

Online Energy Utility Platform

Laboratory 1, Project 1

Avram Andrei-Alexandru

30444

The first laboratory assignment and project consist of an online platform designed to manage clients and smart devices equipped with energy consumption sensors and monitored data from sensors. The system can be accessed by two types of users after a login process: administrator, and clients. The administrator can perform CRUD operations on client accounts, add devices and measurements. Clients can see their devices and current and historical consumption for their devices

Problems that I came across during the implementation of this assignment:

1. Heroku does not have support for Microsoft SQL Server, only for Azure SQL. This was fixed by migrating the database from SQL server to PostgreSQL which has native support in Heroku.
2. JWT Token audience problem. Web client could not be authorized using the token because a wrong audience was set up.
3. CI/CD of the .NET Core Backend application problem. Because Heroku does not have support for .Net and C#, the backend application was placed inside a docker container which was later put on Heroku. A pipeline was set up to run the unit test, build the application and deploy the container to Heroku from GitHub.
4. Kendo Angular library current version required licensing.

Links:

<https://energy-platform-backend.herokuapp.com/> backend

<https://energy-platform-ui.herokuapp.com/> frontend

Technologies used:

Angular for frontend

.NET Core for Backend

PostgreSQL for database

Docker for backend deployment