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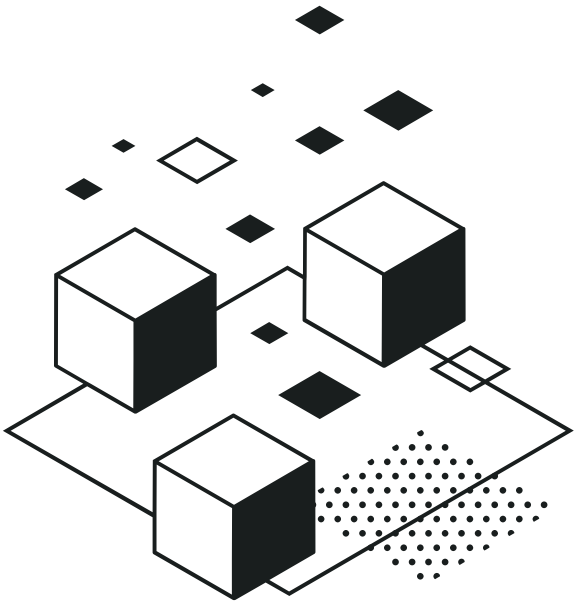
Microservices



Microservice architectures are the ‘new normal’. Building small, self-contained, ready to run applications can bring great flexibility and added resilience to your code. Spring Boot’s many purpose-built features make it easy to build and run your microservices in production at scale. And don’t forget, no microservice architecture is complete without Spring Cloud – easing administration and boosting your fault-tolerance.

What are microservices?

Why build microservices?

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approach to software whereby application code is delivered in small, manageable pieces, independent of others.

lead to many additional benefits, such as easier maintenance, improved productivity, greater fault tolerance, better business alignment, and more.

Microservices with Spring Boot

With Spring Boot, your microservices can start small and iterate fast. That's why it has become the de facto standard for Java™ microservices. Quickstart your project with Spring Initializr and then package as a JAR. With Spring Boot's embedded server model, you're ready to go in minutes.

TRY OUR QUICKSTART GUIDE

Microservice resilience

The distributed nature of microservices brings challenges. Spring helps you mitigate these. With several ready-to-run cloud patterns, Spring Cloud can help with service discovery,

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Cloud

gateway.

Build streaming data microservices with Spring Cloud Stream

Spring Cloud Stream makes it easy to consume and produce events, no matter which messaging platform you choose. Spring Cloud Stream connects your microservices with real-time messaging in just a few lines of code, to help you build highly scalable, event-driven systems.

Get started with Spring Cloud Stream

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Manage your microservices

Spring Boot's optional instrumentation framework, Micrometer, sends metrics straight to Prometheus, Atlas, and more to provide valuable insights. This is complemented by Spring Cloud's Sleuth and Zipkin projects which offer distributed tracing so that you can follow along with what's happening in real-time.

Get started with Micrometer on Spring Boot

Microservices on Cloud Foundry

The small, stateless nature of microservices makes them ideal for horizontal scaling. Platforms like TAS and PKS can provide scalable infrastructure to match, with and greatly reduce your administrative overhead. Using cloud connectors, you can also consume multiple backend services with ease.

CLOUD FOUNDRY

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Ready to get started?

TRY THIS TUTORIAL

More resources

Migrating to Cloud-Native Application Architectures

Matt Stine

Thinking Architecturally

Nate Schutta

Cloud-Native Java: Designing Resilient Systems with Spring Boot, Spring Cloud, and Cloud Foundry

Josh Long & Kenny Bastani

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