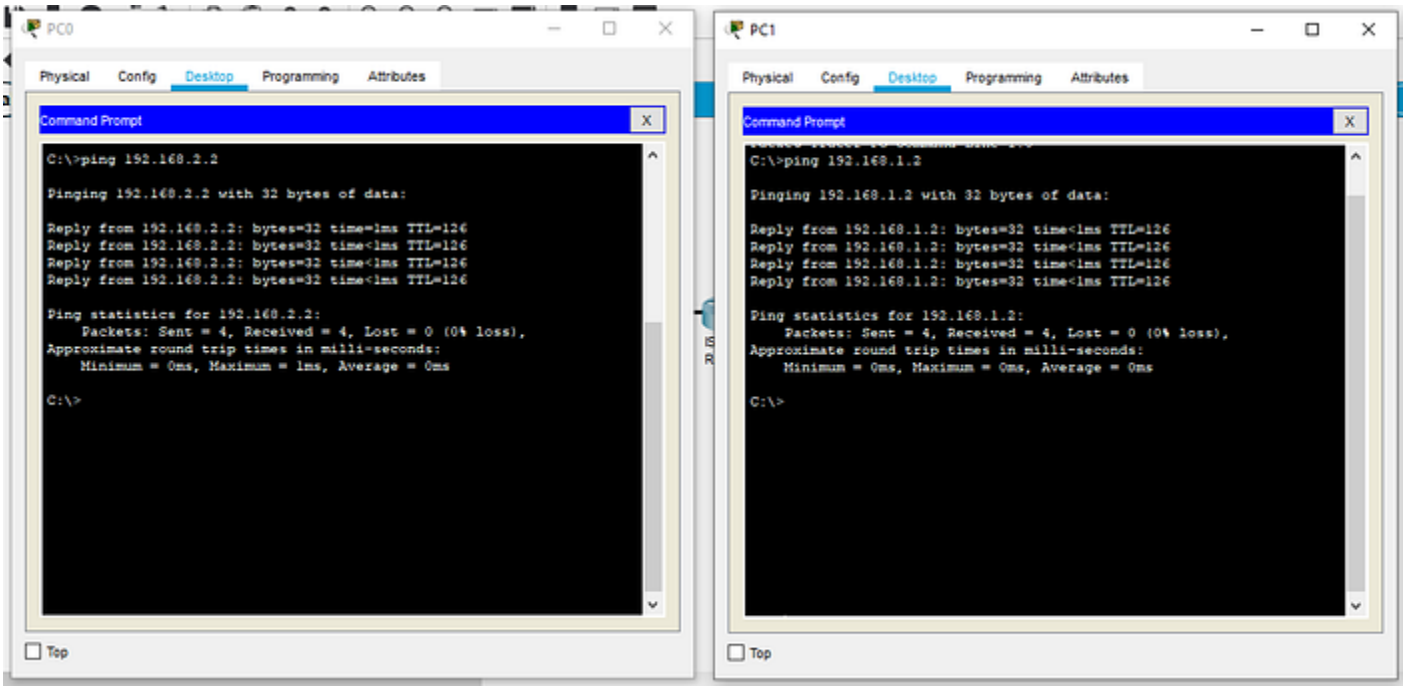
PC : IP configuration

Step 6 : Ping test between the two PCs.

Let's open Command Prompt of the two PCs. Here's the syntax of ping command:

ping <dst-address>

ping 192.168.1.2 from PC0, and **ping 192.168.2.2** from PC1.



Ping test between two PCs

That's it! You have configured a basic static routing with Cisco routers.