Le disque dur

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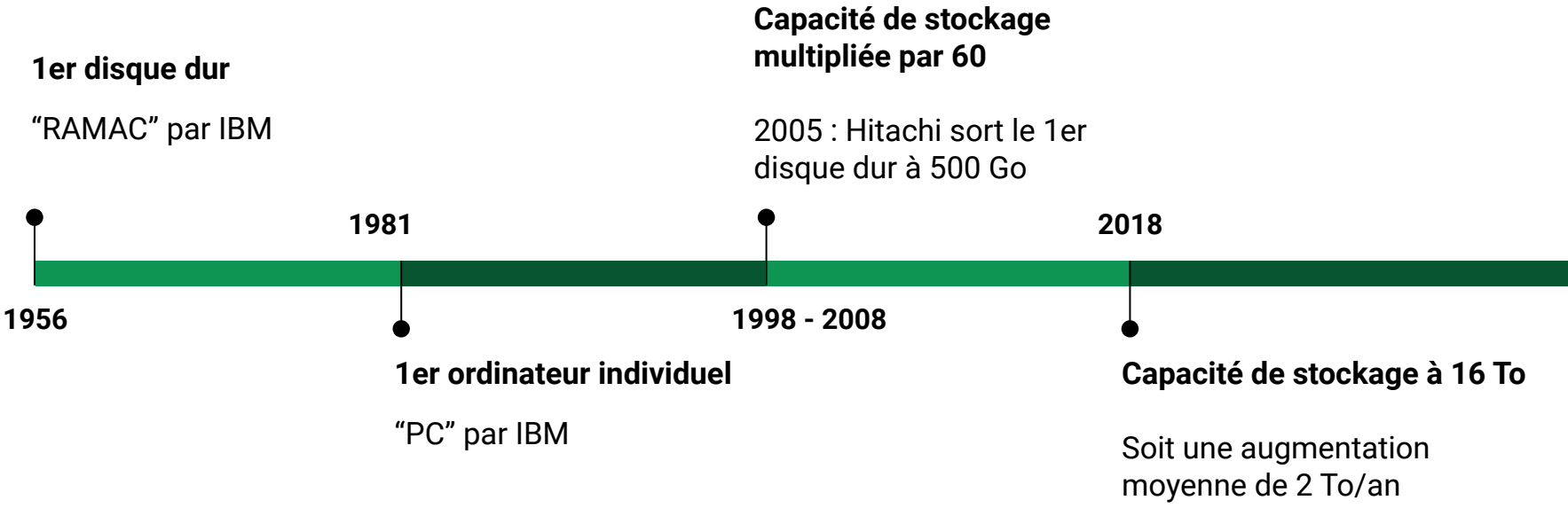
Sommaire

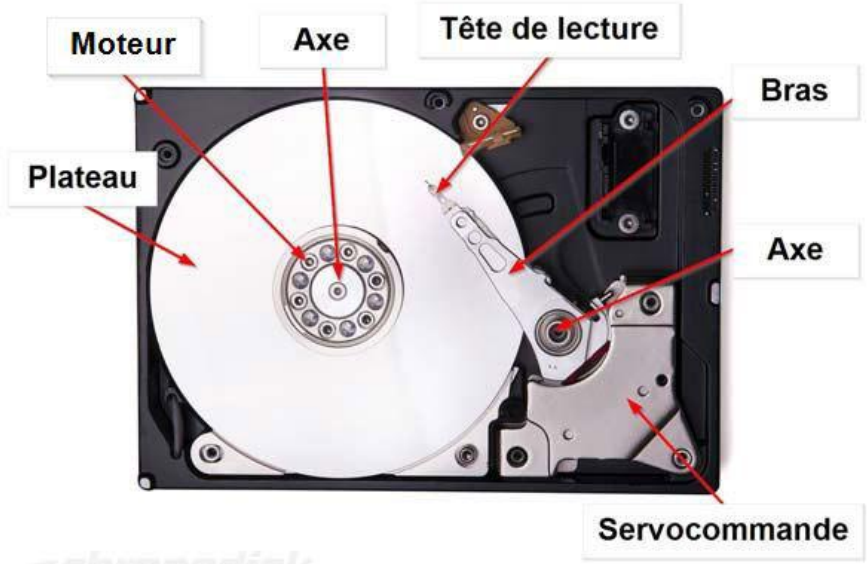
Qu’est-ce qu’un disque dur ?

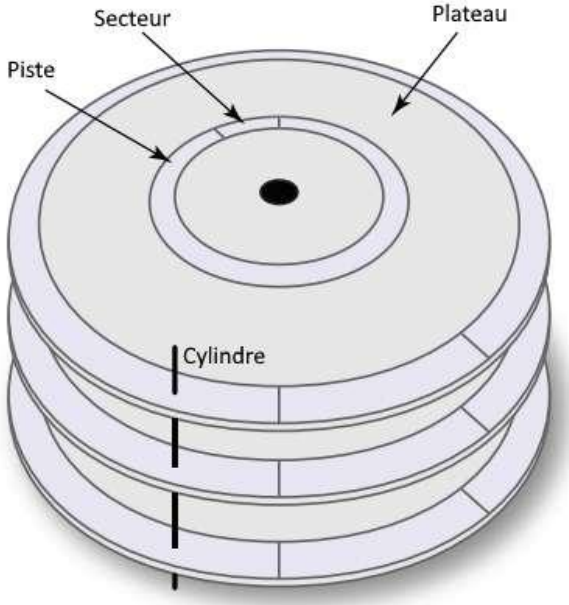
- Composant de l’ordinateur
- Stockage de données numériques
- Plusieurs milliards d’octets (GigaOctets)
- Internes et externes
    - Classiques et SSD
- Choix du disque dur
- Importance

Chronologie du disque dur



Composition et fonctionnement





Caractéristiques

- Taux de transfert
- Temps de latence
- Temps d’accès
- Mémoire cache
- Densité et nombre de plateaux
- Capacité de stockage
- Vitesse de rotation
- Norme de la connectique

Texte à traduire

A hard disk drive (HDD), hard disk, hard drive or fixed disk is a data storage device used for storing and retrieving digital information using one or more rigid ("hard") rapidly rotating disks (platters) coated with magnetic material. The platters are paired with magnetic heads arranged on a moving actuator arm, which read and write data to the platter surfaces.[2] Data is accessed in a random-access manner, meaning that individual blocks of data can be stored or retrieved in any order and not only sequentially. HDDs are a type of non-volatile memory, retaining stored data even when powered off. [...]

The primary characteristics of an HDD are its capacity and performance. Capacity is specified in unit prefixes corresponding to powers of 1000: a 1-terabyte (TB) drive has a capacity of 1,000 gigabytes (GB; where 1 gigabyte = 1 billion bytes). Typically, some of an HDD's capacity is unavailable to the user because it is used by the file system and the computer operating system, and possibly inbuilt redundancy for error correction and recovery. Performance is specified by the time required to move the heads to a track or cylinder (average access time) plus the time it takes for the desired sector to move under the head (average latency, which is a function of the physical rotational speed in revolutions per minute), and finally the speed at which the data is transmitted (data rate).

Source : https://www.researchgate.net/publication/299282101_Hard_Disk_Drive_and_Disk_Encryption

Glossaire

Termes EN	Termes FR
Hard drive disk (HDD)	Disque dur (DD)
Data storage device	Appareil de stockage de données
Platter	Plateau
Magnetic head	Tête magnétique
Actuator	Actuateur
Arm	Bras
Block	Bloc
Non-volatile memory	Mémoire non-volatile
Computer operating system	Système d’exploitation
Track	Piste
Cylinder	Cylindre
Sector	Secteur
Latency	Latence
Rotational speed	Vitesse de rotation

Sources

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- https://www.seagate.com/fr/fr/do-more/everything-you-wanted-to-know-about-hard-drives-master-dm/
- https://www.enssib.fr/bibliotheque-numerique/documents/67744-histoire-des-supports-de-stockage-de-la-carte-perforee-a-la-cle-usb.pdf
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