Project Context and Idea
Performance describes the degree to which a software system meets its requirements w.r.t. timeliness and resource usage.

Use of SOC Lab resources for experimental evaluation of novel approaches in the following areas:

1. DevOps-oriented Load Testing for Microservices
2. Performance Engineering for Multi-Core Systems

DevOps-oriented Load Testing for Microservices (Selected Result)

- Goal: extraction of tailored service-level load tests for microservices from system-level production traces
- Experiments in SOC Lab:
  - Docker-based Sock Shop application
  - 1st load tests to simulate and collect production traces
  - 2nd load tests with extracted tailored workloads

Performance Engineering for Multi-Core Systems (Selected Result)

- Goal: study performance-influencing factors of multi-core systems (e.g., memory) for model-based prediction
- Experiments in SOC Lab:
  - Evaluate accuracy of memory behavior prediction model
  - Experiment runs with different system configurations (e.g., number of cores)

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- H. Schulz, T. Angerstein, A. van Hoorn. Towards automating representative load testing. LTB@ICPE 2018, ACM