

# Bookmark File PDF Building Scalable Web Sites Smanticscholar

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Web Development with Go Building Scalable Apps with Redis and Node.js Build Your Own IoT Platform Building Django 2.0 Web Applications Practical Web Development with Haskell Building Scalable PHP Web Applications Using the Cloud Scalability Rules Scalability Patterns Building Scalable and High-performance Java Web Applications Using J2EE Technology Designing Data-Intensive Applications Hands-On Full-Stack Web Development with GraphQL and React Designing Distributed Systems Building Web, Cloud, and Mobile Solutions with F# The Art of Scalability Architecting High Performing, Scalable and Available Enterprise Web Applications Real-Time Phoenix REST Essentials Building Web Apps with WordPress Scalable Internet Architectures Design and Build Great Web APIs Building Scalable Web Sites Web Database Applications with PHP and MySQL High Performance Web Sites The Art of Scalability Web Scalability for Startup Engineers REST in Practice Building Secure and Reliable Systems Using Fast ASP.NET 4.5 Scalability Rules Building Scalable Network Services Frontend Architecture for Design Systems Building Serverless Web Applications Building Large-Scale Web Applications with Angular Using Google App Engine Building Scalable Web Sites Building the Web of Things Practical Node.js Transactional COM+ Using Joomla Building a Scalable Data Warehouse with Data Vault 2.0

Web Development with Go 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.

Building Scalable Apps with Redis and Node.js Learn the tricks of the trade so you can build and architect applications that scale quickly--without all the high-priced headaches and service-level agreements associated with enterprise app servers and proprietary programming and database products. Culled from the experience of a Flickr.com lead developer, Building Scalable Web Sites offers techniques for creating fast sites that your visitors will find a pleasure to use. Creating popular sites requires much more than fast hardware with lots of memory and hard drive space. It requires thinking about how to grow over time, how to make the same resource available to audiences with different expectations, and how to have a team of developers work on a site without creating new problems for visitors and for each other. Presenting information to visitors from all over the world Integrating email with your web applications Planning hardware purchases and hosting options to have as little impact on your wallet Partitioning and distributing databases to support large datasets and simultaneous transactions Monitoring your applications to find and clear bottlenecks \* Providing services APIs and using services from other providers to increase your site's reach and capabilities Whether you're starting a new site or you already have a large system that needs maintenance, you'll find Building Scalable Web Sites to be a library of ideas for making things work.

Build Your Own IoT Platform Take a deep dive into web development using the Go programming language to build web apps and RESTful services to create reliable and efficient software. Web Development with Go provides Go language fundamentals and then moves on to advanced web development concepts and successful deployment of Go web apps to the cloud. Web Development with Go will teach you how to develop scalable real-world web apps, RESTful services, and backend systems with Go. The book starts off by covering Go programming language fundamentals as a prerequisite for web development. After a thorough understanding of the book delves into web development using the built-in package, net/http. With each chapter you'll be introduced to new concepts for gradually building a real-world web system. The book further shows you how to integrate Go with other technologies. For example, it provides an overview of using MongoDB as a means of storage, and provides an end-to-end REST API sample as well. The book then moves on to demonstrate how to deploy web apps to the cloud using the Google Cloud platform. Web Development with Go provides: Fundamentals for building real-world web apps in Go Thorough coverage of prerequisites and practical code examples for attaining a deeper understanding of web development A reference REST API app which can be used to build scalable real-world backend services in Go A thorough demonstration of deploying web apps to the Cloud using the Google Cloud platform Go is a high-performance language while providing greater level of productivity, therefore Web Development with Go equips you with the necessary skills and knowledge required for effectively building robust and efficient web apps by leveraging the features of Go.

Building Django 2.0 Web Applications Combining React, one of the most widely used JavaScript frameworks, and GraphQL, the modern way of querying an API, two revolutionary technologies will give you a future-proof and scalable stack you can start building your business around. This book will guide you in implementing a modern web application by using React, Apollo, Node.js and GraphQL.

Practical Web Development with Haskell 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 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. 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

Building Scalable PHP Web Applications Using the Cloud Whether you're starting a small web site with hopes of growing big or you already have a large system that needs maintenance, you'll find Building Scalable Web Sites to be a library of ideas for making things work. Creating popular sites requires much more than fast hardware and lots of memory and hard drive space. It requires thinking about how to grow over time, how to make the same resources accessible to audiences with different expectations, and how to have a team of developers work on a site without creating new problems for visitors and for each other.

Scalability Rules 50 Powerful, Easy-to-Use Rules for Supporting Hypergrowth in Any Environment Scalability Rules is the easy-to-use scalability primer and reference for every architect, developer, web professional, and manager. Authors Martin L. Abbott and Michael T. Fisher have helped scale more than 200 hypergrowth startups through their consulting practice. Now, drawing on their unsurpassed experience, they present 50 clear, proven scalability rules—and practical guidance for applying them. Abbott and Fisher transform scalability from a "black art" to a set of realistic, technology-agnostic best practices for supporting hypergrowth in nearly any environment, including both frontend and backend systems. For architects, they offer powerful new insights for creating and evaluating designs. For developers, they share specific techniques for handling everything from databases to state. For managers, they provide invaluable help in goal-setting, decision-making, and interacting with stakeholders. Whatever your role, you'll find practical risk/benefit guidance for setting priorities—and getting maximum "bang for the buck." • Simplifying architectures and avoiding "over-engineering" • Scaling via cloning, replication, separating functionality, and splitting data sets • Scaling out, not up • Getting more out of databases without compromising scalability • Avoiding unnecessary redirects and redundant double-checking • Using caches and content delivery networks more aggressively, without introducing unacceptable complexity • Designing for fault tolerance, graceful failure, and easy rollback • Striving for statelessness when you can; efficiently handling state when you must • Effectively utilizing asynchronous communication • Learning quickly from mistakes, and much more

Scalability Patterns The Data Vault was invented by Dan Linstedt at the U.S. Department of Defense, and the standard has been successfully applied to data warehousing projects at organizations of different sizes, from small to large-size corporations. Due to its simplified design, which is adapted from nature, the Data Vault helps prevent typical data warehousing failures. "Building a Scalable Data Warehouse" covers everything one needs to know to create a scalable data warehouse end to end, including a presentation of the Data Vault modeling technique, which provides the foundations to create a technical data warehouse layer. The book details how to build the data warehouse incrementally using the agile Data Vault 2.0 methodology. In addition, readers will learn how to create the input layer (the stage layer) and the presentation layer (data mart) of the Data Vault 2.0 architecture including implementation best practices. Drawing upon years of practical experience and examples and an easy to understand framework, Dan Linstedt and Michael Olschmike discuss: How to load each layer using SQL Server Integration Services (SSIS), including automation of the Data Vault loading processes. Important data warehouse technologies and practices. Data Quality Services (DQS) and Master Data Services (MDS) in the context of the Data Vault architecture. Provides a complete introduction to data warehousing, applications, and the business context so readers can get-up and running fast Explains theoretical concepts and provides hands-on instruction on how to build and implement a data warehouse Demystifies data vault architecture beginning, intermediate, and advanced techniques Discusses the advantages of the data vault approach over other techniques, also including the latest updates to Data Vault 2.0 and multiple improvements to Data Vault 1.0

Building Scalable and High-performance Java Web Applications Using J2EE Technology Ultra-Fast ASP.NET 4.5 presents a practical approach to building fast and scalable web sites using ASP.NET and SQL Server. In addition to a wealth of tips, tricks and secrets, you'll find advice and code examples for all tiers of your application, including the client, caching, IIS 7.5, ASP.NET 4.5, threads, session state, SQL Server 2012 (otherwise known as Denali), Analysis Services, infrastructure and operations. By applying author Rick Kiessig's ultra-fast approach to your projects, you'll squeeze every last ounce of performance out of your code and infrastructure—guaranteeing site unrivaled speed. Rather than drowning you in options, Ultra-Fast ASP.NET 4.5 presents and explains specific high-impact recommendations and demonstrates them with detailed examples. Using this knowledge, you will soon be building high-performance web sites that scale easily as your site grows. Apply the key principles to help you build Ultra-Fast and Ultra-Scalable web sites. Identify performance traps (such as with session state) and learn how to avoid them. Put into practice an end-to-end systems-based approach to web site performance and scalability, which includes everything from the browser and the network to caching, back-end of hardware infrastructure, and your software development process.

Designing Data-Intensive Applications Fully updated! Fifty Powerful, Easy-to-Use Rules for Supporting Hyper Growth "Whether you're taking on a role as a technology leader in a new company or you simply want to make great technology decisions, Scalability Rules will be the go-to resource on your bookshelf." --Chad Dickerson, Etsy Scalability Rules, Second Edition, is the easy-to-use scalability primer and reference for every architect, developer, network/software engineer, web professional, and manager. Authors Martin L. Abbott and Michael T. Fisher have helped scale hundreds of high-growth companies and thousands of systems. Drawing on their experience, they present 50 up-to-the-minute technical best practices for supporting hyper growth practically anywhere. Fully updated to reflect new technical trends and experiences, this edition is even easier to read, understand, and apply. Abbott and Fisher have also added powerful "stories behind the rules": actual experience case studies from CTOs and technology executives at Etsy, NASDAQ, Salesforce, Shutterfly, Chegg, Warby Parker, Twitter, and other scalability pioneers. Architects will find powerful technology-agnostic insights for creating and evaluating designs. Developers will discover specific techniques for handling everything from data to state. Managers will get invaluable help in setting goals, making decisions, and interacting with technical teams. Whatever your role, you'll find practical risk/benefit guidance for setting priorities, translating plans into action, and gaining maximum scalability at minimum cost. You'll learn how to Simplify architectures and avoid "over-engineering" Design scale into your solution, so you can scale on a just-in-time basis Make the most of cloning and replication Separate functionality and split data sets Scale out, not up Get more out of databases without compromising scalability Eliminate unnecessary redirects and redundant double-checking Use caches aggressively, without unacceptable complexity Design for fault tolerance, graceful failure, and easy rollback Emphasize statelessness, and efficiently handle state when you must Effectively utilize asynchronous communication Learn from your own mistakes and others' high-profile failures Prioritize your actions to get the big bang for the buck"

Hands-On Full-Stack Web Development with GraphQL and React This invaluable roadmap for startup engineers reveals how to successfully handle web application scalability challenges to meet increasing product and traffic demands. Web Scalability for Startup Engineers shows engineers working at startups and small companies how to plan and implement a comprehensive scalability strategy. It presents broad and holistic view of infrastructure and architecture of a scalable web application. Successful startups often face the challenge of scalability, and the core concepts driving a scalable architecture are language and platform agnostic. The book covers a wide range of HTTP-based systems (web services, REST APIs, SaaS, and mobile application backends), starting with a high-level perspective before taking a deep dive into common challenges and issues. This approach builds a holistic view of the problem, helping you see the big picture, and then introduces different technologies and best practices for solving the problem at hand. The book is enriched with the author's real-world experience and expert advice, saving you precious time and effort by learning from others' mistakes and successes. Language-agnostic approach addresses universally challenging concepts in Web development/scalability—does not require knowledge of any particular language Fills the gap for engineers in startups and smaller companies who have limited means for getting to the next level in terms of accomplishing scalability Strategies presented help to decrease time to market and increase the efficiency of web applications

Designing Distributed Systems Give users the real-time experience they expect, by using Elixir and Phoenix Channels to build applications that instantly react to changes and reflect the application's true state. Learn how Elixir and Phoenix make it easy and enjoyable to create real-time applications that scale to a large number of users. Apply system design and development best practices to create applications that are easy to maintain. Gain confidence by learning how to break your applications before your users do. Deploy applications with minimized resource use and maximized performance. Real-time applications come with real challenges - persistent connections, multi-server deployment, and strict performance requirements are just a few. Don't try to solve these challenges by yourself - use a framework that handles them for you. Elixir and Phoenix Channels provide a solid foundation on which to build stable and scalable real-time applications. Build applications that thrive for years. Discover best-practices found in this book. Understand the magic of real-time communication by inspecting the WebSocket protocol in action. Avoid performance pitfalls early in the development lifecycle with a catalog of common problems and their solutions. Leverage GenStage to build a data pipeline that improves scalability. Break down your application before your users do and confidently deploy them. Build a real-world project using solid application design and testing practices that help make future changes a breeze. Create distributed apps that can scale to many users with tools like Phoenix Tracker. Deploy and monitor your application with confidence and ease. Deliver an exceptional real-time experience to your users, with easy maintenance, reduced operational costs, and maximized performance, using Elixir and Phoenix Channels. What You Need: You'll need Elixir 1.9+ and Erlang/OTP 22+ installed on a Mac OS X, Linux, or Windows machine.

Building Web, Cloud, and Mobile Solutions with F# Eliminate the guesswork involved in writing and deploying a cloud application. This step-by-step guide uses PHP to minimize the complexity of the code and setup, but the tools and techniques can be applied on any platform using any language. Everything that you need to jumpstart your application on the cloud is right here. Clear diagrams, step-by-step configuration information, and complete code listings tell you everything you need to get off the ground and start developing your cloud application today. This book introduces several cloud architectures and technologies that will help you accelerate your application.

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cloud. Chapters cover load-balanced clusters, database replication, caching configuration, content delivery networks, infinite-scale file storage, and cloud system administration. Cloud computing has dramatically changed the landscape of web hosting. Instead of spending weeks negotiating contracts for servers, new servers are deployed with the push of a button, and your application can be resized almost instantly to meet today's needs. No matter what size of web application you are developing, you can benefit from modern cloud servers, and this is the guide to tell you how. What You'll Learn Use the cloud and its various platforms with Docker tools Build a simple PHP-based scalable web application Create a basic cloud cluster Work with Amazon and Google Cloud Platform in your PHP web application development Who This Book Is For Developers who have some prior programming experience, including PHP, and who are new to building applications

The Art of Scalability Why use Joomla? Because with Joomla you don't need to have any technical expertise or web design experience to create effective websites and web apps. Whether you're creating your first website or building a multi-function site for a client, this book provides straightforward, hands-on instruction to learn this open source web content management system. Written by members of the Joomla Leadership Team, using Joomla helps newcomers quickly learn the basics, while developers with Joomla experience will pick up best practices for building more sophisticated websites. You'll also find more than a dozen ways to extend the functionality of existing Joomla-built websites. Start building with Joomla in minutes! Get guidelines for planning, creating, and organizing your content Understand how to create and use Joomla templates to build websites quickly Explore how components, modules, and plug-ins can extend your site's functionality Increase your site's performance by using Joomla best practices Use built-in components such as banners, newsfeeds, polls, search, and web links Set up an online store, calendar, photo gallery, discussion forum, and more Learn important security precautions to safeguard your site

Architecting High Performing, Scalable and Available Enterprise Web Applications The Comprehensive, Proven Approach to IT Scalability—Updated with New Strategies, Technologies, and Case Studies In The Art of Scalability, Second Edition, leading scalability consultants Martin L. Abbott and Michael T. Fisher cover everything you need to know to smoothly scale products and services for any requirement. This extensively revised edition reflects new technologies, strategies, and lessons, as well as new case studies from the authors' pioneering consulting practice, AKF Partners. Writing for technical and nontechnical decision-makers, Abbott and Fisher cover the factors that impacts scalability, including architecture, process, people, organization, and technology. Their insights and recommendations reflect more than thirty years of experience at companies ranging from eBay to Visa, and Salesforce.com to Apple. You'll find updated strategies for structuring organizations to maximize agility and performance, as well as new insights into the cloud (IaaS/PaaS) transition, NoSQL, DevOps, business metrics, and more. Using this guide's tools and advice, you can systematically clear away obstacles to scalability—and achieve unprecedented IT and business performance. Coverage includes • Why scalability problems start with organizational culture • People, not technology, and what to do about it • Actionable lessons from real successes and failures • Staffing, structuring, and leading the agile, scalable organization • Scaling processes for hyper-growth environments • Architecting scalability: proprietary models for clarifying needs and making choices—including 15 key success factors • Emerging technologies and challenges: data cost, datacenter planning, cloud evolution, and customer-aligned monitoring • Measuring availability, capacity, load, and performance

Real-Time Phoenix Building Scalable Network Services: Theory and Practice is on building scalable network services on the Internet or in a network service provider's network. The focus is on network services that are provided through the use of a set of servers. The authors present a tiered scalable network service model and various services within this architecture. The service model simplifies design tasks by implementing only the most basic functionalities at lower tiers where the need for scalability dominates functionality. The book includes a number of theoretical results that are practical and applicable to real networks, such as building network measurement, monitoring services, and strategies for building better P2P networks. Various issues in scalable system design and placement algorithms for service nodes are discussed. Using existing network services as well as potentially new but useful services as examples, the authors formalize the problem of placing servers and provide practical solutions for them.

React.js Essentials A Comprehensive, Proven Approach to IT Scalability from Two Veteran Software, Technology, and Business Executives In The Art of Scalability, AKF Partners cofounders Martin L. Abbott and Michael T. Fisher cover everything IT and business leaders must know to build technology infrastructures that can scale smoothly to meet any business requirement. Drawing on their unparalleled experience managing some of the world's highest-transaction-volume Web sites, the authors provide detailed models and best-practice approaches available in no other book. Unlike previous books on scalability, The Art of Scalability doesn't limit its content to a specific technology. Writing for both technical and nontechnical decision-makers, this book covers everything that impacts scalability, including architecture, processes, people, and organizations. Throughout, the authors address a broad spectrum of real-world challenges, from performance testing to IT governance. Using their tools and best practices, organizations can systematically overcome obstacles to scalability and achieve unprecedented levels of technical and business performance. Coverage includes Staffing the scalable organization: essential organizational, management, and leadership skills for technical leaders Building processes for scale: process lessons from 100+ growth companies, from technical issue resolution to crisis management Making better "build versus buy" decisions Architecting scalable solutions: powerful proprietary models for identifying scalability needs and choosing the best approaches to meet them Optimizing performance through caching, application and database design asynchronous design Scalability techniques for emerging technologies, including clouds and grids Planning for rapid data growth and new data centers Evolving monitoring strategies to tightly align with customer requirements

Building Web Apps with WordPress Summary A hands-on guide that will teach how to design and implement scalable, flexible, and open IoT solutions using web technologies. This book focuses on providing the right balance of theory, code samples, and practical examples to enable you to successfully connect all sorts of devices to the web and to expose their services and data over REST APIs. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Because the Internet of Things is still new, there is no universal application protocol. Fortunately, the IoT can take advantage of the existing REST and Pub/Sub APIs with Node.js in embedded systems Learn about IoT protocols like MQTT and CoAP and integrate them to the Web of Things Use the Semantic Web (JSON-LD, RDFa, etc.) to discover and find Web Things Share Things via Social Networks to create the Social Web of Things Build a web-based system for home with HTTP and WebSocket Compose physical mashups with EVERYTHING, Node-RED, and IFTTT About the Reader For both seasoned programmers and those with only basic programming skills. About the Authors Dominique Guinard and Vlad Trifa pioneered the Web of Things and cofounded EVERYTHING, a large-scale IoT cloud platform powering billions of Web Things. Table of Contents PART 1 BASICS OF THE IOT AND THE WOT From the Internet of Things to the Web of Things Hello, World Wide Web of Things Node.js for the Web of Things Getting started with embedded systems Building networks of Things PART 2 BUILDING THE WOT Access: Web APIs for Things Implementing Web Things Find: Describe and discover Web Things Share: Securing and sharing Web Things

Scalable Internet Architectures Provides information on building Web applications using Google App Engine.

Design and Build Great Web APIs Want your web site to display more quickly? This book presents 14 specific rules that will cut 25% to 50% off response time when users request a page. Author Steve Souders, in his job as Chief Performance Yahoo!, collected these best practices while optimizing some of the most-visited pages on the Web. Even sites that had already been highly optimized, such as Yahoo! Search and the Yahoo! Front Page, were able to benefit from these surprisingly simple performance guidelines. The rules in High Performance Web Sites explain how you can optimize the performance of the Ajax, CSS, JavaScript, Flash, and images that you already built into your site -- adjustments that are critical for any rich web application. Other sources of information pay a lot of attention to tuning web servers, databases, and hardware, but the bulk of display time is taken up on the browser side and by the communication between server and browser. High Performance Web Sites covers every aspect of that process. Each performance rule is supported by specific examples, and code snippets are available on the book's companion web site. The rules include how to: Make Fewer HTTP Requests Use a Content Delivery Network Add an Expires Header Gzip Components Put Stylesheets at the Top Put Scripts at the Bottom Avoid CSS Expressions Make JavaScript and CSS External Reduce DNS Lookups Minify JavaScript Avoid Redirects Remove Duplicates Scripts Configure ETags Make Ajax Cacheable If you're building pages for high traffic destinations and want to optimize the experience of users visiting your site, this book is indispensable. "If every web developer would implement just 20% of Steve's guidelines, the Web would be dramatically better place. Between this book and Steve's YSlow extension, there's really no excuse for having a sluggish web site anymore." -Joe Hewitt, Developer of Firebug debugger and Mozilla's DOM Inspector "Steve Souders has done a fantastic job of distilling a massive, semi-arcanic art down to a set of concise, actionable, pragmatic engineering steps that will change the world of web performance." -Eric Lawrence, Developer of the Fiddler Web Debugger, Microsoft Corporation

Building Scalable Web Sites Scaling Java enterprise applications beyond just programming techniques--this is the next level. This volume covers all the technologies Java developers need to build scalable, high-performance Web applications. The book also covers servlet-based session management, EJB application logic, database design and integration, and more.

Web Database Applications with PHP and MySQL A definitive guide on frontend development with Angular from design to deployment Key Features Develop web applications from scratch using Angular and TypeScript Explore reactive programming principles and RxJS to develop and test apps easily Study continuous integration and deployment on the AWS cloud Book Description If you have been burnt by unreliable JavaScript frameworks before, you will be amazed by the maturity of the Angular platform. Angular enables you to build fast, efficient, and real-world web apps. In this Learning Path, you'll learn Angular and to deliver high-quality and productive Angular apps from design to deployment. You will begin by creating a simple fitness app, using the building blocks of Angular, and make your final app, Personal Trainer, by morphing the workout app into a full-fledged personal workout builder and runner with an advanced directive building - the most fundamental and powerful feature of Angular. You will learn the different ways of architecting Angular applications using RxJS, and some of the patterns that are involved in it. Later you'll be introduced to the router-first architecture, a seven-step approach to designing and developing mid-to-large line-of-business apps, along with popular recipes. By the end of the path, you will be familiar with the scope of web development using Angular, Swagger, and Docker, learning patterns and practices to be successful as an individual developer on the web or as a team in the Enterprise. This Learning Path includes content from the following Packt products: Angular 6 by Example by Chandermani Arora, Kenneth Hendry Architecting Angular Applications with Redux, RxJS, and NgRx by Christoffer Noring Angular 6 for Enterprise-Ready Web Applications by Doghuan Uluca What you will learn Develop web applications from scratch using Angular and TypeScript Explore reactive programming principles, RxJS to develop and test apps efficiently Study continuous integration and deployment your Angular app on the AWS cloud Who this book is for If you're a JavaScript or frontend developer looking to gain comprehensive experience of using Angular for end-to-end enterprise-ready applications, this Learning Path is for you.

High Performance Web Sites Build scalable, efficient, and highly available web apps using AWS About This Book Get an in-depth understanding of the serverless model Build a complete serverless web application end to end Learn how to use the Serverless Framework to improve your productivity Who This Book Is For If you're a developer who wants to learn more about scalable and cost-efficient architectures, this book is for you. Basic knowledge of Node.js skills or familiarity with cloud services is required. For other topics, we cover the basics. What You Will Learn Get a grasp of the pros and cons of going serverless and its use cases Discover how you can use the built-in AWS to your advantage Set up the environment and create a basic app with the Serverless Framework Host static files on S3 and CloudFront with HTTPS support Build a sample application with a frontend using React as an SPA Develop the Node.js backend to handle requests and connect to a SimpleDB database Secure your application with authentication and authorization Implement the publish-subscribe pattern to handle notifications in a serverless application Create tests, define the workflow for deployment, and monitor your app in Detail This book will equip you with the knowledge needed to build your own serverless apps by showing you how to build different services while making your application scalable, highly available, and efficient. We begin by giving you an idea of what it means to go serverless, exploring the pros and cons of the serverless model and its use cases. Next, you will be introduced to the AWS services that will be used throughout the book, how to set up how to set up and use the Serverless Framework. From here, you will start to build an entire serverless project of an online store, beginning with a React SPA frontend hosted on AWS followed by a serverless backend with API Gateway and Lambda functions. You will also learn to access data from a SimpleDB database, secure your application with authentication and authorization, and implement serverless notifications for browsers using AWS IoT. This book will describe how to monitor the performance, efficiency, and errors of your apps and conclude by teaching you how to test and deploy your applications. Style and approach This book takes a step-by-step approach on how to use the Serverless Framework and AWS services to build Serverless Applications. It will give you a hands-on feeling, allowing you to practice while reading. It provides a brief introduction of concepts while keeping the focus on the practical skills required to develop applications.

The Art of Scalability Combines language tutorials with application design advice to cover the PHP server-side scripting language and the MySQL database engine.

Web Scalability for Startup Engineers Imagine what a large-scale web project would look like if frontend development were not treated as an add-on, but as an equal partner with backend development and content strategy. This practical book takes experienced web developers through the new discipline of frontend architecture, the latest tools, standards, and best practices that have elevated frontend web development to an entirely new level. Using real-world examples, case studies, and practical tips and tricks throughout, author Micah Godbolt introduces you to the four pillars of frontend architecture. He also provides compelling arguments for why you want to embrace the mantle of frontend architect and fight to make it a first-class citizen in their next project. The four pillars include: Code: how to approach the HTML, CSS, and JavaScript of a design system Process: tools and processes for creating an efficient and error-proof workflow Testing: creating a stable foundation for building your site Documentation: tools for writing documentation while the work is in progress

REST in Practice Learn how to advance your skill level of Haskell, and use this language for practical web development. This book uses a direct, no nonsense approach, so you no longer need to spend extra time reading the documentation, blog posts, and forums to understand how to use Haskell -- all that knowledge is provided in a coherent resource. You'll start by reviewing how multiple facets of web development are done in Haskell, such as routing, building HTMLs, interacting with databases, caches, and queues, etc. You'll then move on to using notable libraries, such as "scotty" for routings, "digestive-functor" for input validation, and "postgresql-simple" for interacting with databases. In the later chapters, you'll learn how all of these libraries can be used together by working on a fully functioning project deployed on Heroku. What You'll Learn Set up a productive Haskell development environment Review basic tasks that are encountered when building web applications. Explore how to interact with external systems, such as databases, queues, and RESTful APIs. Build a RESTful API, website, building views and form validation. Who This Book Is For Software developers familiar Haskell and would like to apply the knowledge on real world applications and software developers new to Haskell.

Building Secure and Reliable Systems Learn how to build key aspects of web, cloud, and mobile solutions by combining # with various .NET and open source technologies. With helpful examples, this hands-on book shows you how to tackle concurrency, asynchrony, and other server-side challenges. You'll quickly learn how to build a productive web application with #, whether you want to integrate the language into your existing web application or use it to create the next Twitter. If you're a mid- to senior-level .NET programmer, you'll discover how this expressive functional-first language helps you write robust, maintainable, and reusable solutions that scale easily and

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devices. Use F# with ASP.NET MVC, ASP.NET Web API, WCF, Windows Azure, HTML5, CSS3, jQuery Mobile, and other tools Build next-generation ASP.NET MVC 4 web applications, using F# to do the heavy lifting on the server Create WCF SOAP and HTTP web services Develop F# web applications and services that run on Windows Azure Build scalable solutions that allow reuse by mobile and web front-ends Use F# with the WebSharper and Pit frameworks to build end-to-end web stacks

Ultra-Fast ASP.NET 4.5 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 your 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, API specifications, and machine-readable API descriptions all reviewed, tested, and ready to turn into fully-functional Node.js code. Create reliable test collections with Postman and implement proper identity and access control security with OAuth2 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.

Scalability Rules Architecting High Performing, Scalable and Available Enterprise Web Applications provides in-depth insights into techniques for achieving desired scalability, availability and performance quality goals for enterprise web applications. The book provides an integrated 360-degree view of achieving and maintaining high performance, scalable, and available enterprise web applications. It covers a wide range of management techniques, proven patterns, novel models, best practices, performance strategies, and continuous improvement methodologies and case studies. The author shares his years of experience in application security, enterprise application testing, caching techniques, production operations and maintenance, and management techniques. Delivers holistic view of scalability, availability and security, caching, testing and project management Includes patterns and frameworks that are illustrated with end-to-end case studies Offers tips and troubleshooting methods for enterprise application testing, security, caching, production operations and management Exploration of synergies between techniques and methodologies to achieve end-to-end availability, scalability, performance and security quality attributes 360-degree viewpoint approach for achieving overall quality Practitioner viewpoint on proven patterns, techniques, methodologies, models and best practices summary and tabular representation of concepts for effective understanding Production operations and troubleshooting tips

Building Scalable Network Services A fast-paced guide to designing and building scalable and maintainable web apps with React.js About This Book Build maintainable and performant user interfaces for your web applications using React.js Create reusable React.js components to save time and effort in maintaining your user interface Learn how to build a ready-to-deploy React.js web application, following our step-by-step tutorial Who This Book Is For If you're a front-end developer with knowledge of jQuery and its libraries, along with frameworks, such as AngularJS and BackboneJS, or native JavaScript development, and you wish to use the fastest web user interface library there is, then this book is ideal for you. What You Will Learn Install powerful React.js tools to make development much more efficient Create React elements with properties and children Get started with stateless and stateful React components Use JSX to speed up your React.js development process Add reusable React components with lifecycle methods Integrate your React components with other JavaScript libraries Utilize the Flux application architecture with your React components Test your React components with Jest test framework In Detail Building web applications with maintainable and performant user interfaces is a challenge we have faced for more than a decade, but no one has risen to this challenge quite like React.js. Today React.js is used by Facebook, Instagram, Khan Academy, and Imperial College London, to name a few. Many new users recognize the benefits of React.js and adopt it in their own projects, forming a fast-growing community. TDD, which React.js has evolved promises a bright future for those who invest in learning it today. React.js Essentials will take you on a fast-paced journey through building your own maintainable React.js application. Begin by exploring how you can create single and multiple user interface elements. Create stateless and stateful user interface elements and make them reactive, learn to interact between your components and lifecycle methods and gauge how to effectively integrate your user interface components with other JavaScript libraries. Delve deep into the core elements of the Flux architecture and learn how to manage your application using stores. Finish by going beyond the Jest test framework, running multiple tests on your application and find solutions to scale it further without complexity. Style and approach The book adopts a step-by-step, hands-on approach with ample codes to ensure you learn React.js at a fast pace.

Frontend Architecture for Design Systems Can a system be considered truly reliable if it isn't fundamentally secure? Or can it be considered secure if it's unreliable? Security is crucial to the design and operation of scalable systems in production, as it plays an important part in product quality, performance, and availability. In this book, experts from Google share best practices to help your organization design scalable and reliable systems that are fundamentally secure. Two previous O'Reilly books from Google—Site Reliability Engineering and The Site Reliability Workbook—demonstrated how and why a commitment to the entire service lifecycle enables organizations to build successful build, deploy, monitor, and maintain software systems. In this latest guide, the authors offer insights into system design, implementation, and maintenance from practitioners who specialize in security and reliability. They also discuss how building and adopting their recommended best practices requires a culture of continuous improvement and supportive of such change. You'll learn about secure and reliable systems through: Design strategies Recommendations for coding, testing, and debugging practices Strategies to prepare for, respond to, and recover from incidents Cultural best practices that help teams across your organization collaborate effectively

Building Serverless Web Applications WordPress is much more than a blogging platform. As this practical guide clearly demonstrates, you can use WordPress to build web apps of any type—not mere content sites, but full-blown apps for specific tasks. If you have PHP experience with a smattering of HTML, CSS, and JavaScript, you can learn how to use WordPress plugins and themes to develop fast, scalable, and secure web apps, native mobile apps, web services, and even a network of multiple WordPress sites. The authors use examples from their recently released SchoolPress app to explain concepts and techniques throughout the book. All code examples are available on GitHub. Compare WordPress with traditional app development frameworks Use themes for views, and plugins for backend functionality Get suggestions for choosing WordPress plugins—or build your own Manage user accounts and roles, and access user data Build asynchronous behaviors in your app with jQuery native apps for iOS and Android, using wrappers Incorporate PHP libraries, external APIs, and web service plugins Collect payments through ecommerce and membership plugins Use techniques to speed up and scale your WordPress app

Building Large-Scale Web Applications with Angular Discover how every solution in some way related to the IoT needs a platform and how to create that platform. This book is about being agile and reducing time to market without breaking the bank. It is about designing something that you can scale incrementally without having to rework and potentially disrupting your current state of the work. So the key questions are: what does it take, how long does it take, and how much does it take to build your own IoT platform? Build Your Own IoT Platform answers these questions and provides you with step-by-step guidance on how to build your own IoT platform. The author bursts the bubble of IoT platforms and highlights what the core of an IoT platform looks like. There are must-haves and there are nice-to-haves; this book will distinguish the two and focus on how to build the must-haves. Building your own IoT platform is not only the biggest cost saver, but also can be a satisfying experience, giving you control over your project. What You Will Learn Architect an interconnected system Develop a flexible architecture Create a redundant communication platform Prioritize system requirements with a bottom-up approach Who This Book Is For IoT developers and development teams in small- to medium-sized companies. Basic to intermediate programming skills are required.

Using Google App Engine If the phrase scalability sounds alien to you, then this is an ideal book for you. You will not need much Node.js experience as each framework is demonstrated in a way that requires no previous knowledge of the framework. You will be building scalable Node.js applications in no time! Knowledge of JavaScript is required.

Building Scalable Web Sites As a developer, you are aware of the increasing concern amongst developers and site architects that websites be able to handle the vast number of visitors that flood the Internet on a daily basis. Scalable Internet Architectures addresses these concerns by teaching you both good and bad design methodologies for building new sites and how to scale existing websites to robust, high-availability websites. Primarily example-based, the book discusses major topics in web architectural design, presenting existing solutions and how they work. Technology budget tight? This book will work for you, too, as it introduces new concepts to solving traditionally expensive problems without a large technology budget. Using open source and proprietary examples, you will be engaged in best practice design methodologies for building new sites, as well as appropriately scaling both growing and shrinking sites. Website development help has arrived in the form of Scalable Internet Architectures.

Building the Web of Things In the race to compete in today's fast-moving markets, large enterprises are busy adopting new technologies for creating new products, processes, and business models. But one obstacle on the road to digital transformation is placing too much emphasis on technology, and not enough on the type of technology enables. What if different lines of business could build their own services and applications—and decision-making was distributed rather than centralized? This report explores the concept of a digital business platform as a way of empowering individual business sectors to act on data in real time. Much innovation in the enterprise will increasingly happen at the edge, whether it involves business users (from marketers to data scientists) or IoT devices. To facilitate the process, your core IT team can provide these sectors with the digital tools they need to innovate quickly. This report explores: Key cultural and organizational changes for developing capabilities through cross-functional product teams A platform for integrating applications, data sources, business partners, clients, mobile apps, social networks, and IoT devices Creating internal API programs for building innovative edge services in low-code or no-code environments Tools including Integration Platform as a Service, Application Platform as a Service, and Integration Software as a Service The challenge of integrating microservices and serverless architectures Event-driven architectures for processing and reacting to events in real time You'll also learn about a complete pervasive integration solution as a core component of a digital business platform that can serve every audience in your organization.

Practical Node.js Learn how to build a wide range of scalable real-world web applications using a professional development toolkit. If you already know the basics of Node.js, now is the time to discover how to bring it to production level by leveraging its vast ecosystem of packages. With this book, you'll work with a varied set of standards and frameworks and see how all those pieces fit together. Practical Node.js takes you from installing all the necessary modules to writing full-stack web applications. You'll harness the power of the Express.js and Hapi frameworks, the MongoDB database with Mongoose and Mongooskin and Mongoose. You'll also work with Pug, Handlebars, Stylus and LESS CSS languages, OAuth and Everyauth libraries, and the Socket.IO and Derby libraries, and everything in between. This exciting second edition is fully updated for ES6/ES2015 and also covers how to deploy to Heroku and AWS, daemonize apps, and write REST APIs. You'll build full-stack real-world web applications from scratch, and also discover how to write your own Node.js modules and publish them on NPM. Fully supported by a continuously updated source code repository on GitHub and with full-color code examples, learn what you can do with Node.js and how far you can take it! What You'll Learn Manipulate data with the mongo console Use the Mongoose and Mongoose MongoDB libraries Build REST API servers with Express and Hapi Deploy apps to Heroku and AWS Test services with Mocha, Expect and TravisCI Implement a third-party OAuth strategy with Everyauth Web developers who have some familiarity with the basics of Node.js and want to learn how to use it to build apps in a professional environment.

Transactional COM+ Go from the initial idea to a production-deployed web app using Django 2.0. Key Features A beginners guide to learning python's most popular framework, Django Build fully featured web projects in Django 2.0 through examples. Deploy web applications in quick and reliable fashion with Docker Book Description This project-based guide will give you a sound understanding of Django 2.0 through three full-featured applications. It starts off by building a basic IMDB clone and adding users who can register, vote on their favorite movies, and upload associated pictures. You will learn how to use the votes that your users have cast to build a recommendation system for movies. This book will also take you through deploying your app into a production environment using Docker containers hosted on the server in Amazon's Electric Computing Cloud (EC2). Next, you're going to build a Stack Overflow clone wherein registered users can ask and answer questions. You will learn how to enable a question to accept answers and mark them as useful. You will also learn how to add search functionality to help users find questions by using Elasticsearch. You'll discover ways to apply the principles of 12 factor apps while deploying Django on the most popular web server, Apache, with mod\_wsgi. Lastly, you'll build a clone of a social media app so users can send and create emails, and deploy it using AWS. Get set to take your basic Python skills to the next level with this comprehensive guide! What you will learn 1. Build new projects from scratch using Django 2.0 2. Provide full-text searching using Elasticsearch and Django 2.0 3. Learn Django 2.0 security best practices 4. Deploy a full Django 2.0 app almost anywhere with mod\_wsgi 5. Deploy a full Django 2.0 app with AWS's PaaS Elastic Beanstalk 6. Deploy a full Django 2.0 app with Docker 7. Deploy a full Django 2.0 app with NGINX and uWSGI Who this book is for If you have some basic knowledge of HTML, CSS, and Python and want to build fully-featured and secure applications using Django, then this book is for you.

Using Joomla! Tim Ewald, COM columnist for DOC Magazine, explains how COM+ works, and then sets out specific rules intended as concrete guidelines to help developers build COM+ systems.

Building a Scalable Data Warehouse with Data Vault 2.0 In this book, the CEO of Cazton, Inc. and internationally-acclaimed speaker, Chander Dhall, demonstrates current website design scalability patterns and takes a pragmatic approach to explaining their pros and cons to show you how to select the appropriate pattern for your business. He then tests the patterns by deliberately forcing them to fail and exposing potential flaws before discussing how to design the optimal pattern to match your scale requirements. The author explains the use of polyglot programming and how to match the right patterns to your business needs. He also details several No-SQL databases and explains the fundamentals of different paradigms of No-SQL by showing complementary strategies of using them along with relational databases to achieve the best results. He also teaches how to make the scalability pattern work with a real-world microservices pattern. With the proliferation of countless electronic devices and a growing number of Internet users, the scalability of websites has become an increasingly important challenge. Scalability, even though highly coveted, may not be so easy to achieve. Think that you can't attain responsiveness along with scalability? Chander Dhall will demonstrate that, in fact, they go hand in hand. What You Will Learn Architect and develop applications so that they are easy to scale. Learn different scaling and partitioning options and the combinations. Learn techniques to speed up responsiveness. Deep dive into caching, column-family databases, document databases, search engines and RDBMS. Learn scalability and responsiveness concepts and how they are usually ignored. Effectively balance scalability, performance, responsiveness, and availability while minimizing downtime. Who This Book Is For Executives (CXOs), software architects, developers, and IT Pros

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