Topology and Orchestration Specification for Cloud Applications (TOSCA) is a new OASIS standard to define structure and management of cloud applications. Topology of an application consists of different nodes and relationships between these nodes. Although nodes are typically software nodes, a human with a specific profile can use a software component, which would result in a TOSCA human node type with a custom relationship type with the corresponding software component.

The goals of the thesis are:

- Analysis of TOSCA for the suitability of representing humans as TOSCA elements
- Defining respective relationship of human nodes
- Generic declarative deployment plan definitions
- Automated generation of the TOSCA types and deployment plans by using available information of an OpenSocial back-end

For the TOSCA run-time, OpenTOSCA container and for TOSCA type management Winery will be used. OpenSocial is a standardization effort to enable unified access to social networks. The auto generation of human specific TOSCA types will be generated based on available data provided by an OpenSocial compliant backend or an existing social network, e.g., LinkedIn, Facebook, Google+.

Requirements
The applicant should be fluent in Java and be willing to apply theoretic concepts in practice. Knowledge of workflow languages is desirable.

Benefits
When finishing the thesis, you will have deep knowledge in the industry standards BPMN/BPEL, OpenSocial (respectively selected social network), and OASIS TOSCA.

Formal Requirements
The student has to manage his schedule including the work packages and milestones for himself.

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