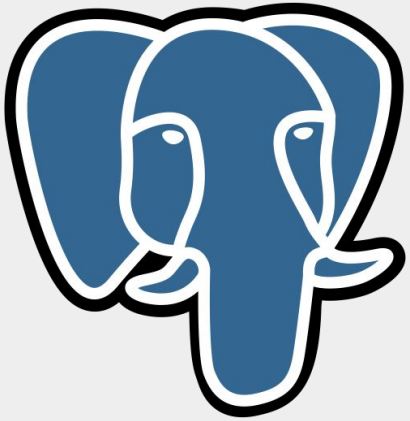


PostgreSQL

What is PostgreSQL ?

PostgreSQL is an **advanced**, **enterprise** class **open source relational database** that supports both **SQL** (relational) and **JSON** (non-relational) querying. It is a highly stable database management system, backed by more than 20 years of community development which has contributed to its high levels of resilience, integrity, and correctness. PostgreSQL is used as the primary data store or data warehouse for many web, mobile, geospatial, and analytics applications.

wikipedia

History of PostgreSQL ?

The PostgreSQL project started in 1986 under the direction of Professor Michael Stonebreaker at the University of California, Berkeley. The project was originally named POSTGRES, in reference to the older Ingres database, also developed at Berkeley. POSTGRES aimed to add the fewest features needed to completely support multiple data types. In 1996, the project was renamed to PostgreSQL to illustrate its support for the SQL querying language (although PostgreSQL is still commonly abbreviated as Postgres). A dedicated and diverse community of contributors – the PostgreSQL Global Development Group – continues to make regular major and minor releases of the free and open source database project.

What is Schema ?

In PostgreSQL, a **schema** holds all objects, except for roles and tablespaces. Schemas effectively act like namespaces, allowing objects of the same name to co-exist in the same database. By default, newly created databases have a schema called public, but any further schemas can be added, and the public schema isn't mandatory.

A search_path setting determines the order in which PostgreSQL checks schemas for unqualified objects (those without a prefixed schema). By default, it is set to $user, public ($user refers to the currently connected database user). This default can be set on a database or role level, but as it is a session parameter, it can be freely changed (even multiple times) during a client session, affecting that session only.

New objects are created in whichever valid schema (one that presently exists) appears first in the search_path.

What is Tablespace ?

A tablespace is a storage location where the actual data underlying database objects can be kept. It provides a layer of abstraction between physical and logical data,[1] and serves to allocate storage for all DBMS managed segments. (A database segment is a database object which occupies physical space such as table data and indexes.) Once created, a tablespace can be referred to by name when creating database segments.

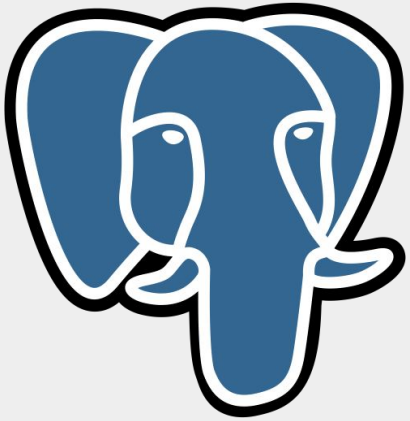
Tablespaces specify only the database storage locations, not the logical database structure, or database schema. For instance, different objects in the same schema may have different underlying tablespaces. Similarly, a tablespace may service segments for more than one schema. Sometimes it can be used to specify schema so as to form a bond between logical and physical data.

wikipedia

Data Types in PostgreSQL

- Boolean
- Arbitrary-precision numerics
- Character (text, varchar, char)
- Binary
- Date/time (timestamp/time with/without time zone, date, interval)
- Enum
- HStore, an extension enabled key-value store within PostgreSQL
- Arrays (variable-length and can be of any data type, including text and composite types) up to 1 GB in total storage size
- Universally unique identifier (UUID)
- JavaScript Object Notation (JSON), and a faster binary JSONB

Data types full list

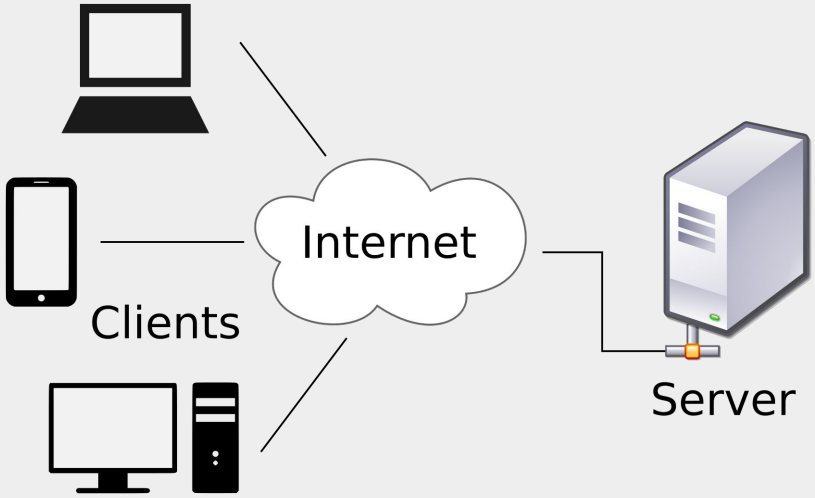


Install PostgreSQL

PostgreSQL Structure

PostgreSQL uses a client/server model. A PostgreSQL session consists of the following cooperating processes (programs):

- A server process, which manages the database files, accepts connections to the database from client applications, and performs database actions on behalf of the clients. The database server program is called postgres.
- The user's client (frontend) application that wants to perform database operations. Client applications can be very diverse in nature: a client could be a text-oriented tool, a graphical application, a web server that accesses the database to display web pages, or a specialized database maintenance tool. Some client applications are supplied with the PostgreSQL distribution.



Client-server-model-wikipedia

Download Links

Windows Linux

Interview Questions