
Livrable 2 - SAE12

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1 Mise en place de la simulation sur *Cisco Packet Tracer*

1.1 VLAN

- Ajout des numéros de VLAN et leur nom dans le panel de gestion du routeur et du switch
- Configuration en mode *trunk* du port du routeur allant vers le switch
- Attribution des numéros VLAN en fonction de l'interface, sur le switch
- Commandes dans le CLI du routeur

```
enable
configure terminal
interface G0
no ip address
no shut

interface G0.1
encapsulation dot1q 10
ip address 192.168.10.1 255.255.255.0
exit

interface G0.2
encapsulation dot1q 20
ip address 192.168.20.1 255.255.255.0
exit

interface G0.3
encapsulation dot1q 30
ip address 192.168.30.1 255.255.255.0
exit

interface G0.4
encapsulation dot1q 40
ip address 192.168.40.1 255.255.255.0
exit
```

1.2 DHCP

- Commandes dans le CLI du routeur

```
enable
configure terminal

ip dhcp pool VLAN10
network 192.168.10.0 255.255.255.0
default-router 192.168.10.1
#dns-server x.x.x.x
exit

ip dhcp pool VLAN20
network 192.168.20.0 255.255.255.0
```

```
default-router 192.168.20.1
#dns-server x.x.x.x
exit

ip dhcp pool VLAN30
network 192.168.30.0 255.255.255.0
default-router 192.168.30.1
#dns-server x.x.x.x
exit

ip dhcp pool VLAN40
network 192.168.40.0 255.255.255.0
default-router 192.168.40.1
#dns-server x.x.x.x
exit
```

- Configuration en mode *DHCP* des machines clientes

2 Schéma du réseau

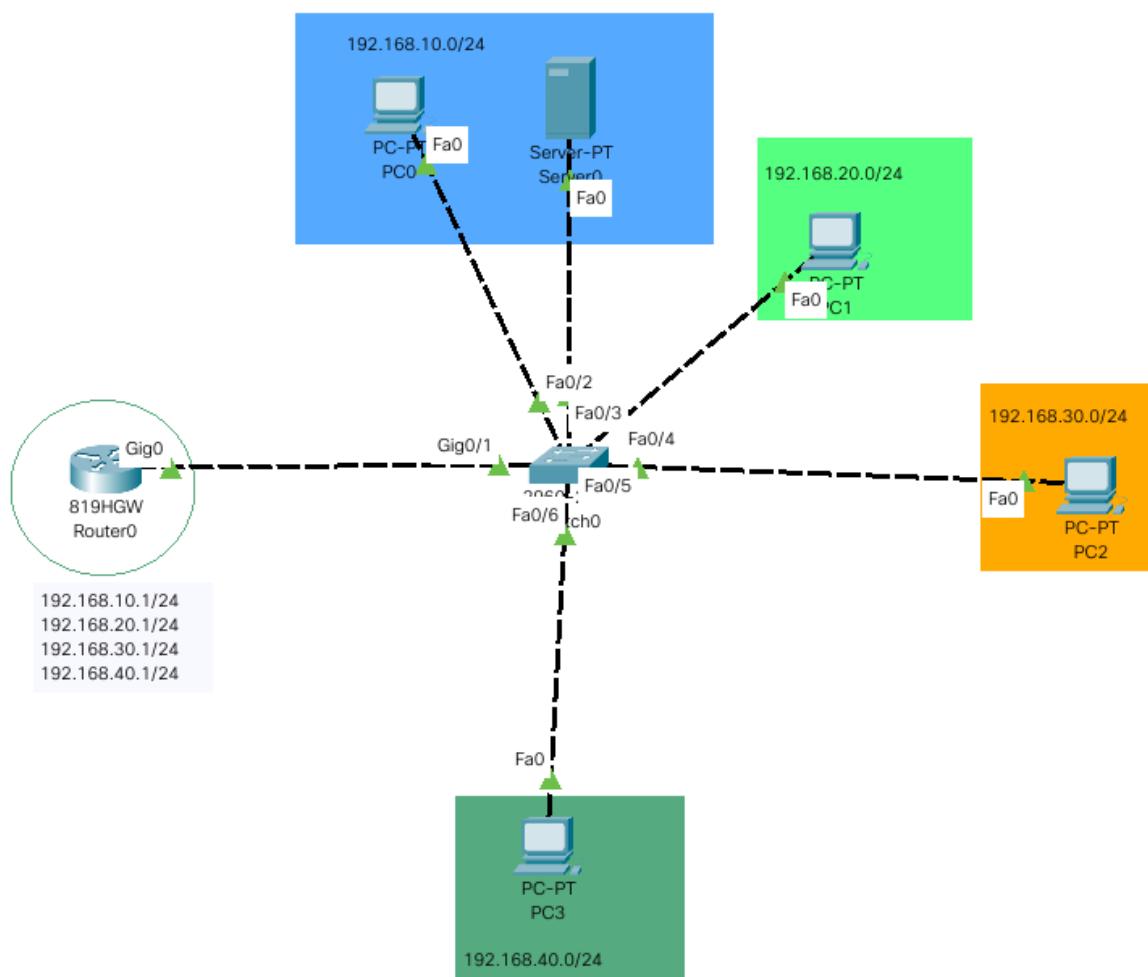
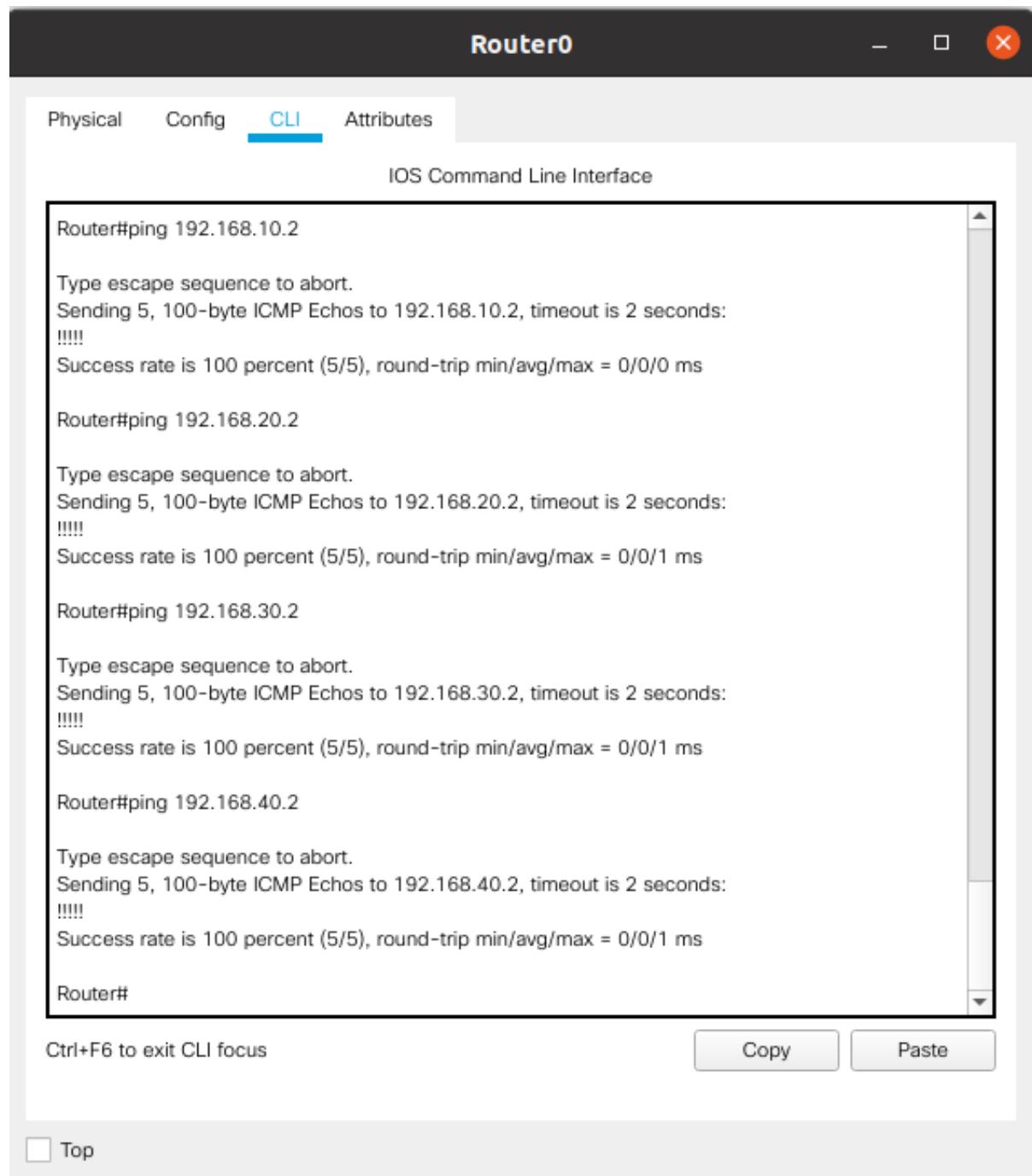


FIGURE 1 – Schéma sur Cisco Packet Tracer

3 Test et vérification de la simulation

3.1 Routeur vers clients



The screenshot shows a window titled "Router0" with a tab bar containing "Physical", "Config", "CLI" (which is highlighted in blue), and "Attributes". The main area is labeled "IOS Command Line Interface". It displays the following output from the Router's CLI:

```
Router#ping 192.168.10.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.10.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/0 ms

Router#ping 192.168.20.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.20.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

Router#ping 192.168.30.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.30.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

Router#ping 192.168.40.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.40.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

Router#
```

At the bottom left, there is a note: "Ctrl+F6 to exit CLI focus". On the right side, there are "Copy" and "Paste" buttons. Below the window, there is a checkbox labeled "Top".

FIGURE 2 – CLI du routeur

3.2 Client vers routeur

PC0

Physical Config Desktop Programming Attributes

Command Prompt X

```
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=255

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:\>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time<1ms TTL=255

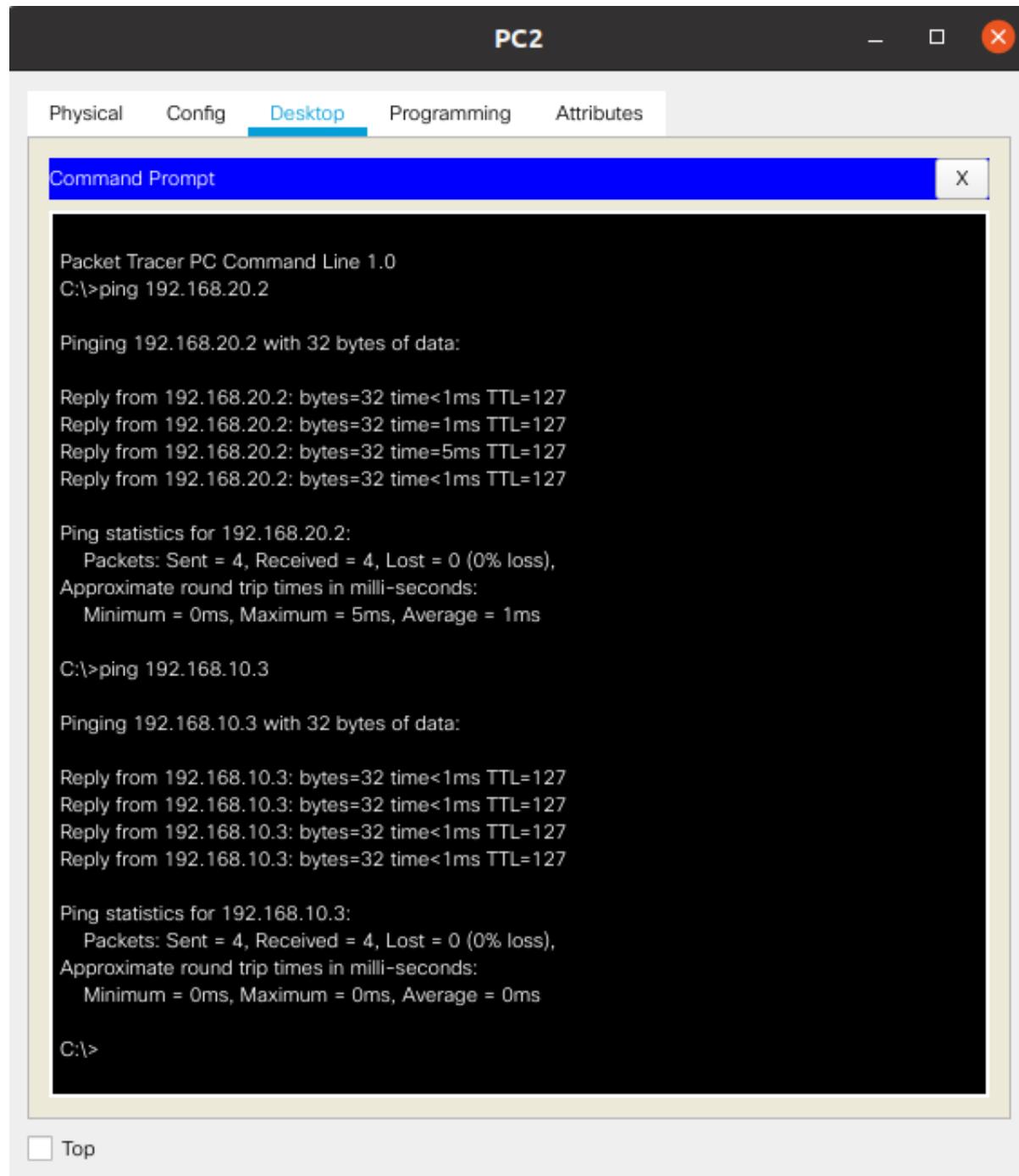
Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Top

FIGURE 3 – CLI d'un client dans le VLAN 10

3.3 Client à Client



The screenshot shows a 'PC2' interface with a 'Desktop' tab selected. A 'Command Prompt' window is open, displaying the following output:

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time<1ms TTL=127
Reply from 192.168.20.2: bytes=32 time=1ms TTL=127
Reply from 192.168.20.2: bytes=32 time=5ms TTL=127
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 5ms, Average = 1ms

C:\>ping 192.168.10.3

Pinging 192.168.10.3 with 32 bytes of data:

Reply from 192.168.10.3: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.10.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

FIGURE 4 – CLI d'un client dans le VLAN 10