**Port Security in Switches**

A computer network diagram with text and symbols

Description automatically generated

**SHUTDOWN THE UNUSED INTERFACES**

* Goto the CLI of the Switch and shutdown the unused ports. [fa 0/5 to fa 0/24]
  + **enable**
  + **configure terminal**
  + **interface fa 0/5** [go to interface mode of fa 0/5]
  + **shutdown**
  + **exit**
  + **interface range fa0/6-24** [go to interface mode of fa 0/6 to fa 0/24]
  + **shutdown**
  + **exit**
* Then, connect the Attacker’s Laptop with the switch and see whether it’s able to connect with the switch or not.

**ENABLE / CONFIGURE PORT SECURITY**

* Set the MAC address as “STATIC” one.
  + **interface fa 0/1**
  + **switchport mode access** [You can configure port security only in the Access Mode]
  + **switchport port-security**
  + **switchport port-security mac-address 0060.70E4.E73A** [set the type as “STATIC”]
  + **switchport port-security maximum 1** [only one MAC address can be learned by this port]
  + **switchport port-security violation shutdown** [shutdown the port in case of security violation]
  + **show mac-address-table**
* Enabling port security will automatically set the type as “STATIC” one.
  + **interface fa 0/2**
  + **switchport mode access**
  + **switchport port-security**
  + Send a simple PDU from PC1 to PC3
  + **show mac-address-table** [now PC1 MAC address is learned and set as Static one]
* Set the MAC address using “STICKY” method.
  + **interface fa 0/3**
  + **switchport mode access**
  + **switchport port-security**
  + **switchport port-security maximum 1**
  + **switchport port-security mac-address sticky** [set the type as “STATIC” using “STICKY”]
  + Send a simple PDU from PC2 to PC0
  + **show mac-address-table**
* Enabling port security for port connecting to hub.
  + **interface fa 0/4**
  + **switchport mode access**
  + **switchport port-security**
  + **switchport port-security maximum 2** [only two MAC address can be learned by this port]
  + **switchport port-security violation shutdown** [shutdown the port in case of security violation]
  + Send a simple PDU from PC4 to PC2
  + Send a simple PDU from PC3 to PC0
  + **show mac-address-table** [now PC3 and PC4 MAC addresses are learned and set as Static one]
* View port security information for interface fa 0/4
  + **show port-security interface fa 0/4**
  + Last source address [will be PC3]

A close up of a computer code

Description automatically generated

A white screen with black text

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A screen shot of a computer program

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A screen shot of a computer

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A screen shot of a computer

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**CHECKING PORT SECURITY IMPLEMENTATION**

* Connect Laptop to the Hub
* Now you can see that the connection from hub to switch is automatically disabled as the number of connected devices is 3. [connection appears in red color & interface fa 0/4 is shut downed - state is down].
* View port security information for interface fa 0/4
  + **show port-security interface fa 0/4**
  + Port status is secure-shutdown
  + Security violation count is 1
  + Last source address [will be Laptop’s MAC address]
* Manually activate the port fa 0/4
  + **interface fa 0/4**
  + **shutdown** [make this port to administratively shut downed first]
  + **no shutdown** [enable the port / change the port state to up]