TelNet Lab

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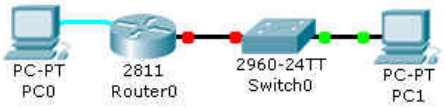
In this activity, you are supposed to be familiar with:

- Applying a Network Topology to Packet Tracer
- Performing Basic Configurations Functions for Cisco Networking Devices
- Familiar with the differences between Routers and Switches

Task: Create a Router's Banners via Telnet

Step 1: Apply the Following Topology to Your Packet Tracer.



Remember: In this activity, You are NOT allowed to use (Config) tabs at all, at any device. So, you must be familiar with CLI "Command Line Interface" and how to connect PC to the Network Device and Execute Commands Using Terminal.

Notes:

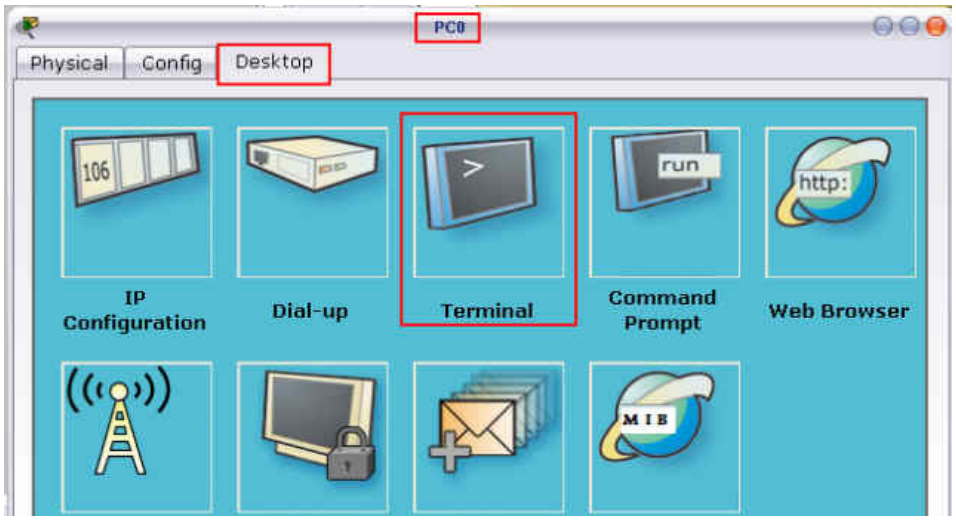
- Use "Console" cable to connect PC0 to Router. Remember to use chose "RS 232" Port at PC, and "Console" Port at Router when connecting. For more details on how to connect "Console" cable, check HTTP Lab.
- There is a "Red dot" at the Right side of the **Router**; because Router's Ports are Not**OFF** by default
- There is a "Green dot" at the Right side of the **Switch**; because Switch's Ports are**ON** by default.

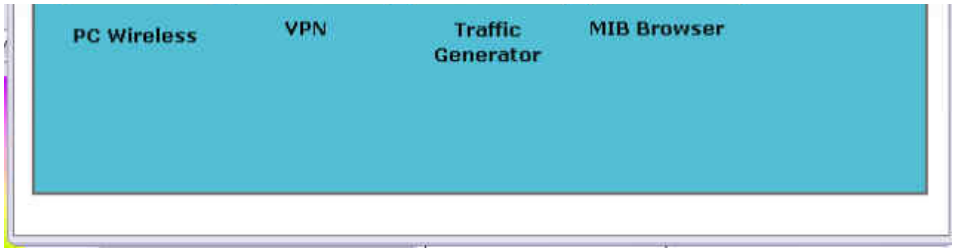
Step 2: Configure Router from PC0

Router can't be accessed in any way but only via "Console" because it doesn't have any configured and running networking services. To be able to access Router, we do this via PC0.

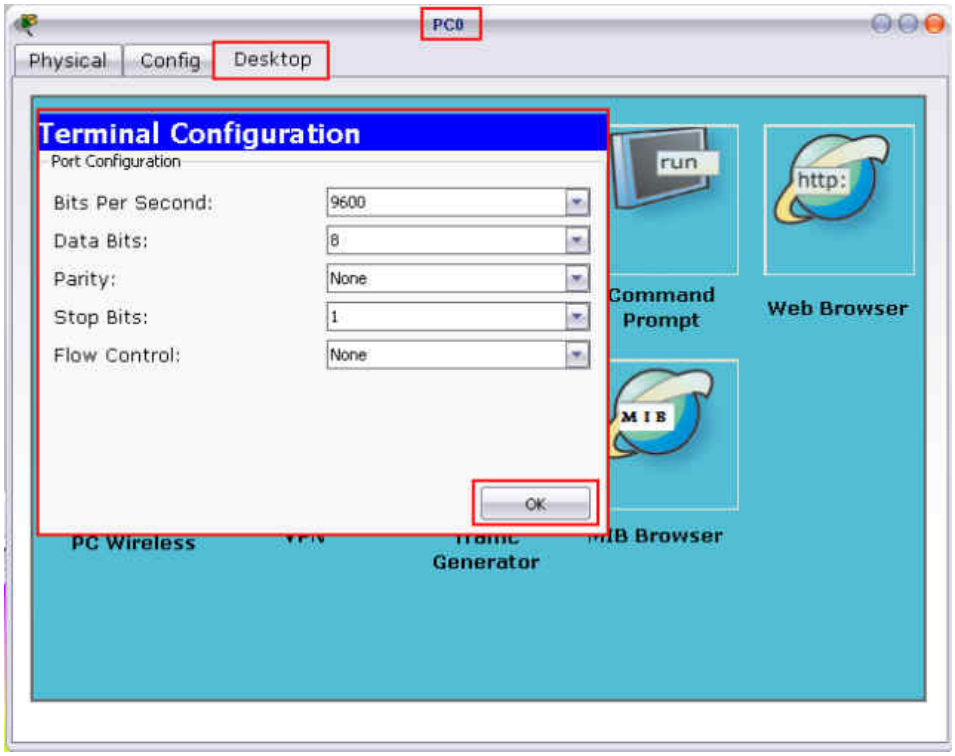
2.1 Access Router via PC0 Terminal

Click on the PC, when the dialogue opens, chose "Desktop" tab, and then "Terminal" as in the figure.

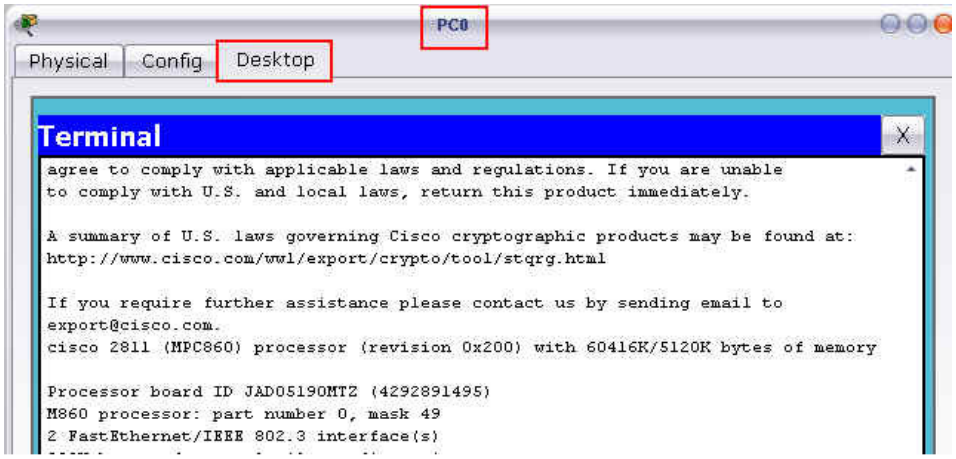




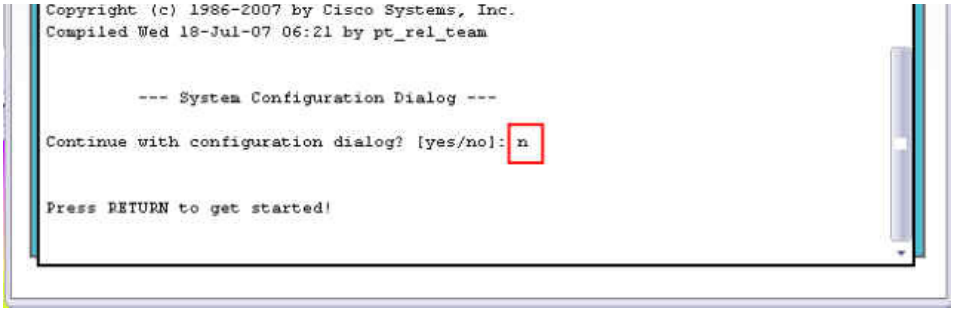
Click on “Terminal”, a new window with “Default Values” shows up as shown in the figure. Press “OK” to accept default values.



Now, you shall see the following window “Exactly”. In case you see a “blank white window”, that means you did something wrong while connecting. Remember to choose the “Right” Ports.



Press “n” and “Return” to Skip the auto configuration steps. You shall see the exact following figure now.



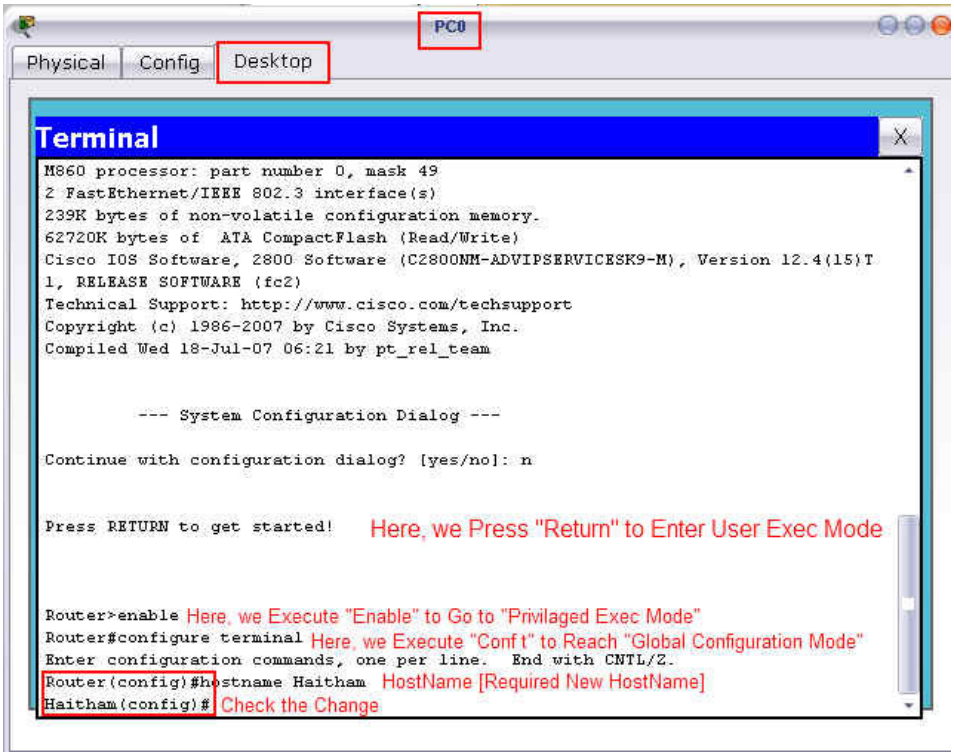
Now, you shall be familiar with "Commands" illustrated at "Chapter 11: Basics to Configure a Cisco Networking Device". Here, we will "Perform Basic Router Configuration".

2.2 Basic Router Configuration

Basic Router Configuration commands include:

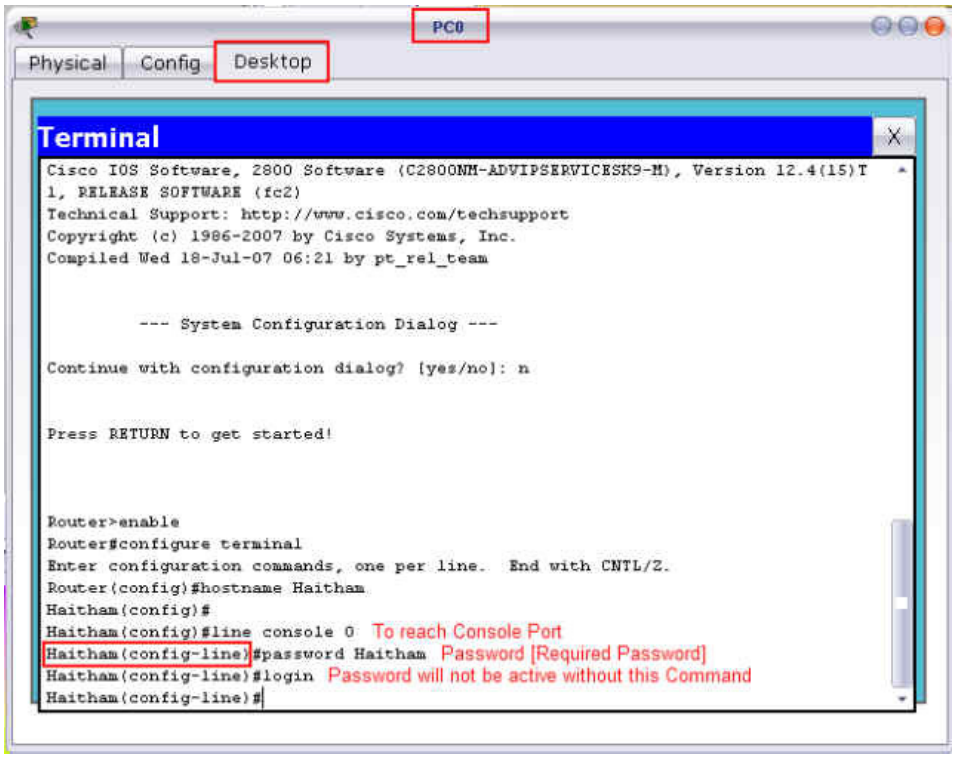
1. **Change Router Name**

Check the Following image. First, you need to reach "Global Configuration Mode". Then, Use "hostname" command.

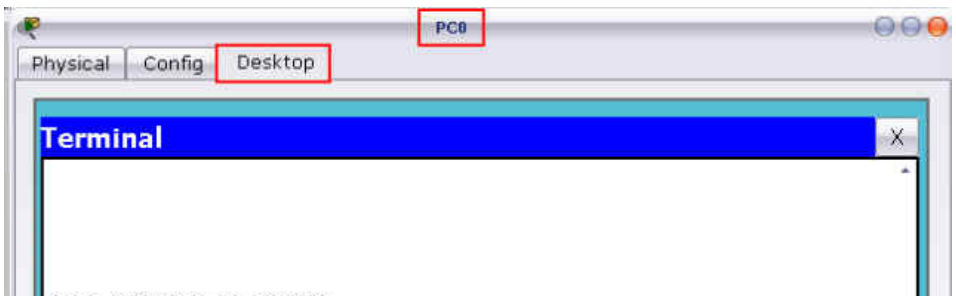


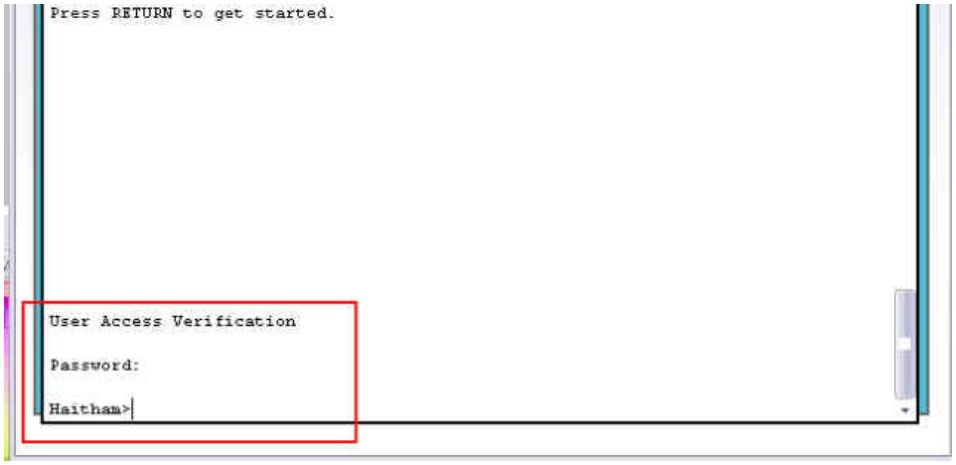
2. **Set Console Password**

Console Password is used by "Router" to prevent "Un-Authorized Router Access" via "Console Port". That means, after we set this password, we will need to enter this password when we connect to the Router via Console Port. Check the Figure for details.



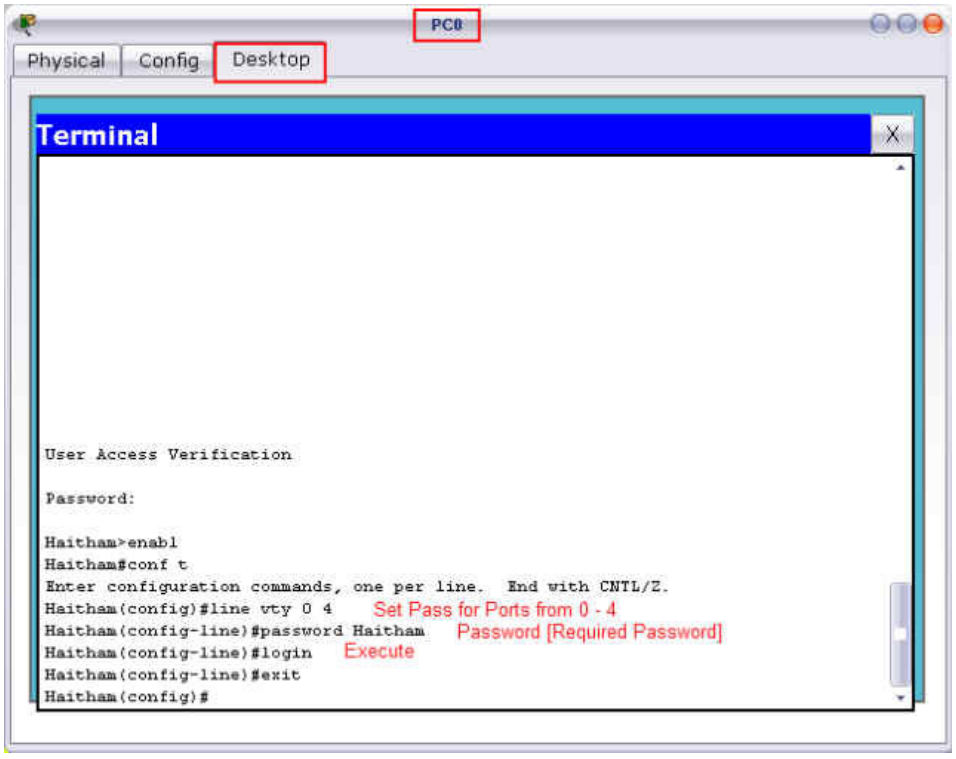
Now, to make sure that console password works fine. We will type “Exit” and Press “Return” until we exit the Router IOS Modes. Then, Press “Return” again to connect as in the figure. When you type your Password, terminal doesn’t show any characters at all.





3. **Set FastEthernet Ports Password (Line vty)**

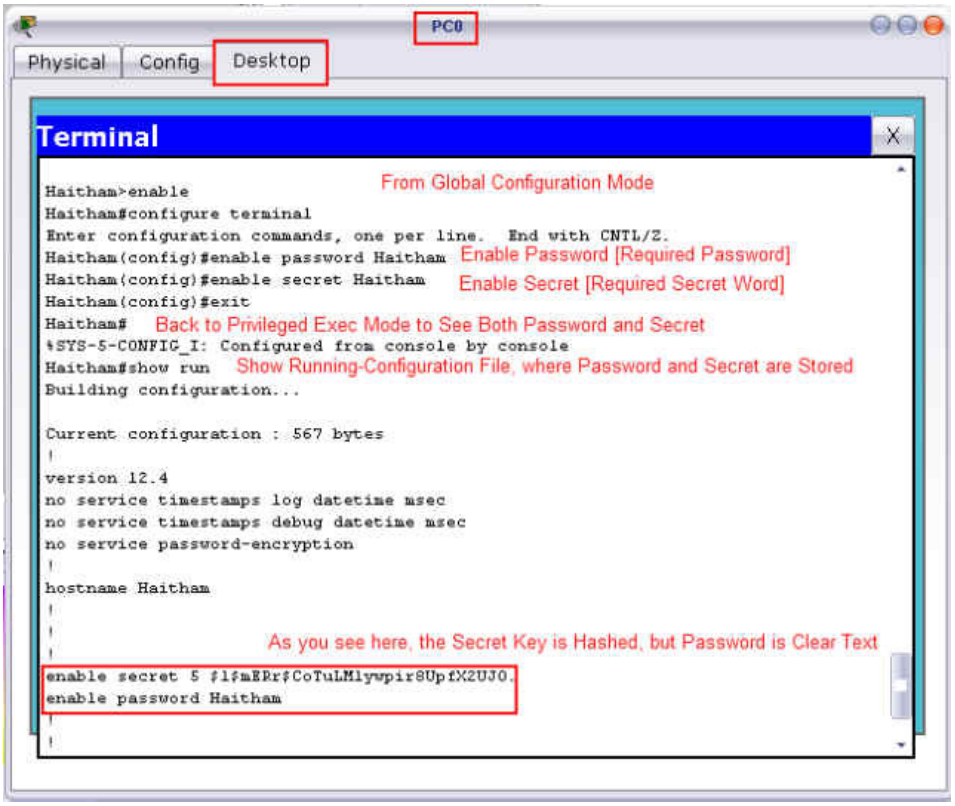
Now, we need to set up FastEthernet Ports passwords; so if we want to “Telnet” this Router via “FastEthernet” Ports (as we are Required in this activity), we will access those Ports. Check the following figure.



4. **Set Enable Password and Enable Secret**

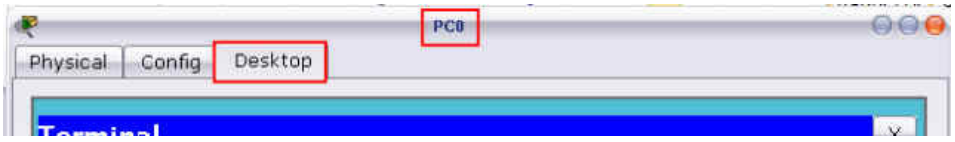
Enable Password and Enable Secret are used to prevent “Unauthorized” access to Privileged Exec Mode. To set those Passwords, check the following figure. To check those passwords, we exit the Router IOS and attempts to connect again. The first password will be the: Console Password. After we enter it correctly, and execute “Enable”, we

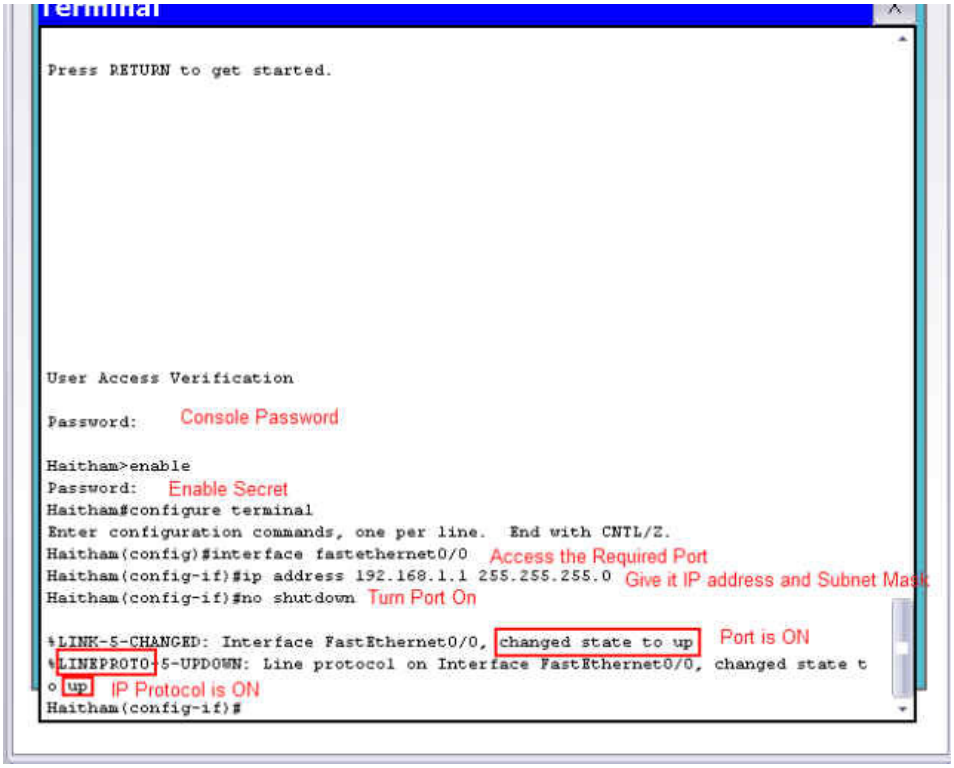
are asked for the “enable password/secret”. The difference between “Password” and “Secret” is the “Encryption”. Enable Secrets are stored as “MD5 Hash Key Value”, unlike passwords that are stored as “Clear Text Values”.



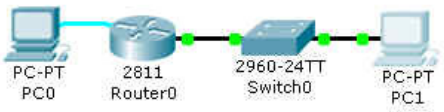
5. Configure and Start Networking Services on the Router

To Configure and Start Networking Services on the Router, we need to Turn the Port that we connected with the switch to “ON”, and give this Interface/Port an IP address and a Subnet Mask. To do so, check the following figure.



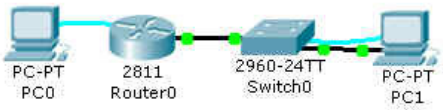


Now, check the Topology again. You will find that “Red dot” has turned into a “Green dot”.



Step 3: Configure Switch

Now, we need to Configure Switch. In order to do so, we need to modify the Topology and to connect PC1 with the switch via a “Console Cable” as shown in the Figure. PC1 will be connected to Switch with two cables, and it is OK.



Now, we will: Perform Basic Switch Configuration.

1. Access Switch via PC1 Terminal: as illustrated with the Router

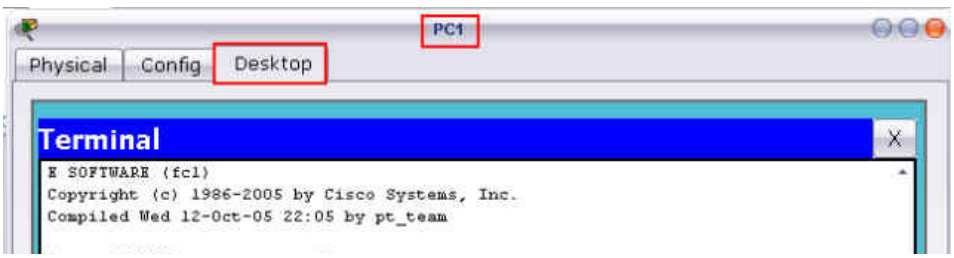
2. Perform Basic Switch Configurations

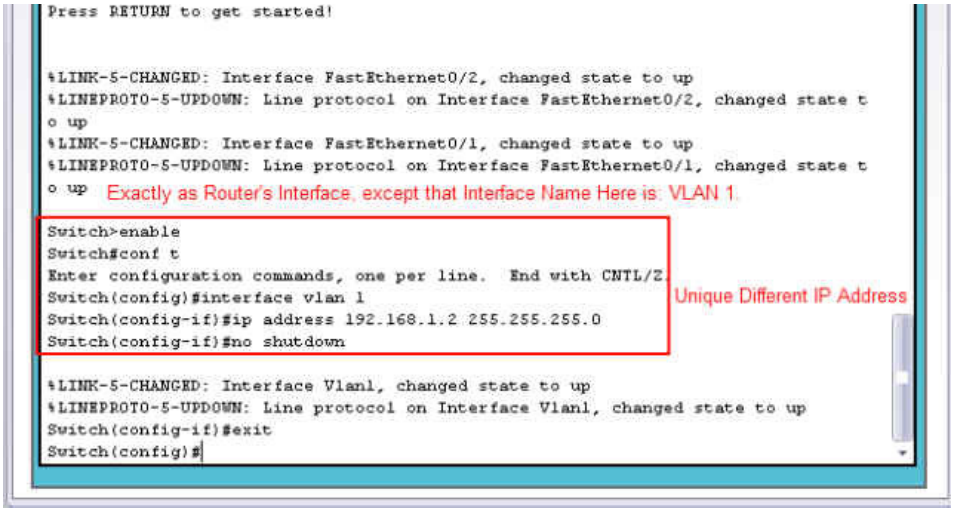
- **2.1 Change Switch Name:** as illustrated with the Router
- **2.2 Set Console Password:** as illustrated with the Router
- **2.3 Set FastEthernet Ports Password:** as illustrated with the Router
- **2.4 Set Enable Password/Secret:** as illustrated with the Router

Note: In the Switch, we DO NOT Enable Networking Services like we did at the Router. We Create a VLAN.

2.5 Create VLAN

Check the figure. We will not talk about VLANs here (they will be mentioned in details in Module 2: Switching). We will just perform the basic configuration operation.

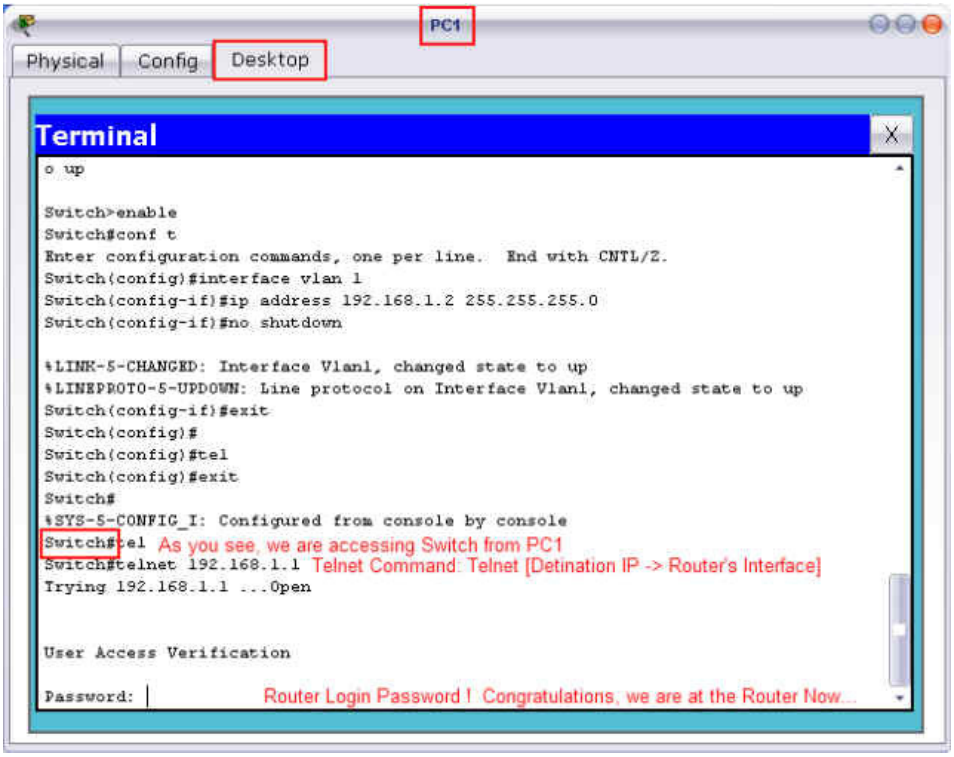




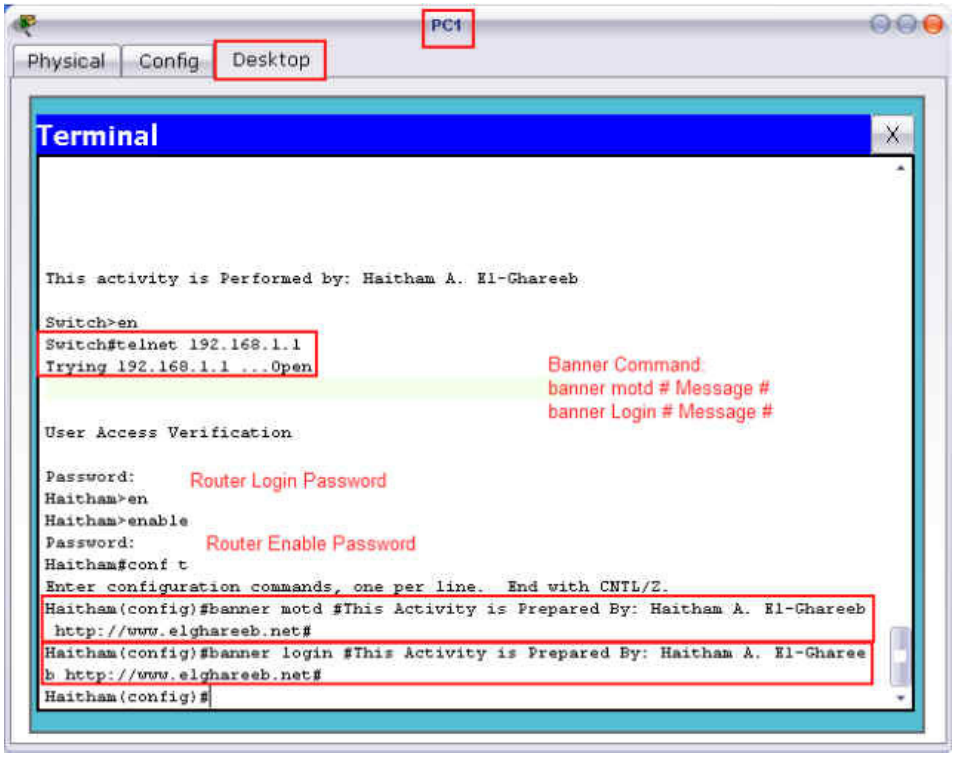
Step 4: Configure PC and Telnet Router

We need to Configure IP Addressing for PC1. If you are not familiar with this task; check HTTP Activity for more details on IP Configuration tool. Use IP Address within the same Network ID of the Router's Interface and Switch VLAN 1. Don't forget to enter "Default Gateway"; that is the Router's interface IP address.

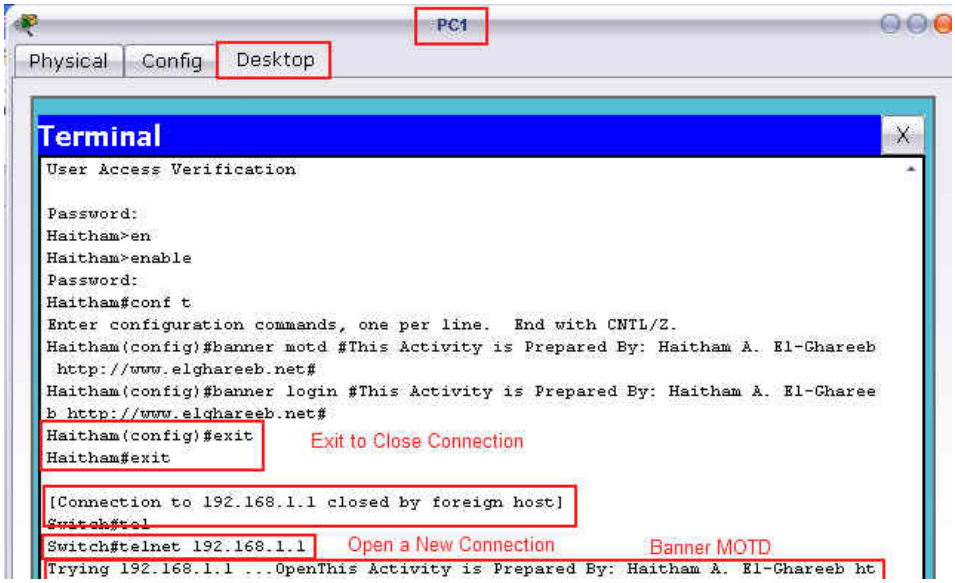
Now, to telnet the Router from PC1, we will Open "Terminal" from PC1, so we are Over:**Switch**.

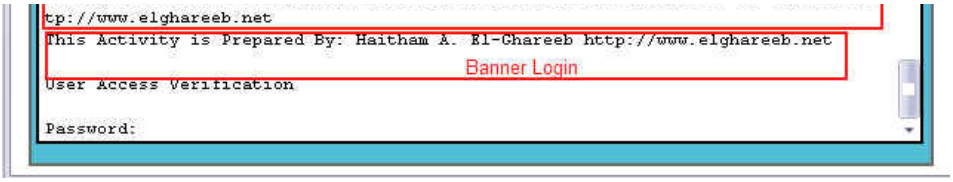


To complete the activity, we will create a Banner. Banner has two types: MOTD "Message of the Day", and Login. **MOTD** is the Message that appears to Users when they try to connect to the device, while **Login** is the Message that appears to users when they try to Login. Generally, they are important messages to clarify that "Un Authorized Access is Prohibited". Check the Following Figure for Command Details.



Now, exit the Telnet, and Attempt to Login again to check the Banner MOTD and Banner Login while it is in work.





If you want to Check the Packet Tracer Source File, you can find it here.

Thanks

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Monday, January 04, 2010