Cloud Computing and Virtualization Lab

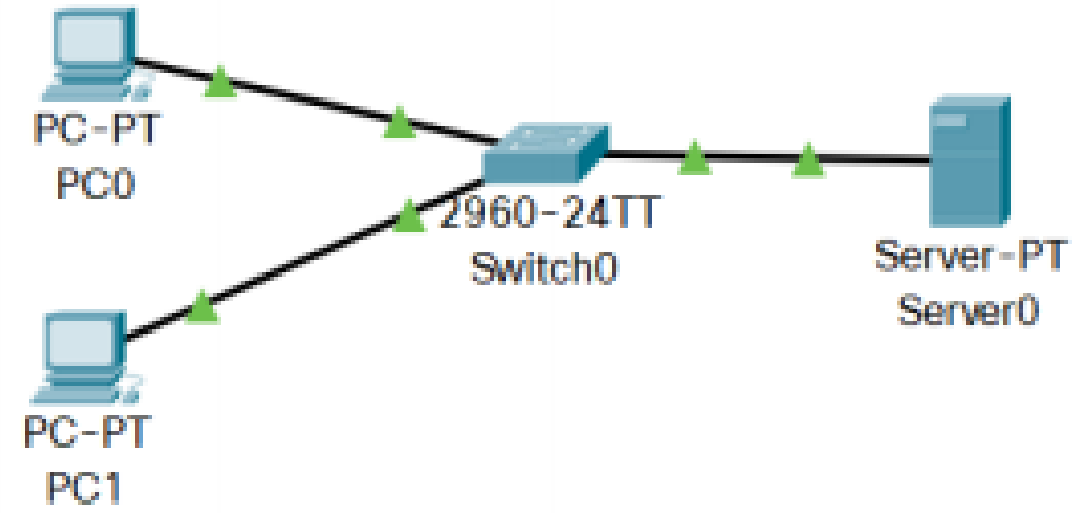
Presented by:

Saurabh Singhal

Assistant Professor

To Simulate

In this activity you will construct a simple Packet Tracer network and complete basic configuration of end devices



Steps to be followed

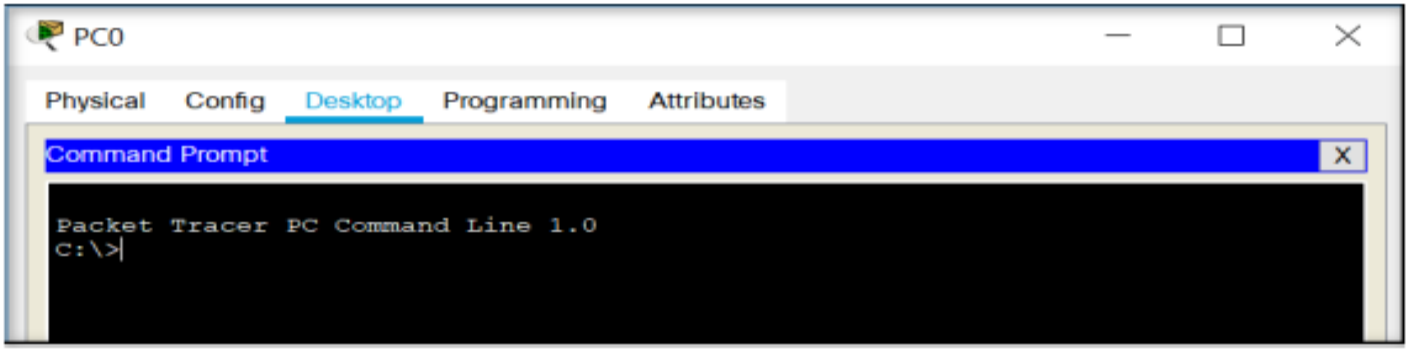
- Once the link lights all turn green, click on Server0. Then configure it as follows:
  - Click on the Desktop tab.
  - Click on the IP Configuration icon.
  - Click on the IP Address dialog box.
  - Type in 192.168.1.1 as the address and press enter.
  - A default value of 255.255.255.0 should appear in the Subnet Mask field.
  - Nothing else in this dialog box needs to be configured, so click the “X” in the upper right corner to close the IP Configuration window. g. Click the red “X” in the upper right corner to close the Server0 window.

Steps to be followed

- Click on PC0. Then configure it as follows:
  - Click on the Desktop tab.
  - Click on the IP Configuration icon.
  - Click on the IP Address dialog box.
  - Type in 192.168.1.2 as the address and press enter.
  - A default value of 255.255.255.0 should appear in the Subnet Mask field.
  - Nothing else in this dialog box needs to be configured, so click the “X” in the upper right corner to close the IP Configuration window

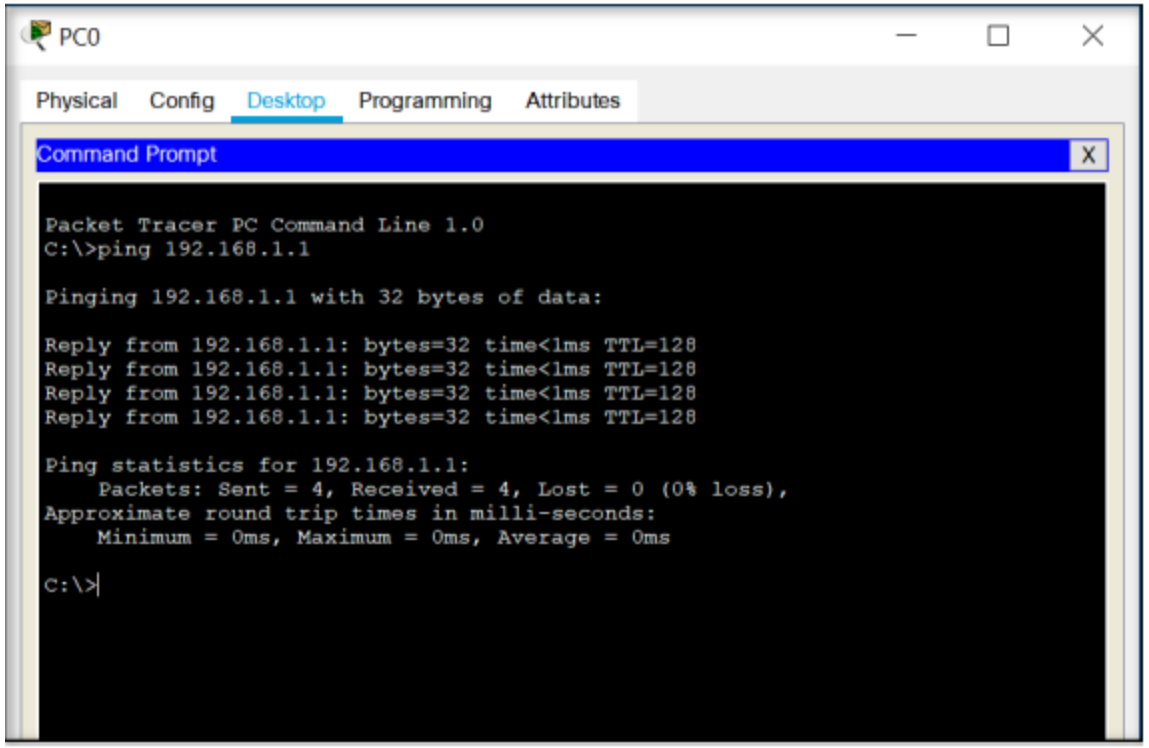
Steps to be followed

- Click on the icon labeled Command Prompt and the following prompt should appear:



- Type the following command in the prompt: ping 192.168.1.1 and press enter.
- If you have done everything correctly, reply should come
- Your output could vary a little but the reply statements should be there. If the replies are not there, try redoing the device configuration to this point.

Steps to be followed



- Click the “X” next to the Command Prompt title bar.
- Click the red “X” in the upper right corner to close the PC0 window

Steps to be followed

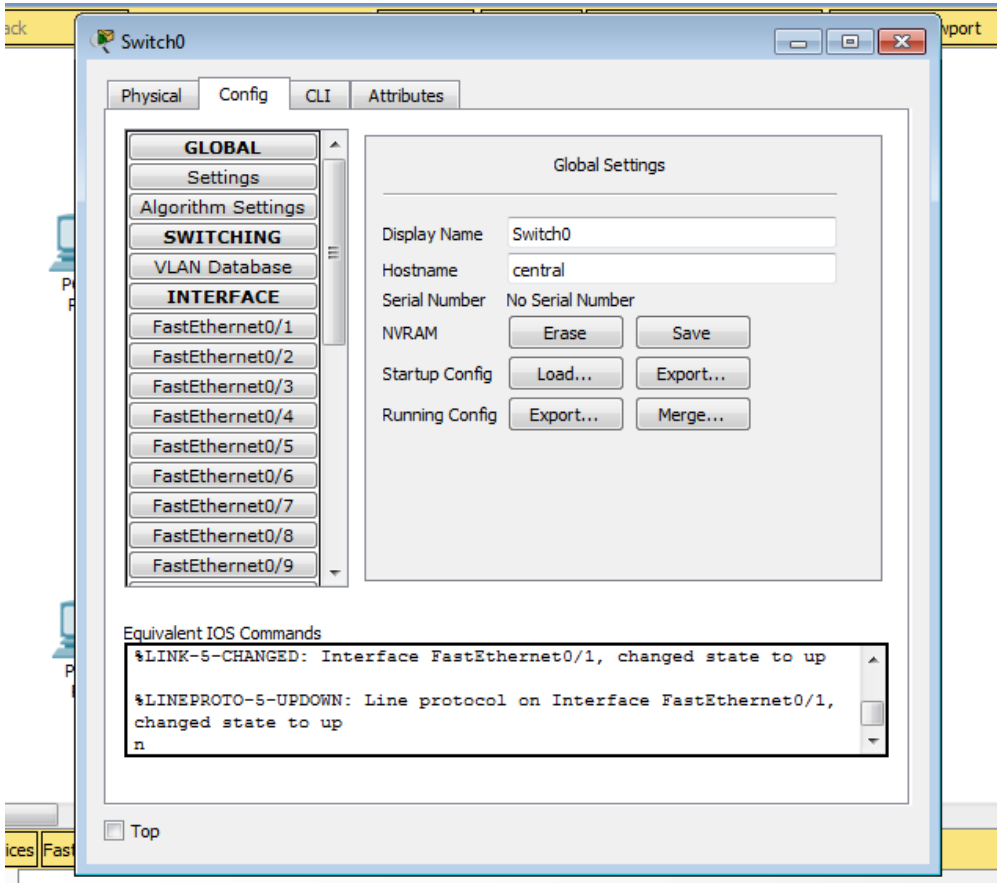
- Repeat the same configuration and ping steps from #3 on PC1, except use 192.168.1.3 as the IP address. The results should be the same.

Steps to be followed

- Finally, click on PC1 again
  - Click on the Desktop tab, if it is not already open.
  - Click on the Web Browser icon.
  - Type 192.168.1.1 in the URL box and click the [GO] button.
  - You should observe the following. If you do not, repeat the earlier steps to confirm the configuration. This happens because the web server feature is on by default in the server and PC1 just connected to the default page.

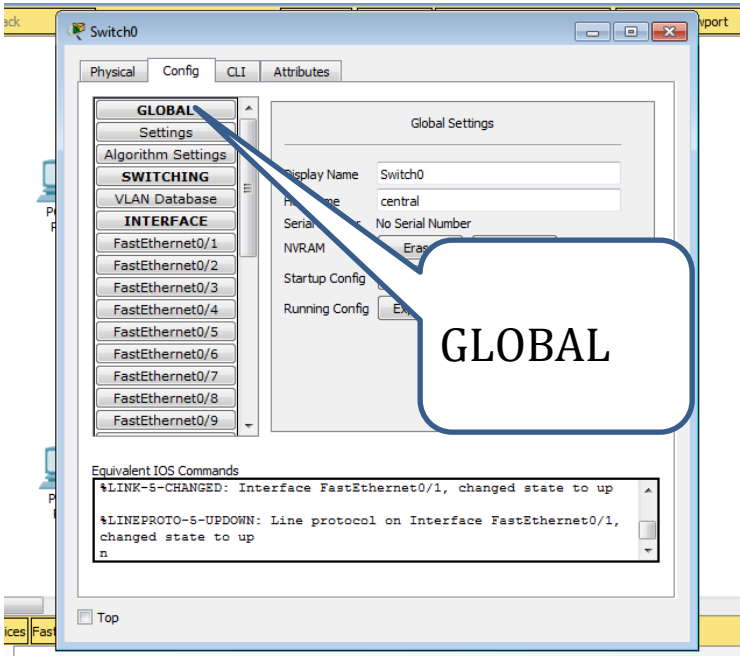
Configure Switch

- Click on Switch0, then click on the Config tab.
- Clicking on the Config tab shows a list of components that can be configured on this device.



Configure Switch

- The Global Settings tab allows a user to change the name of a device that displays in the workspace.
- It also allows for changing the internal name shown at the command line prompt as well as buttons for saving, loading, exporting, and erasing configuration files.



Configure Switch

- Double click in the Hostname dialog box highlighting the word Switch, type Central and press enter. Packet Tracer will display the IOS commands necessary to accomplish the name change in the Equivalent IOS Commands box.
- The commands displayed should be as follows:
  - Switch>enable
  - Switch#configure terminal
  - Enter configuration commands, one per line.
  - End with CNTL/Z.
  - Switch(config)#hostname Central Central(config)#

Configure Switch

- Clicking on the FastEthernet0/1 label will bring up an Ethernet interface to be configured.
- Notice the Equivalent IOS Commands box below. It shows a command of “interface FastEthernet0/1” which would have been the command used to select the interface from the CLI.
- Select the CLI tab to switch to the CLI interface. Notice that the same commands that were in the Equivalent IOS Commands box are listed in the CLI window.
- Click right beside the command prompt at the bottom of the list that looks like this: “Central(config-if)#”
- Then type shutdown , and press enter twice

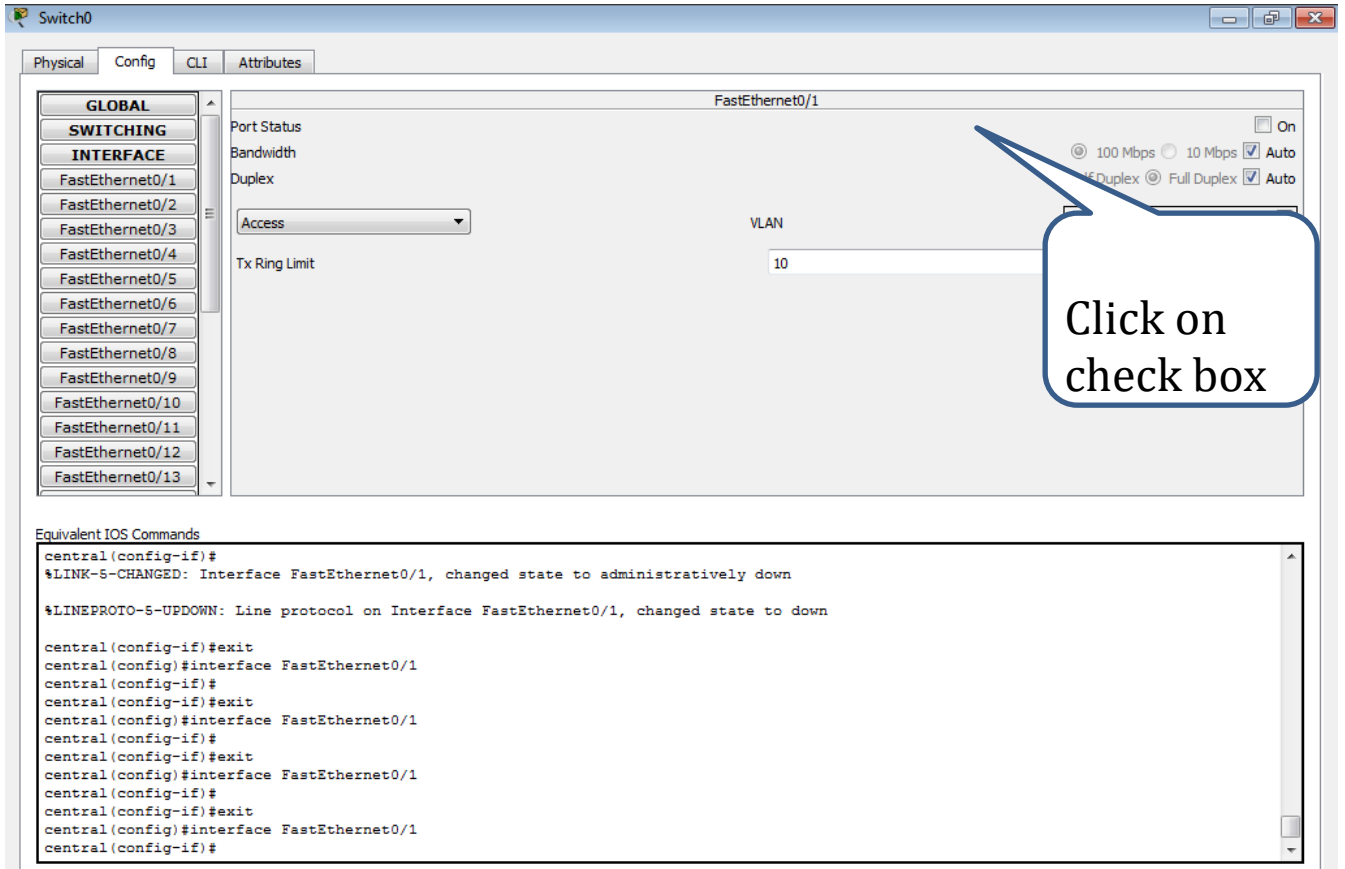
Configure Switch

- Central(config-if)#shutdown
- Central(config-if)#
- %LINK-5-CHANGED: Interface FastEthernet0/1, changed state to administratively down
- %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
- Central(config-if)#
- Notice how the link lights for the connection between PC0 and Switch0 are red.

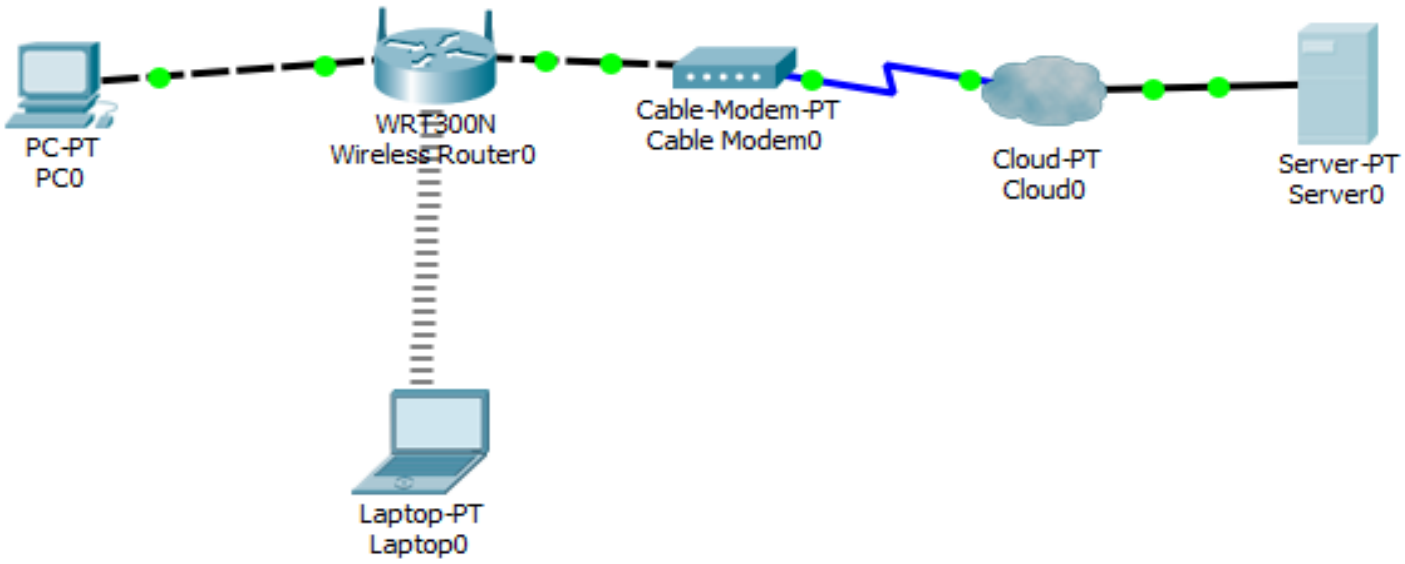
Configure Switch

- To up the link
- Type no shutdown on CLI

OR



Create a Simple Network Using Packet Tracer



Create a Simple Network Using Packet Tracer

- End Devices: PC, Laptop, Server
- Network Devices: Wireless Router, Cloud, Cable Modem
- Cable: Copper Cross Over, Coaxial, Copper Straight Through

Create a Simple Network Using Packet Tracer

Step1: Drag multiple switch from network device switch to logical space

Step2: Drag PCs or Laptop from end devices to logical space

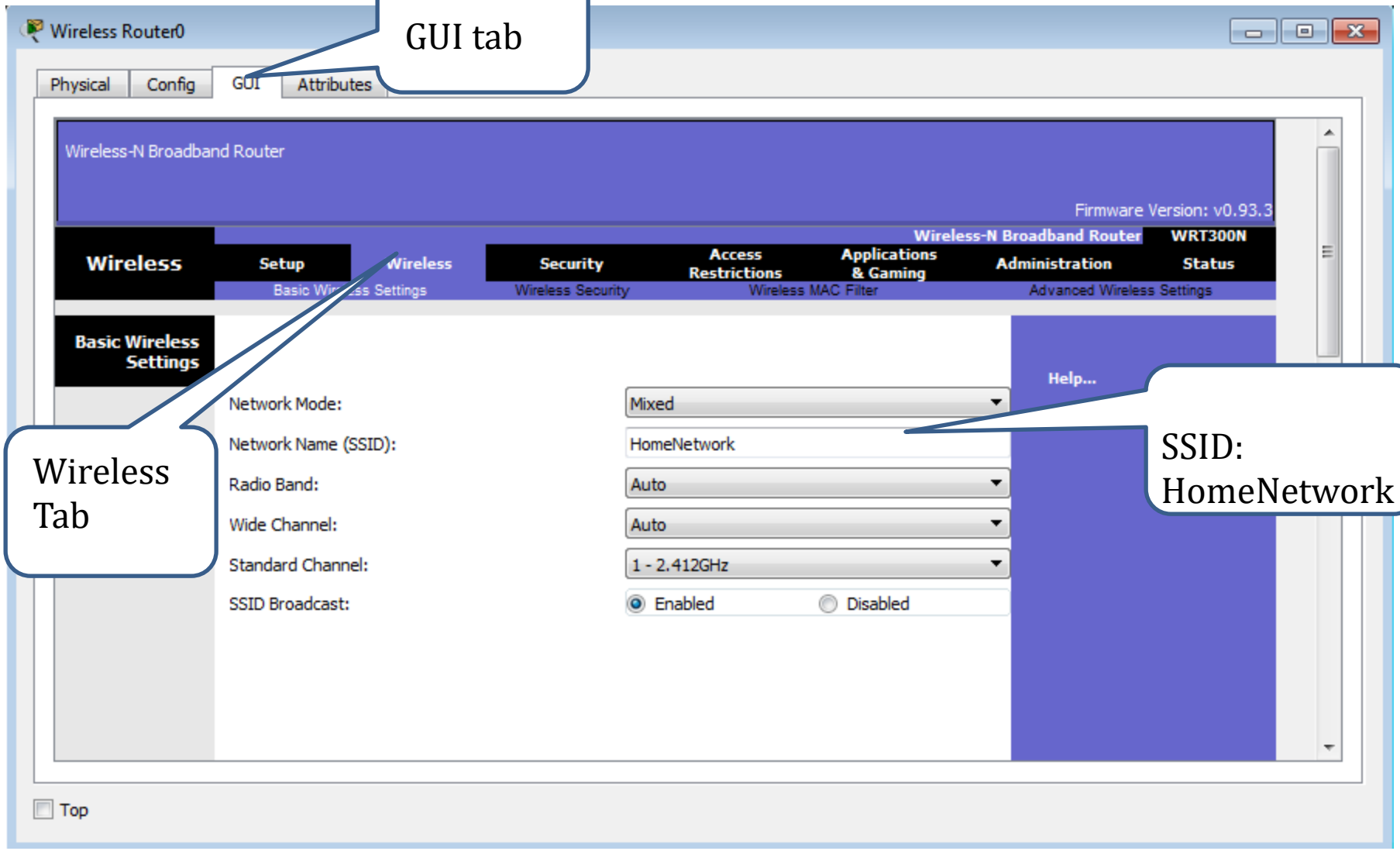
Step3: Select cable from cables to devices as shown in figure

Step4: Wait for connections to be established

Create a Simple Network Using Packet Tracer

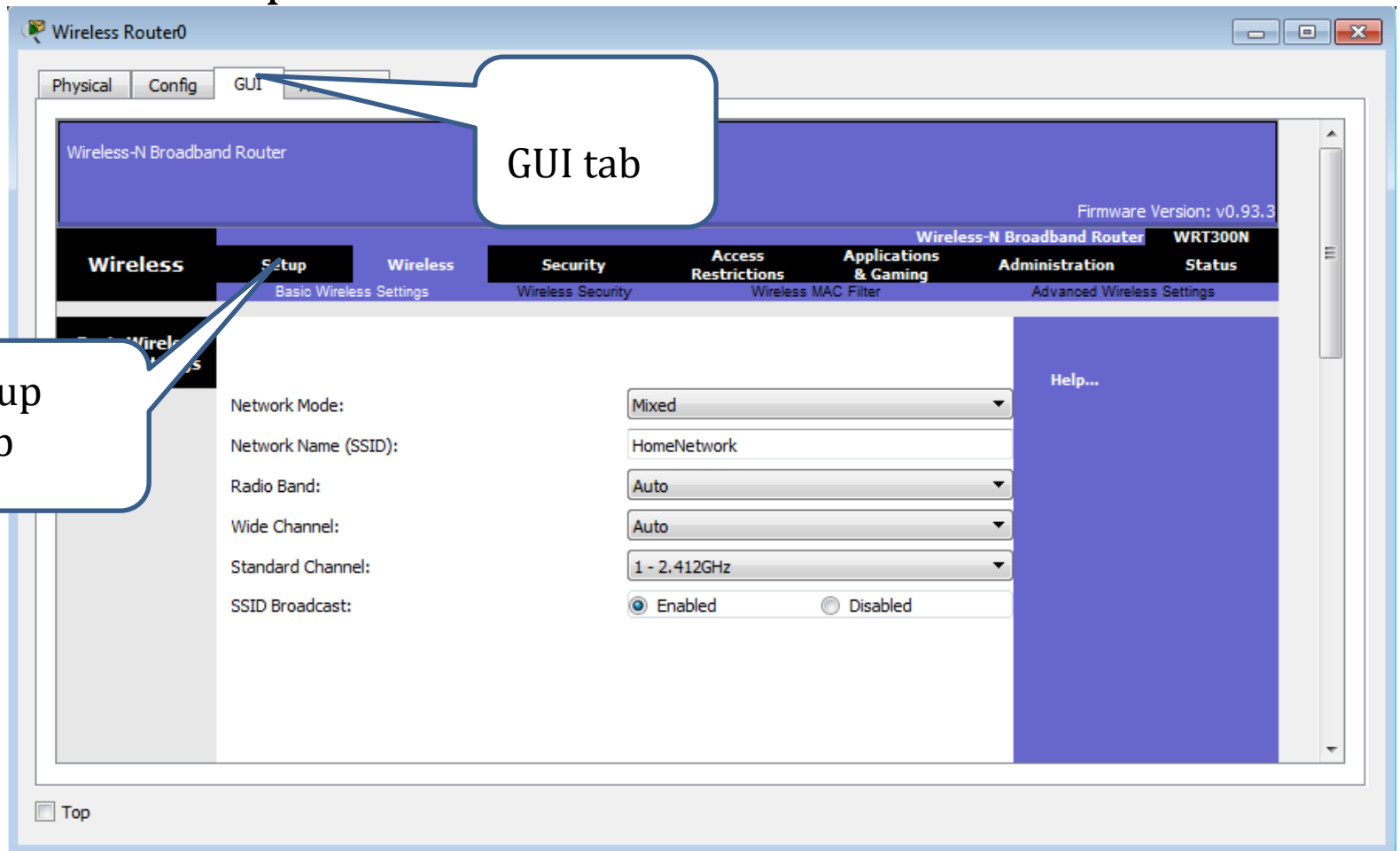
- **Configure the wireless router**
  - Create the wireless network on the wireless router
  - Click on the Wireless Router
  - In the wireless router configuration window, click on the GUI tab to view configuration options for the wireless router.
  - Next, click on the Wireless tab in the GUI to view the wireless settings.
  - The only setting that needs to be changed from the defaults is the Network Name (SSID). Here, type the name “HomeNetwork” as shown in the figure.

Create a Simple Network Using Packet Tracer



Create a Simple Network Using Packet Tracer

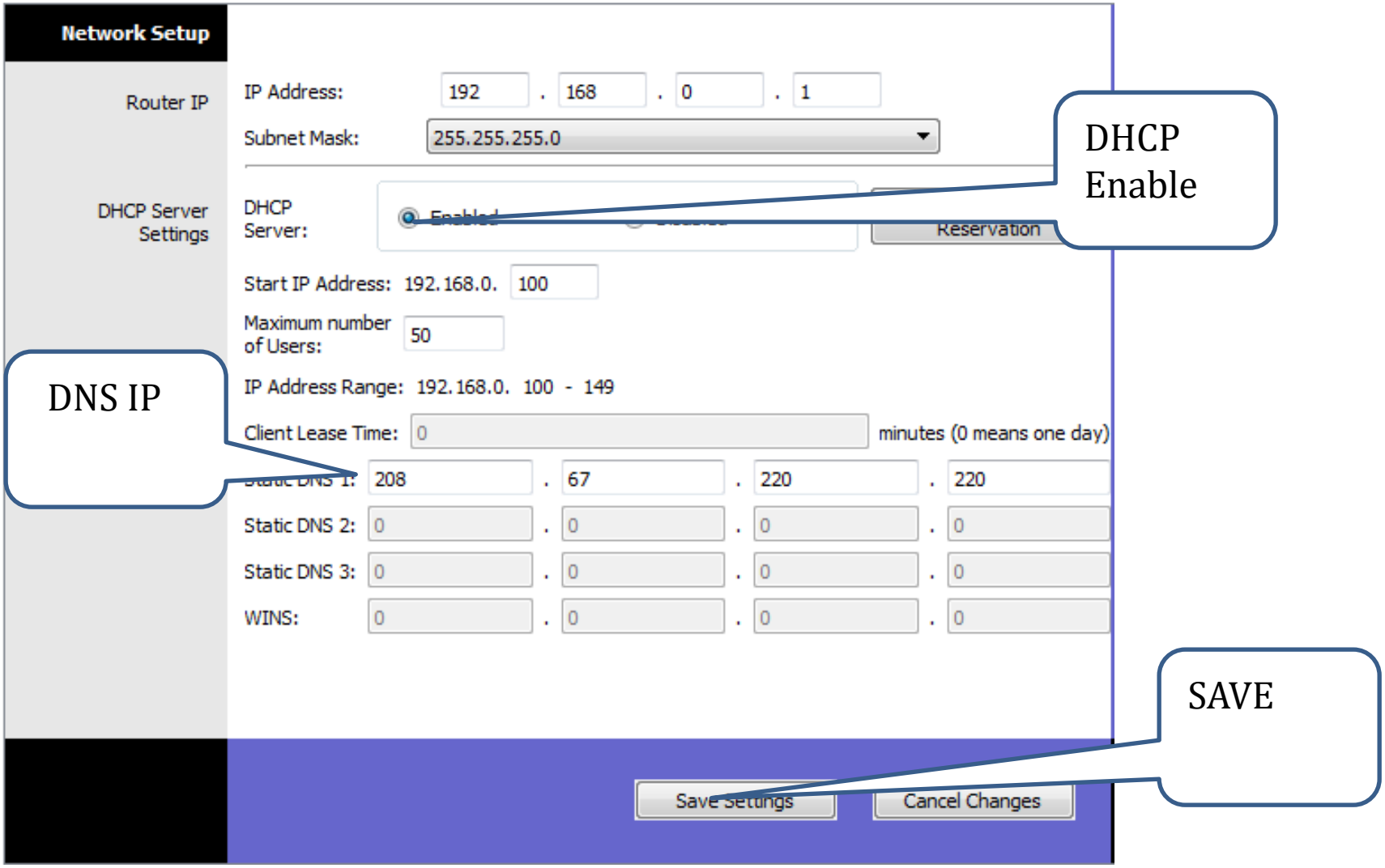
- Configure the Internet connection on the wireless router Click on the Setup tab in the wireless router GUI.



Create a Simple Network Using Packet Tracer

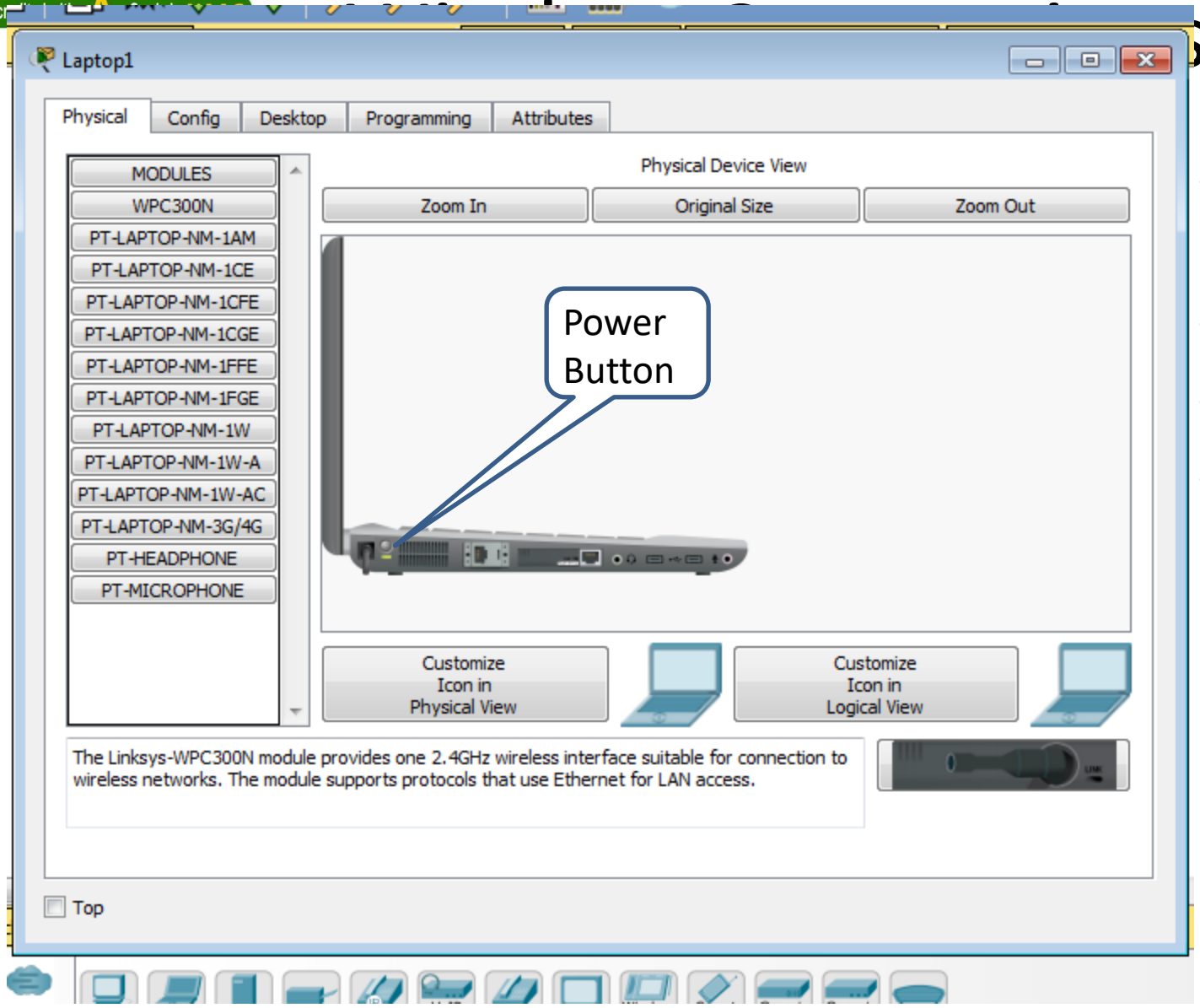
- In the DHCP Server settings verify that the Enabled button is selected
- Configure the static IP address of the DNS server as 208.67.220.220
- Click on the Save Settings tab.

Create a Simple Network Using Packet Tracer



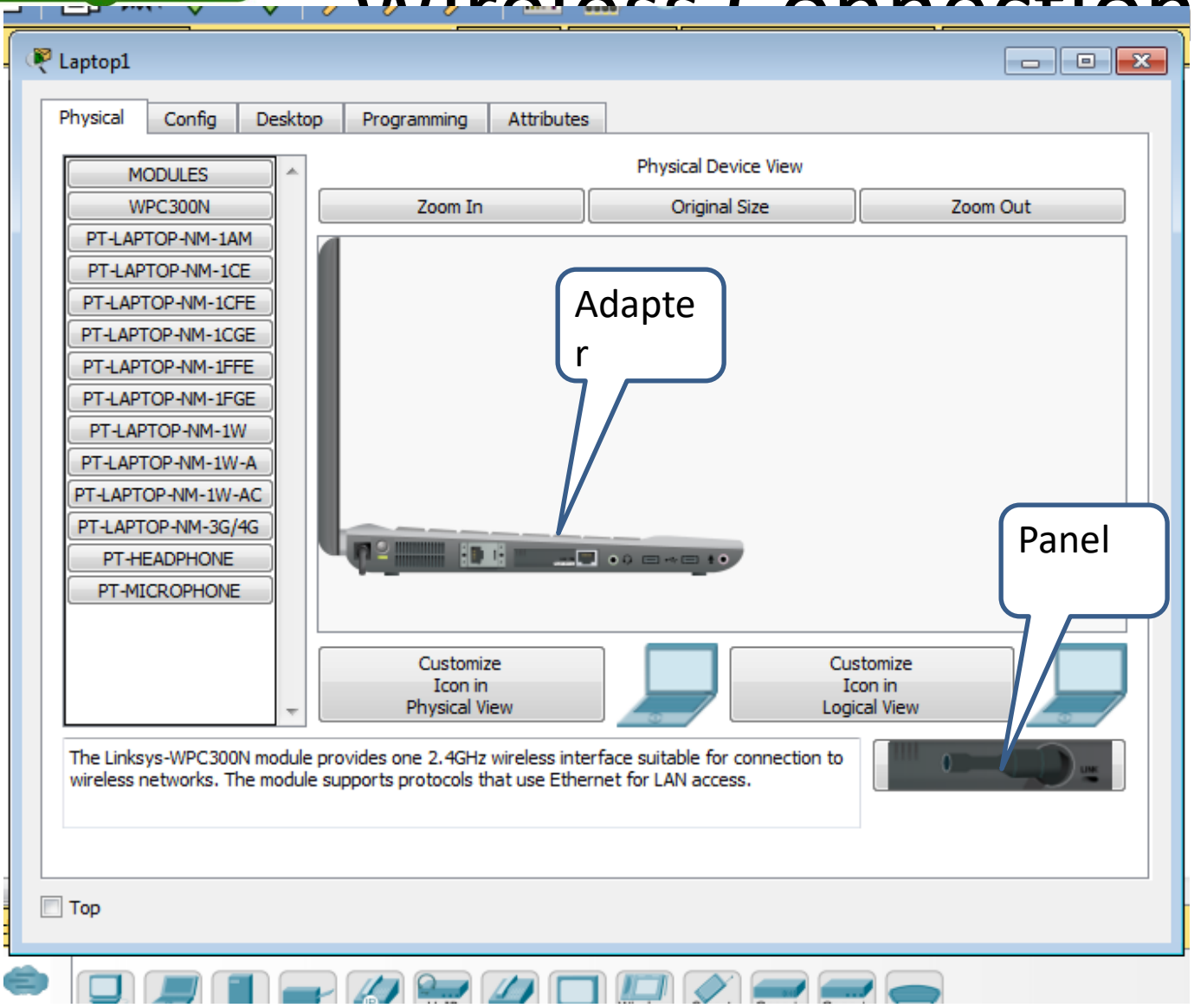
Create a Simple Network Using Packet Tracer

- **Configure the laptop**
  - Click on the Laptop icon on the Logical workspace
  - Select the Physical tab.
  - In the Physical tab you will need to remove the Ethernet copper module and replace it with the Wireless WPC300N module.



- Click on Laptop
- physical
- Zoom out
- Switch off the power of Laptop

Wireless Connections

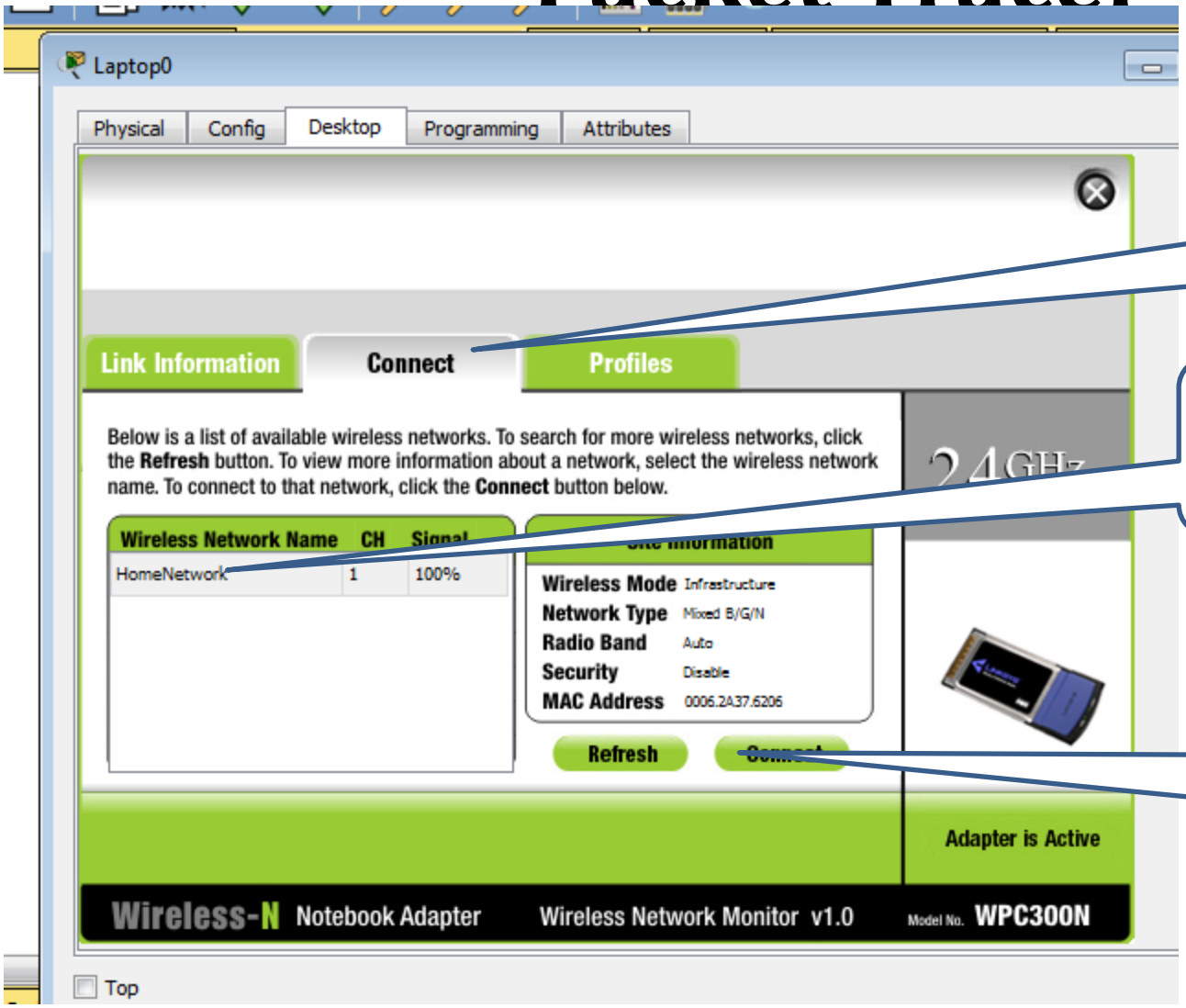


- Drag the adapter and drop it to the panel
- Click on WPC300N
- Drag the adapter from panel and drop it to the adapter place
- Power on the Laptop
- Repeat step for second Laptop

Create a Simple Network Using Packet Tracer

- With the wireless module installed, the next task is to connect the laptop to the wireless network.
- Click on the **Desktop tab** at the top of the Laptop configuration window and select the **PC Wireless icon**.
- Once the Wireless-N Notebook Adapter settings are visible, select the **Connect tab**.
- The wireless network "**HomeNetwork**" should be visible in the list of wireless networks as shown in the figure.
- Select the network, and click on the Connect tab found below the Site Information pane

Create a Simple Network Using Packet Tracer



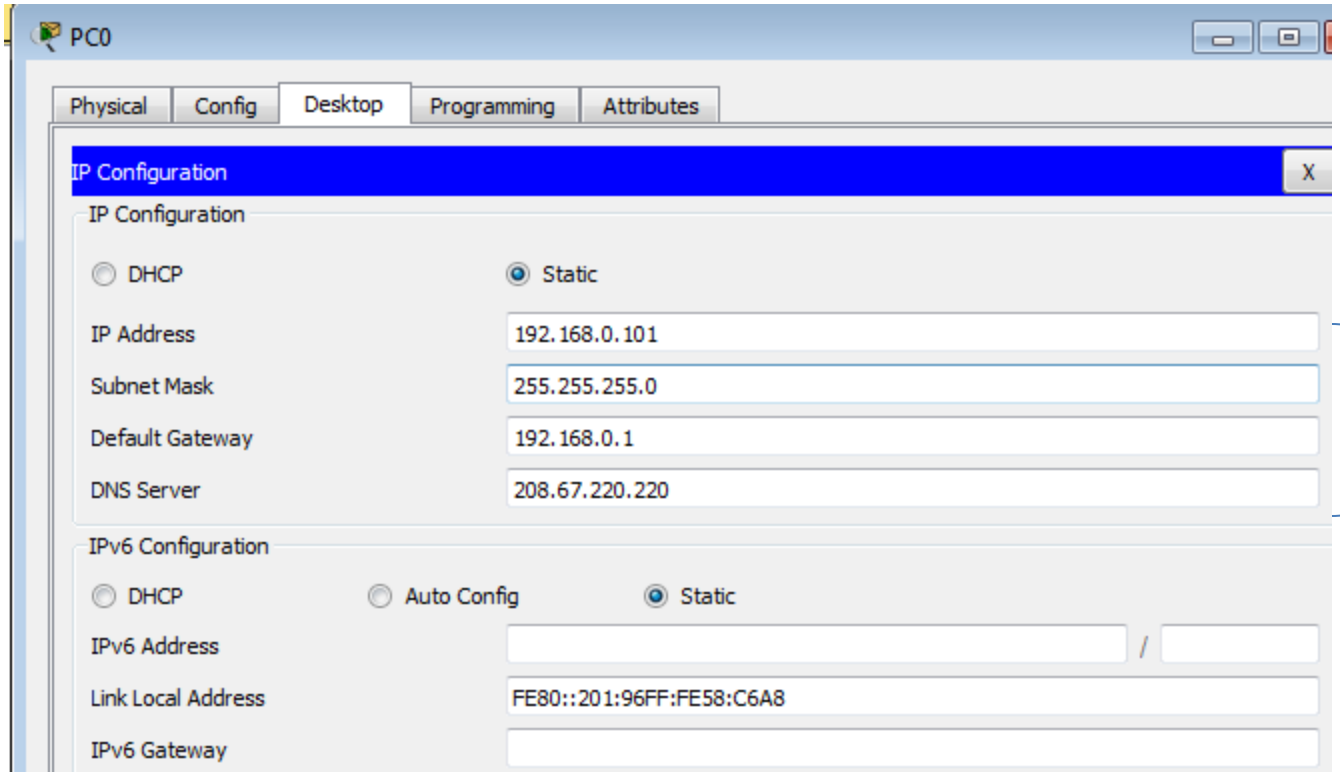
Connect Tab

HomeNetwork

Connect

Create a Simple Network Using Packet Tracer

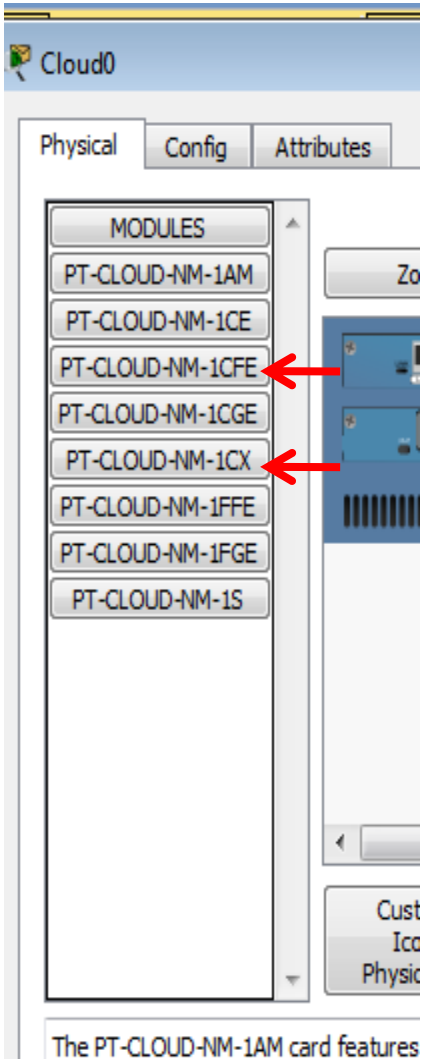
- **Configure the PC**
- Click on the PC icon on the Logical workspace
- Select the Desktop tab and then the IP Configuration icon



Assign the following IP

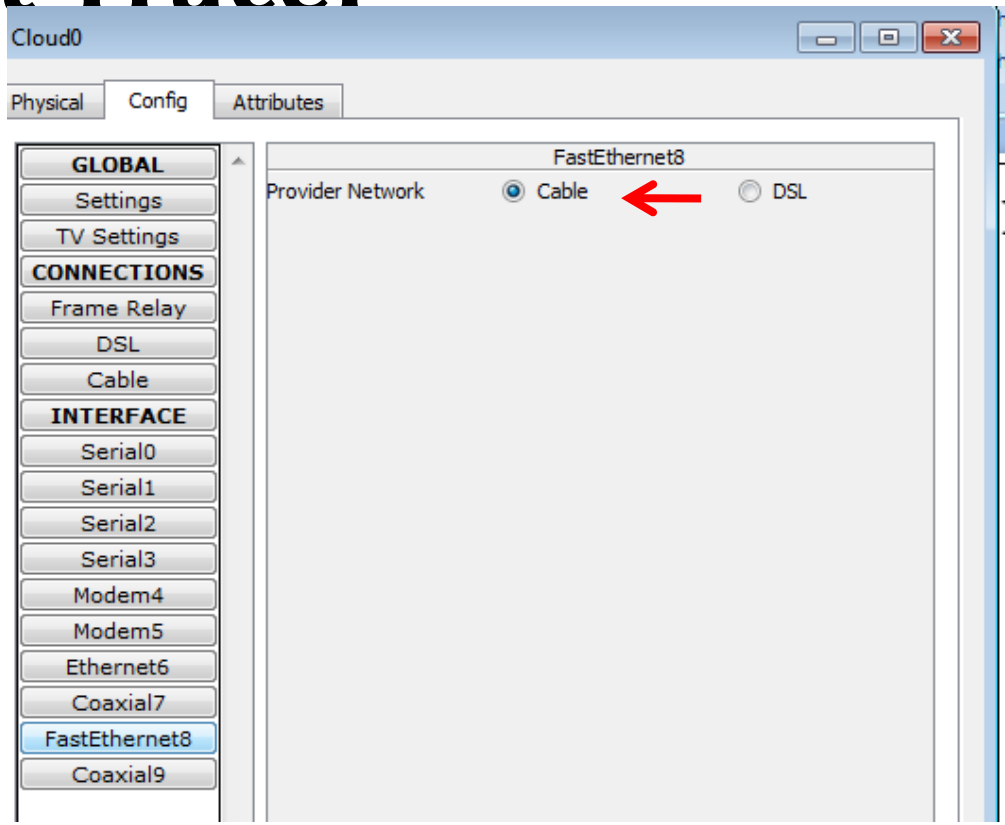
Create a Simple Network Using Packet Tracer

- **Configure the Internet cloud**
  - a. Install network modules if necessary
  - The **PT-CLOUD-NM-1CX** which is for the cable modem service connection and the **PT-CLOUD-NM-1CFE** which is for a copper Ethernet cable connection



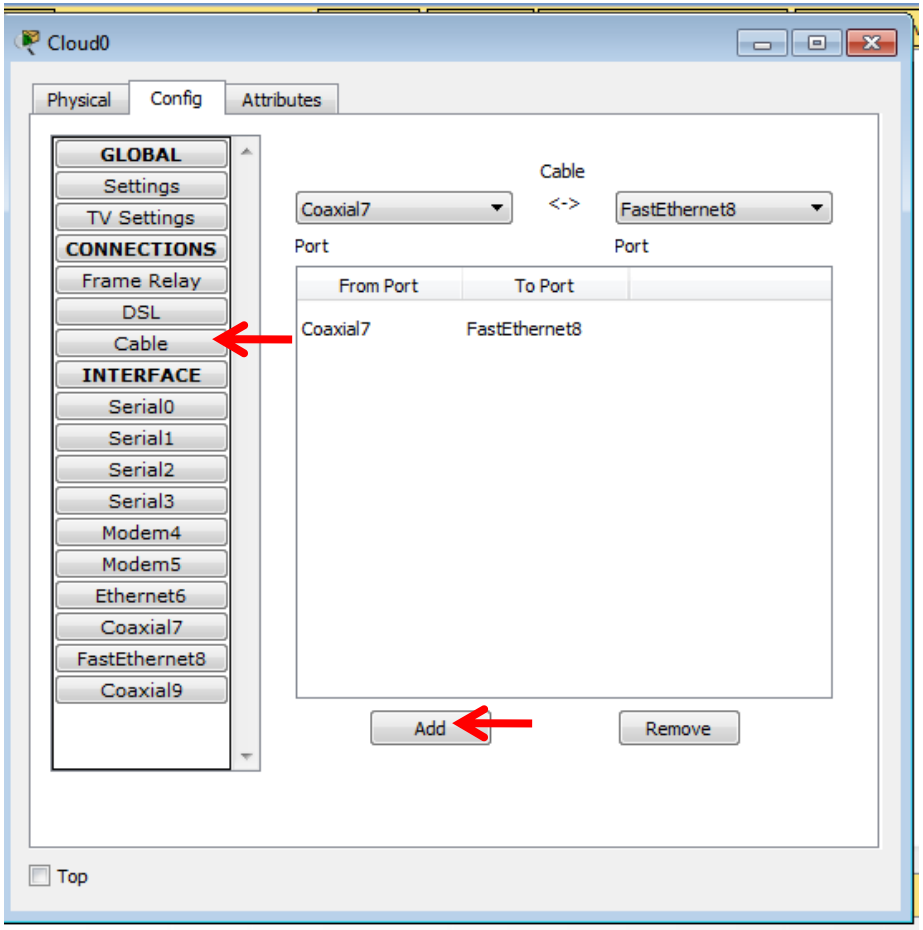
Create a Simple Network Using Packet Tracer

- While still in the Config tab click Ethernet under INTERFACE in the left pane. In the Ethernet configuration window select Cable as the Provider Network as shown in the figure.



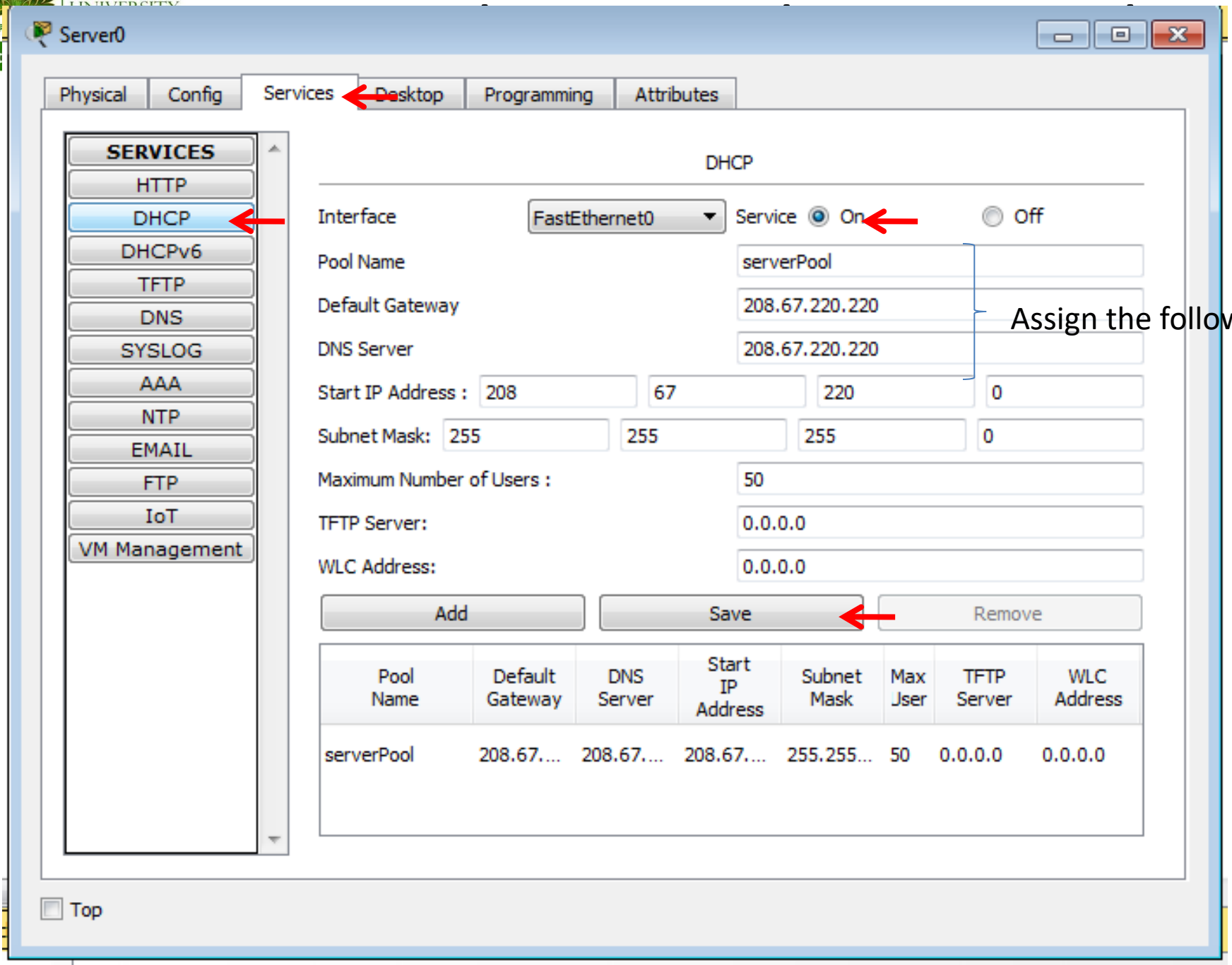
Create a Simple Network Using Packet Tracer

- Identify the From and To Ports
- Click on the Config tab in the Cloud device window. In the left pane click on Cable under CONNECTIONS. In the first drop down box choose Coaxial and in the second drop down box choose Ethernet then click the Add button to add these as the From Port and To Port as shown in the figure.



Create a Simple Network Using Packet Tracer

- **Configure the server**
- Configure the server as a DHCP server
- Click on the server icon on the Logical workspace
- Select the Services tab.
- Select DHCP from the SERVICES list in the left pane.
- In the DHCP configuration window, configure a DHCP as shown in the figure with the following settings.
- Click On to turn the DCHP service on
- Pool name: serverpool
- Default Gateway: 208.67.220.220
- DNS Server: 208.67.220.220
- Starting IP Address: 208.67.220.1
- Subnet Mask 255.255.255.0
- Maximum number of Users: 50 Click save to add the pool



Assign the following IP