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Lab 7

Introduction to Cisco Packet Tracer

OBJECTIVES OF THE LAB

This lab aims to introduce Cisco Packet Tracer. Some specific topics covered in this lab are

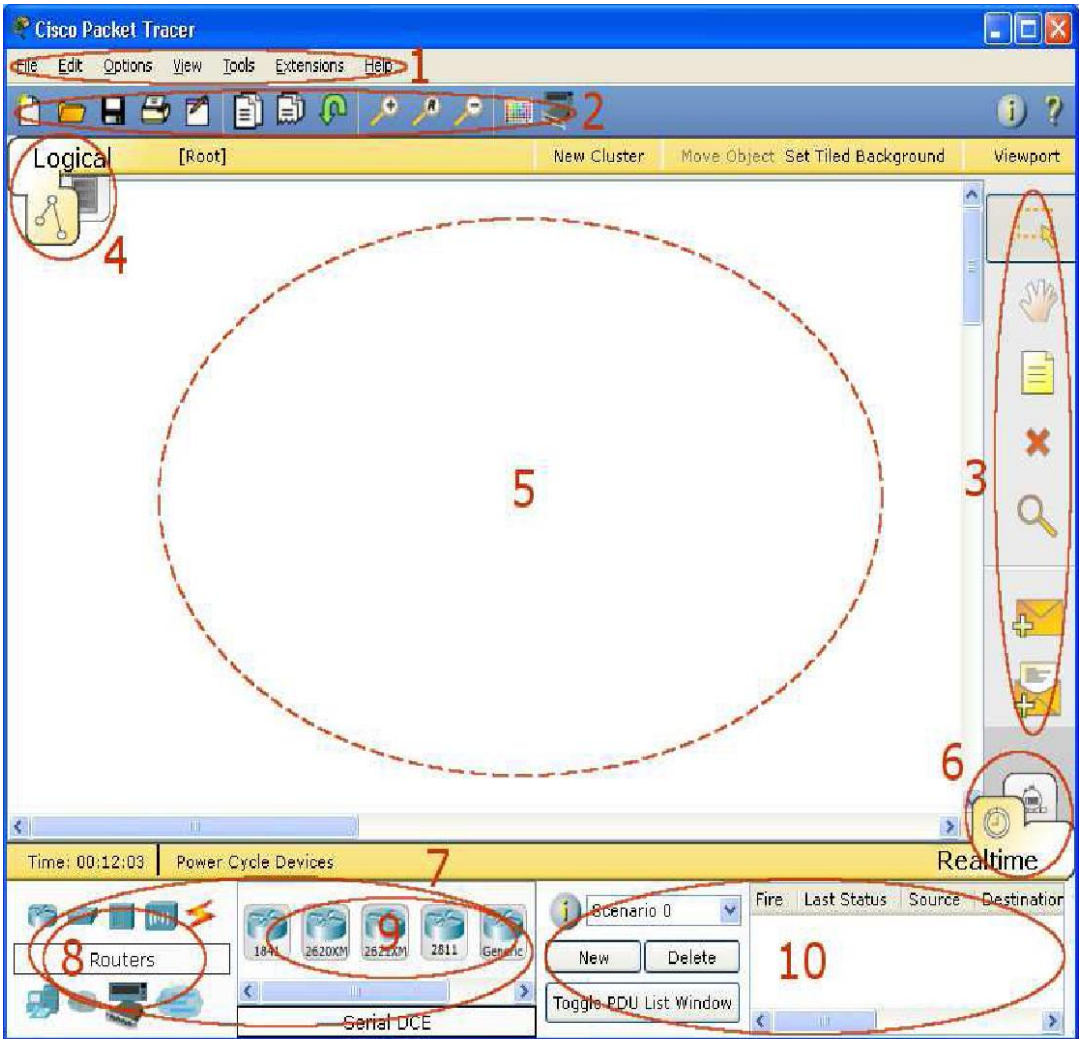
- Cisco Packet Tracer Overview
- Creating Devices
- Adding Modules
- Making Connections

Introduction

Cisco Packet Tracer is an innovative network simulation and visualization tool. This free software helps you to practice your network configuration and troubleshooting skills via your desktop computer or an Android or iOS based mobile device. Packet Tracer is available for both the Linux and Windows desktop environments.

With Packet Tracer you can choose to build a network from scratch, use a pre-built sample network, or complete classroom lab assignments. Packet Tracer allows you to easily explore how data traverses your network. Packet Tracer provides an easy way to design and build networks of varying sizes without expensive lab equipment.

1. Downloading
2. Installing Cisco Packet Tracer
3. Cisco Packet Tracer overview



1	**Menu Bar**	This bar provides the File, Edit, Options, View, Tools, Extensions, and Help menus. You will find basic commands such as Open, Save, Print, and Preferences in these menus. You will also be able to access the Activity Wizard from the Extensions menu.
2	**Main Tool Bar**	This bar provides shortcut icons to the File and Edit menu commands. This bar also provides buttons for Zoom, the drawing Palette, and the Device Template Manager. On the right, you will also find the Network Information button, which you can use to enter a description for the current network (or any text you wish to include).

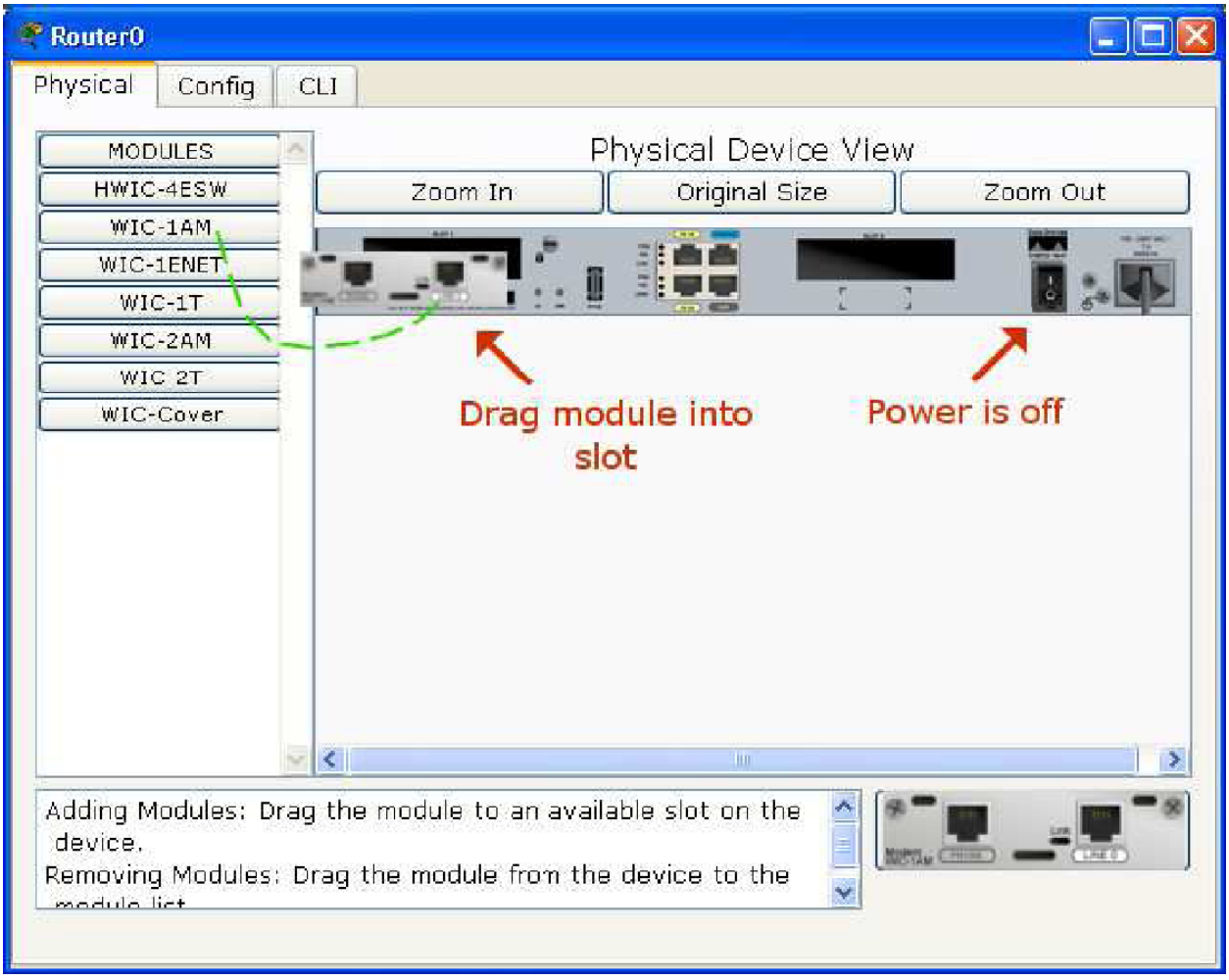
3	**Common Tools Bar**	This bar provides access to these commonly used workspace tools: Select, Move Layout, Place Note, Delete, Inspect, Add Simple PDU, and Add Complex PDU. See "Workspace Basics" for more information.
4	**Logical/Physical Workspace and Navigation Bar**	You can toggle between the Physical Workspace and the Logical Workspace with the tabs on this bar. In Logical Workspace, this bar also allows you to navigate through levels of a cluster, create a new Cluster, Move Object, Set Tiled Background, and Viewport. In Physical Workspace, this bar allows you to navigate through physical locations, create a New City, create a New Building, create a New Closet, Move Object, apply Grid to the background, Set Background, and go to the Working Closet.
5	**Workspace**	This area is where you will create your network, watch simulations, and view many kinds of information and statistics.
6	**Realtime/Simulation Bar**	You can toggle between Realtime Mode and Simulation Mode with the tabs on this bar. This bar also provides buttons to Power Cycle Devices as well as the Play Control buttons and the Event List toggle button in Simulation Mode. Also, it contains a clock that displays the relative Time in Realtime Mode and Simulation Mode.
7	**Network Component Box**	This box is where you choose devices and connections to put into the workspace. It contains the Device-Type Selection Box and the Device-Specific Selection Box.
8	**Device-Type Selection Box**	This box contains the type of devices and connections available in Packet Tracer 5.1. The Device-Specific Selection Box will change depending on which type of device you choose.
9	**Device-Specific Selection Box**	This box is where you choose specifically which devices you want to put in your network and which connections to make.
10	**User Created Packet Window***	This window manages the packets you put in the network during simulation scenarios. See the "Simulation Mode" section for more details.

4. Creating Devices

a. Choose a device type from the **Device-Type Selection** box
b. Click on the desired device model from the **Device-Specific Selection** box
c. Click on a location in the workspace to put your device in that location
d. If you want to cancel your selection, press the **Cancel** icon for that device
e. Alternatively, you can click and drag a device from the **Device-Specific Selection** box onto the workspace

f. You can also click and drag a device directly from the **Device-Type Selection** box and a default device model will be chosen for you

5. **Adding Modules**



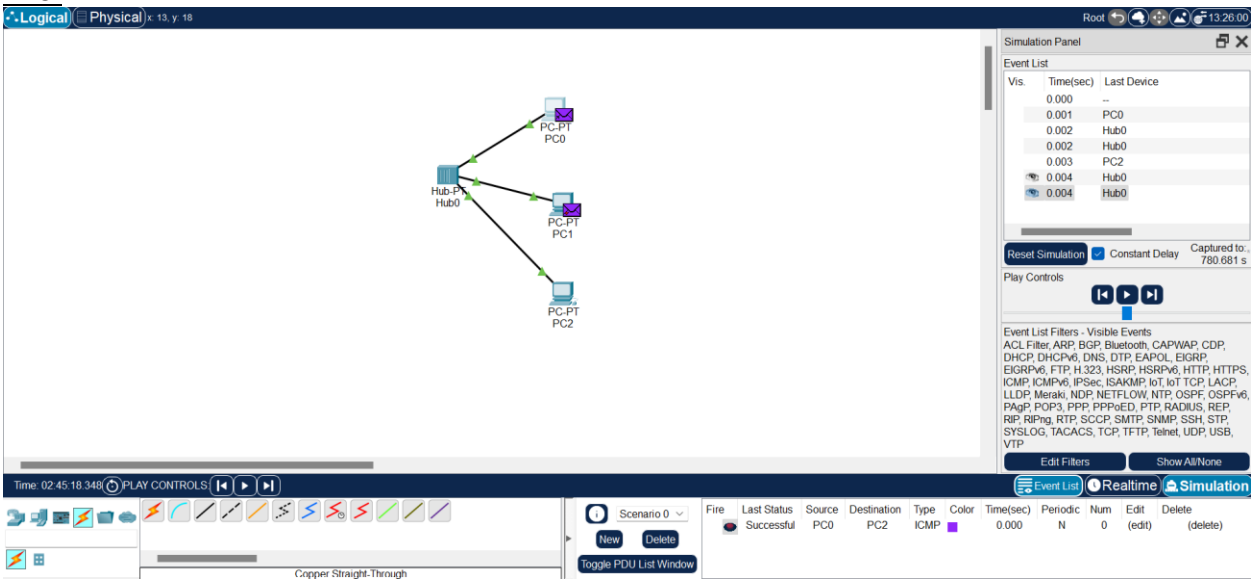
a. Click on a device to bring up its configuration window.
b. By default, you will be in the **Physical Device View** subpanel of the device.
c. You can browse (by clicking) through the list of modules and read their description in the information box at the bottom.
d. When you have found the module you want to add, simply drag it from the list into a compatible bay on the device picture.
e. You can remove a module by dragging it from the device back into the list.

6. **Making Connections**
    a. To make a connection between two devices, first click the **Connections** icon from the **Device-Type Selection** box to bring up the list of available connections.
    b. Then click the appropriate cable type.
    c. The mouse pointer will change into a "connection" cursor.
    d. Click on the first device and choose an appropriate interface to which to connect.
    e. Then click on the second device and do the same.
    f. A connection cable will appear between the two devices, along with link lights showing the link status on each end (for interfaces that have link lights).

Tasks

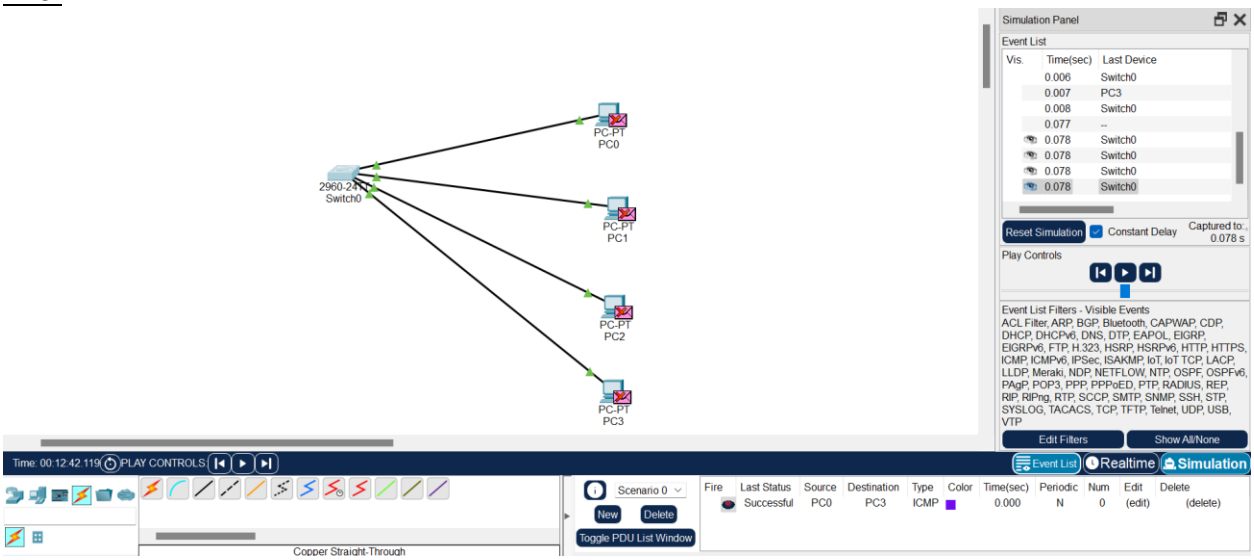
1. Make a LAN using HUB in Cisco Packet Tracer (2)

Ans:



2. Make LAN using SWITCH in Cisco Packet Tracer. (2)

Ans:



Mac address table is:

```
Switch#show mac address-table
          Mac Address Table
-------------------------------------------

Vlan    Mac Address       Type        Ports
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   1    0001.97be.7869    DYNAMIC     Fa0/4
   1    00d0.bcb8.8dca    DYNAMIC     Fa0/1
   1    00e0.b02a.8135    DYNAMIC     Fa0/3
Switch#
```

3. What are the pros and cons of HUB? (2)

Ans: Pros: Hub directly informs all pcs in one try if we want to.
Cons: It sends packets to all pcs which can cause unnecessary traffic.

4. What are the pros and cons of SWITCH? (2)

Ans: Pros: Switch only sends to the intended pc and not to others.
Cons: Switch does not inform all pcs and we have to connect each one separately.

5. Which Ethernet cable did you use for the connection between HUB and PC? What does a switch store in its memory? (2)

Ans: The ethernet cable we used for connection between HUB and PC is Copper Straight-Through. Switch stores the MAC Address Table in its memory.

Note: Your documented should be well presented and accurately documented for each and every step you followed.