The Microservices Community

The Microservices Community is an international community interested in the software paradigm of Microservices.
The overarching aims of the community are the sharing of knowledge and the fostering of collaborations about microservices.
The community has a broad composition, including people from research institutions, private companies, universities, and public organisations (like municipalities). The engine of the community is the strong belief in the importance of discussing open issues and solutions from different points of view, to create foundations for both innovation and basic research.
The microservices community was born during the first edition of the International Conference on Microservices.

https://microservices.sdu.dk

Other Events by the Microservices Community

MiDOS

Microservices, DevOps, and Service-Oriented Architecture @ 34th Annual ACM/SIGAPP Symposium On Applied Computing (SAC) Track on Microservices, DevOps, and Service-Oriented Architecture Limassol, Cyprus April 8-12, 2019

International Workshop on Microservices: Agile and DevOps Experience, Second Edition - May 21st, 2018
International Conference on Microservices 2017 - October 25th-26th, 2017
Meeting on Microservices 2016 - December 20th, 2016

This conference

The International Conference on Microservices is the major forum of the Microservices Community. The conference brings together industry and academia, to discuss all aspects of microservices: their design, programming, and operations.

Venue

Dortmund is the administrative, commercial, and cultural center of the Ruhr area, which is renowned for its long tradition in Industry and Innovation. The region is home to several companies, institutions, and associations at the forefront of the Digital Transformation.

Contact

https://conf-micro.services/2019

microservices@fh-dortmund.de

February 19-21, 2019
Dortmund, Germany
Sonnenstraße 96, 44139 Dortmund

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Microservices Conference 2019

February 19-21, 2019 • Dortmund, Germany

"Industry meets Academia: Get ready for the Digital Transformation"

Fachhochschule Dortmund
University of Applied Sciences and Arts

IDiAL Institute for the Digital Transformation of Application and Living Domains

SDU
DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

In collaboration with Microservices Community

Theme

The general theme of Microservices 2019 is the interplay between microservices and the Digital Transformation, i.e., the process of accelerating and improving business activities, processes, and models through digital automation. This process is crucial for companies in highly-competitive markets, where integration and flexibility of software systems become critical assets to establish leadership. Here, microservices play a central role. They can streamline integration (thanks to their focus on interoperability) and enable more flexible solutions (by supporting dynamic deployments and elastic scaling).

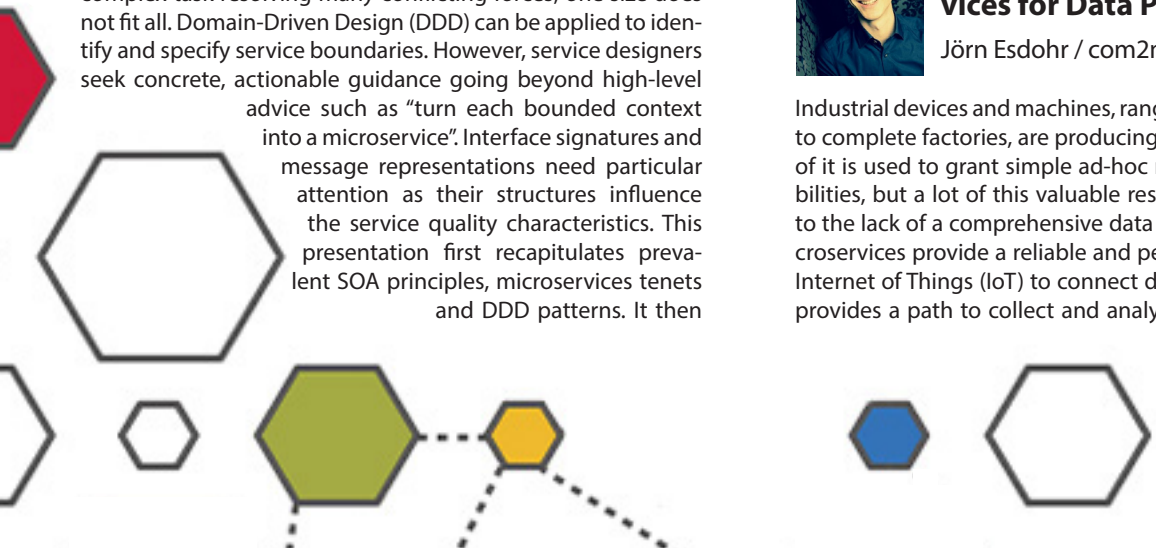
Keynotes

Design

Domain-Specific Service Decomposition with Microservices API Patterns

Olaf Zimmermann / University of Applied Sciences of Eastern Switzerland, Rapperswil

Service orientation is a key enabler for cloud-native application development. Microservices have emerged as a state-of-the-art implementation approach for the realization of the Service-Oriented Architecture (SOA) style, promoting modern software engineering and deployment practices such as containerization, continuous delivery, and DevOps. Designing (micro-)services interfaces' to be expressive, responsive, and evolvable is challenging. For instance, deciding for suited granularities is a complex task resolving many conflicting forces; one size does not fit all. Domain-Driven Design (DDD) can be applied to identify and specify service boundaries. However, service designers seek concrete, actionable guidance going beyond high-level advice such as "turn each bounded context into a microservice". Interface signatures and message representations need particular attention as their structures influence the service quality characteristics. This presentation first recapitulates prevalent SOA principles, microservices tenets and DDD patterns. It then reports on the ongoing compilation of complementary Microservices API Patterns (MAP) and proposes a set of pattern-based API refactorings for service decomposition. Finally, the presentation highlights some of the related research and development challenges.



Develop

Understandable Microservices

Fabrizio Montesi / University of Southern Denmark

Microservices come at a price: they have to be integrated to get a meaningful application. This motivated the creation of tools that make integration easier. Today, we spend more time developing integration than actual applications, so this development could not have come at a better time. Enter Jolie, a microservice-oriented programming language. By offering native linguistic features for composing microservices, Jolie has become a swiss army knife that can be used by integration ninjas and wise software designers that plan for maintanable software. To explore how microservices and Jolie can make us productive with integration, we'll develop microservices for a concrete business idea: a publishing platform for sharing Chuck Norris jokes. Technically, we'll create an API gateway for two different third-party Internet websites, integrate their behaviours, and ultimately get what we want without having to host either of them. Would you write object-oriented software without an object-oriented language? Ask yourself again, but for microservices, after you see this talk.

Factory of Things - Using Microservices for Data Processing and IoT

Jörn Esdohr / com2m GmbH

Industrial devices and machines, ranging from lights over elevators to complete factories, are producing large amounts of data. Some of it is used to grant simple ad-hoc monitoring and control capabilities, but a lot of this valuable resource ends up discarded due to the lack of a comprehensive data processing infrastructure. Microservices provide a reliable and performant architecture for the Internet of Things (IoT) to connect devices on a large scale, which provides a path to collect and analyse the flood of accumulating application data. At com2m, a containerized microservice-based IoT platform was developed leveraging graph and document databases, and modern web technologies. We present the Factory of Things as a showcase that demonstrates the real-world integration of a manufacturing line powered by programmable logic controllers. The IoT platform enables new data processing possibilities to monitor devices and enables the development of rich data-based services.

Deploy

Engineering Reliability

Ramón Medrano Llamas / Google

How do you scale up a service, so it can serve millions (or billions!) of users around the globe, make it reliable and fast while maintaining development speed and change safety? This talk introduces Site Reliability Engineering (SRE) at Google, explaining its purpose and describing the techniques it uses and the challenges it addresses. SRE teams manage Google's many services and properties, plus all the brand new Cloud infrastructure from our offices worldwide. They draw upon Linux based computing resources that are distributed in several data centres around the globe to deploy, manage, and serve globally available services four billions of users.

Build Fashionable Container Systems with Microservices, Clouds, and Kubernetes

Peter Rossbach / bee42 solutions GmbH

Transform your organization and systems so that they no longer need an end-state. Modern clouds and the container technology help you to build self-healing autonomous scalable systems around the globe. The Cloud Native Computing Foundation ecosystem offers you many features to setup and manage complex cloud-native container systems. Serverless or microservice architectures need a lot of glue infrastructure components. In this talk I will show you some automation practices, such as infrastructure as code, release automation, and container orchestration. We build container systems in conjunction with Kubernetes and Clouds. As a developer you will learn how you can easily control your stage environments, reuse setups, and how to release your complete application stack with cloud-native technologies.