



Cloud Databases

 **Goal: create a database in the cloud (AWS RDS) and upload your northwind data there**

To create an AWS account:

- Go to aws.amazon.com
 - In the Pricing tab click on AWS Free Tier
 - Follow the steps to create an account; choose Personal when answering How do you plan to use AWS
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After creating an account, in AWS Management Console:

- Sign in as a Root user
- Answer many an annoying captcha
- Under Services navigate to Databases section and click on RDS
- Click on Databases, then Create database
- Choose Standard create, PostgreSQL, Free tier
- Enter an arbitrary instance identifier (the name of the server)
- Choose 'postgres' as a master username
- Enter a master password (for the 'postgres' user; don't click on Auto generate a password)
- Leave all other settings as is, except:
 - Under Storage, disable storage autoscaling — because we don't want Amazon to increase storage if we end up needing more = 🗑️

- Under Connectivity, click on Yes for Public access — because we want to connect our database to our dashboarding software ☁️
 - Create database 🎉
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When you confirm, it takes a few minute until the instance is ready. The hostname you will need to log into your database remotely will appear under the Endpoint heading.

To get the host name:

- Click on Databases → your database (e.g. database-1)
 - Find Endpoint under Connectivity & security
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If you are working on a free AWS account, you have to edit the Security Rules for the DB Instance in order to log in:

- Databases → click on your database (e.g. unsupervised-lemon)
 - Security group rules → click on default (sg-xxxxxxx)
 - Inbound rules → Edit inbound rules → Add rule
 - Choose:
 - Type: All traffic
 - Source: Anywhere (create two rules, one with IPv4, and one with IPv6)
 - Save rules
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You can now connect to your remote database!

```
psql -h <remote-endpoint> -U <user> -p 5432 -d <dbname>
```

The username and the database are both `postgres`.

Once there, create database `northwind`.

To transfer your data to RDS:

1. if you have your local northwind database and don't have / don't want to work with csv files:

```
pg_dump --no-owner northwind > northwind.sql  
psql -f northwind.sql -h <remote-host> -U postgres -p 5432 -d <db-name>
```

or

2. if you don't have local northwind database or want to work with csv files:

```
psql -f create_tables.sql -h <remote-host> -U postgres -p 5432 -d <db-name>
```

where `create_tables.sql` is the file you used to populate your `northwind` database locally.