

PostgreSQL

About:

PostgreSQL is a powerful, open source object-relational database (ORDBMS) in development since 15 years. It runs on all major operating systems, including Linux, UNIX, Mac and Windows. It is fully ACID compliant, has full support for foreign keys, joins, views, triggers and stored procedures. It has native programming interfaces for C/C++, Java, .Net, Perl, Python, Ruby etc.

PostgreSQL runs stored procedures in more than a dozen programming languages, including Java, Perl, Python, Ruby, C/C++, and its own PL/pgSQL, which is similar to Oracle's PL/SQL.

Installation:

The following steps show how to install Postgres 9.3.5 on Ubuntu 14.04 LTS from the source code.

Requirements:

- An ftp program and tar
- GNU make (3.80 or newer) (gmake can be used)
- >180mb disk space

Getting Postgres Source Code:

We will be downloading and unpacking a tarball via anonymous ftp from postgresql.org. You may choose to download it to a separate 'tarballs' folder on your local machine.

Open shell and type the following commands:

```
ftp ftp.postgresql.org
login as anonymous
cd /pub/source/v9.3.5/
binary
get postgresql-9.3.5.tar.gz
exit
tar -zxvf postgresql-9.3.5.tar.gz
```

This creates a directory postgresql-9.3.5 in pwd.

Building from source code:

Change to the directory where you uncompressed the above tar archive. Now type the following commands.

```
cd postgresql-9.3.5
mkdir build_dir
cd build_dir
../configure --prefix=`pwd`/../pgsql
gmake
```

Note: You may have to use 'make' instead of gmake.

The above commands help us to isolate the source code from the object code.

If all went well, You get a message stating- “All of postgres successfully made. Ready to install.”

Other commands that you should know about:

make check (To compile and execute regression tests)

make clean (remove all object files)

Installing Postgres:

Assuming that you're in the postgres build_dir directory, type “make install”

This will install postgres on your computer.

Starting Postgres:

Now that we have postgres set up, we need to initialize a Database cluster which will have all the Databases that we create.

This is done only once, and the command to do this is:

```
cd postgresql-9.1.4/pgsql
mkdir data
./bin/initdb -D data
```

Now you have created a cluster. You can now start the Postgres server by typing

```
./bin/postgres -D data &
```

To Test your Installation, let's create a sample database; (Done from pgsql directory)

```
LD_LIBRARY_PATH=`pwd`/lib //or replace with
                           absolute path to ./lib
export LD_LIBRARY_PATH    //could also be included
                           in ~/.bashrc
./bin/createdb test      //create a new 'test' schema
./bin/psql test
```

Stopping Postgres:

```
./bin/pg_ctl -D data stop
```

Team Members:

- Akarsh Hegde
- Jason Pinto
- Sourabh S Shenoy