# Microservice Architecture Building Microservices With

Microservices (mitp Professional)Microservices: Up and RunningA Step-By-Step Guide to Building a Microservice ArchitectureO'Reilly Media
Microservices in .NET, Second Edition teaches you to build and deploy microservices using ASP.NET and Azure services. Summary In Microservices in .NET, Second Edition you will learn how to: Build scalable microservices that are reliable in production Optimize microservices for continuous delivery Design event-based collaboration between microservices Deploy microservices to Kubernetes Set up Kubernetes in Azure Microservices in .NET, Second Edition is a comprehensive guide to building microservice applications using the .NET stack. After a crystal-clear introduction to the microservices architectural style, it teaches you practical microservices development skills using ASP.NET. This second edition of the bestselling original has been revised with up-to-date tools for the .NET ecosystem, and more new coverage of scoping microservices and deploying to Kubernetes. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Microservice architectures connect independent components that must work together as a system. Integrating new

technologies like Docker and Kubernetes with Microsoft's familiar ASP.NET framework and Azure cloud platform enables .NET developers to create and manage microservices efficiently. About the book Microservices in .NET, Second Edition teaches you to build and deploy microservices using ASP.NET and Azure services. It lays out microservice architecture simply, and then guides you through several real-world projects, such as building an ecommerce shopping cart. In this fully revised edition, you'll learn about scoping microservices, deploying to Kubernetes, and operations concerns like monitoring, logging, and security. What's inside Optimize microservices for continuous delivery Design event-based collaboration between microservices Deploy microservices to Kubernetes Set up Kubernetes in Azure About the reader For C# developers. No experience with microservices required. About the author Christian Horsdal is an independent consultant with more than 20 years of experience building projects from large-scale microservice systems to tiny embedded systems. Table of Contents PART 1 GETTING STARTED WITH MICROSERVICES 1 Microservices at a glance 2 A basic shopping cart microservice 3 Deploying a microservice to Kubernetes PART 2 BUILDING MICROSERVICES 4 Identifying and scoping microservices 5 Microservice collaboration 6 Data

ownership and data storage 7 Designing for robustness 8 Writing tests for microservices PART 3 HANDLING CROSS-CUTTING CONCERNS: BUILDING A REUSABLE MICROSERVICE PLATFORM 9 Cross-cutting concerns: Monitoring and logging 10 Securing microservice-to-microservice communication 11 Building a reusable microservice platform PART 4 BUILDING APPLICATIONS 12 Creating applications over microservices

Daten stehen heute im Mittelpunkt vieler Herausforderungen im Systemdesign. Dabei sind komplexe Fragen wie Skalierbarkeit, Konsistenz, Zuverlässigkeit, Effizienz und Wartbarkeit zu klären. Darüber hinaus verfügen wir über eine überwältigende Vielfalt an Tools, einschließlich relationaler Datenbanken, NoSQL-Datenspeicher, Stream-und Batchprocessing und Message Broker. Aber was verbirgt sich hinter diesen Schlagworten? Und was ist die richtige Wahl für Ihre Anwendung? In diesem praktischen und umfassenden Leitfaden unterstützt Sie der Autor Martin Kleppmann bei der Navigation durch dieses schwierige Terrain, indem er die Vor-und Nachteile verschiedener Technologien zur Verarbeitung und Speicherung von Daten aufzeigt. Software verändert sich ständig, die Grundprinzipien bleiben aber gleich. Mit diesem Buch lernen Softwareentwickler und -architekten, wie sie die Konzepte in der Praxis umsetzen und wie

sie Daten in modernen Anwendungen optimal nutzen können. Inspizieren Sie die Systeme, die Sie bereits verwenden, und erfahren Sie, wie Sie sie effektiver nutzen können Treffen Sie fundierte Entscheidungen, indem Sie die Stärken und Schwächen verschiedener Tools kennenlernen Steuern Sie die notwenigen Kompromisse in Bezug auf Konsistenz, Skalierbarkeit, Fehlertoleranz und Komplexität Machen Sie sich vertraut mit dem Stand der Forschung zu verteilten Systemen, auf denen moderne Datenbanken aufbauen Werfen Sie einen Blick hinter die Kulissen der wichtigsten Onlinedienste und lernen Sie von deren Architekturen

Summary Microservices in Action is a practical book about building and deploying microservice-based applications. Written for developers and architects with a solid grasp of service-oriented development, it tackles the challenge of putting microservices into production. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Invest your time in designing great applications, improving infrastructure, and making the most out of your dev teams. Microservices are easier to write, scale, and maintain than traditional enterprise applications because they're built as a system of independent components. Master a few important new patterns and processes, and you'll be ready to develop,

deploy, and run production-quality microservices. About the Book Microservices in Action teaches you how to write and maintain microservice-based applications. Created with day-to-day development in mind, this informative guide immerses you in real-world use cases from design to deployment. You'll discover how microservices enable an efficient continuous delivery pipeline, and explore examples using Kubernetes, Docker, and Google Container Engine. What's inside An overview of microservice architecture Building a delivery pipeline Best practices for designing multi-service transactions and queries Deploying with containers Monitoring your microservices About the Reader Written for intermediate developers familiar with enterprise architecture and cloud platforms like AWS and GCP. About the Author Morgan Bruce and Paulo A. Pereira are experienced engineering leaders. They work daily with microservices in a production environment, using the techniques detailed in this book. Table of Contents PART 1 - The lay of the land Designing and running microservices Microservices at SimpleBank PART 2 - Design Architecture of a microservice application Designing new features Transactions and queries in microservices Designing reliable services Building a reusable microservice framework PART 3 - Deployment Deploying microservices Deployment with containers and schedulers Building a delivery

pipeline for microservices PART 4 - Observability and ownership Building a monitoring system Using logs and traces to understand behavior Building microservice teams

Microservices is an architectural style that promotes the development of complex applications as a suite of small services based on business capabilities. This book will help you identify the appropriate service boundaries within the business domain to ensure high cohesion and to define the correct service interfaces to promote loose coupling. Understand the key challenges and solutions around building microservices in the enterprise application environment. This book provides a comprehensive understanding of microservices architectural principles and how to use microservices in real-world scenarios. Architectural challenges using microservices with service integration and API management are presented and you learn how to eliminate the use of centralized integration products such as the enterprise service bus (ESB) through the use of composite/integration microservices. Concepts in the book are supported with use cases, and emphasis is put on the reality that most of you are implementing in a “brownfield” environment in which you must implement microservices alongside legacy applications with minimal disruption to your business. Microservices for the Enterprise covers state-of-the-art techniques around microservices

messaging, service development and description, service discovery, governance, and data management technologies and guides you through the microservices design process. Also included is the importance of organizing services as core versus atomic, composite versus integration, and API versus edge, and how such organization helps to eliminate the use of a central ESB and expose services through an API gateway. What You'll Learn Design and develop microservices architectures with confidence Put into practice the most modern techniques around messaging technologies Apply the Service Mesh pattern to overcome inter-service communication challenges Apply battle-tested microservices security patterns to address real-world scenarios Handle API management, decentralized data management, and observability Who This Book Is For Developers and DevOps engineers responsible for implementing applications around a microservices architecture, and architects and analysts who are designing such systems
Learn the essential concepts, techniques, and design patterns that will help you build scalable and maintainable distributed systems Key Features Learn to design, implement, test, and deploy your microservices Understand the challenges and complexities of testing and monitoring distributed services Build modular and robust microservice architectures with the latest features of C# 8 and

.NET Core 3.1 Book Description The microservice architectural style promotes the development of complex applications as a suite of small services based on specific business capabilities. With this book, you'll take a hands-on approach to build microservices and deploy them using ASP .NET Core and Microsoft Azure. You'll start by understanding the concept of microservices and their fundamental characteristics. This microservices book will then introduce a real-world app built as a monolith, currently struggling under increased demand and complexity, and guide you in its transition to microservices using the latest features of C# 8 and .NET Core 3. You'll identify service boundaries, split the application into multiple microservices, and define service contracts. You'll also explore how to configure, deploy, and monitor microservices using Docker and Kubernetes, and implement autoscaling in a microservices architecture for enhanced productivity. Once you've got to grips with reactive microservices, you'll discover how keeping your code base simple enables you to focus on what's important rather than on messy asynchronous calls. Finally, you'll delve into various design patterns and best practices for creating enterprise-ready microservice applications. By the end of this book, you'll be able to deconstruct a monolith successfully to create well-defined microservices. What you will learn Package, deploy,

and manage microservices and containers with Azure Service Fabric Use REST APIs to integrate services using a synchronous approach Protect public APIs using Azure Active Directory and OAuth 2.0 Understand the operation and scaling of microservices using Docker and Kubernetes Implement reactive microservices with Reactive Extensions Discover design patterns and best practices for building enterprise-ready apps Who this book is for This book is for C# and .NET Core developers who want to understand microservices architecture and implement it in their .NET Core applications. If you're new to building microservices or have theoretical knowledge of the architectural app...

Architect enterprise-grade, Microservice-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 architecture and services Explore 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.

A comprehensive guide in developing and deploying high performance microservices with Rust Key Features Start your microservices journey and get a broader perspective on microservices development using RUST 2018, Build, deploy, and test microservices using AWS Explore advanced techniques for developing microservices such as actor model, Requests Routing, and threads Book Description Microservice architecture is sweeping the world as the de facto pattern for building

web-based applications. Rust is a language particularly well-suited for building microservices. It is a new system programming language that offers a practical and safe alternative to C. This book describes web development using the Rust programming language and will get you up and running with modern web frameworks and crates with examples of RESTful microservices creation. You will deep dive into Reactive programming, and asynchronous programming, and split your web application into a set of concurrent actors. The book provides several HTTP-handling examples with manageable memory allocations. You will walk through stateless high-performance microservices, which are ideally suitable for computation or caching tasks, and look at stateful microservices, which are filled with persistent data and database interactions. As we move along, you will learn how to use Rust macros to describe business or protocol entities of our application and compile them into native structs, which will be performed at full speed with the help of the server's CPU. Finally, you will be taken through examples of how to test and debug microservices and pack them into a tiny monolithic binary or put them into a container and deploy them to modern cloud platforms such as AWS. What you will learn Get acquainted with leveraging Rust web programming Get to grips with various Rust crates, such as hyper, Tokio, and Actix Explore RESTful microservices with Rust Understand how to pack Rust code to a container using Docker Familiarize yourself with Reactive microservices Deploy your microservices to modern cloud platforms such as AWS Who this book

is for This book is for developers who have basic knowledge of RUST, and want to learn how to build, test, scale, and manage RUST microservices. No prior experience of writing microservices in RUST is assumed. Develop and deploy efficient server-side applications and microservice architectures. KEY FEATURES ? Extensive examples of the Go programming language and REST concepts. ? Includes graphical illustrations and visual explanation of the microservice architecture. ? Graphs and visual explanation for Docker and Kubernetes commands. DESCRIPTION 'Building Server-side and Microservices with Go' teaches you the fundamentals of Go programming languages, REST server applications, and microservices. You can develop efficient server-side applications and use modern development concepts such as microservices after reading this book. We will create simple server-side applications and add new features as and when a new topic is covered. We will begin with the fundamentals of Go programming languages, which will create simple server-side applications. During development, a layered design will be introduced, with each application layer serving a specific purpose. We will introduce you to the microservice concept, and it is further divided into a couple of smaller microservices. Finally, we'll look at how to use Docker and Kubernetes to deploy and scale microservices. After reading this book, we will be able to successfully develop monolithic and microservice applications and identify when one approach is more appropriate than another. This book can also help improve existing applications. It is a perfect handy guide

to build proficiency with Docker and Kubernetes. WHAT YOU WILL LEARN ? Basics of Go programming language (data types, structures, loops, functions, concurrency, etc). ? REST concept development and implementation. ? Introduction to layered server-side application designs and key roles. ? PostgreSQL database design, CRUD operations, and queries. ? Introduction to microservices, common practices, and advantages and disadvantages of microservices. ? Microservices development with Go and how to break monolithic applications into microservices. ? Understanding protocol buffers and message queuing protocols for microservice communications. WHO THIS BOOK IS FOR This book is intended for backend developers, software architects, and students interested in learning about the Go programming language, REST Server Applications, and Microservices. Knowing fundamental programming concepts would be an advantage but not essential. TABLE OF CONTENTS 1. Fundamentals of Go Programming Language 2. REST Server Applications 3. HTTP Layer and Handler 4. Core Layer 5. Data Layer and Database 6. Microservices 7. Microservices in Go 8. Microservice Communication 9. Deployment and Scaling

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.

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 your 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.

Quickly learn and employ practical methods for developing microservices Key Features Get to grips with

microservice architecture to build enterprise-ready applications Adopt the best practices to find solutions to specific problems Monitor and manage your services in production Book Description Microservices have become a popular way to build distributed systems that power modern web and mobile apps. Deploying your application as a suite of independently deployable, modular, and scalable services has many benefits. In this book, you'll learn to employ microservices in order to make your application more fault-tolerant and easier to scale and change. Using an example-driven approach, Microservice Development Cookbook introduces you to the microservice architectural style. You'll learn how to transition from a traditional monolithic application to a suite of small services that interact to provide smooth functionality to your client applications. You'll also learn about the patterns used to organize services, so you can optimize request handling and processing and see how to handle service-to-service interactions. You'll then move on to understanding how to secure microservices and add monitoring in order to debug problems. This book also covers fault-tolerance and reliability patterns that help you use microservices to isolate failures in your applications. By the end of the book, you'll be able to work with a team to break a large, monolithic codebase into independently deployable and scalable microservices. You'll also study how to efficiently and effortlessly manage a microservice-based architecture. What you will learn Learn how to design microservice-based systems Create services that fail without impacting users Monitor your services to perform

debugging and create observable systems Manage the security of your services Create fast and reliable deployment pipelines Manage multiple environments for your services Simplify the local development of microservice-based systems Who this book is for Microservice Development Cookbook is for developers who would like to build effective and scalable microservices. Basic knowledge of the microservices architecture is assumed.

Summary The Tao of Microservices guides you on the path to understanding how to apply microservice 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 voxgig, a social 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

"Microservices enable us to develop software in small pieces that work together but can be developed separately, one of the reasons why enterprises have started embracing them. For the past few years, Node.js has emerged as a strong candidate for developing these microservices because of its ability to increase developers' productivity and applications performance. This video is an end-to-end course on how to dismantle your monolith applications and embrace the microservice architecture. We delve into various solutions such as Docker Swarm and Kubernetes to scale our microservices. Testing and deploying these services while scaling is a real challenge; we'll overcome this

challenge by setting up deployment pipelines that break up the application build processes into several stages. The course will help you implement advanced microservice techniques and design patterns on an existing application built with microservices. You'll delve into techniques that you can use today to build your own powerful microservices architecture."--Resource description page.

In this book, we will show you how to report and reclaim memory, how to send and receive messages, and how to report and monitor the health of your entire microservice ecosystem. By the end of this book, you will be confident enough to develop a sturdy microservice architecture that works in a production setting—all by using the efficiency of C#.

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.

As organizations shift from monolithic applications to smaller, self-contained microservices, distributed systems have become more fine-grained. But developing these new systems brings its own host of problems. This expanded second edition takes a holistic view of topics that you need to consider when building, managing, and scaling microservices architectures. Through clear examples and practical advice, author Sam Newman gives everyone from architects and developers to testers and IT operators a firm grounding in the concepts. You'll dive into the latest solutions for modeling, integrating, testing, deploying, and monitoring your own autonomous services. Real-world cases reveal how organizations today manage to get the most out of these architectures. Microservices technologies continue to move quickly. This book brings you up to speed. Get new information on user interfaces, container orchestration, and serverless Align system design with your organization's goals Explore options for integrating a service with your system Understand how to independently deploy microservices Examine the complexities of testing and monitoring distributed services Manage security with expanded content around user-to-service and service-to-service models

It's not new to us that microservices are changing the way we conceive the digital transformation, as

organizations embrace the digital transformation. Every day, more and more companies are betting on microservice adoption, and there is a strong reason for this: business needs to evolve and change in a fast pace, in order to adapt itself to satisfy a demanding 2.0 digital customer's experience in terms of overall service quality.Ensuring that such a change occurs seamlessly and progressively is one of the goals for microservices, and designing and building a solid microservice architecture is the way to guarantee that this happens from inception, by observing principles, best practices, design patterns and reference models. This book provides a comprehensive walkthrough across the different concepts, frameworks, methodologies, and architecture building blocks that make up a microservice ecosystem and constitute a reference architecture from which you can get to multiple sub-architectures and implementations. Being an architect, you'll learn how to better design microservice-led and event-centric architectures in the right way from the early beginning, by showcasing learned lessons, best-practices do's and don'ts. If you are starting your architecture career, it's the right place to getting introduced in concepts and methodologies that you will then grow over time, as you acquire more experience. If you are a developer, but willing to jump into the exciting architecture world, this can also be good reading,

however, be warned that some basic architectural understandings and concepts need to be first incorporated before walking through the advanced concepts presented throughout this book.This book requires you to have some minimal background around Docker and Microservices to better understand the more advanced concepts that are being explained.

How do you detangle a monolithic system and migrate it to a microservices 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 several architectural refactoring patterns Delves into details of database decomposition, including the impact of breaking referential and transactional integrity, new failure modes, and more

Distributed systems have become more fine-grained in the past 10 years, shifting from code-heavy monolithic applications to smaller, self-contained microservices. But developing these systems brings its own set of headaches. With lots of examples and practical advice, this book takes a holistic view of the topics that system architects and administrators must consider when building, managing, and evolving microservice architectures. Microservice technologies are moving quickly. Author Sam Newman provides you with a firm grounding in the concepts while diving into current solutions for modeling, integrating, testing, deploying, and monitoring your own autonomous services. You'll follow a fictional company throughout the book to learn how building a microservice architecture affects a single domain. Discover how microservices allow you to align your system design with your organization's goals Learn options for integrating a service with the rest of your system Take an incremental approach when splitting monolithic

codebases Deploy individual microservices through continuous integration Examine the complexities of testing and monitoring distributed services Manage security with user-to-service and service-to-service models Understand the challenges of scaling microservice architectures

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

This book is an exploration of microservices. It begins by explaining what microservices are and where they are used. Remote Procedure Calls (RPCs) are commonly used for communication between applications. This book guides you on how to use Google shares gRPC for Microservices. You will also be guided on how to use Microservices with Spring, including how to develop a sample microservice in Spring. This book also explains how to perform filtering and routing of requests in microservices. Filtering of requests is done via a proxy service. Instructions on using the Netflix Zuul service for the purpose of filtering requests at the

proxy service are also provided, as well as how to create a pagerank analytics platform using microservices. You will also be guided on how to use polyglot persistence. This allows you to use different kinds of databases, so that you can use the best language for your needs, depending on the application. The process of discovery and registration of microservices will also been explored in detail. The following topics are discussed in this book: - What are Microservices - Google shares gRPC for Microservices - Microservices with Spring - Routing and Filtering - Creation of a PageRank Analytics Platform - Polyglot Persistence in Microservices - Discovery and Registration of Microservices with Netflix's Eureka and Spring Cloud 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 microservice architecturesExplore 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 introducing microservice architecture in your organization"

Microservices architectures offer great benefits: faster change speeds, better scalability and cleaner, evolvable architectures. But, implementing your first Microservices architecture to get those rewards is difficult. How do you quickly educate your team on all the technical details of execution to maximize your chances of success? How do you survive the first year of bringing your microservices implementation to life? How do you improve your execution? Making the right implementation decisions is difficult and you don't have the luxury of time to find out if the decisions you are making are the right ones. This book offers a prescriptive guide for building a Microservices architecture to combat that uncertainty. Inside, you will find a step-by-step

implementation journey mapped out based on the techniques and architectures that have been proven to work for Microservices systems. This book solves the following problems for users: What does a "good" microservices project look like? Are the decisions you're making for your project the "right" ones? How do you come up with a good microservices design that fits your own context as quickly as possible? Where should you spend time thinking/designing and where should you just implement "best practices"?

Master the art of implementing scalable microservices in your production environment with ease About This Book Use domain-driven design to build microservices Use Spring Cloud to use Service Discovery and Registeration Use Kafka, Avro and Spring Streams for implementing event based microservices Who This Book Is For This book is for Java developers who are familiar with the microservices architecture and now wants to take a deeper dive into effectively implementing microservices at an enterprise level. A reasonable knowledge level and understanding of core microservice elements and applications is expected. What You Will Learn Use domain-driven design to design and implement microservices Secure microservices using Spring Security Learn to develop REST service development Deploy and test microservices Troubleshoot and debug the issues

faced during development Learning best practices and common principals about microservices In Detail Microservices are the next big thing in designing scalable, easy-to-maintain applications. It not only makes app development easier, but also offers great flexibility to utilize various resources optimally. If you want to build an enterprise-ready implementation of the microservices architecture, then this is the book for you! Starting off by understanding the core concepts and framework, you will then focus on the high-level design of large software projects. You will gradually move on to setting up the development environment and configuring it before implementing continuous integration to deploy your microservice architecture. Using Spring security, you will secure microservices and test them effectively using REST Java clients and other tools like RxJava 2.0. We'll show you the best patterns, practices and common principals of microservice design and you'll learn to troubleshoot and debug the issues faced during development. We'll show you how to design and implement reactive microservices. Finally, we'll show you how to migrate a monolithic application to microservices based application. By the end of the book, you will know how to build smaller, lighter, and faster services that can be implemented easily in a production environment. Style and approach This book starts from the basics, including environment setup and provides easy-to-follow steps to

implement the sample project using microservices. Eine Microservices-Architektur unterteilt Software-Systeme in eine Vielzahl kleiner Dienste, die unabhängig voneinander in Produktion gebracht werden können. Jedes Team arbeitet dabei an seinen Microservices und ist weitgehend entkoppelt von anderen Teams, das erlaubt eine einfache Skalierung agiler Prozesse. Die Aufteilung in Microservices schützt gegen den Verfall der Architektur, sodass die Systeme auch langfristig wartbar bleiben. Zudem können Legacy-Systeme durch Microservices ergänzt werden, ohne dabei den alten Code zu ändern. Und auch Continuous Delivery ist einfacher umsetzbar. Eberhard Wolff bietet Ihnen in diesem Buch eine umfangreiche Einführung in das Thema Microservices. Dabei geht es u.a. um: Vor- und Nachteile des Microservice-Ansatzes Microservices vs. SOA Die übergreifende Architektur von Microservice-Systemen Die Architektur einzelner Services Auswirkungen auf Projektorganisation, Betrieb, Testen und Deployment Nanoservices Das Buch erläutert technologieneutrale Konzepte und Architekturen, die mit verschiedenen Technologien umgesetzt werden können. Als Beispiel für einen konkreten Technologie-Stack wird Java mit Spring Boot, dem Netflix-Stack und Spring Cloud gezeigt. Anhand von vielen Beispielen und konkreten Szenarien lernen Sie, wie Microservices möglichst gewinnbringend

genutzt werden können. Außerdem erhalten Sie Anregungen, das Gelernte durch eigene Experimente weiter zu vertiefen. In der zweiten Auflage wurde der Abschnitt zu Domain-Driven Design komplett überarbeitet. Erweitert wurde die beispielhafte Beschreibung von Microservices-Technologien: Neben dem Netflix-Stack werden nun auch Alternativen erwähnt. Außerdem wurden die Essays zur Evolution von Microservices und zu Microservices in der Amazon Cloud aktualisiert.
Architect your .NET applications by breaking them into really small pieces—microservices—using this practical, example-based guide About This Book Start your microservices journey and understand a broader perspective of microservices development Build, deploy, and test microservices using ASP.Net MVC, Web API, and Microsoft Azure Cloud Get started with reactive microservices and understand the fundamentals behind it Who This Book Is For This book is for .NET Core developers who want to learn and understand microservices architecture and implement it in their .NET Core applications. It's ideal for developers who are completely new to microservices or have just a theoretical understanding of this architectural approach and want to gain a practical perspective in order to better manage application complexity. What You Will Learn Compare microservices with monolithic applications and SOA Identify the appropriate service boundaries

by mapping them to the relevant bounded contexts Define the service interface and implement the APIs using ASP.NET Web API Integrate the services via synchronous and asynchronous mechanisms Implement microservices security using Azure Active Directory, OpenID Connect, and OAuth 2.0 Understand the operations and scaling of microservices in .NET Core Understand the testing pyramid and implement consumer-driven contract using pact net core Understand what the key features of reactive microservices are and implement them using reactive extension In Detail Microservices is an architectural style that promotes the development of complex applications as a suite of small services based on business capabilities. This book will help you identify the appropriate service boundaries within the business. We'll start by looking at what microservices are, and what the main characteristics are. Moving forward, you will be introduced to real-life application scenarios, and after assessing the current issues, we will begin the journey of transforming this application by splitting it into a suite of microservices. You will identify the service boundaries, split the application into multiple microservices, and define the service contracts. You will find out how to configure, deploy, and monitor microservices, and configure scaling to allow the application to quickly adapt to increased demand in the future. With an introduction to the reactive

microservices, you strategically gain further value to keep your code base simple, focusing on what is more important rather than the messy asynchronous calls. Style and approach This guide serves as a stepping stone that helps .NET Core developers in their microservices architecture. This book provides just enough theory to understand the concepts and apply the examples.

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, Gunicorn, 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 Djangoa- 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 Pillars of OOPS with Python3. Getting Started with Django4. API Development with Django5. Database Modeling with Django6. First Django API Deployment on Web7. Django Project 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://shayankit.wixsite.com/intro25Your LinkedIn Profile: https://www.linkedin.com/in/shayankjain

This book is designed to give you the complete picture of how you can build microservices with Spring Boot. Existing book regarding microservice are helpful to grasp to concepts, but there are no practical examples of how to accomplish it. The objective of the book is to use Spring and Spring Boot to show practical approaches as well a reference guide to Spring Boot. The way we build software has changed dramatically. The word cloud is everywhere. Most software companies are either

using available providers such as AWS, Joyent, Rackspace or trying to build their own private cloud. The tendency of building big massive software is also changing, now the trend is to build smaller software which does one thing and it does it well.It is called microservices, a small, discrete, isolated, stateless, lightweight application that can be deployed separately from other services that depend on it. The architectural style which refers to an approach to structuring a single software application as a group of small services, each running in its own process and communicating with lightweight mechanisms.Spring as a mature framework does provide most of the necessary modules to accomplish what is needed to build a microservice architecture. So as a developer you can add necessary modules, wire it via dependency injection and start using it without changing the context. With Spring, you can connect relational or NoSQL datastore, work with AMQP, build your authentication and authorization, use configuration management, circuit breakers, intelligent routing, etc. Most of the technologies you may need for developing microservices are provided via Spring. The book will cover topics such as essentials Spring Boot, HTTP programming, Spring Cloud Config, Service Discovery, Client-Side Load Balancing, Distributed Messaging, Asynchronous HTTP programming, Routing, API Gateways, etc..

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

Transit from monolithic architectures to highly

available, scalable, and fault-tolerant microservices About This Book Build your own applications based on event-driven microservices and set them up on a production server. Successfully transform any monolithic application into a microservice. Monitor the health of your application, prevent downtime, and reduce costs. Who This Book Is For PHP developers who want to build scalable, highly available, and secure applications will find this book useful. No knowledge of microservices is assumed. What You Will Learn Set up a development environment using the right strategies and tools. Learn about application design and structure to start implementing your application. Transform a monolithic application into microservices. Explore the best way to start implementing your application using testing. Understand how to monitor your microservices, handle errors, and debug the application. Deploy your finished application into a production environment and learn how to solve common problems. Know how to scale your application based on microservices once it is up–and-running. In Detail The world is moving away from bulky, unreliable, and high-maintenance PHP applications, to small, easy-to-maintain and highly available microservices and the pressing need is for PHP developers to understand the criticalities in building effective microservices that scale at large. This book will be a reliable resource, and one that

will help you to develop your skills and teach you techniques for building reliable microservices in PHP. The book begins with an introduction to the world of microservices, and quickly shows you how to set up a development environment and build a basic platform using Docker and Vagrant. You will then get into the different design aspects to be considered while building microservices in your favorite framework and you will explore topics such as testing, securing, and deploying microservices. You will also understand how to migrate a monolithic application to the microservice architecture while keeping scalability and best practices in mind. Furthermore you will get into a few important DevOps techniques that will help you progress on to more complex domains such as native cloud development, as well as some interesting design patterns. By the end of this book you will be able to develop applications based on microservices in an organized and efficient way. You will also gain the knowledge to transform any monolithic applications into microservices. Style and approach Filled with code that you can start typing straightaway, this book will take you through building, testing, securing, and deploying microservices in the most practical way possible. The focus of the book is more inclined towards showing you how it's done, rather than with what to do, although you will get a good idea of those tools most widely used to build microservices.

Microservices, a form of software architecture approach, allows companies to deliver services and products faster, and with scalability and flexibility. The guiding principle of microservices is to build an application by breaking down its business components into smaller services, which can be deployed and operated independently from each other. This sets it apart from the more traditional, monolithic architecture wherein all components are bundled together. Companies that successfully adopt the appropriate microservice patterns for their application can greatly increase the time it takes to convert their ideas into customer value, which sustains long-term customer relationships and generates revenue. This is because, with microservices, development teams do not have to rewrite and deploy the whole application when new features are added. In addition, it takes less time and is much easier to conduct continuous maintenance. This book attempts to explore all you need to know regarding microservice architecture and patterns. It will assist you in making informed decisions, if you have plans to implement microservices architecture. What You'll Learn: Examine the characteristics, concepts, and culture that define microservice architectures. Discover how microservices can help you drive business objectives. Comprehend the challenges of scaling microservice architectures. Analyze the complexities of monitoring and testing distributed systems. Explore effective testing strategies for microservices. Secure microservices with Single Sign-On, API gateway, JWT and so on. Learn how to implement different microservice design patterns to facilitate scalability whilst

maintaining consistency. And lots 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

Learn the essential concepts, techniques, and design patterns that will help you build scalable and maintainable distributed systems Key Features Learn to

design, implement, test, and deploy your microservices Understand the challenges and complexities of testing and monitoring distributed services Build modular and robust microservice architectures with the latest features of C# 8 and .NET Core 3.1 Book Description The microservice architectural style promotes the development of complex applications as a suite of small services based on specific business capabilities. With this book, you'll take a hands-on approach to build microservices and deploy them using ASP .NET Core and Microsoft Azure. You'll start by understanding the concept of microservices and their fundamental characteristics. This microservices book will then introduce a real-world app built as a monolith, currently struggling under increased demand and complexity, and guide you in its transition to microservices using the latest features of C# 8 and .NET Core 3. You'll identify service boundaries, split the application into multiple microservices, and define service contracts. You'll also explore how to configure, deploy, and monitor microservices using Docker and Kubernetes, and implement autoscaling in a microservices architecture for enhanced productivity. Once you've got to grips with reactive microservices, you'll discover how keeping your code base simple enables you to focus on what's important rather than on messy asynchronous calls. Finally, you'll delve into various design patterns and best practices for creating enterprise-ready microservice applications. By the end of this book, you'll be able to deconstruct a monolith successfully to create well-defined microservices. What you will learn Package,

deploy, and manage microservices and containers with Azure Service Fabric Use REST APIs to integrate services using a synchronous approach Protect public APIs using Azure Active Directory and OAuth 2.0 Understand the operation and scaling of microservices using Docker and Kubernetes Implement reactive microservices with Reactive Extensions Discover design patterns and best practices for building enterprise-ready apps Who this book is for This book is for C# and .NET Core developers who want to understand microservices architecture and implement it in their .NET Core applications. If you're new to building microservices or have theoretical knowledge of the architectural approach, this book will help you gain a practical perspective to manage application complexity efficiently. Jetzt aktuell zu Java 8: Dieses Buch ist ein moderner Klassiker zum Thema Entwurfsmuster. Mit dem einzigartigen Von Kopf bis Fuß-Lernkonzept gelingt es den Autoren, die anspruchsvolle Materie witzig, leicht verständlich und dennoch gründlich darzustellen. Jede Seite ist ein Kunstwerk für sich, mit vielen visuellen Überraschungen, originellen Comic-Zeichnungen, humorvollen Dialogen und geistreichen Selbstlernkontrollen. Spätestens, wenn es mal wieder heißt "Spitzen Sie Ihren Bleistift", wird dem Leser klar, dass bei diesem Buch sein Mitmachen gefragt ist. Das ist nicht nur unterhaltsam, sondern auch effektiv: Komplexe Sachverhalte lassen sich nach Erkenntnis der modernen Lernwissenschaft am gründlichsten über mehrere verschiedene Kanäle verstehen. Das Buch verspricht dem Leser daher nicht nur Spaß beim Lernen,

er wird nach der Lektüre auch die Herausforderungen des Software-Designs meistern können.
Explore microservices by developing with Express, deploying with Docker, and scaling with Swarm and Kubernetes. Key Features Build cloud-native microservices using only Node and Express Write clean and maintainable code with JavaScript for improved microservices development Learn ways to monitor and manage your services in a production environment Book Description Microservices are a popular way to build distributed systems that power modern web and mobile apps. With the help of this Learning Path, you'll learn how to develop your applications as a suite of independently deployable and scalable services. Using an example-driven approach, this Learning Path will uncover how you can dismantle your monolithic application and embrace microservice architecture, right from architecting your services and modeling them to integrating them into your application. You'll also explore ways to overcome challenges in testing and deploying these services by setting up deployment pipelines that break down the application development process into several stages. You'll study serverless architecture for microservices and understand its benefits. Furthermore, this Learning Path delves into the patterns used for organizing services, helping you optimize request handling and processing. You'll then move on to learn the fault-tolerance and reliability patterns that help you use microservices to isolate failures in your applications. By the end of this Learning Path, you'll have the skills necessary to build enterprise-ready applications using

microservices. This Learning Path includes content from the following Packt products: Hands-On Microservices with Node.js by Diogo Resende Microservices Development Cookbook by Paul Osman What you will learn Use Docker and Swarm for continuous deployment and scaling Build and deploy cloud-native microservices and avoid vendor lock-in Explore different service architectures such as Hydra and Seneca Create services that don't impact users upon failure Monitor your services to perform debugging and create observable systems Develop fast and reliable deployment pipelines Manage multiple environments for your services Simplify the local development of microservice-based systems Who this book is for If you're a JavaScript developer looking to put your skills to work by building microservices and moving away from the monolithic architecture, this book is for you. To understand the concepts explained in this Learning Path, you must have knowledge of Node.js and be familiar with the microservices architecture.

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 3. Getting Started with Django 4. API Development with Django 5. Database Modeling with Django 6. First Django API Deployment on Web 7. Django Project Deployment on various web servers 8. What are Microservices 9. Designing Microservice Systems 10. Service Authentication 11. Microservices Deployment With Django 12. JWT Auth Service 13. Asynchronous Tasks 14. AWS Serverless 15. How to Adopt Microservices in Practice