Install PostgreSQL on Windows and Ubuntu

Installation process of PostgreSQL

This document discusses detail installation process of PostgreSQL on Windows and Ubuntu.

Install PostgreSQL on Windows

There are three steps to complete the PostgreSQL installation:

1. Download PostgreSQL installer for Windows
2. Install PostgreSQL
3. Verify the installation

1) Download PostgreSQL Installer for Windows
First, you need to go to the download page of PostgreSQL installers on the EnterpriseDB.

Second, click the download link as shown below:

Version	Linux x86-64	Linux x86-32	Mac OS X	Windows x86-64	Windows x86-32
12.3	N/A	N/A	Download	Download	N/A
11.8	N/A	N/A	Download	Download	N/A
10.13	Download	Download	Download	Download	Download
9.6.18	Download	Download	Download	Download	Download
9.5.22	Download	Download	Download	Download	Download
9.4.26 (Not Supported)	Download	Download	Download	Download	Download
9.3.25 (Not Supported)	Download	Download	Download	Download	Download

It will take a few minutes to complete the download.

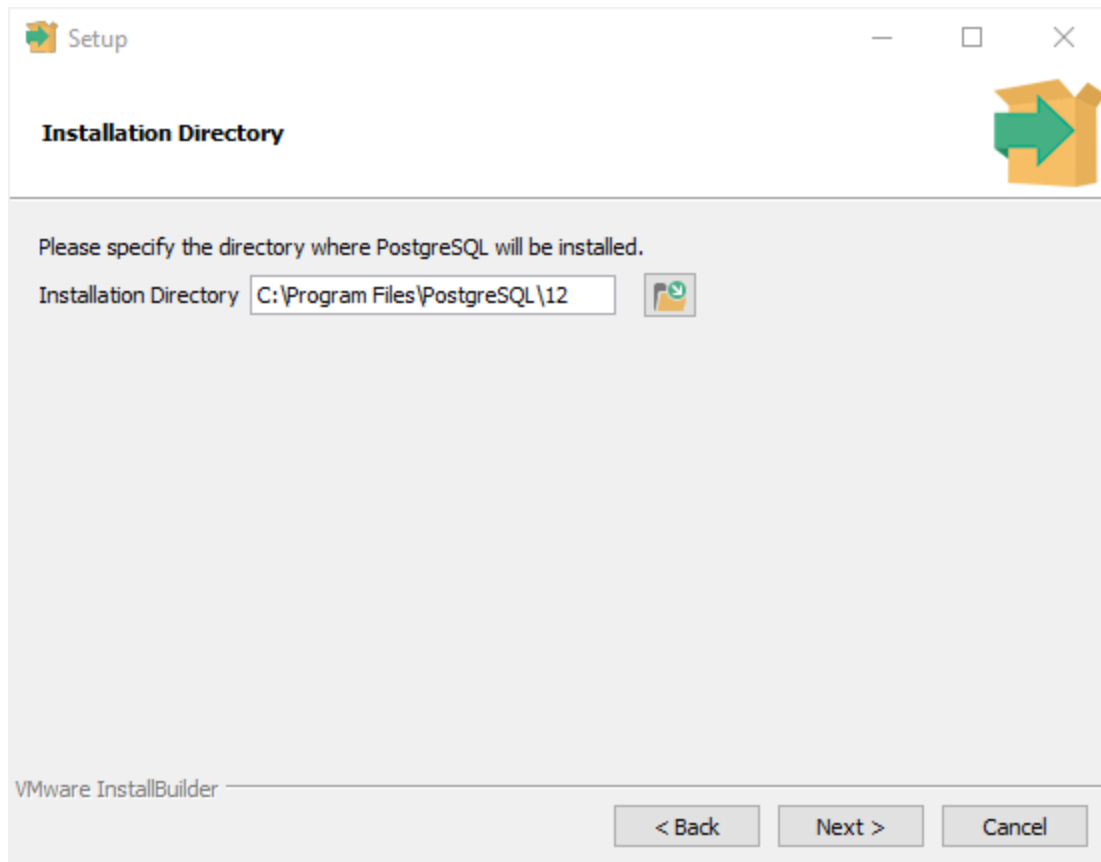**2) Install PostgreSQL on Windows step by step**
To install PostgreSQL on Windows, you need to have administrator privileges.

Step 1. Double click on the installer file, an installation wizard will appear and guide you through multiple steps where you can choose different options that you would like to have in PostgreSQL.
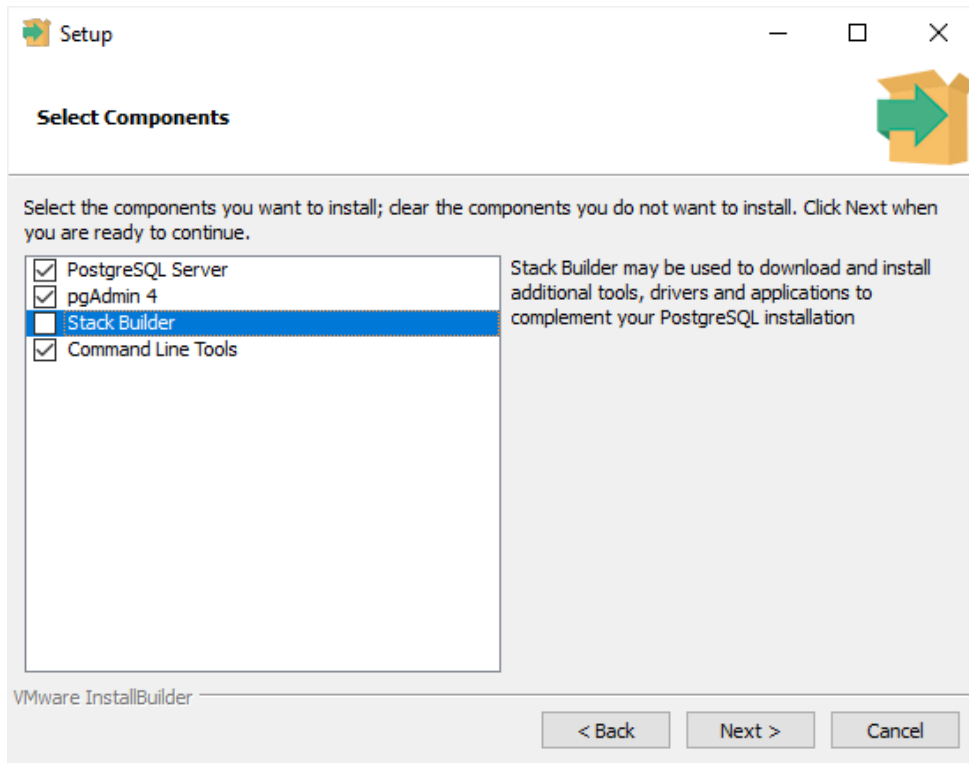
Step 2. Click the Next button

Step 3. Specify installation folder, choose your own or keep the default folder suggested by PostgreSQL installer and click the Next button
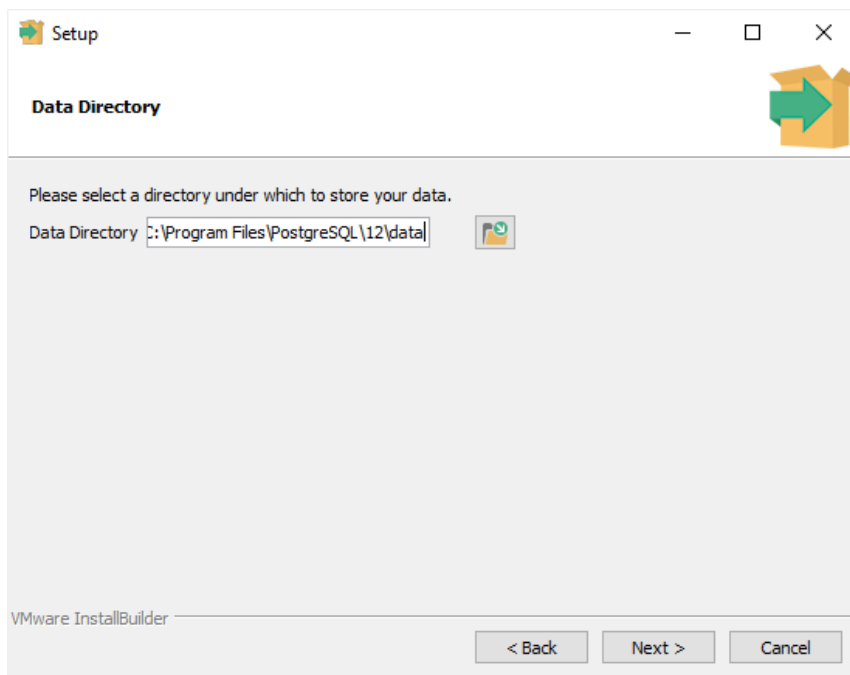
-

Step 4. Select software components to install:

- The PostgreSQL Server to install the PostgreSQL database server
- pgAdmin 4 to install the PostgreSQL database GUI management tool.
- Command Line Tools to install command-line tools such as psql, pg_restore, etc. These tools allow you to interact with the PostgreSQL database server using the command-line interface.
- Stack Builder provides a GUI that allows you to download and install drivers that work with PostgreSQL.

For the tutorial on this website, you don't need to install Stack Builder so feel free to uncheck it and click the Next button to select the data directory:
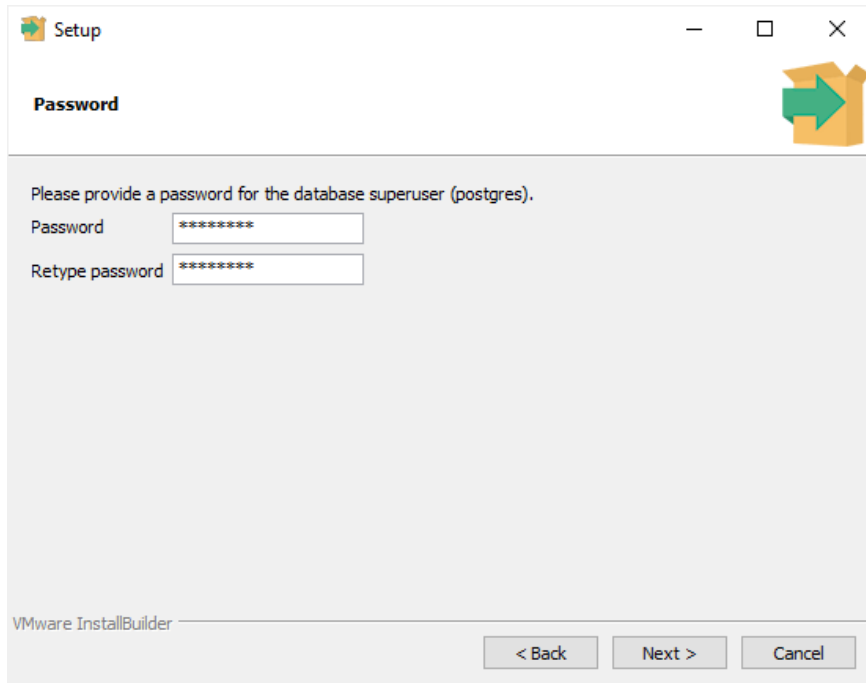
Step 5. Select the database directory to store the data or accept the default folder. And click the Next button to go to the next step:

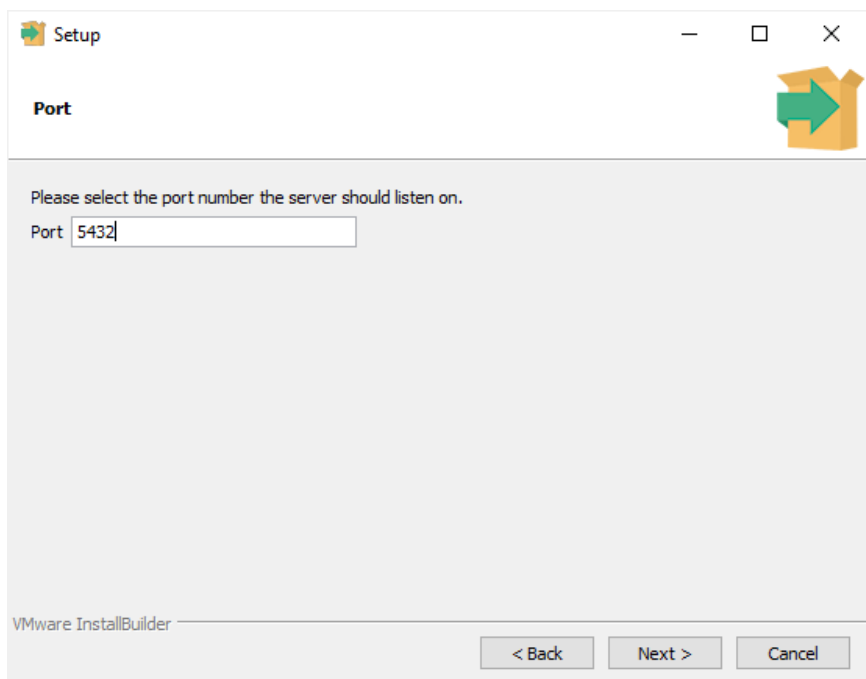Step 6. Enter the password for the database superuser (postgres)

PostgreSQL runs as a service in the background under a service account named postgres. If you already created a service account with the name postgres, you need to provide the password of that account in the following window.
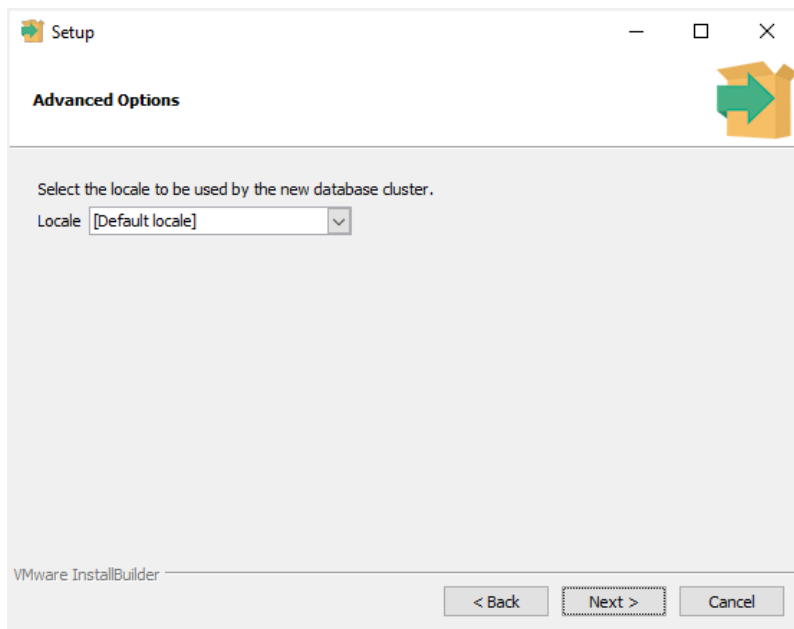After entering the password, you need to retype it to confirm and click the Next button:

Step 7. Enter a port number on which the PostgreSQL database server will listen. The default port of PostgreSQL is 5432. You need to make sure that no other applications are using this port.
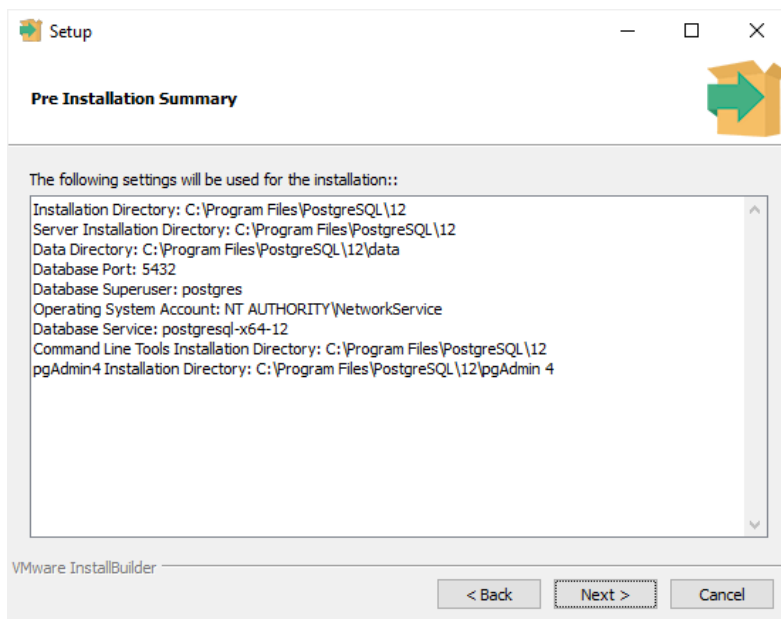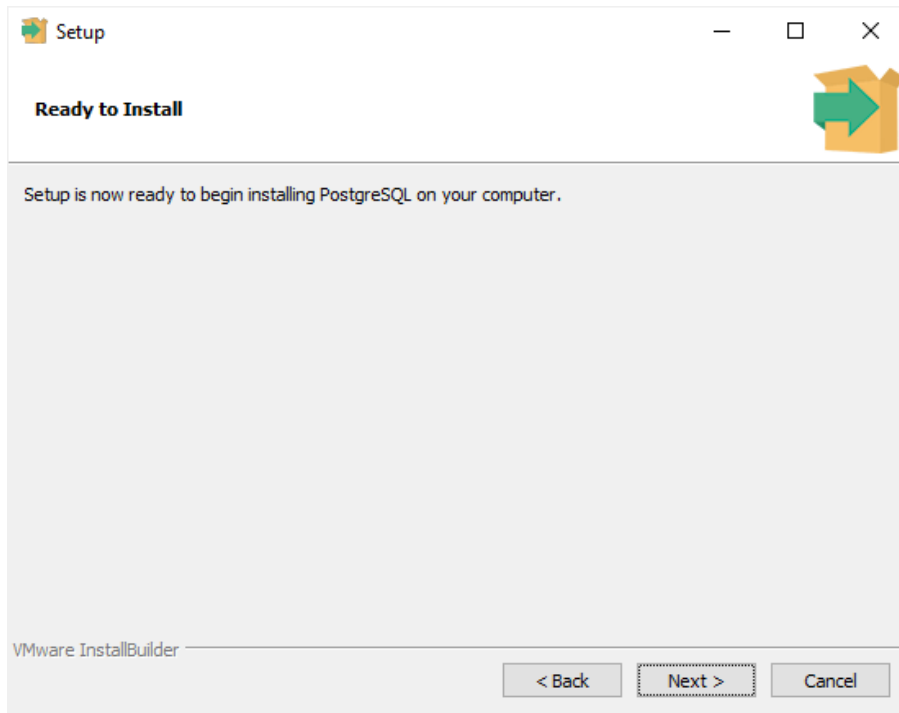
Step 8. Choose the default locale used by the PostgreSQL database. If you leave it as default locale, PostgreSQL will use the operating system locale. After that click the Next button.
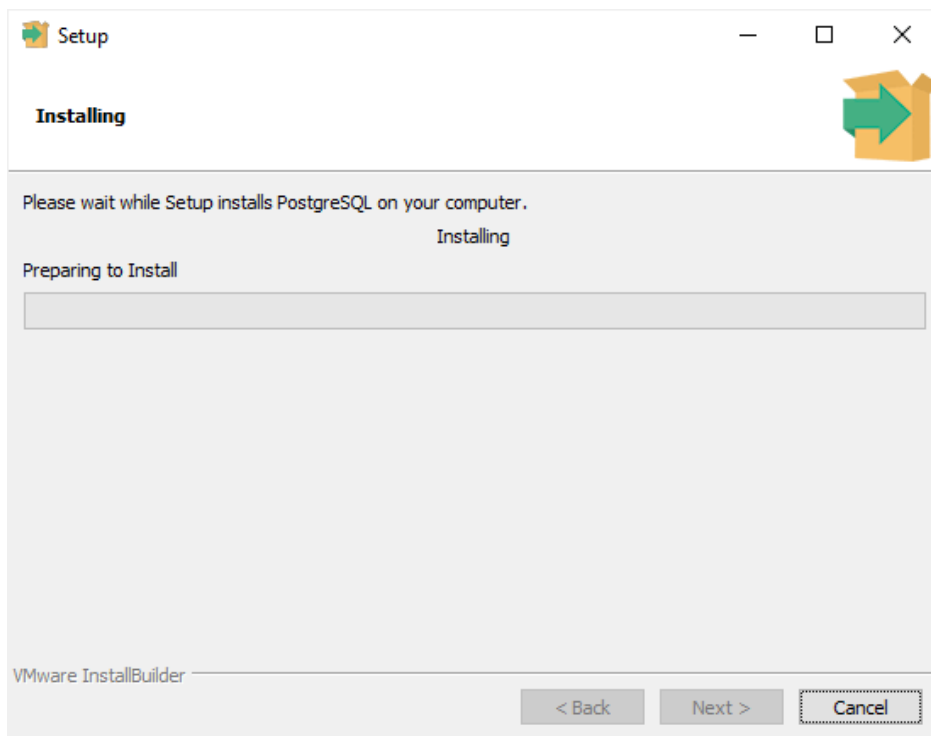

Step 9. The setup wizard will show the summary information of PostgreSQL. You need to review it and click the Next button if everything is correct. Otherwise, you need to click the Back button to change the configuration accordingly.

Now, you're ready to install PostgreSQL on your computer. Click the **Next** button to begin installing PostgreSQL.

The installation may take a few minutes to complete.

Step 10. Click the **Finish** button to complete the PostgreSQL installation.
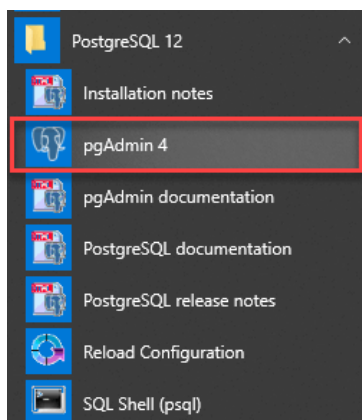
3) Verify the Installation

There are several ways to verify the PostgreSQL installation. You can try to connect to the PostgreSQL database server from any client application e.g., psql and pgAdmin.

      a) Through PgAdmin

The pgAdmin application allows you to interact with the PostgreSQL database server via an intuitive user interface.
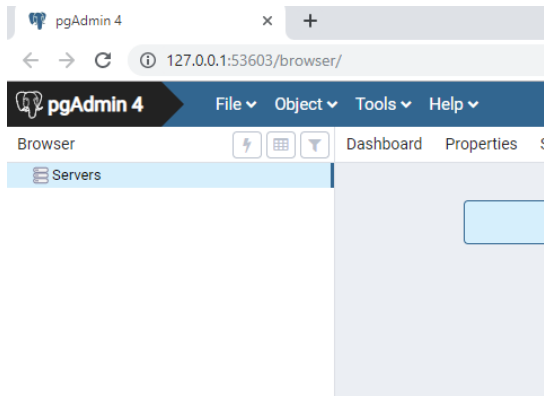
The following illustrates how to connect to a database using pgAdmin GUI application:

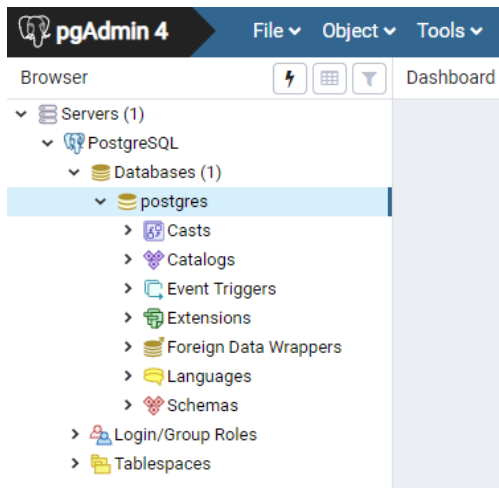First, launch the pgAdmin application.

The pgAdmin application will launch on the web browser as shown in the following picture:
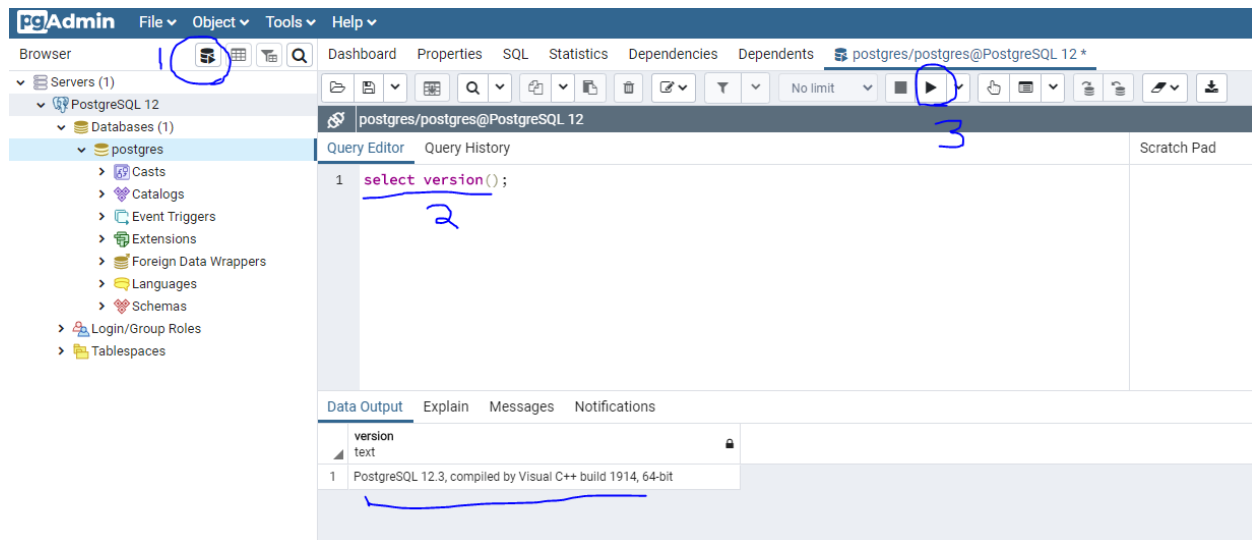
Click on the Servers node to expand the server. By default, PostgreSQL has a database named postgres as shown below:
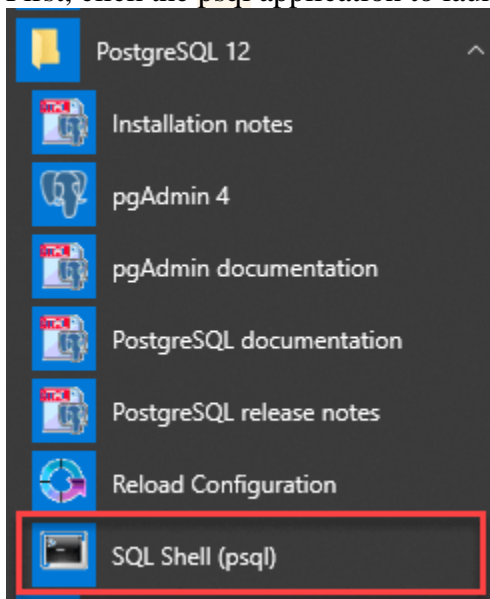

Enter the query in the **Query Editor**, click the **Execute** button, you will see the result of the query displaying in the **Data Output** tab:

b) Through the psql program.

First, click the psql application to launch it. The psql command-line program will display.

Second, enter all the necessary information such as the server, database, port, username, and password. To accept the default, you can press **Enter**. Note that you should provide the password that you entered during installing the PostgreSQL.

Server [localhost]:
Database [postgres]:
Port [5432]:
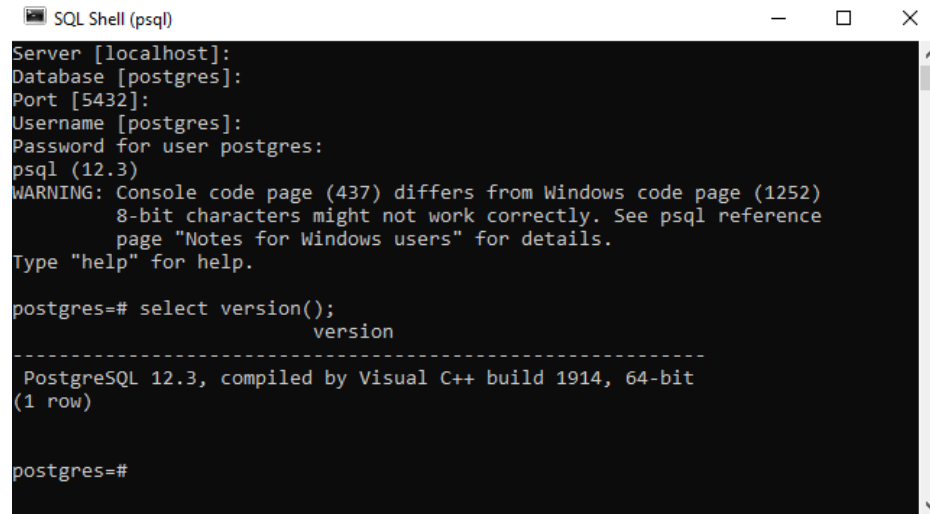Username [postgres]:
Password for user postgres:
psql (12.3)
WARNING: Console code page (437) differs from Windows code page (1252)

> 8-bit characters might not work correctly. See psql reference
> page "Notes for Windows users" for details.

Type "help" for help.

postgres=#

Third, issue the command SELECT version(); you will see the following output:

Install PostgreSQL on Ubuntu

Once visiting the [PostgreSQL download for Ubuntu page](#), you find the script that allows you to install PostgreSQL on Ubuntu. You need to execute them one by one. Start terminal window in your Ubuntu system and execute the following command:

First, execute the following command to create the file repository configuration:

```
$ sudo sh -c 'echo "deb http://apt.postgresql.org/pub/repos/apt $(lsb_release -cs)-pgdg main" > /etc/apt/sources.list.d/pgdg.list'
```

Second, import the repository signing key:

```
$ wget --quiet -O - https://www.postgresql.org/media/keys/ACCC4CF8.asc | sudo apt-key add -
```

Third, update the package list:

```
$ sudo apt-get update
```

Finally, install the latest version of PostgreSQL:
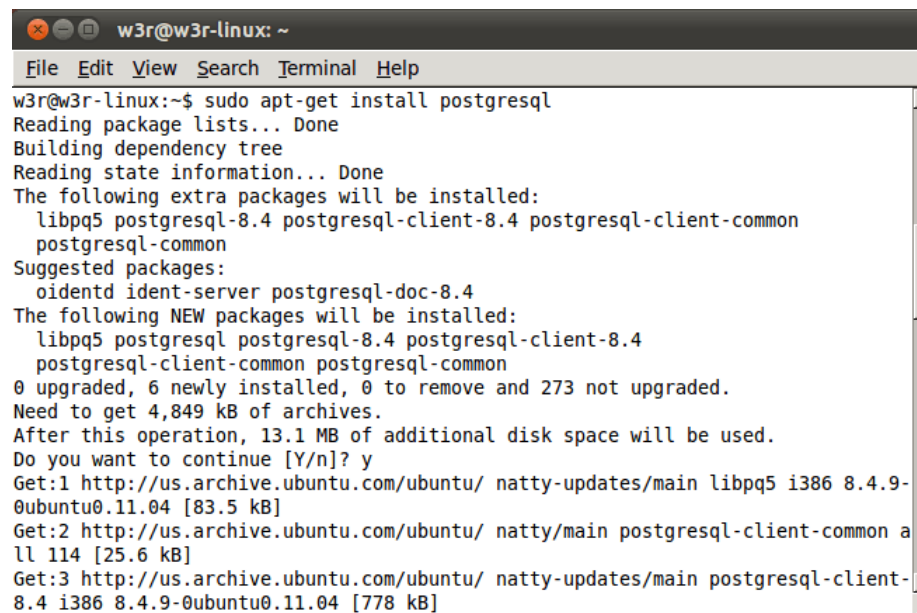
sudo apt-get install postgresql

It will ask for administrative password and then proceed with the installation. The installation process is not much interactive. Only once it asks you "Do you want to continue?". Press Y and installation will continue. As soon as the installation is finished, it will take you to the command prompt again. The installation process also installs PostgreSQL client.

If you want to install a specific version, you can use postgresql-version instead of postgresql. For example, to install PostgreSQL version 12, you use the following command:

$ **sudo apt-get install postgresql-12**
It will take few minutes to download and install the PostgreSQL.

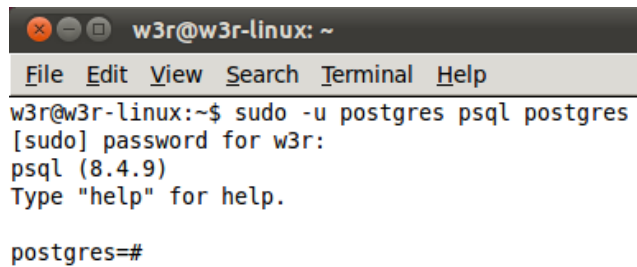The following pictorial is taken while installing PostgreSQL in Ubuntu.

Change the PostgreSQL postgres user password

The default user for PostgreSQL is "postgres". The first thing you need to do after you successfully installed PostgreSQL, is to change the password for the "postgres" user. For doing so, run the following command, which will take you to the PostgreSQL command line.

sudo -u postgres psql postgres

The following pictorial is taken after we ran the above command.

```
w3r@w3r-linux: ~
File  Edit  View  Search  Terminal  Help
w3r@w3r-linux:~$ sudo -u postgres psql postgres
[sudo] password for w3r:
psql (8.4.9)
Type "help" for help.

postgres=#
```

Now run the following command to be prompted to supply a password for "postgres" database role.

\password postgres

The following pictorial is taken after we ran the above command.

```
postgres=# \password postgres
Enter new password:
Enter it again:
postgres=# █
```
                                                    '>

To exit the PostgreSQL command prompt, type Contrl+D.

Install pgAdmin - GUI to manage PostgreSQL

Refer**:** https://www.pgadmin.org/download/pgadmin-4-apt/

Run the following command to install pgadmin4.

sudo apt-get install pgadmin4

The installation process starts and after asking once "Do you want to continue?" it continues. Press y when it asks so.

You can start pgadmin4 from Application > Programming > pgadmin4.