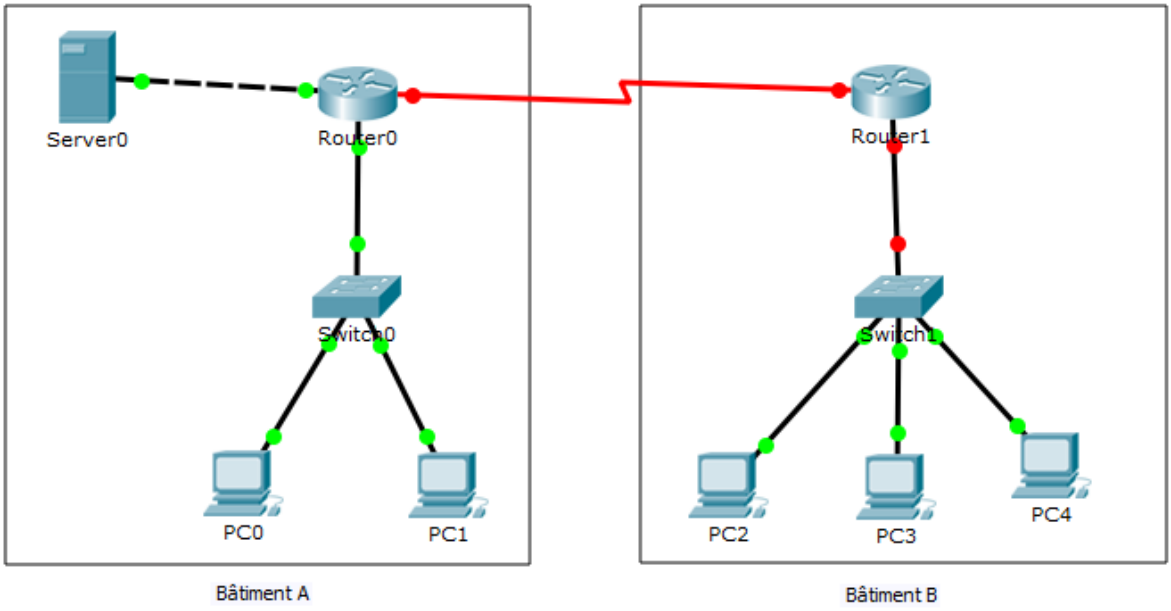
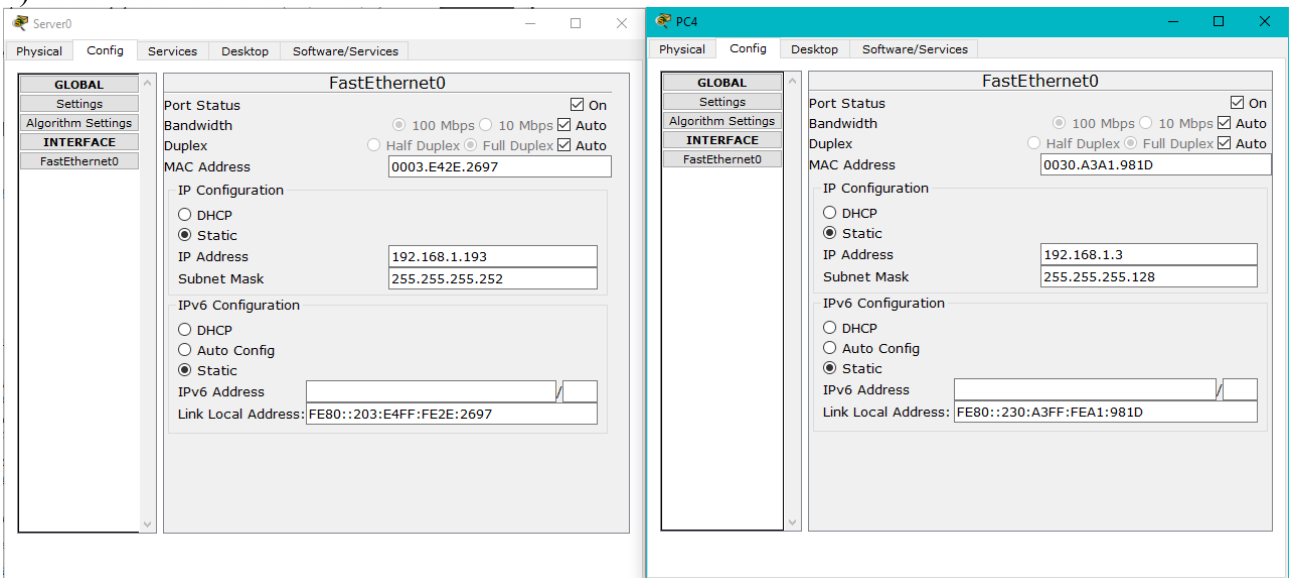
DELIOT Maxence
Partie 1 :



Partie 2 :
1)



3)

Equivalent IOS Commands

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#no ip address
Router(config-if)#ip address 192.168.1.126 255.255.255.0
Router(config-if)#ip address 192.168.1.126 255.255.255.128
Router(config-if)#
```

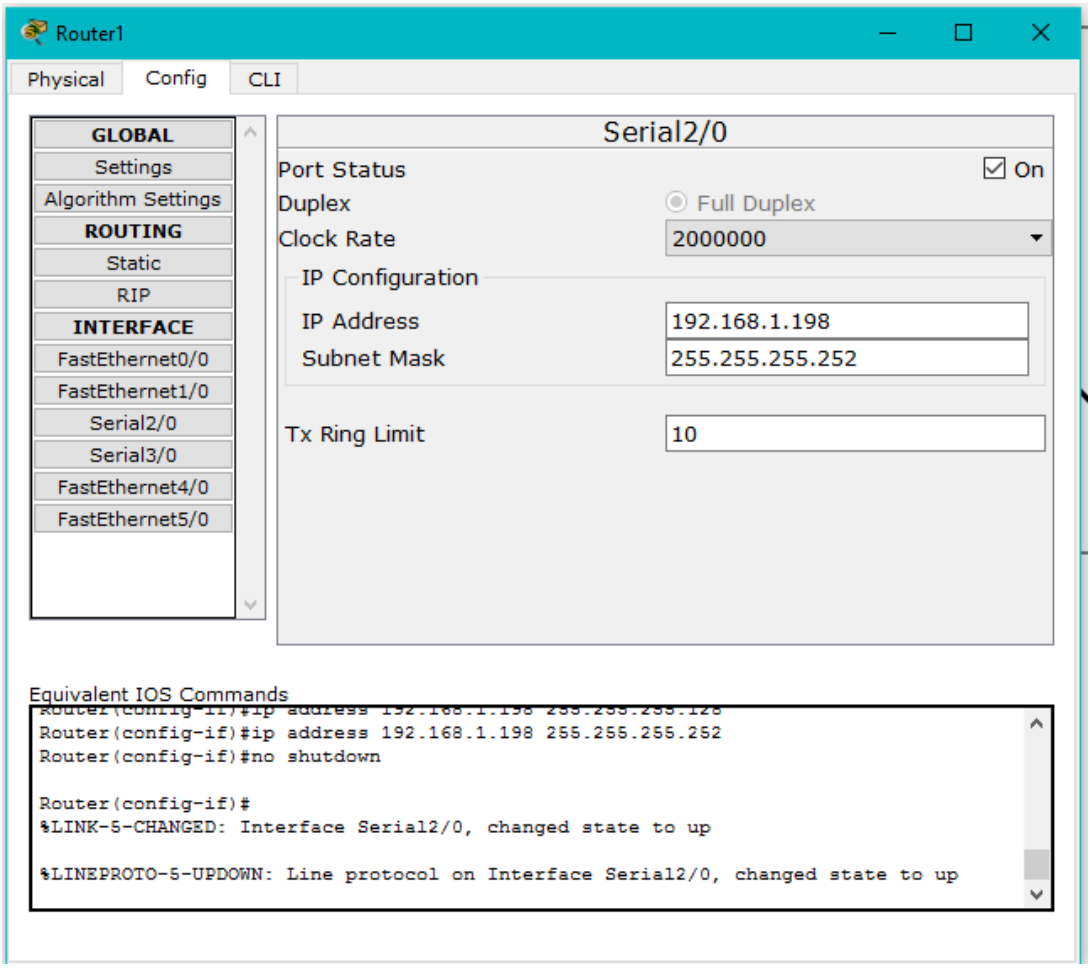
Equivalent IOS Commands

```
Router(config-if)#ip address 192.168.1.126 255.255.255.128
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
up
```

4)



Partie 3 :
Ping vers PC2 (192.168.1.1) Yes

```
PC>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=1ms TTL=128
Reply from 192.168.1.1: bytes=32 time=0ms TTL=128
Reply from 192.168.1.1: bytes=32 time=0ms TTL=128
Reply from 192.168.1.1: bytes=32 time=0ms 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 = 1ms, Average = 0ms
```

Ping vers Fa0/0 de R1 (192.168.1.126) =>Yes

```
PC>ping 192.168.1.126

Pinging 192.168.1.126 with 32 bytes of data:

Reply from 192.168.1.126: bytes=32 time=1ms TTL=255
Reply from 192.168.1.126: bytes=32 time=0ms TTL=255
Reply from 192.168.1.126: bytes=32 time=0ms TTL=255
Reply from 192.168.1.126: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.1.126:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Ping vers Se2/0 de R1 (192.168.1.198)=>No

```
PC>ping 192.168.1.198

Pinging 192.168.1.198 with 32 bytes of data:

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

Ping statistics for 192.168.1.198:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

C'est un ICMP de type Echo request

Information PDU a la peripherique : PC4

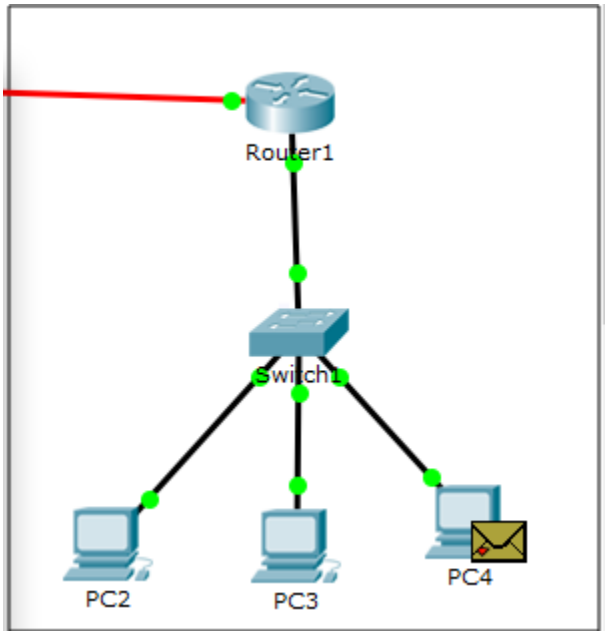
OSI Model | Outbound PDU Details

A la peripherique: PC4
Source: PC4
Destination: 192.168.1.198

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Couche 3: ICMP Message Type: 8
Layer2	Layer2
Layer1	Layer1

1. The Ping process starts the next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.
3. The source IP address is not specified. The device sets it to the port's IP address.
4. The destination IP address is not in the same subnet and is not the broadcast address.
5. The default gateway is not set. The device drops the packet.

Challenge Me | << Previous Layer | Next Layer >>



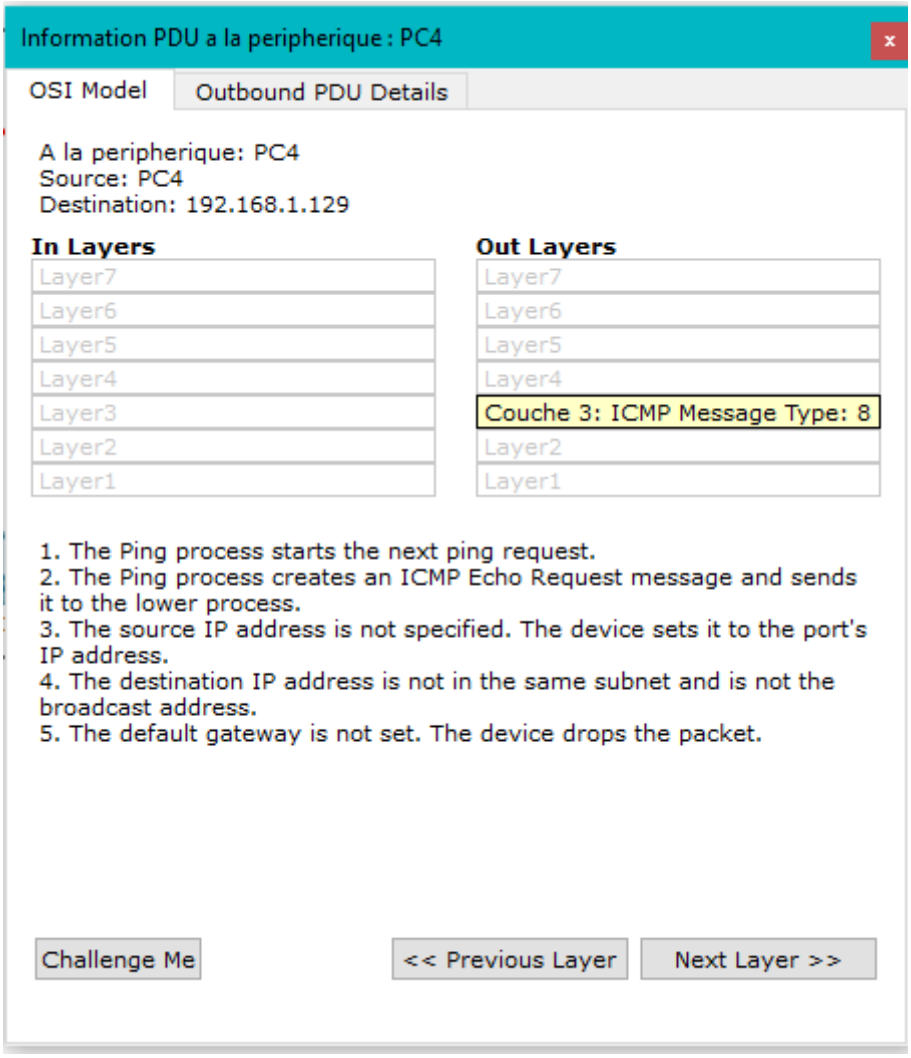
Ping vers PC0 (192.168.1.129)

```
PC>ping 192.168.1.129

Pinging 192.168.1.129 with 32 bytes of data:

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

Ping statistics for 192.168.1.129:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```



2)Machine : Server0 => Passerelle : 192.168.1.194
Machine : PC4 =>Passerelle : 192.168.1.126

4)
Ping vers PC2 (192.168.1.1) => No

```
PC>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.190: Destination host unreachable.
Reply from 192.168.1.190: Destination host unreachable.
Reply from 192.168.1.190: Destination host unreachable.
Reply from 192.168.1.190: Destination host unreachable.

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Ping vers Se2/0 de R0 (192.168.1.197) =>Yes

```
PC>ping 192.168.1.197

Pinging 192.168.1.197 with 32 bytes of data:

Reply from 192.168.1.197: bytes=32 time=4ms TTL=255
Reply from 192.168.1.197: bytes=32 time=4ms TTL=255
Reply from 192.168.1.197: bytes=32 time=4ms TTL=255
Reply from 192.168.1.197: bytes=32 time=4ms TTL=255

Ping statistics for 192.168.1.197:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 4ms, Average = 4ms
```

Ping vers Se2/0 de R1 (192.168.1.198) =>No

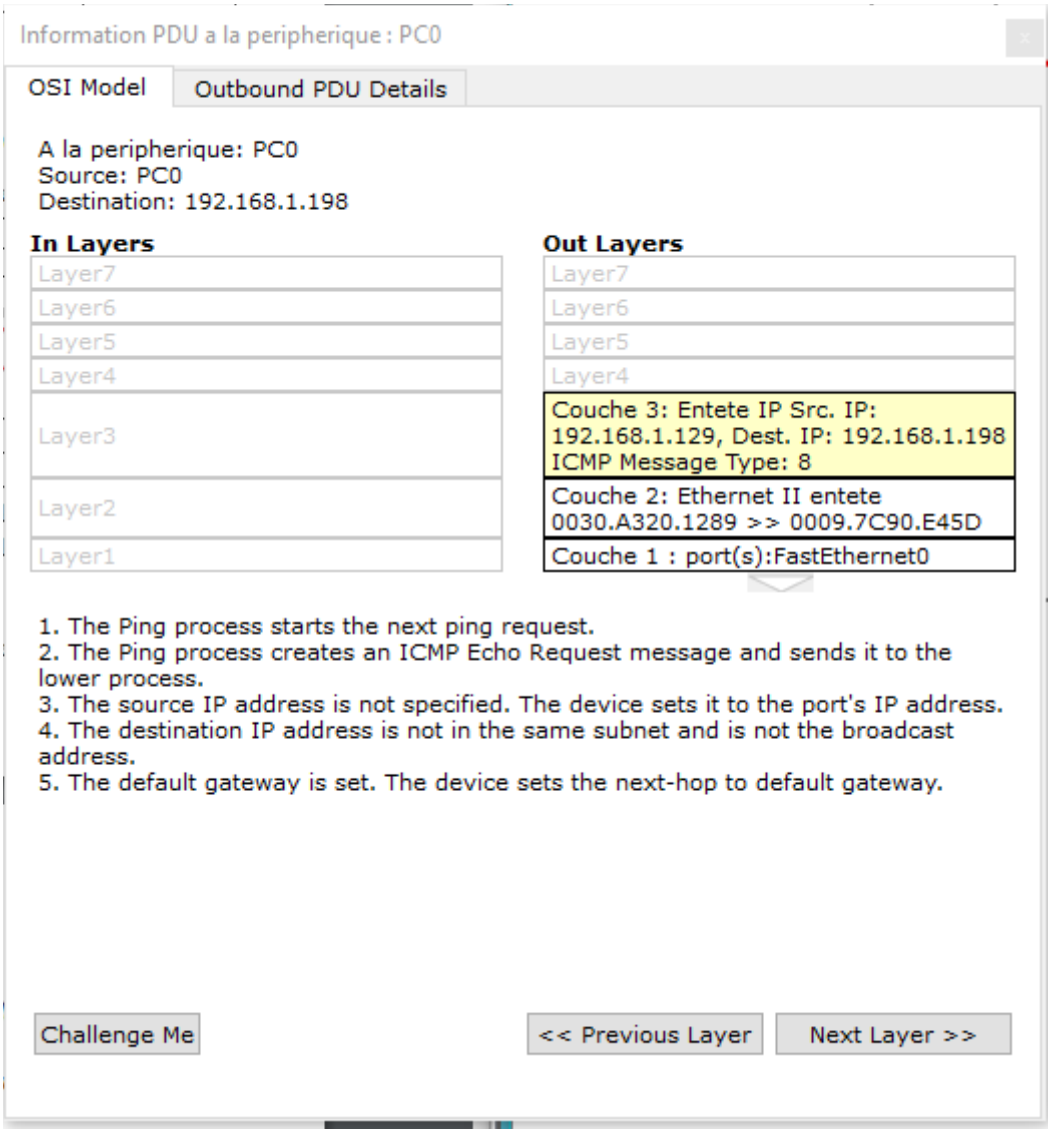
```
PC>ping 192.168.1.198

Pinging 192.168.1.198 with 32 bytes of data:

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

Ping statistics for 192.168.1.198:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Le paquet ICMP Echo reply car pas la meme sous réseau.


Information PDU a la peripherique : PC0
OSI Model
Outbound PDU Details
A la peripherique: PC0
Source: PC0
Destination: 192.168.1.198
In Layers
Layer7
Layer6
Layer5
Layer4
Layer3
Layer2
Layer1
Out Layers
Layer7
Layer6
Layer5
Layer4
Couche 3: Entete IP Src. IP: 192.168.1.129, Dest. IP: 192.168.1.198 ICMP Message Type: 8
Couche 2: Ethernet II entete 0030.A320.1289 >> 0009.7C90.E45D
Couche 1 : port(s):FastEthernet0
1. The Ping process starts the next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to the lower process.
3. The source IP address is not specified. The device sets it to the port's IP address.
4. The destination IP address is not in the same subnet and is not the broadcast address.
5. The default gateway is set. The device sets the next-hop to default gateway.
Challenge Me
<< Previous Layer
Next Layer >>

Partie 4 :

1)

```
Router>enable
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/25 is directly connected, FastEthernet0/0
C       192.168.1.196/30 is directly connected, Serial2/0
```

2)

```
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.1.197
```

3)

```
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 192.168.1.197 to network 0.0.0.0

     192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/25 is directly connected, FastEthernet0/0
C       192.168.1.196/30 is directly connected, Serial2/0
S*   0.0.0.0/0 [1/0] via 192.168.1.197
```

4)

```
PC>ping 192.168.1.198

Pinging 192.168.1.198 with 32 bytes of data:

Reply from 192.168.1.198: bytes=32 time=6ms TTL=254
Reply from 192.168.1.198: bytes=32 time=6ms TTL=254
Reply from 192.168.1.198: bytes=32 time=6ms TTL=254
Reply from 192.168.1.198: bytes=32 time=6ms TTL=254

Ping statistics for 192.168.1.198:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 6ms, Maximum = 6ms, Average = 6ms
```

L'adresse par defaut passe à l'action .

5)

```
PC>ping 168.168.1.193

Pinging 168.168.1.193 with 32 bytes of data:

Reply from 192.168.1.190: Destination host unreachable.
Reply from 192.168.1.190: Destination host unreachable.
Reply from 192.168.1.190: Destination host unreachable.
Reply from 192.168.1.190: Destination host unreachable.

Ping statistics for 168.168.1.193:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Le Echo request car pas d'adresse par defaut du switch 1.

6)

```
Packet Tracer PC Command Line 1.0
PC>ping 192.168.1.193

Pinging 192.168.1.193 with 32 bytes of data:

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