

Java Web Services Up Running 2 Edition Kingcoolore

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

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

Design scalable and robust RESTful web services with JAX-RS and Jersey extension APIs About This Book Get to grips with the portable Java APIs used for JSON processing Design solutions to produce, consume, and visualize RESTful

web services using WADL, RAML, and Swagger A step-by-step guide packed with many real-life use-cases to help you build efficient and secure RESTful web APIs in Java Who This Book Is For If you are a web developer with a basic understanding of the REST concepts but are new to the idea of designing and developing RESTful web services, this is the book for you. As all the code samples for the book are written in Java, proficiency in Java is a must. What You Will Learn Introduce yourself to the RESTful software architectural style and the REST API design principles Make use of the JSR 353 APIs and Jackson API for JSON processing Build portable RESTful web APIs, making use of the JAX-RS 2.0 API Simplify API development using the Jersey extension APIs Secure your RESTful web services with various authentication and authorization mechanisms Get to grips with the various metadata solutions to describe, produce, and consume RESTful web services Understand the design and coding guidelines to build well-performing RESTful APIs See how the role of RESTful web services changes with emerging technologies and trends In Detail REST (REpresentational State Transfer) is a simple yet powerful software architecture style to create scalable web services and allow them to be simple, lightweight, and fast. The REST API uses HTTP and JSON, so that it can be used with many programming languages such as Ruby, Java, Python, and Scala. Its use in Java seems to be the most popular though, because of the API's reusability. This book is a guide to developing RESTful web services in Java using the popular RESTful framework APIs available today. You will begin with gaining an in-depth knowledge of the RESTful software architectural style and its relevance in modern applications. Further, you will understand the APIs to parse, generate, transform, and query JSON effectively. Then, you will see how to build a simple RESTful service using the popular JAX-RS 2.0 API along with some real-world examples. This book will introduce you to the Jersey framework API, which is used to simplify your web services. You will also see how to secure your services with various authentication mechanisms. You will get to grips with various solutions to describe, produce, consume, and visualize RESTful web services. Finally, you will see how to design your web services to equip them for the future technological advances, be it Cloud or mobile computing. By the end of this book, you will be able to efficiently build robust, scalable, and secure RESTful web services, making use of the JAX-RS and Jersey framework extensions. Style and approach This book is written as a step-by-step guide to designing and developing robust RESTful web services. Each topic is explained in a simple and easy-to-understand manner with lots of real-life use-cases and their solutions. The traditional division of labor between the database (which only stores and manages SQL and XML data for fast, easy data search and retrieval) and the application server (which runs application or business logic, and presentation logic) is obsolete. Although the books primary focus is on programming the Oracle Database, the concepts and techniques provided apply to most RDBMS that support Java including Oracle, DB2, Sybase, MySQL, and PostgreSQL. This

is the first book to cover new Java, JDBC, SQLJ, JPublisher and Web Services features in Oracle Database 10g Release 2 (the coverage starts with Oracle 9i Release 2). This book is a must-read for database developers audience (DBAs, database applications developers, data architects), Java developers (JDBC, SQLJ, J2EE, and OR Mapping frameworks), and to the emerging Web Services assemblers. Describes pragmatic solutions, advanced database applications, as well as provision of a wealth of code samples. Addresses programming models which run within the database as well as programming models which run in middle-tier or client-tier against the database. Discusses languages for stored procedures: when to use proprietary languages such as PL/SQL and when to use standard languages such as Java; also running non-Java scripting languages in the database. Describes the Java runtime in the Oracle database 10g (i.e., OracleJVM), its architecture, memory management, security management, threading, Java execution, the Native Compiler (i.e., NCOMP), how to make Java known to SQL and PL/SQL, data types mapping, how to call-out to external Web components, EJB components, ERP frameworks, and external databases. Describes JDBC programming and the new Oracle JDBC 10g features, its advanced connection services (pooling, failover, load-balancing, and the fast database event notification mechanism) for clustered databases (RAC) in Grid environments. Describes SQLJ programming and the latest Oracle SQLJ 10g features, contrasting it with JDBC. Describes the latest Database Web services features, Web services concepts and Services Oriented Architecture (SOA) for DBA, the database as Web services provider and the database as Web services consumer. Abridged coverage of JPublisher 10g, a versatile complement to JDBC, SQLJ and Database Web Services.

This text provides Java developers with in-depth coverage of Web Services technology. It includes contributions from recognised Web Services experts and architects, including the Web Services team at IBM.

This book addresses the web services arena with a specific agenda of providing information right from covering the fundamental aspects to its deployment and implementation issues. The content is introductory in nature, and covers not only the technology aspects, but also highlights the application scenarios across the industry. In order to illustrate the potential of web services, a case study exemplifying the Financial and Banking Services industry has been chosen for presentation the book.

A tutorial and reference to Java-based APIs for application software development covers such topics as XDoclet, JavaServer Faces, Hibernate API, Enterprise JavaBeans, and J2EE security.

Helps readers eliminate performance problems, covering topics including bottlenecks, profiling tools, strings, algorithms, distributed systems, and servlets. Get a comprehensive understanding of gRPC fundamentals through real-world examples. With this practical guide, you'll learn how this high-performance interprocess communication protocol is capable of connecting polyglot services in microservices architecture, while

providing a rich framework for defining service contracts and data types. Complete with hands-on examples written in Go, Java, Node, and Python, this book also covers the essential techniques and best practices to use gRPC in production systems. Authors Kasun Indrasiri and Danesh Kuruppu discuss the importance of gRPC in the context of microservices development.

Written by industry thought leaders, Java Web Services Architecture is a no-nonsense guide to web services technologies including SOAP, WSDL, UDDI and the JAX APIs. This book is useful for systems architects and provides many of the practical considerations for implementing web services including authorization, encryption, transactions and the future of Web Services. Covers all the standards, the JAX APIs, transactions, security, and more.

The web services architecture provides a new way to think about and implement application-to-application integration and interoperability that makes the development platform irrelevant. Two applications, regardless of operating system, programming language, or any other technical implementation detail, communicate using XML messages over open Internet protocols such as HTTP or SMTP. The Simple Open Access Protocol (SOAP) is a specification that details how to encode that information and has become the messaging protocol of choice for Web services. Programming Web Services with SOAP is a detailed guide to using SOAP and other leading web services standards--WSDL (Web Service Description Language), and UDDI (Universal Description, Discovery, and Integration protocol). You'll learn the concepts of the web services architecture and get practical advice on building and deploying web services in the enterprise. This authoritative book decodes the standards, explaining the concepts and implementation in a clear, concise style. You'll also learn about the major toolkits for building and deploying web services. Examples in Java, Perl, C#, and Visual Basic illustrate the principles. Significant applications developed using Java and Perl on the Apache Tomcat web platform address real issues such as security, debugging, and interoperability. Covered topic areas include: The Web Services Architecture SOAP envelopes, headers, and encodings WSDL and UDDI Writing web services with Apache SOAP and Java Writing web services with Perl's SOAP::Lite Peer-to-peer (P2P) web services Enterprise issues such as authentication, security, and identity Up-and-coming standards projects for web services Programming Web Services with SOAP provides you with all the information on the standards, protocols, and toolkits you'll need to integrate information services with SOAP. You'll find a solid core of information that will help you develop individual Web services or discover new ways to integrate core business processes across an enterprise.

The approach we take is ideal for software developers with some, or extensive, programming experience: we design a RESTful API, which serves as our software specification, and implement it with every framework discussed in the book—there are no hypothetical examples; only practical working applications. This book is for Java developers who want to code RESTful web services using any of the open source RESTful frameworks available to date, for example, JAX-RS implementations such as Jersey and RESTEasy, the Restlet lightweight framework, or Struts 2 with the REST plug-in. You don't need to know REST, as we cover the theory of REST and web services; however, you should be familiar with the Java language and have some understanding of Java web applications. For each framework, we develop the same web service outlined in Chapter 4, so there is lots of working code available. This is a practical guide and the majority of the book is about coding RESTful web services, and not just about the theory of REST.

A tutorial introducing Java basics covers programming principles, integrating applets with Web applications, and using threads, arrays, and sockets.

The comprehensive Wrox guide for creating Java web applications for the enterprise This guide shows Java software developers and software engineers how to build complex web applications in an enterprise environment. You'll begin with an introduction to the Java

Enterprise Edition and the basic web application, then set up a development application server environment, learn about the tools used in the development process, and explore numerous Java technologies and practices. The book covers industry-standard tools and technologies, specific technologies, and underlying programming concepts. Java is an essential programming language used worldwide for both Android app development and enterprise-level corporate solutions. As a step-by-step guide or a general reference, this book provides an all-in-one Java development solution. Explains Java Enterprise Edition 7 and the basic web application, how to set up a development application server environment, which tools are needed during the development process, and how to apply various Java technologies. Covers new language features in Java 8, such as Lambda Expressions, and the new Java 8 Date & Time API introduced as part of JSR 310, replacing the legacy Date and Calendar APIs. Demonstrates the new, fully-duplex WebSocket web connection technology and its support in Java EE 7, allowing the reader to create rich, truly interactive web applications that can push updated data to the client automatically. Instructs the reader in the configuration and use of Log4j 2.0, Spring Framework 4 (including Spring Web MVC), Hibernate Validator, RabbitMQ, Hibernate ORM, Spring Data, Hibernate Search, and Spring Security. Covers application logging, JSR 340 Servlet API 3.1, JSR 245 JavaServer Pages (JSP) 2.3 (including custom tag libraries), JSR 341 Expression Language 3.0, JSR 356 WebSocket API 1.0, JSR 303/349 Bean Validation 1.1, JSR 317/338 Java Persistence API (JPA) 2.1, full-text searching with JPA, RESTful and SOAP web services, Advanced Message Queuing Protocol (AMQP), and OAuth. Professional Java for Web Applications is the complete Wrox guide for software developers who are familiar with Java and who are ready to build high-level enterprise Java web applications.

Overview: Learn how to develop REST-style and SOAP-based web services and clients with this quick and thorough introduction. This hands-on book delivers a clear, pragmatic approach to web services by providing an architectural overview, complete working code examples, and short yet precise instructions for compiling, deploying, and executing them. You'll learn how to write services from scratch and integrate existing services into your Java applications. With greater emphasis on REST-style services, this second edition covers HttpServlet, Restlet, and JAX-RS APIs; jQuery clients against REST-style services; and JAX-WS for SOAP-based services. Code samples include an Apache Ant script that compiles, packages, and deploys web services. Learn differences and similarities between REST-style and SOAP-based services; -- Program and deliver RESTful web services, using Java APIs and implementations; -- Explore RESTful web service clients written in Java, JavaScript, and Perl; -- Write SOAP-based web services with an emphasis on the application level; -- Examine the handler and transport levels in SOAP-based messaging; -- Learn wire-level security in HTTP(S), users/roles security, and WS-Security; -- Use a Java Application Server (JAS) as an alternative to a standalone web server.

As a developer new to Web Services, how do you make sense of this emerging framework so you can start writing your own services today? This concise book gives programmers both a concrete introduction and a handy reference to XML web services, first by explaining the foundations of this new breed of distributed services, and then by demonstrating quick ways to create services with open-source Java tools. Web Services make it possible for diverse applications to discover each other and exchange data seamlessly via the Internet. For instance, programs written in Java and running on Solaris can find and call code written in C# that run on Windows XP, or programs written in Perl that run on Linux, without any concern about the details of how that service is implemented. A common set of Web Services is at the core of Microsoft's new .NET strategy, Sun Microsystems's Sun One Platform, and the W3C's XML Protocol Activity Group. In this book, author Ethan Cerami explores four key emerging technologies: XML Remote Procedure Calls (XML-RPC) SOAP - The foundation for most

commercial Web Services development Universal Discovery, Description and Integration (UDDI) Web Services Description Language (WSDL) For each of these topics, Web Services Essentials provides a quick overview, Java tutorials with sample code, samples of the XML documents underlying the service, and explanations of freely-available Java APIs. Cerami also includes a guide to the current state of Web Services, pointers to open-source tools and a comprehensive glossary of terms. If you want to break through the Web Services hype and find useful information on these evolving technologies, look no further than Web Services Essentials.

Expert Solutions and State-of-the-Art Code Examples SOA Using Java™ Web Services is a hands-on guide to implementing Web services and Service Oriented Architecture (SOA) with today's Java EE 5 and Java SE 6 platforms. Author Mark Hansen presents in explicit detail the information that enterprise developers and architects need to succeed, from best-practice design techniques to state-of-the-art code samples. Hansen covers creating, deploying, and invoking Web services that can be composed into loosely coupled SOA applications. He begins by reviewing the "big picture," including the challenges of Java-based SOA development and the limitations of traditional approaches. Next, he systematically introduces the latest Java Web Services (JWS) APIs and walks through creating Web services that integrate into a comprehensive SOA solution. Finally, he shows how application frameworks based on JWS can streamline the entire SOA development process and introduces one such framework: SOA-J. The book Introduces practical techniques for managing the complexity of Web services and SOA, including best-practice design examples Offers hard-won insights into building effective SOA applications with Java Web Services Illuminates recent major JWS improvements—including two full chapters on JAX-WS 2.0 Thoroughly explains SOA integration using WSDL, SOAP, Java/XML mapping, and JAXB 2.0 data binding Walks step by step through packaging and deploying Web services components on Java EE 5 with JSR-181 (WS-Metadata 2.0) and JSR-109 Includes specific code solutions for many development issues, from publishing REST endpoints to consuming SOAP services with WSDL Presents a complete case study using the JWS APIs, together with an Ajax front end, to build a SOA application integrating Amazon, Yahoo Shopping, and eBay Contains hundreds of code samples—all tested with the GlassFish Java EE 5 reference implementation—that are downloadable from the companion Web site, <http://soabook.com>. Foreword Preface

Acknowledgments About the Author Chapter 1: Service-Oriented Architecture with Java Web Services Chapter 2: An Overview of Java Web Services Chapter 3: Basic SOA Using REST Chapter 4: The Role of WSDL, SOAP, and Java/XML Mapping in SOA Chapter 5: The JAXB 2.0 Data Binding Chapter 6: JAX-WS—Client-Side Development Chapter 7: JAX-WS 2.0—Server-Side Development Chapter 8: Packaging and Deployment of SOA Components (JSR-181 and JSR-109) Chapter 9: SOAShopper: Integrating eBay, Amazon, and Yahoo! Shopping Chapter 10: Ajax and Java Web Services Chapter 11: WSDL-Centric Java Web Services with SOA-J Appendix A: Java, XML, and Web Services

Standards Used in This Book Appendix B: Software Configuration Guide

Appendix C: Namespace Prefixes Glossary References Index

Enterprise Integration Patterns provides an invaluable catalog of sixty-five patterns, with real-world solutions that demonstrate the formidable of messaging and help you to design effective messaging solutions for your enterprise. The authors also include examples covering a variety of different integration technologies, such as JMS, MSMQ, TIBCO ActiveEnterprise, Microsoft BizTalk, SOAP, and XSL. A case study describing a bond trading system illustrates the patterns in practice, and the book offers a look at emerging standards, as well as insights into what the future of enterprise integration might hold. This book provides a consistent vocabulary and visual notation framework to describe large-scale integration solutions across many technologies. It also explores in detail the advantages and limitations of asynchronous messaging architectures. The authors present practical advice on designing code that connects an application to a messaging system, and provide extensive information to help you determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system. If you want to know how to manage, monitor, and maintain a messaging system once it is in use, get this book.

The Java EE 7 Tutorial: Volume 2, Fifth Edition, is a task-oriented, example-driven guide to developing enterprise applications for the Java Platform, Enterprise Edition 7 (Java EE 7). Written by members of the Java EE documentation team at Oracle, this book provides new and intermediate Java programmers with a deep understanding of the platform. This guide includes descriptions of platform features and provides instructions for using the latest versions of NetBeans IDE and GlassFish Server Open Source Edition. The book introduces Enterprise JavaBeans components, the Java Persistence API, the Java Message Service (JMS) API, Java EE security, transactions, resource adapters, Java EE Interceptors, Batch Applications for the Java Platform, and Concurrency Utilities for Java EE. The book culminates with three case studies that illustrate the use of multiple Java EE 7 APIs.

Most modern business systems include independent applications that exchange information with each other—a technique usually called enterprise integration. An architectural approach called the Enterprise Service Bus (ESB) offers developers a way to handle the messages between those independent applications without creating a lot of custom code. While commercial ESB solutions can be quite expensive to implement and maintain, a set of high-quality open source ESB tools offer the same functionality at a substantially lower cost. Open Source ESBs in Action shows you how to implement and use two open source ESB implementations: Mule and ServiceMix. The authors introduce you to these freely-available ESB tools and present practical examples of how to use them in real-world scenarios. You will learn how the various features of an ESB such as transformation, routing, security, connectivity and more can be implemented using Mule and ServiceMix. You will also learn how to solve common enterprise

integration problems using a structured approach. Beyond simply learning how Mule and Service Mix work, you'll learn the core techniques of ESB implementation such as Process Choreography, or the implementation of complex business processes through an ESB, and Service Orchestration, or exposing a set of services as a single service. The book shows you the fundamentals of ESB-based event processing and Quality of Service concerns like security, reliable delivery, and transaction management. Working in integration projects is exciting, with new technologies and paradigms arriving every day. Open Source technologies like Mule and ServiceMix both offer lower-cost solutions and a higher degree of innovation than commercial ESB implementations. Open Source ESBs in Action will help you master ESB-driven integration techniques quickly and will provide you with knowledge you need to work effectively with Mule and ServiceMix. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.

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.

Learn how to design and develop distributed web services in Java, using RESTful architectural principles and the JAX-RS 2.0 specification in Java EE 7. By focusing on implementation rather than theory, this hands-on reference demonstrates how easy it is to get started with services based on the REST architecture. With the book's technical guide, you'll learn how REST and JAX-RS work and when to use them. The RESTEasy workbook that follows provides step-by-step instructions for installing, configuring, and running several working JAX-RS examples, using the JBoss RESTEasy implementation of JAX-RS 2.0. Learn JAX-RS 2.0 features, including a client API, server-side asynchronous HTTP, and filters and interceptors Examine the design of a distributed RESTful interface for an e-commerce order entry system Use the JAX-RS Response object to return complex responses to your client (ResponseBuilder) Increase the

performance of your services by leveraging HTTP caching protocols Deploy and integrate web services within Java EE7, servlet containers, EJB, Spring, and JPA Learn popular mechanisms to perform authentication on the Web, including client-side SSL and OAuth 2.0

Wonderpedia, an encyclopedia (NeoPopRealism Journal) of books published after year 2000. Founded by Nadia Russ in 2008.

A developer's guide to designing, testing, and securing production-ready modern APIs with the help of practical ideas to improve your application's functionality

Key Features Build resilient software for your enterprises and customers by understanding the complete API development life cycle Overcome the challenges of traditional API design by adapting to a new and evolving culture of modern API development Use Spring and Spring Boot to develop future-proof scalable APIs

Book Description The philosophy of API development has evolved over the years to serve the modern needs of enterprise architecture, and developers need to know how to adapt to these modern API design principles. Apps are now developed with APIs that enable ease of integration for the cloud environment and distributed systems. With this Spring book, you'll discover various kinds of production-ready API implementation using REST APIs and explore async using the reactive paradigm, gRPC, and GraphQL. You'll learn how to design evolving REST-based APIs supported by HATEOAS and ETAGs and develop reactive, async, non-blocking APIs. After that, you'll see how to secure REST APIs using Spring Security and find out how the APIs that you develop are consumed by the app's UI. The book then takes you through the process of testing, deploying, logging, and monitoring your APIs. You'll also explore API development using gRPC and GraphQL and design modern scalable architecture with microservices. The book helps you gain practical knowledge of modern API implementation using a sample e-commerce app. By the end of this Spring book, you'll be able to develop, test, and deploy highly scalable, maintainable, and developer-friendly APIs to help your customers to transform their business. What you will learn

Understand RESTful API development, its design paradigm, and its best practices Become well versed in Spring's core components for implementing RESTful web services Implement reactive APIs and explore async API development Apply Spring Security for authentication using JWT and authorization of requests Develop a React-based UI to consume APIs Implement gRPC inter-service communication Design GraphQL-based APIs by understanding workflows and tooling Gain insights into how you can secure, test, monitor, and deploy your APIs

Who this book is for This book is for inexperienced Java programmers, comp science, or coding boot camp graduates who have knowledge of basic programming constructs, data structures, and algorithms in Java but lack the practical web development skills necessary to start working as a developer. Professionals who've recently joined a startup or a company and are tasked with creating real-world web APIs and services will also find this book helpful. This book is also a good resource for Java developers who are looking

for a career move into web development to get started with the basics of web service development.

Explains what Web services technologies are and how they work, discussing how to use them and what they do and covering topics including SOAP, WSDL, UDDI, security, interoperability, and integration.

Get up to speed on the principal technologies in the Java Platform, Enterprise Edition 7, and learn how the latest version embraces HTML5, focuses on higher productivity, and provides functionality to meet enterprise demands. Written by Arun Gupta, a key member of the Java EE team, this book provides a chapter-by-chapter survey of several Java EE 7 specifications, including WebSockets, Batch Processing, RESTful Web Services, and Java Message Service. You'll also get self-paced instructions for building an end-to-end application with many of the technologies described in the book, which will help you understand the design patterns vital to Java EE development.

Understand the key components of the Java EE platform, with easy-to-understand explanations and extensive code samples Examine all the new components that have been added to Java EE 7 platform, such as WebSockets, JSON, Batch, and Concurrency Learn about RESTful Web Services, SOAP XML-based messaging protocol, and Java Message Service Explore Enterprise JavaBeans, Contexts and Dependency Injection, and the Java Persistence API Discover how different components were updated from Java EE 6 to Java EE 7

According to recent press reports, everyone is developing Web Services, but many are still in the exploratory phase - learning what's involved and how to achieve ROI. This book is designed to give a working introduction to Web Services to help decision-makers prepare for the implementation in their companies. It demystifies the topic by providing a beginning level explanation of what this technology is, what it means to businesses, where to apply it, and how to make it work. Using numerous simple examples, the book explains the core concepts of Web Services: SOAP, UDDI, and WSDL, as well as tools and related concepts that will help create the "big picture" in readers' minds.

"Every developer working with the Web needs to read this book." -- David Heinemeier

Hansson, creator of the Rails framework "RESTful Web Services finally provides a practical roadmap for constructing services that embrace the Web, instead of trying to route around it." -- Adam Trachtenberg, PHP author and EBay Web Services

Evangelist You've built web sites that can be used by humans. But can you also build web sites that are usable by machines? That's where the future lies, and that's what RESTful Web Services shows you how to do. The World Wide Web is the most popular distributed application in history, and Web services and mashups have turned it into a powerful distributed computing platform. But today's web service technologies have lost sight of the simplicity that made the Web successful. They don't work like the Web, and they're missing out on its advantages. This book puts the "Web" back into web services. It shows how you can connect to the programmable web with the technologies you already use every day. The key is REST, the architectural style that drives the Web.

This book: Emphasizes the power of basic Web technologies -- the HTTP application protocol, the URI naming standard, and the XML markup language Introduces the Resource-Oriented Architecture (ROA), a common-sense set of rules for designing RESTful web services Shows how a RESTful design is simpler, more versatile, and

more scalable than a design based on Remote Procedure Calls (RPC) Includes real-world examples of RESTful web services, like Amazon's Simple Storage Service and the Atom Publishing Protocol Discusses web service clients for popular programming languages Shows how to implement RESTful services in three popular frameworks -- Ruby on Rails, Restlet (for Java), and Django (for Python) Focuses on practical issues: how to design and implement RESTful web services and clients This is the first book that applies the REST design philosophy to real web services. It sets down the best practices you need to make your design a success, and the techniques you need to turn your design into working code. You can harness the power of the Web for programmable applications: you just have to work with the Web instead of against it. This book shows you how.

Kubernetes radically changes the way applications are built and deployed in the cloud. Since its introduction in 2014, this container orchestrator has become one of the largest and most popular open source projects in the world. The updated edition of this practical book shows developers and ops personnel how Kubernetes and container technology can help you achieve new levels of velocity, agility, reliability, and efficiency. Kelsey Hightower, Brendan Burns, and Joe Beda—who've worked on Kubernetes at Google and beyond—explain how this system fits into the lifecycle of a distributed application. You'll learn how to use tools and APIs to automate scalable distributed systems, whether it's for online services, machine learning applications, or a cluster of Raspberry Pi computers. Create a simple cluster to learn how Kubernetes works Dive into the details of deploying an application using Kubernetes Learn specialized objects in Kubernetes, such as DaemonSets, jobs, ConfigMaps, and secrets Explore deployments that tie together the lifecycle of a complete application Get practical examples of how to develop and deploy real-world applications in Kubernetes From lambda expressions and JavaFX 8 to new support for network programming and mobile development, Java 8 brings a wealth of changes. This cookbook helps you 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 debugging and data structures to GUI development and functional programming. Each recipe includes self-contained code solutions that you can freely use, along with a discussion of how and why they work. If you are familiar with Java basics, this cookbook will bolster your knowledge of the language in general and Java 8's main APIs in particular. Recipes include: Methods for compiling, running, and debugging 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 Directory and filesystem operations Working with graphics, audio, and video GUI development, including JavaFX and handlers Network programming on both client and server Database access, using JPA, Hibernate, and JDBC Processing JSON and XML for data storage Multithreading and concurrency

Learn the fundamentals of Java EE 8 APIs to build effective web services Key Features Design modern and stylish web services with Java EE APIs Secure your web services with JSON Web Tokens Explore the advanced concepts of RESTful web services and the JAX-RS API Book Description Java Enterprise Edition is one of the leading application programming platforms for enterprise Java development. With Java EE 8

finally released and the first application servers now available, it is time to take a closer look at how to develop modern and lightweight web services with the latest API additions and improvements. *Building RESTful Web Services with Java EE 8* is a comprehensive guide that will show you how to develop state-of-the-art RESTful web services with the latest Java EE 8 APIs. You will begin with an overview of Java EE 8 and the latest API additions and improvements. You will then delve into the details of implementing synchronous RESTful web services and clients with JAX-RS. Next up, you will learn about the specifics of data binding and content marshalling using the JSON-B 1.0 and JSON-P 1.1 APIs. This book also guides you in leveraging the power of asynchronous APIs on the server and client side, and you will learn to use server-sent events (SSEs) for push communication. The final section covers advanced web service topics such as validation, JWT security, and diagnosability. By the end of this book, you will have implemented several working web services and have a thorough understanding of the Java EE 8 APIs required for lightweight web service development. What you will learn Dive into the latest Java EE 8 APIs relevant for developing web services Use the new JSON-B APIs for easy data binding Understand how JSON-P API can be used for flexible processing Implement synchronous and asynchronous JAX-RS clients Use server-sent events to implement server-side code Secure Java EE 8 web services with JSON Web Tokens Who this book is for If you're a Java developer who wants to learn how to implement web services using the latest Java EE 8 APIs, this book is for you. Though no prior knowledge of Java EE 8 is required, experience with a previous Java EE version will be beneficial.

Learn how to develop REST-style and SOAP-based web services and clients with this quick and thorough introduction. This hands-on book delivers a clear, pragmatic approach to web services by providing an architectural overview, complete working code examples, and short yet precise instructions for compiling, deploying, and executing them. You'll learn how to write services from scratch and integrate existing services into your Java applications. With greater emphasis on REST-style services, this second edition covers `HttpServlet`, `Restlet`, and JAX-RS APIs; jQuery clients against REST-style services; and JAX-WS for SOAP-based services. Code samples include an Apache Ant script that compiles, packages, and deploys web services. Learn differences and similarities between REST-style and SOAP-based services Program and deliver RESTful web services, using Java APIs and implementations Explore RESTful web service clients written in Java, JavaScript, and Perl Write SOAP-based web services with an emphasis on the application level Examine the handler and transport levels in SOAP-based messaging Learn wire-level security in HTTP(S), users/roles security, and WS-Security Use a Java Application Server (JAS) as an alternative to a standalone web server

This book constitutes the proceedings of the International Conference on ENTERprise information systems, held Viana do Castelo, Portugal, in October 2010.

Find out how to implement the REST architecture to build resilient software in Java with the help of the Spring 5.0 framework. Key Features Follow best practices and explore techniques such as clustering and caching to achieve a reactive, scalable web service. Leverage the Spring Framework to quickly

implement RESTful endpoints. Learn to implement a client library for a RESTful web service using the Spring Framework along with the new front end framework. Book Description REST is an architectural style that tackles the challenges of building scalable web services. In today's connected world, APIs have taken a central role on the web. APIs provide the fabric through which systems interact, and REST has become synonymous with APIs. The depth, breadth, and ease of use of Spring makes it one of the most attractive frameworks in the Java ecosystem. Marrying the two technologies is therefore a very natural choice. This book takes you through the design of RESTful web services and leverages the Spring Framework to implement these services. Starting from the basics of the philosophy behind REST, you'll go through the steps of designing and implementing an enterprise-grade RESTful web service. Taking a practical approach, each chapter provides code samples that you can apply to your own circumstances. This second edition brings forth the power of the latest Spring 5.0 release, working with MVC built-in as well as the front end framework. It then goes beyond the use of Spring to explore approaches to tackle resilience, security, and scalability concerns. Improve performance of your applications with the new HTTP 2.0 standards. You'll learn techniques to deal with security in Spring and discover how to implement unit and integration test strategies. Finally, the book ends by walking you through building a Java client for your RESTful web service, along with some scaling techniques using the new Spring Reactive libraries. What you will learn

- Deep dive into the principles behind REST
- Expose CRUD operations through RESTful endpoints with the Spring Framework
- Devise response formats and error handling strategies, offering a consistent and flexible structure to simplify integration for service consumers
- Follow the best approaches for dealing with a service's evolution while maintaining backward compatibility
- Understand techniques to secure web services
- Comply with the best ways to test RESTful web services, including tips for load testing
- Optimise and scale web services using techniques such as caching and clustering

Who this book is for This book is intended for those who want to learn to build RESTful web services with the latest Spring 5.0 Framework. To make best use of the code samples included in the book, you should have a basic knowledge of the Java language. Previous experience with the Spring Framework would also help you get up and running quickly. While the REST design philosophy has captured the imagination of web and enterprise developers alike, using this approach to develop real web services is no picnic. This cookbook includes more than 100 recipes to help you take advantage of REST, HTTP, and the infrastructure of the Web. You'll learn ways to design RESTful web services for client and server applications that meet performance, scalability, reliability, and security goals, no matter what programming language and development framework you use. Each recipe includes one or two problem statements, with easy-to-follow, step-by-step instructions for solving them, as well as examples using HTTP requests and

responses, and XML, JSON, and Atom snippets. You'll also get implementation guidelines, and a discussion of the pros, cons, and trade-offs that come with each solution. Learn how to design resources to meet various application scenarios Successfully design representations and URIs Implement the hypertext constraint using links and link headers Understand when and how to use Atom and AtomPub Know what and what not to do to support caching Learn how to implement concurrency control Deal with advanced use cases involving copying, merging, transactions, batch processing, and partial updates Secure web services and support OAuth

Master core REST concepts and create RESTful web services in Java About This Book Build efficient and secure RESTful web APIs in Java.. Design solutions to produce, consume and visualize RESTful web services using WADL, RAML, and Swagger Familiarize the role of RESTful APIs usage in emerging technology trends like Cloud, IoT, Social Media. Who This Book Is For If you are a web developer with a basic understanding of the REST concepts and envisage to get acquainted with the idea of designing and developing RESTful web services, this is the book for you. As all the code samples for the book are written in Java, proficiency in Java is a must. What You Will Learn Introduce yourself to the RESTful software architectural style and the REST API design principles Make use of the JSR 353 API, JSR 374 API, JSR 367 API and Jackson API for JSON processing Build portable RESTful web APIs, making use of the JAX-RS 2.1 API Simplify API development using the Jersey and RESTEasy extension APIs Secure your RESTful web services with various authentication and authorization mechanisms Get to grips with the various metadata solutions to describe, produce, and consume RESTful web services Understand the design and coding guidelines to build well-performing RESTful APIs See how the role of RESTful web services changes with emerging technologies and trends In Detail Representational State Transfer (REST) is a simple yet powerful software architecture style to create lightweight and scalable web services. The RESTful web services use HTTP as the transport protocol and can use any message formats, including XML, JSON(widely used), CSV, and many more, which makes it easily inter-operable across different languages and platforms. This successful book is currently in its 3rd edition and has been used by thousands of developers. It serves as an excellent guide for developing RESTful web services in Java. This book attempts to familiarize the reader with the concepts of REST. It is a pragmatic guide for designing and developing web services using Java APIs for real-life use cases following best practices and for learning to secure REST APIs using OAuth and JWT. Finally, you will learn the role of RESTful web services for future technological advances, be it cloud, IoT or social media. By the end of this book, you will be able to efficiently build robust, scalable, and secure RESTful web services using Java APIs. Style and approach Step-by-step guide to designing and developing robust RESTful web services. Each topic is explained in a simple and easy-to-understand manner with lots of real-life use-

cases and their solutions.

Build robust, scalable, end-to-end business solutions with J2EE(TM) Web Services. This is the definitive practitioner's guide to building enterprise-class J2EE Web Services that integrate with any B2B application and interoperate with any legacy system. Sun senior architect Ray Lai introduces 25 vendor-independent architectural patterns and best practices for designing Web Services that deliver outstanding performance, scalability, and reliability. Lai takes you to the frontiers of emerging Web Services technologies, showing how to make the most of today's leading-edge tools, from Java Web Services Developer Pack to Apache Axis. Coverage includes: Web Services: making the business case, and overcoming the technical and business challenges Real-life examples and scenarios, and a start-to-finish application case study Expert guidance on reducing risk and avoiding implementation pitfalls Building complete business solutions with rich messaging and workflow collaboration Mainframe interoperability and B2B integration within and beyond the enterprise Framework and methodology to develop your Web Services patterns and best practices Up-to-the-minute coverage of Web Services security New applications: service consolidation, wireless, and more An extensive library of links to Web resources, reference material, and vendors Whether you're an architect, designer, project leader, or developer, these are the best practices, patterns, and techniques you need to succeed with Web services in your enterprise environment. Enterprises seeking to leverage Web Services to revolutionize the ways they deliver services to customers, partners, and employees will find the answers they need in this book. "Ray Lai's J2EETM Platform Web Services is a comprehensive look at J2EE platform architecture and should be a must read for any serious Web Services developer." --Larry Tabb, Senior Strategic Advisor, Tower Group "This is a book for true practitioners. It's for those interested in designing and implementing Web Services now-and preparing for new opportunities on the horizon." --Jonathan Schwartz, Executive Vice President, Sun Microsystems The Globus Toolkit is a key technology in Grid Computing, the exciting new computing paradigm that allows users to share processing power, data, storage, and other computing resources across institutional and geographic boundaries. Globus Toolkit 4: Programming Java Services provides an introduction to the latest version of this widely acclaimed toolkit. Based on the popular web-based The Globus Toolkit 4 Programmer's Tutorial, this book far surpasses that document, providing greater detail, quick reference appendices, and many additional examples. If you're making the leap into Grid Computing using the Globus Toolkit, you'll want Globus Toolkit 4: Programming Java Services at your side as you take your first steps. Written for newcomers to Globus Toolkit, but filled with useful information for experienced users. Clearly situates Globus application development within the context of Web Services and evolving Grid standards. Provides detailed coverage of Web Services programming with the Globus Toolkit's Java WS Core component. Covers basic aspects of developing

secure services using the Grid Security Infrastructure (GSI). Uses simple, didactic examples throughout the book, but also includes a more elaborate example, the FileBuy application, that showcases common design patterns found in Globus applications. Concludes with useful reference appendices.

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