

How to backup your disk with dd

I had several bad experiences losing my data in my life. Sometimes because of the hardware, sometimes because of my stupidity or inexperience. At least, it learned to be careful. I backup my data regularly, and on several support concerning the important ones.

I sometimes back up my primary partition, where the system is set. If my drive crashed, I want to recover quickly a system without having to reinstall hundreds of applications. I have used several times Partimage and was satisfied. But now I tend to use dd, which basically do the same thing in just one line. The advantage is that it is by default on any Linux distribution.

To back it up on an usb disk :

```
$ sudo dd if=/dev/hda1 | gzip -v | dd of=/media/usbdisk/backup_hda1.gz
```

To backup my home and other data partitions, I just copy the files manually, it is faster and there is no need to backup such a thing as the boot sector. But of course you could use the same command above.

When you wish to restore the partition to a new hard drive, just :

```
$ zcat /mnt/hdb5/sauvegarde.gz | dd of=/dev/hda1
```

To do that, you will have probably booted on a live CD Linux as Knoppix to restore the crashed system. In any case, don't overwrite the system you just booted on !

One tip if you want to back up only the boot sector :

```
$ sudo dd if=/dev/hda of=/home/secteur_boot.dd bs=512 count=1
```

And to restore :

```
$ sudo dd if=/home/secteur_boot.dd of=/dev/hda bs=512 count=1
```

Advanced options

```
oflag=direct, sync
```

for writing to slow devices such as SD cards, oflag=direct keeps it from filling up the process's memory with the backlogged output, and oflag=sync keeps it from filling up the kernel's memory.

direct is a good idea if you want to avoid buffering on the write end, but sync will severely degrade performance if the drive you're writing to does its own buffering. It will force every write to flush

the drive's buffer too before moving on.

also: status=progress

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