How To's:

Data Upload

How to create a Datasource DB

NOTE: FDSA only supports PostgreSQL Databases, and the maximum size supported for schemas/datasets is 500 MB.

When adding a data source in FDSA, avoid using the root user's credentials and refrain from saving datasets under the 'public' schema. Follow these instructions:

1. Login as root user (or whatever admin user you have) to your database server

   psql -h <HOST IP/url> -p <PORT> -U <user> postgres

2. Create a new user (the one we are going to use to add the DB to FDSA)

   CREATE USER <username> WITH PASSWORD '<password>';

   Note: The <username> and <password> used here are the ones required when adding a Data Source.

3. Give access to the new user

   ALTER USER <username> CREATEDB;

   ALTER USER <username> CREATEROLE;

4. Exit and login with the new user:

   \q

   psql -h <HOST IP/url> -p <PORT> -U <username> postgres

5. As "<username>", create the data source DB and switch to it.

   CREATE DATABASE <test-database>;

   \c <test-database>

6. Then create a schema/dataset and add your research data there:

   CREATE SCHEMA <test-dataset>;

   IMPORTANT: Additionally, add tables with their respective columns, foreign keys, primary keys, and indexes in this schema, this is required to be able to execute queries/tasks with joins from the Query Builder Tool. The maximum size supported for schemas/datasets is 500 MB.

How to create a data source and a dataset inside our test database

It is necessary to define the data that you are going to insert and the schema that you are going to provide to make possible the creation of the data source/dataset.

1. Copy data file
   docker cp <file_path> fdsa_db:/home/data.csv

2. Login to the local database "PGDATABASE and PGUSER can be read in the .env file"
   docker exec -it fdsa_db bash
   cd /home
   psql -d <PGDATABASE> -U <PGUSER>

3. Create database and a schema
   create database <database_name>;
   \c <database_name>
   create schema <schema_name>;

4. Now create the table with the schema definition.
   create table <schema_name>.<table_name>(
   …
   );

5. Copy the data into the table
   \copy <schema_name>.<table_name> from '/home/data.csv' WITH DELIMITER ',' csv;

6. Now use the fdsa admin GUI to add the data source and dataset

Connections

How to connect to the internal database

The connection between the server and the docker Database is made through the Docker CLI.

1. You should check the following database credentials in the .env file
    PGDATABASE='fdsa_appliance'
    PGUSER='<user>'
    PGPASSWORD='<password>'
    PGPORT=<port>

2. Get inside the docker container:
    docker exec -it fdsa_db bash

3. Connect to the database using the psql command:
    psql -d <PGDATABASE> -U <PGUSER>

How to use an external PostgreSQL DB for the internal FDSA management

NOTE: Postgres DBs cannot have names with spaces, '-' or other special characters.

1. Log in to your database:

    psql -h <HOST IP/url> -p <PORT> -U <user> postgres

2. Create the 'fdsa_user':

    CREATE USER fdsa_user WITH PASSWORD 'fdsa_pass' SUPERUSER;

3. Grant necessary access to 'fdsa_user':

    ALTER USER fdsa_user CREATEDB;

    ALTER USER fdsa_user CREATEROLE;

4. Exit and log in with 'fdsa_user':
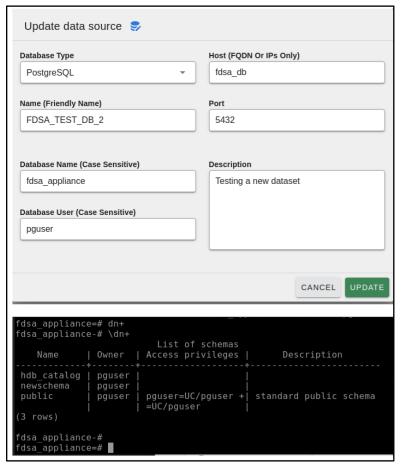
    \q

    psql -h <HOST IP/url> -p <PORT> -U fdsa_user postgres

5. Create the required databases ('keycloak' and 'fdsa_database') using port 5432 and ensure it is open for FDSA connectivity.

6. Update the 'Database Credentials' section in the '.env' file with your external database information (PGHOST, PGDATABASE, PGUSER, PGPASSWORD).

7. When the installer asks if you want to use an external database, answer 'yes'.

Permissions

How to check if user has the correct permissions

Here are the instructions on how to make sure your Schema and Database ownerships are same as credentials used on FDSA GUI (FDSA -> Datasources -> Add New Datasource)

Run the following command:
1. docker exec -it fdsa_db bash
2. psql -d fdsa_appliance -U pguser
3. \l
4. \c fdsa_appliance
5. \dn+
6. SELECT * FROM pg_catalog.pg_tables WHERE schemaname = 'schemaname';

How to fix permissions errors with the database

If there are issues with the permissions your user has, try these commands:

1) Connect to the database...
   a) docker exec -it fdsa_db bash

b) `psql -d fdsa_appliance -U pguser`

2) Grant USAGE on schema:
   a) `GRANT USAGE ON SCHEMA <schema1> TO <user>;`
   b) `GRANT USAGE ON SCHEMA <schema2> TO <user>;`

3) Grant on all tables for DML statements: SELECT, INSERT, UPDATE, DELETE:
   a) `GRANT SELECT, INSERT, UPDATE, DELETE ON ALL TABLES IN SCHEMA <schema1> TO <user>;`
   b) `GRANT SELECT, INSERT, UPDATE, DELETE ON ALL TABLES IN SCHEMA <schema2> TO <user>;`

4) Grant all privileges on all tables in the schema:
   a) `GRANT ALL PRIVILEGES ON ALL TABLES IN SCHEMA <schema1> TO <user>;`
   b) `GRANT ALL PRIVILEGES ON ALL TABLES IN SCHEMA <schema2> TO <user>;`

5) Grant all privileges on all sequences in the schema:
   a) `GRANT ALL PRIVILEGES ON ALL SEQUENCES IN SCHEMA <schema1> TO <user>;`
   b) `GRANT ALL PRIVILEGES ON ALL SEQUENCES IN SCHEMA <schema2> TO <user>;`

6) Grant all privileges on the database:
   a) `GRANT ALL PRIVILEGES ON DATABASE <database> TO <user>;`