Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

Chair of Computer Science II
University of Würzburg
-
Software Engineering
http://se.informatik.uni-wuerzburg.de

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Master/Bachelor Thesis:

Cloud Elasticity Benchmarking and Tuning with BUNGEE

Cloud Elasticity Benchmark
BUNGEE

Motivation

Elasticity is a central aspect of the cloud computing paradigm and heavily used in cloud providers' advertisements and even in the naming of specific products or services. Different metrics capable of quantifying aspects of elastic behavior have been proposed so far. Comparability in terms of elasticity is the aim of BUNGEE, a benchmark prototype that automates a comprehensive measurement methodology for elasticity metrics. The elasticity capabilities of Infrastructure-as-a-Service Provides are relevant due to their direct impact on SLA compliance and costs. Currently, different approaches for resource allocation are not yet compared by a benchmark.

Goals

It is the goal of this thesis to extend and apply the cloud elasticity benchmarking prototype BUNGEE to various cloud platforms. Furthermore, the available rule-based resource allocation approaches should be compared to state-of-the-art proactive approaches.

We offer

- Collaboration with SPEC Research and leading infrastructure providers such as AWS and IBM
- Excellent working environment and intensive mentoring
- Work with state-of-the-art and innovative technologies

- ■ **Learn about state-of-the-art in workload characterization**
- ■ **Get on-hands experience with recent research tools**
- ■ **Contribute to standardized SPEC benchmarks**

Duration
3 months for Bachelor Thesis,
6 months for Master Thesis

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