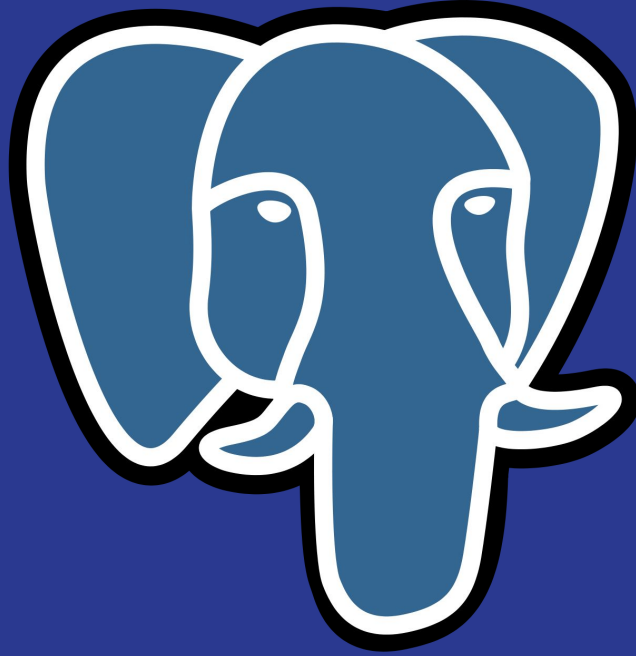


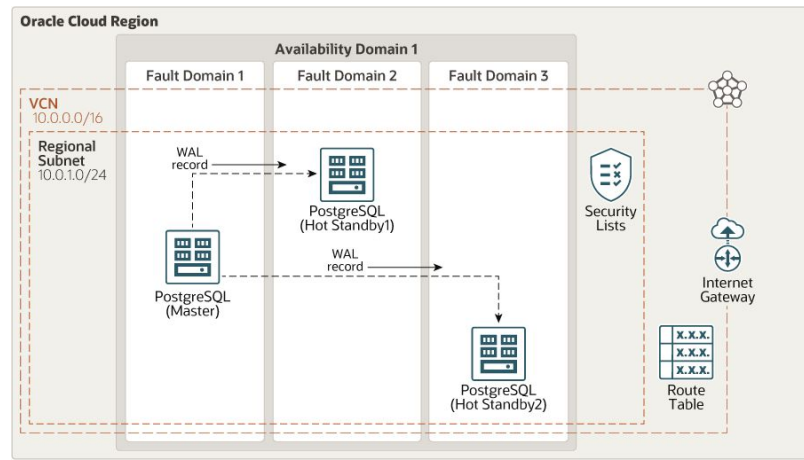
PostgreSQL

By: Bilal Naeem



Introduction

1. A database management system (dbms) that is open - source software and implements both SQL and JSON.
2. PostgreSQL utilizes queries that are relational and non-relational for flexibility and compatibility
3. PostgreSQL offers sophisticated data types as well as performance enhancement tools that are similar to Oracle and SQL server.
4. Pronunciation “POST-gress” and the QL is silent.

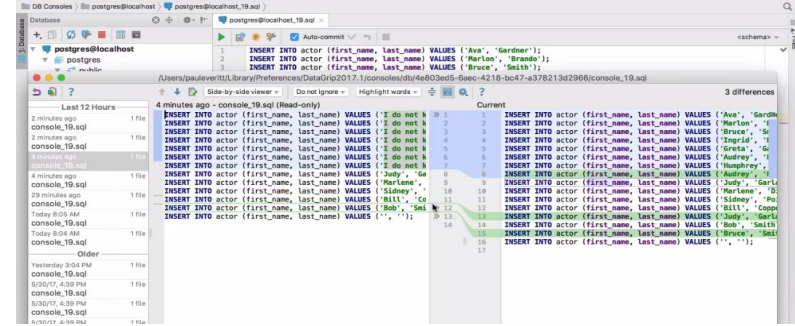


History of PostgreSQL

- Michael Stonebraker and his team invented Postgres in 1986
- It was then released in 1995 as Postgres95 which changed to PostgreSQL 6.0 after a year
- By 2001, PostgreSQL 6.0 added MVCC, Join syntax Controls, etc.
- PostgreSQL 8.4 released in 2009 and after a year, PostgreSQL 9.0 was released
- PGconf NYC was organised in 2014



Features of PostgreSQL

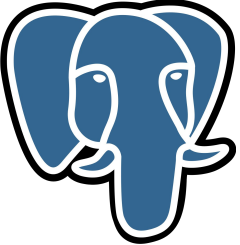


- Assists programmers in the creation of apps.
- Accessible with all major platforms and languages such as Java, C++, Python, and others.
- It has a highly complex locking mechanism.
- Capability for several simultaneous actions that do not interfere with one another
- Mature Server-Side Programming Functionality.
- Standby server and high availability.

Common Use of PostgreSQL

- **A reliable library in the LAMP (Linux Apache MySQL PHP) stack**
 - PostgreSQL is primarily used in highly complex websites and application
- **Database for general-purpose transactions**
 - Big companies like apple and amazon use PostgreSQL to assist businesses with their processes and applications
- **PostgreSQL support geographic information systems (GIS)** meaning you can directly linked to specific geographical locations where the data is consists of.

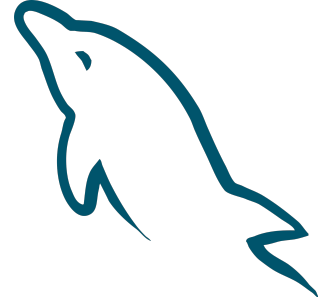




PostgreSQL

vs

MySQL



- **Advantages:**

- can manage interactive websites and web apps
- is appropriate for data warehousing and analysis
- You can learn PostgreSQL easily and doesn't require much training

- **Disadvantages**

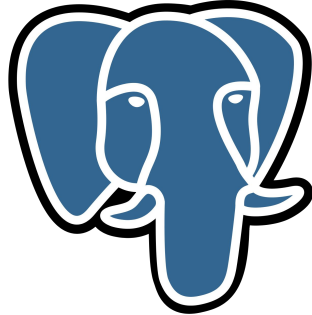
- Is not as popular as other databases
- Speed improvement requires more time than MySQL.
- It is slower than MySQL in terms of performance metrics

- **Advantages:**

- Most popular open source database management system .
- Reduced Total Cost of Ownership
- Seamless Connectivity through pipes, TCP/IP sockets and UNIX sockets.

- **Disadvantages:**

- Has difficult time supporting large database
- Can't transitions very efficiently
- Prone to data corruptions



Conclusion

- PostgreSQL is an open-source Database Management System.
- It is a powerful cross between standard SQL and object-oriented programming features.
- PostgreSQL supports a variety of data types like SQL and JSON which includes network address and customized data types.
- A primary goal of PostgreSQL is to maintain coherence and reliability.
- To be more reliable, PostgreSQL contains security, authentication, and disaster recovery options.



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