

Technology Tools

Technology Tools for this Course

There are two technology tools that you will need for this course. Please install the components you need so that you are setup for your assignments.

1. PostgreSQL
2. Amazon Web Service

In this course, you will be utilizing PostgreSQL, an open source database, to complete some of your assignments. Find the directions below to setup and write SQL scripts.

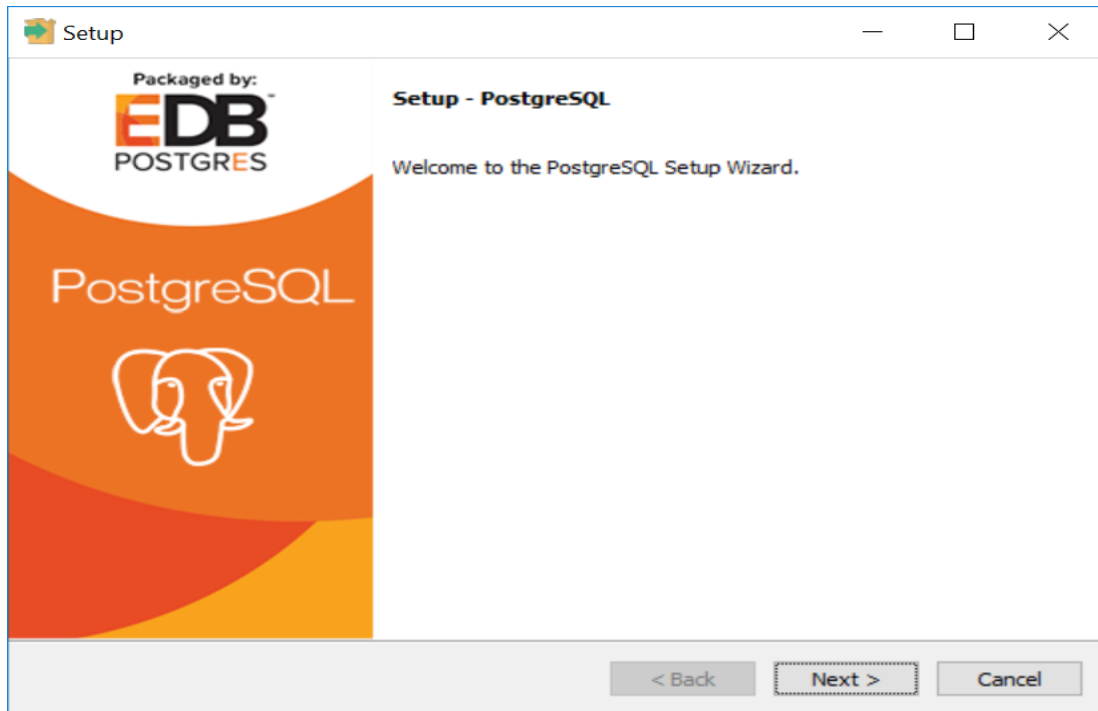
PostgreSQL

How to Setup

Windows

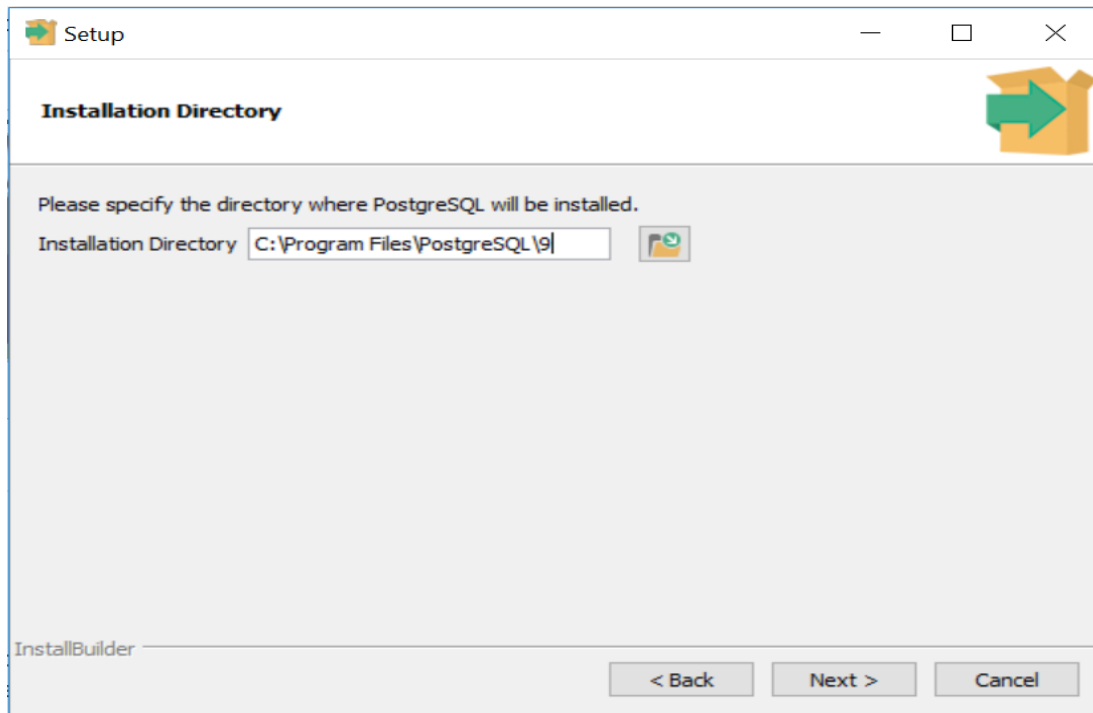
1. Download PostgreSQL from the official website:
<http://www.postgresql.org/download/windows/>
2. Select the download installer from EnterpriseDB
3. Select version 9.5 to download
4. Double-click the installer file and proceed with the installation wizard

Technology Tools



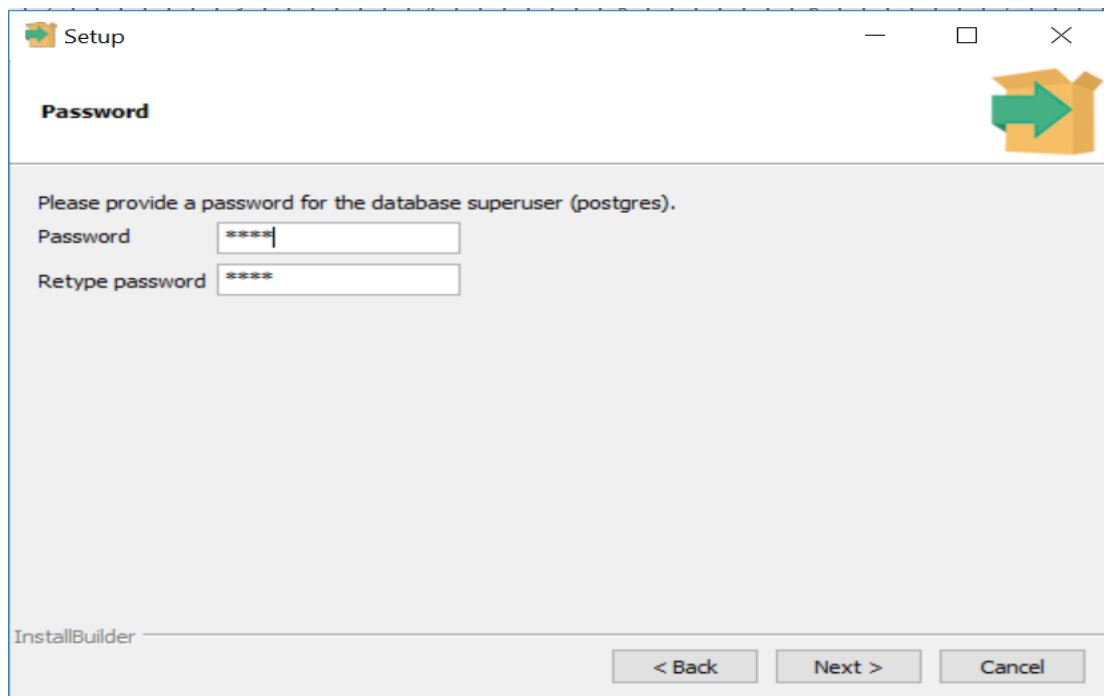
5. Choose your own installation folder or keep the default.

Technology Tools



6. Enter a password for superuser (save the password for future use)

Technology Tools



The screenshot shows a Windows-style window titled "Setup" with standard minimize, maximize, and close buttons. The window is divided into a header area and a main content area. The header area has the word "Password" in bold. The main content area has a light gray background and contains the text "Please provide a password for the database superuser (postgres)." followed by two input fields. The first field is labeled "Password" and the second is labeled "Retype password". Both fields contain four asterisks (****). At the bottom of the window, there is a status bar with the text "InstallBuilder" on the left and three buttons: "< Back", "Next >", and "Cancel". A large green arrow icon is visible in the top right corner of the window.

Setup

Password

Please provide a password for the database superuser (postgres).

Password

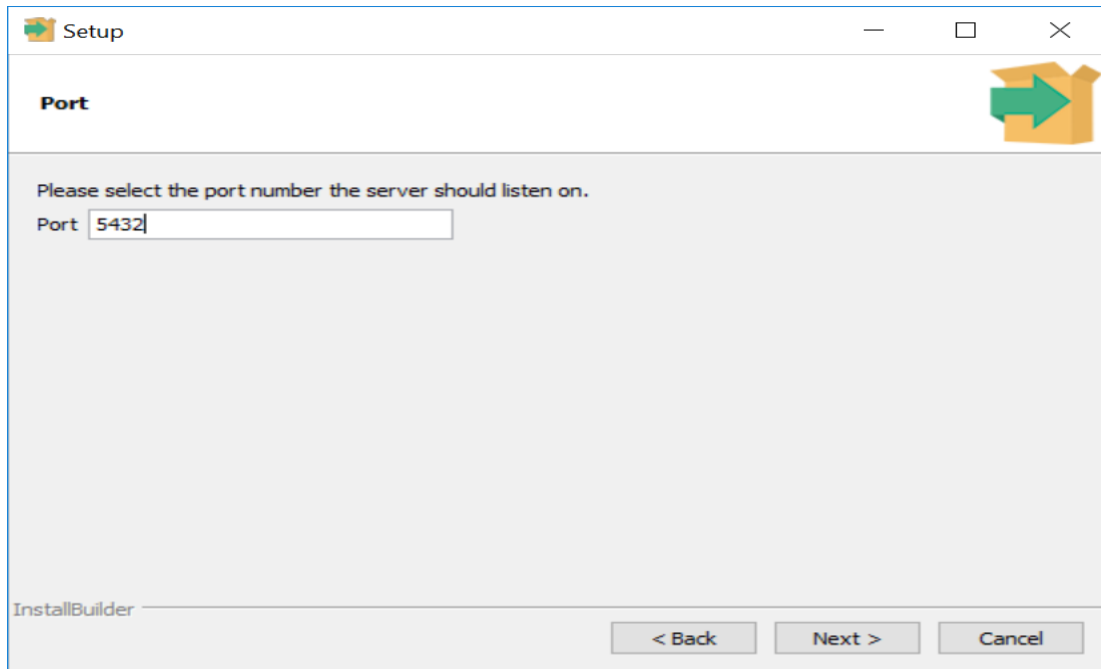
Retype password

InstallBuilder

< Back Next > Cancel

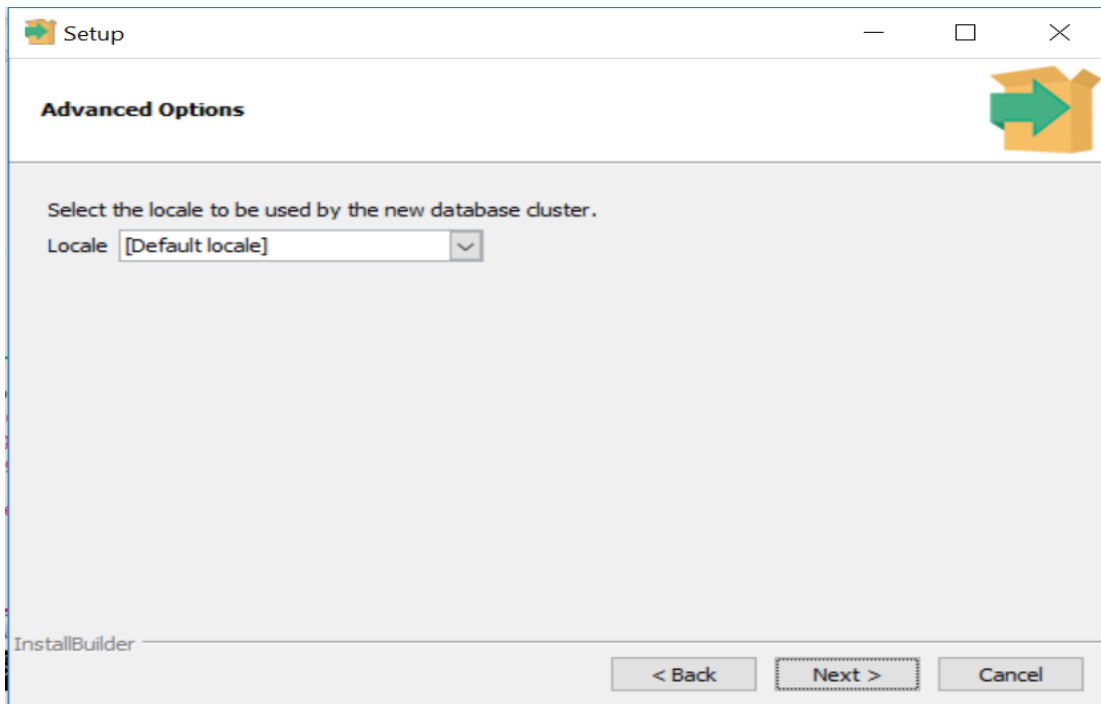
7. Enter the port number for PostgreSQL or keep the default.

Technology Tools



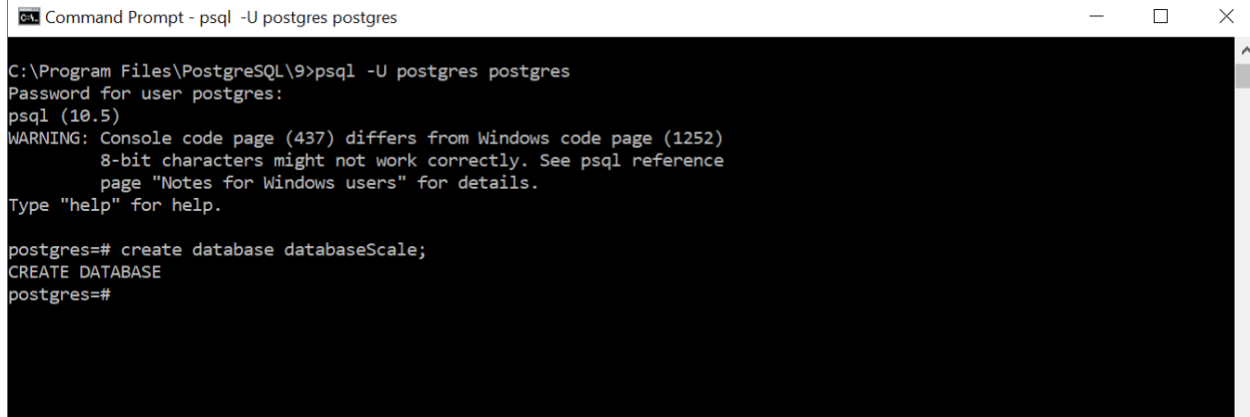
8. Choose Default locale for the locale to be used by the new database cluster

Technology Tools



9. Wait for the complete installation now
 10. Now, you can select launch or just Finish
 11. Open a command line prompt. Enter the following command to enter the interactive shell for executing postgres queries: `psql -U postgres <password> \list` will give the list of all databases
8. Now, you can enter any other query like `'CREATE DATABASE testdb;'`

Technology Tools



```
Command Prompt - psql -U postgres postgres

C:\Program Files\PostgreSQL\9>psql -U postgres postgres
Password for user postgres:
psql (10.5)
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=# create database databaseScale;
CREATE DATABASE
postgres=#
```

Mac

1. Download PostgreSQL from the official website: <http://postgresapp.com/>
2. Double-click on the .dmg file and copy it to the applications folder
3. Go to the launchpad and you should see the postgresql icon
4. Click on the PostgreSQL application and click initialize to start the SQL server
5. Open the terminal and execute the following line to configure the path

```
sudo mkdir -p /etc/paths.d &&
```

```
echo /Applications/Postgres.app/Contents/Versions/latest/bin | sudo tee
/etc/paths.d/postgresappEnter your mac password and the path is set
```

6. Now, close the terminal and restart it again

7. Enter the following command to enter the interactive shell for executing postgres queries: `psql -U postgres <Password>`

- \list will give the list of all databases

8. Now, you can enter any other query like `'CREATE DATABASE testdb;'`

Technology Tools

Assignment Tips

- Do not forget the semicolon
- In order to connect to a database, enter \connect testdb;
- You can view the databases in the interactive view (pgadmin) as well.

Writing Scripts

Once your PostgreSQL client is running, type in your SQL statement to execute it.

If your SQL statements spans across multiple lines, end the statement with a semicolon and hit enter. This will send the SQL statement to the server.

Assignment Tip

- Make sure you put in the query with the right syntax. Depending on the command, psql will display the query results or will display a confirmation message.

PostgreSQL Help

For additional help and tutorials on PostgreSQL visit: [PostgreSql Support](#).

Amazon Web Service

In this course, you will also be utilizing the **free** version of Amazon Web Services. There is nothing additional to download. You will find links to AWS tutorials embedded with the appropriate content items.

[Click here to access the main home page for AWS.](#)

Technology Tools

Assignment Grading

Each assignment part will be auto-graded and will provide feedback as soon as it is submitted. You have multiple chances to submit each assignment. You must pass each assignment to unlock the following assignment. Once you pass the assignment, you will also be able to view a video that explains the assignment solution.

Major Project Grading: You will be assigned one major project to complete during this course. You will have four (4) checkpoints in which your instructor for the course will be grading.

Posting to GitHub: In order to maintain academic integrity, students may only post code to GitHub that may act as an **inspiration** to other students. However, no student may post any code that would provide the solution to any problem or project.

Citing Source Code: If any student uses code obtained from any outside source in order to solve a problem, please make sure to cite the source in the comment section of the code.

Assignment Help

If you have trouble submitting your assignment, you are encouraged to visit the course's Discussion Forums as many of your peers are likely to have had similar problems and have found a solution. Each programming assignment has its own sub-forum to discuss with peers.

If you do not receive an answer that helps you move forward with your assignment, you may request the Graduate Student Assistant (GSA) to review your code and provide feedback. If the GSA is not available, you may contact the instructor for code review.