

Files

dreлло_light

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 [README.md](#)

Drello_Light

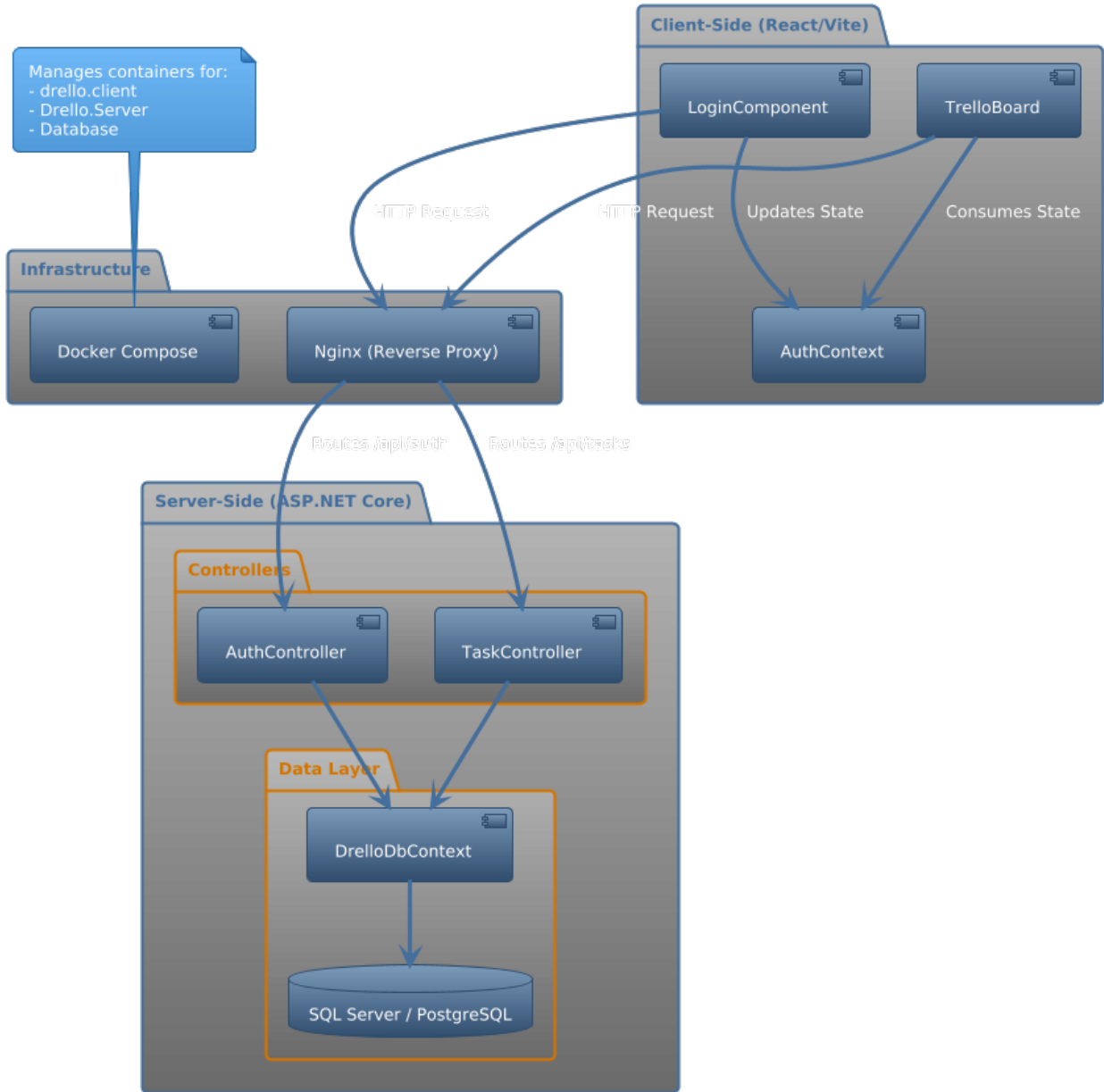
What is the tool?

The tool should be a simple Trello knockoff. It should complete the simple CRUD commands for the tasks. This tool is kept simple and only the owner of the board can make changes on the board, to make sure that happens a user can login and ther i can also implement the JWT part of the project.

Technologie stack

The project uses the following technologies. .Net for the backend with a EntityFramework as the interface to access the database as well as to generate the database structure. The database itself is a Postgres service and the frontend is a React.js. The balancer useds was Nginx.

Architecture



The diagram illustrates the system architecture, divided into three main layers:

- Client-Side (React/Vite):** Contains `LoginComponent` and `TrelloBoard`. `LoginComponent` sends an `HTTP Request` to `AuthContext` and `Updates State`. `TrelloBoard` sends an `HTTP Request` to `AuthContext` and `Consumes State`.
- Infrastructure:** Contains `Docker Compose` and `Nginx (Reverse Proxy)`. A note indicates Docker Compose manages containers for `- drello.client`, `- Drello.Server`, and `- Database`. `Nginx` receives `HTTP Requests` from the client and routes them to the server-side controllers.
- Server-Side (ASP.NET Core):** Contains `Controllers` (`AuthController` and `TaskController`) and a `Data Layer` (`DrelloDbContext` and `SQL Server / PostgreSQL`). `AuthController` and `TaskController` interact with `DrelloDbContext`, which in turn interacts with the database.

Load Test

Using the "Hey" to test the balance, the backend was able to achieve 2.7k RPS.

Starting the project

The service can be started by calling `docker compose up --build` and the whole service gets tested. The test user that gets created by default is "user" and "pw". The user also has default entries for each column and the user can add, remove and move the tasks. The frontend is started on the localhost and on the port 5137.

Authorization

The service gets secured by using a JWT Bearer that checks if the user is authenticated. Beyond that the service uses Accesstoken and Refreshtoken to manage the state of user and if the user needs to sign in.