Lecture 4: Tools and technologies 3

Purpose and motivation

The purpose of this lecture is to discuss the message busses and containerization tools in relation to software architecture. We will start by introducing the concept of message busses and how they can be used to decouple software components. We will also discuss containerization tools and how they can be used to support software architecture.

Furthermore we will follow up on last lectures exercises and work with and do pitching.

Before Class

- Read the literature
- Review the exercises from last lecture and prepare to ask any questions you may have
- Read the peer reviews you have gotten and reflect on your own work so far, e.g. what can you learn from the reviews? Should you change anything in your work?

Reading

Read the following before class:

- Message-oriented Middleware for Industrial Production Systems[3]
- Container Orchestration: A Survey. In "Systems Modeling: Methodologies and Tools"[2, pp. 221-235]
- Docker[1]

(Find the material at the library, on itslearning, or in online databases.

In class

Lecture

1. Message busses
2. Containerization tools

Exercises

1. Work with your pitches
2. Do pitching

References

[1] Charles Anderson. "Docker [Software engineering]". English. In: *IEEE software* 32.3 (2015), pp. 102–c3.

[2] Emiliano Casalicchio. "Container Orchestration: A Survey". English. In: Systems Modeling: Methodologies and Tools. Cham: Springer International Publishing, 2019, pp. 221–235. ISBN: 2522-8595. DOI: 10.1007/978-3-319-92378-9_14.

[3] P. Sommer et al. "Message-oriented Middleware for Industrial Production Systems". English. In: IEEE, 2018, pp. 1217–1223.