

# Database setup

## Abstract

One of the reasons that Augur is so powerful is because of its [unified data model](#). In order to ensure this data model remains performant with large amounts of data, we use PostgreSQL as our database engine. We'll need to set up a PostgreSQL instance and create a database, after which Augur can take care of the rest. Make sure to save off the credentials you use when you create the database, you'll need them again to configure Augur.

## PostgreSQL Installation

Before you can install our schema, you will need to make sure you have write access to a PostgreSQL 10 or later database.

To download and install Postgres, follow the [instructions here](#).

## Using Docker

If you're looking for the fastest possible way to get Augur started, we recommend use our [database container](#). If you're looking to collect data long term, we recommend following the rest of this tutorial and setting up a persistent PostgreSQL installation.

### ⚠ Warning

If you want to collect data over the long term, we strongly advise against [using a Docker container for your database](#).

### ⓘ Note

`make install` uses the `psql` command to load the database schema. Please make sure the host OS can run the `psql` command even if a docker DB is used.

## For Windows Users

For windows specific instructions, [go here](#) You can also use WSL with a Ubuntu Distribution. [go there](#) And then follow the linux instructions

## For Linux Users

For linux specific instructions, [go here](#)

On Linux/Unix [pgAdmin](#) is a great open source alternative (dashboard).

## For Mac Users

We recommend using [Postgres.app](#) if you're on macOS

Installation instructions can also be [found here](#).

## Creating a Database

## Running and Connecting to the Postgres Server

if you were using `psql` to connect to an instance on your machine `localhost` under the default user `postgres` on the default PostgreSQL port `5432`, you might run something like this to connect to the server:

```
$ psql -h localhost -U postgres -p 5432
```

## Creating the Augur Table & Database User

To setup your Augur table, run the following,

```
CREATE DATABASE augur;  
CREATE USER augur WITH ENCRYPTED PASSWORD 'password';  
GRANT ALL PRIVILEGES ON DATABASE augur TO augur;
```

When connected to a psql terminal, run the following

```
postgres=# CREATE DATABASE augur;  
postgres=# CREATE USER augur WITH ENCRYPTED PASSWORD 'password';  
postgres=# GRANT ALL PRIVILEGES ON DATABASE augur TO augur;
```

Replace 'password' with your custom password. Make sure to save your password to a secure location for backup.

## Connecting to the database during “make install”

When you run, `make install` you will eventually be prompted with the following:

```
*****
Setting up database credentials...
*****

Would you like to...
1) initialize a new database AND install the schema?
2) connect to an existing empty database and ONLY install the schema?
3) connect to a database with the schema already installed?
```

What do each of this mean?

### 1. Initialize a new database and install the schema

You have a Postgres database, but you have not created a new “Augur” table / “Augur” user

Enter your default postgres database and password. This will most likely be the `postgres` table and `postgres` user.

The password will be the `root` password for your database (postgres user).

```
These will be used to log in to the database so that Augur can initialize a new database and install the schema for you.
Default DB name: postgres
Default user: postgres
Default user's password: mysecretpassword
```

Enter the IP address (hostname) of your postgres instance and the port it is hosted on (normally 5432)

```
Please enter the host on which your instance is running, and the port it is listening on.
Host: localhost
Port: 5432
```

Enter the new credentials for the augur user that augur will use to access the database.

```
Now, please choose the credentials for the database you would create.  
If you are not sure to put , we recommend naming both your database and user as augur.  
The choice of password is up to you; just make sure you don't forget it.
```

```
Database: newaugur  
User: newaugur3
```

## 2. Connect to an existing empty database and ONLY install the schema?

You have a Postgres database with existing “augur” table and “augur” user

Enter the credentials for the “augur” user/table that augur will use to access the database.

```
Please type the number corresponding to your selection and then press the Enter/Return key.  
Your choice: 2  
Please enter the credentials for the database.  
Database: augur  
User: augur  
Password: 
```

Same instructions for hostname and port from Case 1

## 3. Connect to a database with schema already installed

Enter the existing credentials for the “augur” user/table with preexisting schema that augur will use to access the database.

```
Would you like to...  
1) initialize a new database AND install the schema?  
2) connect to an existing empty database and ONLY install the schema?  
3) connect to a database with the schema already installed?  
  
Please type the number corresponding to your selection and then press the Enter/Return key.  
Your choice: 3  
Please enter the credentials for the database you have created.  
Database: augur  
User: augur  
Password: 
```

Same instructions for hostname and port from Case 1