

## *Amqp Document*

*A guide to cloud computing for students, scientists, and engineers, with advice and many hands-on examples. The emergence of powerful, always-on cloud utilities has transformed how consumers interact with information technology, enabling video streaming, intelligent personal assistants, and the sharing of content. Businesses, too, have benefited from the cloud, outsourcing much of their information technology to cloud services. Science, however, has not fully exploited the advantages of the cloud. Could scientific discovery be accelerated if mundane chores were automated and outsourced to the cloud? Leading computer scientists Ian Foster and Dennis Gannon argue that it can, and in this book offer a guide to cloud computing for students, scientists, and engineers, with advice and many hands-on examples. The book surveys the technology that underpins the cloud, new approaches to technical problems enabled by the cloud, and the concepts required to integrate cloud services into scientific work. It covers managing data in the cloud, and how to program these services; computing in the cloud, from deploying single virtual machines or containers to supporting basic interactive science experiments to gathering clusters of machines to do data analytics; using the cloud as a platform for automating analysis procedures, machine learning, and analyzing streaming data; building your own cloud with open source software; and cloud security. The book is accompanied by a website, [Cloud4SciEng.org](http://Cloud4SciEng.org), that provides a variety of supplementary material, including exercises, lecture slides, and other resources helpful to readers and instructors. Microservices architecture (MSA) is increasingly popular with software architects and engineers as it accelerates software solution design, development, and deployment in a risk-free manner. Placing a software system into a production environment is elegantly simplified and sped up with the use of MSA development platforms, runtime environments, acceleration engines, design patterns, integrated frameworks, and related tools. The MSA ecosystem is expanding with third-party products that automate as many tasks as possible. MSA is being positioned as the enterprise-grade and agile-application design method. This book covers in-depth the features and facilities that make up the MSA ecosystem.*

*Beginning with an overview of Service-Oriented Architecture (SOA) that covers the Common Object Request Broker Architecture (CORBA), Distributed Component Object Model (DCOM), and Remote Method Invocation (RMI), the book explains the basic essentials of MSA and the continuous delivery of applications to customers. The book gives software developers insight into: Current and emerging communication models Key architectural elements of MSA-based applications Designing efficient APIs for microservices MSA middleware platforms such as REST, SOAP, Apache Thrift, and gRPC Microservice discovery and the API gateway Service orchestration and choreography for composing individual services to achieve a useful business process Database transactions in MSA-centric applications Design, composition, security, and deployment patterns MSA security Modernizing legacy applications The book concludes with a chapter on composing and building powerful microservices. With the exponential growth of IoT devices, microservices are being developed and deployed on resource-constrained but resource-intensive devices in order to provide people-centric applications. The book discusses the challenges of these applications. Finally, the book looks at the role of microservices in smart environments and upcoming trends including ubiquitous yet disappearing microservices.*

*Summary RabbitMQ in Action is a fast-paced run through building and managing scalable applications using the RabbitMQ messaging server. It starts by explaining how message queuing works, its history, and how RabbitMQ fits in. Then it shows you real-world examples you can apply to your own scalability and interoperability challenges. About the Technology There's a virtual switchboard at the core of most large applications where messages race between servers, programs, and services. RabbitMQ is an efficient and easy-to-deploy queue that handles this message traffic effortlessly in all situations, from web startups to massive enterprise systems. About the Book RabbitMQ in Action teaches you to build and manage scalable applications in multiple languages using the RabbitMQ messaging server. It's a snap to get started. You'll learn how message queuing works and how RabbitMQ fits in. Then, you'll explore practical scalability and interoperability issues through many examples. By the end, you'll know how to make Rabbit run like a well-oiled machine in a 24 x 7 x 365 environment. Written for developers familiar with Python,*

**PHP, Java, .NET, or any other modern programming language. No RabbitMQ experience required. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside Learn fundamental messaging design patterns Use patterns for on-demand scalability Glue a PHP frontend to a backend written in anything Implement a PubSub-alerting service in 30 minutes flat Configure RabbitMQ's built-in clustering Monitor, manage, extend, and tune RabbitMQ ===== Table of Contents Pulling RabbitMQ out of the hat Understanding messaging Running and administering Rabbit Solving problems with Rabbit: coding and patterns Clustering and dealing with failure Writing code that survives failure Warrens and Shovels: failover and replication Administering RabbitMQ from the Web Controlling Rabbit with the REST API Monitoring: Houston, we have a problem Supercharging and securing your Rabbit Smart Rabbits: extending RabbitMQ**

**A practical book filled with advanced recipes as well as plenty of code and real-life examples which will make your learning curve quick and easy. If you are a software developer who wants to develop distributed applications based on messaging [BISAC]; then this book is for you. It's assumed that you have some experience with multithreading applications and distributed applications. You are also expected to know the basic concepts of Web and cloud applications in order to follow the recipes effectively.**

**RabbitMQ Cookbook**

**Node.js Design Patterns**

**Fog Computing**

**Applications, Challenges, and Scenarios in IoT HetNets**

**Linux: Embedded Development**

**Reactive Edition**

*Mastering RabbitMQ* Packt Publishing Ltd

*Summarizes the current state and upcoming trends within the area of fog computing Written by some of the leading experts in the field, Fog Computing: Theory and Practice focuses on the technological aspects of employing fog computing in various application domains, such as smart healthcare, industrial process control and improvement, smart cities, and virtual learning environments. In addition, the Machine-to-Machine (M2M) communication methods for fog computing environments are covered in depth. Presented*

*in two parts—Fog Computing Systems and Architectures, and Fog Computing Techniques and Application—this book covers such important topics as energy efficiency and Quality of Service (QoS) issues, reliability and fault tolerance, load balancing, and scheduling in fog computing systems. It also devotes special attention to emerging trends and the industry needs associated with utilizing the mobile edge computing, Internet of Things (IoT), resource and pricing estimation, and virtualization in the fog environments. Includes chapters on deep learning, mobile edge computing, smart grid, and intelligent transportation systems beyond the theoretical and foundational concepts Explores real-time traffic surveillance from video streams and interoperability of fog computing architectures Presents the latest research on data quality in the IoT, privacy, security, and trust issues in fog computing Fog Computing: Theory and Practice provides a platform for researchers, practitioners, and graduate students from computer science, computer engineering, and various other disciplines to gain a deep understanding of fog computing.*

*Leverage the power of Linux to develop captivating and powerful embedded Linux projects About This Book Explore the best practices for all embedded product development stages Learn about the compelling features offered by the Yocto Project, such as customization, virtualization, and many more Minimize project costs by using open source tools and programs Who This Book Is For If you are a developer who wants to build embedded systems using Linux, this book is for you. It is the ideal guide for you if you want to become proficient and broaden your knowledge. A basic understanding of C programming and experience with systems programming is needed. Experienced embedded Yocto developers will find new insight into working methodologies and ARM specific development competence. What You Will Learn Use the Yocto Project in the embedded Linux development process Get familiar with and customize the bootloader for a board Discover more about real-time layer, security, virtualization, CGL, and LSB See development workflows for the U-Boot and the Linux kernel, including debugging and optimization Understand the open source licensing requirements and how to comply with them when cohabiting with proprietary programs Optimize your production systems by reducing the size of both the Linux kernel and root filesystems Understand device trees and make changes to accommodate new hardware on your device Design and write multi-threaded applications using POSIX threads Measure real-time latencies and tune the Linux kernel to minimize them In Detail Embedded Linux is a complete Linux distribution employed to operate embedded devices such as smartphones, tablets, PDAs, set-top boxes, and many more. An example of an embedded Linux distribution is Android, developed by Google. This learning path starts with the module Learning Embedded Linux Using the Yocto Project. It introduces embedded Linux software and hardware architecture and presents information about the bootloader. You will go through Linux kernel features and source code and get an overview of the Yocto Project components available. The next module Embedded Linux Projects Using Yocto Project Cookbook takes you through the installation of a professional embedded Yocto setup, then advises you on best practices. Finally, it explains how to quickly get hands-on with the Freescale ARM ecosystem and community layer using the affordable and open source Wandboard embedded board. Moving ahead, the final module Mastering Embedded Linux Programming*

*takes you through the product cycle and gives you an in-depth description of the components and options that are available at each stage. You will see how functions are split between processes and the usage of POSIX threads. By the end of this learning path, your capabilities will be enhanced to create robust and versatile embedded projects. This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products: Learning Embedded Linux Using the Yocto Project by Alexandru Vaduva Embedded Linux Projects Using Yocto Project Cookbook by Alex Gonzalez Mastering Embedded Linux Programming by Chris Simmonds Style and approach This comprehensive, step-by-step, pragmatic guide enables you to build custom versions of Linux for new embedded systems with examples that are immediately applicable to your embedded developments. Practical examples provide an easy-to-follow way to learn Yocto project development using the best practices and working methodologies. Coupled with hints and best practices, this will help you understand embedded Linux better. The Complete Guide to Building Cloud-Based Services Cloud Native Go shows developers how to build massive cloud applications that meet the insatiable demands of today's customers, and will dynamically scale to handle virtually any volume of data, traffic, or users. Kevin Hoffman and Dan Nemeth describe the modern cloud-native application in detail, illuminating factors, disciplines, and habits associated with rapid, reliable cloud-native development. They also introduce Go, a "simply elegant" high-performance language that is especially well-suited for cloud development. You'll walk through creating microservices in Go, adding front-end web components using ReactJS and Flux, and mastering advanced Go-based cloud-native techniques. Hoffman and Nemeth show how to build a continuous delivery pipeline with tools like Wercker, Docker, and Dockerhub; automatically push apps to leading platforms; and systematically monitor app performance in production. Learn "The Way of the Cloud": why developing good cloud software is fundamentally about mindset and discipline Discover why Go is ideal for cloud-native microservices development Plan cloud apps that support continuous delivery and deployment Design service ecosystems, and then build them in a test-first manner Push work-in-progress to a cloud Use Event Sourcing and CQRS patterns to react and respond to enormous volume and throughput Secure cloud-based web applications: do's, don'ts, and options Create reactive applications in the cloud with third-party messaging providers Build massive-scale, cloud-friendly GUIs with React and Flux Monitor dynamic scaling, failover, and fault tolerance in the cloud*

*Professional Java for Web Applications*

*Building Web Applications and Microservices for the Cloud with Go and React*

*AMQP HANDBK - EVERYTHING YNTKA*

*Essentials of Microservices Architecture*

*The Hitchhiker's Guide to Python*

*Implement various connectors including Database, File, SOAP, Email, VM, JMS, AMQP, Scripting, SFTP, LDAP, Java and*

*ObjectStore (English Edition)*

*The event-centric hybrid cloud integration revolves around applications running based on events or messages. The new event-centric approach to hybrid cloud aims to simplify the task of managing these messages while increasing the overall reliability of the system. Event-centric applications work well in the cloud due to the varying intensity and frequency of events. These fluctuations fit well into a cloud infrastructure that can dynamically scale to fit those needs. An event-centric approach cuts down on communication overhead for an application, thus helping to speed up the development process. IBM® Hybrid Integration Services is a set of hybrid cloud capabilities in IBM Bluemix® that allows businesses to create hybrid clouds by connecting their Bluemix environment to on-premises systems at the application programming interface (API), data, or event level. In November 2015, the IBM International Technical Support Organization (ITSO) IBM Redbooks® team published a Redbooks publication that covers hybrid cloud scenarios with Bluemix for API and data integrations, Hybrid Cloud Data and API Integration: Integrate Your Enterprise and Cloud with Bluemix Integration Services, SG24-8277, and can be found at the following website:*

*<http://www.redbooks.ibm.com/Redbooks.nsf/RedbookAbstracts/sg248277.html?Open> Hybrid Cloud Event Integration: Integrate Your Enterprise and Cloud with Bluemix Integration Services, SG24-8281 is a companion book to SG24-8277 and focuses on event-centric hybrid cloud integrations with Bluemix. 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*

*This book is a quick and concise introduction to RabbitMQ. Follow the unique case study of Clever Coney Media as they progressively discover how to fully utilize RabbitMQ, containing clever examples and detailed explanations. Whether you are someone who develops enterprise messaging products professionally or a hobbyist who is already familiar with open source Message Queuing software and you are looking for a new challenge, then this is the book for you. Although you should be familiar with Java, Ruby, and Python to get the most out of the examples, RabbitMQ Essentials will give you the push you need to get started that no other RabbitMQ tutorial can provide you with.*

*Summary The best way to learn microservices development is to build something! Bootstrapping Microservices with Docker, Kubernetes, and Terraform guides you from zero through to a complete microservices project, including fast prototyping, development, and deployment. You'll get your feet wet using industry-standard tools as you learn and practice the practical skills you'll use for every microservices application. Following a true bootstrapping approach, you'll begin with a simple, familiar application and build up your knowledge and skills as you create and deploy a real microservices project. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Taking microservices from proof of concept to production is a complex, multi-step operation relying on tools like Docker, Terraform, and Kubernetes for packaging and deployment. The best way to learn the process is to build a project from the ground up, and that's exactly what you'll do with this book! About the book In Bootstrapping Microservices with Docker, Kubernetes, and Terraform, author Ashley Davis lays out a comprehensive approach to building microservices. You'll start with a simple design and work layer-by-layer until you've created your own video streaming application. As you go, you'll learn to configure cloud infrastructure with Terraform, package microservices using Docker, and deploy your finished project to a Kubernetes cluster. What's inside Developing and testing microservices applications Working with cloud providers Applying automated testing Implementing infrastructure as code and setting up a continuous delivery pipeline Monitoring, managing, and troubleshooting About the reader Examples are in JavaScript. No experience with*

*microservices, Kubernetes, Terraform, or Docker required. About the author Ashley Davis is a software developer, entrepreneur, stock trader, and the author of Manning's Data Wrangling with JavaScript. Table of Contents 1 Why microservices? 2 Creating your first microservice 3 Publishing your first microservice 4 Data management for microservices 5 Communication between microservices 6 Creating your production environment 7 Getting to continuous delivery 8 Automated testing for microservices 9 Exploring FlixTube 10 Healthy microservices 11 Pathways to scalability*

*Cloud Native Programming with Golang*

*A Primer*

*Microservice Patterns and Best Practices*

*Web Scalability for Startup Engineers*

*Explore patterns like CQRS and event sourcing to create scalable, maintainable, and testable microservices*

*A project-based guide*

***The comprehensive Wrox guide for creating Java web applications for the enterprise This guide shows Java software developers and software engineers how to build complex web applications in an enterprise environment. You'll begin with an introduction to the Java Enterprise Edition and the basic web application, then set up a development application server environment, learn about the tools used in the development process, and explore numerous Java technologies and practices. The book covers industry-standard tools and technologies, specific technologies, and underlying programming concepts. Java is an essential programming language used worldwide for both Android app development and enterprise-level corporate solutions As a step-by-step guide or a general reference, this book provides an all-in-one Java development solution Explains Java Enterprise Edition 7 and the basic web application, how to set up a development application server environment, which tools are needed during the development process, and how to apply various Java technologies Covers new language features in Java 8, such as Lambda Expressions, and the new Java 8 Date & Time API introduced as part of JSR 310, replacing the legacy Date and Calendar APIs Demonstrates the new, fully-duplex WebSocket web connection technology and its support in Java EE 7, allowing the reader to create rich, truly interactive web applications that can push updated data to the client automatically Instructs the reader in the configuration and use of Log4j 2.0, Spring Framework 4 (including Spring Web MVC), Hibernate Validator, RabbitMQ, Hibernate ORM, Spring Data, Hibernate***

**Search, and Spring Security Covers application logging, JSR 340 Servlet API 3.1, JSR 245 JavaServer Pages (JSP) 2.3 (including custom tag libraries), JSR 341 Expression Language 3.0, JSR 356 WebSocket API 1.0, JSR 303/349 Bean Validation 1.1, JSR 317/338 Java Persistence API (JPA) 2.1, full-text searching with JPA, RESTful and SOAP web services, Advanced Message Queuing Protocol (AMQP), and OAuth Professional Java for Web Applications is the complete Wrox guide for software developers who are familiar with Java and who are ready to build high-level enterprise Java web applications.**

**Master the art of developing message-based applications with RabbitMQ About This Book Learn how to administer, manage, and extend your own message broker, RabbitMQ Develop clients to make a message bridge between your software systems using RabbitMQ Discover how to achieve proficiency with RabbitMQ with the well-defined descriptions of the topics Who This Book Is For If you are an intermediate-level RabbitMQ developer, who wants to achieve professional-level expertise in the subject, this book is for you. You'll also need to have a decent understanding of message queuing. What You Will Learn Administer RabbitMQ using different tools Understand the roots and details of messaging, message brokers, and AMQP protocol Scale the RabbitMQ server using the clusters and high availability techniques Extend RabbitMQ by developing the Erlang OTP-based applications that use the RabbitMQ API Manage the RabbitMQ server using its powerful tools Monitor the RabbitMQ Server using different open source tools such as Nagios, Munin, and Zabbix Ensure your RabbitMQ's security using SSL, SASL, and access control Develop RabbitMQ clients using Java, Python, and C# with an industry example In Detail RabbitMQ is one of the most powerful Open Source message broker software, which is widely used in tech companies such as Mozilla, VMware, Google, AT&T, and so on. RabbitMQ gives you lots of fantastic and easy-to-manage functionalities to control and manage the messaging facility with lots of community support. As scalability is one of our major modern problems, messaging with RabbitMQ is the main part of the solution to this problem. This book explains and demonstrates the RabbitMQ server in a detailed way. It provides you with lots of real-world examples and advanced solutions to tackle the scalability issues. You'll begin your journey with the installation and configuration of the RabbitMQ server, while also being given specific details pertaining to the subject. Next, you'll study the major problems that our server faces, including scalability and high availability, and try to get the solutions for both of these issues by using the RabbitMQ mechanisms. Following on from this, you'll get to design and develop your own plugins using the Erlang language and RabbitMQ's internal API. This knowledge will help you to start with the**

**management and monitoring of the messages, tools, and applications. You'll also gain an understanding of the security and integrity of the messaging facilities that RabbitMQ provides. In the last few chapters, you will build and keep track of your clients (senders and receivers) using Java, Python, and C#. Style and approach An easy-to-follow guide, full of hands-on examples based around managing, monitoring, extending, and securing RabbitMQ and its internal tools. You will learn how to develop your own clients using Java, Python, and C#.**

**Discover practical techniques to build cloud-native apps that are scalable, reliable, and always available. Key Features Build well-designed and secure microservices. Enrich your microservices with continuous integration and monitoring. Containerize your application with Docker Deploy your application to AWS. Learn how to utilize the powerful AWS services from within your application Book Description Awarded as one of the best books of all time by BookAuthority, Cloud Native Programming with Golang will take you on a journey into the world of microservices and cloud computing with the help of Go. Cloud computing and microservices are two very important concepts in modern software architecture. They represent key skills that ambitious software engineers need to acquire in order to design and build software applications capable of performing and scaling. Go is a modern cross-platform programming language that is very powerful yet simple; it is an excellent choice for microservices and cloud applications. Go is gaining more and more popularity, and becoming a very attractive skill. This book starts by covering the software architectural patterns of cloud applications, as well as practical concepts regarding how to scale, distribute, and deploy those applications. You will also learn how to build a JavaScript-based front-end for your application, using TypeScript and React. From there, we dive into commercial cloud offerings by covering AWS. Finally, we conclude our book by providing some overviews of other concepts and technologies that you can explore, to move from where the book leaves off. What you will learn Understand modern software applications architectures Build secure microservices that can effectively communicate with other services Get to know about event-driven architectures by diving into message queues such as Kafka, Rabbitmq, and AWS SQS. Understand key modern database technologies such as MongoDB, and Amazon's DynamoDB Leverage the power of containers Explore Amazon cloud services fundamentals Know how to utilize the power of the Go language to access key services in the Amazon cloud such as S3, SQS, DynamoDB and more. Build front-end applications using ReactJS with Go Implement CD for modern applications Who this book is for This book is for developers who want to begin building secure, resilient, robust, and scalable Go applications that are cloud native. Some knowledge of the**

**Go programming language should be sufficient. To build the front-end application, you will also need some knowledge of JavaScript programming.**

**Unleash the power of serverless integration with Azure About This Book Build and support highly available and scalable API Apps by learning powerful Azure-based cloud integration Deploy and deliver applications that integrate seamlessly in the cloud and quickly adapt as per your integration needs Deploy hybrid applications that work and integrate on the cloud (using Logic Apps and BizTalk Server) Who This Book Is For This book is for Microsoft Enterprise developers, DevOps, and IT professionals who would like to use Azure App Service and Microsoft Cloud Integration technologies to create cloud-based web and mobile apps. What You Will Learn Explore new models of robust cloud integration in Microsoft Azure Create your own connector and learn how to publish and manage it Build reliable, scalable, and secure business workflows using Azure Logic Apps Simplify SaaS connectivity with Azure using Logic Apps Connect your on-premises system to Azure securely Get to know more about Logic Apps and how to connect to on-premises “line-of-business” applications using Microsoft BizTalk Server In Detail Microsoft is focusing heavily on Enterprise connectivity so that developers can build scalable web and mobile apps and services in the cloud. In short, Enterprise connectivity from anywhere and to any device. These integration services are being offered through powerful Azure-based services. This book will teach you how to design and implement cloud integration using Microsoft Azure. It starts by showing you how to build, deploy, and secure the API app. Next, it introduces you to Logic Apps and helps you quickly start building your integration applications. We'll then go through the different connectors available for Logic Apps to build your automated business process workflow. Further on, you will see how to create a complex workflow in Logic Apps using Azure Function. You will then add a SaaS application to your existing cloud applications and create Queues and Topics in Service Bus on Azure using Azure Portal. Towards the end, we'll explore event hubs and IoT hubs, and you'll get to know more about how to tool and monitor the business workflow in Logic Apps. Using this book, you will be able to support your apps that connect to data anywhere—be it in the cloud or on-premises. Style and approach This practical hands-on tutorial shows you the full capability of App Service and other Azure-based integration services to build scalable and highly available web and mobile apps. It helps you successfully build and support your applications in the cloud or on-premises successfully. We'll debunk the popular myth that switching to cloud is risky—it's not!**

**Mastering RabbitMQ**

**Theory and Practice**  
**VMware vCloud Architecture Toolkit (vCAT)**  
**Hands-on MuleSoft Anypoint Platform Volume 3**  
**Paradigms, Applications, and Techniques**  
**Introducing Spring Framework**

This book offers readers an idea of what embedded Linux software and hardware architecture looks like, cross-compiling, and also presents information about the bootloader and how it can be built for a specific board. This book will go through Linux kernel features and source code, present information on how to build a kernel source, modules, and the Linux root filesystem. You'll be given an overview of the available Yocto Project components, how to set up Yocto Project Eclipse IDE, and how to use tools such as Wic and Swabber that are still under development. It will present the meta-realtime layer and the newly created meta-cgl layer, its purpose, and how it can add value to poky.

The complete vCAT printed reference: knowledge, tools, and validated designs for building high-value vCloud® solutions The vCloud Architecture Toolkit (vCAT) brings together validated designs, tools, and knowledge for architecting, implementing, operating, and consuming modern vCloud infrastructure based on the Software Defined Data Center (SDDC). vCAT has already helped hundreds of VMware customers succeed with vCloud. Now, pioneering VMware architect John Arrasjid has integrated essential vCAT information into a definitive printed guide, adding even more context and examples for successful planning and deployment. To do so, Arrasjid has distilled contributions from more than 100 VMware architects, consultants, administrators, engineers, project managers, and other technical leaders. VMware vCloud Architecture Toolkit (vCAT) is your complete roadmap for using virtualization to simplify data centers and related IT infrastructure. You'll find up-to-the-minute, field-proven insights for addressing a wide spectrum of challenges—from availability to interoperability, security to business continuity. Coverage includes vCAT design guidelines and patterns for efficiently architecting, operating, and consuming VMware cloud computing solutions Software-defined datacenter services for storage, networking, security, and availability People, process, and technology issues associated with effective vCloud operation and maintenance Efficient service consumption: consumption models, service catalogs, vApps, and service provider interactions Workflows to coordinate and automate task sequences, which extend beyond vCloud VMware vCloud Director® Server Resource Kit software

tools Advanced “cloud bursting” and autoscaling techniques to dynamically leverage additional computing resources Planning and management of capacity, security, compliance, and disaster recovery

Summary RabbitMQ in Depth is a practical guide to building and maintaining message-based applications. This book provides detailed coverage of RabbitMQ with an emphasis on why it works the way it does. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology At the heart of most modern distributed applications is a queue that buffers, prioritizes, and routes message traffic. RabbitMQ is a high-performance message broker based on the Advanced Message Queueing Protocol. It's battle tested, ultrafast, and powerful enough to handle anything you can throw at it. It requires a few simple setup steps, and you can instantly start using it to manage low-level service communication, application integration, and distributed system message routing. About the Book RabbitMQ in Depth is a practical guide to building and maintaining message-based applications. This book provides detailed coverage of RabbitMQ with an emphasis on why it works the way it does. You'll find examples and detailed explanations based in real-world systems ranging from simple networked services to complex distributed designs. You'll also find the insights you need to make core architectural choices and develop procedures for effective operational management. What's Inside AMQP, the Advanced Message Queueing Protocol Communicating via MQTT, Stomp, and HTTP Valuable troubleshooting techniques Database integration About the Reader Written for programmers with a basic understanding of messaging-oriented systems. About the Author Gavin M. Roy is an active, open source evangelist and advocate who has been working with internet and enterprise technologies since the mid-90s. Technical editor James Titcumb is a freelance developer, trainer, speaker, and active contributor to open source projects. Table of Contents PART 1 - RABBITMQ AND APPLICATION ARCHITECTURE Foundational RabbitMQ How to speak Rabbit: the AMQ Protocol An in-depth tour of message properties Performance trade-offs in publishing Don't get messages; consume them Message patterns via exchange routing PART 2 - MANAGING RABBITMQ IN THE DATA CENTER OR THE CLOUD Scaling RabbitMQ with clusters Cross-cluster message distribution PART 3 - INTEGRATIONS AND CUSTOMIZATION Using alternative protocols Database integrations Introducing Spring Framework is your hands-on guide to learning to build applications using the Spring Framework. The book uses a simple My Documents application that you will develop incrementally over the course of the book and covers:

- How to programmatically configure the

Spring container and beans • How to use annotations for dependency injection • How to use collections and custom types • How to customize and configure bean properties and bean lifecycle interfaces • How to handle metadata using XML, annotations, and the Groovy bean reader • How to use the new Spring Boot and Spring XD After reading this book, you will have all you need to start using the Spring Framework effectively.

Best Practices for Development

Quarkus Cookbook

Technical and Operational Guidance for Cloud Success

Robust Cloud Integration with Azure

Asynchronous and Reactive Java

*OpenStack Trove is your step-by-step guide to set up and run a secure and scalable cloud Database as a Service (DBaaS) solution. The book shows you how to set up and configure the Trove DBaaS framework, use prepackaged or custom database implementations, and provision and operate a variety of databases—including MySQL, PostgreSQL, MongoDB, Cassandra, and Redis—in development and production environments. Authors Amrith Kumar and Douglas Shelley, both active technical contributors to the Trove project, describe common deployment scenarios such as single-node database instances and walk you through the setup, configuration, and ongoing management of complex database topics like replication, clustering, and high availability. The book provides detailed descriptions of how Trove works and gives you an in-depth understanding of its architecture. It also shows you how to avoid common errors and debug and troubleshoot Trove installations, and perform common tasks such as:*

*The Hitchhiker's Guide to Python takes the journeyman Pythonista to true expertise. More than any other language, Python was created with the philosophy of simplicity and parsimony. Now 25 years old, Python has become the primary or secondary language (after SQL) for many business users. With popularity comes diversity—and possibly dilution. This guide, collaboratively written by over a hundred members of the Python community, describes best practices currently used by package and application developers. Unlike other books for this audience, The Hitchhiker's Guide is light on reusable code and heavier on design philosophy, directing the reader to excellent sources that already exist.*

*Build and optimize efficient messaging applications with ease About This Book Learn to administer, configure, and manage RabbitMQ instances Discover ways to secure and troubleshoot*

*RabbitMQ instances This book is fully up-to-date with all the latest changes to version 3.5 Who This Book Is For If you are a developer or system administrator with a basic knowledge of messaging who wants to learn RabbitMQ, or if you want to further enhance your knowledge in working with the message broker, then this book is ideal for you. To fully understand some examples in the book, a basic knowledge of the Java programming language is required. What You Will Learn Apply messaging patterns using the message broker Administer RabbitMQ using the command line, management Web console, or management REST services Create a cluster of scalable, and highly-available, RabbitMQ instances Use RabbitMQ with the Spring Framework, MuleESB, WSO2, and Oracle databases Deploy RabbitMQ using Puppet, Vagrant, or Docker Fine-tune the performance of RabbitMQ Monitor RabbitMQ using Nagios, Munin, or Monit Secure, troubleshoot, and extend RabbitMQ In Detail RabbitMQ is Open Source Message Queuing software based on the Advanced Message Queue Protocol Standard written in the Erlang Language. RabbitMQ is an ideal candidate for large-scale projects ranging from e-commerce and finance to Big Data and social networking because of its ease of use and high performance. Managing RabbitMQ in such a dynamic environment can be a challenging task that requires a good understanding not only of how to work properly with the message broker but also of its best practices and pitfalls. Learning RabbitMQ starts with a concise description of messaging solutions and patterns, then moves on to concrete practical scenarios for publishing and subscribing to the broker along with basic administration. This knowledge is further expanded by exploring how to establish clustering and high availability at the level of the message broker and how to integrate RabbitMQ with a number of technologies such as Spring, and enterprise service bus solutions such as MuleESB and WSO2. We will look at advanced topics such as performance tuning, secure messaging, and the internals of RabbitMQ. Finally we will work through case-studies so that we can see RabbitMQ in action and, if something goes wrong, we'll learn to resolve it in the Troubleshooting section. Style and approach Each chapter of the book is an easy-to-follow guide that expands and builds on the knowledge already gained in previous chapters. Throughout the course of the book, a sample system called the CSN (Corporate Social Network) is used to illustrate the core principles described. At the end of each chapter, there is a Q&A session that covers practical questions that may arise in practice when working with RabbitMQ.*

*Complete, Hands-On Guide to Building Advanced Distributed Applications with Ruby Distributed programming techniques make applications easier to scale, develop, and deploy—especially in*

*emerging cloud computing environments. Now, one of the Ruby community's leading experts has written the first definitive guide to distributed programming with Ruby. Mark Bates begins with a simple distributed application, and then walks through an increasingly complex series of examples, demonstrating solutions to the most common distributed programming problems. Bates presents the industry's most useful coverage of Ruby's standard distributed programming libraries, DRb and Rinda. Next, he introduces powerful third-party tools, frameworks, and libraries designed to simplify Ruby distributed programming, including his own Distribunaut. If you're an experienced Ruby programmer or architect, this hands-on tutorial and practical reference will help you meet any distributed programming challenge, no matter how complex. Coverage includes Writing robust, secure, and interactive applications using DRb—and managing its drawbacks Using Rinda to build applications with improved flexibility, fault tolerance, and service discovery Simplifying DRb service management with RingyDingy Utilizing Starfish to facilitate communication between distributed programs and to write MapReduce functions for processin large data sets Using Politics to customize the processes running on individual server instances in a cloud computing environment Providing reliable distributed queuing with the low-overhead Starling messaging server Implementing comprehensive enterprise messaging with RabbitMQ and Advanced Message Queuing Protocol (AMQP) Offloading heavyweight tasks with BackgroundDRb and DelayedJob*

*Distributed Messaging for Everyone*

*Structuring, Deploying and Managing the Microservices Architecture with Django*

*RabbitMQ Essentials*

*Emerging Trends, Issues, and Challenges in the Brazilian Technology, Volume 1*

*Vert.x in Action*

*XML-based Content Management*

**Optimized for Kubernetes, Quarkus is designed to help you create Java applications that are cloud first, container native, and serverless capable. With this cookbook, authors Alex Soto Bueno and Jason Porter from Red Hat provide detailed solutions for installing, interacting with, and using Quarkus in the development and production of microservices. The recipes in this book show midlevel to senior developers familiar with Java enterprise application development how to get started with Quarkus quickly. You'll become familiar with how Quarkus works within the wider Java ecosystem and discover ways to adapt this framework to your particular needs. You'll learn how to: Shorten the development cycle by enabling live reloading in dev mode Connect to and communicate with Kafka Develop with the reactive programming model Easily add fault tolerance to your services Build your**

**application as a Kubernetes-ready container Ease development with OpenAPI and test a native Quarkus application**

**The experts at CloudAMQP, managers of the largest fleet of RabbitMQ clusters in the world, have written this comprehensive guide on message queue architecture. From the basics to production, this book provides a deep understanding of RabbitMQ through the experience of Complete Car, a taxi company building its app from the ground up.**

**This book presents the proceedings of the 5th Edition of the Brazilian Technology Symposium (BTSym). This event brings together researchers, students and professionals from the industrial and academic sectors, seeking to create and/or strengthen links between issues of joint interest, thus promoting technology and innovation at nationwide level. The BTSym facilitates the smart integration of traditional and renewable power generation systems, distributed generation, energy storage, transmission, distribution and demand management. The areas of knowledge covered by the event are Smart Designs, Sustainability, Inclusion, Future Technologies, IoT, Architecture and Urbanism, Computer Science, Information Science, Industrial Design, Aerospace Engineering, Agricultural Engineering, Biomedical Engineering, Civil Engineering, Control and Automation Engineering, Production Engineering, Electrical Engineering, Mechanical Engineering, Naval and Oceanic Engineering, Nuclear Engineering, Chemical Engineering, Probability and Statistics.**

**A step-by-step that will help you build Microservices architecture using Django and Python**  
**KEY FEATURES** - Understand in-depth the fundamentals of Microservices - Learn how to create and use Django APIs - Use web technology such as Nginx, Gunicorn, UWSGI, and Postgresql to deploy a Django project  
**DESCRIPTION** Microservices architectures solve the multiple problems of software architecture. Django is a full-stack development framework, written in python. This book includes everything necessary for web application development; from the user views to the information storage: model, persistence, relationships, controllers, forms, validations, rest API and a very useful back office. Furthermore, the book will show how to build production-ready microservices. It will help you create restful APIs and get familiar with Redis and Celery. Towards the end, the book will show how to secure these services and deploy these microservices using Django. Lastly, it will show how to scale our services.  
**WHAT WILL YOU LEARN** - Understand the basics of Python, Django, and Microservices - Learn how to deploy Microservices with Django - Get familiar with Microservices Architecture - Designing, Principles, and Requirements - Implement Asynchronous task, JWT API Authentication and AWS Serverless with Microservice architecture  
**WHO THIS BOOK IS FOR** This book is for those beginners who want to make their careers in software development. It starts from the basics of python and Django, takes the reader to the Microservices architecture.  
**Table of Contents**  
**1. Basic of Python**  
**2. Major Pillars of OOPS with Python**  
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**RabbitMQ in Action**

**An In-Depth Guide to the Spring Framework and Its Tools**

## **Hacking with Spring Boot 2.3**

## **Learning Embedded Linux Using the Yocto Project**

## **Build distributed and scalable applications with message queuing using RabbitMQ, 2nd Edition**

## **Dive into Rabbit MQ**

*This book discusses several exciting research topics and applications in the intelligent Heterogenous Networks (Het-Net) and Internet of Things (IoT) era. We are resolving significant issues towards realizing the future vision of the Artificial Intelligence (AI) in IoT-enabled spaces. Such AI-powered IoT solutions will be employed in satisfying critical conditions towards further advances in our daily smart life. This book overviews the associated issues and proposes the most up to date alternatives. The objective is to pave the way for AI-powered IoT-enabled spaces in the next generation Het-Net technologies and open the door for further innovations. The book presents the latest advances and research into heterogeneous networks in critical IoT applications. It discusses the most important problems, challenges, and issues that arise when designing real-time intelligent heterogeneous networks for diverse scenarios.*

*Vert.x in Action teaches you how to build production-quality reactive applications in Java. This book covers core Vert.x concepts, as well as the fundamentals of asynchronous and reactive programming. Learn to develop microservices by using Vert.x tools for database communications, persistent messaging, and test app resiliency. The patterns and techniques included here transfer to reactive technologies and frameworks beyond Vert.x. Summary As enterprise applications become larger and more distributed, new architectural approaches like reactive designs, microservices, and event streams are required knowledge. The Vert.x framework provides a mature, rock-solid toolkit for building reactive applications using Java, Kotlin, or Scala. Vert.x in Action teaches you to build responsive, resilient, and scalable JVM applications with Vert.x using well-established reactive design patterns. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Vert.x is a collection of libraries for the Java virtual machine that simplify event-based and asynchronous programming. Vert.x applications handle tedious tasks like asynchronous communication, concurrent work, message and data persistence, plus they're easy to scale, modify, and maintain. Backed by the Eclipse Foundation and used by Red Hat and others, this toolkit supports code in a variety of languages. About the book Vert.x in Action teaches you how to build production-quality reactive applications in Java. This book covers core Vert.x concepts, as well as the fundamentals of asynchronous and reactive programming. Learn to develop microservices by using Vert.x tools for database communications, persistent messaging, and test app resiliency. The patterns and techniques included here transfer to reactive technologies and frameworks beyond Vert.x. What's inside Building reactive services Responding to external service failures Horizontal scaling Vert.x toolkit architecture and Vert.x testing Deploying with Docker and Kubernetes About the reader For intermediate Java web developers. About the author Julien Ponge is a principal software engineer at Red Hat, working on the Eclipse Vert.x project. Table of Contents PART 1 - FUNDAMENTALS OF ASYNCHRONOUS PROGRAMMING WITH VERT.X 1 Vert.x,*

*asynchronous programming, and reactive systems 2 Verticles: The basic processing units of Vert.x 3 Event bus: The backbone of a Vert.x application 4 Asynchronous data and event streams 5 Beyond callbacks 6 Beyond the event bus PART 2 - DEVELOPING REACTIVE SERVICES WITH VERT.X 7 Designing a reactive application 8 The web stack 9 Messaging and event streaming with Vert.x 10 Persistent state management with databases 11 End-to-end real-time reactive event processing 12 Toward responsiveness with load and chaos testing 13 Final notes: Container-native Vert.x*

*Explore the concepts and tools you need to discover the world of microservices with various design patterns Key Features Get to grips with the microservice architecture and build enterprise-ready microservice applications Learn design patterns and the best practices while building a microservice application Obtain hands-on techniques and tools to create high-performing microservices resilient to possible fails Book Description Microservices are a hot trend in the development world right now. Many enterprises have adopted this approach to achieve agility and the continuous delivery of applications to gain a competitive advantage. This book will take you through different design patterns at different stages of the microservice application development along with their best practices. Microservice Patterns and Best Practices starts with the learning of microservices key concepts and showing how to make the right choices while designing microservices. You will then move onto internal microservices application patterns, such as caching strategy, asynchronism, CQRS and event sourcing, circuit breaker, and bulkheads. As you progress, you'll learn the design patterns of microservices. The book will guide you on where to use the perfect design pattern at the application development stage and how to break monolithic application into microservices. You will also be taken through the best practices and patterns involved while testing, securing, and deploying your microservice application. At the end of the book, you will easily be able to create interoperable microservices, which are testable and prepared for optimum performance. What you will learn How to break monolithic application into microservices Implement caching strategies, CQRS and event sourcing, and circuit breaker patterns Incorporate different microservice design patterns, such as shared data, aggregator, proxy, and chained Utilize consolidate testing patterns such as integration, signature, and monkey tests Secure microservices with JWT, API gateway, and single sign on Deploy microservices with continuous integration or delivery, Blue-Green deployment Who this book is for This book is for architects and senior developers who would like implement microservice design patterns in their enterprise application development. The book assumes some prior programming knowledge.*

*Master Spring basics and core topics, and share the authors' insights and real-world experiences with remoting, Hibernate, and EJB. Beyond the basics, you'll learn how to leverage the Spring Framework to build the various tiers and parts of an enterprise Java application: transactions, web and presentation tiers, deployment, and much more. A full sample application allows you to apply many of the technologies and techniques covered in Pro Spring 5 and see how they work together. This book updates the perennial bestseller with the latest that the new Spring Framework 5 has to offer. Now in its fifth edition, this popular title is by far the most comprehensive and definitive treatment of Spring available. It covers the new functional web framework and*

*interoperability with Java 9. After reading this definitive book, you'll be armed with the power of Spring to build complex Spring applications, top to bottom. The agile, lightweight, open-source Spring Framework continues to be the de facto leading enterprise Java application development framework for today's Java programmers and developers. It works with other leading open-source, agile, and lightweight Java technologies such as Hibernate, Groovy, MyBatis, and more. Spring now works with Java EE and JPA 2 as well. What You'll Learn Discover what's new in Spring Framework 5 Use the Spring Framework with Java 9 Master data access and transactions Work with the new functional web framework Create microservices and other web services Who This Book Is For Experienced Java and enterprise Java developers and programmers. Some experience with Spring highly recommended.*

*Develop microservice-based high performance web apps for the cloud with Go*

*Integration, Methodologies and Tools*

*Designing Microservices Using Django*

*Distributed Programming with Ruby*

*Bootstrapping Microservices with Docker, Kubernetes, and Terraform*

*Hybrid Cloud Event Integration: Integrate Your Enterprise and Cloud with Bluemix Integration Services*

TAGLINE Make Integration simpler and speedy with Enterprise Infrastructure using Anypoint

connectors KEY FEATURES ? Application connectors and SaaS connectors are described in

detail. ? All programmes (DB, JMS, LDAP) are installed with reference applications and

screenshots. ? Real-time use cases for creating APIs and application flows are described.

DESCRIPTION Hands-on MuleSoft Anypoint platform Volume 3 offers installation and step-by-

step procedures for connecting to various core applications, including "Database, File,

SOAP, Email, Virtual Machine, JMS, AMQP, SFTP, LDAP, Java, and ObjectStore." The above

connectors' source code and graphics clearly explains how to include modules, configure

connectors, test connectivity, and invoke operations. This book explains the business

case and endpoint design through the use of a real-world bank application. Using real-

world examples such as Workday and Box, you will get well-versed with the fundamental

concepts about the connectors. Practicing all of the above activities will help you to

gain the experience, but you can also sharpen your skills by incorporating more business

principles and procedures. WHAT YOU WILL LEARN ? Acquire knowledge of various connectors

for mission-critical enterprise applications and databases ? Learn system application

settings, components, including database, SOAP web services and much more ? Learn about

Netbeans, ApacheMQ, and WSDL as you integrate the system infrastructure. ? Use-cases and examples to aid in the adoption of the MuleSoft enterprise application. WHO THIS BOOK IS FOR This book is intended for Business Analysts, Quality Engineers, Human Resources, and Information Technology workers. No prior programming knowledge is required. TABLE OF CONTENTS 1. MuleSoft Connectors Introduction 2. Database Connector 3. File Connector 4. SOAP Webservice Connector 5. E-mail Connector 6. VM Connector 7. JMS connector 8. AMQP Connector 9. Script Engine Connector 10. SFTP Connector 11. LDAP Connector 12. Java Connector

This updated and expanded second edition of Book provides a user-friendly introduction to the subject, Taking a clear structural framework, it guides the reader through the subject's core elements. A flowing writing style combines with the use of illustrations and diagrams throughout the text to ensure the reader understands even the most complex of concepts. This succinct and enlightening overview is a required reading for all those interested in the subject . We hope you find this book useful in shaping your future career & Business.

Spring Boot 2.3 is the hottest ticket in town... ..when it comes to Java development. Learn the latest features that can scale your apps including: \* Web and Data access \* Developer tools and test support \* Operational features \* Docker container baking \* Bottleneck discovery with BlockHound \* Messaging \* Security \* More! Written cover-to-cover using Project Reactor, your apps will scale like never before. Grab your copy today and learn to build top-notch, scalable solutions with modern tactics. Greg L. Turnquist works on the Spring team as a principal developer at VMware. He is a committer to Spring HATEOAS, Spring Data, Spring Boot, R2DBC, and Spring Session for MongoDB. He also wrote Packt's best-selling title, Learning Spring Boot 2.0 2nd Edition. He co-founded the Nashville Java User Group in 2010 and hasn't met a Java app (yet) that he doesn't like. Follow him on Twitter @gregturn and subscribe for all his Spring Boot videos at YouTube.com/GregTurnquist.

In business, art, and life, creating on a world-class level demands bold action and leaps of faith in the face of great uncertainty. But that uncertainty can lead to fear,

anxiety, paralysis, and destruction. It can gut creativity and stifle innovation. It can keep you from taking the risks necessary to do great work and craft a deeply-rewarding life. And it can bring companies that rely on innovation grinding to a halt. That is, unless you know how to use it to your advantage. Winters draws on leading-edge technology best practices, and awareness-focusing techniques in a fresh, practical, nondogmatic way. Their approach enables creativity and productivity on an entirely different level and can turn the once-tortuous AMQP journey into a more enjoyable quest. PLUS, INCLUDED with your purchase, are real-life document resources; this kit is available for instant download, giving you the tools to navigate and deliver on any AMQP goal.

Cloud Native Go

Proceedings of the 5th Brazilian Technology Symposium

OpenStack Trove

Cloud Computing for Science and Engineering

Learning RabbitMQ

Real-Time Intelligence for Heterogeneous Networks

XML-based Content Management: Integration, Methodologies and Tools covers the design and deployment of XML-based solutions and how to manage content and metadata, a practice that requires a more methodological approach than those traditionally applied to the design and deployment of document and content management solutions. The extensive use of XML implies the need of adding additional activities, quality controls, and tools to the established document-management and web-application design processes. The book describes a methodology that covers the different phases of the content and metadata management lifecycle, from generation, to archiving, to compliance with existing content management and archiving standards. In addition, the book reviews the key characteristics of the tools necessary for storage, retrieval and delivery. Focuses on methodologies for the design and deployment of XML-based content management solutions based on standards like BMPN and SPEM Provides an updated view of consolidated technologies for structured data management Explains the link between technologies for content storage and distribution Presents the conceptual knowledge to understand and relate the strategic view provided by OAIIS with the management of daily operations focused on content collection, aggregation and publishing

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 its 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.

**It's All About Delivering Service with vCloud Director** Empowered by virtualization, companies are not just moving into the cloud, they're moving into private clouds for greater security, flexibility, and cost savings. However, this move involves more than just infrastructure. It also represents a different business model and a new way to provide services. In this detailed book, VMware vExpert Simon Gallagher makes sense of private cloud computing for IT administrators. From basic cloud theory and strategies for adoption to practical implementation, he covers all the issues. You'll learn how to build a private cloud and deliver it as a service using VMware vCloud Director 5.1. Consider what it takes to transition to the cloud, including the business, technical, and operational issues Get familiar with the essential tools—the vCloud Director 5.1 suite Understand the delivery model of infrastructure-as-a-service Define a service catalog, including determining how to track and allocate costs and design for service levels Measure the impact of a private cloud on your legacy applications and infrastructure Implement efficient operations—learn how to apply automation, set up backup and restore, and maintain HA Deliver an end-to-end solution to an end user with a fully managed guest Foreword by Joe Baguley, Chief Technologist, EMEA, VMware

Introduction to Cloud Native Apps with Spring , Cloud Native is a style of application development that encourages easy adoption of best practices in the areas of continuous delivery and value-driven development. A related discipline is that of building 12-factor Apps in which development practices are aligned with delivery and operations goals, for instance by using declarative programming and management and monitoring. Spring Cloud facilitates these styles of development in a number of specific ways and the starting point is a set of features that all components in a distributed system either need or need easy access to when required. Introduction to DevOps, will introduce you to the microservices architecture, cloud environment, etc. You will learn the difference between a microservice based application and a monolith application while also learning how to migrate to a microservices application. Spring for DevOps & Microservices, will introduce you Spring Boot framework. You will learn how to effectively use it to create microservice application. We will cover such topics like creating REST API using Spring MVC annotations, providing API documentation using Swagger2, and exposing health checks and metrics using Spring Boot Actuator endpoints.

BEGNNING CLOUD NATIVE APPLICATION WITH SPRING

RabbitMQ in Depth

VMware Private Cloud Computing with vCloud Director

Pro Spring 5