
Bookmark File PDF RESTful Java Web Services Third Edition A Pragmatic Guide To Designing And Building RESTful APIs Using Java

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HULL DARRYL

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: SOA Shopper: Integrating eBay, Ama-

zon, 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 Explore the best tools and techniques to create lightweight, maintainable, and scalable Python web services Key Features Combine Python with different data sources to build complex RESTful APIs from scratch Configure and fine-tune your APIs using the best tools and techniques available Use command-line and GUI tools to test CRUD operations performed by RESTful Web Services or APIs Book Description Python is the language of choice for millions of developers worldwide that builds great web services in RESTful architecture. This second edition of Hands-On RESTful Python Web Services will cover the best tools you can use to build engaging web services. This book shows you how to develop RESTful APIs using the most popular Python frameworks and all the necessary stacks with Python, combined with related libraries and tools. You'll learn to incorporate all new features of Python 3.7, Flask 1.0.2, Django 2.1, Tornado 5.1, and also a new framework, Pyramid. As you advance through the chapters, you will get to grips with each of these frameworks to build various web services, and be shown use cases and best practices covering when to use a particular framework. You'll then successfully develop RESTful APIs with all frameworks and understand how each framework processes HTTP requests and routes URLs. You'll also discover best practices for validation, serialization, and deserialization. In the concluding chapters, you will take advantage of specific features available in certain frameworks such as integrated ORMs, built-in authorization and authentication, and work with asynchronous code. At the end of each framework, you will write tests for RESTful APIs and improve code coverage. By the end of the book, you will have gained a deep understanding of the stacks needed to build RESTful web services. What you will learn Select the most appropriate framework based on requirements Develop complex RESTful APIs from scratch using Python Use requests handlers, URL patterns, serialization, and validations Add authentication, authorization, and interaction with ORMs and databases Debug, test, and improve RESTful APIs with four frameworks Design RESTful APIs with frameworks and create automated tests Who this book is for This book is for web developers who have a working knowledge of Python and would like to build amazing web services

by taking advantage of the various frameworks of Python. You should have some knowledge of RESTful APIs.

Summary Restlet in Action gets you started with the Restlet Framework and the REST architecture style. You'll create and deploy applications in record time while learning to use popular RESTful Web APIs effectively. This book looks at the many aspects of web development, on both the server and client side, along with cloud computing, mobile Android devices, and Semantic Web applications. About the Technology In a RESTful architecture any component can act, if needed, as both client and server—this is flexible and powerful, but tricky to implement. The Restlet project is a reference implementation with a Java-based API and everything you need to build servers and web clients that integrate with most web and enterprise technologies. About the Book Restlet in Action introduces the Restlet Framework and RESTful web APIs. You'll see how to easily create and deploy your own web API while learning to consume other web APIs effectively. You'll learn about designing, securing, versioning, documentation, optimizing, and more on both the server and client side, as well as about cloud computing, mobile Android devices, and Semantic Web applications. The book requires a basic knowledge of Java and the web, but no prior exposure to REST or Restlet. 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. What's Inside Written by the creators of Restlet! How to create your own web API How to deploy on cloud and mobile platforms Focus on Android, Google App Engine, Google Web Toolkit, and OSGi technologies Table of Contents PART 1 GETTING STARTED Introducing the Restlet Framework Beginning a Restlet application Deploying a Restlet application PART 2 GETTING READY TO ROLL OUT Producing and consuming Restlet representations Securing a Restlet application Documenting and versioning a Restlet application Enhancing a Restlet application with recipes and best practices PART 3 FURTHER USE POSSIBILITIES Using Restlet with cloud platforms Using Restlet in browsers and mobile devices Embracing hypermedia and the Semantic Web The future of Restlet 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

Design and implement efficient RESTful solutions with this practical hands-on guide About This Book Create a fully featured RESTful API solution from scratch. Learn how to leverage Node.js, Express, MongoDB and NoSQL datastores to give an extra edge to your REST API design. Use this practical guide to integrate MongoDB in your Node.js application. Who This Book Is For The ideal target audi-

ence for this book is web developers who have some experience with RESTful services. Familiarity with basic JavaScript programming techniques is required. No prior experience with Node.js or Express.js is required. What You Will Learn Install, develop, and test your own Node.js user modules Comprehend the differences between an HTTP and a RESTful application Optimize RESTful service URI routing with best practices Eliminate third-party dependencies in your tests with mocking Learn about NoSQL data stores and integrate MongoDB in your Node.js application with Mongoose Secure your services with NoSQL database integration within Node.js applications Enrich your development skills to create scalable, server-side, RESTful applications based on the Node.js platform In Detail In this era of cloud computing, every data provisioning solution is built in a scalable and fail-safe way. Thus, when building RESTful services, the right choice for the underlying platform is vital. Node.js, with its asynchronous, event-driven architecture, is exactly the right choice to build RESTful APIs. This book will help you enrich your development skills to create scalable, server-side, RESTful applications based on the Node.js platform. Starting with the fundamentals of REST, you will understand why RESTful web services are better data provisioning solution than other technologies. You will start setting up a development environment by installing Node.js, Express.js, and other modules. Next, you will write a simple HTTP request handler and create and test Node.js modules using automated tests and mock objects. You will then have to choose the most appropriate data storage type, having options between a key/value or document data store, and also you will implement automated tests for it. This module will evolve chapter by chapter until it turns into a full-fledged and secure Restful service. Style and approach Create state of the art RESTful API solutions leveraging Node.js 4.x.

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.

Apply microservices patterns to build resilient and scalable distributed systems Key Features Understand the challenges of building large-scale microservice landscapes Build cloud-native production-ready microservices with this comprehensive guide Discover how to get the best out of Spring Cloud, Kubernetes, and Istio when used together Book Description Microservices architecture allows developers to build and maintain applications with ease, and enterprises are rapidly adopting it to build software using Spring Boot as their default framework. With this book, you'll learn how to efficiently build and deploy microservices using Spring Boot. This microservices book will take you through tried and tested approaches to building distributed systems and implementing microservices architecture in your organization. Starting with a set of simple cooperating microservices devel-

oped using Spring Boot, you'll learn how you can add functionalities such as persistence, make your microservices reactive, and describe their APIs using Swagger/OpenAPI. As you advance, you'll understand how to add different services from Spring Cloud to your microservice system. The book also demonstrates how to deploy your microservices using Kubernetes and manage them with Istio for improved security and traffic management. Finally, you'll explore centralized log management using the EFK stack and monitor microservices using Prometheus and Grafana. By the end of this book, you'll be able to build microservices that are scalable and robust using Spring Boot and Spring Cloud. What you will learn

Build reactive microservices using Spring Boot
Develop resilient and scalable microservices using Spring Cloud
Use OAuth 2.0/OIDC and Spring Security to protect public APIs
Implement Docker to bridge the gap between development, testing, and production
Deploy and manage microservices using Kubernetes
Apply Istio for improved security, observability, and traffic management

Who this book is for This book is for Java and Spring developers and architects who want to learn how to break up their existing monoliths into microservices and deploy them either on-premises or in the cloud using Kubernetes as a container orchestrator and Istio as a service Mesh. No familiarity with microservices architecture is required to get started with this book.

Build Alfresco applications using Web Services, WebScripts and CMIS.

Spring REST is a practical guide for designing and developing RESTful APIs using the Spring Framework. This book walks you through the process of designing and building a REST application while taking a deep dive into design principles and best practices for versioning, security, documentation, error handling, paging, and sorting. This book 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.

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.

The basic rules of REST APIs - "many nouns, few verbs, stick with HTTP" - seem easy, but that simplicity and power require discipline to work smoothly. This brief guide provides next steps for implementing complex projects on simple and extensible foundations.

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.

Java Enterprise Edition (Java EE) continues to be one of the leading Java technologies and platforms from Oracle (previously Sun). Beginning Java EE 6 Platform with GlassFish 3, Second Edition is this first tutorial book on the final version of the Java EE 6 Platform. Step by step and easy to follow, this book describes many of the Java EE 6 specifications and reference implementations, and shows them in action using practical examples. This book uses the new version of GlassFish 3 to deploy and administer the code examples. Written by an expert member of the Java EE 6 specification request and review board in the Java Community Process (JCP), this book contains the best information possible, from an expert's perspective on enterprise Java technologies.

Discover the RESTful technologies, including REST, JSON, XML, JAX-RS web services, SOAP and more, for building today's microservices, big data applications, and web service applications. This book is based on a course the Oracle-based author is teaching for UC Santa Cruz Silicon Valley which covers architecture, design best practices and coding labs. Pro RESTful APIs: Design gives you all the fundamentals from the top down: from the top (architecture) through the middle (design) to the bottom (coding). This book is a must have for any microservices or web services developer building applications and services. What You'll Learn Discover the key RESTful APIs, including REST, JSON, XML, JAX, SOAP and more Use these for web services and data exchange, especially in today's big data context Harness XML, JSON, REST, and JAX-RS in examples and case studies Apply best practices to your solutions' architecture Who This Book Is For Experienced web programmers and developers.

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

This IBM® Redbooks® publication focuses on developing Web service applications in IBM CICS®. It takes the broad view of developing and modernizing CICS applications for XML, Web services, SOAP, and SOA support, and lays out a reference architecture for developing these kinds of applications. We start by discussing Web services in general, then review how CICS implements Web services. We offer an overview of different development approaches: bottom-up, top-down, and meet-in-the-middle. We then look at how you would go about exposing a CICS application as a Web service provider, again looking at the different approaches. The book then steps through the process of creating a CICS Web service requester. We follow this by looking at CICS application aggregation (including 3270 applications) with IBM Rational® Application Developer for IBM System z® and how to implement CICS Web Services using CICS Cloud technology. The first part is concluded with hints and tips to help you when implementing this technology. Part two of this publication provides performance

figures for a basic Web service. We investigate some common variables and examine their effects on the performance of CICS as both a requester and provider of Web services.

The popularity of REST in recent years has led to tremendous growth in almost-RESTful APIs that don't include many of the architecture's benefits. With this practical guide, you'll learn what it takes to design usable REST APIs that evolve over time. By focusing on solutions that cross a variety of domains, this book shows you how to create powerful and secure applications, using the tools designed for the world's most successful distributed computing system: the World Wide Web. You'll explore the concepts behind REST, learn different strategies for creating hypermedia-based APIs, and then put everything together with a step-by-step guide to designing a RESTful Web API. Examine API design strategies, including the collection pattern and pure hypermedia Understand how hypermedia ties representations together into a coherent API Discover how XMDP and ALPS profile formats can help you meet the Web API "semantic challenge" Learn close to two-dozen standardized hypermedia data formats Apply best practices for using HTTP in API implementations Create Web APIs with the JSON-LD standard and other the Linked Data approaches Understand the CoAP protocol for using REST in embedded systems

Develop Enterprise Java applications compliant with the latest version of the Java EE specification About This Book This book covers all of the major Java EE 8 APIs and includes new additions such as enhanced Security, JSON-B Processing, and more Learn additional Java EE APIs, such as the Java API for WebSocket and the Java Message Service (JMS) Develop applications by taking advantage of the latest versions of CDI, Security, Servlets, and JSF and other Java EE specifications Who This Book Is For If you are a Java developer who wants to become proficient with Java EE 8, this book is ideal for you. You are expected to have some experience with Java and to have developed and deployed applications in the past, but you don't need any previous knowledge of Java EE. What You Will Learn Develop and deploy Java EE applications Embrace the latest additions to the Contexts and Dependency Injection (CDI) specification to develop Java EE applications Develop web-based applications by utilizing the latest version of JavaServer Faces, JSF 2.3. Understand the steps needed to process JSON data with JSON-P and the new JSON-B Java EE API Implement RESTful web services using the new JAX-RS 2.1 API, which also includes support for Server-Sent Events (SSE) and the new reactive client API In Detail Java EE is an Enterprise Java standard. Applications written to comply with the Java EE specification do not tie developers to a specific vendor; instead they can be deployed to any Java EE compliant application server. With this book, you'll get all the tools and techniques you need to build robust and scalable applications in Java EE 8. This book covers all the major Java EE 8 APIs including JSF 2.3, Enterprise JavaBeans (EJB) 3.2, Contexts and Dependency Injection (CDI) 2.0, the Java API for WebSockets, JAX-RS 2.1, Servlet 4.0, and more. The book begins by introducing you to Java EE 8 application development and goes on to cover all the major Java EE 8 APIs. It goes beyond the basics to develop Java EE applications that can be deployed to any Java EE 8 compliant application server. It also introduces advanced topics such as JSON-P and JSON-B, the Java APIs for JSON processing, and the Java API for JSON binding. These topics dive deep, explaining how the two APIs (the Model API and the Streaming API) are used to process JSON data. Moving on, we cover additional Java EE APIs, such as the Java API for WebSocket and the Java Message Service (JMS), which allows loosely coupled, asynchronous communication. Further on, you'll discover ways to secure Java EE applica-

tions by taking advantage of the new Java EE Security API. Finally, you'll learn more about the RESTful web service development using the latest JAX-RS 2.1 specification. You'll also get to know techniques to develop cloud-ready microservices in Java EE. Style and approach The book takes a pragmatic approach, showing you various techniques to utilize new features of Java EE 8 specification. It is packed with clear, step-by-step instructions, practical examples, and straightforward explanations. A step-by-step guide that will help you design, develop, scale, and deploy RESTful APIs with TypeScript 3 and Node.js Key Features Gain in-depth knowledge of OpenAPI and Swagger to build scalable web services Explore a variety of test frameworks and test runners such as Stryker, Mocha, and Chai Create a pipeline by Dockerizing your environment using Travis CI, Google Cloud Platform, and GitHub Book Description In the world of web development, leveraging data is the key to developing comprehensive applications, and RESTful APIs help you to achieve this systematically. This book will guide you in designing and developing web services with the power of TypeScript 3 and Node.js. You'll design REST APIs using best practices for request handling, validation, authentication, and authorization. You'll also understand how to enhance the capabilities of your APIs with ODMs, databases, models and views, as well as asynchronous callbacks. This book will guide you in securing your environment by testing your services and initiating test automation with different testing approaches. Furthermore, you'll get to grips with developing secure, testable, and more efficient code, and be able to scale and deploy TypeScript 3 and Node.js-powered RESTful APIs on cloud platforms such as the Google Cloud Platform. Finally, the book will help you explore microservices and give you an overview of what GraphQL can allow you to do. By the end of this book, you will be able to use RESTful web services to create your APIs for mobile and web apps and other platforms. What you will learn Explore various methods to plan your services in a scalable way Understand how to handle different request types and the response status code Get to grips with securing web services Delve into error handling and logging your web services for improved debugging Uncover the microservices architecture and GraphQL Create automated CI/CD pipelines for release and deployment strategies Who this book is for If you're a developer who has a basic understanding of REST concepts and want to learn how to design and develop RESTful APIs, this book is for you. Prior knowledge of TypeScript will help you make the most out of this book.

Create web services that are lightweight, maintainable, scalable, and secure using the best tools and techniques designed for Python About This Book Develop RESTful Web Services using the most popular frameworks in Python Configure and fine-tune your APIs using the best tools and techniques available This practical guide will help you to implement complete REST-based APIs from scratch Who This Book Is For This book is for web developers who have working knowledge of Python and would like to build amazing web services by taking advantage of the various frameworks of Python. You should have some knowledge of RESTful APIs. What You Will Learn Develop complex RESTful APIs from scratch with Python combined with and without data sources Choose the most appropriate (micro) framework based on the specific requirements of a RESTful API / web service Debug, test, and profile RESTful APIs with each of the frameworks Develop a complex RESTful API that interacts with a PostgreSQL database Add authentication and permissions to a RESTful API built in each of the frameworks Map URL patterns to request handlers and check how the API works Profile an existing API and refactor it to take advantage of asynchronous code In Detail Python is the language of

choice for millions of developers worldwide, due to its gentle learning curve as well as its vast applications in day-to-day programming. It serves the purpose of building great web services in the RESTful architecture. This book will show you the best tools you can use to build your own web services. Learn how to develop RESTful APIs using the popular Python frameworks and all the necessary stacks with Python, Django, Flask, and Tornado, combined with related libraries and tools. We will dive deep into each of these frameworks to build various web services, and will provide use cases and best practices on when to use a particular framework to get the best results. We will show you everything required to successfully develop RESTful APIs with the four frameworks such as request handling, URL mapping, serialization, validation, authentication, authorization, versioning, ORMs, databases, custom code for models and views, and asynchronous callbacks. At the end of each framework, we will add authentication and security to the RESTful APIs and prepare tests for it. By the end of the book, you will have a deep understanding of the stacks needed to build RESTful web services. Style and approach The book takes a straightforward approach, not spending time getting you started with RESTful APIs and web services. It will give you the best use cases for each framework to build great web services in Python.

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.

· 200 RESTful Java Web Services Interview Questions · 75 HR Interview Questions · Real life scenario-based questions · Strategies to respond to interview questions · 2 Aptitude Tests These questions are across a wide range of topics. Some of the topics included are: - REST Basics (Introduction to REST, HTTP, etc) - JAX-RS (Standard Java API for REST services) - Spring REST (Another very popular REST implementation for Java) - JSON (Data interchange format for REST) - Postman (Very popular testing tool for REST services) - Swagger (Very popular documentation tool for REST) RESTful Java Web Services Interview Questions You'll Most Likely Be Asked is a perfect companion to stand ahead above the rest in today's competitive job market. Rather than going through comprehensive, text-book-sized reference guides, this book includes only the information required immediately for job search to build an IT career. This book puts the interviewee in the driver's seat and helps them steer their way to impress the interviewer. Includes: a) 200 RESTful Java Web Services Interview Questions, Answers and proven strategies for getting hired as an IT professional b) Dozens of examples to respond to interview questions c) 75 HR Questions with Answers and proven strategies to give specific, impressive, answers that help nail the interviews d) 2 Aptitude Tests download available on www.vibrantpublishers.com

"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.

A hands-on guide to building an enterprise-grade, scalable RESTful web service using the Spring

Framework About This Book Follow best practices and explore techniques such as clustering and caching to achieve a 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 Who This Book Is For This book is intended for those who want to learn to build RESTful web services with the Spring 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. 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 Optimize and scale web services using techniques such as caching and clustering In Detail 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 book goes beyond the use of Spring and explores approaches to tackle resilience, security, and scalability concerns. 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 for it. Style and approach This book is a step-by-step, hands-on guide to designing and building RESTful web services. The book follows the natural cycle of developing these services and includes multiple code samples to help you.

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.

REST architecture (style) is a pivot of distributed systems, simplify data integration amongst modern and legacy applications leverages through the RESTful paradigm. This book is fully loaded with many RESTful API patterns, samples, hands-on implementations and also discuss the capabilities of many REST API frameworks for Java, Scala, Python and Go

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

This IBM® Redbooks® publication can help you develop content and process management applications with IBM FileNet® APIs. The IBM FileNet P8 suite of products contains a set of robust APIs that range from core platform APIs to supporting application APIs. This book focuses specifically on Content Engine and Process Engine APIs. Content Engine API topics that we discuss include creating, re-

trieving, updating, and deleting objects; querying and viewing documents; and batching and batch execution. We also explore more complex topics, including permissions and authorization, versioning, relationships, annotations, workflow subscriptions and event actions, metadata discovery, and dynamic security inheritance. Process Engine API topics that we discuss include launching a workflow, searching for and processing work items, and working with process status. The more complex topics we cover include, Component Integrator application space, role, workbasket, resource navigation in Process Engine REST API, ECM Widgets, and building a custom Get Next In-basket widget. To help you better understand programming with IBM FileNet APIs, we provide a sample application implemented for a fictional company. We include the data model, security model, workflows, and various applications developed for the sample. You can download them for your reference. This book is intended for IBM FileNet P8 application developers. We recommend using this book in conjunction with the online ECM help.

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.

Design and implement scalable and maintainable RESTful solutions with Node.js 10 Key Features Create rich and scalable RESTful API solutions from scratch Explore the new features of Node.js 10, Express 4.0, and MongoDB Integrate MongoDB in your Node.js application to store and secure your data Book Description When building RESTful services, it is really important to choose the right framework. Node.js, with its asynchronous, event-driven architecture, is exactly the right choice for building RESTful APIs. This third edition of RESTful Web API Design with Node.js 10 will teach you to create scalable and rich RESTful applications based on the Node.js platform. You will be introduced to the latest NPM package handler and understand how to use it to customize your RESTful development process. You will begin by understanding the key principle that makes an HTTP application a RESTful-enabled application. After writing a simple HTTP request handler, you will create and test Node.js modules using automated tests and mock objects; explore using the NoSQL database, MongoDB, to store data; and get to grips with using self-descriptive URLs. You'll learn to set accurate HTTP status codes along with understanding how to keep your applications backward-compatible. Also, while implementing a full-fledged RESTful service, you will use Swagger to document the API and implement automation tests for a REST-enabled endpoint with Mocha. Lastly, you will explore some

authentication techniques to secure your application. What you will learn
 Install, develop, and test your own Node.js user modules
 Understand the differences between HTTP and RESTful applications
 Use self-descriptive URLs and set accurate HTTP status codes
 Eliminate third-party dependencies in your tests with mocking
 Implement automation tests for a REST-enabled endpoint with Mocha
 Secure your services with NoSQL database integration within Node.js applications
 Integrate a simple frontend using JavaScript libraries available on a CDN server
 Who this book is for
 If you are a web developer keen to enrich your development skills to create server-side RESTful applications based on the Node.js platform, this book is for you. Some knowledge of REST would be an added advantage, but is definitely not a necessity.

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.

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.

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

Learn how to design and develop distributed web services in Java using RESTful architectural principals and the JAX-RS specification in Java EE 6. With this hands-on reference, you'll focus on implementation rather than theory, and discover why the RESTful method is far better than technologies like CORBA and SOAP. It's easy to get started with services based on the REST architecture. RESTful Java with JAX-RS includes a technical guide that explains REST and JAX-RS, how they work, and when to use them. With the RESTEasy workbook that follows, you get step-by-step instructions for installing, configuring, and running several working JAX-RS examples using the JBoss RESTEasy implementation of JAX-RS. Work on the design of a distributed RESTful interface, and develop it in Java as a JAX-RS service
 Dispatch HTTP requests in JAX-RS, and learn how to extract information from them
 Deploy your web services within Java Enterprise Edition using the Application class, Default Component Model, EJB Integration, Spring Integration, and JPA
 Discover several options for securing your web services
 Learn how to implement RESTful design patterns using JAX-RS
 Write RESTful clients in Java using libraries and frameworks such as java.net.URL, Apache HTTP Client, and RESTEasy Proxy
 REST continues to gain momentum as the best method for building Web services, and this down-to-earth book delivers techniques and examples that show how to design and implement integration solutions using the REST architectural style.

Explore the best tools and techniques to create lightweight, maintainable, and scalable Python web services
 Key Features
 Combine Python with different data sources to build complex RESTful APIs from scratch
 Configure and fine-tune your APIs using the best tools and techniques available
 Use

command-line and GUI tools to test CRUD operations performed by RESTful Web Services or APIs

Book Description Python is the language of choice for millions of developers worldwide that builds great web services in RESTful architecture. This second edition of Hands-On RESTful Python Web Services will cover the best tools you can use to build engaging web services. This book shows you how to develop RESTful APIs using the most popular Python frameworks and all the necessary stacks with Python, combined with related libraries and tools. You'll learn to incorporate all new features of Python 3.7, Flask 1.0.2, Django 2.1, Tornado 5.1, and also a new framework, Pyramid. As you advance through the chapters, you will get to grips with each of these frameworks to build various web services, and be shown use cases and best practices covering when to use a particular framework. You'll then successfully develop RESTful APIs with all frameworks and understand how each framework processes HTTP requests and routes URLs. You'll also discover best practices for validation, serialization, and deserialization. In the concluding chapters, you will take advantage of specific features available in certain frameworks such as integrated ORMs, built-in authorization and authentication, and work with asynchronous code. At the end of each framework, you will write tests for RESTful APIs and improve code coverage. By the end of the book, you will have gained a deep understanding of the stacks needed to build RESTful web services. What you will learn

- Select the most appropriate framework based on requirements
- Develop complex RESTful APIs from scratch using Python
- Use requests handlers, URL patterns, serialization, and validations
- Add authentication, authorization, and interaction with ORMs and databases
- Debug, test, and improve RESTful APIs with four frameworks
- Design RESTful APIs with frameworks and create automated tests

Who this book is for This book is for web developers who have a working knowledge of Python and would like to build amazing web

services by taking advantage of the various frameworks of Python. You should have some knowledge of RESTful APIs.

Master the Java API for RESTful Web Services in this in-depth course from Java expert Zanis Khan. There are seven topics which focus on the Java programming language API spec allowing you to create powerful web services according to the Representational State Transfer architectural pattern: **Introducing RESTful Services** . Be able to explain RESTful (Representational State Transfer) services during this first topic in the Rest API using Java course. Follow along with Zanis and learn about the tools we will use: Oracle Weblogic and Eclipse, Oracle database, and the Chrome browser to start building APIs. HTTP, XML, JSON, and URIs are discussed as well. **Using the RESTful/API Service** . Practice working with the RESTful/API Service during this second topic in the Rest API using Java course. Get the environment up and running and also set up two very important frameworks: the Jersey framework and the Jackson framework. **Connecting to a Database** . Use the RESTful/API service to connect to a database during this third topic in the Rest API using Java course. **Creating Search Functionality Part 1** . Use the RESTful/API service to create search functionality during this fourth topic in the Rest API using Java course. **Creating Search Functionality Part 2** . Continue using the RESTful/API service and build upon the prior session to include additional search functionality during this fifth topic in the Rest API using Java course. **Submitting Data** . Use the RESTful/API service to submit data during this sixth topic in the Rest API using Java course. Follow along with Zanis and practice using SQL to insert data into the relational database. **Updating and Deleting Data** . Use the RESTful/API service to update and delete data during this seventh topic in the Rest API using Java course. Follow along with Zanis and practice using SQL to update and delete data from the relational database.