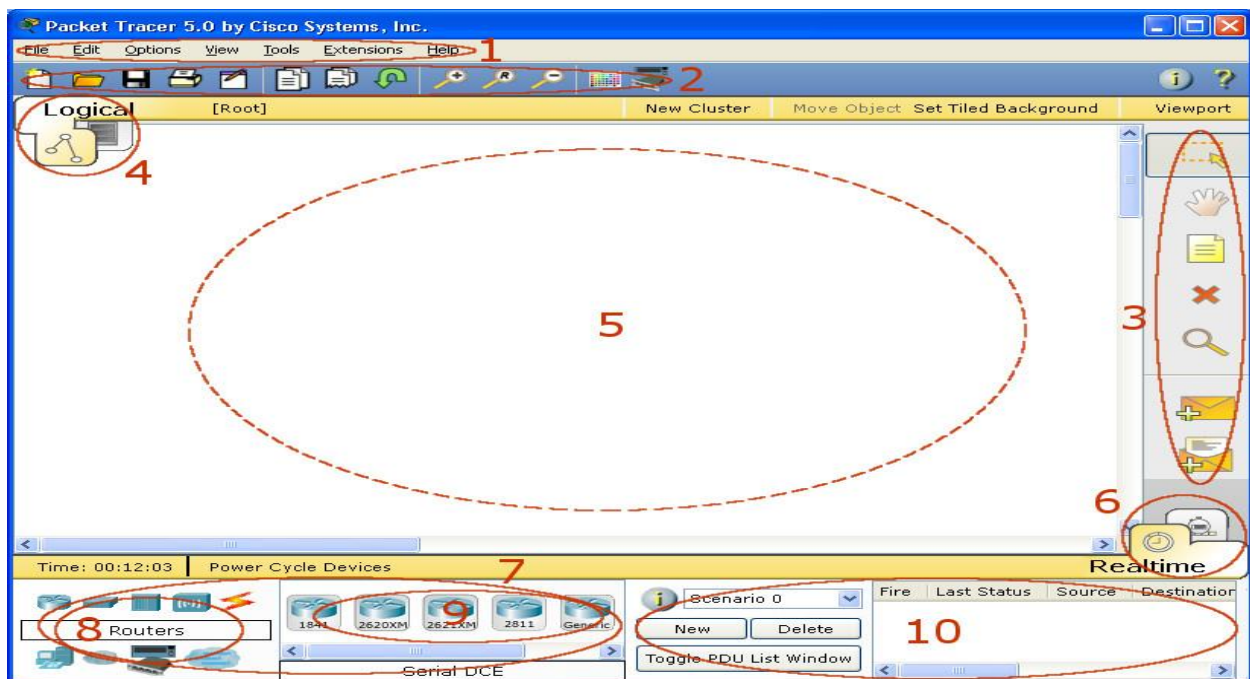# Lab # 02: Introduction to Packet Tracer

Introduction

Packet Tracer provides a simulation-based environment for networking training. It offers a unique combination of visualization tools, complex assessment and activity authoring capabilities, and opportunities for multi-user collaboration and competition. For students, Packet Tracer offers extensive learning benefits:

1. Provides a versatile practice and visualization environment for the design, configuration, and troubleshooting of network environments

2. Offers an exploratory development environment that enables users to design, build, and configure networks with drag-and-drop devices

Lab Activities:

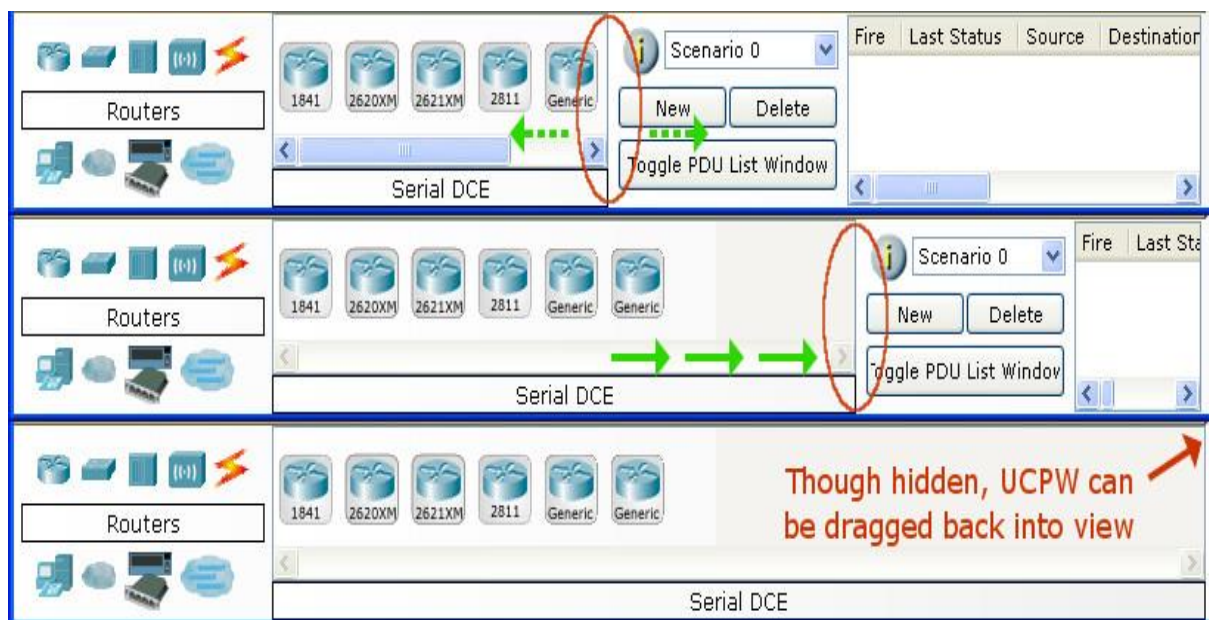When you open Packet Tracer 5.0, by default you will be presented with the following interface:

This initial interface contains ten components. If you are unsure of what a particular interface item does, move your mouse over the item and a help balloon will explain the item.

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 **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 5.0. 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.

You can freely resize the **User Created Packet Window** (UCPW) by placing the cursor near the left edge of the window (it will turn into a "resize" cursor) and then drag the cursor left or right. You can hide the window from view by dragging the edge all the way to the right. When the UCPW is hidden, you can bring it back by placing the cursor on the edge (notice when the resize cursor appears) and then dragging the edge back.
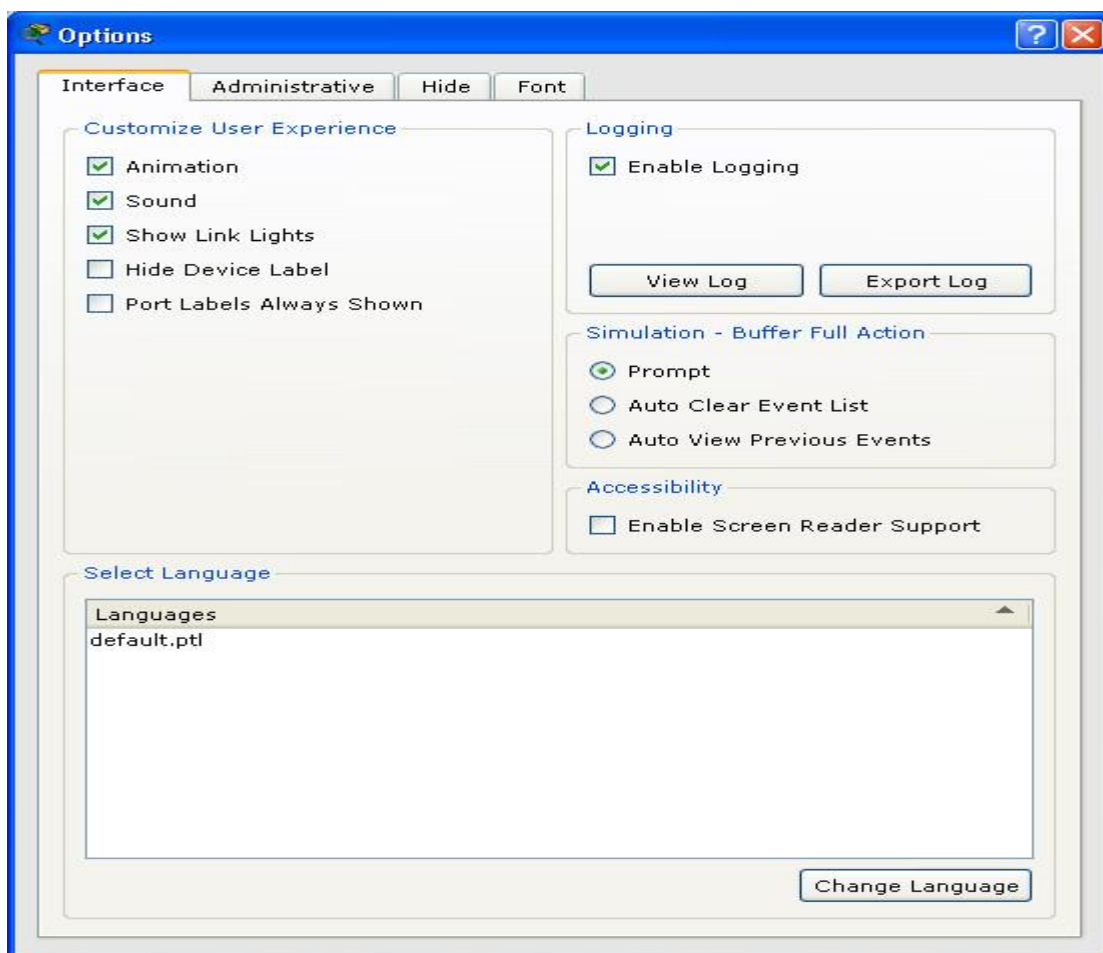

Workspaces and Modes

Packet Tracer has two workspaces (Logical and Physical) and two modes (Realtime and simulation). Upon startup, you are in the Logical Workspace in Realtime Mode. You can build your network and see it run in real time in this configuration. You can switch to Simulation mode to run controlled networking scenarios. You can also switch to the Physical Workspace to arrange the physical aspects (such as the location) of your devices. Note that you view a simulation while you are in the Physical Workspace. You should return to the Logical Workspace after you are done in the Physical Workspace.
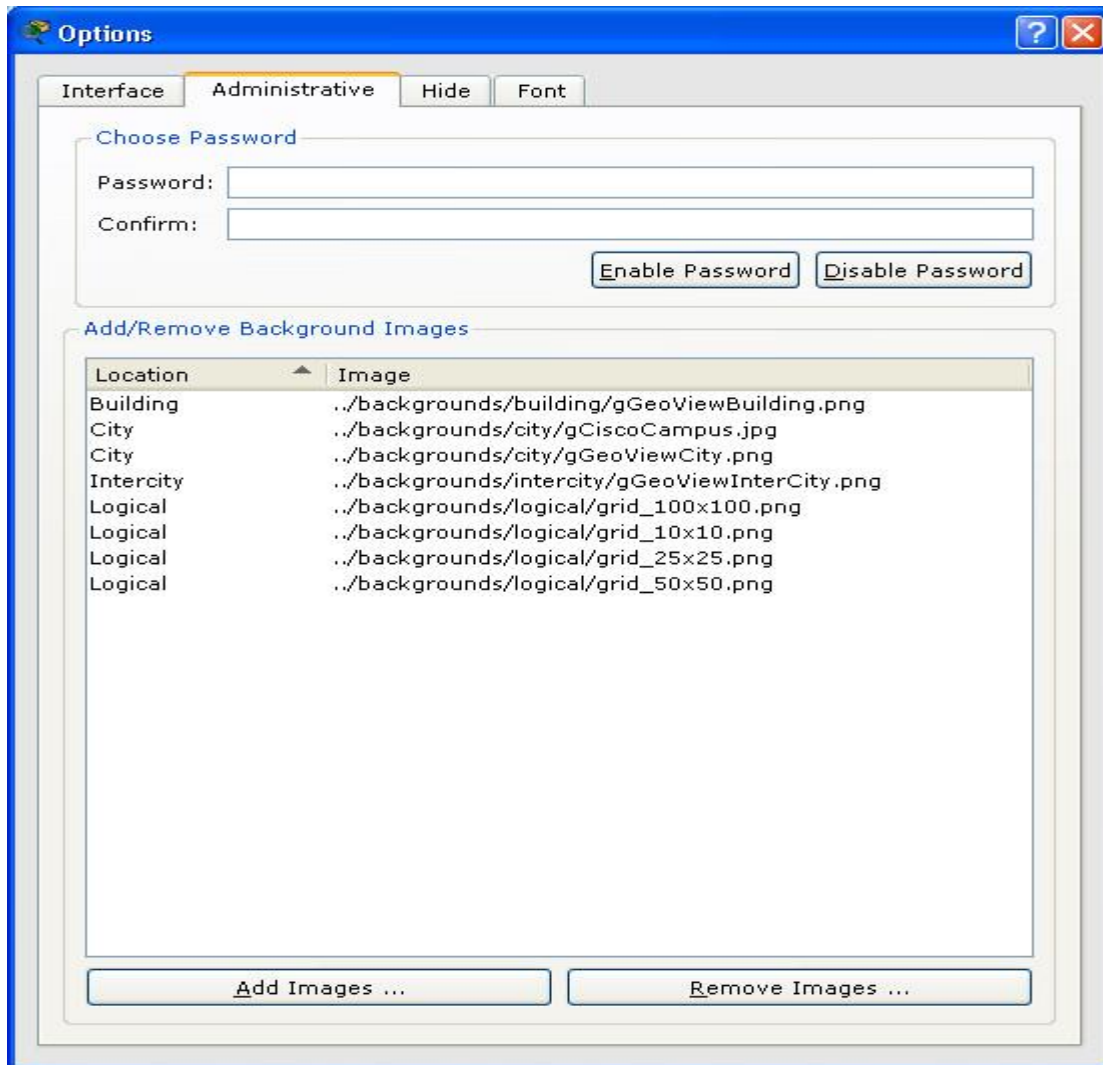
Setting Preferences

You can customize your Packet Tracer experience by setting your own preferences. From the **Menu Bar**, select **Options** > **Preferences** (or simply press **Ctrl + R**) to view the program settings.
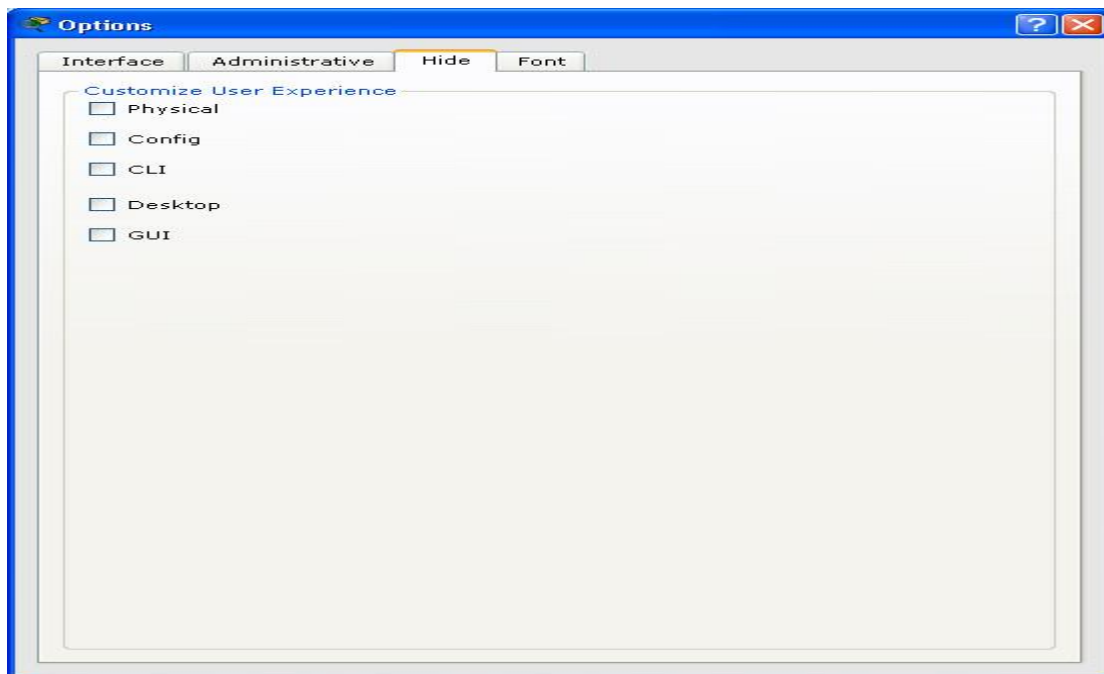
Under the **Interface** panel, you can toggle the **Animation**, **Sound**, and **Show Link Lights** settings to suit the performance of your system and your preferences. You can also manage information clutter with the **Hide Device Label** and **Port Labels Always Shown** settings. The **Logging** feature allows the program to capture all Cisco IOS commands that you enter and export them to a text file (refer to the "Configuring Devices" page for more information). The **Simulation - Buffer Full Action** feature allows you to set the preferred action that Packet Tracer 5.0 will perform. You can set the action to **Prompt** if you want to be prompted when the Simulation buffer is full. At the prompt, you can either **Clear Event List** or **View Previous Events**. Alternatively, you can set the action to either **Auto Clear Event List** to allow Packet Tracer 5.0 to automatically clear the Event List when the buffer is full, or you can set the action to **Auto View Previous Events** to automatically view the previous events. The **Enable Screen Reader Support** accessibility feature reads out all the titles and descriptions of the visible window that has the focus. Lastly, you can also change the base language of the program by choosing from the **Languages** list and then pressing the **Change Language** button.
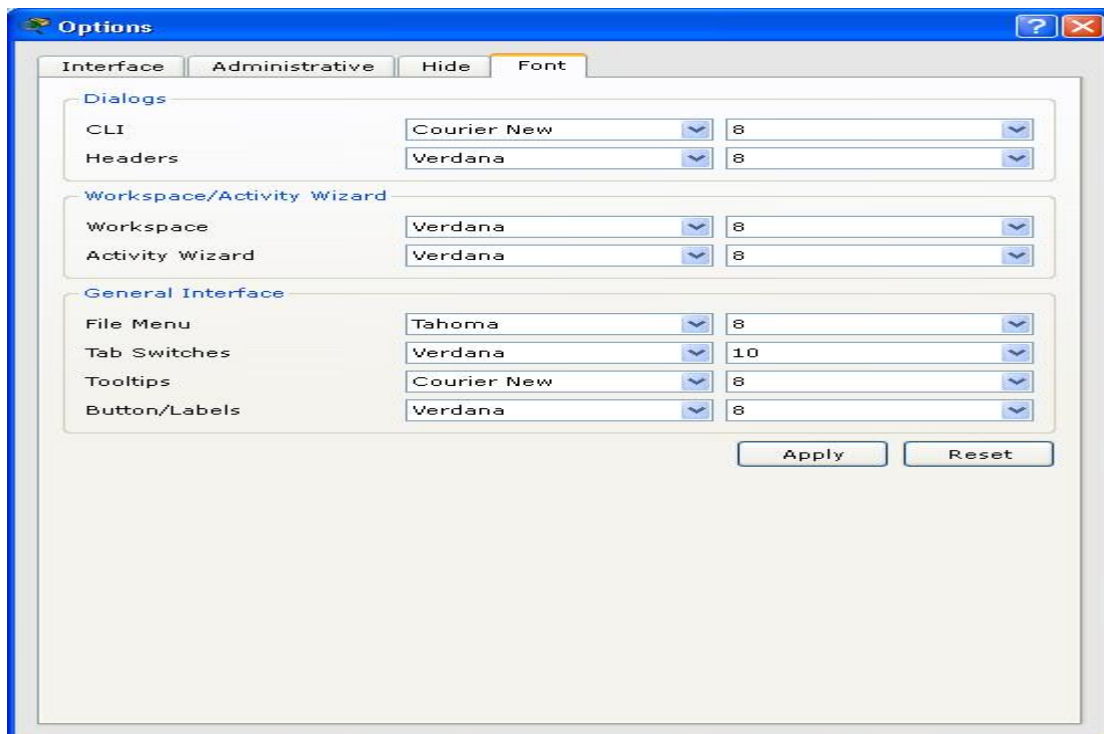
Under the Administrative panel, you can Add/Remove Background Images that are available in the program. You can also set a Password to prevent others from tampering with the images. Note that the password is case-sensitive.

Under the Hide panel, you can choose to hide or show the Physical, Config, CLI, Desktop, and GUI tabs in the device edit dialog.

Under the Font panel, you can select different fonts and font sizes for the Dialogs, Workspace/Activity Wizard, and the General Interface.
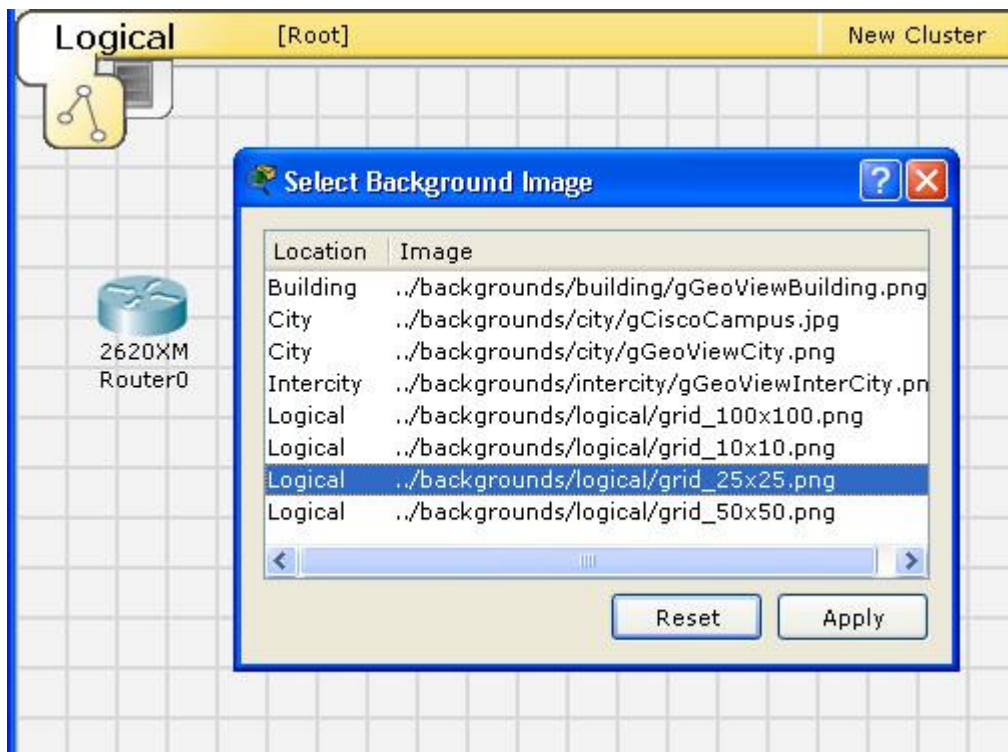

Setting a User Profile

You can set your user profile for activity assessment and Multi-user identification. From the Menu Bar, select Options > User Profile to view the User Profile dialog. In the User Profile dialog, you can enter your Name, E-Mail, and any Additional Info about yourself that you may want to share.

Setting a Background

You can replace the blank workspace with a background image of your choice. You can only set background images that are available in the Administrative panel in Preferences. To set a background, press the Set Tiled Background button in the Logical Workspace Bar. Choose from the list of available images from the Select Background Image window, and press the Apply button. You can revert to a blank background at any time by pressing the Reset button.

You can create or customize your own images and use them as backgrounds in the Logical Workspace. Just put image files in the ./backgrounds/logical folder of the program and add them to the Administrative panel list. Note that background images do not affect any network functions. They are simply visual aids.

> The recommended format for background images is .png. Other supported file formats are .jpg and .bmp.
>
> When adding photorealistic files, it is best to use .jpg format. For text or drawings, use .png or .bmp formats.