

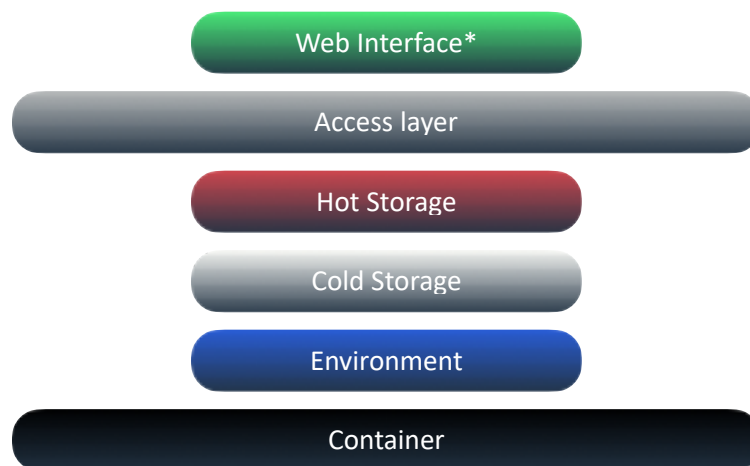
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(DRAFT) BACKEND SPECIFICATION

Minimal Backend for IoMT project

For the application we need to ship a backend solution easy to implement but good in order to store records. In the future, the application will need probably high availability and performances. This means that there will be a need to store data efficiently for future processing. So, one quick solution to deploy quickly the application and giving all the necessary to store data safely with high performances could be using some kind of container and on top of it installing all the necessary dependency as well as database solution taught for scaling and performances. Once this has been done, an access layer could be built on top as well as a small Web interface (not compulsory).



For the reason above, technologies must be chosen and the idea is to find the good compromise between acquired knowledge and technologies available. So this has been chosen:

- **Container:** Docker
- **Environment:** Ubuntu
- **Cold Storage:** PostgreSQL

- **Hot Storage:** To decide
- **Access Layer:** Flask
- **Web Interface:** To decide

The Access Layer

Several literatures propose blockchain as a good way to build permission system to storages. Some of that did some advancement with the use of smart contracts in order to access the storages. Others, used some permission blockchain in order to do it, using Hyperledger IBM for example.

For this reason, we thought to develop a simple system initially with API solution with Flask and possibly adding a second layer built on Blockchain to possibly enabling data sharing (without worrying about the problem of sensitive data).