# Goal

The goal of this document is to provide some context on infrastructure related aspects of the Eviden card game project. This is so that the next group can better understand how we deployed the application and what to look out for.

# Deployment

Every different service of the project has its own Dockerfile. This creates a container image which we can easily host on different platforms. For the front-end there is a production and development image. The production one is the one in the “.deployment” folder.

These images are used both for development and production. It is our advice to use the Docker Compose setup when developing. This sets up everything to run the application locally. Make sure to adjust your “.env” file in the front-end. There is also an example one. There might be multiple restarts and Kafka may say that it failed. But by running the Docker Compose again this should be fixed.

For production we used Kubernetes. In the end we built a bare-metal HA cluster in the Netlab. The PO would like to move to a public cloud and that would also be my recommendation. Building a bare-metal HA cluster can be fun and good exercise if someone is really into infrastructure. Otherwise avoid it, because building your own cluster requires more than creating one in AWS/GCP/Azure.

If you still would like to create your own cluster. The back-end “.deployment” folder has a “operator.sh” script which should install everything necessary for a bare-metal cluster. Although “Helm” setup is not included.

**Disclaimer:** A large part of the Kubernetes setup is not merged yet. There is still a PR open in the back-end. This was because it was not fully working yet. The reason for that is that we used distributed MySQL clusters in K8S. But unfortunately (read incompetently) the previous group(s) often used embedded entities instead of relationships between models. This is a problem because MySQL clusters require that each entity has a primary key. Changing this in every service required a lot of work (see PR) and was not finished in time. Keep this in mind.

If you need any help regarding the project, please reach out to me, Fabian te Raaij. I am doing open learning when you are reading this so I should be around.