Formador/a**: *laura.villalba@itb.cat***

Pràctica 2 - RA3 - Configuració i administració de switches

En aquesta pràctica aplicareu els coneixements adquirits a aquesta RA respecte a la configuració bàsica d'un switche, la configuració del protocol spanning-tree i port security en un entorn simulat fent servir el packet tracert.

1. Criteris d'avaluació

La puntuació màxima assumible a cada activitat s'indica a l'enunciat respectiu.
Els criteris que es tindran en compte per avaluar el treball de l'alumnat són els següents:

- La correcció i la completesa de les respostes.
- La coherència i la bona estructuració de les respostes, així com la seva pulcritud.

2. Forma i data de lliurament

Un cop finalitzat la pràctica s'ha de lliurar el document al Classroom del mòdul, dins del termini establert. Tingueu en compte que el sistema no permet fer lliuraments després de la data i hora indicades.
El nom del fitxer tindrà el següent format: **"VillalbaGuerreroL_Pt2_370.3.pdf,** i el packet tracert de la mateixa manera.

El termini de lliurament finalitzarà a les **09:50 h** del dia **25/10/2024.**

1. Configura les IPs i màscaradels PCs. Mostra que hi ha connexió entre tots els PCs de la mateixa xarxa, i que no hi ha connexió entre els PCs de xarxes diferents.**(1,00 punt)**

Dispositiu	**adreça IP**
PC1_1	192.168.10.1/25
PC1_2	192.168.10.2/25
PC2_1	192.168.10.129/25
PC2_2	192.168.10.130/25
PC3_1	192.168.11.1/25
PC3_2	192.168.11.2/25

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```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

Reply from 192.168.10.2: bytes=32 time=1ms TTL=128
Reply from 192.168.10.2: bytes=32 time<1ms TTL=128
Reply from 192.168.10.2: bytes=32 time<1ms TTL=128
Reply from 192.168.10.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.1

Pinging 192.168.10.1 with 32 bytes of data:

Reply from 192.168.10.1: bytes=32 time<1ms TTL=128
Reply from 192.168.10.1: bytes=32 time<1ms TTL=128
Reply from 192.168.10.1: bytes=32 time<1ms TTL=128
Reply from 192.168.10.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.129

Pinging 192.168.10.129 with 32 bytes of data:

Request timed out.
```

PC1_2
192.168.10.2

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Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.130

Pinging 192.168.10.130 with 32 bytes of data:

Reply from 192.168.10.130: bytes=32 time<1ms TTL=128
Reply from 192.168.10.130: bytes=32 time<1ms TTL=128
Reply from 192.168.10.130: bytes=32 time<1ms TTL=128
Reply from 192.168.10.130: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.130:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.129

Pinging 192.168.10.129 with 32 bytes of data:

Reply from 192.168.10.129: bytes=32 time<1ms TTL=128
Reply from 192.168.10.129: bytes=32 time<1ms TTL=128
Reply from 192.168.10.129: bytes=32 time<1ms TTL=128
Reply from 192.168.10.129: bytes=32 time=8ms TTL=128

Ping statistics for 192.168.10.129:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\>
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

Request timed out.
Request timed out.
```

PC2_1
192.168.10.129

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```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.11.2

Pinging 192.168.11.2 with 32 bytes of data:

Reply from 192.168.11.2: bytes=32 time<1ms TTL=128
Reply from 192.168.11.2: bytes=32 time<1ms TTL=128
Reply from 192.168.11.2: bytes=32 time<1ms TTL=128
Reply from 192.168.11.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.11.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.11.1

Pinging 192.168.11.1 with 32 bytes of data:

Reply from 192.168.11.1: bytes=32 time<1ms TTL=128
Reply from 192.168.11.1: bytes=32 time<1ms TTL=128
Reply from 192.168.11.1: bytes=32 time=10ms TTL=128
Reply from 192.168.11.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.11.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 2ms

C:\>
```

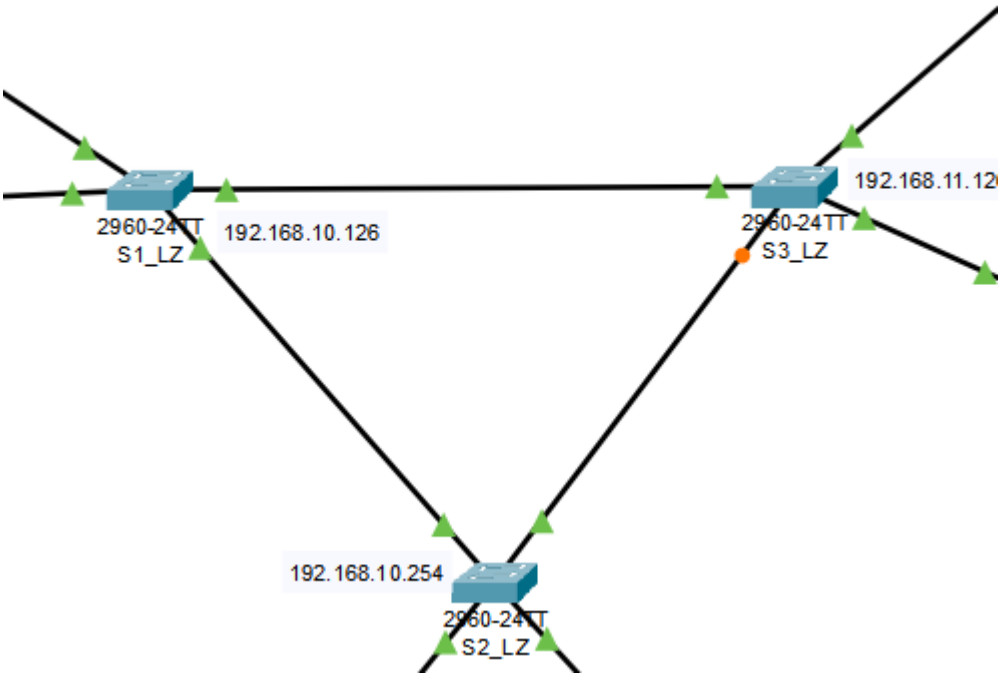
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.30

Pinging 192.168.10.30 with 32 bytes of data:

Request timed out.
```

PC3_2
192.168.11.2

2. Configura el nom del switche amb les teves inicials (S1_LVG, S2_LVG i S3_LVG). **(0,25 punts)**



3. Configura una VLAN per cada subxarxa, de manera que puguis fer ping entre el switch i cadascuna de les xarxes creades. Configuració el port ***f0/24*** per la gestió del switche.

    a. **Nota La IP de gestió serà l'última del rang.(0,25 punts)**

```
S1_LZ>
S1_LZ>
S1_LZ>enable
S1_LZ#config ter
Enter configuration commands, one per line.  End with CNTL/Z.
S1_LZ(config)#interface vlan 99
S1_LZ(config-if)#ip address 192.168.10.126 255.255.255.128
S1_LZ(config-if)#interface range f0/1 , f0/2
S1_LZ(config-if-range)#switchport mode access
S1_LZ(config-if-range)#switchport access vlan 99
% Access VLAN does not exist. Creating vlan 99
S1_LZ(config-if-range)#
%LINK-5-CHANGED: Interface Vlan99, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan99, changed state to up
```

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PC1_2

```
C:\>ping 192.168.10.126

Pinging 192.168.10.126 with 32 bytes of data:

Reply from 192.168.10.126: bytes=32 time<1ms TTL=255
Reply from 192.168.10.126: bytes=32 time=12ms TTL=255
Reply from 192.168.10.126: bytes=32 time<1ms TTL=255
Reply from 192.168.10.126: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.10.126:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 12ms, Average = 3ms

C:\>
```

```
S2_LZ>
S2_LZ>
S2_LZ>
S2_LZ>enable
S2_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S2_LZ(config)#interface vlan 99
S2_LZ(config-if)#ip address 192.168.10.254 255.255.255.128
S2_LZ(config-if)#interface range f0/1 , f0/2
S2_LZ(config-if-range)#switchport mode access
S2_LZ(config-if-range)#switchport access vlan 99
% Access VLAN does not exist. Creating vlan 99
S2_LZ(config-if-range)#
%LINK-5-CHANGED: Interface Vlan99, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan99, changed state to up
```

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PC2_1
192.168.10.129

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.254

Pinging 192.168.10.254 with 32 bytes of data:

Reply from 192.168.10.254: bytes=32 time=8ms TTL=255
Reply from 192.168.10.254: bytes=32 time<1ms TTL=255
Reply from 192.168.10.254: bytes=32 time=19ms TTL=255
Reply from 192.168.10.254: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.10.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 19ms, Average = 6ms

C:\>
```

```
S3_LZ>
S3_LZ>
S3_LZ>
S3_LZ>enable
S3_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S3_LZ(config)#interface vlan 99
S3_LZ(config-if)#ip address 192.168.11.126 255.255.255.128
S3_LZ(config-if)#interface range f0/1 , f0/2
S3_LZ(config-if-range)#switchport mode access
S3_LZ(config-if-range)#switchport access vlan 99
% Access VLAN does not exist. Creating vlan 99
S3_LZ(config-if-range)#
%LINK-5-CHANGED: Interface Vlan99, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan99, changed state to up
```

PC3_1
192.168.11.1

```
C:\>ping 192.168.11.126

Pinging 192.168.11.126 with 32 bytes of data:

Reply from 192.168.11.126: bytes=32 time<1ms TTL=255
Reply from 192.168.11.126: bytes=32 time<1ms TTL=255
Reply from 192.168.11.126: bytes=32 time<1ms TTL=255
Reply from 192.168.11.126: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.11.126:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

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Hem detectat moltes col·lisions a la nostra xarxa, i ens han demanat que resolguem aquest problema amb la configuració del protocol STP als nostres equips.

4. Fes la configuració necessària perquè el sw1 sigui el root bridge de la xarxa. La seva prioritat serà 4096, i la de la resta de switches de la xarxa 8192. **(1,00 punts)**

```
S1_LZ>
S1_LZ>enable
S1_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S1_LZ(config)#spanning-tree vlan 1 priority 4096
```

```
S2_LZ>
S2_LZ>enable
S2_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S2_LZ(config)#spanning-tree vlan 1 priority 8192
```

```
S3_LZ>
S3_LZ>enable
S3_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S3_LZ(config)#spanning-tree vlan 1 priority 8192
```

   a. **Nota → Podeu fer servir la VLAN configurada a l'apartat 1**

5. Quina és la comanda que has de fer servir per mostrar quin és el rootbridge? Mostra la informació afegint captures al document. **(0,50 punts)**

   La comanda show spanning-tree vlan 1. El switch que tingui la prioritat més baixa serà el Rootbridge.

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```
S1_LZ>
S1_LZ>
S1_LZ>show spanning-tree vlan 1
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID     Priority    4097
              Address     0060.5C05.A813
              This bridge is the root
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    4097  (priority 4096 sys-id-ext 1)
              Address     0060.5C05.A813
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  20

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Gi0/2            Desg FWD 4         128.26   P2p
Gi0/1            Desg FWD 4         128.25   P2p

S1_LZ>
```

```
S3_LZ>
S3_LZ>
S3_LZ>show spanning-tree vlan 1
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID     Priority    4097
              Address     0060.5C05.A813
              Cost        4
              Port        25(GigabitEthernet0/1)
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    8193  (priority 8192 sys-id-ext 1)
              Address     00E0.8FC0.B51B
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  20

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Gi0/1            Root FWD 4         128.25   P2p
Gi0/2            Altn BLK 4         128.26   P2p

S3_LZ>
```

Formador/a: ***laura.villalba@itb.cat***

```
S3_LZ#show spanning-tree vlan 1
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID     Priority    4097
              Address     0060.5C05.A813
              Cost        4
              Port        25(GigabitEthernet0/1)
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority    8193  (priority 8192 sys-id-ext 1)
              Address     00E0.8FC0.B51B
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  20

Interface        Role Sts Cost      Prio.Nbr Type
---------------- ---- --- --------- -------- --------------------------------
Gi0/1            Root FWD 4         128.25   P2p
Gi0/2            Altn BLK 4         128.26   P2p
```

Per fer la xarxa més segura, ens han indicat que hauríem de configurar el port-security a tots els switches de la nostra xarxa.

6. Configura port security en els ports f0/1 i f0/2 on estan connectats els PCs, i la resta de ports no han d'estar accessibles. Fes servir la comanda per rangs. Mostra la informació afegint captures al document. **(1,50 punts)**

```
S1_LZ#
S1_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S1_LZ(config)#interface range f0/1 , f0/2
S1_LZ(config-if-range)#switchport mode access
S1_LZ(config-if-range)#switchport port-security
```

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```
S1_LZ(config)#interface range f0/3 - 24
S1_LZ(config-if-range)#shutdown

%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/7, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/8, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/9, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/10, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/11, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/12, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/13, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/14, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/15, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/16, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/17, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/18, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/19, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/20, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/21, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/22, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/23, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/24, changed state to administratively down
S1_LZ(config-if-range)#
```

```
S2_LZ>
S2_LZ>
S2_LZ>enable
S2_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S2_LZ(config)#interface range f0/1 , f0/2
S2_LZ(config-if-range)#switchport mode access
S2_LZ(config-if-range)#switchport port-security
S2_LZ(config-if-range)#
```

Formador/a: *laura.villalba@itb.cat*

```
S2_LZ(config)#interface range f0/3 - 24
S2_LZ(config-if-range)#shutdown

%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/7, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/8, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/9, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/10, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/11, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/12, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/13, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/14, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/15, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/16, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/17, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/18, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/19, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/20, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/21, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/22, changed state to administratively down
```

```
S3_LZ>
S3_LZ>enable
S3_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S3_LZ(config)#interface range f0/1 - 2
S3_LZ(config-if-range)#switchport mode access
S3_LZ(config-if-range)#switchport port-security
S3_LZ(config-if-range)#
```

Formador/a: *laura.villalba@itb.cat*

```
S3_LZ(config)#interface range f0/3 - 24
S3_LZ(config-if-range)#shutdown

%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/7, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/8, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/9, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/10, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/11, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/12, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/13, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/14, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/15, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/16, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/17, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/18, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/19, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/20, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/21, changed state to administratively down

%LINK-5-CHANGED: Interface FastEthernet0/22, changed state to administratively down
```

Formador/a: ***laura.villalba@itb.cat***

7. Fes la configuració perquè com a màxim perquè només un dispositiu pugui accedir als ports Fast Ethernet 0/1 i 0/2. Aquesta configuració s'ha de fer en cada switche. **(1,00 punts)**

```
S1_LZ>
S1_LZ>enable
S1_LZ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S1_LZ(config)#interface range f0/1 , f0/2
S1_LZ(config-if-range)#switchport port-security maximum 1
S1_LZ(config-if-range)#
```

```
S2_LZ>
S2_LZ>enable
S2_LZ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S2_LZ(config)#interface range f0/1 - 2
S2_LZ(config-if-range)#switchport port-security maximum 1
S2_LZ(config-if-range)#
```

```
S3_LZ>
S3_LZ>
S3_LZ>enable
S3_LZ#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S3_LZ(config)#interface range f0/1 - 2
S3_LZ(config-if-range)#switchpor port-security maximum 1
S3_LZ(config-if-range)#
```

8. Assegureu els ports de manera que l'adreça MAC d'un dispositiu s'aprèn dinàmicament i s'afegeix a la configuració en execució. **(1,00 punts)**

```
S1_LZ#
S1_LZ#enable
S1_LZ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S1_LZ(config)#interface range f0/1 - 2
S1_LZ(config-if-range)#switchport port-security mac-address sticky
S1_LZ(config-if-range)#
```

```
S2_LZ>
S2_LZ>enable
S2_LZ#confi t
Enter configuration commands, one per line.  End with CNTL/Z.
S2_LZ(config)#interface range f0/1 - 2
S2_LZ(config-if-range)#switchport port-security mac-address sticky
S2_LZ(config-if-range)#
```

```
S3_LZ>
S3_LZ>enable
S3_LZ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S3_LZ(config)#interface range f0/1 - 2
S3_LZ(config-if-range)#switchport port-security mac-address sticky
S3_LZ(config-if-range)#
```

9. Estableix la violació de manera que els ports Fast Ethernet 0/1 i 0/2 no estiguin desactivats quan es produeixi una infracció, però els paquets s'eliminin d'una font desconeguda. **(1,00 punts) Restrict**

```
S1_LZ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S1_LZ(config)#interface range f0/1 - 2
S1_LZ(config-if-range)#switchport port-security violation restrict
S1_LZ(config-if-range)#
```

```
S2_LZ(config)#interface range f0/1-2
S2_LZ(config-if-range)#switchport port-security violation restrict
S2_LZ(config-if-range)#
```

```
S3_LZ#
S3_LZ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S3_LZ(config)#interface range f0/1-2
S3_LZ(config-if-range)#switchport port-security violation restrict
S3_LZ(config-if-range)#
```

Copy

Formador/a: ***laura.villalba@itb.cat***

10. Verifica que port security està activat i que les adreces MAC de PC1 i PC2 s'han afegit a la configuració en execució**. (1,00 punts)**

```
Sl_LZ#
Sl_LZ#
Sl_LZ#
Sl_LZ#show port-security interface f0/1
Port Security              : Enabled
Port Status                : Secure-up
Violation Mode             : Restrict
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   : 0002.1717.96E1:99
Security Violation Count   : 0
```

```
Sl_LZ#
Sl_LZ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Sl_LZ(config)#exit
Sl_LZ#
%SYS-5-CONFIG_I: Configured from console by console

Sl_LZ#
Sl_LZ#show port-security interface f0/2
Port Security              : Enabled
Port Status                : Secure-up
Violation Mode             : Restrict
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   : 0040.0B38.6675:99
Security Violation Count   : 0

Sl_LZ#
```

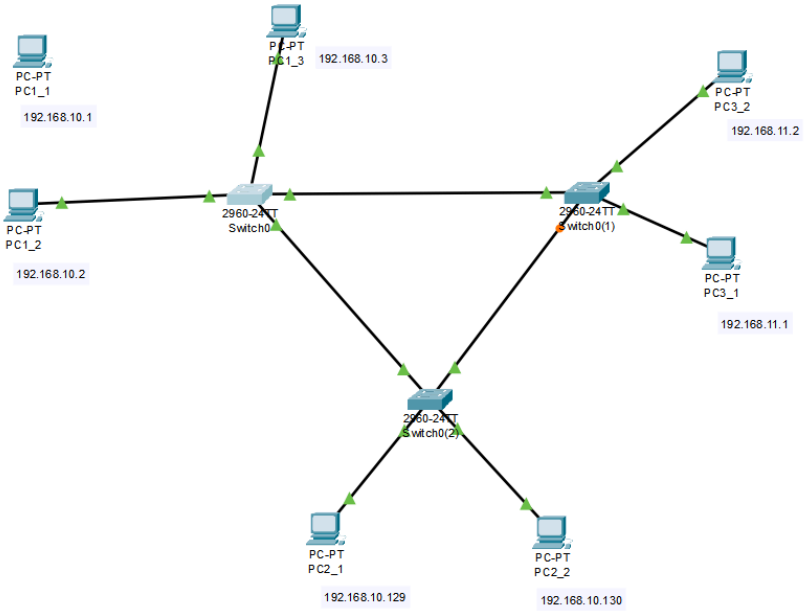
```
Sl_LZ#
Sl_LZ#show mac-address table
                    ^
% Invalid input detected at '^' marker.

Sl_LZ#show mac-address-table
          Mac Address Table
-------------------------------------------

Vlan    Mac Address       Type        Ports
----    -----------       --------    -----

   1    0001.971c.8619    DYNAMIC     Gig0/2
   1    0030.f2ab.877c    DYNAMIC     Gig0/1
  99    0002.1717.96e1    STATIC      Fa0/1
  99    0040.0b38.6675    STATIC      Fa0/2
Sl_LZ#
```

11. Afegeix un PC3 al SW1 de manera que Port-security s'activi i mostra les infraccions de seguretat del port per al port al qual està connectat aquest nou PC. Mostra la informació afegint captures al document. **(1,50 punts)**



Failed	PC1_3	Switch0	ICMP		0.000	N	7	(edit)
Failed	PC1_3	Switch0	ICMP		0.000	N	8	(edit)
Failed	PC1_3	Switch0	ICMP		0.000	N	9	(edit)

```
S1_LZ#show port-security interface f0/1
Port Security              : Enabled
Port Status                : Secure-up
Violation Mode             : Restrict
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   : 0001.C7AE.8923:99
Security Violation Count   : 5
```