The Architecture Of Open Source Applications Amy Brown

Despite the buzz surrounding the cloud computing, only a small percentage of organizations have actually deployed this new style of IT—so far. If you're planning your long-term cloud strategy, this practical book provides insider knowledge and actionable real-world lessons regarding planning, design, operations, security, and application transformation. This book teaches business and technology managers how to transition their organization's traditional IT to cloud computing. Rather than yet another book trying to sell or convince readers on the benefits of clouds, this book provides guidance, lessons learned, and best practices on how to design, deploy, operate, and secure an enterprise cloud based on real-world experience. Author James Bond provides useful guidance and best-practice checklists based on his field experience with real customers and cloud providers. You'll view cloud services from the perspective of a consumer and as an owner/operator of an enterprise private or hybrid cloud, and learn valuable lessons from successful and less-than-successful organization use-case scenarios. This is the information every CIO needs in order to make the business and technical decisions to finally execute on their journey to cloud computing. Get updated trends and definitions in cloud computing, deployment models, and for building or buying cloud services Discover challenges in cloud operations and management not foreseen by early adopters Use real-world lessons to plan and build an enterprise private or hybrid cloud Learn how to assess, port, and migrate legacy applications to the cloud Identify security threats and vulnerabilities unique to the cloud Employ a cloud management system for your enterprise (private or multi-provider hybrid) cloud ecosystem Understand the challenges for becoming an IT service broker leveraging the power of the cloud

This proceedings volume presents the latest research from the worldwide mass customization, personalization and co-creation (MCPC) community bringing together new thoughts and results from various disciplines within the field. The chapters are based on papers from The MCPC 2015 Conference where the emphasis was placed on “managing complexity.” MCPC is now beginning to emerge in many industries as a profitable business model. But customization and personalization go far beyond the sheer individualization of products and become an extension of current business models and production styles. This book covers topics such as complexity management of knowledge-based systems in manufacturing design and production, sustainable mass customization, choice navigation, and product modeling. The chapters are contributed by a wide range of specialists, offering cutting-edge research, as well as insightful advances in industrial practice in key areas. The MCPC 2015 Conference had a strong focus on real life MCPC applications, and this proceedings volume reflects this. MCPC strategies aim to profit from the fact that people are different. Their objective is to turn customer heterogeneities into profit opportunities, hence addressing the current trend of long tail business models. Mass customization means to provide goods and services that best serve individual customers’ personal needs with near mass production efficiency. This book brings together the latest from MCPC thought leaders, entrepreneurs, technology developers, and researchers that use these strategies in practice.

Microservices can have a positive impact on your enterprise—just ask Amazon and Netflix—but you can fall into many traps if you

don’t approach them in the right way. This practical guide covers the entire microservices landscape, including the principles, technologies, and methodologies of this unique, modular style of system building. You’ll learn about the experiences of organizations around the globe that have successfully adopted microservices. In three parts, this book explains how these services work and what it means to build an application the Microservices Way. You’ll explore a design-based approach to microservice architecture with guidance for implementing various elements. And you’ll get a set of recipes and practices for meeting practical, organizational, and cultural challenges to microservice adoption. Learn how microservices can help you drive business objectives Examine the principles, practices, and culture that define microservice architectures Explore a model for creating complex systems and a design process for building a microservice architecture Learn the fundamental design concepts for individual microservices Delve into the operational elements of a microservices architecture, including containers and service discovery Discover how to handle the challenges of introducing microservice architecture in your organization

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 CICD 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.

Embedded Systems and Robotics with Open-Source Tools provides easy-to-understand and easy-to-implement guidance for rapid prototype development. Designed for readers unfamiliar with advanced computing technologies, this highly accessible book:

Describes several cutting-edge open-source software and hardware technologies Examines a number of embedded computer systems and their practical applications Includes detailed projects for applying rapid prototype development skills in real time Embedded Systems and Robotics with Open-Source Tools effectively demonstrates that, with the help of high-performance microprocessors, microcontrollers, and highly optimized algorithms, one can develop smarter embedded devices.

Open source provides the competitive advantage in the Internet Age. According to the August Forrester Report, 56 percent of IT managers interviewed at Global 2,500 companies are already using some type of open source software in their infrastructure and another 6 percent will install it in the next two years. This revolutionary model for collaborative software development is being embraced and studied by many of the biggest players in the high-tech industry, from Sun Microsystems to IBM to Intel.The Cathedral & the Bazaar is a must for anyone who cares about the future of the computer industry or the dynamics of the information economy. Already, billions of dollars have been made and lost based on the ideas in this book. Its conclusions will be studied, debated, and implemented for years to come. According to Bob Young, "This is Eric Raymond's great contribution to the success of the open source revolution, to the adoption of Linux-based operating systems, and to the success of open source users and the companies that supply them."The interest in open source software development has grown enormously in the past year. This revised and expanded paperback edition includes new material on open source developments in 1999 and 2000. Raymond's clear and effective writing style accurately describing the benefits of open source software has been key to its success. With major vendors creating acceptance for open source within companies, independent vendors will become the open source story in 2001.

An account of the life and work of the architect Minoru Yamasaki that leads the author to consider how (and for whom) architectural history is written. Sandfuture is a book about the life of the architect Minoru Yamasaki (1912–1986), who remains on the margins of history despite the enormous influence of his work on American architecture and society. That Yamasaki’s most famous projects—the Pruitt-Igoe apartments in St. Louis and the original World Trade Center in New York—were both destroyed on national television, thirty years apart, makes his relative obscurity all the more remarkable. Sandfuture is also a book about an artist interrogating art and architecture’s role in culture as New York changes drastically after a decade bracketed by terrorism and natural disaster. From the central thread of Yamasaki’s life, Sandfuture spirals outward to include reflections on a wide range of subjects, from the figure of the architect in literature and film and transformations in the contemporary art market to the perils of sick buildings and the broader social and political implications of how, and for whom, cities are built. The result is at once sophisticated in its understanding of material culture and novelistic in its telling of a good story.

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.

With the immense cost savings and scalability the cloud provides, the rationale for building cloud native applications is no longer in question. The real issue is how. With this practical guide, developers will learn about the most commonly used design patterns for building cloud native applications using APIs, data, events, and streams in both greenfield and brownfield development. You'll learn how to incrementally design, develop, and deploy large and effective cloud native applications that you can manage and maintain at scale with minimal cost, time, and effort. Authors Kasun Indrasiri and Sriskandarajah Suhothayan highlight use cases that effectively demonstrate the challenges you might encounter at each step. Learn the fundamentals of cloud native applications Explore key cloud native communication, connectivity, and composition patterns Learn decentralized data management techniques Use event-driven architecture to build distributed and scalable cloud native applications Explore the most commonly used patterns for API management and consumption Examine some of the tools and technologies you'll need for building cloud native systems

Document the architecture of your software easily with this highly practical, open-source template. Key Features Get to grips with leveraging the features of arc42 to create insightful documents Learn the concepts of software architecture documentation through real-world examples Discover techniques to create compact, helpful, and easy-to-read documentation Book Description When developers document the architecture of their systems, they often invent their own specific ways of articulating structures, designs, concepts, and decisions. What they need is a template that enables simple and efficient software architecture documentation. arc42 by Example shows how it's done through several real-world examples. Each example in the book, whether it is a chess engine, a huge CRM system, or a cool web system, starts with a brief description of the problem domain and the quality requirements. Then, you'll discover the system context with all the external interfaces. You'll dive into an overview of the solution strategy to implement the building blocks and runtime scenarios. The later chapters also explain various cross-cutting concerns and how they affect other aspects of a program. What you will learn Utilize arc42 to document a system's physical infrastructure Learn how to identify a system's scope and boundaries Break a system down into building blocks and illustrate the relationships between them Discover how to describe the runtime behavior of a system Know how to document design decisions and their reasons Explore the risks and technical debt of your system Who this book is for This book is for software developers and solutions architects who are looking for an easy, open-source tool to document their systems. It is a useful reference for those who are already using arc42. If you are new to arc42, this book is a great learning resource. For those of you who want to write better technical documentation will benefit from the general concepts covered in this book.

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 1974, Donald Knuth wrote, "We should forget about small efficiencies, say about 97%% of the time: premature optimization is the root of all evil." With computers available now that are millions of times faster than those available then, today's programmers have even less reason to worry about shaving cycles and saving bytes than those a generation ago. But "less" isn't "none": every once in a while, squeezing the last

ounce of performance out of the machine really does matter.This book is written by over a dozen developers who have grappled with slow code, memory leaks, or uncontrollable latency in open source software. They share their mistakes and successes, and give the reader an over-the-shoulder view of how they approached their specific challenges. With examples from bioinformatics research code to web browsers, the solutions are as varied as the problems.This book will help junior and senior developers alike understand how their colleagues think about performance.

This is the eagerly-anticipated revision to one of the seminal books in the field of software architecture which clearly defines and explains the topic.

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

The Future of Modular Architecture presents an unprecedented proposal for mass-customized mid- and high-rise modular housing that can be manufactured and distributed on a global scale. Advocating for the adoption of open-source design based on a new modular standard, the book shows how the construction industry and architectural practice may soon be radically reshaped. By leveraging the existing intermodal freight transport system, global supply chains can be harnessed to realize the long-held promise that housing will be a well-designed and affordable industrial product. We are on the cusp of a transformative change in the way we design and build our cities. Author David Wallance argues that modular architecture is profoundly intertwined with globalization, equitable urbanism, and sustainable development. His book addresses these timely issues through a specific approach grounded in fundamental concepts. Going beyond the individual modular building, Wallance forecasts the emergence of a new type of design, manufacturing, and construction enterprise. Written in an approachable style with illustrated examples, the book is a must read for professionals in architecture and design, city planning, construction, real estate, as well as the general reader with an interest in these topics.

Even more than authorship, ownership is challenged by the rise of digital and computational methods of design and production. These challenges are simultaneously legal, ethical and economic. How are new methods of fabrication and manufacture going to irreversibly change not only ways of working, but also designers’ ethics and their stance on ownership? In his 2013 second-term State of the Union address,

President Obama stated that 3D printing ‘has the potential to revolutionize the way we make almost everything’. Nowhere will the impact of 3D printing be felt greater than in the architectural and design communities. When anyone can print out an object or structure from a digital file, will designers still exert the same creative rights or will they need to develop new practice and payment models? As architecture becomes more collaborative with open-source processes, will the emphasis on signature as the basis of ownership remain relevant? How will wider teams working globally be accredited and compensated? This issue of AD explores this subject; it features the work of designers who are developing wholly new approaches to practice by exploring means of commercialising process-based products rather than objects. Contributors: Phil Bernstein, Mark Garcia, Antoine Picon, Carlo Ratti and David Ruy Featured architects: Francis Bitonti, Marjan Colletti, Wendy W Fok, Panagiotis Michalatos, Jose Sanchez, Thibault Schwartz, Aaron Sprecher, Feng Xu and Philip Yuan

A variety of programming models relevant to scientists explained, with an emphasis on how programming constructs map to parts of the computer. What makes computer programs fast or slow? To answer this question, we have to get behind the abstractions of programming languages and look at how a computer really works. This book examines and explains a variety of scientific programming models (programming models relevant to scientists) with an emphasis on how programming constructs map to different parts of the computer's architecture. Two themes emerge: program speed and program modularity. Throughout this book, the premise is to "get under the hood," and the discussion is tied to specific programs. The book digs into linkers, compilers, operating systems, and computer architecture to understand how the different parts of the computer interact with programs. It begins with a review of C/C++ and explanations of how libraries, linkers, and Makefiles work. Programming models covered include Pthreads, OpenMP, MPI, TCP/IP, and CUDA.The emphasis on how computers work leads the reader into computer architecture and occasionally into the operating system kernel. The operating system studied is Linux, the preferred platform for scientific computing. Linux is also open source, which allows users to peer into its inner workings. A brief appendix provides a useful table of machines used to time programs. The book's website (https://github.com/divakarvi/bk-spca) has all the programs described in the book as well as a link to the html text.

This provocative book argues that it is high time the practice of architecture moved away from the ego-fuelled grand visions of starchitects to a networked, collaborative, inclusive model inspired by 21st-century trends such as crowd-sourcing, open access and mass customization. But how can collaborative design avoid becoming design-by-committee? Carlo Ratti and Matthew Claudel deftly navigate this and other vital questions, considering along the way the applications of open-source architecture not only conceptually, but also in practice. Open Source Architecture is a rallying cry to students and open-minded professionals seeking new perspectives on a profession that the authors passionately believe to be moribund.

Continuous Architecture provides a broad architectural perspective for continuous delivery, and describes a new architectural approach that supports and enables it. As the pace of innovation and software releases increases, IT departments are tasked to deliver value quickly and inexpensively to their business partners. With a focus on getting software into end-users hands faster, the ultimate goal of daily software updates is in sight to allow teams to ensure that they can release every change to the system simply and efficiently. This book presents an architectural approach to support modern application delivery methods and provide a

broader architectural perspective, taking architectural concerns into account when deploying agile or continuous delivery approaches. The authors explain how to solve the challenges of implementing continuous delivery at the project and enterprise level, and the impact on IT processes including application testing, software deployment and software architecture. Covering the application of enterprise and software architecture concepts to the Agile and Continuous Delivery models Explains how to create an architecture that can evolve with applications Incorporates techniques including refactoring, architectural analysis, testing, and feedback-driven development Provides insight into incorporating modern software development when structuring teams and organizations

The Architecture of Open Source ApplicationsElegance, Evolution, and a Few Fearless HacksLulu.com

What are the ingredients of robust, elegant, flexible, and maintainable software architecture? Beautiful Architecture answers this question through a collection of intriguing essays from more than a dozen of today's leading software designers and architects. In each essay, contributors present a notable software architecture, and analyze what makes it innovative and ideal for its purpose. Some of the engineers in this book reveal how they developed a specific project, including decisions they faced and tradeoffs they made. Others take a step back to investigate how certain architectural aspects have influenced computing as a whole. With this book, you'll discover: How Facebook's architecture is the basis for a data-centric application ecosystem The effect of Xen's well-designed architecture on the way operating systems evolve How community processes within the KDE project help software architectures evolve from rough sketches to beautiful systems How creeping featurism has helped GNU Emacs gain unanticipated functionality The magic behind the Jikes RVM self-optimizable, self-hosting runtime Design choices and building blocks that made Tandem the choice platform in high-availability environments for over two decades Differences and similarities between object-oriented and functional architectural views How architectures can affect the software's evolution and the developers' engagement Go behind the scenes to learn what it takes to design elegant software architecture, and how it can shape the way you approach your own projects, with Beautiful Architecture.

The book describes projects which help in developing cybersecurity solution architectures and the use of the right tools from the opensource software domain. These projects are covered in detail with recipes on how to use opensource tooling to obtain standard cyber defense and the ability to do self-penetration testing and vulnerability assessment.

This topical volume offers a comprehensive review of secret intelligence organizations and activities. Intelligence has been in the news consistently since 9/11 and the Iraqi WMD errors. Leading experts in the field approach the three major missions of intelligence: collection-and-analysis; covert action; and counterintelligence. Within each of these missions, the dynamically written essays dissect the so-called intelligence cycle to reveal the challenges of gathering and assessing information from around the world. Covert action, the most controversial intelligence activity, is explored, with special attention on the issue of military organizations moving into what was once primarily a civilian responsibility. The authors furthermore examine the problems that are associated with counterintelligence, protecting secrets from foreign spies and terrorist organizations, as well as the question of

intelligence accountability, and how a nation can protect its citizens against the possible abuse of power by its own secret agencies. The Handbook of Intelligence Studies is a benchmark publication with major importance both for current research and for the future of the field. It is essential reading for advanced undergraduates, graduate students and scholars of intelligence studies, international security, strategic studies and political science in general.

Developing Microservices Architecture on Azure with Open Source Technologies is a complete, step-by-step guide to building flexible microservices architectures by leveraging services provided by the Microsoft Azure cloud platform, and key open-source technologies such as Java, Node.JS, .NET Core and Angular. Expert Microsoft consultants Ovais Mehboob and Arvind Chandaka guide students step-by-step through a realistic case study project that illuminates key technical implementation tasks for establishing end to end infrastructure, developing cloud-native applications, automating deployment, and realizing value.

Architect and design highly scalable, robust, clean and highly performant applications in .NET Core About This Book Incorporate architectural soft-skills such as DevOps and Agile methodologies to enhance program-level objectives Gain knowledge of architectural approaches on the likes of SOA architecture and microservices to provide traceability and rationale for architectural decisions Explore a variety of practical use cases and code examples to implement the tools and techniques described in the book Who This Book Is For This book is for experienced .NET developers who are aspiring to become architects of enterprise-grade applications, as well as software architects who would like to leverage .NET to create effective blueprints of applications. What You Will Learn Grasp the important aspects and best practices of application lifecycle management Leverage the popular ALM tools, application insights, and their usage to monitor performance, testability, and optimization tools in an enterprise Explore various authentication models such as social media-based authentication, 2FA and OpenID Connect, learn authorization techniques Explore Azure with various solution approaches for Microservices and Serverless architecture along with Docker containers Gain knowledge about the recent market trends and practices and how they can be achieved with .NET Core and Microsoft tools and technologies In Detail If you want to design and develop enterprise applications using .NET Core as the development framework and learn about industry-wide best practices and guidelines, then this book is for you. The book starts with a brief introduction to enterprise architecture, which will help you to understand what enterprise architecture is and what the key components are. It will then teach you about the types of patterns and the principles of software development, and explain the various aspects of distributed computing to keep your applications effective and scalable. These chapters act as a catalyst to start the practical implementation, and design and develop applications using different architectural approaches, such as layered architecture, service oriented architecture, microservices and cloud-specific solutions. Gradually, you will learn about the different approaches and models of the Security framework and explore various authentication models and authorization techniques, such as social media-based authentication and safe storage using app secrets. By the end of the book, you will get to know the concepts and usage of the emerging fields, such as DevOps, BigData, architectural practices, and Artificial Intelligence. Style and approach Filled with examples and use cases, this guide takes a no-nonsense approach to show you the best tools and techniques required to become a successful software architect.

Apply business requirements to IT infrastructure and deliver a high-quality product by understanding architectures such as microservices, DevOps, and cloud-native using modern C++ standards and features Key Features Design scalable large-scale applications with the C++ programming language Architect software solutions in a cloud-based environment with continuous integration and continuous delivery

(CI/CD) Achieve architectural goals by leveraging design patterns, language features, and useful tools Book Description Software architecture refers to the high-level design of complex applications. It is evolving just like the languages we use. Modern C++ allows developers to write high-performance apps in a high-level language without sacrificing readability and maintainability. If you're working with modern C++, this practical guide will help you put your knowledge to work and design distributed, large-scale apps. You'll start by getting up to speed with architectural concepts, including established patterns and rising trends. The book will then explain what software architecture is and help you explore its components. Next, you'll discover the design concepts involved in application architecture and the patterns in software development, before going on to learn how to build, package, integrate, and deploy your components. In the concluding chapters, you'll explore different architectural qualities, such as maintainability, reusability, testability, performance, scalability, and security. Finally, you will get an overview of distributed systems, such as service-oriented architecture, microservices, and cloud-native, and understand how to apply them in application development. By the end of this book, you'll be able to build distributed services using modern C++ and associated tools to deliver solutions as per your clients' requirements. What you will learn Understand how to apply the principles of software architecture Apply design patterns and best practices to meet your architectural goals Write elegant, safe, and performant code using the latest C++ features Build applications that are easy to maintain and deploy Explore the different architectural approaches and learn to apply them as per your requirement Simplify development and operations using application containers Discover various techniques to solve common problems in software design and development Who this book is for This software architecture C++ programming book is for experienced C++ developers who are looking to become software architects or are interested in developing enterprise-grade applications.

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.

Freely available source code, with contributions from thousands of programmers around the world: this is the spirit of the software revolution known as Open Source. Open Source has grabbed the computer industry's attention. Netscape has opened the source code to Mozilla; IBM supports Apache; major database vendors haved ported their products to Linux. As enterprises realize the power of the open-source development model, Open Source is becoming a viable mainstream alternative to commercial software.Now in Open Sources, leaders of Open Source come together for the first time to discuss the new vision of the software industry they have created. The essays in this volume offer insight into how the Open Source movement works, why it succeeds, and where it is going.For programmers who have labored on open-source projects, Open Sources is the new gospel: a powerful vision from the movement's spiritual leaders. For businesses integrating open-source software into their enterprise, Open Sources reveals the mysteries of how open development builds better software, and how businesses can leverage freely available software for a competitive business advantage.The contributors here have been the leaders in the open-source arena: Brian Behlendorf (Apache) Kirk McKusick (Berkeley Unix) Tim O'Reilly (Publisher, O'Reilly & Associates) Bruce Perens (Debian Project, Open Source Initiative) Tom Paquin and Jim Hamerly (mozilla.org, Netscape) Eric Raymond (Open Source Initiative) Richard Stallman (GNU, Free Software Foundation, Emacs) Michael Tiemann (Cygnus Solutions) Linus Torvalds (Linux) Paul Vixie (Bind)

Larry Wall (Perl) This book explains why the majority of the Internet's servers use open- source technologies for everything from the operating system to Web serving and email. Key technology products developed with open-source software have overtaken and surpassed the commercial efforts of billion dollar companies like Microsoft and IBM to dominate software markets. Learn the inside story of what led Netscape to decide to release its source code using the open-source mode. Learn how Cygnus Solutions builds the world's best compilers by sharing the source code. Learn why venture capitalists are eagerly watching Red Hat Software, a company that gives its key product -- Linux -- away.For the first time in print, this book presents the story of the open- source phenomenon told by the people who created this movement.Open Sources will bring you into the world of free software and show you the revolution.

Open Sources 2.0 is a collection of insightful and thought-provoking essays from today's technology leaders that continues painting the evolutionary picture that developed in the 1999 book Open Sources: Voices from the Revolution . These essays explore open source's impact on the software industry and reveal how open source concepts are infiltrating other areas of commerce and society. The essays appeal to a broad audience: the software developer will find thoughtful reflections on practices and methodology from leading open source developers like Jeremy Allison and Ben Laurie, while the business executive will find analyses of business strategies from the likes of Sleepycat co-founder and CEO Michael Olson and Open Source Business Conference founder Matt Asay. From China, Europe, India, and Brazil we get essays that describe the developing world's efforts to join the technology forefront and use open source to take control of its high tech destiny. For anyone with a strong interest in technology trends, these essays are a must-read. The enduring significance of open source goes well beyond high technology, however. At the heart of the new paradigm is network-enabled distributed collaboration: the growing impact of this model on all forms of online collaboration is fundamentally challenging our modern notion of community. What does the future hold? Veteran open source commentators Tim O'Reilly and Doc Searls offer their perspectives, as do leading open source scholars Steven Weber and Sonali Shah. Andrew Hessel traces the migration of open source ideas from computer technology to biotechnology, and Wikipedia co-founder Larry Sanger and Slashdot co-founder Jeff Bates provide frontline views of functioning, flourishing online collaborative communities. The power of collaboration, enabled by the internet and open source software, is changing the world in ways we can only begin to imagine.Open Sources 2.0 further develops the evolutionary picture that emerged in the original Open Sources and expounds on the transformative open source philosophy. "This is a wonderful collection of thoughts and examples bygreat minds from the free software movement, and is a must have foranyone who follows free software development and project histories." --Robin Monks, Free Software Magazine The list of contributors include Alolita Sharma Andrew Hessel Ben Laurie Boon-Lock Yeo Bruno Souza Chris DiBona Danese Cooper Doc Searls Eugene Kim Gregorio Robles Ian Murdock Jeff Bates Jeremy Allison Jesus M. Gonzalez-Barahona Kim Polese Larry Sanger Louisa Liu Mark Stone Mark Stone Matthew N. Asay Michael Olson Mitchell Baker Pamela Jones Robert Adkins Russ Nelson Sonali K. Shah Stephen R. Walli Steven Weber Sunil Saxena Tim O'Reilly Wendy Seltzer

Software Systems Architecture, Second Edition is a highly regarded, practitioner-oriented guide to designing and implementing effective architectures for information systems. It is both a readily accessible introduction to software architecture and an invaluable handbook of well-established best practices. With this book you will learn how to Design and communicate an architecture that reflects and balances the different needs of its stakeholders Focus on architecturally significant aspects of design, including frequently overlooked areas such as performance, resilience, and location Use scenarios and patterns to drive the creation and validation of your architecture Document your architecture as a set of related views Reflecting new standards and developments in the field, this new edition extends and updates much of

the content, and Adds a “system context viewpoint” that documents the system's interactions with its environment Expands the discussion of architectural principles, showing how they can be used to provide traceability and rationale for architectural decisions Explains how agile development and architecture can work together Positions requirements and architecture activities in the project context Presents a new lightweight method for architectural validation Whether you are an aspiring or practicing software architect, you will find yourself referring repeatedly to the practical advice in this book throughout the lifecycle of your projects. A supporting Web site containing further information can be found at www.viewpoints-and-perspectives.info.

The political writings of the French poststructuralists have eluded articulation in the broader framework of general political philosophy primarily because of the pervasive tendency to define politics along a single parameter: the balance between state power and individual rights in liberalism and the focus on economic justice as a goal in Marxism. What poststructuralists like Michel Foucault, Gilles Deleuze, and Jean-François Lyotard offer instead is a political philosophy that can be called tactical: it emphasizes that power emerges from many different sources and operates along many different registers. This approach has roots in traditional anarchist thought, which sees the social and political field as a network of intertwined practices with overlapping political effects. The poststructuralist approach, however, eschews two questionable assumptions of anarchism, that human beings have an (essentially benign) essence and that power is always repressive, never productive. After positioning poststructuralist political thought against the background of Marxism and the traditional anarchism of Bakunin, Kropotkin, and Proudhon, Todd May shows what a tactical political philosophy like anarchism looks like shorn of its humanist commitments—namely, a poststructuralist anarchism. The book concludes with a defense, contra Habermas and Critical Theory, of poststructuralist political thought as having a metaethical structure allowing for positive ethical commitments.

Beschrijving van vijfentwintig open source applicaties.

The book covers the best practices and approaches for software architects to follow when developing .NET and C# solutions, along with the most up to date cloud environments and tools to enable effective app development, delivery, and deployment.

Structure As Architecture provides readers with an accessible insight into the relationship between structure and architecture, focusing on the design principles that relate to both fields. Over one hundred case studies of contemporary buildings from countries across the globe including the UK, the US, France, Germany, Spain, Hong Kong and Australia are interspersed throughout the book. The author has visited and photographed each of these examples and analyzed them to show how structure plays a significant architectural role, as well as bearing loads. This is a highly illustrated sourcebook, providing a new insight into the role of structure, and discussing the point where the technical and the aesthetic meet to create the discipline of ‘architecture’.

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often occur because their developers do not understand the architectural lessons that experienced object developers have learned. Patterns of Enterprise Application Architecture is written in direct response to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology--from Smalltalk to CORBA to Java to .NET--the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns. The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually

two books in one. The first section is a short tutorial on developing enterprise applications, which you can read from start to finish to understand the scope of the book's lessons. The next section, the bulk of the book, is a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The topics covered include · Dividing an enterprise application into layers · The major approaches to organizing business logic · An in-depth treatment of mapping between objects and relational databases · Using Model-View-Controller to organize a Web presentation · Handling concurrency for data that spans multiple transactions · Designing distributed object interfaces

Enterprise Integration Patterns provides an invaluable catalog of sixty-five patterns, with real-world solutions that demonstrate the formidable of messaging and help you to design effective messaging solutions for your enterprise. The authors also include examples covering a variety of different integration technologies, such as JMS, MSMQ, TIBCO ActiveEnterprise, Microsoft BizTalk, SOAP, and XSL. A case study describing a bond trading system illustrates the patterns in practice, and the book offers a look at emerging standards, as well as insights into what the future of enterprise integration might hold. This book provides a consistent vocabulary and visual notation framework to describe large-scale integration solutions across many technologies. It also explores in detail the advantages and limitations of asynchronous messaging architectures. The authors present practical advice on designing code that connects an application to a messaging system, and provide extensive information to help you determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system. If you want to know how to manage, monitor, and maintain a messaging system once it is in use, get this book.

Introduce yourself to the nuances of modern monitoring for cloud-native applications running on Kubernetes clusters. This book will help you get started with the concepts of monitoring, introduce you to popular open-source monitoring tools, and help with finding the correct set of use cases for their implementation. It covers the in-depth technical details of open-source software used in modern monitoring systems that are tailor made for environments running microservices. Monitoring Cloud-Native Applications is divided into two parts. Part 1 starts with an introduction to cloud-native applications and the foundational concepts of monitoring. It then walks you through the various aspects of monitoring containerized workloads using Kubernetes as the de-facto orchestration platform. You will dive deep into the architecture of a modern monitoring system and look at its individual components in detail. Part 2 introduces you to popular open-source tools which are used by enterprises and startups alike and are well established as the tools of choice for industry stalwarts. First off, you will look at Prometheus and understand its architecture and usage. You will also learn about InfluxDB, formerly called TICK Stack (Telegraf, InfluxDB, Chronograf, and Kapacitor). You will explore the technical details of its architecture and the use cases which it solves. Your next stop will be Elastic Stack, formerly known as the ELK Stack (ElasticSearch, LogStash, and Kibana) and you will examine the scenarios where you can use it effectively. In the next chapter, you will be introduced to Grafana, a multi-platform open source analytics and interactive visualization tool that can help you with visualization of data and dashboards. After reading this book, you will have a much better understanding of key terminologies and general concepts around monitoring and observability. You will also be able to select a suitable monitoring solution from the bouquet of open-source monitoring solutions available for applications, microservices, and containers. Armed with this knowledge, you will be better prepared to design and lead a successful agile operations team. What You Will Learn Monitor and observe of metrics, events, logs, and traces Carry

out infrastructure and application monitoring for microservices architecture Analyze and visualize collected data Use alerting, reporting, and automated actions for problem resolution Who This Book Is For DevOps administrators, cloud administrators, and site reliability engineers (SREs) who manage and monitor applications and cloud infrastructure on a day-to-day basis within their organizations.

Middleware is the bridge that connects distributed applications across different physical locations, with different hardware platforms, network technologies, operating systems, and programming languages. This book describes middleware from two different perspectives: from the viewpoint of the systems programmer and from the viewpoint of the applications programmer. It focuses on the use of open source solutions for creating middleware and the tools for developing distributed applications. The design principles presented are universal and apply to all middleware platforms, including CORBA and Web Services. The authors have created an open-source implementation of CORBA, called MICO, which is freely available on the web. MICO is one of the most successful of all open source projects and is widely used by demanding companies and institutions, and has also been adopted by many in the Linux community. * Provides a comprehensive look at the architecture and design of middleware the bridge that connects distributed software applications * Includes a complete, commercial-quality open source middleware system written in C++ * Describes the theory of the middleware standard CORBA as well as how to implement a design using open source techniques

A classic examination of superb design through the centuries. Widely regarded as a classic in the field, Experiencing Architecture explores the history and promise of good design. Generously illustrated with historical examples of designing excellence—ranging from teacups, riding boots, and golf balls to the villas of Palladio and the fish-feeding pavilion of Beijing's Winter Palace—Rasmussen's accessible guide invites us to appreciate architecture not only as a profession, but as an art that shapes everyday experience. In the past, Rasmussen argues, architecture was not just an individual pursuit, but a community undertaking. Dwellings were built with a natural feeling for place, materials and use, resulting in “a remarkably suitable comeliness.” While we cannot return to a former age, Rasmussen notes, we can still design spaces that are beautiful and useful by seeking to understand architecture as an art form that must be experienced. An understanding of good design comes not only from one's professional experience of architecture as an abstract, individual pursuit, but also from one's shared, everyday experience of architecture in real time—its particular use of light, color, shape, scale, texture, rhythm and sound. Experiencing Architecture reminds us of what good architectural design has accomplished over time, what it can accomplish still, and why it is worth pursuing. Wide-ranging and approachable, it is for anyone who has ever wondered “what instrument the architect plays on.”

A quick start guide to learning essential software architecture tools, frameworks, design patterns, and best practices Key Features Apply critical thinking to your software development and architecture practices and bring structure to your approach using well-known IT standards Understand the impact of cloud-native approaches on software architecture Integrate the latest technology trends into your architectural designs Book Description Are you a seasoned developer who likes to add value to a project beyond just writing code? Have you realized that good development practices are not enough to make a project successful, and you now want to embrace the bigger picture in the IT landscape? If so, you're ready to become a software architect; someone who can deal with any IT stakeholder as well as add value to the numerous dimensions of software development. The sheer volume of content on software architecture can be overwhelming, however. Software Architecture for Busy Developers is here to help. Written by Stephane Eyskens, author of The Azure Cloud Native Mapbook, this book guides you through your software architecture journey in a pragmatic way using real-world scenarios. By drawing on over 20 years of consulting experience, Stephane will help you understand the role of a software architect, without the fluff or unnecessarily complex theory.

You'll begin by understanding what non-functional requirements mean and how they concretely impact target architecture. The book then covers different frameworks used across the entire enterprise landscape with the help of use cases and examples. Finally, you'll discover ways in which the cloud is becoming a game changer in the world of software architecture. By the end of this book, you'll have gained a holistic understanding of the architectural landscape, as well as more specific software architecture skills. You'll also be ready to pursue your software architecture journey on your own - and in just one weekend! What you will learn Understand the roles and responsibilities of a software architect Explore enterprise architecture tools and frameworks such as The Open Group Architecture Framework (TOGAF) and ArchiMate Get to grips with key design patterns used in software development Explore the widely adopted Architecture Tradeoff Analysis Method (ATAM) Discover the benefits and drawbacks of monoliths, service-oriented architecture (SOA), and microservices Stay on top of trending architectures such as API-driven, serverless, and cloud native Who this book is for This book is for developers who want to move up the organizational ladder and become software architects by understanding the broader application landscape and discovering how large enterprises deal with software architecture practices. Prior knowledge of software development is required to get the most out of this book.