Database backup

Primary Focus, making sure the database is up and running constantly

Protect from failure

increase mean time between failure

decrease mean time between recovery

Protect from redundancy

Minimize loss of data

Backup can be categorized as

1. Logical backup
2. Physical backup

Physical backup:

Kept as backup files, compressed files, saved on a physical disk. Follow the 3-2-1 rule, which is that you should have 3 copies of your data (your production data and 2 backup copies) on two different media (disk and tape) with one copy off-site for disaster recovery.

Logical backup:

Logical backup is the copying of the actual database data, like schemas.

Categories of failure:

Hardware Failure: It can occur due to power surges, overheating, or physical damage to the storage device.

Software Bugs: Database software may have bugs that lead to data corruption or loss. Regular updates and thorough testing are essential to minimize this risk.

Human/User Error: Accidental deletion, overwriting, or misconfiguration can result in data loss. Proper access controls, training, and backups are crucial to prevent human-induced failures.

Cyber Attacks: Malicious activities like hacking, ransomware, or denial-of-service attacks can compromise data integrity. Implementing security measures, such as firewalls, encryption, and intrusion detection systems, helps mitigate this risk.

Database Schema Corruption: Corruption of database schemas can occur due to various factors. Having backups, point-in-time recovery options, and understanding storage engines are essential for recovery.

Media Failure: Media failure is a serious hardware mishap such as a disk crash.

Instance Failure: An instance failure can result from a hardware problem, such as a power outage, or a software problem, such as an operating system crash.

If you use archiving, a log file is passed to the log manager when it is full, even if the log file is still active and is needed for normal processing. This process allows copies of the data to be moved away from volatile media as quickly as possible.

EaseUS ToDo Backup: This solution has been around for over a decade and offers packages for both Windows and Mac users. It supports incremental or full backups for up to 16TB of data, including handling multiple partitions and hardware RAID. EaseUS ToDo Backup also supports cloud backups.

AutoRABIT Vault: If you’re specifically looking for Salesforce data backup and recovery, AutoRABIT Vault provides automated, unlimited backup and recovery features. It includes compare tools, sandbox seeding, and comprehensive data management features.

Free Windows 10 Backup Tools: If you’re using Windows 10, there are free tools available for backup and recovery. These tools support automatic and scheduled backups.