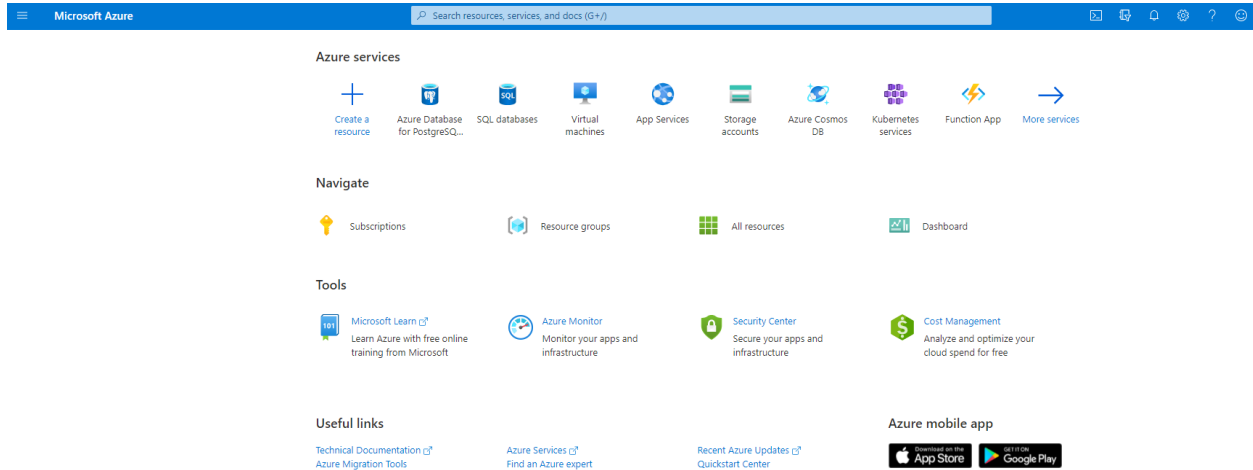
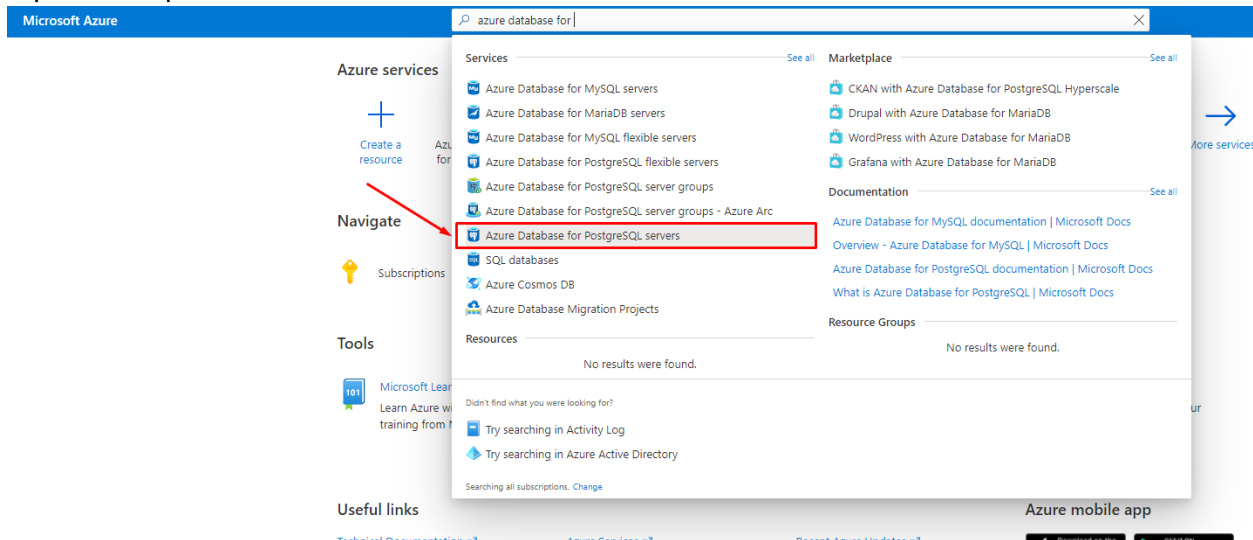


Create a Postgres Database on Azure

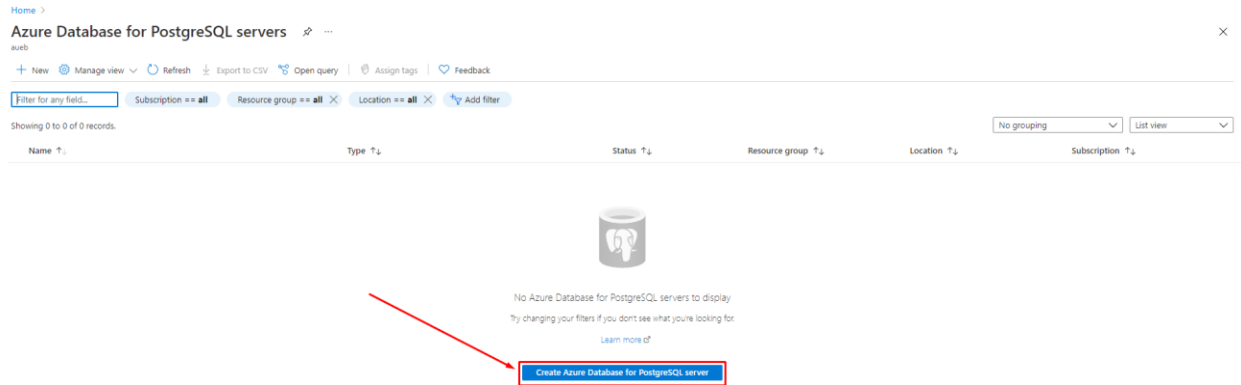
Step 1: Go to Microsoft Azure Home page : [link](#) (After you have logged in). You should see your panel.



Step 2: In the search area search for “azure database for postgres server” and press the equivalent option in the search results.



Step 3: In the new window that will pop-up select “Create Azure Database for PostgreSQL server”.




Step 4: In the single server tab press “Create”.

Home > Azure Database for PostgreSQL servers >

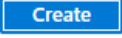
Select Azure Database for PostgreSQL deployment option


Microsoft

How do you plan to use the service?

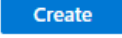
**Single server**
Best for broad range of traditional transactional workloads.


Enterprise ready, fully managed community PostgreSQL server with up to 64 vCores, optional geospatial support, full-text search and more.

 [Learn more](#)

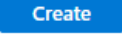
**Flexible server (Preview)**
Best for workloads that require advanced customization and cost optimization.


Maximum control with a simplified developer experience. Supports custom maintenance windows, zone redundant high availability, and simple cost optimization. Flexible server is currently in preview.

 [Learn more](#)

**Hyperscale (Citrus) server group**
Best for ultra-high performance and data needs beyond 100GB.

Ideal for multi-tenant applications and real-time analytical workloads that need sub-second response. Supports both transactional/operational workloads and hybrid transactional analytics workloads.

 [Learn more](#)

**Azure Arc enabled PostgreSQL Hyperscale (Preview)**
Best for ultra-high performance and data needs beyond 100GB on your infrastructure.

Deployed on the infrastructure of your choice (on-premises/edge/multi-cloud), it is ideal for multi-tenant applications, transactional/operational workloads and real-time analytical workloads that need sub-second response.

[Learn more](#)

Step 5a: Fill-in the appropriate information in the project details selection.

Start with the information about the Resource group. Press “create new” and add a name (any name you want) for your resource group. Then press “OK”.

Single server ...

Microsoft

⚠ Changing Basic options may reset selections you have made. Review all options prior to creating the resource.

Basics Additional settings Tags Review + create

Create an Azure Database for PostgreSQL server. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ Azure for Students

Resource group * ⓘ Select a resource group

Create new

Server details

Enter required settings for this server, including

Server name * ⓘ student_resource_group

Data source * ⓘ None Backup

Location * ⓘ (US) East US

Version * ⓘ 11

Compute + storage ⓘ

General Purpose
4 vCores, 100 GB storage
[Configure server](#)

Step 5b: Fill-in the server details as following:

- Server name: any valid server name you want (e.g.studentserver2021)
- Location: (US) East US (This is the default value)
- Version 11 (This is the default value)

Single server ...

Microsoft

⚠ Changing Basic options may reset selections you have made. Review all options prior to creating the resource.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource group * ⓘ
[Create new](#)

Server details

Enter required settings for this server, including picking a location and configuring the compute and storage resources.

Server name * ⓘ ✓

Data source * ⓘ ☐ None ☐ Backup

Location * ⓘ
[Supported Locations](#)

Version * ⓘ

Compute + storage ⓘ **General Purpose**
4 vCores, 100 GB storage
[Configure server](#)

✓ Server name must be at least 3 characters and at most 63 characters.
✓ Server name must only contain lowercase letters, numbers, and hyphens. The server name must not start or end in a hyphen.
✓ Server name must be available.

Step 5c: Press “configure server”.

Single server ...

Microsoft

⚠ Changing Basic options may reset selections you have made. Review all options prior to creating the resource.

Basics * Additional settings Tags Review + create

Create an Azure Database for PostgreSQL server. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource group * ⓘ
[Create new](#)

Server details

Enter required settings for this server, including picking a location and configuring the compute and storage resources.

Server name * ⓘ ✓

Data source * ⓘ ☐ None ☐ Backup

Location * ⓘ
[Supported Locations](#)

Version * ⓘ

Compute + storage ⓘ **General Purpose**
4 vCores, 100 GB storage
[Configure server](#)

Step 5d: Make the following selections:

- Select the “Basic” tab.
- vCore should be 1 (1vCore).
- Storage must be 5GB.

- d. Backup Retention Period must be 35 days.
- e. The EST.MOETHLY COST should be app. 22 Euros (21.70 is shown in this example)
Note: If the EST.MOETHLY COST is larger by a lot (e.g. above 30 EUROS) please verify that the steps shown above are executed correctly. Do not continue unless you are sure. Ideally you should get 22 Euros or less as a cost.
- f. Press “OK” at the bottom.

Home > Azure Database for PostgreSQL servers > Select Azure Database for PostgreSQL deployment option > Single server >

Configure

Basic

Up to 2 vCores with variable I/O performance (1-2 vCores)

General Purpose

Up to 64 vCores with predictable I/O performance (2-64 vCores)

Memory Optimized

Up to 32 memory optimized vCores with predictable I/O performance (2-32 vCores)

Please note that changing to and from the Basic compute tier or changing the backup redundancy options after server creation is not supported.

Compute Generation - [Learn more about compute generation](#)

Gen 5

vCore - [What is a vCore?](#)

1 vCore

Storage cannot be scaled down

Storage (type: Basic storage)

5 GB

Storage Auto-growth - [Learn more about storage auto-growth](#)

Yes No

Backup Retention Period

35 Days

Backup Redundancy Options - [Learn more about backup redundancy options](#)

Locally Redundant

Recover from data loss within region

PRICE SUMMARY

Gen 5 Compute generation

Cost per vCore 21.28

vCores selected × 1

Basic storage

Cost per GB / month 0.08

Storage selected (in GB) × 5

EST. MONTHLY COST 21.70 EUR


Additional charge per usage

See [pricing details](#) for more detail.

Step 5e: Fill-in the information about the in the “Administrator account” section. Add any preferred admin username and password for the database that we are about to create. You should remember the admin username and password.

Single server ...

Microsoft

 Changing Basic options may reset selections you have made. Review all options prior to creating the resource.

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ

Resource group * ⓘ

[Create new](#)

Server details

Enter required settings for this server, including picking a location and configuring the compute and storage resources.

Server name * ⓘ

Data source * ⓘ

Location * ⓘ

[Supported Locations](#)

Version * ⓘ

Compute + storage ⓘ

Basic
1 vCores, 5 GB storage
[Configure server](#)

Administrator account

Admin username * ⓘ

Password * ⓘ

Confirm password *

Step 5f: Press “Review + create” at the bottom of the screen.

Step 5g: Check that the cost (~22 EUROS) and your information are ok and press “Create”. This may take a few minutes.

Single server ...

Microsoft

Basics Additional settings Tags Review + create

Product details

Azure Database for PostgreSQL
by Microsoft

[Terms of use](#) | [Privacy policy](#)

Estimated cost per month

21.70 EUR

[View pricing details](#)

Terms

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with this offering and (b) I agree to share my contact, usage and transactional information with the provider(s) of the offering(s).

Basics

Subscription	Azure for Students
Resource group	student_resource_group
Server name	studentserver2021
Data source	None
Server admin login name	student
Location	East US
Version	11
Compute + storage	Basic, Gen5, 1 vCores, 5 GB Storage
Backup retention period	35 day(s)
Backup redundancy	Locally redundant
Storage Auto Grow	Enabled

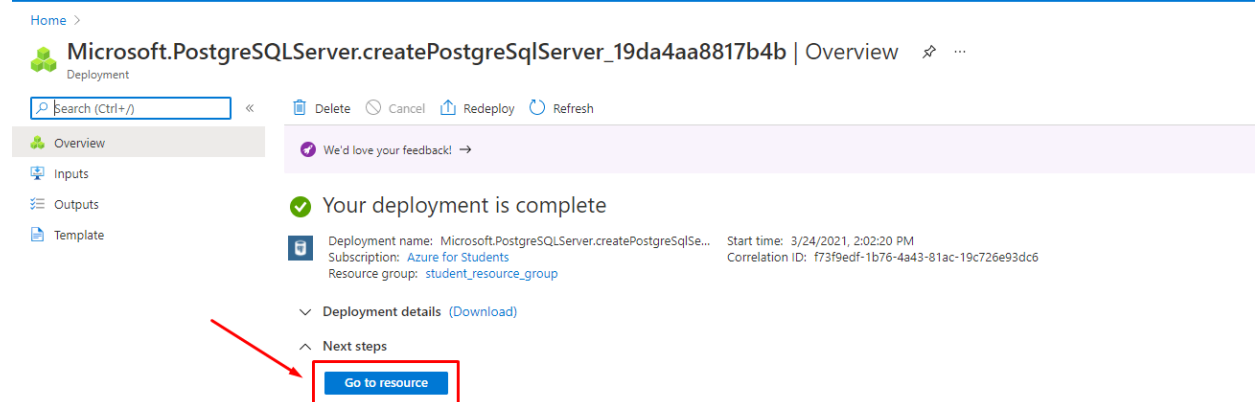
Tags

Create

< Previous

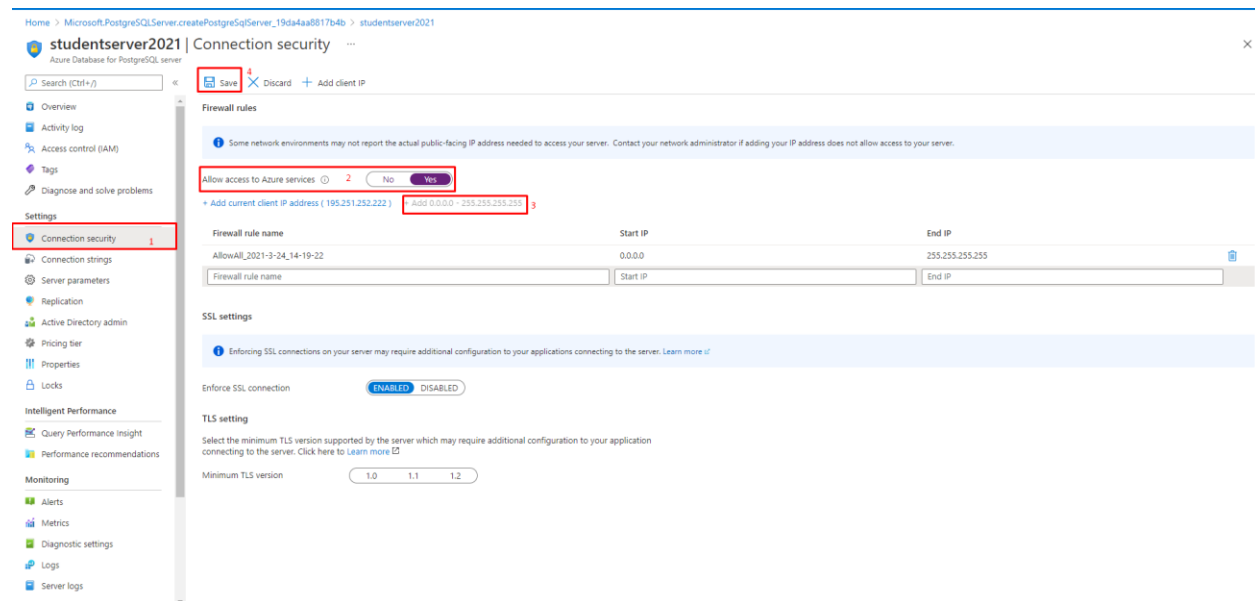
[Download a template for automation](#)

Step 5h: Once the process above is finished press “Go to resource”.



Step 6a: You should be redirected to your control panel. On the the left menu select the option “Connection security”. In the tab that will be available add the following options:

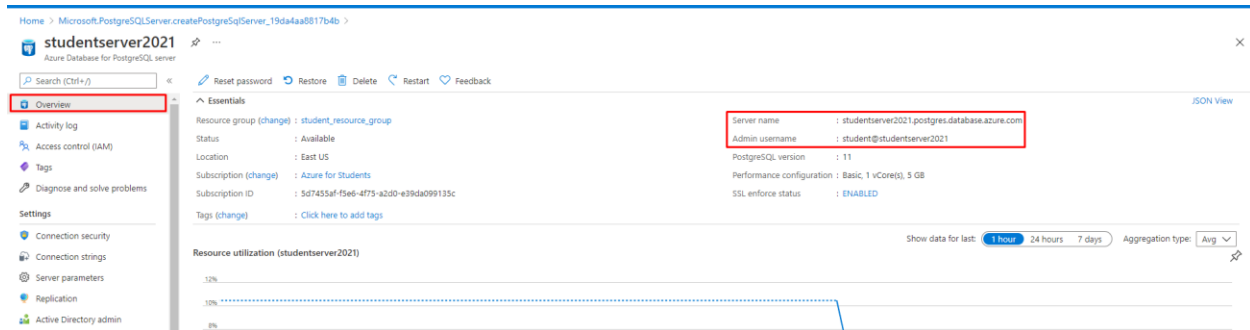
- Allow access to azure services: “Yes” should be checked
- All IPs should be allowed so press the link “Add 0.0.0.0 - 255.255.255.255”
- Press “Save”



Step 7a:

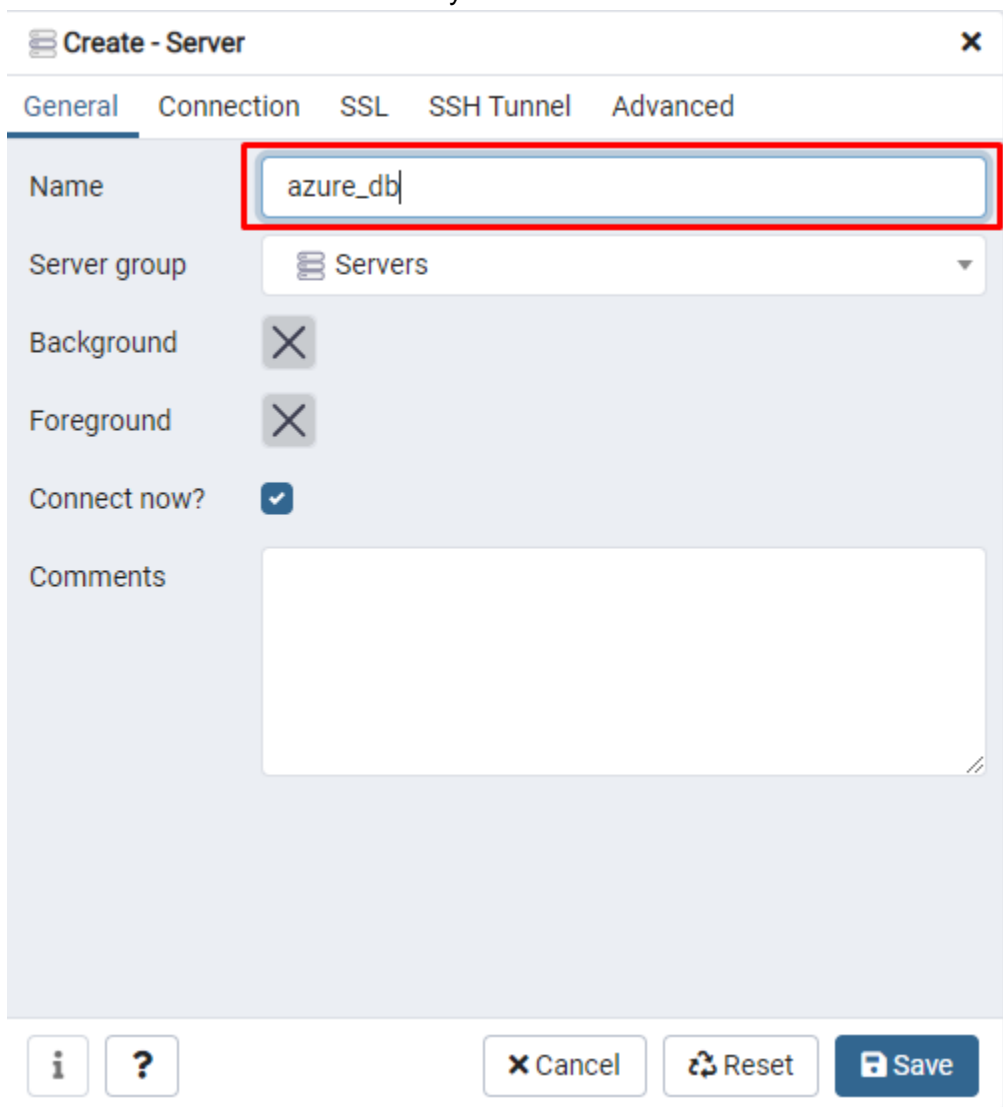
Go to the “Overview” tab and copy the following information (so we can add them to pgAdmin4 to make a connection with the database):

- Server name
- Admin username
- You should remember your admin password from step 5e.



Step 7b: Go to pgAdmin4 (you can download and install pgAdmin using this [link](#)) and press “Add New Server” and in the “General” tab fill the following:

a. Name: choose a name for your database

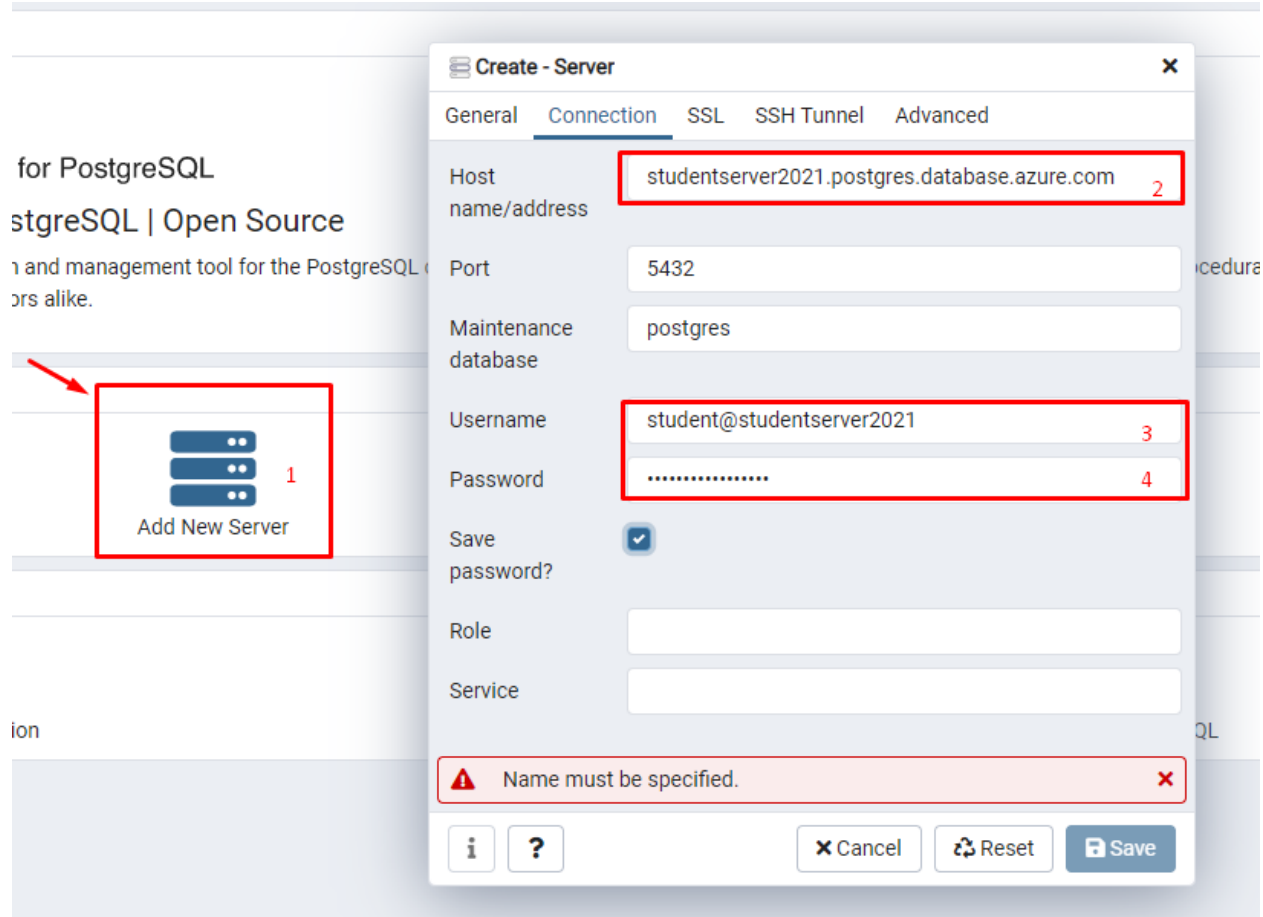


Step 7c:

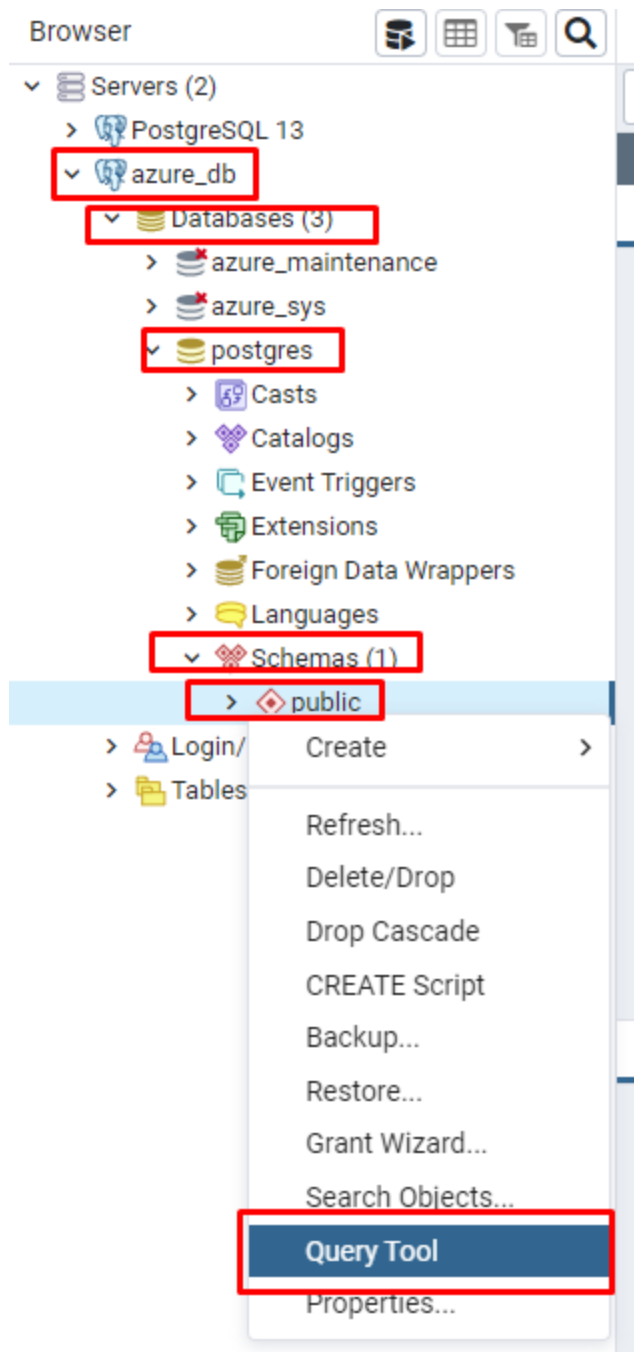
Fill-in the following in the “Connection” tab

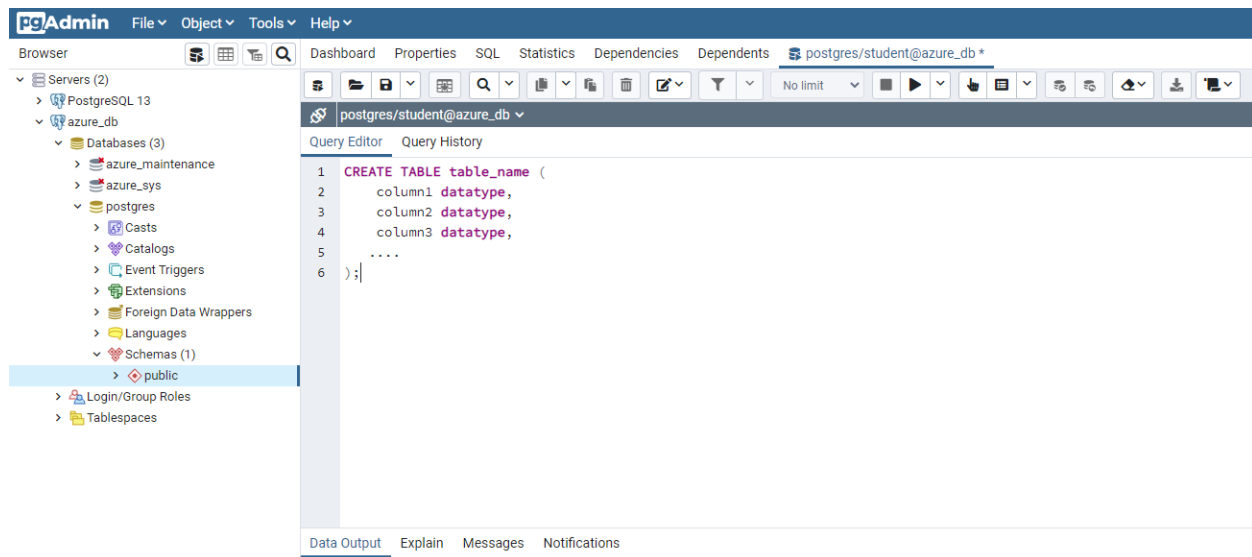
a. Host name/address: The server name as it was copied above (Step 7a-a)

- b. Port: 5432 (This is the default)
- c. Maintenance database: postgres (This is the default)
- d. Username: The admin name as it was copied above (Step 7a-b)
- e. Password: The admin password (step 5e)
- f. Press "Save".

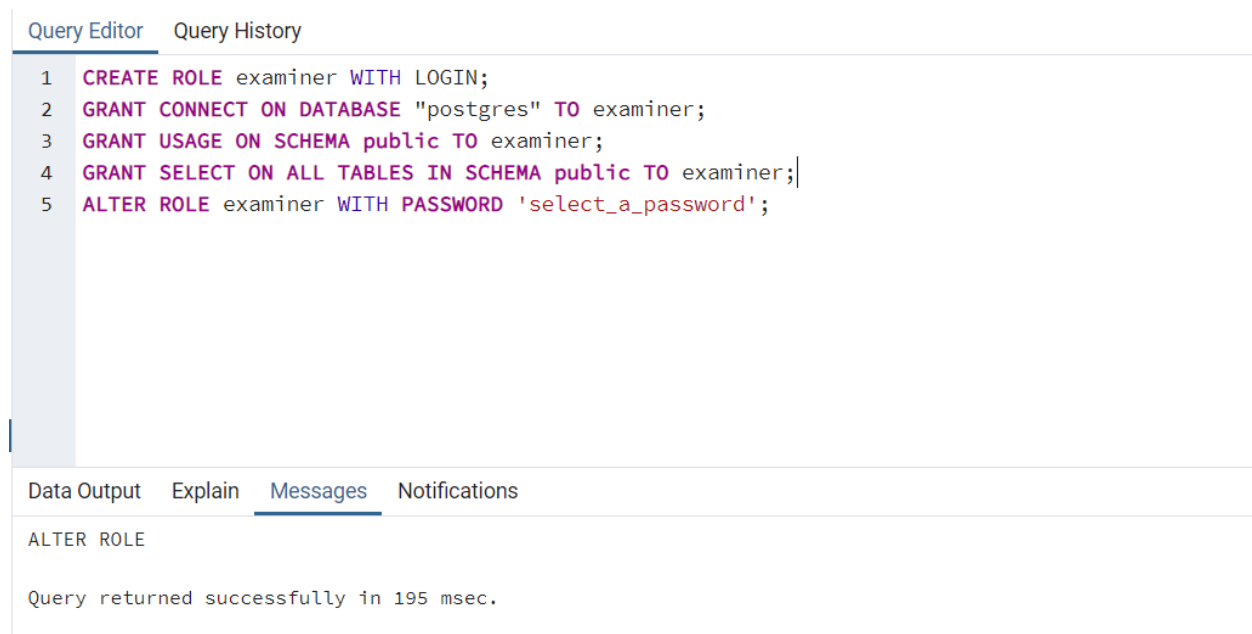


Step 8: You can find your database by making the following selections on your left menu:
Your_database_name >> Databases >> postgres >> Shemas >> public.
If you right click on public and press "Query tool" and new window opens and you can write SQL queries for your database.





Step 9: You also have to create a read-only role for your database using the following instructions, so that the examiners can connect to your database using the password you have set for the examiner role, without being able to modify anything.



Step 10: You can also connect to you database through a command line interface using psql (<http://postgresguide.com/utilities/psql.html>), but you first have to install postrgres on your computer (<http://postgresguide.com/setup/install.html>). After you also set the environment variable path appropriately¹, you can connect to your database through command line with the following command:

¹ In Windows when we have a program installed and we want to call it from the command line from all folders, we have to tell the computer where the executable is. The psql executable file, along with the rest of Postgres, is usually located in C:\Program Files\PostgreSQL\10\bin. We take this path and go to our Windows environment variables and add it to the Path variable. In this

```
psql -h name_of_the_endpoint -p port_number -U db_user_name -d  
database_name
```

We can use either pgAdmin or psql (or both) to work on your database.

way we can give to the cmd from wherever we are the psql command normally. -If we did not make Path we would call psql only from the folder bin... -