

CSEC 744 Network Security

Name : Shriram Karpoora Sundara Pandian Course

Title : Infrastructure Security

Lab : 2

Chapter : 10

Exercise 10. 01 :

Step 1 :

B.

```
Enter configuration commands, one per line. End with CNTL/Z.  
S0(config)#interface f0/1  
S0(config-if)#switchport mode access  
S0(config-if)#switchport port-security  
S0(config-if)#switchport port-security mac-address sticky  
S0(config-if)#
```

Step 2 :

A.

```
C:\>ping 10.4.0.3  
  
Pinging 10.4.0.3 with 32 bytes of data:  
  
Reply from 10.4.0.3: bytes=32 time<1ms TTL=125  
Reply from 10.4.0.3: bytes=32 time=1ms TTL=125  
Reply from 10.4.0.3: bytes=32 time<1ms TTL=125  
Reply from 10.4.0.3: bytes=32 time<1ms TTL=125  
  
Ping statistics for 10.4.0.3:  
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
Approximate round trip times in milli-seconds:  
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

B.

```
-----
S0#show port-security
Secure Port MaxSecureAddr CurrentAddr SecurityViolation Security Action
              (Count)          (Count)          (Count)
-----
          Fa0/1             1             1             0          Shutdown
-----
```

```
S0#show port-security interface f0/1
Port Security          : Enabled
Port Status            : Secure-up
Violation Mode         : Shutdown
Aging Time             : 0 mins
Aging Type             : Absolute
SecureStatic Address Aging : Disabled
Maximum MAC Addresses  : 1
Total MAC Addresses    : 1
Configured MAC Addresses : 0
Sticky MAC Addresses   : 1
Last Source Address:Vlan : 0060.2FEA.A794:1
Security Violation Count : 0
```

```
S0#show running-config
Building configuration...

Current configuration : 1478 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S0
!
enable secret 5 $1$mERr$2jygS30agKvkxKp5BbQlu.
!
!
!
ip ssh version 2
ip domain-name weissman.edu
!
username shriram privilege 1 password 0 kp
!
!
!
--More-- |
```

The related information about the commands and sticky mac address below :

```
!
interface FastEthernet0/1
 switchport mode access
 switchport port-security
 switchport port-security mac-address sticky
 switchport port-security mac-address sticky 0060.2FEA.A794
!
interface FastEthernet0/2
```

C.

```
S0#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
S0#reload
Proceed with reload? [confirm]
C2960 Boot Loader (C2960-HBOOT-M) Version 12.2(25r)FX, RELEASE SOFTWARE (fc4)
Cisco WS-C2960-24TT (RC32300) processor (revision C0) with 21039K bytes of memory.
2960-24TT starting...
Base ethernet MAC Address: 0007.ECEA.D41C
Xmodem file system is available.
Initializing Flash...
flashfs[0]: 2 files, 0 directories
flashfs[0]: 0 orphaned files, 0 orphaned directories
flashfs[0]: Total bytes: 64016384
flashfs[0]: Bytes used: 4671933
flashfs[0]: Bytes available: 59344451
flashfs[0]: flashfs fsck took 1 seconds.
...done Initializing Flash.

Boot Sector Filesystem (bs:) installed, fsid: 3
Parameter Block Filesystem (pb:) installed, fsid: 4

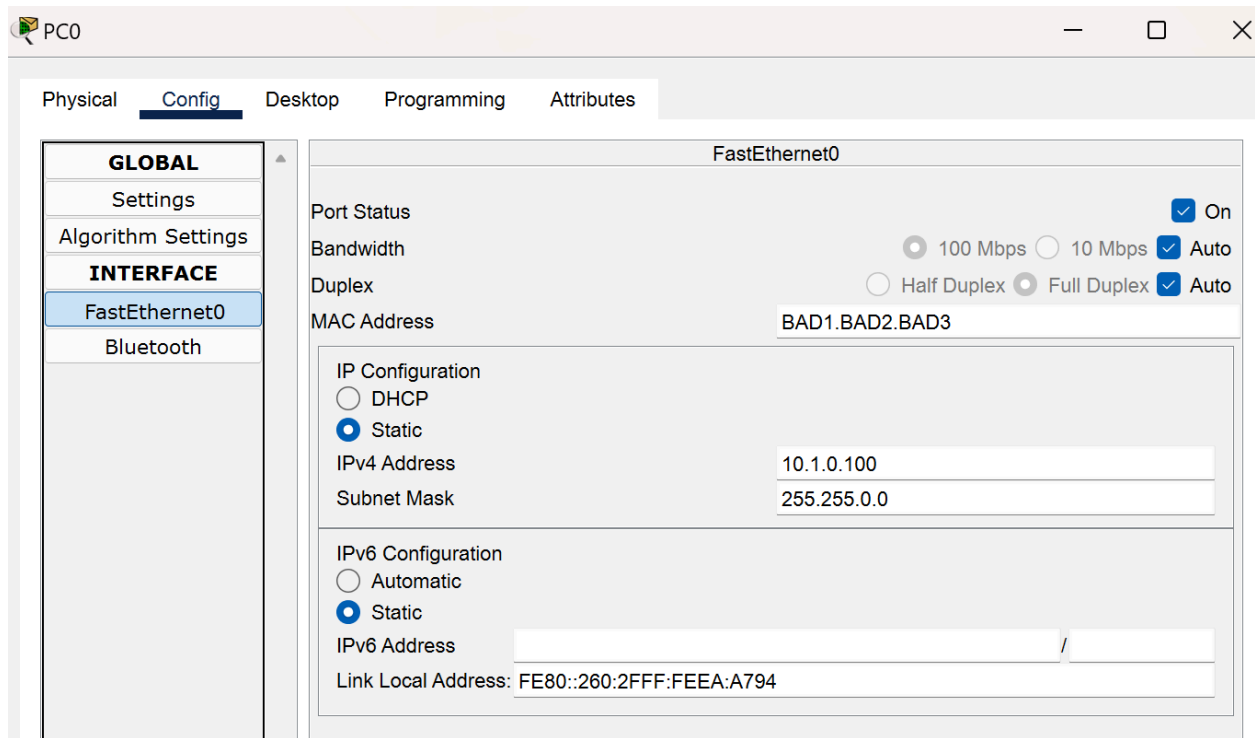
Loading "flash:/2960-lanbasek9-mz.150-2.SE4.bin"...
#####|
```

D.

```
!
interface FastEthernet0/1
  switchport mode access
  switchport port-security
  switchport port-security mac-address sticky
  switchport port-security mac-address sticky 0060.2FEA.A794
!
interface FastEthernet0/2
```

Step 3 :

A.



B.

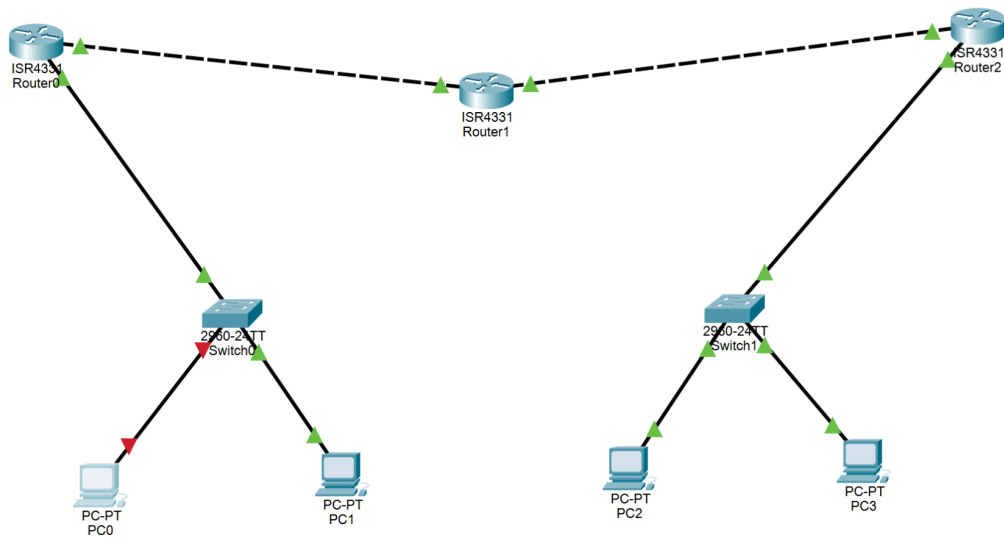
```
C:\>ping 10.4.0.3

Pinging 10.4.0.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.4.0.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Yes the connection between the switch and PC0 turned RED.



C.

```

S0#show port-security
Secure Port MaxSecureAddr CurrentAddr SecurityViolation Security Action
          (Count)          (Count)          (Count)
-----
          Fa0/1            1              1              1      Shutdown
-----

S0#show port-security interface f0/1
Port Security          : Enabled
Port Status            : Secure-shutdown
Violation Mode         : Shutdown
Aging Time             : 0 mins
Aging Type             : Absolute
SecureStatic Address Aging : Disabled
Maximum MAC Addresses  : 1
Total MAC Addresses    : 1
Configured MAC Addresses : 0
Sticky MAC Addresses   : 1
Last Source Address:Vlan : BAD1.BAD2.BAD3:1
Security Violation Count : 1

```

The port status is secure shutdown.

```
S0#show interface f0/1
FastEthernet0/1 is down, line protocol is down (err-disabled)
  Hardware is Lance, address is 000d.bd3e.4201 (bia 000d.bd3e.4201)
  BW 100000 Kbit, DLY 1000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s
  input flow-control is off, output flow-control is off
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:00:08, output 00:00:05, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    956 packets input, 193351 bytes, 0 no buffer
    Received 956 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    0 watchdog, 0 multicast, 0 pause input
    0 input packets with dribble condition detected
    2357 packets output, 263570 bytes, 0 underruns
    0 output errors, 0 collisions, 10 interface resets
    0 babbles, 0 late collision, 0 deferred
    0 lost carrier, 0 no carrier
    0 output buffer failures, 0 output buffers swapped out
```

Step 4 :

A.

```
S0(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to administratively down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down

S0(config-if)#no shutdown

S0(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
```

B.

```
% Incomplete command.
S0#show port-security
Secure Port MaxSecureAddr CurrentAddr SecurityViolation Security Action
              (Count)          (Count)          (Count)
-----
Fa0/1         1              0              0              Shutdown
-----
S0#show port-security interface f0/1
Port Security      : Enabled
Port Status        : Secure-up
Violation Mode     : Shutdown
Aging Time         : 0 mins
Aging Type         : Absolute
SecureStatic Address Aging : Disabled
Maximum MAC Addresses : 1
Total MAC Addresses : 0
Configured MAC Addresses : 0
Sticky MAC Addresses : 0
Last Source Address:Vlan : BAD1.BAD2.BAD3:1
Security Violation Count : 0
```

We got the port status as secure up after turning on the switch manually.

C.

Yes it is showing the sticky with my mac address of the switch.

```
!
interface FastEthernet0/1
 switchport mode access
 switchport port-security
 switchport port-security mac-address sticky
 switchport port-security mac-address sticky 0060.2FEA.A794
!
```

```
S0#
S0#
S0#clear port-security sticky
S0#
```

Now let see the running config after removing the sticky

```
interface FastEthernet0/1
 switchport mode access
 switchport port-security
 switchport port-security mac-address sticky
!
```

Here we can see there is no sticky mac address present.

Got the ping successfully

```
C:\>ping 10.4.0.3

Pinging 10.4.0.3 with 32 bytes of data:

Reply from 10.4.0.3: bytes=32 time=1ms TTL=125
Reply from 10.4.0.3: bytes=32 time<1ms TTL=125
Reply from 10.4.0.3: bytes=32 time<1ms TTL=125
Reply from 10.4.0.3: bytes=32 time<1ms TTL=125

Ping statistics for 10.4.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

```
S0#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
```