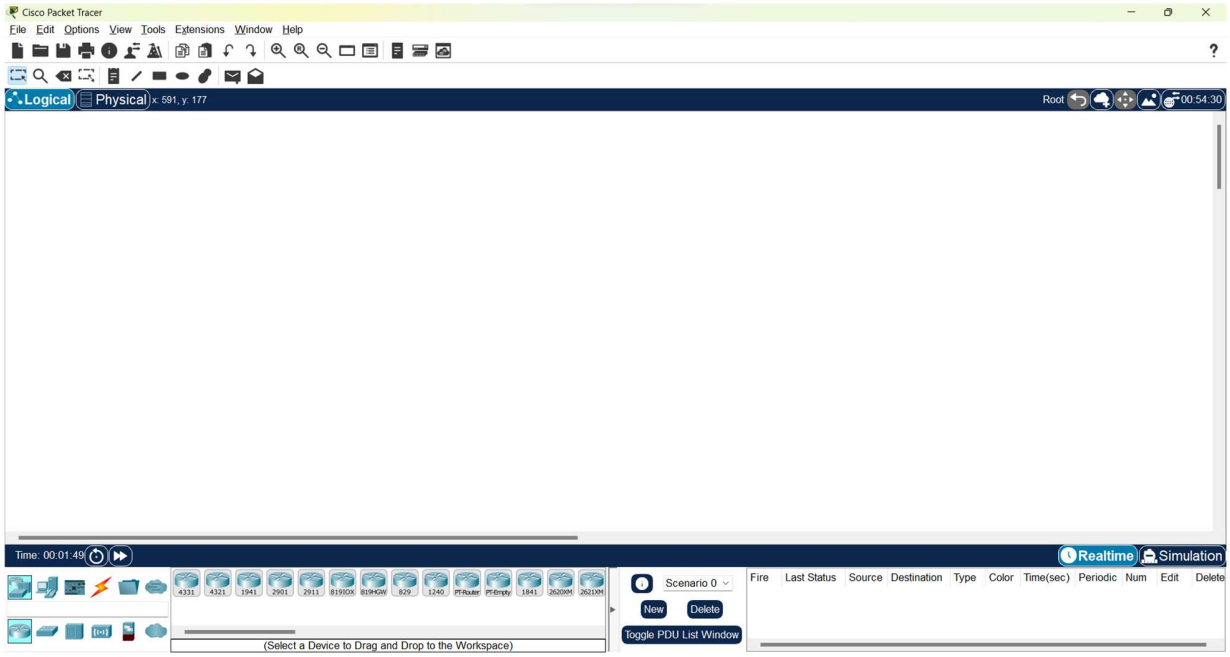
Marwadi University Marwadi Chandarana Group	**Marwadi University** **Faculty of Engineering and Technology** **Department of Information and Communication Technology**	
Subject: Computer Networks (01CT0503)	**Aim:** Introduce networking simulator tool and demonstrate various functionality - CO1	
Experiment No: 01	**Date:** 24/7/2023	**Enrolment No:** 92210133006

Aim: Introduce networking simulator tool and demonstrate various functionality. - CO1

Step 1:
Open Cisco Packet Tracer to explore its different functionalities.



Step 2:
In the main window, you'll find a white blank area where you can place networking components and conduct experiments. There are options like logical, physical, realtime, and simulation mode.

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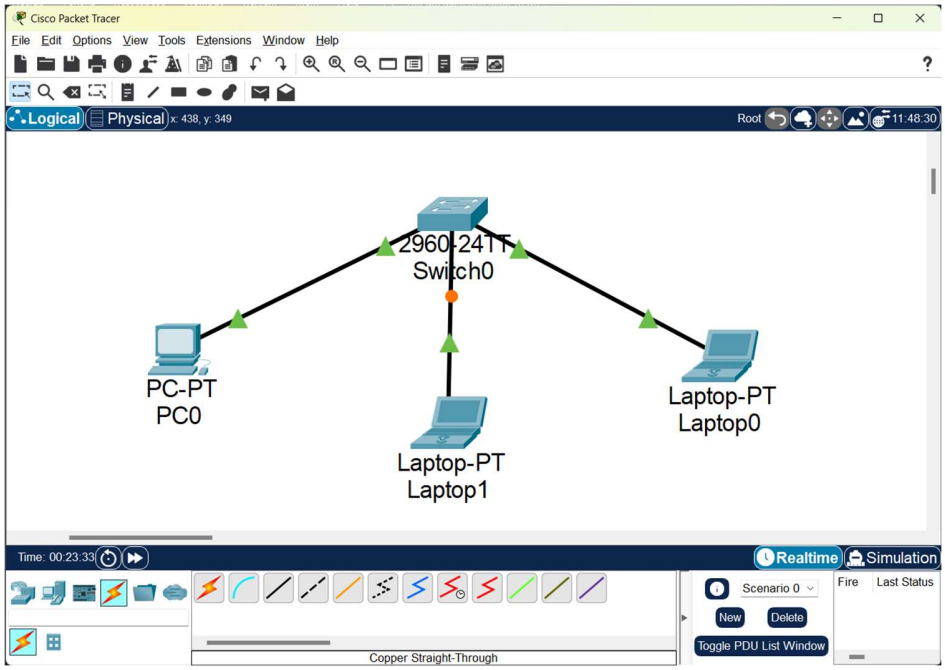
Step 3:
At the bottom left corner of the interface, you'll notice various categories, and in the second line, there are different sub-categories for each category.

Step 4:
By clicking on a specific sub-category, you can access different components on the right side of it. You can drag and drop these components into the work area to perform different tasks.

Step 5:
Let's create a small network with 1 PC, 2 laptops, and 1 switch to perform simulation. Connect the PCs and laptops to the switch using FastEthernet ports and copper straight cables.



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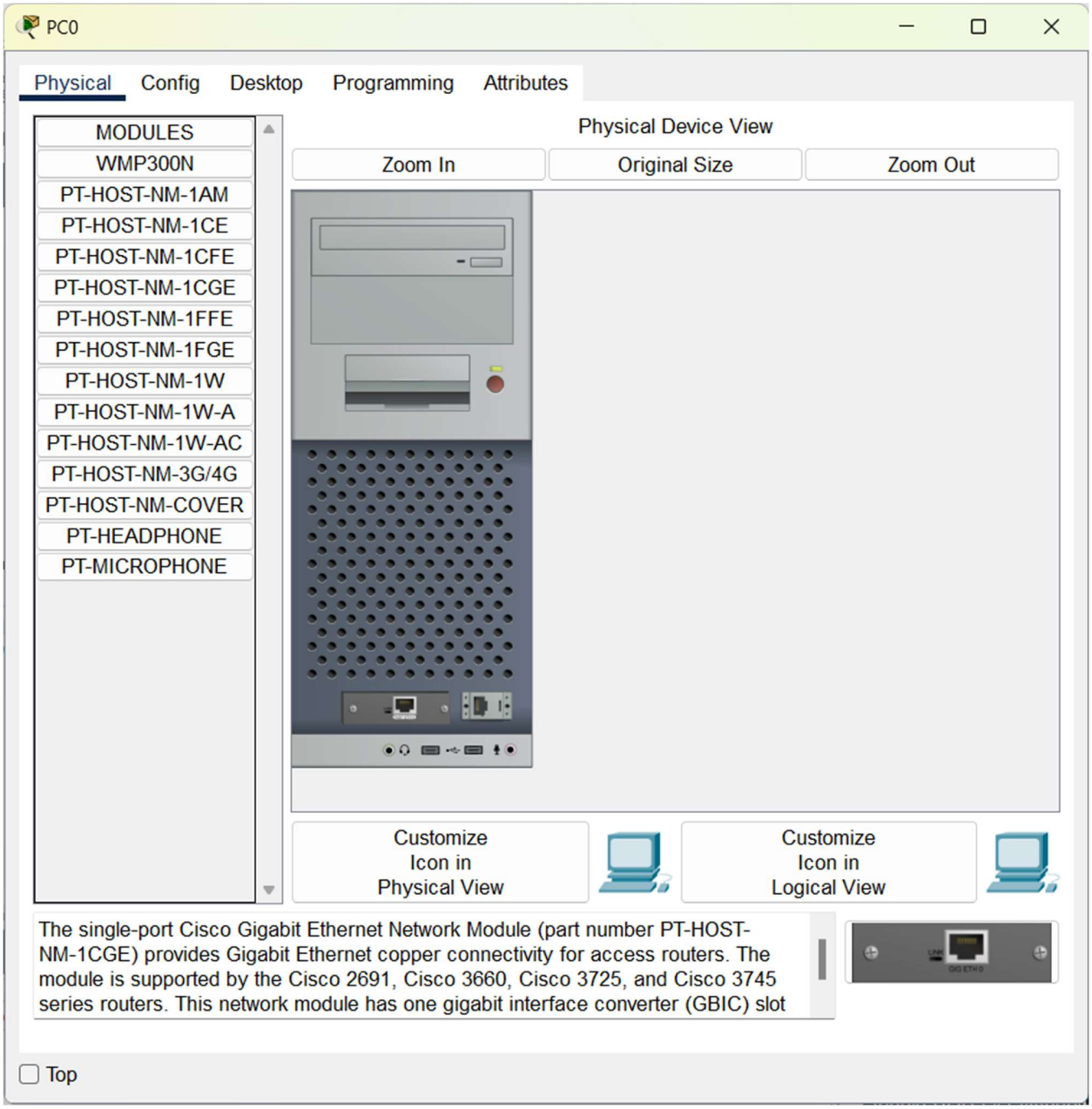
Step 6:

Clicking on any component provides options like its physical view, configuration, desktop, CLI (Command Line Interface), and attributes. These options allow you to edit modules, configure devices, and many thigs by exploring these options.

In below image we clicked on pc and see its different options.



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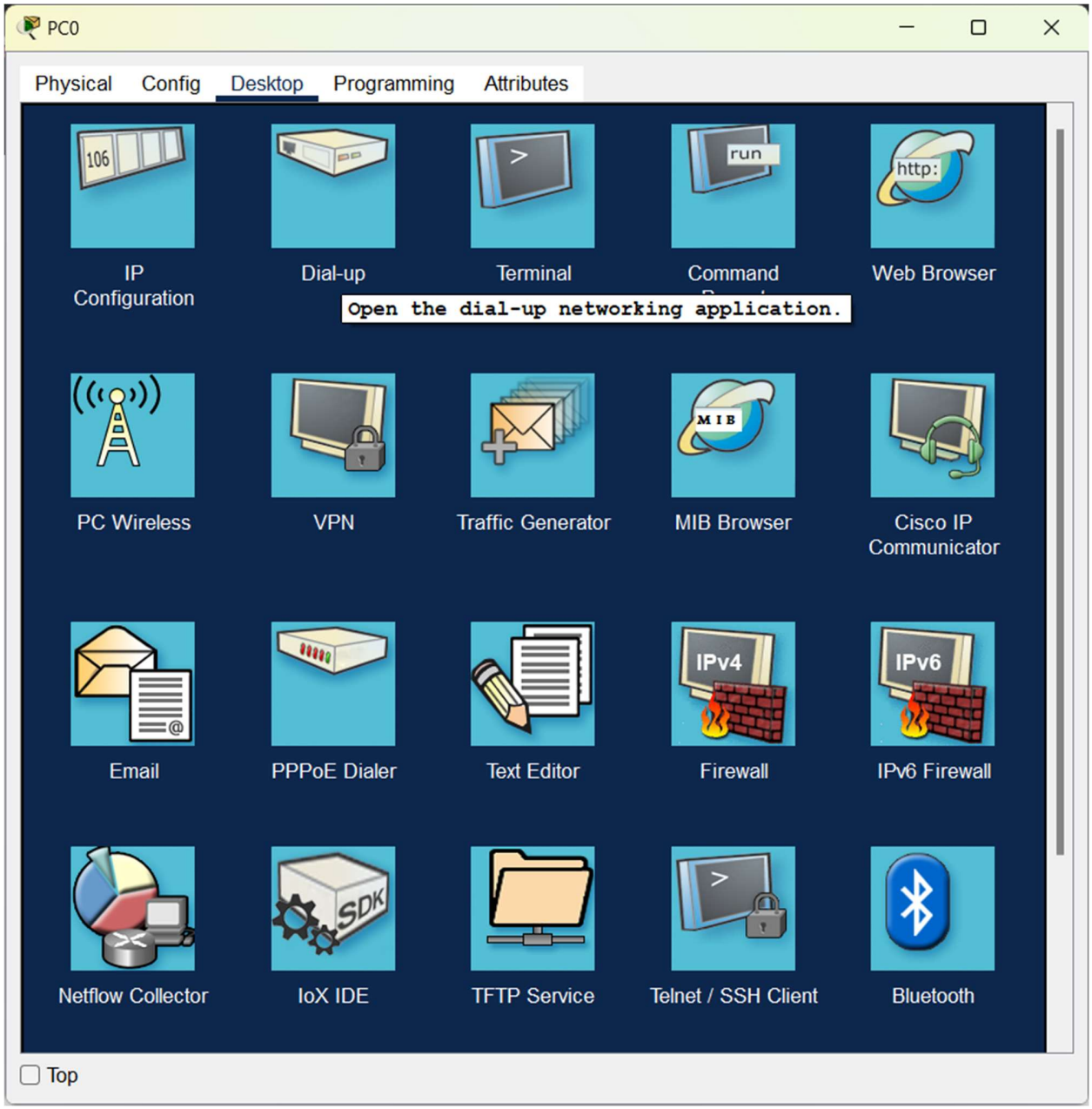
Step:7

Now click on Desktop and in that we can see many options like ip configuration, dial-up, terminal, command prompt, web browser and many more.



Here we can use ip configuration to config ip address to perform simulation. To do that click on IP Configuration and fill all details and then click close button

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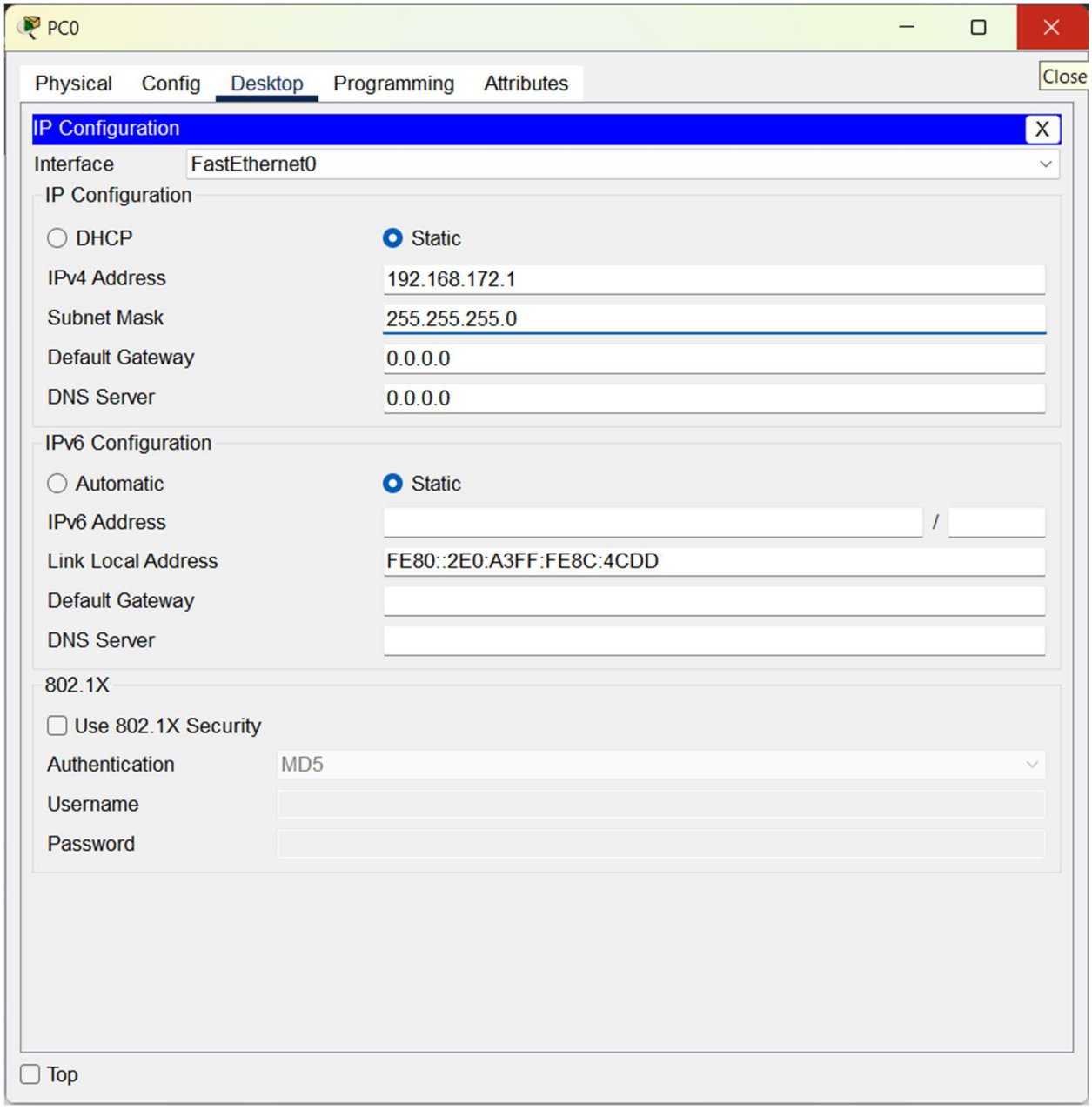

Do this for all remaining PC and Laptops.

Step:8

Now hover any PC or Laptop to see IP is successfully configured or not and also see other details like port name, port status up or down, ip address, mac address etc.

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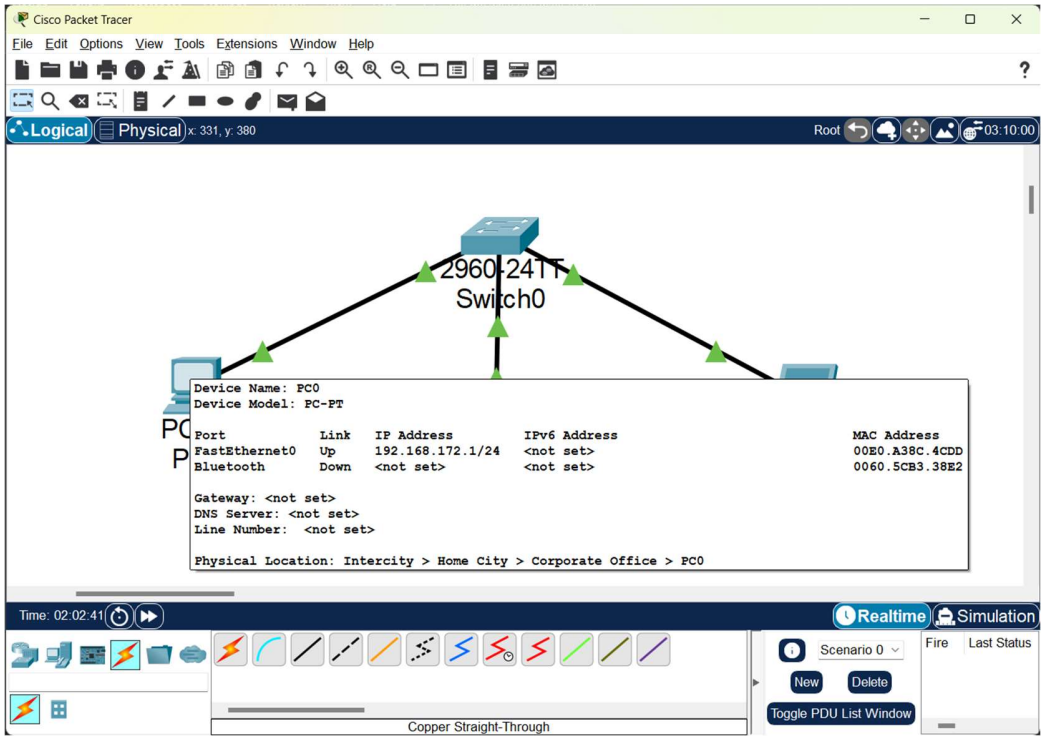
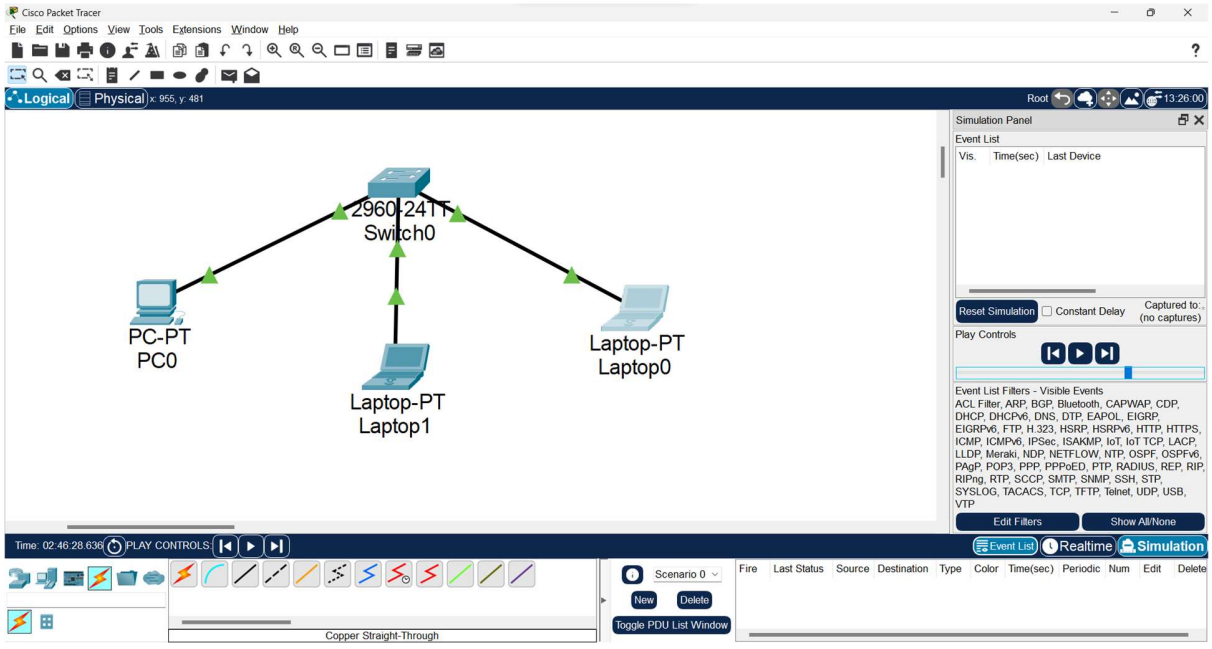


Step:9

Now click on simulation to see simulation steps in animation form.



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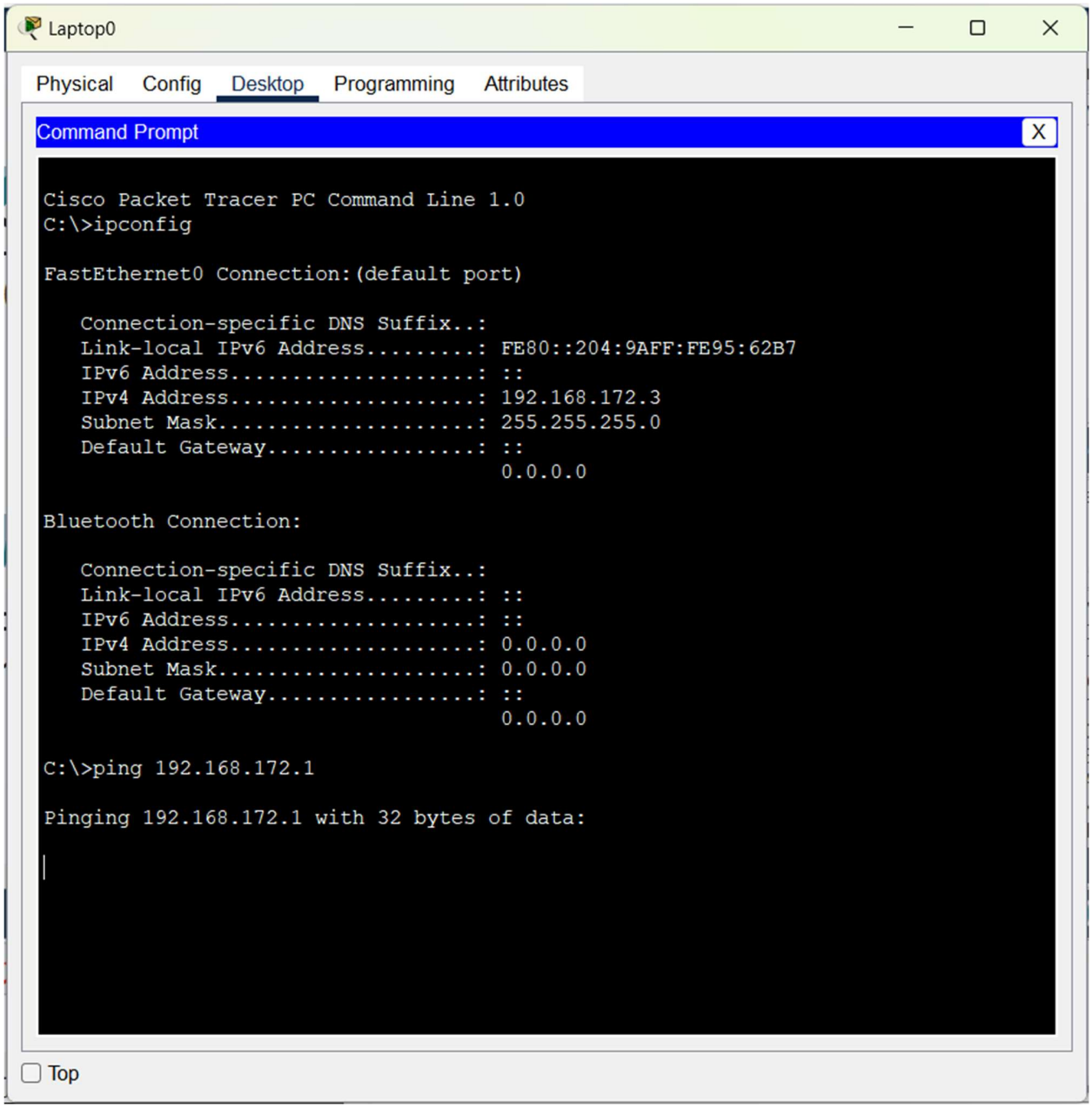
Step:10

Now click on any pc or laptop and then click on desktop and then click command prompt.

Now write ipconfig command to see current device ip configuration and then write ping command to send packet from selected device to another device to check connect between those two devices.



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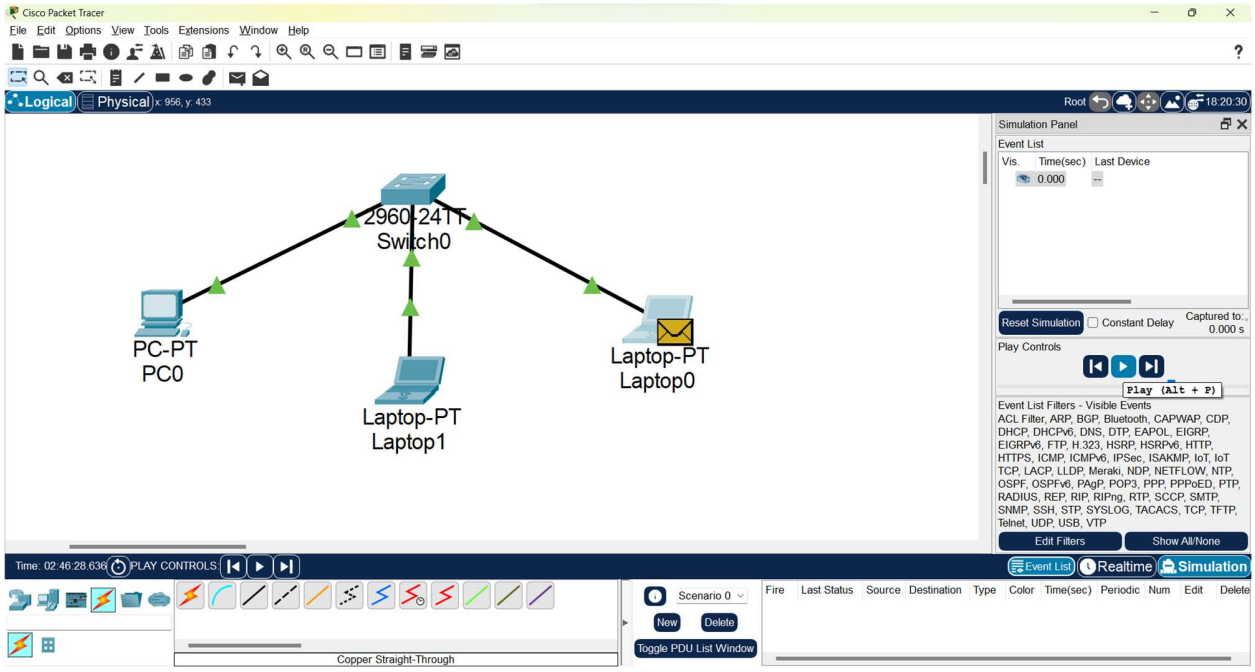
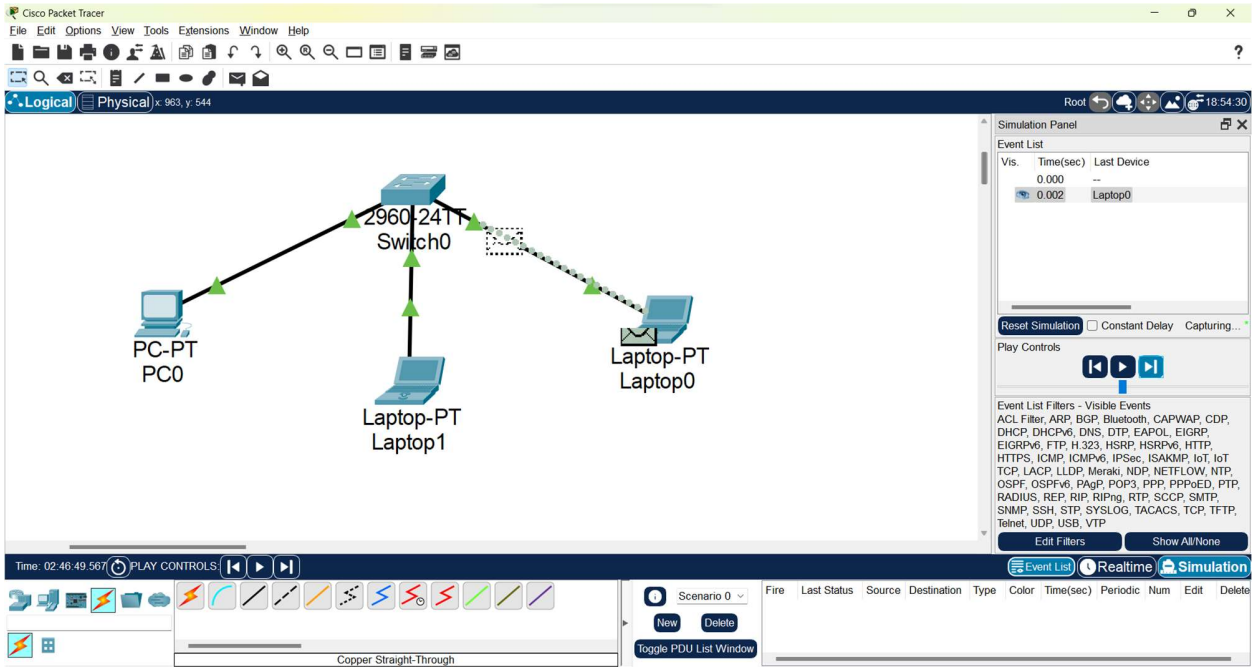
Step:11

Now we can see packet icon in image at device where we run ping command.

Now click on play button to see how packet is transfer from one device to another device.





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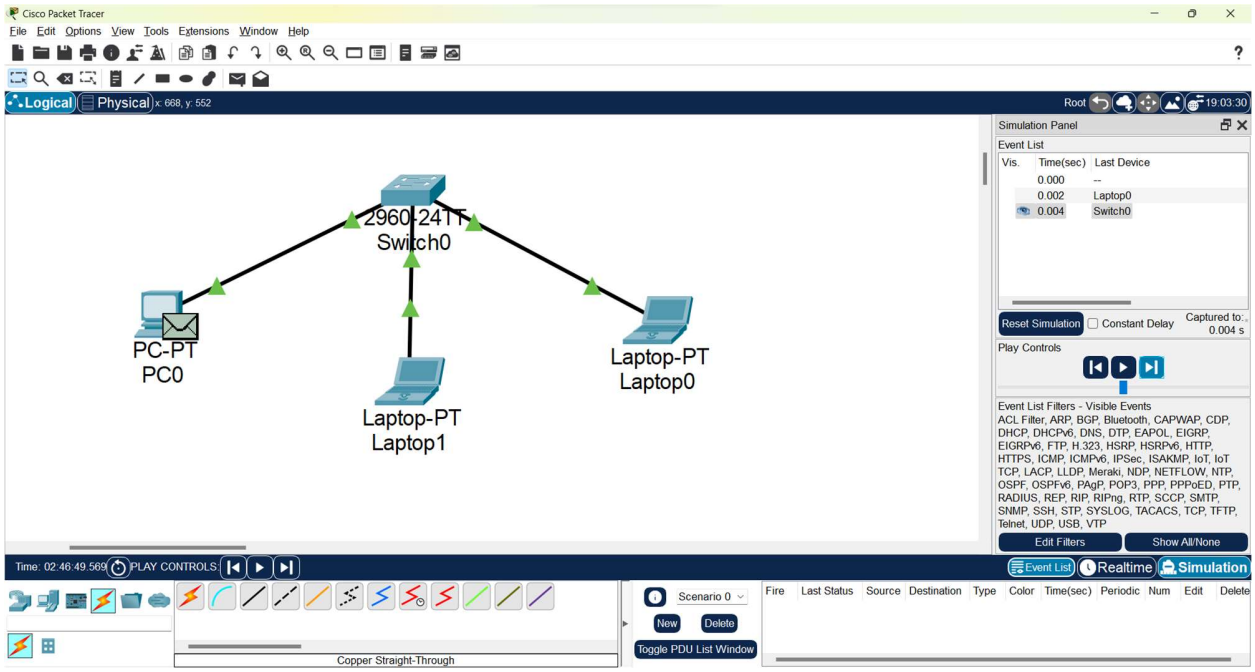

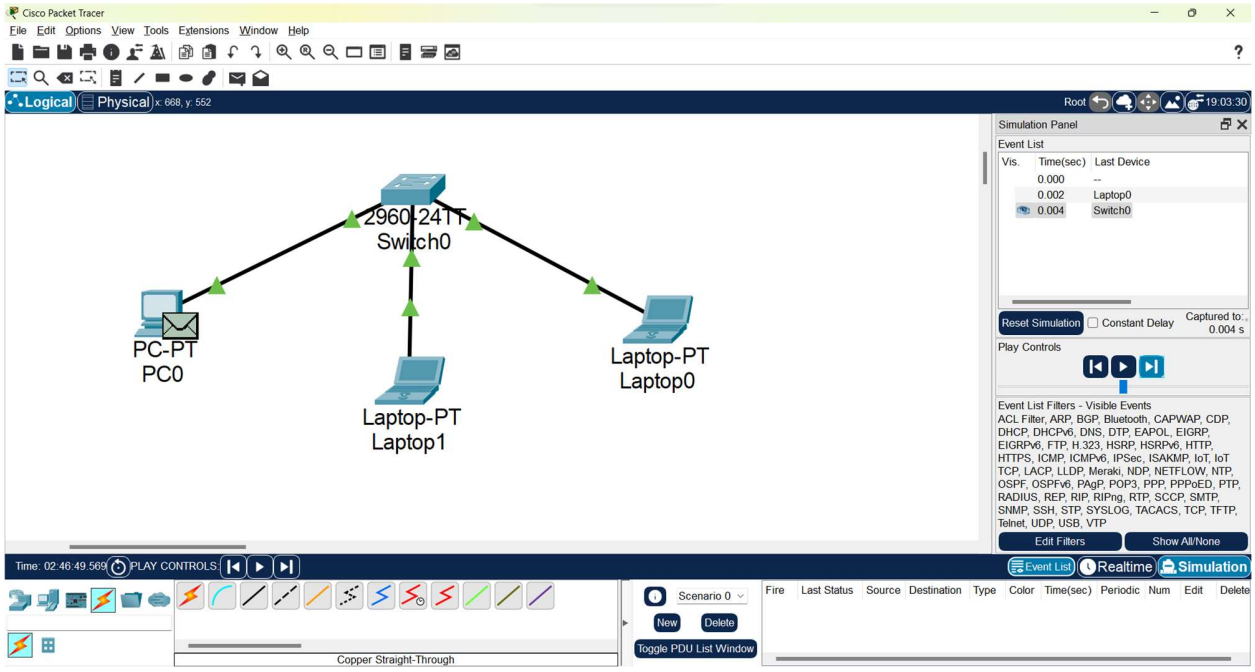

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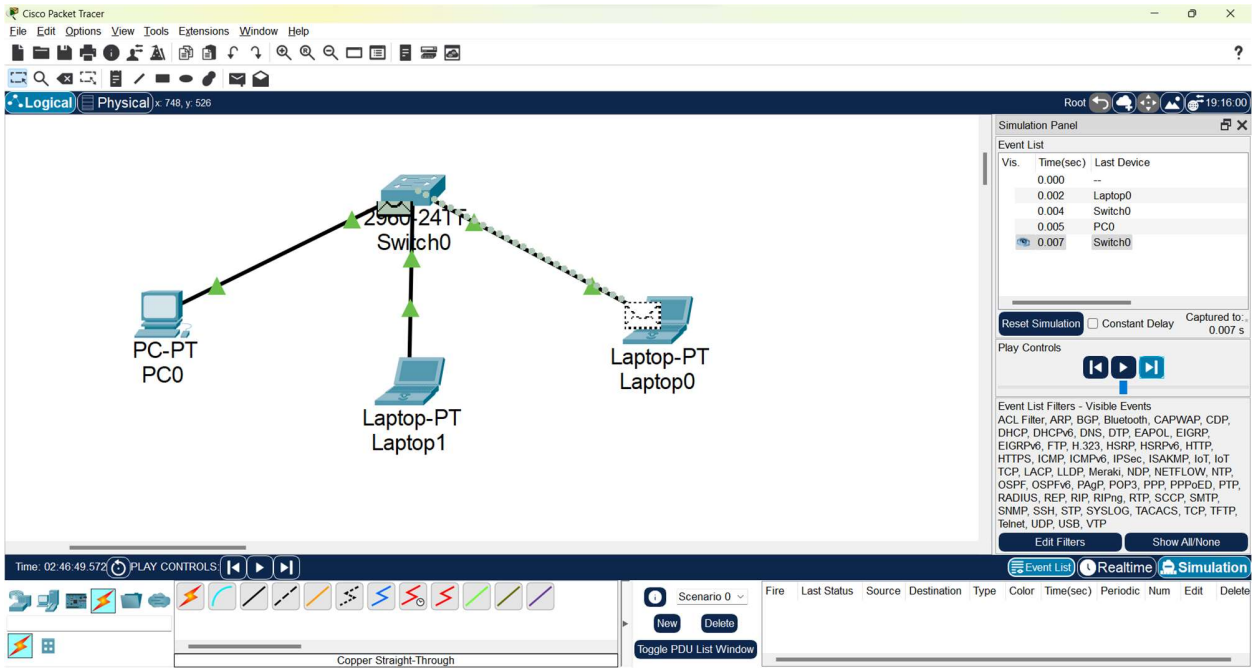

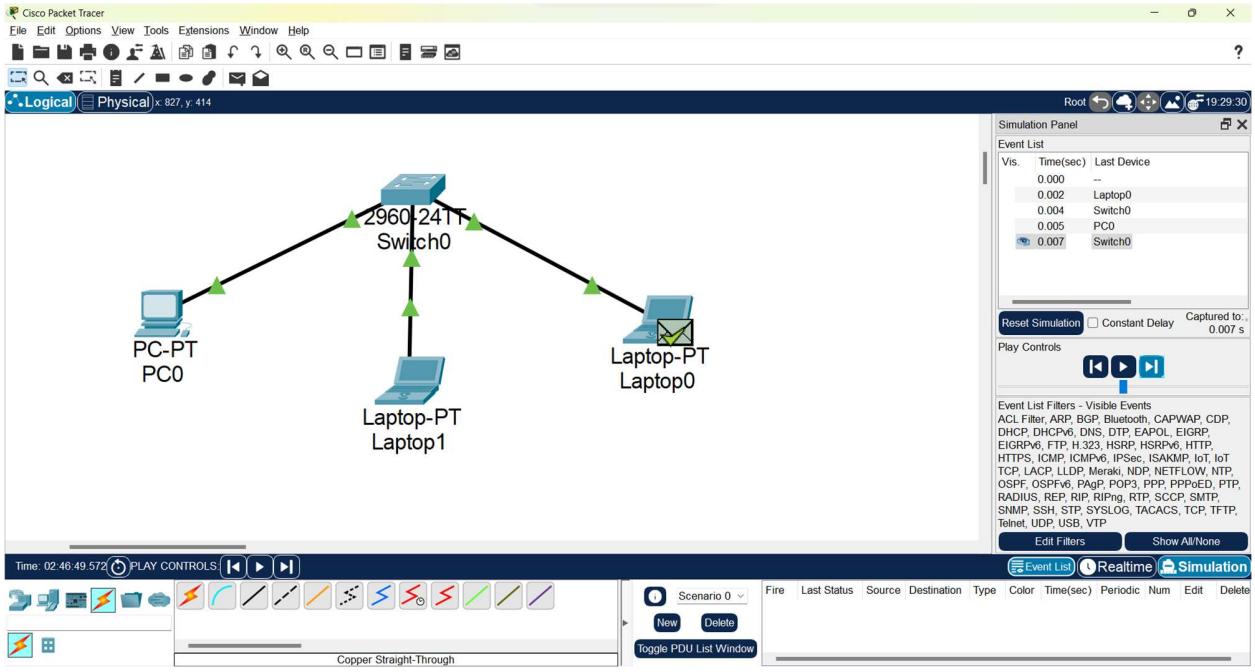

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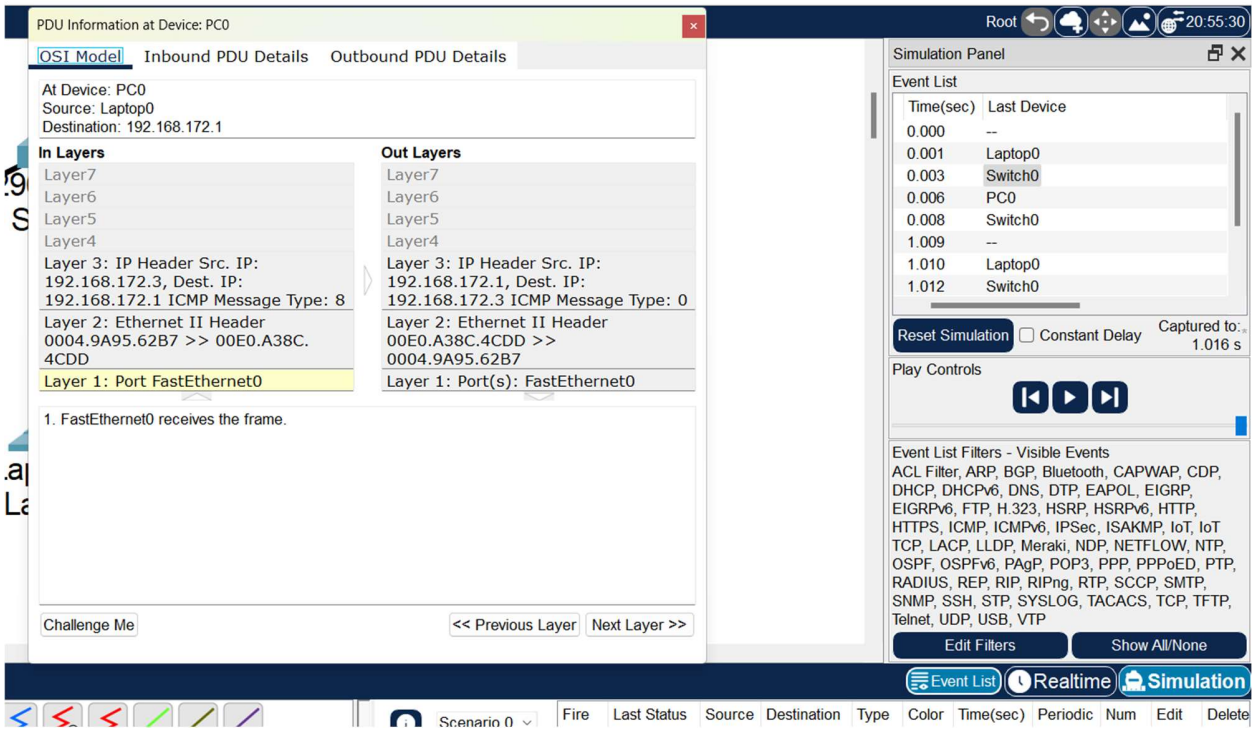
Step:12
Now click on any step from list display in simulation panel event list.
From there we can see OSI model and its information for particular stage.



Step:13
Press CTRL + S or save from file option to save work as packet tracer file (.pkt)

Conclusion:

Through this experiment, I have learned about Cisco Packet Tracer and its various uses. Now I understand how to utilize it for conducting different experiments before implementing any physical network setup, thus preventing significant errors and potential device damage. Moreover, I have explored the different functionalities of Packet Tracer, its extensive component library, and the benefits of working with real-time and simulation modes, allowing me to analyze data transfer between devices effectively. Overall, this experience has provided me with valuable knowledge and insights into network simulation, and I am grateful for the opportunity to learn and grow from it.