POSTGRESQL OVERVIEW

PostgreSQL is a powerful, open source object-relational database system. It has more than 15 years of active development and a proven architecture that has earned it a strong reputation for reliability, data integrity, and correctness.

This tutorial will give you quick start with PostgreSQL and make you comfortable with PostgreSQL programming.

What is PostgreSQL?

PostgreSQL (pronounced as **post-gress-Q-L**) is an open source relational database management system (DBMS) developed by a worldwide team of volunteers. PostgreSQL is not controlled by any corporation or other private entity and the source code is available free of charge.

Brief History

PostgreSQL, originally called Postgres, was created at UCB by a computer science professor named Michael Stonebraker. Stonebraker started Postgres in 1986 as a followup project to its predecessor, Ingres, now owned by Computer Associates.

1. 1977-1985: A project called INGRES was developed.
    - Proof-of-concept for relational databases
    - Established the company Ingres in 1980
    - Bought by Computer Associates in 1994
2. 1986-1994: POSTGRES
    - Development of the concepts in INGRES with a focus on object orientation and the query language Quel
    - The code base of INGRES was not used as a basis for POSTGRES
    - Commercialized as Illustra (bought by Informix, bought by IBM)
3. 1994-1995: Postgres95
    - Support for SQL was added in 1994
    - Released as Postgres95 in 1995
    - Re-released as PostgreSQL 6.0 in 1996
    - Establishment of the PostgreSQL Global Development Team

Key features of PostgreSQL

PostgreSQL runs on all major operating systems, including Linux, UNIX (AIX, BSD, HP-UX, SGI IRIX, Mac OS X, Solaris, Tru64), and Windows. It supports text, images, sounds, and video, and includes programming interfaces for C / C++ , Java , Perl , Python , Ruby, Tcl and Open Database Connectivity (ODBC).

PostgreSQL supports a large part of the SQL standard and offers many modern features including the following:

- Complex SQL queries
- SQL Sub-selects
- Foreign keys
- Trigger

- Views
- Transactions
- Multiversion concurrency control (MVCC)
- Streaming Replication (as of 9.0)
- Hot Standby (as of 9.0)

You can check official documentation of PostgreSQL to understand above-mentioned features. PostgreSQL can be extended by the user in many ways, for example by adding new:

- Data types
- Functions
- Operators
- Aggregate functions
- Index methods

Procedural Languages Support

PostgreSQL supports four standard procedural languages which allows the users to write their own code in any of the languages and it can be executed by PostgreSQL database server. These procedural languages are - PL/pgSQL, PL/Tcl, PL/Perl and PL/Python. Besides, other non-standard procedural languages like PL/PHP, PL/V8, PL/Ruby, PL/Java, etc., are also supported.