**Net 1061 Switching, Routing, and Wireless Essentials**

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**Lab: #**

**Follow the instructions down below for the lab itself. For this lab, all answers need to be in blue font. For the questions right below, answer in complete sentences. If this is a self-grading packet tracer. Ensure you paste the screen shot of your score page at the bottom of the document. You will upload both this document and the pkt file regardless if it is self-grading or not. Let the instructor know if you have any questions.**

***Lab Analysis Report***

1. Using complete sentences summarize work you completed during the lab.

I used port security to prevent unauthorized devices from using a port

2. Using complete sentences describe what you learned from the lab. Hint; look at the lab objectives listed at the top of the lab section.

I learned how to prevent an unauthorized device from using a certain port

***Problems Encountered***

1. Using complete sentences describe any problem(s) experienced during lab.

No problems

2. Using complete sentences describe how you solved your problem(s).

No problems

3. Using complete sentences explain if you needed any assistance with the lab; then list what you learned from that assistance. No problems

Packet Tracer - Implement Port Security

# Addressing Table

| Device | Interface | IP Address | Subnet Mask |
| --- | --- | --- | --- |
| S1 | VLAN 1 | 10.10.10.2 | 255.255.255.0 |
| PC1 | NIC | 10.10.10.10 | 255.255.255.0 |
| PC2 | NIC | 10.10.10.11 | 255.255.255.0 |
| Rogue Laptop | NIC | 10.10.10.12 | 255.255.255.0 |

# Objective

Part 1: Configure Port Security

Part 2: Verify Port Security

# Background

In this activity, you will configure and verify port security on a switch. Port security allows you to restrict a port’s ingress traffic by limiting the MAC addresses that are allowed to send traffic into the port.

## Configure Port Security

* + 1. Access the command line for **S1** and enable port security on Fast Ethernet ports 0/1 and 0/2.

Open Configuration Window

S1(config)# **interface** **range** **f0/1 – 2**

S1(config-if-range)# **switchport port-security**

* + 1. Set the maximum so that only one device can access the Fast Ethernet ports 0/1 and 0/2.

S1(config-if-range)# **switchport port-security maximum 1**

* + 1. Secure the ports so that the MAC address of a device is dynamically learned and added to the running configuration.

S1(config-if-range)# **switchport port-security mac-address sticky**

* + 1. Set the violation mode so that the Fast Ethernet ports 0/1 and 0/2 are not disabled when a violation occurs, but a notification of the security violation is generated and packets from the unknown source are dropped.

S1(config-if-range)# **switchport port-security violation restrict**

* + 1. Disable all the remaining unused ports. Use the **range** keyword to apply this configuration to all the ports simultaneously.

S1(config-if-range)# **interface range f0/3 - 24 , g0/1 - 2**

S1(config-if-range)# **shutdown**

## Verify Port Security

* + 1. From **PC1**, ping **PC2**.
    2. Verify that port security is enabled and the MAC addresses of **PC1** and **PC2** were added to the running configuration.

S1# **show run | begin interface**

* + 1. Use port-security show commands to display configuration information.

S1# **show port-security**

S1# **show port-security address**

* + 1. Attach **Rogue Laptop** to any unused switch port and notice that the link lights are red.
    2. Enable the port and verify that **Rogue Laptop** can ping **PC1** and **PC2**. After verification, shut down the port connected to **Rogue Laptop.**
    3. Disconnect **PC2** and connect **Rogue Laptop** to F0/2, which is the port to which PC2 was originally connected. Verify that **Rogue Laptop** is unable to ping **PC1**.
    4. Display the port security violations for the port to which **Rogue Laptop** is connected.

S1# **show port-security interface f0/2**

Close Configuration Window

### Question:

How many violations have occurred?

Type your 4 here.

* + 1. Disconnect **Rouge Laptop** and reconnect **PC2**. Verify **PC2** can ping **PC1**.

### Question:

Why is **PC2** able to ping **PC1**, but the **Rouge Laptop** is not?

Type your answers here.port security only allowes the first device’s MAC address that it learned to use the port.

End of Document Graphical user interface, application

Description automatically generated