COMPTE RENDU

TP1 RESEAU

SMAIL AGHILAS

GROUPE 2

• Physique et liaison de données :

1 - Il y a 16 stations.

2 - Il y a une seule carte réseau Ethernet.

3 – Il y a 7 connecteurs électriques.

4 - Il y a d'autre extrémité du câble est un câble RJ45, qui est relié au switch.

5 - Oui la salle contient un Switch.

6 - A mon avis c'est NON.

7 - Les paramètres réseaux de la station :

```
s21219997@V-PP-47-061:~/Bureau$ ifconfig -a
ens160: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.192.134.78  netmask 255.255.255.0  broadcast
10.192.134.255
        ether 00:50:56:b9:11:eb  txqueuelen 1000  (Ethernet)
```

• Compte-rendu :

1 – Combien d'interface réseaux possèdent actuellement votre VM :

Elle y a 3 interfaces réseaux :

- L'interface local (lo).
- L'interface Eth0.
- L'interface Eth1.

2- Les paramètre réseaux de la machine virtuelle est :

```
m1reseaux@VM1:~$ ip addr

1: lo:<LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN
group default qlen 1000
```

```
link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00

inet 127.0.0.1/8 scope host lo

valid_lft forever preferred_lft forever

inet6 ::1/128 scope host

valid_lft forever preferred_lft forever



2: eth0:<BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast
state UP group default qlen 1000

 link/ether 08:00:27:f8:c0:4d brd ff:ff:ff:ff:ff:ff

 altname enp0s3

 inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic eth0

 valid_lft 86332sec preferred_lft 86332sec

 inet6 fe80::a00:27ff:fe8d:c04d/64 scope link

 valid_lft forever preferred_lft forever



3:  eth1: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc
pfifo_fast  state UP group default qlen 1000

 link/ether 08:00:27:01:ab:a6 brd ff:ff:ff:ff:ff:ff

 altname enp0s8

 inet6 fe80::a204:8bcd:16a8:1cf4/64 scope link noprefixroute

 valid_lft forever preferred_lft forever
```

3 – Oui , il est possible de faire une connexion a internet via l’interface réseau.

```
m1reseaux@VM1:~$ wget https://pageperso.lis-
lab.fr/emmanuel.godard/enseignement/tp %20m1%20reseaux/

--2022-10-02 22:28:20-- https://pageperso.lis-
lab.fr/emmanuel.godard/enseignement/tp %20m1%20reseaux/

Resolving pageperso.lis-lab.fr (pageperso.lis-lab.fr)...
139.124.22.27

Connecting to pageperso.lis-lab.fr (pageperso.lis-
lab.fr)|139.124.22.27|:443... connected.
```

```
HTTP request sent, awaiting response... 200 OK
Length: 11073 (11K) [text/html]
Saving to: 'index.html'
index.html 100%[================>] 10.81K --.-KB/s in 0s
2022-10-02 22:28:20 (66.0 MB/s) - 'index.html' saved [11073/11073]
```

4 – La bonne manière de stopper la VM est d'utiliser la commande :

```
vagrant halt
```

5- Les paramètre réseaux de la machine virtuelle :

```
m1reseaux@VM1:~$ ip addr
 1: lo:<LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN
group default qlen 1000
link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
inet 127.0.0.1/8 scope host lo
valid_lft forever preferred_lft forever
inet6 ::1/128 scope host
valid_lft forever preferred_lft forever


2: eth0:<BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast
state UP group default qlen 1000
link/ether 08:00:27:8d:c0:4d brd ff:ff:ff:ff:ff:ff
altname enp0s3
inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic eth0
valid_lft 86319sec preferred_lft 86319sec
inet6 fe80::a00:27ff:fe8d:c04d/64 scope link
valid_lft forever preferred_lft forever


3: eth1:<BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast
state UP group default qlen 1000
link/ether 08:00:27:01:ab:a6 brd ff:ff:ff:ff:ff:ff
```

```
altname enp0s8

inet6 fe80::a204:8bcd:16a8:1cf4/64 scope link noprefixroute

valid_lft forever preferred_lft forever



4: eth2:<BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast
state UP group default qlen 1000

link/ether 08:00:27:97:54:8e brd ff:ff:ff:ff:ff:ff

altname enp0s9

inet6 fe80::ffac:74a0:af9a:8e31/64 scope link noprefixroute

valid_lft forever preferred_lft forever
```

Vers le Routage :

Nouvelles VMs :

1- Oui en peut accéder a internet depuis les VMs.
2- Les configuration réseau de Bleue :

```
@bleu$ ip addr

1: lo:<LOOPBACK,UP,LOWER_UP>  mtu 65536 qdisc noqueue state
UNKNOWN group default qlen 1000

link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00

inet 127.0.0.1/8 scope host lo

valid_lft forever preferred_lft forever

inet6 ::1/128 scope host

valid_lft forever preferred_lft forever
```

```
2: eth0:<BROADCAST,MULTICAST,UP,LOWER_UP>  mtu 1500 qdisc
pfifo_fast state UP group default qlen 1000

link/ether 08:00:27:8d:c0:4d brd ff:ff:ff:ff:ff:ff

altname enp0s3

inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic eth0

valid_lft 84784sec preferred_lft 84784sec

inet6 fe80::a00:27ff:fe8d:c04d/64 scope link

valid_lft forever preferred_lft forever




3: eth1:<BROADCAST,MULTICAST,UP,LOWER_UP>  mtu 1500 qdisc
pfifo_fast state UP group default qlen 1000

link/ether 08:00:27:7d:d3:cd brd ff:ff:ff:ff:ff:ff

altname enp0s8
```

- Les configuration réseau <vert> :

```
m1reseaux@VM3:~$ ip addr



1: lo: mtu 65536 qdisc noqueue state UNKNOWN group default qlen
1000

 link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00

 inet 127.0.0.1/8 scope host lo

valid_lft forever preferred_lft forever

inet6 ::1/128 scope host

valid_lft forever preferred_lft forever
```

```
2: eth0: mtu 1500 qdisc pfifo_fast state UP group default qlen
1000

link/ether 08:00:27:8d:c0:4d brd ff:ff:ff:ff:ff:ff

altname enp0s3

inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic eth0

valid_lft 85920sec preferred_lft 85920sec

inet6 fe80::a00:27ff:fe8d:c04d/64 scope link

valid_lft forever preferred_lft forever
```

```
3: eth1: mtu 1500 qdisc pfifo_fast state UP group default qlen
1000

link/ether 08:00:27:0d:a7:e1 brd ff:ff:ff:ff:ff:ff

altname enp0s8

inet6 fe80::e463:9e41:4020:3d39/64 scope link noprefixroute

valid_lft forever preferred_lft foreve
```

1.1 Non

m1reseaux@VM1:~$ ping 192.168.1.1

PING 192.168.1.1 (192.168.1.1) 56(84) bytes of data.

--- 192.168.1.1 ping statistics ---

5 packets transmitted, 0 received, 100% packet loss, time 4095ms

1.2 Oui :

```
m1reseaux@VM2:~$ ping 192.168.1.2
PING 192.168.1.2 (192.168.1.2) 56(84) bytes of data.
```

```
64 bytes from 192.168.1.2: icmp_seq=1 ttl=64 time=0.782 ms
64 bytes from 192.168.1.2: icmp_seq=2 ttl=64 time=0.620 ms
64 bytes from 192.168.1.2: icmp_seq=3 ttl=64 time=0.585 ms
64 bytes from 192.168.1.2: icmp_seq=4 ttl=64 time=0.749 ms ^C --
- 192.168.1.2 ping statistics ---

4 packets transmitted, 4 received, 0% packet loss, time 3076ms
 rtt min/avg/max/mdev = 0.585/0.684/0.782/0.083 ms


 m1reseaux@VM3:~$ ping 192.168.1.1

PING 192.168.1.1 (192.168.1.1) 56(84) bytes of data.
64 bytes from 192.168.1.1: icmp_seq=1 ttl=64 time=0.596 ms
64 bytes from 192.168.1.1: icmp_seq=2 ttl=64 time=0.601 ms
64 bytes from 192.168.1.1: icmp_seq=3 ttl=64 time=0.646 ms
64 bytes from 192.168.1.1: icmp_seq=4 ttl=64 time=0.617 ms ^C --
- 192.168.1.1 ping statistics ---

4 packets transmitted,

4 received, 0% packet loss, time 3065ms rtt min/avg/max/mdev =
0.596/0.615/0.646/0.019 ms
```

2 – Parametre nécessaire : addresse IP ,masque, Mac, passerelle.

Observation du Trafic Réseau :

La VM « Bleue » envoie une trame ARP au broadcast pour connaître l'adresse MAC de la

machine ayant comme adresse IP « 192.168.1.2 » (La VM « Verte »).

La VM « Verte » répond avec son adresse MAC en envoyant une autre trame ARP.

La VM « Bleue » peut envoyer maintenant les paquets ICMP à la VM « Verte ».