Technical Documentation

NJ
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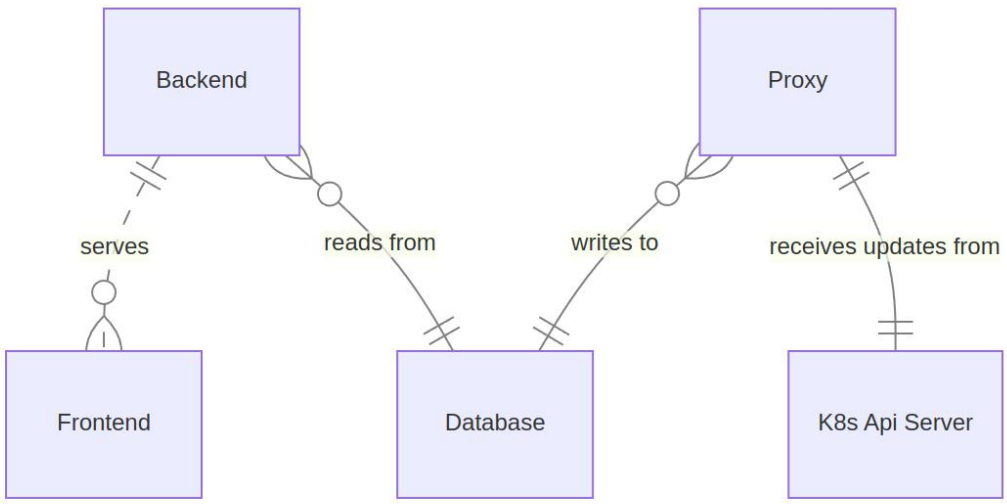
Letzte Aktualisierung: vor Kurzem

Architecture

Our Architecture is comprised of the following components:

1. **The Proxy:** Communicates with the Kubernetes API, listens for changes in the Kubernetes cluster and updates the database. It is written in `Golang`.
2. **The Database:** Stores all states and changes of Kubernetes components in the cluster. As a database we use `PostgreSQL`.
3. **The Explorer:** Frontend web application with backend that fetches data from the database and displays it in a user friendly manner in any local webbrowser. Here the user can navigate through the different parts of the cluster and look at health information, status information and event changelogs. It is written in `Next.js` and uses `Tailwind CSS` and the UI elements of `Flowbite`.

A visualization of this architecture can be found below.



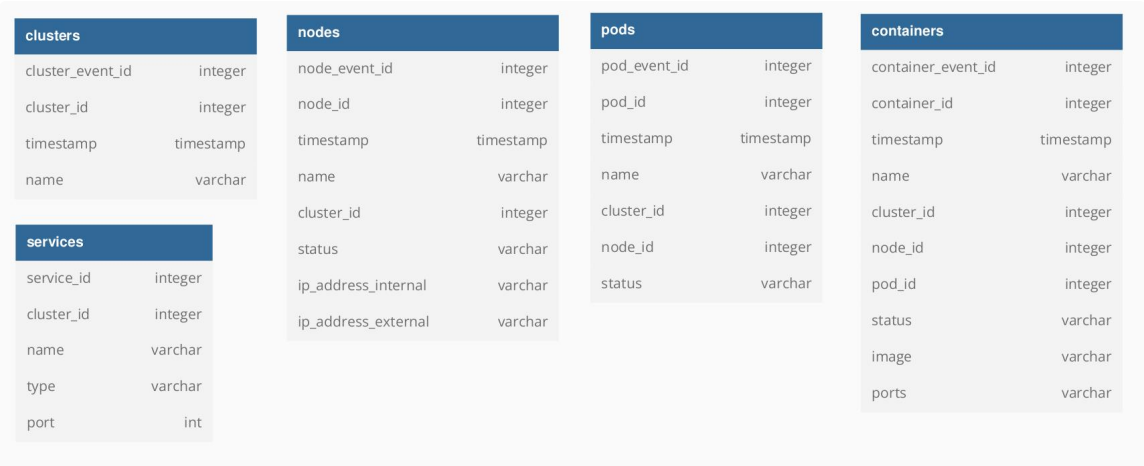
Tech Stack summary

To increase reproducibility, we have commited to using `Docker` and `Docker-Compose` to set up our software. By building in the container, developers are not required to install any of the development tools (with the exception of a K8s API provider) locally.

Additionally, we are very mindful of polling vs event driven updates and are evaluating each part of our stack by its ability to receive, transform and emits events efficiently.

Database

As our database we are using PostgreSQL. You can change the default login credentials in the `docker-compose.yaml` . An overview of the database scheme can be found below.



+ Stichwort hinzufügen

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