

Communication and Deployment Microservices Architecture Patterns



Inhalt

- Motivation
- Grundbegriffe
- Synchrone Kommunikation Patterns
- Asynchrone Kommunikation Patterns
- Deployment Patterns
- Fazit
- Pattern-Baum

Motivation

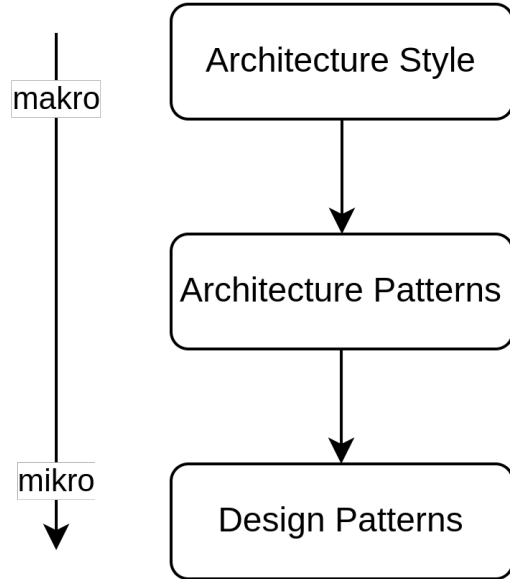
- Problem: es gibt keinen gesamt Überblick mit allen Patterns
- Übersicht über Architektur Patterns durch Literatur Review
 - Zusätzlich Kategorisierung
- Techniken: Suchen mit String, Zitate nach oben/unten

Microservices

“A microservice is a cohesive, independent process interacting via messages.”

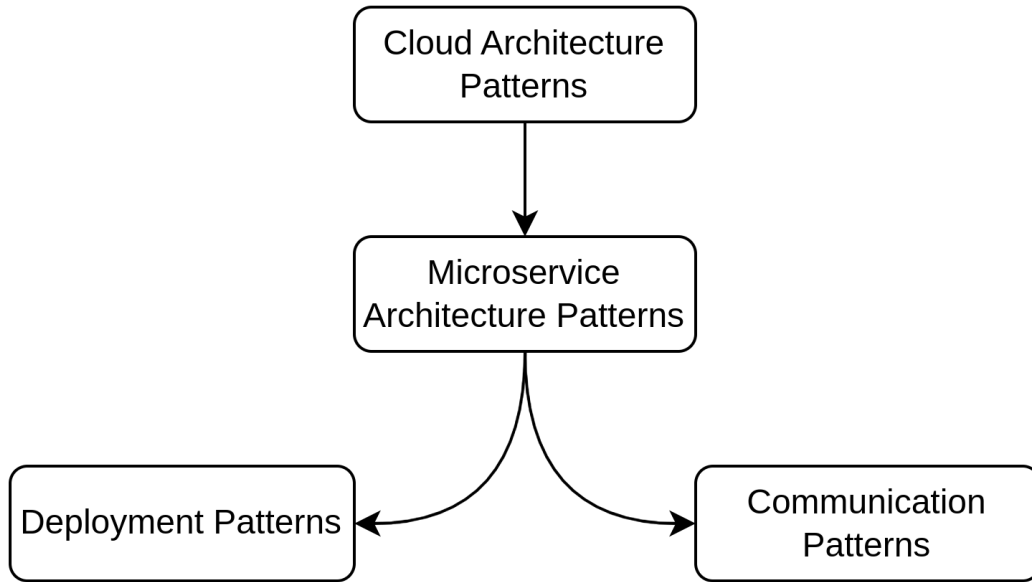
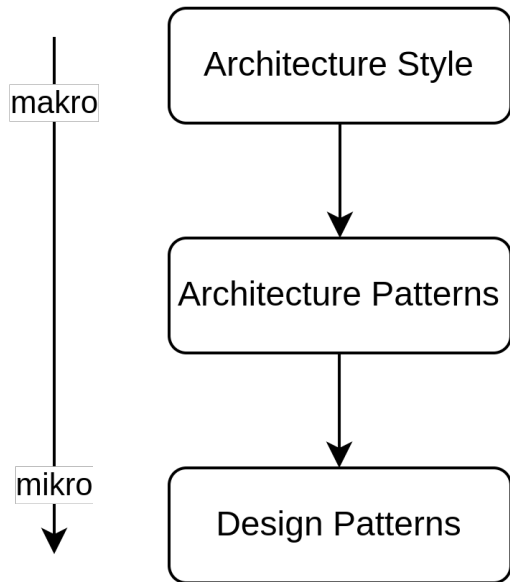
“A microservice architecture is a distributed application where all its modules are microservices.”

Architecture Patterns



Mark Richards. Software Architecture Patterns, Second Edition.
O'Reilly Media, 2022, isbn:9781098134273

Architecture Patterns

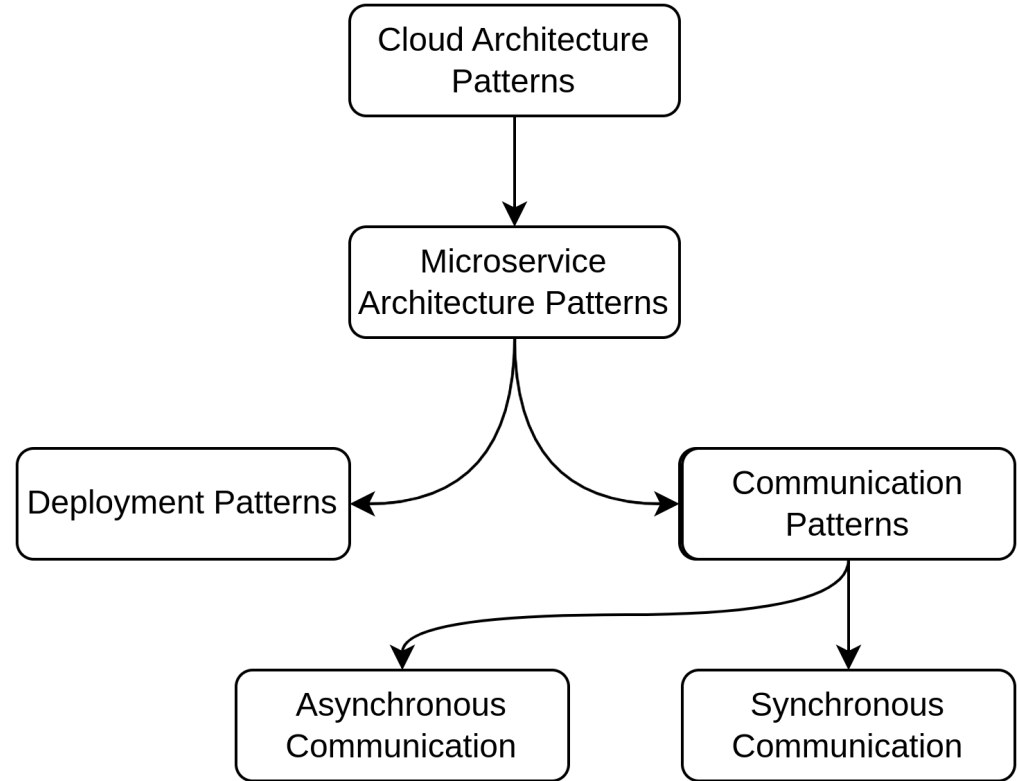
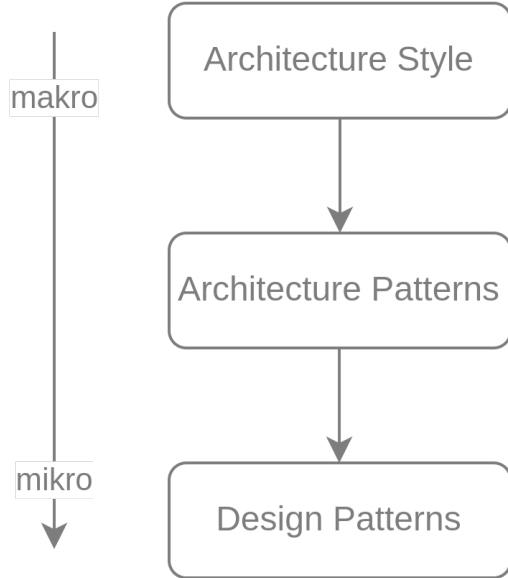


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Qualitätsattribute

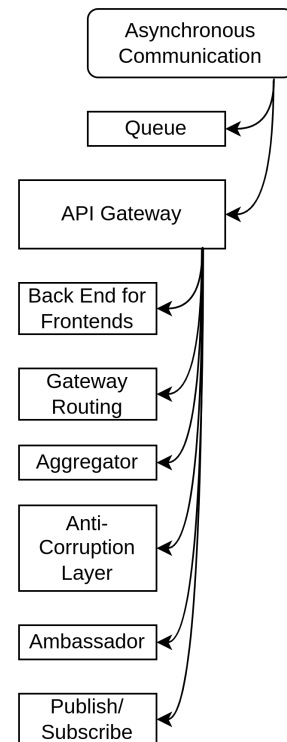
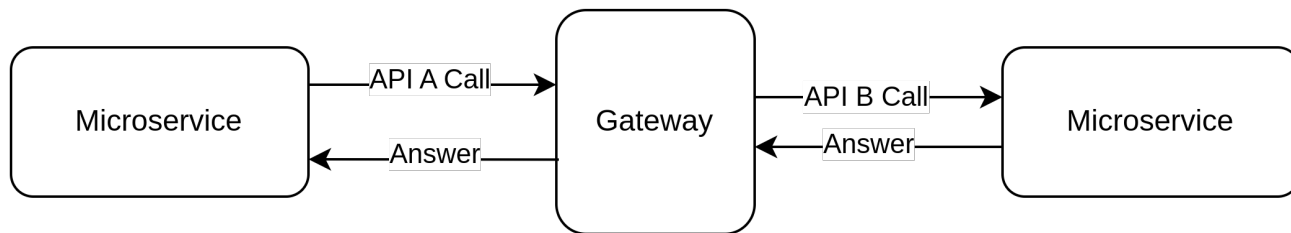
| | | | |
|----------------|-----------------|---------------|-----------------|
| Skalierbarkeit | Leistung | Verfügbarkeit | Überwachbarkeit |
| Sicherheit | Überprüfbarkeit | Wartung | Niedrige Kosten |

Communication Patterns

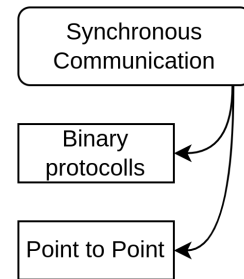
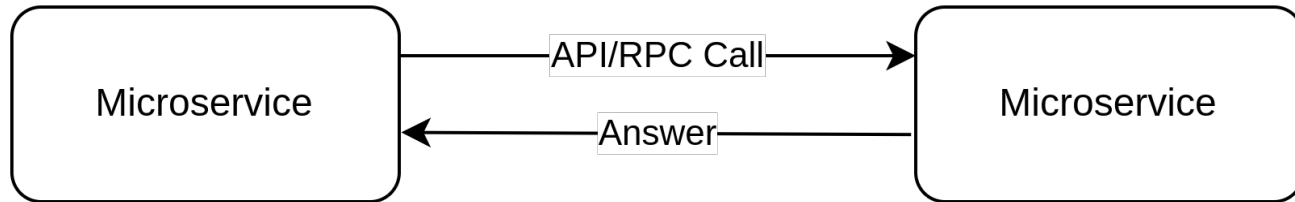


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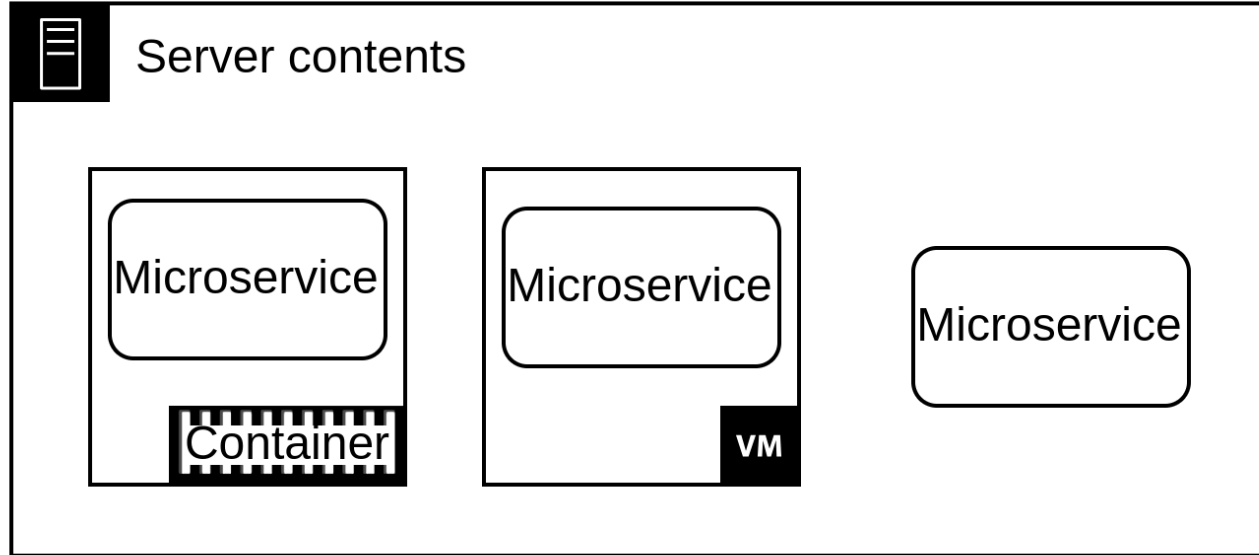
Asynchronous Communication Patterns



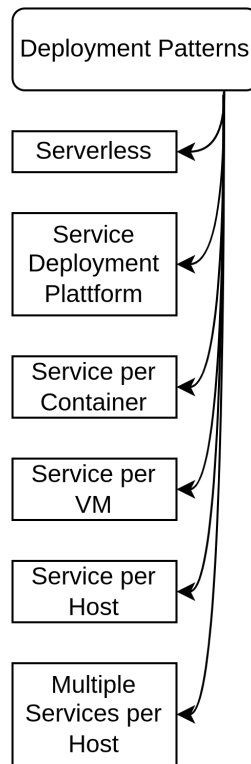
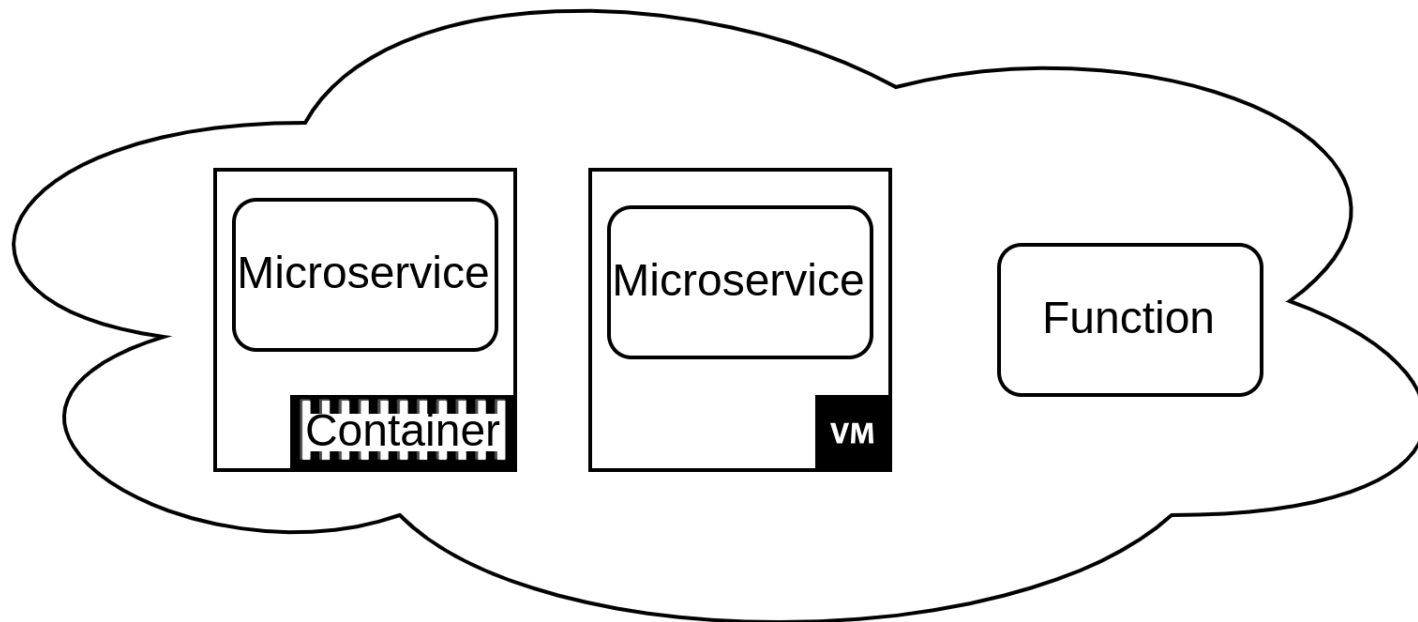
Synchronous Communication Patterns



Deployment Patterns



Deployment Patterns



FAZIT

- 37 Quellen angeschaut
 - 17 Akademische Papers
 - 5 Lehrbücher
 - 3 Paper aus der Industrie, 2 Lernmaterial aus der Industrie
 - 6 Akademische Literatur Reviews
- 20 Architektur Pattern Identifiziert
 - 6 Deployment
 - 14 Communication

Ergebnis: Pattern-Baum

