

Cloud computing

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Travaux Pratiques



Pour commencer

```
sux (mot de passe tpreseau)
```

```
mkdir /mnt/nfs
```

```
cd /mnt/nfs
```

```
pwd doit renvoyer /mnt/nfs
```

```
Sur une seule ligne :
```

```
rsync 172.17.2.16:/mnt/nfs/* ./ ; gunzip
```

```
jessie.qcow2.gz
```

```
ls -al /mnt/nfs
```

Introduction

```
echo toto
```

```
echo toto > titi
```

```
cat titi
```

```
echo haha >> titi
```

```
cat titi
```

```
grep to titi
```

```
grep qsd f titi
```



pipe

La sortie d'un processus (stdout) alimente directement l'entrée (stdin) du suivant

```
cat /etc/passwd
```

```
grep www /etc/passwd
```

```
cat /etc/passwd | grep www
```

```
ps fax >/tmp/ps_fax
```

```
grep kvm /tmp/ps_fax
```

```
ps fax | grep kvm
```

ssh avec pipe

```
scp /dir1/file ip:/dir2/file
```

```
cat /dir1/file | ssh ip "cat > /dir2/file"
```

```
cat file | gzip | ssh ip "cat | gunzip > file"
```

```
cat /root/.ssh/id_rsa.pub | ssh ip "cat  
>>/root/.ssh/authorized_keys"
```

W

```
echo "tout va bien ?" | ssh ip "cat >/dev/tty1"
```

```
echo "oui, merci" | ssh ip "cat >/dev/pts/0"
```



tcpdump | grep

```
tcpdump -D
```

```
tcpdump -i eth0
```

```
tcpdump -i br0 port 80 -A
```

```
tcpdump -i br0 port 443 -A
```

```
tcpdump -i br0 port 80 -A | grep -i password=
```



tcpdump | grep

```
tcpdump -i eth0 \
```

```
port http or port smtp or port imap or port  
pop3 -l -A | \
```

```
egrep -i 'pass=|pwd=|log=|login=|user=|  
username=|pw=|passw=|passwd=|password=|  
pass:|user:|username:|password:|login:|pass  
|user'
```



Récupérer l'adresse ip

```
root@wheezy:~# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
    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 qlen 1000
    link/ether 54:52:00:00:00:0d brd ff:ff:ff:ff:ff:ff
    inet 192.168.122.205/24 brd 192.168.122.255 scope global eth0
    inet6 fe80::5652:ff:fe00:d/64 scope link
        valid_lft forever preferred_lft forever
root@wheezy:~# _
```



Vocabulaire

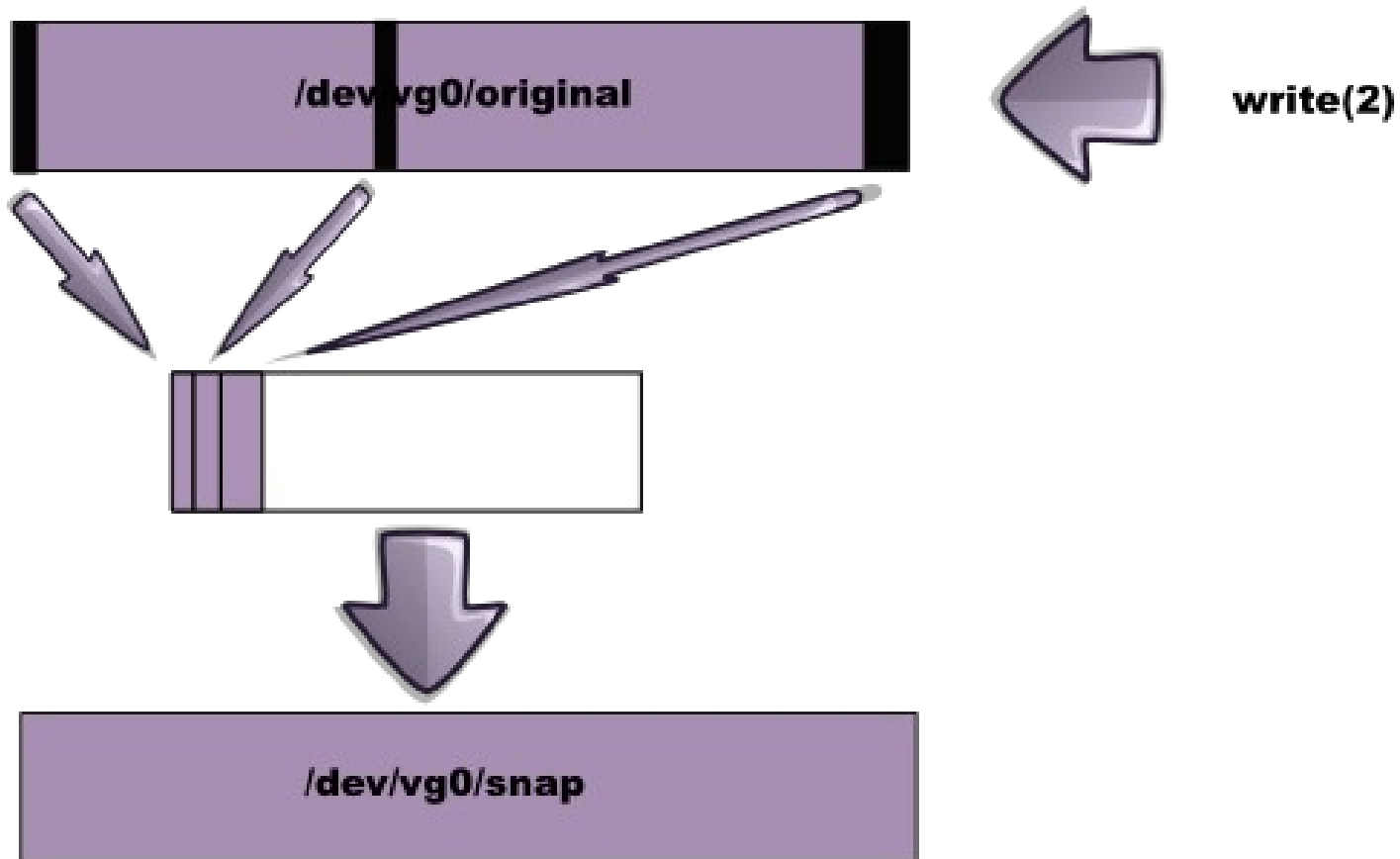
Hyperviseur : machine hôte

Domaine : machine invitée

Appliance virtuelle : solution configurée
avant livraison au client



Snapshot



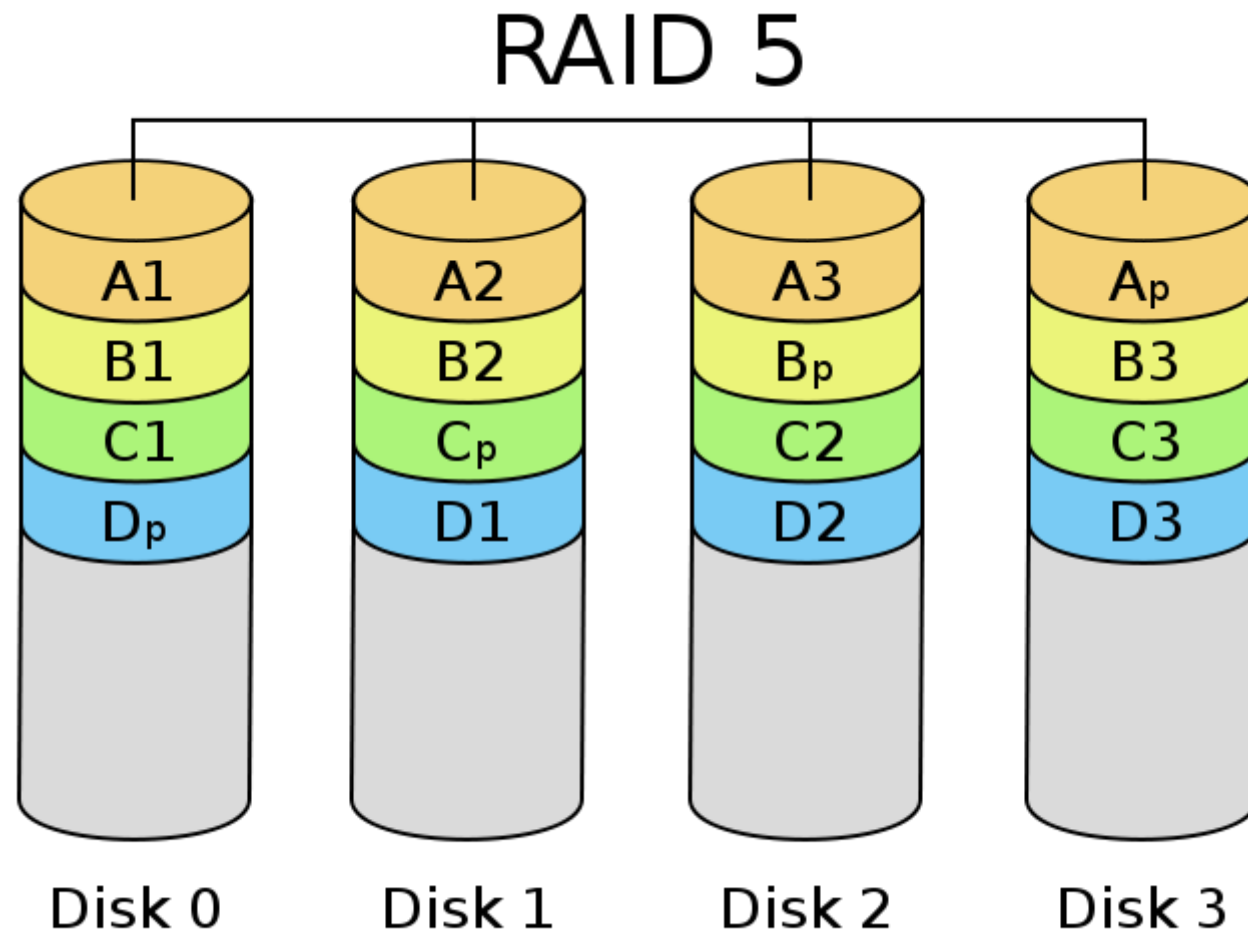
Systemes RAID



Redondance des données

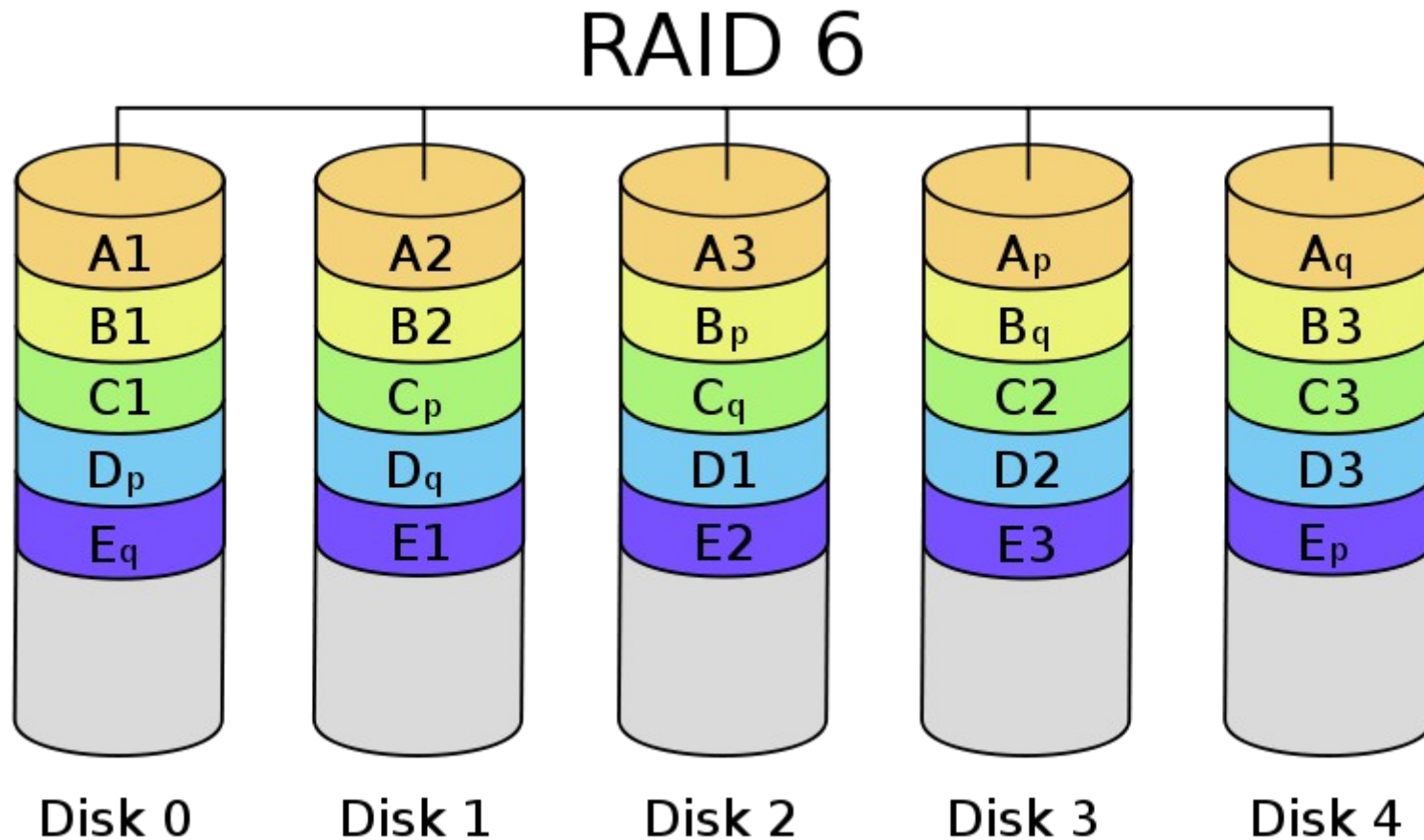
- Redundant Arrays of Independent Disks RAID
 - RAID 0 : (striping) volume agrégé par bande
 - RAID 1 : disques en miroir
 - RAID 5 :
volume agrégé par bande à parité répartie
 - RAID 6 : n redondances
 - RAID DP (Dual Parity) NAS
 - RAID Soft

Redondance des données : RAID 5



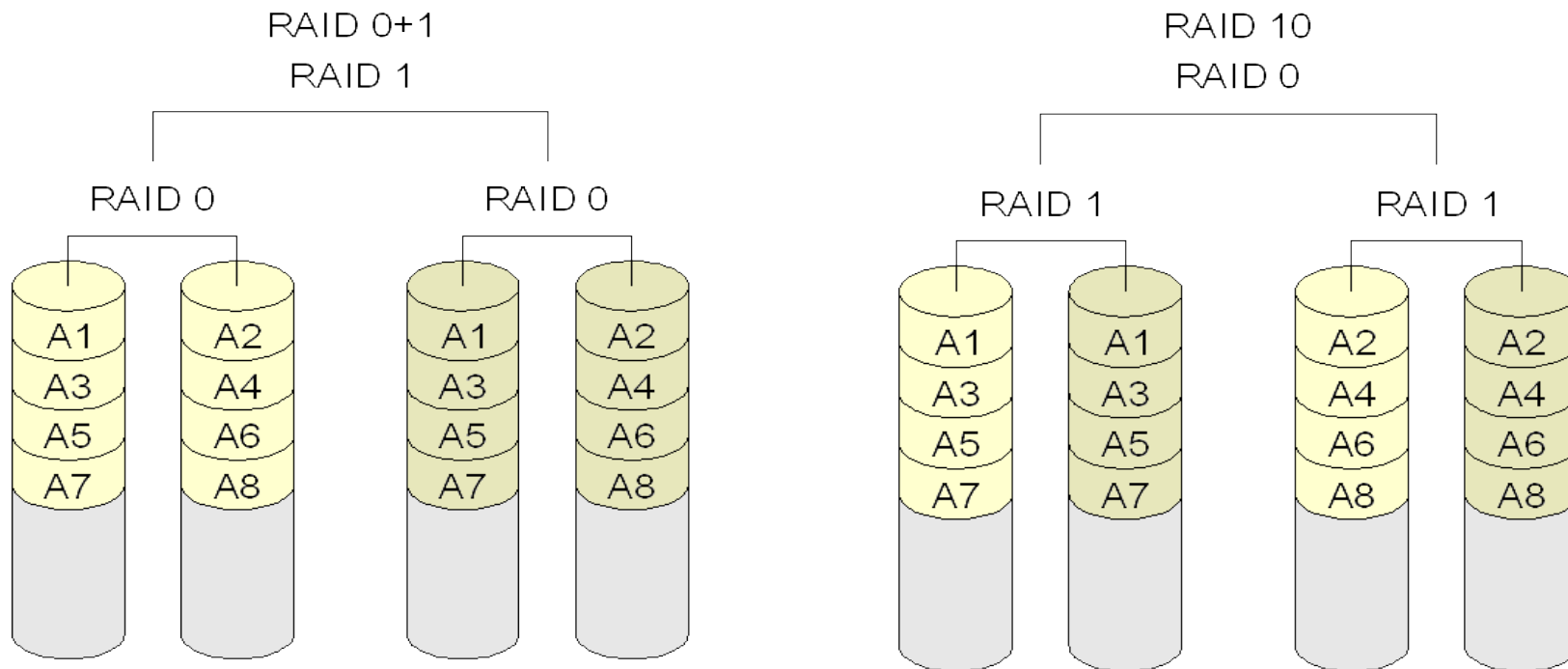
$$A_p = A_1 \text{ xor } A_2 \text{ xor } A_3$$

Redondance des données : RAID 6



Redondance des données

- RAID combiné : RAID 01, RAID 10, ...



- Attention à l'excès de confiance