

Microservices In Practice From Architecture To Deployment

A step-by-step that will help you build Microservices architecture using Django and Python KEY FEATURES a- Understand in-depth the fundamentals of Microservicesa- Learn how to create and use Django APIs a- Use web technology such as Nginx, Unicorn, UWSGI, and Postgresql to deploy a Django projectDESCRIPTION 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 a- Understand the basics of Python, Django, and Microservices a- Learn how to deploy Microservices with Django- Get familiar with Microservices Architecture - Designing, Principles, and Requirements a- 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 Contents1. Basic of Python2. Major Concepts of DOPS with Python3. Getting Started with Django4. API Development with Django5. Database Modeling with Django6. First Django API Deployment on various web servers8. What are Microservices9. Designing Microservice Systems10. Service Authentication11. Microservices Deployment With Django12. JWT Auth Service13. Asynchronous Tasks14. AWS Serverless15. How to Adopt Microservices in Practice About the Author Shayank Jain is a software developer and data analyst. He is strongly passionate about codingand architectural design. He has more than 6.5 years of professional experience in developingscalable software solutions for various organizations. He has been programming since theage of 16 and has developed software for mobile, web, hardware gaming and standaloneapplications. After getting his hands dirty with programming, he found many new ways to debug and deploy the code successfully with minimal time constraints. After reading and implementing, he found out that many critical concepts can be implemented easily in programming with correct and focused thinking. His research interests include information security, cryptography, analysis, design, and implementation of algorithms. He has extensively worked with python and implemented new ideas on various projects in his free time. He is also active in the computer science and education community. Through this book, he wants to share these methodologies and tricks with the beginners. Outside work, Shayank spends his spare time helping, coaching, and mentoring young people in taking up careers in technology. Your Blog links: https://shayanikt.wixsite.com/intro25Your LinkedIn Profile: https://www.linkedin.com/in/shayanjkain

Microservices is an architectural style in which large, complex software applications are composed of one or more smaller services. Each of these microservices focuses on completing one task that represents a small business capability. These microservices can be developed in any programming language. This IBM® Redbooks® publication covers Microservices best practices for Java. It focuses on creating cloud native applications using the latest version of IBM WebSphere® Application Server Liberty, IBM Bluemix® and other Open Source Frameworks in the Microservices ecosystem to highlight Microservices best practices for Java. This book is a complete guide to building a Microservices Architecture, supported by an application that evolves from a small monolith to a microservice ecosystem. The author follows a very pragmatic approach to explain the benefits of using this type of software architecture, instead of keeping the reader distracted with just theoretical concepts. A practical, evolving example This book, in contrast to guides available on the Internet, is based on a realistic, evolving example. Short guides can't focus on the multiple aspects of building microservices, and normally don't fit into more complex scenarios. Besides, trying to combine these short guides to make up a real application means facing a lot of gaps in the big puzzle of microservices. Guides are too shallow to help you building something real. On the other hand, most books about microservices are sometimes too focused on theory. Some books are usually on the other side of the spectrum. They explain topics like Domain Driven Design, Event Sourcing, Service Discovery, API Gateway, Centralized Logging, Continuous Deployment, DevOps, Reactive Systems, Circuit-Breaker patterns, etc. But that might be overwhelming - where to start? Is it needed to use all of these concepts in a microservice architecture? How to put them in practice? Those are the questions answered in this book, supported with code examples from the included application. Covered topics This book covers some of the state-of-the-art techniques in computer programming, from a practical point of view: - Microservices with Spring Boot - Event Driven Architecture and Messaging with RabbitMQ - RESTful services with Spring - Service Discovery with Eureka and Load Balancing with Ribbon - Routing requests with Zuul as your API Gateway - Test Driven Development: write your tests first - End to End Tests for an Event Driven Architecture using Cucumber - Continuous Integration and Deployment - On the other hand, this book also helps the reader to focus on what's important - starting with the Minimum Viable Product but keeping the flexibility to evolve it.

Architect enterprise-grade, Microservices-based solutions using Microsoft Azure Service Fabric. About This Book Explore architectural patterns for building modern day Microservice-based systems Learn about Microsoft Service Fabric as a platform to host distributed Microservices Discover multiple options for hosting Microservices on heterogeneous, cross-platform environments Learn to configure Azure Service Fabric clusters for enterprise-grade service deployments Who This Book Is For The book is aimed at IT architects, system administrators, and DevOps engineers who have a basic knowledge of the Microsoft Azure platform and are working on, or are curious about, the concepts of Microservices and Microservice architecture. What You Will Learn Understand the basics of Microservices and how Microsoft Azure fits into the equation Master Azure Service Fabric application programming models Comprehensive study of various architecture patterns for building enterprise-grade Microservices Manage and deploy Microservices on Azure Service Fabric An insight into the future of Microservices with containers and serverless computing In Detail Microsoft Azure is rapidly evolving and is widely used as a platform on which you can build Microservices that can be deployed on-premise and on-cloud heterogeneous environments through Microsoft Azure Service Fabric. This book will help you understand the concepts of Microservice application architecture and build highly maintainable and scalable enterprise-grade applications using the various services in Microsoft Azure Service Fabric. We will begin by understanding the intricacies of the Microservices architecture and its advantages over the monolithic architecture and Service Oriented Architecture (SOA) principles. We will present various scenarios where Microservices should be used and walk you through the architectures of Microservice-based applications. Next, you will take an in-depth look at Microsoft Azure Service Fabric, which is the best-in-class platform for building Microservices. You will explore how to develop and deploy sample applications on Microsoft Azure Service Fabric to gain a thorough understanding of it. Building Microservice-based application is complicated. Therefore, we will take you through several design patterns that solve the various challenges associated with realizing the Microservices architecture in enterprise applications. Each pattern will be clearly illustrated with examples that you can keep referring to when designing applications. Finally, you will be introduced to advanced topics such as Serverless computing and DevOps using Service Fabric, to help you undertake your next venture with confidence. Style and approach This book introduces its readers to the concept of Microservices and Microsoft Azure Service Fabric as a distributed platform to host enterprise-grade Microservices. It then addresses common architectural challenges associated with the Microservice architecture, using proven architectural patterns.

Building Microservices Practical Microservices Architectural Patterns Paradigms, Applications, and Techniques Microservices with Azure Design Patterns for Cloud Native Applications Developing Microservices Architecture on Azure with Open Source Technologies Microservice ArchitectureAligning Principles, Practices, and CultureO'Reilly Media, Inc.* This book provides practical guidance for adopting a high velocity, continuous delivery process to create reliable, scalable, Software-as-a-Service (SaaS) solutions that are designed and built using a microservice architecture, deployed to the Azure cloud, and managed through automation. Microservices, IoT, and Azure offers software developers, architects, and operations engineers' step-by-step directions for building SaaS applications—applications that are available 24x7, work on any device, scale elastically, and are resilient to change—through code, script, exercises, and a working reference implementation. The book provides a working definition of microservices and contrasts this approach with traditional monolithic Layered Architecture. A fictitious, homebiomedical startup is used to demonstrate microservice architecture and automation capabilities for cross-cutting and business services as well as connected device scenarios for Internet of Things (IoT). Several Azure PaaS services are detailed including Storage, SQL Database, DocumentDB, Redis Cache, Cloud Services, Web APi's, API Management, IoT Hub, IoT Suite, Event Hub, and Stream Analytics. Finally the book looks to the future and examines Service Fabric to see how microservices are becoming the de facto approach to building reliable software in the cloud. In this book, you'll learn: What microservices are and why are they're a compelling architecture pattern for SaaS applications How to design, develop, and deploy microservices using Visual Studio, PowerShell, and Azure Microservice patterns for cross-cutting concerns and business capabilities Microservice patterns for Internet of Things and big data analytics solutions using IoT Hub, Event Hub, and Stream Analytics Techniques for automating microservice provisioning, building, and deployment What Service Fabric is and how it's the future direction for microservices on Microsoft Azure

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, NodeJS, .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 building end to end infrastructure, developing cloud-native applications, automating deployment, and realizing value. 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, CORS 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, CORS 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 to implement microservice design patterns in their enterprise application development. The book assumes some prior programming knowledge.

Microservices Patterns SRE with Java Microservices Monolith to Microservices Microservices Best Practices for Java Scalable Web Architecture, Processes, and Organizations for the Modern Enterprise How do you detangle a monolithic system and migrate it to a microservice architecture? How do you do it while maintaining business-as-usual? As a companion to Sam Newman 's extremely popular Building Microservices, this new book details a proven method for transitioning an existing monolithic system to a microservice architecture. With many illustrative examples, insightful migration patterns, and a bevy of practical advice to transition your monolith enterprise into a microservice operation, this practical guide covers multiple scenarios and strategies for a successful migration, from initial planning all the way through application and database decomposition. You 'll learn several tried and tested patterns and techniques that you can use as you migrate your existing architecture. Ideal for organizations looking to transition to microservices, rather than rebuild Helps companies determine whether to migrate, when to migrate, and where to begin Addresses communication, integration, and the migration of legacy systems Discusses multiple migration patterns and where they apply Provides database migration examples, along with synchronization strategies Explores application decomposition, including the impact of breaking referential and transactional integrity, new failure modes, and more

Microservices architectures offer faster change speeds, better scalability, and cleaner, evolvable system designs. But implementing your first microservices architecture is difficult. How do you make myriad choices, educate your team on all the technical details, and navigate the organization to a successful execution to maximize your chance of success? With this book, authors Ronnie Mitra and Irakli Nadareishvili provide step-by-step guidance for building an effective microservices architecture. Architects and engineers will follow an implementation journey based on techniques and architectures that have proven to work for microservices systems. You'll build an operating model, a microservices design, an infrastructure foundation, and two working microservices, then put those pieces together as a single implementation. For anyone tasked with building microservices or a microservices architecture, this guide is invaluable. Learn an effective and explicit end-to-end microservices system design Define teams, their responsibilities, and guidelines for working together Understand how to slice a big application into a collection of microservices Examine how to isolate and embed data into corresponding microservices Build a simple yet powerful CI/CD pipeline for infrastructure changes Write code for sample microservices Deploy a working microservices application on Amazon Web Services

Annotation Over the past 10 years, distributed systems have become more fine-grained. From the large multi-million line long monolithic applications, we are now seeing the benefits of smaller self-contained services. Rather than heavy-weight, hard to change Service Oriented Architectures, we are now seeing systems consisting of collaborating microservices. Easier to change, deploy, and if required retire, organizations which are in the right position to take advantage of them are yielding significant benefits. This book takes an holistic view of the things you need to be cognizant of in order to pull this off. It covers just enough understanding of technology, architecture, operations and organization to show you how to move towards finer-grained systems.

Your one-stop guide to the common patterns and practices, showing you how to apply these using the Go programming language About This Book This short, concise, and practical guide is packed with real-world examples of building microservices with Go It is easy to read and will benefit smaller teams who want to extend the functionality of their existing systems Using this practical approach will save you money in terms of maintaining a monolithic architecture and demonstrate capabilities in ease of use Who This Book Is For You should have a working knowledge of programming in Go, including writing and compiling basic applications. However, no knowledge of RESTful architecture, microservices, or web services is expected. If you are looking to apply techniques to your own projects, taking your first steps into microservice architecture, this book is for you. What You Will Learn Plan a microservice architecture and design a microservice Write a microservice with a RESTful API and a database Understand the common idioms and common patterns in microservices architecture Leverage tools and automation that helps microservices become horizontally scalable Get a grounding in containerization with Docker and Docker-Compose, which will greatly accelerate your development lifecycle Manage and secure Microservices at scale with monitoring, logging, service discovery, and automation Test microservices and integrate API tests in Go In Detail Microservice architecture is sweeping the world as the de facto pattern to build web-based applications. Golang is a language particularly well suited to building them. Its strong community, encouragement of idiomatic style, and statically-linked binary artifacts make integrating it with other technologies and managing microservices at scale consistent and intuitive. This book will teach you the common patterns and practices, showing you how to apply these using the Go programming language. It will teach you the fundamental concepts of architectural design and RESTful communication, and show you patterns that provide manageable code that is supportable in development and at scale in production. We will provide you with examples on how to put these concepts and patterns into practice with Go. Whether you are planning a new application or working in an existing monolith, this book will explain and illustrate with practical examples how teams of all sizes can start solving problems with microservices. It will help you understand Docker and Docker-Compose and how it can be used to isolate microservice dependencies and build environments. We finish off by showing you various techniques to monitor, test, and secure your microservices. By the end, you will know the benefits of system resilience of a microservice and the advantages of Go stack. Style and approach The step-by-step tutorial focuses on building microservices. Each chapter expands upon the previous one, teaching you the main skills and techniques required to be a successful microservice practitioner.

Microservices, IoT and Azure Microservices - the Practical Way Microservices from Theory to Practice: Creating Applications in IBM Bluemix Using the Microservices Approach Production-Ready Microservices Event-Based Java Microservices with Spring Boot and Spring Cloud Leveraging DevOps and Microservice Architecture to deliver SaaS Solutions

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 objectivesExamine the principles, practices, and culture that define microservicesExplore a model for creating complex systems and a design process for building a microservice architectureLearn the fundamental design concepts for individual microservicesDelve into the operational elements of a microservices architecture, including containers and service discoveryDiscover how to handle the challenges of migrating microservice architecture in your organization
Summary: The Tao of Microservices guides you on the path to understanding how to apply microservices architectures to your own real-world projects. This high-level book offers a conceptual view of microservice design, along with core concepts and their application. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology An application, even a complex one, can be designed as a system of independent components, each of which handles a single responsibility. Individual microservices are easy for small teams without extensive knowledge of the entire system design to build and maintain. Microservice applications rely on modern patterns like asynchronous, message-based communication, and they can be optimized to work well in cloud and container-centric environments. About the Book The Tao of Microservices guides you on the path to understanding and building microservices. Based on the invaluable experience of microservices guru Richard Rodger, this book exposes the thinking behind microservice designs. You'll master individual concepts like asynchronous messaging, service APIs, and encapsulation as you learn to apply microservices architecture to real-world projects. Along the way, you'll dig deep into detailed case studies with source code and documentation and explore best practices for team development, planning for change, and tool choice. What's Inside Principles of the microservice architecture Breaking down real-world case studies Implementing large-scale systems When not to use microservices About the Reader This book is for developers and architects. Examples use JavaScript and Node.js. About the Author Richard Rodger, CEO of voxig, a sync network for the events industry, has many years of experience building microservice-based systems for major global companies. Table of Contents PART 1 - BUILDING MICROSERVICES Brave new World Services Messages Data Deployment PART 2 - RUNNING MICROSERVICES Measurement Migration People Case study: Nodezoo.com

Learns how to implement the microservice architecture using JavaAbout This Book Leverage the power of microservices to build a flexible and efficient system in Java* See Docker and Spring Boot in practice to form easily deployable microservices* Hands-on approach throughout the book in order to familiarize and grasp the detailsWho This Book Is ForThis book is for Java developers who want to get started with microservices and implement it in their workplace. No knowledge of microservice is necessary.What You Will Learn* The role of a discovery service and externalized configuration in the overall architecture* Use of message brokers for event driven microservices* How to intermix data management strategies across components* Implementing different types of tests in Spring Boot environment* Applying CI to our microservices suite architecture* Walk through of monitoring and scaling the sample applicationIn DetailA microservice architecture helps you build your application as a suite of different services. This approach has been widely adopted as it helps to easily scale up your application with reduced dependencies. This way if a part of your application is corrupted, it can be fixed easily thereby eliminating the possibility of completely shutting down your software. This book will teach you how to leverage Java to build scalable microservices. You will learn the fundamentals of this architecture and how to efficiently implement it practically.We start off with a brief introduction to the microservice architecture and how it fares with the other architectures. The book dives deep into essential microservice components and how to set up seamless communication between two microservice end points. You will create an effective data model and learn different ways to test and deploy a microservices. You will also learn the best way to migrate your software from a monolith to a microservice architecture.Finishing off with monitoring, scaling and troubleshooting, this book will set a solid foundation for you to start implementing microservices.Style and approachStarting with the fundamentals, this book explains all the essential concepts gradually with the help of numerous examples.*

"For software developers of all experience levels looking to improve their results, and design and implement domain-driven enterprise applications consistently with the best current state of professional practice, Implementing Domain-Driven Design will impart a treasure trove of knowledge hard won within the DDD and enterprise application architecture communities over the last couple decades."—Randy Stafford, Architect At-Large, Oracle Coherence Product Development "This book is a must-read for anybody looking to put DDD into practice."—Udi Dahan, Founder of NServiceBus Implementing Domain-Driven Design presents a top-down approach to understanding domain-driven design (DDD) in a way that fluently connects strategic patterns to fundamental tactical programming tools. Vaughn Vernon couples guided approaches to implementation with modern architectures, highlighting the importance and value of focusing on the business domain while balancing technical considerations. Building on Eric Evans' seminal book, Domain-Driven Design, the author presents practical DDD techniques through examples from familiar domains. Each principle is backed up by realistic Java examples—all applicable to C#, Java, and all other mainstream case study: the delivery of a large-scale SaaS system for a multitenant environment. The author takes you far beyond "DDD lite" approaches that embrace DDD solely as a technical nooket, and shows you how to fully leverage DDD's "strategic design patterns": using Bounded Context, Context Maps, and the Ubiquitous Language. Using these techniques and examples, you can reduce time to market and improve quality, as you build software that is more flexible, more scalable, and more tightly aligned to business goals. Coverage includes Getting started the right way with DDD, so you can rapidly gain value from it Using DDD within diverse architectures, including Hexagonal, SOA, REST, CQRS, Event-Driven, and Fabric/Grid-Based Appropriately designing and applying Entities—and learning when to use Value Objects instead Mastering DDD's powerful new Domain Events technique Designing Repositories for ORM, NoSQL, and other databases

Evolve the Monolith to Microservices with Java and Node

Aligning Principles, Practices, and Culture Microservices Microservice Architecture Microservices for the Enterprise Support Constant Change The Most Complete, Practical, and Actionable Guide to Microservices Going beyond mere theory and marketing hype, Eberhard Wolff presents all the knowledge you need to capture the full benefits of this emerging paradigm. He illuminates microservice concepts, architectures, and scenarios from a technology-neutral standpoint, and demonstrates how to implement them with today's leading technologies such as Docker, Java, Spring Boot, the Netflix stack, and Spring Cloud. The author tradesoff associated with microservices, and guides you through the entire project lifecycle: development, testing, deployment, operations, and more. You'll find best practices for architecting microservice-based systems, individual microservices, and nanoservices, each illuminated with pragmatic examples. The author supplements opinions based on his experience with concise essays from other experts, enriching your understanding and illuminating areas where experts disagree. Read their own the concepts explained in the book to gain hands-on experience. Discover what microservices are, and how they differ from other forms of modularization Modernize legacy applications and efficiently build new systems Drive more value from continuous delivery with microservices Learn how microservices differ from SOA Optimize the microservices project lifecycle Plan, visualize, manage, and evolve architecture Integrate and communicate among microservices Apply advanced patterns like CQRS and Event Sourcing Maximize resilience and stability Operate and monitor microservices in production Build a full implementation with Docker, Java, Spring Boot, the Netflix stack, and Spring Cloud Explore nanoservices with Amazon Lambda, OSgi, Java EE, Vert.x, Erlang, and Seneca Understand microservices' impact on teams, technical leaders, product owners, and stakeholders Managers will discover better ways to support microservices, and learn how adopting the method at their own companies will master the technical skills and concepts they need to be effective. Architects will gain a deep understanding of key issues in creating or migrating toward microservices, and exactly what it will take to transform their plans into reality. Developers 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 means 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.

Microservices Security in Action teaches you how to address microservices-specific security challenges throughout the system. This practical guide includes plentiful hands-on exercises using industry-leading open-source tools and examples using Java and Spring Boot. Summary Unlike traditional enterprise applications, Microservices applications are collections of independent components that function as a system. Securing the messages, queues, and API endpoints requires new infrastructure and the code. Microservices Security in Action teaches you how to address microservices-specific security challenges throughout the system. This practical guide includes plentiful hands-on exercises using industry-leading open-source tools and examples using Java and Spring Boot. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Integrating independent services into a single system microservices deployment. With proper planning, however, you can build in security from the start. Learn to create secure services and protect application data throughout development and deployment. As microservices continue to change enterprise application systems, developers and architects must learn to integrate security into their design and implementation. Because microservices are created as a system of independent components, each a possible point of failure, they require planning, design, and implementation, you can reap the benefits of microservices while keeping your application data—and your company's reputation—safe! About the book Microservices Security in Action is filled with solutions, teaching best practices for throttling and monitoring, access control, and microservice-to-microservice communications. Detailed code samples, exercises, and real-world use cases help you put what you've learned into production. Along the way, authors a Sriwardena and Nuwan Dias shine a light on important concepts like throttling, analytics gathering, access control at the API gateway, and microservice-to-microservice communication. You'll also discover how to securely deploy microservices using state-of-the-art technologies including Kubernetes, Docker, and the Istio service mesh. Lots of hands-on exercises secure your learning as you go, and this straightforward guide wraps up with a security process review and best practice planning, designing, and implementing microservices applications with the priceless confidence that comes with knowing they're secure! What's inside Microservice security concepts Edge services with an API gateway Deployments with Docker, Kubernetes, and Istio Security testing at the code level Communications with HTTP, gRPC, and Kafka About the reader For experienced microservices developers with intermediate Java skills. About the author Prabhath Sriwardena is the vice president, Nuwan Dias is the director of API/architecture at WSO2. They have designed secure systems for many Fortune 500 companies. Table of Contents PART 1 OVERVIEW 1 Microservices security landscape 2 First steps in securing microservices PART 2 EDGE SECURITY 3 Securing north/south traffic with an API gateway 4 Accessing a secured microservice via a single-page application 5 Engaging throttling, monitoring, and access control PART 3 SERVICE-TO-SERVICE COMMUNICATION 6 Securing microservices with JWT 7 Securing east/west traffic with JWT 8 Securing east/west traffic over gRPC 9 Fortuning reactive microservices PART 4 SECURE DEPLOYMENT 10 Conquering container security with Docker 11 Securing microservices on Kubernetes 12 Securing microservices with Istio service mesh PART 5 SECURE DEVELOPMENT 13 Secure coding practices and automation

Summary Enterprise Java Microservices is an example-rich tutorial that shows how to design and manage large-scale Java applications as a collection of microservices. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Large applications are easier to develop and maintain when you build them from small, simple components. Java developers now enjoy a wide range of tools that support microservices-sized app servers, open source frameworks, and well-defined patterns. Best of all, you can build microservices applications using your existing Java skills. About the Book Enterprise Java Microservices teaches you to design and build JVM-based microservices applications. You'll start by learning how microservices designs compare to traditional Java EE applications. Always practical, author Ken Finnigan introduces big-picture concepts along with the tools and techniques you'll need to build microservices. You'll learn how to design and build microservices applications. You'll start by learning how microservices designs compare to traditional Java EE applications. Always practical, author Ken Finnigan introduces big-picture concepts along with the tools and techniques you'll need to build microservices. You'll learn how to design and build microservices applications. You'll start by learning how microservices designs compare to traditional Java EE applications. Always practical, author Ken Finnigan introduces big-picture concepts along with the tools and techniques you'll need to build microservices. You'll learn how to design and build microservices applications. You'll start by learning how microservices designs compare to traditional Java EE applications. Always practical, author Ken Finnigan introduces big-picture concepts along with the tools and techniques you'll need to build microservices. You'll learn how to design and build microservices applications. 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