Topology and Orchestration Specification for Cloud Applications (TOSCA) is a new standard to define structure and management of cloud applications. Topology of an application consists of different nodes and relationships between these nodes. A TOSCA node can be used to represent an information-sharing platform such as MediaWiki\(^1\). MediaWiki is the original package used to establish Wikipedia.

The goals of the thesis are:

- Definition of MediaWiki TOSCA NodeType including extensive operations such as add user, remove user, or post messages
- Definition of the corresponding management plans for the MediaWiki NodeType

For the TOSCA run-time, OpenTOSCA container and for TOSCA model management Winery will be used. The NodeType will be deployed on an existing Ubuntu NodeType, and other existing node types will be reused where applicable, e.g. a MySQL NodeType.

Requirements

Knowledge of workflow languages for defining management plans, Java, and PHP is desirable as MediaWiki is based on PHP.

Benefits

When finishing the thesis, you will have deep knowledge in the industry standards and technologies such as BPMN/BPEL and OASIS TOSCA. Moreover, the student will obtain a deep knowledge about a famous open-source Wiki platform.

Formal Requirements

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

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\(^1\) [http://www.mediawiki.org/wiki/MediaWiki/de](http://www.mediawiki.org/wiki/MediaWiki/de)