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## **FACULTÉ DES SCIENCES ET DES TECHNOLOGIES(FST)**

### **TD N°\_4 – RÉSEAUX**

**COURS: RÉSEAUX**

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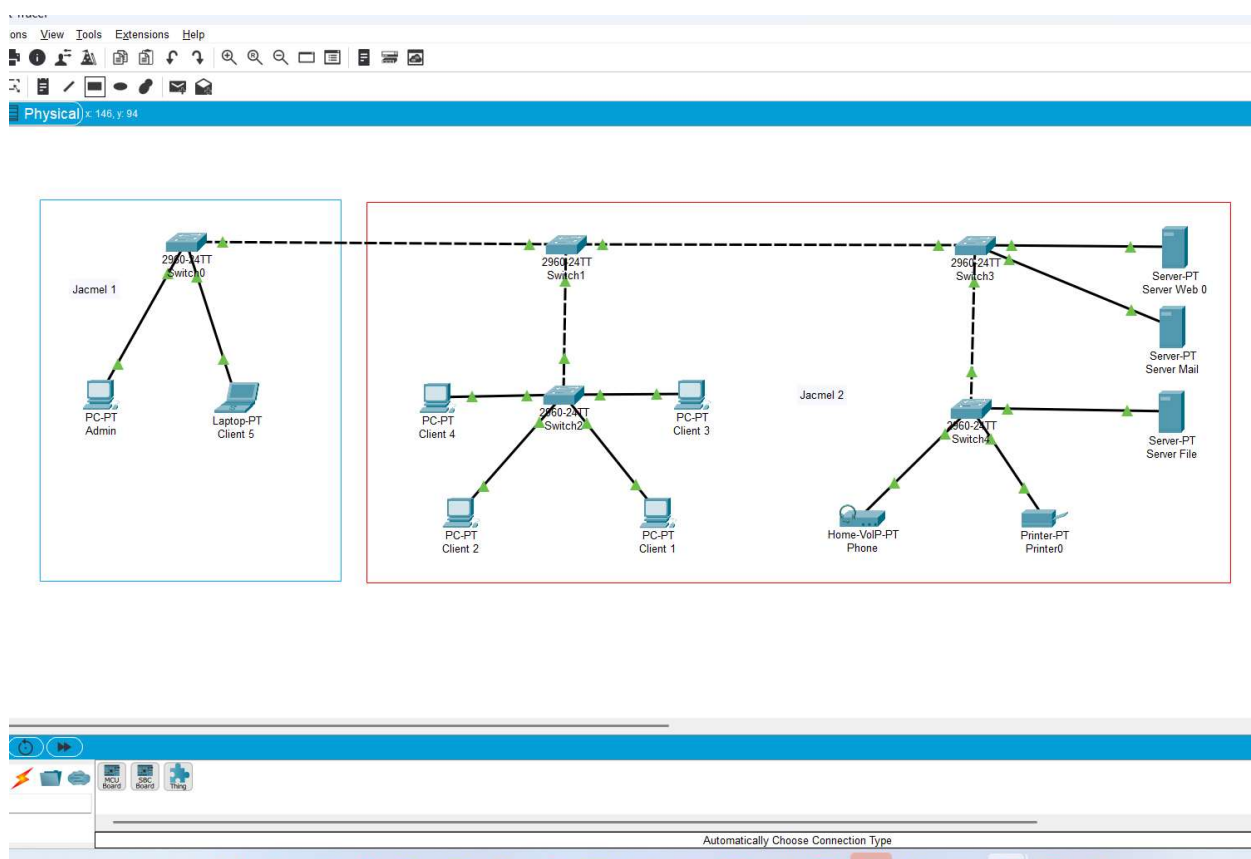
**NIVEAU:** L3

**DATE:** 19/11/2025

### L'objectif de ce TD est de:

1. Découvrir la configuration de base d'un switch et d'un routeur.
2. Attribuer des adresses IPv4 et IPv6 aux périphériques.
3. Tester la connectivité entre les hôtes.
4. Utiliser le Mode Simulation pour analyser le trafic réseau.

1. Reproduisons cette topologie en configurant les switches, puis en attribuant les adresses IP aux dispositifs. Utilisons IPv4, et testons la connectivité des deux VLAN à l'aide de la commande ping et du mode de simulation.



Testons la connectivité

a-Ping

## Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.2.11

Pinging 192.168.2.11 with 32 bytes of data:

Reply from 192.168.2.11: bytes=32 time=1ms TTL=128
Reply from 192.168.2.11: bytes=32 time<1ms TTL=128
Reply from 192.168.2.11: bytes=32 time<1ms TTL=128
Reply from 192.168.2.11: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.2.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\>ping 192.168.2.9

Pinging 192.168.2.9 with 32 bytes of data:

Reply from 192.168.2.9: bytes=32 time=1ms TTL=128
Reply from 192.168.2.9: bytes=32 time<1ms TTL=128
Reply from 192.168.2.9: bytes=32 time<1ms TTL=128
Reply from 192.168.2.9: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.2.9:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

```
Physical  Config  Desktop  Programming  Attributes

Command Prompt

Packet Tracer PC Command Line 1.0
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=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

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

C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

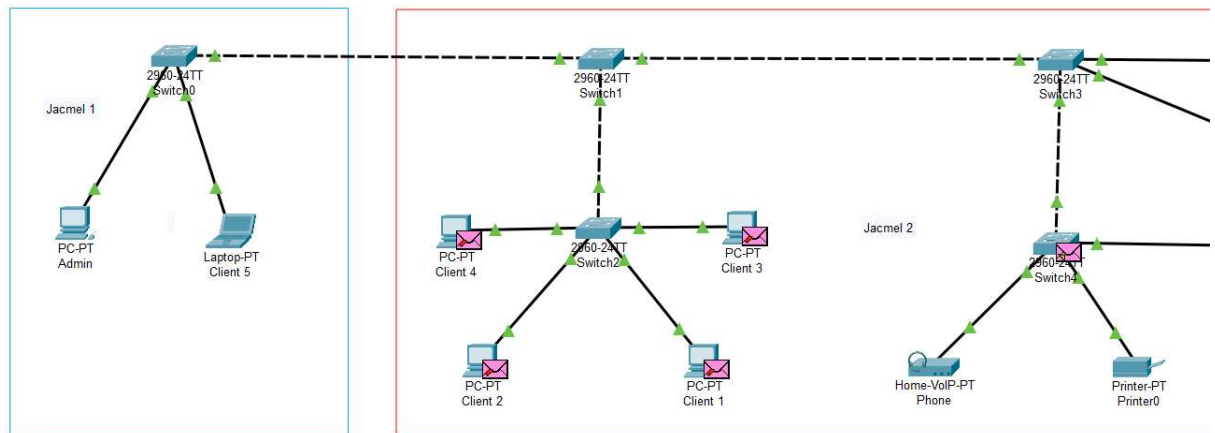
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

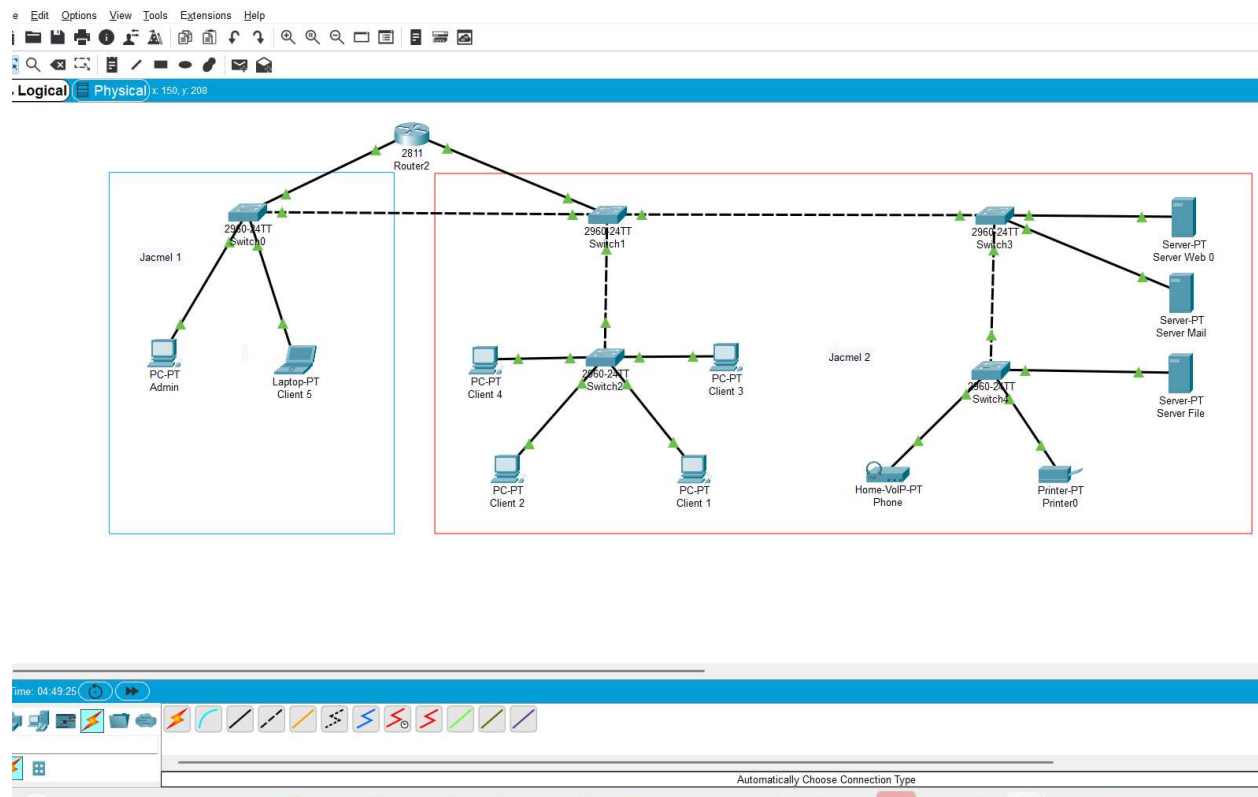
Ici on peut remarquer que le premier réseau (Jacmel 1) n'est pas en communication avec le second réseau (Jacmel 2) à cause d'une manque de passerelle.

## b-Simulation



Ici le message n'est pas arrivé à destination.

2-Reproduisons cette topologie en configurant le routeur et les switches, puis en attribuant les adresses IP aux dispositifs. Utilisons IPv4, et testons la connectivité des deux VLAN à l'aide de la commande ping et du mode de simulation.



Testons la connectivité:

### a-Ping

```
C:\>ping 192.168.2.11

Pinging 192.168.2.11 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.11: bytes=32 time<1ms TTL=127
Reply from 192.168.2.11: bytes=32 time=1ms TTL=127
Reply from 192.168.2.11: bytes=32 time=3ms TTL=127

Ping statistics for 192.168.2.11:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 3ms, Average = 1ms

C:\>ping 192.168.2.10

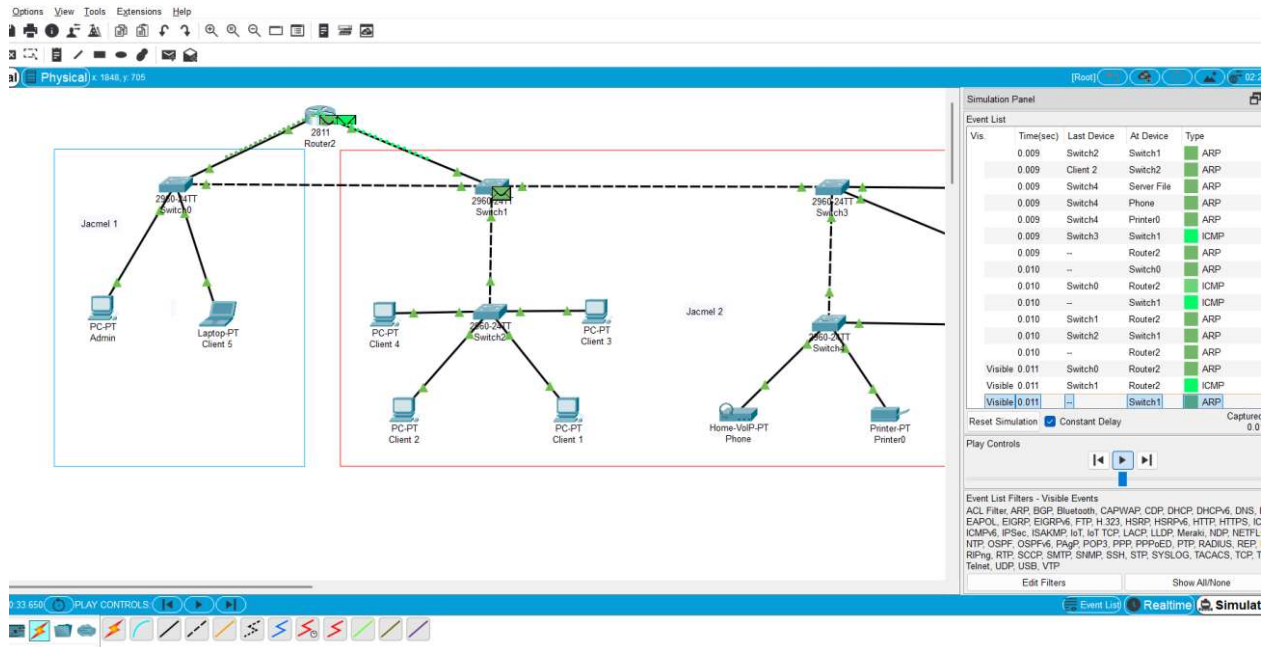
Pinging 192.168.2.10 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.10: bytes=32 time<1ms TTL=127
Reply from 192.168.2.10: bytes=32 time<1ms TTL=127
Reply from 192.168.2.10: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.2.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

### b-Simulation



Donc ici grâce à la passerelle les deux réseaux sont en communication et le message est reçu.

## Cocclusion.

Ce travail m'a permis de découvrir la configuration de base d'un switch et d'un routeur, tester la connectivité entre les hôtes et utiliser le Mode Simulation pour analyser le trafic réseau. Donc la tâche est réussie.