

Installation guide pgAdmin 4 & connections to PostgreSQL 2024–25

Start a new .txt file where you write down passwords, special queries, questions etc. You'll need it in step 25 of this guide (and later on in the course too!).

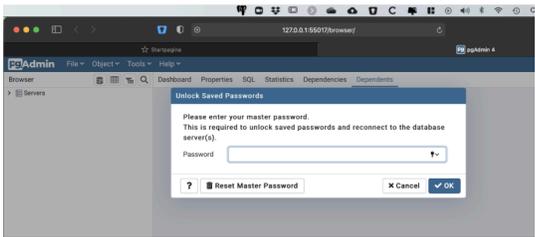
If you enlisted in BCS at a later time, it's possible you will encounter an error in step 12 below. Talk to your lecturer, or send a teams chat. To resolve this error, we need to do some manual intervention.

- 1 Download the latest version of the client software pgAdmin 4 at <https://www.pgadmin.org/download/>
- 2 Install
- 3 pgAdmin is a web application, a client that makes connection to the database server. If you get the question "What database do you use?" then please don't answer 'pgadmin'. In this course we will be using PostgreSQL, an open source database management system. pgAdmin is only one of the many clients that can connect with our database server. Other alternatives are dbschema, omniddb, datagrip, ...

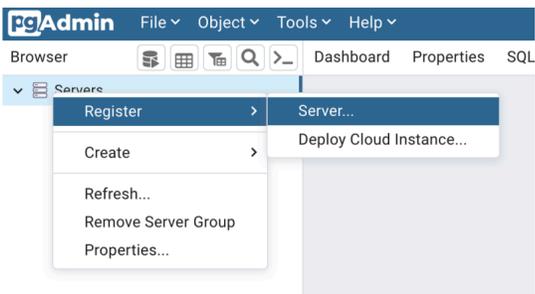
4 Start pgAdmin 4

5 You can probably skip step 6. This used to be a necessary step in older versions of pgAdmin, but that seems to be no longer the case.

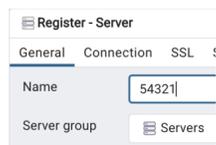
6 If you want pgAdmin to remember the passwords for the connections, you need to set a master password. We suggest you choose something simple.



7 Right click on Servers > Register > Server...



8 General tab: Name '54321' (we choose the port number as the name)



9 Connection tab: fill in the data from the screen shot. Don't forget to change the Port to 54321. Use your own student number as Username. The password is your UCLL password. You might want to save your password if you don't want to type it every time you open this connection.



10 Parameters tab: SSL mode: Require



11 Confirm below with 'Save'. If the response is the error 'FATAL: LDAP authentication failed for user ...', you provided a wrong combination for Username and password. If you get a 'timeout error' a restart of pgAdmin can help.

12 If the connection succeeded, you should see a blue elephant 54321. If you see a pink elephant, then stop taking certain substances ...



13 Check whether you see the 'tennis' schema in basis_rdbms > schemas. We'll use this for the exercises.

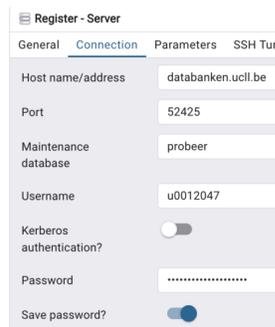


Great: first connection is a success. Now for the second one.

14 Right click Servers > Register > Server...

15 General tab: Name '52425' (since this is academic year 24-25 ...)

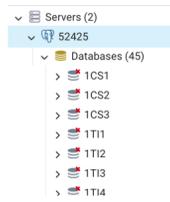
16 Connection tab: see screen shot.



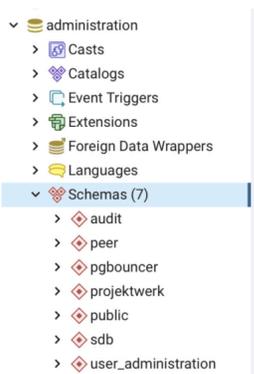
17 Parameters tab: SSL mode: Require.

Confirm with 'Save'.

18 If everything went according to plan, there is a second blue elephant 52425. Open this connection and check whether you get a similar result as in the screen shot.



19 OK, you're halfway. Now for the hard part.. Open 52425 and open the database 'Administration'.



Open schemas and look for the schema 'user_administration'.

20 Right click 'user_administration' > Query tool. The cursor is now in a Query window, where you can type SQL commands. You need to type (copy / paste) the code in the next step. But note you need to replace the character 'y' depending upon your class. In BCS this is either 1, 2 or 3.

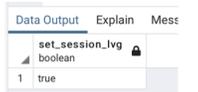
21 Copy the next query up unto the semicolon ";":
SELECT user_administration.set_session_svg ('df', '1CSy');



22 Execute the query by clicking on the arrow, or even better: learn the shortcut (F5) by heart, because you will be doing this a lot .

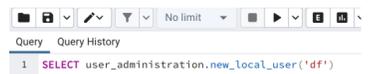


23 If everything works out as planned, you get the boolean 'true'.



24 We could in principle call it a day and stop here. But there is a small problem: there are only 8 connections per user. This is a number you get to rather quickly. Reserving 8 connections per user takes up a lot of memory. A solution to this problem is called pooling (see https://en.wikipedia.org/wiki/Connection_pool). So that's the reason we continue with a third connection.

25 Take a deep breath now. In the same query tool as before, in the schema 'user_administration', type the following SQL Query: SELECT user_administration.new_local_user('df'); Execute this query (F5).



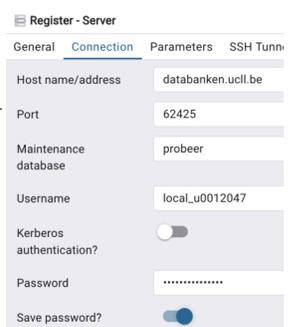
26 The result is a password for a new local_user (a small window opens). Copy this password and write it down in the .txt file you created in the beginning of this guide.



27 Configure a new connection (by now that is the third time, so you should be able to do it, see step 7). General tab: Name: pooling_62425

28 Connection tab: see screen shot. In the Parameters tab: SSL on 'require'.

Do note however that the username is now local_rnumber and the password is the one you obtained in step 26!



29 This pooling connection 62425 is the one we will use for almost everything in this course.



30 Testing 1 2 3 Can you open 1CS1, 2 or 3 (depending on what you chose in step 21) via this pooling connection?



31 Next test: a little bit lower, look for the database 'oefeningen' (dutch for exercises). Right click on tennis and open a query tool. Execute the following code: SELECT * FROM spelers (spelers is dutch for players)



32 Is the result this screen shot? Congratulations, you're ready for this course!

