

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.

Step 1: Configure Port Security

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

```
S1(config)# interface range f0/1 - 2
S1(config-if-range)# switchport port-security
```
- 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
```
- 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
```
- 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
```
- 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
```

Step 2: Verify Port Security

- From **PC1**, ping **PC2**.
- 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
```

- c. Use port-security show commands to display configuration information.

```
S1# show port-security
```

```
S1# show port-security address
```

- d. Attach **Rogue Laptop** to any unused switch port and notice that the link lights are red.
- e. Enable the port and verify that **Rogue Laptop** can ping **PC1** and **PC2**. After verification, shut down the port connected to **Rogue Laptop**.
- f. 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**.
- g. Display the port security violations for the port to which **Rogue Laptop** is connected.

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

How many violations have occurred?

- h. Disconnect **Rogue Laptop** and reconnect **PC2**. Verify **PC2** can ping **PC1**.

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