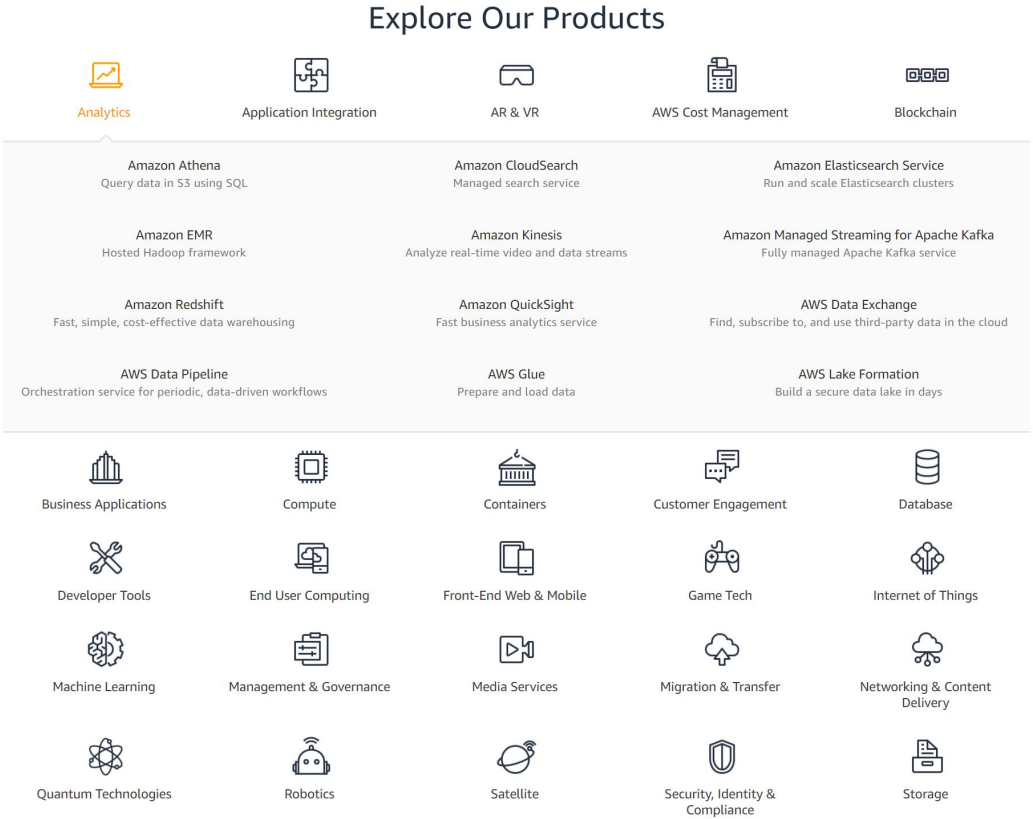
# Setting up a database on AWS

Data Engineering

# AWS is the biggest cloud compute provider



# Sign up for AWS

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One year Free Tier for new accounts

**Explore Free Tier products with a new AWS account.**

To learn more, visit aws.amazon.com/free.

## Sign up for AWS

Root user email address

Used for account recovery and as described in the **AWS Privacy Notice**

AWS account name

Choose a name for your account. You can change this name in your account settings after you sign up.

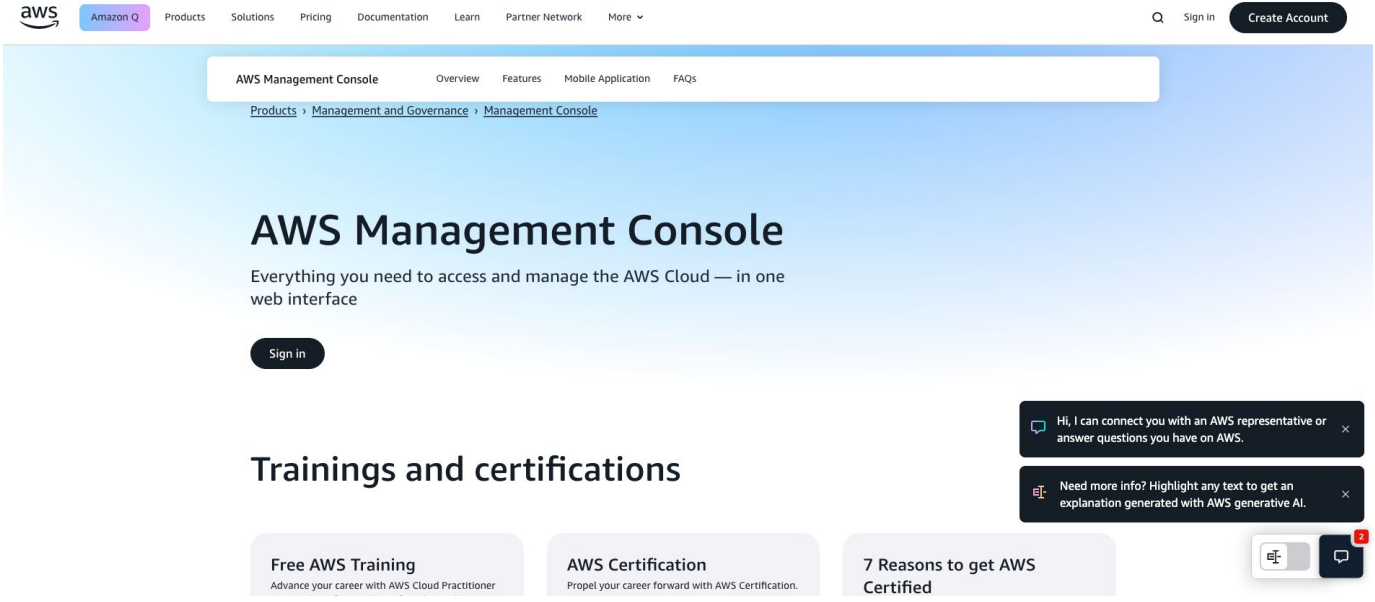
**Verify email address**

OR

**Sign in to an existing AWS account**

# Signing into AWS

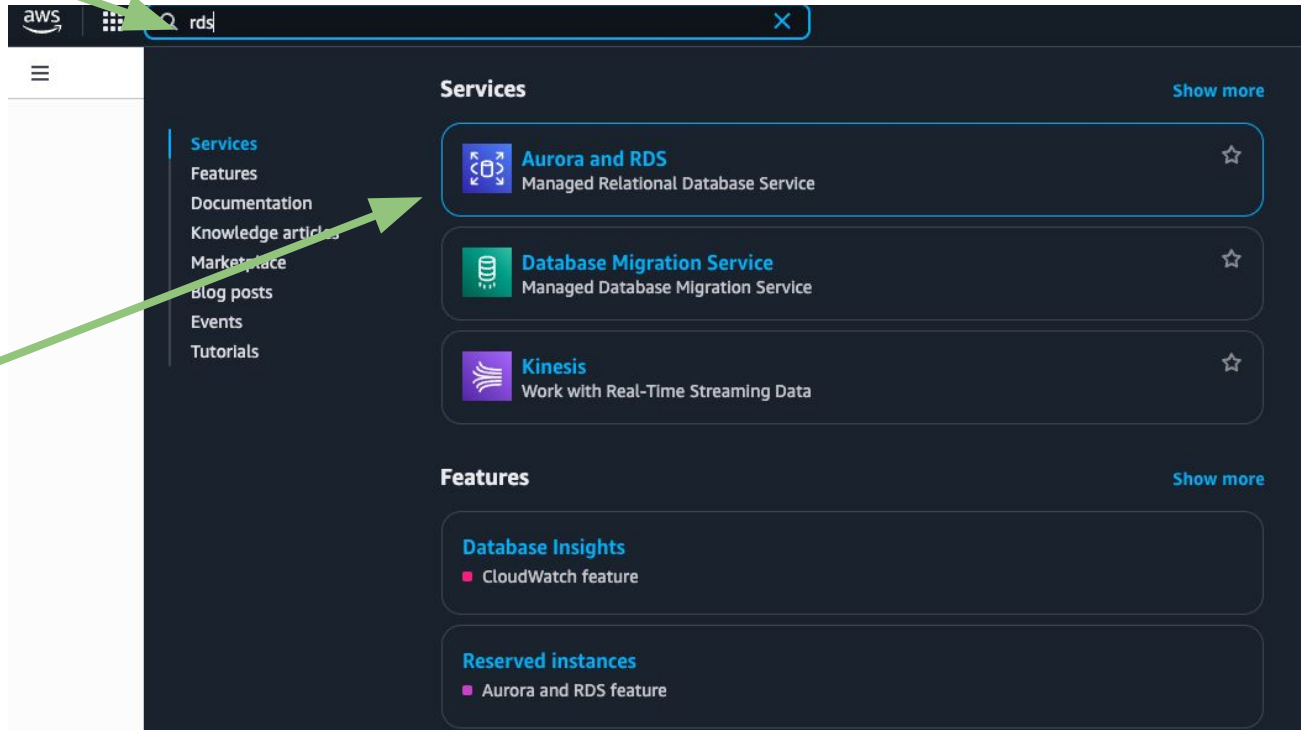
- https://aws.amazon.com/console/
- Sign in as a root user



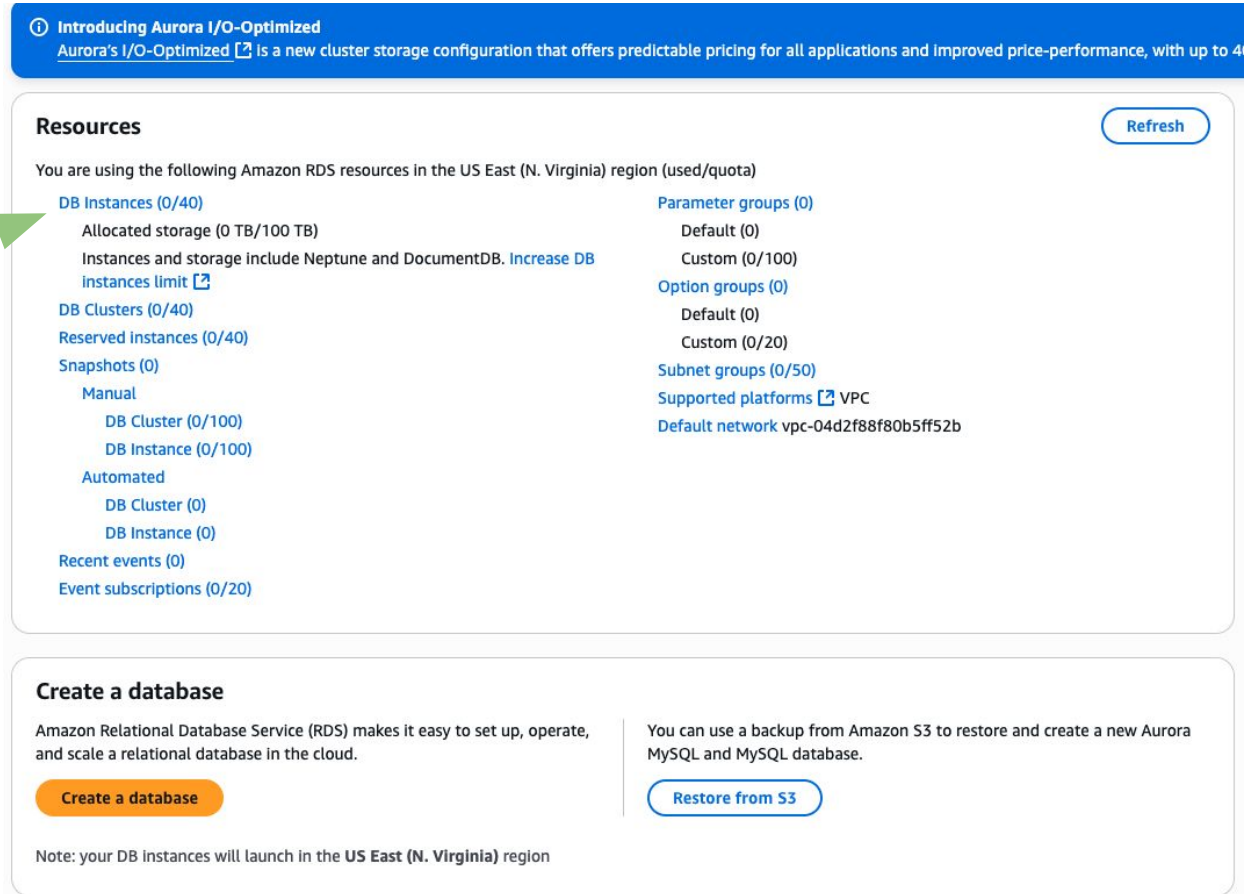
# Getting to RDB management console

1 - Search for RDS

2 - Click RDS

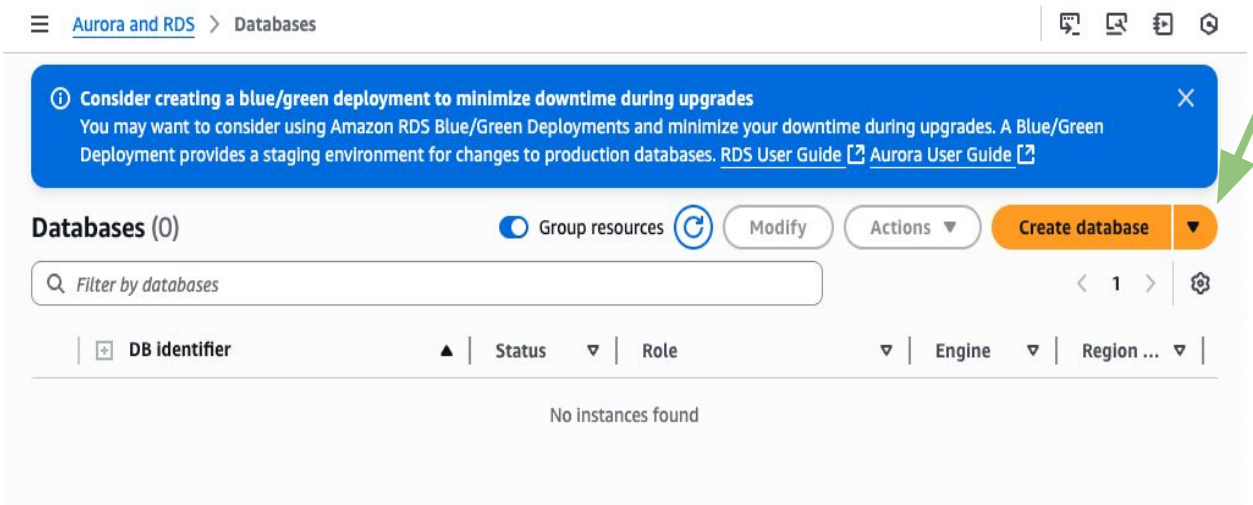


Click on DB instances



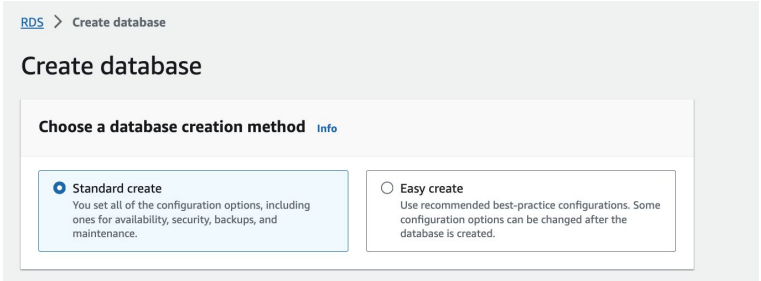
# Creating a database

Click ‘Create Database’



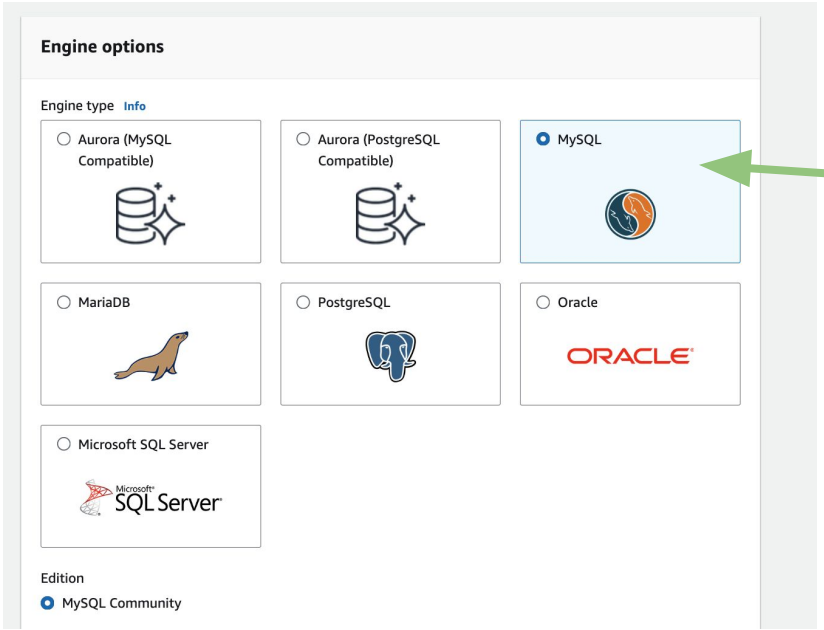
# Creating a database - selecting options

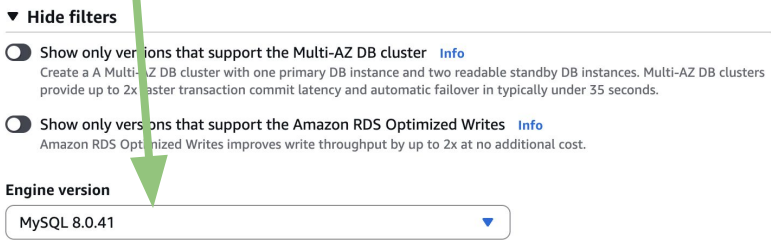
Click ‘Standard Create’




Click ‘MySQL’

Use ‘MySQL 8.0.41’



# Creating a database - selecting options

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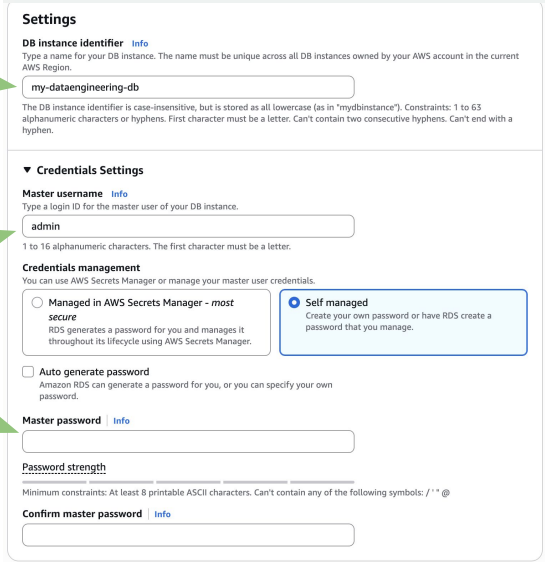
- Now we need to give it a name, password, username, etc
- Also select how much compute resources to use
- **Really really important to follow directions**

# Creating a database - selecting options

Click ‘Free tier’


Create instance id.
**NOTE:** This is just the name in the console, not for accessing

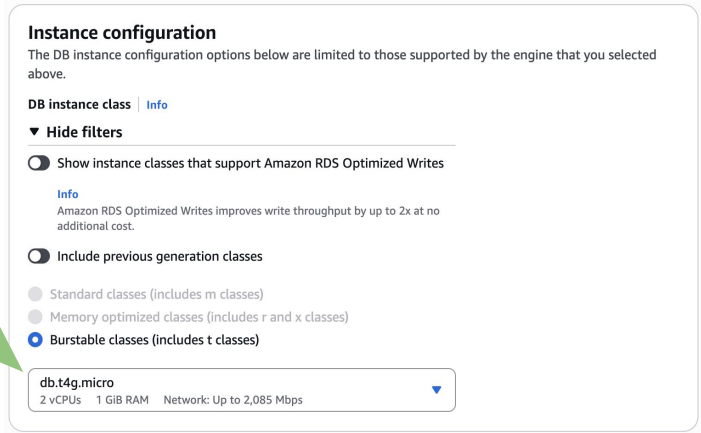
Create username and password.
NOTE: You’ll need these credentials to access db from python.

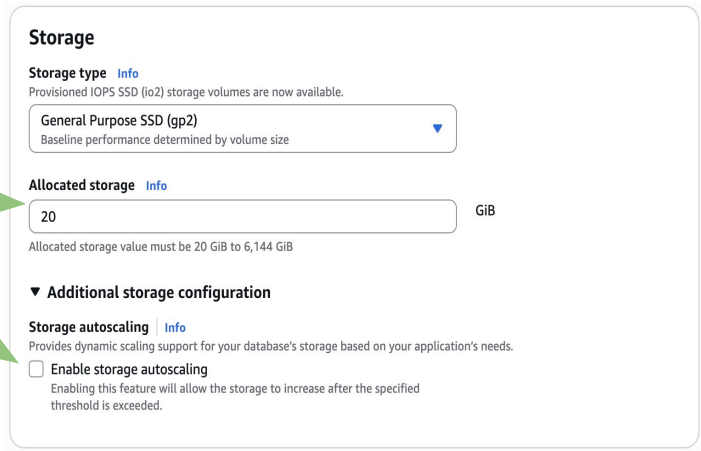


# Creating a database - selecting options

Select your instance size – use '**db.t4g.micro**' Should be the default

Minimum storage is 20gb (the default). Deselect autoscaling box (it's checked here… uncheck it!).



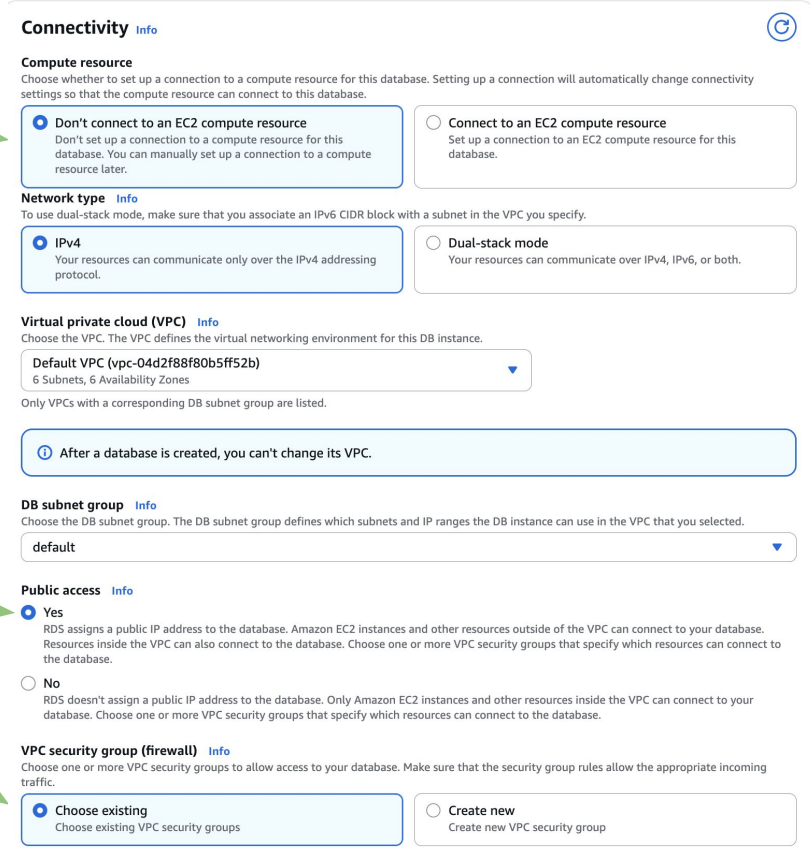



# Creating a database - selecting options

Don’t connect to an EC2 compute resource

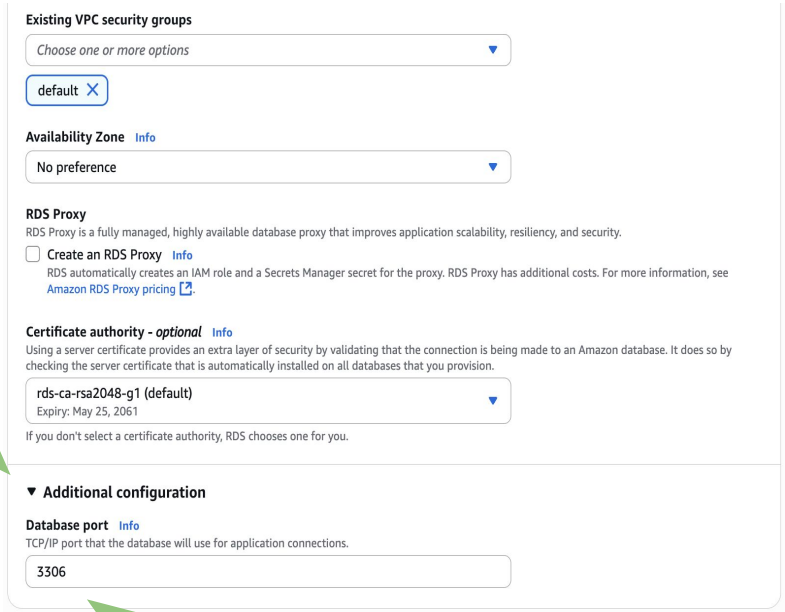
**CRITICAL** - Change ‘Public access’ to Yes.

**CRITICAL** - Leave ‘VPC security group’ as ‘Choose existing.’ We’ll modify that later.



# Creating a database - selecting options

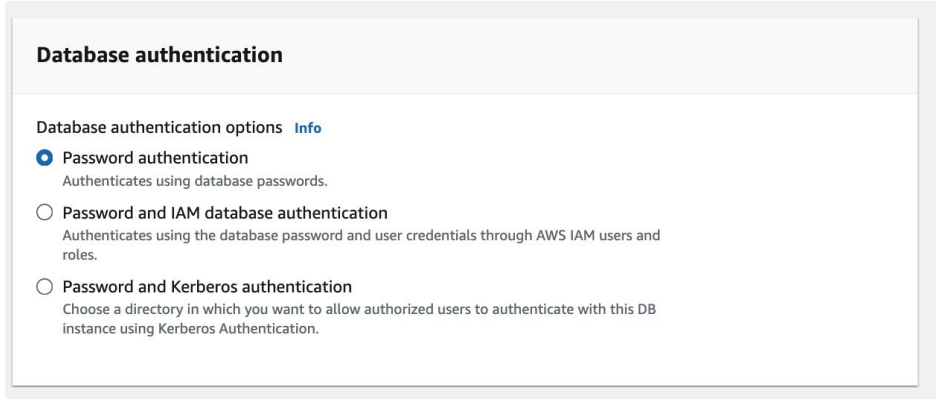
Expand ‘Additional configuration’




You can see the port is set to 3306 – the standard for MySQL

# Creating a database - selecting options

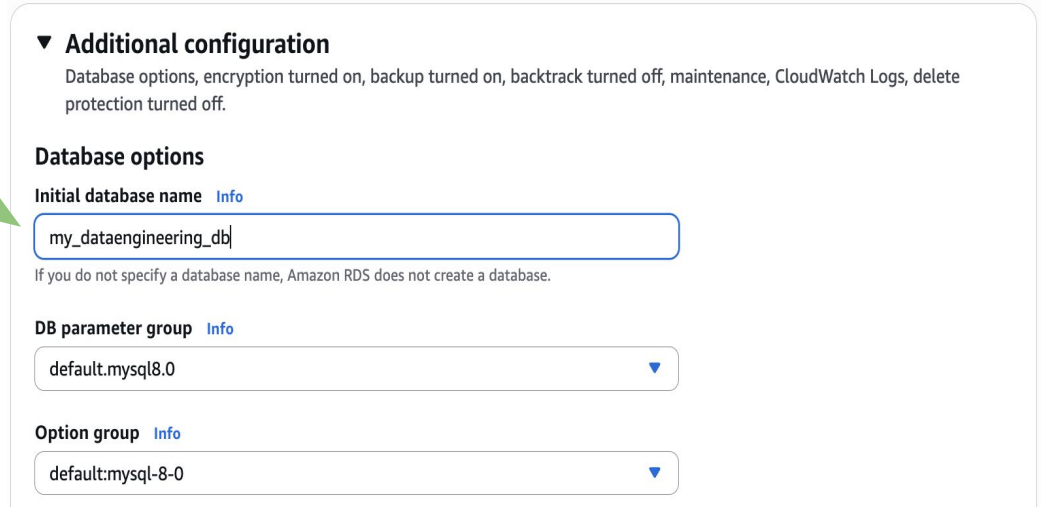
**CRITICAL** - Make sure ‘Password authentication’ is selected



# Creating a database - selecting options

**CRITICAL** - Name your database. This is needed for AWS to create it and for you to access it.

I'm calling this 'my_dataengineering_db'




All other options you can just leave as the default

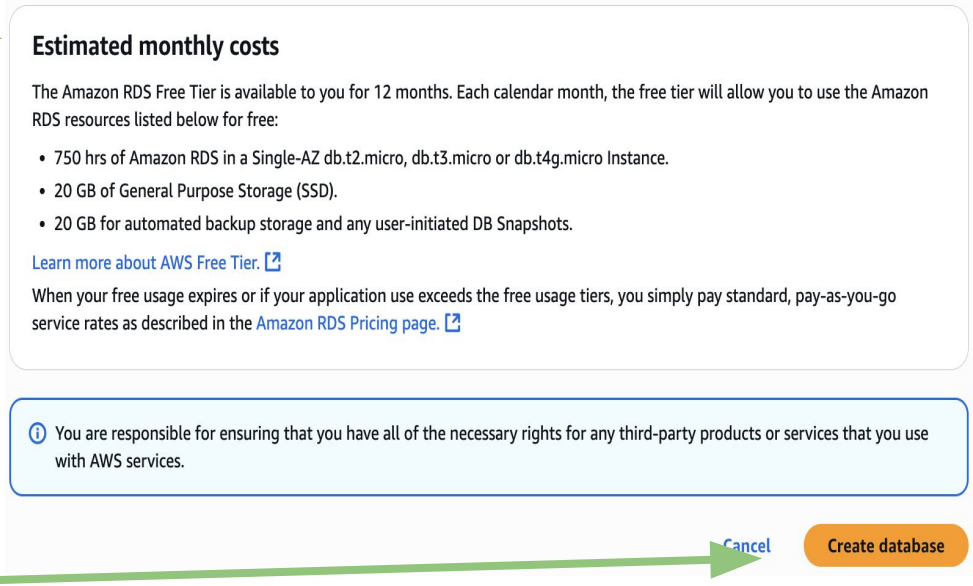
# Creating a database - selecting options

**CRITICAL** - Costs should show free

**CRITICAL** - It is important that you run only one database

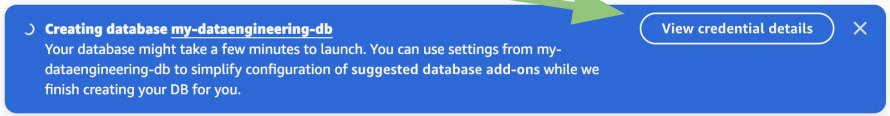
Click ‘Create database’

WOOOO!

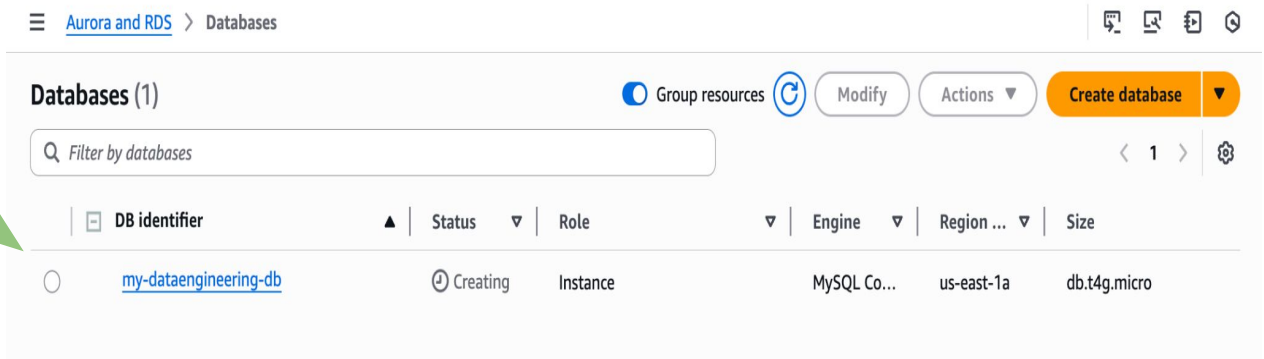


# Creating a database - selecting options

It'll take a bit to create. Good time to make sure you have your credentials written down




You can see now I have my new db.



# Need to change our security credentials

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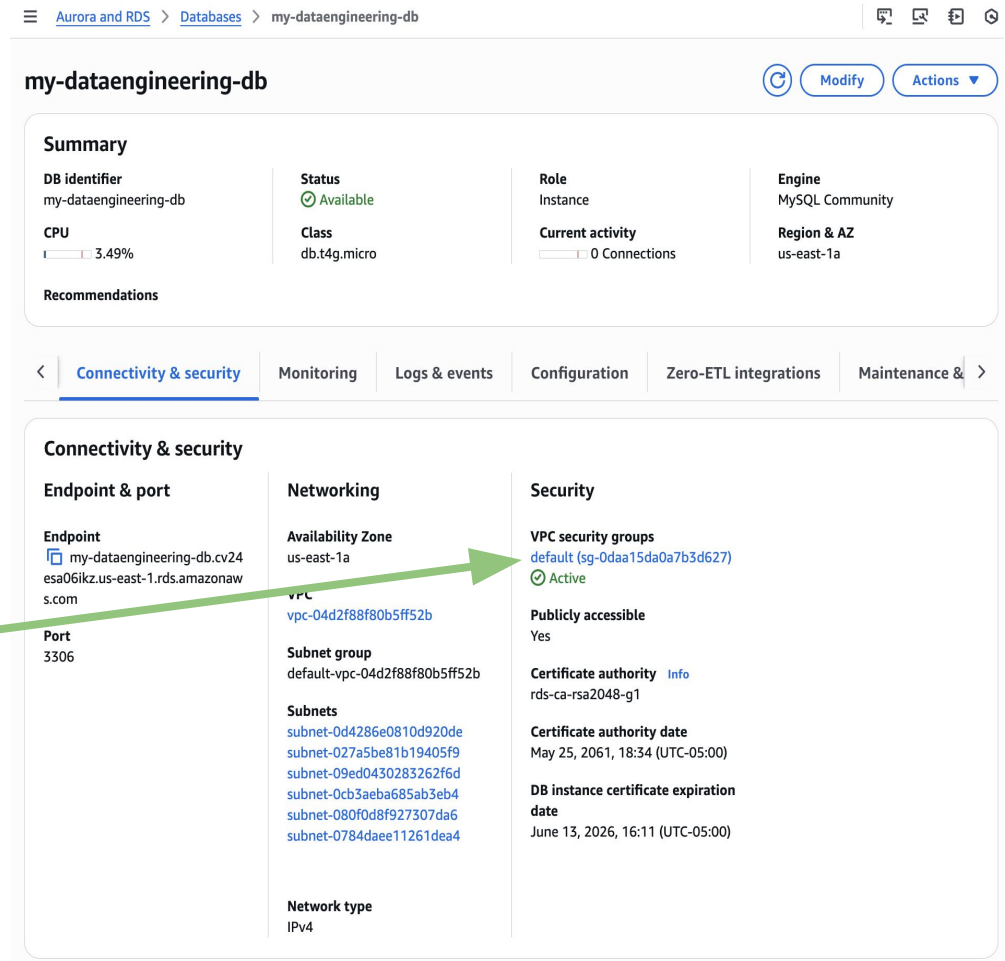
- Our database is up and running.  Now we just need to change our security credentials to let any ip address with the password access it.
- **If you don’t change this you won’t be able to connect to your database for homework and quiz.**
- **Seriously, you must do this step**

# Modifying security credentials

If you click on the database from the console it'll take you to the console for the individual database

To modify your security group click the link under 'VPC security groups'



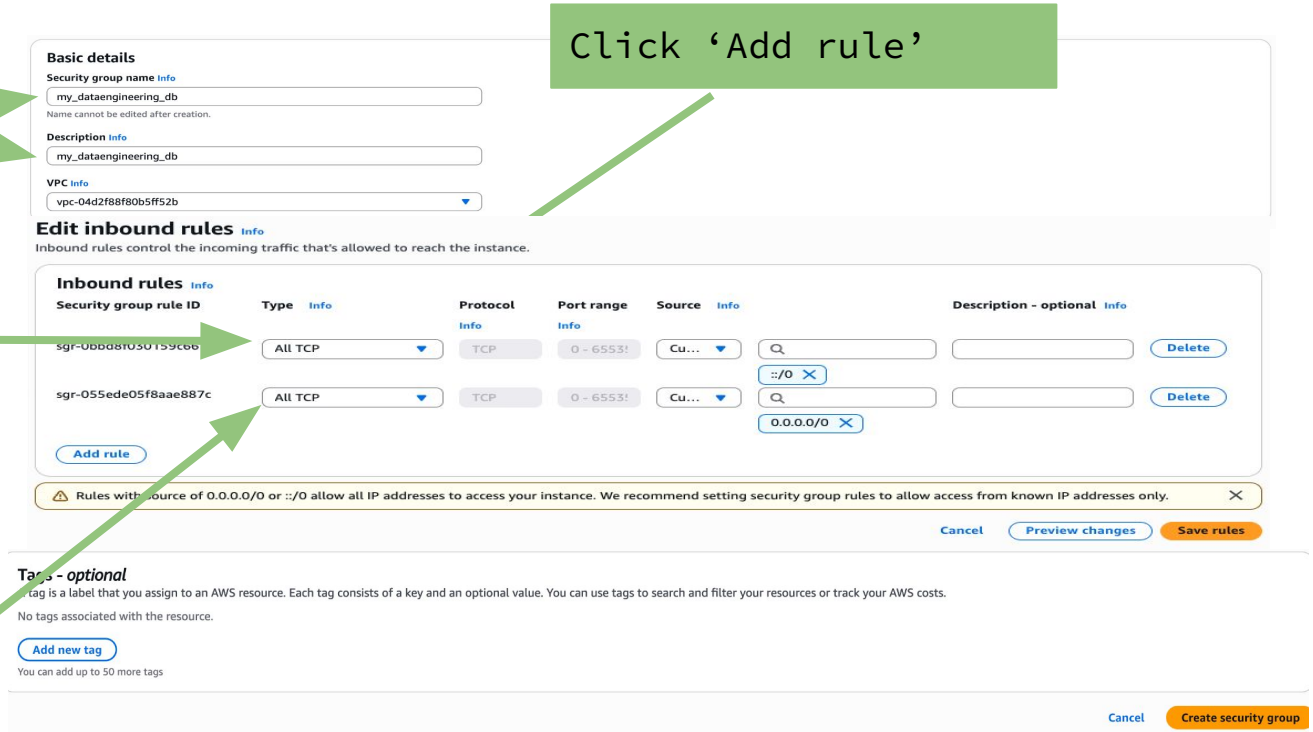
Click ‘Create security group’

Choose a name and description

First rule will already be there. Change it to ‘All TCP’ and ‘Anywhere-IPv4’

Change second rule to ‘All TCP’ and ‘Anywhere-IPv6’

Click ‘Add rule’



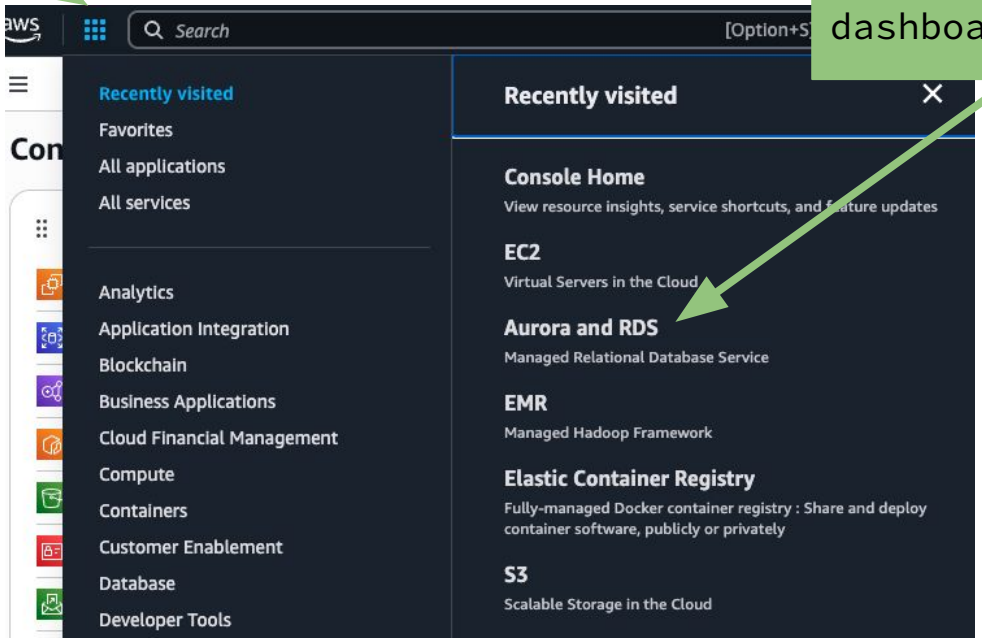

Leave the outbound rule as default

Finally, click ‘Create security group’

# Going back to our database

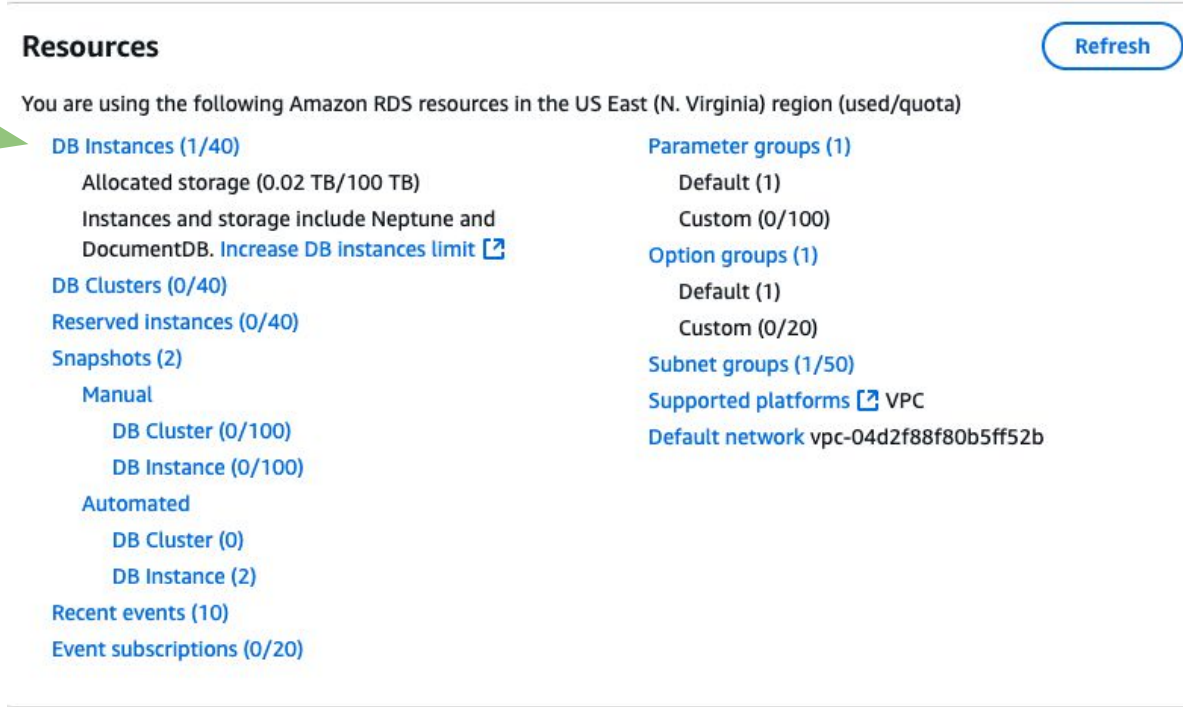
Click ‘services’

Then click ‘RDS’ to go back to our database dashboard.



# Going back to our database

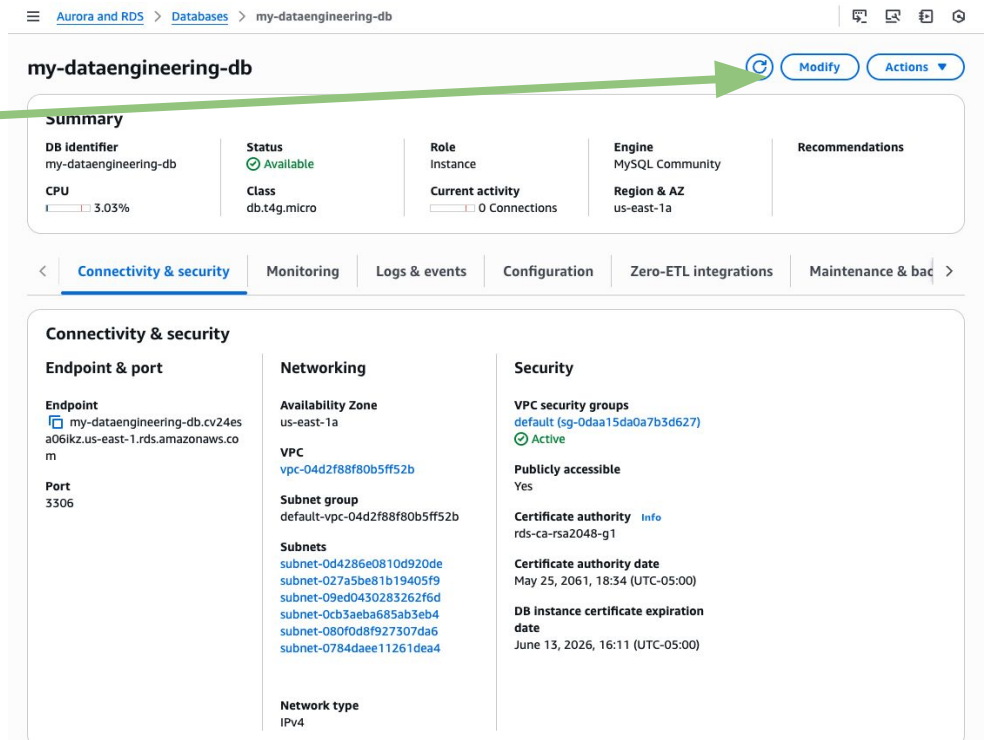
Again, we can see I have a DB instance running. Click on ‘DB Instances’



# Going back to our database

Once there click on our hw database again.

Click ‘Modify’

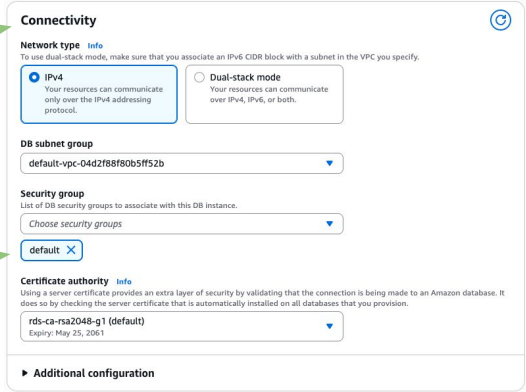


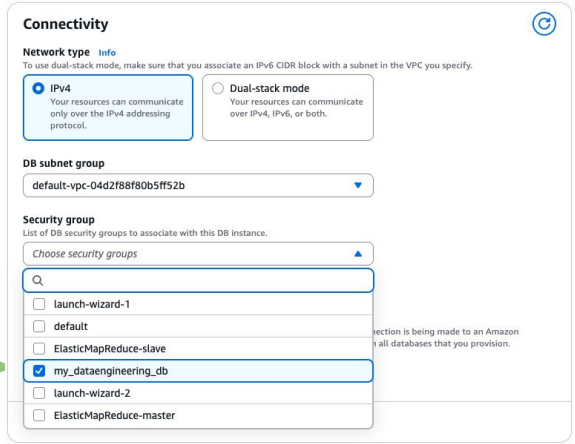
Scroll down to ‘Connectivity’

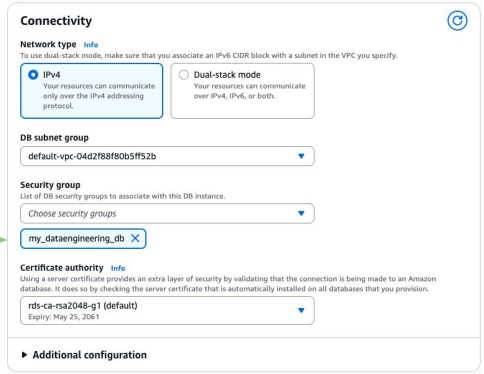
Click the ‘X’ to delete the default security group

Click the pull-down menu and select the security group you just created

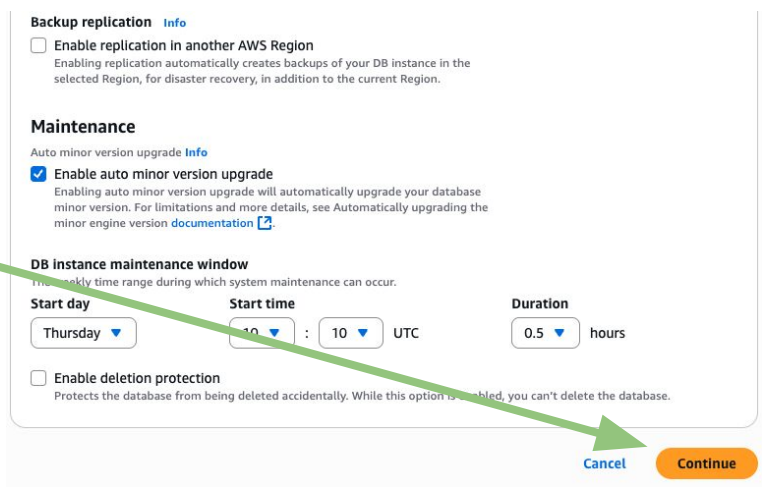
If everything is right, you should now only have a box with your security group name here



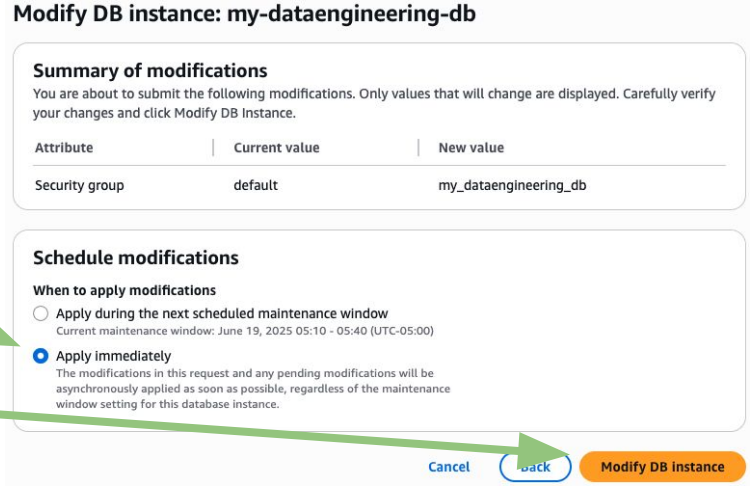



Scroll down to the bottom and click ‘Continue’




Choose ‘Apply immediately’

Click ‘Modify DB instance’



# Going back to our database

Wait until the status updates to ‘Available’ (you might need to refresh your browser)

Now you need to copy your endpoint.

This is the last part we need to connect. We already have the database name, password, username, and port!