

R3D17

TP1

Environnement du TP

3.1 Installations nécessaires au TP

3.2 URLs pour réaliser une net instal

4 Création de machines virtuelles K-VMs

4.1 Création de VMs avec virt-manager

4.1.1 Accès à virt-manager

1.

```
lucky@lucky:~$ virsh vcpuinfo CentOS
VCPU:      0
CPU:       3
State:     running
CPU time:  22,4s
CPU Affinity: yyyyyyyy

VCPU:      1
CPU:       6
State:     running
CPU time:  13,7s
CPU Affinity: yyyyyyyy

VCPU:      2
CPU:       2
State:     running
CPU time:  14,3s
CPU Affinity: yyyyyyyy
```

2.

```
lucky@lucky:~$ virsh list
 Id   Name        State
-----
 12   CentOS     running
```

3.

```
lucky@lucky:~$ virsh list --all
 Id   Name        State
-----
 12   CentOS     running
```

4.

```
lucky@lucky:~$ virsh shutdown CentOS
Domain 'CentOS' is being shutdown

lucky@lucky:~$ virsh list --all
 Id   Name      State
-----
  -   CentOS   shut off

lucky@lucky:~$ virsh start  CentOS
Domain 'CentOS' started

lucky@lucky:~$ virsh list
 Id   Name      State
-----
 13   CentOS    running
```

5.

```
lucky@lucky:~$ virsh autostart CentOS
Domain 'CentOS' marked as autostarted

lucky@lucky:~$ virsh autostart CentOS --disable
Domain 'CentOS' unmarked as autostarted
```

6.

```
lucky@lucky:~$ virsh vcpuinfo CentOS
VCPU:      0
CPU:        0
State:      running
CPU time:   10,2s
CPU Affinity: yyyyyyyy

VCPU:      1
CPU:        6
State:      running
CPU time:   3,5s
CPU Affinity: yyyyyyyy

VCPU:      2
CPU:        3
State:      running
CPU time:   2,8s
CPU Affinity: yyyyyyyy
```

7.

```
lucky@lucky:~$ virsh destroy CentOS --graceful
Domain 'CentOS' destroyed

lucky@lucky:~$ virsh start CentOS
Domain 'CentOS' started

lucky@lucky:~$ virsh destroy CentOS
Domain 'CentOS' destroyed
```

4.2 Création d'une KVM Debian avec virt-install

1. Voici la commande pour réaliser la VM

```
virt-install --osinfo detect=on,name=debian12 --vcpus 1 --ram 1024 --disk
size=5 -l http://ftp.fr.debian.org/debian/dists/stable/main/installer-
amd64/
```

- 2.

```
lucky@lucky:~$ virsh dominfo debian12
Id:          18
Name:        debian12
UUID:        6030f4f1-5194-47ca-9fe7-3807cb876097
OS Type:     hvm
State:       running
CPU(s):      1
CPU time:    980,4s
Max memory:  1048576 KiB
Used memory: 1048576 KiB
Persistent:  yes
Autostart:   disable
Managed save: no
Security model: apparmor
Security DOI: 0
Security label: libvirt-6030f4f1-5194-47ca-9fe7-3807cb876097 (enforcing)
```

```
lucky@lucky:~$ virsh schedinfo debian12
Scheduler      : posix
cpu_shares     : 100
vcpu_period    : 100000
vcpu_quota     : 17592186044415
emulator_period: 100000
emulator_quota : 17592186044415
global_period  : 100000
global_quota   : 17592186044415
iothread_period: 100000
iothread_quota : 17592186044415
```

```
lucky@lucky:~$ virsh vcpuinfo debian12
VCPU:      0
CPU:       7
State:     running
CPU time:  1102,4s
CPU Affinity:  yyyyyyyyy
```

3.

```
lucky@lucky:~$ virsh setvcpus debian12 2 --maximum --config

lucky@lucky:~$ virsh vcpuinfo debian12
VCPU:      0
CPU:       0
State:     running
CPU time:  1270,3s
CPU Affinity:  yyyyyyyyy

lucky@lucky:~$ virsh vcpucount debian12
maximum    config      2
maximum    live         1
current    config      1
current    live         1
```

4.3 Création de VMs avec virt-builder

```
lucky@lucky:/$ sudo virt-builder centos-8.0 --size 10G --root-password password:root --format qcow2
[sudo] Mot de passe de lucky :
[ 3.3] Downloading: http://builder.libguestfs.org/centos-8.0.xz
[ 8.1] Planning how to build this image
[ 8.1] Uncompressing
[22.2] Resizing (using virt-resize) to expand the disk to 10.0G
[160.7] Opening the new disk
[165.9] Setting a random seed
[166.0] Setting passwords
[169.5] Finishing off
        Output file: centos-8.0.qcow2
        Output size: 10.0G
        Output format: qcow2
        Total usable space: 9.3G
        Free space: 8.1G (86%)

lucky@lucky:/$ virt-install --osinfo detect=on,name=centos8 --vcpus 3 --ram 2048 --disk size=5 --disk path=centos-8.0.qcow2 --cdrom ~/Downloads/boot1.iso
Using default --name rocky8

Début d'installation...
Allocating 'disk-3.qcow2'
Création du domaine...
Exécution de la commande de console graphique : virt-viewer --connect qemu:///system --wait rocky8
```

4.4 Création de VMs avec virt-customize

```
lucky@lucky:/$ sudo virt-builder debian-11 --output debian.qcow2 --size 10G --root-password password:root --format qcow2
[ 1.3] Downloading: http://builder.libguestfs.org/debian-11.xz
[ 4.3] Planning how to build this image
[ 4.3] Uncompressing
[ 16.4] Resizing (using virt-resize) to expand the disk to 10.0G
[ 121.0] Opening the new disk
[ 125.6] Setting a random seed
virt-builder: warning: random seed could not be set for this type of guest
[ 125.7] Setting passwords
[ 127.2] Finishing off
          Output file: debian.qcow2
          Output size: 10.0G
          Output format: qcow2
          Total usable space: 9.8G
          Free space: 8.8G (90%)
```

```
lucky@lucky:/$ sudo virt-customize -a debian.qcow2 --root-password password:rootroot
[ 0.0] Examining the guest ...
[ 2.7] Setting a random seed
virt-customize: warning: random seed could not be set for this type of guest
[ 2.8] Setting passwords
[ 3.7] Finishing off
```

5 Découverte de l'architecture KVM

5.1 Gestion de réseau

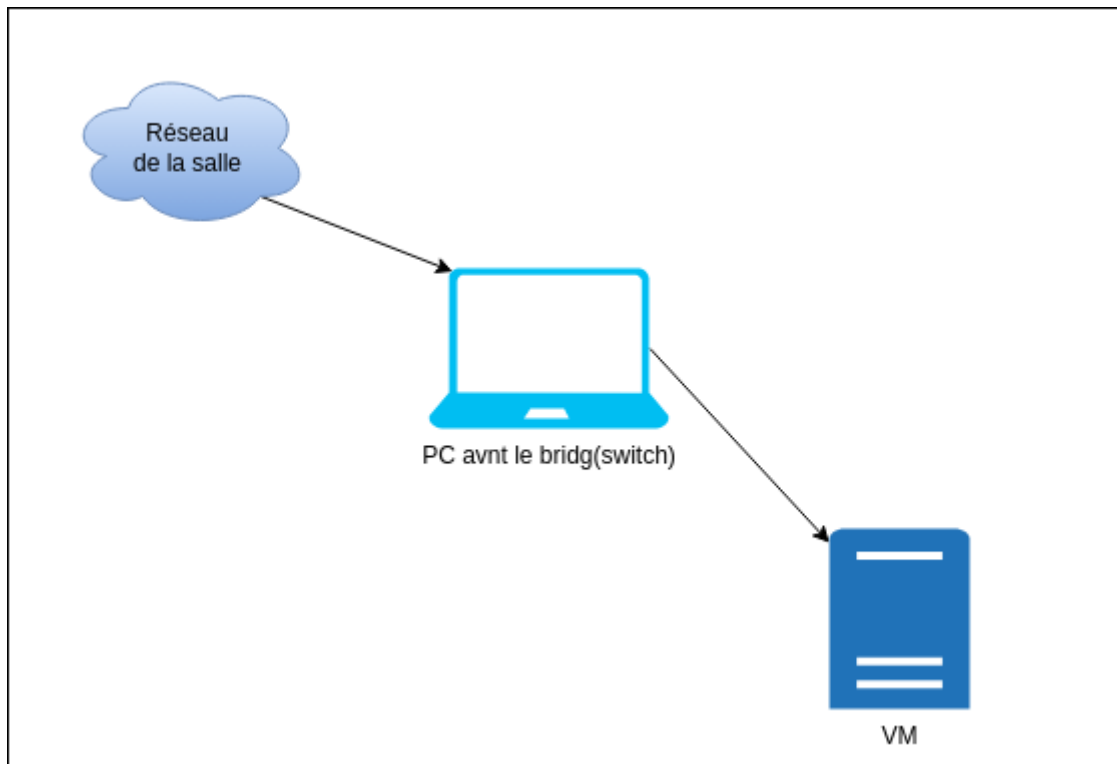
1.

```
lucky@lucky:~$ virsh net-list --all
Name          State    Autostart    Persistent
-----
default       active   yes          yes

lucky@lucky:~$ brctl show
bridge name bridge id   STP enabled interfaces
docker0      8000.02427e801587 no
virbr0       8000.5254005eb861 yes  vnet27
```

Le bridge utilisé par ma machine virtuelle est le bridge default.

2. Le bridge fonctionne comme un switch pour les VM de KVM.



3.

```
lucky@lucky:~$ sudo brctl addbr monbridge
[sudo] Mot de passe de lucky :
lucky@lucky:~$ brctl show
bridge name bridge id   STP enabled interfaces
docker0      8000.02427e801587 no
monbridge    8000.362e77940708 no
virbr0       8000.5254005eb861 yes  vnet27
```

```
lucky@lucky:~$ brctl addif mybridge eth0 #Ajoute une interface au bridge
lucky@lucky:~$ sudo ip link set up dev monbridge #Active le bridge
sudo dhclient monbridge #Récupère un adresse sur le réseau de la salle
```