

DOMERGUE Mathys

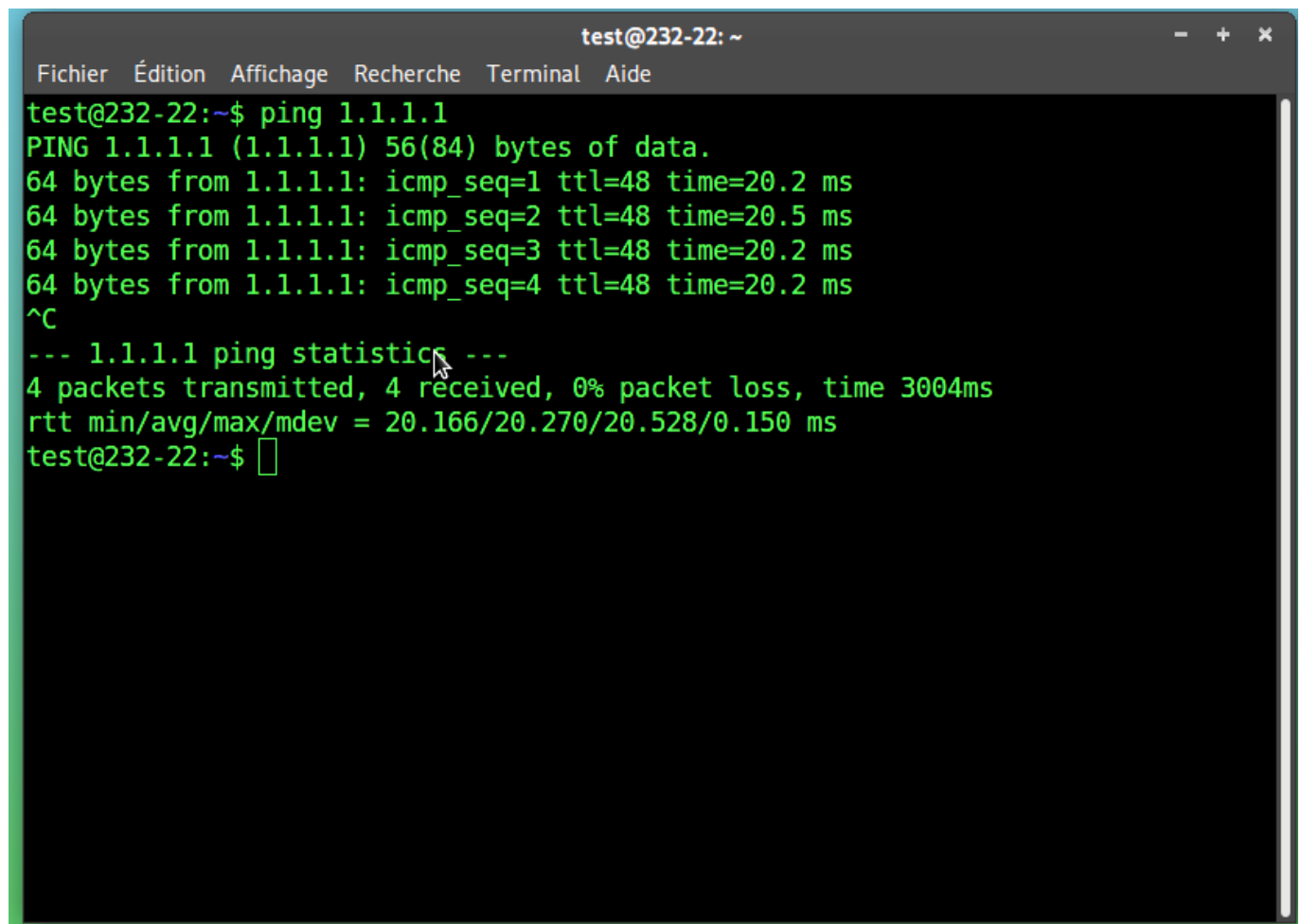
RT2 App

TP2 R401

1. Question primaires

Exercice 1

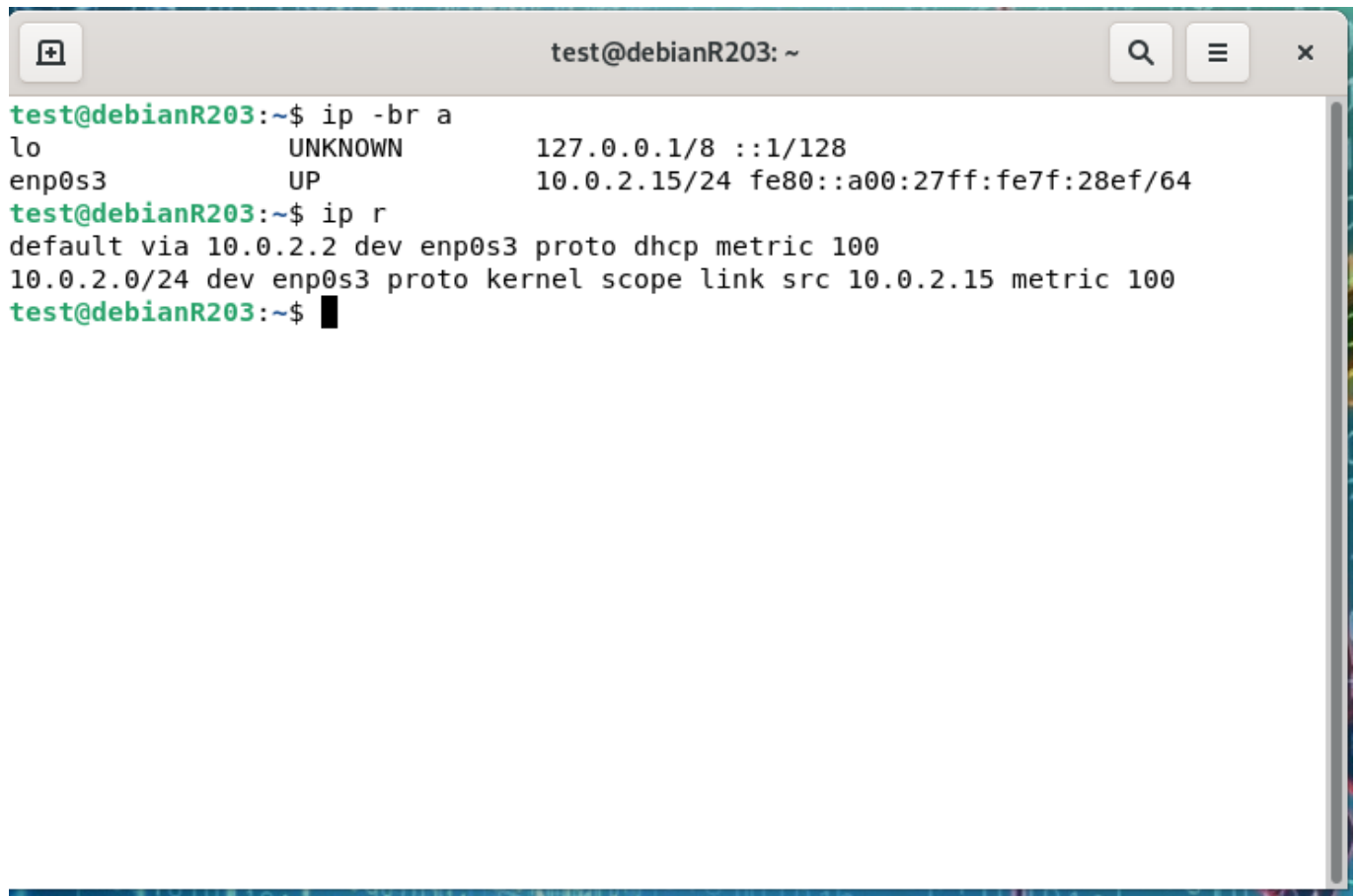
Pour que le client interne puisse avoir internet, on va utilisé la commande iptables



```
test@232-22: ~  
Fichier  Édition  Affichage  Recherche  Terminal  Aide  
test@232-22:~$ ping 1.1.1.1  
PING 1.1.1.1 (1.1.1.1) 56(84) bytes of data.  
64 bytes from 1.1.1.1: icmp_seq=1 ttl=48 time=20.2 ms  
64 bytes from 1.1.1.1: icmp_seq=2 ttl=48 time=20.5 ms  
64 bytes from 1.1.1.1: icmp_seq=3 ttl=48 time=20.2 ms  
64 bytes from 1.1.1.1: icmp_seq=4 ttl=48 time=20.2 ms  
^C  
--- 1.1.1.1 ping statistics ---  
4 packets transmitted, 4 received, 0% packet loss, time 3004ms  
rtt min/avg/max/mdev = 20.166/20.270/20.528/0.150 ms  
test@232-22:~$
```

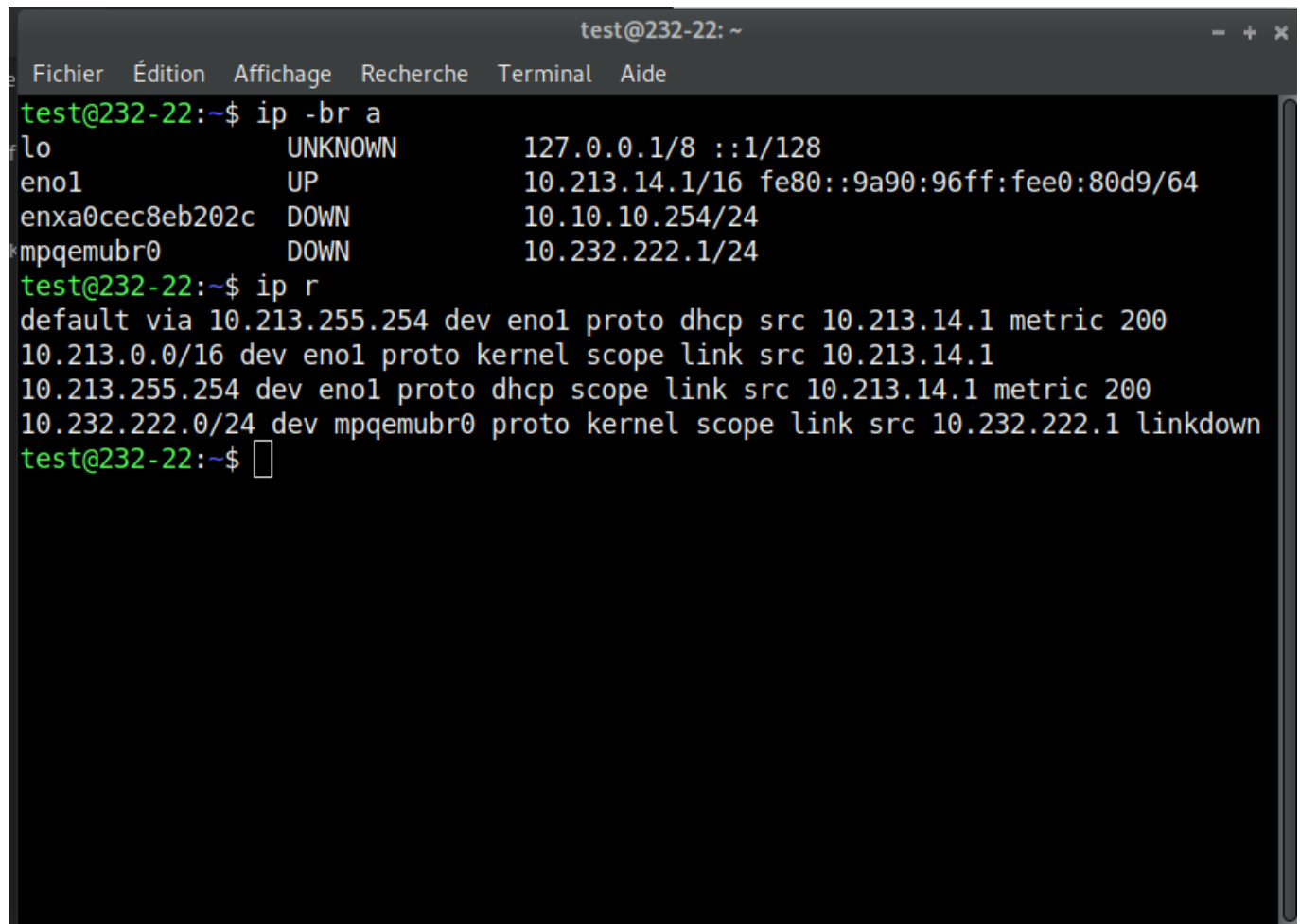
Exercice 2

Configuration Client OPENVPN

A terminal window titled 'test@debianR203: ~' with search, menu, and close buttons. It shows the output of 'ip -br a' and 'ip r' commands.

```
test@debianR203:~$ ip -br a
lo                UNKNOWN          127.0.0.1/8 ::1/128
enp0s3            UP                10.0.2.15/24 fe80::a00:27ff:fe7f:28ef/64
test@debianR203:~$ ip r
default via 10.0.2.2 dev enp0s3 proto dhcp metric 100
10.0.2.0/24 dev enp0s3 proto kernel scope link src 10.0.2.15 metric 100
test@debianR203:~$
```

Configuration Passerelle

A terminal window titled 'test@232-22: ~' with a menu bar (Fichier, Édition, Affichage, Recherche, Terminal, Aide) and window controls. It shows the output of 'ip -br a' and 'ip r' commands.

```
test@232-22:~$ ip -br a
lo                UNKNOWN          127.0.0.1/8 ::1/128
eno1              UP                10.213.14.1/16 fe80::9a90:96ff:fee0:80d9/64
enxa0cec8eb202c   DOWN            10.10.10.254/24
mpqemubr0         DOWN            10.232.222.1/24
test@232-22:~$ ip r
default via 10.213.255.254 dev eno1 proto dhcp src 10.213.14.1 metric 200
10.213.0.0/16 dev eno1 proto kernel scope link src 10.213.14.1
10.213.255.254 dev eno1 proto dhcp scope link src 10.213.14.1 metric 200
10.232.222.0/24 dev mpqemubr0 proto kernel scope link src 10.232.222.1 linkdown
test@232-22:~$
```

Configuration Client interne

```
test@232-22: ~  
Fichier  Édition  Affichage  Recherche  Terminal  Aide  
test@232-22:~$ ip -br a  
lo                UNKNOWN      127.0.0.1/8 ::1/128  
eno1              UP          10.10.10.1/24 fe80::9a90:96ff:fee0:80c1/64  
wlp3s2            DOWN  
mpqemubr0         DOWN        10.232.222.1/24  
test@232-22:~$ ip r  
default via 10.10.10.254 dev eno1  
10.10.10.0/24 dev eno1 proto kernel scope link src 10.10.10.1  
10.232.222.0/24 dev mpqemubr0 proto kernel scope link src 10.232.222.1 linkdown  
test@232-22:~$
```

Configuration IPTABLES

```
test@232-22: ~  
Fichier  Édition  Affichage  Recherche  Terminal  Aide  
test@232-22:~$ sudo iptables -A FORWARD -i enx3c18a002b9dc -o eno1 -j ACCEPT  
test@232-22:~$ sudo iptables -t nat -A POSTROUTING -o eno1 -j MASQUERADE  
test@232-22:~$
```

2. Premiers tests

Exercice 4

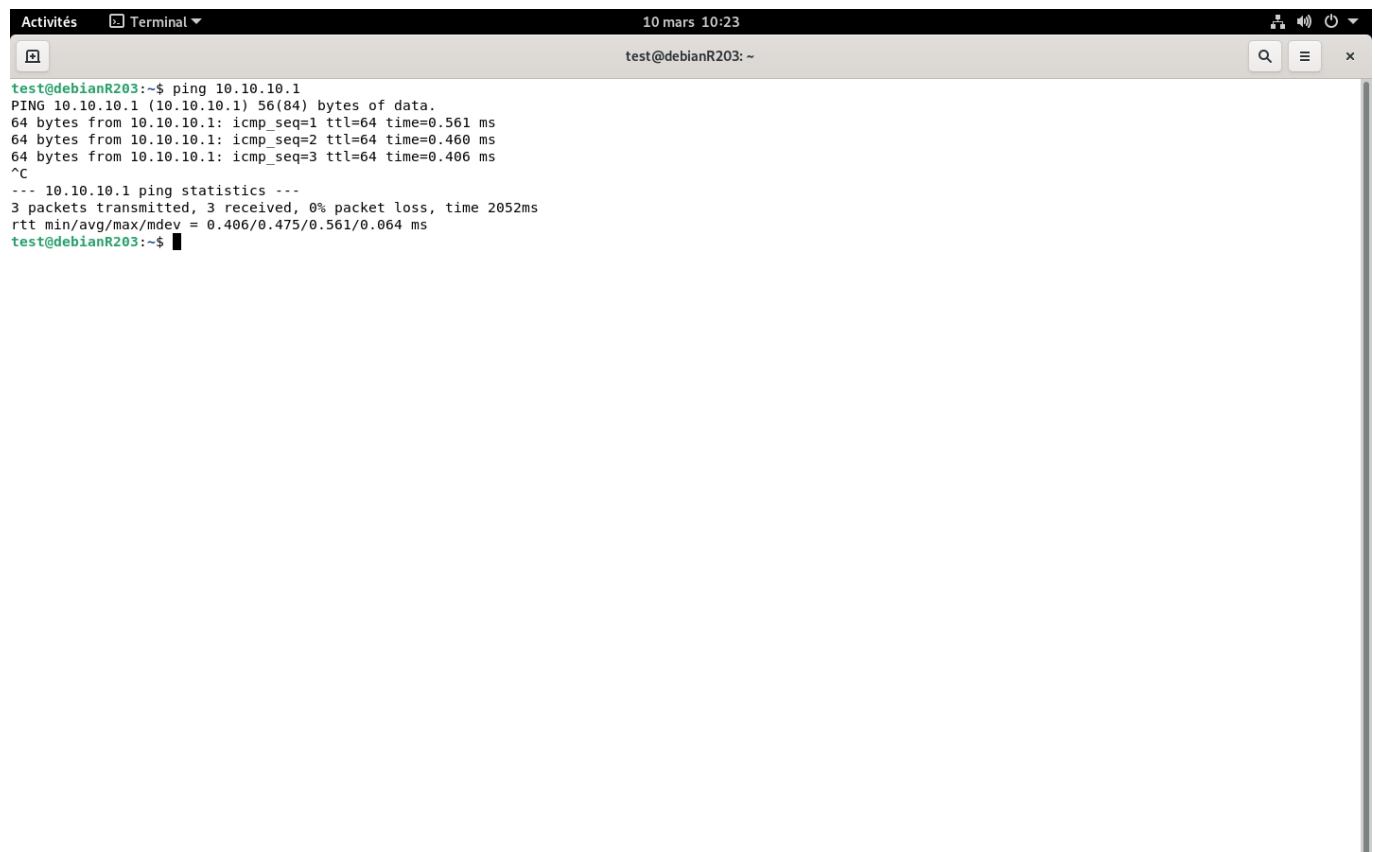
Sur la passerelle :

```
openvpn --dev tun0 --ifconfig 10.10.10.1 10.10.10.2
```

Sur le client Openvpn:

```
openvpn --remote 10.0.2.2 --dev tun0 --ifconfig 10.10.10.2 10.10.10.1
```

Exercice 5



The screenshot shows a terminal window titled "Terminal" with a timestamp of "10 mars 10:23". The user is logged in as "test" on a machine named "debianR203". The terminal displays the execution of the command "ping 10.10.10.1". The output shows three successful ping requests, each with 64 bytes of data, and a summary of the statistics.

```
test@debianR203:~$ ping 10.10.10.1
PING 10.10.10.1 (10.10.10.1) 56(84) bytes of data:
64 bytes from 10.10.10.1: icmp_seq=1 ttl=64 time=0.561 ms
64 bytes from 10.10.10.1: icmp_seq=2 ttl=64 time=0.460 ms
64 bytes from 10.10.10.1: icmp_seq=3 ttl=64 time=0.406 ms
^C
--- 10.10.10.1 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2052ms
rtt min/avg/max/mdev = 0.406/0.475/0.561/0.064 ms
test@debianR203:~$
```

Exercice 6

Interface passerelle :

```
test@232-22: ~  
Fichier  Édition  Affichage  Recherche  Terminal  Aide  
test@232-22:~$ ip -br a  
lo                UNKNOWN      127.0.0.1/8  ::1/128  
eno1              UP          10.213.14.1/16 fe80::9a90:96ff:fee0:80d9/64  
enxa0cec8eb202c   UP          10.10.10.254/24 fe80::a2ce:c8ff:feeb:202c/64  
mpqemubr0        DOWN        10.232.222.1/24  
vboxnet0         DOWN  
vboxnet1         DOWN  
tun0             UNKNOWN     10.10.10.1 peer 10.10.10.2/32 fe80::1fdb:43b:6851:bce/64  
test@232-22:~$
```

Interface Oenvpn :

```
Activités  Terminal  10 mars 10:23  
test@debianR203: ~  
test@debianR203:~$ ip -br a  
lo                UNKNOWN      127.0.0.1/8  ::1/128  
enp0s3            UP          10.0.2.15/24 fe80::a00:27ff:fe7f:28ef/64  
tun0             UNKNOWN     10.10.10.2 peer 10.10.10.1/32 fe80::f586:7bf7:83c9:977/64  
test@debianR203:~$
```

On peut remarquer dans les deux cas que notre machine obtient une nouvelle interface pour la communication VPN

Exercice 7

The top screenshot shows a Wireshark capture of ICMP Echo (ping) traffic. The packet list shows 69 packets, with the selected packet being an Echo (ping) request from 10.10.10.1 to 10.10.10.2. The packet details pane shows the raw packet data and the packet bytes.

The bottom screenshot shows a Wireshark capture of ICMP Echo (ping) traffic. The packet list shows 41 packets, with the selected packet being an Echo (ping) request from 10.10.10.1 to 10.10.10.2. The packet details pane shows the raw packet data and the packet bytes.

3. Ajout d'une clé sécurisée

Exercice 9

```
lucky@lucky:~/Downloads$ cat static.key
#
# 2048 bit OpenVPN static key
#
-----BEGIN OpenVPN Static key V1-----
eceeab933a24e869416d4394fa23f20c
3b14af56c488f9d519f75f3a6a856b4d
591e28e3a448746b32dafa24d210ebfd
f180fc2d25844a9023b56cffbc68bf20
97dad0b9a29b4432e96b47c605a7b0a9
f104416acfa0461bb2359a72bb4da4f5
8688ac0d44063811aa0261446199229d
098351745ebe5978aebfd5edb67a6c90
d83f0a56edbd8efd6387cf3fe4847d70
3e79bb6e387ef469e6bb548f5f036761
c2a61e899a612f50e822e4913e6d2b7b
610431bcfbb330fefbf0acea6ec1f933
d219b7ac38819cc9dd1ae372beb30955
5a86bd4cbca4f3d72d0bf42503f7e74c
9562a56784396e1a7cba516f5175dcc0
6bab0bcddc2cdd05c4004ee5e5570f7e
-----END OpenVPN Static key V1-----
```

Exercice 10

La clé est une clé vpn.

Exercice 11

La longueur de la clé est de 2048 bits.