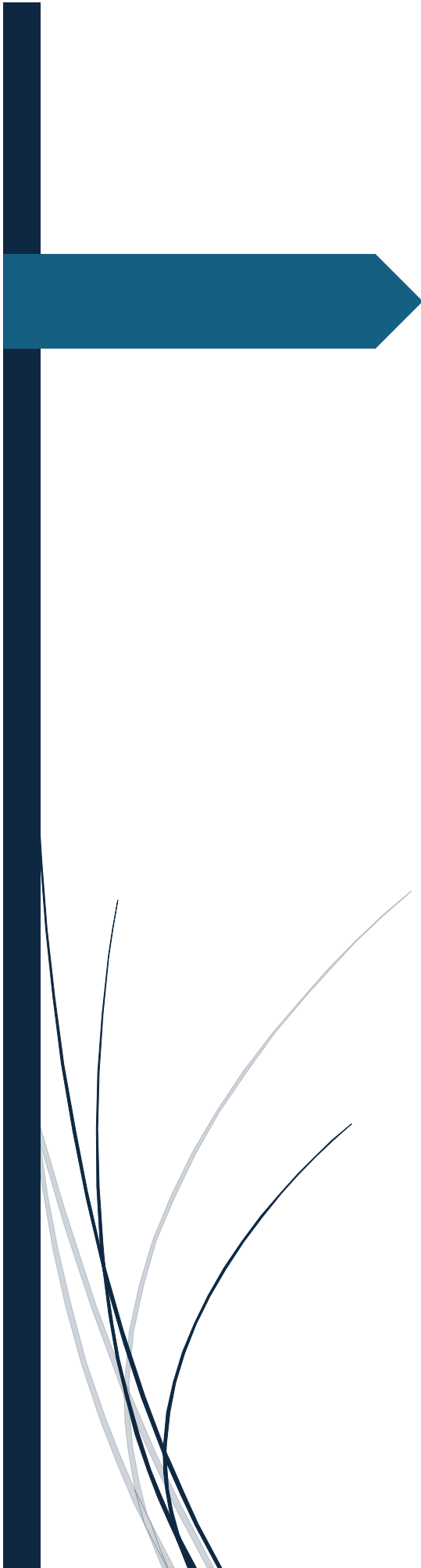


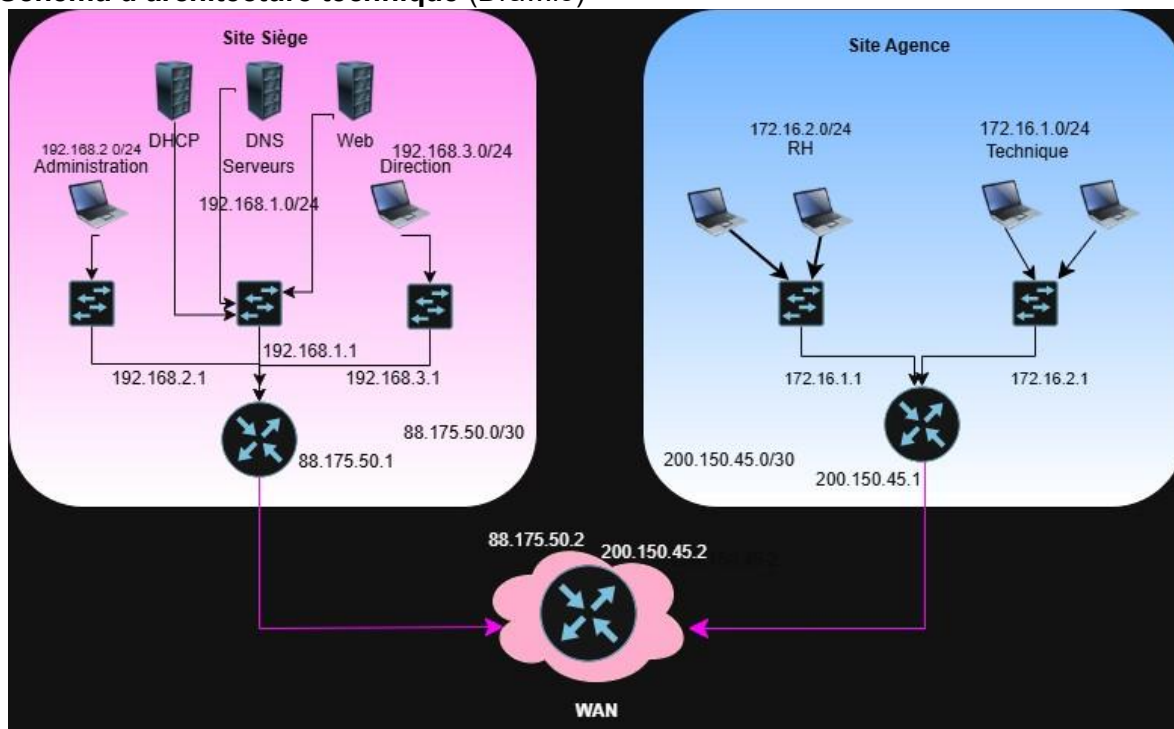


Infrastructure Réseau Fonctionnelle

Paula Andrea Contreras Ovalle

IRIS ECOLE SUPERIEURE D'INFORMATIQUE TOULOUSE

Schéma d'architecture technique (Draw.io)



Plan d'adressage IP complet et détaillé (en forme de tableau)

Plan adressage IP Privée GreenCop						
Site	Service	LAN	Gateway	Serveur	Protocol	IP serveur
Siege	Administration	192.168.2.0/24	192.168.2.1	N/A	N/A	N/A
	Direction	192.168.3.0/24	192.168.3.1	N/A	N/A	N/A
	Serveur	192.168.1.0/24	192.168.1.1	dns1	DNS	192.168.1.100
				dhcp-srv	DHCP	192.168.1.101
Agence	RH	172.16.2.0/24	172.16.2.1	N/A		N/A
	Technique	172.16.1.0/24	172.16.1.1	N/A		N/A

Plan adressage IP Privée GreenCop			
Site	Routeur	Interface	IP
Siege	R-SG	Gi0/0/0	88.175.50.1
Agence	R-AG	Gi0/0/0	200.150.45.1
WAN	R-WAN	Gi0/0/0	88.175.50.2
		Gi0/0/1	200.150.45.2

Configuration complète des équipements (commandes Cisco)

- **ROUTEUR HQ (siege)**

enable

configure terminal

```
interface GigabitEthernet0/1 ip
address 192.168.1.1 255.255.255.0
no shutdown
exit
```

```
interface GigabitEthernet0/2 ip
address 192.168.2.1 255.255.255.0
no shutdown
exit
```

```
interface GigabitEthernet0/0 ip address
88.175.50.1 255.255.255.252
no shutdown
exit
```

```
ip route 172.16.1.0 255.255.255.0 88.175.50.2 ip
route 172.16.2.0 255.255.255.0 88.175.50.2
```

- **ROUTEUR AGENCE (R-AG)**

enable configure

terminal

```
interface GigabitEthernet0/1 ip
address 172.16.2.1 255.255.255.0
no shutdown
exit
```

```
interface GigabitEthernet0/2 ip
address 172.16.1.1 255.255.255.0
no shutdown exit
```

```
interface GigabitEthernet0/0 ip address
200.150.45.1 255.255.255.252 no
shutdown exit
```

```
ip route 192.168.1.0 255.255.255.0 200.150.45.2 ip
route 192.168.2.0 255.255.255.0 200.150.45.2 ip
route 192.168.3.0 255.255.255.0 200.150.45.2
```

- **ROUTEUR PRINCIPAL (R-WAN)**

```
enable configure
terminal
```

```
interface GigabitEthernet0/0 ip address
88.175.50.2 255.255.255.252
no shutdown
exit
```

```
interface GigabitEthernet0/1 ip address
200.150.45.2 255.255.255.252 no
shutdown
exit
```

```
ip route 192.168.1.0 255.255.255.0 88.175.50.1 ip
route 192.168.2.0 255.255.255.0 88.175.50.1 ip
route 192.168.3.0 255.255.255.0 88.175.50.1 ip
route 172.16.1.0 255.255.255.0 200.150.45.1 ip
route 172.16.2.0 255.255.255.0 200.150.45.1
```

- **SWITCH RH (Agence – Switch 1)**

```
enable
configure terminal
```

```
interface FastEthernet0/1
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/2
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/24
switchport mode access
switchport access vlan 1 exit
```

- **SWITCH Technique (Agence – Switch 4)** enable
configure terminal

```
interface FastEthernet0/1
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/2
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/24
switchport mode access
switchport access vlan 1
exit
```

- **SWITCH Admin (siege)**

enable configure terminal

```
interface FastEthernet0/1
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/2
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/24
switchport mode access
switchport access vlan 1 exit
```

- **SWITCH Direction (siege)**

enable
configure terminal

```
interface FastEthernet0/1
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/2
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/24
switchport mode access
switchport access vlan 1 exit
```

- **SWITCH Serveurs (siege) enable**
configure terminal

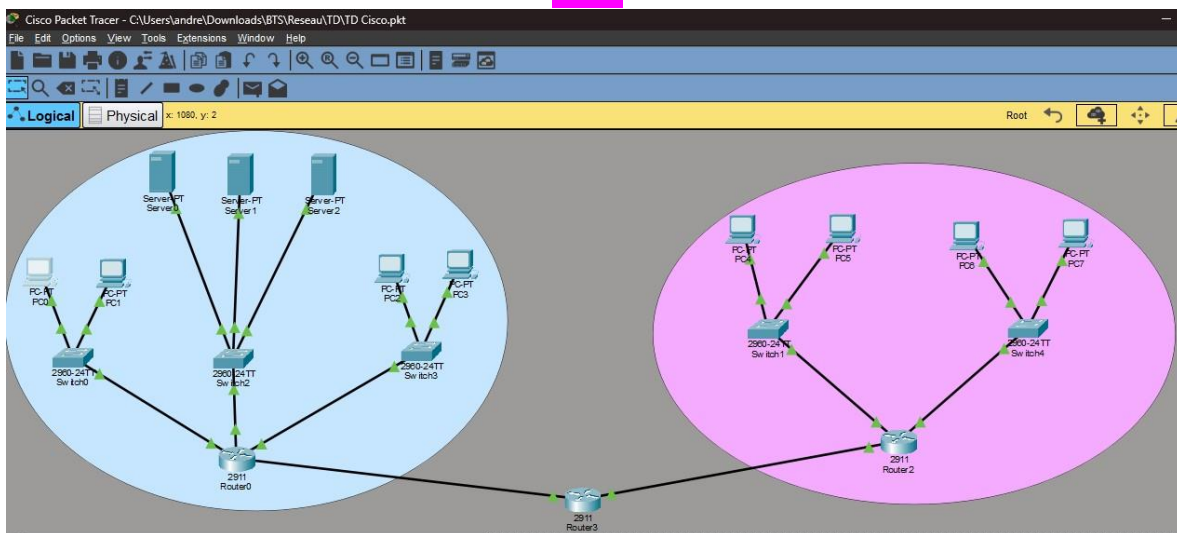
```
interface FastEthernet0/1
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/2
switchport mode access
switchport access vlan 1
exit
```

```
interface FastEthernet0/3
switchport mode access
switchport access vlan 1
exit
```

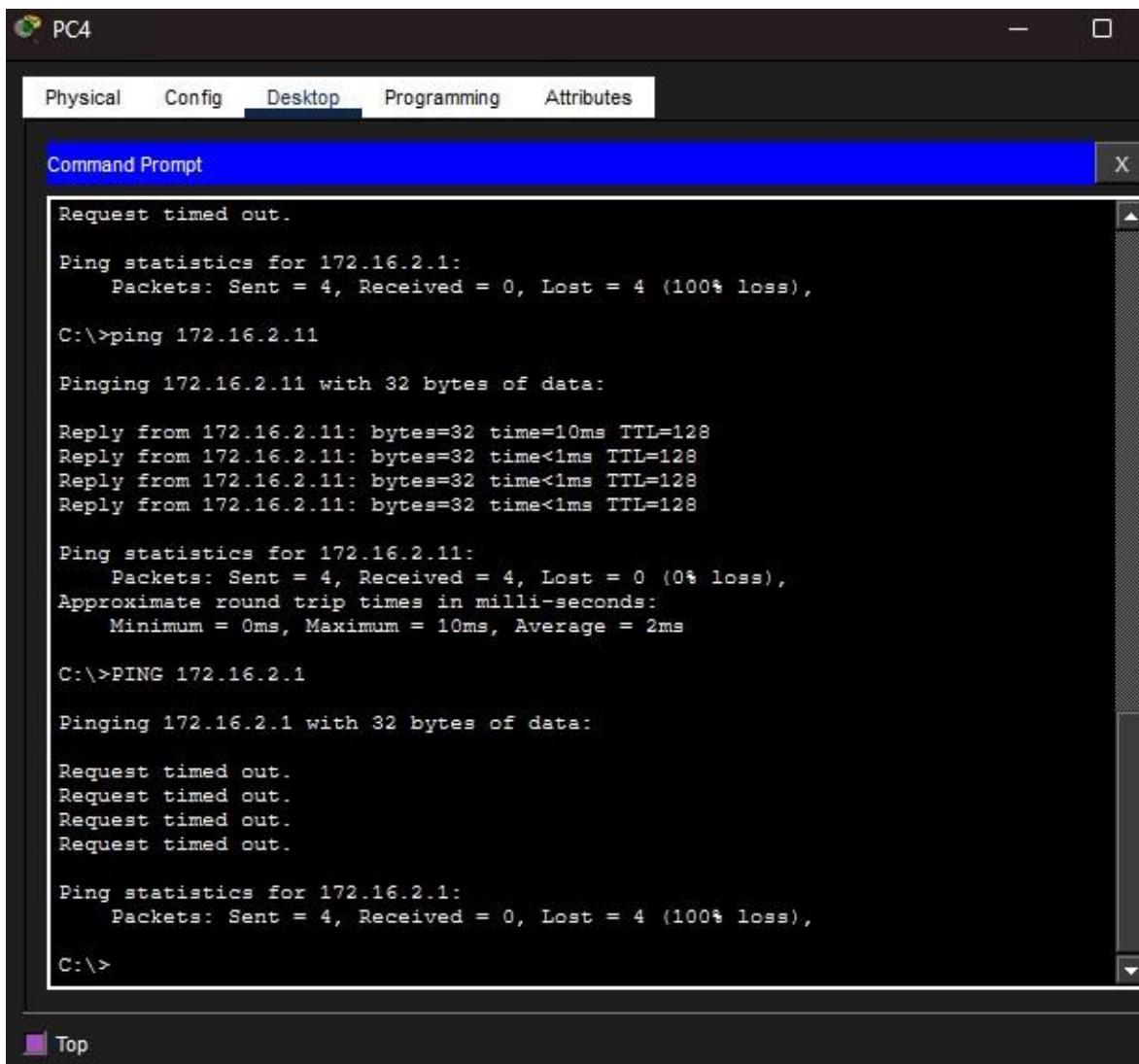
```
interface FastEthernet0/24
switchport mode access
switchport access vlan 1
exit
```

CISCO

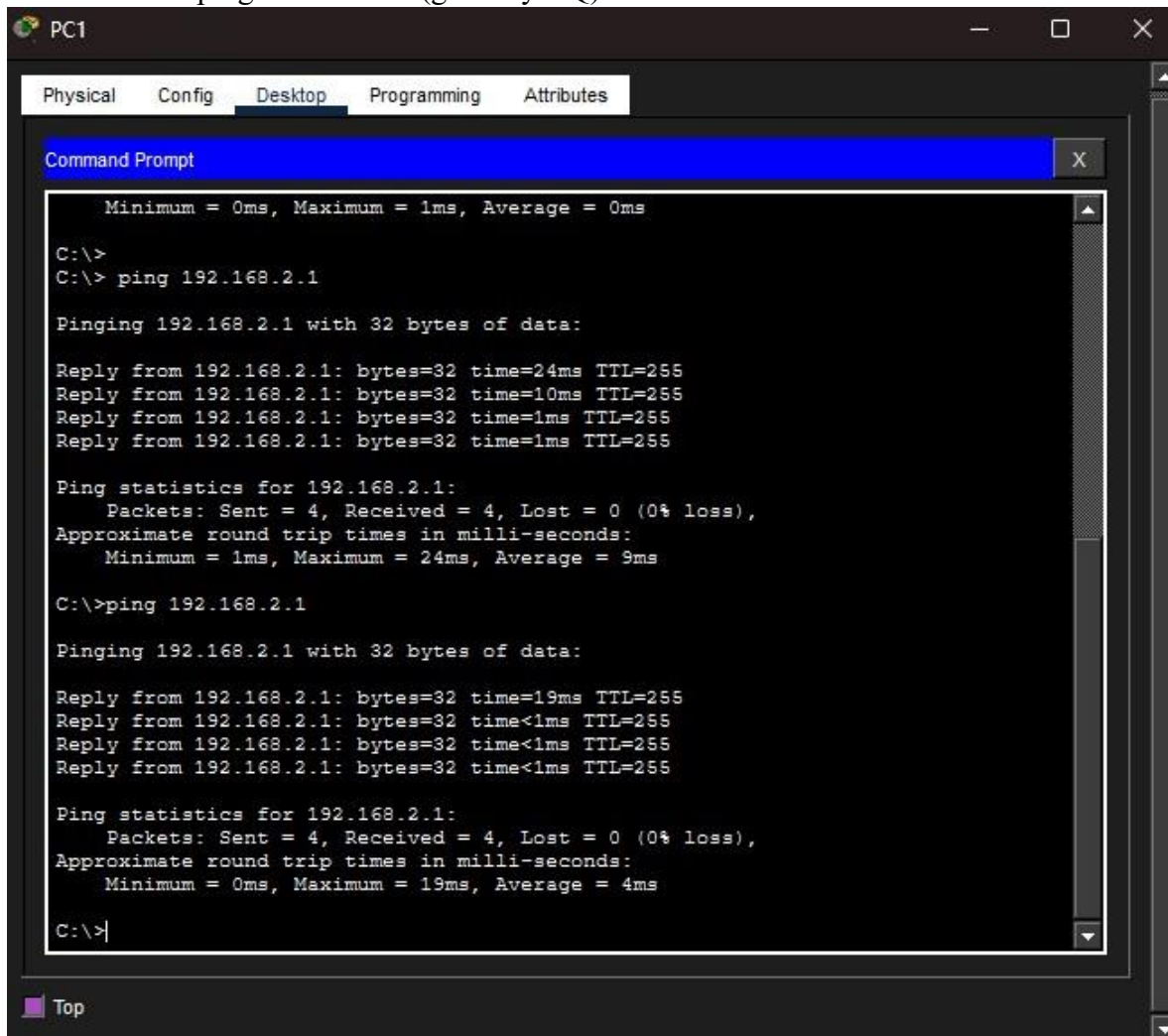


Ping entre PC et routeurs

PC2 --> (gateway R-AG).



PC-Admin1 → ping 192.168.2.1 (gateway HQ).



The screenshot shows a window titled "PC1" with tabs for "Physical", "Config", "Desktop", "Programming", and "Attributes". The "Desktop" tab is active, displaying a "Command Prompt" window. The Command Prompt shows the results of a ping command to 192.168.2.1. The first ping shows a minimum of 0ms, maximum of 1ms, and average of 0ms. The second ping shows a minimum of 1ms, maximum of 24ms, and average of 9ms. The third ping shows a minimum of 0ms, maximum of 19ms, and average of 4ms.

```
PC1
Physical Config Desktop Programming Attributes
Command Prompt
Minimum = 0ms, Maximum = 1ms, Average = 0ms
C:\>
C:\> ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=24ms TTL=255
Reply from 192.168.2.1: bytes=32 time=10ms TTL=255
Reply from 192.168.2.1: bytes=32 time=1ms TTL=255
Reply from 192.168.2.1: bytes=32 time=1ms TTL=255

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 24ms, Average = 9ms

C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

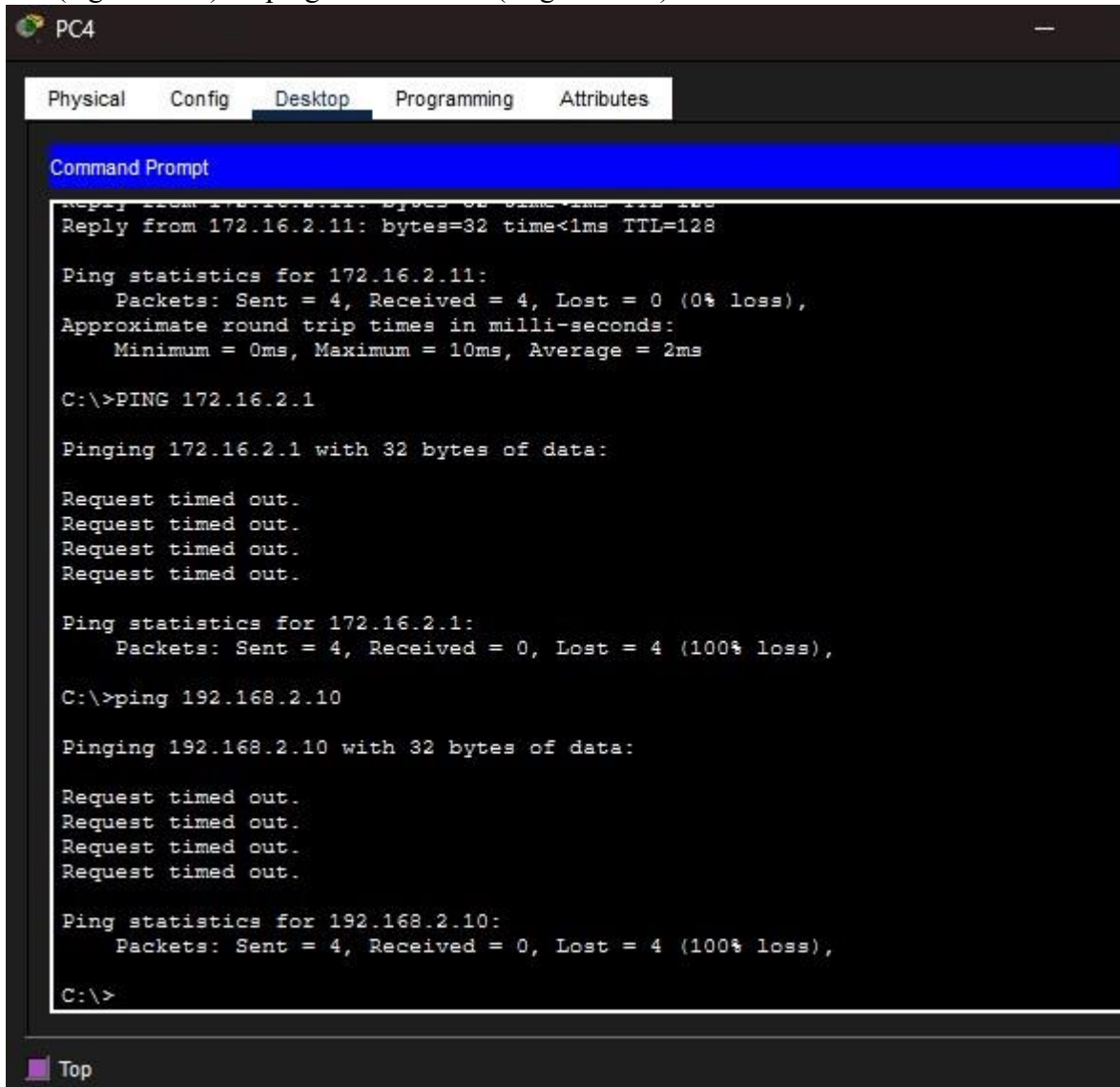
Reply from 192.168.2.1: bytes=32 time=19ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 19ms, Average = 4ms

C:\>|
Top
```

Ping entre sites

PC4 (Agence RH) → ping 192.168.2.10 (siege Admin).



```
PC4
Physical  Config  Desktop  Programming  Attributes

Command Prompt

Reply from 172.16.2.11: bytes=32 time<1ms TTL=128
Reply from 172.16.2.11: bytes=32 time<1ms TTL=128

Ping statistics for 172.16.2.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 2ms

C:\>PING 172.16.2.1

Pinging 172.16.2.1 with 32 bytes of data:

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

Ping statistics for 172.16.2.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.2.10

Pinging 192.168.2.10 with 32 bytes of data:

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

Ping statistics for 192.168.2.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

PC-Admin1 (siege) → ping 172.16.2.10 (Agence RH)

```
C:\> ping 172.16.2.10

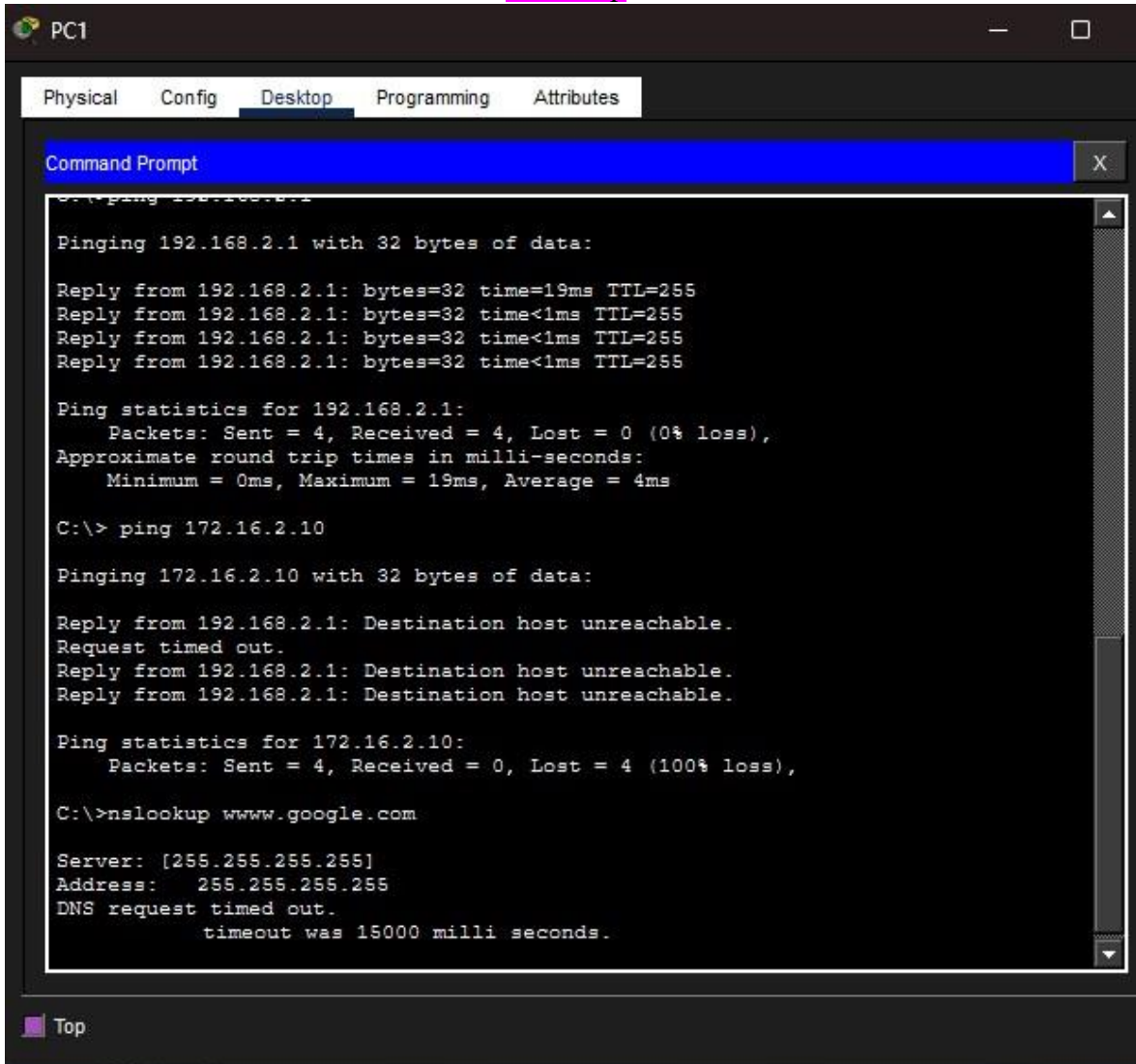
Pinging 172.16.2.10 with 32 bytes of data:

Reply from 192.168.2.1: Destination host unreachable.
Request timed out.
Reply from 192.168.2.1: Destination host unreachable.
Reply from 192.168.2.1: Destination host unreachable.

Ping statistics for 172.16.2.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

Nslookup



The screenshot shows a PC1 desktop environment with a dark theme. The 'Desktop' tab is selected in the top navigation bar. A 'Command Prompt' window is open, displaying the results of several network commands. The first command is a successful ping to 192.168.2.1. The second is a failed ping to 172.16.2.10. The third is an nslookup command for www.google.com, which also failed.

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=19ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 19ms, Average = 4ms

C:\>ping 172.16.2.10

Pinging 172.16.2.10 with 32 bytes of data:

Reply from 192.168.2.1: Destination host unreachable.
Request timed out.
Reply from 192.168.2.1: Destination host unreachable.
Reply from 192.168.2.1: Destination host unreachable.

Ping statistics for 172.16.2.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>nslookup www.google.com

Server: [255.255.255.255]
Address: 255.255.255.255
DNS request timed out.
        timeout was 15000 milli seconds.
```

Top

Configuration DHCP sur les PC

Server0

PhysicalConfigServicesDesktopProgrammingAttributes

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

PRP

DHCP

InterfaceFastEthernet0ServiceOnOff

Pool NameAGENCE 7

Default Gateway172.16.1.11

DNS Server8.8.8.8

Start IP Address :1721611

Subnet Mask:25525500

Maximum Number of Users :245

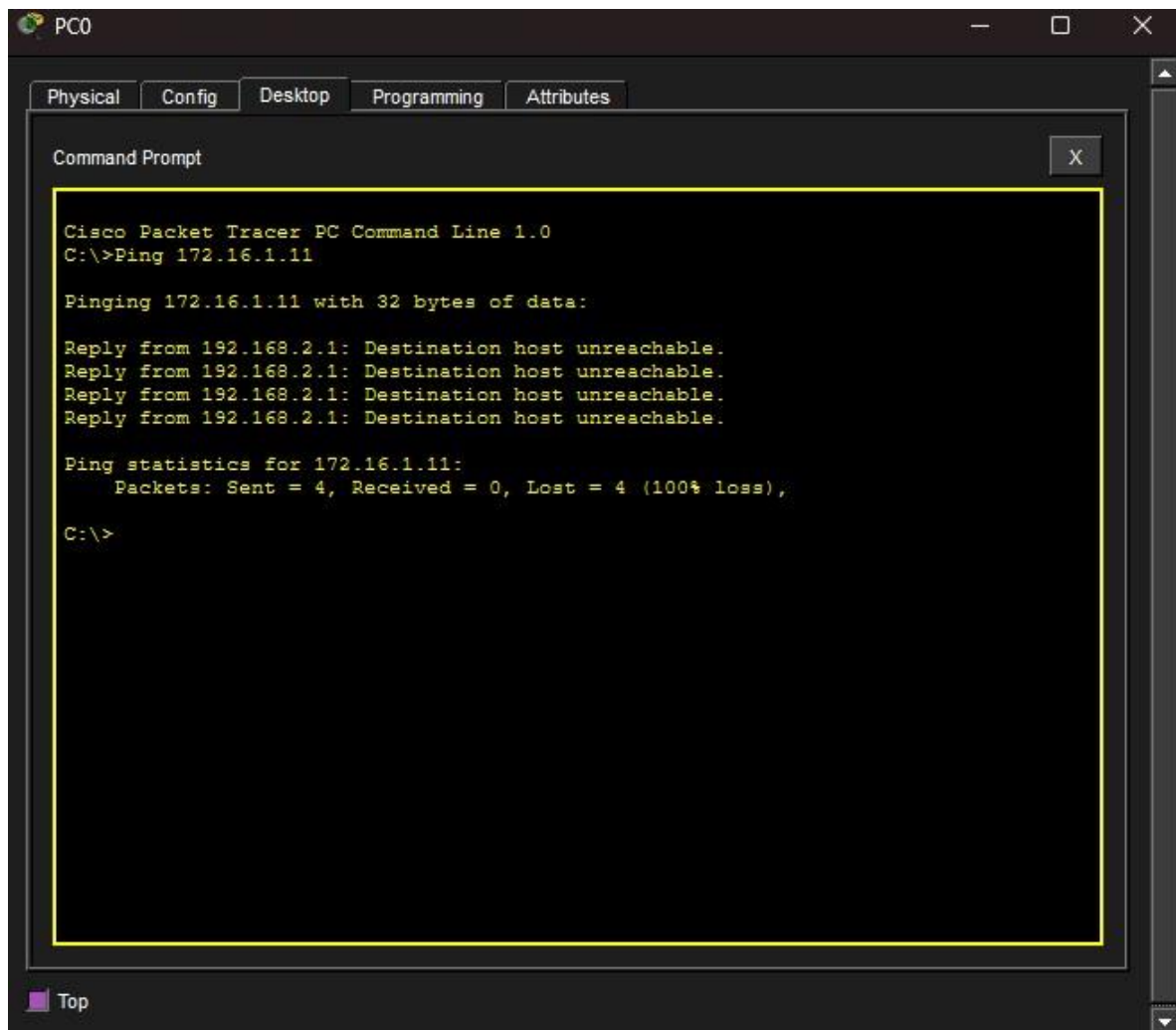
TFTP Server:0.0.0.0

WLC Address:0.0.0.0

AddSaveRemove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
AGENCE 7	172.16.1.11	8.8.8.8	172.16.1.1	255.255.0.0	245	0.0.0.0	0.0.0.0
AGENCE 6	172.16.1.10	8.8.8.8	172.16.1.1	255.255.0.0	245	0.0.0.0	0.0.0.0
AGENCE 5	172.16.2.11	8.8.8.8	172.16.2.1	255.255.0.0	245	0.0.0.0	0.0.0.0
AGENCE 4	172.16.2.10	8.8.8.8	172.16.2.1	255.255.0.0	245	0.0.0.0	0.0.0.0
SEGE 3	192.168.3.11	8.8.8.8	192.168.3.1	255.255.255.0	245	0.0.0.0	0.0.0.0
SEGE 2	192.168.3.10	8.8.8.8	192.168.3.11	255.255.255.0	245	0.0.0.0	0.0.0.0
SEGE 1	192.168.2.11	8.8.8.8	192.168.2.1	255.255.255.0	246	0.0.0.0	0.0.0.0

Top



Fin.