

# Web Api Design Apigee

A strategy and implementation guide for building, deploying, and managing APIs Key Features

Comprehensive, end-to-end guide to business-driven enterprise APIs Distills years of experience with API and microservice strategies Provides detailed guidance on implementing API-led architectures in any business Book

Description APIs are the cornerstone of modern, agile enterprise systems. They enable access to enterprise services from a wide variety of devices, act as a platform for innovation, and open completely new revenue

streams. Enterprise API Management shows how to define the right architecture, implement the right patterns, and define the right organization model for business-driven APIs. Drawing on his experience of

developing API and microservice strategies for some of the world's largest companies, Luis Weir explains how APIs deliver value across an enterprise. The book

explores the architectural decisions, implementation patterns, and management practices for successful enterprise APIs, as well as providing clear, actionable advice on choosing and executing the right API strategy

in your enterprise. With a relentless focus on creating business value, Luis Weir reveals an effective method for planning, building, and running business products and

services with APIs. What you will learn Create API strategies to deliver business value Monetize APIs, promoting them through public marketplaces and directories Develop API-led architectures, applying best practice architecture patterns Choose between REST,

GraphQL, and gRPC-style API architectures Manage APIs and microservices through the complete life cycle Deploy APIs and business products, as well as Target Operating Models Lead product-based organizations to embrace DevOps and focus on delivering business capabilities Who this book is for Architects, developers, and technology executives who want to deliver successful API strategies that bring business value. 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.

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 learn how 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 Piethen Strengtholt 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

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Explore data governance and data security, master data management, self-service data marketplaces, and the importance of metadata

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.

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.

API Design for C++ provides a comprehensive discussion of Application Programming Interface (API) development, from initial design through implementation, testing, documentation, release, versioning,

maintenance, and deprecation. It is the only book that teaches the strategies of C++ API development, including interface design, versioning, scripting, and plug-in extensibility. Drawing from the author's experience on large scale, collaborative software projects, the text offers practical techniques of API design that produce robust code for the long term. It presents patterns and practices that provide real value to individual developers as well as organizations. API Design for C++ explores often overlooked issues, both technical and non-technical, contributing to successful design decisions that product high quality, robust, and long-lived APIs. It focuses on various API styles and patterns that will allow you to produce elegant and durable libraries. A discussion on testing strategies concentrates on automated API testing techniques rather than attempting to include end-user application testing techniques such as GUI testing, system testing, or manual testing. Each concept is illustrated with extensive C++ code examples, and fully functional examples and working source code for experimentation are available online. This book will be helpful to new programmers who understand the fundamentals of C++ and who want to advance their design skills, as well as to senior engineers and software architects seeking to gain new expertise to complement their existing talents. Three specific groups of readers are targeted: practicing software engineers and architects, technical managers, and students and educators. The only book that teaches the strategies of C++ API development, including design, versioning, documentation, testing, scripting, and extensibility.

Extensive code examples illustrate each concept, with fully functional examples and working source code for experimentation available online. Covers various API styles and patterns with a focus on practical and efficient designs for large-scale long-term projects.

While business functions such as manufacturing, operations, and marketing often utilize various software applications, they tend to operate without the ability to interact with each other and exchange data. This provides a challenge to gain an enterprise-wide view of a business and to assist real-time decision making.

Service-Driven Approaches to Architecture and Enterprise Integration addresses the issues of integrating assorted software applications and systems by using a service driven approach. Supporting the dynamics of business needs, this book highlights the tools, techniques, and governance aspects of design, and implements cost-effective enterprise integration solutions. It is a valuable source of information for software architects, SOA practitioners, and software engineers as well as researchers and students in pursuit of extensible and agile software design.

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

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.

With this concise book, you'll learn the art of building hypermedia APIs that don't simply run on the Web, but that actually exist in the Web. You'll start with the general principles and technologies behind this architectural approach, and then dive hands-on into three fully-functional API examples. Too many APIs rely on concepts rooted in desktop and local area network patterns that don't scale well—costly solutions that are difficult to maintain over time. This book shows system architects and web developers how to design and implement human- and machine-readable web services that remain stable and flexible as they scale. Learn the H-Factors for representing application metadata across all media types and formats Understand the four basic design elements for authoring hypermedia types Convert a simple read-only XML-based media type into a successful API design Examine the challenges and advantages of designing a hypermedia type with JSON Use HTML5's rich set of hypermedia controls in the API design process Learn the details of documenting, publishing, and registering media type designs and link-relation types

Learn the business and technical importance of API design and architecture using the available cloud services from Azure and AWS. This book starts off with an introduction to APIs and the concept of API Economy from a business and organizational perspective. You'll decide on a sustainable API strategy and API architecture based on different case scenarios. You'll then look at actual examples on API development guidelines, providing a practical view and approach towards the API development and aligning teams in API development. This book walks you through the API

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gateway services available in Azure and AWS and reviews different approaches to API Security. This will prepare you for understanding the trade-off between security and the frictionless API experience. What You'll Learn Implement API Gateways to streamline API Development Examine Security Mapping with API gateways from Azure and AWS Apply API implementation using Serverless architecture Review evolving APIs for monitoring and changing business requirements Use code samples in API security implementations Who This Book Is For Developers and architects with .NET and web development experience who want to learn about API design.

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 This book constitutes the refereed proceedings of the Second

International EAI Conference on Emerging Technologies for Developing Countries, AFRICATEK 2018, held in Cotonou, Benin, in May 2018. The 12 revised full papers and 4 short papers were selected from 27 submissions. The papers are organized thematically in tracks, starting with ITS and security, applications and IT services, gaming and user experience.

This book gathers the Proceedings of the 20th International Conference on Interactive Collaborative Learning (ICL2017), held in Budapest, Hungary on 27–29 September 2017. The authors are currently witnessing a significant transformation in the development of education. The impact of globalisation on all areas of human life, the exponential acceleration of technological developments and global markets, and the need for flexibility and agility are essential and challenging elements of this process that have to be tackled in general, but especially in engineering education. To face these current real-world challenges, higher education has to find innovative ways to quickly respond to them. Since its inception in 1998, this conference has been devoted to new approaches in learning with a focus on collaborative learning. Today the ICL conferences offer a forum for exchange concerning relevant trends and research results, and for sharing practical experience gained while developing and testing elements of new technologies and pedagogies in the learning context. This is the eBook version of the print title, Framework Design Guidelines, Second Edition . Access to all the samples, applications, and content on the DVD is available through the product catalog page [www.informit.com/title/9780321545619](http://www.informit.com/title/9780321545619) Navigate to the “Downloads” tab and click on the “DVD Contents” links - see instructions in back pages of your eBook. Framework Design Guidelines, Second Edition, teaches developers the best practices for designing reusable libraries for the Microsoft .NET Framework. Expanded and

updated for .NET 3.5, this new edition focuses on the design issues that directly affect the programmability of a class library, specifically its publicly accessible APIs. This book can improve the work of any .NET developer producing code that other developers will use. It includes copious annotations to the guidelines by thirty-five prominent architects and practitioners of the .NET Framework, providing a lively discussion of the reasons for the guidelines as well as examples of when to break those guidelines. Microsoft architects Krzysztof Cwalina and Brad Abrams teach framework design from the top down. From their significant combined experience and deep insight, you will learn The general philosophy and fundamental principles of framework design Naming guidelines for the various parts of a framework Guidelines for the design and extending of types and members of types Issues affecting—and guidelines for ensuring—extensibility How (and how not) to design exceptions Guidelines for—and examples of—common framework design patterns Guidelines in this book are presented in four major forms: Do, Consider, Avoid, and Do not. These directives help focus attention on practices that should always be used, those that should generally be used, those that should rarely be used, and those that should never be used. Every guideline includes a discussion of its applicability, and most include a code example to help illuminate the dialogue. Framework Design Guidelines, Second Edition, is the only definitive source of best practices for managed code API development, direct from the architects themselves. A companion DVD includes the Designing .NET Class Libraries video series, instructional presentations by the authors on design guidelines for developing classes and components that extend the .NET Framework. A sample API specification and other useful resources and tools are also included.

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In today's market, where rival web services compete for attention, a well-designed REST API is a must-have feature. This concise book presents a set of API design rules, drawn primarily from best practices that stick close to the Web's REST architectural style. Along with rules for URI design and HTTP use, you'll learn guidelines for media types and representational forms. REST APIs are ubiquitous, but few of them follow a consistent design methodology. Using these simple rules, you will design web service APIs that adhere to recognized web standards. To assist you, author Mark Massé introduces the Web Resource Modeling Language (WRML), a conceptual framework he created for the design and implementation of REST APIs. Learn design rules for addressing resources with URIs Apply design principles to HTTP's request methods and response status codes Work with guidelines for conveying metadata through HTTP headers and media types Get design tips to address the needs of client programs, including the special needs of browser-based JavaScript clients Understand why REST APIs should be designed and configured, not coded

This collection of articles and blog entries is representative of the full spectrum of commerce-related content we've published on PayPal's Developer Network over the past year. You will find tutorials and quick reference pieces for developers. With the creation of x.commerce we have expanded our coverage to address the needs of eBay and Magento developers and you can expect to see more content focused on helping both the developer and merchant communities in the coming year. Our team has covered a wide variety of topics including building mobile shopping carts, QR codes, working with various PayPal APIs, including how to integrate PayPal with other technologies such as WordPress. Three main themes have emerged in the commerce world today: Mobile, Social, and Local. Expect to

see more coverage of these in the coming months.

APIs are transforming the business world at an increasing pace. Gain the essential skills needed to quickly design, build, and deploy quality web APIs that are robust, reliable, and resilient. Go from initial design through prototyping and implementation to deployment of mission-critical APIs for your organization. Test, secure, and deploy your API with confidence and avoid the "release into production" panic. Tackle just about any API challenge with more than a dozen open-source utilities and common programming patterns you can apply right away. Good API design means starting with the API-First principle - understanding who is using the API and what they want to do with it - and applying basic design skills to match customers' needs while solving business-critical problems. Use the Sketch-Design-Build method to create reliable and scalable web APIs quickly and easily without a lot of risk to the day-to-day business operations. Create clear sequence diagrams, accurate specifications, and machine-readable API descriptions all reviewed, tested, and ready to turn into fully-functional NodeJS code. Create reliable test collections with Postman and implement proper identity and access control security with AuthO-without added cost or risk to the company. Deploy all of this to Heroku using a continuous delivery approach that pushes secure, well-tested code to your public servers ready for use by both internal and external developers. From design to code to test to deployment, unlock hidden business value and release stable and scalable web APIs that meet customer needs and solve important business problems in a consistent and reliable manner.

Do you sometimes get that feeling of being stuck? Does the world seem to move ahead leaving you behind? Is your career on hold? Or maybe you just

don't know where to begin. Is there a place for you in this huge world of business and career building? Is it all so confusing and sometimes frightening? You are bursting with ideas, but no one else seems to be excited about what you have to say. Slowly it dawns that maybe your ideas aren't that hot anyway. Your dreams will end up being just that - dreams. They will never see the light of day. You need to find the right direction, or the right beginning, but you can't seem to find that elusive door which will open up the possibilities for a fulfilling career. This is a no-holds-barred book on taking stock of your situation, finding the right triggers, and voila! It's all there in front of you. You begin to wonder at the fact that it was in front of your eyes and yet you could not see it. Are you ready for the journey? Welcome to the world of self-realization.

Research into the next generation of service architecture techniques has enabled the design, development, and implementation of dynamic, adaptive, and autonomic services to enable enterprises to efficiently align information technology with their agile business requirements and foster smart services and seamless enterprise integration. Handbook of Research on Architectural Trends in Service-Driven Computing explores, delineates, and discusses recent advances in architectural methodologies and development techniques in service-driven computing. This comprehensive

publication is an inclusive reference source for organizations, researchers, students, enterprise and integration architects, practitioners, software developers, and software engineering professionals engaged in the research, development, and integration of the next generation of computing. Whether you develop web applications or mobile apps, the OAuth 2.0 protocol will save a lot of headaches. This concise introduction shows you how OAuth provides a single authorization technology across numerous APIs on the Web, so you can securely access users' data—such as user profiles, photos, videos, and contact lists—to improve their experience of your application. Through code examples, step-by-step instructions, and use-case examples, you'll learn how to apply OAuth 2.0 to your server-side web application, client-side app, or mobile app. Find out what it takes to access social graphs, store data in a user's online filesystem, and perform many other tasks. Understand OAuth 2.0's role in authentication and authorization Learn how OAuth's Authorization Code flow helps you integrate data from different business applications Discover why native mobile apps use OAuth differently than mobile web apps Use OpenID Connect and eliminate the need to build your own authentication system

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 "Creating channels with application programming interfaces"--Cover.

Data analysis is an important part of modern business administration, as efficient compilation of information allows managers and business leaders to make the best decisions for the financial solvency of their organizations. Understanding the use of analytics, reporting, and data mining in everyday business environments is imperative to the success of modern businesses. Business Intelligence: Concepts, Methodologies, Tools, and Applications presents a comprehensive examination of business data analytics along with case studies and practical applications for businesses in a variety of fields and corporate arenas. Focusing on topics and issues

such as critical success factors, technology adaptation, agile development approaches, fuzzy logic tools, and best practices in business process management, this multivolume reference is of particular use to business analysts, investors, corporate managers, and entrepreneurs in a variety of prominent industries.

This book constitutes the refereed proceedings of the 13th International Conference on Web Engineering, ICWE 2013, held in Aalborg, Denmark, in July 2013. The 21 full research papers, 4 industry papers, and 11 short papers presented were carefully reviewed and selected from 92 submissions. The scientific program was completed with 7 workshops, 6 demonstrations and posters. The papers cover a wide spectrum of topics, such as, among others: web mining and knowledge extraction, semantic and linked data management, crawling and web research, model-driven web engineering, component-based web engineering, Rich Internet Applications (RIAs) and client-side programming, web services, and end-user development.

In recent years, API adoption has exploded among developers, for reasons that this book will examine. But the purpose of this book is not to discuss how to deliver an API but to rather how to scale the business side to meet this rising developer demand. Written by someone with an engineering and a

business background, The Business of APIs also aims to bridge the technical and the business aspects of API development. This book serves to help people understand what APIs are, who uses them, and the different types of APIs that are available. As the title suggests, this is a business-oriented book. Nonetheless it does seek to educate users about what types of technologies go into popular Web APIs. The book also surveys the history of modern Web APIs and examines how they've been used successfully. If you are considering launching an API, this book should help you understand the common stumbling blocks that have been faced by many API owners -- then hopefully you can avoid them. The book will also identify common building blocks used by API owners, building blocks that should be fundamental for your API planning and development. The Business of APIs highlights what it takes to be successful in providing quality Web APIs and points to some of the innovative steps new businesses are taking with their APIs -- all in an effort to build vibrant API ecosystems and healthy businesses.

Learn to develop, test, and deploy your Spring Boot distributed application and explore various best practices. Key Features Build and deploy your microservices architecture in the cloud Build event-driven resilient systems using Hystrix and Turbine Explore API management tools such as KONG and

API documentation tools such as Swagger Book Description Spring is one of the best frameworks on the market for developing web, enterprise, and cloud ready software. Spring Boot simplifies the building of complex software dramatically by reducing the amount of boilerplate code, and by providing production-ready features and a simple deployment model. This book will address the challenges related to power that come with Spring Boot's great configurability and flexibility. You will understand how Spring Boot configuration works under the hood, how to overwrite default configurations, and how to use advanced techniques to prepare Spring Boot applications to work in production. This book will also introduce readers to a relatively new topic in the Spring ecosystem – cloud native patterns, reactive programming, and applications. Get up to speed with microservices with Spring Boot and Spring Cloud. Each chapter aims to solve a specific problem or teach you a useful skillset. By the end of this book, you will be proficient in building and deploying your Spring Boot application. What you will learn

- Build logically structured and highly maintainable Spring Boot applications
- Configure RESTful microservices using Spring Boot
- Make the application production and operation-friendly with Spring Actuator
- Build modern, high-performance distributed applications using cloud patterns
- Manage and deploy your Spring Boot application to the cloud

(AWS) Monitor distributed applications using log aggregation and ELK Who this book is for The book is targeted at experienced Spring and Java developers who have a basic knowledge of working with Spring Boot. The reader should be familiar with Spring Boot basics, and aware of its benefits over traditional Spring Framework-based applications. Architect and deliver packaged Force.com applications that cater to enterprise business needs About This Book Explore the lightning framework, advanced application life cycle processes, and testing Use the Force.com platform to build truly integrated, scalable, and robustly engineered applications focused on enterprise-level customer demands Using the Lightning technology to deliver modern and responsive user experiences targeting multiple devices through Lightning Experience and Salesforce1 Mobile. Step-by-step, work on examples to get you building your own ready-to-install packaged application Who This Book Is For This book is for advanced Force.com developers and architects who need to understand the Salesforce platform from the perspective of enterprise-level requirements. A prior understanding of Apex and Visualforce is a must. Those familiar with other enterprise software ecosystems will also find this book ideal as they adopt Force.com. What You Will Learn Package, install, test, and upgrade an application Define architecture-aligning data storage

and functional requirements Develop Apex code that is easy to navigate, self-documenting, testable, robust, and organic Leverage your application's clientagnostic Service layer backbone to support numerous platform areas Get the most from hosting your application within the Lightning Experience and Salesforce1 Mobile clients Apply querying, indexing, and asynchronous best practices Leverage mocking and dependency injection in your Apex tests Explore tips for developing advanced applications In Detail Companies of all sizes have seen the need for Force.com's architectural strategy focused on enabling their business objectives. Successful enterprise applications require planning, commitment, and investment in the best tools, processes, and features available. This book will teach you how to architect and support enduring applications for enterprise clients with Salesforce by exploring how to identify architecture needs and design solutions based on industry standard patterns. There are several ways to build solutions on Force.com, and this book will guide you through a logical path and show you the steps and considerations required to build packaged solutions from start to finish. It covers all aspects, from engineering to getting your application into the hands of your customers, and ensuring that they get the best value possible from your Force.com application. You will get acquainted with extending tools such as



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Web APIs are everywhere, giving developers an efficient way to interact with applications, services, and data. Well-designed APIs are a joy to use; poorly-designed APIs are cumbersome, confusing, and frustrating. The Design of Web APIs is a practical, example packed guide to crafting extraordinary web APIs. Author Arnaud Lauret demonstrates fantastic design principles and techniques you can apply to both public and private web APIs. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Web API Design Crafting Interfaces that Developers Love this book chances are that you care about designing Web APIs that developers will love and that you're interested in applying proven design principles and best practices to your Web API. One of the sources for our design thinking API development is becoming increasingly common for server-side developers thanks to the rise of front-end JavaScript frameworks, iPhone applications, and API-centric architectures. It might seem like grabbing stuff from a data source and shoving it out as JSON would be easy, but surviving changes in business logic, database schema updates, new features, or deprecated endpoints can be a

nightmare. After finding many of the existing resources for API development to be lacking, Phil learned a lot of things the hard way through years of trial and error. This book aims to condense that experience, taking examples and explanations further than the trivial apples and pears nonsense tutorials often provide. By passing on some best practices and general good advice you can hit the ground running with API development, combined with some horror stories and how they were overcome/avoided/averted. This book will discuss the theory of designing and building APIs in any language or framework, with this theory applied in PHP-based examples.

Build and deploy scalable cloud native microservices using the Spring framework and Kubernetes. **KEY FEATURES** ? Complete coverage on how to design, build, run, and deploy modern cloud native microservices. ? Includes numerous sample code exercises on microservices, Spring and Kubernetes. ? Develop a stronghold on Kubernetes, Spring, and the microservices architecture. ? Complete guide of application containerization on Kubernetes containers. ? Coverage on managing modern applications and infrastructure using observability tools. **DESCRIPTION** The main objective of this book is to give an overview of cloud native microservices, their architecture, design patterns, best practices, real use cases and practical

coverage of modern applications. This book covers a strong understanding of the fundamentals of microservices, API first approach, Testing, observability, API Gateway, Service Mesh and Kubernetes alternatives of Spring Cloud. This book covers the implementation of various design patterns of developing cloud native microservices using Spring framework docker and Kubernetes libraries. It covers containerization concepts and hands-on lab exercises like how to build, run and manage microservices applications using Kubernetes. After reading this book, the readers will have a holistic understanding of building, running, and managing cloud native microservices applications on Kubernetes containers. **WHAT YOU WILL LEARN ?** Learn fundamentals of microservice and design patterns. ? Learn microservices development using Spring Boot and Kubernetes. ? Learn to develop reactive, event-driven, and batch microservices. ? Perform end-to-end microservices testing using Cucumber. ? Implement API gateway, authentication & authorization, load balancing, caching, rate limiting. ? Learn observability and monitoring techniques of microservices. **WHO THIS BOOK IS FOR** This book is for the Spring Developers, Microservice Developers, Cloud Engineers, DevOps Consultants, Technical Architect and Solution Architects, who have some familiarity with application development, Docker and Kubernetes containers. **TABLE OF**

CONTENTS 1. Overview of Cloud Native microservices 2. Microservice design patterns 3. API first approach 4. Build microservices using the Spring Framework 5. Batch microservices 6. Build reactive and event-driven microservices 7. The API gateway, security, and distributed caching with Redis 8. Microservices testing and API mocking 9. Microservices observability 10. Containers and Kubernetes overview and architecture 11. Run microservices on Kubernetes 12. Service Mesh and Kubernetes alternatives of Spring Cloud Utilize ServiceStack as the rock solid foundation of your distributed system About This Book Take advantage of the various data providers to access authentication and authorization, sessions, cache, and database Leverage asynchronous processing for decoupling components to ease scaling Monitor and tune the performance of your distributed system Who This Book Is For Mastering ServiceStack is targeted at developers who have already implemented web services with ASMX, WCF, or ServiceStack and want to gain more insight into the possibilities ServiceStack has to offer to build distributed systems of all scales. What You Will Learn Design a prudent and resilient API, following the RESTful design Understand the internal processing chain and utilize the provided hooks Incorporate ServiceStack as a full service provider to your existing distributed system Leverage the power

of asynchronous processing and add message queues to your architecture Analyze and tune the performance of your service In Detail Mastering ServiceStack covers real-life problems that occur over the lifetime of a distributed system and how to solve them by deeply understanding the tools of ServiceStack. Distributed systems is the enterprise solution that provide flexibility, reliability, scaling, and performance. ServiceStack is an outstanding tool belt to create such a system in a frictionless manner, especially sophisticated designed and fun to use. The book starts with an introduction covering the essentials, but assumes you are just refreshing, are a very fast learner, or are an expert in building web services. Then, the book explains ServiceStack's data transfer object patterns and teach you how it differs from other methods of building web services with different protocols, such as SOAP and SOA. It also introduces more low-level details such as how to extend the User Auth, message queues and concepts on how the technology works. By the end of this book, you will understand the concepts, framework, issues, and resolutions related to ServiceStack. Style and approach A step-by-step approach that follows the natural requirements of a distributed system in a conversational style.

REST API Design Rulebook"O'Reilly Media, Inc."

API Design Patterns lays out a set of design principles for building internal and public-facing APIs. Summary A

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collection of best practices and design standards for web and internal APIs. In API Design Patterns you will learn:

- Guiding principles for API patterns
- Fundamentals of resource layout and naming
- Handling data types for any programming language
- Standard methods that ensure predictability
- Field masks for targeted partial updates
- Authentication and validation methods for secure APIs
- Collective operations for moving, managing, and deleting data
- Advanced patterns for special interactions and data transformations

API Design Patterns reveals best practices for building stable, user-friendly APIs. These design patterns can be applied to solve common API problems and flexibly altered to fit your specific needs. Hands-on examples and relevant use-cases illustrate patterns for API fundamentals, advanced functionalities, and even uncommon scenarios. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology APIs are contracts that define how applications, services, and components communicate. API design patterns provide a shared set of best practices, specifications and standards that ensure APIs are reliable and simple for other developers to use. This book collects and explains the most important patterns from both the API design community and the experts at Google. About the book API Design Patterns lays out a set of design principles for building internal and public-facing APIs. Google API expert JJ Geewax presents patterns that ensure your APIs are consistent, scalable, and flexible. You'll improve the design of the most common APIs, plus discover techniques for tricky edge

cases. Precise illustrations, relevant examples, and detailed scenarios make every pattern clear and easy to understand. What's inside

Guiding principles for API patterns  
Fundamentals of resource layout and naming  
Advanced patterns for special interactions and data transformations  
A detailed case-study on building an API and adding features  
About the reader  
For developers building web and internal APIs in any language.  
About the author  
JJ Geewax is a software engineer at Google, focusing on Google Cloud Platform, API design, and real-time payment systems. He is also the author of Manning's Google Cloud Platform in Action.

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"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 Optimise 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. Summary A Web API is a platform with a web-style interface developers can use to implement functionality. Well-designed APIs feel like a natural extension of the application, rather than just a new interface into the backend database. Designing Web APIs based on use cases allows an organization to develop irresistible APIs, which developers can consume easily and which support the business values of that organization. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology It takes a village to deliver an irresistible web API. Business stakeholders look for an API that works side-by-side with the main product to enhance the experience for customers. Project managers require easy integration with other products or ways for customers to interact with your system. And, developers need APIs to consistently interoperate with external systems. The trick is getting the whole village together. This book shows you how. About the Book Irresistible APIs presents a process to create APIs that succeed for all members of the team. In it, you'll learn how to capture an application's core business value and extend it with an API that will delight the developers who use it. Thinking about APIs from the business point of view, while also considering the end-user experience, encourages you to explore both sides of the design process and learn some successful biz-to-dev communication patterns. Along the way, you'll start to view your APIs as part of your product's core value

instead of just an add-on. What's Inside Design-driven development Developing meaningful use cases API guiding principles How to recognize successful APIs About the Reader Written for all members of an API design team, regardless of technical level. About the Author Kirsten Hunter is an API evangelist who helps developers and business stakeholders understand, design, and deliver amazing APIs. Table of Contents UNDERSTANDING WEB APIs What makes an API irresistible? Working with web APIs API First Web services explained DESIGNING WEB APIs Guiding principles for API design Defining the value for your API Creating your schema model Design-driven development Empowering your developers 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.

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