Research Context

• Modern software engineering paradigms and technologies – such as DevOps and microservices – are gaining more and more attraction
• Established QoS evaluation (e.g., performance and reliability) for „classic“ paradigms and technologies exist
• Challenges and lack of adoption for DevOps and microservices

Project Goals

• Setting up CASPA platform for comparability of QoS evaluation approaches
• Development, integration, and experimental evaluation of novel approaches for QoS evaluation in DevOps and microservices

Activities

• Integration of a new microservice benchmark application into CASPA
• Novel approach 1: Detection of software performance antipatterns from profiler data
• Novel approach 2: Performance testing of microservices

Next Steps

• Continuous and declarative load testing for microservices
• Automatic extraction and evolution of load test specifications from application performance monitoring data
• Efficient performance test selection based on formal models

Selected References


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