
Cloud Native Java Designing Resilient Systems With Spring Boot Spring Cloud And Cloud Foundry

Beginning Quarkus Framework
 Design high-performing and cost-effective applications for the cloud
 Modernizing Enterprise Java
 Build self-healing, microservices-based, distributed systems using Spring Cloud
 Resilient Microservices with Spring Boot 2 and Spring Cloud
 Cloud Native DevOps with Kubernetes
 Build modern, cloud-native, and distributed systems using Spring Boot
 Hands-On Cloud-Native Applications with Java and Quarkus
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 Release It!
 Building, Deploying, and Scaling Modern Applications in the Cloud
 A guide for programmers interested in developing cloud native applications using Ballerina Swan Lake
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 Design and Deploy Production-Ready Software
 Build resilient and scalable microservices using Spring Cloud, Istio, and Kubernetes, 2nd Edition
 Cloud Foundry
 Reusable Elements for Designing Cloud-Native Applications
 A Problem-Solution Approach
 A Problem-Solution Approach
 Reactive Spring
 Architecting Cloud Native Applications
 Mastering Spring Cloud
 Cloud Native Patterns
 Spring Microservices in Action
 97 Things Every Cloud Engineer Should Know
 Design and Build Modern Cloud Native Applications using Spring and Kubernetes (English Edition)
 Mastering Spring Boot 2.0
 Build and deploy Java microservices using Spring Cloud, Istio, and Kubernetes
 Cloud Native Infrastructure
 Kubernetes Patterns
 Develop microservice-based high performance web apps for the cloud with Go
 Spring Boot Messaging
 Simplify the development of lightning fast applications based on microservices and reactive programming
 Build microservice-based cloud-native applications that dynamically scale
 Istio in Action
 Design Patterns for Cloud Native Applications
 Build high performance, Kubernetes-native Java serverless applications
 Spring Boot in Action
 Designing Resilient Systems with Spring Boot, Spring Cloud, and Cloud Foundry
 Build Cloud-Native Enterprise Java Applications and Microservices

Cloud Native Java Designing Resilient Systems With Spring Boot Spring Cloud And Cloud Foundry

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ELLISON BRANDT

Beginning Quarkus Framework "O'Reilly Media, Inc."
 Build and deploy scalable cloud native microservices using the Spring framework and Kubernetes. KEY FEATURES ● Complete coverage on how to design, build, run, and deploy modern cloud native microservices. ● Includes numerous sample code exercises on microservices, Spring and Kubernetes. ● Develop a stronghold on Kubernetes, Spring, and the microservices architecture. ● Complete guide of application containerization on Kubernetes containers. ● Coverage on managing modern applications and infrastructure using observability tools. DESCRIPTION The main objective of this book is to give an overview of cloud native microservices, their architecture, design patterns, best practices, real use cases and practical coverage of modern applications. This book covers a strong understanding of

the fundamentals of microservices, API first approach, Testing, observability, API Gateway, Service Mesh and Kubernetes alternatives of Spring Cloud. This book covers the implementation of various design patterns of developing cloud native microservices using Spring framework docker and Kubernetes libraries. It covers containerization concepts and hands-on lab exercises like how to build, run and manage microservices applications using Kubernetes. After reading this book, the readers will have a holistic understanding of building, running, and managing cloud native microservices applications on Kubernetes containers. WHAT YOU WILL LEARN ● Learn fundamentals of microservice and design patterns. ● Learn microservices development using Spring Boot and Kubernetes. ● Learn to develop reactive, event-driven, and batch microservices. ● Perform end-to-end microservices testing using Cucumber. ● Implement API gateway, authentication & authorization, load balancing, caching, rate limiting. ● Learn observability and monitoring techniques of microservices. WHO THIS BOOK IS FOR

This book is for the Spring Developers, Microservice Developers, Cloud Engineers, DevOps Consultants, Technical Architect and Solution Architects, who have some familiarity with application development, Docker and Kubernetes containers. TABLE OF CONTENTS 1. Overview of Cloud Native microservices 2. Microservice design patterns 3. API first approach 4. Build microservices using the Spring Framework 5. Batch microservices 6. Build reactive and event-driven microservices 7. The API gateway, security, and distributed caching with Redis 8. Microservices testing and API mocking 9. Microservices observability 10. Containers and Kubernetes overview and architecture 11. Run microservices on Kubernetes 12. Service Mesh and Kubernetes alternatives of Spring Cloud

Design high-performing and cost-effective applications for the cloud "O'Reilly Media, Inc."

Performance tuning is an experimental science, but that doesn't mean engineers should resort to guesswork and folklore to get the job done. Yet that's often the case. With this practical book, intermediate to advanced Java technologists working with complex technology stacks will learn how to tune Java applications for performance using a quantitative, verifiable approach. Most resources on performance tend to discuss the theory and internals of Java virtual machines, but this book focuses on the practicalities of performance tuning by examining a wide range of aspects. There are no simple recipes, tips and tricks, or algorithms to learn. Performance tuning is a process of defining and determining desired outcomes. And it requires diligence. Learn how Java principles and technology make the best use of modern hardware and operating systems Explore several performance tests and common anti-patterns that can vex your team Understand the pitfalls of measuring Java performance numbers and the drawbacks of microbenchmarking Dive into JVM garbage collection logging, monitoring, tuning, and tools Explore JIT compilation and Java language performance techniques Learn performance aspects of the Java Collections API and get an overview of Java concurrency

[Modernizing Enterprise Java](#) Packt Publishing Ltd

Solve difficult service-to-service communication challenges around security, observability, routing, and resilience with an Istio-based service mesh. Istio allows you to define these traffic policies as configuration and enforce them consistently without needing any service-code changes. In Istio in Action you will learn: Why and when to use a service mesh Envoy's role in Istio's service mesh Allowing "North-South" traffic into a mesh Fine-grained traffic routing Make your services robust to network failures Gain observability over your system with telemetry "golden signals" How Istio makes your services secure by default Integrate cloud-native applications with legacy workloads such as in VMs Reduce the operational complexity of your microservices with an Istio-powered service mesh! Istio in Action shows you how to implement this powerful new architecture and move your application-networking concerns to a dedicated infrastructure layer. Non-functional concerns stay separate from your application, so your code is easier to understand, maintain, and adapt regardless of programming language. In this practical guide, you'll go hands-on with the full-featured Istio service mesh to manage microservices communication. Helpful diagrams, example configuration, and examples make it easy to understand how to control routing, secure container applications, and monitor network traffic. About the technology Offload complex microservice communication layer challenges to Istio! The industry-standard Istio service mesh radically simplifies security, routing, observability, and other service-to-service communication challenges. With Istio, you use a straightforward declarative configuration style to establish application-level

network policies. By separating communication from business logic, your services are easier to write, maintain, and modify. About the book Istio in Action teaches you how to implement an Istio-based service mesh that can handle complex routing scenarios, traffic encryption, authorization, and other common network-related tasks. You'll start by defining a basic service mesh and exploring the data plane with Istio's service proxy, Envoy. Then, you'll dive into core topics like traffic routing and visualization and service-to-service authentication, as you expand your service mesh to workloads on multiple clusters and legacy VMs. What's inside Comprehensive coverage of Istio resources Practical examples to showcase service mesh capabilities Implementation of multi-cluster service meshes How to extend Istio with WebAssembly Traffic routing and observability VM integration into the mesh About the reader For developers, architects, and operations engineers. About the author Christian Posta is a well-known architect, speaker, and contributor. Rinor Maluku is an engineer at Solo.io working on application networking solutions. Table of Contents PART 1 UNDERSTANDING ISTIO 1 Introducing the Istio service mesh 2 First steps with Istio 3 Istio's data plane: The Envoy proxy PART 2 SECURING, OBSERVING, AND CONTROLLING YOUR SERVICE'S NETWORK TRAFFIC 4 Istio gateways: Getting traffic into a cluster 5 Traffic control: Fine-grained traffic routing 6 Resilience: Solving application networking challenges 7 Observability: Understanding the behavior of your services 8 Observability: Visualizing network behavior with Grafana, Jaeger, and Kiali 9 Securing microservice communication PART 3 ISTIO DAY-2 OPERATIONS 10 Troubleshooting the data plane 11 Performance-tuning the control plane PART 4 ISTIO IN YOUR ORGANIZATION 12 Scaling Istio in your organization 13 Incorporating virtual machine workloads into the mesh 14 Extending Istio on the request path

Build self-healing, microservices-based, distributed systems using Spring Cloud Packt Publishing Ltd

Learn how to build scalable cloud native applications with the new-generation Ballerina language using expert tips and best practices Key Features Work with code samples based on the Ballerina Swan Lake Beta1 version Explore the in-built networking protocol support in Ballerina to develop secure distributed apps Build a Ballerina app with an automated CI/CD pipeline with observability to simplify maintenance and deployment Book Description The Ballerina programming language was created by WSO2 for the modern needs of developers where cloud native development techniques have become ubiquitous. Ballerina simplifies how programmers develop and deploy cloud native distributed apps and microservices. Cloud Native Applications with Ballerina will guide you through Ballerina essentials, including variables, types, functions, flow control, security, and more. You'll explore networking as an in-built feature in Ballerina, which makes it a first-class language for distributed computing. With this app development book, you'll learn about different networking protocols as well as different architectural patterns that you can use to implement services on the cloud. As you advance, you'll explore multiple design patterns used in microservice architecture and use serverless in Amazon Web Services (AWS) and Microsoft Azure platforms. You will also get to grips with Docker, Kubernetes, and serverless platforms to simplify maintenance and the deployment process. Later, you'll focus on the Ballerina testing framework along with deployment tools and monitoring tools to build fully automated observable cloud applications. By the end of this book, you will have learned how to apply the Ballerina language for building scalable, resilient, secured, and easy-to-maintain cloud native Ballerina projects and applications. What you will learn Understand the concepts and models in cloud native architecture Get to grips

with the high-level concepts of building applications with the Ballerina language Use cloud native architectural design patterns to develop cloud native Ballerina applications Discover how to automate, maintain, and observe cloud native Ballerina applications Use a container to deploy and maintain a Ballerina application with Docker and Kubernetes Explore serverless architecture and use Microsoft Azure and the AWS platform to build serverless applications Who this book is for This Ballerina Swan Lake book is for cloud developers, integration developers, and microservices developers who are facing challenges with legacy tooling and are looking for the latest tools and technologies to solve them. Beginner-level programming knowledge is required before getting started with this Ballerina book.

Resilient Microservices with Spring Boot 2 and Spring Cloud
Pragmatic Bookshelf

Resilience and fault tolerance are a must, or your system will fall apart. This book will teach you how to build a resilient microservice infrastructure using proven patterns with Spring Boot 2 and Spring Cloud. --

Cloud Native DevOps with Kubernetes "O'Reilly Media, Inc."

Learn to develop, test, and deploy your Spring Boot distributed application and explore various best practices. Key Features Build and deploy your microservices architecture in the cloud Build event-driven resilient systems using Hystrix and Turbine Explore API management tools such as KONG and API documentation tools such as Swagger Book Description Spring is one of the best frameworks on the market for developing web, enterprise, and cloud ready software. Spring Boot simplifies the building of complex software dramatically by reducing the amount of boilerplate code, and by providing production-ready features and a simple deployment model. This book will address the challenges related to power that come with Spring Boot's great configurability and flexibility. You will understand how Spring Boot configuration works under the hood, how to overwrite default configurations, and how to use advanced techniques to prepare Spring Boot applications to work in production. This book will also introduce readers to a relatively new topic in the Spring ecosystem - cloud native patterns, reactive programming, and applications. Get up to speed with microservices with Spring Boot and Spring Cloud. Each chapter aims to solve a specific problem or teach you a useful skillset. By the end of this book, you will be proficient in building and deploying your Spring Boot application. What you will learn Build logically structured and highly maintainable Spring Boot applications Configure RESTful microservices using Spring Boot Make the application production and operation-friendly with Spring Actuator Build modern, high-performance distributed applications using cloud patterns Manage and deploy your Spring Boot application to the cloud (AWS) Monitor distributed applications using log aggregation and ELK Who this book is for The book is targeted at experienced Spring and Java developers who have a basic knowledge of working with Spring Boot. The reader should be familiar with Spring Boot basics, and aware of its benefits over traditional Spring Framework-based applications.

Build modern, cloud-native, and distributed systems using Spring Boot Apress

The way developers design, build, and run software has changed significantly with the evolution of microservices and containers. These modern architectures use new primitives that require a different set of practices than most developers, tech leads, and architects are accustomed to. With this focused guide, Bilgin Ibryam and Roland Huß from Red Hat provide common reusable elements, patterns, principles, and practices for designing and implementing cloud-native applications on Kubernetes. Each

pattern includes a description of the problem and a proposed solution with Kubernetes specifics. Many patterns are also backed by concrete code examples. This book is ideal for developers already familiar with basic Kubernetes concepts who want to learn common cloud native patterns. You'll learn about the following pattern categories: Foundational patterns cover the core principles and practices for building container-based cloud-native applications. Behavioral patterns explore finer-grained concepts for managing various types of container and platform interactions. Structural patterns help you organize containers within a pod, the atom of the Kubernetes platform. Configuration patterns provide insight into how application configurations can be handled in Kubernetes. Advanced patterns covers more advanced topics such as extending the platform with operators. *Hands-On Cloud-Native Applications with Java and Quarkus* Apress

Summary Cloud Native Patterns is your guide to developing strong applications that thrive in the dynamic, distributed, virtual world of the cloud. This book presents a mental model for cloud-native applications, along with the patterns, practices, and tooling that set them apart. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Cloud platforms promise the holy grail: near-zero downtime, infinite scalability, short feedback cycles, fault-tolerance, and cost control. But how do you get there? By applying cloudnative designs, developers can build resilient, easily adaptable, web-scale distributed applications that handle massive user traffic and data loads. Learn these fundamental patterns and practices, and you'll be ready to thrive in the dynamic, distributed, virtual world of the cloud. About the Book With 25 years of experience under her belt, Cornelia Davis teaches you the practices and patterns that set cloud-native applications apart. With realistic examples and expert advice for working with apps, data, services, routing, and more, she shows you how to design and build software that functions beautifully on modern cloud platforms. As you read, you will start to appreciate that cloud-native computing is more about the how and why rather than the where. What's inside The lifecycle of cloud-native apps Cloud-scale configuration management Zero downtime upgrades, versioned services, and parallel deploys Service discovery and dynamic routing Managing interactions between services, including retries and circuit breakers About the Reader Requires basic software design skills and an ability to read Java or a similar language. About the Author Cornelia Davis is Vice President of Technology at Pivotal Software. A teacher at heart, she's spent the last 25 years making good software and great software developers. Table of Contents PART 1 - THE CLOUD-NATIVE CONTEXT You keep using that word: Defining "cloud-native" Running cloud-native applications in production The platform for cloud-native software PART 2 - CLOUD-NATIVE PATTERNS Event-driven microservices: It's not just request/response App redundancy: Scale-out and statelessness Application configuration: Not just environment variables The application lifecycle: Accounting for constant change Accessing apps: Services, routing, and service discovery Interaction redundancy: Retries and other control loops Fronting services: Circuit breakers and API gateways Troubleshooting: Finding the needle in the haystack Cloud-native data: Breaking the data monolith

Hands-On Microservices with Spring Boot and Spring Cloud
Apress

The Spring framework is growing. It has always been about choice. Java EE focused on a few technologies, largely to the detriment of alternative, better solutions. When the Spring framework debuted, few would have agreed that Java EE

represented the best-in-breed architectures of the day. Spring debuted to great fanfare, because it sought to simplify Java EE. Each release since marks the introduction of new features designed to both simplify and enable solutions. With version 2.0 and later, the Spring framework started targeting multiple platforms. The framework provided services on top of existing platforms, as always, but was decoupled from the underlying platform wherever possible. Java EE is still a major reference point, but it's not the only target. OSGi (a promising technology for modular architectures) has been a big part of the SpringSource strategy here. Additionally, the Spring framework runs on Google App Engine. With the introduction of annotation-centric frameworks and XML schemas, SpringSource has built frameworks that effectively model the domain of a specific problem, in effect creating domain-specific languages (DSLs). Frameworks built on top of the Spring framework have emerged supporting application integration, batch processing, Flex and Flash integration, GWT, OSGi, and much more.

[Release It!](#) "O'Reilly Media, Inc."

Spring Microservices in Action, Second Edition teaches you to build microservice-based applications using Java and Spring. Summary By dividing large applications into separate self-contained units, Microservices are a great step toward reducing complexity and increasing flexibility. Spring Microservices in Action, Second Edition teaches you how to build microservice-based applications using Java and the Spring platform. This second edition is fully updated for the latest version of Spring, with expanded coverage of API routing with Spring Cloud Gateway, logging with the ELK stack, metrics with Prometheus and Grafana, security with the Hashicorp Vault, and modern deployment practices with Kubernetes and Istio. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Building and deploying microservices can be easy in Spring! Libraries like Spring Boot, Spring Cloud, and Spring Cloud Gateway reduce the boilerplate code in REST-based services. They provide an effective toolbox to get your microservices up and running on both public and private clouds. About the book Spring Microservices in Action, Second Edition teaches you to build microservice-based applications using Java and Spring. You'll start by creating basic services, then move to efficient logging and monitoring. Learn to refactor Java applications with Spring's intuitive tooling, and master API management with Spring Cloud Gateway. You'll even deploy Spring Cloud applications with AWS and Kubernetes. What's inside Microservice design principles and best practices Configuration with Spring Cloud Config and Hashicorp Vault Client-side resiliency with Resilience4j, and Spring Cloud Load Balancer Metrics monitoring with Prometheus and Grafana Distributed tracing with Spring Cloud Sleuth, Zipkin, and ELK Stack About the reader For experienced Java and Spring developers. About the author John Carnell is a senior cloud engineer with 20 years of Java experience. Illary Huaylupo Sánchez is a software engineer with over 13 years of experience. Table of Contents 1 Welcome to the cloud, Spring 2 Exploring the microservices world with Spring Cloud 3 Building microservices with Spring Boot 4 Welcome to Docker 5 Controlling your configuration with the Spring Cloud Configuration Server 6 On service discovery 7 When bad things happen: Resiliency patterns with Spring Cloud and Resilience4j 8 Service routing with Spring Cloud Gateway 9 Securing your microservices 10 Event-driven architecture with Spring Cloud Stream 11 Distributed tracing with Spring Cloud Sleuth and Zipkin 12 Deploying your microservices *Building, Deploying, and Scaling Modern Applications in the Cloud* Cloud Native Java Designing Resilient Systems with Spring Boot, Spring Cloud, and Cloud Foundry

Solve all your Spring 5 problems using complete and real-world code examples. When you start a new project, you'll be able to copy the code and configuration files from this book, and then modify them for your needs. This can save you a great deal of work over creating a project from scratch. The recipes in Spring 5 Recipes cover Spring fundamentals such as Spring IoC container, Spring AOP/ AspectJ, and more. Other recipes include Spring enterprise solutions for topics such as Spring Java EE integration, Spring Integration, Spring Batch, Spring Remoting, messaging, transactions, and working with big data and the cloud using Hadoop and MongoDB. Finally, Spring web recipes cover Spring MVC, other dynamic scripting, integration with the popular Grails Framework (and Groovy), REST/web services, and more. You'll also see recipes on new topics such as Spring Framework 5, reactive Spring, Spring 5 microservices, the functional web framework and much more. This book builds upon the best-selling success of the previous editions and focuses on the latest Spring Framework features for building enterprise Java applications. What You'll Learn Get re-usable code recipes and snippets for core Spring, annotations and other development tools Access Spring MVC for web development Work with Spring REST and microservices for web services development and integration into your enterprise Java applications Use Spring Batch, NoSQL and big data for building and integrating various cloud computing services and resources Integrate Java Enterprise Edition and other Java APIs for use in Spring Use Grails code and much more Who This Book Is For Experienced Java and Spring programmers. [A guide for programmers interested in developing cloud native applications using Ballerina Swan Lake](#) Simon and Schuster Build robust and reliable Java applications that works on modern infrastructure, such as containers and cloud, using the new features in Quarkus 1.0 Key Features Build apps with faster boot time and low RSS memory using the latest Quarkus 1.0 features Seamlessly integrate imperative and reactive programming models to build modern Java applications Discover effective solutions for running Java on serverless apps, microservices, containers, FaaS, and the cloud Book Description Quarkus is a new Kubernetes-native framework that allows Java developers to combine the power of containers, microservices, and cloud-native to build reliable applications. The book is a development guide that will teach you how to build Java-native applications using Quarkus and GraalVM. We start by learning about the basic concepts of a cloud-native application and its advantages over standard enterprise applications. Then we will quickly move on to application development, by installing the tooling required to build our first application on Quarkus. Next, we'll learn how to create a container-native image of our application and execute it in a Platform-as-a-Service environment such as Minishift. Later, we will build a complete real-world application that will use REST and the Contexts and Dependency injection stack with a web frontend. We will also learn how to add database persistence to our application using PostgreSQL. We will learn how to work with various APIs available to Quarkus such as Camel, Eclipse MicroProfile, and Spring DI. Towards the end, we will learn advanced development techniques such as securing applications, application configuration, and working with non-blocking programming models using Vert.x. By the end of this book, you will be proficient with all the components of Quarkus and develop blazing fast applications leveraging modern technology infrastructure. What you will learn Build a native application using Quarkus and GraalVM Secure your applications using Elytron and the MicroProfile JWT extension Manage data persistence with Quarkus using PostgreSQL Use a non-blocking programming model with Quarkus Learn how to get Camel and Infinispan working in native mode Deploy an application in a Kubernetes-

native environment using Minishift Discover Reactive Programming with Vert.x Who this book is for The book is for Java developers and software architects who are interested in learning a promising microservice architecture for building reliable and robust applications. Knowledge of Java, Spring Framework, and REST APIs is assumed.

Cloud-Native Applications in Java Apress

Summary Spring Microservices in Action teaches you how to build microservice-based applications using Java and the Spring platform. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Microservices break up your code into small, distributed, and independent services that require careful forethought and design. Fortunately, Spring Boot and Spring Cloud simplify your microservice applications, just as the Spring Framework simplifies enterprise Java development. Spring Boot removes the boilerplate code involved with writing a REST-based service. Spring Cloud provides a suite of tools for the discovery, routing, and deployment of microservices to the enterprise and the cloud. About the Book Spring Microservices in Action teaches you how to build microservice-based applications using Java and the Spring platform. You'll learn to do microservice design as you build and deploy your first Spring Cloud application. Throughout the book, carefully selected real-life examples expose microservice-based patterns for configuring, routing, scaling, and deploying your services. You'll see how Spring's intuitive tooling can help augment and refactor existing applications with micro services. What's Inside Core microservice design principles Managing configuration with Spring Cloud Config Client-side resiliency with Spring, Hystrix, and Ribbon Intelligent routing using Netflix Zuul Deploying Spring Cloud applications About the Reader This book is written for developers with Java and Spring experience. About the Author John Carnell is a senior cloud engineer with twenty years of experience in Java. Table of contents Welcome to the cloud, Spring Building microservices with Spring Boot Controlling your configuration with Spring Cloud configuration server On service discovery When bad things happen: client resiliency patterns with Spring Cloud and Netflix Hystrix Service routing with Spring Cloud and Zuul Securing your microservices Event-driven architecture with Spring Cloud Stream Distributed tracing with Spring Cloud Sleuth and Zipkin Deploying your microservices

Design and Deploy Production-Ready Software Packt Publishing Ltd

With the immense cost savings and scalability the cloud provides, the rationale for building cloud native applications is no longer in question. The real issue is how. With this practical guide, developers will learn about the most commonly used design patterns for building cloud native applications using APIs, data, events, and streams in both greenfield and brownfield development. You'll learn how to incrementally design, develop, and deploy large and effective cloud native applications that you can manage and maintain at scale with minimal cost, time, and effort. Authors Kasun Indrasiri and Sriskandarajah Suhothayan highlight use cases that effectively demonstrate the challenges you might encounter at each step. Learn the fundamentals of cloud native applications Explore key cloud native communication, connectivity, and composition patterns Learn decentralized data management techniques Use event-driven architecture to build distributed and scalable cloud native applications Explore the most commonly used patterns for API management and consumption Examine some of the tools and technologies you'll need for building cloud native systems Build resilient and scalable microservices using Spring Cloud, Istio, and Kubernetes, 2nd Edition Packt Publishing Ltd

Cloud Native Spring in Action teaches you effective Spring and Kubernetes cloud development techniques that you can immediately apply to enterprise-grade applications. To really benefit from the reliability and scalability you get with cloud platforms, your applications need to be designed for that environment. Cloud Native Spring in Action is a practical guide for planning, designing, and building your first cloud native apps using the powerful, industry-standard Spring framework Cloud Native Spring in Action teaches you effective Spring and Kubernetes cloud development techniques that you can immediately apply to enterprise-grade applications. As you develop an online bookshop, you'll learn how to build and test a cloud native app with Spring, containerize it with Docker, and deploy it to the public cloud with Kubernetes. Including coverage of security, continuous delivery, and configuration, this hands-on guide is the perfect primer for navigating the increasingly complex cloud landscape. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Cloud Foundry O'Reilly Media

While containers, microservices, and distributed systems dominate discussions in the tech world, the majority of applications in use today still run monolithic architectures that follow traditional development processes. This practical book helps developers examine long-established Java-based models and demonstrates how to bring these monolithic applications successfully into the future. Relying on their years of experience modernizing applications, authors Markus Eisele and Natale Vinto walk you through the steps necessary to update your organization's Java applications. You'll discover how to dismantle your monolithic application and move to an up-to-date software stack that works across cloud and on-premises installations. Learn cloud native application basics to understand what parts of your organization's Java-based applications and platforms need to migrate and modernize Understand how enterprise Java specifications can help you transition projects and teams Build a cloud native platform that supports effective development without falling into buzzword traps Find a starting point for your migration projects by identifying candidates and staging them through modernization steps Discover how to complement a traditional enterprise Java application with components on top of containers and Kubernetes

Reusable Elements for Designing Cloud-Native Applications Packt Publishing Ltd

Apply cloud native patterns and practices to deliver responsive, resilient, elastic, and message-driven systems with confidence Key Features Discover best practices for applying cloud native patterns to your cloud applications Explore ways to effectively plan resources and technology stacks for high security and fault tolerance Gain insight into core architectural principles using real-world examples Book Description Cloud computing has proven to be the most revolutionary IT development since virtualization. Cloud native architectures give you the benefit of more flexibility over legacy systems. This Learning Path teaches you everything you need to know for designing industry-grade cloud applications and efficiently migrating your business to the cloud. It begins by exploring the basic patterns that turn your database inside out to achieve massive scalability. You'll learn how to develop cloud native architectures using microservices and serverless computing as your design principles. Then, you'll explore ways to continuously deliver production code by implementing continuous observability in production. In the concluding chapters, you'll learn about various public cloud architectures ranging from AWS and Azure to the Google Cloud Platform, and understand the future trends and expectations of cloud providers. By the end of

this Learning Path, you'll have learned the techniques to adopt cloud native architectures that meet your business requirements. This Learning Path includes content from the following Packt products: Cloud Native Development Patterns and Best Practices by John Gilbert Cloud Native Architectures by Erik Farr et al. What you will learn Understand the difference between cloud native and traditional architecture Automate security controls and configuration management Minimize risk by evolving your monolithic systems into cloud native applications Explore the aspects of migration, when and why to use it Apply modern delivery and testing methods to continuously deliver production code Enable massive scaling by turning your database inside out Who this book is for This Learning Path is designed for developers who want to progress into building cloud native systems and are keen to learn the patterns involved. Software architects, who are keen on designing scalable and highly available cloud native applications, will also find this Learning Path very useful. To easily grasp these concepts, you will need basic knowledge of programming and cloud computing.

A Problem-Solution Approach "O'Reilly Media, Inc."

Discover practical techniques to build cloud-native apps that are scalable, reliable, and always available. Key Features Build well-designed and secure microservices. Enrich your microservices with continuous integration and monitoring. Containerize your application with Docker Deploy your application to AWS. Learn how to utilize the powerful AWS services from within your application Book Description Awarded as one of the best books of all time by BookAuthority, Cloud Native Programming with Golang will take you on a journey into the world of microservices and cloud computing with the help of Go. Cloud computing and microservices are two very important concepts in modern software architecture. They represent key skills that ambitious software engineers need to acquire in order to design and build software applications capable of performing and scaling. Go is a modern cross-platform programming language that is very powerful yet simple; it is an excellent choice for microservices and cloud applications. Go is gaining more and more popularity, and becoming a very attractive skill. This book starts by covering the software architectural patterns of cloud applications, as well as practical concepts regarding how to scale, distribute, and deploy those applications. You will also learn how to build a JavaScript-based front-end for your application, using TypeScript and React. From there, we dive into commercial cloud offerings by covering AWS. Finally, we conclude our book by providing some overviews of other concepts and technologies that you can explore, to move from where the book leaves off. What you will learn Understand modern software applications architectures Build secure microservices that can effectively communicate with other services Get to know about event-driven architectures by diving into message queues such as Kafka, Rabbitmq, and AWS SQS. Understand key modern database technologies such as MongoDB, and Amazon's DynamoDB Leverage the power of containers Explore Amazon cloud services fundamentals Know how to utilize the power of the Go language to access key services in the Amazon cloud such as S3, SQS, DynamoDB and more. Build front-end applications using ReactJS with Go Implement CD for modern applications Who this book is for This book is for developers who want to begin building secure, resilient, robust, and scalable Go applications that are cloud native. Some knowledge of the Go programming language should be sufficient. To build the front-end application, you will also need some knowledge of JavaScript programming.

A Problem-Solution Approach 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.

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Apply microservices patterns to build resilient and scalable distributed systems Key Features Understand the challenges of building large-scale microservice landscapes Build cloud-native production-ready microservices with this comprehensive guide Discover how to get the best out of Spring Cloud, Kubernetes, and Istio when used together Book Description Microservices architecture allows developers to build and maintain applications with ease, and enterprises are rapidly adopting it to build software using Spring Boot as their default framework. With this book, you'll learn how to efficiently build and deploy microservices using Spring Boot. This microservices book will take you through tried and tested approaches to building distributed systems and implementing microservices architecture in your organization. Starting with a set of simple cooperating microservices developed using Spring Boot, you'll learn how you can add functionalities such as persistence, make your microservices reactive, and describe their APIs using Swagger/OpenAPI. As you advance, you'll understand how to add different services from Spring Cloud to your microservice system. The book also demonstrates how to deploy your microservices using Kubernetes and manage them with Istio for improved security and traffic management. Finally, you'll explore centralized log management using the EFK stack and monitor microservices using Prometheus and Grafana. By the end of this book, you'll be able to build microservices that are scalable and robust using Spring Boot and Spring Cloud. What you will learn Build reactive microservices using Spring Boot Develop resilient and scalable microservices using Spring Cloud Use OAuth 2.0/OIDC and Spring Security to protect public APIs Implement Docker to bridge the gap between development, testing, and production Deploy and manage microservices using Kubernetes Apply Istio for improved security, observability, and traffic management Who this book is for This book is for Java and Spring

developers and architects who want to learn how to break up their existing monoliths into microservices and deploy them either on-premises or in the cloud using Kubernetes as a

container orchestrator and Istio as a service Mesh. No familiarity with microservices architecture is required to get started with this book.

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