

## Manipulation 1

b)

|     | PC0 (VLAN 20) | PC1 (VLAN 10) | PC2 (VLAN 10) | PC3 (VLAN 30) | PC4(VLAN 20) | PC5 (VLAN 10) |
|-----|---------------|---------------|---------------|---------------|--------------|---------------|
| PC0 |               | X             | X             | X             |              | X             |
| PC1 | X             |               |               | X             | X            |               |
| PC2 | X             |               |               | X             | X            |               |
| PC3 | X             | X             | X             |               | X            | X             |
| PC4 |               | X             | X             | X             |              | X             |
| PC5 | X             |               |               | X             | X            |               |

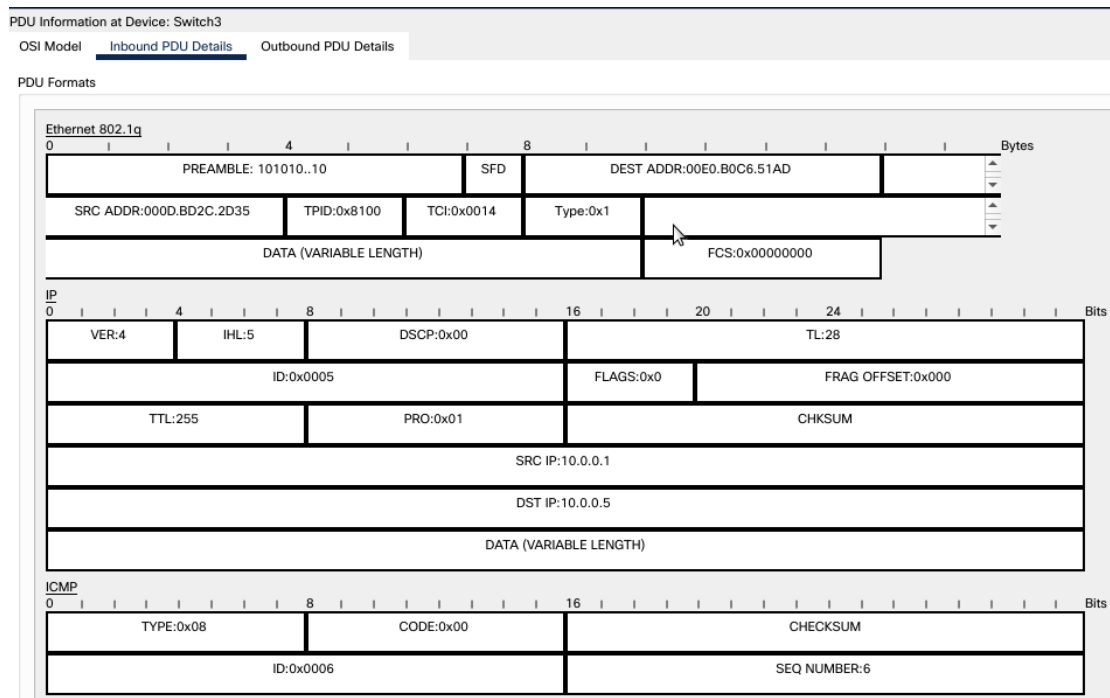
c) Les résultats sont conformes aux attentes car les PC qui sont dans le même VLAN peuvent communiquer et les PC de VLAN différents ne peuvent pas communiquer.

d) Le port 1 est en configuration trunk pour pouvoir laisser passer tous les paquets peut importe le VLAN

e)



f)



Manip 2

b)

Switch0

Physical   Config   **CLI**   Attributes

IOS Command Line Interface

```
%SYS-5-CONFIG_I: Configured from console by console

Switch#
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface FastEthernet0/3
Switch(config-if)#
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/1
Switch(config-if)#ex
Switch(config)#hex
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#sh spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID    Priority    32769
  Address   000A.41A6.8DCC
  Cost      19
  Port      1(FastEthernet0/1)
  Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec

Bridge ID   Priority    32769 (priority 32768 sys-id-ext 1)
  Address   0040.0B64.AE22
  Hello Time 2 sec Max Age 20 sec Forward Delay 15 sec
  Aging Time 20

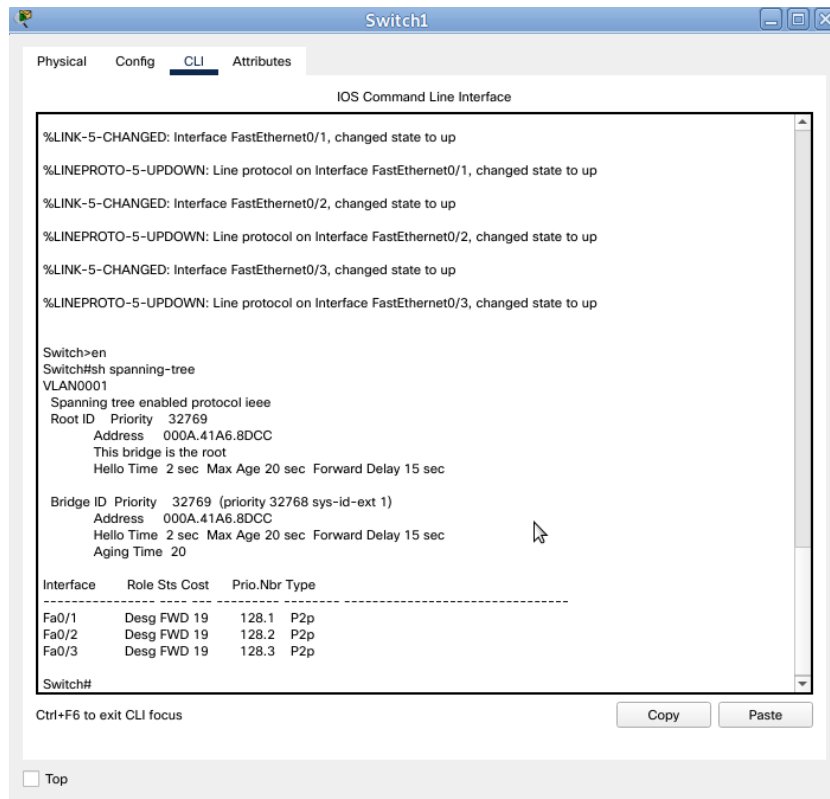
Interface    Role Sts Cost    Prio.Nbr Type
-----
Fa0/3       Desg FWD 19     128.3   P2p
Fa0/2       Altn BLK 19     128.2   P2p
Fa0/1       Root FWD 19     128.1   P2p

Switch#
```

Ctrl+F6 to exit CLI focus

Copy   Paste

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d) La communication fonctionne.

e)

| Interface | Role Sts Cost | Prio.Nbr Type |
|-----------|---------------|---------------|
| Fa0/3     | Desg FWD 19   | 128.3 P2p     |
| Fa0/2     | Altn BLK 19   | 128.2 P2p     |
| Fa0/1     | Root FWD 19   | 128.1 P2p     |

g) Comme le lien actif est supprimer la communication n'est plus possible.

### Manipulation 3

b) Le Root Bridge est le Switch1, son Bridge id est 32769

```
Switch#sh spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0002.1698.5D82
             This bridge is the root
             Hello Time  2 sec   Max Age 20 sec   Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     0002.1698.5D82
             Hello Time  2 sec   Max Age 20 sec   Forward Delay 15 sec
             Aging Time  20

Interface                Role Sts Cost        Prio.Nbr Type
-----
Fa0/21                   Desg LSN 19          128.21 P2p
Fa0/22                   Desg LSN 19          128.22 P2p
Fa0/23                   Desg LSN 19          128.23 P2p
Gi0/1                    Desg FWD 4           128.25 P2p
Gi0/2                    Desg LSN 19          128.26 P2p
```

c) On peut influencer l'élection avec la commande suivante :

**spanning-tree vlan 1 root primary**

d)

```
Switch#sh spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    24577
             Address     0007.EC4D.EE57
             This bridge is the root
             Hello Time  2 sec   Max Age 20 sec   Forward Delay 15 sec

  Bridge ID  Priority    24577 (priority 24576 sys-id-ext 1)
             Address     0007.EC4D.EE57
             Hello Time  2 sec   Max Age 20 sec   Forward Delay 15 sec
             Aging Time  20

Interface                Role Sts Cost        Prio.Nbr Type
-----
Fa0/22                   Desg FWD 19          128.22 P2p
Fa0/23                   Desg FWD 19          128.23 P2p
Fa0/24                   Desg FWD 19          128.24 P2p
Gi0/1                    Desg FWD 4           128.25 P2p
Gi0/2                    Desg FWD 4           128.26 P2p
```

e)

```
Switch#sh spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    24577
              Address     0007.EC4D.EE57
              Cost        23
              Port        23(FastEthernet0/23)
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

    Bridge ID  Priority    32769  (priority 32768 sys-id-ext 1)
              Address     00D0.BC62.3281
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time  20
```

| Interface | Role | Sts | Cost | Prio.Nbr | Type |
|-----------|------|-----|------|----------|------|
| Fa0/4     | Desg | FWD | 19   | 128.4    | P2p  |
| Fa0/20    | Altn | BLK | 19   | 128.20   | P2p  |
| Fa0/22    | Altn | BLK | 19   | 128.22   | P2p  |
| Fa0/23    | Root | FWD | 19   | 128.23   | P2p  |
| Fa0/24    | Desg | FWD | 19   | 128.24   | P2p  |