Packet Tracer: Novice Session

Cisco Networking Academy®
Mind Wide Open™

How Can I Use Packet Tracer?

Problem Scenario:

Your students need to learn how to configure a router Ethernet interface and to verify connectivity to this interface from a PC that has been configured to participate on the network.

- How can you demonstrate this to the whole group?
- How can they practice what they've learned?
- How can you test their ability to complete all of the steps on their own?

Use Packet Tracer!

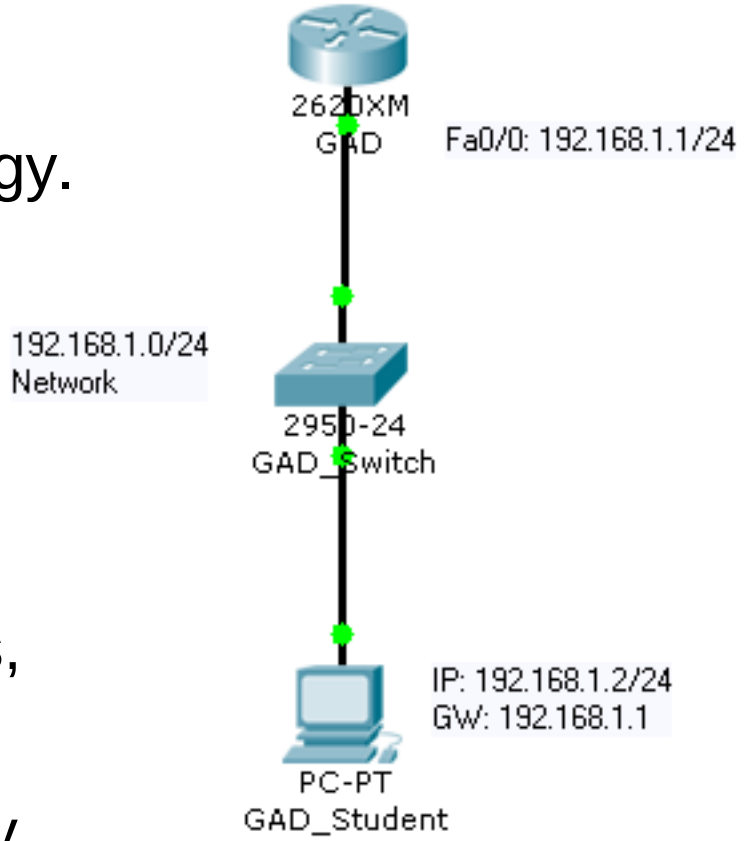
The Topology

As a group:

- Start with the finished topology.
- Walk students through the steps.

Individually:

- Students will create the devices, connect the devices, and configure the devices.
- Students will test connectivity from the PC to the router.

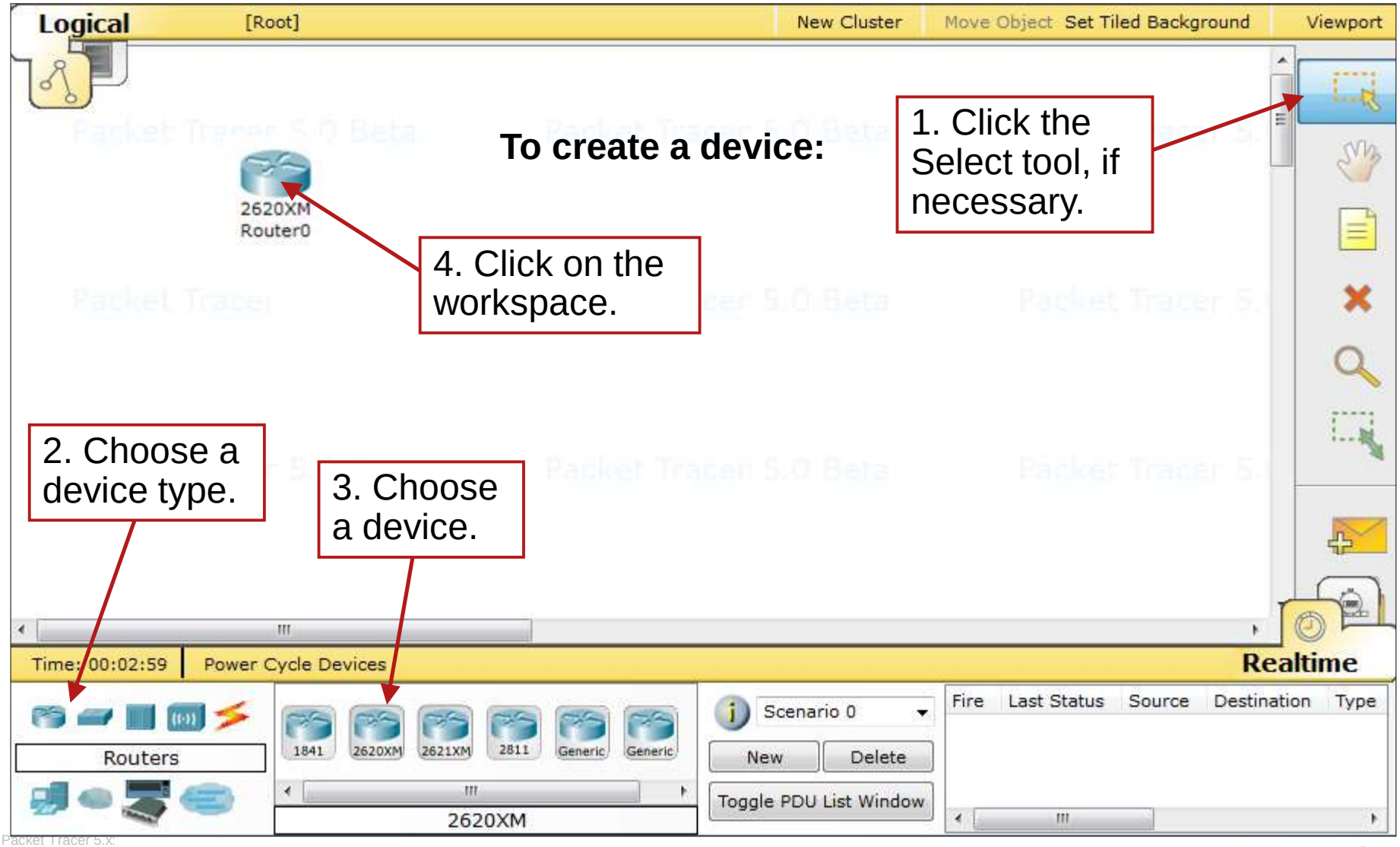


Skills Demonstrated in this Session

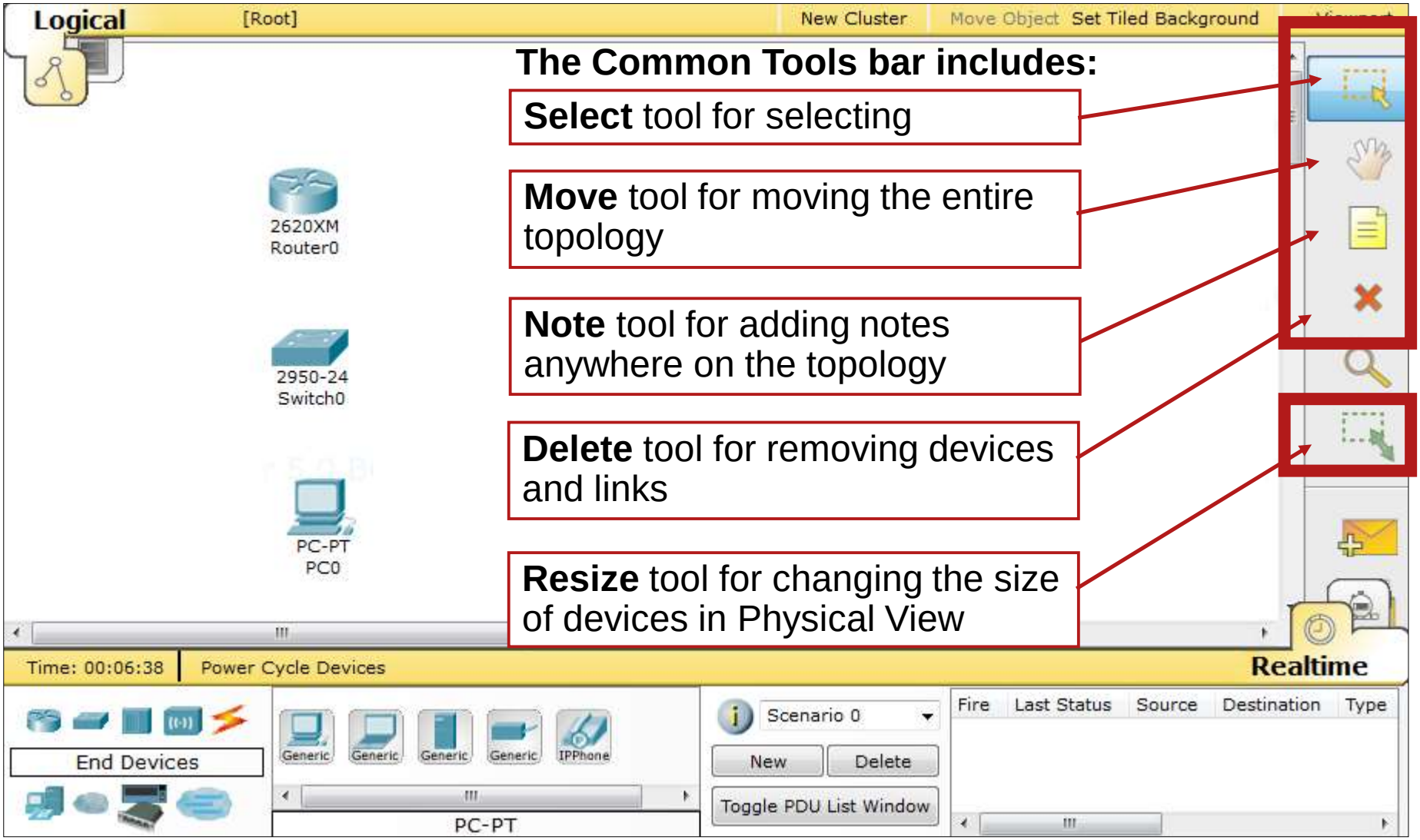
- Create and arrange devices
- Create connections
- Configure devices
- Verify connectivity
- Simulation mode
- Common issues for beginners

Creating and Arranging Devices

Create the Devices



Common Tools



The Common Tools bar includes:

Select tool for selecting

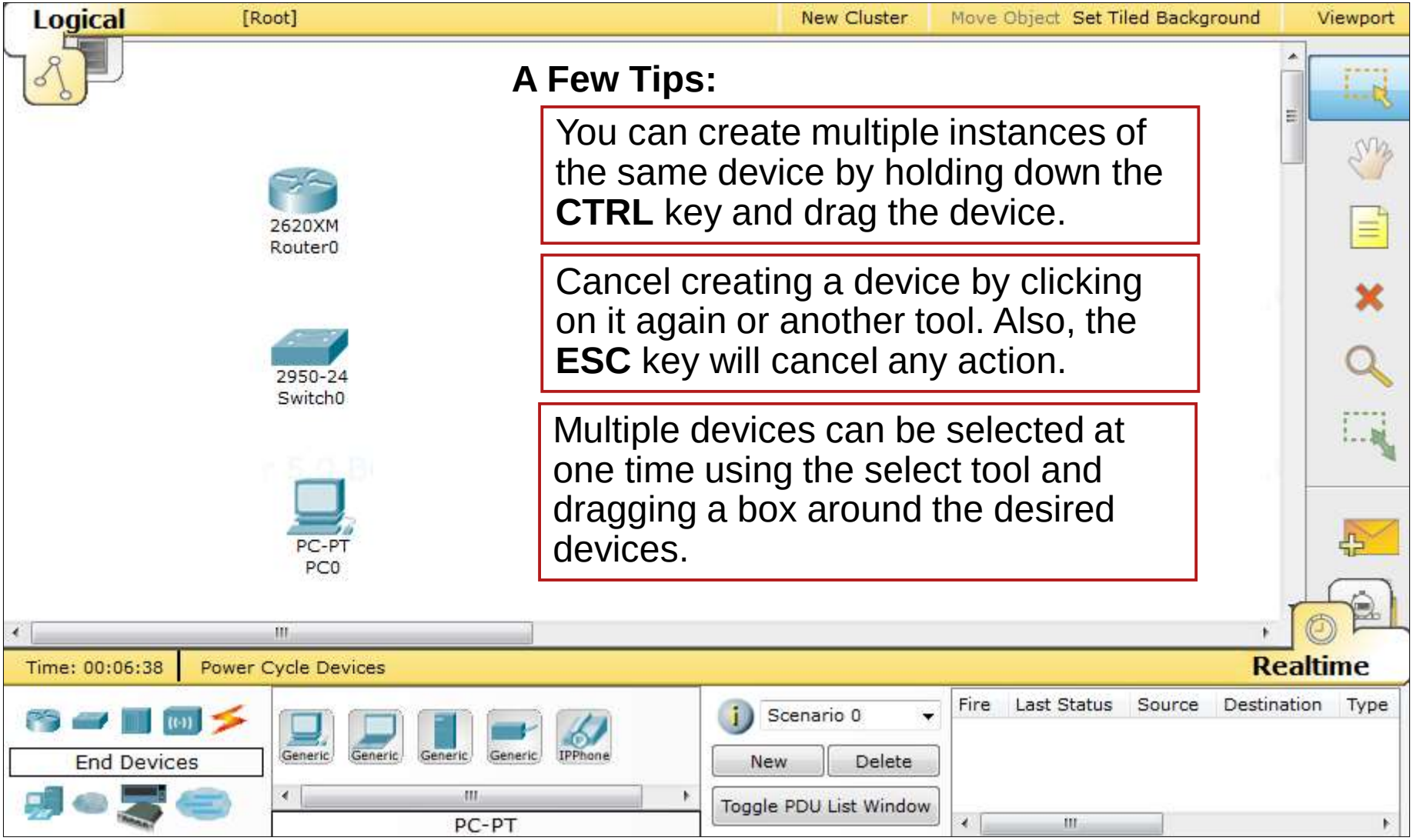
Move tool for moving the entire topology

Note tool for adding notes anywhere on the topology

Delete tool for removing devices and links

Resize tool for changing the size of devices in Physical View

Some Tips



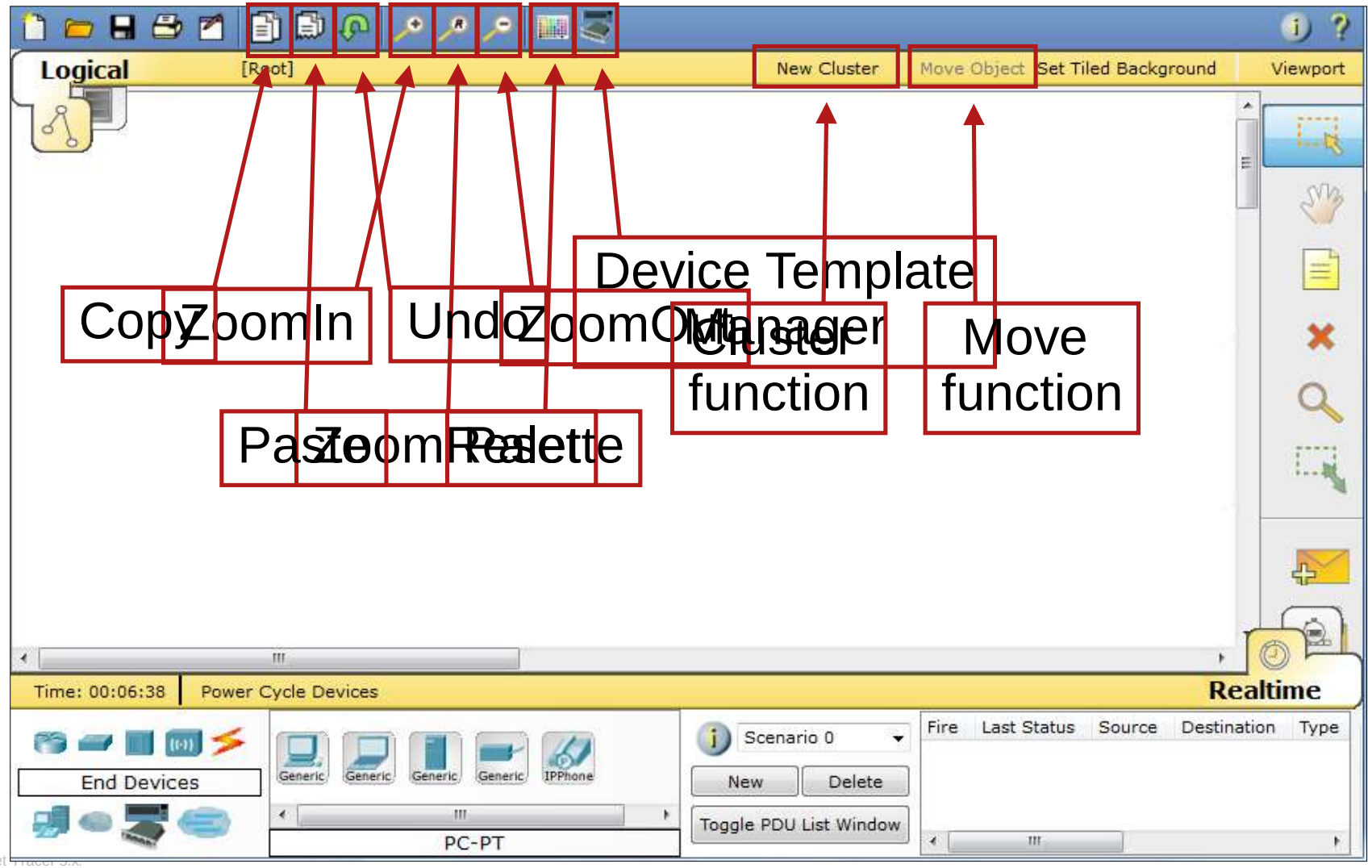
A Few Tips:

You can create multiple instances of the same device by holding down the **CTRL** key and drag the device.

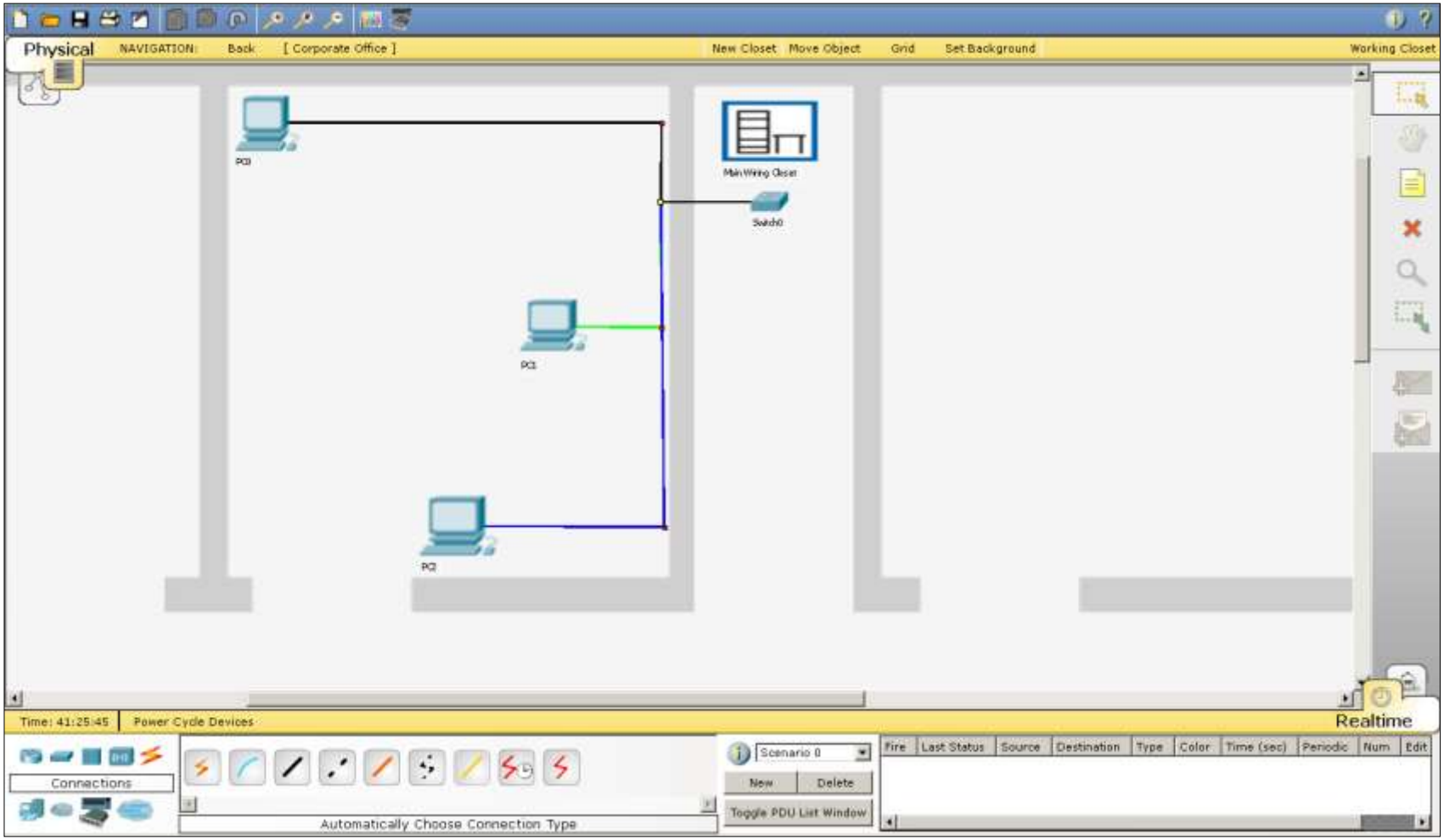
Cancel creating a device by clicking on it again or another tool. Also, the **ESC** key will cancel any action.

Multiple devices can be selected at one time using the select tool and dragging a box around the desired devices.

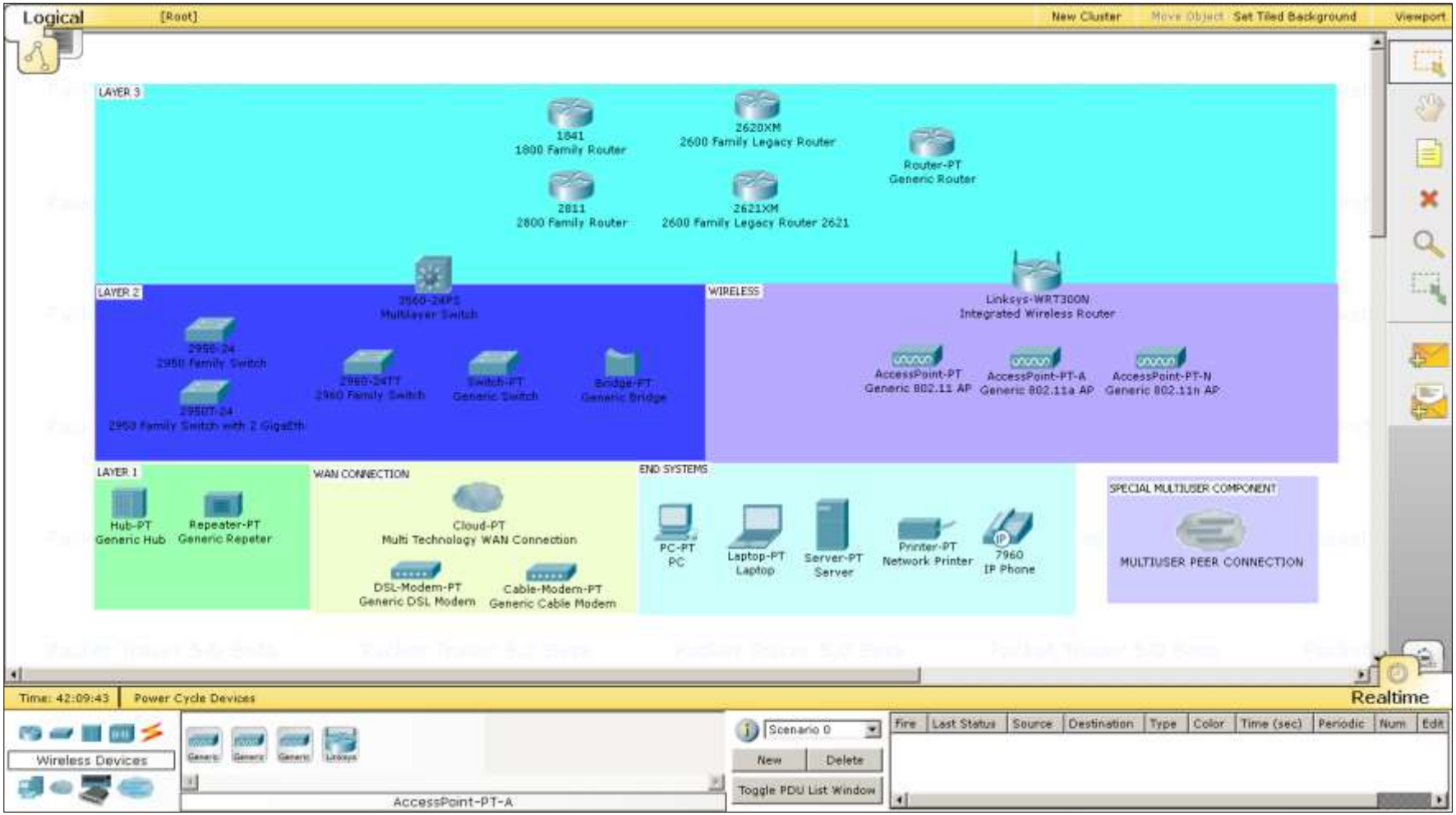
PT 5.2 Features



Create Bend Point

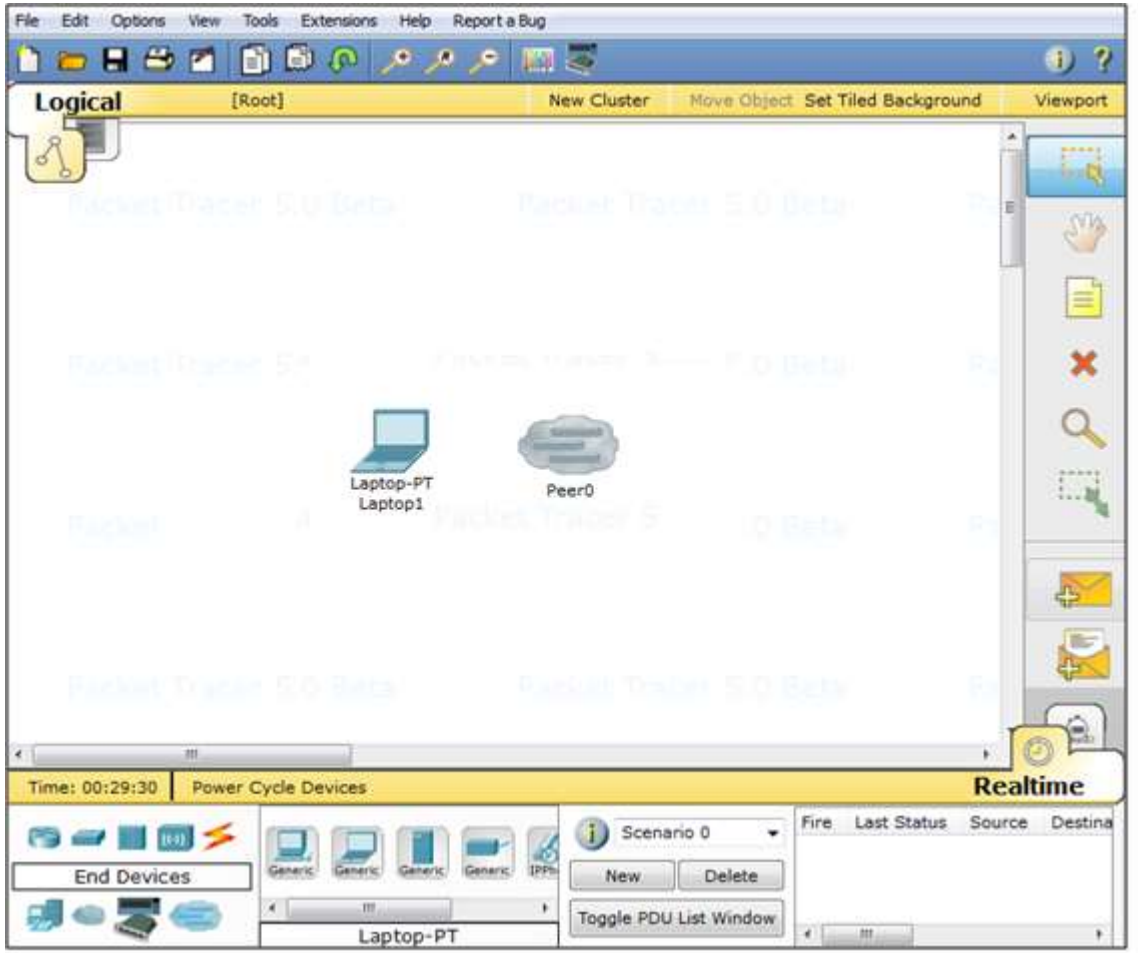


Legacy Devices (PT5.x)

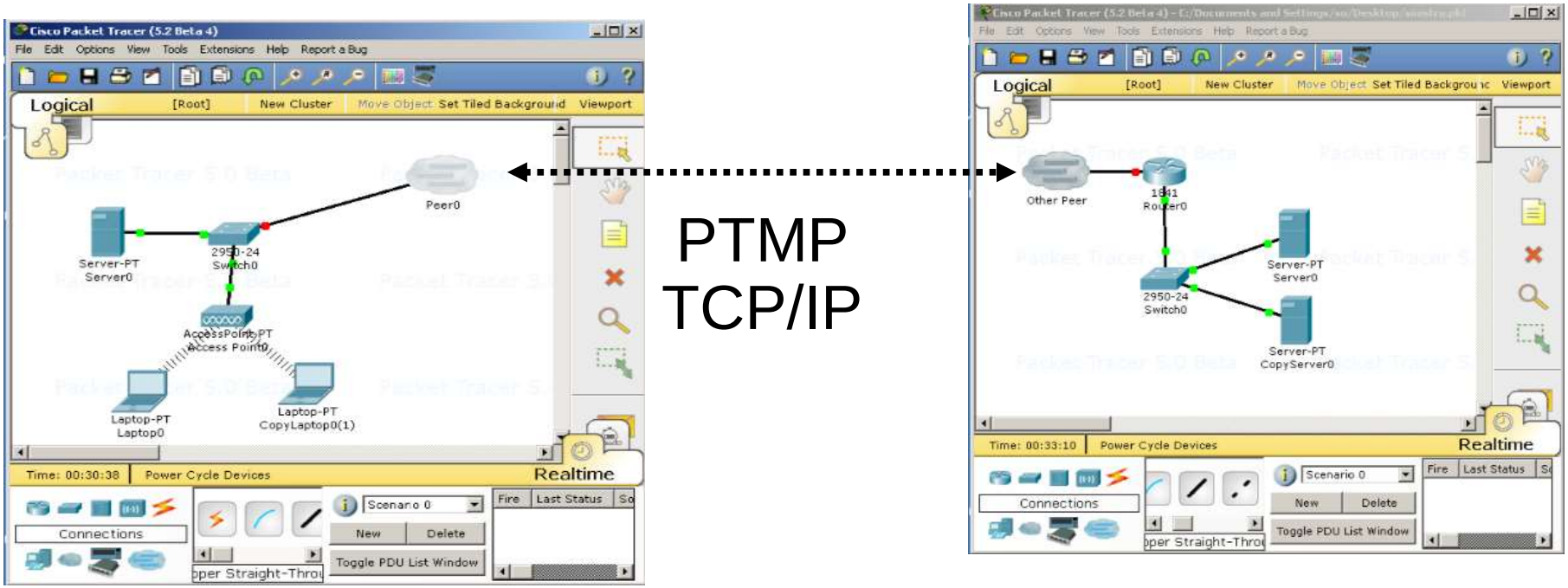


New Devices (PT5.x)

- The new device: laptop-PT



Multiuser Cloud and New Laptop

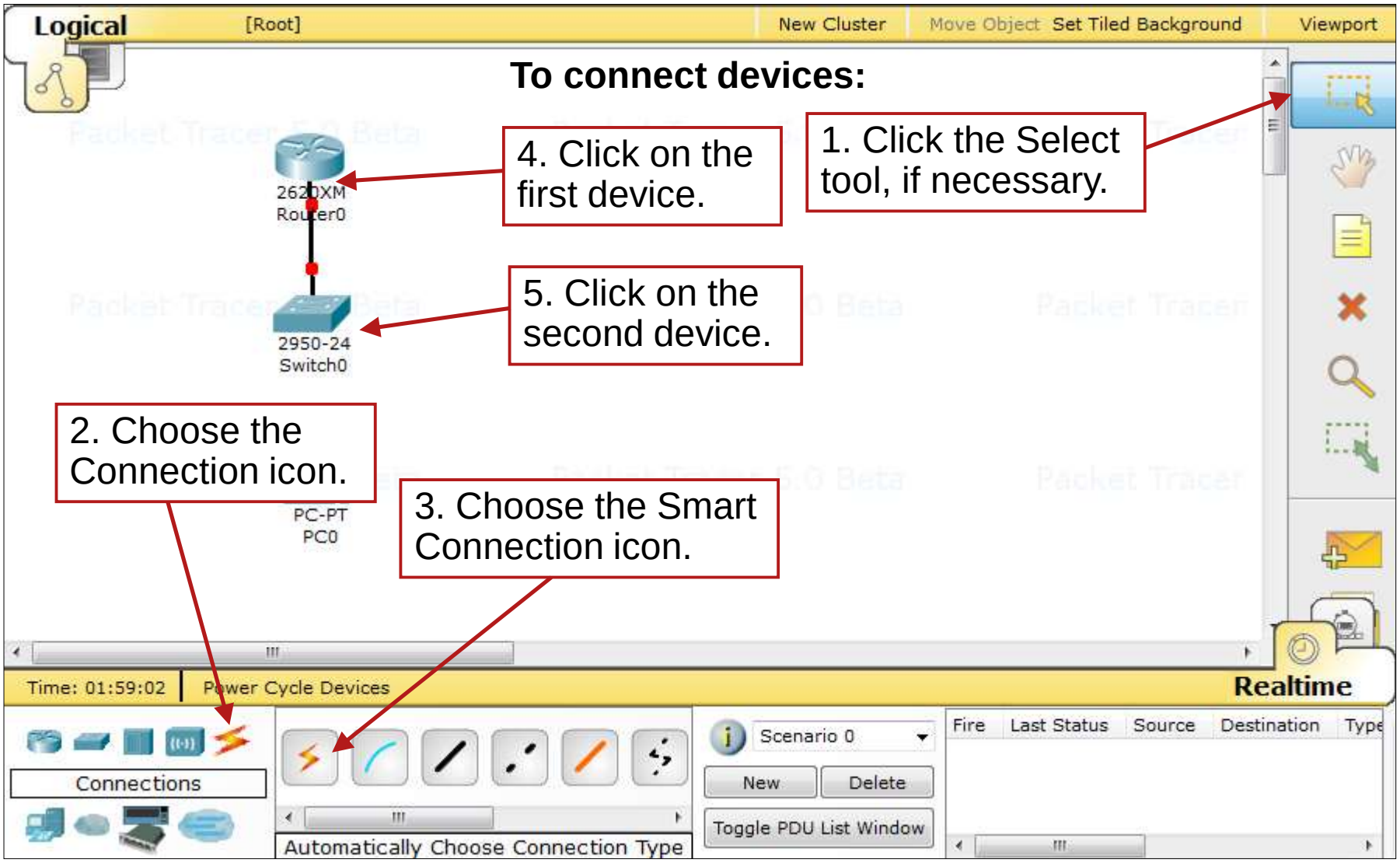


PTMP
TCP/IP

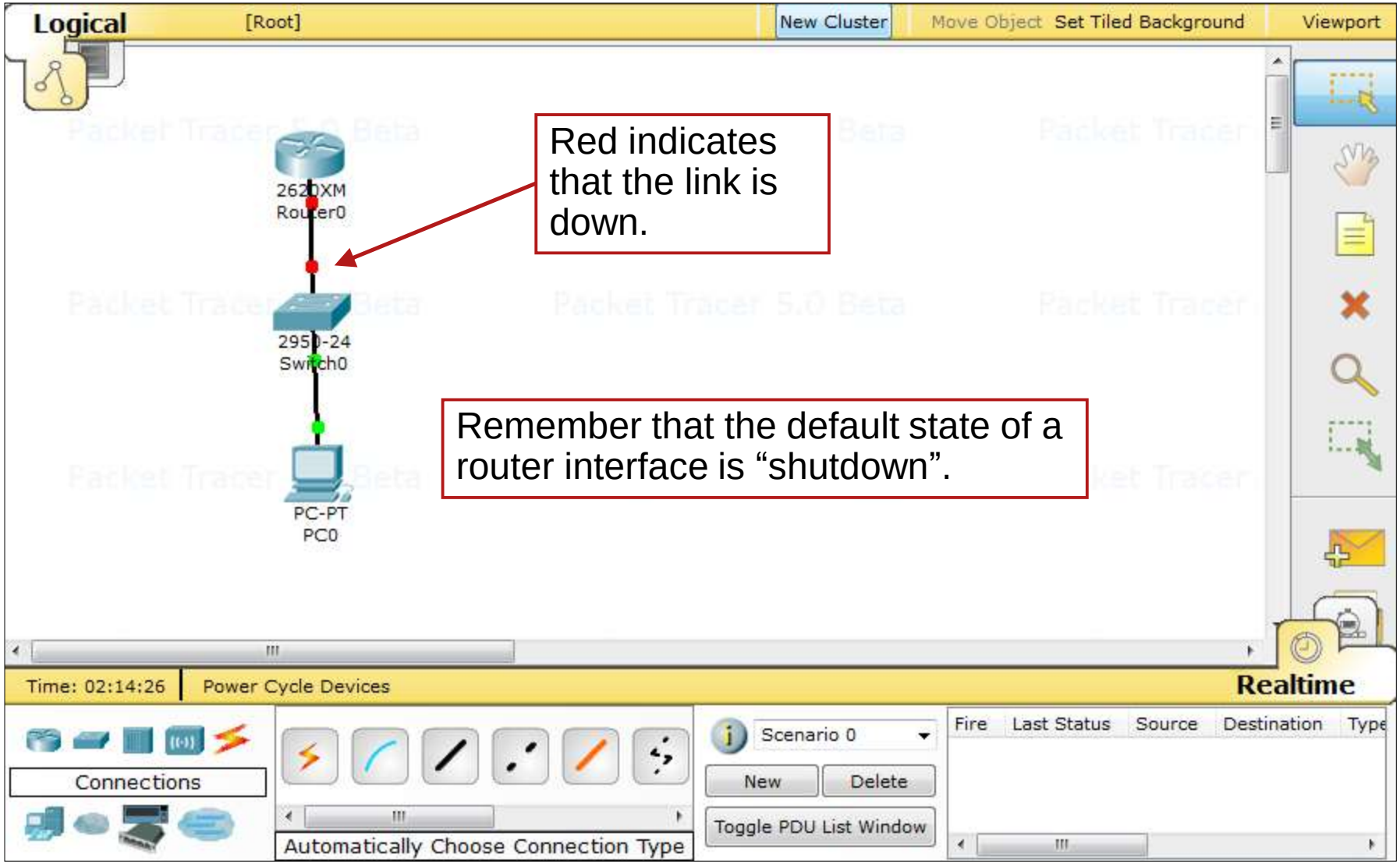
- The Multiuser connection (Peer0 in the picture) can connect by TCP/IP to a Multiuser connection of another PT (Instance on a different computer)

Connecting Devices

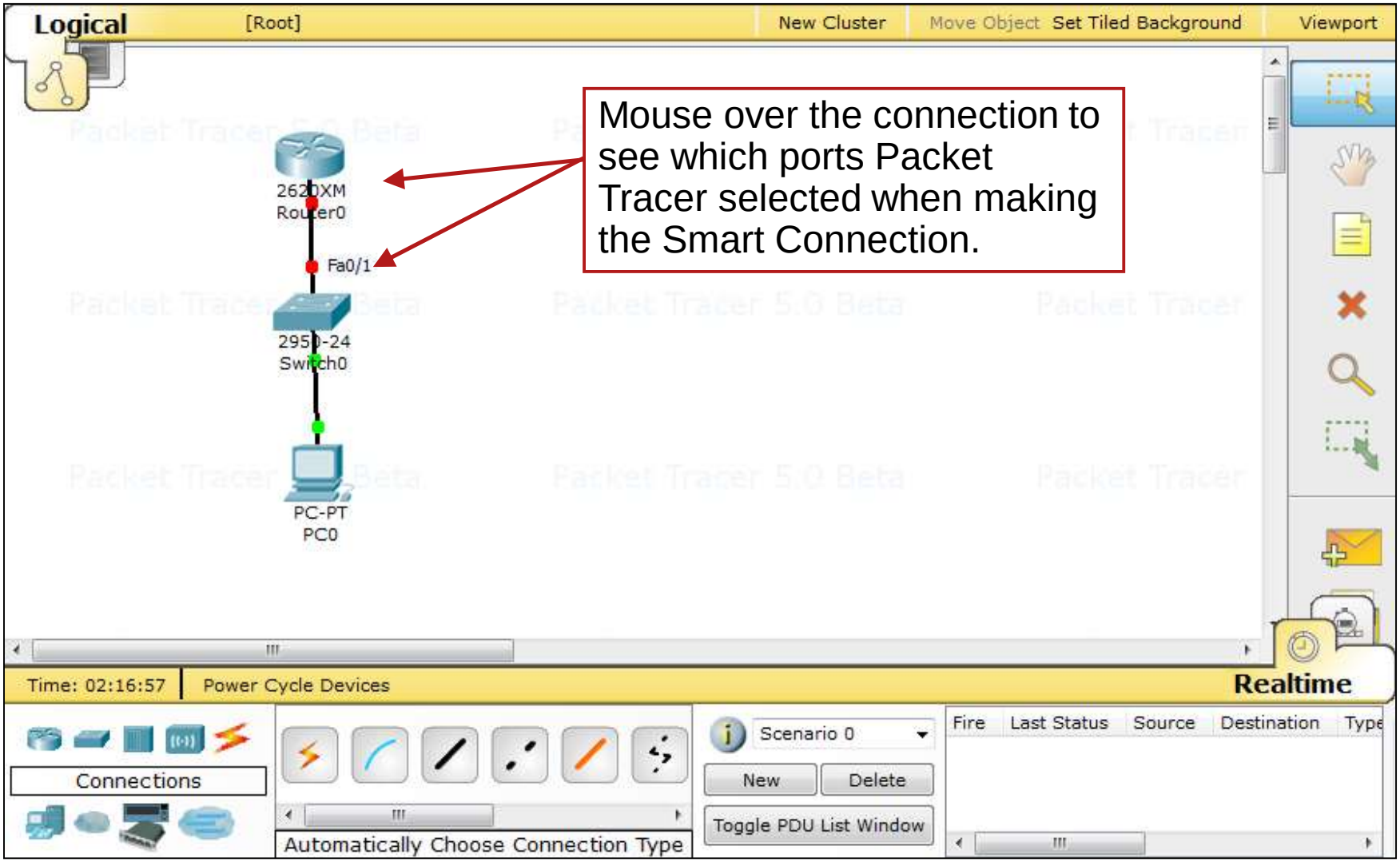
Smart Connection



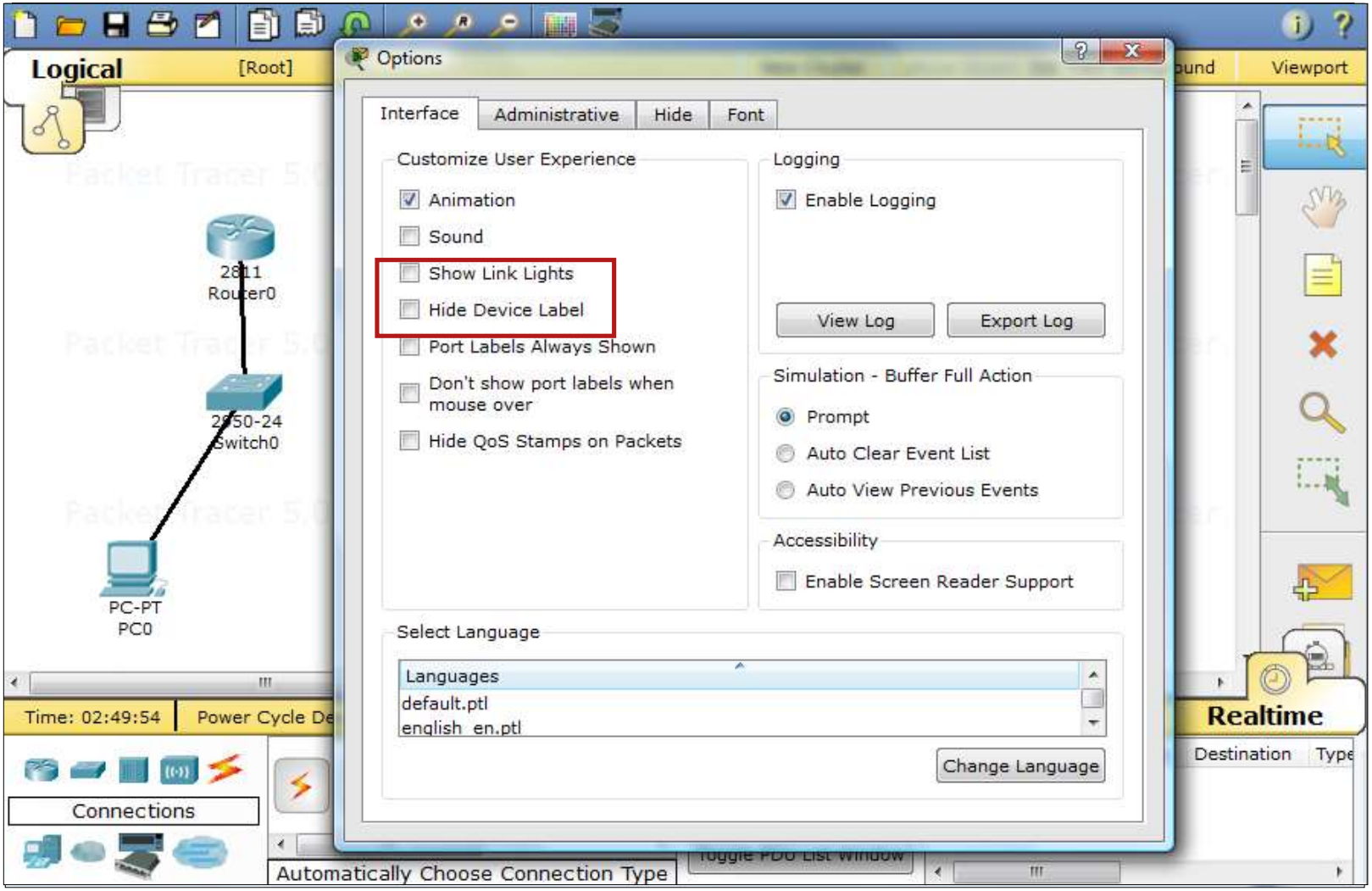
Port Status



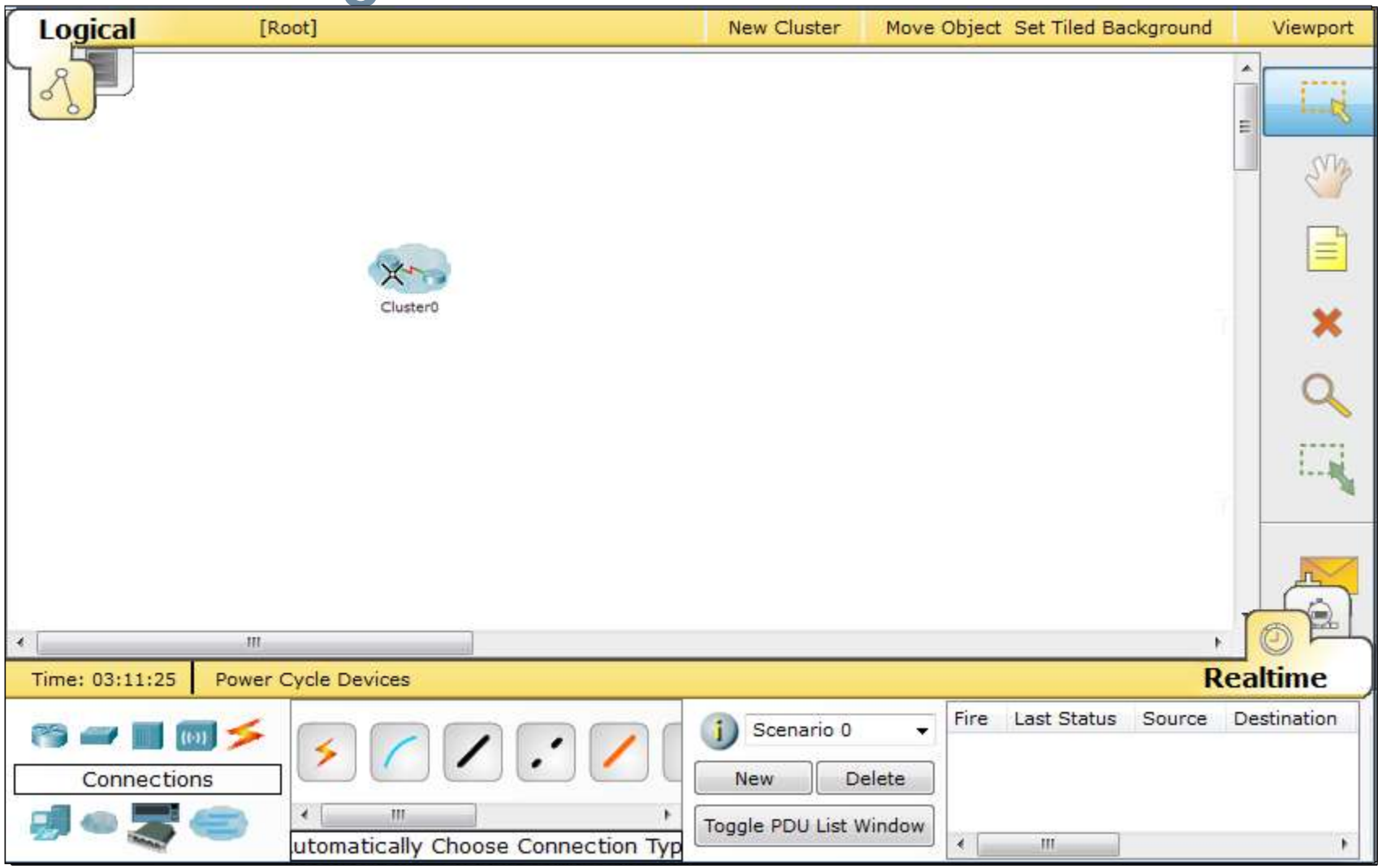
Viewing Port Labels



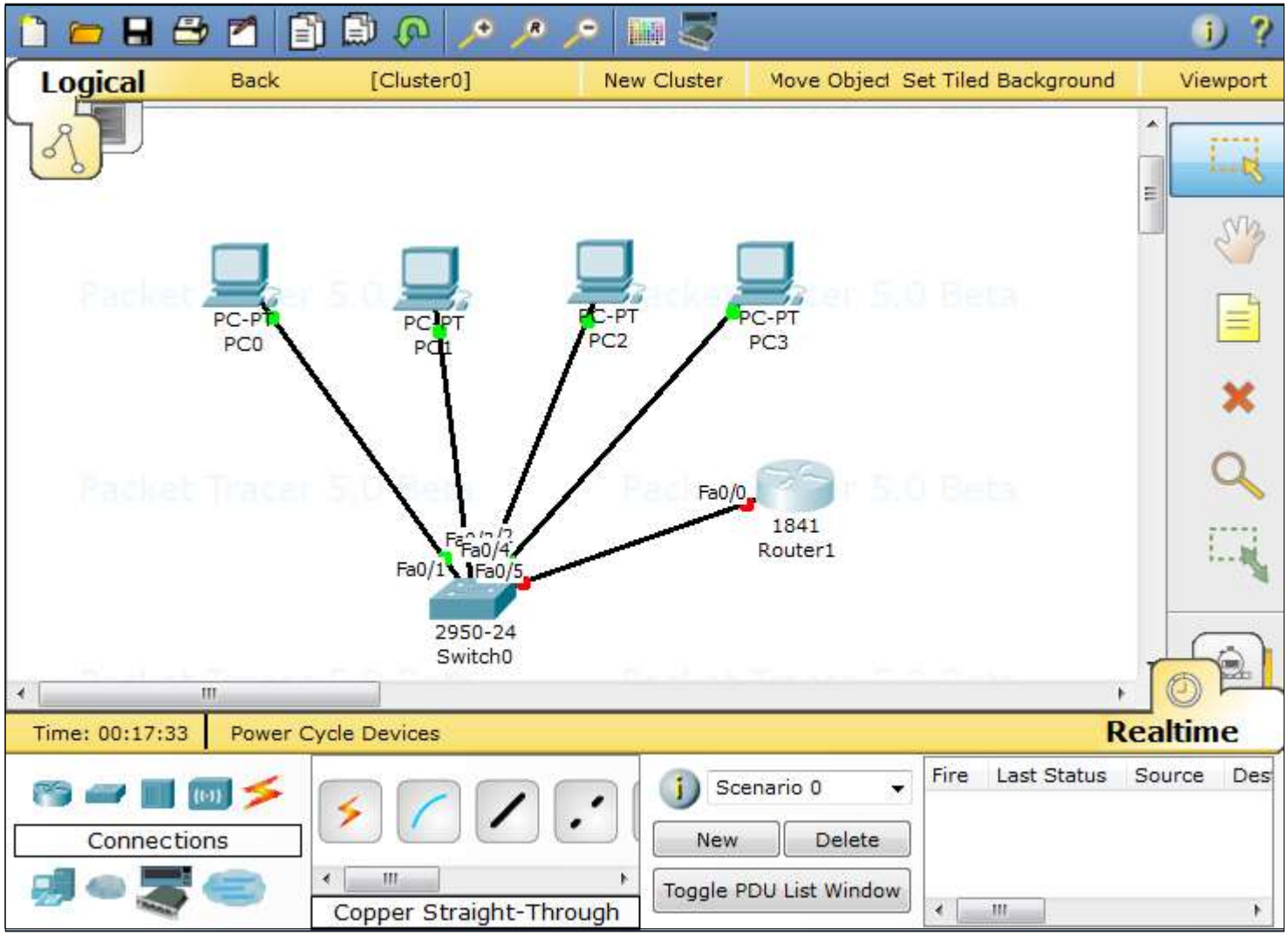
Port Label Options and Other Options



Clustering Devices



Connect to a Device Within a Cluster

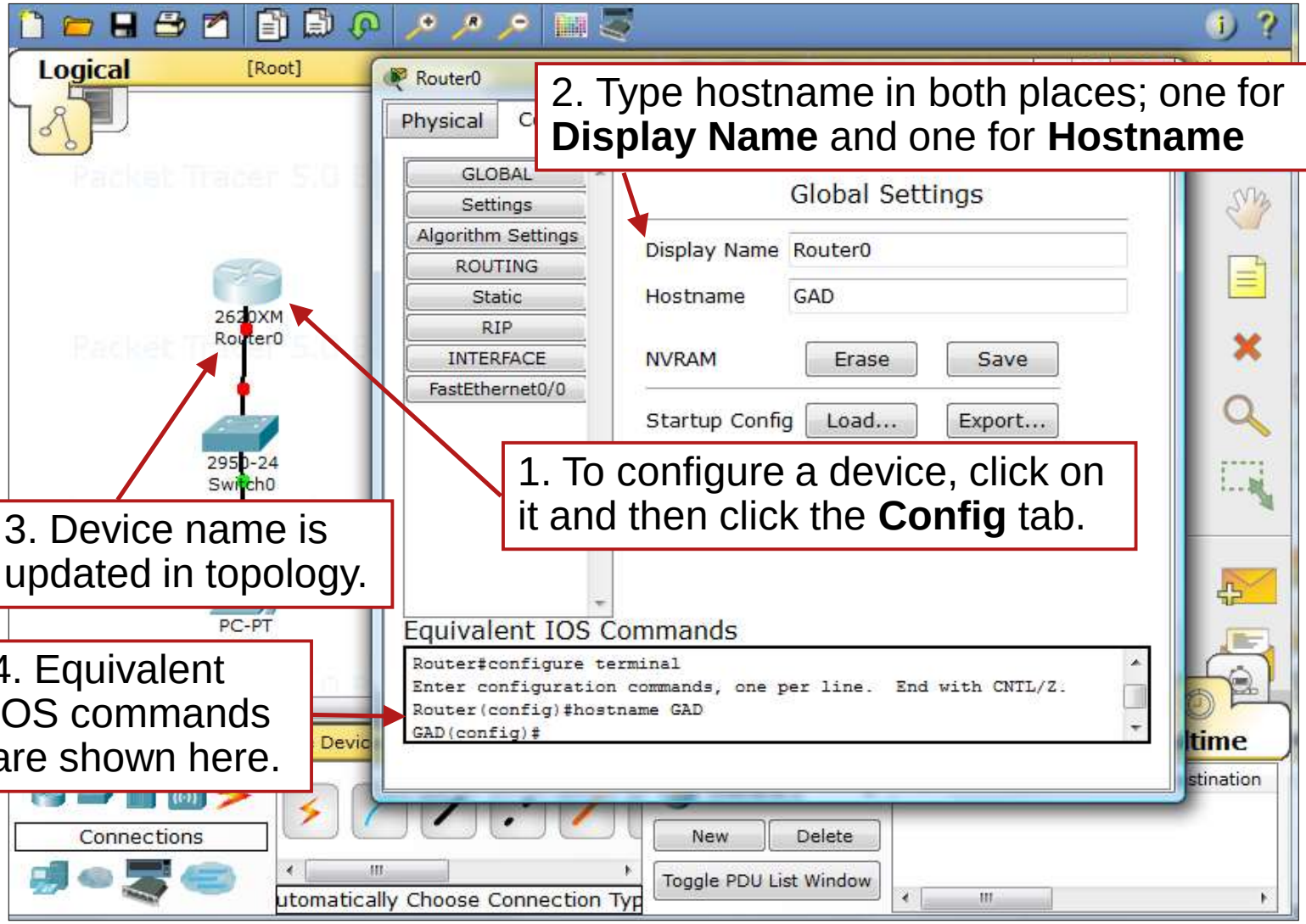


Configuring Devices

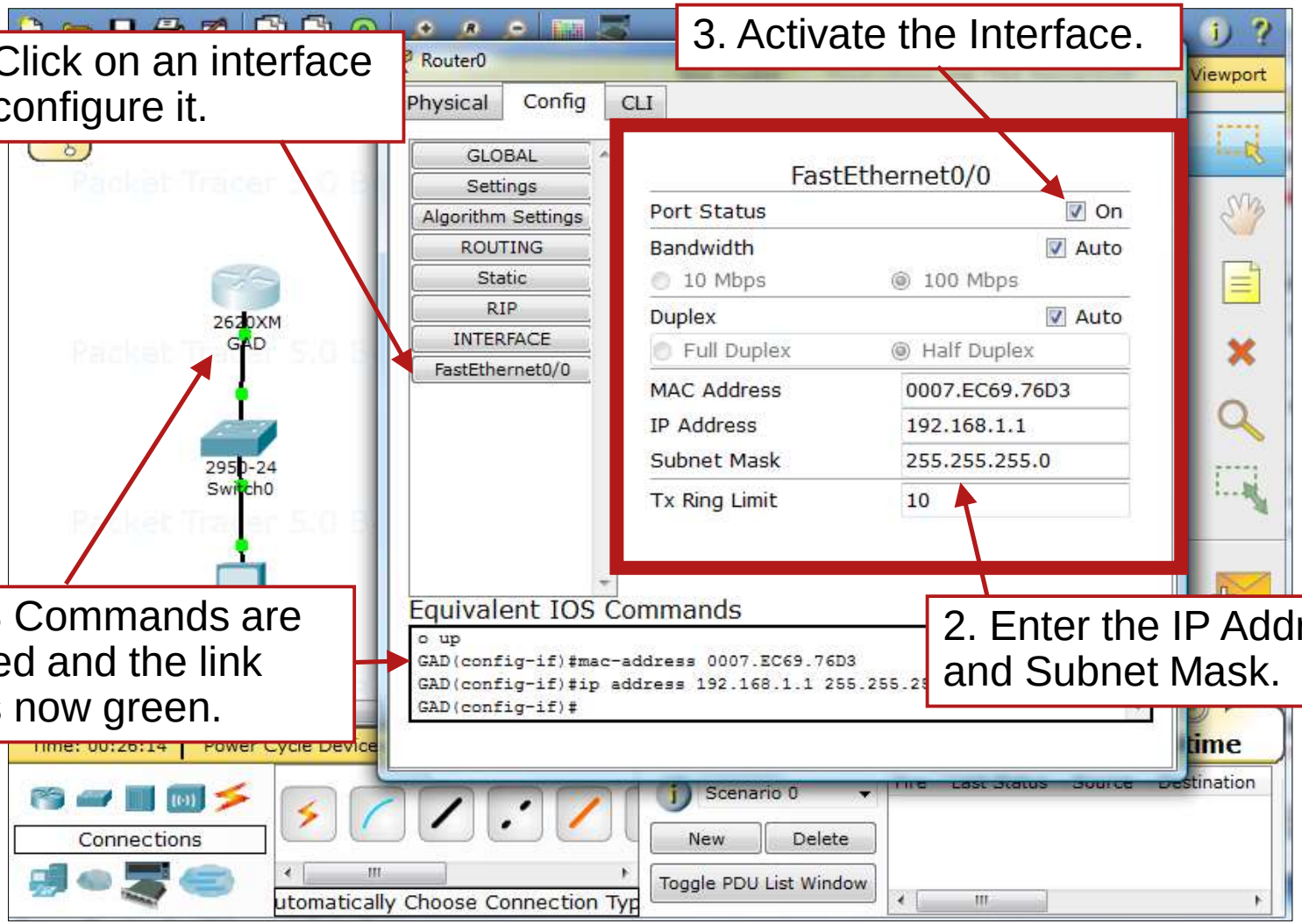
GUI Configuration

- In this example, we are assuming that students either have not learned configuration through CLI, or are just beginning to learn this.
- Packet Tracer offers students the ability to make some basic configuration changes through a GUI interface, while also showing them the equivalent IOS commands.

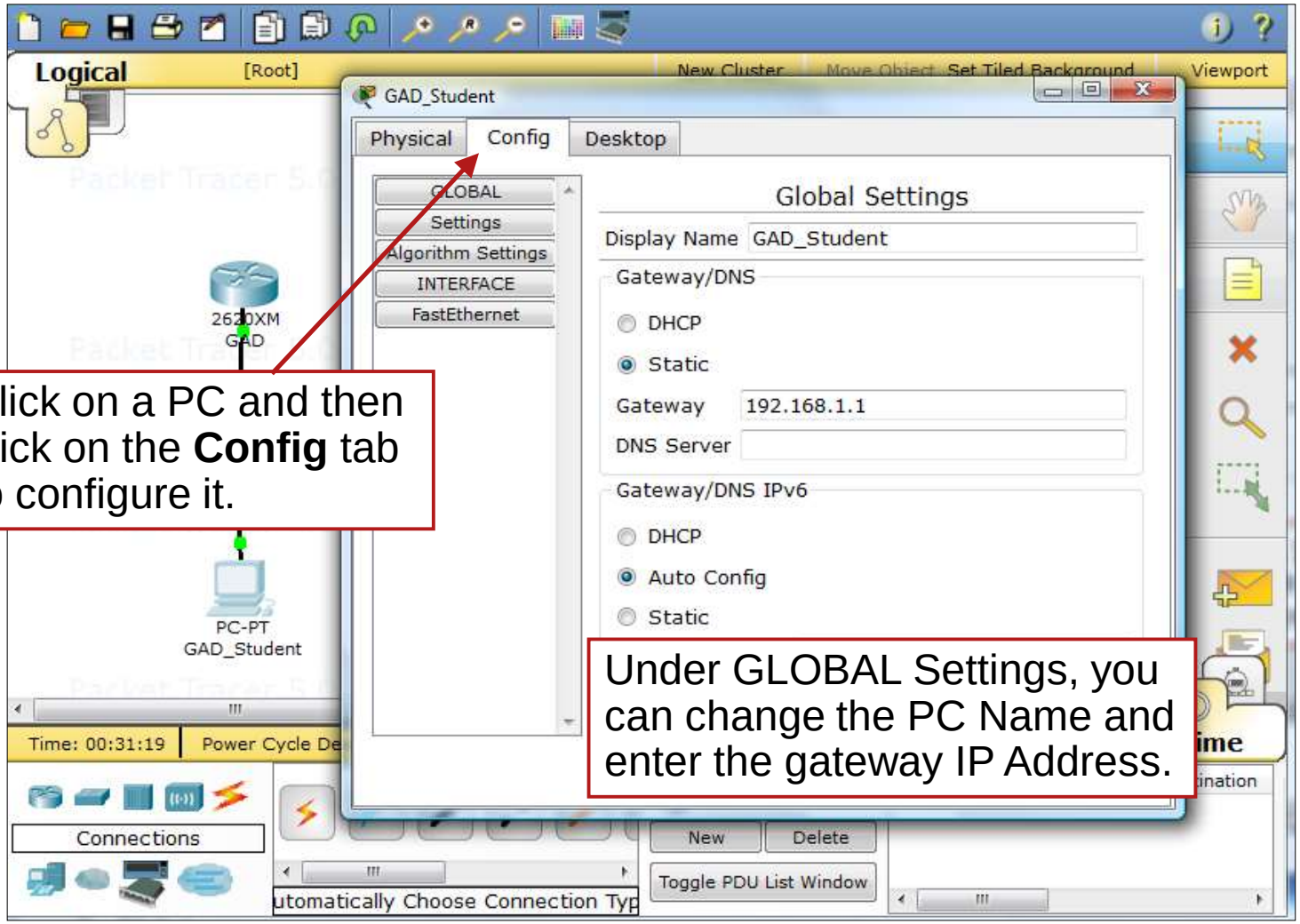
Configuring Router Hostname



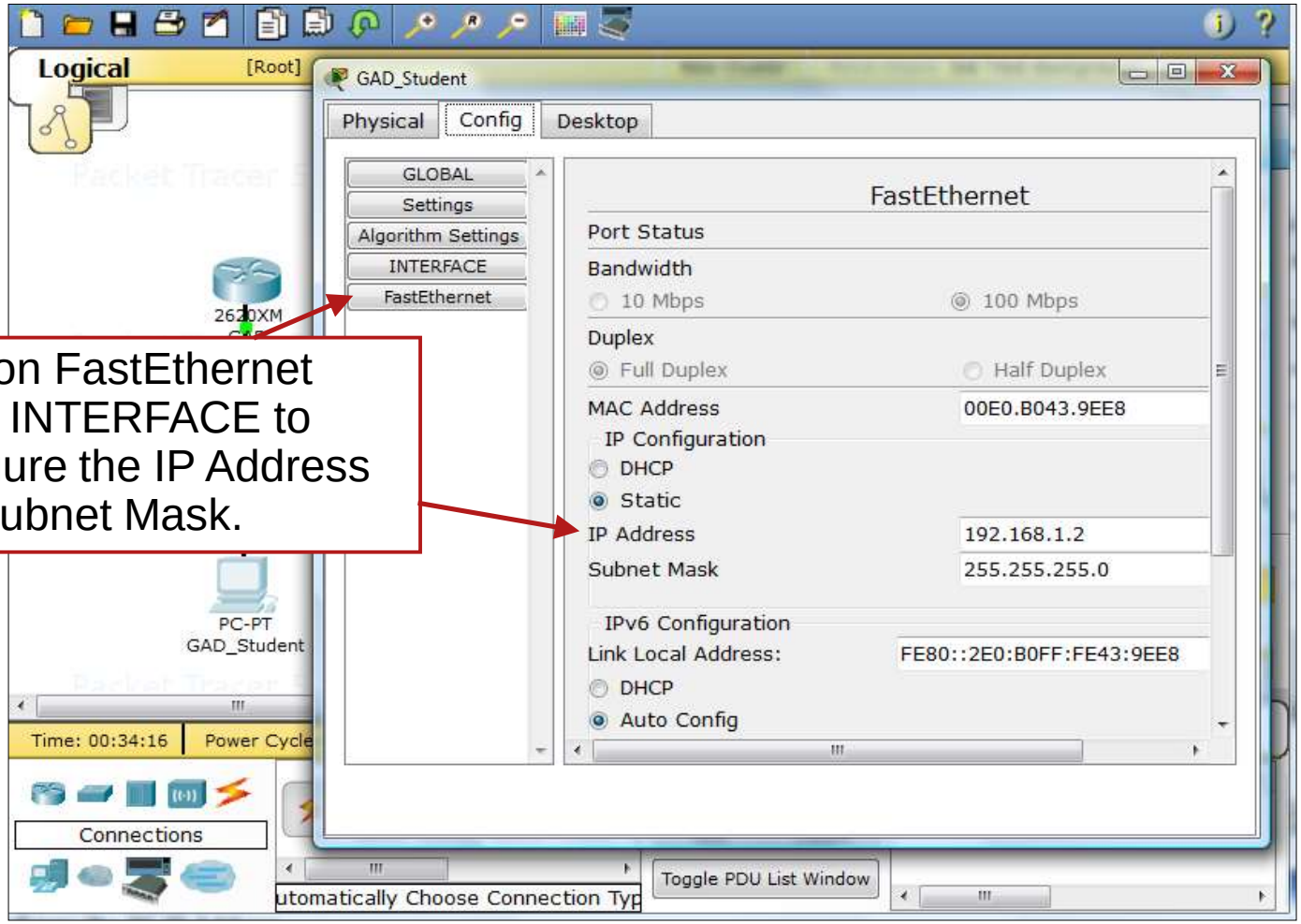
Configure Router FastEthernet Interface



Configure the PC Gateway

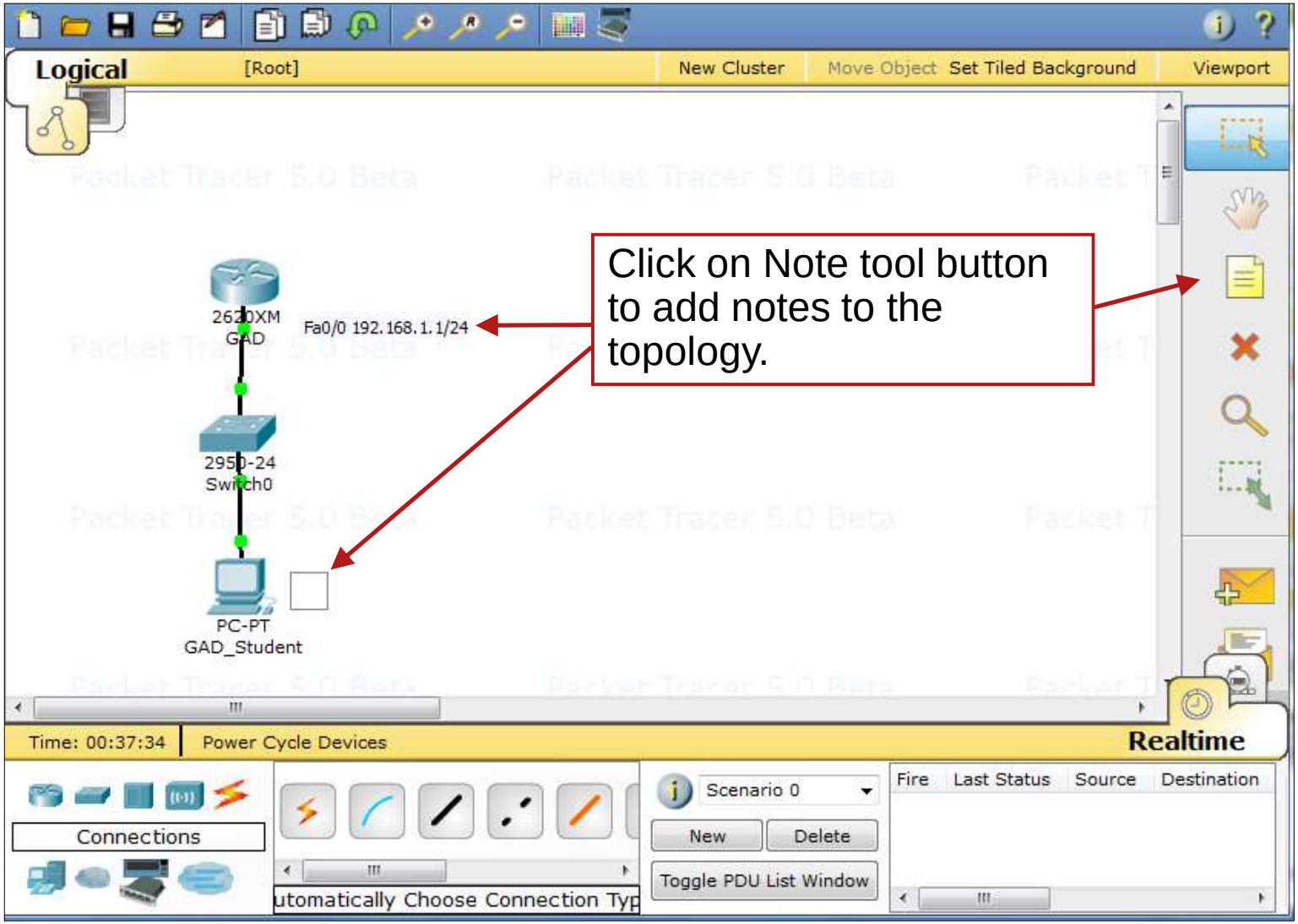


Configure the PC IP Address

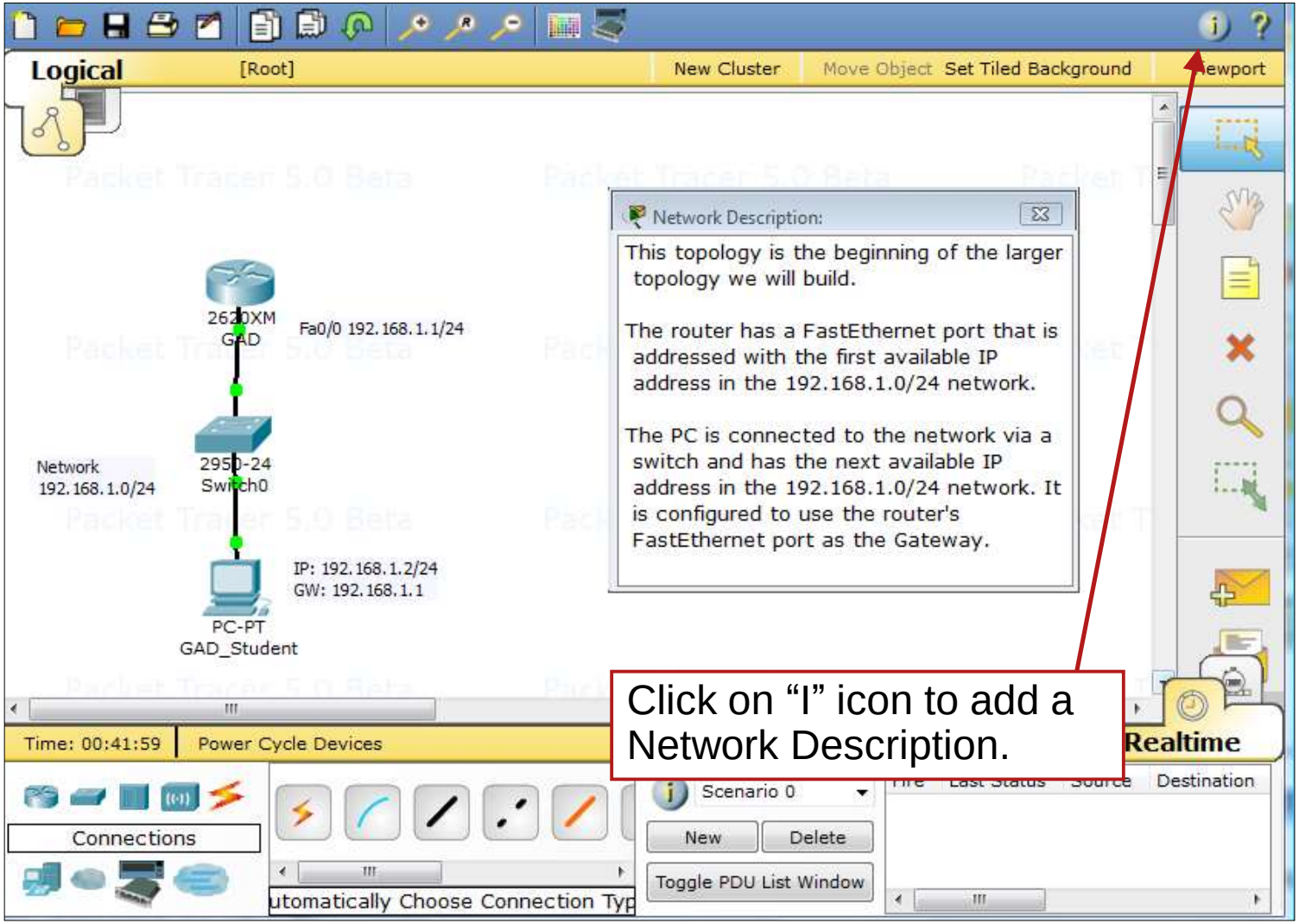


Click on FastEthernet under INTERFACE to configure the IP Address and Subnet Mask.

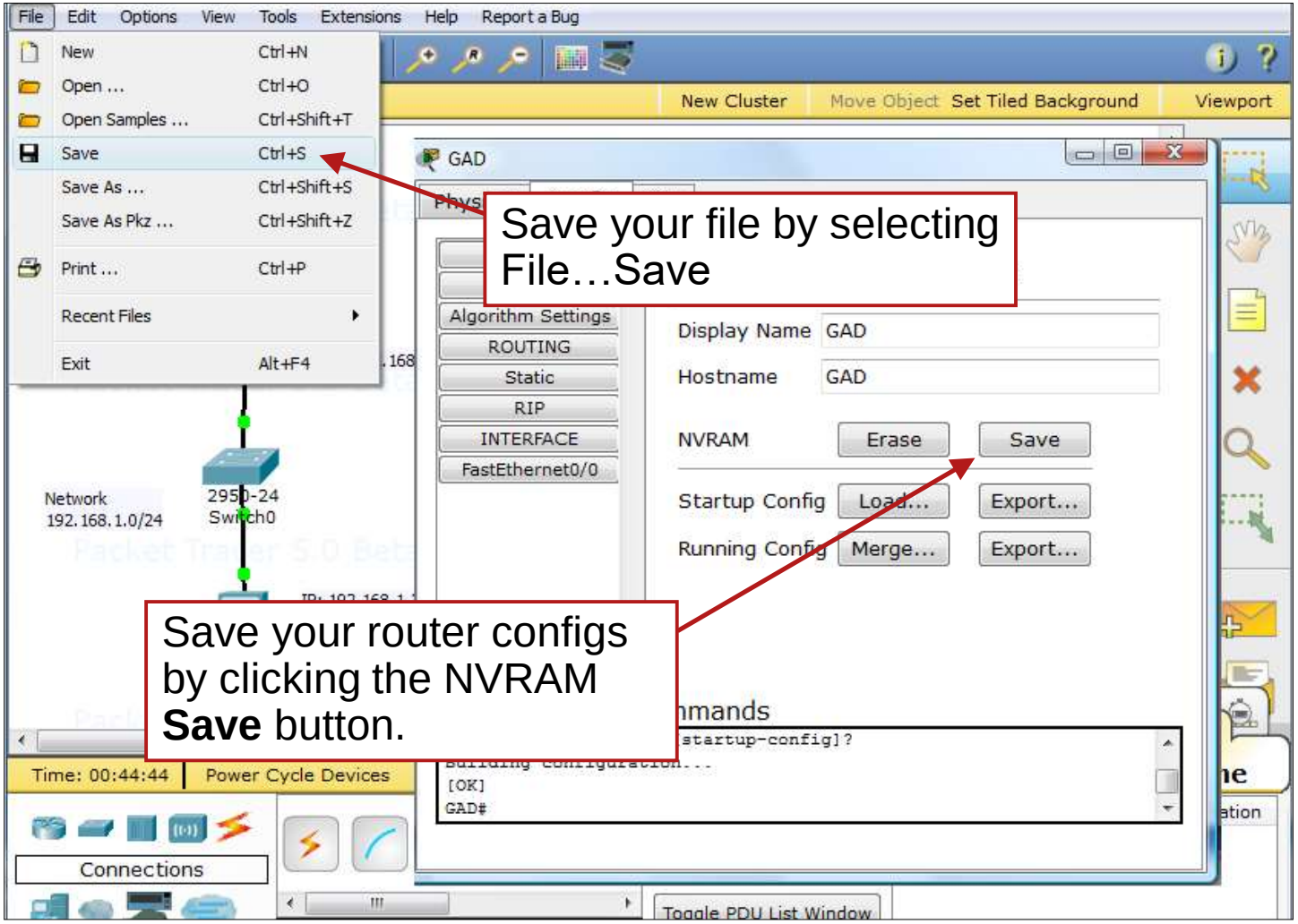
Add Notes



Network Description



Save Your Configurations and File

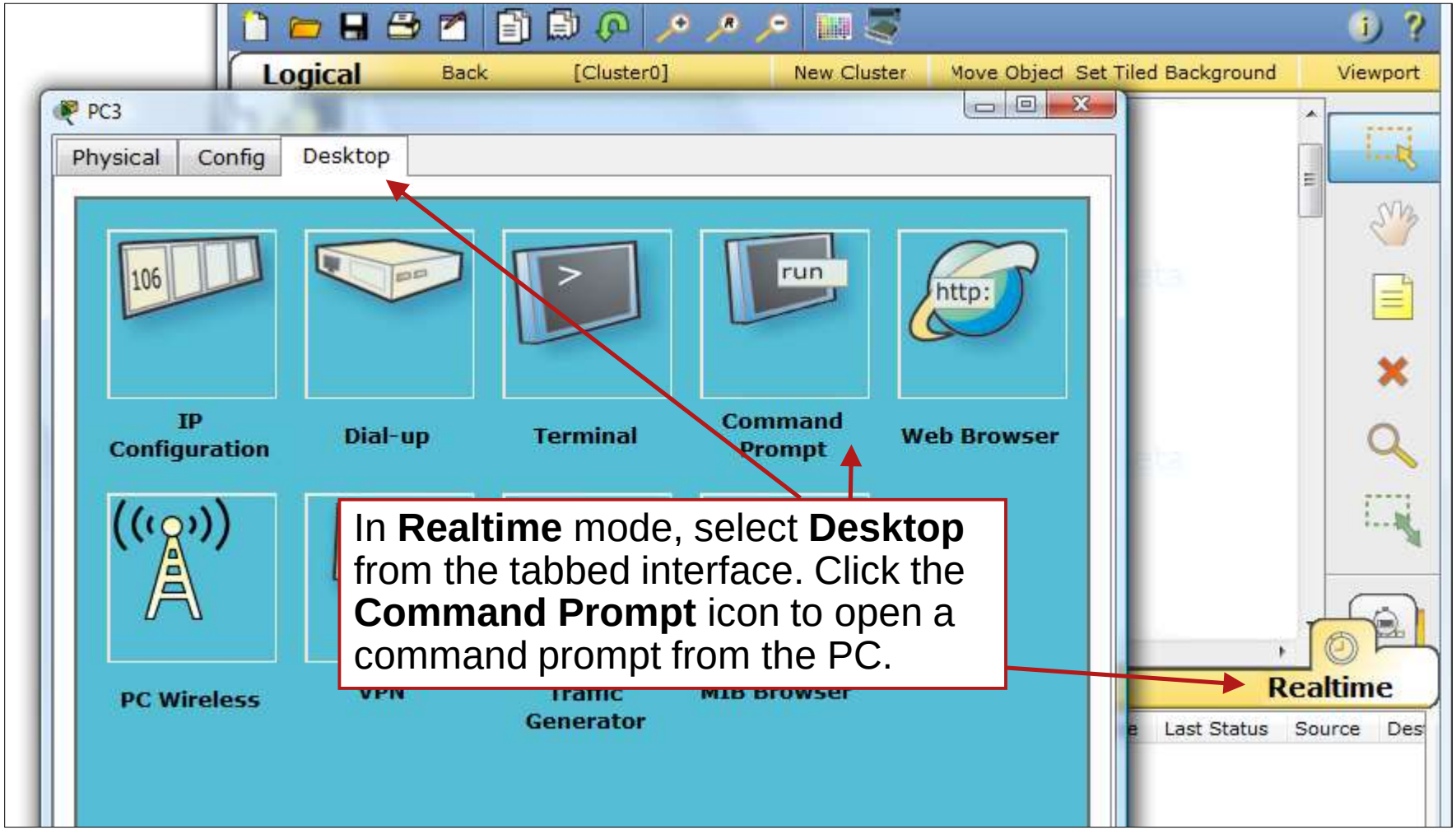


Verify Connectivity

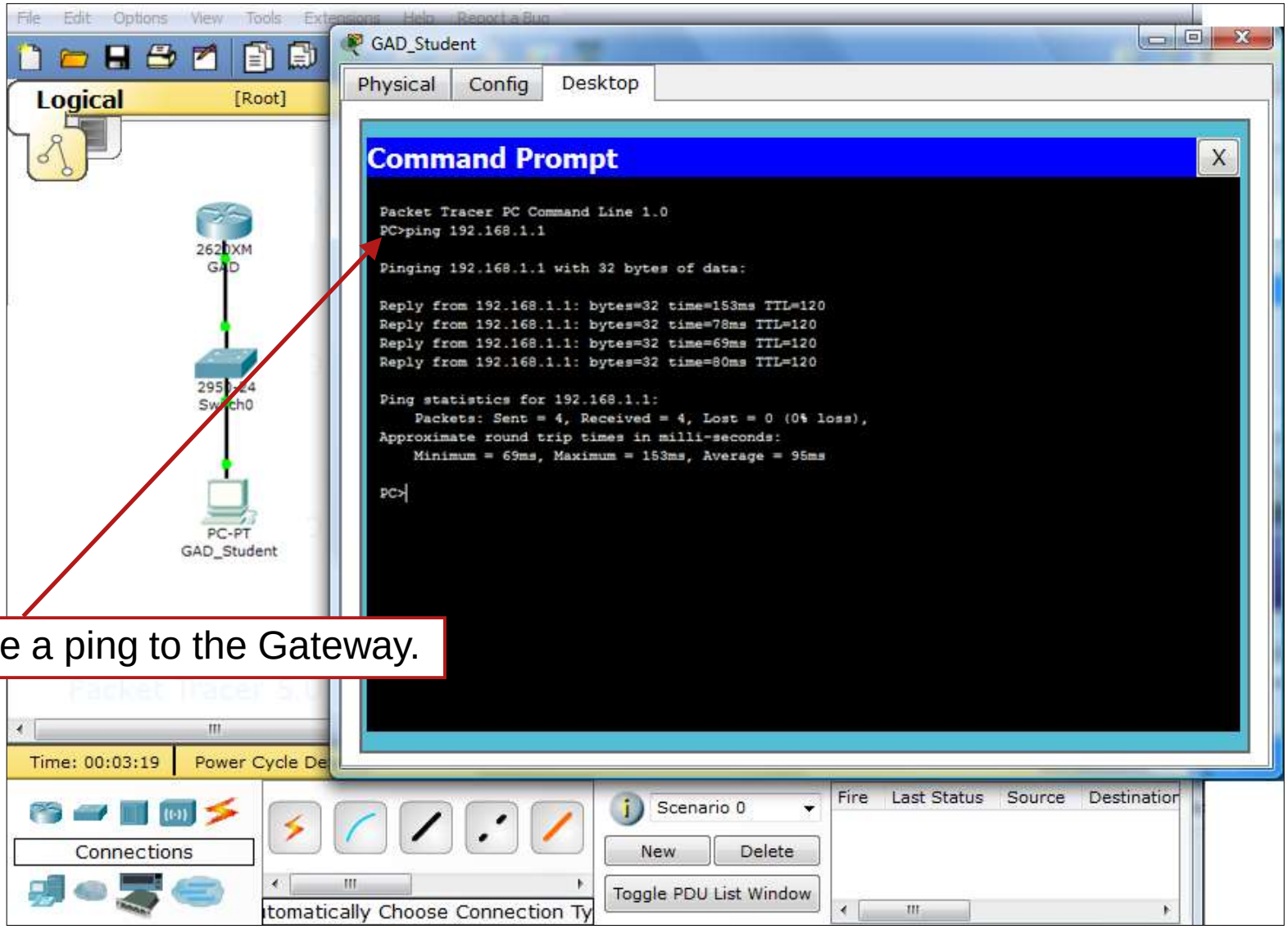
Verifying Connectivity

- There are several ways to verify connectivity in Packet Tracer.
- In Realtime mode, open a command prompt from the PC desktop and issue a ping just as you would in the classroom with real equipment.
- In Simulation Mode, create a simulation that allows you to open up the packet at different points along the path to view how the device is processing the packet.

Verifying in Realtime Mode



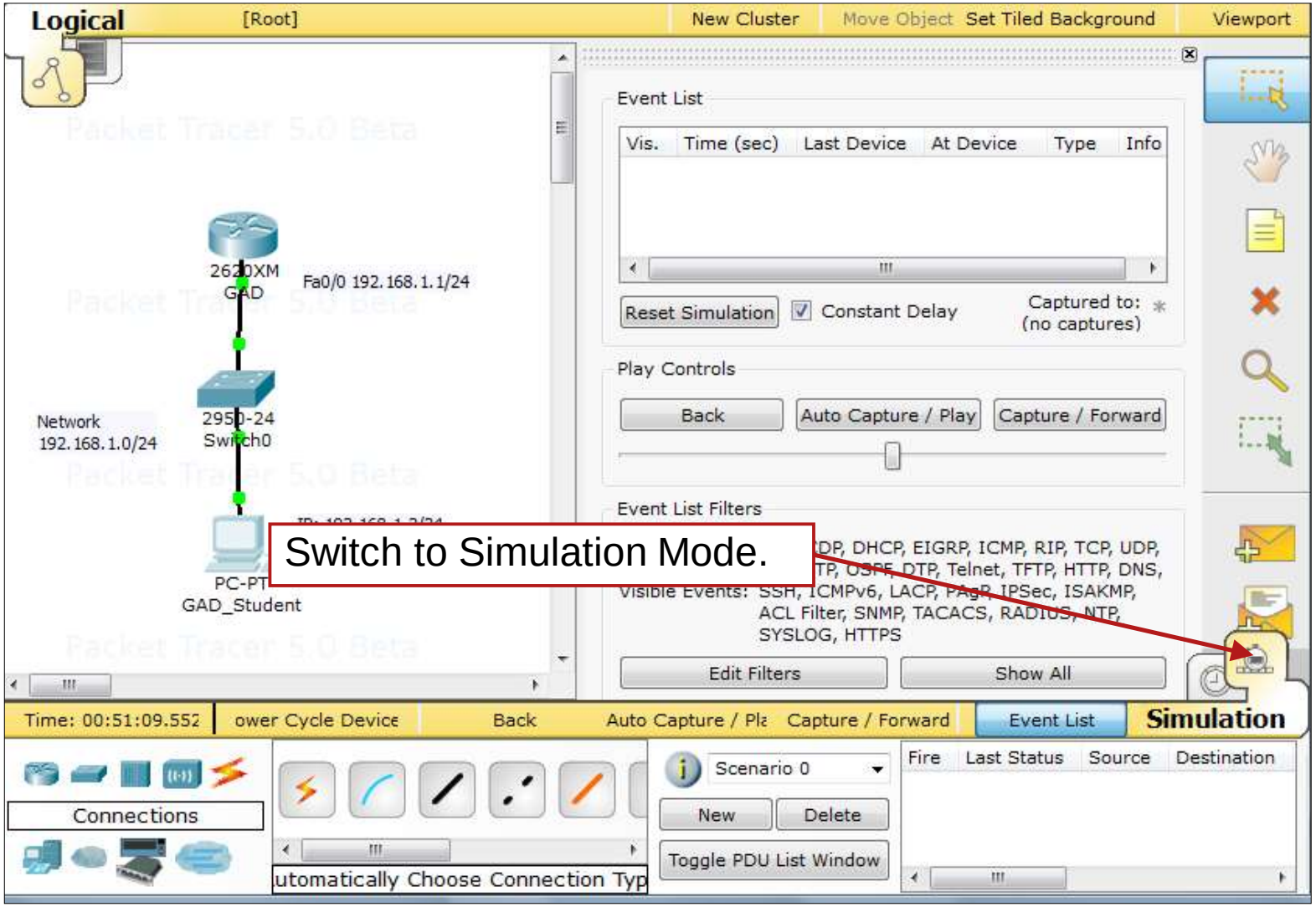
Ping the Gateway



Issue a ping to the Gateway.

Run a Simulation

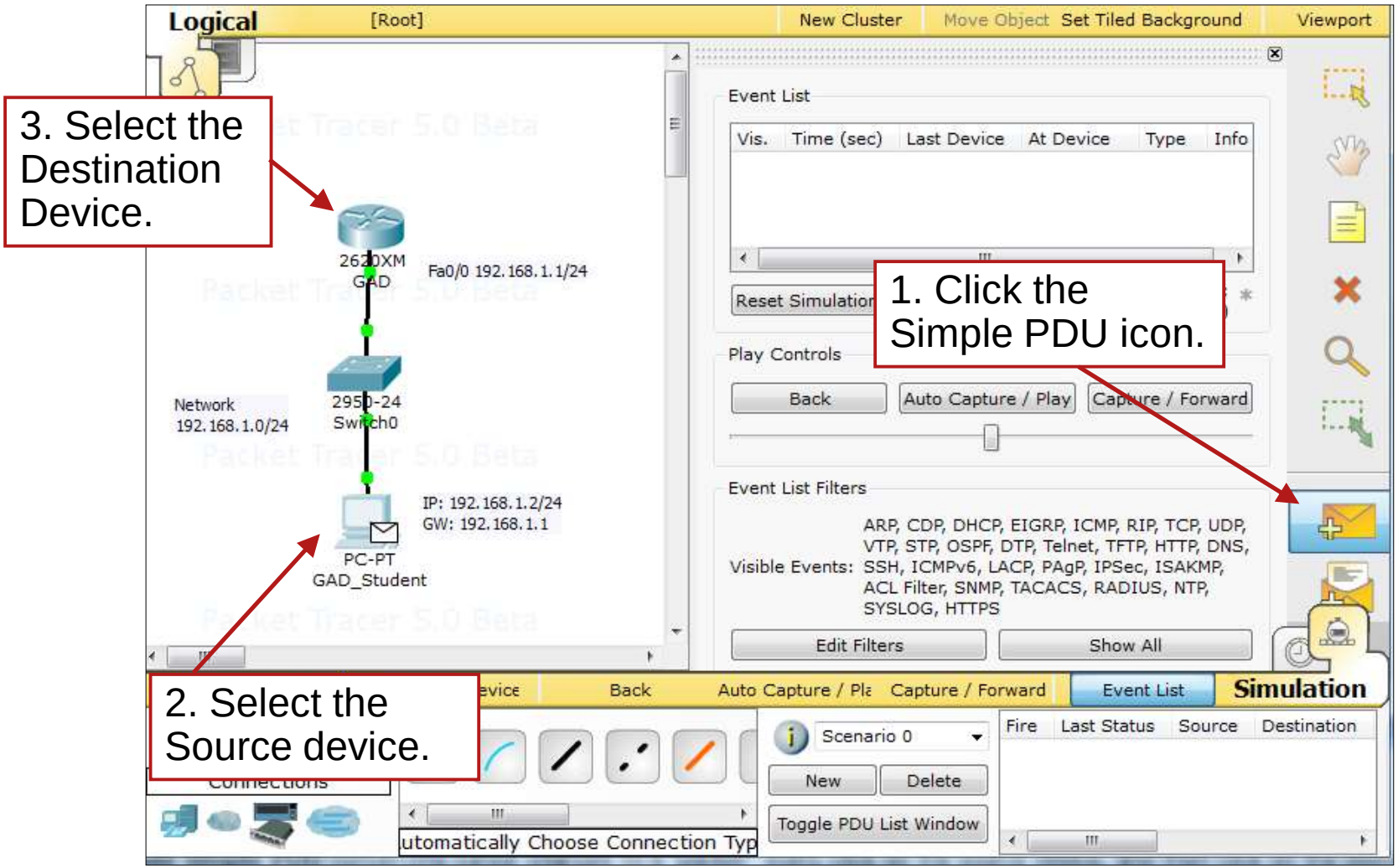
Simulation Mode



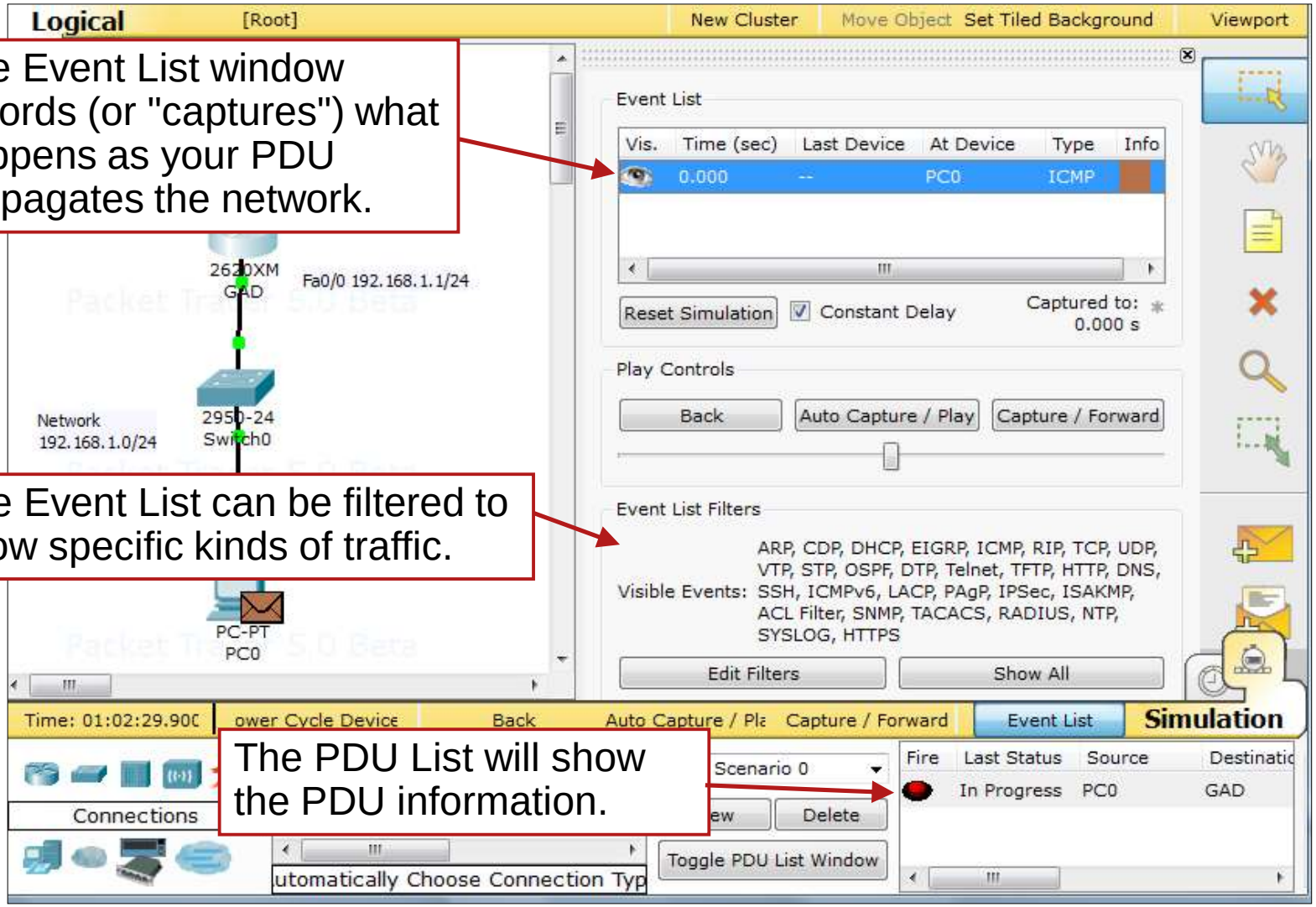
Simulation Mode?

- Most of the work so far has been completed in the Realtime Mode. In Realtime Mode, your network is always running (like a real network) whether you are working on the network or not. Your configurations are created and modified in real time, and the network responds in real time.
- Simulation Mode is used to observe network traffic in a detailed and controlled pace to observe the paths that packets take and inspect packets in detail.
- Simulation Mode allows us to create and examine packets.

Create a PDU



Event List

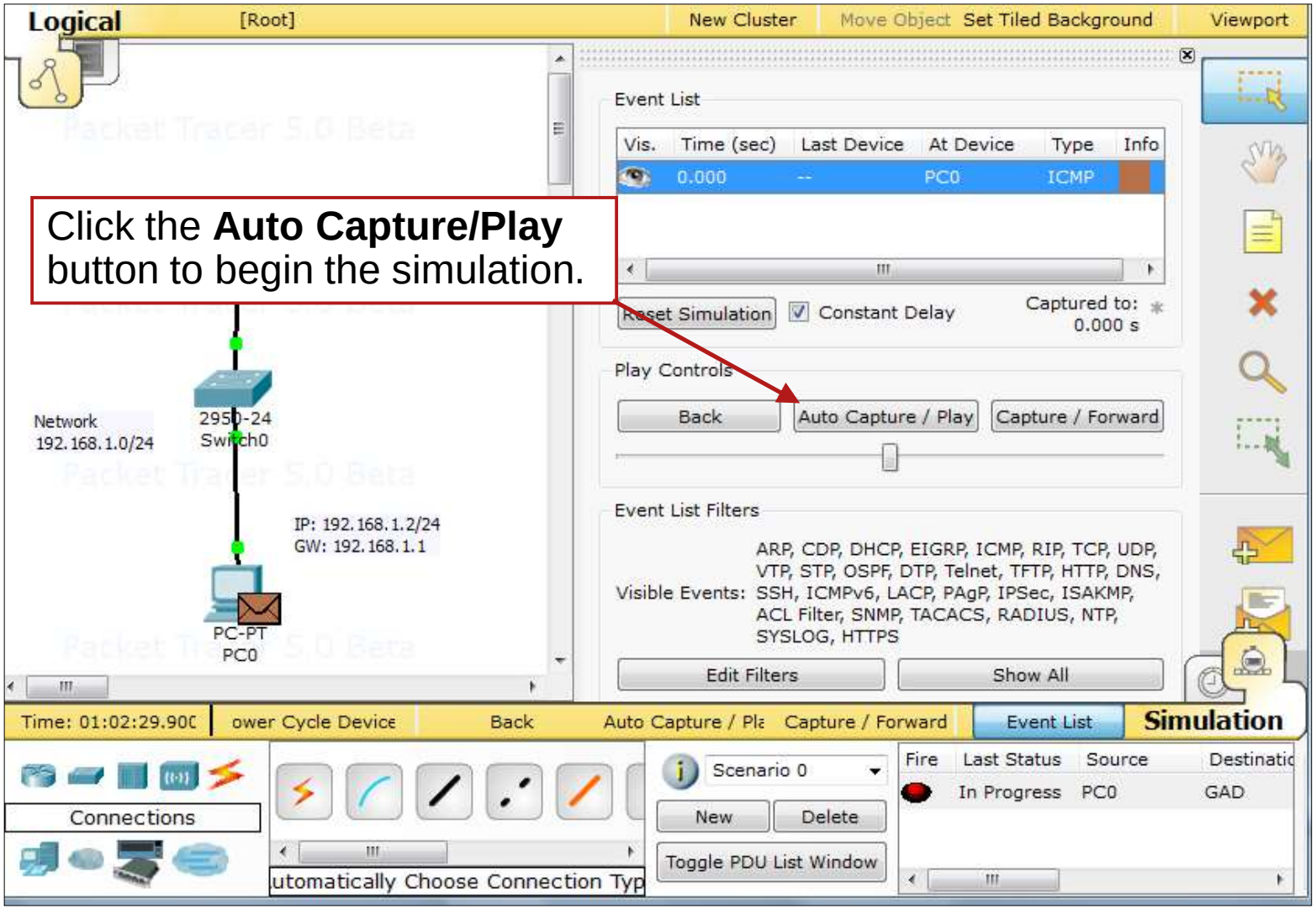


The Event List window records (or "captures") what happens as your PDU propagates the network.

The Event List can be filtered to show specific kinds of traffic.

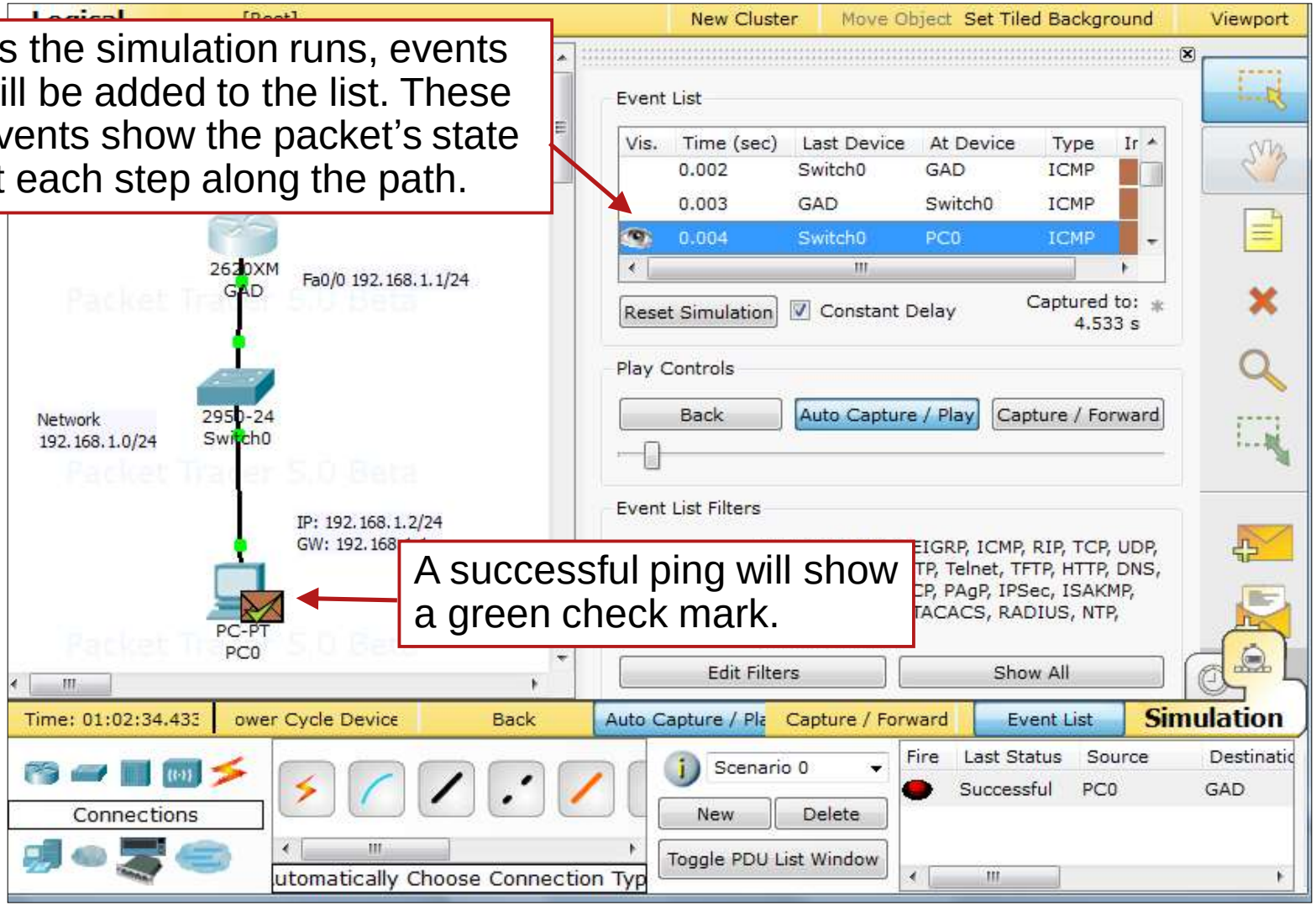
The PDU List will show the PDU information.

Playing the Simulation



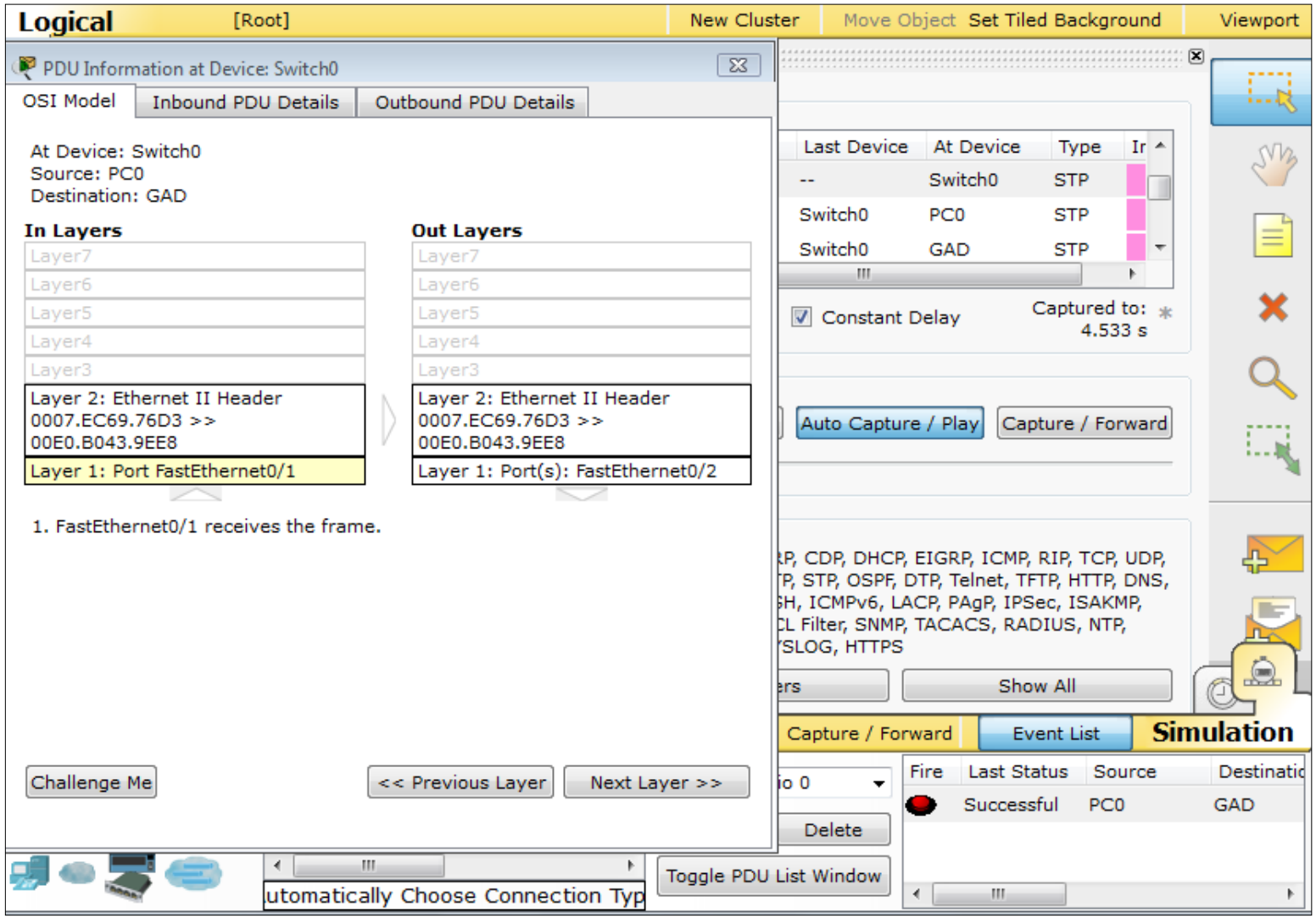
Results

As the simulation runs, events will be added to the list. These events show the packet's state at each step along the path.



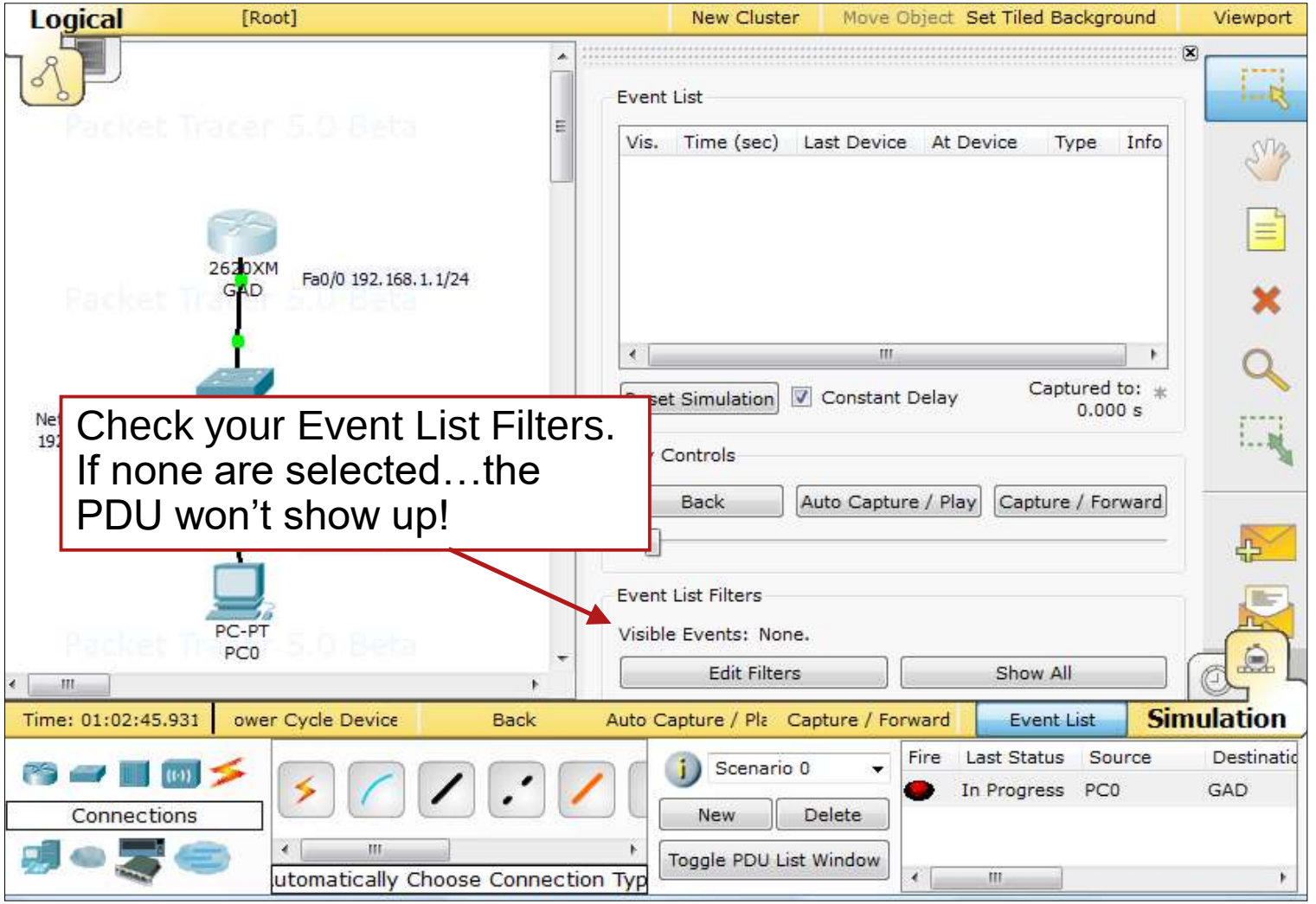
A successful ping will show a green check mark.

PDU Information

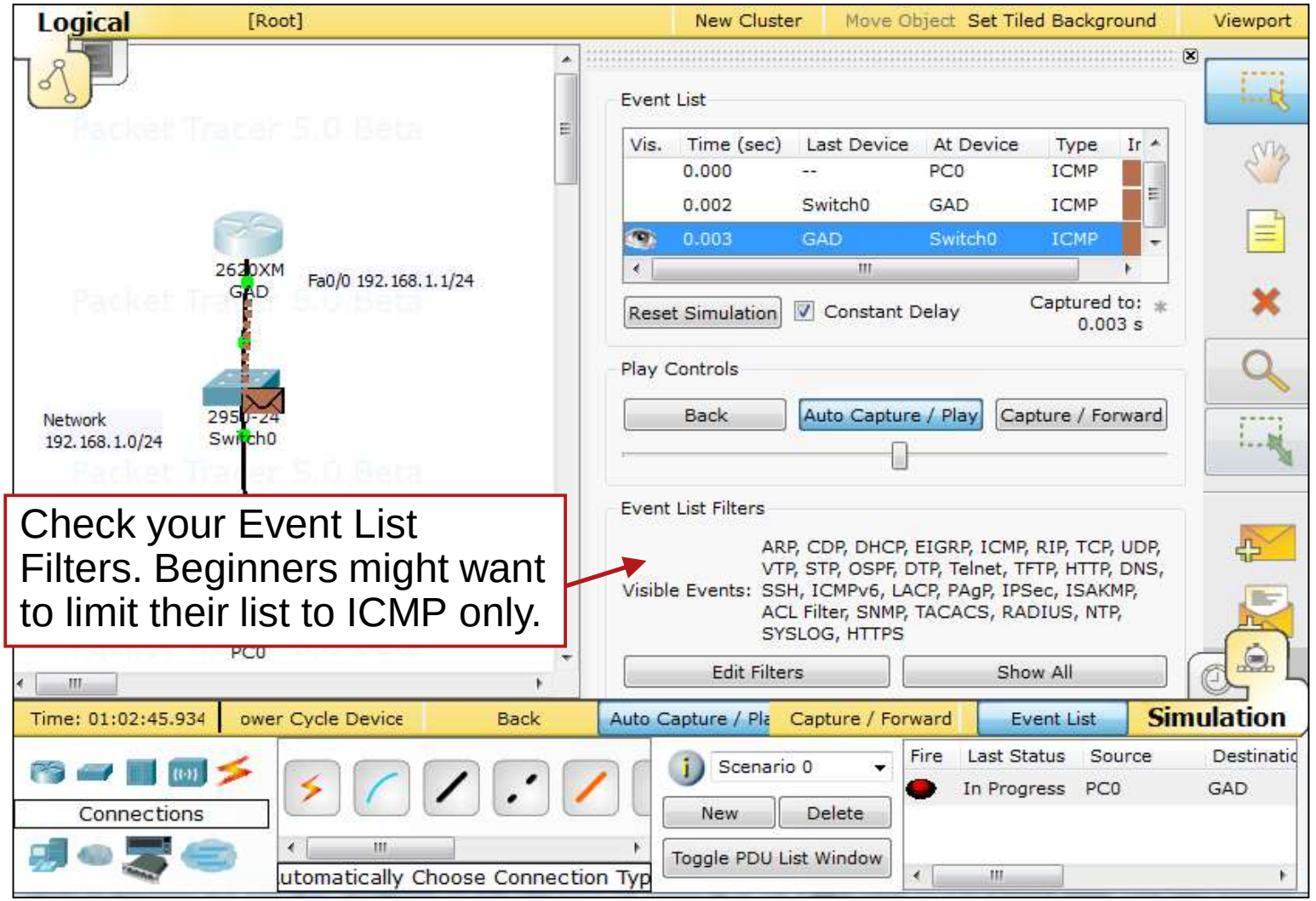


Common Issues for Beginners

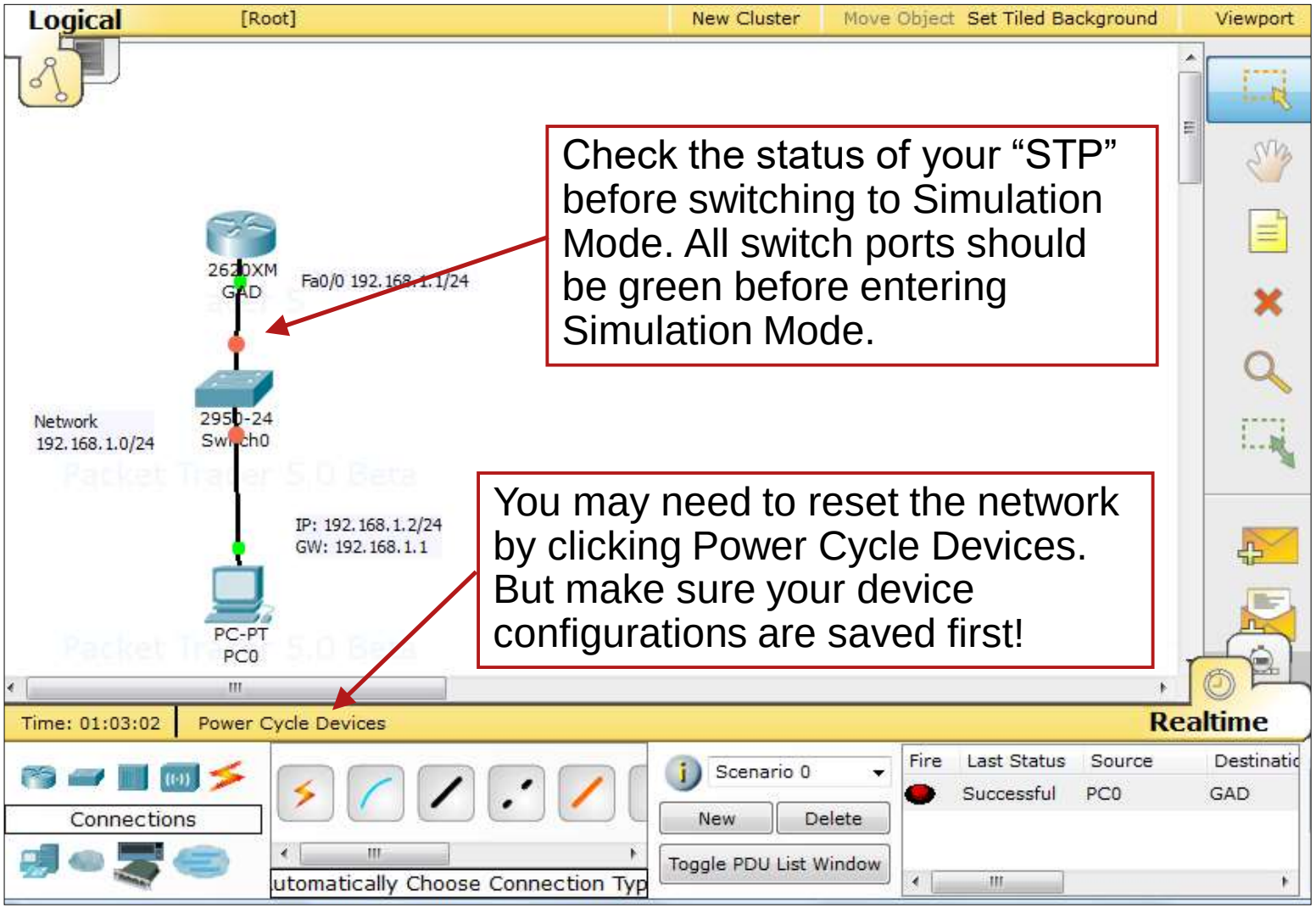
I Do Not See My PDU!



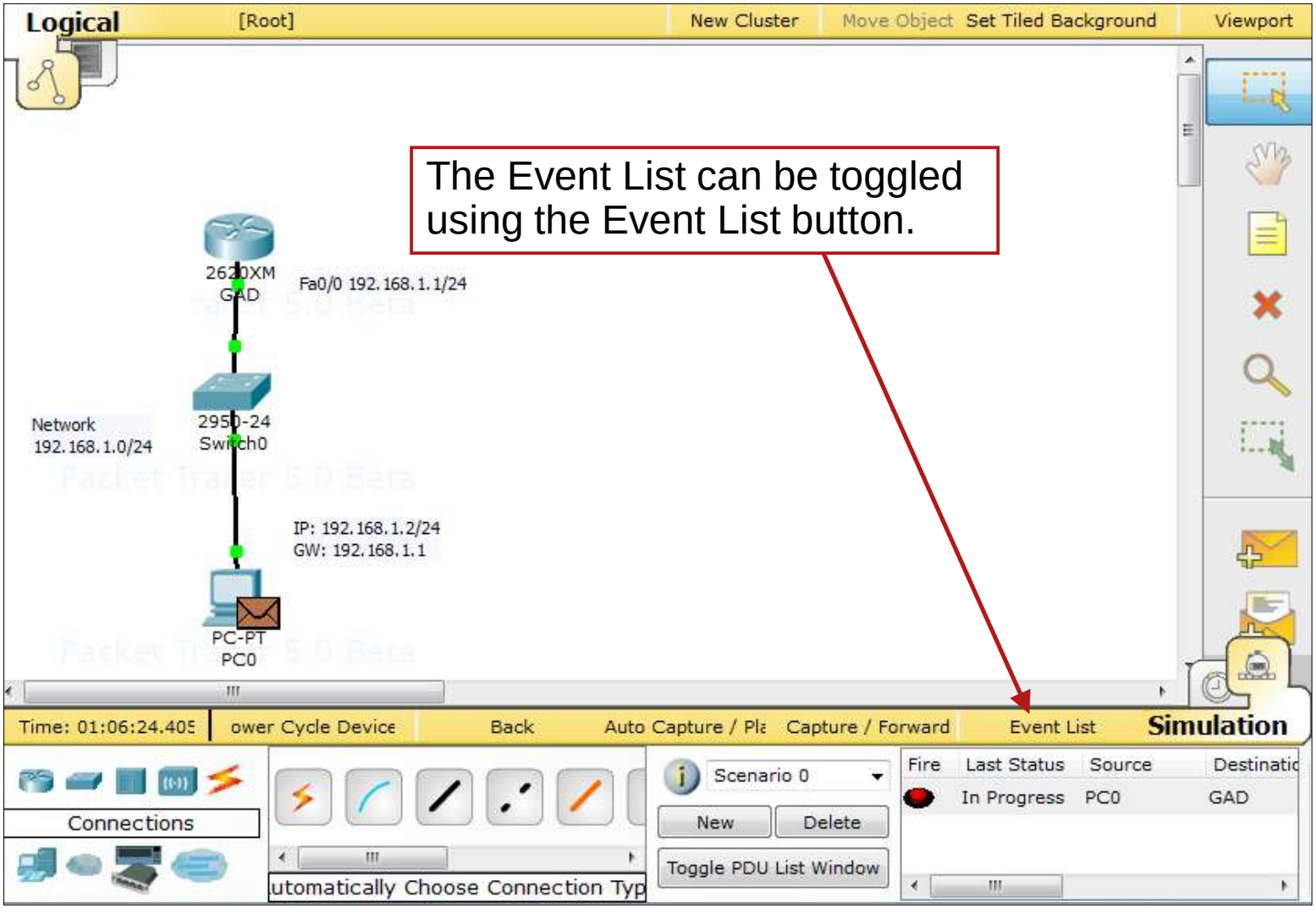
I See PDUs I Did Not Create!



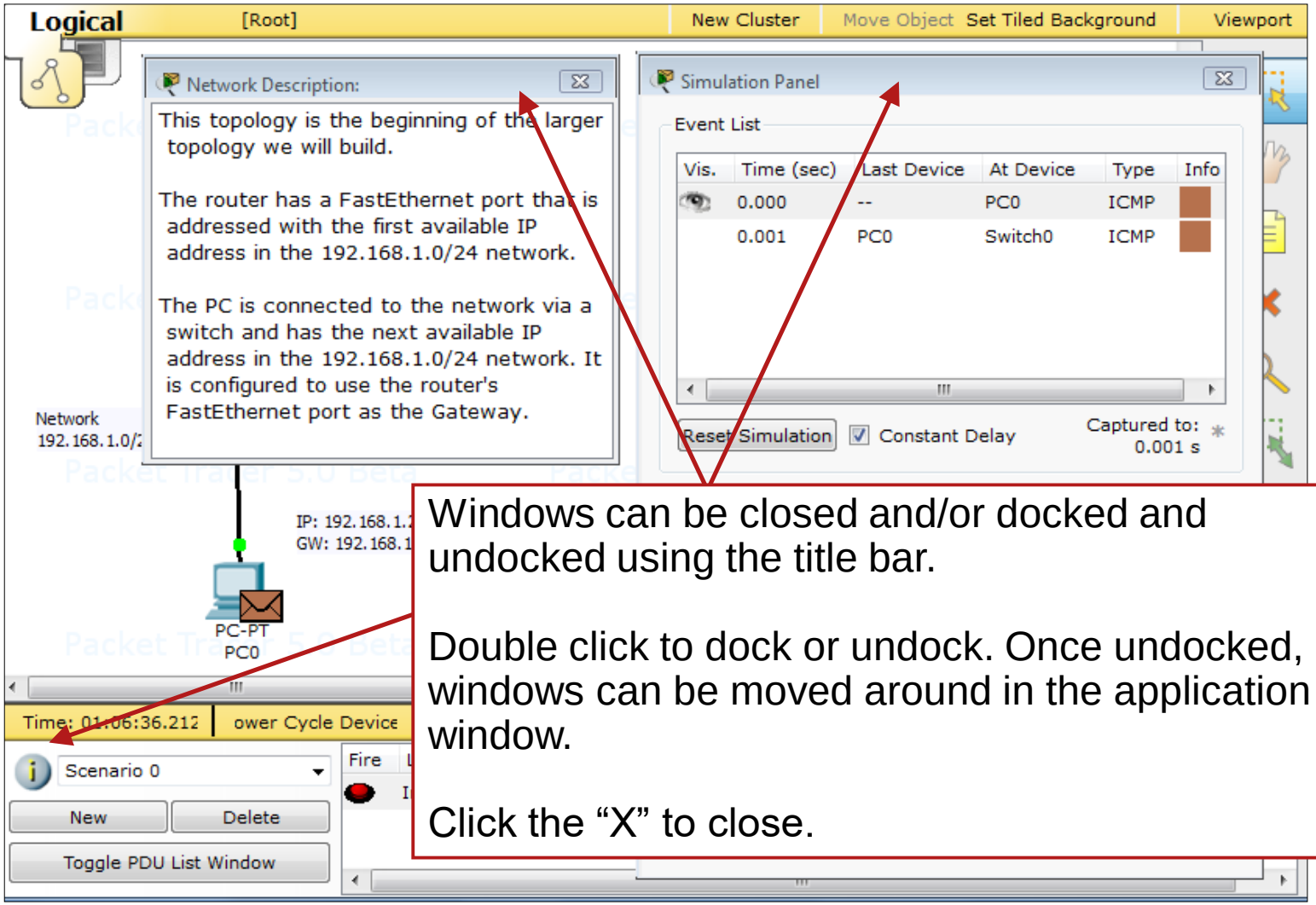
My Pings Are Unsuccessful



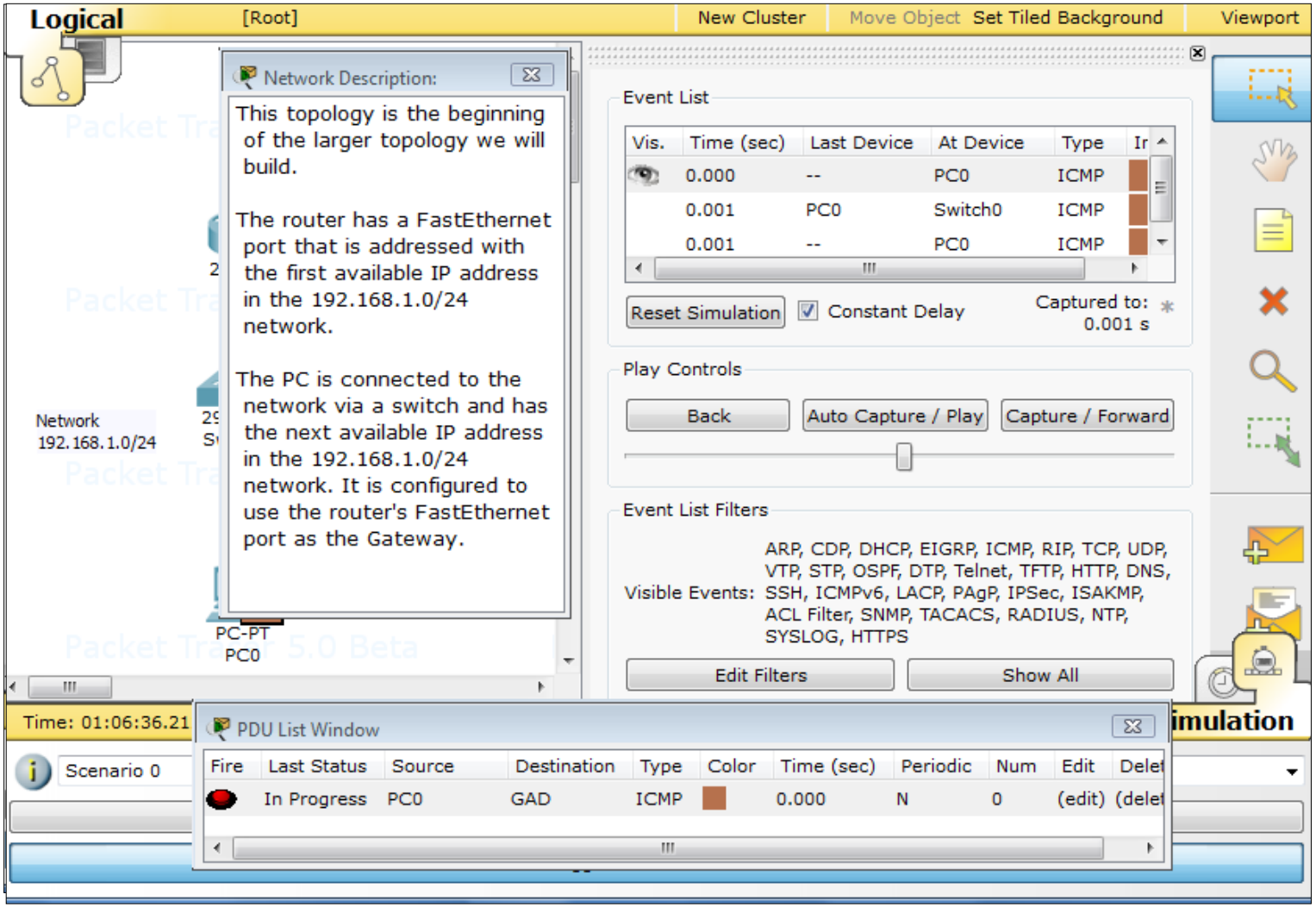
Where is the Event List Window?



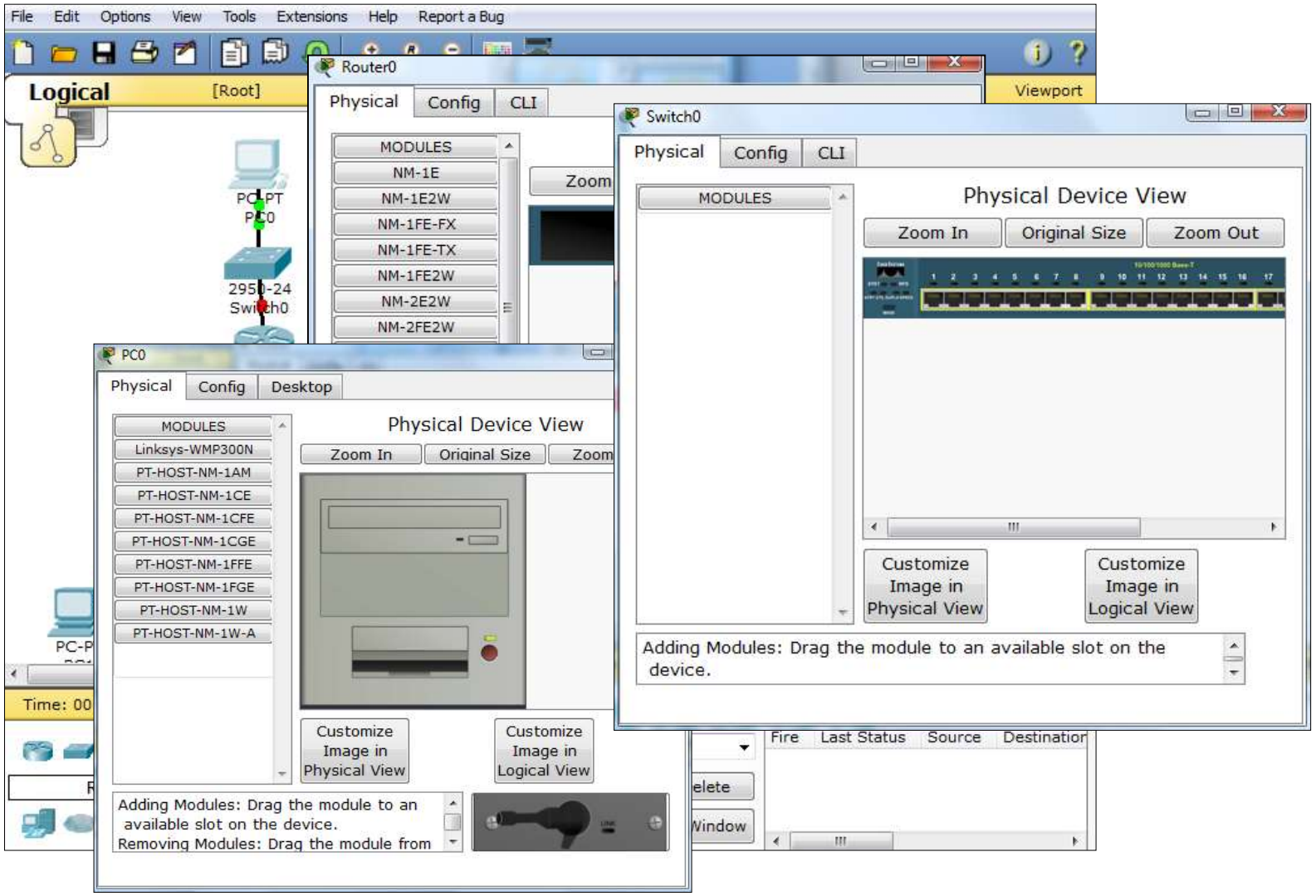
Where Did My Topology Go?



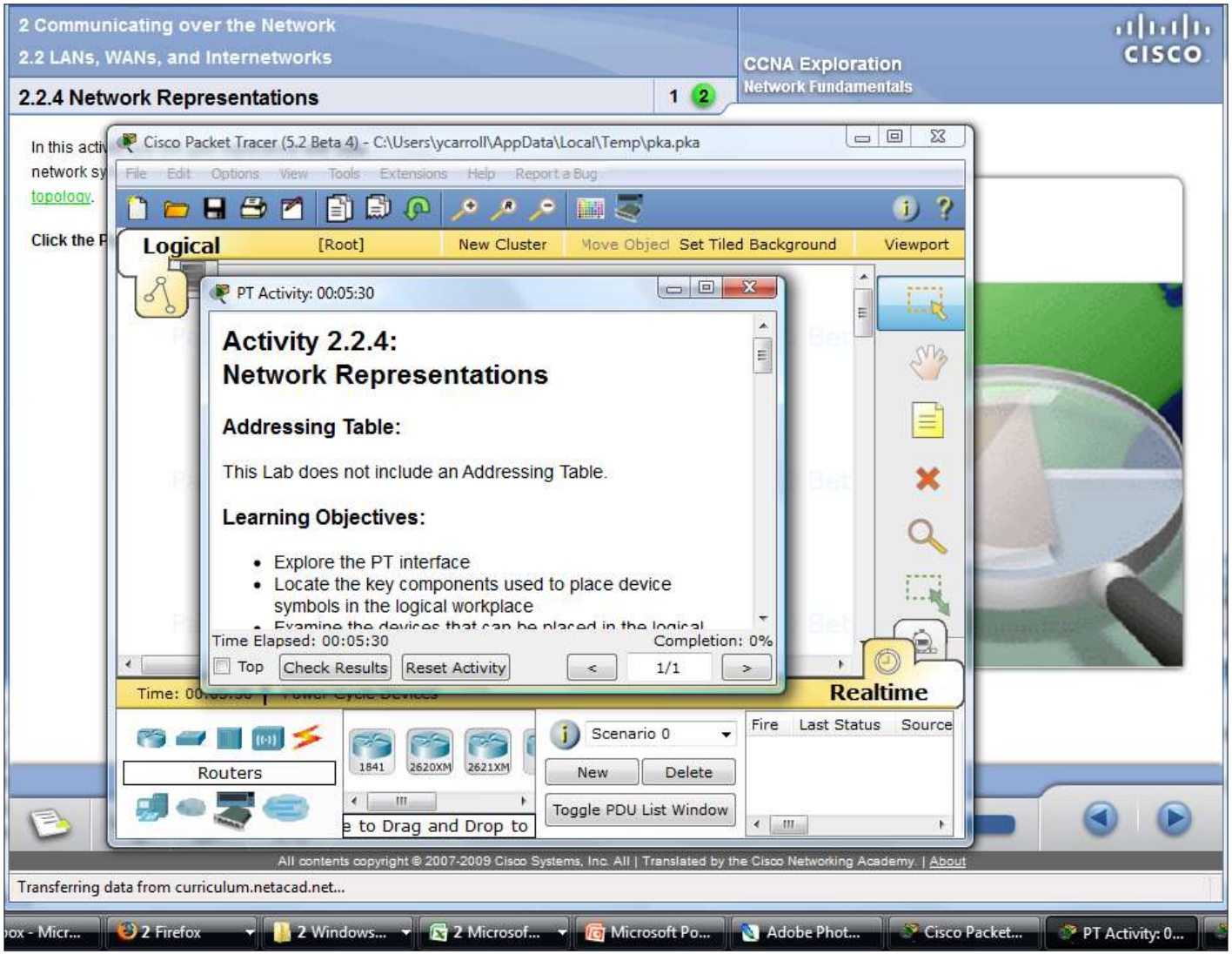
Arranging Windows



Multiple Device Windows

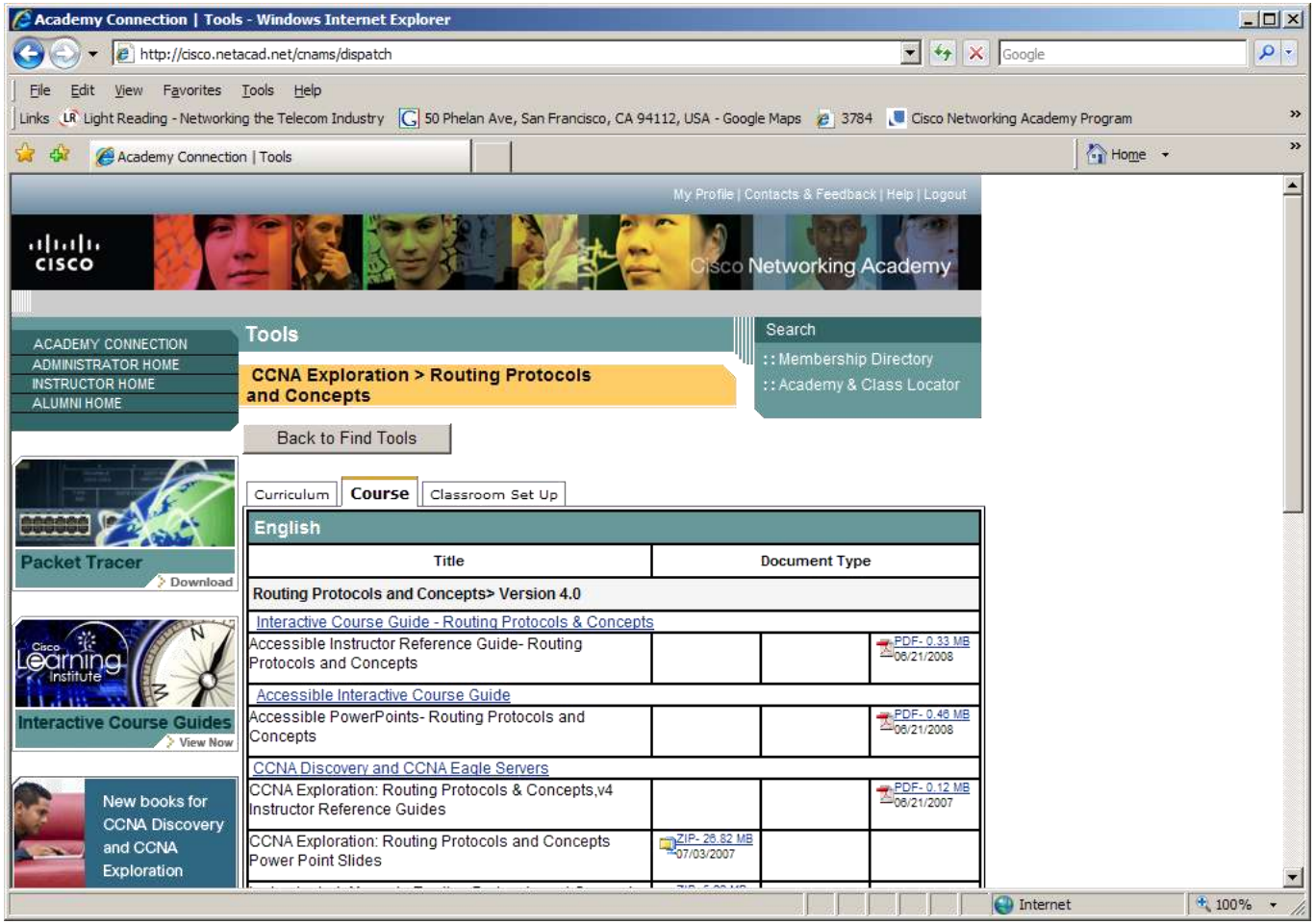


Where is the Activity Instructions Window?

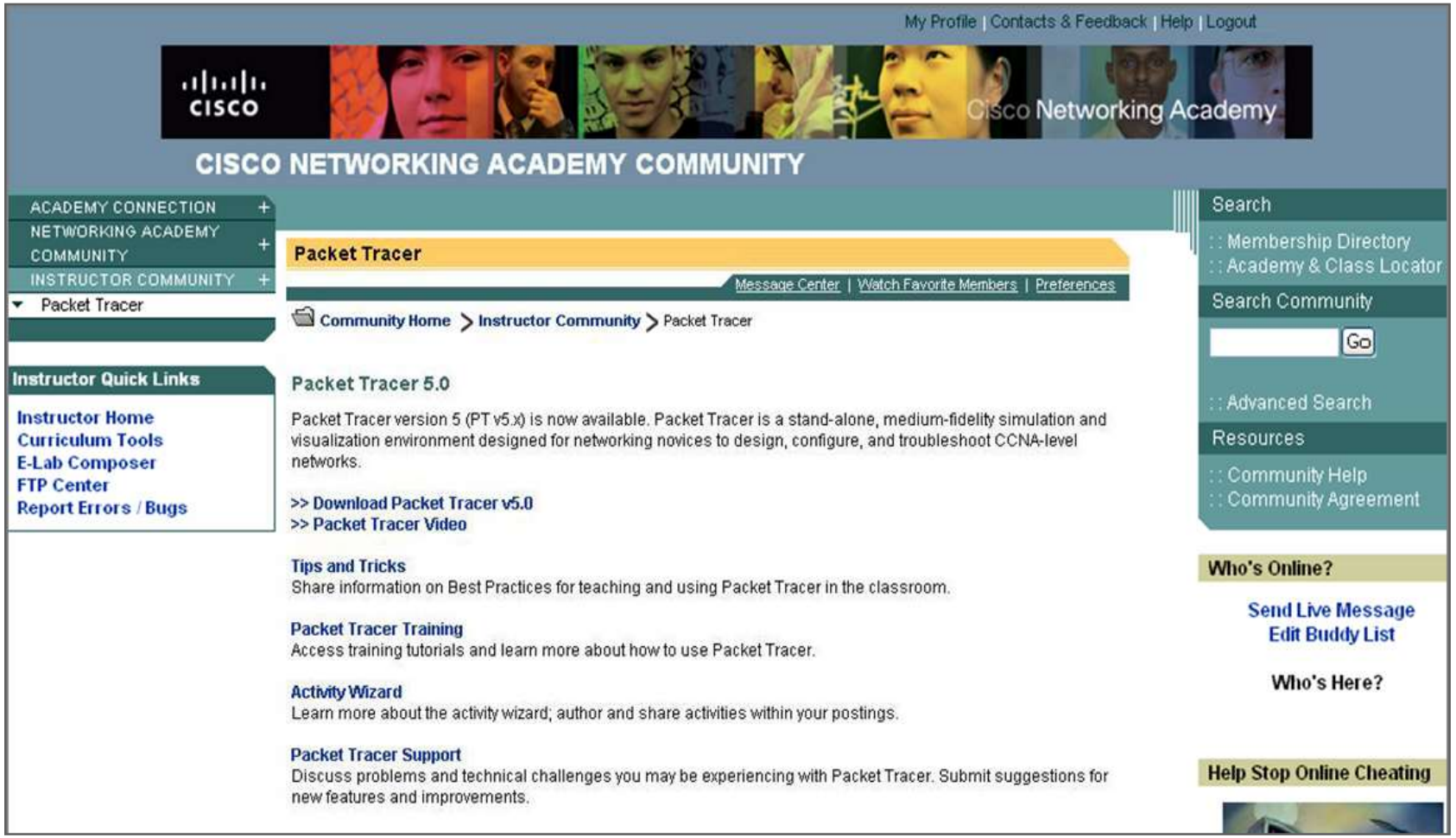


Helpful Resources

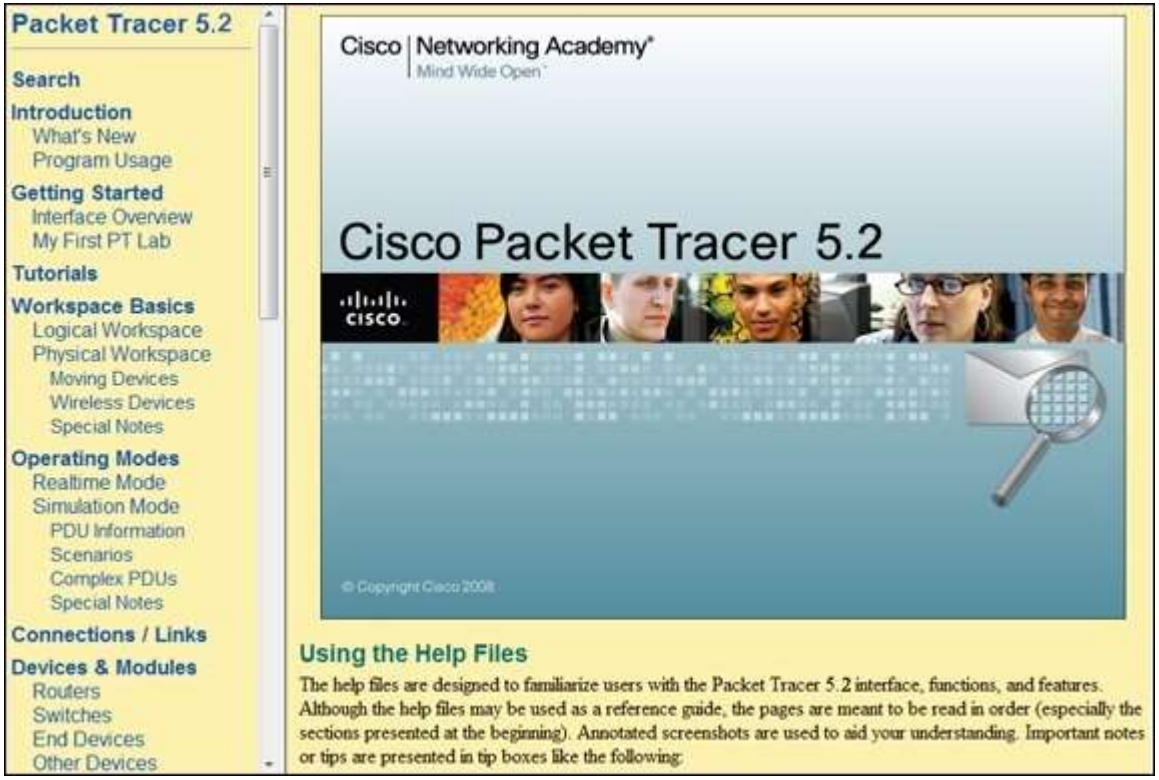
Download the Latest Version & Activities



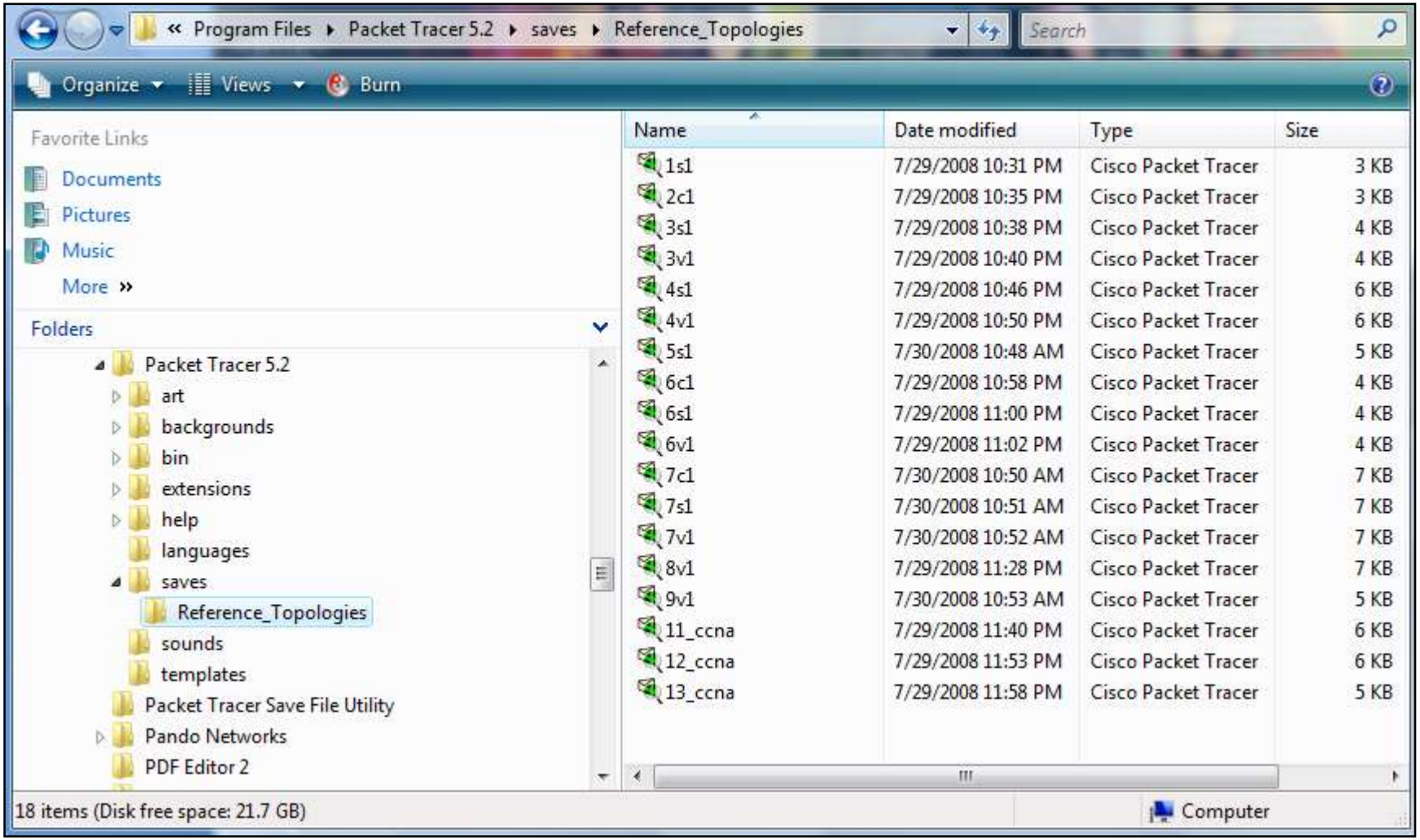
Packet Tracer Forum



Interested in More Help?



Reference Topologies



Q and A