

# Compte-rendu

## Contexte :

L'entreprise Amine utilise trois VLAN pour séparer les différentes parties de son réseau. Le premier VLAN, VLAN 2, est utilisé pour les employés de l'entreprise et est connecté à un switch et à un routeur. Le deuxième VLAN, VLAN 3, est utilisé pour les invités de l'entreprise et est également connecté à un switch et à un routeur. Le troisième VLAN, VLAN 4, est utilisé pour les appareils de gestion de l'entreprise et est connecté à un switch et un routeur différents des VLAN 1 et 2.

## Sommaire:

- 1 - Configuration et mise en place du routeur et des switchs
- 2 - Test de ping sur les postes clients

## Prérequis :

- Deux switch cisco 2960-24TT
- Deux routeurs cisco 1841
- 3 PC
- Un serveur

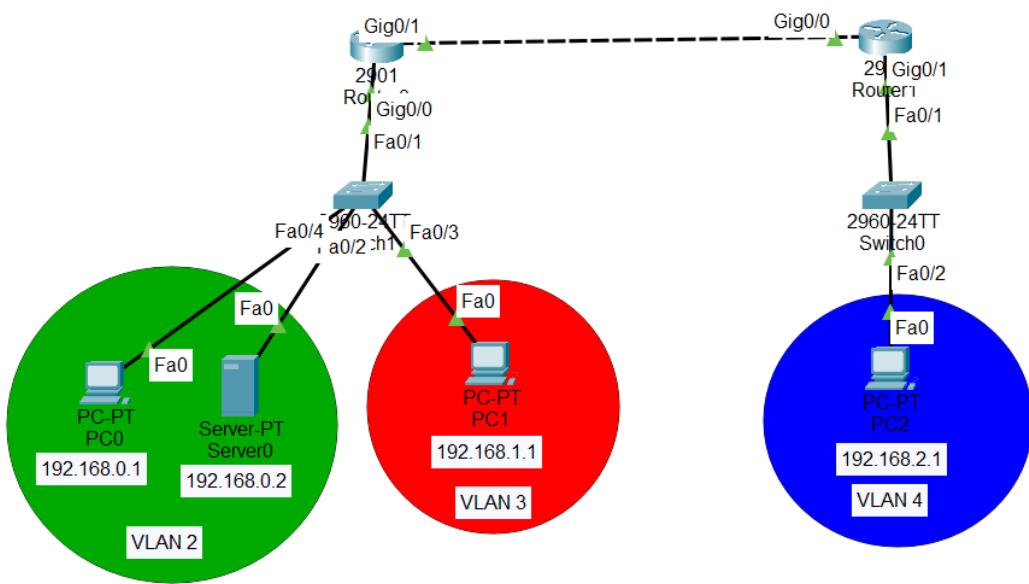
## Explication :

Tout d'abord, nous allons installer et configurer un switch cisco 2960 avec quatre interfaces et un autre switch avec deux interfaces.

Ensuite, nous allons installer et configurer deux routeurs cisco 1841 avec deux interfaces.

Enfin, nous allons effectuer des tests avec les postes qui sont dans les différents VLAN.

## Schéma de la mission :



Tutoriel :

## 1- Configuration et mise en place des routeurs et des switchs

### Configuration du Switch0

**Entrer en mode configuration**

enable

configure terminal

#### Création vlan 2

vlan 2

exit

do show vlan

#### Création vlan 3

vlan 3

exit

do show vlan

#### Configuration du port fa0/4 connecté à PC0

interface fa0/4

```
switchport mode access  
switchport access vlan 2  
no shutdown  
exit  
do show vlan
```

**Configuration du port fa0/2 connecté à Server0**

```
interface fa0/2  
switchport mode access  
switchport access vlan 2  
no shutdown  
exit  
do show vlan
```

**Configuration du port fa0/3 connecté à PC1**

```
interface fa0/3  
switchport mode access  
switchport access vlan 3  
no shutdown  
exit  
do show vlan
```

**Configuration du port fa0/1 connecté à router0**

```
interface fa0/1  
switchport mode trunk  
switchport trunk allowed vlan 1-4  
no shutdown  
exit  
do show running-config
```

## Configuration du Switch1

**Entrer en mode configuration**

```
enable  
configure terminal
```

**Création vlan 4**

```
vlan 4  
exit  
do show vlan
```

**Configuration du port fa0/2 connecté à PC2**

```
interface fa0/2  
switchport mode access  
switchport access vlan 4  
no shutdown  
exit
```

do show vlan

**Configuration du port fa0/1 connecté à router1**

```
interface fa0/1
switchport mode trunk
switchport trunk allowed vlan 1-4
no shutdown
exit
do show running-config
```

### 3. Configuration des routeurs

#### Configuration du Router0

**Retrait de l'adresse IP sur le port gig0/0 connecté au Lan de gauche**

```
interface Gig0/0
no ip address
no shutdown
exit
do show running-config
```

**Configuration de l'interface virtuelle sur gig0/0 pour le VLAN 2**

```
interface Gig0/0.2
encapsulation dot1q 2
ip address 192.168.0.254 255.255.255.0
no shutdown
exit
do show running-config
```

**Configuration de l'interface virtuelle sur gig0/0 pour le VLAN 3**

```
interface Gig0/0.3
encapsulation dot1q 3
ip address 192.168.1.254 255.255.255.0
no shutdown
exit
do show running-config
VLAN 2 et VLAN 3 peuvent ping entre eux
```

**Configuration de l'interface gig0/1 connectée à Router1**

```
interface Gig0/1
ip address 10.0.0.1 255.0.0.0
no shutdown
exit
do show running-config
```

**Configuration de RIP**

```
router rip
version 2
no auto-summary
network 192.168.0.0
network 192.168.1.0
network 10.0.0.0
exit
do show running-config
```

## Configuration du Router1

**Retrait de l'adresse IP sur le port gig0/1 connecté au Lan de droite**

```
interface Gig0/1
no ip address
no shutdown
exit
do show running-config
```

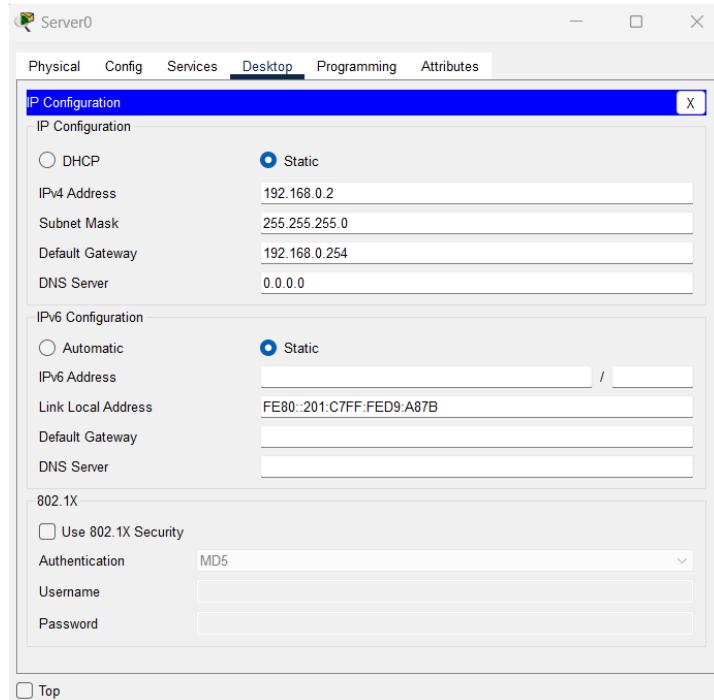
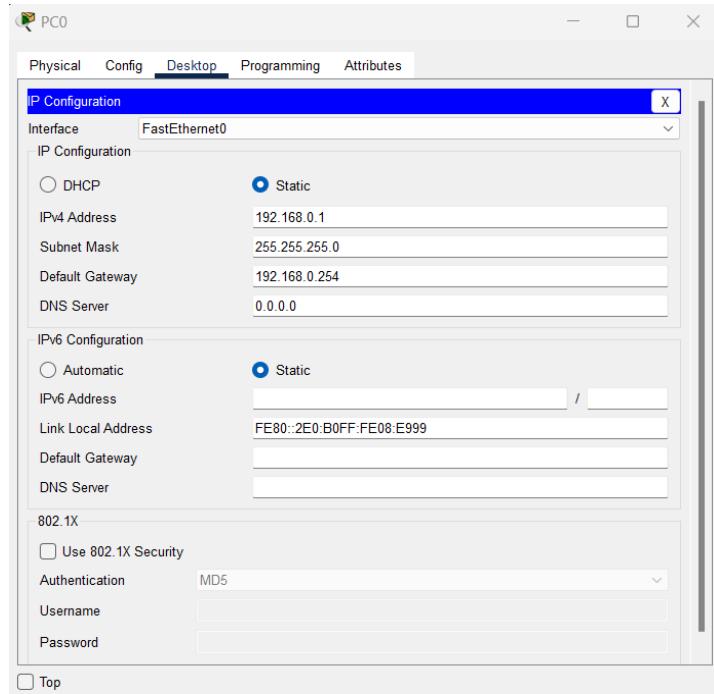
**Configuration de l'interface virtuelle sur gig0/1 pour le VLAN 4**

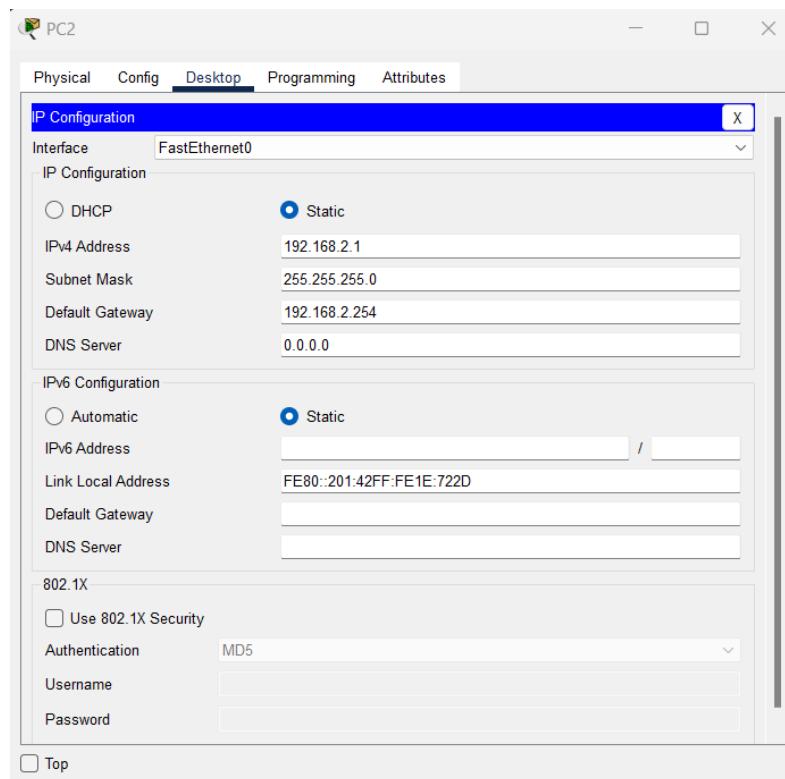
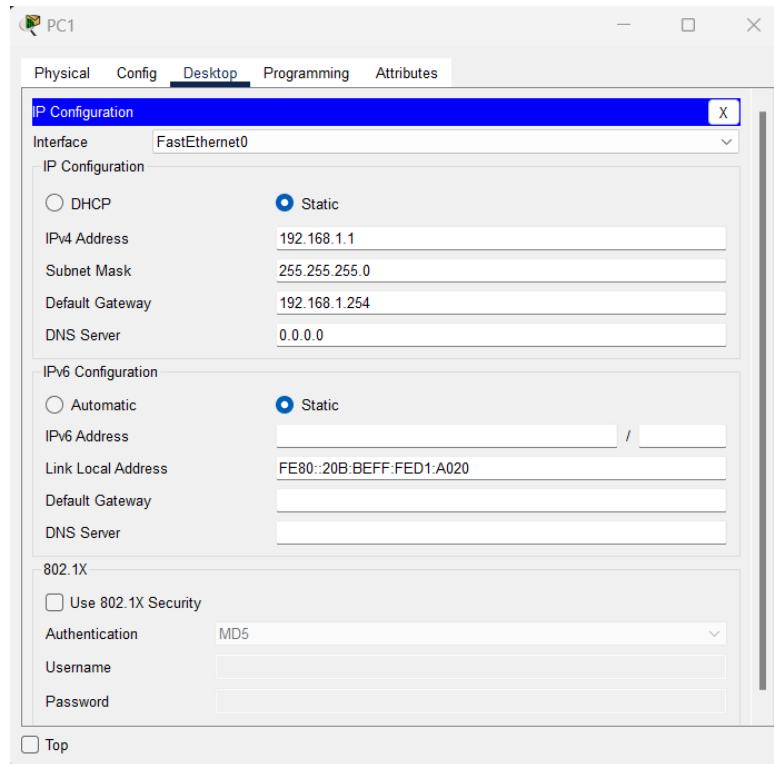
```
interface Gig0/1.4
encapsulation dot1q 4
ip address 192.168.2.254 255.255.255.0
no shutdown
exit
do show running-config
```

**Configuration de RIP**

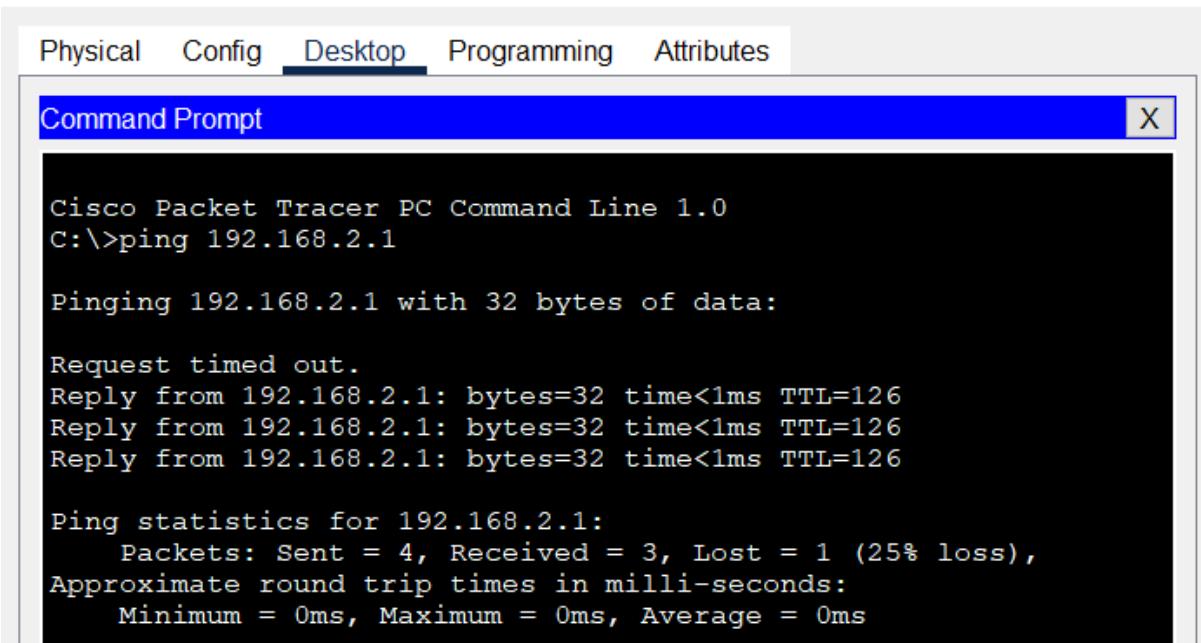
```
router rip
version 2
no auto-summary
network 192.168.2.0
network 10.0.0.0
exit
do show running-config
```

## Configuration des cartes réseaux des machines





## 2- Test de ping sur les postes clients



The screenshot shows a window titled "Command Prompt" from the Cisco Packet Tracer software. The window has tabs at the top: Physical, Config, Desktop (which is selected), Programming, and Attributes. The main area displays the following command-line output:

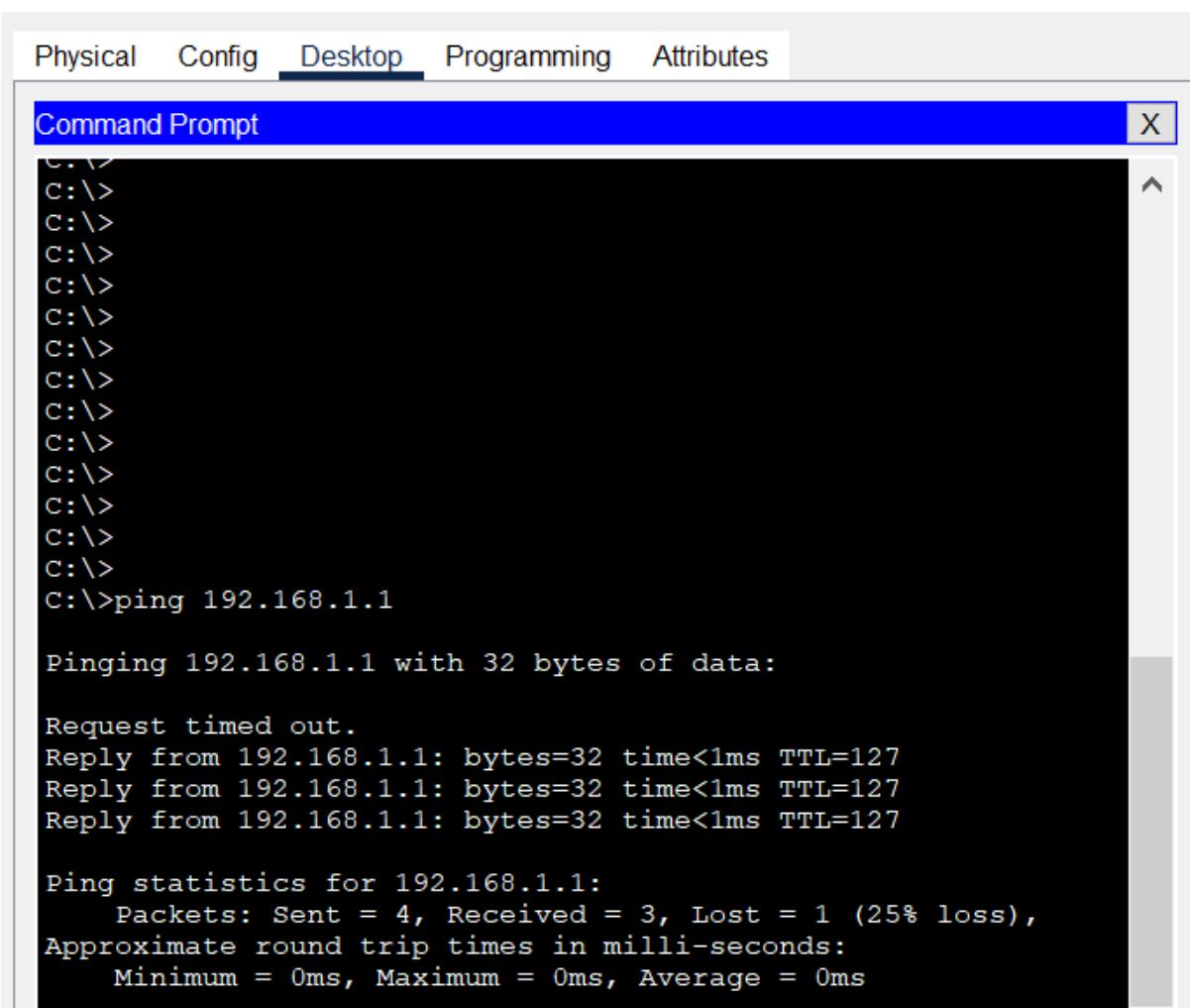
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.1: bytes=32 time<1ms TTL=126
Reply from 192.168.2.1: bytes=32 time<1ms TTL=126
Reply from 192.168.2.1: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

### Test du ping du vlan 2 vers le vlan 4



The screenshot shows a software interface for managing network devices. At the top, there's a toolbar with icons for Physical, Config, Desktop (which is selected), Programming, and Attributes. Below the toolbar is a blue header bar with the text "Command Prompt" and a close button (X). The main area is a black terminal window displaying the following command-line session:

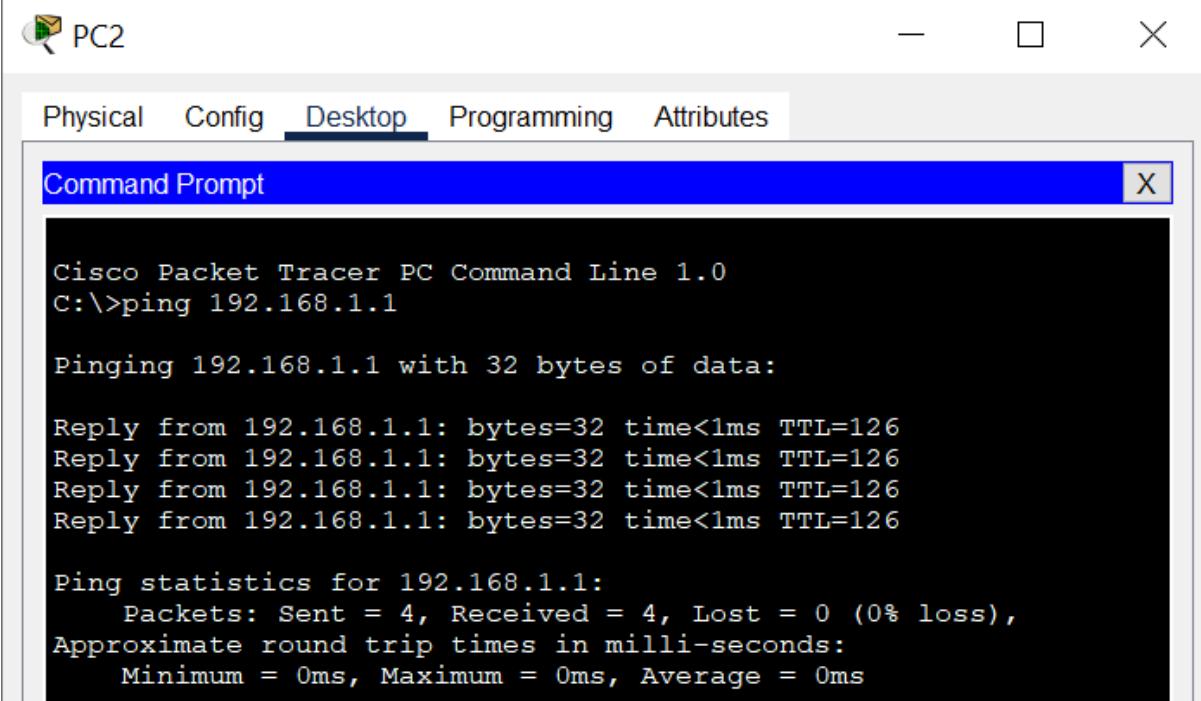
```
C:\>
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Request timed out.
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

### Test du ping du vlan 2 vers vlan 3



The image shows a screenshot of the Cisco Packet Tracer software interface. At the top, there is a menu bar with tabs: Physical, Config, Desktop (which is underlined), Programming, and Attributes. Below the menu bar is a title bar with the text "Command Prompt" and a close button (X). The main area is a black terminal window displaying the output of a ping command. The text in the window reads:

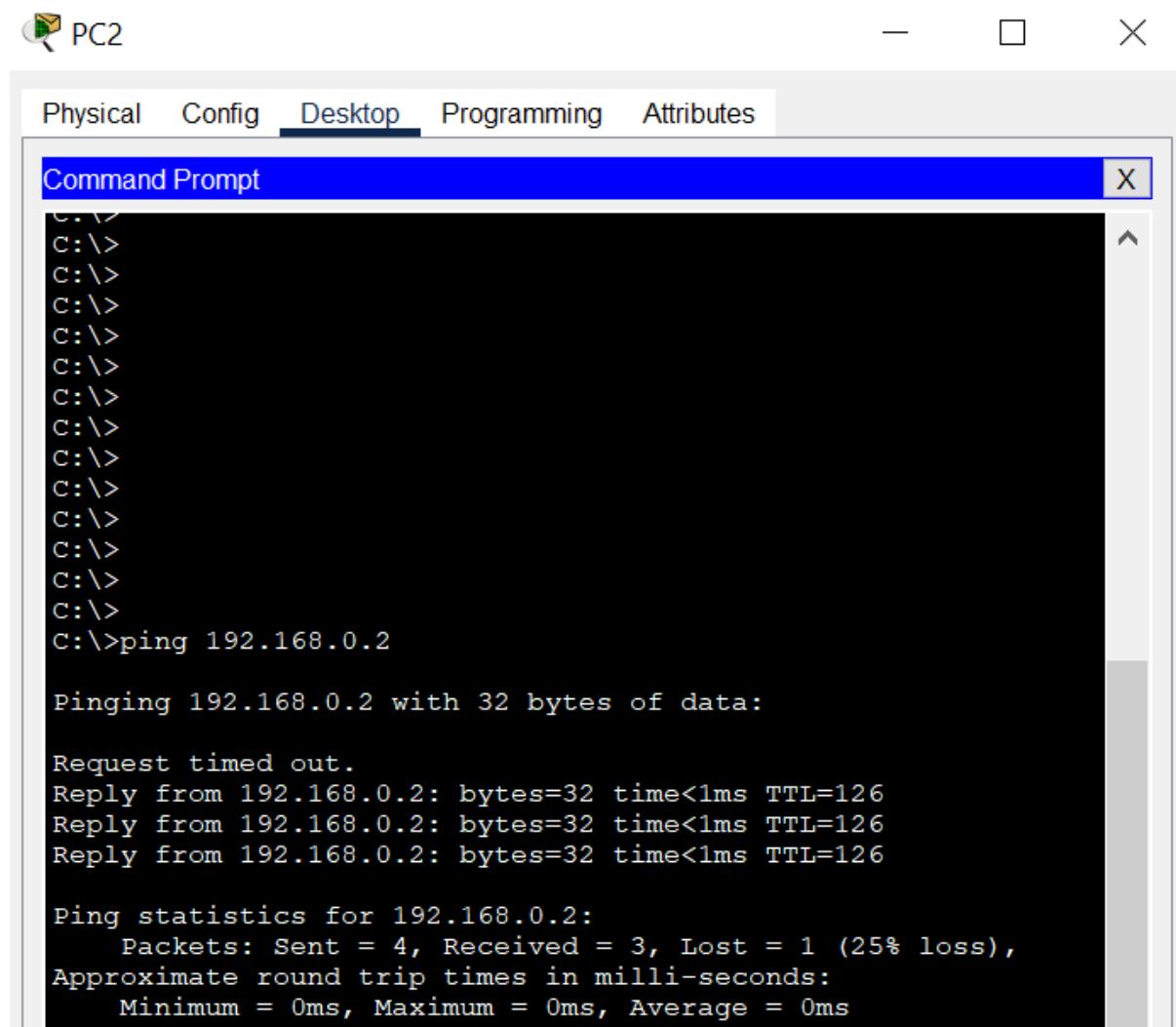
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

### Test du ping du vlan 4 vers le vlan 3



The screenshot shows a Windows Command Prompt window titled "Command Prompt". The window has a blue header bar with tabs for "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". The main area of the window displays the following command-line output:

```
C:\>
C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.0.2: bytes=32 time<1ms TTL=126
Reply from 192.168.0.2: bytes=32 time<1ms TTL=126
Reply from 192.168.0.2: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

### Test du ping du vlan 4 vers le vlan 2

## Conclusion

Nous avons bien séparé les différents réseaux de l'entreprise par des vlan et nous les avons fait communiquer ensemble. Enfin, nous avons effectué des tests avec un ping sur l'ensemble des vlan pour vérifier la communication.