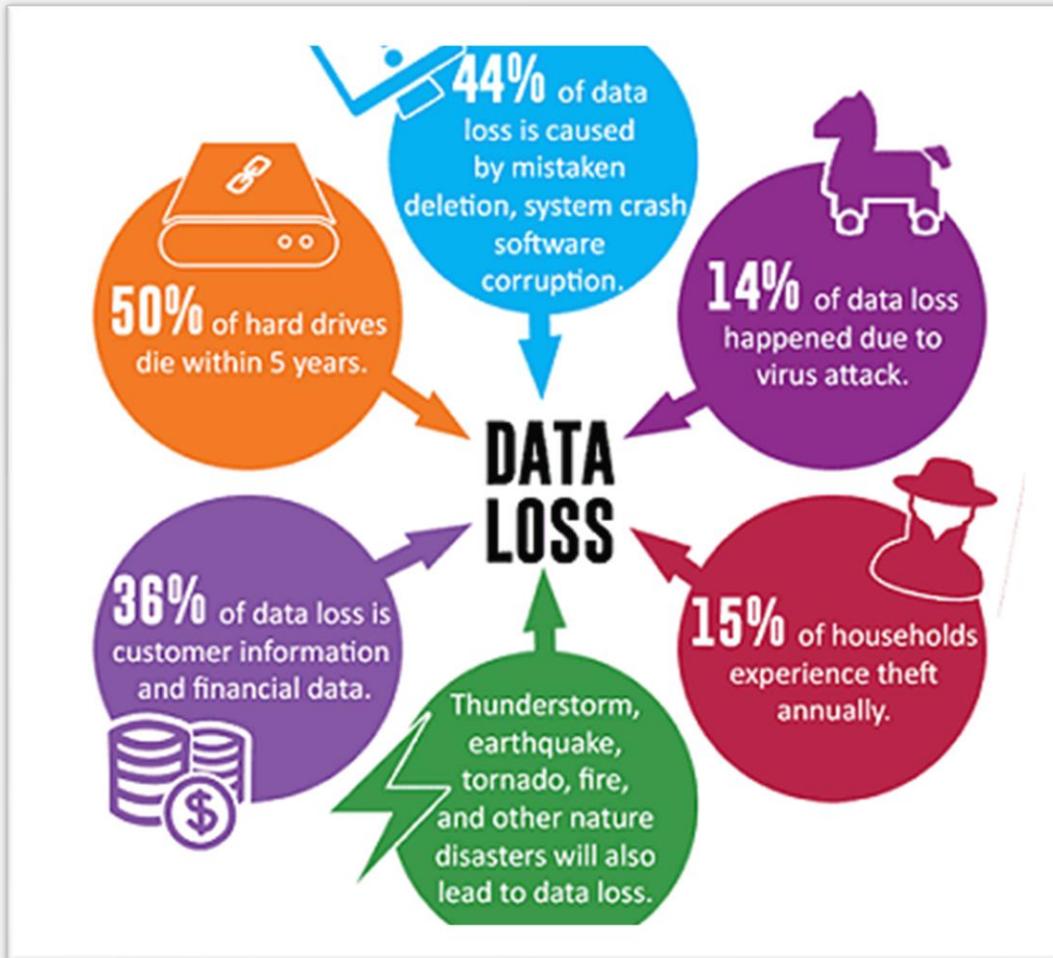


Data Backup Methods



Data Loss



In addition to problems arising from malicious activity there are a variety of reasons for accidental loss of data.

- A disk or tape gets corrupted
- A disk or tape is destroyed
- The system crashes
- The file is erased or overwritten by mistake
- The location of the file is forgotten.



What is Data Backup?

- ▶ Data backup is a process of duplicating **active data** to allow retrieval of the duplicate set after a data loss event
- ▶ The purpose of backing up data is to ensure that if anything happens to the original file, the backup copy can be used to restore the file without loss of data and within a reasonable time-frame.



Disk Mirroring

Disk mirroring (**also known as RAID-1 (Random Array of Independent Disks)**) is the practice of duplicating data in separate volumes on two hard disks to make storage more fault-tolerant.

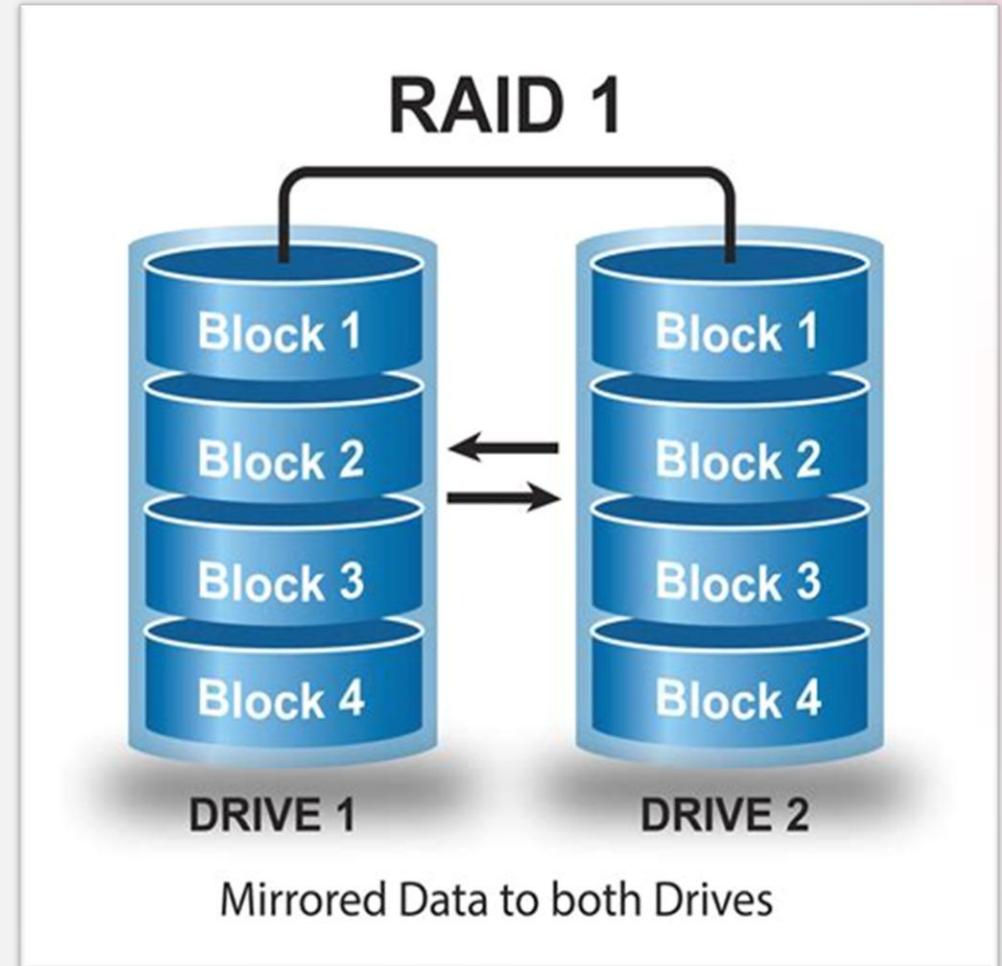
Mirroring provides data protection in the case of disk failure, because data is constantly updated to both disks.

Fault-tolerant technology is a capability of a computer system, electronic system or network to deliver uninterrupted service, despite one or more of its components failing.



Disk Mirroring

- Backup technique in which data is written simultaneously to two or more hard disks.
- In the event of a disk failure, the computer automatically switches access to the next disk, without loss of data or interrupting data processing. This is known as **fault tolerance**
- In some configurations, backup disks are maintained at a remote site (mirror site) for additional safety.



What is Data Archiving?

Data archiving is:

- The process of retaining data for long term storage. The data might not be in use, however, it can be brought into use and can be stored for future purposes
- intended to protect older information that is not needed for everyday operations but may have to be accessed occasionally.
- a way of reducing primary storage and the related costs, rather than acting as a data recovery tool.
- data that is not active but is too important to delete

