Practical Lab 002 – In-Class Assignment

Welcome to your first practical in-class assignment. This assignment is based on your knowledge and understanding of concepts. No hits are allowed, and the usage of external resources is strictly prohibited.

Rules/Restrictions and Allowed Resources

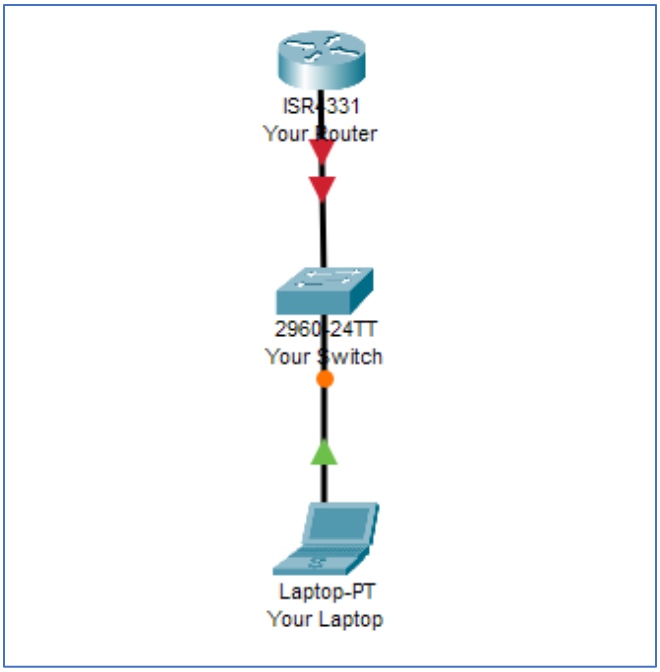
For the purposes of this lab, **external resources are strictly prohibited.** You may **not** use a cell phone, laptop or ask for advice from your non-group members. You may bring **one** handwritten list of commands with you, which contains notes and/or commands that are relevant to what you have covered so far. Discussing with other students will result in a zero grade for both students.

Instructions

Please complete the following scenarios.

Scenario 1: SSH and Security

Please build a topology consisting of **One Router, One Switch and Your Laptop.** You will be using this Topology for all the scenarios in this lab.



Requirements:

- ○ You have full connectivity – your laptop can ping/connect to both router and switch
- ○ You have a MOTD on both the router and the switch
- ○ You have both a console and enable password set (set to Password123) **AND** no passwords are in plaintext
- ○ You have SSH configured and your computer can connect to both the router switch via SSH
- ○ You created a SSH user with the user "superuser" that is the maximum privilege level and has the password "superpassword"

Full Marks (5/5): All criteria above is met | **3/5 Marks:** SSH works, but one item is missing | **0 Grade:** SSH not working and/or two or more items are missing.

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Scenario 2: Backup and Restore

With the topology created in the first scenario, backup the configuration to a TFTP server running on your computer (laptop), then restore it.

Evaluation Requirements:

- Demonstrate the ability to backup and restore your configuration via TFTP from the router
- Demonstrate the ability to backup and restore your configuration via TFTP from the switch

Full Marks (3/3): All criteria above is met | **1/3 Marks:** One criteria not met | **0 Grade:** No criteria met, TFTP server misconfigured

Scenario 3: Syslog

With the topology created in the first scenario, set up logging on the router to your PC. The default level should be preset to 7 (no need to change). To 'trigger' a message to be sent to your PC, toggle the state of an interface (interface {name} > shutdown > no shutdown)

Evaluation Requirements:

- A syslog service is correctly configured on your computer
- A syslog message is generated

Full Marks (2/2): All criteria above is met | **1/2 Marks:** Slight misconfiguration issue | **0 Grade:** Fully misconfigured / Syslog not installed

Scenario 3: ACL

Create an ACL called "LAB_EVAL", and add two ACEs to deny HTTP and HTTPS to a specific host (IP doesn't matter), followed by an allow-all. Assign this ACL to an interface.

Evaluation Requirements:

- ACL Correctly defined and Assigned to an interface
- Professor will ask you to insert a ACE at a specific sequence
- Professor will ask you to delete a ACE at a specific sequence

Full Marks (3/3): All criteria above is met | **1.5/3 Marks:** ACL configured but unable to perform 1 or 2 of the tasks | **0 Grade:** ACL incorrectly configured or not assigned to interface

Finishing up:

After you have completed this, please erase the startup config (erase startup-config) to clear the switches and router for the next group of students. **Failure to do this will result in in a 50% on this lab.**