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Internetworking

CMPT 307N 112

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Lab 3B

**Purpose:**

To show the importance of how Switch Security works, demonstrating port security (& its specific violation modes) with Maximum MAC Addresses and showing what happens when a violation occurs and how to a switch handles it.

**Q1**. The ‘Do’ command allows for user & privilege mode commands to be entered while in Config mode.

**Q2**. ‘Switchport mode access’ puts the interface into Access Mode.

‘Switchport port-security’ switches Port Security mode within the interface to Enabled.

‘Switchport port-security maximum 3’ sets the max allowed MAC Addresses to 3 for that port.

**Q3**. Violation Mode’s options: Protect (allows traffic to known MAC Adds, drops comm. with unknown MAC adds, no violation notification is made), Restrict (same as Protect, but a violation notification is shown in security status), and Shutdown (disables current switchport).

**Q4**. The Current Addresses went up to 2. The Max Addresses stayed the same (The max wouldn’t change unless we manually changed it again). We expected this because Switch1 had not yet learned any addresses due to no prior communications, so it was initially at 0. Now that we made a PING from PC1 to PC2, the Switch1 updated to show that it now learned 2 new MAC Addresses.

**Q5**. The connection between switches was disabled due to a violation occurring (exceeding max MAC Addresses through our 4th PING), and the violation mode Shutdown handles violations by shutting down links.

**New Commands:**

* **“**Switchport port-security maximum \_\_\_ **”** – One of the aspects you can change regarding security. This command allows a set max addresses allowed on a switch specified to what the number is entered.
* **“**Switchport port-security violation \_\_\_\_ “ – Handles how a switch will react to a violation committed. Modes include: Restrict, Shutdown, and Protect.
* **“**Show Port-Security interface \_\_\_ **”** – Displays current port’s security status

**Reflection:**

I enjoyed seeing how the switch handles violations in real time, another advantage to the ‘hands on’ learning experience we are provided by Cisco Packet Tracer. It is really neat seeing exactly what you are entering in the CLI and CMD take effect, like the shutdown of the switches connection between each other, and the statuses being updated when checking them afterwards. Even though this lab was short and to the point, it helped expand my growing knowledge of network intricacies.

**Comments:**

I hope we can work more with security in future labs, and see how the other modes react also. Security is definitely one of the major aspects of internetworking, and other systems because without it, anything and everything could be compromised!