

FACULTÉ DES SCIENCES ET TECHNOLOGIES (FST)

TROISIÈME ANNÉE

Rapport du travail de Laboratoire N° 3

Cours : Réseaux I

Étudiante : Christy Gérys LAMBERT

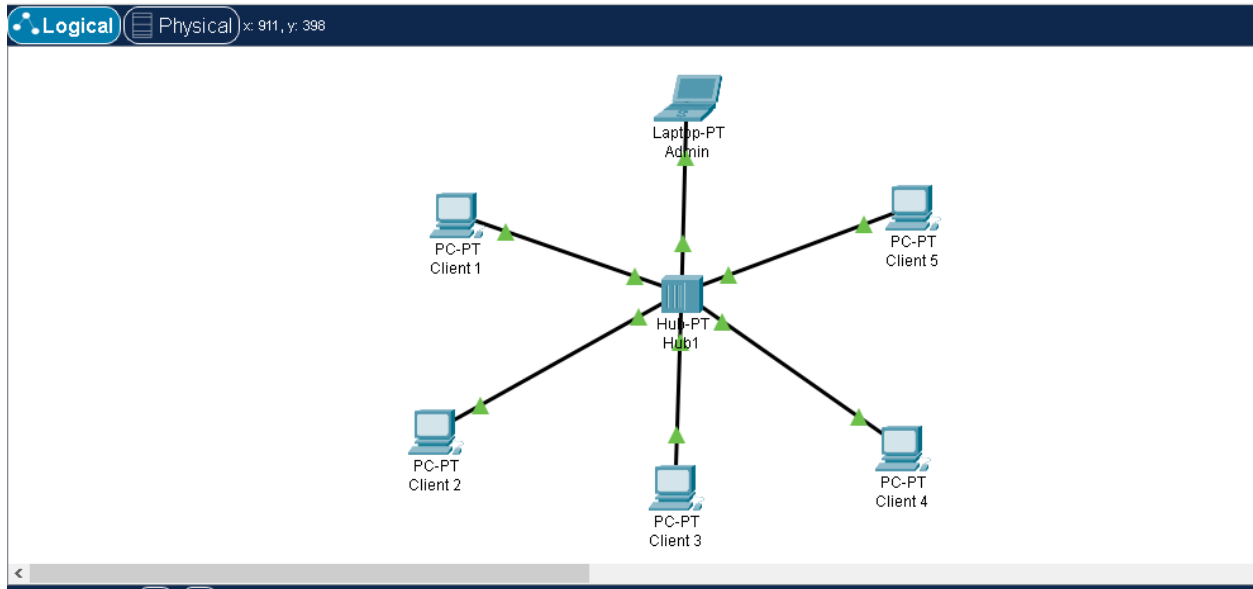
Professeur : Ismaël SAINT AMOUR

Le 14 Novembre 2025

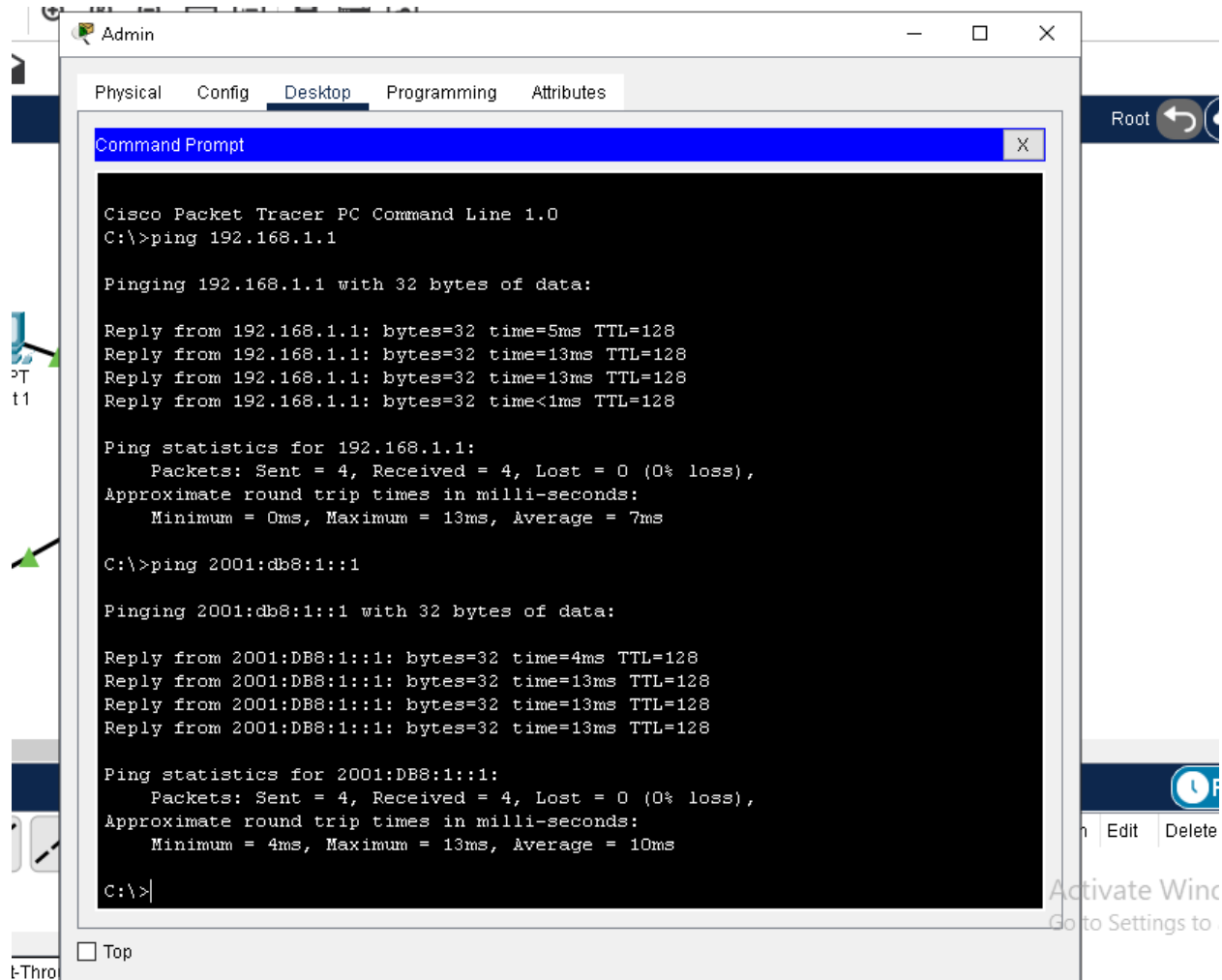
OBJECTIF

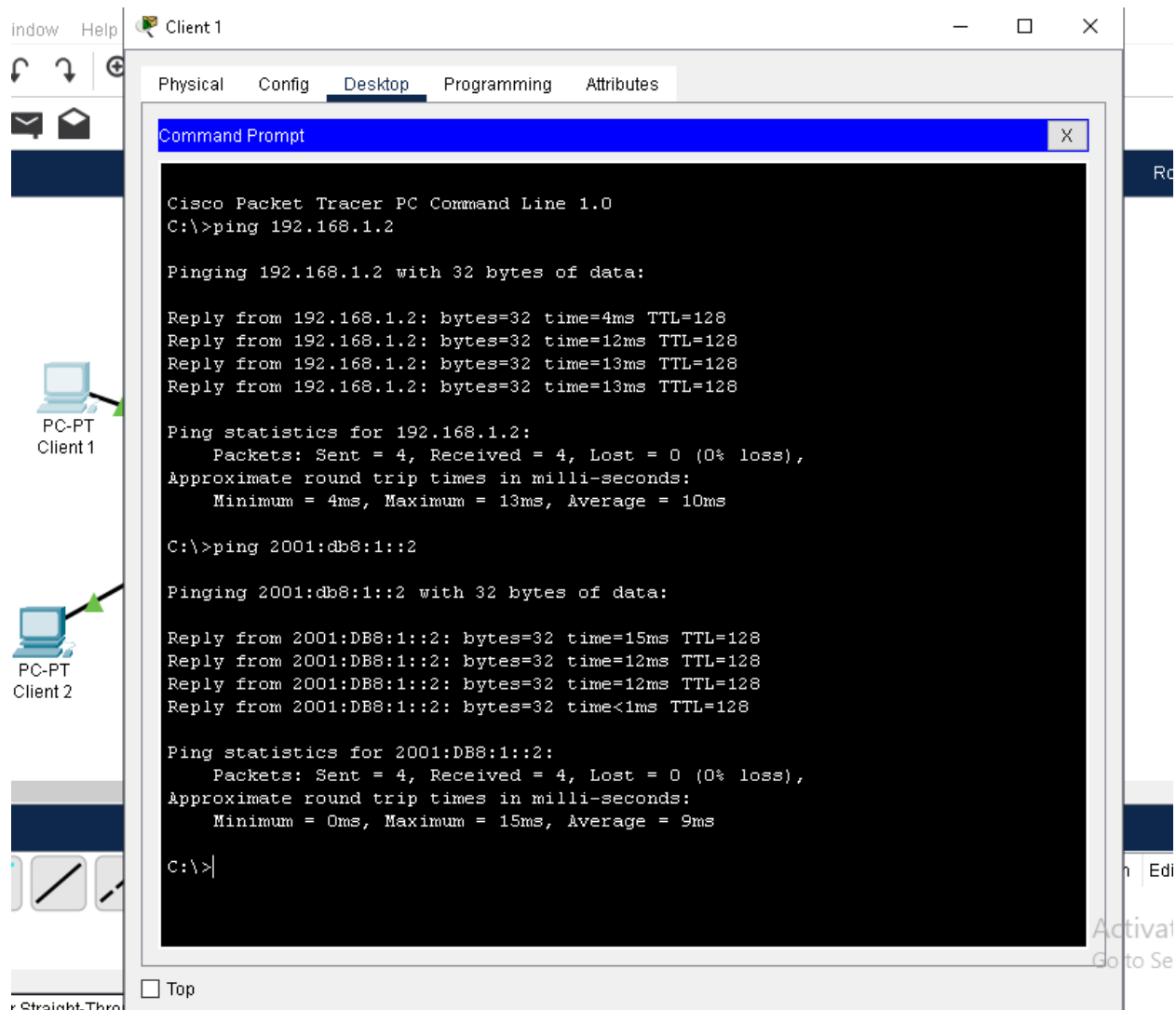
- 1. Savoir attribuer des adresses IP valides aux machines.*
- 2. Comprendre l'adressage IPv4 et IPv6.*
- 3. Configurer des adresses IP sur des hôtes et routeurs dans Cisco Packet Tracer.*
- 4. Vérifier la connectivité avec les commandes ping ipv4 et ping ipv6.*

1.a) Reproduction d'une topologie en étoile et configuration des adresses IPv4 et IPv6



1.b) Vérification de la connectivité





ns Window Help Client 2

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
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=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time=14ms TTL=128
Reply from 192.168.1.3: bytes=32 time=11ms TTL=128
Reply from 192.168.1.3: bytes=32 time=11ms 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 = 4ms, Maximum = 14ms, Average = 10ms

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=4ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time<1ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time=12ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time=15ms 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 = 0ms, Maximum = 15ms, Average = 7ms

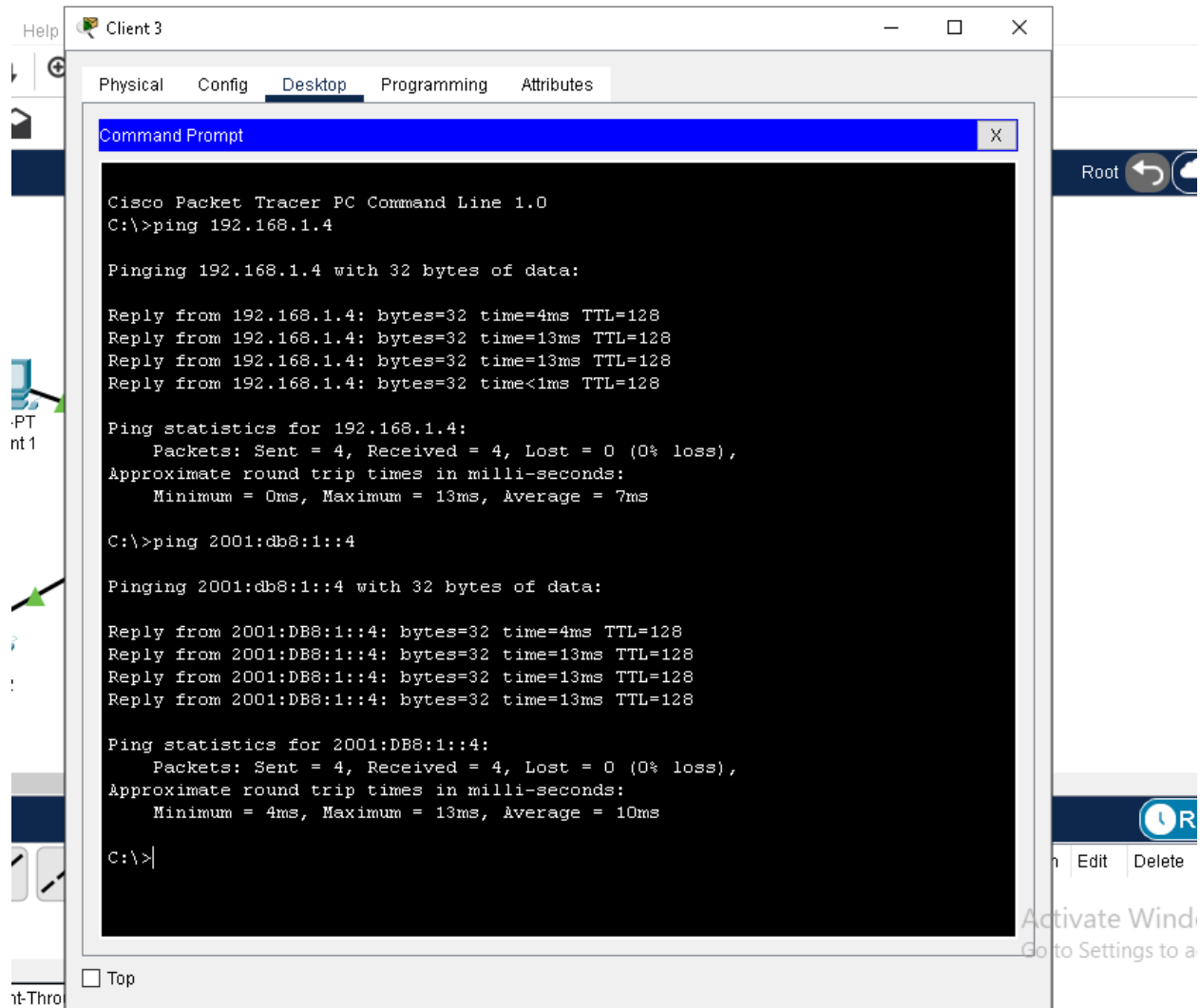
C:\>
```

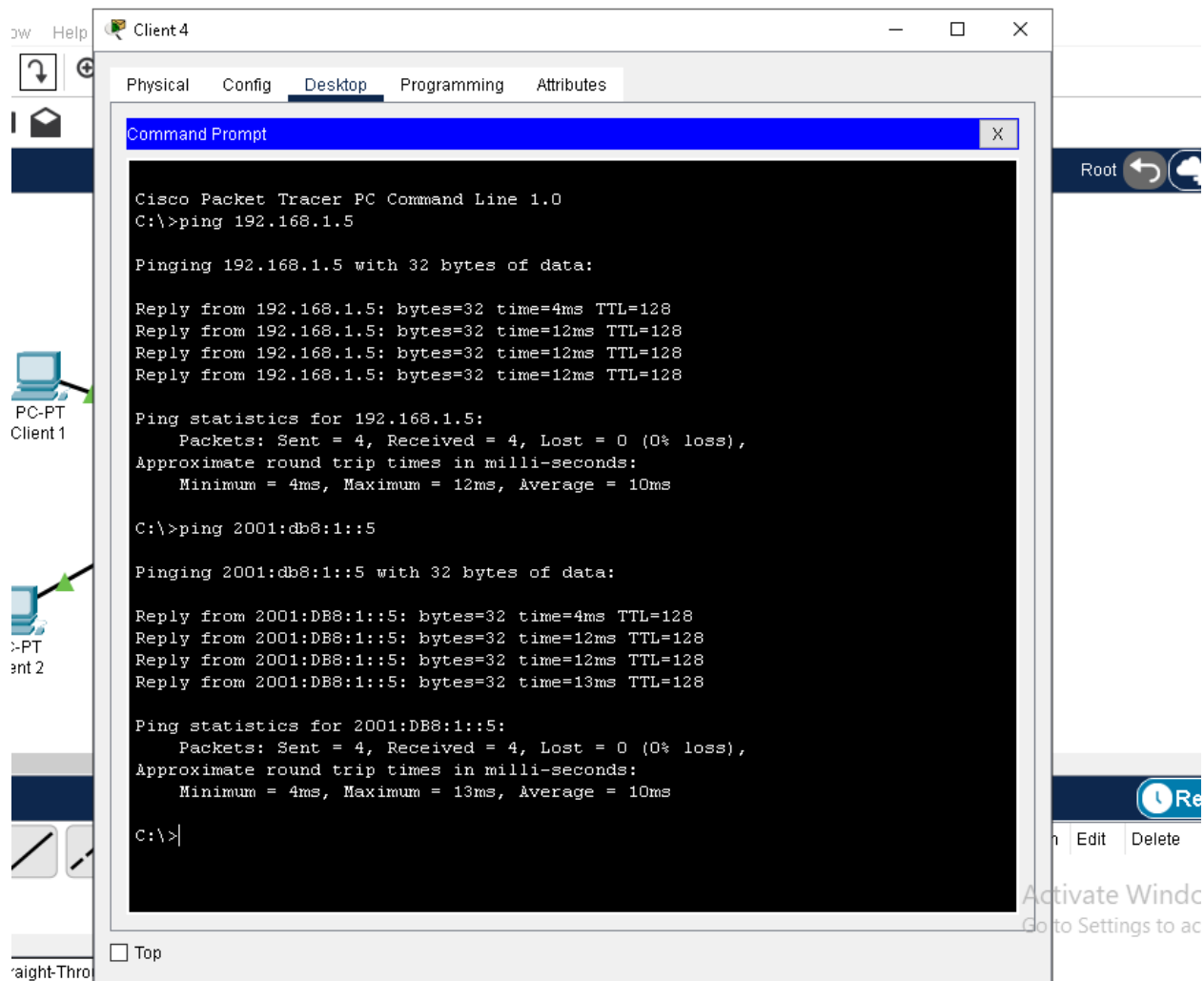
PC-PT Client 1

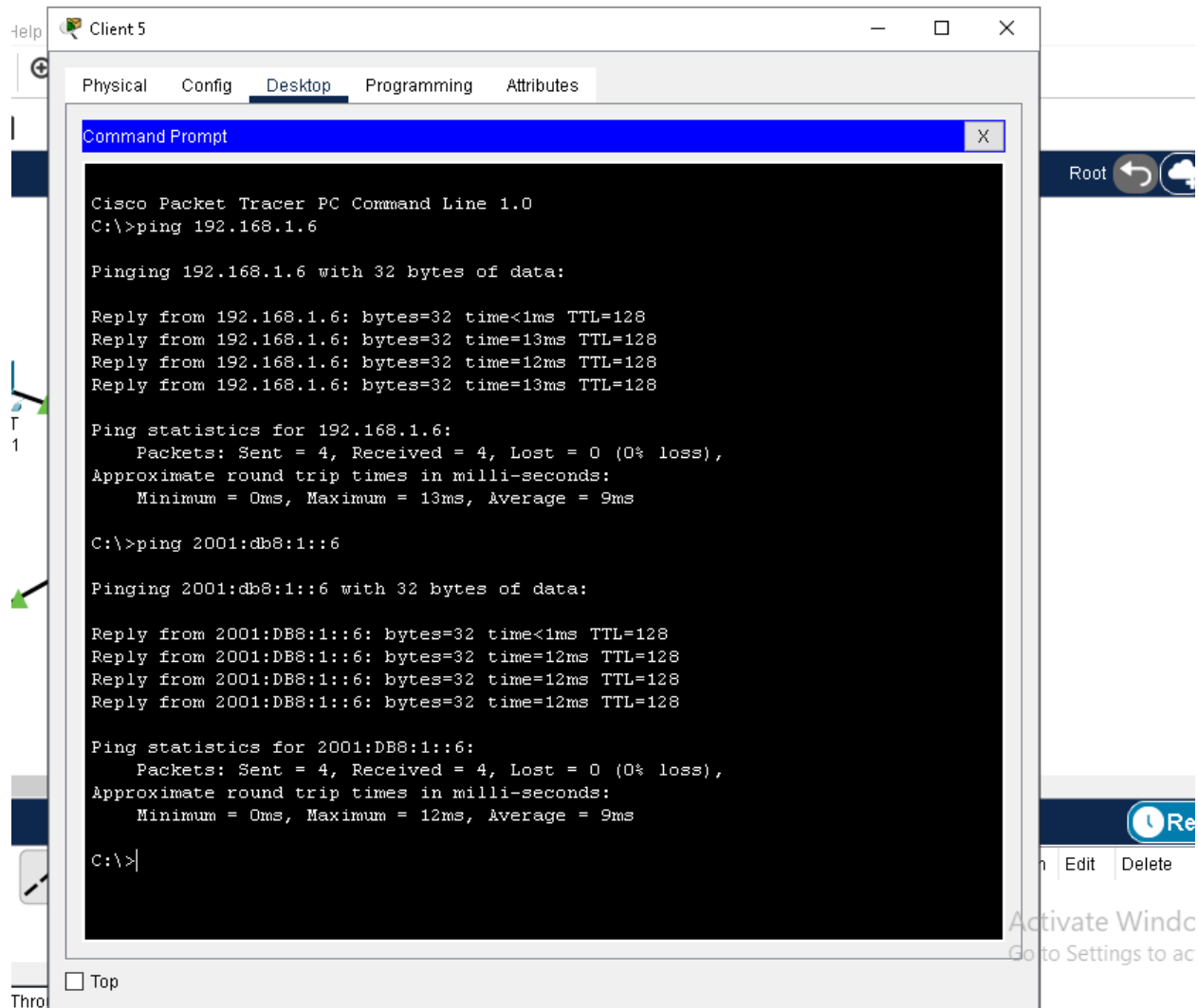
PC-PT Client 2

Top

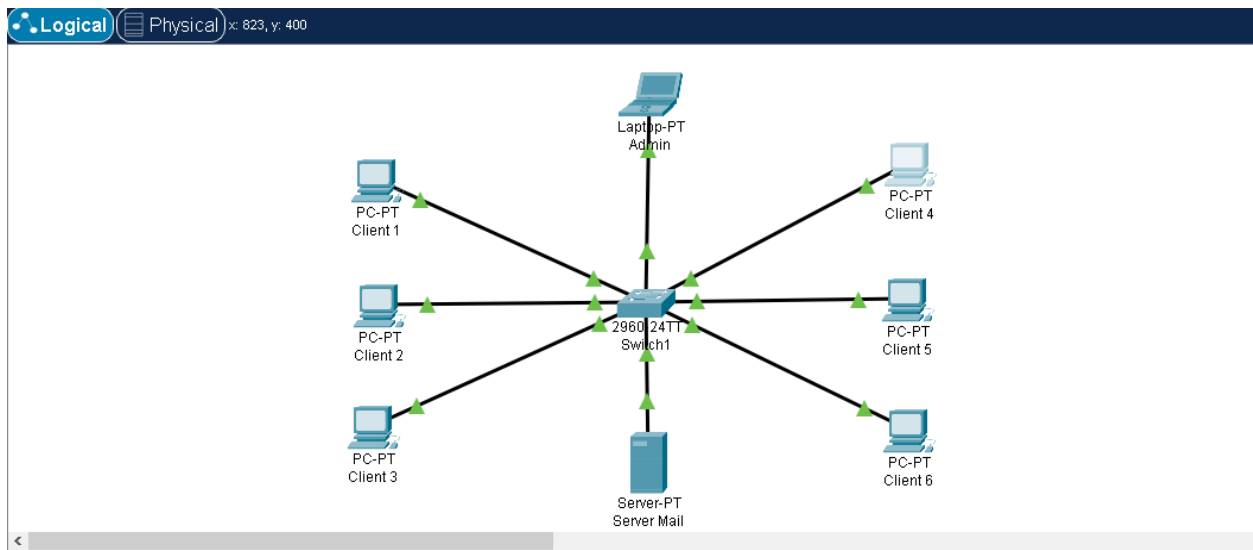
Active Go to St







2.a Reproduction d'une topologie en étoile avec configuration de l'adresse IPv4



2.b Vérification de la connectivité

Admin

Physical Config **Desktop** Programming Attributes

Command Prompt

```
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=7ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time=18ms TTL=128
Reply from 192.168.1.1: bytes=32 time=4ms TTL=128

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 = 18ms, Average = 7ms

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=6ms TTL=128
Reply from 2001:DB8:1::1: bytes=32 time=18ms TTL=128
Reply from 2001:DB8:1::1: bytes=32 time=17ms 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 = 18ms, Average = 10ms

C:\>
```

Physical Config Desktop Programming Attributes

Command Prompt X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=7ms TTL=128
Reply from 192.168.1.2: bytes=32 time=16ms TTL=128
Reply from 192.168.1.2: bytes=32 time=18ms TTL=128
Reply from 192.168.1.2: bytes=32 time=20ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 7ms, Maximum = 20ms, Average = 15ms

C:\>ping 2001:db8:1::2

Pinging 2001:db8:1::2 with 32 bytes of data:

Reply from 2001:DB8:1::2: bytes=32 time<1ms TTL=128
Reply from 2001:DB8:1::2: bytes=32 time=19ms TTL=128
Reply from 2001:DB8:1::2: bytes=32 time=19ms TTL=128
Reply from 2001:DB8:1::2: bytes=32 time=19ms TTL=128

Ping statistics for 2001:DB8:1::2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 19ms, Average = 14ms

C:\>|
```

Physical Config Desktop Programming Attributes

Command Prompt

X

```
Cisco Packet Tracer PC Command Line 1.0
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=18ms TTL=128
Reply from 192.168.1.3: bytes=32 time=20ms TTL=128
Reply from 192.168.1.3: bytes=32 time=20ms 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 = 20ms, Average = 14ms

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=5ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time=19ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time=20ms TTL=128
Reply from 2001:DB8:1::3: bytes=32 time<1ms 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 = 0ms, Maximum = 20ms, Average = 11ms

C:\>
```

Physical Config Desktop Programming Attributes

Command Prompt

X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time=18ms TTL=128
Reply from 192.168.1.4: bytes=32 time=18ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 18ms, Average = 9ms

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=19ms TTL=128
Reply from 2001:DB8:1::4: bytes=32 time<1ms TTL=128
Reply from 2001:DB8:1::4: bytes=32 time=19ms 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 = 19ms, Average = 10ms

C:\>|
```

Physical Config Services Desktop Programming Attributes

Command Prompt X

```
Cisco Packet Tracer SERVER Command Line 1.0
C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time=6ms TTL=128
Reply from 192.168.1.5: bytes=32 time=16ms TTL=128
Reply from 192.168.1.5: bytes=32 time=19ms TTL=128
Reply from 192.168.1.5: bytes=32 time=18ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 6ms, Maximum = 19ms, Average = 14ms

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=18ms TTL=128
Reply from 2001:DB8:1::5: bytes=32 time=19ms TTL=128
Reply from 2001:DB8:1::5: bytes=32 time=12ms TTL=128
Reply from 2001:DB8:1::5: bytes=32 time=19ms 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 = 12ms, Maximum = 19ms, Average = 17ms

C:\>|
```

Physical Config Desktop Programming Attributes

Command Prompt

X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.8

Pinging 192.168.1.8 with 32 bytes of data:

Reply from 192.168.1.8: bytes=32 time=6ms TTL=128
Reply from 192.168.1.8: bytes=32 time=18ms TTL=128
Reply from 192.168.1.8: bytes=32 time=18ms TTL=128
Reply from 192.168.1.8: bytes=32 time=19ms TTL=128

Ping statistics for 192.168.1.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 6ms, Maximum = 19ms, Average = 15ms

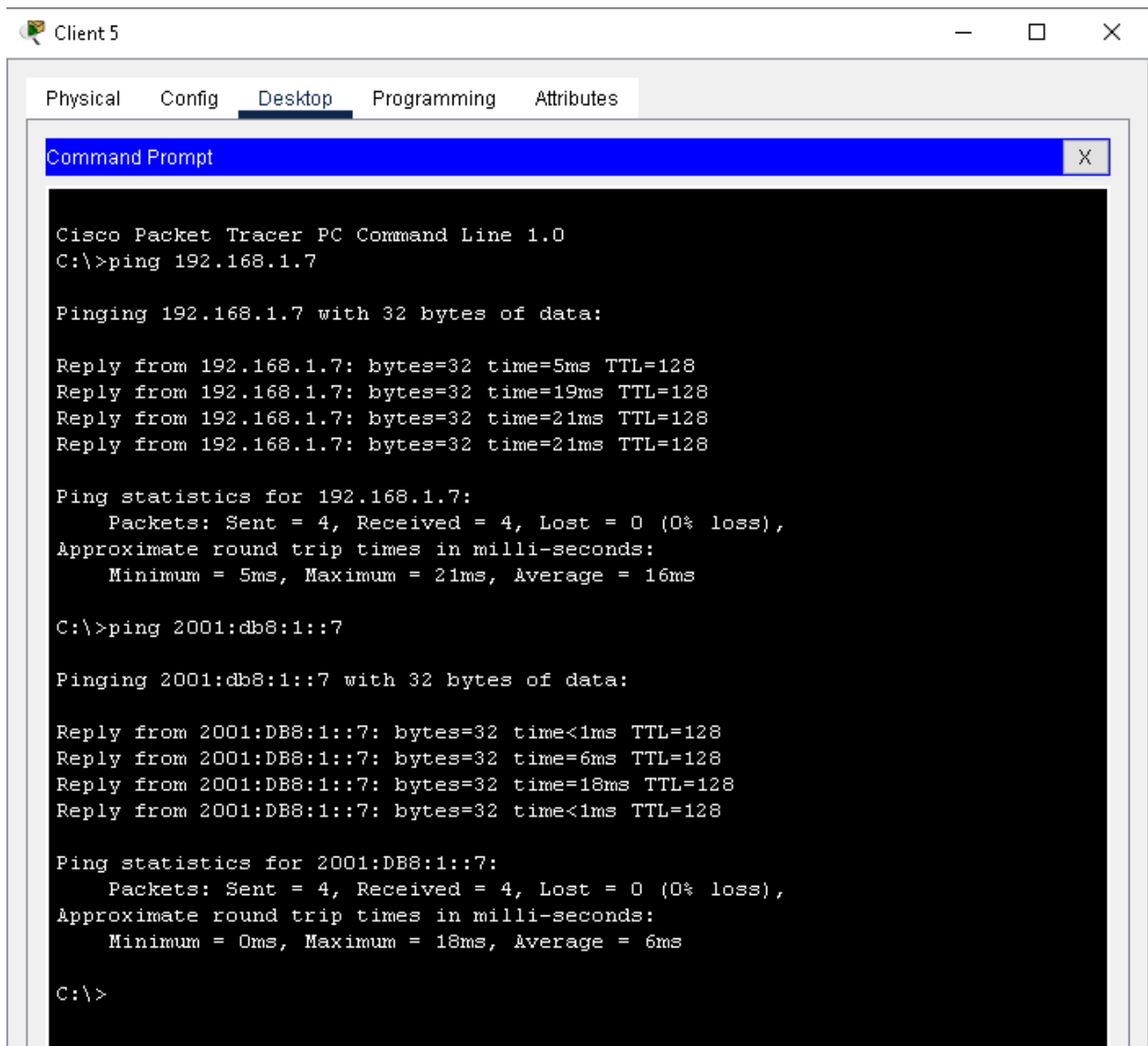
C:\>ping 2001:db8:1::6

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

Reply from 2001:DB8:1::6: bytes=32 time=7ms TTL=128
Reply from 2001:DB8:1::6: bytes=32 time=7ms TTL=128
Reply from 2001:DB8:1::6: bytes=32 time=21ms TTL=128
Reply from 2001:DB8:1::6: bytes=32 time<1ms 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 = 0ms, Maximum = 21ms, Average = 8ms

C:\>
```



Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Reply from 192.168.1.6: bytes=32 time=6ms TTL=128
Reply from 192.168.1.6: bytes=32 time=19ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time=19ms TTL=128

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 19ms, Average = 11ms

C:\>2001:db8:1::8
Invalid Command.

C:\>ping 2001:db8:1::8

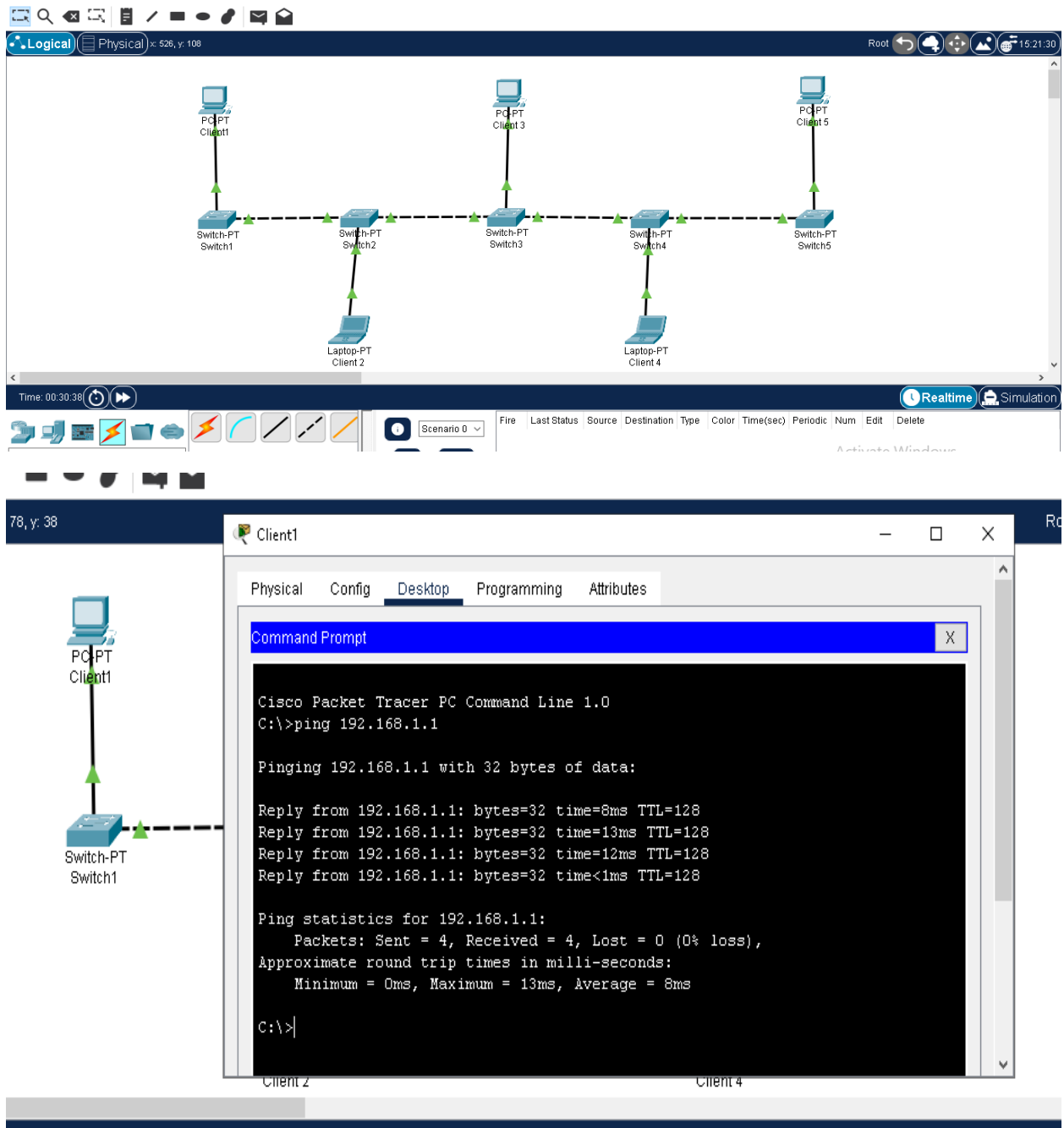
Pinging 2001:db8:1::8 with 32 bytes of data:

Reply from 2001:DB8:1::8: bytes=32 time=23ms TTL=128
Reply from 2001:DB8:1::8: bytes=32 time=2ms TTL=128
Reply from 2001:DB8:1::8: bytes=32 time=23ms TTL=128
Reply from 2001:DB8:1::8: bytes=32 time=20ms TTL=128


Ping statistics for 2001:DB8:1::8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 23ms, Average = 17ms

C:\>
```

3) Configuration des adresses IPv4 d'une topologie en bus et test de la connectivité.



Logical Physical x: 1080, y: 90



Client 2

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

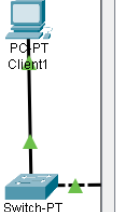
Reply from 192.168.1.2: bytes=32 time=16ms TTL=128
Reply from 192.168.1.2: bytes=32 time=4ms TTL=128
Reply from 192.168.1.2: bytes=32 time=12ms TTL=128
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 16ms, Average = 8ms

C:\>
```

Client 2 Client 4

Logical Physical x: 290, y: 6



Client 3

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

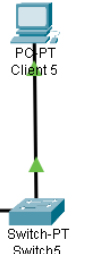
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time=11ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=13ms TTL=128

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 = 13ms, Average = 7ms

C:\>
```

Client 2 Client 4

Logical Physical x: 995, y: 397



Client 4

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.4

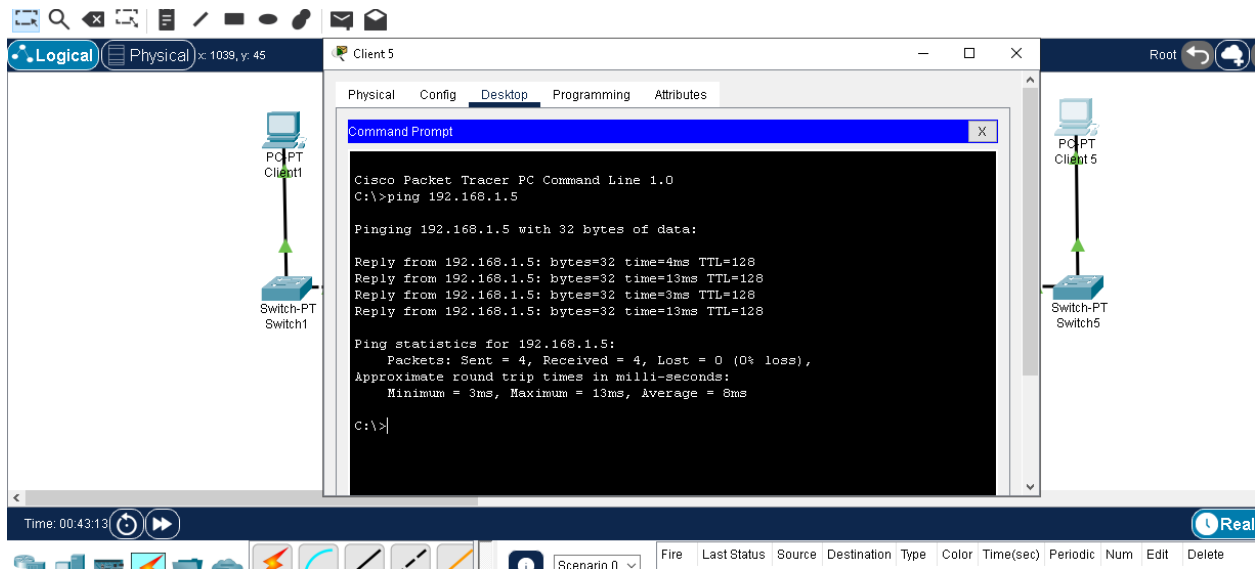
Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time=6ms TTL=128
Reply from 192.168.1.4: bytes=32 time=13ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time=13ms TTL=128

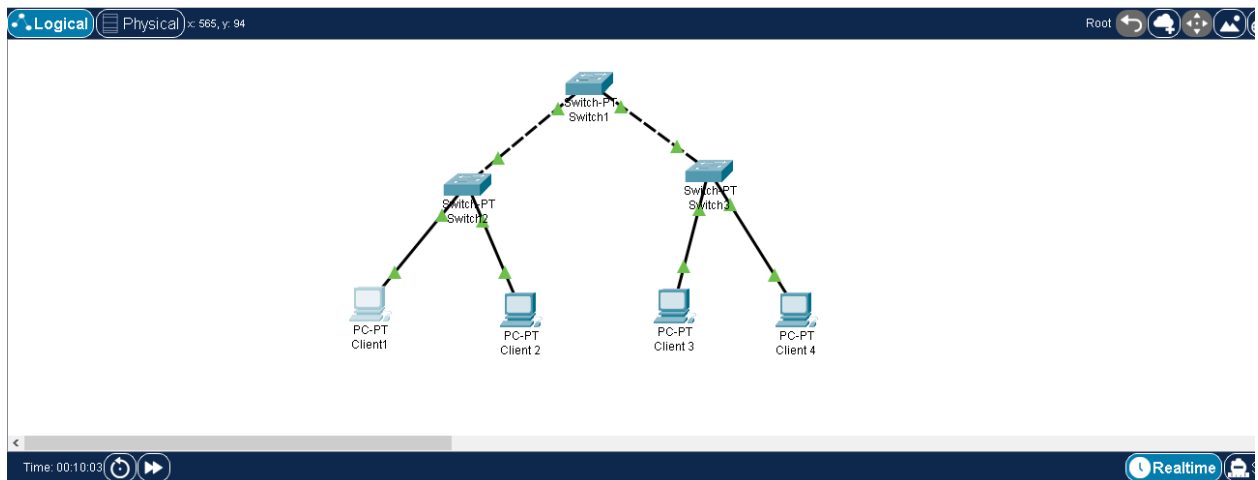
Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 13ms, Average = 8ms

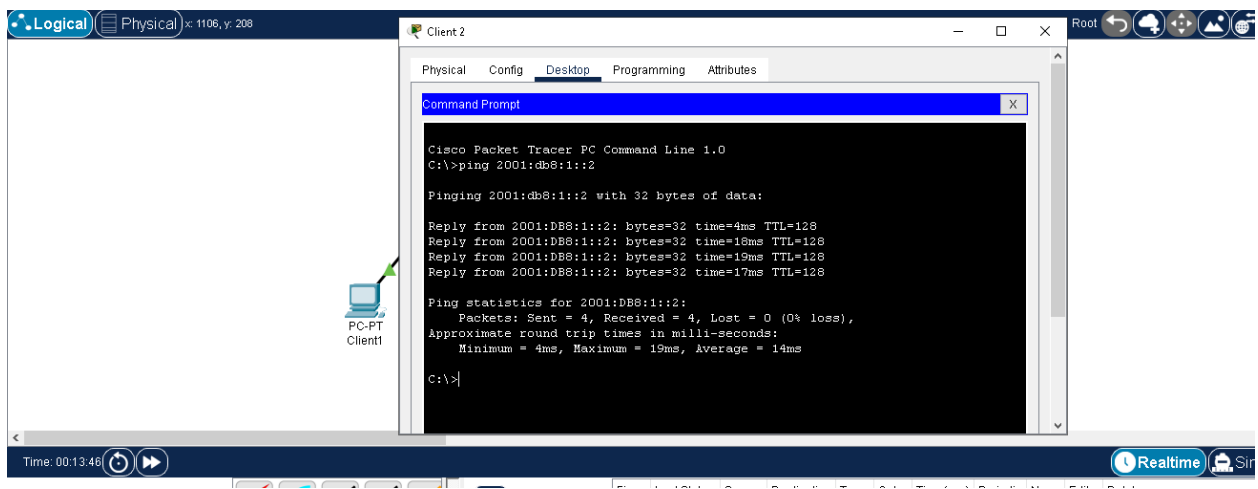
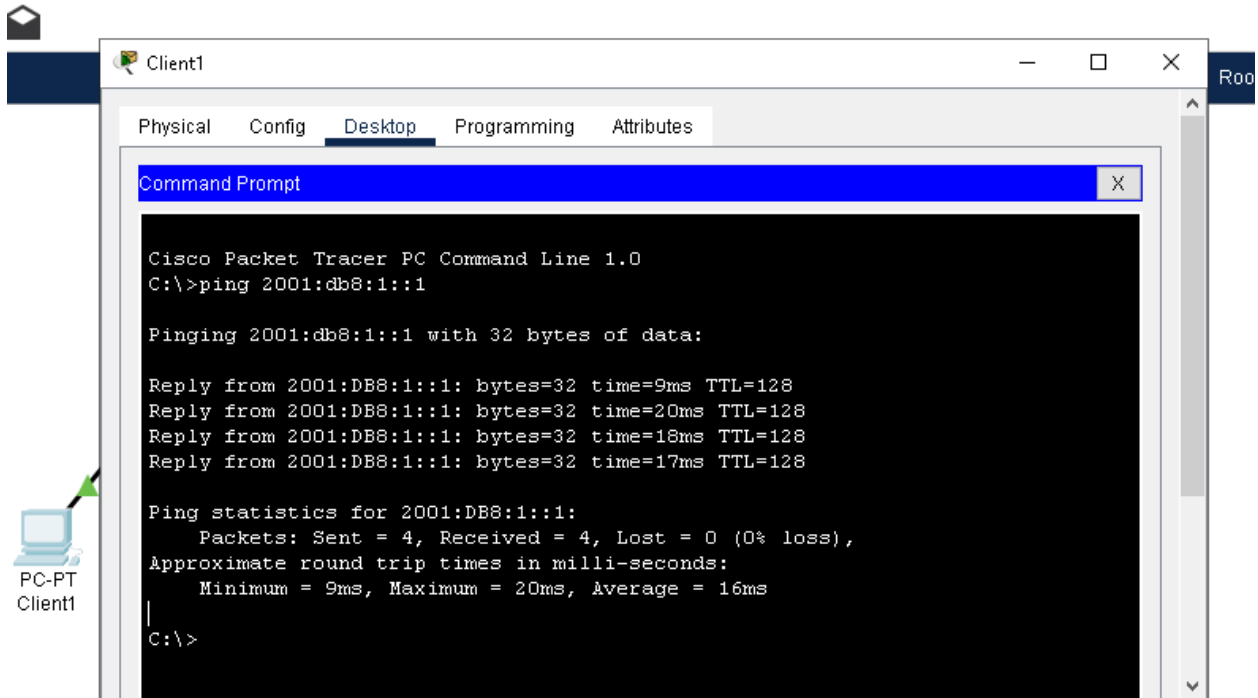
C:\>
```

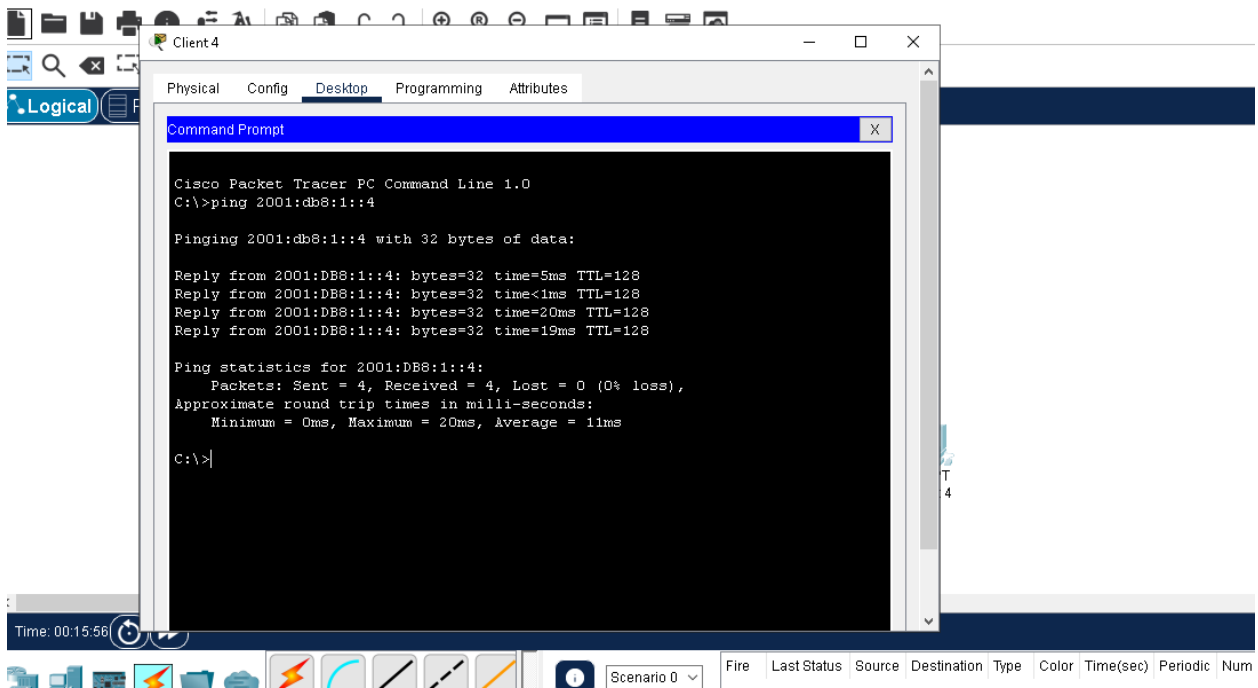
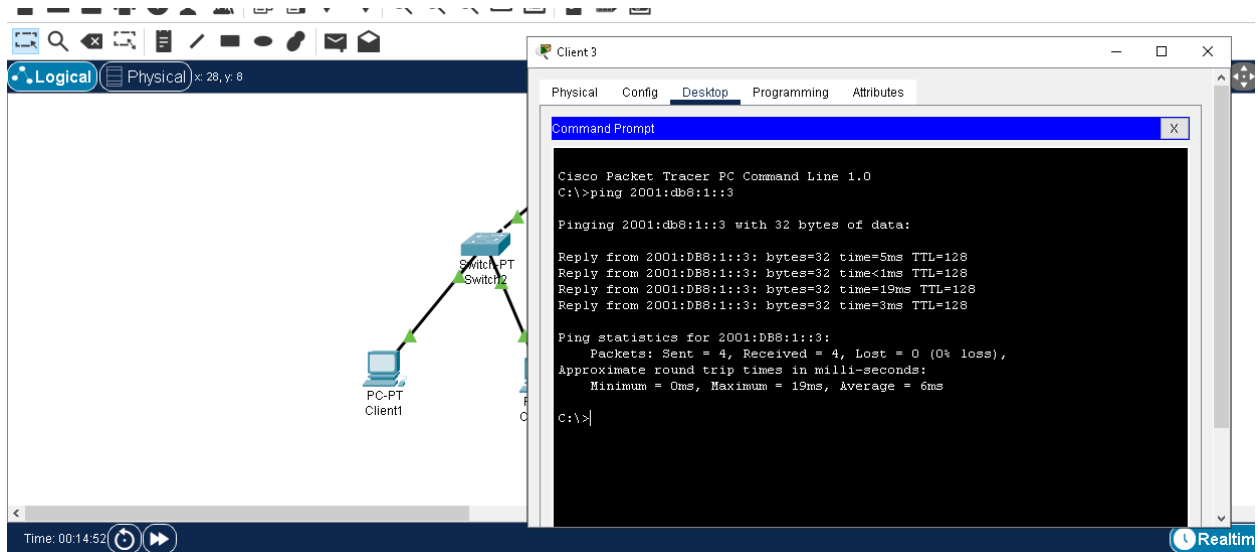
Time: 00:40:05



4) Configuration d'adresse IPv6 d'une topologie en arbre et test de connectivité.







Conclusion

L'adressage permet d'attribuer une adresse IP à une machine ce qui permet de pouvoir identifier chaque machine, cela évite toutes confusions entre les machines.