Api Architecture The Big Picture For Building Apis Volume 2 Api University Series

Take a detailed look at the NetBeans IDE and new features in the NetBeans Platform. Learn about support for JShell, the Jigsaw Module System, and Local Variable Type Inference, focusing on what this new version of NetBeans brings to developers who are working in Java and other supported languages. The book is a practical, hands-on guide providing a number of step-by-step recipes that help you take advantage of the power in the latest Java (and other) software platforms, and gives a good grounding on using NetBeans IDE for your projects. This book has been written by Apache community members who both use the IDE and actively contribute and develop Apache NetBeans as an open source project. Pro Apache NetBeans consists of three parts. The first part describes how to use the IDE as well as the new features that it brings to support the latest Java versions. The second part describes how you can extend NetBeans by creating plugins and writing your own applications using the Rich Client Platform. The third part describes how you can contribute to develop NetBeans IDE further, becoming part of the open source team that is driving future developments in the toolset. What You Will LearnWork faster and more effectively by applying expert tips and tricks Apply NetBeans' most cutting-edge features to your Java developmentDebug your applications using intuitive features built into the IDE Identify performance issues in your application by using the NetBeans profiler Develop using the latest API of the NetBeans Rich Client Platform Extend Apache NetBeans by creating plugins built on the Rich Client Platform Build NetBeans from source and understand the internals of NetBeans itself Contribute to the large community that supports and develops NetBeans Who This Book Is For Developers who want to know the latest features in NetBeans, as well as how the transition to Apache has affected the future of the NetBeans IDE. The book is also of interest to those desiring to become contributors to the NetBeans project and to influence its future development. Java developers who need to create a new desktop application from scratch also will benefit from this book.

"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.

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.

JUnit in Action, Third Edition has been completely rewritten for this release. The book is full of examples that demonstrate JUnit's modern features, including its new architecture; nested, tagged, and dynamic tests; and dependency injection. Summary JUnit is the gold standard for unit testing Java applications. Filled with powerful new features designed to automate software testing, JUnit 5 boosts your productivity and helps avoid debugging nightmares. Whether you're just starting with JUnit or you want to ramp up on the new features, JUnit in Action, Third Edition has you covered. Extensively revised with new code and new chapters, JUnit in Action, Third Edition is an up-to-date guide to smooth software testing. Dozens of hands-on examples illustrate JUnit 5's innovations for dependency injection, nested testing, parameterized tests, and more. Throughout, you’ll learn how to use JUnit 5 to automate your testing, for a process that consumes less resources, and gives you more time for developing. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology The JUnit framework is the gold standard for unit testing Java applications—and knowing it is an essential skill for Java developers. The latest version, JUnit 5, is a total overhaul, now supporting modern Java features like Lambdas and Streams. About the book JUnit in Action, Third Edition has been completely rewritten for this release. The book is full of examples that demonstrate JUnit's modern features, including its new architecture; nested, tagged, and dynamic tests; and dependency injection. You'll benefit from author Catalin Tudose's unique "pyramid" testing strategy, which breaks the testing process into layers and sets you on the path to bug-free code creation. What's inside Migrating from JUnit

4 to 5 Effective test automation Test-driven development and behavior-driven development Using mocks for test isolation Connecting JUnit 5 with Maven or Gradle About the reader For intermediate Java developers. About the author Catalin Tudose has a Ph.D. in Computer Science, and over 15 years of experience as a Senior Java Developer and Technical Team Lead. Previous editions were authored by Petar Tahchiev, Felipe Leme, Gary Gregory, and Vincent Massol. Table of Contents PART 1 - JUNIT 1 JUnit jump-start 2 Exploring core JUnit 3 JUnit architecture 4 Migrating from JUnit 4 to JUnit 5 5 Software testing principles PART 2 - DIFFERENT TESTING STRATEGIES 6 Test quality 7 Coarse-grained testing with stubs 8 Testing with mock objects 9 In-container testing PART 3 - WORKING WITH JUNIT 5 AND OTHER TOOLS 10 Runing JUnit tests from Maven 3 11 Running JUnit tests from Gradle 6 12 JUnit 5 IDE support 13 Coninuous integration with JUnit 5 PART 4 - WORKING WITH MODERN FRAMEWORKS AND JUNIT 5 14 JUnit 5 extension model 15 Presentation-layer testing 16 Testing Spring applications 17 Testing Spring Boot applications 18 Testing a REST API 19 Testing database applications PART 5 - DEVELOPING APPLICATIONS WITH JUNIT 5 20 Test-driven development with JUnit 5 21 Behavior-driven development in JUnit 5 22 Implementing a test

pyramid strategy with JUnit 5

Designing Data-Intensive Applications

J2EE Platform Web Services

Data Management at Scale

Big Data, Data Warehouse and Data Vault

A guide for architects and developers to expedite digital transformation with API-led architectures

RESTful API Design

A step-by-step guide that will help you design, develop, scale, and deploy RESTful APIs with TypeScript 3 and Node.js Key FeaturesGain in-depth knowledge of OpenAPI and Swagger to build scalable web servicesExplore a variety of test frameworks and test runners such as Stryker, Mocha, and ChaiCreate a pipeline by Dockerizing your environment using Travis CI, Google Cloud Platform, and GitHubBook 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 learnExplore various methods to plan your services in a scalable wayUnderstand how to handle different request types and the response status codeGet to grips with securing web servicesDelve into error handling and logging your web services for improved debuggingUncover the microservices architecture and GraphQLCreate automated CI/CD pipelines for release and deployment strategiesWho 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.

Find the right big data solution for your business ororganization Big data management is one of the major challenges facingbusiness, industry, and not-for-profit organizations. Data setssuch as customer transactions for a mega-retailer, weather patternsmonitored by meteorologists, or social network activity can quicklyoutpace the capacity of traditional data management tools. If youneed to develop or manage big data solutions, you'll appreciate howthese four experts define, explain, and guide you through this newand often confusing concept. You'll learn what it is, why itmatters, and how to choose and implement solutions that work. Effectively managing big data is an issue of growing importanceto businesses, not-for-profit organizations, government, and ITprofessionals Authors are experts in information management, big data, and avariety of solutions Explains big data in detail and discusses how to select andimplement a solution, security concerns to consider, data storageand presentation issues, analytics, and much more Provides essential information in a no-nonsense,easy-to-understand style that is empowering Big Data For Dummies cuts through the confusion and helpsyou take charge of big data solutions for your organization.

This book offers an introduction to web-API security with OAuth 2.0 and OpenID Connect. In less than 50 pages you will gain an overview of the capabilities of OAuth. You will learn the core concepts of OAuth. You will get to know all four OAuth flows that are used in cloud solutions and mobile apps. If you have tried to read the official OAuth specification, you may get the impression that OAuth is complex. This book explains OAuth in simple terms. The different OAuth flows are visualized graphically using sequence diagrams. The diagrams allow you to see the big picture of the various OAuth interactions. This high-level overview is complemented with rich set of example requests and responses and an explanation of the technical details. In the book the challenges and benefits of OAuth are presented, followed by an explanation of the technical concepts of OAuth. The technical concepts include the actors, endpoints, tokens and the four OAuth flows. Each flow is described in detail, including the use cases for each flow. Extensions of OAuth are presented, such as OpenID Connect and the SAML2 Bearer Profile. Who should read this book? You do not have the time to read long books? This book provides an overview, the core concepts, without getting lost in the small-small details. This book provides all the necessary information to get started with OAuth in less than 50 pages. You believe OAuth is complicated? OAuth may seem complex with flows and redirects going back and forth. This book will give you clarity by introducing the seemingly complicated material by many illustrations. These illustrations clearly show all the involved interaction parties and the messages they exchange. You want to learn the OAuth concepts efficiently? This book uses many illustrations and sequence diagrams. A good diagram says more than 1000 words. You want to learn the difference between OAuth and OpenID Connect? You wonder when the two concepts are used, what they have in common and what is different between them. This book will help you answer this question. You want to use OAuth in your mobile app? If you want to access resources that are protected by OAuth, you need to get a token first, before you can access the resource. For this, you need to understand the OAuth flows and the dependencies between the steps of the flows. You want to use OAuth to protect your APIs? OAuth is perfectly suited to protect your APIs. You can learn which OAuth endpoints need to be provided and which checks need to be made within the protected APIs.

As data management and integration continue to evolve rapidly, storing all your data in one place, such as a data warehouse, is no longer scalable. In the very near future, data will need to be distributed and available for several technological solutions. With this practical book, you'll learnhow to migrate your enterprise from a complex and tightly coupled data landscape to a more flexible architecture ready for the modern world of data consumption. Executives, data architects, analytics teams, and compliance and governance staff will learn how to build a modern scalable data landscape using the Scaled Architecture, which you can introduce incrementally without a large upfront investment. Author Piethein Strengholt provides blueprints, principles, observations, best practices, and patterns to get you up to speed. Examine data management trends, including technological developments, regulatory requirements, and privacy concerns Go deep into the Scaled Architecture and learn how the pieces fit together Explore data governance and data security, master data management, self-service data marketplaces, and the importance of metadata

REST API Design Rulebook

Pro Apache NetBeans

An Architect's Guide to Developing and Managing APIs for Your Organization

The Big Ideas Behind Reliable, Scalable, and Maintainable Systems

REST in Practice

Domain-driven Design

A lot of work is required to release an API, but the effort doesn’t always pay off. Overplanning before an API matures is a wasted investment, while underplanning can lead to disaster. This practical guide provides maturity models for individual APIs and multi-API landscapes to help you invest the right human and company resources for the right maturity level at the right time. How do you balance the desire for agility and speed with the need for robust and scalable operations? Four experts from the API Academy show software architects, program directors, and product owners how to maximize the value of their APIs by managing them as products through a continuous life cycle. Learn which API decisions you need to govern and how and where to do so Design, deploy, and manage APIs using

an API-as-a-product (AaaP) approach Examine ten pillars that form the foundation of API product work Learn how the continuous improvement model governs changes throughout an API's lifetime Explore the five stages of a complete API product life cycle Delve into team roles needed to design, build, and maintain your APIs Learn how to manage your API landscape—the set of APIs published by your organization

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.

This book contains the refereed proceedings of the 12th International Conference on Knowledge Management in Organizations, KMO 2017, held in Beijing, China, in August 2017. The theme of the conference was "Emerging Technology and Knowledge Management in Organizations." The 45 contributions accepted for KMO 2017 were selected from 112 submissions and are organized in topical sections on: Knowledge Management Models and Behaviour Studies; Knowledge Sharing; Knowledge Transfer and Learning; Knowledge and Service Innovation; Knowledge and Organization; Information Systems Research; Value Chain and Supply Chain; Knowledge Representation and Reasoning; Data Mining and

Intelligent Science; Big Data Management; Internet of Things and Network.

Get to grips with key IoT aspects along with modern trends, architectures, and technologies that support IoT solutions, such as cloud computing, modern app architecture paradigms, and data analytics Key Features • Understand the big picture of designing production-grade IoT solutions from an industry expert • Get up and running with the development and designing aspects of the Internet of Things • Solve business problems specific to your domain using different IoT platforms and technologies Book Description With the rising demand for and recent enhancements in IoT, a developer with sound knowledge of IoT is the need of the hour. This book will help you design, build, and operate large-scale E2E IoT solutions to transform your business and products, increase revenue, and reduce operational costs. Starting with an overview of how IoT technologies can help you solve your business problems, this book will be a useful guide to helping you implement end-to-end IoT solution architecture. You'll learn to select IoT devices; real-time operating systems; IoT Edge covering Edge location, software, and hardware; and the best IoT connectivity for your IoT solution. As you progress, you'll work with IoT device management, IoT data analytics, IoT platforms, and put these components to work as part of your IoT solution. You'll also be able to

build IoT backend cloud from scratch by leveraging the modern app architecture paradigms and cloud-native technologies such as containers and microservices. Finally, you'll discover best practices for different operational excellence pillars, including high availability, resiliency, reliability, security, cost optimization, and high performance, which should be applied for large-scale production-grade IoT solutions. By the end of this IoT book, you'll be confident in designing, building, and operating IoT solutions. What you will learn • Understand the detailed anatomy of IoT solutions and explore their building blocks • Explore IoT connectivity options and protocols used in designing IoT solutions • Understand the value of IoT platforms in building IoT solutions • Explore real-time operating systems used in microcontrollers • Automate device administration tasks with IoT device management • Master different architecture paradigms and decisions in IoT solutions • Build and gain insights from IoT analytics solutions • Get an overview of IoT solution operational excellence pillars Who this book is for This book is for E2E solution architects, systems and technical architects, and IoT developers looking to design, build, and operate E2E IoT applications and solutions. Basic knowledge of cloud computing, software engineering, and distributed system design will help you get the most out of this book.

Hands-On RESTful Web Services with TypeScript 3

Webhooks – Events for RESTful APIs

Designing Production-Grade and Large-Scale IoT Solutions

Designing, Developing, and Deploying

The Big Picture

Microservice Architecture

Innovate at scale through well-architected API-led products that drive personalized, predictive, and adaptive customer experiences Key FeaturesStrategize your IT investments by modeling enterprise solutions with an API-centric approachBuild robust and reliable API platforms to boost business agility and omnichannel deliveryCreate digital value chains through the productization of your APIsBook Description API-centric architectures are foundational to delivering omnichannel experiences for an enterprise. With this book, developers will learn techniques to design loosely coupled, cloud-based, business-tier interfaces that can be consumed by a variety of client applications. Using real-world examples and case studies, the book helps you *get to grips with the cloudbased design and implementation of reliable and resilient API-centric solutions. Starting with the evolution of enterprise applications, you'll learn how API-based integration architectures drive digital transformation. You'll then learn about the important principles and practices that apply to cloud-based API architectures and advance to exploring the different architecture styles and their implementation in Azure. This book is written from a practitioner's point of view, so you'll discover ideas and practices that have worked successfully in various customer scenarios. By the end of this book, you'll be able to architect, design, deploy, and monetize your API solutions in the Azure cloud while implementing best practices and industry standards. What you will learnExplore the benefits of API-led architecture in an enterpriseBuild highly reliable and resilient, cloud-based, API-centric solutionsPlan technical initiatives based on Well-Architected Framework principlesGet to grips with the productization and* *management of your API assets for value creationDesign high-scale enterprise integration platforms on the Azure cloudStudy the important principles and practices that apply to cloud-based API architecturesWho this book is for This book is for solution architects, developers, engineers, DevOps professionals, and IT decision-makers who are responsible for designing and developing large distributed systems. Familiarity with enterprise solution architectures and cloud-based design will help you to comprehend the concepts covered in the book easily. Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps*

you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures Maximize the impact of your assets and business services by providing APIs for developers and other users. The journey described in this book starts with identifying business assets. As part of the API team, you then need to identify and define the requirements of traffic

management, security, mediation, and orchestration. You also must define metrics for the analytics to measure the success of the overall API program. API documentation and the ease of developer onboarding also determine the success of the APIs. Finally, monetization of these APIs leads to revenue generation for the enterprise. Author De — an expert in building and managing API solutions — provides enterprise architects, designers, and technologists with insight into the world of APIs and the various technical aspects of building and managing an effective API management solution. API Management: Developing and Managing APIs for your Organization: Introduces the basics of APIs and highlights their value Provides an overview of technologies for building an API management solution and defines the requirements, including how to build a RESTful API Offers design principles for building developer-friendly APIs Explains how to secure your APIs Shows how to use API analytics to measure the success of your APIs Demonstrates how to monetize APIs Finally, API

Management touches on various technical nuances of creating, distributing, and managing an API. This book will not only help you learn how to design, build, deploy, and manage an API for an enterprise scale, but also generate revenue for your organization. What You'll Learn Discover the API life cycle Design and develop APIs Implement API security Test your APIs Deploy and monitor your APIs Who This Book Is For Enterprise architects, technology enthusiasts, security architects, and operations specialists.

A lot of work is required to release an API, but the effort doesn't always pay off. Overplanning before an API matures is a wasted investment, while underplanning can lead to disaster. The second edition of this book provides maturity models for individual APIs and multi-API landscapes to help you invest the right human and company resources for the right maturity level at the right time. How do you balance the desire for agility and speed with the need for robust and scalable operations? Four experts show software architects, program directors, and *product owners how to maximize the value of their APIs by managing them as products through a continuous lifecycle. Learn which API decisions you need to govern Design, deploy, and manage APIs using an API-as-a-product (AaaP) approach Examine 10 pillars that form the foundation of API product work Learn how the continuous improvement model governs changes throughout an APIâ??s lifetime Explore the five stages of a complete API product lifecycle Delve into team roles needed to design, build, and maintain your APIs Learn how to manage APIs published by your organization*

Making the Right Decisions in an Evolving Landscape

Design Principles for Process-driven Architectures Using Oracle BPM and SOA Suite 12c

Play for Scala

OpenID Connect & JWT

Microservices for the Enterprise

Getting Started in Web-API Security

Version 5.0 of the Java 2 Standard Edition SDK is the most important upgrade since Java first appeared a decade ago. With Java 5.0, you'll not only find substantial changes in the platform, but to the language itself-something that developers of Java took five years to complete. The main goal of Java 5.0 is to make it easier for you to develop safe, powerful code, but none of these improvements makes Java any easier to learn, even if you've programmed with Java for years. And that means our bestselling hands-on tutorial takes on even greater significance. Learning Java is the most widely sought introduction to the programming language that's changed the way we think about computing. Our updated third edition takes an objective, no-nonsense approach to the new features in Java 5.0, some of which are drastically different from the way things were done in any previous versions. The most essential change is the addition of "generics", a feature that allows developers to write, test, and deploy code once, and then reuse the code again and again for different data types. The beauty of generics is that more problems will be caught during development, and Learning Java will show you exactly how it's done. Java 5.0 also adds more than 1,000 new classes to the Java library. That means 1,000 new things you can do without having to program it in yourself. That's a huge change. With our book's practical examples, you'll come up to speed quickly on this and other new features such as loops and threads. The new edition also includes an introduction to Eclipse, the open source IDE that is growing in popularity. Learning Java, 3rd Edition addresses all of the important uses of Java, such as web applications, servlets, and XML that are increasingly driving enterprise applications.

Practical Software Architecture Solutions from the Legendary Robert C. Martin (“Uncle Bob”) By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books Clean Code and The Clean Coder, legendary software craftsman Robert C. Martin (“Uncle Bob”) reveals those rules and helps you apply them. Martin’s Clean Architecture doesn’t merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you've come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you'll face–the ones that will make or break your projects. Learn what software architects need to achieve–and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what's critically important and what's merely a “detail” Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures Clean Architecture is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager–and for every programmer who must execute someone else's designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available.

Looking for the big picture of building APIs? This book is for you! Building APIs that consumers love should certainly be the goal of any API initiative. However, it is easier said than done. It requires getting the architecture for your APIs right. This book equips you with both foundations and best practices for API architecture. This book is for you if you want to understand the big picture of API design and development, you want to define an API architecture, establish a platform for APIs or simply want to build APIs your consumers love. This book is NOT for you, if you are looking for a step-by step guide for building APIs, focusing on every detail of the correct application of REST principles. In this case I recommend the book "API Design" of the API-University Series. What is API architecture? Architecture spans the bigger picture of APIs and can be seen from several perspectives: API architecture may refer to the architecture of the complete solution consisting not only of the API itself, but also of an API client such as a mobile app and several other components. API solution architecture explains the components and their relations within the software solution. API architecture may refer to the technical architecture of the API platform. When building, running and exposing not only one, but several APIs, it becomes clear that certain building blocks of the API, runtime functionality and management functionality for the API need to be used over and over again. An API platform provides an infrastructure for developing, running and managing APIs. API architecture may refer to the architecture of the API portfolio. The API portfolio contains all APIs of the enterprise and needs to be managed like a product. API portfolio architecture analyzes the functionality of the API and organizes, manages and reuses the APIs. API architecture may refer to the design decisions for a particular API proxy. To document the design decisions, API description languages are used. We explain the use of API description languages (RAML and Swagger) on many examples. This book covers all of the above perspectives on API architecture. However, to become useful, the architecture needs to be put into practice. This is why this book covers an API methodology for design and development. An API methodology provides practical guidelines for putting API architecture into practice. It explains how to develop an API architecture into an API that consumers love. A lot of the information on APIs is available on the web. Most of it is published by vendors of API products. I am always a bit suspicious of technical information pushed by product vendors. This book is different. In this book, a product-independent view on API architecture is presented. The API-University Series is a modular series of books on API-related topics. Each book focuses on a particular API topic, so you can select the topics within APIs, which are relevant for you.

API ArchitectureAPI-University Press

JUnit in Action

Design and develop scalable RESTful APIs for your applications

Tackling Complexity in the Heart of Software

API Management

Knowledge Management in Organizations

Hypermedia and Systems Architecture

Describes ways to incorporate domain modeling into software development.

Do you want to know how OpenID Connect works? This book is for you! Exploring how OpenID Connect works in detail is the subject of this book. We take a bottom-up approach and first study all the elements (actors, endpoints, and tokens) of OpenID Connect. This puts us in an excellent position for the second step: to understand the various OpenID Connect Flows - how the actors, endpoints, and tokens are put together to transmit identity claims securely. Do you wonder why there are several OpenID Connect Flows? Whether we use OpenID Connect from a mobile app, a script in a browser or from a secure backend server, there is an appropriate OpenID Connect Flow with the right tradeoffs in security, functionality, and convenience for each of these scenarios. This book helps you to choose the right one. Do you think that these OpenID Connect Flows are confusing? You are not alone; the OpenID Connect Flows tend to get confusing. However, with this book, we make it clear and easy to understand: We visualize these flows and show how to choose the flow that is appropriate for a given scenario. A picture says more than a 1000 words - that is why we explain the OpenID Connect Flows using easy to *understand sequence diagrams. Do you want to understand how JWT works? This book explains what a JSON Web Token (JWT) is, how it is used in OpenID Connect, how it is constructed, what data it contains, how to read it, and how to protect its contents. Do you wonder why there are so many tokens in OpenID Connect and how to use them? There are JWT, JWS, JWE, access tokens, refresh tokens, identity tokens, and authorization codes. This book helps you to make sense of them all. Using examples, we explore how the tokens are used, constructed, signed, and encrypted. Why is OpenID Connect so popular? If used in the right way, OpenID Connect is powerful, and everyone loves it: End-users don't need to signup and remember a new password Business owners enjoy high conversion rates Developers don't get any grey hair over securely storing credentials Do you want to increase the conversion rate of your app? Signup and login to a new app become so smooth and convenient that end-users are much more likely to try a new app. It is supported, e.g. by Google, Yahoo, or Microsoft. Would you like to manage no credentials but still have authenticated users? For us developers of web and mobile apps, these signup and login features are attractive, too: we do not need to manage user credentials, and we get a higher conversion rate resulting in more new customers. In effect, this means cutting costs and increasing the number of new* *customers for our apps. Which programming language do you use in the book? This is not a programming book, don't expect implementations with a specific programming language or library. Instead, we focus on understanding OpenID Connect on a conceptual level, so we can design and architect apps that work with OpenID Connect. And OpenID Connect is the standard behind creating smooth login and signup experiences, increasing the customer signup rate, and creating highly converting apps.*

Summary Play for Scala shows you how to build Scala-based web applications using the Play 2 framework. This book starts by introducing Play through a comprehensive overview example. Then, you'll look at each facet of a typical Play application both by exploring simple code snippets and by adding to a larger running example. Along the way, you'll deepen your knowledge of Scala as a programming language and work with tools like Akka. About this Book Play is a Scala web framework with built-in advantages: Scala's strong type system helps deliver bug-free code, and the Akka framework helps achieve hassle-free concurrency and peak performance. Play builds on the web's stateless nature for excellent scalability, and because it is event-based and nonblocking, you'll find it to be great for near real-time applications. Play for Scala teaches you to build Scala-based web applications using Play 2. It gets you going with a comprehensive overview *example. It then explores each facet of a typical Play application by walking through sample code snippets and adding features to a running example. Along the way, you'll deepen your knowledge of Scala and learn to work with tools like Akka. Written for readers familiar with Scala and web-based application architectures. No knowledge of Play is assumed. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. What's Inside Intro to Play 2 Play's MVC structure Mastering Scala templates and forms Persisting data and using web services Using Play's advanced features About the Authors Peter Hiltonv, Erik Bakker, and Francisco Canedo, are engineers at Lunatech, a consultancy with Scala and Play expertise. They are contributors to the Play framework. Table of Contents PART 1: GETTING STARTED Introduction to Play Your first Play application PART 2: CORE FUNCTIONALITY Deconstructing Play application architecture Defining the application's HTTP interface Storing data—the persistence layer Building a user interface with view templates Validating and processing input with the forms API PART 3: ADVANCED CONCEPTS Building a single-page JavaScript application with JSON Play and more Web services, iteratees, and WebSockets Want to build APIs like Facebook? Since Facebook's framework for building APIs, GraphQL, has become publicly available, this ambition seems to be within reach for many* *companies. And that is great. But first, let's learn what GraphQL really is and - maybe even more importantly - let's figure out how to apply GraphQL to build APIs that consumers love. Do you like to learn hands-on? In this book, we take a hands-on approach to learning GraphQL. We first explore the concepts of the two GraphQL languages using examples. Then we start writing some code for our first GraphQL API. We develop this API step by step, from creating a schema and resolving queries, over mocking data and connecting data sources all the way to developing mutations and setting up event subscriptions. Are your API consumers important to you? This book shows you how to apply a consumer-oriented design process for GraphQL APIs, so you can deliver what your consumers really want: an API that solves their problems and offers a great developer experience. Do you want to enable the API consumers so they can build great apps? This book explains the GraphQL query language, which allows the API consumers to retrieve data, write data and get notified when data changes. More importantly, you let them decide, which data they really need from the API. Do you want to make your API easy and intuitive to use? This book shows you how to use the GraphQL schema language to define a type system for your API, which serves as a reference documentation and helps your API consumers write queries that are syntactically correct. Do you want to profit* *from what has worked for others? This book provides a collection of best practices for GraphQL that have worked for other companies, e.g. regarding pagination, authentication and caching. REST vs. GraphQL: Which one is better? GraphQL and REST are competing philosophies for building APIs. It is not in the scope of this book to compare or discuss the two approaches. The focus of this book is on a hands-on approach for learning GraphQL.*

GraphQL API Design

JUnit in Action, Third Edition

OAuth

Microservices Patterns

Covers Play 2

RESTful Web Services

This book is a design handbook and provides skills to successfully design, implement, and optimize business processes on top of SOA. Starting with business process modeling, it shows design principles to architect sound process architectures. It presents best practices for modeling business processes using BPMN, together with design principles for services and composite applications. It provides detailed coverage of how to prepare business processes for execution. An in-depth explanation of human interactions is given and also principles and best practices for using rules. Moving on, Adaptive Case Management principles are explained, along with the reach of business processes to mobile devices and ensuring multichannel interactions. Business activity monitoring,

event-driven architectures, complex event processing in relation to business processes, and enabling integration with events and IoT devices are explained. The design principles and best practices are demonstrated in a practical way on a rental car use case. Microservices can have a positive impact on your enterprise—just ask Amazon and Netflix—but you can fall into many traps if you don't approach them in the right way. This practical guide covers the entire microservices landscape, including the principles, technologies, and methodologies of this unique, modular style of system building. You'll learn about the experiences of organizations around the globe that have successfully adopted microservices. In three parts, this book explains how these services work and what it means to build an application the Microservices Way. You'll explore a design-based approach to microservice architecture with guidance for implementing various elements. And you'll get a set of recipes and practices for meeting practical, organizational, and cultural challenges to microservice adoption. Learn how microservices can help you drive business objectives Examine the principles, practices, and culture that define microservice architectures Explore a model for creating complex systems and a design process for building a microservice architecture Learn the fundamental design concepts for individual microservices Delve into the *operational elements of a microservices architecture, including containers and service discovery Discover how to handle the challenges of introducing microservice architecture in your organization*

Discover the many exciting sights of the London Landscape. Learn about the history, the culture and the people through this amusing pictue book. Like a colourful trip around a Monopoly board, this trendy information book is packed with detailed illustrations of London and plenty of famous landmarks. Children can see how many pictures they recognise and learn about those they don't. Illustrations: Full colour throughout

"A comprehensive overview of the challenges teams face when moving to microservices, with industry-tested solutions to these problems." - Tim Moore, Lightbend 44 reusable patterns to develop and deploy reliable production-quality microservices-based applications, with worked examples in Java Key Features 44 design patterns for building and deploying microservices applications Drawing on decades of unique experience from author and microservice architecture pioneer Chris Richardson A pragmatic approach to the benefits and the drawbacks of microservices architecture Solve service decomposition, transaction management, and inter-service communication Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Microservices Patterns teaches you

44 reusable patterns to reliably develop and deploy production-quality microservices-based applications. This invaluable set of design patterns builds on decades of distributed system experience, adding new patterns for composing services into systems that scale and perform under real-world conditions. More than just a patterns catalog, this practical guide with worked examples offers industry-tested advice to help you design, implement, test, and deploy your microservices-based application. What You Will Learn How (and why!) to use microservices architecture Service decomposition strategies Transaction management and querying patterns Effective testing strategies Deployment patterns This Book Is Written For Written for enterprise developers familiar with standard enterprise application architecture. Examples are in Java. About The Author Chris Richardson is a Java Champion, a JavaOne rock star, author of Manning's POJOs in Action, and creator of the original CloudFoundry.com. Table of Contents Escaping monolithic hell Decomposition strategies Interprocess communication in a microservice architecture Managing transactions with sagas Designing business logic in a microservice architecture Developing business logic with event sourcing Implementing queries in a microservice architecture External API patterns Testing microservices: part 1 Testing microservices: part 2 Developing production-ready services Deploying microservices Refactoring to

microservices
Building Applications on the Rich Client Platform
Java EE 7: The Big Picture
My Big Picture Book of London
A Craftsman's Guide to Software Structure and Design
Learning Java

A hilarious, irreverent book about doing your own thing Meet Iggy Peck—creative, independent, and not afraid to express himself! In the spirit of David Shannon's No, David and Rosemary Wells's Noisy Nora, Iggy Peck will delight readers looking for irreverent, inspired fun. Iggy has one passion: building. His parents are proud of his fabulous creations, though they're sometimes surprised by his materials—who could forget the tower he built of dirty diapers? When his second-grade teacher declares her dislike of architecture, Iggy faces a challenge. He loves building too much to give it up! With Andrea Beaty's irresistible rhyming text and David Roberts's puckish illustrations, this book will charm creative kids everywhere, and amuse their sometimes bewildered parents. Also from the powerhouse author-illustrator team of Iggy Peck, Architect, is Rosie Revere, Engineer, a charming, witty picture book about believing in yourself and pursuing your passion. Ada Twist, Scientist, the companion picture book featuring the next kid from Iggy Peck's class, is available in September 2016.

Got RESTful APIs? Great. API consumers love

them. But today, such RESTful APIs are not enough for the evolving expectations of API consumers. Their apps need to be responsive, event-based and react to changes in near real-time. This results in a new set of requirements for the APIs, which power the apps. APIs now need to provide concepts such as events, notifications, triggers, and subscriptions. These concepts are not natively supported by the REST architectural style. In thios book we show how to engineer RESTful APIs that support events with a webhook infrastructure. What are the alternatives to webhooks? We study several approaches for realizing events, such as Polling, Long Polling, Webhooks, HTTP Streaming, Server-Sent Events, WebSockets, WebSub and GraphQL Subscriptions. All of these approaches have their advantages and disadvantages. Can webhooks communicate in real-time? We study the non-functional requirements of a webhooks infrastructure, in areas such as security, reliability and developer experience. How do well-known API providers design webhooks? We examine the webhook infrastructure provided by GitHub, BitBucket, Stripe, Slack, and Intercom. With the best practices, case studies, and design templates provided in this book, we want to help you extend your API portfolio with a modern webhook infrastructure. So you can offer both APIs and events that developers love to use.

Understand the key challenges and solutions around building microservices in the enterprise application environment. This book provides a

comprehensive understanding of microservices architectural principles and how to use microservices in real-world scenarios. Architectural challenges using microservices with service integration and API management are presented and you learn how to eliminate the use of centralized integration products such as the enterprise service bus (ESB) through the use of composite/integration microservices. Concepts in the book are supported with use cases, and emphasis is put on the reality that most of you are implementing in a "brownfield" environment in which you must implement microservices alongside legacy applications with minimal disruption to your business. Microservices for the Enterprise covers state-of-the-art techniques around microservices messaging, service development and description, service discovery, governance, and data management technologies and guides you through the microservices design process. Also included is the importance of organizing services as core versus atomic, composite versus integration, and API versus edge, and how such organization helps to eliminate the use of a central ESB and expose services through an API gateway. What You'll LearnDesign and develop microservices architectures with confidence Put into practice the most modern techniques around messaging technologies Apply the Service Mesh pattern to overcome inter-service communication challenges Apply battle-tested microservices security patterns to address real-world scenarios Handle API management,

decentralized data management, and observability Who This Book Is For Developers and DevOps engineers responsible for implementing applications around a microservices architecture, and architects and analysts who are designing such systems

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

With examples in Java

Continuous API Management

Programming Entity Framework

Iggy Peck, Architect

A Practical Guide for Business Implementation Success

Designing API-First Enterprise Architectures on Azure

Looking for Best Practices for RESTful APIs? This book is for you! Why? Because this book is packed with practical experience on what works best for RESTful API Design. You want

to design APIs like a Pro? Use API description languages to both design APIs and develop APIs efficiently. The book introduces the two most common API description languages RAML, OpenAPI, and Swagger. Your company cares about its customers? Learn API product management with a customer-centric design and development approach for APIs. Learn how to manage APIs as a product and how to follow an API-first approach. Build APIs your customers love! You want to manage the complete API lifecycle? An API development methodology is proposed to guide you through the lifecycle: API inception, API design, API development, API publication, API evolution, and maintenance. You want to build APIs right? This book shows best practices for REST design, such as the correct use of resources, URIs, representations, content types, data formats, parameters, HTTP status codes, and HTTP methods. Your APIs connect to legacy systems? The book shows best practices for connecting APIs to existing backend systems. Your APIs connect to a mesh of microservices? The book shows the principles for designing APIs for scalable, autonomous microservices. You expect lots of traffic on your API? The book shows you how to achieve high performance, availability and

maintainability. You want to build APIs that last for decades? We study API versioning, API evolution, backward- and forward-compatibility and show API design patterns for versioning. The API-University Series is a modular series of books on API-related topics. Each book focuses on a particular API topic, so you can select the topics within APIs, which are relevant for you.

PHP Master is tailor-made for the PHP developer who's serious about taking their server-side applications to the next level and who wants to really keep ahead of the game by adhering to best practice, employing the most effective object-oriented programming techniques, wrapping projects in layers of security and ensuring their code is doing its job perfectly. Create professional, dynamic applications according to an object-oriented programming blueprint Learn advanced performance evaluation techniques for maximum site efficiency Brush up on the best testing methods to refine your code and keep your applications watertight Protect your site against attacks and vulnerabilities with the latest security systems Plug in to some serious functionality with PHP's APIs and libraries

Today, the world is trying to create and

educate data scientists because of the phenomenon of Big Data. And everyone is looking deeply into this technology. But no one is looking at the larger architectural picture of how Big Data needs to fit within the existing systems (data warehousing systems). Taking a look at the larger picture into which Big Data fits gives the data scientist the necessary context for how pieces of the puzzle should fit together. Most references on Big Data look at only one tiny part of a much larger whole. Until data gathered can be put into an existing framework or architecture it can't be used to its full potential. Data Architecture a Primer for the Data Scientist addresses the larger architectural picture of how Big Data fits with the existing information infrastructure, an essential topic for the data scientist. Drawing upon years of practical experience and using numerous examples and an easy to understand framework. W.H. Inmon, and Daniel Linstedt define the importance of data architecture and how it can be used effectively to harness big data within existing systems. You'll be able to: Turn textual information into a form that can be analyzed by standard tools. Make the connection between analytics and Big Data Understand

how Big Data fits within an existing systems environment Conduct analytics on repetitive and non-repetitive data Discusses the value in Big Data that is often overlooked, non-repetitive data, and why there is significant business value in using it Shows how to turn textual information into a form that can be analyzed by standard tools Explains how Big Data fits within an existing systems environment Presents new opportunities that are afforded by the advent of Big Data Demystifies the murky waters of repetitive and non-repetitive data in Big Data

If you use Entity Framework in Visual Studio 2008 and .NET 3.5, this is the book you want. Programming Entity Framework, 1st Edition offers experienced developers a thorough introduction to Microsoft's core framework for modeling and interacting with data in .NET applications. This hands-on tour provides a deep understanding of Entity Framework's architecture and APIs, and explains how to use the framework in a variety of applications built with Visual Studio 2008 and .NET 3.5. From the Entity Data Model (EDM) and Object Services to EntityClient and the Metadata Workspace, this highly acclaimed first edition covers it all. Understand the core concepts you need

to make the best use of the Entity Framework (EF) in your applications Learn to query your data, using either LINQ to Entities or Entity SQL Create Windows Forms, WPF, and ASP.NET applications Build ASMX web services and WCF services Use Object Services to work directly with your entity objects Delve into model customization, relationship management, change tracking, data concurrency, and more One important note: while many of the lessons from this book will continue to be valuable as you move to .NET 4, the thoroughly revised second edition of Programming Entity Framework (August 2010) specifically targets Visual Studio 2010 and .NET 4 -- where there have been many advancements and additions to the framework.

API Development

Big Data For Dummies

Clean Architecture

Aligning Principles, Practices, and Culture

API Architecture

Data Architecture: A Primer for the Data Scientist

The Definitive Guide to Java Platform, Enterprise Edition 7 Java EE 7: The Big Picture uniquely explores the entire Java EE 7 platform in an all-encompassing style while examining each tier of the platform in enough detail so that you can select the right technologies for specific project needs. In this authoritative guide, Java expert Danny Coward walks you through the code, applications, and frameworks that power the platform. Take full advantage of the robust capabilities of Java EE 7, increase your productivity, and meet enterprise demands with help from this Oracle Press resource. Explore the features of the Java servlet model and Java servlet API Create dynamic web content with JavaServer Pages and JavaServer Faces Build websites for nonbrowser clients with JAX-RS Push data to web clients using Java WebSockets Secure web applications Work with web component APIs Maximize enterprise beans for multithreading, asynchronous processes, transactions, and more Access relational databases with the Java Database Connectivity APIs and the Java Persistence API Understand the packaging and deployment mechanisms of Java EE applications Work with Java EE Contexts and Dependency Injection Secure enterprise beans in a Java EE application Enable parallel processing with Java EE concurrency APIs

The software development ecosystem is constantly changing, providing a constant stream of new tools, frameworks, techniques, and paradigms. Over the past few years, incremental developments in core engineering practices for software development have created the foundations for rethinking how architecture changes over time, along with ways to protect important architectural characteristics as it evolves. This practical guide ties those parts together with a new way to think about architecture and time. Implement application programming interface (API) usability, security, availability, reliability, and scalability to extend your company's market and potentially generate revenue. Businesses know they need to extend their markets into the digital world, and expose internal data to the Internet. This book shows how stakeholders within an organization can make it a successful journey. Stakeholder needs are not identical and departments experience difficulties discussing requirements with each other due to their different fundamental understanding of the process. The goal of this book is to introduce a common language for all business groups—developers, security experts, architects, product managers—around APIs and provide an overview of all aspects that need to be considered when exposing internal data. Most of the content in this book is based on feedback from real-world enterprise customer questions, challenges, and business scenarios. Practical guidance is provided on the business value of APIs, the general requirements to know, and how to undertake an audience-based implementation. You will learn how to protect access to data, as well as API error handling, documentation, management, integration, and more. What You'll Learn Know the types of APIs and their business and technical requirements The main benefits of APIs, including business value, loose coupling, and frequent updates Protect access to APIs through role-based access, attribute-based access, and rate limiting Distinguish between OAuth and OpenID Connect, and know how they both work Manage API error handling, including what should and should not be handled Understand the distinction between runtime, dynamic data, and static data Leverage external APIs as part of your own APIs Who This Book Is For API developers, API security experts, software architects, product owners, and business owners

Building Evolutionary Architectures

A comprehensive and practical guide to implementing end-to-end IoT solutions

Write Cutting Edge Code

PHP Master

12th International Conference, KMO 2017, Beijing, China, August 21-24, 2017, Proceedings

Support Constant Change