

# BlueTelecom - SAE 21 Par LOPITNO Mathys - 2024 ©

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## Notes importantes

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### Premier démarrage

Lors du premier démarrage de l'application, il faut attendre 1 minutes afin que tout les appareils soient bien démarrés. Afin d'accélérer le processus vous pouvez appuyer 2 fois sur le bouton >> en bas à gauche de l'application.

### Premières actions entre 2 machines

Une des limitations de Cisco Packet Tracer, et qu'il n'y a pas de "free ARP" et qu'une requête ARP fait perdre la requête initiale. Il est donc normal que lors des premières actions entre 2 machines, la première (allant jusqu'au 4 première suivant la distance) requête échoue. Il suffit de réessayer une seconde fois pour que cela fonctionne.

### DHCP sur les PCs

Tout les PCs (hors administrateur DMZ) sont configurés pour recevoir une adresse IP via DHCP. Il est donc normal que lors de l'allumage du montage, il faille attendre uen trentaine de secondes/ 1 minute pour que l'adresse IP soit attribuée. Cependant un bug fait que le DHCP peut se voir désactiver lors de l'allumage du montage. Il suffit de le réactiver manuellement, pour cela il aller dans Config, Gateway/ DNS IPv4 et cocher "DHCP".

### Connexion par le VPN

Le VPN est configurée avec un système de pre shared key en plus de l'authentification par mot de passe. Il faut donc plusieurs requetes pour que la connexion soit établie. Il est normal que les premières requetes échoue, il suffit de réessayer.

### Test des configurations

Il est important de notées que les screens issues du tests ont été réalisée à la fin de la configurations de tout les appareils, et les premières actions menant a des échecs ont été réalisée. Lors d'un test nous partons donc du principe que tout les appareils ont été configuré.

### Rassemblement par VLAN

La configuration est testée sur 1 Pc pour chaque VLAN et est représentatif du VLAN entier, car ils partagent la même configuration.

# Test réseaux interne (Entreprise + Délocalisé) vers DMZ + Internet

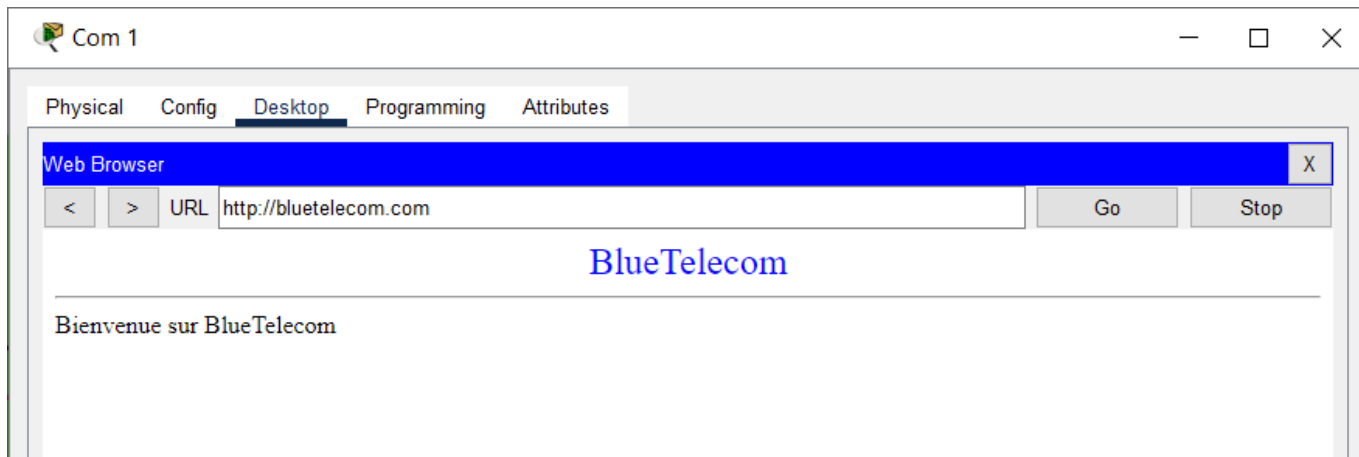
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## Rappel des accès

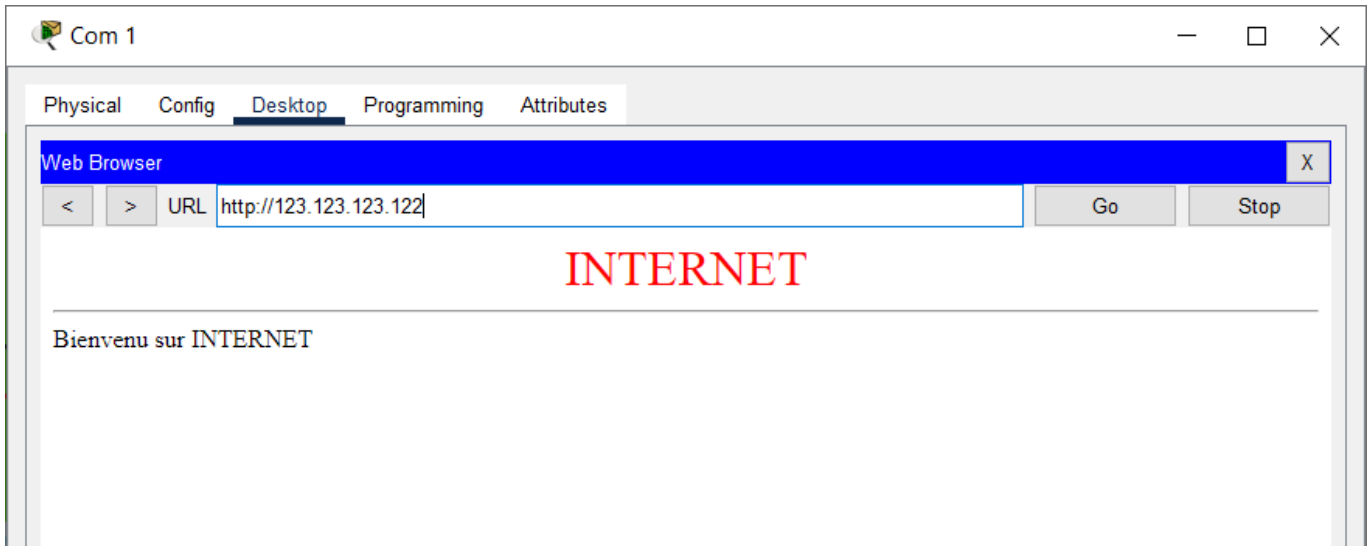
Machine	Internet	DMZ
PC Com	Oui	Oui
PC Tech	Non	Non
PC Admin Entreprise	Oui	Oui
Pc Admin DMZ	Non	Non
Serveur Entreprise	Non	Non
Pc délocalisé	Oui	Oui

## PC Com

Access server DMZ (DNS + Web)

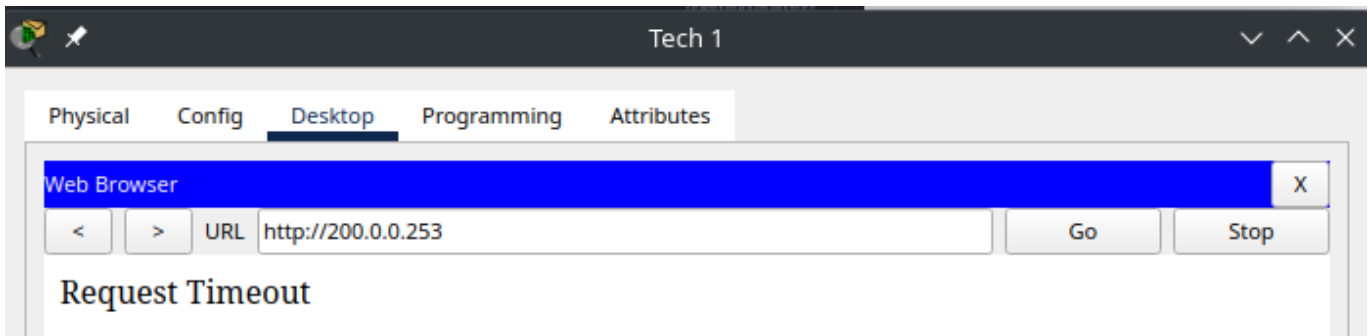


Access internet

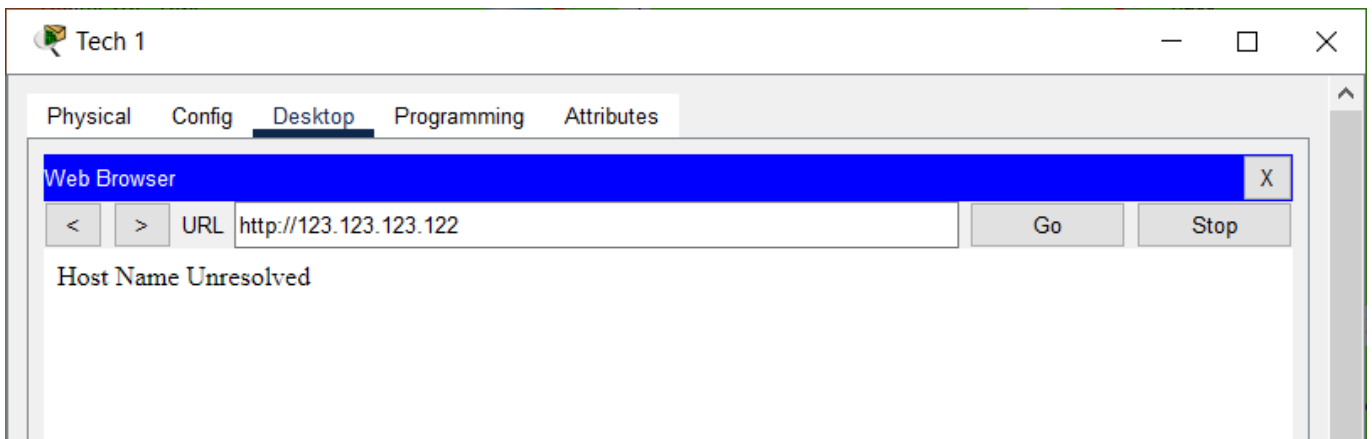


## PC Tec

Access server DMZ (DNS + Web)

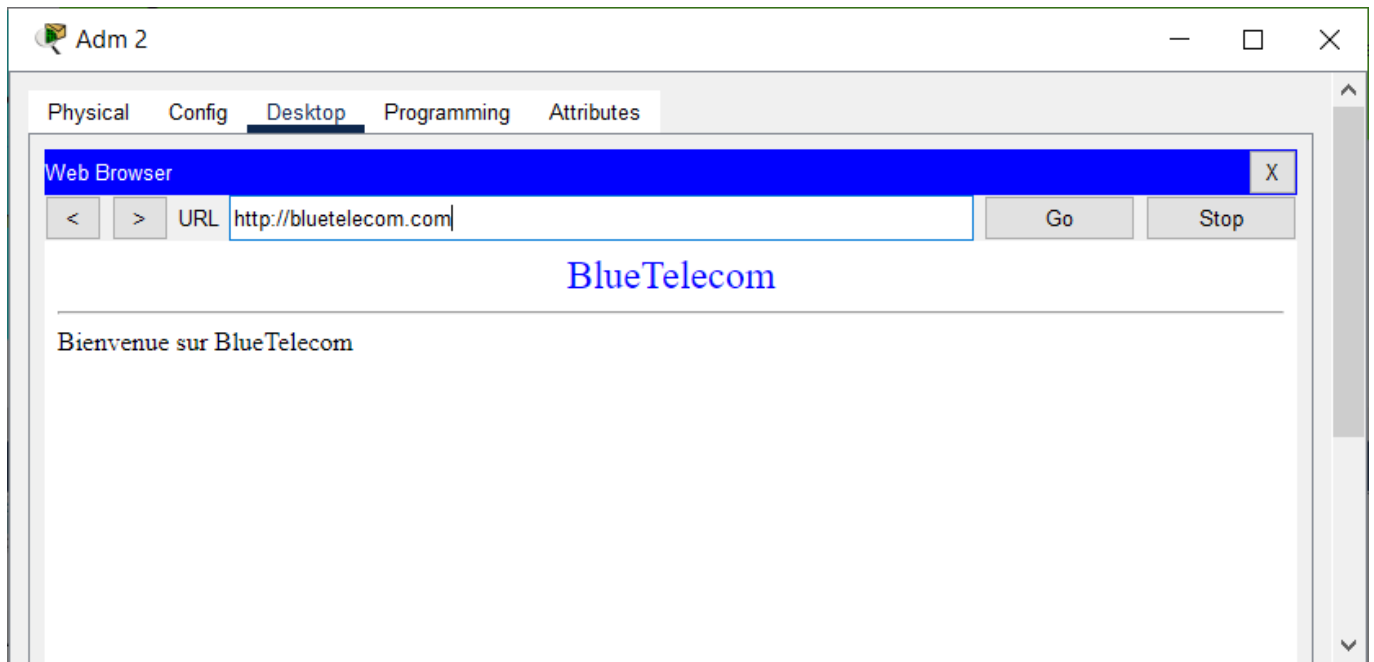


Access internet

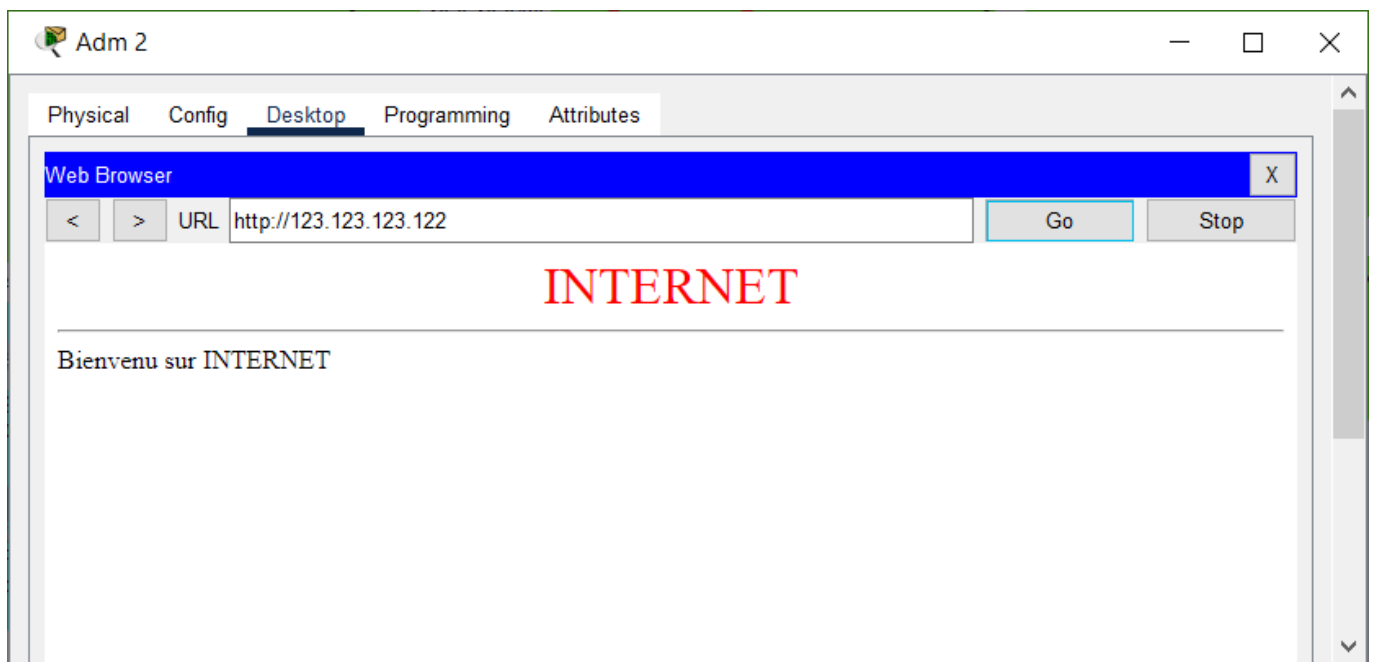


## PC Admin

### Access server DMZ (DNS + Web)

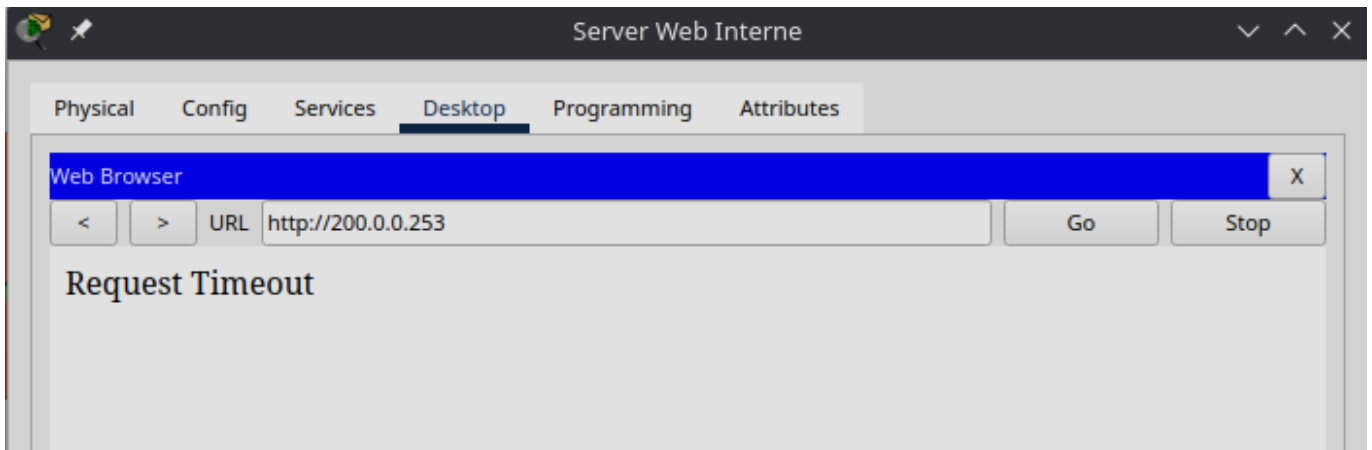


### Access internet

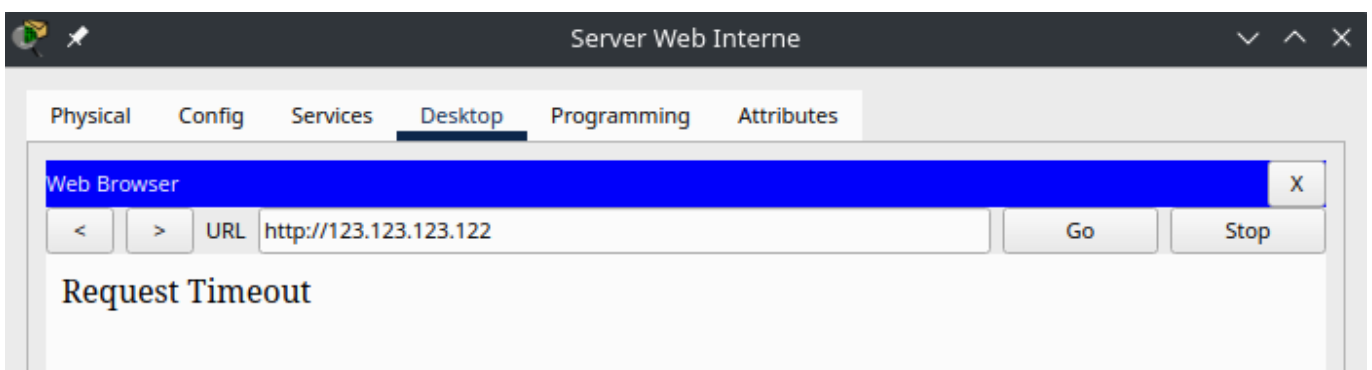


### Server

### Access server DMZ (DNS + Web)

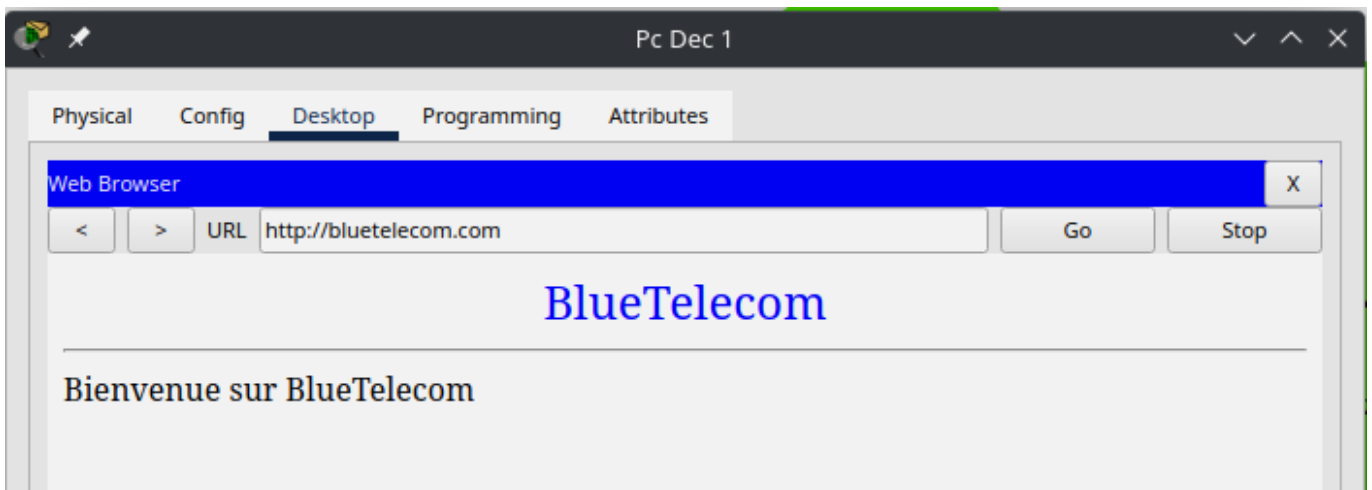


### Access internet

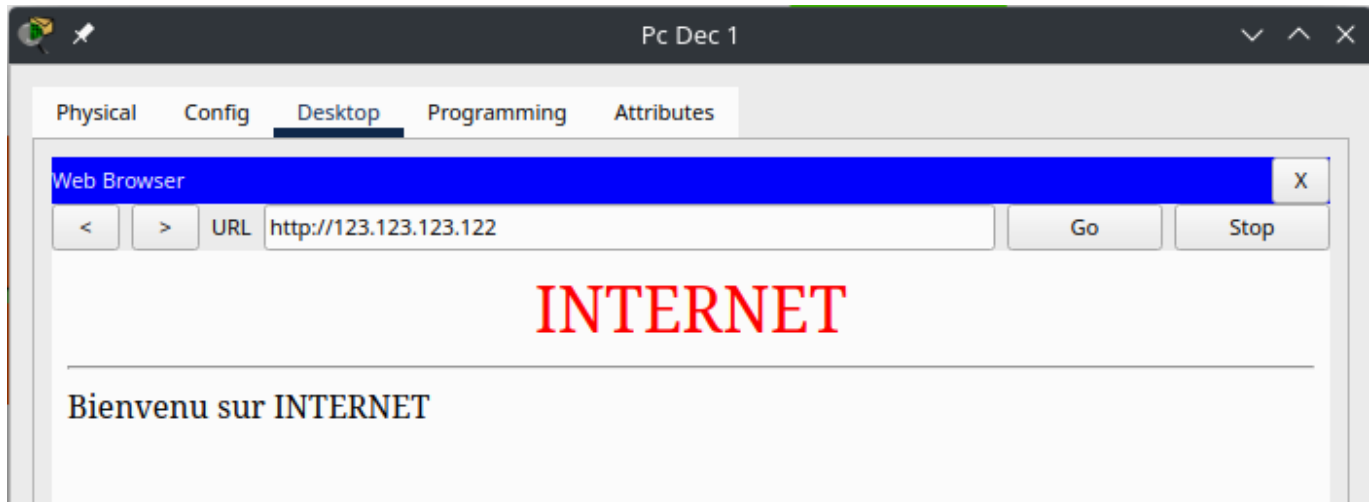


### Pc délocalisé

#### Access server DMZ (DNS + Web)



### Access internet



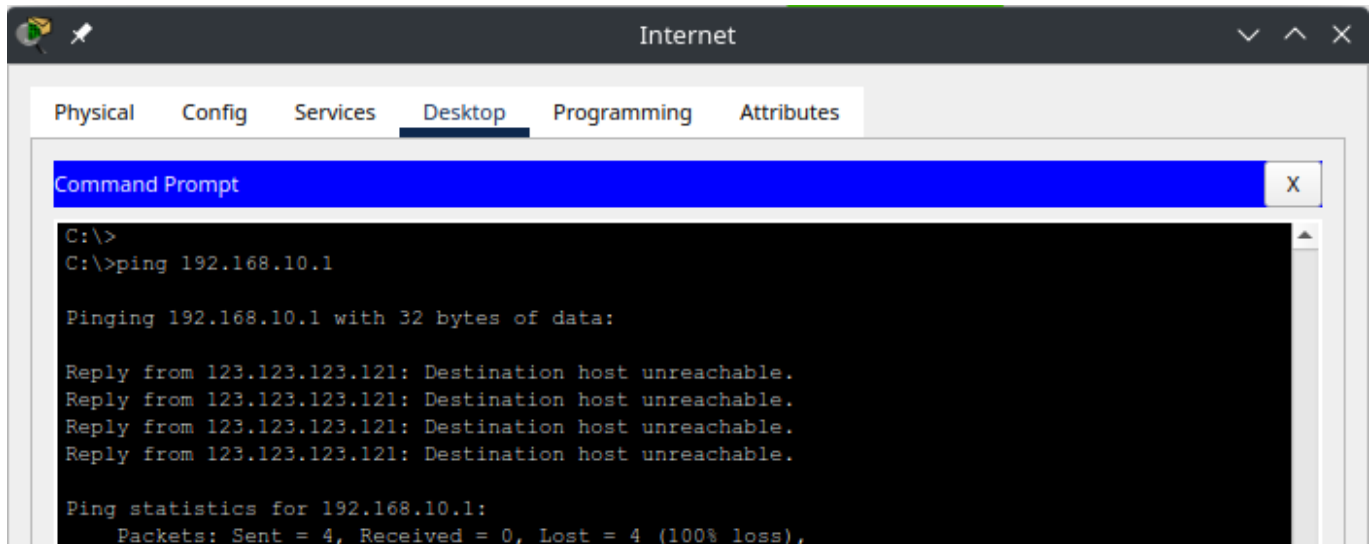
## Internet vers autre

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### Rappel des accès

Server/ Pc	Internet --> Server/ Pc
PC-Admin	Non
PC-Tech	Non
PC-Com	Non
Server (interne)	Non
Server DNS	Oui
Server Web	Oui
PC-Délocalisé	Non
Pc-Admin DMZ	Non

PC-Com



The screenshot shows a Command Prompt window titled "Command Prompt" with a close button (X) in the top right corner. The window is open within a larger application window titled "Internet" which has tabs for "Physical", "Config", "Services", "Desktop", "Programming", and "Attributes". The "Desktop" tab is selected. The Command Prompt shows the following text:

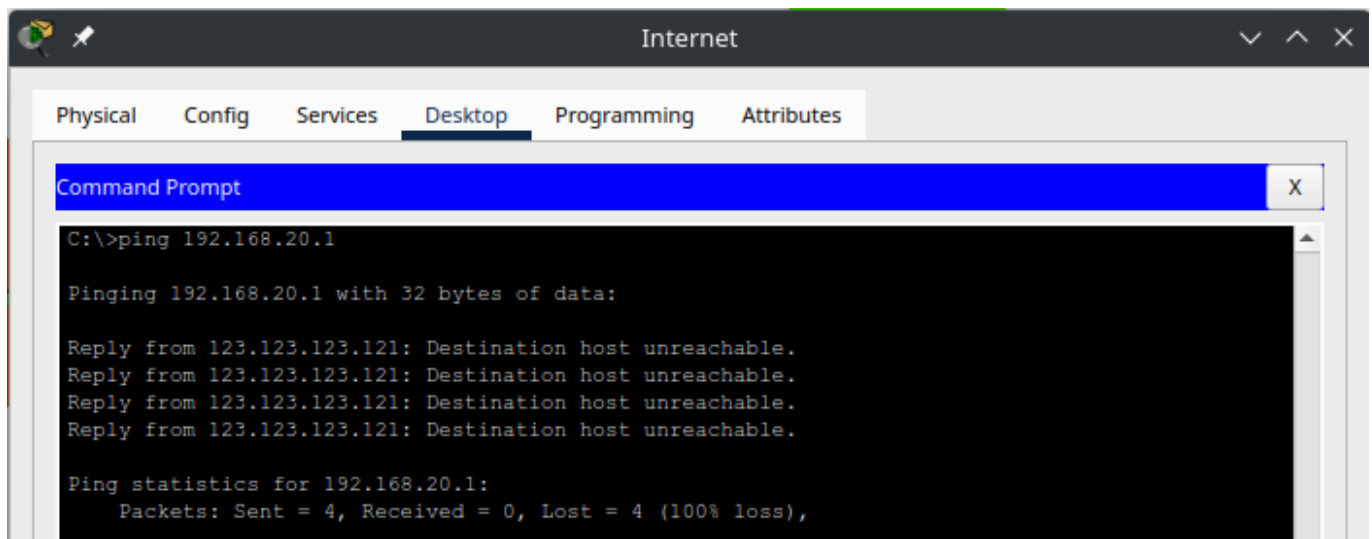
```
C:\>
C:\>ping 192.168.10.1

Pinging 192.168.10.1 with 32 bytes of data:

Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.

Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

## PC-Tech



The screenshot shows a Command Prompt window titled "Command Prompt" with a close button (X) in the top right corner. The window is open within a larger application window titled "Internet" which has tabs for "Physical", "Config", "Services", "Desktop", "Programming", and "Attributes". The "Desktop" tab is selected. The Command Prompt shows the following text:

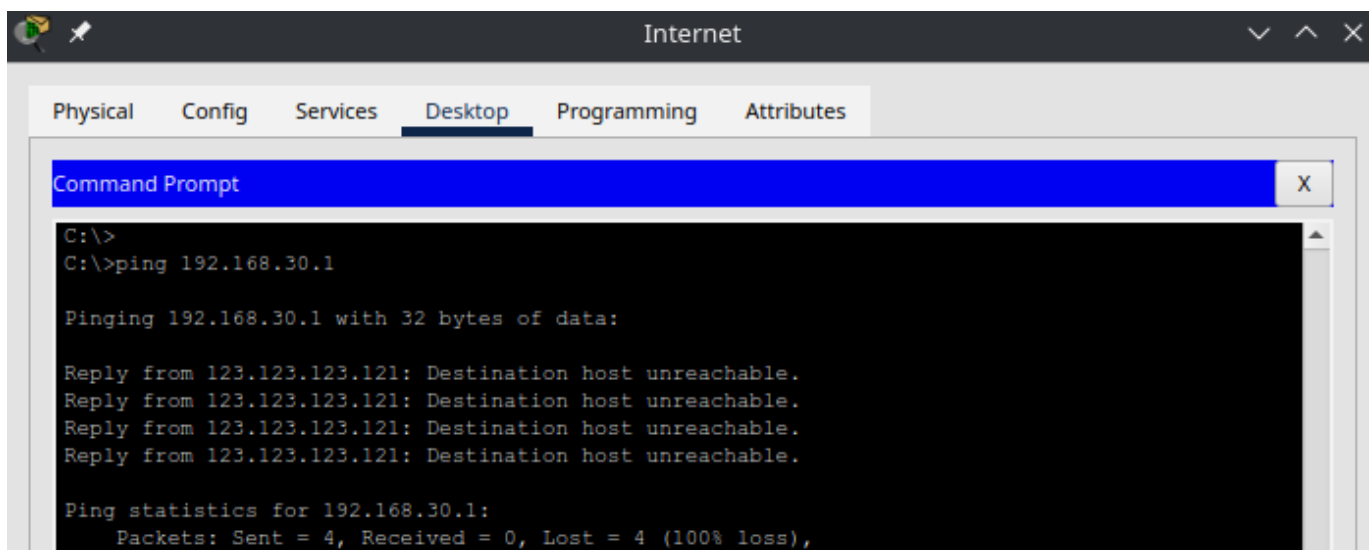
```
C:\>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.

Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

## PC-Admin



The screenshot shows a Command Prompt window titled "Command Prompt" with a close button (X) in the top right corner. The window is open within a larger application window titled "Internet" which has tabs for "Physical", "Config", "Services", "Desktop", "Programming", and "Attributes". The "Desktop" tab is selected. The Command Prompt shows the following text:

```
C:\>
C:\>ping 192.168.30.1

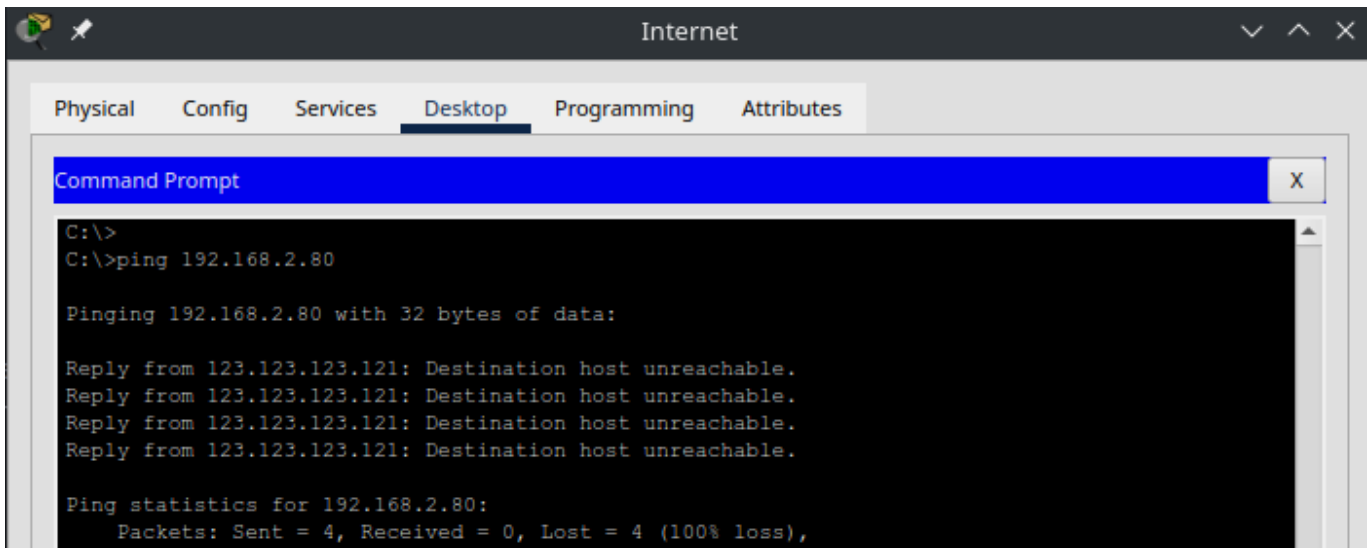
Pinging 192.168.30.1 with 32 bytes of data:

Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.

Ping statistics for 192.168.30.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

## Server Interne





The screenshot shows a Command Prompt window titled "Command Prompt" with a blue header bar. The window is open within a larger application window titled "Internet". The Command Prompt shows the following text:

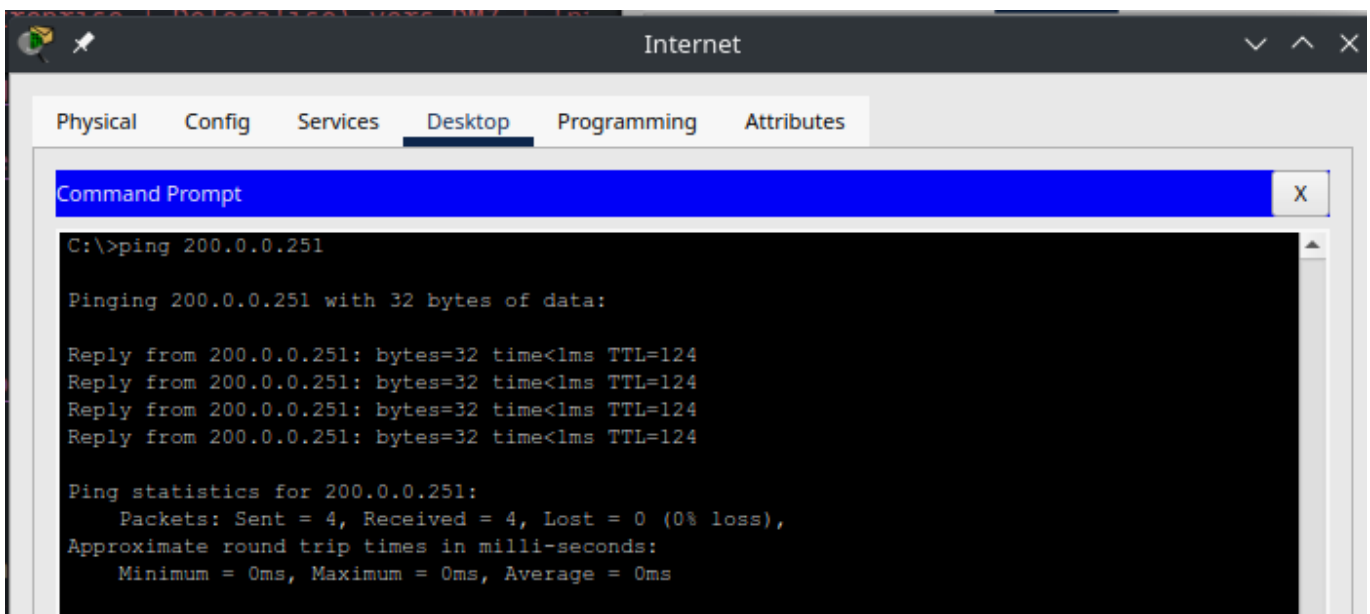
```
C:\>
C:\>ping 192.168.2.80

Pinging 192.168.2.80 with 32 bytes of data:

Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.

Ping statistics for 192.168.2.80:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

## Server DNS



The screenshot shows a Command Prompt window titled "Command Prompt" with a blue header bar. The window is open within a larger application window titled "Internet". The Command Prompt shows the following text:

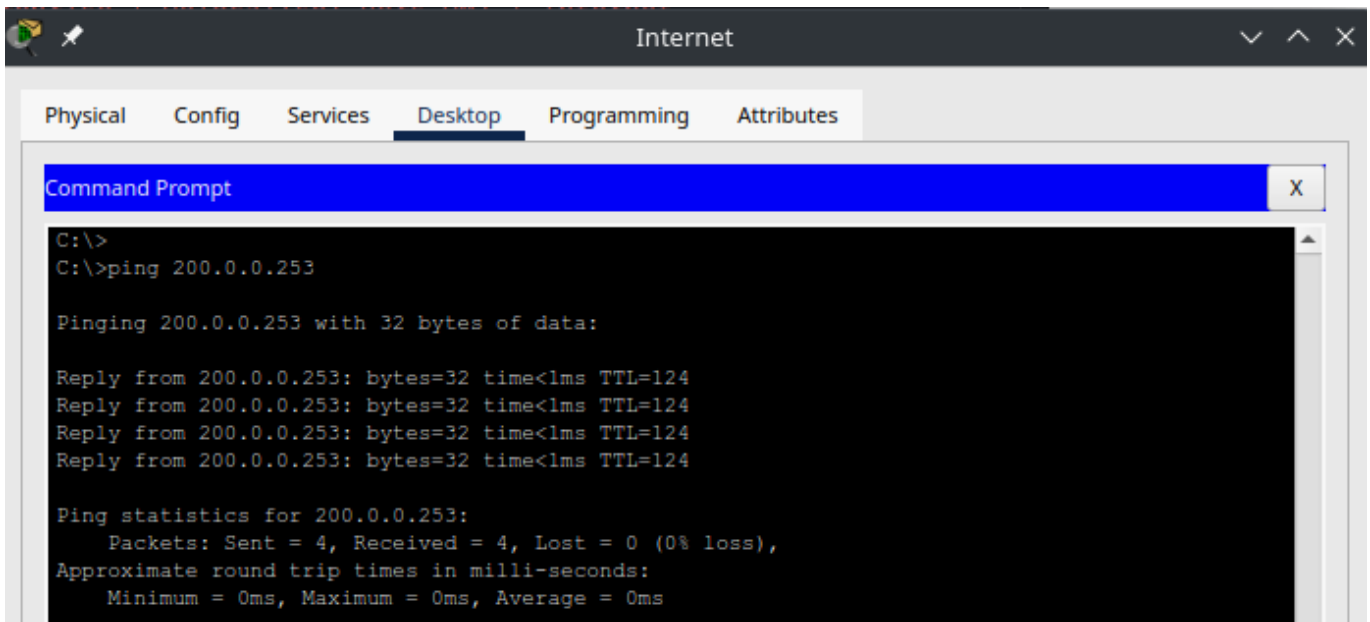
```
C:\>ping 200.0.0.251

Pinging 200.0.0.251 with 32 bytes of data:

Reply from 200.0.0.251: bytes=32 time<lms TTL=124
Reply from 200.0.0.251: bytes=32 time<lms TTL=124
Reply from 200.0.0.251: bytes=32 time<lms TTL=124
Reply from 200.0.0.251: bytes=32 time<lms TTL=124

Ping statistics for 200.0.0.251:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

## Server Web



The screenshot shows a Cisco Packet Tracer window titled "Internet" with tabs for Physical, Config, Services, Desktop, Programming, and Attributes. The Desktop tab is active, displaying a Command Prompt window. The Command Prompt shows the execution of a ping command to 200.0.0.253, which is successful. The output includes the number of bytes, time, and TTL for each of the four replies, and a summary of ping statistics showing 0% loss.

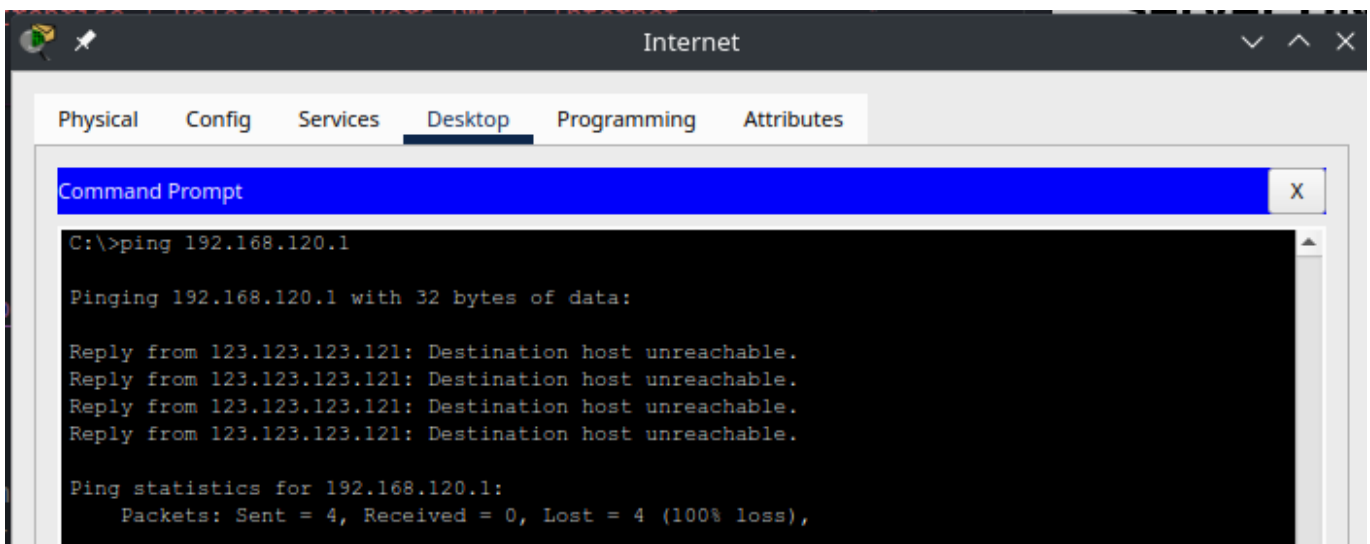
```
C:\>ping 200.0.0.253

Pinging 200.0.0.253 with 32 bytes of data:

Reply from 200.0.0.253: bytes=32 time<1ms TTL=124
Reply from 200.0.0.253: bytes=32 time<1ms TTL=124
Reply from 200.0.0.253: bytes=32 time<1ms TTL=124
Reply from 200.0.0.253: bytes=32 time<1ms TTL=124

Ping statistics for 200.0.0.253:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

## Pc Délocalisé



The screenshot shows a Cisco Packet Tracer window titled "Internet" with tabs for Physical, Config, Services, Desktop, Programming, and Attributes. The Desktop tab is active, displaying a Command Prompt window. The Command Prompt shows the execution of a ping command to 192.168.120.1, which fails. The output shows four replies from 123.123.123.121, all indicating "Destination host unreachable." The summary of ping statistics shows 100% loss.

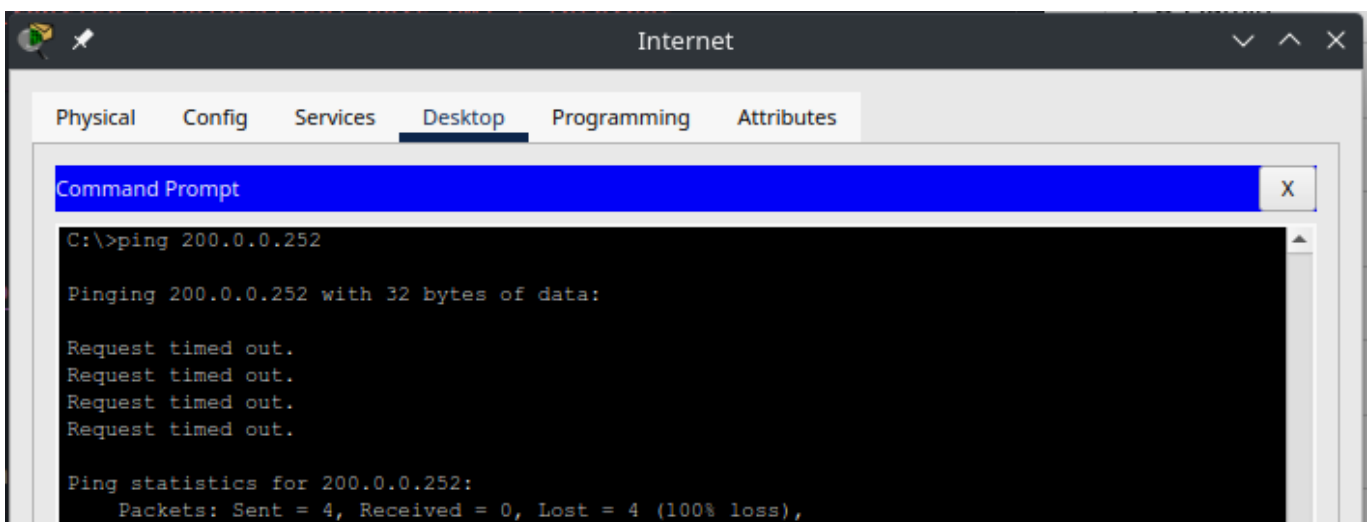
```
C:\>ping 192.168.120.1

Pinging 192.168.120.1 with 32 bytes of data:

Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.
Reply from 123.123.123.121: Destination host unreachable.

Ping statistics for 192.168.120.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

## Pc Admin DMZ



The screenshot shows a Cisco Packet Tracer window titled "Internet" with tabs for Physical, Config, Services, Desktop, Programming, and Attributes. The Desktop tab is active, displaying a Command Prompt window. The Command Prompt shows the execution of a ping command to 200.0.0.252, which fails. The output shows four "Request timed out" messages. The summary of ping statistics shows 100% loss.

```
C:\>ping 200.0.0.252

Pinging 200.0.0.252 with 32 bytes of data:

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

Ping statistics for 200.0.0.252:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

## Configuration des ACL

## Rappel des accès

VLAN ID	VLAN 2	VLAN 10	VLAN 20	VLAN 30
VLAN 2	\	Oui	Oui	Oui
VLAN 10	Oui	\	Out	Non
VLAN 20	Oui	Oui	\	Oui
VLAN 30	Oui	Non	Out	\

Oui = Accès autorisé Non = Accès refusé Out = Accès sortant autorisé (Si le paquet est initié par le VLAN en question)

### VLAN 2

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	Server Web Interne	Com 1	ICMP		0.000	N	0	(edit)	(delete)
	Successful	Server Web Interne	Tech 1	ICMP		0.000	N	1	(edit)	(delete)
	Successful	Server Web Interne	Adm 1	ICMP		0.000	N	2	(edit)	(delete)

### VLAN 10

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Failed	Com 1	Tech 1	ICMP		0.000	N	0	(edit)	(delete)
	Failed	Com 1	Adm 1	ICMP		0.000	N	1	(edit)	(delete)
	Successful	Com 1	Server We...	ICMP		0.000	N	2	(edit)	(delete)

### VLAN 20

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	Tech 1	Com 2	ICMP		0.000	N	0	(edit)	(delete)
	Successful	Tech 1	Adm 1	ICMP		0.000	N	1	(edit)	(delete)
	Successful	Tech 1	Server We...	ICMP		0.000	N	2	(edit)	(delete)

### VLAN 30

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Failed	Adm 1	Com 1	ICMP		0.000	N	0	(edit)	(delete)
	Failed	Adm 1	Com 2	ICMP		0.000	N	1	(edit)	(delete)
	Successful	Adm 1	Server We...	ICMP		0.000	N	2	(edit)	(delete)

# Configuration du VPN

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## Rappel des accès

Pour le VPN, il est configuré pour que tout les PCs décentralisée puisse communiquer avec le serveur web, et avec personne d'autre.

### Dec 1

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	Pc Dec 1	Server We...	ICMP		0.000	N	0	(edit)	(delete)
	Failed	Pc Dec 1	Com 1	ICMP		0.000	N	1	(edit)	(delete)
	Failed	Pc Dec 1	Tech 1	ICMP		0.000	N	2	(edit)	(delete)
	Failed	Pc Dec 1	Adm 1	ICMP		0.000	N	3	(edit)	(delete)

### Dec 2

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	Pc Dec 2	Server We...	ICMP		0.000	N	0	(edit)	(delete)
	Failed	Pc Dec 2	Com 1	ICMP		0.000	N	1	(edit)	(delete)
	Failed	Pc Dec 2	Tech 1	ICMP		0.000	N	2	(edit)	(delete)
	Failed	Pc Dec 2	Adm 1	ICMP		0.000	N	3	(edit)	(delete)