# Connecting to an RDS instance

This guide will setup connections to an AWS RDS instance that can be used inside a Docker-run Zeppelin image.

## Prerequisites

- Install Docker on your operating system. Links and instructions can be found in the README.md

- Create an RDS instance in AWS.

- Update RDS security data to accept all traffic, both Inbound and Outbound.

- Create a table with data inserted. This will allow you to test the connection.

## Instructions

- Run the docker image `docker run -p 8080:8080 --rm --name zeppelin trilogyed/zepl:1.0.0`.

- **Note:** The image will be downloaded the first time it is run, which will take a considerable amount of time. After the image has been downloaded, the container will start up much faster in subsequent runs.

- Navigate to `localhost:8080`.
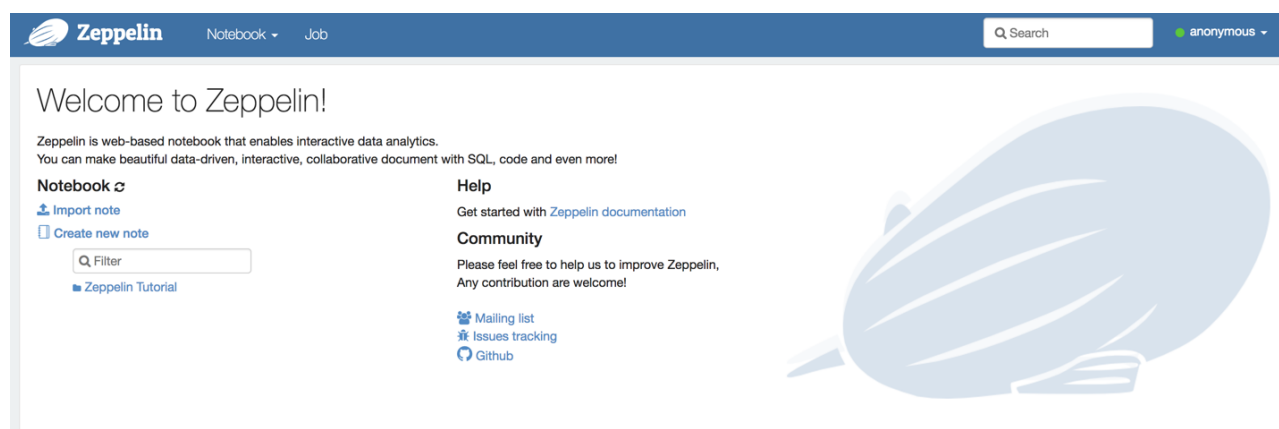
- Click **Profile** on top right right and select **Interpreter**.
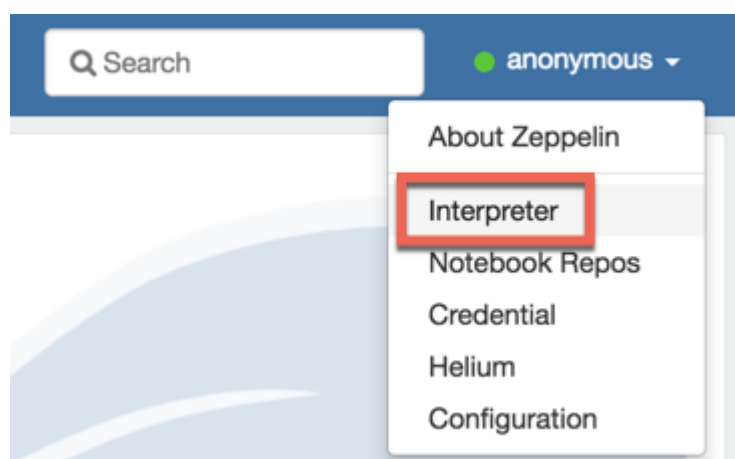
- Click `+Create`.

- Enter an interpreter name and select **jdbc** from the "Interpreter group".

- Enter the password for the RDS in `default.password`.

- Add the AWS endpoint to `default.url` before the port and the database name after port.

- Enter the username for the RDS instance in `default.user`.

**Properties**

| name | value | action |
|---|---|---|
| common.max_count | 1000 | ✖ |
| default.completer.schemaFilters | | ✖ |
| default.completer.ttlInSeconds | 120 | ✖ |
| default.driver | org.postgresql.Driver | ✖ |
| default.password | ·················· | ✖ |
| default.precode | | ✖ |
| default.splitQueries | ☐ | ✖ |
| default.statementPrecode | | ✖ |
| default.url | jdbc:postgresql://<aws endpoint>:5432/<db name> | ✖ |
| default.user | <db user> | ✖ |

- Scroll down and click **Save**.

- Navigate back to the main page and click **Create new note.**

- Enter a name for the note, and then select the name of the interpreter just created as the default interpreter. Click **Create**.
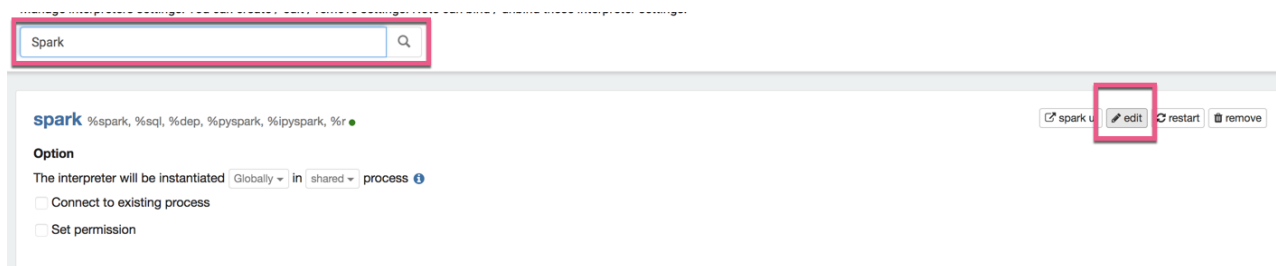
## Create New Note ✖

### Note Name

test_note

### Default Interpreter

awsRDS ▲▼

Use '/' to create folders. Example: /NoteDirA/Note1

**Create**
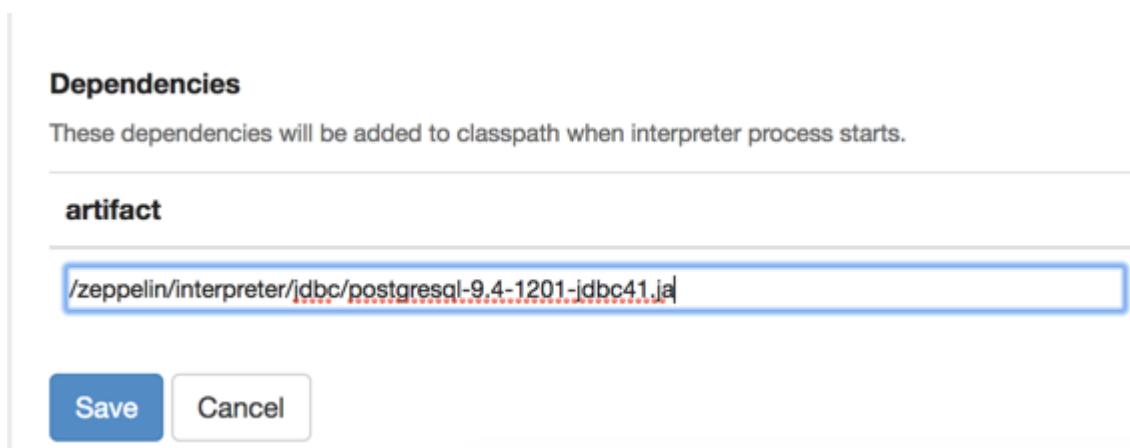
- Run a `SELECT * FROM <table name>` from a cell to confirm the connection works.

Adding a Postgres Drive to ZEPL

- On the interpreters screen, search for **Spark**.



- Click **Edit** and scroll down to Dependencies.

- Under "artifact" enter the path `/zeppelin/interpreter/jdbc/postgresql-9.4-1201-jdbc41.jar` then click **Save**.



- Spark will now be able to connect to an RDS instance using a JDBC URL.

- Test that the connection works by running the following code, using a table currently available in your RDS:

```
%pyspark
jdbc_url = "jdbc:postgresql://<rds endpoint>:5432/<DB name>"
config = {"user":"root", "password": "<password>"}
my_df = spark.read.jdbc(url=jdbc_url, table='<table name>',
properties=config)
my_df.limit(10).show()
```