Bachelor’s/Master’s Thesis:
Automatic Extraction of Workload Specifications for Load Testing and Performance Prediction with WESSBAS

Background and Motivation

WESSBAS is an approach for workload extraction and specification for session-based application systems. It comprises i.) the WESSBAS-DSL, a domain-specific language for system- and tool-agnostic modeling of probabilistic session-based workloads; ii.) support for automatic extraction of WESSBAS-DSL instances from recorded session information; iii.) model transformations of WESSBAS-DSL instances into the popular load generation tool JMeter (including the Markov4JMeter extension, as part of the WESSBAS approach) and the Palladio Component Model for model-based performance prediction of component based software systems.

Goal

The goal of this thesis is to extend the set of supported transformations by transformations to other common load testing tool (e.g., HP LoadRunner, IBM Rational Performance Tester) and/or performance modeling languages/tools (e.g., Descartes, UML MARTE). The representativeness of the generated workload is to be investigated in quantitative experiments and/or industrial case studies.

Possible Collaborations

This thesis can be conducted in the context of the Research Group of the Standard Performance Evaluation Corporation (SPEC). Particularly, the WESSBAS approach is currently driven by the RSS group in collaboration with the fortiss GmbH in Munich (an institute associated with the Technische Universität München) and Kiel University.

Literatur


Contact

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1SPEC and SPEC RG: http://www.spec.org and http://research.spec.org/