

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.

Part 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
```

Part 2: Verify Port Security

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

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- b. 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?

не менее четырех, по одному для каждого запроса на ping

- 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?

Безопасность порта, которая была включена на порту, позволяла только устройству, MAC-адрес которого был изучен первым, доступ к порту, не допуская доступ ко всем другим устройствам