
Testing Java Microservices

Spring REST

SRE with Java Microservices

Hands-On Microservices with Kotlin

Hands-On Microservices with Spring Boot and Spring Cloud

Continuous Delivery in Java

Testing Web APIs

Building Microservices

Kubernetes Native Microservices with Quarkus and MicroProfile

Microservices Patterns

Quarkus Cookbook

Test-driven Development

Building Microservices with Micronaut®

Spring Microservices

Learn Microservices with Spring Boot 3

Microservices

Cracking Spring Microservices Interviews

Production-Ready Microservices

Cloud Native Java
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Cloud Native Microservices with Spring and Kubernetes
Mastering Microservices with Java
Bootstrapping Microservices with Docker, Kubernetes, and Terraform
Enterprise Java Microservices
Microservices with Spring Boot and Spring Cloud
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Mastering Spring Cloud
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Domain-driven Design
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Microservices in Action
Test-Driven Java Development
Microservices Best Practices for Java
Spring: Microservices with Spring Boot

The JHipster Mini-Book
Learn Microservices with Spring Boot
Pro Microservices in .NET 6

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SANTANA YARETZI

Spring REST BPB
Publications
Master the art of
implementing scalable
and reactive
microservices in your
production environment
with Java 11 Key
FeaturesUse domain-
driven designs to build
microservicesExplore

various microservices
design patterns such as
service discovery,
registration, and API
GatewayUse Kafka, Avro,
and Spring Streams to
implement event-based
microservicesBook
Description Microservices
are key to designing
scalable, easy-to-maintain
applications. This latest
edition of Mastering
Microservices with Java,
works on Java 11. It
covers a wide range of

exciting new
developments in the
world of microservices,
including microservices
patterns, interprocess
communication with
gRPC, and service
orchestration. This book
will help you understand
how to implement
microservice-based
systems from scratch.
You'll start off by
understanding the core
concepts and framework,
before focusing on the

high-level design of large software projects. You'll then use Spring Security to secure microservices and test them effectively using REST Java clients and other tools. You will also gain experience of using the Netflix OSS suite, comprising the API Gateway, service discovery and registration, and Circuit Breaker. Additionally, you'll be introduced to the best patterns, practices, and common principles of microservice design that will help you to understand how to

troubleshoot and debug the issues faced during development. By the end of this book, you'll have learned how to build smaller, lighter, and faster services that can be implemented easily in a production environment. What you will learn Use domain-driven designs to develop and implement microservices Understand how to implement microservices using Spring Boot Explore service orchestration and distributed transactions using the Sagas Discover interprocess

communication using REpresentational State Transfer (REST) and events Gain knowledge of how to implement and design reactive microservices Deploy and test various microservices Who this book is for This book is designed for Java developers who are familiar with microservices architecture and now want to effectively implement microservices at an enterprise level. Basic knowledge and understanding of core

microservice elements and applications is necessary.

SRE with Java

Microservices "O'Reilly Media, Inc."

Annotation Over the past 10 years, distributed systems have become more fine-grained. From the large multi-million line long monolithic applications, we are now seeing the benefits of smaller self-contained services. Rather than heavy-weight, hard to change Service Oriented Architectures, we are now seeing systems consisting

of collaborating microservices. Easier to change, deploy, and if required retire, organizations which are in the right position to take advantage of them are yielding significant benefits. This book takes an holistic view of the things you need to be cognizant of in order to pull this off. It covers just enough understanding of technology, architecture, operations and organization to show you how to move towards finer-grained systems.

Hands-On

Microservices with

Kotlin Simon and Schuster

Build fast, efficient Kubernetes-based Java applications using the Quarkus framework, MicroProfile, and Java standards. In Kubernetes Native Microservices with Quarkus and MicroProfile you'll learn how to: Deploy enterprise Java applications on Kubernetes Develop applications using the Quarkus runtime Compile natively using GraalVM for blazing speed Create efficient microservices

applications Take advantage of MicroProfile specifications Popular Java frameworks like Spring were designed long before Kubernetes and the microservices revolution. Kubernetes Native Microservices with Quarkus and MicroProfile introduces next generation tools that have been cloud-native and Kubernetes-aware right from the beginning. Written by veteran Java developers John Clingan and Ken Finnigan, this book shares expert insight into Quarkus and

MicroProfile directly from contributors at Red Hat. You'll learn how to utilize these modern tools to create efficient enterprise Java applications that are easy to deploy, maintain, and expand. About the technology Build microservices efficiently with modern Kubernetes-first tools! Quarkus works naturally with containers and Kubernetes, radically simplifying the development and deployment of microservices. This powerful framework minimizes startup time

and memory use, accelerating performance and reducing hosting cost. And because it's Java from the ground up, it integrates seamlessly with your existing JVM codebase. About the book Kubernetes Native Microservices with Quarkus and MicroProfile teaches you to build microservices using containers, Kubernetes, and the Quarkus framework. You'll immediately start developing a deployable application using Quarkus and the MicroProfile APIs.

Then, you'll explore the startup and runtime gains Quarkus delivers out of the box and also learn how to supercharge performance by compiling natively using GraalVM. Along the way, you'll see how to integrate a Quarkus application with Spring and pick up pro tips for monitoring and managing your microservices. What's inside Deploy enterprise Java applications on Kubernetes Develop applications using the Quarkus runtime framework Compile

natively using GraalVM for blazing speed Take advantage of MicroProfile specifications About the reader For intermediate Java developers comfortable with Java EE, Jakarta EE, or Spring. Some experience with Docker and Kubernetes required. About the author John Clingan is a senior principal product manager at Red Hat, where he works on enterprise Java standards and Quarkus. Ken Finnigan is a senior principal software engineer at Workday,

previously at Red Hat working on Quarkus. Table of Contents PART 1 INTRODUCTION 1 Introduction to Quarkus, MicroProfile, and Kubernetes 2 Your first Quarkus application PART 2 DEVELOPING MICROSERVICES 3 Configuring microservices 4 Database access with Panache 5 Clients for consuming other microservices 6 Application health 7 Resilience strategies 8 Reactive in an imperative world 9 Developing Spring microservices with

Quarkus PART 3
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 DEFINITION, AND
 SECURITY OF
 MICROSERVICES 10
 Capturing metrics 11
 Tracing microservices 12
 API visualization 13
 Securing a microservice

**Hands-On
 Microservices with
 Spring Boot and Spring
 Cloud** Packt Publishing
 Ltd

Summary The best way to
 learn microservices
 development is to build
 something! Bootstrapping
 Microservices with
 Docker, Kubernetes, and

Terraform guides you
 from zero through to a
 complete microservices
 project, including fast
 prototyping,
 development, and
 deployment. You'll get
 your feet wet using
 industry-standard tools as
 you learn and practice the
 practical skills you'll use
 for every microservices
 application. Following a
 true bootstrapping
 approach, you'll begin
 with a simple, familiar
 application and build up
 your knowledge and skills
 as you create and deploy
 a real microservices

project. Purchase of the
 print book includes a free
 eBook in PDF, Kindle, and
 ePub formats from
 Manning Publications.
 About the technology
 Taking microservices from
 proof of concept to
 production is a complex,
 multi-step operation
 relying on tools like
 Docker, Terraform, and
 Kubernetes for packaging
 and deployment. The best
 way to learn the process
 is to build a project from
 the ground up, and that's
 exactly what you'll do
 with this book! About the
 book In Bootstrapping

Microservices with Docker, Kubernetes, and Terraform, author Ashley Davis lays out a comprehensive approach to building microservices. You'll start with a simple design and work layer-by-layer until you've created your own video streaming application. As you go, you'll learn to configure cloud infrastructure with Terraform, package microservices using Docker, and deploy your finished project to a Kubernetes cluster. What's inside Developing and testing microservices

applications Working with cloud providers Applying automated testing Implementing infrastructure as code and setting up a continuous delivery pipeline Monitoring, managing, and troubleshooting About the reader Examples are in JavaScript. No experience with microservices, Kubernetes, Terraform, or Docker required. About the author Ashley Davis is a software developer, entrepreneur, stock trader, and the author of Manning's Data Wrangling

with JavaScript. Table of Contents 1 Why microservices? 2 Creating your first microservice 3 Publishing your first microservice 4 Data management for microservices 5 Communication between microservices 6 Creating your production environment 7 Getting to continuous delivery 8 Automated testing for microservices 9 Exploring FlixTube 10 Healthy microservices 11 Pathways to scalability **Continuous Delivery in Java** Lulu.com

Continuous delivery adds enormous value to the business and the entire software delivery lifecycle, but adopting this practice means mastering new skills typically outside of a developer's comfort zone. In this practical book, Daniel Bryant and Abraham Marín-Pérez provide guidance to help experienced Java developers master skills such as architectural design, automated quality assurance, and application packaging and deployment on a variety

of platforms. Not only will you learn how to create a comprehensive build pipeline for continually delivering effective software, but you'll also explore how Java application architecture and deployment platforms have affected the way we rapidly and safely deliver new software to production environments. Get advice for beginning or completing your migration to continuous delivery Design architecture to enable the continuous delivery of Java applications Build

application artifacts including fat JARs, virtual machine images, and operating system container (Docker) images Use continuous integration tooling like Jenkins, PMD, and find-sec-bugs to automate code quality checks Create a comprehensive build pipeline and design software to separate the deploy and release processes Explore why functional and system quality attribute testing is vital from development to delivery Learn how to effectively build and test

applications locally and observe your system while it runs in production
Testing Web APIs O'Reilly Media

Microservices is an architectural style in which large, complex software applications are composed of one or more smaller services. Each of these microservices focuses on completing one task that represents a small business capability. These microservices can be developed in any programming language. This IBM® Redbooks® publication covers

Microservices best practices for Java. It focuses on creating cloud native applications using the latest version of IBM WebSphere® Application Server Liberty, IBM Bluemix® and other Open Source Frameworks in the Microservices ecosystem to highlight Microservices best practices for Java. [Building Microservices](#) Packt Publishing Ltd Learn how to build, test, secure, deploy, and efficiently consume services across distributed systems. Key Features - Explore the

wealth of options provided by Spring Cloud for wiring service dependencies in microservice systems. - Create microservices utilizing Spring Cloud's Netflix OSS - Architect your cloud-native data using Spring Cloud. Book Description Developing, deploying, and operating cloud applications should be as easy as local applications. This should be the governing principle behind any cloud platform, library, or tool. Spring Cloud—an open-source library—makes it easy to develop JVM

applications for the cloud. In this book, you will be introduced to Spring Cloud and will master its features from the application developer's point of view. This book begins by introducing you to microservices for Spring and the available feature set in Spring Cloud. You will learn to configure the Spring Cloud server and run the Eureka server to enable service registration and discovery. Then you will learn about techniques related to load balancing and circuit breaking and

utilize all features of the Feign client. The book now delves into advanced topics where you will learn to implement distributed tracing solutions for Spring Cloud and build message-driven microservice architectures. Before running an application on Docker containers, you will master testing and securing techniques with Spring Cloud. What you will learn - Abstract Spring Cloud's feature set - Create microservices utilizing Spring Cloud's Netflix OSS - Create

synchronous API microservices based on a message-driven architecture. - Explore advanced topics such as distributed tracing, security, and contract testing. - Manage and deploy applications on the production environment
Who this book is for This book appeals to developers keen to take advantage of Spring cloud, an open source library which helps developers quickly build distributed systems. Knowledge of Java and Spring Framework will be

helpful, but no prior exposure to Spring Cloud is required.

Kubernetes Native Microservices with Quarkus and

MicroProfile "O'Reilly Media, Inc."

Invoke TDD principles for end-to-end application development with Java
About This Book Explore the most popular TDD tools and frameworks and become more proficient in building applications
Create applications with better code design, fewer bugs, and higher test coverage, enabling you to

get them to market quickly
Implement test-driven programming methods into your development workflows
Who This Book Is For If you're an experienced Java developer and want to implement more effective methods of programming systems and applications, then this book is for you.
What You Will Learn Explore the tools and frameworks required for effective TDD development
Perform the Red-Green-Refactor process efficiently, the pillar around which all

other TDD procedures are based
Master effective unit testing in isolation from the rest of your code
Design simple and easily maintainable codes by implementing different techniques
Use mocking frameworks and techniques to easily write and quickly execute tests
Develop an application to implement behaviour-driven development in conjunction with unit testing
Enable and disable features using Feature Toggles
In Detail Test-driven development (TDD) is a development

approach that relies on a test-first procedure that emphasises writing a test before writing the necessary code, and then refactoring the code to optimize it. The value of performing TDD with Java, one of the most established programming languages, is to improve the productivity of programmers, the maintainability and performance of code, and develop a deeper understanding of the language and how to employ it effectively. Starting with the basics of

TDD and reasons why its adoption is beneficial, this book will take you from the first steps of TDD with Java until you are confident enough to embrace the practice in your day-to-day routine. You'll be guided through setting up tools, frameworks, and the environment you need, and will dive right in to hands-on exercises with the goal of mastering one practice, tool, or framework at a time. You'll learn about the Red-Green-Refactor procedure, how to write

unit tests, and how to use them as executable documentation. With this book you'll also discover how to design simple and easily maintainable code, work with mocks, utilise behaviour-driven development, refactor old legacy code, and release a half-finished feature to production with feature toggles. You will finish this book with a deep understanding of the test-driven development methodology and the confidence to apply it to application programming with Java. Style and

approach An easy-to-follow, hands-on guide to building applications through effective coding practices. This book covers practical examples by introducing different problems, each one designed as a learning exercise to help you understand each aspect of TDD.

Microservices Patterns

Packt Publishing Ltd

Summary Effective Unit Testing is written to show how to write good tests—tests that are concise and to the point, expressive, useful, and

maintainable. Inspired by Roy Osherove's bestselling *The Art of Unit Testing*, this book focuses on tools and practices specific to the Java world. It introduces you to emerging techniques like behavior-driven development and specification by example, and shows you how to add robust practices into your toolkit. About Testing Test the components before you assemble them into a full application, and you'll get better software. For Java developers, there's now a decade of

experience with well-crafted tests that anticipate problems, identify known and unknown dependencies in the code, and allow you to test components both in isolation and in the context of a full application. About this Book Effective Unit Testing teaches Java developers how to write unit tests that are concise, expressive, useful, and maintainable. Offering crisp explanations and easy-to-absorb examples, it introduces emerging

techniques like behavior-driven development and specification by example. Programmers who are already unit testing will learn the current state of the art. Those who are new to the game will learn practices that will serve them well for the rest of their career. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. About the Author Lasse Koskela is a coach, trainer, consultant, and programmer. He

hacks on open source projects, helps companies improve their productivity, and speaks frequently at conferences around the world. Lasse is the author of *Test Driven, also published by Manning. What's Inside A thorough introduction to unit testing Choosing best-of-breed tools Writing tests using dynamic languages Efficient test automation Table of Contents PART 1 FOUNDATIONS The promise of good tests In search of good Test doubles PART 2 CATALOG*

Readability Maintainability Trustworthiness PART 3 DIVERSIONS Testable design Writing tests in other JVM languages Speeding up test execution [Quarkus Cookbook](#) Simon and Schuster Summary Enterprise Java Microservices is an example-rich tutorial that shows how to design and manage large-scale Java applications as a collection of microservices. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats

from Manning Publications. About the Technology Large applications are easier to develop and maintain when you build them from small, simple components. Java developers now enjoy a wide range of tools that support microservices application development, including right-sized app servers, open source frameworks, and well-defined patterns. Best of all, you can build microservices applications using your existing Java skills. About the Book

Enterprise Java Microservices teaches you to design and build JVM-based microservices applications. You'll start by learning how microservices designs compare to traditional Java EE applications. Always practical, author Ken Finnigan introduces big-picture concepts along with the tools and techniques you'll need to implement them. You'll discover ecosystem components like Netflix Hystrix for fault tolerance and master the Just enough Application Server

(JeAS) approach. To ensure smooth operations, you'll also examine monitoring, security, testing, and deploying to the cloud. What's inside The microservices mental model Cloud-native development Strategies for fault tolerance and monitoring Securing your finished applications About the Reader This book is for Java developers familiar with Java EE. About the Author Ken Finnigan leads the Thorntail project at Red Hat, which seeks to make

developing microservices for the cloud with Java and Java EE as easy as possible. Table of Contents PART 1 MICROSERVICES BASICS Enterprise Java microservices Developing a simple RESTful microservice Just enough Application Server for microservices Microservices testing Cloud native development PART 2 - IMPLEMENTING ENTERPRISE JAVA MICROSERVICES Consuming microservices Discovering microservices for consumption

Strategies for fault tolerance and monitoring
 Securing a microservice
 Architecting a microservice hybrid Data streaming with Apache Kafka
Test-driven Development
 "O'Reilly Media, Inc."
 One of the biggest challenges for organizations that have adopted microservice architecture is the lack of architectural, operational, and organizational standardization. After splitting a monolithic application or building a microservice ecosystem

from scratch, many engineers are left wondering what's next. In this practical book, author Susan Fowler presents a set of microservice standards in depth, drawing from her experience standardizing over a thousand microservices at Uber. You'll learn how to design microservices that are stable, reliable, scalable, fault tolerant, performant, monitored, documented, and prepared for any catastrophe. Explore production-readiness standards, including:

Stability and Reliability: develop, deploy, introduce, and deprecate microservices; protect against dependency failures Scalability and Performance: learn essential components for achieving greater microservice efficiency Fault Tolerance and Catastrophe Preparedness: ensure availability by actively pushing microservices to fail in real time Monitoring: learn how to monitor, log, and display key metrics; establish alerting and on-call

procedures Documentation and Understanding: mitigate tradeoffs that come with microservice adoption, including organizational sprawl and technical debt **Building Microservices with Micronaut®** Packt Publishing Ltd Optimized for Kubernetes, Quarkus is designed to help you create Java applications that are cloud first, container native, and serverless capable. With this cookbook, authors Alex Soto Bueno and Jason Porter from Red Hat

provide detailed solutions for installing, interacting with, and using Quarkus in the development and production of microservices. The recipes in this book show midlevel to senior developers familiar with Java enterprise application development how to get started with Quarkus quickly. You'll become familiar with how Quarkus works within the wider Java ecosystem and discover ways to adapt this framework to your particular needs. You'll learn how to: Shorten the

development cycle by enabling live reloading in dev mode Connect to and communicate with Kafka Develop with the reactive programming model Easily add fault tolerance to your services Build your application as a Kubernetes-ready container Ease development with OpenAPI and test a native Quarkus application Spring Microservices Simon and Schuster Ensure your web APIs are consistent and bug-free by implementing an automated testing

process. In Testing Web APIs you will: Design and implement a web API testing strategy Set up a test automation suite Learn contract testing with Pact Facilitate collaborative discussions to test web API designs Perform exploratory tests Experiment safely in a downloadable API sandbox environment Testing Web APIs teaches you to plan and implement the perfect testing strategy for your web APIs. In it, you'll explore dozens of different testing activities

to help you develop a custom testing regime for your projects. This practical book demystifies abstract strategic concepts by applying them to common API testing scenarios, revealing how these complex ideas work in the real world. You'll learn to take a risk-driven approach to API testing, and build a strategy that goes beyond the basics of code and requirements coverage. Your whole team will soon be involved in ensuring quality! About the

technology Web APIs are the public face of your application, and they need to be perfect. Implementing an automated testing program is the best way to ensure that your web APIs are production ready. About the book Testing Web APIs is a unique and practical guide, from the initial design of your testing suite through techniques for documentation, implementation, and delivery of consistently excellent APIs. You'll see a wide range of testing

techniques, from exploratory to live testing of production code, and how to save time with automation using industry-standard tools. This book helps take the hassle out of API testing. What's inside Design and implement a web API testing strategy Set up a test automation suite Contract testing with Pact Hands-on practice in the downloadable API sandbox About the reader For dedicated software QA and testers, or experienced developers. Examples in Java. About

the author Mark Winteringham is the OpsBoss at Ministry of Testing, where he teaches many aspects of software testing. Table of Contents
PART 1 THE VALUE OF WEB API TESTING 1 Why and how we test web APIs 2 Beginning our testing journey 3 Quality and risk
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PART 3 EXPANDING OUR TEST

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Learn Microservices with Spring Boot 3
 Packt Publishing Ltd
 Master the art of implementing scalable microservices in your production environment with ease About This Book
 Use domain-driven design to build microservices Use Spring Cloud to use Service Discovery and Registration Use Kafka, Avro and Spring Streams

for implementing event based microservices Who This Book Is For This book is for Java developers who are familiar with the microservices architecture and now wants to take a deeper dive into effectively implementing microservices at an enterprise level. A reasonable knowledge level and understanding of core microservice elements and applications is expected. What You Will Learn Use domain-driven design to design and implement microservices Secure microservices

using Spring Security Learn to develop REST service development Deploy and test microservices Troubleshoot and debug the issues faced during development Learning best practices and common principals about microservices In Detail Microservices are the next big thing in designing scalable, easy-to-maintain applications. It not only makes app development easier, but also offers great flexibility to utilize various resources optimally. If you want to

build an enterprise-ready implementation of the microservices architecture, then this is the book for you! Starting off by understanding the core concepts and framework, you will then focus on the high-level design of large software projects. You will gradually move on to setting up the development environment and configuring it before implementing continuous integration to deploy your microservice architecture. Using Spring security, you will secure microservices

and test them effectively using REST Java clients and other tools like RxJava 2.0. We'll show you the best patterns, practices and common principals of microservice design and you'll learn to troubleshoot and debug the issues faced during development. We'll show you how to design and implement reactive microservices. Finally, we'll show you how to migrate a monolithic application to microservices based application. By the end of the book, you will know

how to build smaller, lighter, and faster services that can be implemented easily in a production environment. Style and approach This book starts from the basics, including environment setup and provides easy-to-follow steps to implement the sample project using microservices. *Microservices* O'Reilly Media Learn Spring Boot and how to build Java-based enterprise, web, and microservice applications with it. In this book, you'll

see how to work with relational and NoSQL databases, build your first microservice, enterprise, or web application, and enhance that application with REST APIs. You'll also learn how to build reactive web applications using Spring Boot along with Spring Web Reactive. Then you'll secure your Spring Boot-created application or service before testing and deploying it. After reading and learning with *Beginning Spring Boot 2*, you'll have the skills and techniques to start

building your first Spring Boot applications and microservices with confidence to take the next steps in your career journey. What You'll Learn Use Spring Boot autoconfiguration Work with relational and NoSQL databases Build web applications with Spring Boot Apply REST APIs using Spring Boot Create reactive web applications using Spring Web Reactive Secure your Spring Boot applications or web services Test and deploy your Spring Boot applications Who This

Book Is For Experienced Java and Spring Framework developers who are new to the new Spring Boot micro-framework.
[Cracking Spring Microservices Interviews](#)
 Munish Chandel
 The author of "Prefactoring" and "All on C" shows how to develop well-structured, reliable software as a collection of interfaces that interact with each other.
Production-Ready Microservices Packt Publishing Ltd
 "Domain-Driven Design"

incorporates numerous examples in Java-case studies taken from actual projects that illustrate the application of domain-driven design to real-world software development.

Cloud Native Java

Prentice Hall

Explore different aspects of building modular microservices such as development, testing, maintenance, and deployment using the Micronaut framework

Key Features Learn how to build scalable, fast, and resilient microservices

with this concise guide

Explore the many advantages of using reflection-free, compile-time dependency injections and aspect-oriented programming

Build cloud-native applications easily with the Micronaut framework

Book Description The open source Micronaut® framework is a JVM-based toolkit designed to create microservices quickly and easily. This book will help full-stack and Java developers build modular, high-performing, and

reactive microservice-based apps using the Micronaut framework. You'll start by building microservices and learning about the core components, such as ahead-of-time compilation, reflection-less dependency injection, and reactive baked-in HTTP clients and servers. Next, you will work on a real-time microservice application and learn how to integrate Micronaut projects with different kinds of relational and non-relational databases. You'll also learn how to

employ different security mechanisms to safeguard your microservices and integrate microservices using event-driven architecture in the Apache Kafka ecosystem. As you advance, you'll get to grips with automated testing and popular testing tools. The book will help you understand how you can easily handle microservice concerns in Micronaut projects, such as service discovery, API documentation, distributed configuration management, fallbacks, and circuit breakers.

Finally, you'll explore the deployment and maintenance aspects of microservices and get up to speed with the Internet of Things (IoT) using the Framework. By the end of this book, you'll be able to build, test, deploy, and maintain your own microservice apps using the framework. What you will learn Understand why the Micronaut framework is best suited for building microservices Build web endpoints and services in the Micronaut framework Safeguard microservices using

Session, JWT, and OAuth in Micronaut projects Get to grips with event-driven architecture in Micronaut applications Discover how to automate testing at various levels using built-in tools and testing frameworks Deploy your microservices to containers and cloud platforms Become well-versed with distributed logging, tracing, and monitoring in Micronaut projects Get hands-on with the IoT using Alexa and the Micronaut framework Who this book is for This book is for

developers who have been building microservices on traditional frameworks such as Spring Boot and are looking for a faster alternative. Intermediate-level knowledge of Java programming and implementing web services development in Java is required.

Testing Microservices with Mountebank

Apress

The Most Complete, Practical, and Actionable Guide to Microservices
Going beyond mere theory and marketing

hype, Eberhard Wolff presents all the knowledge you need to capture the full benefits of this emerging paradigm. He illuminates microservice concepts, architectures, and scenarios from a technology-neutral standpoint, and demonstrates how to implement them with today's leading technologies such as Docker, Java, Spring Boot, the Netflix stack, and Spring Cloud. The author fully explains the benefits and tradeoffs associated

with microservices, and guides you through the entire project lifecycle: development, testing, deployment, operations, and more. You'll find best practices for architecting microservice-based systems, individual microservices, and nanoservices, each illuminated with pragmatic examples. The author supplements opinions based on his experience with concise essays from other experts, enriching your understanding and illuminating areas where

experts disagree. Readers are challenged to experiment on their own the concepts explained in the book to gain hands-on experience. Discover what microservices are, and how they differ from other forms of modularization Modernize legacy applications and efficiently build new systems Drive more value from continuous delivery with microservices Learn how microservices differ from SOA Optimize the microservices project lifecycle Plan, visualize, manage, and evolve

architecture Integrate and communicate among microservices Apply advanced architectural techniques, including CQRS and Event Sourcing Maximize resilience and stability Operate and monitor microservices in production Build a full implementation with Docker, Java, Spring Boot, the Netflix stack, and Spring Cloud Explore nanoservices with Amazon Lambda, OSGi, Java EE, Vert.x, Erlang, and Seneca Understand microservices' impact on teams, technical leaders,

product owners, and stakeholders Managers will discover better ways to support microservices, and learn how adopting the method affects the entire organization. Developers will master the technical skills and concepts they need to be effective. Architects will gain a deep understanding of key issues in creating or migrating toward microservices, and exactly what it will take to transform their plans into reality. Cloud Native

Microservices with Spring and Kubernetes IBM Redbooks

"The one [and only] book on implementing microservices with a real-world, cover-to-cover example you can relate to." - Christian Bach, Swiss Re Microservices in Action is a practical book about building and deploying microservice-based applications. Written for developers and architects with a solid grasp of service-oriented development, it tackles the challenge of putting microservices into

production. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Invest your time in designing great applications, improving infrastructure, and making the most out of your dev teams. Microservices are easier to write, scale, and maintain than traditional enterprise applications because they're built as a system of independent components. Master a few important new patterns

and processes, and you'll be ready to develop, deploy, and run production-quality microservices. About the Book Microservices in Action teaches you how to write and maintain microservice-based applications. Created with day-to-day development in mind, this informative guide immerses you in real-world use cases from design to deployment. You'll discover how microservices enable an efficient continuous delivery pipeline, and explore examples using

Kubernetes, Docker, and Google Container Engine. What's inside An overview of microservice architecture Building a delivery pipeline Best practices for designing multi-service transactions and queries Deploying with containers Monitoring your microservices About the Reader Written for intermediate developers familiar with enterprise architecture and cloud platforms like AWS and GCP. About the Author

Morgan Bruce and Paulo A. Pereira are experienced engineering leaders. They work daily with microservices in a production environment, using the techniques detailed in this book. Table of Contents Designing and running microservices Microservices at SimpleBank Architecture of a microservice application Designing new features Transactions and queries in microservices Designing reliable

services Building a reusable microservice framework Deploying microservices Deployment with containers and schedulers Building a delivery pipeline for microservices Building a monitoring system Using logs and traces to understand behavior Building microservice teams PART 1 - The lay of the land PART 2 - Design PART 3 - Deployment PART 4 - Observability and ownership