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DES SCIENCES

Université: Institut Universitaire des Sciences (IUS)

TD N^o 3: Réseau1

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Professeur: Ismael SAINT AMOUR

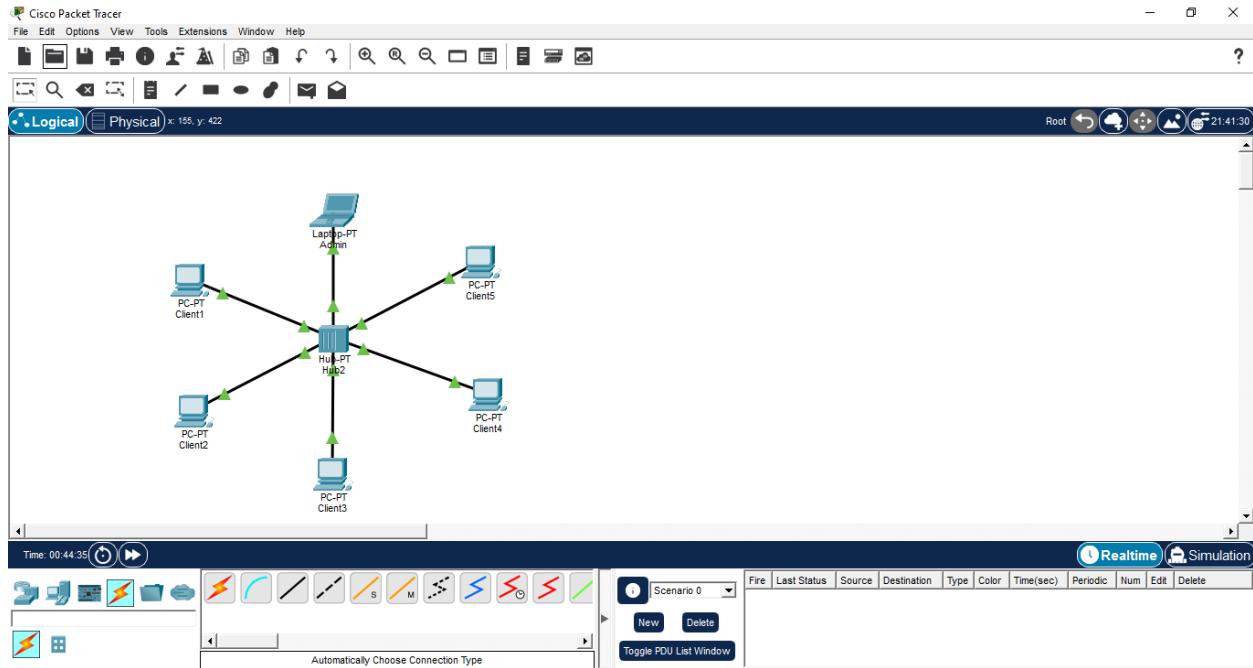
Niveau: 3^{ème} Année

Date: 29/Déc/2025

Objectif du TD

L'objectif de ce travail dirigé est de reproduire différentes topologies réseau en configurant des adresses IPv4 et IPv6, puis de vérifier la connectivité entre les équipements à l'aide des commandes réseau appropriées.

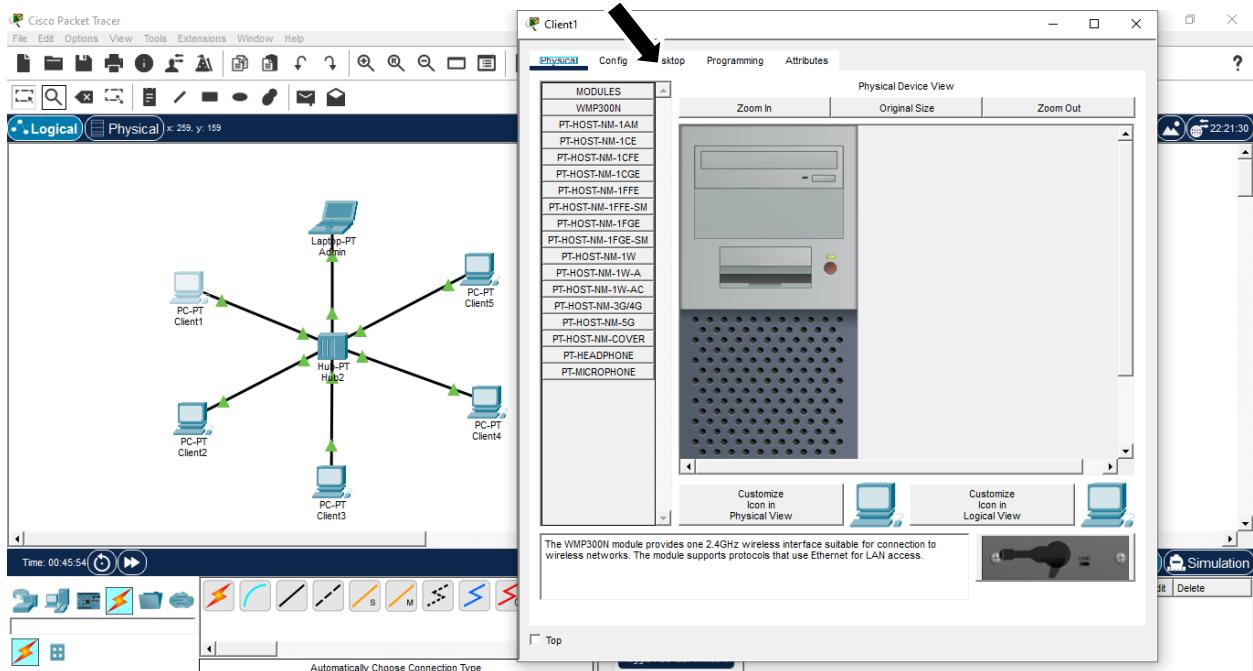
1) J'ai Reproduit cette topologie en configurant les adresses IPv4, puis en vérifiant la connectivité.



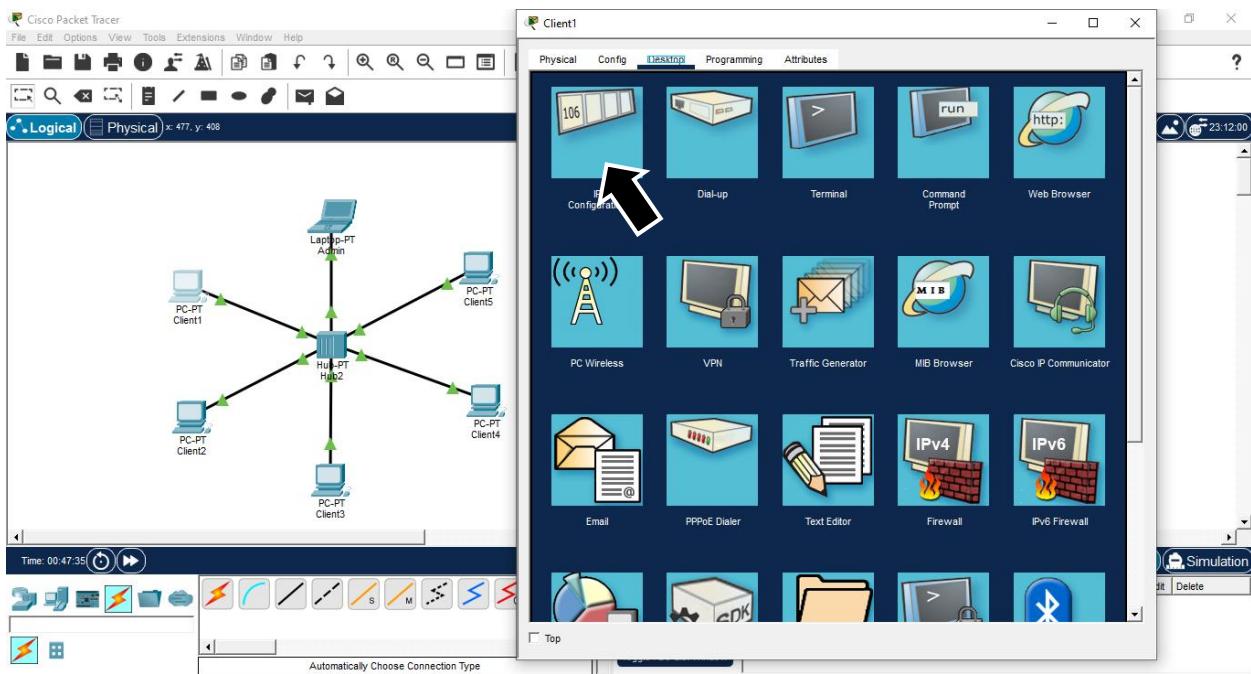
- ❖ La topologie réseau exigée a été mise en place avec succès.

a) Configuration l'adresse IPv4 pour le PC Client 1:

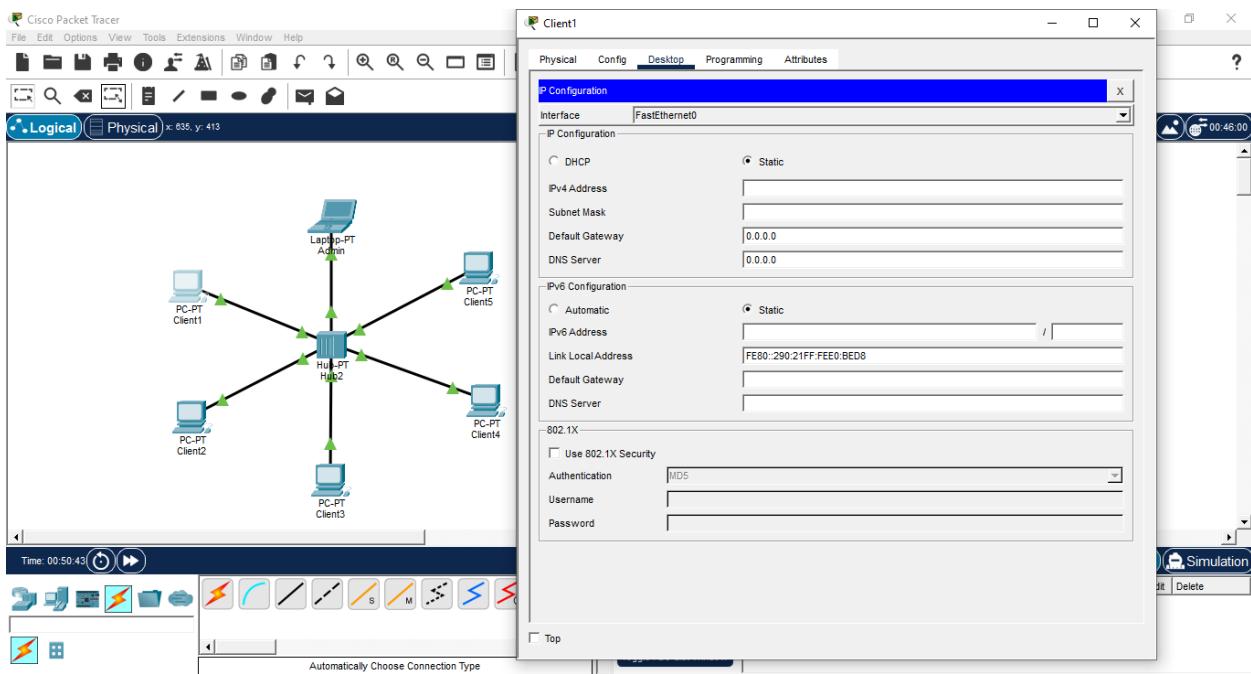
- Client1:192.168.1.10



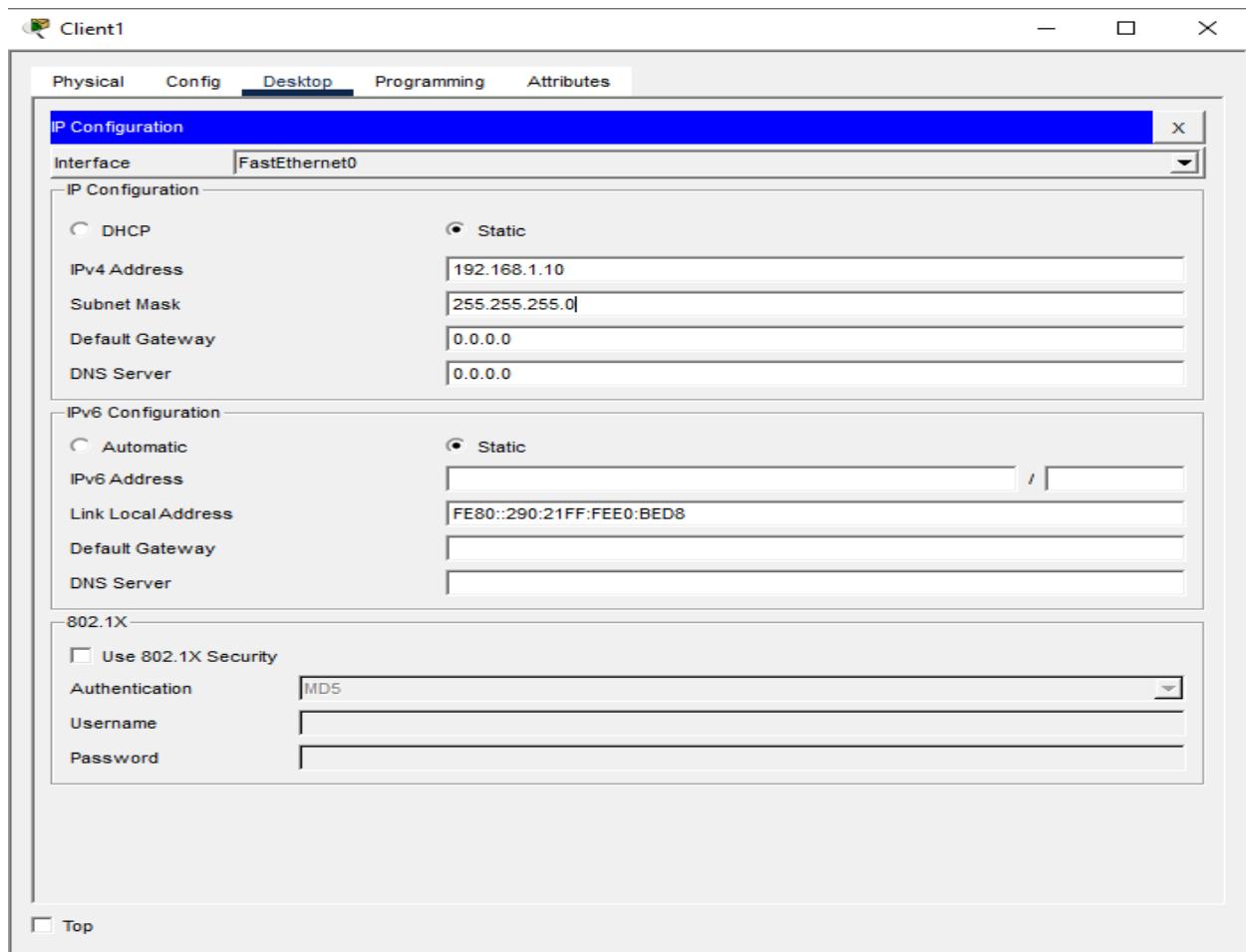
- ❖ Dans cette image, j'ai cliqué sur le client 1 afin de le configurer avec une adresse IPv4.



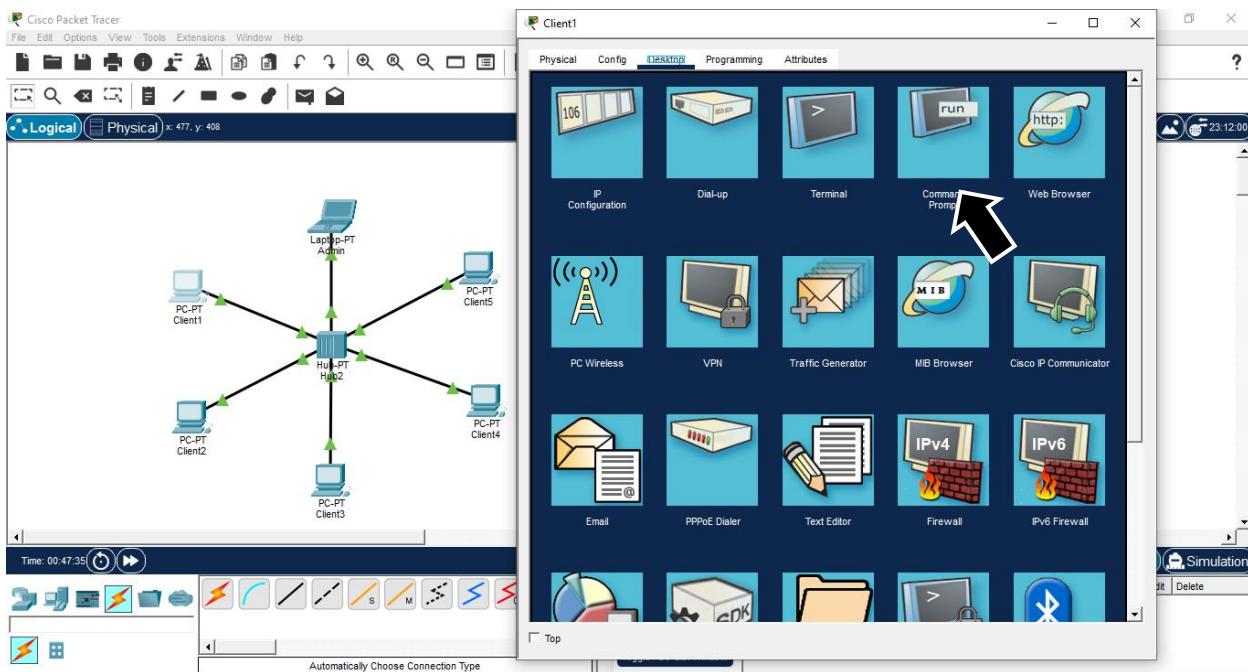
- ❖ Sur cette image, j'ai cliqué sur IP Configuration afin de passer à l'étape suivante.



- ❖ Sur cette image, j'ai cliqué sur Desktop afin de saisir l'adresse IP du client 1.



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau du client1.



- ❖ Sur cette image, j'ai cliqué sur Command Prompt afin de passer à l'étape suivante.

- J'ai Vérifié la connectivité en faisant un ping pour le PC Client 1

The screenshot shows a window titled "Client1" with a tab bar containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tab bar is a "Command Prompt" window with the following text:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.10

Pinging 192.168.1.10 with 32 bytes of data:

Reply from 192.168.1.10: bytes=32 time=5ms TTL=128
Reply from 192.168.1.10: bytes=32 time=7ms TTL=128
Reply from 192.168.1.10: bytes=32 time=8ms TTL=128
Reply from 192.168.1.10: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 8ms, Average = 5ms

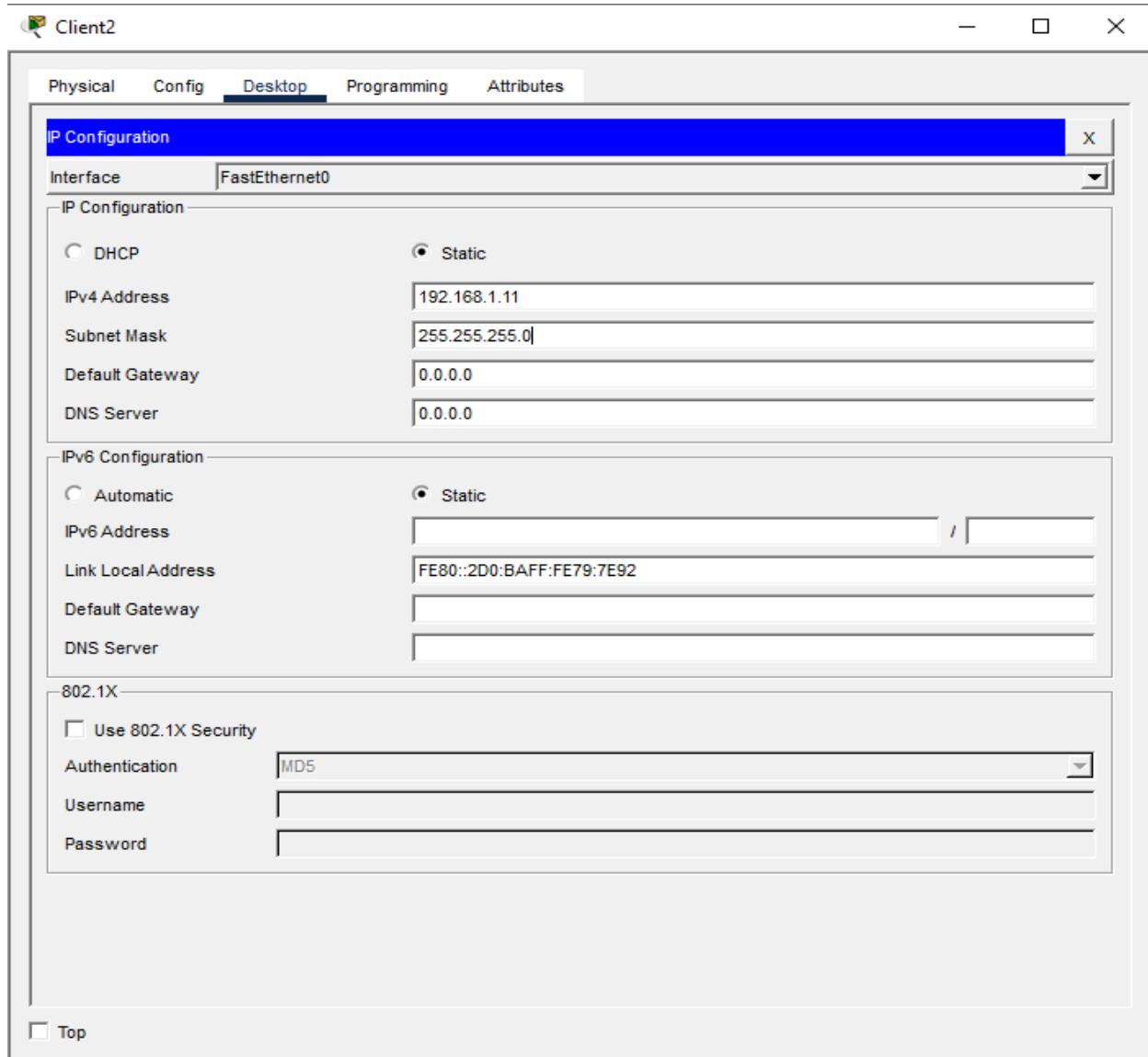
C:\>
```

At the bottom left of the Command Prompt window, there is a "Top" button.

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 1.

b) Configuration l'adresse IPv4 pour le PC Client 2:

- Client2:192.168.1.11



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau pour le **Client2**.

- J'ai Vérifié la connectivité en faisant un ping pour le PC

Client 2

The screenshot shows a window titled "Client2" with a tab bar containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tabs is a blue header bar labeled "Command Prompt" with a close button. The main area of the window is a black terminal window displaying the output of a ping command. The text in the terminal is as follows:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:

Reply from 192.168.1.11: bytes=32 time=13ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128
Reply from 192.168.1.11: bytes=32 time=1ms TTL=128
Reply from 192.168.1.11: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 13ms, Average = 3ms

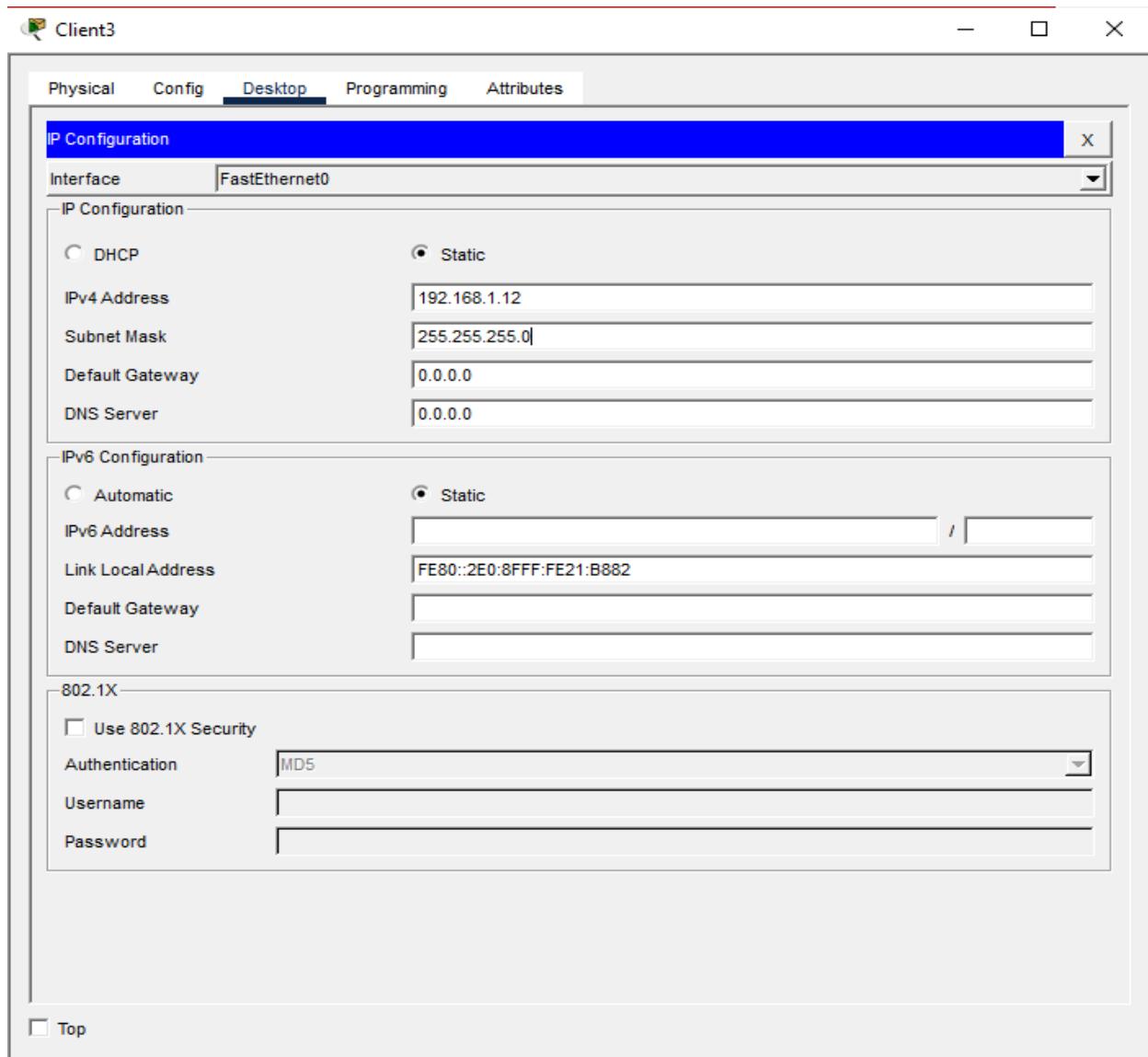
C:\>|
```

At the bottom left of the terminal window, there is a small checkbox labeled "Top".

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 2.

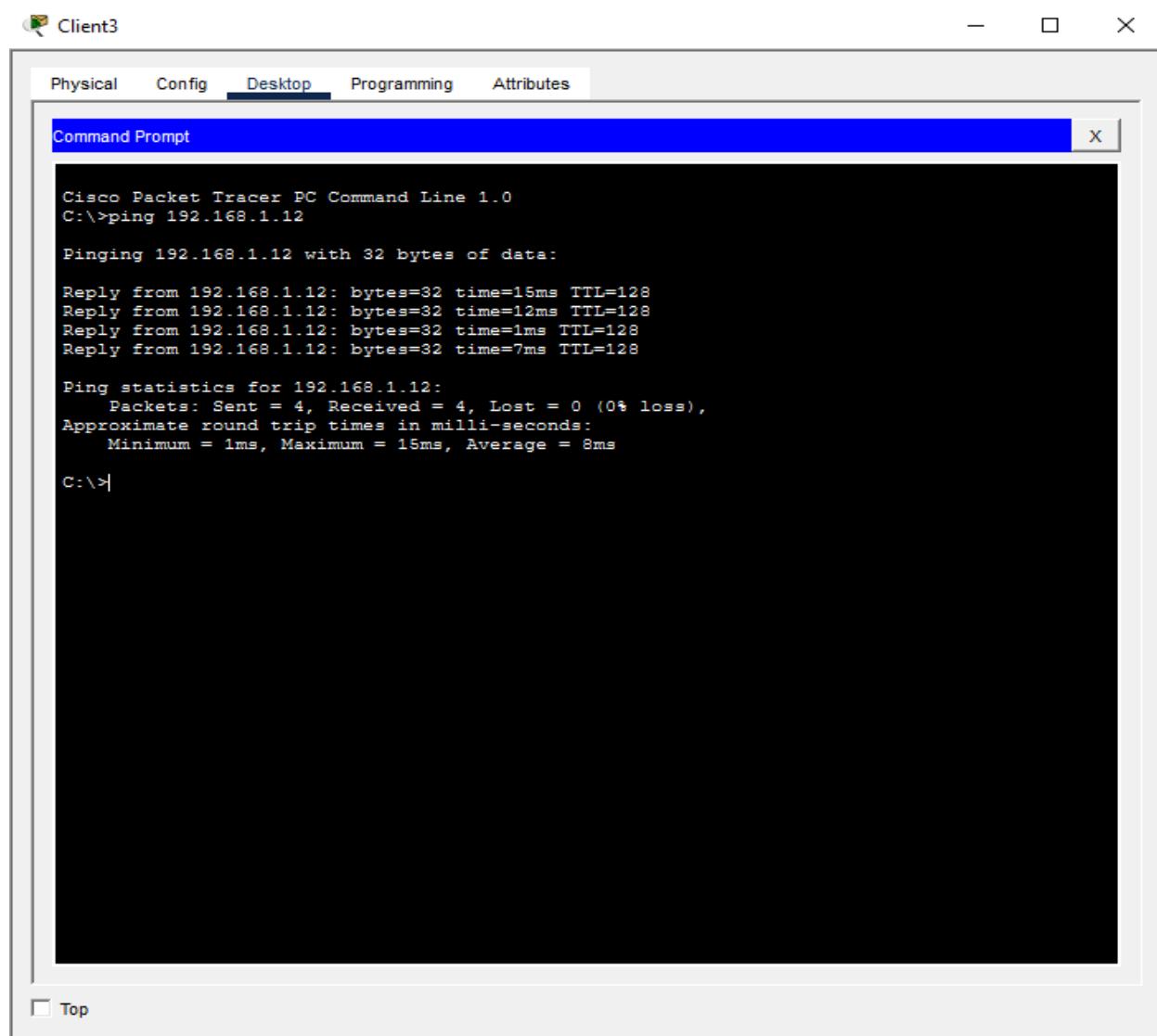
c) Configuration l'adresse IPv4 pour le PC Client 3:

- Client3:192.168.1.12



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau pour le **Client3**.

- J'ai Vérifié la connectivité en faisant un ping pour le PC Client 3



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

Pinging 192.168.1.12 with 32 bytes of data:

Reply from 192.168.1.12: bytes=32 time=15ms TTL=128
Reply from 192.168.1.12: bytes=32 time=12ms TTL=128
Reply from 192.168.1.12: bytes=32 time=1ms TTL=128
Reply from 192.168.1.12: bytes=32 time=7ms TTL=128

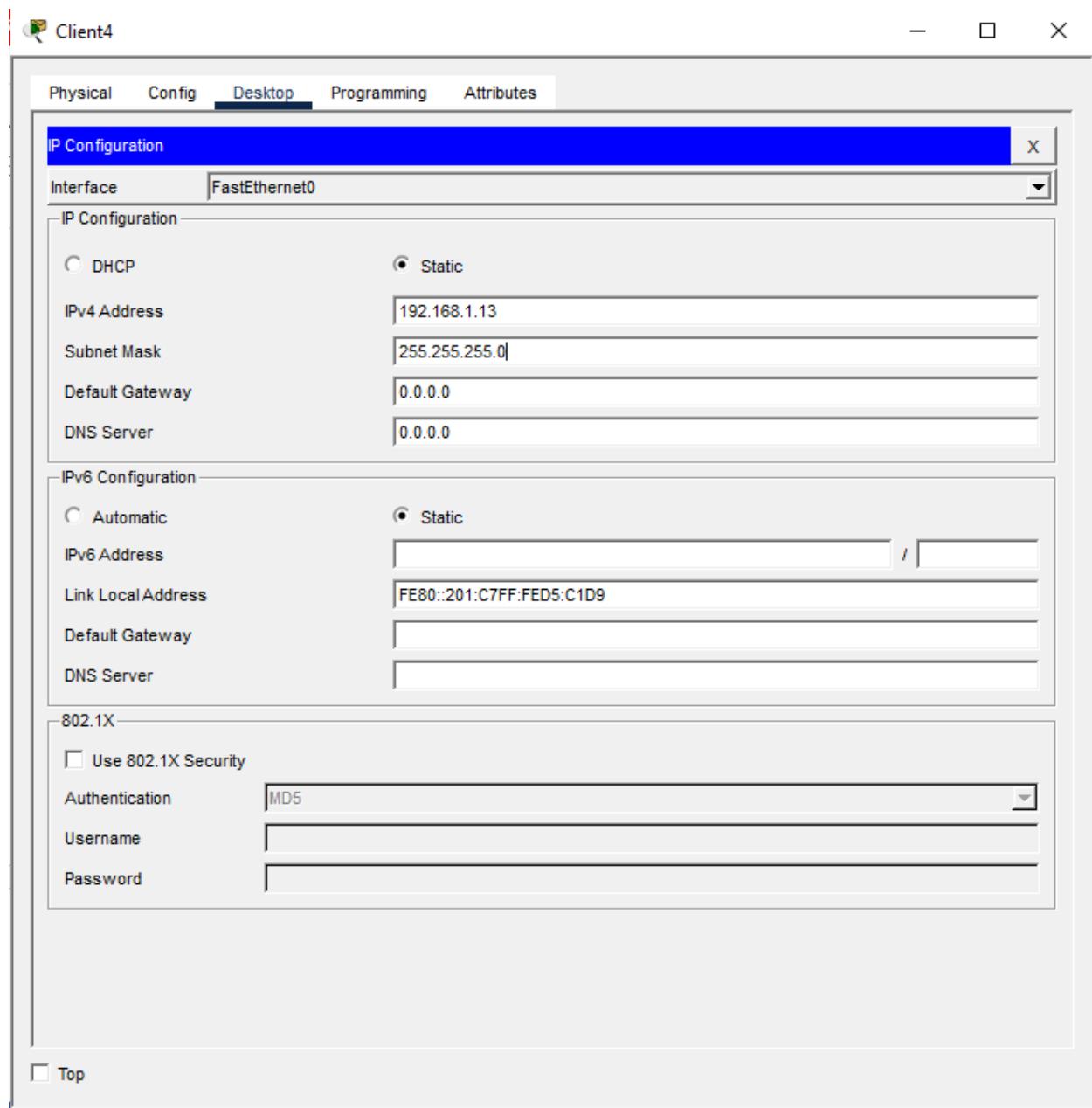
Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 15ms, Average = 8ms

C:\>|
```

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 3.

d) Configuration l'adresse IPv4 pour le PC Client 4:

- Client4:192.168.1.13



- Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau pour le **Client4**.

- J'ai Vérifié la connectivité en faisant un ping pour le PC Client 4

The screenshot shows a window titled "Client4" with a tab bar containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tabs is a "Command Prompt" window with a blue header bar. The command prompt displays the following output:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.13

Pinging 192.168.1.13 with 32 bytes of data:

Reply from 192.168.1.13: bytes=32 time=20ms TTL=128
Reply from 192.168.1.13: bytes=32 time=1ms TTL=128
Reply from 192.168.1.13: bytes=32 time=8ms TTL=128
Reply from 192.168.1.13: bytes=32 time=2ms TTL=128

Ping statistics for 192.168.1.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 20ms, Average = 7ms

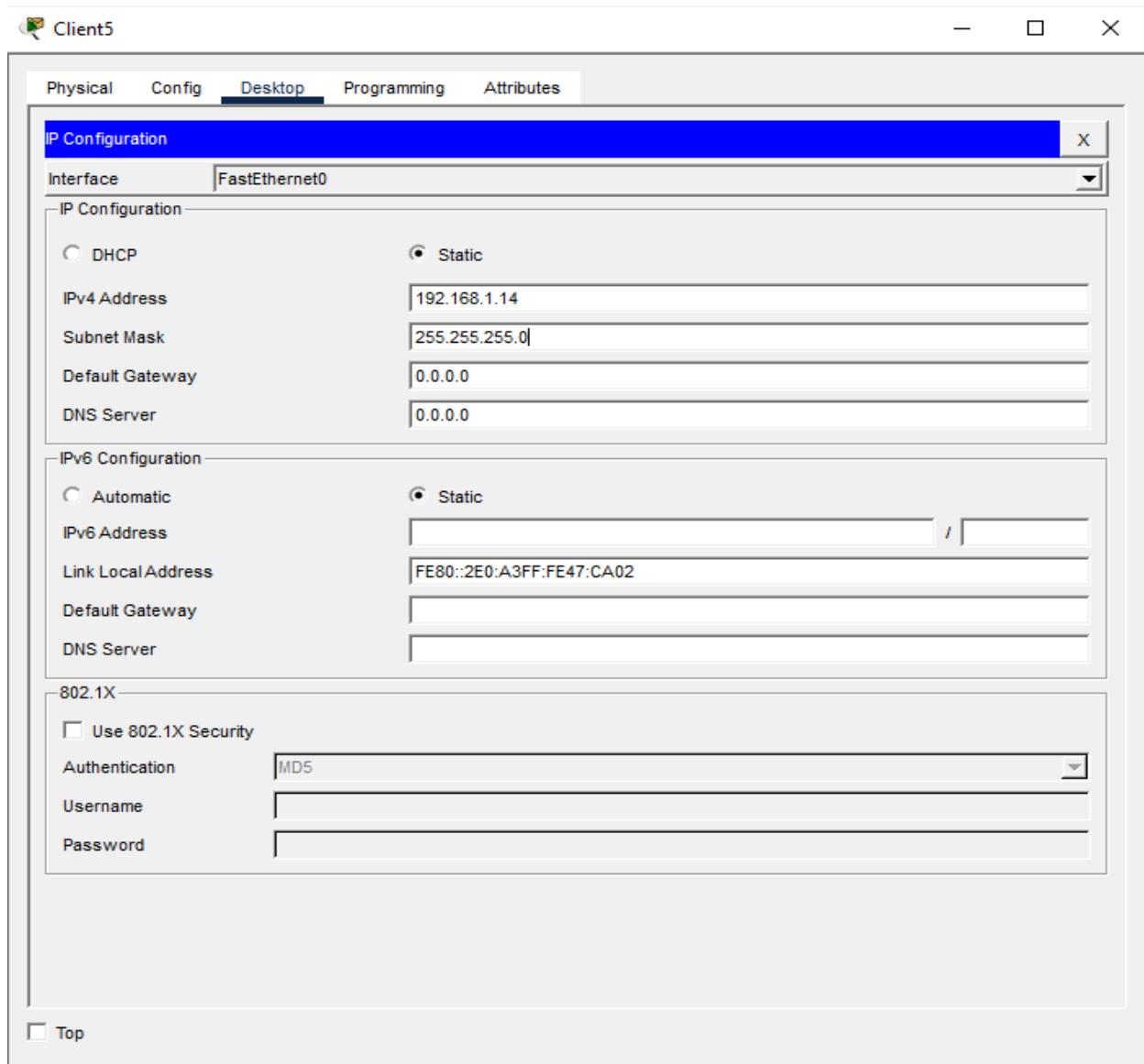
C:\>|
```

At the bottom left of the main window area, there is a small checkbox labeled "Top".

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 4.

e) Configuration l'adresse IPv4 pour le PC Client 5:

- Client5:192.168.1.14



- Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau pour le **Client5**.

- J'ai Vérifié la connectivité en faisant un ping pour le PC Client 5

The screenshot shows a window titled "Client5" with a tab bar containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tabs is a "Command Prompt" window with a blue header bar. The command prompt displays the following output:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.14

Pinging 192.168.1.14 with 32 bytes of data:

Reply from 192.168.1.14: bytes=32 time=13ms TTL=128
Reply from 192.168.1.14: bytes=32 time=21ms TTL=128
Reply from 192.168.1.14: bytes=32 time=22ms TTL=128
Reply from 192.168.1.14: bytes=32 time=7ms TTL=128

Ping statistics for 192.168.1.14:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 7ms, Maximum = 22ms, Average = 16ms

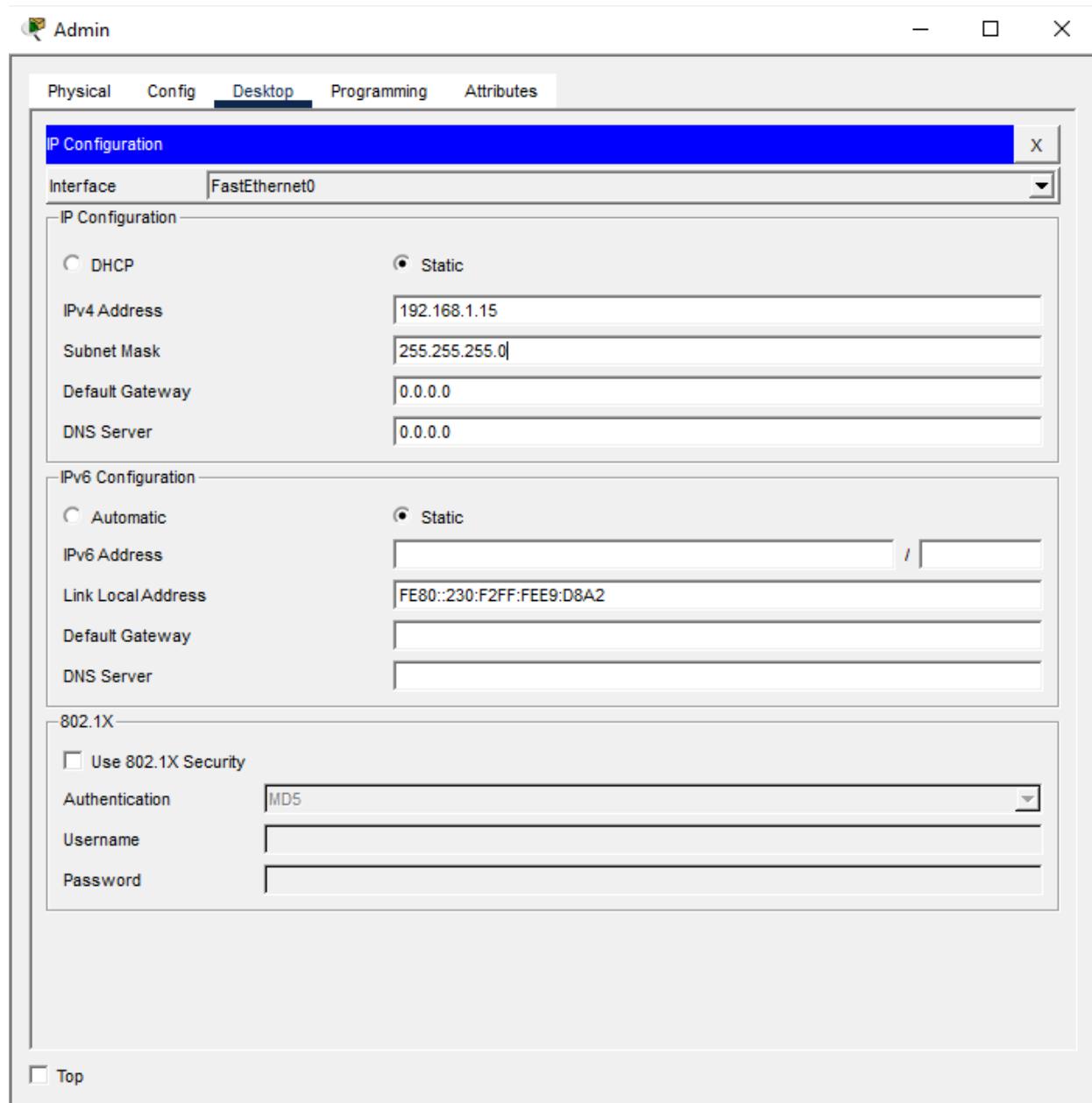
C:\>|
```

At the bottom left of the main window area, there is a small checkbox labeled "Top".

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 5.

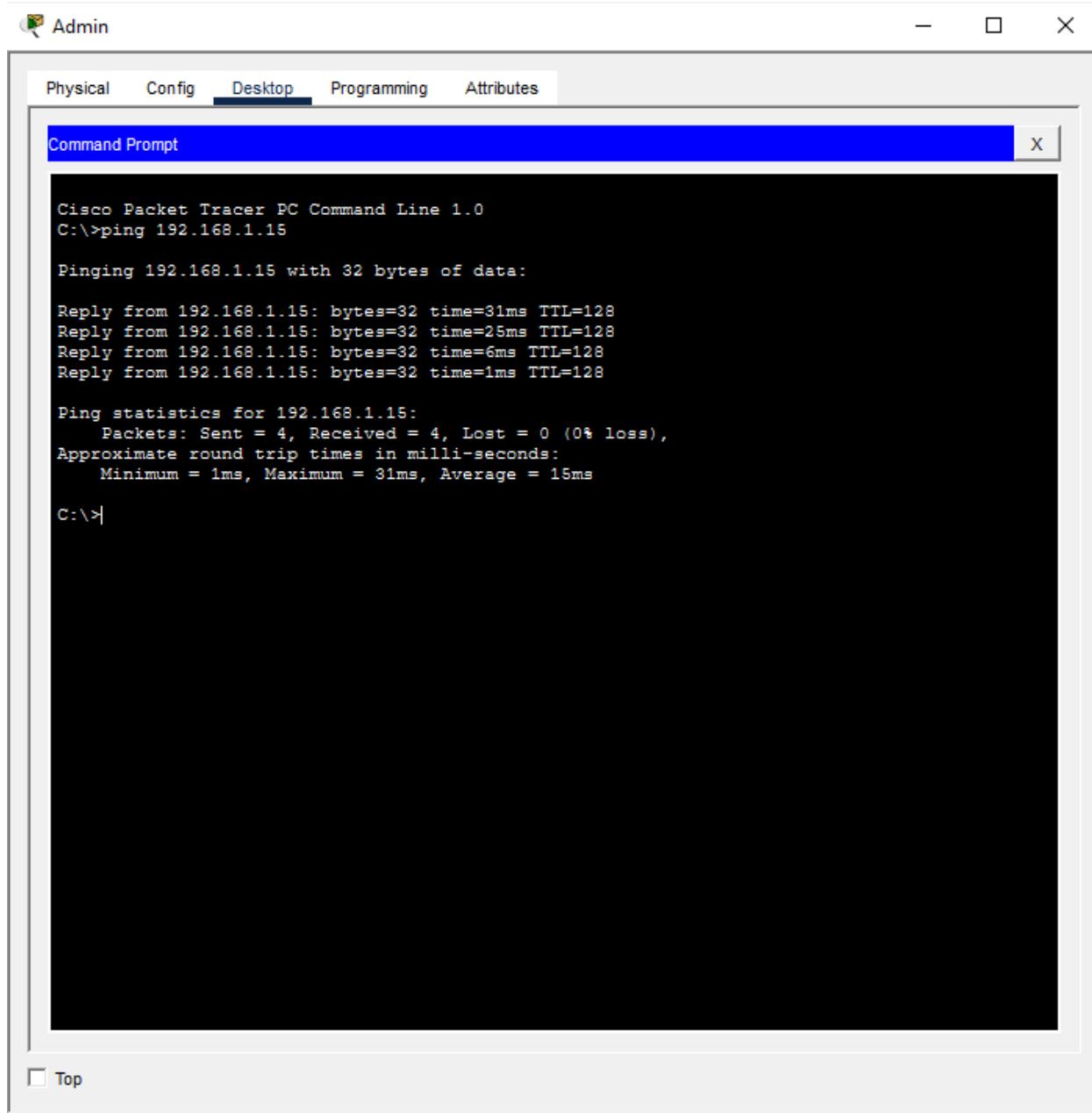
f) Configuration l'adresse IPv4 pour le PC Admin:

- Admin:192.168.1.15



- Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau du **PC Admin**.

- J'ai Vérifié la connectivité en faisant un ping pour le PC Admin



The screenshot shows a window titled "Admin" with a tab bar at the top containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tab bar is a title bar for "Command Prompt" with a close button. The main area of the window displays the output of a ping command:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.15

Pinging 192.168.1.15 with 32 bytes of data:

Reply from 192.168.1.15: bytes=32 time=31ms TTL=128
Reply from 192.168.1.15: bytes=32 time=25ms TTL=128
Reply from 192.168.1.15: bytes=32 time=6ms TTL=128
Reply from 192.168.1.15: bytes=32 time=1ms TTL=128

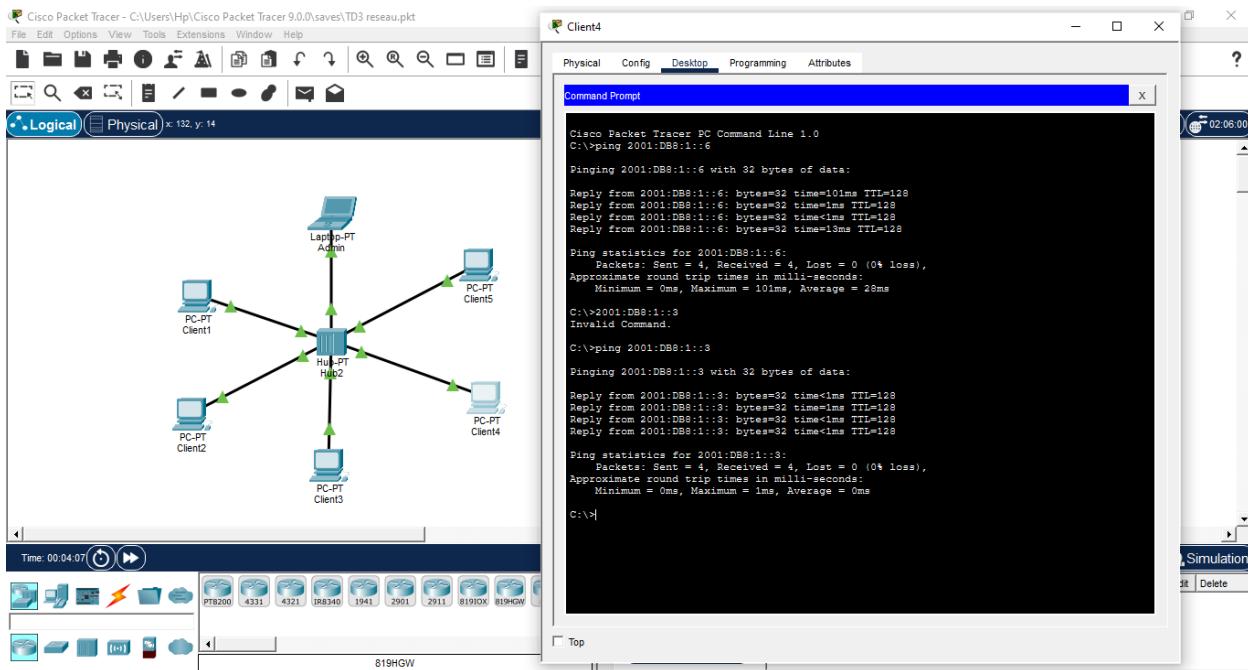
Ping statistics for 192.168.1.15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 31ms, Average = 15ms

C:\>|
```

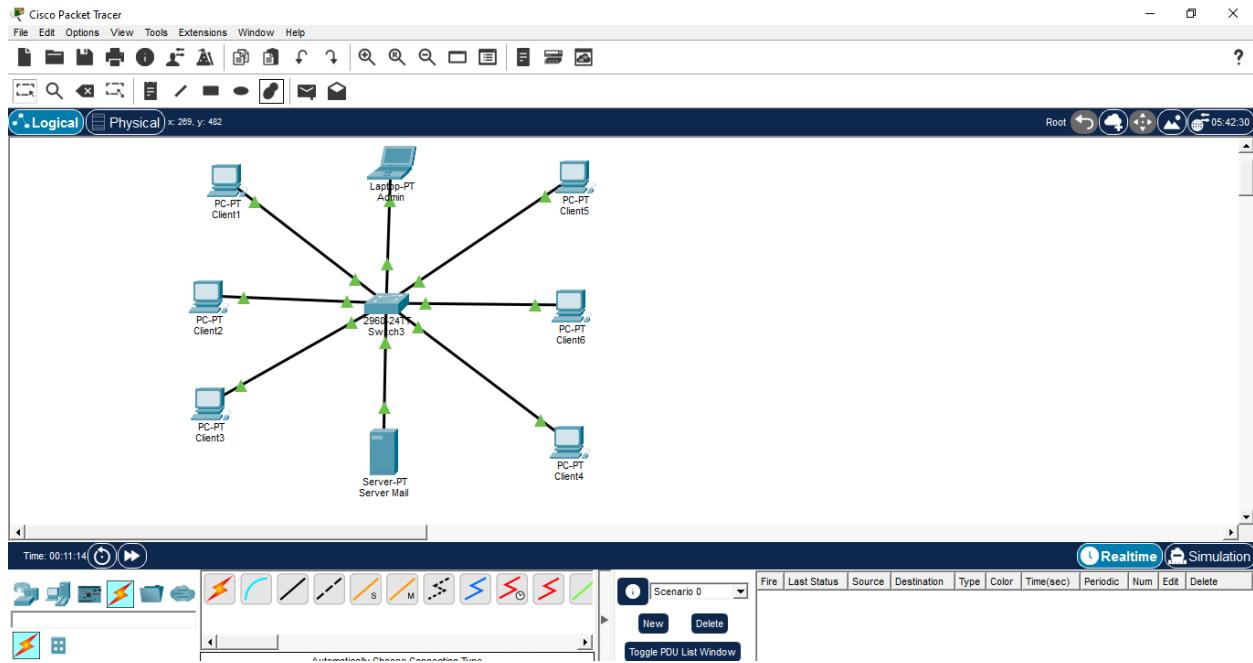
At the bottom left of the window, there is a "Top" button.

Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC Admin.

3. Parmi les topologies, choisissez-en une, configurez les adresses IPv4 et testez la connectivité.

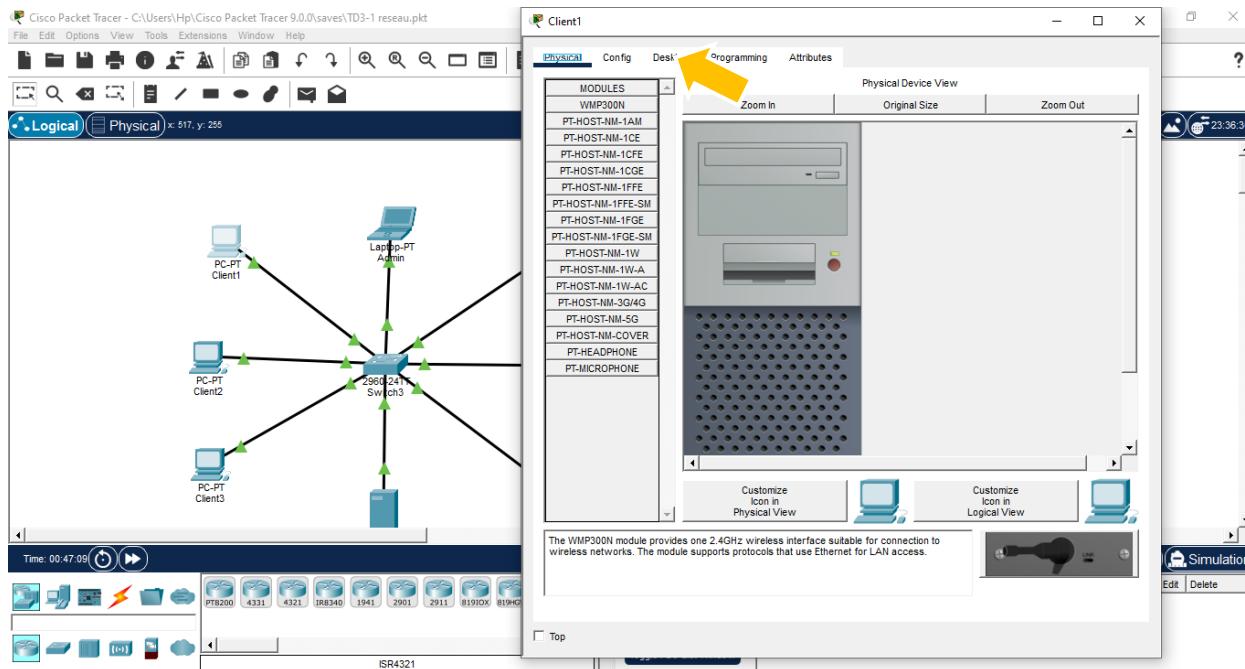


2) J'ai Reproduit cette topologie en configurant les adresses IPv4, puis en vérifiant la connectivité.

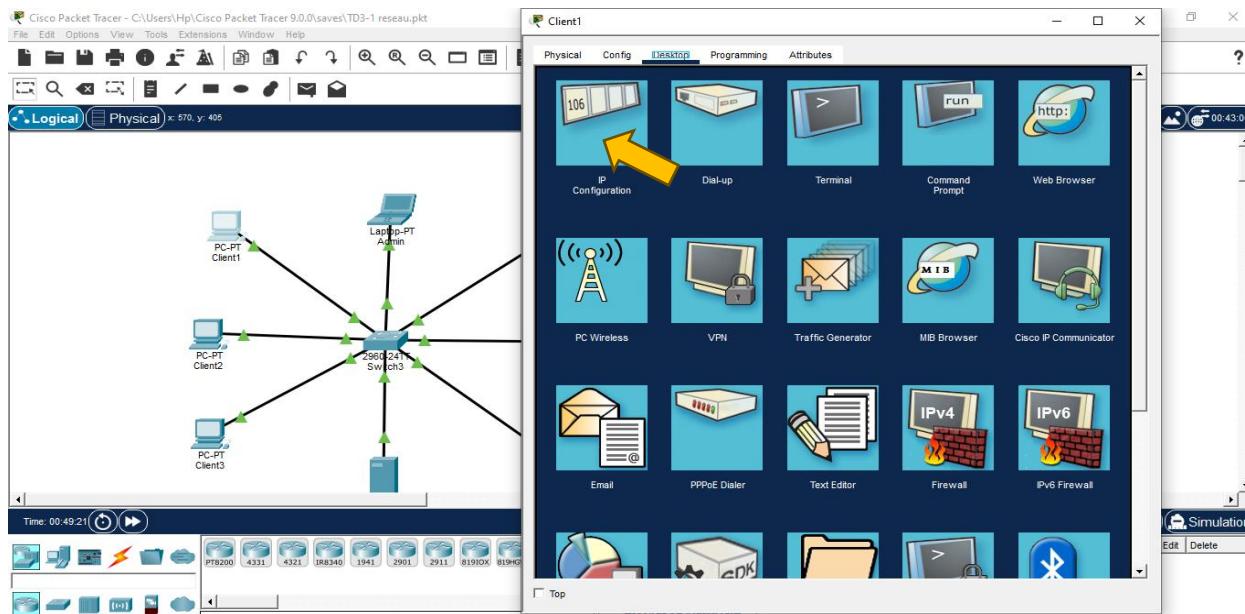


J'ai reproduit correctement la topologie demandée.

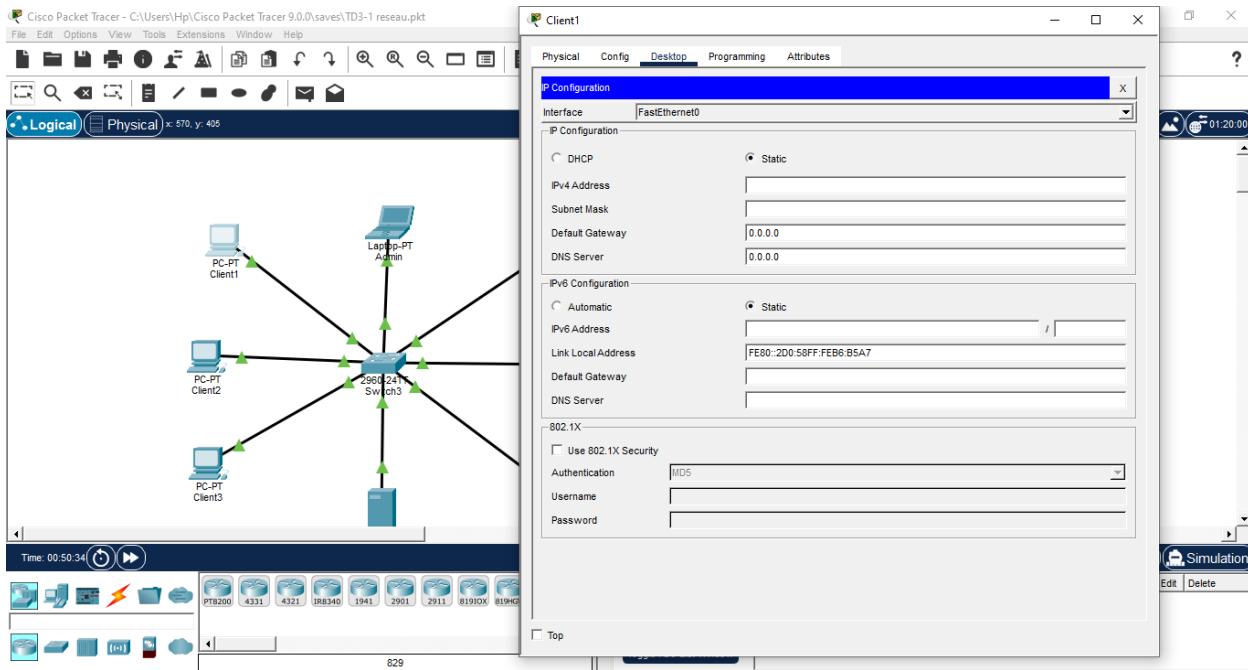
a) Pour Client 1



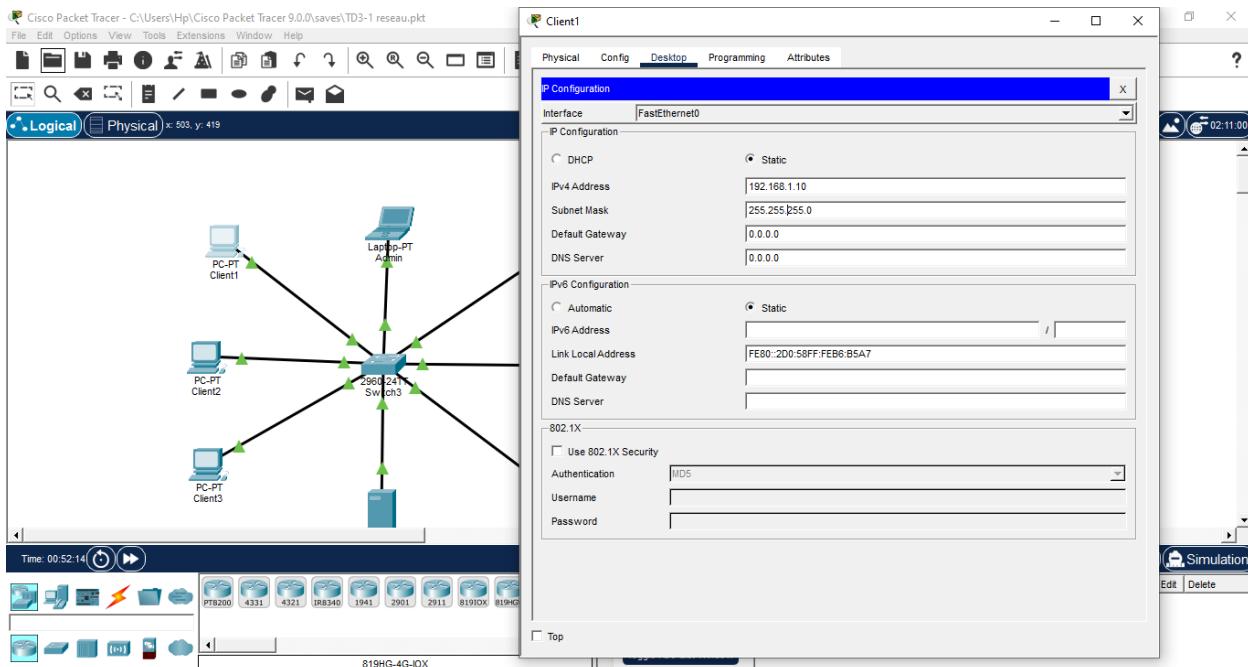
- Dans cette image, j'ai cliqué sur le client1 pour configurer avec l'adresse IPv4.



- Sur cette image, j'ai effectué un clic sur **IP configuration** pour passer à l'étape suivant.



- ❖ Sur cette image, j'ai cliqué sur Desktop afin de saisir l'adresse IP du client 1.



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau pour le Client1.

- J'ai Vérifié la connectivité en faisant un ping pour le Client 1

The screenshot shows a window titled "Client1" with a tab bar at the top containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tab bar is a "Command Prompt" window. The command prompt displays the following output:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.10

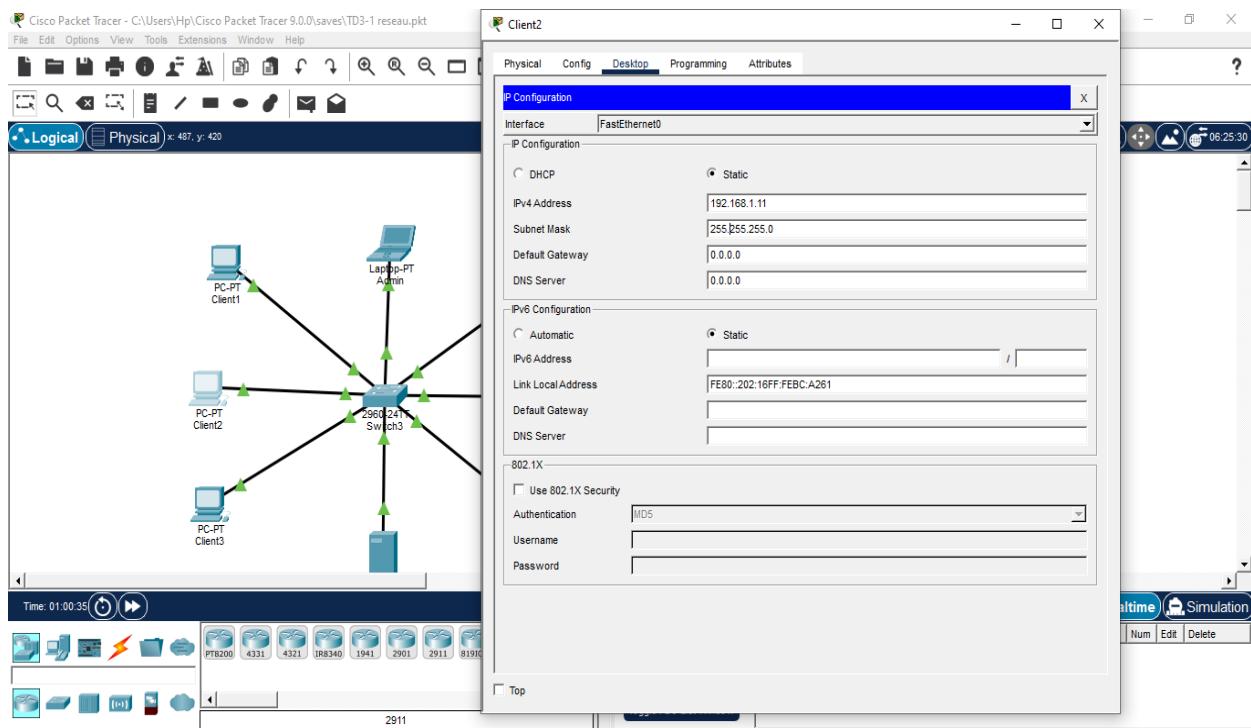
Pinging 192.168.1.10 with 32 bytes of data:
Reply from 192.168.1.10: bytes=32 time=24ms TTL=128
Reply from 192.168.1.10: bytes=32 time=23ms TTL=128
Reply from 192.168.1.10: bytes=32 time=21ms TTL=128
Reply from 192.168.1.10: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 24ms, Average = 17ms

C:\>
```

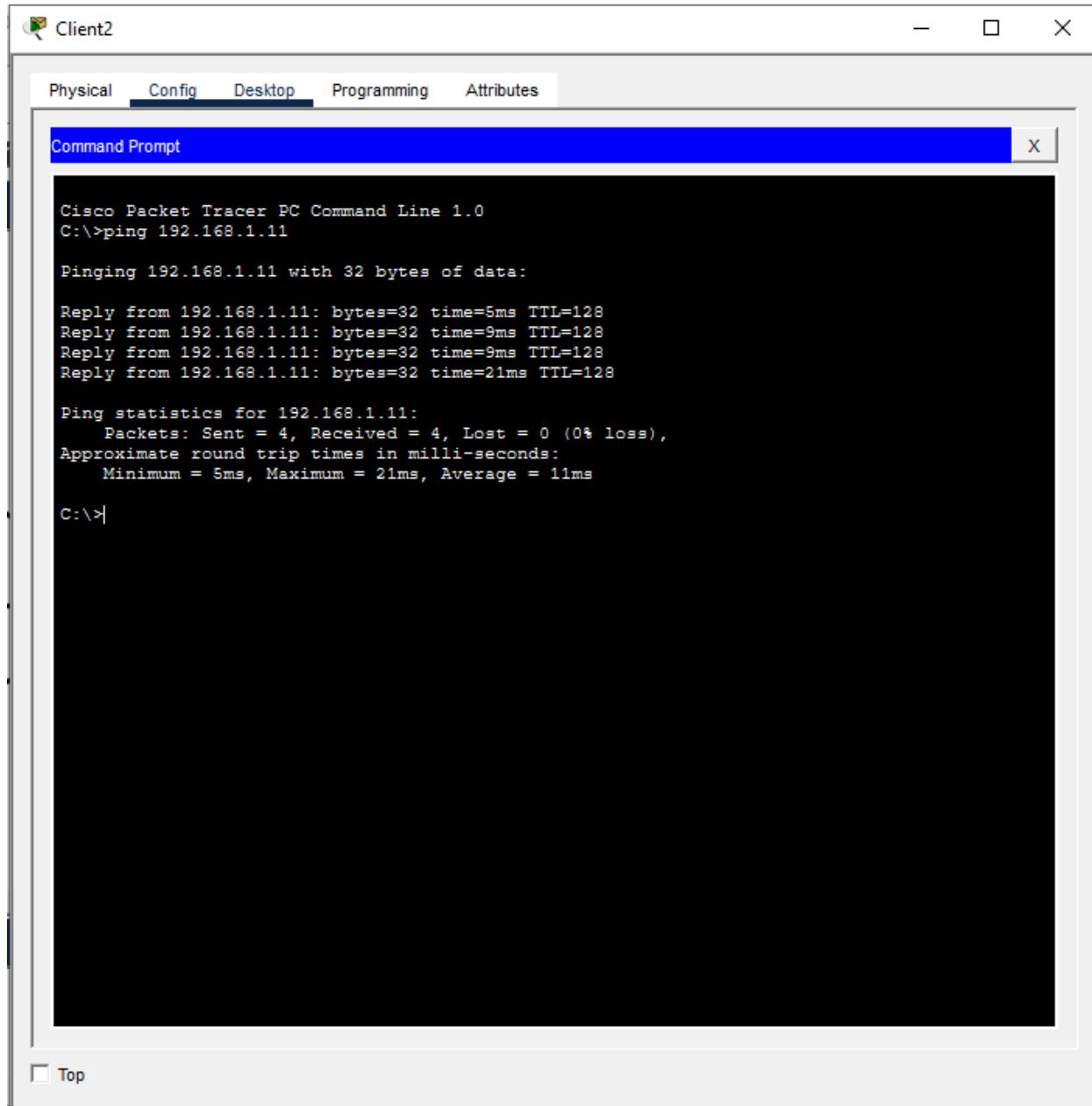
- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 1.

b) Pour Client 2



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau pour le Client2.

- J'ai Vérifié la connectivité en faisant un ping pour le Client 2



The screenshot shows a window titled "Client2" with a tab bar at the top. The "Desktop" tab is selected. Below the tabs is a "Command Prompt" window with a blue header bar containing the text "Command Prompt". The main area of the window displays the following text:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:

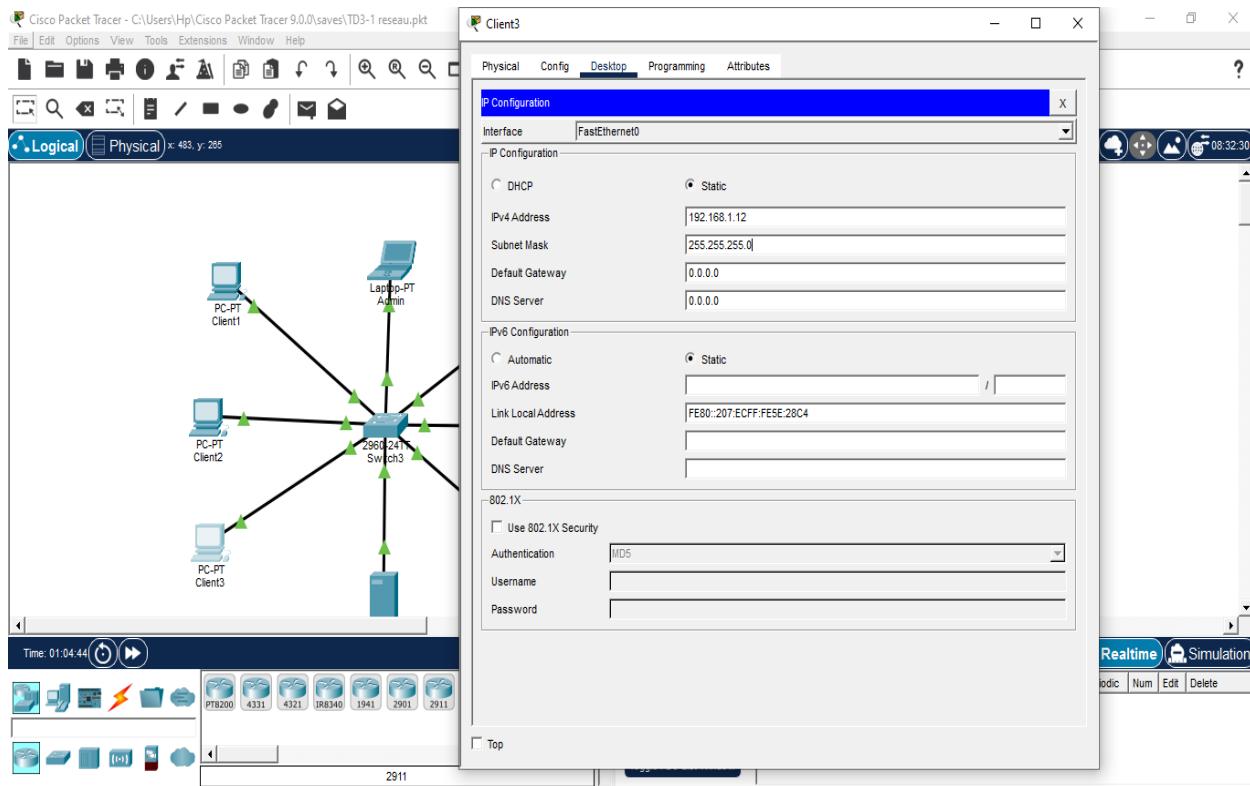
Reply from 192.168.1.11: bytes=32 time=6ms TTL=128
Reply from 192.168.1.11: bytes=32 time=9ms TTL=128
Reply from 192.168.1.11: bytes=32 time=9ms TTL=128
Reply from 192.168.1.11: bytes=32 time=21ms TTL=128

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 5ms, Maximum = 21ms, Average = 11ms

C:\>|
```

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 2.

c) Pour Client 3



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau pour le Client3.

- J'ai Vérifié la connectivité en faisant un ping pour le Client 3

The screenshot shows a window titled "Client3" with a tab bar containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tab bar is a "Command Prompt" window with a blue header bar labeled "Command Prompt" and a close button "X". The main area of the command prompt displays the following output:

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

Pinging 192.168.1.12 with 32 bytes of data:

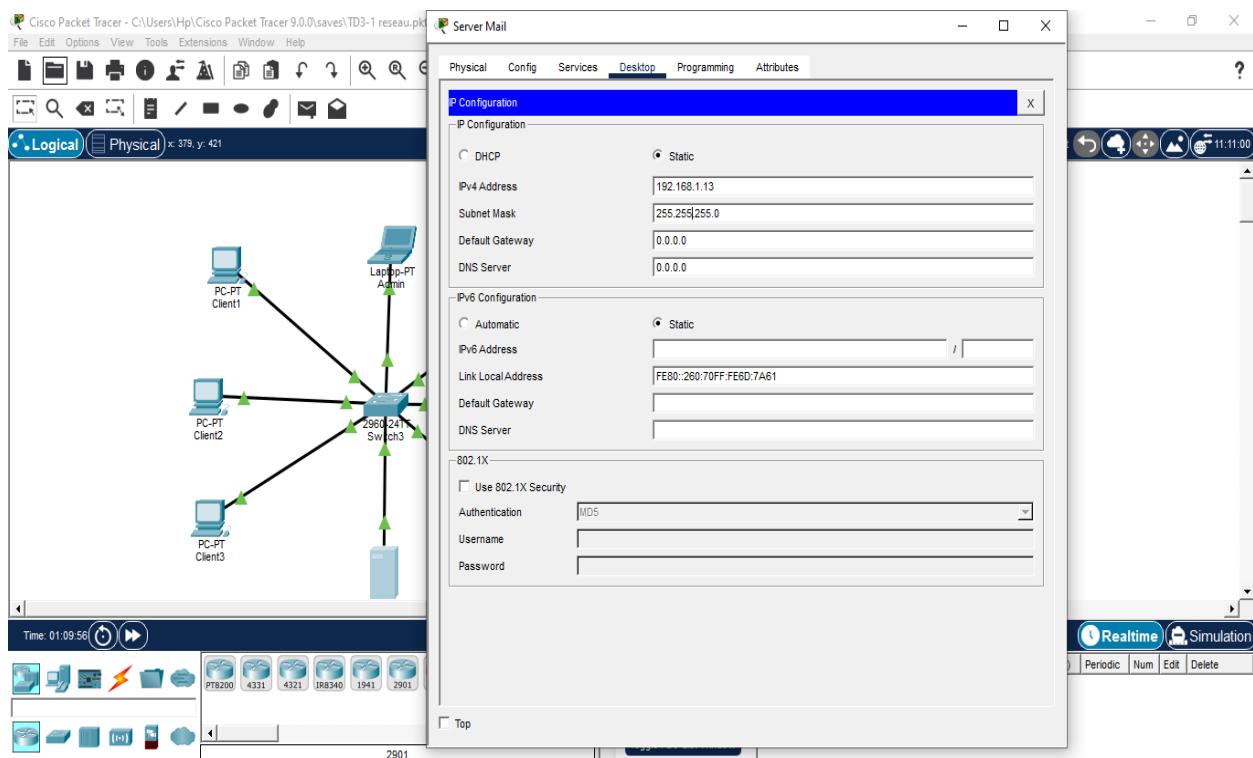
Reply from 192.168.1.12: bytes=32 time=13ms TTL=128
Reply from 192.168.1.12: bytes=32 time=11ms TTL=128
Reply from 192.168.1.12: bytes=32 time=26ms TTL=128
Reply from 192.168.1.12: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 26ms, Average = 12ms

C:\>
```

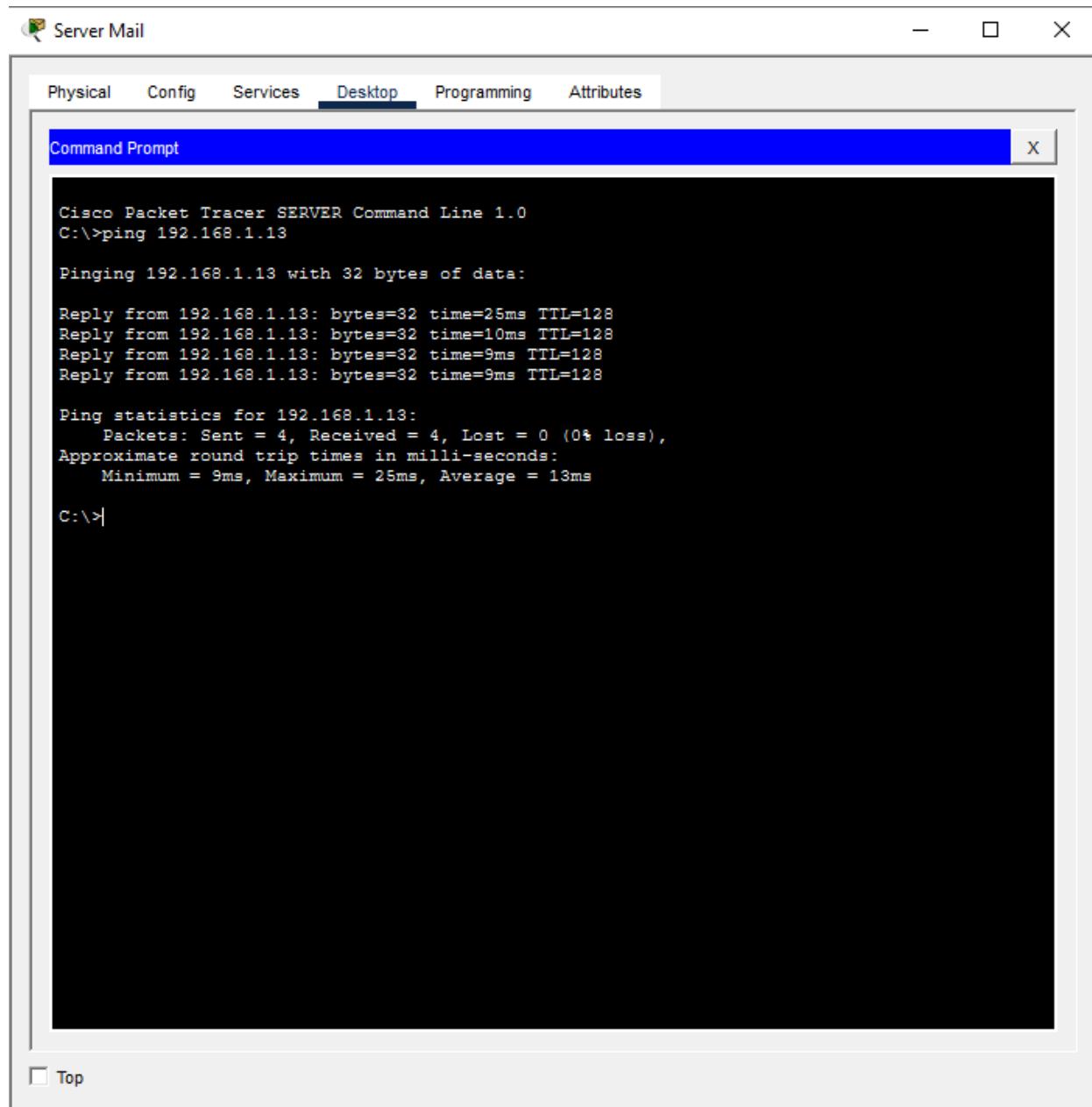
- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 3

- J'ai Vérifié la connectivité en faisant un ping pour le Server Mail



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau du Server Mail.

- J'ai Vérifié la connectivité pour le Server Mail



The screenshot shows a window titled "Server Mail" with a tab bar containing "Physical", "Config", "Services", "Desktop" (which is selected), "Programming", and "Attributes". Below the tab bar is a title bar for a "Command Prompt" window. The command prompt displays the following output:

```
Cisco Packet Tracer SERVER Command Line 1.0
C:\>ping 192.168.1.13

Pinging 192.168.1.13 with 32 bytes of data:

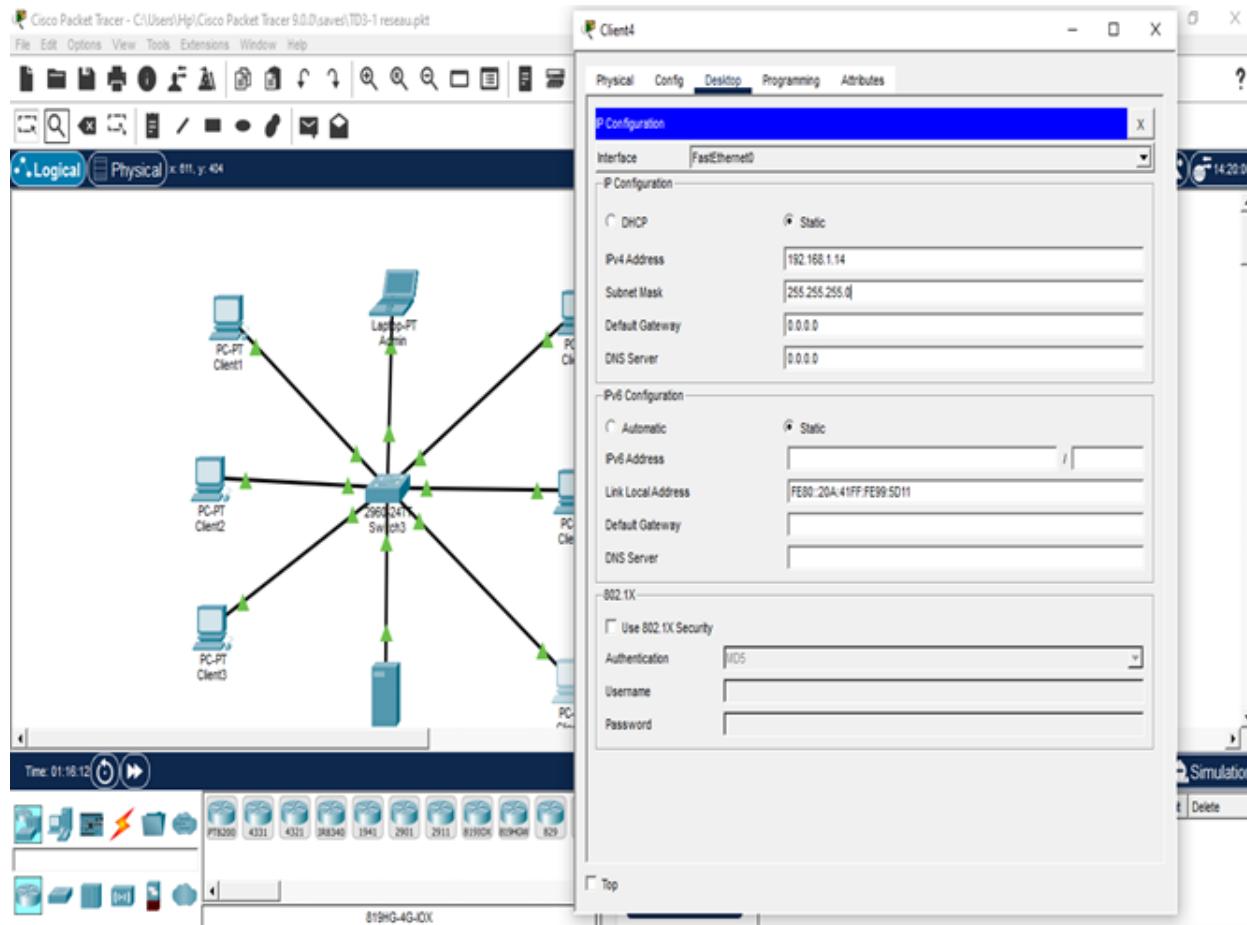
Reply from 192.168.1.13: bytes=32 time=25ms TTL=128
Reply from 192.168.1.13: bytes=32 time=10ms TTL=128
Reply from 192.168.1.13: bytes=32 time=9ms TTL=128
Reply from 192.168.1.13: bytes=32 time=9ms TTL=128

Ping statistics for 192.168.1.13:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 9ms, Maximum = 25ms, Average = 13ms

C:\>|
```

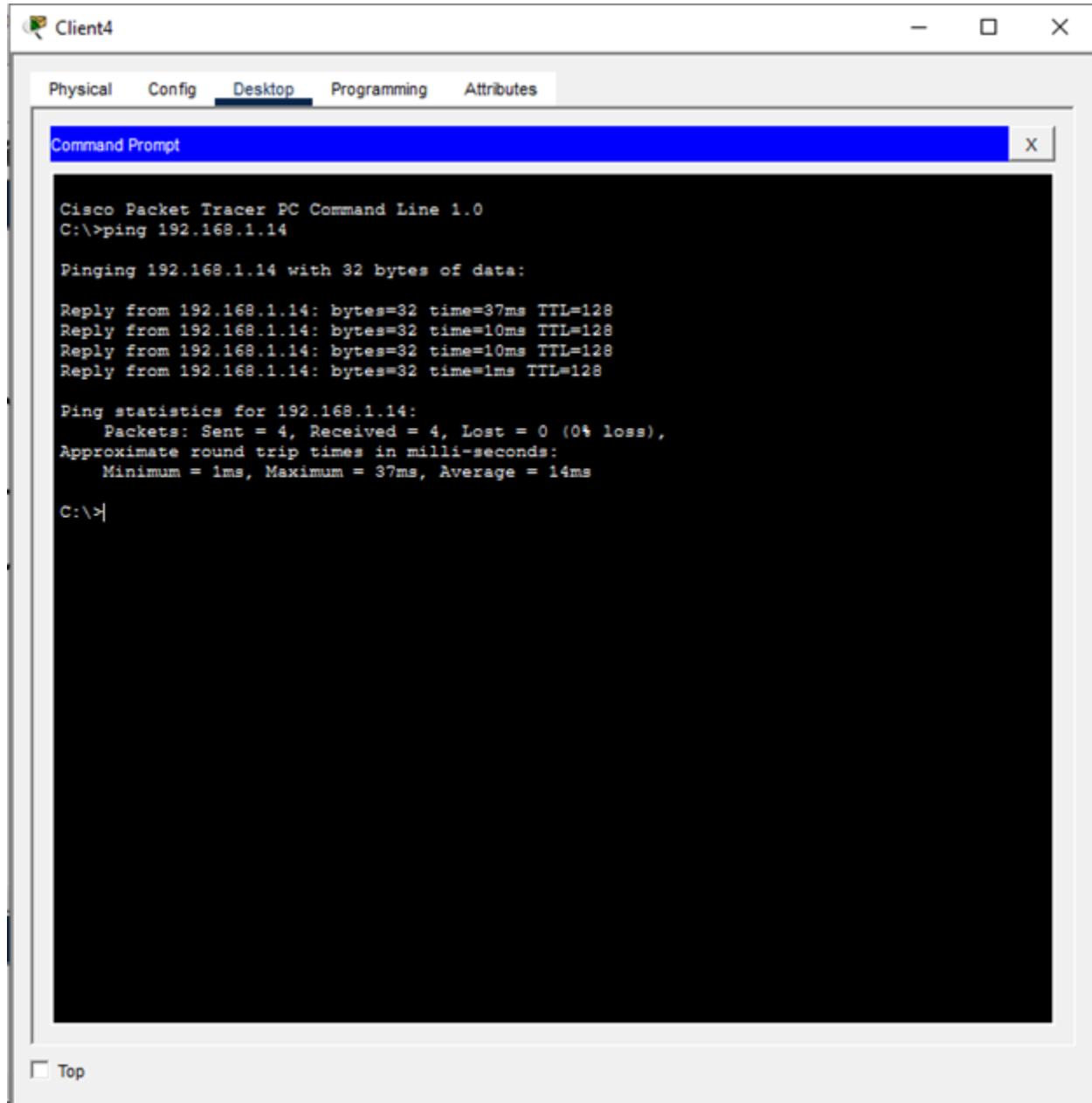
- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du **Server Mail**.

- J'ai Vérifié la connectivité en faisant un ping pour le Client 4



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau du Client4.

- J'ai Vérifié la connectivité pour le Client 4



Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.14

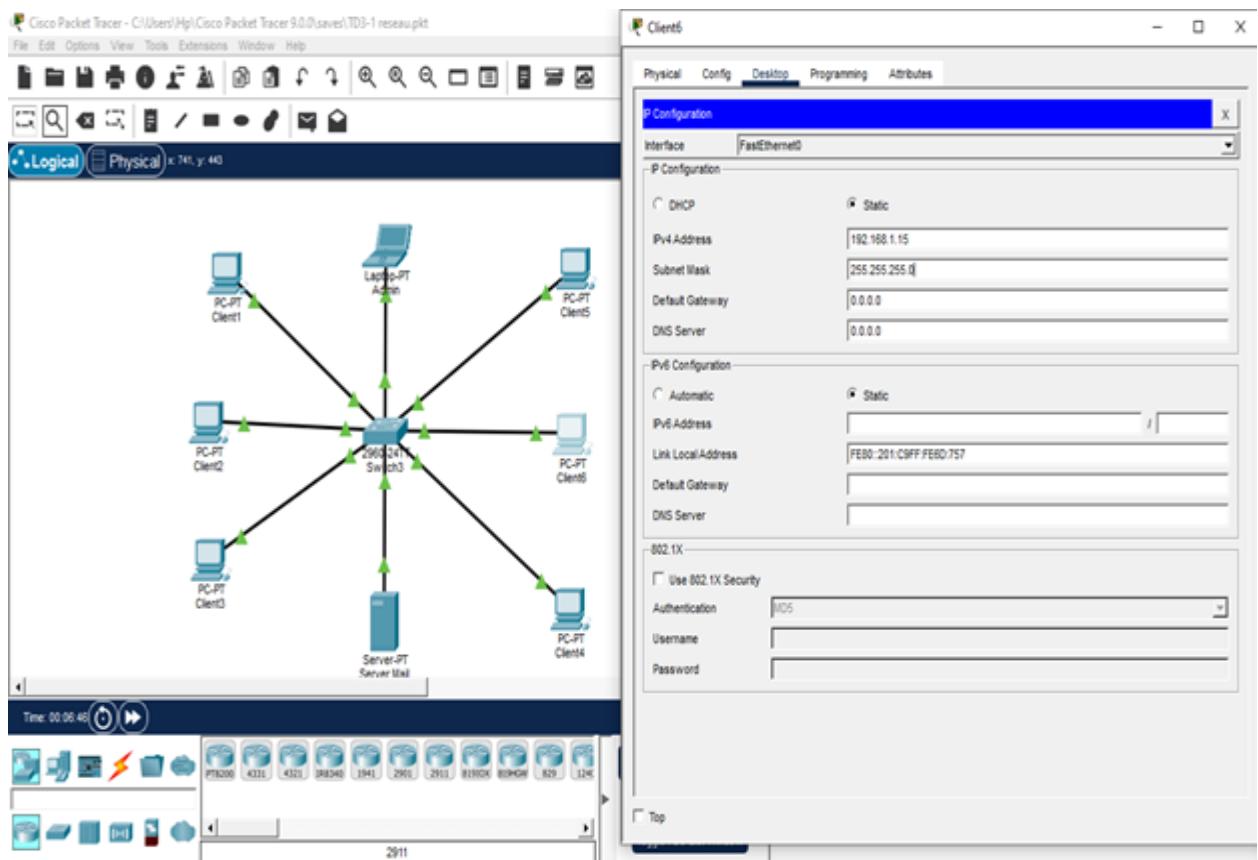
Pinging 192.168.1.14 with 32 bytes of data:

Reply from 192.168.1.14: bytes=32 time=37ms TTL=128
Reply from 192.168.1.14: bytes=32 time=10ms TTL=128
Reply from 192.168.1.14: bytes=32 time=10ms TTL=128
Reply from 192.168.1.14: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.14:
 Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
 Approximate round trip times in milli-seconds:
 Minimum = 1ms, Maximum = 37ms, Average = 14ms

C:\>

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 4.



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau du Client6.

- J'ai Vérifié la connectivité en faisant un ping pour le Client 6

The screenshot shows a window titled "Client6" with tabs for Physical, Config, Desktop (which is selected), Programming, and Attributes. A sub-window titled "Command Prompt" contains the following text:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.15

Pinging 192.168.1.15 with 32 bytes of data:

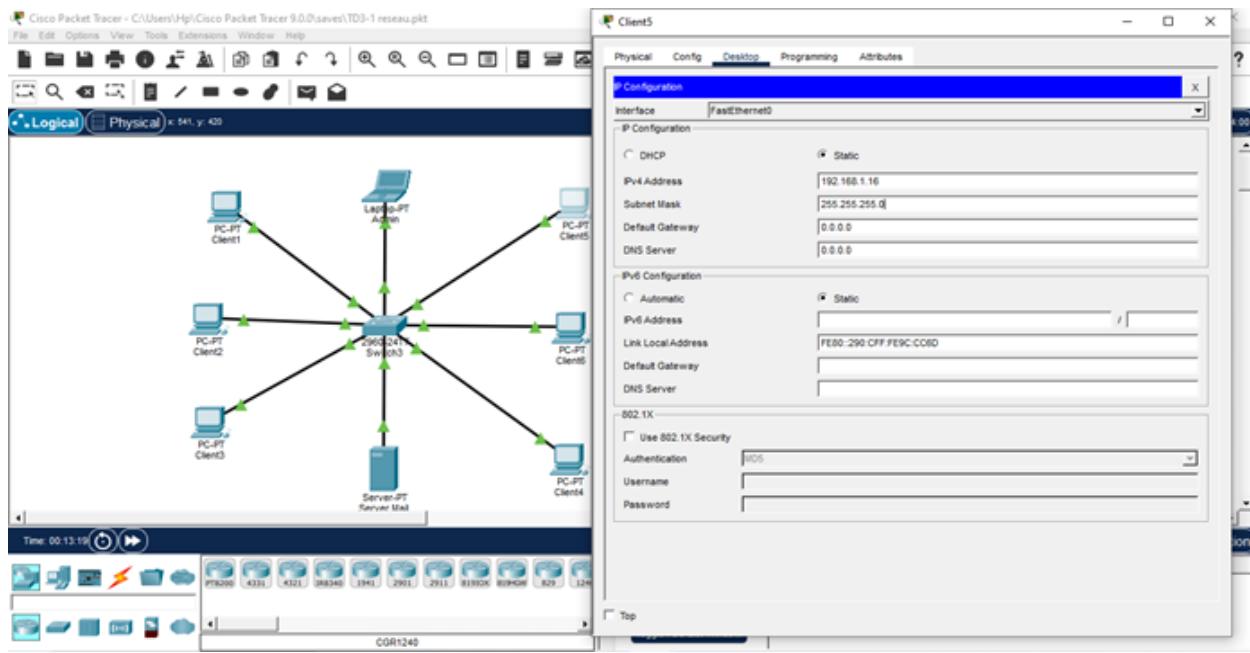
Reply from 192.168.1.15: bytes=32 time<1ms TTL=128
Reply from 192.168.1.15: bytes=32 time=10ms TTL=128
Reply from 192.168.1.15: bytes=32 time<1ms TTL=128
Reply from 192.168.1.15: bytes=32 time=9ms TTL=128

Ping statistics for 192.168.1.15:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 4ms

C:\>
```

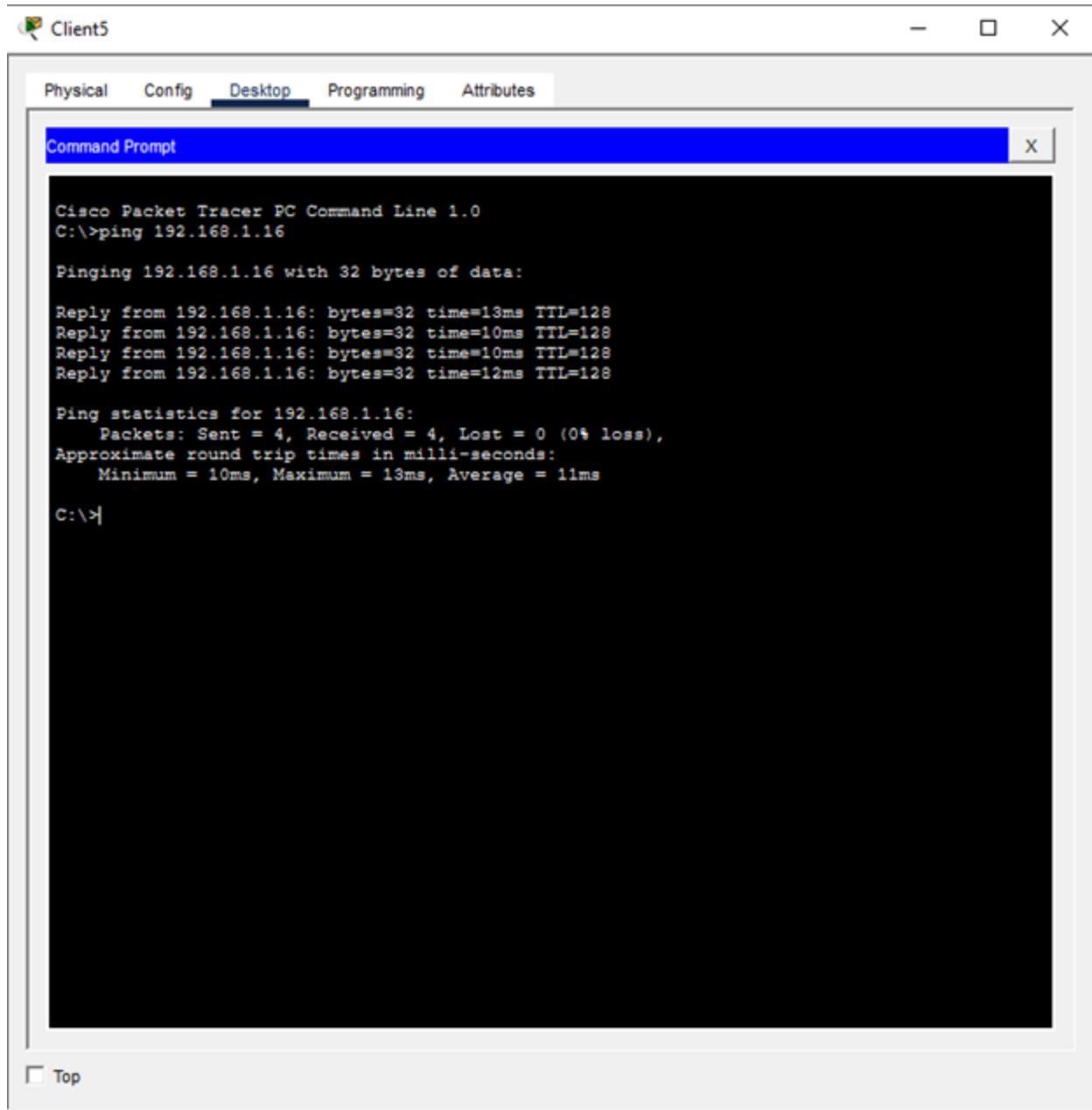
At the bottom left of the Command Prompt window, there is a checkbox labeled "Top".

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 6.



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau du Client5.

- J'ai Vérifié la connectivité pour le Client5



The screenshot shows a window titled "Client5" with a tab bar at the top. The "Desktop" tab is selected. Below the tabs is a "Command Prompt" window with a blue header bar containing the text "Command Prompt" and a close button "X". The main area of the window displays the output of a ping command:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.16

Pinging 192.168.1.16 with 32 bytes of data:

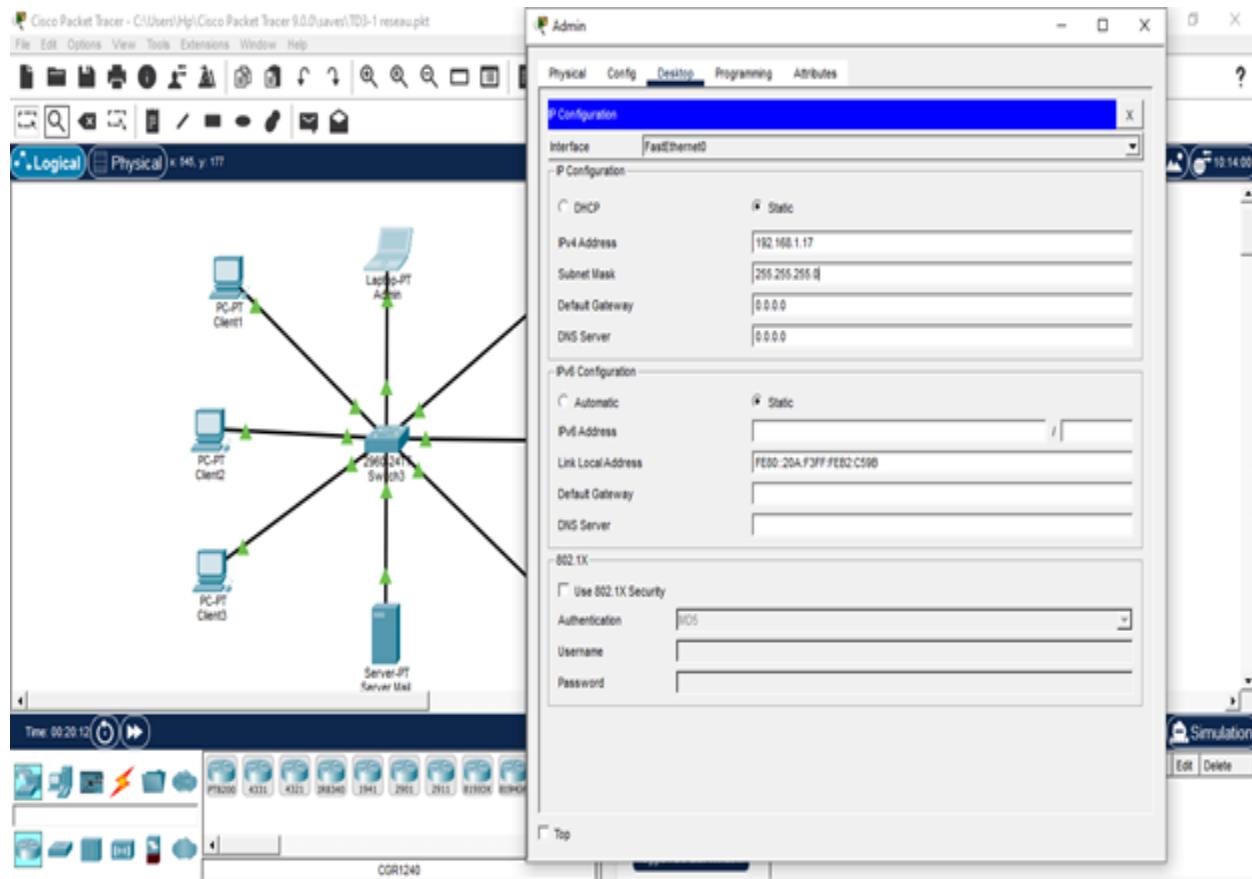
Reply from 192.168.1.16: bytes=32 time=13ms TTL=128
Reply from 192.168.1.16: bytes=32 time=10ms TTL=128
Reply from 192.168.1.16: bytes=32 time=10ms TTL=128
Reply from 192.168.1.16: bytes=32 time=12ms TTL=128

Ping statistics for 192.168.1.16:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 10ms, Maximum = 13ms, Average = 11ms

C:\>|
```

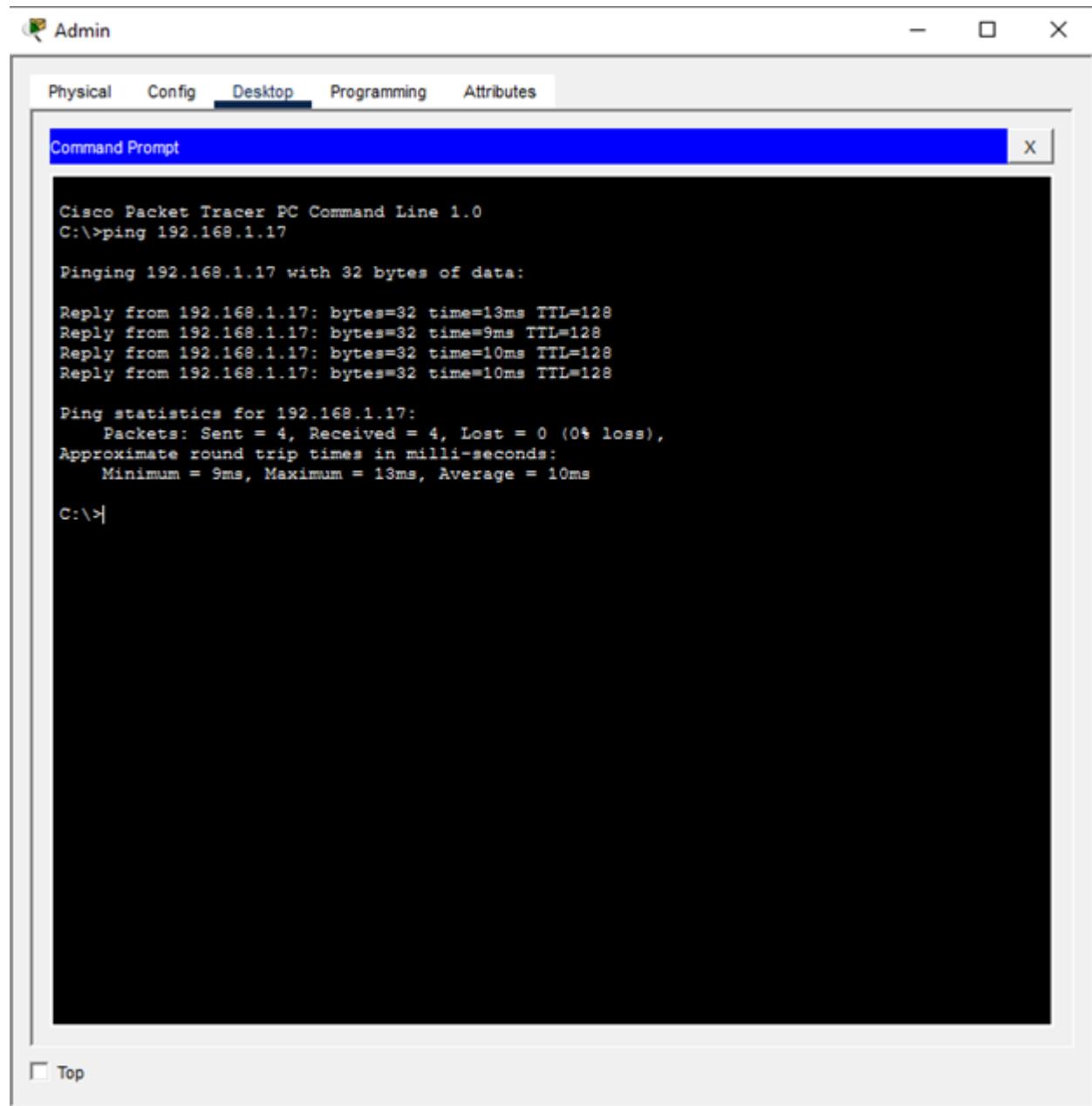
At the bottom left of the window, there is a "Top" button.

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client5.



- ❖ Sur cette image, j'ai configuré l'adresse IP et le masque de sous-réseau du PC Admin.

- J'ai Vérifié la connectivité pour Admin

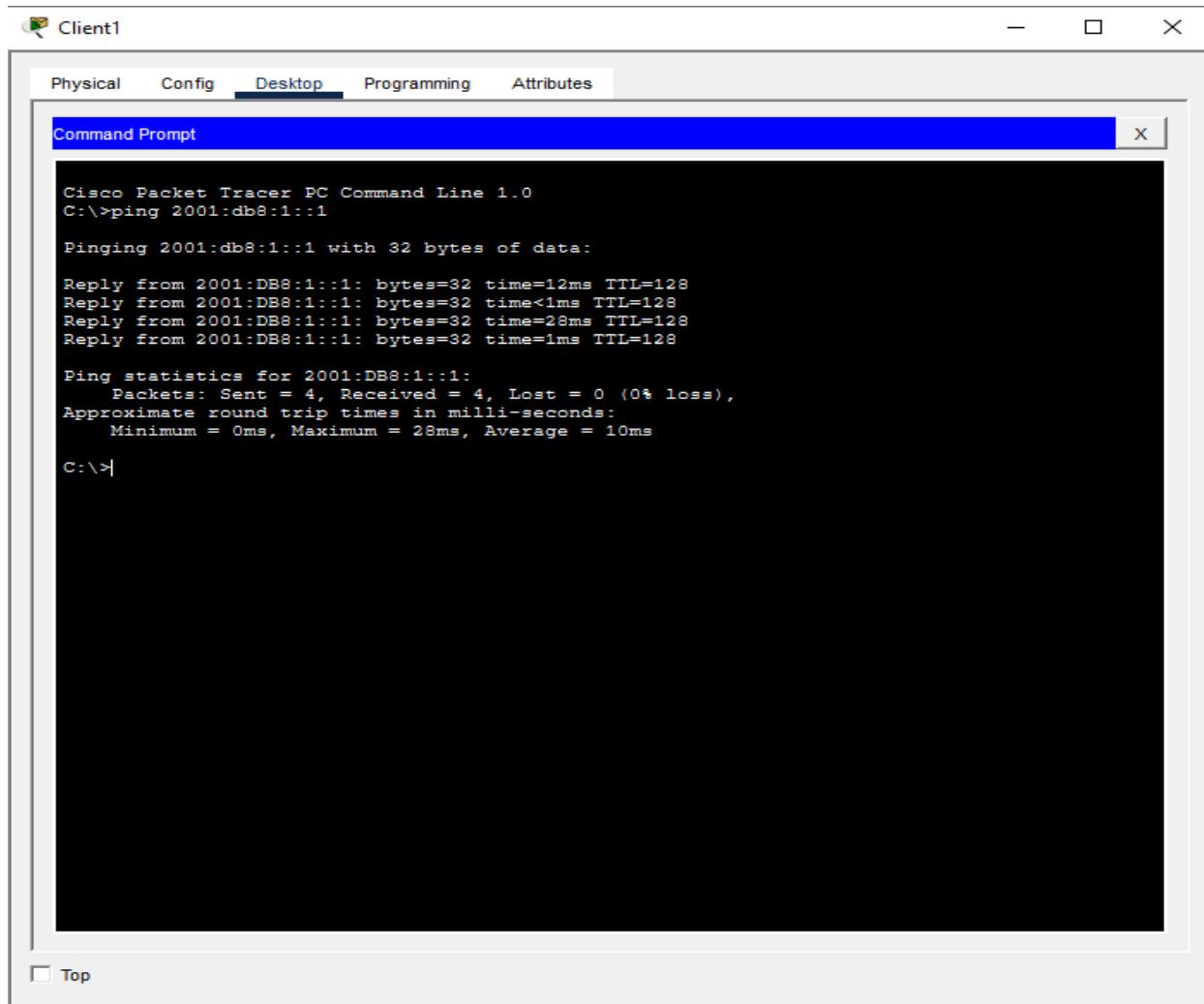


- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC Admin.

4. J'ai configuré les adresses IPv6 et en testant la connectivité (topologie1).

➤ *Après avoir configurer les adresses IPv6, j'ai testé tout les connectivité.*

a) Pour le Client 1



The screenshot shows a window titled "Client1" with tabs for Physical, Config, Desktop (selected), Programming, and Attributes. A sub-tab "Command Prompt" is open, displaying the following text:

```
Cisco Packet Tracer PC Command Line 1.0
C:>ping 2001:db8:1::1

Pinging 2001:DB8:1::1 with 32 bytes of data:

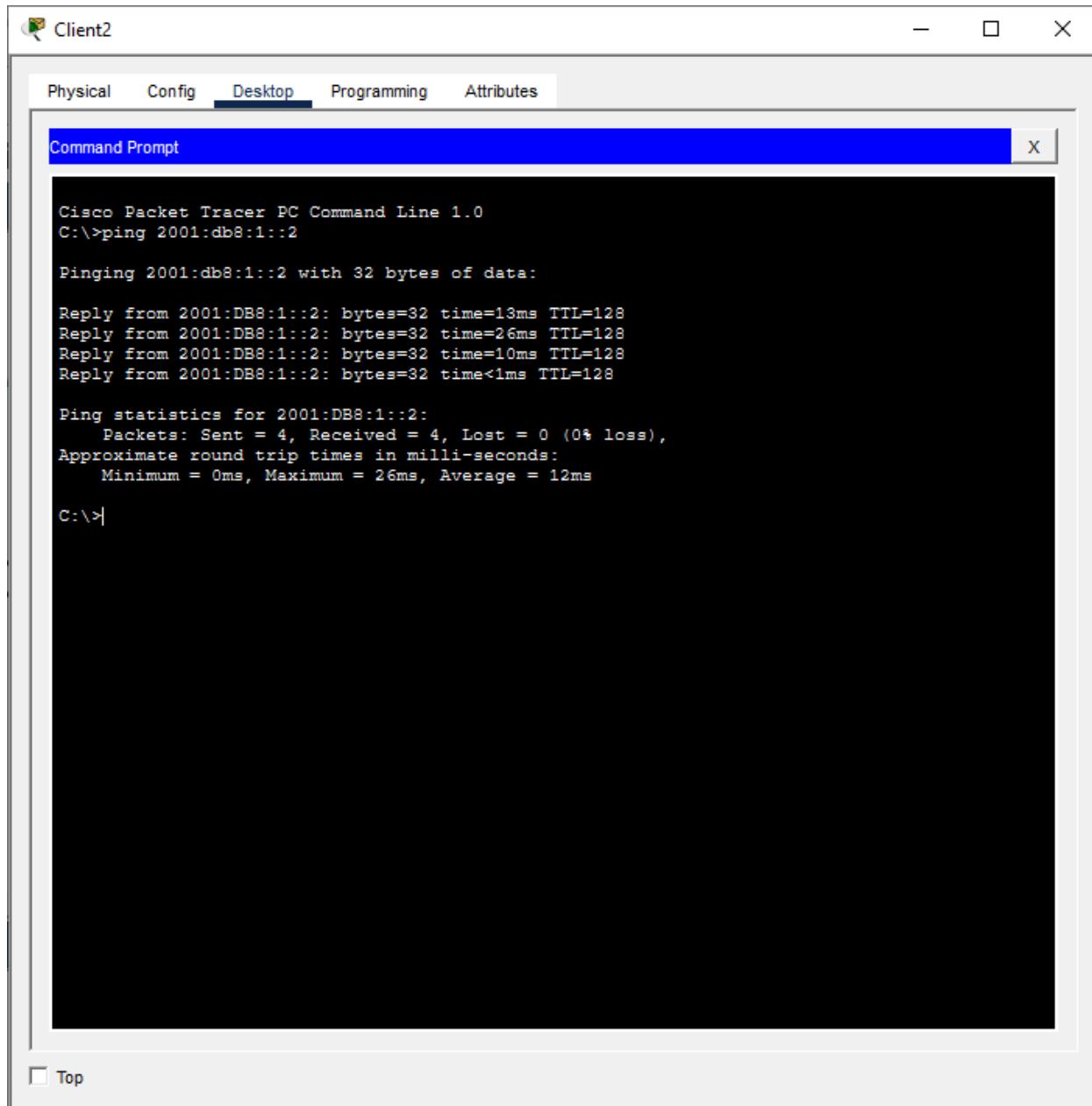
Reply from 2001:DB8:1::1: bytes=32 time=12ms TTL=128
Reply from 2001:DB8:1::1: bytes=32 time<1ms TTL=128
Reply from 2001:DB8:1::1: bytes=32 time=28ms TTL=128
Reply from 2001:DB8:1::1: bytes=32 time=1ms TTL=128

Ping statistics for 2001:DB8:1::1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 28ms, Average = 10ms

C:>|
```

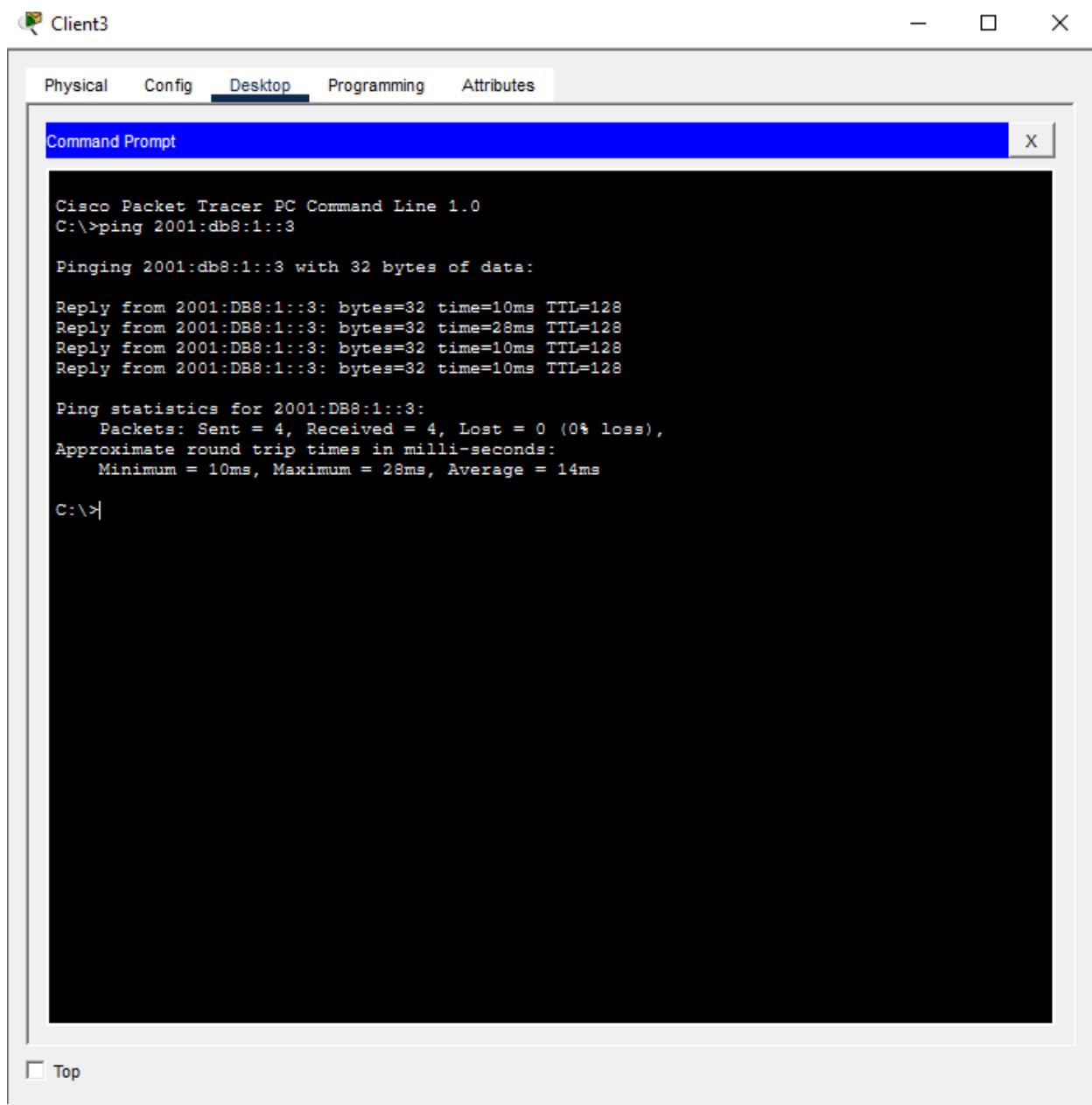
- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 1.

b) Pour Client 2



- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 2.

c) Pour Client 3



The screenshot shows a window titled "Client3" with a tab bar at the top: Physical, Config, Desktop (which is selected), Programming, and Attributes. Below the tab bar is a blue header bar labeled "Command Prompt". The main area of the window is a black terminal window displaying the output of a ping command. The text in the terminal is as follows:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 2001:db8:1::3

Pinging 2001:db8:1::3 with 32 bytes of data:

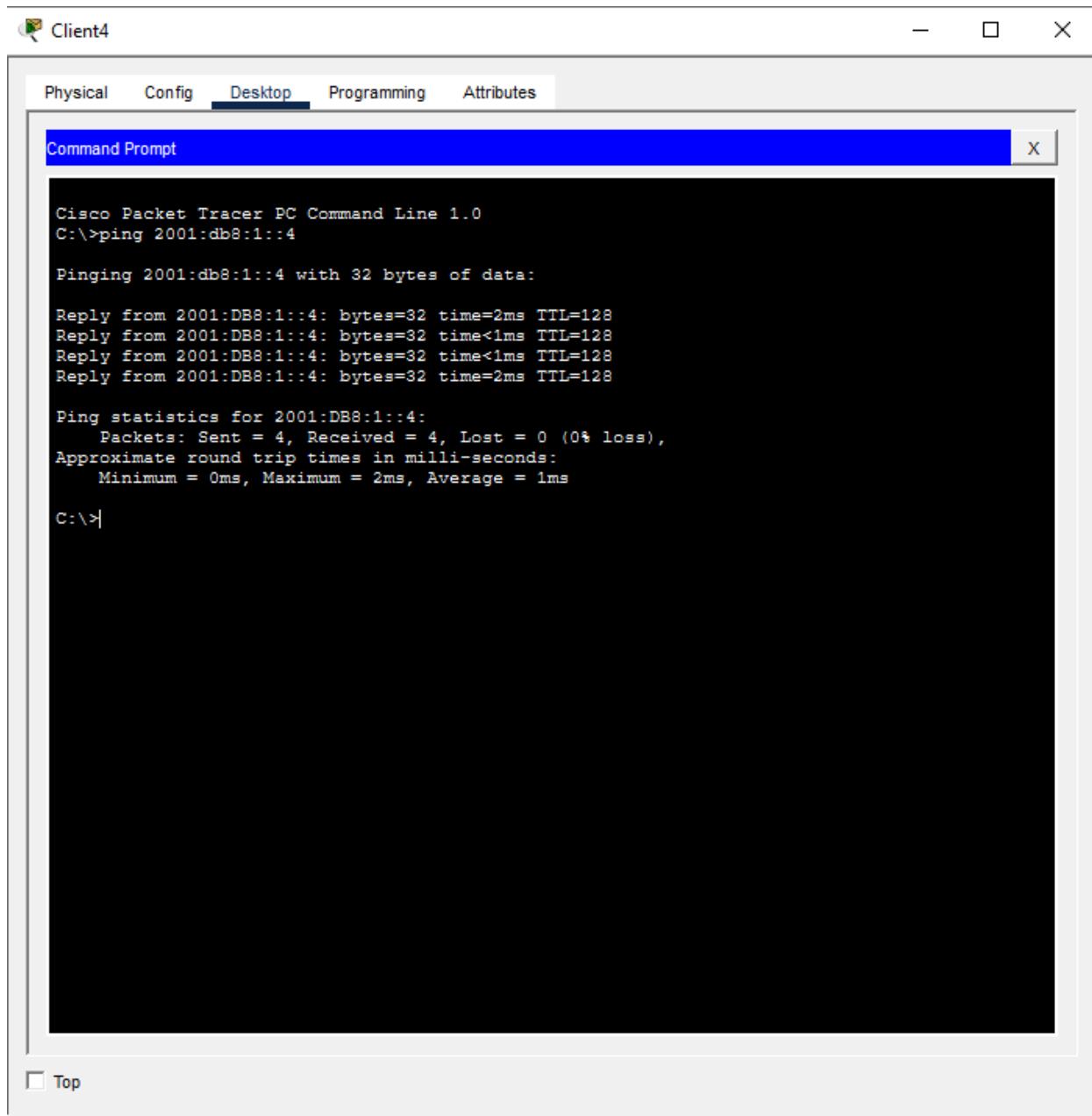
Reply from 2001:DB8:1::3: bytes=32 time=10ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time=28ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time=10ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time=10ms TTL=128

Ping statistics for 2001:DB8:1::3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 10ms, Maximum = 28ms, Average = 14ms

C:\>
```

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 3

d) Pour Client 4



The screenshot shows a window titled "Client4" with a tab bar containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tabs is a "Command Prompt" window. The command prompt displays the following output:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 2001:db8:1::4

Pinging 2001:db8:1::4 with 32 bytes of data:

Reply from 2001:DB8:1::4: bytes=32 time=2ms TTL=128
Reply from 2001:DB8:1::4: bytes=32 time<1ms TTL=128
Reply from 2001:DB8:1::4: bytes=32 time<1ms TTL=128
Reply from 2001:DB8:1::4: bytes=32 time=2ms TTL=128

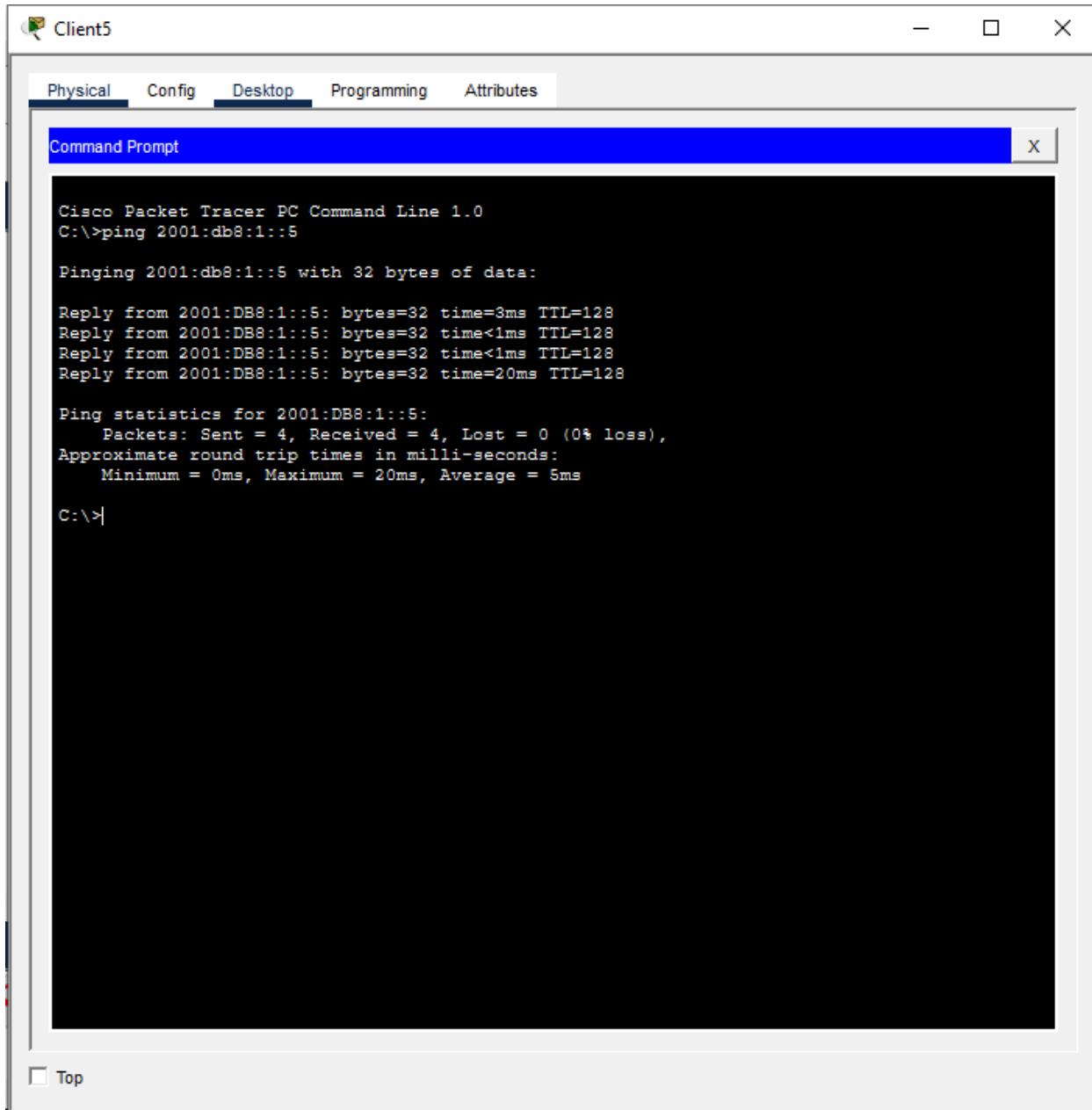
Ping statistics for 2001:DB8:1::4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 1ms

C:\>
```

At the bottom left of the Command Prompt window, there is a checkbox labeled "Top".

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 4.

e) Pour Client 5



The screenshot shows a window titled "Client5" with a tab bar at the top. The "Desktop" tab is selected. Below the tabs is a "Command Prompt" window with a blue header bar containing the title. The main area of the Command Prompt displays the output of a ping command:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 2001:db8:1::5

Pinging 2001:DB8:1::5 with 32 bytes of data:

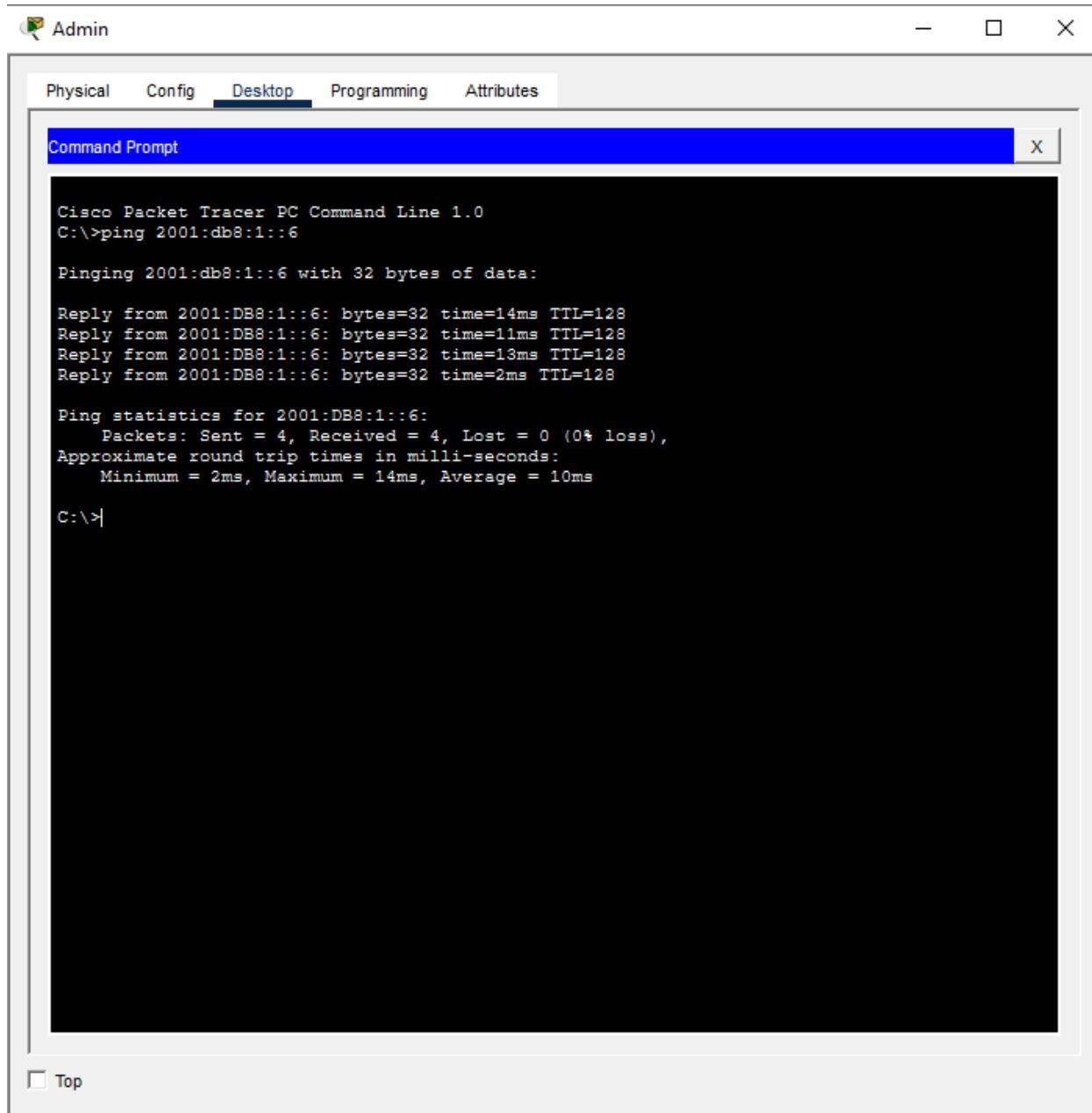
Reply from 2001:DB8:1::5: bytes=32 time=3ms TTL=128
Reply from 2001:DB8:1::5: bytes=32 time<1ms TTL=128
Reply from 2001:DB8:1::5: bytes=32 time<1ms TTL=128
Reply from 2001:DB8:1::5: bytes=32 time=20ms TTL=128

Ping statistics for 2001:DB8:1::5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 20ms, Average = 5ms

C:\>
```

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du PC client 5.

f) Pour Amin



The screenshot shows a window titled "Admin" with a tab bar at the top. The "Desktop" tab is selected. Below the tabs is a "Command Prompt" window. The command prompt displays the following output:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 2001:db8:1::6

Pinging 2001:db8:1::6 with 32 bytes of data:

Reply from 2001:DB8:1::6: bytes=32 time=14ms TTL=128
Reply from 2001:DB8:1::6: bytes=32 time=11ms TTL=128
Reply from 2001:DB8:1::6: bytes=32 time=13ms TTL=128
Reply from 2001:DB8:1::6: bytes=32 time=2ms TTL=128

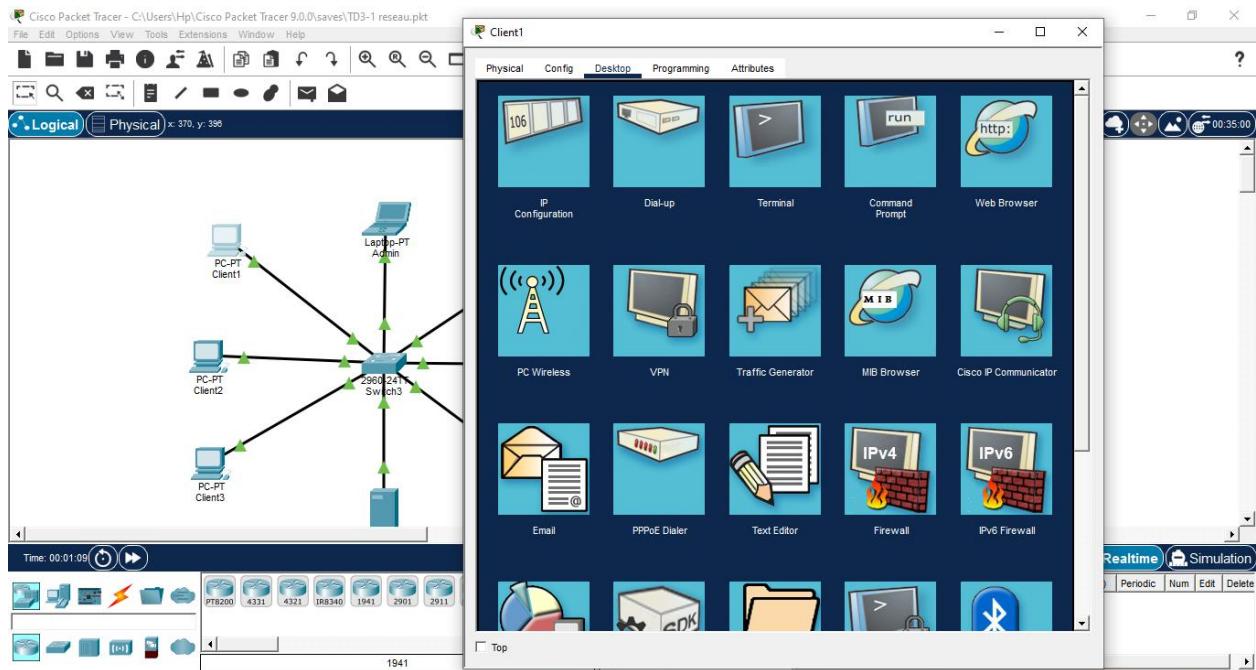
Ping statistics for 2001:DB8:1::6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 14ms, Average = 10ms

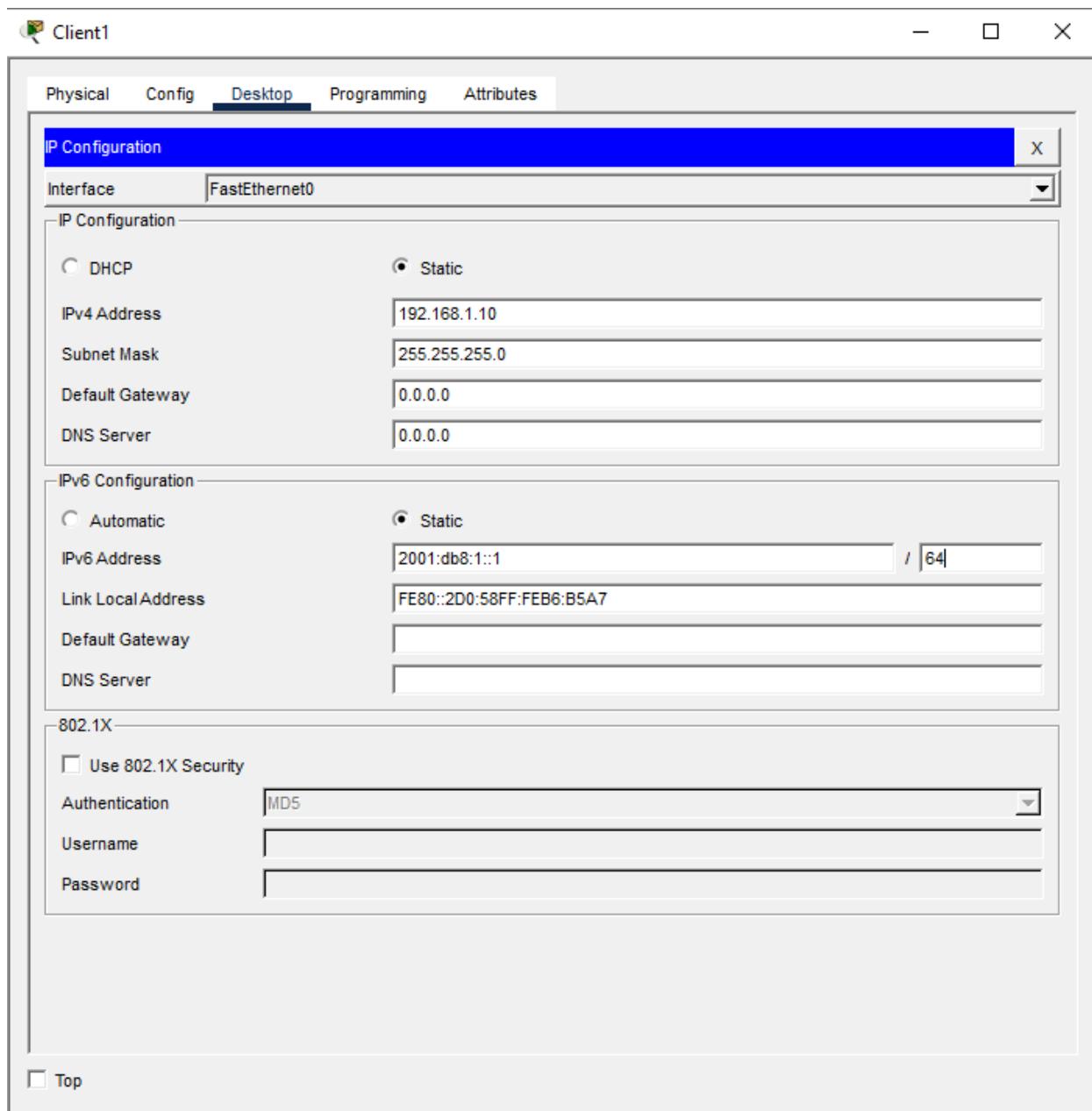
C:\>
```

- ❖ Sur cette image, j'ai effectué un ping afin de vérifier la connectivité du **PC Admin.**

5. Reproduisez cette topologie en configurant les adresses IPv6 indiquées dans le tableau ci-dessous, puis vérifiez la connectivité.

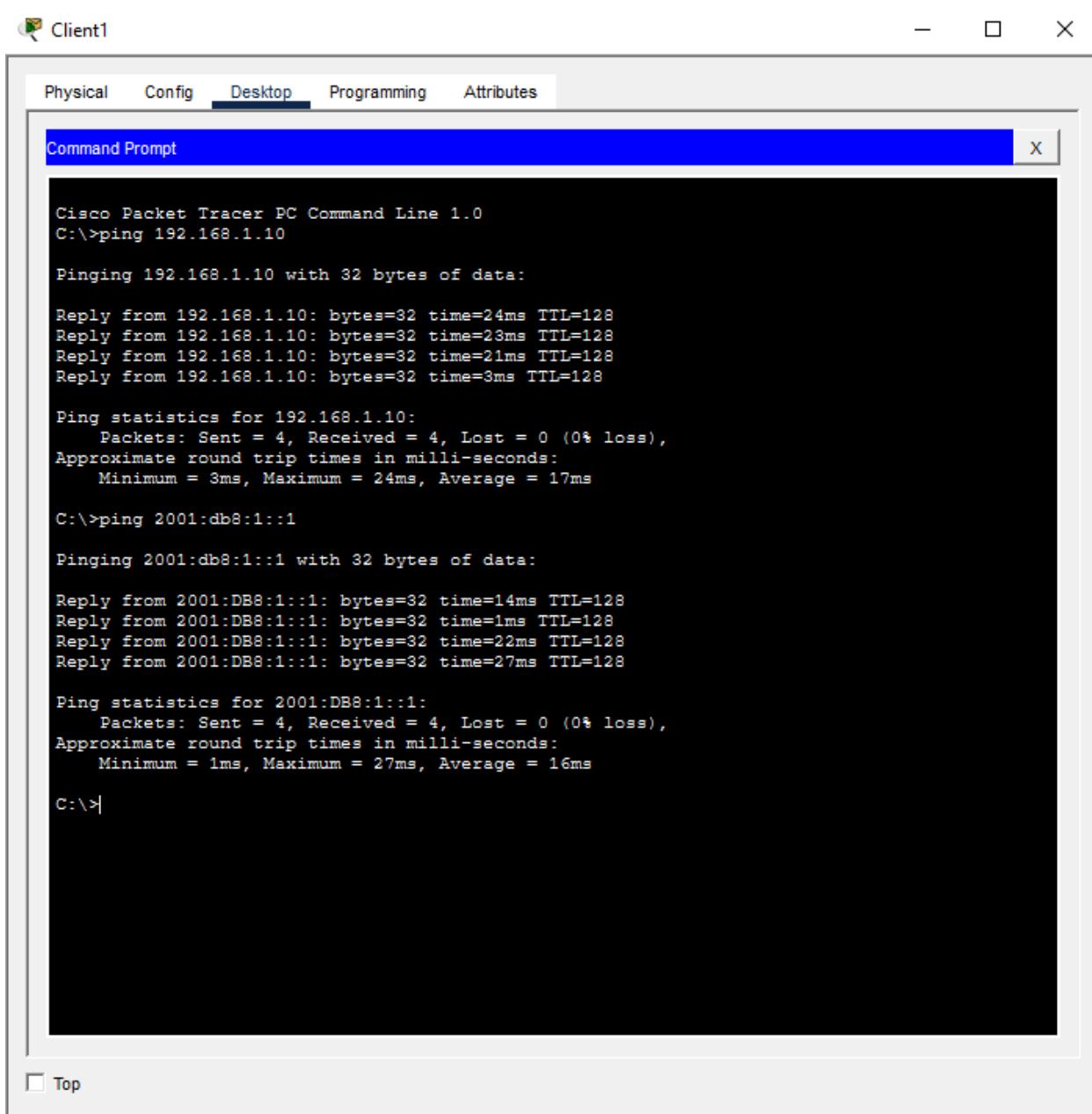
- J'ai Reproduit topologie (2) IPv6 pour le client 1





- ❖ Sur cette image, j'ai configuré les adresses IPv6 du **Client1**.

- J'ai vérifié la connectivité pour le client 1



The screenshot shows a window titled "Client1" with a tab bar at the top containing "Physical", "Config", "Desktop" (which is selected), "Programming", and "Attributes". Below the tab bar is a "Command Prompt" window. The command prompt displays the following output:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.10

Pinging 192.168.1.10 with 32 bytes of data:

Reply from 192.168.1.10: bytes=32 time=24ms TTL=128
Reply from 192.168.1.10: bytes=32 time=23ms TTL=128
Reply from 192.168.1.10: bytes=32 time=21ms TTL=128
Reply from 192.168.1.10: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 24ms, Average = 17ms

C:\>ping 2001:db8:1::1

Pinging 2001:db8:1::1 with 32 bytes of data:

Reply from 2001:DB8:1::1: bytes=32 time=14ms TTL=128
Reply from 2001:DB8:1::1: bytes=32 time=1ms TTL=128
Reply from 2001:DB8:1::1: bytes=32 time=22ms TTL=128
Reply from 2001:DB8:1::1: bytes=32 time=27ms TTL=128

Ping statistics for 2001:DB8:1::1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 27ms, Average = 16ms

C:\>
```

At the bottom left of the Command Prompt window, there is a "Top" button.

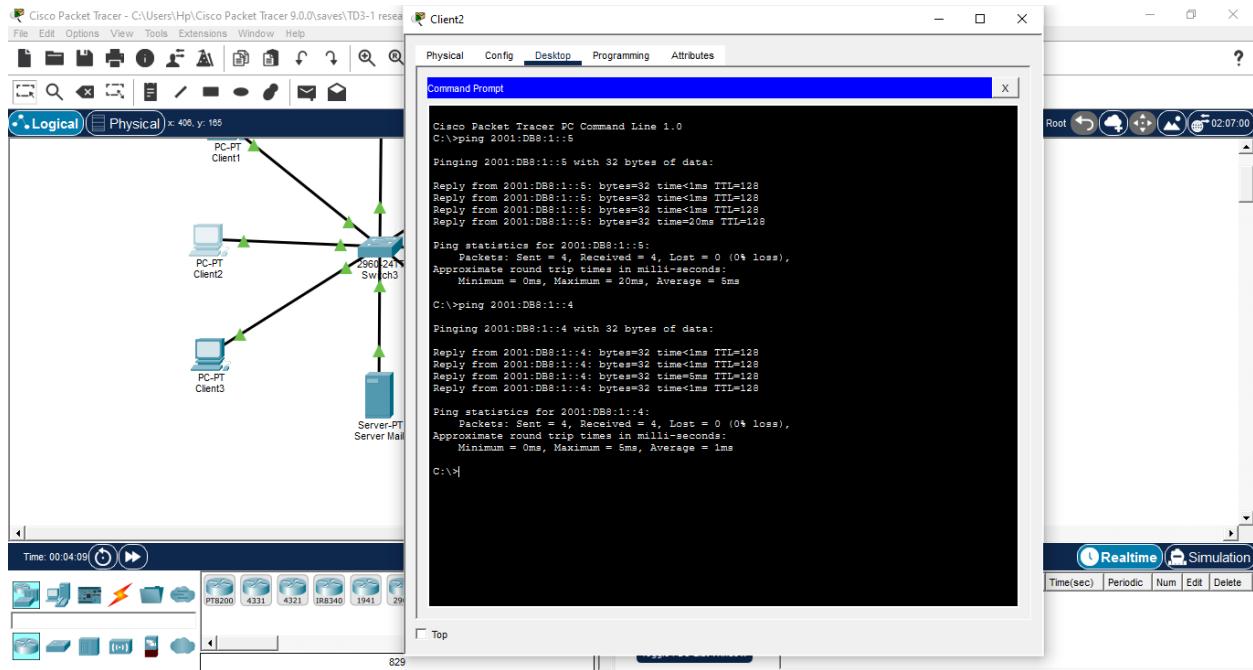
- ❖ Sur cette image, j'ai vérifié la connectivité du **PC Client1**.

- Tableau d'adressage IPv4 et IPv6

- Especies	IPv4	IPv6
Client 2	192.168.1.11	2001:db8:1::2/64
Client 3	192.168.1.12	2001:db8:1::3/64
Server Mail	192.168.1.13	2001:db8:1::4/64
Client 4	192.168.1.14	2001:db8:1::5/64
Client 6	192.168.1.15	2001:db8:1::6/64
Client 5	192.168.1.16	2001:db8:1::7/64
Admin	192.168.1.17	2001:db8:1::8/64

- ❖ Chaque machine du réseau a été configurée avec une adresse IPv4 et une adresse IPv6 uniques dans le même sous-réseau. Après cette configuration, les tests de connectivité IPv4 et IPv6 ont été réalisés avec succès.

5. Parmi les topologies, choisissez-en une, configurez les adresses IPv6 et testez la connectivité.



- ❖ Sur cette image, après avoir configuré les adresses IPv6, on constate que le test de connectivité a été effectué avec succès.

Conclusion

Ce TD nous a permis de mieux comprendre le fonctionnement de l'adressage IPv4 et IPv6. Toutes les configurations ont été réalisées avec succès. Les principales difficultés concernaient la configuration IPv6, résolue grâce à une vérification du préfixe 2001:db8:1::n/64.