

# Bachelor thesis

## **A Study for Automatic Account Management and Container Technologies on Cloud**

The experiments will be conducted on an Openstack-based Cloud: DigiMed Cloud hosted at LRZ. Openstack is a widely-used cloud orchestrator that is used to manage the resources on the cloud. Containerisation is an OS-level virtualisation technology that provides separation of application execution environments.

- Study the background on cloud computing.
- Study the background on containerisation and virtualisation.
- Get to know the basic usage of Openstack, including: usage of the interfaces of web UI and command lines.
- Master the usage of Docker containers: a Docker container needs to be developed to host a service program. This service program is able to synchronise the accounts between two ID management systems. The program can be written in either Python, Golang or C/C++.

### **Requirements:**

- Major in Compute science.
- Familiar with one of the programming languages: Python, Golang or C/C++.

### **Organisatorisches:**

#### **Aufgabensteller:**

Prof. Dr. D. Kranzlmüller

#### **Anzahl Bearbeiter: 1**

#### **Betreuer:**

Dr. Naweiluo Zhou

Dr. Peter Zinterhof