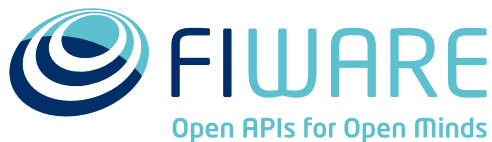




HiWi Position

Development and administration of a Kubernetes environment for a shared research ICT platform

For the ESD subtopic 2.3 Smart Areas and Research, we created a platform to share and exchange IoT time series research measurement data from our Energy Lab with our partners of the Research Centre Jülich (FZJ) and the DLR in Oldenburg.



Your job will be to take over the Kubernetes portion of the development efforts and implement changes to the overall architecture of the authentication and authorisation components, making the system more secure and robust. Also, we need you for operating the Kubernetes services of the project and resolve issues as they come up with other researchers. This will be confined to services that we can access, but it will involve some server administration, debugging and Kubernetes operation. It is mandatory that you are already familiar with Kubernetes as we do not have the capacity to teach you.

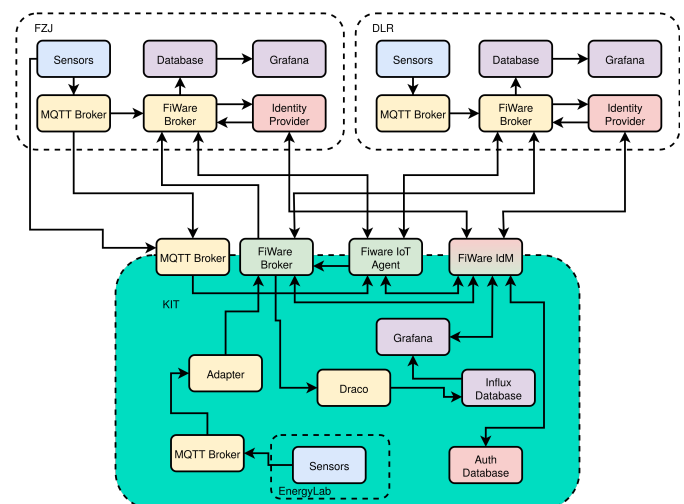
Main Tasks:

- Maintain and operate a Kubernetes cluster
- Develop new components for the cluster
- Respond to issues with running systems
- Implement a secure ICT platform for the project
- Assist with system administration

Education, experience and skills:

- Studies in Computer Science or adjacent
- Experience with Kubernetes
- Experience with system administration

This platform was implemented using IoT agents, MQTT and FiWare components and several other services for authentication, authorisation, visualisation, load management, etc. Most of these services are setup and operated using our IAI Kubernetes K8s cluster. As this project includes multiple different research groups with different objectives, the task of our research group RSA is to contribute safety and security to the overall platform. For this, we implemented additional authentication mechanisms. Another focus of our efforts is to realise the project with modern concepts, services and components.



What we offer:

- Variable working hours for optimal studies conditions
- Contribute to an active research project spanning multiple different research groups and universities
- Work with modern IT technologies