



Bachelor-, Master- und Doktorandenseminar
des Instituts für Informatik

Microservices versus Monolithic Architecture for the Development of Web Applications

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Choosing an architecture for a software is among the earliest decisions made in a software development project. Today, the trend is to choose the microservices architecture pattern to develop applications. Some large internet companies like Amazon and Netflix are successfully using microservices. These success stories as well as the huge amount of talks and conferences about microservices during the last years have aroused enthusiasm for the use of this architecture style. Nevertheless, before using microservices, the question to ask is whether this architecture style is a good choice for the system intended to be developed. This thesis aims to answer this question.

We present a case study for the development of a web application. To achieve our solution, we started by collecting and analyzing the requirements of the application. After that, in order to better understand the microservices architecture pattern and how to evaluate it, we have done a review of the literature on this architecture pattern and on the software architecture evaluation methods. Then, after the description of a monolithic and a microservices architecture candidates, both architectures have been evaluated based on their prototypes. For the evaluation, the performance and the scalability have been considered as software quality attributes. Moreover, a cost analysis of both architectures has been done.

Donnerstag, den 24.11.2016, 13 Uhr c.t. im
Besprechungsraum 106, IfI, Julius-Albert-Straße 4