

## Travaux pratiques : configuration des VLAN et du trunking (3.2.2.5).

### Sommaire :

#### Partie 1 : Création du réseau et configuration des paramètres de base du périphérique :

Étape 1 : Câblez le réseau conformément à la topologie.

Étape 3 : Configurez les paramètres de base pour chaque commutateur.

Étape 4 : Configurez les hôtes de PC.

Étape 5 : Testez la connectivité.

#### Partie 2 : Cr éation du VLAN et attribution des ports de commutateur :

Étape 1 : Cr éez les VLAN sur les commutateurs.

Étape 2 : Attribuez les VLAN aux interfaces de commutateur correctes.

#### Partie 3 : Mise à jour des attributions des ports VLAN et de la base de données VLAN :

Étape 1 : Attribuez un VLAN à plusieurs interfaces.

Étape 2 : Supprimez une attribution de VLAN de l'interface.

Étape 3 : Supprimez un ID de VLAN de la base de données VLAN.

#### Partie 4 : Configuration d'un trunk 802.1Q entre les commutateurs :

Étape 1 : Utilisez le protocole DTP pour initier le trunking sur F0/1.

Étape 2 : Configurez manuellement l'interface trunk F0/1.

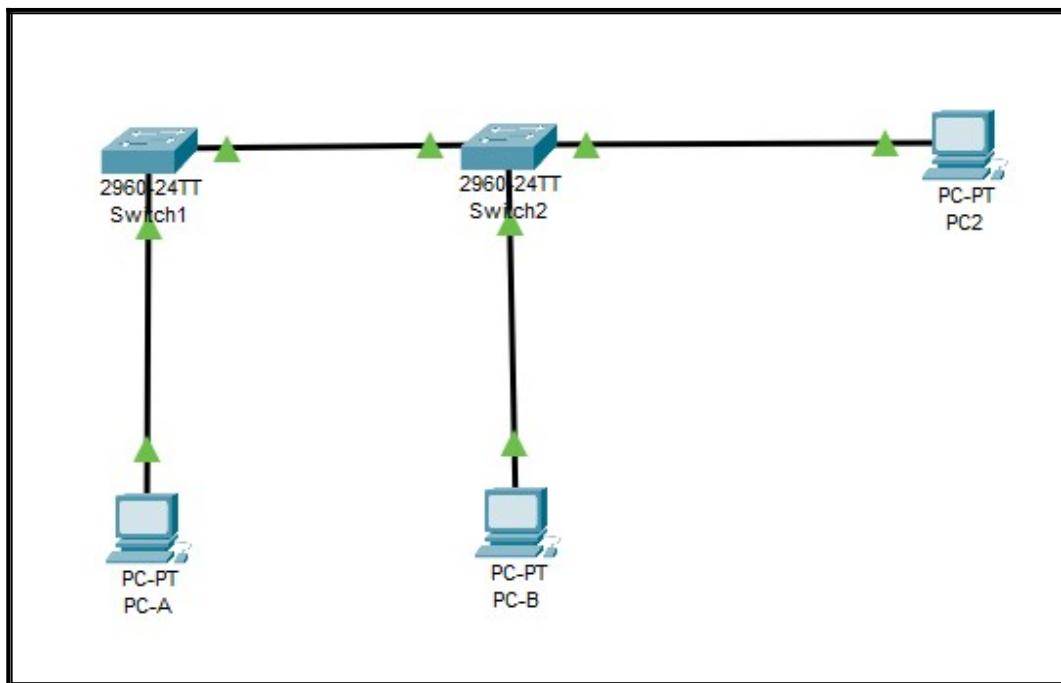
#### Partie 5 : Suppression de la base de données VLAN :

Étape 1 : Déterminez si la base de données VLAN existe.

Étape 2 : Supprimez la base de données VLAN.

## Partie 1 : Création du réseau et configuration des paramètres de base du périphérique :

Étape 1 : Câblez le réseau conformément à la topologie.



1ère étape : Nous câblons le réseau conformément à la topologie demandé.

### Étape 3 : Configurez les paramètres de base pour chaque commutateur.

```
S1#sh run
Building configuration...

Current configuration : 1243 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S1
!
enable secret 5 $1$ERr$9cTjUIEqNGurQiFU.ZeCil
!
!
!
no ip domain-lookup
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
!
interface FastEthernet0/2
!
interface FastEthernet0/3
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
interface FastEthernet0/10
!
interface FastEthernet0/11
!
interface FastEthernet0/12
!
interface FastEthernet0/13
!
interface FastEthernet0/14
```

```
:
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
!
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
interface Vlan1
  ip address 192.168.1.11 255.255.255.0
  shutdown
!
!
!
line con 0
  password cisco
  logging synchronous
!
line vty 0 4
  password cisco
  logging synchronous
  login
line vty 5 15
  login
!
!
!
end
```

**1ère étape :** Nous configurons le **Switch numéro 1** de la topologie.

```

S2#sh run
Building configuration...

Current configuration : 1473 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname S2
!
enable secret 5 $1$mERr$9cTjUIEqNGurQiFU.ZeCil
!
!
!
no ip domain-lookup
!
!
!
spanning-tree mode pvst
spanning-tree extend system-id
!
interface FastEthernet0/1
!
interface FastEthernet0/2
    shutdown
!
interface FastEthernet0/3
    shutdown
!
interface FastEthernet0/4
    shutdown
!
interface FastEthernet0/5
    shutdown
!
interface FastEthernet0/6
!
interface FastEthernet0/7
    shutdown
!
interface FastEthernet0/8
    shutdown
!
interface FastEthernet0/9
    shutdown
!
interface FastEthernet0/10
    shutdown
!
interface FastEthernet0/11
!
interface FastEthernet0/12
    shutdown
!
interface FastEthernet0/13
    shutdown
!

interface FastEthernet0/14
    shutdown
!
interface FastEthernet0/15
    shutdown
!
interface FastEthernet0/16
    shutdown
!
interface FastEthernet0/17
    shutdown
!
interface FastEthernet0/18
    shutdown
!
interface FastEthernet0/19
    shutdown
!
interface FastEthernet0/20
    shutdown
!
interface FastEthernet0/21
    shutdown
!
interface FastEthernet0/22
    shutdown
!
interface FastEthernet0/23
    shutdown
!
interface FastEthernet0/24
    shutdown
!
interface GigabitEthernet0/1
    shutdown
!
interface GigabitEthernet0/2
    shutdown
!
interface Vlan1
    ip address 192.168.1.12 255.255.255.0
    shutdown
!
!
!
!
line con 0
    password cisco
    logging synchronous
!
line vty 0 4
    password cisco
    logging synchronous
    login
line vty 5 15
    login
!
!
```

**2ème étape :** Nous configurons le **Switch numéro 2** de la topologie.

## Étape 4 : Configurez les hôtes de PC.

The image displays three separate windows, each representing a host computer (PC-A, PC-B, and PC-C). Each window shows the 'Desktop' tab selected, with an 'IP Configuration' dialog box open. The 'IP Configuration' dialog box contains settings for an interface named 'FastEthernet0'. For each host, the 'Static' radio button is selected, and the following IP parameters are configured:

- PC-A:** IP Address: 192.168.10.3, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.10.1
- PC-B:** IP Address: 192.168.10.4, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.10.1
- PC-C:** IP Address: 192.168.20.3, Subnet Mask: 255.255.255.0, Default Gateway: 192.168.20.1

**1ère étape :** Nous configurons les trois adresses hôtes des **PC-A, PC-B et PC-C.**

## Étape 5 : Testez la connectivité.

PC-A

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.4

Pinging 192.168.10.4 with 32 bytes of data:

Reply from 192.168.10.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 192.168.20.3

Pinging 192.168.20.3 with 32 bytes of data:

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

Ping statistics for 192.168.20.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\>ping 192.168.1.11

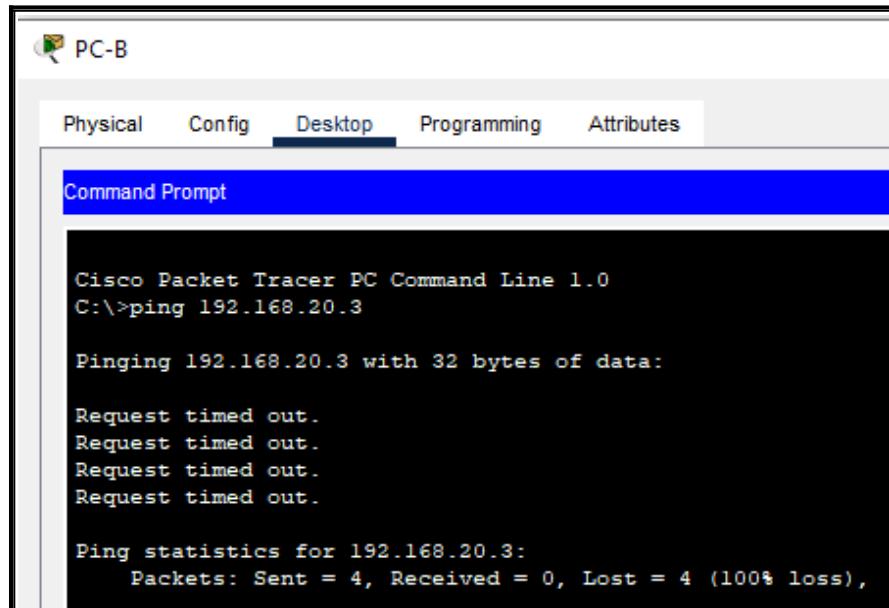
Pinging 192.168.1.11 with 32 bytes of data:

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

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

1ère étape : Premier test de connectivité depuis **PC-A**

- PC-A vers PC-B (Screen 1)
- PC-A vers PC-C (Screen 2)
- PC-A vers S1 (Screen 3)



PC-B

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:>ping 192.168.20.3

Pinging 192.168.20.3 with 32 bytes of data:

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

Ping statistics for 192.168.20.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:>ping 192.168.1.12

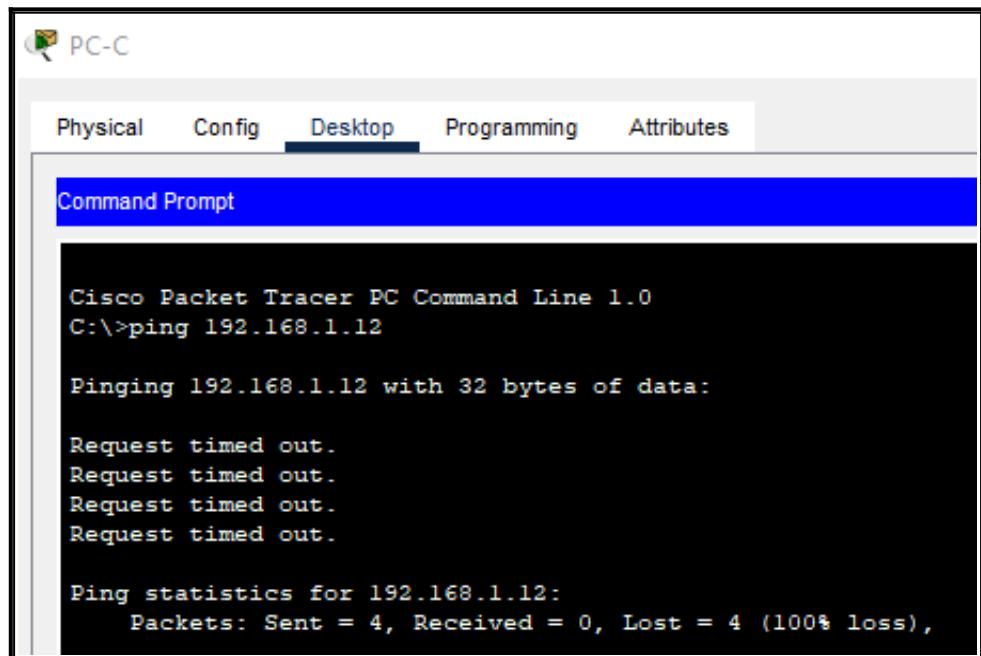
Pinging 192.168.1.12 with 32 bytes of data:

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

Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

**2ème étape :** Test de connectivité depuis **PC-B**.

- PC-B vers PC-C
- PC-B vers S2



The screenshot shows the Cisco Packet Tracer software interface. At the top, there's a menu bar with tabs: Physical, Config, Desktop (which is selected), Programming, and Attributes. Below the menu is a blue header bar labeled "Command Prompt". The main area is a black terminal window displaying the following text:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.12

Pinging 192.168.1.12 with 32 bytes of data:

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

Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

**3ème étape :** Test de connectivité depuis **PC-C**.

- PC-C vers S2

```
S1#ping 192.168.1.12

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.12, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)
```

**4ème étape :** Test de connectivité depuis **S1**.

- S1 vers S2

## Partie 2 : Création du VLAN et attribution des ports de commutateur :

### Étape 1 : Créez les VLAN sur les commutateurs.

```
S1(config)#vlan 10
S1(config-vlan)#name Student
S1(config-vlan)#vlan 20
S1(config-vlan)#name Faculty
S1(config-vlan)#vlan 99
S1(config-vlan)#name Management
S1(config-vlan)#end
```

```
S1#show vlan

VLAN Name          Status    Ports
---- --
1     default       active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                           Fa0/5, Fa0/6, Fa0/7, Fa0/8
                           Fa0/9, Fa0/10, Fa0/11, Fa0/12
                           Fa0/13, Fa0/14, Fa0/15, Fa0/16
                           Fa0/17, Fa0/18, Fa0/19, Fa0/20
                           Fa0/21, Fa0/22, Fa0/23, Fa0/24
                           Gig0/1, Gig0/2
10    Student        active
20    Faculty        active
99    Management     active
1002  fddi-default   active
1003  token-ring-default active
1004  fddinet-default active
1005  trnet-default  active

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp  BrdgMode Transl Trans2
---- --
1   enet   100001    1500   -     -     -     -     -     0     0
10  enet   100010    1500   -     -     -     -     -     0     0
20  enet   100020    1500   -     -     -     -     -     0     0
99  enet   100099    1500   -     -     -     -     -     0     0
1002 fddi   101002    1500   -     -     -     -     -     0     0
1003 tr    101003    1500   -     -     -     -     -     0     0
1004 fdnet 101004    1500   -     -     -     ieee  -     0     0
1005 trnet 101005    1500   -     -     -     ibm   -     0     0

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp  BrdgMode Transl Trans2
---- --
Remote SPAN VLANs
-----
```

Primary	Secondary	Type	Ports

1ère étape : Nous créons les Vlan sur le **Switch 1**, avec la commande « **show vlan** » nous affichons la liste des vlan sur le commutateur.

```

S2(config)#vlan 10
S2(config-vlan)#name Student
S2(config-vlan)#vlan 20
S2(config-vlan)#name Faculty
S2(config-vlan)#vlan 99
S2(config-vlan)#name Management
S2(config-vlan)#end

```

```

S2#SHOW VLAN

VLAN Name                               Status    Ports
----- -----
1   default                             active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                         Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                         Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                         Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                         Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                         Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                         Gig0/1, Gig0/2

10  Student                            active
20  Faculty                            active
99  Management                         active
1002 fddi-default                     active
1003 token-ring-default               active
1004 fdnet-default                    active
1005 trnet-default                   active

VLAN Type   SAID      MTU    Parent RingNo BridgeNo Stp   BrdgMode Transl Trans2
----- -----
1   enet     100001   1500   -       -       -       -       0       0
10  enet     100010   1500   -       -       -       -       0       0
20  enet     100020   1500   -       -       -       -       0       0
99  enet     100099   1500   -       -       -       -       0       0
1002 fddi    101002   1500   -       -       -       -       0       0
1003 tr     101003    1500   -       -       -       -       0       0
1004 fdnet   101004   1500   -       -       -       ieee   0       0
1005 trnet   101005   1500   -       -       -       ibm   0       0

VLAN Type   SAID      MTU    Parent RingNo BridgeNo Stp   BrdgMode Transl Trans2
----- -----
Remote SPAN VLANs
----- -----
Primary Secondary Type          Ports
----- -----

```

**2ème étape :** Nous créons les Vlan sur le **Switch 2**, avec la commande « **show vlan** » nous affichons la liste des vlan sur le commutateur.

## Étape 2 : Attribuez les VLAN aux interfaces de commutateur correctes.

```
S1(config)#interface f0/6
S1(config-if)#switchport mode access
S1(config-if)#switchport access vlan10
^
* Invalid input detected at '^' marker.

S1(config-if)#switchport access vlan 10
S1(config-if)#interface vlan 1
S1(config-if)#no ip address
S1(config-if)#interface vlan 99
S1(config-if)#
*LINK-5-CHANGED: Interface Vlan99, changed state to up

S1(config-if)#ip address 192.168.1.11 255.255.255.0
S1(config-if)#end
```

```
S1#show vlan brief

VLAN Name          Status      Ports
---- -----
1    default        active     Fa0/1, Fa0/2, Fa0/3, Fa0/4
                           Fa0/5, Fa0/7, Fa0/8, Fa0/9
                           Fa0/10, Fa0/11, Fa0/12, Fa0/13
                           Fa0/14, Fa0/15, Fa0/16, Fa0/17
                           Fa0/18, Fa0/19, Fa0/20, Fa0/21
                           Fa0/22, Fa0/23, Fa0/24, Gig0/1
                           Gig0/2
10   Student         active     Fa0/6
20   Faculty         active
99   Management      active
1002 fddi-default   active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default  active
```

```
S1#show ip interface brief
Interface          IP-Address      OK? Method Status      Protocol
FastEthernet0/1    unassigned      YES manual up       up
FastEthernet0/2    unassigned      YES manual down    down
FastEthernet0/3    unassigned      YES manual down    down
FastEthernet0/4    unassigned      YES manual down    down
FastEthernet0/5    unassigned      YES manual down    down
FastEthernet0/6    unassigned      YES manual up       up
FastEthernet0/7    unassigned      YES manual down    down
FastEthernet0/8    unassigned      YES manual down    down
FastEthernet0/9    unassigned      YES manual down    down
FastEthernet0/10   unassigned      YES manual down    down
FastEthernet0/11   unassigned      YES manual down    down
FastEthernet0/12   unassigned      YES manual down    down
FastEthernet0/13   unassigned      YES manual down    down
FastEthernet0/14   unassigned      YES manual down    down
FastEthernet0/15   unassigned      YES manual down    down
FastEthernet0/16   unassigned      YES manual down    down
FastEthernet0/17   unassigned      YES manual down    down
FastEthernet0/18   unassigned      YES manual down    down
FastEthernet0/19   unassigned      YES manual down    down
FastEthernet0/20   unassigned      YES manual down    down
FastEthernet0/21   unassigned      YES manual down    down
FastEthernet0/22   unassigned      YES manual down    down
FastEthernet0/23   unassigned      YES manual down    down
FastEthernet0/24   unassigned      YES manual down    down
GigabitEthernet0/1 unassigned      YES manual down    down
GigabitEthernet0/2 unassigned      YES manual down    down
Vlan1             unassigned      YES manual administratively down down
Vlan99            192.168.1.11   YES manual up       down
```

**1ère étape :** Nous attribuons **S1** au vlan des participants, les commandes suivantes permettent de vérifier que les vlan sont correctement attribués aux interfaces.

```

S2(config)#interface f0/11
S2(config-if)#switchport mode access
S2(config-if)#switchport access vlan 10
S2(config-if)#interface vlan 1
S2(config-if)#no ip address
S2(config-if)#interface vlan 99
S2(config-if)#
*LINK-5-CHANGED: Interface Vlan99, changed state to up

S2(config-if)#ip address 192.168.1.12 255.255.255.0
S2(config-if)#end

```

```

S2(config)#interface f0/18
S2(config-if)#switchport mode access
S2(config-if)#switchport access vlan 20

```

```

S2#show vlan brief

VLAN Name          Status    Ports
---- -----
1     default       active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                           Fa0/5, Fa0/6, Fa0/7, Fa0/8
                           Fa0/9, Fa0/10, Fa0/12, Fa0/13
                           Fa0/14, Fa0/15, Fa0/16, Fa0/17
                           Fa0/19, Fa0/20, Fa0/21, Fa0/22
                           Fa0/23, Fa0/24, Gig0/1, Gig0/2

10    Student        active    Fa0/11
20    Faculty         active   Fa0/18
99    Management      active
1002  fddi-default   active
1003  token-ring-default active
1004  fddinet-default active
1005  trnet-default   active

```

```

S2#show ip interface brief
Interface          IP-Address      OK? Method Status      Protocol
FastEthernet0/1     unassigned      YES manual up           up
FastEthernet0/2     unassigned      YES manual administratively down down
FastEthernet0/3     unassigned      YES manual administratively down down
FastEthernet0/4     unassigned      YES manual administratively down down
FastEthernet0/5     unassigned      YES manual administratively down down
FastEthernet0/6     unassigned      YES manual down        down
FastEthernet0/7     unassigned      YES manual administratively down down
FastEthernet0/8     unassigned      YES manual administratively down down
FastEthernet0/9     unassigned      YES manual administratively down down
FastEthernet0/10    unassigned      YES manual administratively down down
FastEthernet0/11    unassigned      YES manual up           up
FastEthernet0/12    unassigned      YES manual administratively down down
FastEthernet0/13    unassigned      YES manual administratively down down
FastEthernet0/14    unassigned      YES manual administratively down down
FastEthernet0/15    unassigned      YES manual administratively down down
FastEthernet0/16    unassigned      YES manual administratively down down
FastEthernet0/17    unassigned      YES manual administratively down down
FastEthernet0/18    unassigned      YES manual administratively down down
FastEthernet0/19    unassigned      YES manual administratively down down
FastEthernet0/20    unassigned      YES manual administratively down down
FastEthernet0/21    unassigned      YES manual administratively down down
FastEthernet0/22    unassigned      YES manual administratively down down
FastEthernet0/23    unassigned      YES manual administratively down down
FastEthernet0/24    unassigned      YES manual administratively down down
GigabitEthernet0/1   unassigned      YES manual administratively down down
GigabitEthernet0/2   unassigned      YES manual administratively down down
Vlan1              unassigned      YES manual administratively down down
Vlan99             192.168.1.12   YES manual up           down

```

**2ème étape :** Nous attribuons **S2** au vlan des participants, les commandes suivantes permettent de vérifier que les vlan sont correctement attribués aux interfaces.

## Partie 3 : Mise à jour des attributions des ports VLAN et de la base de données VLAN :

### Étape 1 : Attribuez un VLAN à plusieurs interfaces.

```
S1(config)#interface range f0/11-24
S1(config-if-range)#switchport mode access
S1(config-if-range)#switchport access vlan 10
S1(config-if-range)#end
---
```

```
S1#show vlan brief
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/7, Fa0/8, Fa0/9 Fa0/10, Gig0/1, Gig0/2
10 Student	active	Fa0/6, Fa0/11, Fa0/12, Fa0/13 Fa0/14, Fa0/15, Fa0/16, Fa0/17 Fa0/18, Fa0/19, Fa0/20, Fa0/21 Fa0/22, Fa0/23, Fa0/24
20 Faculty	active	
99 Management	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

1ère étape : Attribution des interfaces suivantes au Vlan 10. Par la suite nous vérifions la prise en compte de cette opération en contrôlant les attributions de Vlan.

```
S1(config)#interface range f0/11, f0/21
S1(config-if-range)#switchport access vlan 20
S1(config-if-range)#end
```

```
S1#show vlan brief
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/7, Fa0/8, Fa0/9 Fa0/10, Gig0/1, Gig0/2
10 Student	active	Fa0/6, Fa0/12, Fa0/13, Fa0/14 Fa0/15, Fa0/16, Fa0/17, Fa0/18 Fa0/19, Fa0/20, Fa0/22, Fa0/23 Fa0/24
20 Faculty	active	Fa0/11, Fa0/21
99 Management	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

2ème étape : Réattributions des interfaces au Vlan 20. Nouveau contrôle afin de vérifier que les attributions sont correctes.

## Étape 2 : Supprimez une attribution de VLAN de l'interface.

```
S1(config)#interface f0/24
S1(config-if)#no switchport acces vlan
S1(config-if)#end
```

```
S1#show vlan brief

VLAN Name          Status      Ports
---- ----
1     default       active      Fa0/1, Fa0/2, Fa0/3, Fa0/4
                           Fa0/5, Fa0/7, Fa0/8, Fa0/9
                           Fa0/10, Fa0/24, Gig0/1, Gig0/2
10    Student        active      Fa0/6, Fa0/12, Fa0/13, Fa0/14
                           Fa0/15, Fa0/16, Fa0/17, Fa0/18
                           Fa0/19, Fa0/20, Fa0/22, Fa0/23
20    Faculty         active     Fa0/11, Fa0/21
99    Management      active
1002   fddi-default   active
1003   token-ring-default   active
1004   fddinet-default   active
1005   trnet-default     active
--
```

**1ère étape :** Nous supprimons l'attribution de l'**interface f0/24** au **Vlan 10**, nous vérifions par la suite que celui-ci à donc bien fait sont retour dans le **Vlan par défaut 1**.

## Étape 3 : Supprimez un ID de VLAN de la base de données VLAN.

```
S1(config)#interface f0/24
S1(config-if)#switchport access vlan 30
* Access VLAN does not exist. Creating vlan 30
S1(config-if)#end
```

```
S1#show vlan brief

VLAN Name          Status      Ports
---- ----
1     default       active      Fa0/1, Fa0/2, Fa0/3, Fa0/4
                           Fa0/5, Fa0/7, Fa0/8, Fa0/9
                           Fa0/10, Gig0/1, Gig0/2
10    Student        active      Fa0/6, Fa0/12, Fa0/13, Fa0/14
                           Fa0/15, Fa0/16, Fa0/17, Fa0/18
                           Fa0/19, Fa0/20, Fa0/22, Fa0/23
20    Faculty         active     Fa0/11, Fa0/21
30    VLAN0030       active      Fa0/24
99    Management      active
1002   fddi-default   active
1003   token-ring-default   active
1004   fddinet-default   active
1005   trnet-default     active
--
```

**1ère étape :** Nous attribuons l'interface **f0/24** au **Vlan 30**.

```
S1(config)#no vlan 30  
S1(config)#end
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/7, Fa0/8, Fa0/9 Fa0/10, Gig0/1, Gig0/2
10 Student	active	Fa0/6, Fa0/12, Fa0/13, Fa0/14 Fa0/15, Fa0/16, Fa0/17, Fa0/18 Fa0/19, Fa0/20, Fa0/22, Fa0/23
20 Faculty	active	Fa0/11, Fa0/21
99 Management	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

**2ème étape :** Nous supprimons le **Vlan 30**. Celui-ci n'est donc plus dans la **base de donnée Vlan**.

```
S1(config)#interface f0/24  
S1(config-if)#no switchport access vlan  
S1(config-if)#end
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/7, Fa0/8, Fa0/9 Fa0/10, <b>Fa0/24</b> , Gig0/1, Gig0/2
10 Student	active	Fa0/6, Fa0/12, Fa0/13, Fa0/14 Fa0/15, Fa0/16, Fa0/17, Fa0/18 Fa0/19, Fa0/20, Fa0/22, Fa0/23
20 Faculty	active	Fa0/11, Fa0/21
99 Management	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

**3ème étape :** Étant donné que l'interface **f0/24** était attribuer au **Vlan 30**, celle-ci n'a donc plus d'attributions, il faut donc la retirer du Vlan 30 supprimer avant.

## Partie 4 : Configuration d'un trunk 802.1Q entre les commutateurs :

### Étape 1 : Utilisez le protocole DTP pour initier le trunking sur F0/1.

```
S1(config)#interface f0/1
S1(config-if)#switchport mode dynamic desirable

S1(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan99, changed state to up
```

```
S2#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan99, changed state to up
```

**1ère étape :** Nous configurons **f0/1** sur **S1** de manière à négocier le mode **trunk**, on observe aussi l'apparition des messages sur **S2** concernant le statut de la liaison.

```
S1#show vlan brief
```

VLAN	Name	Status	Ports
1	default	active	Fa0/2, Fa0/3, Fa0/4, Fa0/5 Fa0/7, Fa0/8, Fa0/9, Fa0/10 Fa0/24, Gig0/1, Gig0/2
10	Student	active	Fa0/6, Fa0/12, Fa0/13, Fa0/14 Fa0/15, Fa0/16, Fa0/17, Fa0/18 Fa0/19, Fa0/20, Fa0/22, Fa0/23
20	Faculty	active	
99	Management	active	
1002	fdci-default	active	
1003	token-ring-default	active	
1004	fdinnet-default	active	
1005	trnet-default	active	
...			

**2ème étape :** Cette commande est à la fois saisit sur **S1** et **S2** afin d'observer que **f0/1** n'est plus attribuer au **Vlan 1**.

```
S1#show interface trunk
Port      Mode          Encapsulation  Status        Native vlan
Fa0/1    desirable     n-802.1q       trunking     1

Port      Vlans allowed on trunk
Fa0/1    1-1005

Port      Vlans allowed and active in management domain
Fa0/1    1,10,20,99

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/1    1,10,20,99
```

```
S2#show interface trunk
Port      Mode          Encapsulation  Status        Native vlan
Fa0/1    auto          n-802.1q       trunking     1

Port      Vlans allowed on trunk
Fa0/1    1-1005

Port      Vlans allowed and active in management domain
Fa0/1    1,10,20,99

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/1    1,10,20,99
```

3ème étape : La commande d'afficher les interfaces ainsi que leur mode.

Sur **S1** l'interface **f0/1** est en mode « **desirable** » tandis que sur **S2** l'interface **f0/1** est en mode « **auto** ».

```
S1#ping 192.168.1.12
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.12, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/0 ms
```

4ème étape : Premier test de ping de **S1 vers S2**.

```
C:\>ping 192.168.10.4

Pinging 192.168.10.4 with 32 bytes of data:

Reply from 192.168.10.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 192.168.20.3

Pinging 192.168.20.3 with 32 bytes of data:

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

Ping statistics for 192.168.20.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:

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

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

**5ème étape :** Test de ping depuis **PC-A**.

- PC-A vers PC-B (Screen 1)
- PC-A vers PC-C (Screen 2)
- PC-A vers S1 (Screen 3)

```
C:\>ping 192.168.20.3

Pinging 192.168.20.3 with 32 bytes of data:

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

Ping statistics for 192.168.20.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\>ping 192.168.1.12

Pinging 192.168.1.12 with 32 bytes of data:

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

Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

**6ème étape :** Test de ping depuis **PC-B**.

- PC-B vers PC-C (Screen 1)
- PC-B vers S2 (Screen 2)

```
C:\>ping 192.168.1.12

Pinging 192.168.1.12 with 32 bytes of data:

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

Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

**7ème étape :** Test de ping depuis **PC-C** vers S2.

## Étape 2 : Configurez manuellement l'interface trunk F0/1.

```
S1(config)#interface f0/1  
S1(config-if)#switchport mode trunk
```

```
S2(config)#interface f0/1  
S2(config-if)#switchport mode trunk
```

1ère étape : Nous modifions le mode de port de commutateur sur l'interface **f0/1** afin d'imposer le **mode trunking** à la fois sur **S1** et **S2**.

```
S2#show interface trunk  
Port      Mode       Encapsulation  Status      Native vlan  
Fa0/1    on        802.1q         trunking      1  
  
Port      Vlans allowed on trunk  
Fa0/1    1-1005  
  
Port      Vlans allowed and active in management domain  
Fa0/1    1,10,20,99  
  
Port      Vlans in spanning tree forwarding state and not pruned  
Fa0/1    1,10,20,99
```

2ème étape : Nous vérifions que le mode est bien passé sur « **on** » pour l'interface **f0/1**.

## Partie 5 : Suppression de la base de données VLAN :

### Étape 1 : Déterminez si la base de données VLAN existe.

```
S1#show flash
Directory of flash:/

 1 -rw-      4414921      <no date>  c2960-lanbase-mz.122-25.FX.bin
 5 -rw-      2038        <no date>  config.text
 4 -rw-       736        <no date>  vlan.dat

64016384 bytes total (59598689 bytes free)
```

**1ère étape :** Avec cette commande nous déterminons si un fichier **vlan.dat** existe dans la mémoire flash.

### Étape 2 : Supprimez la base de données VLAN.

```
S1#delete vlan.dat
Delete filename [vlan.dat]?
Delete flash:/vlan.dat? [confirm]
```

**1ère étape :** Nous supprimons par la suite la base de données **Vlan** concernant le fichier **vlan.dat** de la mémoire flash.

```
S1#show flash
Directory of flash:/

 1 -rw-      4414921      <no date>  c2960-lanbase-mz.122-25.FX.bin
 5 -rw-      2038        <no date>  config.text

64016384 bytes total (59599425 bytes free)
```

**2ème étape :** Après la suppression du fichier nous vérifions de nouveau dans la mémoire flash que le fichier à donc bien été effacé.