My Seminar Topic

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English abstract.

Keywords

1 Introduction

Motivation/Introduction into the topic/paper.

2 Foundation

General foundation knowledge.

2.1 Microservice Architecture

Explanation of microservice architectures. [4]

2.2 Architecture Extraction

Explanation of Architecture Extraction.

2.3 PCM

Explanation of the Palladio Component Model. [2]

3 Study Design

Explain how the literature research is done.

3.1 Study Aim

Explain the goal of the paper.

3.2 Research Questions

The research questions I want to to answer in this paper.

3.3 Selecting the Papers

Explanation of how I searched for the papers. The keywords I used and the selection criteria (inclusion/exclusion).

Async Papers:

1. [11], [10] (MOM)
2. [1] (MOM)
3. [3] (MOM)
4. [8] (HTTP)
5. [7] (HTTP)
6. [9] (HTTP)

4 Results

Answers to the research questions. Analysis of the papers I found.

5 Discussion

Not sure if I need this section.

6 Threats to Validity

Explain the threats to internal and external validity of the study.

7 Related Work

Other papers that are similar to my paper. Also say that e.g. MicroART could perhaps support async communication in the future. [6] [5]

8 Conclusion

The final conclusions of this paper.

References

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[3] Fabian Brosig, Nikolaus Huber, and Samuel Kounev. "Automated extraction of architecture-level performance models of distributed component-based systems". In: IEEE, Nov. 2011, pp. 183–192. ISBN: 978-1-4577-1639-3. DOI: 10.1109/ASE.2011.6100052.

[4] Nicola Dragoni et al. *Microservices: Yesterday, Today, and Tomorrow*. 2017. DOI: 10.1007/978-3-319-67425-4_12.

[5] S. Ducasse and D. Pollet. "Software Architecture Reconstruction: A Process-Oriented Taxonomy". In: *IEEE Transactions on Software Engineering* 35 (4 July 2009), pp. 573–591. ISSN: 0098-5589. DOI: 10.1109/TSE.2009.19.

[6] Giona Granchelli et al. "Towards recovering the software architecture of microservice-based systems". In: 2017. DOI: 10.1109/ICSAW.2017.48.

[7] Martin Kleehaus et al. "MICROLYZE: A framework for recovering the software architecture in microservice-based environments". In: vol. 317. 2018. DOI: 10.1007/978-3-319-92901-9_14.

[8] Benjamin Mayer and Rainer Weinreich. "An Approach to Extract the Architecture of Microservice-Based Software Systems". In: 2018. DOI: 10.1109/SOSE.2018.00012.

[9] Evangelos Ntentos et al. "Detector-based component model abstraction for microservice-based systems". In: *Computing* 103 (11 2021). ISSN: 14365057. DOI: 10.1007/s00607-021-01002-z.

[10] Snigdha Singh, Yves Richard Kirschner, and Anne Koziolek. "Towards extraction of message-based communication in mixed-technology architectures for performance model". In: 2021. DOI: 10.1145/3447545.3451201.

[11] Snigdha Singh, Dominik Werle, and Anne Koziolek. "ARCHI4MOM: Using Tracing Information to Extract the Architecture of Microservice-Based Systems from Message-Oriented Middleware". In: *European Conference on Software Architecture* (2022).