

DevOps Performance

Working Group

~~Enterprise Software Performance Working Group (ESP WG)~~

SPEC RG Working Group Proposal

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Contact

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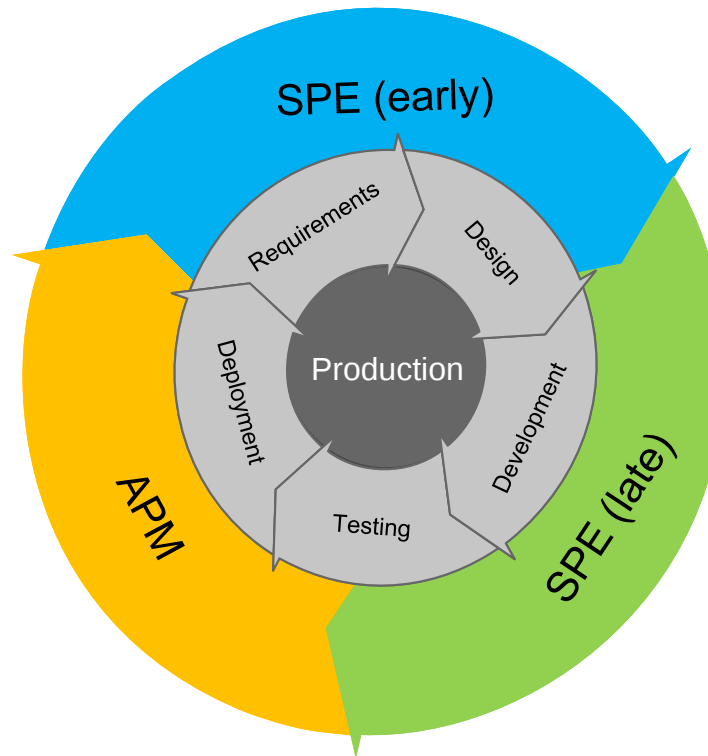
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Scope: Combination of SPE and APM



Mission: The mission of the DevOps Performance WG is to foster and facilitate research in combining application performance management (APM) and model-based software performance engineering (SPE) activities for business-critical application systems.

Mission Statement

The mission of the DevOps Performance Working Group is to foster and facilitate research by combining application performance management (APM) and model-based software performance engineering (SPE) activities for business-critical application systems. The need for a better SPE/APM integration is driven by an increased interrelation of development and operation teams in corporate environments due to DevOps concepts. SPE proposes to start performance evaluations by transforming software design models into performance models. These performance models need to be parameterized with estimates of resource demands to derive meaningful predictions. APM tools enable the collection of fine-grained monitoring information of a running system. This monitoring information has the potential to significantly increase the accuracy of the performance model predictions during the complete life-cycle of a software system. The goal of the working group is to consolidate concepts and tools to better integrate these activities.

Current Members and Meetings

- Current member organizations
 - fortiss GmbH
 - Kiel University
 - KIT
 - University of Stuttgart
 - University of Würzburg
- Positions (not elected)
 - Chair: André van Hoorn (U Stuttgart)
 - Vice chair: Andreas Brunnert (fortiss GmbH)
 - Secretary: Felix Willnecker (fortiss GmbH)
 - Release manager: Nils Ehmke (Kiel U)
- Bi-weekly calls, currently @ Fri ~ 15:00-16:00 (Berlin/CEST)

General Topics of Interest

- **Model extraction (architecture + operational profile) via dynamic analysis**
 - Instrumentation techniques (dynamic/adaptive)
 - Hybrid (i.e., static + dynamic) analysis
- **Data feedback between Op $\leftrightarrow$ Dev**
 - Define and evaluate interchangeable formats to exchange (measures, measurements, models)
 - Define process models to better integrate SPE and APM in companies (which team has to do what, and when)?
- **Runtime management techniques**
 - Reactive/proactive problem detection, diagnosis, and resolution
- **Load testing**
 - Use extracted models for „better“ load tests

Working Group Activities

- **Current Activity:**
 - Landscaping of performance model extraction approaches
- **Next Steps:**
 - Common case study of existing/extended approaches using *SPECjEnterprise2010* (or *Next* depending on the availability)
 - Evaluation of model extraction approaches
 - Evaluation of performance problem detection/diagnosis approaches
 - Needs injection of representative performance problems into SPECjEnterprise