Spring Microservices In Action By Carnell John

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Spring 5.0 By Example - Claudio Eduardo de Oliveira 2018-02-26
Discover the real power of Spring Framework 5.0 and learn to create powerful applications in its newest version Key Features Learn reactive programming by implementing a reactive

application with Spring Webflux Create a robust and scalable messaging application with Spring messaging support Apply your knowledge to build three real-world projects in Spring Book Description With growing demands, organizations are looking for systems that are robust and scalable. Therefore, the Spring Framework has become the most popular framework for Java development. It not only simplifies software development but also improves developer productivity. This book covers effective ways to develop robust applications in Java using Spring. The book has three parts, where each one covers the building of a comprehensive project in Java and Spring. In the first part, you will construct a CMS Portal using Spring's support for building REST APIs. You will also learn to integrate these APIs with AngularJS and later develop this application in a reactive fashion using Project Reactor, Spring WebFlux, and Spring Data. In the second part, you'll understand how to build a messaging application, which will consume the Twitter API and perform filtering and transformations. Here, you will also learn about server-sent events and explore Spring's support for Kotlin, which makes application development quick and efficient. In the last part, you will build a real microservice application using the most important techniques and patterns such as service discovery, circuit breakers, security, data streams, monitoring, and a lot more from this architectural style. By the end of the book, you will be confident about using Spring to build your applications. What you will learn Implement REST APIs with Spring REST support Introduce the Spring Boot and understand how it makes creating robust applications extremely simple Understand how Spring Data helps us add persistence in MongoDB and SQL databases Introduce Reactive Programming and use this with Spring Webflux Implement a Reactive REST client and learn how it can create asynchronous applications Create a robust, scalable, and fault

tolerant application with Spring Messaging Implement a websocket to add interactive behaviors in your applications Introduce the Spring Cloud projects Who this book is for If you're a developer starting out with Spring, then this book will help you learn about the new Spring 5.0 framework concepts followed by their implementation in Java and Kotlin. The book will also help experienced Spring developers gain insights into the new features added in Spring 5.0.

Spring REST - Balaji Varanasi 2021-11-28 Design and develop Java-based RESTful APIs using the latest versions of the Spring MVC and Spring Boot frameworks. This book walks you through the process of designing and building a REST application while delving into design principles and best practices for versioning, security, documentation, error handling, paging, and sorting. Spring REST provides a brief introduction to REST, HTTP, and web infrastructure. You will learn about several Spring projects such as Spring Boot, Spring MVC, Spring Data JPA, and Spring Security, and the role they play in simplifying REST application development. You will learn how to build clients that consume REST services. Finally, you will learn how to use the Spring MVC test framework to unit test and integration test your REST API. After reading this book, you will come away with all the skills to build sophisticated REST applications using Spring technologies. What You Will Learn Build Java-based microservices, native cloud, or any applications using Spring REST Employ Spring MVC and RESTful Spring Build a QuickPoll application example Document REST services, as well as versioning, paging, and sorting Test, handle errors and secure your application Who This Book Is For Intermediate Java programmers with at least some prior experience with Spring and web/cloud application development.

Microservices Security in Action - Wajjakkara Kankanamge Anthony Nuwan Dias 2020-07-11

”A complete guide to the challenges and solutions in securing microservices architectures.” —Massimo Siani, FinDynamic Key Features Secure microservices infrastructure and code Monitoring, access control, and microservice-to-microservice communications Deploy securely using Kubernetes, Docker, and the Istio service mesh. Hands-on examples and exercises using Java and Spring Boot Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. Microservices Security in Action teaches you how to address microservices-specific security challenges throughout the system. This practical guide includes plentiful hands-on exercises using industry-leading open-source tools and examples using Java and Spring Boot. About The Book Design and implement security into your microservices from the start. Microservices Security in Action teaches you to assess and address security challenges at every level of a Microservices application, from APIs to infrastructure. You’ll find effective solutions to common security problems, including throttling and monitoring, access control at the API gateway, and microservice-to-microservice communication. Detailed Java code samples, exercises, and real-world business use cases ensure you can put what you’ve learned into action immediately. What You Will Learn Microservice security concepts Edge services with an API gateway Deployments with Docker, Kubernetes, and Istio Security testing at the code level Communications with HTTP, gRPC, and Kafka This Book Is Written For For experienced microservices developers with intermediate Java skills. About The Author Prabath Siriwardena is the vice president of security architecture at WSO2. Nuwan Dias is the director of API architecture at WSO2. They have designed secure systems for many Fortune 500 companies. Table of Contents PART 1 OVERVIEW 1 Microservices security landscape 2

First steps in securing microservices PART 2 EDGE SECURITY 3 Securing north/south traffic with an API gateway 4 Accessing a secured microservice via a single-page application 5 Engaging throttling, monitoring, and access control PART 3 SERVICE-TO-SERVICE COMMUNICATIONS 6 Securing east/west traffic with certificates 7 Securing east/west traffic with JWT 8 Securing east/west traffic over gRPC 9 Securing reactive microservices PART 4 SECURE DEPLOYMENT 10 Conquering container security with Docker 11 Securing microservices on Kubernetes 12 Securing microservices with Istio service mesh PART 5 SECURE DEVELOPMENT 13 Secure coding practices and automation

Java Web Services: Up and Running - Martin Kalin 2009-02-12

This example-driven book offers a thorough introduction to Java's APIs for XML Web Services (JAX-WS) and RESTful Web Services (JAX-RS). Java Web Services: Up and Running takes a clear, pragmatic approach to these technologies by providing a mix of architectural overview, complete working code examples, and short yet precise instructions for compiling, deploying, and executing an application. You'll learn how to write web services from scratch and integrate existing services into your Java applications. With Java Web Services: Up and Running, you will: Understand the distinction between SOAP-based and REST-style services Write, deploy, and consume SOAP-based services in core Java Understand the Web Service Definition Language (WSDL) service contract Recognize the structure of a SOAP message Learn how to deliver Java-based RESTful web services and consume commercial RESTful services Know security requirements for SOAP- and REST-based web services Learn how to implement JAX-WS in various application servers Ideal for students as well as experienced programmers, Java Web Services: Up and Running is the concise guide you need to start

working with these technologies right away.

Spring Microservices in Action - John Carnell 2017-06-11

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

Mastering Spring Cloud - Piotr Mińkowski 2018-04-26

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 container s, 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.

Microservices with Spring Boot and Spring Cloud - Magnus Larsson 2021-07-29

A step-by-step guide to creating and deploying production-quality microservices-based applications Key FeaturesBuild cloud-native production-ready microservices with this comprehensively updated guideUnderstand the challenges of building large-scale microservice architecturesLearn how to get the best out of Spring Cloud, Kubernetes, and Istio in combinationBook Description With this book, you'll learn how to efficiently build and deploy microservices. This new edition has been updated for the most recent versions of Spring, Java, Kubernetes, and Istio, demonstrating faster and simpler handling of Spring Boot, local Kubernetes clusters, and Istio installation. The expanded scope includes native compilation of Spring-based microservices, support for Mac and Windows with WSL2, and an introduction to Helm 3 for packaging and deployment. A revamped security chapter now follows the OAuth 2.1 specification and makes use of the newly launched Spring Authorization Server from the Spring team. Starting with a set of simple cooperating microservices, you'll add persistence and resilience, make your microservices reactive, and document their APIs using OpenAPI. You'll understand how fundamental design patterns are applied to add important functionality, such as service discovery with Netflix Eureka and edge servers with Spring Cloud Gateway. You'll learn how to deploy your microservices using Kubernetes and

adopt Istio. You'll explore centralized log management using the Elasticsearch, Fluentd, and Kibana (EFK) stack and monitor microservices using Prometheus and Grafana. By the end of this book, you'll be confident in building microservices that are scalable and robust using Spring Boot and Spring Cloud. What you will learnBuild reactive microservices using Spring BootDevelop resilient and scalable microservices using Spring CloudUse OAuth 2.1/OIDC and Spring Security to protect public APIsImplement Docker to bridge the gap between development, testing, and productionDeploy and manage microservices with KubernetesApply Istio for improved security, observability, and traffic managementWrite and run automated microservice tests with JUnit, testcontainers, Gradle, and bashWho this book is for If you are a Java or Spring Boot developer who wants to learn how to build microservice landscapes from scratch, this book is for you. No familiarity with microservices architecture is required.

Professional Java Development with the Spring Framework - Rod Johnson 2007-08-27

The Spring Framework is a major open source application development framework that makes Java/J2EE(TM) development easier and more productive. This book shows you not only what Spring can do but why, explaining its functionality and motivation to help you use all parts of the framework to develop successful applications. You will be guided through all the Spring features and see how they form a coherent whole. In turn, this will help you understand the rationale for Spring's approach, when to use Spring, and how to follow best practices. All this is illustrated with a complete sample application. When you finish the book, you will be well equipped to use Spring effectively in everything from simple Web applications to complex enterprise applications. What you will learn from this book * The core Inversion of Control container and the concept

of Dependency Injection * Spring's Aspect Oriented Programming (AOP) framework and why AOP is important in J2EE development * How to use Spring's programmatic and declarative transaction management services effectively * Ways to access data using Spring's JDBC functionality, iBATIS SQL Maps, Hibernate, and other O/R mapping frameworks * Spring services for accessing and implementing EJBs * Spring's remoting framework Who this book is for This book is for Java/J2EE architects and developers who want to gain a deeper knowledge of the Spring Framework and use it effectively. Wrox Professional guides are planned and written by working programmers to meet the real-world needs of programmers, developers, and IT professionals. Focused and relevant, they address the issues technology professionals face every day. They provide examples, practical solutions, and expert education in new technologies, all designed to help programmers do a better job.

Twelve Years a Slave - Solomon Northup 2021-01-01

"Having been born a freeman, and for more than thirty years enjoyed the blessings of liberty in a free State—and having at the end of that time been kidnapped and sold into Slavery, where I remained, until happily rescued in the month of January, 1853, after a bondage of twelve years—it has been suggested that an account of my life and fortunes would not be uninteresting to the public." -an excerpt

Java Cookbook - Ian F. Darwin 2020-03-17

Java continues to grow and evolve, and this cookbook continues to evolve in tandem. With this guide, you'll get up to speed right away with hundreds of hands-on recipes across a broad range of Java topics. You'll learn useful techniques for everything from string handling and functional programming to network communication. Each recipe includes self-contained code solutions that you can freely use, along with a discussion of how and why they

work. If you're familiar with Java basics, this cookbook will bolster your knowledge of the language and its many recent changes, including how to apply them in your day-to-day development. This updated edition covers changes through Java 12 and parts of 13 and 14. Recipes include: Methods for compiling, running, and debugging Packaging Java classes and building applications Manipulating, comparing, and rearranging text Regular expressions for string and pattern matching Handling numbers, dates, and times Structuring data with collections, arrays, and other types Object-oriented and functional programming techniques Input/output, directory, and filesystem operations Network programming on both client and server Processing JSON for data interchange Multithreading and concurrency Using Java in big data applications Interfacing Java with other languages

Building Microservices - Sam Newman 2015-02-02

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.

Cloud Native Java - Josh Long 2017-08-11

What separates the traditional enterprise from the likes of Amazon, Netflix, and Etsy? Those companies have refined the art of cloud native development to maintain their competitive edge

and stay well ahead of the competition. This practical guide shows Java/JVM developers how to build better software, faster, using Spring Boot, Spring Cloud, and Cloud Foundry. Many organizations have already waded into cloud computing, test-driven development, microservices, and continuous integration and delivery. Authors Josh Long and Kenny Bastani fully immerse you in the tools and methodologies that will help you transform your legacy application into one that is genuinely cloud native. In four sections, this book takes you through: The Basics: learn the motivations behind cloud native thinking; configure and test a Spring Boot application; and move your legacy application to the cloud Web Services: build HTTP and RESTful services with Spring; route requests in your distributed system; and build edge services closer to the data Data Integration: manage your data with Spring Data, and integrate distributed services with Spring's support for event-driven, messaging-centric architectures Production: make your system observable; use service brokers to connect stateful services; and understand the big ideas behind continuous delivery

Spring Boot: Up and Running - Mark Heckler 2021-02-05

With over 75 million downloads per month, Spring Boot is the most widely used Java framework available. Its ease and power have revolutionized application development from monoliths to microservices. Yet Spring Boot's simplicity can also be confounding. How do developers learn enough to be productive immediately? This practical book shows you how to use this framework to write successful mission-critical applications. Mark Heckler from VMware, the company behind Spring, guides you through Spring Boot's architecture and approach, covering topics such as debugging, testing, and deployment. If you want to develop cloud native Java or Kotlin applications with Spring Boot rapidly and effectively--using

reactive programming, building APIs, and creating database access of all kinds--this book is for you. Learn how Spring Boot simplifies cloud native application development and deployment Build reactive applications and extend communication across the network boundary to create distributed systems Understand how Spring Boot's architecture and approach increase developer productivity and application portability Deploy Spring Boot applications for production workloads rapidly and reliably Monitor application and system health for optimal performance and reliability Debug, test, and secure cloud-based applications painlessly

Enterprise Java Microservices - Kenneth Finnigan 2018-09-27

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

March's Advanced Organic Chemistry - Michael B. Smith 2007-01-29

The Sixth Edition of a classic in organic chemistry continues its tradition of excellence Now in its sixth edition, March's Advanced Organic Chemistry remains the gold standard in organic chemistry. Throughout its six editions, students and chemists from around the world have relied on it as an essential resource for planning and executing synthetic reactions. The Sixth Edition brings the text completely current with the most recent organic reactions. In addition, the references have been updated to enable readers to find the latest primary and review literature with ease. New features include: More than 25,000 references to the literature to facilitate further research Revised mechanisms, where required, that explain concepts in clear modern terms Revisions and updates to each chapter to bring them all fully up to date with the latest reactions and discoveries A revised Appendix B to facilitate

correlating chapter sections with synthetic transformations

Microservices in Action - Morgan Bruce 2018-10-03

Summary 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 PART 1 - The lay of

the land Designing and running microservices Microservices at SimpleBank PART 2 - Design Architecture of a microservice application Designing new features Transactions and queries in microservices Designing reliable services Building a reusable microservice framework PART 3 - Deployment Deploying microservices Deployment with containers and schedulers Building a delivery pipeline for microservices PART 4 - Observability and ownership Building a monitoring system Using logs and traces to understand behavior Building microservice teams

Spring Boot 2.0 Projects - Mohamed Shazin Sadakath 2018-07-30

Develop diverse real-life projects including most aspects of Spring Boot Key Features Run production-grade based applications using the Spring WebFlux framework Learn to develop high performance, asynchronous applications with Spring Boot Create robust microservice-based applications with Kotlin using Spring Boot Book Description Spring is one of the best tools available on the market for developing web, enterprise, and cloud-ready software. The goal of Spring Boot is to provide a set of tools for quickly building Spring applications that are easy to configure, and that make it easy to create and run production-grade Spring-based applications. Spring Boot 2.0 Projects will get you acquainted with important features of the latest version of this application-building tool and will cover basic, as well as advanced topics. The book starts off by teaching you how to create a web application using Spring Boot, followed by creating a Spring Boot-based simple blog management system that uses Elasticsearch as the data store. As you make your way through the chapters, you'll build a RESTful web services application using Kotlin and the Spring WebFlux framework. Spring WebFlux is a new framework that helps in creating a reactive application in a functional way. Toward the end of the book, you will build a taxi-hailing API with reactive

microservices using Spring Boot and a Twitter clone with a Spring Boot backend. Finally, you'll learn how to build an asynchronous email formatter. What you will learn Learn the fundamental features of Spring Boot 2.0 Customize Spring Boot 2.0 applications Build a basic web application Use Redis to build a taxi-hailing API Create a simple blog management system and a Twitter clone Develop a reactive RESTful web service with Kotlin using Spring Boot Who this book is for This book is for competent Spring developers who wish to understand how to develop complex yet scalable applications with Spring Boot. You must have a good knowledge of Java programming and be familiar with the basics of Spring.

Novel Translations - Bethany Wiggin 2011-06-15 Many early novels were cosmopolitan books, read from London to Leipzig and beyond, available in nearly simultaneous translations into French, English, German, and other European languages. In Novel Translations, Bethany Wiggin charts just one of the paths by which newness—in its avatars as fashion, novelties, and the novel—entered the European world in the decades around 1700. As readers across Europe snapped up novels, they domesticated the genre. Across borders, the novel lent readers everywhere a suggestion of sophistication, a familiarity with circumstances beyond their local ken. Into the eighteenth century, the modern German novel was not German at all; rather, it was French, as suggested by Germans' usage of the French word Roman to describe a wide variety of genres: pastoral romances, war and travel chronicles, heroic narratives, and courtly fictions. Carried in large part on the coattails of the Huguenot diaspora, these romans, nouvelles, amours secrets, histoires galantes, and histories scandaleuses shaped German literary culture to a previously unrecognized extent. Wiggin contends that this French chapter in the German novel's history began to draw to a close only in the 1720s, more than sixty years after the word

first migrated into German. Only gradually did the Roman go native; it remained laden with the baggage from its "French" origins even into the nineteenth century.

Modern Java in Action - Raoul-Gabriel Urma 2018-09-26

Summary Manning's bestselling Java 8 book has been revised for Java 9! In Modern Java in Action, you'll build on your existing Java language skills with the newest features and techniques. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Modern applications take advantage of innovative designs, including microservices, reactive architectures, and streaming data. Modern Java features like lambdas, streams, and the long-awaited Java Module System make implementing these designs significantly easier. It's time to upgrade your skills and meet these challenges head on! About the Book Modern Java in Action connects new features of the Java language with their practical applications. Using crystal-clear examples and careful attention to detail, this book respects your time. It will help you expand your existing knowledge of core Java as you master modern additions like the Streams API and the Java Module System, explore new approaches to concurrency, and learn how functional concepts can help you write code that's easier to read and maintain. What's inside Thoroughly revised edition of Manning's bestselling Java 8 in Action New features in Java 8, Java 9, and beyond Streaming data and reactive programming The Java Module System About the Reader Written for developers familiar with core Java features. About the Author Raoul-Gabriel Urma is CEO of Cambridge Spark. Mario Fusco is a senior software engineer at Red Hat. Alan Mycroft is a University of Cambridge computer science professor; he cofounded the Raspberry Pi Foundation. Table of Contents PART 1 - FUNDAMENTALS Java 8, 9, 10, and 11: what's happening? Passing code with

behavior parameterization Lambda expressions PART 2 - FUNCTIONAL-STYLE DATA PROCESSING WITH STREAMS Introducing streams Working with streams Collecting data with streams Parallel data processing and performance PART 3 - EFFECTIVE PROGRAMMING WITH STREAMS AND LAMBDAS Collection API enhancements Refactoring, testing, and debugging Domain-specific languages using lambdas PART 4 - EVERYDAY JAVA Using Optional as a better alternative to null New Date and Time API Default methods The Java Module System PART 5 - ENHANCED JAVA CONCURRENCY Concepts behind CompletableFuture and reactive programming CompletableFuture: composable asynchronous programming Reactive programming PART 6 - FUNCTIONAL PROGRAMMING AND FUTURE JAVA EVOLUTION Thinking functionally Functional programming techniques Blending OOP and FP: Comparing Java and Scala Conclusions and where next for Java

Learn Microservices with Spring Boot 3 - Moisés Macero García 2021-01-12

Build Java-based microservices architecture using the Spring Boot 3 framework by evolving an application from a small monolith to an event-driven architecture composed of several services. This revised book follows an incremental approach in teaching the structure of microservices, test-driven development, Eureka, Ribbon, Zuul, and end-to-end tests with Cucumber. This updated book now covers what's been added to the new Spring Boot 3 release, including support for the latest Java SE LTS; changes to the Stream Editor UI; Maven preemptive authentication; building Docker images using cloud-native build packs; building layered jars for optimized Docker images; E2E traceability for configuration properties; many dependency upgrades; support for Spring Data Neumann; and more. Author Moises Macero uses a pragmatic approach to explain the

benefits of using this type of software architecture, instead of keeping you distracted with theoretical concepts. He covers some of the state-of-the-art techniques in computer programming, from a practical point of view. You'll focus on what's important, starting with the minimum viable product but keeping the flexibility to evolve it. What You Will Learn Build microservices with Spring Boot 3 Use event-driven architecture and messaging with RabbitMQ Master service discovery with Eureka and load balancing with Ribbon Route requests with Zuul as your API gateway Write end-to-end tests for an event-driven architecture using Cucumber Carry out continuous integration and deployment Who This Book Is For Those with at least some prior experience with Java programming. Some prior exposure to Spring Boot recommended but not required.

Developing the Higher Education Curriculum - Brent Carnell 2017-11-13

A complementary volume to Dilly Fung's A Connected Curriculum for Higher Education (2017), this book explores 'research-based education' as applied in practice within the higher education sector. A collection of 15 chapters followed by illustrative vignettes, it showcases approaches to engaging students actively with research and enquiry across disciplines. It begins with one institution's creative approach to research-based education – UCL's Connected Curriculum, a conceptual framework for integrating research-based education into all taught programmes of study – and branches out to show how aspects of the framework can apply to practice across a variety of institutions in a range of national settings. The 15 chapters are provided by a diverse range of authors who all explore research-based education in their own way. Some chapters are firmly based in a subject-discipline – including art history, biochemistry, education, engineering, fashion and design, healthcare, and veterinary sciences – while others reach across

geopolitical regions, such as Australia, Canada, China, England, Scotland and South Africa. The final chapter offers 12 short vignettes of practice to highlight how engaging students with research and enquiry can enrich their learning experiences, preparing them not only for more advanced academic learning, but also for professional roles in complex, rapidly changing social contexts.

Microservices Patterns - Chris Richardson 2018-10-27

"A comprehensive overview of the challenges teams face when moving to microservices, with industry-tested solutions to these problems." - Tim Moore, Lightbend 44 reusable patterns to develop and deploy reliable production-quality microservices-based applications, with worked examples in Java Key Features 44 design patterns for building and deploying microservices applications Drawing on decades of unique experience from author and microservice architecture pioneer Chris Richardson A pragmatic approach to the benefits and the drawbacks of microservices architecture Solve service decomposition, transaction management, and inter-service communication Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Microservices Patterns teaches you 44 reusable patterns to reliably develop and deploy production-quality microservices-based applications. This invaluable set of design patterns builds on decades of distributed system experience, adding new patterns for composing services into systems that scale and perform under real-world conditions. More than just a patterns catalog, this practical guide with worked examples offers industry-tested advice to help you design, implement, test, and deploy your microservices-based application. What You Will Learn How (and why!) to use microservices architecture Service decomposition strategies Transaction management and querying patterns Effective

testing strategies Deployment patterns This Book Is Written For Written for enterprise developers familiar with standard enterprise application architecture. Examples are in Java. About The Author Chris Richardson is a Java Champion, a JavaOne rock star, author of Manning's POJOs in Action, and creator of the original CloudFoundry.com. Table of Contents Escaping monolithic hell Decomposition strategies Interprocess communication in a microservice architecture Managing transactions with sagas Designing business logic in a microservice architecture Developing business logic with event sourcing Implementing queries in a microservice architecture External API patterns Testing microservices: part 1 Testing microservices: part 2 Developing production-ready services Deploying microservices Refactoring to microservices

Hands-On Microservices with Spring Boot and Spring Cloud - Magnus Larsson 2019-09-20

Apply microservices patterns to build resilient and scalable distributed systems Key FeaturesUnderstand the challenges of building large-scale microservice landscapesBuild cloud-native production-ready microservices with this comprehensive guideDiscover how to get the best out of Spring Cloud, Kubernetes, and Istio when used togetherBook 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 learnBuild reactive microservices using Spring BootDevelop resilient and scalable microservices using Spring CloudUse OAuth 2.0/OIDC and Spring Security to protect public APIsImplement Docker to bridge the gap between development, testing, and productionDeploy and manage microservices using KubernetesApply Istio for improved security, observability, and traffic managementWho 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.

Learning Spring Boot 2.0 - Greg L. Turnquist 2017-11-03

Use Spring Boot to build lightning-fast apps About This Book Get up to date with the defining characteristics of Spring Boot 2.0 in Spring Framework 5 Learn to perform Reactive programming with SpringBoot Learn about developer tools, AMQP messaging, WebSockets, security, MongoDB data access, REST, and more Who This Book Is For This book is designed for both novices and experienced Spring developers. It will teach you how to override Spring Boot's opinions and frees you from the need to define

complicated configurations. What You Will Learn Create powerful, production-grade applications and services with minimal fuss Support multiple environments with one artifact, and add production-grade support with features Find out how to tweak your apps through different properties Use custom metrics to track the number of messages published and consumed Enhance the security model of your apps Make use of reactive programming in Spring Boot Build anything from lightweight unit tests to fully running embedded web container integration tests In Detail Spring Boot provides a variety of features that address today's business needs along with today's scalable requirements. In this book, you will learn how to leverage powerful databases and Spring Boot's state-of-the-art WebFlux framework. This practical guide will help you get up and running with all the latest features of Spring Boot, especially the new Reactor-based toolkit. The book starts off by helping you build a simple app, then shows you how to bundle and deploy it to the cloud. From here, we take you through reactive programming, showing you how to interact with controllers and templates and handle data access. Once you're done, you can start writing unit tests, slice tests, embedded container tests, and even autoconfiguration tests. We go into detail about developer tools, AMQP messaging, WebSockets, security, and deployment. You will learn how to secure your application using both routes and method-based rules. By the end of the book, you'll have built a social media platform from which to apply the lessons you have learned to any problem. If you want a good understanding of building scalable applications using the core functionality of Spring Boot, this is the book for you. Style and approach This book takes a tutorial-based approach to teach you all you need to know to get up and running with the latest version of Spring Boot. Filled with examples, you will gain hands-on experience of every area that Spring tackles.

Spring in Action - Craig Walls 2018-10-05 Summary Spring in Action, 5th Edition is the fully updated revision of Manning's bestselling Spring in Action. This new edition includes all Spring 5.0 updates, along with new examples on reactive programming, Spring WebFlux, and microservices. You'll also find the latest Spring best practices, including Spring Boot for application setup and configuration. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Spring Framework makes life easier for Java developers. New features in Spring 5 bring its productivity-focused approach to microservices, reactive development, and other modern application designs. With Spring Boot now fully integrated, you can start even complex projects with minimal configuration code. And the upgraded WebFlux framework supports reactive apps right out of the box! About the Book Spring in Action, 5th Edition guides you through Spring's core features, explained in Craig Walls' famously clear style. You'll roll up your sleeves and build a secure database-backed web app step by step. Along the way, you'll explore reactive programming, microservices, service discovery, RESTful APIs, deployment, and expert best practices. Whether you're just discovering Spring or leveling up to Spring 5.0, this Manning classic is your ticket! What's inside Building reactive applications Spring MVC for web apps and RESTful web services Securing applications with Spring Security Covers Spring 5.0 Over 100,000 copies sold! About the Reader For intermediate Java developers. About the Author Craig Walls is a principal software engineer at Pivotal, a popular author, an enthusiastic supporter of Spring Framework, and a frequent conference speaker. Table of Contents PART 1 - FOUNDATIONAL SPRING Getting started with Spring Developing web applications Working with data Securing Spring Working with configuration properties PART 2 - INTEGRATED

SPRING Creating REST services Consuming REST services Sending messages asynchronously Integrating Spring PART 3 - REACTIVE SPRING Introducing Reactor Developing reactive APIs Persisting data reactively PART 4 CLOUD-NATIVE SPRING Discovering services Managing configuration Handling failure and latency PART 5 - DEPLOYED SPRING Working with Spring Boot Actuator Administering Spring Monitoring Spring with JMX Deploying Spring

Spring Boot in Action - Craig Walls 2015-12-16 Summary A developer-focused guide to writing applications using Spring Boot. You'll learn how to bypass the tedious configuration steps so that you can concentrate on your application's behavior. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The Spring Framework simplifies enterprise Java development, but it does require lots of tedious configuration work. Spring Boot radically streamlines spinning up a Spring application. You get automatic configuration and a model with established conventions for build-time and runtime dependencies. You also get a handy command-line interface you can use to write scripts in Groovy. Developers who use Spring Boot often say that they can't imagine going back to hand configuring their applications. About the Book Spring Boot in Action is a developer-focused guide to writing applications using Spring Boot. In it, you'll learn how to bypass configuration steps so you can focus on your application's behavior. Spring expert Craig Walls uses interesting and practical examples to teach you both how to use the default settings effectively and how to override and customize Spring Boot for your unique environment. Along the way, you'll pick up insights from Craig's years of Spring development experience. What's Inside Develop Spring apps more efficiently Minimal to no configuration Runtime metrics with the Actuator

Covers Spring Boot 1.3 About the Reader Written for readers familiar with the Spring Framework. About the Author Craig Walls is a software developer, author of the popular book Spring in Action, Fourth Edition, and a frequent speaker at conferences. Table of Contents Bootstarting Spring Developing your first Spring Boot application Customizing configuration Testing with Spring Boot Getting Groovy with the Spring Boot CLI Applying Grails in Spring Boot Taking a peek inside with the Actuator Deploying Spring Boot applications APPENDIXES Spring Boot developer tools Spring Boot starters Configuration properties Spring Boot dependencies

Hands-on Application Development using Spring Boot - Shagun Bakliwal 2021-10-30

A pragmatic guide for Java developers to help build Microservices and Cloud Apps using Spring Boot. KEY FEATURES ● Develops microservices from start to finish using the Spring Boot Framework. ● Creates cloud-native applications using Spring Boot's production-ready features. ● Covers the API gateway, unit testing, cloud deployments, and managing high-traffic applications. DESCRIPTION Spring is an excellent framework for developing both web and cloud-native applications. This book on application development using Spring Boot simplifies the process of writing boilerplate code for complex software. It allows developers to concentrate on the application's concept rather than on the internal Java configuration. This book will guide you on how to make the best use of the strength that Spring Boot provides. You'll gain an understanding of how Spring Boot configuration works in conjunction with application development, including auto-configuration and overriding default configurations. You will learn to develop scalable, dependable microservices to accelerate the development lifecycle of a cloud-based application. Each chapter will walk you through the features of Spring Boot as a Software

Development Framework, such as performing Create, Read, Update, and Delete (CRUD) operations on a database and securing web services with appropriate logging. By the end of this book, you will develop, test, and deploy applications ready for production and how to establish them as cloud-based applications. The readers will also gain the expertise of writing unit and integration test cases. WHAT YOU WILL LEARN ● Get to know Spring Boot and all its capabilities. ● Build start-to-end production-ready applications. ● Explore the API Gateway and practice how to run request routing. ● Learn API doc tools like Swagger and host your apps on Cloud. ● Practice how to balance the application's load when the system is under high traffic. ● Learn to write unit tests and integration tests for bug-free coding. WHO THIS BOOK IS FOR This book is for Java developers who want to quickly develop, test, and deploy production-ready applications. This book will also appeal to cloud-native application developers and cloud engineers. No prior Spring Boot knowledge is required as the basics are covered in the book. TABLE OF CONTENTS 1. Getting Started with Spring Boot 2. Developing Your First Spring Boot Application 3. Spring Boot Starter Dependencies and Auto-Configuration 4. Spring Boot Annotations 5. Working with Spring Data JPA and Caching 6. Building RESTFul Microservices 7. Securing a Web Application 8. Building Resilient System 9. Logging 10. Working with the Swagger API Management Tool 11. Testing a Spring Boot Application 12. Deploying a Spring Boot Application

Spring Microservices in Action, Second Edition - John Carnell 2021-06-08

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. about the technology Microservices break up your code into independent interconnected services that require careful forethought and design. Fortunately, Spring Boot, Spring Cloud, and Spring Cloud Gateway simplify the tedious plumbing and infrastructure setup required for microservice applications. 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. Spring Cloud Gateway provides a clear and effective routing to APIs, with a single entry point into a system. Together, they make it a snap to spin up Spring applications as microservices and wire them together into a reliable, scalable system. about the book Fully updated and upgraded for the latest version of Spring, Spring Microservices in Action, Second Edition is an expanded revision of a Manning bestseller. In it, you''ll learn how to build microservice-based applications using Java and the Spring platform and how to efficiently monitor and log your microservices operations. 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 microservices and how Spring Cloud Gateway makes it easy to handle multiple APIs with a single tool. You''ll also pick up best practices for using Spring with modern deployment platforms based on Kubernetes and Istio. what''s inside Core microservice design principles Microservices best practices Using docker containers to run microservices

Managing configuration with Spring Cloud Config and Hashicorp Vault for sensitive information Client-side resiliency with Hystrix, and Ribbon Managing application metrics with Prometheus and Grafana Intelligent routing using Spring Cloud Gateway Distributed tracing with Spring Cloud Sleuth, Zipkin and ELK Stack Deploying Spring Cloud applications with Kubernetes and Istio about the reader This book is written for developers with Java and Spring experience. about the authors John Carnell is a senior cloud engineer with twenty years of experience in Java. Illary Huaylupo Sánchez is a software engineer with an MBA in IT management and over twelve years of experience in Java.

Spring Microservices in Action - John Carnell 2017-07

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

Reactive Spring - Josh Long 2020-09-15
Microservices and big-data increasingly confront us with the limitations of traditional input/output. In traditional IO, work that is IO-bound dominates threads. This wouldn't be such a big deal if we could add more threads cheaply, but threads are expensive on the JVM, and most other platforms. Even if threads were cheap and infinitely scalable, we'd still be confronted with the faulty nature of networks. Things break, and they often do so in subtle, but non-exceptional ways. Traditional approaches to integration bury the faulty nature of networks behind overly simplifying abstractions. We need something better.Join Spring Developer Advocate Josh Long for an introduction to reactive programming in the Spring ecosystem, leveraging the reactive streams specification, Reactor, Spring Boot, Spring Cloud and so much more.This book will cover important concepts in reactive programming including project Reactor and the reactive streams specification, data access, web

programming, RPC with protocols like RSocket, testing, and integration and composition, and more.

The Book of Buried Treasure - Ralph D. Paine 2022-05-17

The Book of Buried Treasure is a historical account of pirates and piracy, containing true stories of some of the most notorious buccaneers, their heists and robberies and the pirate gold that is lost forever. The book is written by American journalist and adventurer Ralph D. Paine who was indicted for piracy with a capital crime, after sailing on a boat that was smuggling munitions._x000D_ Table of Contents:_x000D_ The World-Wide Hunt for Vanished Riches_x000D_ Captain Kidd in Fact and Fiction_x000D_ Captain Kidd, His Treasure_x000D_ Captain Kidd, His Trial, and Death_x000D_ The Wondrous Fortune of William Phips_x000D_ The Bold Sea Rogue, John Quelch_x000D_ The Armada Galleon of Tobermory Bay_x000D_ The Lost Plate Fleet of Vigo_x000D_ The Pirates' Hoard of Trinidad_x000D_ The Lure of Cocos Island_x000D_ The Mystery of the Lutine Frigate_x000D_ The Toilers of the Thetis_x000D_ The Quest of El Dorado_x000D_ The Wizardry of the Divining Rod_x000D_ Sundry Pirates and Their Booty_x000D_ Practical Hints for Treasure Seekers

Spring Boot 2 Recipes - Marten Deinum 2019-03-14

Solve all your Spring Boot 2 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. Using a problem-solution approach, Spring Boot 2 Recipes quickly introduces you to Pivotal's Spring Boot 2 micro-framework, then dives into code snippets on how to apply and integrate Spring Boot 2 with the Spring MVC web framework, Spring Web

Sockets, and microservices. You'll also get solutions to common problems with persistence, integrating Spring Boot with batch processing, algorithmic programming via Spring Batch, and much more. Other recipes cover topics such as using and integrating Boot with Spring's enterprise services, Spring Integration, testing, monitoring and more. What You'll Learn Get reusable code recipes and snippets for the Spring Boot 2 micro-framework Discover how Spring Boot 2 integrates with other Spring APIs, tools, and frameworks Access Spring MVC and the new Spring Web Sockets for simpler web development Work with microservices for web services development and integration with your Spring Boot applications Add persistence and a data tier seamlessly to make your Spring Boot web application do more Integrate enterprise services to create a more complex Java application using Spring Boot Who This Book Is For Experienced Java and Spring programmers.

Pro Spring Security - Carlo Scarioni 2013-06-17

Security is a key element in the development of any non-trivial application. The Spring Security Framework provides a comprehensive set of functionalities to implement industry-standard authentication and authorization mechanisms for Java applications. Pro Spring Security will be a reference and advanced tutorial that will do the following: Guides you through the implementation of the security features for a Java web application by presenting consistent examples built from the ground-up. Demonstrates the different authentication and authorization methods to secure enterprise-level applications by using the Spring Security Framework. Provides you with a broader look into Spring security by including up-to-date use cases such as building a security layer for RESTful web services and Grails applications.

Spring Security in Action - Laurentiu Spilca 2020-11-03

Spring Security in Action shows you how to prevent cross-site scripting and request forgery

attacks before they do damage. You'll start with the basics, simulating password upgrades and adding multiple types of authorization. As your skills grow, you'll adapt Spring Security to new architectures and create advanced OAuth2 configurations. By the time you're done, you'll have a customized Spring Security configuration that protects against threats both common and extraordinary. Summary While creating secure applications is critically important, it can also be tedious and time-consuming to stitch together the required collection of tools. For Java developers, the powerful Spring Security framework makes it easy for you to bake security into your software from the very beginning. Filled with code samples and practical examples, Spring Security in Action teaches you how to secure your apps from the most common threats, ranging from injection attacks to lackluster monitoring. In it, you'll learn how to manage system users, configure secure endpoints, and use OAuth2 and OpenID Connect for authentication and authorization. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Security is non-negotiable. You rely on Spring applications to transmit data, verify credentials, and prevent attacks. Adopting "secure by design" principles will protect your network from data theft and unauthorized intrusions. About the book Spring Security in Action shows you how to prevent cross-site scripting and request forgery attacks before they do damage. You'll start with the basics, simulating password upgrades and adding multiple types of authorization. As your skills grow, you'll adapt Spring Security to new architectures and create advanced OAuth2 configurations. By the time you're done, you'll have a customized Spring Security configuration that protects against threats both common and extraordinary. What's inside Encoding passwords and authenticating users Securing endpoints Automating security testing Setting up

a standalone authorization server About the reader For experienced Java and Spring developers. About the author Laurentiu Spilca is a dedicated development lead and trainer at Endava, with over ten years of Java experience. Table of Contents PART 1 - FIRST STEPS 1 Security Today 2 Hello Spring Security PART 2 - IMPLEMENTATION 3 Managing users 4 Dealing with passwords 5 Implementing authentication 6 Hands-on: A small secured web application 7 Configuring authorization: Restricting access 8 Configuring authorization: Applying restrictions 9 Implementing filters 10 Applying CSRF protection and CORS 11 Hands-on: A separation of responsibilities 12 How does OAuth 2 work? 13 OAuth 2: Implementing the authorization server 14 OAuth 2: Implementing the resource server 15 OAuth 2: Using JWT and cryptographic signatures 16 Global method security: Pre- and postauthorizations 17 Global method security: Pre- and postfiltering 18 Hands-on: An OAuth 2 application 19 Spring Security for reactive apps 20 Spring Security testing

The Hitchhiker's Guide to the Galaxy - 1993

Testing Java Microservices - Jason Porter 2018-08-03

Summary Testing Java Microservices teaches you to implement unit and integration tests for microservice systems running on the JVM. You'll work with a microservice environment built using Java EE, WildFly Swarm, and Docker. You'll learn how to increase your test coverage and productivity, and gain confidence that your system will work as you expect. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Microservice applications present special testing challenges. Even simple services need to handle unpredictable loads, and distributed message-based designs pose unique security and performance concerns. These challenges increase when you throw in asynchronous communication and containers.

About the Book Testing Java Microservices teaches you to implement unit and integration tests for microservice systems running on the JVM. You'll work with a microservice environment built using Java EE, WildFly Swarm, and Docker. You'll advance from writing simple unit tests for individual services to more-advanced practices like chaos or integration tests. As you move towards a continuous-delivery pipeline, you'll also master live system testing using technologies like the Arquillian, Wiremock, and Mockito frameworks, along with techniques like contract testing and over-the-wire service virtualization. Master these microservice-specific practices and tools and you'll greatly increase your test coverage and productivity, and gain confidence that your system will work as you expect. What's Inside Test automation Integration testing microservice systems Testing container-centric systems Service virtualization About the Reader Written for Java developers familiar with Java EE, EE4J, Spring, or Spring Boot. About the Authors Alex Soto Bueno and Jason Porter are Arquillian team members. Andy Gumbrecht is an Apache TomEE developer and PMC. They all have extensive enterprise-testing experience. Table of Contents An introduction to microservices Application under test Unit-testing microservices Component-testing microservices Integration-testing microservices Contract tests End-to-end testing Docker and testing Service virtualization Continuous delivery in microservices

Spring Data - Mark Pollack 2012-10-24

You can choose several data access frameworks when building Java enterprise applications that work with relational databases. But what about big data? This hands-on introduction shows you how Spring Data makes it relatively easy to build applications across a wide range of new data access technologies such as NoSQL and Hadoop. Through several sample projects, you'll learn how Spring Data provides a consistent programming model that retains NoSQL-specific

features and capabilities, and helps you develop Hadoop applications across a wide range of use-cases such as data analysis, event stream processing, and workflow. You'll also discover the features Spring Data adds to Spring's existing JPA and JDBC support for writing RDBMS-based data access layers. Learn about Spring's template helper classes to simplify the use of database-specific functionality Explore Spring Data's repository abstraction and advanced query functionality Use Spring Data with Redis (key/value store), HBase (column-family), MongoDB (document database), and Neo4j (graph database) Discover the GemFire distributed data grid solution Export Spring Data JPA-managed entities to the Web as RESTful web services Simplify the development of HBase applications, using a lightweight object-mapping framework Build example big-data pipelines with Spring Batch and Spring Integration

Mastering Spring Boot 2.0 - Dinesh Rajput

2018-05-31

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.

Spring in Action, Sixth Edition - Craig Walls 2022-04-05

If you need to learn Spring, look no further than this widely beloved and comprehensive guide! Fully revised for Spring 5.3, and packed with interesting real-world examples to get your hands dirty with Spring. In Spring in Action, 6th Edition you will learn: Building reactive applications Relational and NoSQL databases Integrating via HTTP and REST-based services, and sand reactive RSocket services Reactive programming techniques Deploying applications to traditional servers and containers Securing applications with Spring Security Over the years, Spring in Action has helped tens of thousands of developers get a major productivity boost from Spring. This new edition of the classic bestseller covers all of the new features

of Spring 5.3 and Spring Boot 2.4 along with examples of reactive programming, Spring Security for REST Services, and bringing reactivity to your databases. You'll also find the latest Spring best practices, including Spring Boot for application setup and configuration. About the technology Spring is required knowledge for Java developers! Why? Th is powerful framework eliminates a lot of the tedious configuration and repetitive coding tasks, making it easy to build enterprise-ready, production-quality software. The latest updates bring huge productivity boosts to microservices, reactive development, and other modern application designs. It’s no wonder over half of all Java developers use Spring. About the book Spring in Action, Sixth Edition is a comprehensive guide to Spring’s core features, all explained in Craig Walls’ famously clear style. You’ll put Spring into action as you build a complete database-backed web app step-by-step. This new edition covers both Spring fundamentals and new features such as reactive flows, Kubernetes integration, and RSocket. Whether you’re new to Spring or leveling up to Spring 5.3, make this classic bestseller your bible! What's inside Relational and NoSQL databases Integrating via RSocket and REST-based services Reactive programming techniques Deploying applications to traditional servers and containers About the reader For beginning to intermediate Java developers. About the author Craig Walls is an engineer at VMware, a member of the Spring engineering team, a popular author, and a frequent conference speaker. Table of Contents PART 1 FOUNDATIONAL SPRING 1 Getting started with Spring 2 Developing web applications 3 Working with data 4 Working with nonrelational data 5 Securing Spring 6 Working with configuration properties PART 2 INTEGRATED SPRING 7 Creating REST services 8 Securing REST 9 Sending messages asynchronously 10 Integrating Spring PART 3 REACTIVE SPRING

11 Introducing Reactor 12 Developing reactive APIs 13 Persisting data reactively 14 Working with RSocket PART 4 DEPLOYED SPRING 15 Working with Spring Boot Actuator 16 Administering Spring 17 Monitoring Spring with JMX 18 Deploying Spring

Camel in Action - Claus Ibsen 2018-02-02 Summary Camel in Action, Second Edition is the most complete Camel book on the market. Written by core developers of Camel and the authors of the highly acclaimed first edition, this book distills their experience and practical insights so that you can tackle integration tasks like a pro. Forewords by James Strachan and Dr. Mark Little Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Apache Camel is a Java framework that implements enterprise integration patterns (EIPs) and comes with over 200 adapters to third-party systems. A concise DSL lets you build integration logic into your app with just a few lines of Java or XML. By using Camel, you benefit from the testing and experience of a large and vibrant open source community. About the Book Camel in Action, Second Edition is the definitive guide to the Camel framework. It starts with core concepts like sending, receiving, routing, and transforming data. It then goes in depth on many topics such as how to develop, debug, test, deal with errors, secure, scale, cluster, deploy, and monitor your Camel applications. The book also discusses how to run Camel with microservices, reactive systems, containers, and in the cloud. What's Inside Coverage of all relevant EIPs Camel microservices with Spring Boot Camel on Docker and Kubernetes Error handling, testing, security, clustering, monitoring, and deployment Hundreds of examples in Java and XML About the Reader Readers should be familiar with Java. This book is accessible to beginners and invaluable to experts. About the Author Claus Ibsen is a senior principal engineer working for

Red Hat specializing in cloud and integration. He has worked on Apache Camel for the last nine years where he heads the project. Claus lives in Denmark. Jonathan Anstey is an engineering manager at Red Hat and a core Camel contributor. He lives in Newfoundland, Canada. Table of Contents Part 1 - First steps Meeting Camel Routing with Camel Part 2 - Core Camel Transforming data with Camel Using beans with Camel Enterprise integration patterns Using components Part 3 - Developing and testing Microservices Developing Camel projects Testing RESTful web services Part 4 - Going further with Camel Error handling Transactions and idempotency Parallel processing Securing Camel Part 5 - Running and managing Camel Running and deploying Camel Management and monitoring Part 6 - Out in the wild Clustering Microservices with Docker and Kubernetes Camel tooling Bonus online chapters Available at https://www.manning.com/books/camel-in-action-second-edition and in electronic versions of this book: Reactive Camel Camel and the IoT by Henryk Konsek