Microservices: The Big Picture

WHAT ARE MICROSERVICES?



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Course Outline



What are microservices?

Microservices terminology

Are microservices suited for your organization?



Audience







Business







CTO



Developer



Overview



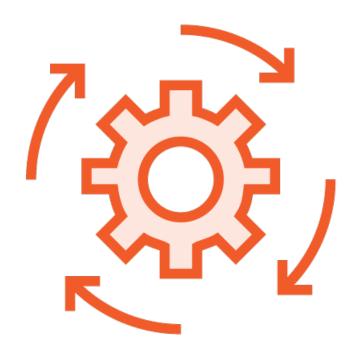
Microservice?

Software development lifecycle

Microservice definition

Monolith vs. microservices





Software development lifecycle

From project to product

Organization and management

Deployed in production

Microservices have an impact on this lifecyle



Maintain

Monitor

Requirements

Release

Plan & Design

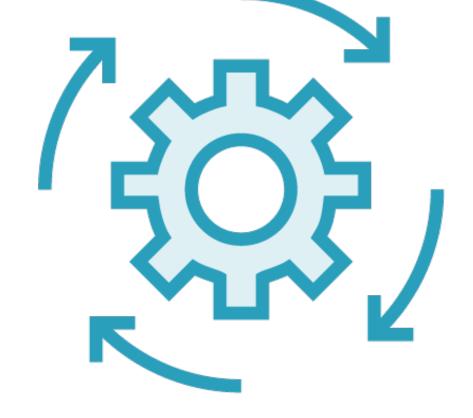
Test

Develop



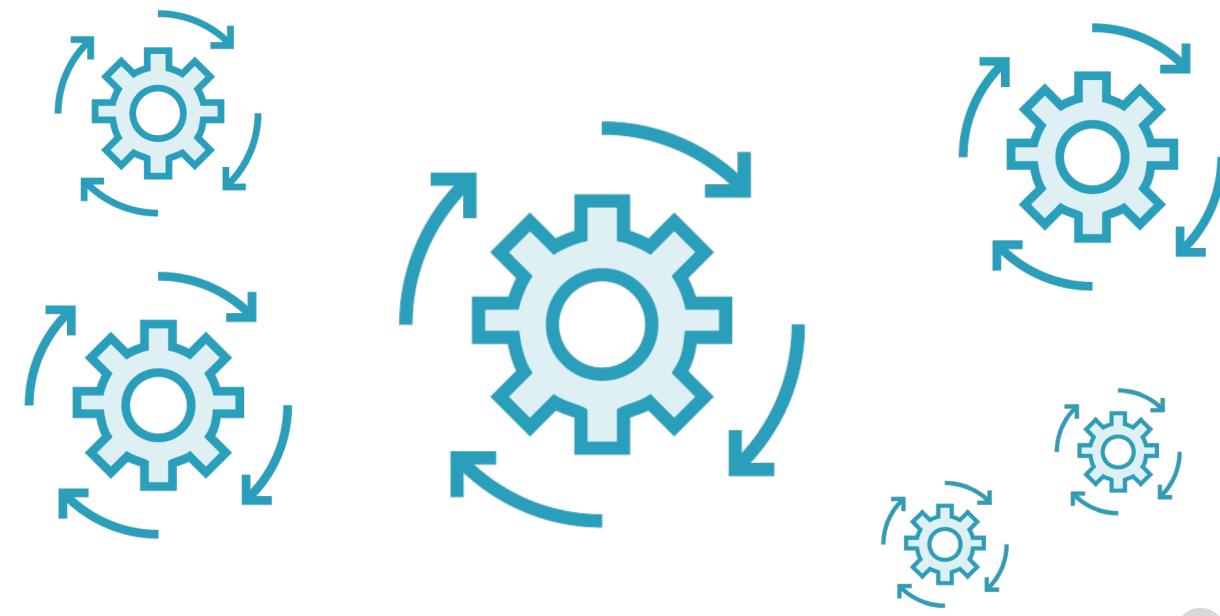




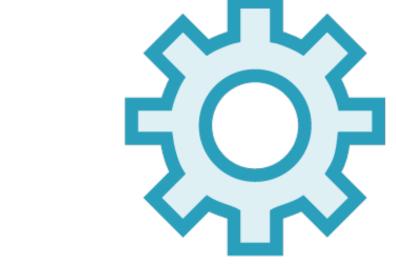
















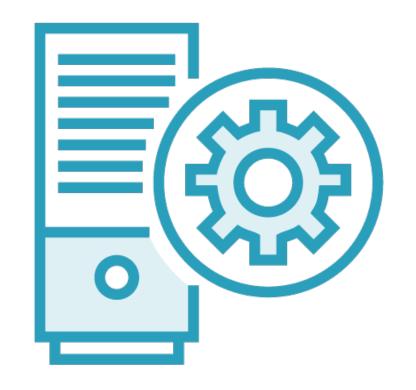












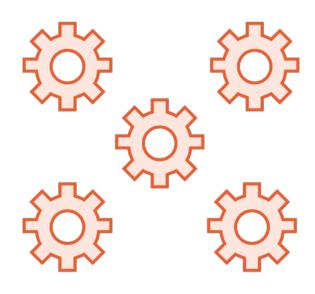








Microservices



Set of practices

Increase speed

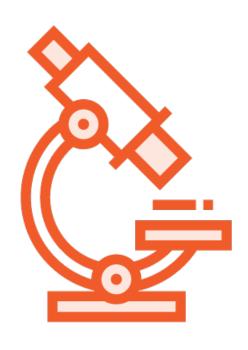
Scale

Technology agnostic

Principles and architectural patterns



Micro



Big or small

No universal measure

"Does one thing"

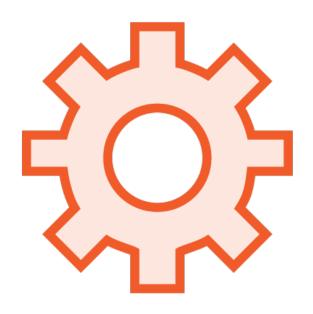
Scope of functionalities

Bounded context

Identify sub-domains



Service



Independently deployable component

Interoperability

Message based communication

Service-oriented architecture (SOA)



"The microservice architectural style is an approach to developing a single application as a suite of small services, each running in its own process and communicating with lightweight mechanisms."

James Lewis and Martin Fowler, Thoughtworks



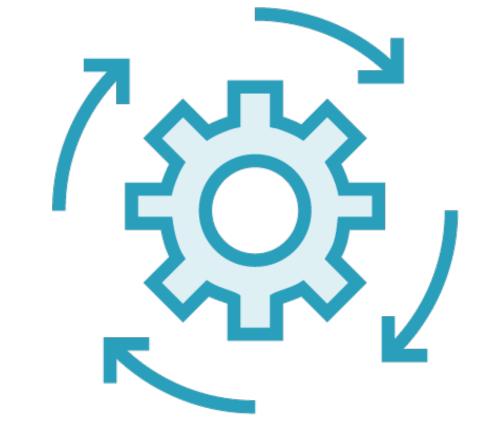
"Microservices are small, autonomous services that work together."

Sam Newman, Thoughtworks



Maintain

Monitor



Requirements

Release

Plan & Design

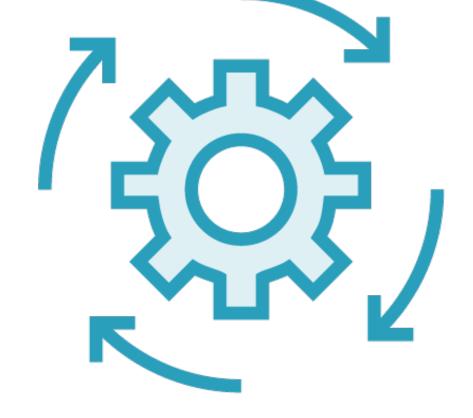
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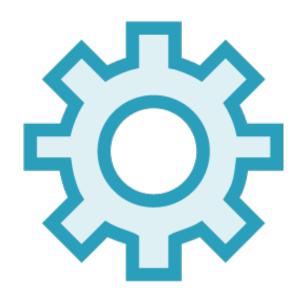


























Maintain

Monitor

Requirements

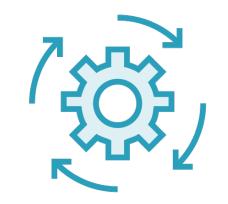
Release

Plan & Design

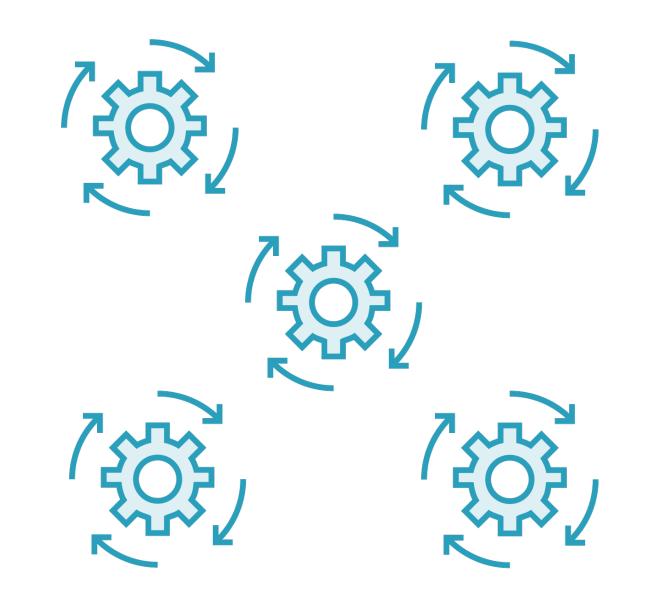
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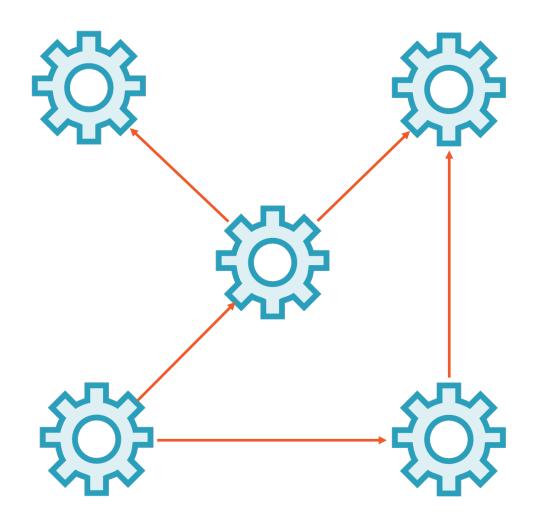
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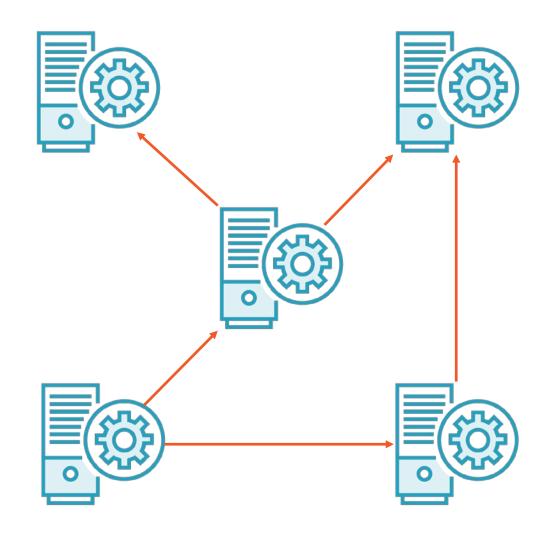




















Summary



Software development lifecycle

Micro everything

Bounded context

Autonomously developed

Independently deployable

Exchange messages

Solve systems that are too big



Next Module



Microservice elements

Terminology

Design patterns

Concepts

