
MySQL
SQLite

Why PostgreSQL

Introduction

PostgreSQL is a powerful, open-source object-relational database system known for its robustness, scalability, and standards compliance. It has been a popular choice for developers and businesses since its inception in 1989.

Advantages of PostgreSQL

- **Robust and Reliable:** PostgreSQL offers ACID compliance and advanced features like multi-vversion concurrency control (MVCC).
- **Scalability:** It can handle large amounts of data and high-throughput workioads.
- **Extensibility:** PostgreSQL supports custom functions, data types, and extensions.
- **Standards Compliance:** PostgreSQL adheres to SQL standards, ensuring compatibility across different platforms.

Why Companies Are Shifting to PostgreSQL

Many companies are choosing PostgreSQL for its cost-effectiveness, reliability, and strong community support, particularly for large-scale and mission-critical applications.

Why PostgreSQL is Better Than Excel

Disadvantages of Excel

- **Limited data capacity:** Excel has a maximum limit of 1,048,576 rows and 16,384 columns.
- **Lack of data integrity:** Excel is prone to errors, especially with large datasets.
- **Concurrency issues:** Multiple users cannot work on the same Excel tile simultaneously.
- **Limited scalability:** Excel is not suitable for handling large, complex datasets.

Solutions with PostgreSQL

- **High capacity:** PostgreSQL can handle large datasets without limitations.
- **Data integrity:** PostgreSQL supports ACID transactions and strong data types.
- **Concurrency:** Multiple users can access and modify the database simultaneously.
- **Scalability:** PostgreSQL is designed for scalability and can manage increasing data volumes.

Why PostgreSQL is Better Than MySQL

Disadvantages of MySQL

- Slower with complex analytical queries
- Limited JSON & NoSQL-like data handling
- Less strict with data integrity (can lead to “silent” issues)

Solutions with PostgreSQL

- Faster performance for complex queries
- Better support for JSON & NoSQL data
- Stronger data integrity with stricter enforcement

Why PostgreSQL is Better Than SQLite

Disadvantages of SQLite

- Perfect for small/local apps, but not built for heavy traffic
- Lacks advanced features like replication & partitioning
- Not ideal for multi-user, high-concurrency environments

Solutions with PostgreSQL

- Built for heavy traffic and large-scale applications.
- Supports replication & partitioning features.
- Designed to support multi-user applications and high-concurrency.