

# **Download Ebook The Art Of Scalability Scalable Web Architecture Processes And Organizations For Modern Enterprise Martin L Abbott Read Pdf Free**

The Art of Scalability The Art of Scalability Scalable Internet Architectures Building Scalable and High-performance Java Web Applications Using J2EE Technology Building Scalable Web Sites Architecting High Performing, Scalable and Available Enterprise Web Applications Scalability Rules Building Microservices Scalability Rules Scalable Web Architecture Web Scalability for Startup Engineers Scalability Patterns Scalable and Secure Internet Services and Architecture Hello, Startup Architecture of Reliable Web Applications Software Building Scalable Web Sites Scalable Big Data Architecture Clean Architecture Foundations of Scalable Systems Frontend Architecture for Design Systems Scalable and Modular Architecture for CSS Designing Data-Intensive Applications Real-time Design Patterns A Software Architecture Primer Client-Server Web Apps with JavaScript and Java Web Development with Go Cloud Architecture Patterns Web Application Architecture Building Evolutionary Architectures 500 Lines Or Less Handbook of Research on Scalable Computing Technologies Hands-On Software Architecture with Golang Node.js Design Patterns Full Stack Development with JHipster

Cloud Application Architectures  
Web Applications on Azure  
Architecting for Scale  
Microservices Patterns  
REST in Practice  
SOA Source Book

Software services are established as a programming concept, but their impact on the overall architecture of enterprise IT and business operations is not well-understood. This has led to problems in deploying SOA, and some disillusionment. The SOA Source Book adds to this a collection of reference material for SOA. It is an invaluable resource for enterprise architects working with SOA. The SOA Source Book will help enterprise architects to use SOA effectively. It explains: What SOA is How to evaluate SOA features in business terms How to model SOA How to use The Open Group Architecture Framework (TOGAF™) for SOA SOA governance This book explains how TOGAF can help to make an Enterprise Architecture. Enterprise Architecture is an approach that can help management to understand this growing complexity. 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 coverage to 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 guidance, organizations can systematically overcome obstacles to

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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 hyper-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 splitting, and 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 "This book presents, discusses, shares ideas, results and experiences on the recent important advances and future challenges on enabling technologies for achieving higher performance"--Provided by publisher. Unlock the full potential of web development with "Scalable Web Architecture with Nginx and Lua," the definitive guide to harnessing the power of Nginx and Lua for building dynamic, high-performance web applications. This comprehensive book offers a deep dive into the essentials of using Nginx and Lua together, providing readers with the knowledge and tools needed to create efficient, scalable, and secure web services. From setting up your development environment to advanced scripting techniques, this book covers all aspects of Nginx and Lua development. You'll learn how to optimize your web applications for peak performance, implement robust security policies directly at the web server level, and systematically scale your services to handle increasing loads with ease. Each chapter is packed with expert insights, practical examples, and real-world applications, ensuring you can apply what you learn immediately. Whether you're a web developer looking to enhance your existing skills, a system administrator aiming to build scalable web

infrastructures, or a software engineer interested in the latest web technologies, this book is your gateway to mastering web development with Nginx and Lua. Embark on a journey to elevate your web applications far beyond the conventional, with "Scalable Web Architecture with Nginx and Lua" as your guide. The authors present a fresh, pragmatic approach to the study of software architecture. This edition contains a series of chapters that introduce and develop an understanding of software architecture by means of careful explanation and elaboration of a range of key concepts. (Computer Books) "This book presents new concepts regarding reliability, availability, manageability, performance, scalability, and secured-ability of applications, particularly those that run over the Web. It examines causes of failure in Web-based information system development projects, and indicates that to exploit the unprecedented opportunities offered by e-service applications, businesses and users alike need a highly available, reliable, and efficient telecommunication infrastructure"-- Provided by publisher. 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 everything 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 scalability, 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 organizations and 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 principles

Emerging technologies and challenges: data cost, datacenter planning, cloud evolution, and customer-aligned monitoring

- Measuring availability, capacity, load, and performance

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. The software development ecosystem is constantly changing, providing a constant stream of new tools, frameworks, techniques, and paradigms. Over the past few years, incremental developments in core engineering practices for software development have created the foundations for rethinking how architecture changes over time, along with ways to protect important architectural characteristics as it evolves. This practical guide ties those parts together with a new way to think about architecture and time. 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 site. 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 patterns 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 the ever 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'll 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 that 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 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 the 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 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. Presenting information to visitors from all over the world Integrating email with your web applications Planning hardware purchases and hosting options to

have as much as you need without breaking 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 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. This revised and enlarged edition of a classic in Old Testament scholarship reflects the most up-to-date research on the prophetic books and offers substantially expanded discussions of important new insight on Isaiah and the other prophets. Discover the world of Full Stack Development with real-world examples. Key Features  
Leverage the full power of the JHipster platform to build complex web applications  
Create microservices from scratch and convert JHipster monolith apps into microservices  
Build and deploy applications locally, in Docker and on various cloud platforms.  
Book Description JHipster is a development platform to generate, develop, and deploy Spring Boot and Angular/React applications and Spring microservices. It provides you with a variety of tools that will help you quickly build modern web applications. This book will be your guide to building full stack applications with Spring and Angular using the JHipster tool set. You will begin by understanding what JHipster is and the various tools and technologies associated with it. You will learn the essentials of a full stack developer before getting hands-on and building a monolithic web application with JHipster. From here you will learn the JHipster Domain Language with entity modeling and entity creation using JDL and JDL studio. Moving on, you will be introduced to client side technologies such as Angular and Bootstrap and will delve into technologies such as Spring Security, Spring MVC, and Spring Data. You will learn to build and package apps for production with various deployment options

such as Heroku and more. During the course of the book, you will be introduced to microservice server-side technologies and how to break your monolithic application with a database of your choice. Next, the book takes you through cloud deployment with microservices on Docker and Kubernetes. Going forward, you will learn to build your client side with React and master JHipster best practices. By the end of the book, you will be able to leverage the power of the best tools available to build modern web applications. What you will learn

- Build business logic by creating and developing entity models us the JHipster Domain Language
- Customize web applications with Angular, Bootstrap and Spring
- Tests and Continuous Integration with Jenkins
- Utilize the JHipster microservice stack, which includes Netflix Eureka, Spring Cloud config, HashiCorp Consul, and so on.
- Understand advanced microservice concepts such as API rout, load balancing, rate limit, circuit break, centralized configuration server, JWT authentication, and more
- Run microservices locally using Docker and Kubernetes (in production)

Who this book is for This book will appeal to developers who would like to build modern web applications quickly. A basic knowledge of the Spring ecosystem would be an added advantage. Get the best out of Node.js by mastering its most powerful components and patterns to create modular and scalable applications with ease

About This Book

- Create reusable patterns and modules by leveraging the new features of Node.js .
- Understand the asynchronous single thread design of node and grasp all its features and patterns to take advantage of various functions.
- This unique guide will help you get the most out of Node.js and its ecosystem.

Who This Book Is For

The book is meant for developers and software architects with a basic working knowledge of JavaScript who are interested in acquiring a deeper understanding of how to design and develop enterprise-level Node.js applications. Basic knowledge of Node.js is also helpful to get the most out of this book.

What You Will Learn

Design and implement a series of server-side JavaScript

patterns so you understand why and when to apply them in different use case scenarios Become comfortable with writing asynchronous code by leveraging constructs such as callbacks, promises, generators and the async-await syntax Identify the most important concerns and apply unique tricks to achieve higher scalability and modularity in your Node.js application Untangle your modules by organizing and connecting them coherently Reuse well-known techniques to solve common design and coding issues Explore the latest trends in Universal JavaScript, learn how to write code that runs on both Node.js and the browser and leverage React and its ecosystem to implement universal applications In Detail Node.js is a massively popular software platform that lets you use JavaScript to easily create scalable server-side applications. It allows you to create efficient code, enabling a more sustainable way of writing software made of only one language across the full stack, along with extreme levels of reusability, pragmatism, simplicity, and collaboration. Node.js is revolutionizing the web and the way people and companies create their software. In this book, we will take you on a journey across various ideas and components, and the challenges you would commonly encounter while designing and developing software using the Node.js platform. You will also discover the "Node.js way" of dealing with design and coding decisions. The book kicks off by exploring the basics of Node.js describing it's asynchronous single-threaded architecture and the main design patterns. It then shows you how to master the asynchronous control flow patterns, and the stream component and it culminates into a detailed list of Node.js implementations of the most common design patterns as well as some specific design patterns that are exclusive to the Node.js world. Lastly, it dives into more advanced concepts such as Universal Javascript, and scalability' and it's meant to conclude the journey by giving the reader all the necessary concepts to be able to build an enterprise grade application using Node.js. Style and approach

This book takes its intended readers through a comprehensive explanation to create a scalable and efficient real-time server-side apps. 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, including 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 developers who 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 on which to build your site Documentation: tools for writing documentation while the work is in progress 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 and innovative 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. Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively. Make informed decisions by identifying the strengths and weaknesses of different tools. Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity. Understand the distributed systems research upon which modern databases are built. Peek behind the scenes of major online services, and learn from their architectures. If you're involved in planning IT infrastructure as a network or system architect, system administrator, or developer, this book will help you adapt your skills to work with these highly scalable, highly redundant infrastructure services. While analysts hotly debate the advantages and risks of cloud computing, IT staff and programmers are left to determine whether and how to put their applications into these virtualized services. Cloud Application Architectures provides answers -- and critical guidance -- on issues of cost, availability, performance, scaling, privacy, and security. With Cloud Application Architectures, you will: Understand the differences between traditional deployment and cloud computing. Determine whether moving existing

applications to the cloud makes technical and business sense  
Analyze and compare the long-term costs of cloud services, traditional hosting, and owning dedicated servers  
Learn how to build a transactional web application for the cloud or migrate one to it  
Understand how the cloud helps you better prepare for disaster recovery  
Change your perspective on application scaling  
To provide realistic examples of the book's principles in action, the author delves into some of the choices and operations available on Amazon Web Services, and includes high-level summaries of several of the other services available on the market today. Cloud Application Architectures provides best practices that apply to every available cloud service. Learn how to make the transition to the cloud and prepare your web applications to succeed. 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, CTO, 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 immense 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 experiences and 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

databases 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 and CDNs more 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 biggest "bang for the buck" This book is the "Hello, World" tutorial for building products, technologies, and teams in a startup environment. It's based on the experiences of the author, Yevgeniy (Jim) Brikman, as well as interviews with programmers from some of the most successful startups of the last decade, including Google, Facebook, LinkedIn, Twitter, GitHub, Stripe, Instagram, AdMob, Pinterest, and many others. Hello, Startup is a practical, how-to guide that consists of three parts: Products, Technologies, and Teams. Although at its core, this is a book for programmers, by programmers, only Part II (Technologies) is significantly technical, while the rest should be accessible to technical and non-technical audiences alike. If you're at all interested in startups—whether you're a programmer at the beginning of your career, a seasoned developer bored with large company politics, or a manager looking to motivate your engineers—this book is for you. Annotation Over the past 10 years, distributed systems have become more fine-grained. From the large multi-million line long monolithic applications, we are

now seeing the benefits of smaller self-contained services. Rather than heavy-weight, hard to change Service Oriented Architectures, we are now seeing systems consisting of collaborating microservices. Easier to change, deploy, and if required retire, organizations which are in the right position to take advantage of them are yielding significant benefits. This book takes an holistic view of the things you need to be cognizant of in order to pull this off. It covers just enough understanding of technology, architecture, operations and organization to show you how to move towards finer-grained systems. Building, scaling, and optimizing the next generation of Web applications. As a Java programmer, how can you tackle the disruptive client-server approach to web development? With this comprehensive guide, you'll learn how today's client-side technologies and web APIs work with various Java tools. Author Casimir Saternos provides the big picture of client-server development, and then takes you through many practical client-server architectures. You'll work with hands-on projects in several chapters to get a feel for the topics discussed. User habits, technologies, and development methods have drastically altered web app design in recent years. But the Web itself hasn't changed. This book shows you how to build apps that conform to the web's underlying architecture. Learn the advantages of using separate client and server tiers, including code organization and speedy prototyping Explore the major tools, frameworks, and starter projects used in JavaScript development Dive into web API design and REST style of software architecture Understand Java's alternatives to traditional packaging methods and application server deployment Build projects with lightweight servers, using jQuery with Jython, and Sinatra with Angular Create client-server web apps with traditional Java web application servers and libraries Every day, companies struggle to scale critical applications. As traffic volume and data demands increase, these applications become more complicated and brittle, exposing risks and compromising

availability. This practical guide shows IT, devops, and system reliability managers how to prevent an application from becoming slow, inconsistent, or downright unavailable as it grows. Scaling isn't just about handling more users; it's also about managing risk and ensuring availability. Author Lee Atchison provides basic techniques for building applications that can handle huge quantities of traffic, data, and demand without affecting the quality your customers expect. In five parts, this book explores:

- Availability: learn techniques for building highly available applications, and for tracking and improving availability going forward
- Risk management: identify, mitigate, and manage risks in your application, test your recovery/disaster plans, and build out systems that contain fewer risks
- Services and microservices: understand the value of services for building complicated applications that need to operate at higher scale
- Scaling applications: assign services to specific teams, label the criticalness of each service, and devise failure scenarios and recovery plans
- Cloud services: understand the structure of cloud-based services, resource allocation, and service distribution

This book highlights the different types of data architecture and illustrates the many possibilities hidden behind the term "Big Data", from the usage of No-SQL databases to the deployment of stream analytics architecture, machine learning, and governance. Scalable Big Data Architecture covers real-world, concrete industry use cases that leverage complex distributed applications, which involve web applications, RESTful API, and high throughput of large amount of data stored in highly scalable No-SQL data stores such as Couchbase and Elasticsearch. This book demonstrates how data processing can be done at scale from the usage of NoSQL datastores to the combination of Big Data distribution. When the data processing is too complex and involves different processing topology like long running jobs, stream processing, multiple data sources correlation, and machine learning, it's often necessary to delegate the load to

Hadoop or Spark and use the No-SQL to serve processed data in real time. This book shows you how to choose a relevant combination of big data technologies available within the Hadoop ecosystem. It focuses on processing long jobs, architecture, stream data patterns, log analysis, and real time analytics. Every pattern is illustrated with practical examples, which use the different open source projects such as Logstash, Spark, Kafka, and so on. Traditional data infrastructures are built for digesting and rendering data synthesis and analytics from large amount of data. This book helps you to understand why you should consider using machine learning algorithms early on in the project, before being overwhelmed by constraints imposed by dealing with the high throughput of Big data. Scalable Big Data Architecture is for developers, data architects, and data scientists looking for a better understanding of how to choose the most relevant pattern for a Big Data project and which tools to integrate into that pattern. In-depth examination of concepts and principles of Web application development Completely revised and updated, this popular book returns with coverage on a range of new technologies. Authored by a highly respected duo, this edition provides an in-depth examination of the core concepts and general principles of Web application development. Packed with examples featuring specific technologies, this book is divided into three sections: HTTP protocol as a foundation for Web applications, markup languages (HTML, XML, and CSS), and survey of emerging technologies. After a detailed introduction to the history of Web applications, coverage segues to core Internet protocols, Web browsers, Web application development, trends and directions, and more. Includes new coverage on technologies such as application primers, Ruby on Rails, SOAP, XPath, P3P, and more Explores the fundamentals of HTTP and its evolution Looks at HTML and its roots as well as XML languages and applications Reviews the basic operation of Web Servers, their functionality, configuration, and security Discusses how to

process flow in Web browsers and looks at active browser pages  
Addresses the trends and various directions that the future of  
Web application frameworks may be headed This book is essential  
reading for anyone who needs to design or debug complex  
systems, and it makes it easier to learn the new application  
programming interfaces that arise in a rapidly changing Internet  
environment. 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 these attributes through practical, 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 efficient project 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  
project 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 Bulleted summary and tabular representation of  
concepts for effective understanding Production operations and  
troubleshooting tips As we pointed out in The Architecture of  
Open Source Applications, architects look at thousands of  
buildings during their training, and study the critiques of many  
more. But most software developers only ever get to know a  
handful of programs well - usually programs they wrote

themselves. This book provides you with the chance to study how 26 experienced programmers think when they are building something new. The programs you will read about in this book were all written from scratch to solve difficult problems. A web server, a pedometer, a Python interpreter, a web-based spreadsheet, and many more applications are written, in 500 lines of code or less, and described by their creators so that you can learn from their insights and their mistakes. Build .NET apps on Microsoft Azure services that can grow to Internet scale. Learn how you can make smart application architecture decisions and follow best practices so that your website can handle tens of thousands of concurrent users and deliver your content globally. Author Rob Reagan takes you through key Azure technologies targeted toward building web applications, and along the way shares his lessons learned in scaling out a real-world web application. After an overview of web application building blocks, the book dives into relational and NoSQL data storage options on Azure, including Azure Table Storage and CosmosDB. You'll then discover how to make best use of Redis Cache, Web Jobs, Messaging Queues, and more, alongside other tips, tricks, and troubleshooting advice for when things go wrong. The book concludes with a thorough exploration of best practices for deployment at scale.

What You'll Learn

- Develop scalable architecture patterns on Azure with ASP.NET MVC
- Understand the pros and cons of using SQL Azure vs. NoSQL solutions (Azure Tables, CosmosDB)
- Perform data migration, backup, and recovery in SQL Azure
- Use effective caching
- Troubleshoot your web applications
- Know best practices for deployment

Who This Book Is For

Professional developers or serious hobbyists with experience developing web applications with ASP.NET MVC or Web API

Understand the principles of software architecture with coverage on SOA, distributed and messaging systems, and database modeling

Key Features

- Gain knowledge of architectural approaches on SOA and microservices for architectural

decisions Explore different architectural patterns for building distributed applications Migrate applications written in Java or Python to the Go language Book Description Building software requires careful planning and architectural considerations; Golang was developed with a fresh perspective on building next-generation applications on the cloud with distributed and concurrent computing concerns. Hands-On Software Architecture with Golang starts with a brief introduction to architectural elements, Go, and a case study to demonstrate architectural principles. You'll then move on to look at code-level aspects such as modularity, class design, and constructs specific to Golang and implementation of design patterns. As you make your way through the chapters, you'll explore the core objectives of architecture such as effectively managing complexity, scalability, and reliability of software systems. You'll also work through creating distributed systems and their communication before moving on to modeling and scaling of data. In the concluding chapters, you'll learn to deploy architectures and plan the migration of applications from other languages. By the end of this book, you will have gained insight into various design and architectural patterns, which will enable you to create robust, scalable architecture using Golang. What you will learn Understand architectural paradigms and deep dive into Microservices Design parallelism/concurrency patterns and learn object-oriented design patterns in Go Explore API-driven systems architecture with introduction to REST and GraphQL standards Build event-driven architectures and make your architectures anti-fragile Engineer scalability and learn how to migrate to Go from other languages Get to grips with deployment considerations with CI/CD pipeline, cloud deployments, and so on Build an end-to-end e-commerce (travel) application backend in Go Who this book is for Hands-On Software Architecture with Golang is for software developers, architects, and CTOs looking to use Go in their software architecture to build enterprise-grade

applications. Programming knowledge of Golang is assumed. 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 Internet sites 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 technical teams. 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 Practical Software Architecture Solutions from the Legendary Robert C. Martin (“Uncle Bob”) By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon

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the success of his best-selling books *Clean Code* and *The Clean Coder*, legendary software craftsman Robert C. Martin (“Uncle Bob”) reveals those rules and helps you apply them. Martin’s *Clean Architecture* doesn’t merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you’ve come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you’ll face—the ones that will make or break your projects. Learn what software architects need to achieve—and core disciplines and practices for achieving it

Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what’s critically important and what’s merely a “detail” Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures

*Clean Architecture* is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager—and for every programmer who must execute someone else’s designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available. 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 scalability of HTTP-based systems (websites, 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 a 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 Scalable and Secure Internet Services and Architecture provides an in-depth analysis of many key scaling technologies. Topics include: server clusters and load balancing; QoS-aware resource management; server capacity planning; Web caching and prefetching; P2P overlay network; mobile code and security; and mobility support for adaptive grid computi 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 basics, 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 persistent 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 Demo web apps 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 developer 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. In many systems, scalability becomes the primary driver as the user base grows. Attractive features and high utility breed success, which brings more requests to handle and more data to manage. But organizations reach a tipping point when design decisions that made sense under light loads suddenly become technical debt. This practical book covers design approaches and technologies that make it possible to scale an application quickly and cost-effectively. Author Ian Gorton takes software architects and developers through the foundational principles of distributed systems. You'll explore the essential ingredients of scalable solutions, including replication, state management, load balancing, and caching. Specific chapters focus on the implications of scalability for databases, microservices, and event-based streaming systems. You will focus on: Foundations of scalable systems: Learn basic design principles of scalability, its costs, and architectural tradeoffs Designing scalable services:

Dive into service design, caching, asynchronous messaging, serverless processing, and microservices Designing scalable data systems: Learn data system fundamentals, NoSQL databases, and eventual consistency versus strong consistency Designing scalable streaming systems: Explore stream processing systems and scalable event-driven processing "A comprehensive overview of the challenges teams face when moving to microservices, with industry-tested solutions to these problems." - Tim Moore, Lightbend 44 reusable patterns to develop and deploy reliable production-quality microservices-based applications, with worked examples in Java Key Features 44 design patterns for building and deploying microservices applications Drawing on decades of unique experience from author and microservice architecture pioneer Chris Richardson A pragmatic approach to the benefits and the drawbacks of microservices architecture Solve service decomposition, transaction management, and inter-service communication Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Microservices Patterns teaches you 44 reusable patterns to reliably develop and deploy production-quality microservices-based applications. This invaluable set of design patterns builds on decades of distributed system experience, adding new patterns for composing services into systems that scale and perform under real-world conditions. More than just a patterns catalog, this practical guide with worked examples offers industry-tested advice to help you design, implement, test, and deploy your microservices-based application. What You Will Learn How (and why!) to use microservices architecture Service decomposition strategies Transaction management and querying patterns Effective testing strategies Deployment patterns This Book Is Written For Written for enterprise developers familiar with standard enterprise application architecture. Examples are in Java. About The Author Chris Richardson is a Java Champion, a JavaOne rock star, author of Manning's POJOs in Action, and

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