

Webhooks Events For RESTful APIs Volume 4 API University Series

Yeah, reviewing a book **Webhooks Events For RESTful APIs Volume 4 API University Series** could be credited with your near associates listings. This is just one of the solutions for you to be successful. As understood, expertise does not suggest that you have fantastic points.

Comprehending as capably as arrangement even more than extra will have the funds for each success. next-door to, the proclamation as well as insight of this Webhooks Events For RESTful APIs Volume 4 API University Series can be taken as skillfully as picked to act.

[ASP.NET Core 5 for Beginners](#) - Andreas Helland 2020-12-18

Learn how to build web applications efficiently using ASP.NET Core 5 with the C# programming language and related frameworks Key Features Build web apps and services and cross-platform applications using .NET and C# Understand different web programming concepts with the help of real-world examples Explore the new features and APIs in ASP.NET Core 5, EF Core, Visual Studio, and Blazor Book Description ASP.NET Core 5 for Beginners is a comprehensive introduction for those who are new to the framework. This condensed guide takes a practical and engaging approach to cover everything that you need to know to start using ASP.NET Core for building cloud-ready, modern web applications. The book starts with a brief introduction to the ASP.NET Core framework and highlights the new features in its latest release, ASP.NET Core 5. It then covers the improvements in cross-platform support, the view engines that will help you to understand web development, and the new frontend technologies available with Blazor for building interactive web UIs. As you advance, you'll learn the fundamentals of the different frameworks and capabilities that ship with ASP.NET Core. You'll also get to grips with securing web apps with identity implementation, unit testing, and the latest in containers and cloud-native to

deploy them to AWS and Microsoft Azure. Throughout the book, you'll find clear and concise code samples that illustrate each concept along with the strategies and techniques that will help to develop scalable and robust web apps. By the end of this book, you'll have learned how to leverage ASP.NET Core 5 to build and deploy dynamic websites and services in a variety of real-world scenarios. What you will learn Explore the new features and APIs introduced in ASP.NET Core 5 and Blazor Put basic ASP.NET Core 5 concepts into practice with the help of clear and simple samples Work with Entity Framework Core and its different workflows to implement your application's data access Discover the different web frameworks that ASP.NET Core 5 offers for building web apps Get to grips with the basics of building RESTful web APIs to work with real data Deploy your web apps in AWS, Azure, and Docker containers Work with SignalR to add real-time notifications to your app Who this book is for This book is for developers who want to learn how to develop web-based applications using the ASP.NET Core framework. Familiarity with the C# language and a basic understanding of HTML and CSS is required to get the most out of this book.

Serverless GraphQL APIs with Amazon's AWS AppSync - Matthias Biehl 2018-05-30

This book gets you a running start with serverless GraphQL APIs on Amazon's AWS AppSync. Whether you are new to GraphQL, or you are an experienced GraphQL developer, this book will provide you with the knowledge needed to get started with AWS AppSync. Do you like learning by doing? After quickly covering the GraphQL foundations, you will dive into the practice of developing APIs with AWS AppSync with in-depth walkthroughs, screenshots, and code samples. Do I learn everything I need to get started? The book guides you through the step-by-step process of designing GraphQL APIs: creating a GraphQL schema, developing GraphQL APIs, connecting data sources, developing resolvers with AppSync templates, securing your API, offering real-time data, developing offline support and synchronization for your apps and much more. Why GraphQL? GraphQL is now a viable option for modern API design. And since Facebook, Yelp, and Shopify have built successful APIs with GraphQL, many companies consider following in the technological footsteps of these tech giants. Using GraphQL is great, but by itself, it is only half the rent: It requires the manual installation and maintenance of software infrastructure components. Why Serverless GraphQL with AppSync? AppSync is a cloud-based platform for GraphQL APIs. It is serverless, so you waste no time setting up infrastructure. It scales up and down dynamically depending on the load. It supports your app developers with an SDK for synchronization and offline support. You pay only what you use, so no upfront investment is needed and it may save your organizations thousands of dollars in IT costs.

RxJS in Action - Paul Daniels 2017-07-20

Summary RxJS in Action gives you the development skills you need to create reactive applications with RxJS. This book is full of theory and practical examples that build on each other and help you begin thinking in a reactive manner. Foreword by Ben Lesh, Project lead, RxJS 5. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning

Publications. About the Technology On the web, events and messages flow constantly between UI and server components. With RxJS, you can filter, merge, and transform these streams directly, opening the world of data flow programming to browser-based apps. This JavaScript implementation of the ReactiveX spec is perfect for on-the-fly tasks like autocomplete. Its asynchronous communication model makes concurrency much, much easier. About the Book RxJS in Action is your guide to building a reactive web UI using RxJS. You'll begin with an intro to stream-based programming as you explore the power of RxJS through practical examples. With the core concepts in hand, you'll tackle production techniques like error handling, unit testing, and interacting with frameworks like React and Redux. And because RxJS builds on ideas from the world of functional programming, you'll even pick up some key FP concepts along the way. What's Inside Building clean, declarative, fault-tolerant applications Transforming and composing streams Taming asynchronous processes Integrating streams with third-party libraries Covers RxJS 5 About the Reader This book is suitable for readers comfortable with JavaScript and standard web application architectures. About the Author Paul P. Daniels is a professional software engineer with experience in .NET, Java, and JavaScript. Luis Atencio is a software engineer working daily with Java, PHP, and JavaScript platforms, and author of Manning's Functional Programming in JavaScript. Table of Contents PART 1 - UNDERSTANDING STREAMS Thinking reactively Reacting with RxJS Core operators It's about time you used RxJS PART 2 - OBSERVABLES IN PRACTICE Applied reactive streams Coordinating business processes Error handling with RxJS PART 3 MASTERING RXJS Heating up observables Toward testable, reactive programs RxJS in the wild

Learn Kubernetes Security - Kaizhe Huang 2020-07-09

Secure your container environment against cyberattacks and deliver robust deployments with this practical guide Key FeaturesExplore a variety of

Kubernetes components that help you to prevent cyberattacks Perform effective resource management and monitoring with Prometheus and built-in Kubernetes tools Learn techniques to prevent attackers from compromising applications and accessing resources for crypto-coin mining Book Description Kubernetes is an open source orchestration platform for managing containerized applications. Despite widespread adoption of the technology, DevOps engineers might be unaware of the pitfalls of containerized environments. With this comprehensive book, you'll learn how to use the different security integrations available on the Kubernetes platform to safeguard your deployments in a variety of scenarios. Learn Kubernetes Security starts by taking you through the Kubernetes architecture and the networking model. You'll then learn about the Kubernetes threat model and get to grips with securing clusters. Throughout the book, you'll cover various security aspects such as authentication, authorization, image scanning, and resource monitoring. As you advance, you'll learn about securing cluster components (the kube-apiserver, CoreDNS, and kubelet) and pods (hardening image, security context, and PodSecurityPolicy). With the help of hands-on examples, you'll also learn how to use open source tools such as Anchore, Prometheus, OPA, and Falco to protect your deployments. By the end of this Kubernetes book, you'll have gained a solid understanding of container security and be able to protect your clusters from cyberattacks and mitigate cybersecurity threats. What you will learn Understand the basics of Kubernetes architecture and networking Gain insights into different security integrations provided by the Kubernetes platform Delve into Kubernetes' threat modeling and security domains Explore different security configurations from a variety of practical examples Get to grips with using and deploying open source tools to protect your deployments Discover techniques to mitigate or prevent known Kubernetes hacks Who this book is for This book is for security consultants, cloud administrators, system administrators,

and DevOps engineers interested in securing their container deployments. If you're looking to secure your Kubernetes clusters and cloud-based deployments, you'll find this book useful. A basic understanding of cloud computing and containerization is necessary to make the most of this book.

Kafka Streams in Action - Bill Bejeck 2018-08-29

Summary Kafka Streams in Action teaches you everything you need to know to implement stream processing on data flowing into your Kafka platform, allowing you to focus on getting more from your data without sacrificing time or effort. Foreword by Neha Narkhede, Cocreator of Apache Kafka Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Not all stream-based applications require a dedicated processing cluster. The lightweight Kafka Streams library provides exactly the power and simplicity you need for message handling in microservices and real-time event processing. With the Kafka Streams API, you filter and transform data streams with just Kafka and your application. About the Book Kafka Streams in Action teaches you to implement stream processing within the Kafka platform. In this easy-to-follow book, you'll explore real-world examples to collect, transform, and aggregate data, work with multiple processors, and handle real-time events. You'll even dive into streaming SQL with KSQL! Practical to the very end, it finishes with testing and operational aspects, such as monitoring and debugging. What's inside Using the KStreams API Filtering, transforming, and splitting data Working with the Processor API Integrating with external systems About the Reader Assumes some experience with distributed systems. No knowledge of Kafka or streaming applications required. About the Author Bill Bejeck is a Kafka Streams contributor and Confluent engineer with over 15 years of software development experience. Table of Contents PART 1 - GETTING STARTED WITH KAFKA STREAMS Welcome to Kafka Streams Kafka quickly PART 2 - KAFKA STREAMS

DEVELOPMENT Developing Kafka Streams Streams and state The KTable API The Processor API PART 3 - ADMINISTERING KAFKA STREAMS Monitoring and performance Testing a Kafka Streams application PART 4 - ADVANCED CONCEPTS WITH KAFKA STREAMS Advanced applications with Kafka Streams APPENDIXES Appendix A - Additional configuration information Appendix B - Exactly once semantics

[Azure Serverless Computing Cookbook](#) - Praveen Kumar Sreeram 2017-08-17
Over 50 recipes to help you build applications hosted on Serverless architecture using Azure Functions. About This Book Enhance Azure Functions with continuous deployment using Visual Studio Team Services Learn to deploy and manage cost-effective and highly available serverless applications using Azure Functions This recipe-based guide will teach you to build a robust serverless environment Who This Book Is For If you are a Cloud administrator, architect, or developer who wants to build scalable systems and deploy serverless applications with Azure functions, then this book is for you. Prior knowledge and hands-on experience with core services of Microsoft Azure is required. What You Will Learn Develop different event-based handlers supported by serverless architecture supported by Microsoft Cloud Platform – Azure Integrate Azure Functions with different Azure Services to develop Enterprise-level applications Get to know the best practices in organizing and refactoring the code within the Azure functions Test, troubleshoot, and monitor the Azure functions to deliver high-quality, reliable, and robust cloud-centric applications Automate mundane tasks at various levels right from development to deployment and maintenance Learn how to develop stateful serverless applications and also self-healing jobs using Durable Functions In Detail Microsoft provides a solution to easily run small segment of code in the Cloud with Azure Functions. Azure Functions provides solutions for processing data, integrating systems, and building simple APIs and microservices. The book starts with intermediate-level

recipes on serverless computing along with some use cases on benefits and key features of Azure Functions. Then, we'll deep dive into the core aspects of Azure Functions such as the services it provides, how you can develop and write Azure functions, and how to monitor and troubleshoot them. Moving on, you'll get practical recipes on integrating DevOps with Azure functions, and providing continuous integration and continuous deployment with Visual Studio Team Services. It also provides hands-on steps and tutorials based on real-world serverless use cases, to guide you through configuring and setting up your serverless environments with ease. Finally, you'll see how to manage Azure functions, providing enterprise-level security and compliance to your serverless code architecture. By the end of this book, you will have all the skills required to work with serverless code architecture, providing continuous delivery to your users. Style and approach This recipe-based guide explains the different features of Azure Function by taking a real-world application related to a specific domain. You will learn how to implement automation and DevOps and discover industry best practices to develop applications hosted on serverless architecture using Azure functions.

Enterprise Application Architecture with .NET Core - Ganesan Senthilvel
2017-04-25

Architect and design highly scalable, robust, clean and highly performant applications in .NET Core About This Book Incorporate architectural soft-skills such as DevOps and Agile methodologies to enhance program-level objectives Gain knowledge of architectural approaches on the likes of SOA architecture and microservices to provide traceability and rationale for architectural decisions Explore a variety of practical use cases and code examples to implement the tools and techniques described in the book Who This Book Is For This book is for experienced .NET developers who are aspiring to become architects of enterprise-grade applications, as well as software architects who would like to leverage .NET to create effective blueprints of applications.

What You Will Learn Grasp the important aspects and best practices of application lifecycle management Leverage the popular ALM tools, application insights, and their usage to monitor performance, testability, and optimization tools in an enterprise Explore various authentication models such as social media-based authentication, 2FA and OpenID Connect, learn authorization techniques Explore Azure with various solution approaches for Microservices and Serverless architecture along with Docker containers Gain knowledge about the recent market trends and practices and how they can be achieved with .NET Core and Microsoft tools and technologies In Detail If you want to design and develop enterprise applications using .NET Core as the development framework and learn about industry-wide best practices and guidelines, then this book is for you. The book starts with a brief introduction to enterprise architecture, which will help you to understand what enterprise architecture is and what the key components are. It will then teach you about the types of patterns and the principles of software development, and explain the various aspects of distributed computing to keep your applications effective and scalable. These chapters act as a catalyst to start the practical implementation, and design and develop applications using different architectural approaches, such as layered architecture, service oriented architecture, microservices and cloud-specific solutions. Gradually, you will learn about the different approaches and models of the Security framework and explore various authentication models and authorization techniques, such as social media-based authentication and safe storage using app secrets. By the end of the book, you will get to know the concepts and usage of the emerging fields, such as DevOps, BigData, architectural practices, and Artificial Intelligence. Style and approach Filled with examples and use cases, this guide takes a no-nonsense approach to show you the best tools and techniques required to become a successful software architect.

Data Pipelines Pocket Reference - James Densmore 2021-02-10

Data pipelines are the foundation for success in data analytics. Moving data from numerous diverse sources and transforming it to provide context is the difference between having data and actually gaining value from it. This pocket reference defines data pipelines and explains how they work in today's modern data stack. You'll learn common considerations and key decision points when implementing pipelines, such as batch versus streaming data ingestion and build versus buy. This book addresses the most common decisions made by data professionals and discusses foundational concepts that apply to open source frameworks, commercial products, and homegrown solutions. You'll learn: What a data pipeline is and how it works How data is moved and processed on modern data infrastructure, including cloud platforms Common tools and products used by data engineers to build pipelines How pipelines support analytics and reporting needs Considerations for pipeline maintenance, testing, and alerting

Microsoft Azure Essentials - Fundamentals of Azure - Michael Collier
2015-01-29

Microsoft Azure Essentials from Microsoft Press is a series of free ebooks designed to help you advance your technical skills with Microsoft Azure. The first ebook in the series, Microsoft Azure Essentials: Fundamentals of Azure, introduces developers and IT professionals to the wide range of capabilities in Azure. The authors - both Microsoft MVPs in Azure - present both conceptual and how-to content for key areas, including: Azure Websites and Azure Cloud Services Azure Virtual Machines Azure Storage Azure Virtual Networks Databases Azure Active Directory Management tools Business scenarios Watch Microsoft Press's blog and Twitter (@MicrosoftPress) to learn about other free ebooks in the "Microsoft Azure Essentials" series.

Proceedings of International Conference on Recent Trends in Machine Learning, IoT, Smart Cities and Applications - Vinit Kumar Gunjan
2020-10-17

This book gathers selected research papers presented at the International Conference on Recent Trends in Machine Learning, IOT, Smart Cities & Applications (ICMISC 2020), held on 29–30 March 2020 at CMR Institute of Technology, Hyderabad, Telangana, India. Discussing current trends in machine learning, Internet of things, and smart cities applications, with a focus on multi-disciplinary research in the area of artificial intelligence and cyber-physical systems, this book is a valuable resource for scientists, research scholars and PG students wanting formulate their research ideas and find the future directions in these areas. Further, it serves as a reference work anyone wishing to understand the latest technologies used by practicing engineers around the globe.

GraphQL API Design - Matthias Biehl 2018-01-30

Want to build APIs like Facebook? Since Facebook's framework for building APIs, GraphQL, has become publicly available, this ambition seems to be within reach for many companies. And that is great. But first, let's learn what GraphQL really is and - maybe even more importantly - let's figure out how to apply GraphQL to build APIs that consumers love. Do you like to learn hands-on? In this book, we take a hands-on approach to learning GraphQL. We first explore the concepts of the two GraphQL languages using examples. Then we start writing some code for our first GraphQL API. We develop this API step by step, from creating a schema and resolving queries, over mocking data and connecting data sources all the way to developing mutations and setting up event subscriptions. Are your API consumers important to you? This book shows you how to apply a consumer-oriented design process for GraphQL APIs, so you can deliver what your consumers really want: an API that solves their problems and offers a great developer experience. Do you want to enable the API consumers so they can build great apps? This book explains the GraphQL query language, which allows the API consumers to retrieve data, write data and get notified when data changes. More

importantly, you let them decide, which data they really need from the API. Do you want to make your API easy and intuitive to use? This book shows you how to use the GraphQL schema language to define a type system for your API, which serves as a reference documentation and helps your API consumers write queries that are syntactically correct. Do you want to profit from what has worked for others? This book provides a collection of best practices for GraphQL that have worked for other companies, e.g. regarding pagination, authentication and caching. REST vs. GraphQL: Which one is better? GraphQL and REST are competing philosophies for building APIs. It is not in the scope of this book to compare or discuss the two approaches. The focus of this book is on a hands-on approach for learning GraphQL.

IBM Cloud Private System Administrator's Guide - Ahmed Azraq 2019-05-13
IBM® Cloud Private is an application platform for developing and managing containerized applications across hybrid cloud environments, on-premises and public clouds. It is an integrated environment for managing containers that includes the container orchestrator Kubernetes, a private image registry, a management console, and monitoring frameworks. This IBM Redbooks covers tasks performed by IBM Cloud Private system administrators such as installation for high availability, configuration, backup and restore, using persistent volumes, networking, security, logging and monitoring. Istio integration, troubleshooting and so on. As part of this project we also developed several code examples and you can download those from the IBM Redbooks GitHub location: <https://github.com/IBMRedbooks>. The authors team has many years of experience in implementing IBM Cloud Private and other cloud solutions in production environments, so throughout this document we took the approach of providing you the recommended practices in those areas. If you are an IBM Cloud Private system administrator, this book is for you. If you are developing applications on IBM Cloud Private, you can see the IBM Redbooks publication IBM Cloud Private Application

Developer's Guide, SG24-8441.

Continuous Integration, Delivery, and Deployment - Sander Rossel 2017-10-30

Getting started with the processes and the tools to continuously deliver high-quality software About This Book Incorporate popular development practices to prevent messy code Automate your build, integration, release, and deployment processes with Jenkins, Git, and Gulp?and learn how continuous integration (CI) can save you time and money Gain an end-to-end overview of Continuous Integration using different languages (JavaScript and C#) and tools (Gulp and Jenkins) Who This Book Is For This book is for developers who want to understand and implement Continuous Integration and Delivery in their daily work. A basic knowledge of at least JavaScript and HTML/CSS is required. Knowing C# and SQL will come in handy. Most programmers who have programmed in a (compiled) C-like language will be able to follow along. What You Will Learn Get to know all the aspects of Continuous Integration, Deployment, and Delivery Find out how Git can be used in a CI environment Set up browser tests using Karma and Selenium and unit tests using Jasmine Use Node.js, npm, and Gulp to automate tasks such as linting, testing, and minification Explore different Jenkins jobs to integrate with Node.js and C# projects Perform Continuous Delivery and Deployment using Jenkins Test and deliver a web API In Detail The challenge faced by many teams while implementing Continuous Deployment is that it requires the use of many tools and processes that all work together. Learning and implementing all these tools (correctly) takes a lot of time and effort, leading people to wonder whether it's really worth it. This book sets up a project to show you the different steps, processes, and tools in Continuous Deployment and the actual problems they solve. We start by introducing Continuous Integration (CI), deployment, and delivery as well as providing an overview of the tools used in CI. You'll then create a web app and see how Git can be used in a CI environment. Moving on, you'll explore unit testing using

Jasmine and browser testing using Karma and Selenium for your app. You'll also find out how to automate tasks using Gulp and Jenkins. Next, you'll get acquainted with database integration for different platforms, such as MongoDB and PostgreSQL. Finally, you'll set up different Jenkins jobs to integrate with Node.js and C# projects, and Jenkins pipelines to make branching easier. By the end of the book, you'll have implemented Continuous Delivery and deployment from scratch. Style and approach This practical book takes a step-by-step approach to explaining all the concepts of Continuous Integration and delivery, and how it can help you deliver a high-quality product.

Designing Web APIs - Brenda Jin 2018-08-29

Using a web API to provide services to application developers is one of the more satisfying endeavors that software engineers undertake. But building a popular API with a thriving developer ecosystem is also one of the most challenging. With this practical guide, developers, architects, and tech leads will learn how to navigate complex decisions for designing, scaling, marketing, and evolving interoperable APIs. Authors Brenda Jin, Saurabh Sahni, and Amir Shevat explain API design theory and provide hands-on exercises for building your web API and managing its operation in production. You'll also learn how to build and maintain a following of app developers. This book includes expert advice, worksheets, checklists, and case studies from companies including Slack, Stripe, Facebook, Microsoft, Cloudfare, Oracle, and GitHub. Get an overview of request-response and event-driven API design paradigms Learn best practices for designing an API that meets the needs of your users Use a template to create an API design process Scale your web API to support a growing number of API calls and use cases Regularly adapt the API to reflect changes to your product or business Provide developer resources that include API documentation, samples, and tools

Azure for Architects - Ritesh Modi 2017-10-20

Your one stop guide to making the most out of Azure Cloud About This Book Get familiar with the different design patterns available in Microsoft Azure Develop Azure cloud architecture and a pipeline management system Get to know the security best practices for your Azure deployment Who This Book Is For If you are Cloud Architects, DevOps Engineers, or developers who want to learn key architectural aspects of the Azure Cloud platform, then this book is for you. Prior basic knowledge of the Azure Cloud platform is good to have. What You Will Learn Familiarize yourself with the components of the Azure Cloud platform Understand the cloud design patterns Use enterprise security guidelines for your Azure deployment Design and implement Serverless solutions See Cloud architecture and the deployment pipeline Understand cost management for Azure solutions In Detail Over the years, Azure cloud services has grown quickly, and the number of organizations adopting Azure for their cloud services is also gradually increasing. Leading industry giants are finding that Azure fulfills their extensive cloud requirements. This book will guide you through all the important and tough decision-making aspects involved in architecting a Azure public cloud for your organization. The book starts with an extensive introduction to all the categories of designs available with Azure. These design patterns focus on different aspects of cloud such as high availability, data management, and so on. Gradually, we move on to various aspects such as building your cloud structure and architecture. It will also include a brief description about different types of services provided by Azure, such as Azure functions and Azure Analytics, which can prove beneficial for an organization. This book will cover each and every aspect and function required to develop a Azure cloud based on your organizational requirements. By the end of this book, you will be in a position to develop a full-fledged Azure cloud. Style and approach This hands-on guide to the Azure Cloud platform covers different architectural concepts and implementations necessary for any enterprise scale

deployment.

[Architecting the Internet of Things](#) - Dieter Uckelmann 2011-04-02

Many of the initial developments towards the Internet of Things have focused on the combination of Auto-ID and networked infrastructures in business-to-business logistics and product lifecycle applications. However, the Internet of Things is more than a business tool for managing business processes more efficiently and more effectively – it will also enable a more convenient way of life. Since the term Internet of Things first came to attention when the Auto-ID Center launched their initial vision for the EPC network for automatically identifying and tracing the flow of goods within supply-chains, increasing numbers of researchers and practitioners have further developed this vision. The authors in this book provide a research perspective on current and future developments in the Internet of Things. The different chapters cover a broad range of topics from system design aspects and core architectural approaches to end-user participation, business perspectives and applications.

[Kubernetes Patterns](#) - Bilgin Ibryam 2019-04-09

The way developers design, build, and run software has changed significantly with the evolution of microservices and containers. These modern architectures use new primitives that require a different set of practices than most developers, tech leads, and architects are accustomed to. With this focused guide, Bilgin Ibryam and Roland Huß from Red Hat provide common reusable elements, patterns, principles, and practices for designing and implementing cloud-native applications on Kubernetes. Each pattern includes a description of the problem and a proposed solution with Kubernetes specifics. Many patterns are also backed by concrete code examples. This book is ideal for developers already familiar with basic Kubernetes concepts who want to learn common cloud native patterns. You'll learn about the following pattern categories: Foundational patterns cover the core principles and

practices for building container-based cloud-native applications. Behavioral patterns explore finer-grained concepts for managing various types of container and platform interactions. Structural patterns help you organize containers within a pod, the atom of the Kubernetes platform. Configuration patterns provide insight into how application configurations can be handled in Kubernetes. Advanced patterns covers more advanced topics such as extending the platform with operators.

Microservices from Theory to Practice: Creating Applications in IBM Bluemix Using the Microservices Approach - Shahir Daya 2016-04-04

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. They communicate with each other using language-neutral protocols, such as Representational State Transfer (REST), or messaging applications, such as IBM® MQ Light. This IBM Redbooks® publication gives a broad understanding of this increasingly popular architectural style, and provides some real-life examples of how you can develop applications using the microservices approach with IBM Bluemix™. The source code for all of these sample scenarios can be found on GitHub (<https://github.com/>). The book also presents some case studies from IBM products. We explain the architectural decisions made, our experiences, and lessons learned when redesigning these products using the microservices approach. Information technology (IT) professionals interested in learning about microservices and how to develop or redesign an application in Bluemix using microservices can benefit from this book.

OAuth - Matthias Biehl 2014-11-15

This book offers an introduction to web-API security with OAuth 2.0 and OpenID Connect. In less than 50 pages you will gain an overview of the

capabilities of OAuth. You will learn the core concepts of OAuth. You will get to know all four OAuth flows that are used in cloud solutions and mobile apps. If you have tried to read the official OAuth specification, you may get the impression that OAuth is complex. This book explains OAuth in simple terms. The different OAuth flows are visualized graphically using sequence diagrams. The diagrams allow you to see the big picture of the various OAuth interactions. This high-level overview is complemented with rich set of example requests and responses and an explanation of the technical details. In the book the challenges and benefits of OAuth are presented, followed by an explanation of the technical concepts of OAuth. The technical concepts include the actors, endpoints, tokens and the four OAuth flows. Each flow is described in detail, including the use cases for each flow. Extensions of OAuth are presented, such as OpenID Connect and the SAML2 Bearer Profile. Who should read this book? You do not have the time to read long books? This book provides an overview, the core concepts, without getting lost in the small-small details. This book provides all the necessary information to get started with OAuth in less than 50 pages. You believe OAuth is complicated? OAuth may seem complex with flows and redirects going back and forth. This book will give you clarity by introducing the seemingly complicated material by many illustrations. These illustrations clearly show all the involved interaction parties and the messages they exchange. You want to learn the OAuth concepts efficiently? This book uses many illustrations and sequence diagrams. A good diagram says more than 1000 words. You want to learn the difference between OAuth and OpenID Connect? You wonder when the two concepts are used, what they have in common and what is different between them. This book will help you answer this question. You want to use OAuth in your mobile app? If you want to access resources that are protected by OAuth, you need to get a token first, before you can access the resource. For this, you need to understand the OAuth flows and the

dependencies between the steps of the flows. You want to use OAuth to protect your APIs? OAuth is perfectly suited to protect your APIs. You can learn which OAuth endpoints need to be provided and which checks need to be made within the protected APIs.

The Art of Monitoring - James Turnbull 2014-12

A hands-on and introductory guide to the art of modern application and infrastructure monitoring and metrics. We start small and then build on what you learn to scale out to multi-site, multi-tier applications. The book is written for both developers and sysadmins. We focus on building monitored and measurable applications. We also use tools that are designed to handle the challenges of managing Cloud, containerised and distributed applications and infrastructure. In the book we'll deliver: * An introduction to monitoring, metrics and measurement. * A scalable framework for monitoring hosts (including Docker and containers), services and applications built on top of the Riemann event stream processor. * Graphing and metric storage using Graphite and Grafana. * Logging with Logstash. * A framework for high quality and useful notifications * Techniques for developing and building monitorable applications * A capstone that puts all the pieces together to monitor a multi-tier application.

The Design of Web APIs - Arnaud Lauret 2019-10-08

Web APIs are everywhere, giving developers an efficient way to interact with applications, services, and data. Well-designed APIs are a joy to use; poorly-designed APIs are cumbersome, confusing, and frustrating. The Design of Web APIs is a practical, example packed guide to crafting extraordinary web APIs. Author Arnaud Lauret demonstrates fantastic design principles and techniques you can apply to both public and private web APIs. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Microservices Patterns - Chris Richardson 2018-10-27

"A comprehensive overview of the challenges teams face when moving to microservices, with industry-tested solutions to these problems." - Tim Moore, Lightbend 44 reusable patterns to develop and deploy reliable production-quality microservices-based applications, with worked examples in Java Key Features 44 design patterns for building and deploying microservices applications Drawing on decades of unique experience from author and microservice architecture pioneer Chris Richardson A pragmatic approach to the benefits and the drawbacks of microservices architecture Solve service decomposition, transaction management, and inter-service communication Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Microservices Patterns teaches you 44 reusable patterns to reliably develop and deploy production-quality microservices-based applications. This invaluable set of design patterns builds on decades of distributed system experience, adding new patterns for composing services into systems that scale and perform under real-world conditions. More than just a patterns catalog, this practical guide with worked examples offers industry-tested advice to help you design, implement, test, and deploy your microservices-based application. What You Will Learn How (and why!) to use microservices architecture Service decomposition strategies Transaction management and querying patterns Effective testing strategies Deployment patterns This Book Is Written For Written for enterprise developers familiar with standard enterprise application architecture. Examples are in Java. About The Author Chris Richardson is a Java Champion, a JavaOne rock star, author of Manning's POJOs in Action, and creator of the original CloudFoundry.com. Table of Contents Escaping monolithic hell Decomposition strategies Interprocess communication in a microservice architecture Managing transactions with sagas Designing business logic in a microservice architecture Developing business logic with event sourcing Implementing queries in a microservice architecture External

API patterns Testing microservices: part 1 Testing microservices: part 2
Developing production-ready services Deploying microservices Refactoring to
microservices

OpenID Connect & JWT - Matthias Biehl 2019-02-02

Do you want to know how OpenID Connect works? This book is for you!
Exploring how OpenID Connect works in detail is the subject of this book. We
take a bottom-up approach and first study all the elements (actors, endpoints,
and tokens) of OpenID Connect. This puts us in an excellent position for the
second step: to understand the various OpenID Connect Flows - how the
actors, endpoints, and tokens are put together to transmit identity claims
securely. Do you wonder why there are several OpenID Connect Flows?
Whether we use OpenID Connect from a mobile app, a script in a browser or
from a secure backend server, there is an appropriate OpenID Connect Flow
with the right tradeoffs in security, functionality, and convenience for each of
these scenarios. This book helps you to choose the right one. Do you think that
these OpenID Connect Flows are confusing? You are not alone; the OpenID
Connect Flows tend to get confusing. However, with this book, we make it
clear and easy to understand: We visualize these flows and show how to
choose the flow that is appropriate for a given scenario. A picture says more
than a 1000 words - that is why we explain the OpenID Connect Flows using
easy to understand sequence diagrams. Do you want to understand how JWT
works? This book explains what a JSON Web Token (JWT) is, how it is used
in OpenID Connect, how it is constructed, what data it contains, how to read
it, and how to protect its contents. Do you wonder why there are so many
tokens in OpenID Connect and how to use them? There are JWT, JWS,
JWE, access tokens, refresh tokens, identity tokens, and authorization codes.
This book helps you to make sense of them all. Using examples, we explore
how the tokens are used, constructed, signed, and encrypted. Why is OpenID
Connect so popular? If used in the right way, OpenID Connect is powerful,

and everyone loves it: End-users don't need to signup and remember a new
password Business owners enjoy high conversion rates Developers don't get
any grey hair over securely storing credentials Do you want to increase the
conversion rate of your app? Signup and login to a new app become so smooth
and convenient that end-users are much more likely to try a new app. It is
supported, e.g. by Google, Yahoo, or Microsoft. Would you like to manage no
credentials but still have authenticated users? For us developers of web and
mobile apps, these signup and login features are attractive, too: we do not need
to manage user credentials, and we get a higher conversion rate resulting in
more new customers. In effect, this means cutting costs and increasing the
number of new customers for our apps. Which programming language do
you use in the book? This is not a programming book, don't expect
implementations with a specific programming language or library. Instead,
we focus on understanding OpenID Connect on a conceptual level, so we can
design and architect apps that work with OpenID Connect. And OpenID
Connect is the standard behind creating smooth login and signup experiences,
increasing the customer signup rate, and creating highly converting apps.

An Architectural and Practical Guide to IBM Hybrid Integration Platform -
Carsten Börnert 2017-01-12

In order to remain competitive in today's world, companies need to be able to
integrate internally and externally by connecting sensors, customers and
partners with the information in their systems of record. In short, they need
to integrate with everything. This IBM® Redbooks® publication describes
how IBM Application Integration Suite and IBM Messaging portfolio can be
used to satisfy the needs of core hybrid integration use cases, accelerating
companies in their digital transformation journey. All concepts are explained
within the context of these use cases: Joining the API economy Improving
productivity Refactoring for innovation The target audience for this book is
cloud and integration architects and specialists who are implementing hybrid

integration solutions.

RESTful API Design - Matthias Biehl 2016-08-29

Looking for Best Practices for RESTful APIs? This book is for you! Why? Because this book is packed with practical experience on what works best for RESTful API Design. You want to design APIs like a Pro? Use API description languages to both design APIs and develop APIs efficiently. The book introduces the two most common API description languages RAML, OpenAPI, and Swagger. Your company cares about its customers? Learn API product management with a customer-centric design and development approach for APIs. Learn how to manage APIs as a product and how to follow an API-first approach. Build APIs your customers love! You want to manage the complete API lifecycle? An API development methodology is proposed to guide you through the lifecycle: API inception, API design, API development, API publication, API evolution, and maintenance. You want to build APIs right? This book shows best practices for REST design, such as the correct use of resources, URIs, representations, content types, data formats, parameters, HTTP status codes, and HTTP methods. Your APIs connect to legacy systems? The book shows best practices for connecting APIs to existing backend systems. Your APIs connect to a mesh of microservices? The book shows the principles for designing APIs for scalable, autonomous microservices. You expect lots of traffic on your API? The book shows you how to achieve high performance, availability and maintainability. You want to build APIs that last for decades? We study API versioning, API evolution, backward- and forward-compatibility and show API design patterns for versioning. The API-University Series is a modular series of books on API-related topics. Each book focuses on a particular API topic, so you can select the topics within APIs, which are relevant for you.

RESTful Web Services Cookbook - Subbu Allamaraju 2010-02-22

While the REST design philosophy has captured the imagination of web and

enterprise developers alike, using this approach to develop real web services is no picnic. This cookbook includes more than 100 recipes to help you take advantage of REST, HTTP, and the infrastructure of the Web. You'll learn ways to design RESTful web services for client and server applications that meet performance, scalability, reliability, and security goals, no matter what programming language and development framework you use. Each recipe includes one or two problem statements, with easy-to-follow, step-by-step instructions for solving them, as well as examples using HTTP requests and responses, and XML, JSON, and Atom snippets. You'll also get implementation guidelines, and a discussion of the pros, cons, and trade-offs that come with each solution. Learn how to design resources to meet various application scenarios Successfully design representations and URIs Implement the hypertext constraint using links and link headers Understand when and how to use Atom and AtomPub Know what and what not to do to support caching Learn how to implement concurrency control Deal with advanced use cases involving copying, merging, transactions, batch processing, and partial updates Secure web services and support OAuth

Data Lake for Enterprises - Tomcy John 2017-05-31

A practical guide to implementing your enterprise data lake using Lambda Architecture as the base About This Book Build a full-fledged data lake for your organization with popular big data technologies using the Lambda architecture as the base Delve into the big data technologies required to meet modern day business strategies A highly practical guide to implementing enterprise data lakes with lots of examples and real-world use-cases Who This Book Is For Java developers and architects who would like to implement a data lake for their enterprise will find this book useful. If you want to get hands-on experience with the Lambda Architecture and big data technologies by implementing a practical solution using these technologies, this book will also help you. What You Will Learn Build an enterprise-level data lake using

the relevant big data technologies Understand the core of the Lambda architecture and how to apply it in an enterprise Learn the technical details around Sqoop and its functionalities Integrate Kafka with Hadoop components to acquire enterprise data Use flume with streaming technologies for stream-based processing Understand stream-based processing with reference to Apache Spark Streaming Incorporate Hadoop components and know the advantages they provide for enterprise data lakes Build fast, streaming, and high-performance applications using Elasticsearch Make your data ingestion process consistent across various data formats with configurability Process your data to derive intelligence using machine learning algorithms In Detail The term "Data Lake" has recently emerged as a prominent term in the big data industry. Data scientists can make use of it in deriving meaningful insights that can be used by businesses to redefine or transform the way they operate. Lambda architecture is also emerging as one of the very eminent patterns in the big data landscape, as it not only helps to derive useful information from historical data but also correlates real-time data to enable business to take critical decisions. This book tries to bring these two important aspects — data lake and lambda architecture—together. This book is divided into three main sections. The first introduces you to the concept of data lakes, the importance of data lakes in enterprises, and getting you up-to-speed with the Lambda architecture. The second section delves into the principal components of building a data lake using the Lambda architecture. It introduces you to popular big data technologies such as Apache Hadoop, Spark, Sqoop, Flume, and Elasticsearch. The third section is a highly practical demonstration of putting it all together, and shows you how an enterprise data lake can be implemented, along with several real-world use-cases. It also shows you how other peripheral components can be added to the lake to make it more efficient. By the end of this book, you will be able to choose the right big data technologies using the lambda architectural patterns to build your enterprise

data lake. Style and approach The book takes a pragmatic approach, showing ways to leverage big data technologies and lambda architecture to build an enterprise-level data lake.

Webhooks – Events for RESTful APIs - Matthias Biehl 2017-12-22

Got RESTful APIs? Great. API consumers love them. But today, such RESTful APIs are not enough for the evolving expectations of API consumers. Their apps need to be responsive, event-based and react to changes in near real-time. This results in a new set of requirements for the APIs, which power the apps. APIs now need to provide concepts such as events, notifications, triggers, and subscriptions. These concepts are not natively supported by the REST architectural style. In this book we show how to engineer RESTful APIs that support events with a webhook infrastructure. What are the alternatives to webhooks? We study several approaches for realizing events, such as Polling, Long Polling, Webhooks, HTTP Streaming, Server-Sent Events, WebSockets, WebSub and GraphQL Subscriptions. All of these approaches have their advantages and disadvantages. Can webhooks communicate in real-time? We study the non-functional requirements of a webhooks infrastructure, in areas such as security, reliability and developer experience. How do well-known API providers design webhooks? We examine the webhook infrastructure provided by GitHub, BitBucket, Stripe, Slack, and Intercom. With the best practices, case studies, and design templates provided in this book, we want to help you extend your API portfolio with a modern webhook infrastructure. So you can offer both APIs and events that developers love to use.

Learning Docker - Jeeva S. Chelladhurai 2017-05-31

Docker lets you create, deploy, and manage your applications anywhere at anytime – flexibility is key so you can deploy stable, secure, and scalable app containers across a wide variety of platforms and delve into microservices architecture About This Book This up-to-date edition shows how to leverage

Docker's features to deploy your existing applications Learn how to package your applications with Docker and build, ship, and scale your containers Explore real-world examples of securing and managing Docker containers Who This Book Is For This book is ideal for developers, operations managers, and IT professionals who would like to learn about Docker and use it to build and deploy container-based apps. No prior knowledge of Docker is expected. What You Will Learn Develop containerized applications using the Docker version 17.03 Build Docker images from containers and launch them Develop Docker images and containers leveraging Dockerfiles Use Docker volumes to share data Get to know how data is shared between containers Understand Docker Jenkins integration Gain the power of container orchestration Familiarize yourself with the frequently used commands such as `docker exec`, `docker ps`, `docker top`, and `docker stats` In Detail Docker is an open source containerization engine that offers a simple and faster way for developing and running software. Docker containers wrap software in a complete filesystem that contains everything it needs to run, enabling any application to be run anywhere – this flexibly and portably means that you can run apps in the cloud, on virtual machines, or on dedicated servers. This book will give you a tour of the new features of Docker and help you get started with Docker by building and deploying a simple application. It will walk you through the commands required to manage Docker images and containers. You'll be shown how to download new images, run containers, list the containers running on the Docker host, and kill them. You'll learn how to leverage Docker's volumes feature to share data between the Docker host and its containers – this data management feature is also useful for persistent data. This book also covers how to orchestrate containers using Docker compose, debug containers, and secure containers using the AppArmor and SELinux security modules. Style and approach This step-by-step guide will walk you through the features and use of Docker, from Docker software installation to

the impenetrable security of containers.

Jenkins 2: Up and Running - Brent Laster 2018-05-02

Design, implement, and execute continuous delivery pipelines with a level of flexibility, control, and ease of maintenance that was not possible with Jenkins before. With this practical book, build administrators, developers, testers, and other professionals will learn how the features in Jenkins 2 let you define pipelines as code, leverage integration with other key technologies, and create automated, reliable pipelines to simplify and accelerate your DevOps environments. Author Brent Laster shows you how Jenkins 2 is significantly different from the more traditional, web-only versions of this popular open source automation platform. If you're familiar with Jenkins and want to take advantage of the new technologies to transform your legacy pipelines or build new modern, automated continuous delivery environments, this is your book. Create continuous delivery pipelines as code with the Jenkins domain-specific language Get practical guidance on how to migrate existing jobs and pipelines Harness best practices and new methods for controlling access and security Explore the structure, implementation, and use of shared pipeline libraries Learn the differences between declarative syntax and scripted syntax Leverage new and existing project types in Jenkins Understand and use the new Blue Ocean graphical interface Take advantage of the capabilities of the underlying OS in your pipeline Integrate analysis tools, artifact management, and containers

IBM Cloud Private Application Developer's Guide - Ahmed Azraq 2019-05-01

IBM® Cloud Private is an application platform for developing and managing containerized applications across hybrid cloud environments, on-premises and public clouds. It is an integrated environment for managing containers that includes the container orchestrator Kubernetes, a private image registry, a management console, and monitoring frameworks. This IBM Redbooks® publication covers tasks that are performed by IBM Cloud™ Private

application developers, such as deploying applications, application packaging with helm, application automation with DevOps, using Microclimate, and managing your service mesh with Istio. The authors team has many years of experience in implementing IBM Cloud Private and other cloud solutions in production environments. Throughout this book, we used the approach of providing you the recommended practices in those areas. As part of this project, we also developed several code examples, which can be downloaded from the Redbooks GitHub web page. If you are an IBM Cloud Private application developer, this book is for you. If you are an IBM Cloud Private systems administrator, you can see the IBM Redbooks publication IBM Private Cloud Systems Administrator's Guide, SG248440.

DevNet Associate DEVASC 200-901 Official Certification Guide - Chris Jackson 2020-05-25

DevNet Associate DEVASC 200-901 Official Certification Guide is Cisco's official, comprehensive self-study resource for Cisco's DEVASC 200-901 exam: your pathway to the DevNet Associate Certification demonstrating your knowledge of application development and automation on Cisco platforms. Written by Cisco experts based on Cisco's own internal training, it clearly explains the value of each technique, presents realistic use cases, introduces solution components, illuminates their inner workings, and shows how to execute on what you've learned in practice. Designed for all Cisco DevNet Associate candidates, it covers every DEVASC 200-901 objective concisely and logically, with extensive teaching features designed to promote retention and understanding. You'll find: Pre-chapter quizzes to assess knowledge upfront and focus your study more efficiently Foundation topics sections that explain concepts and configurations, and link theory to practice Key topics sections calling attention to every figure, table, and list you must know Exam Preparation sections with additional chapter review features Final preparation chapter providing tools and a complete final study plan A customizable

practice test library This guide offers comprehensive, up-to-date coverage of all DEVASC 200-901 topics related to: Software development and design Understanding and using APIs Cisco platforms and development Application deployment and security Infrastructure and automation Network fundamentals

Building Secure and Reliable Systems - Heather Adkins 2020-03-16

Can a system be considered truly reliable if it isn't fundamentally secure? Or can it be considered secure if it's unreliable? Security is crucial to the design and operation of scalable systems in production, as it plays an important part in product quality, performance, and availability. In this book, experts from Google share best practices to help your organization design scalable and reliable systems that are fundamentally secure. Two previous O'Reilly books from Google—Site Reliability Engineering and The Site Reliability Workbook—demonstrated how and why a commitment to the entire service lifecycle enables organizations to successfully build, deploy, monitor, and maintain software systems. In this latest guide, the authors offer insights into system design, implementation, and maintenance from practitioners who specialize in security and reliability. They also discuss how building and adopting their recommended best practices requires a culture that's supportive of such change. You'll learn about secure and reliable systems through: Design strategies Recommendations for coding, testing, and debugging practices Strategies to prepare for, respond to, and recover from incidents Cultural best practices that help teams across your organization collaborate effectively

Splunk 7 Essentials, Third Edition - J-P Contreras 2018-03-29

Transform machine data into powerful analytical intelligence using Splunk Key Features Analyze and visualize machine data to step into the world of Splunk! Leverage the exceptional analysis and visualization capabilities to make informed decisions for your business This easy-to-follow, practical book

can be used by anyone - even if you have never managed data before

Book Description Splunk is a search, reporting, and analytics software platform for machine data, which has an ever-growing market adoption rate. More organizations than ever are adopting Splunk to make informed decisions in areas such as IT operations, information security, and the Internet of Things. The first two chapters of the book will get you started with a simple Splunk installation and set up of a sample machine data generator, called Eventgen. After this, you will learn to create various reports, dashboards, and alerts. You will also explore Splunk's Pivot functionality to model data for business users. You will then have the opportunity to test-drive Splunk's powerful HTTP Event Collector. After covering the core Splunk functionality, you'll be provided with some real-world best practices for using Splunk, and information on how to build upon what you've learned in this book. Throughout the book, there will be additional comments and best practice recommendations from a member of the SplunkTrust Community, called "Tips from the Fez". What you will learn

- Install and configure Splunk for personal use
- Store event data in Splunk indexes, classify events into sources, and add data fields
- Learn essential Splunk Search Processing Language commands and best practices
- Create powerful real-time or user-input dashboards
- Be proactive by implementing alerts and scheduled reports

Tips from the Fez: best practices using Splunk features and add-ons

- Understand security and deployment considerations for taking Splunk to an organizational level
- Who this book is for

This book is for the beginners who want to get well versed in the services offered by Splunk

7. If you want to be a data/business analyst or want to be a system administrator, this book is what you want. No prior knowledge of Splunk is required.

[Docker for Serverless Applications](#) - Chanwit Kaewkasi 2018-04-19

Build applications and infrastructures that leverage Function-as-a-Service and Docker

Key Features - Implement containerization in Serverless/FaaS

environments - Utilize Docker as a functional unit of work for Serverless/FaaS platforms - Use Docker as a portable infrastructure for Serverless Applications

Book Description Serverless applications have gained a lot of popularity among developers and are currently the buzzwords in the tech market. Docker and serverless are two terms that go hand-in-hand. This book will start by explaining serverless and Function-as-a-Service (FaaS) concepts, and why they are important. Then, it will introduce the concepts of containerization and how Docker fits into the Serverless ideology. It will explore the architectures and components of three major Docker-based FaaS platforms, how to deploy and how to use their CLI. Then, this book will discuss how to set up and operate a production-grade Docker cluster. We will cover all concepts of FaaS frameworks with practical use cases, followed by deploying and orchestrating these serverless systems using Docker. Finally, we will also explore advanced topics and prototypes for FaaS architectures in the last chapter. By the end of this book, you will be in a position to build and deploy your own FaaS platform using Docker. What you will learn

- Learn what Serverless and FaaS applications are
- Get acquainted with the architectures of three major serverless systems
- Explore how Docker technologies can help develop Serverless applications
- Create and maintain FaaS infrastructures
- Set up Docker infrastructures to serve as on-premises FaaS infrastructures
- Define functions for Serverless applications with Docker containers

Who this book is for If you are a Developer, a Docker Engineer, a DevOps Engineer, or any stakeholder interested in learning the use of Docker on Serverless environments then this book is for you.

[Openid Connect](#) - Matthias Biehl 2019-02-03

Signup and login with a Google, Yahoo, or Microsoft account can be found in more and more web and mobile apps. One login used by many, freeing the end-user from the burden of managing many accounts and passwords. Signup and login to a new app become so smooth and convenient, that end-users are

much more likely to try a new app. For us developers of web and mobile apps, these signup and login features are attractive, too: we do not need to manage user credentials, and we get a higher conversion rate resulting in more new customers. In effect, this means cutting costs and increasing the number of new customers for our apps. So how does this feature "Signup and login with Google, Yahoo, or Microsoft" work? It is realized with OpenID Connect, a standardized protocol for sharing end-user data in a secure and controlled manner. Exploring how OpenID Connect works, so we as developers can enjoy its benefits is the subject of this book. This book explains the overall concept of OpenID Connect, so we understand who the actors are, which endpoints and tokens are involved and how these elements interact in so-called flows. These flows tend to get confusing, so we visualize these flows as sequence diagrams, and show how to choose the flow that is appropriate for a given scenario. Using examples, we explore how the tokens are constructed, signed and encrypted with JWT, JWS, and JWE. This is not a programming book, don't expect implementations with a specific programming language or library. Instead, we focus on understanding OpenID Connect on a conceptual level, so we can design and architect apps that work with OpenID Connect. And OpenID Connect is the standard behind creating smooth login and signup experiences, increasing the customer signup rate, and creating highly converting apps.

Building Microservices with .NET Core - Gaurav Kumar Arora 2017-06-14
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.

Building Bots with Microsoft Bot Framework - Kishore Gaddam 2017-05-31

Build intelligent and smart conversational interfaces using Microsoft Bot Framework About This Book Develop various real-world intelligent bots from scratch using Microsoft Bot Framework Integrate your bots with most popular conversation platforms such as Skype, Slack, and Facebook Messenger Flaunt your bot building skills in your organization by thoroughly understanding and implementing the bot development concepts such as messages (rich text and pictures), dialogs, and third-party authentication and calling Who This Book Is For This book is for developers who are keen on building powerful services with great and interactive bot interface.

Experience with C# is needed. What You Will Learn Set up a development environment and install all the required software to get started programming a bot Publish a bot to Slack, Skype, and the Facebook Messenger platform Develop a fully functional weather bot that communicates the current weather in a given city Help your bot identify the intent of a text with the help of LUIS in order to make decisions Integrate an API into your bot development Build an IVR solution Explore the concept of MicroServices and see how MicroServices can be used in bot development Develop an IoT project, deploy it, and connect it to a bot In Detail Bots help users to use the language as a UI and interact with the applications from any platform. This book teaches you how to develop real-world bots using Microsoft Bot Framework. The book starts with setting up the Microsoft Bot Framework development environment and emulator, and moves on to building the first bot using Connector and Builder SDK. Explore how to register, connect, test, and publish your bot to the Slack, Skype, and Facebook Messenger platforms. Throughout this book, you will build different types of bots from simple to complex, such as a weather bot, a natural speech and intent processing bot, an

Interactive Voice Response (IVR) bot for a bank, a facial expression recognition bot, and more from scratch. These bots were designed and developed to teach you concepts such as text detection, implementing LUIS dialogs, Cortana Intelligence Services, third-party authentication, Rich Text format, Bot State Service, and microServices so you can practice working with the standard development tools such as Visual Studio, Bot Emulator, and Azure. Style and approach This step-by-step guide takes a learn-while-doing approach, delivering the practical knowledge and experience you need to design and build real-world Bots. The concepts come to you on an as-needed basis while developing a bot so you increase your programming knowledge and experience at the same time.

Data Engineering with Python - Paul Crickard 2020-10-23

Build, monitor, and manage real-time data pipelines to create data engineering infrastructure efficiently using open-source Apache projects Key Features Become well-versed in data architectures, data preparation, and data optimization skills with the help of practical examples Design data models and learn how to extract, transform, and load (ETL) data using Python Schedule, automate, and monitor complex data pipelines in production Book Description Data engineering provides the foundation for data science and analytics, and forms an important part of all businesses. This book will help you to explore various tools and methods that are used for understanding the data engineering process using Python. The book will show you how to tackle challenges commonly faced in different aspects of data engineering. You'll start with an introduction to the basics of data engineering, along with the technologies and frameworks required to build data pipelines to work with large datasets. You'll learn how to transform and clean data and perform analytics to get the most out of your data. As you advance, you'll discover how to work with big data of varying complexity and production databases, and build data pipelines. Using real-world examples, you'll build architectures

on which you'll learn how to deploy data pipelines. By the end of this Python book, you'll have gained a clear understanding of data modeling techniques, and will be able to confidently build data engineering pipelines for tracking data, running quality checks, and making necessary changes in production. What you will learn Understand how data engineering supports data science workflows Discover how to extract data from files and databases and then clean, transform, and enrich it Configure processors for handling different file formats as well as both relational and NoSQL databases Find out how to implement a data pipeline and dashboard to visualize results Use staging and validation to check data before landing in the warehouse Build real-time pipelines with staging areas that perform validation and handle failures Get to grips with deploying pipelines in the production environment Who this book is for This book is for data analysts, ETL developers, and anyone looking to get started with or transition to the field of data engineering or refresh their knowledge of data engineering using Python. This book will also be useful for students planning to build a career in data engineering or IT professionals preparing for a transition. No previous knowledge of data engineering is required.

[Learn Azure in a Month of Lunches, Second Edition](#) - Iain Foulds 2020-10-06

Learn Azure in a Month of Lunches, Second Edition, is a tutorial on writing, deploying, and running applications in Azure. In it, you'll work through 21 short lessons that give you real-world experience. Each lesson includes a hands-on lab so you can try out and lock in your new skills. Summary You can be incredibly productive with Azure without mastering every feature, function, and service. Learn Azure in a Month of Lunches, Second Edition gets you up and running quickly, teaching you the most important concepts and tasks in 21 practical bite-sized lessons. As you explore the examples, exercises, and labs, you'll pick up valuable skills immediately and take your

first steps to Azure mastery! This fully revised new edition covers core changes to the Azure UI, new Azure features, Azure containers, and the upgraded Azure Kubernetes Service. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Microsoft Azure is vast and powerful, offering virtual servers, application templates, and prebuilt services for everything from data storage to AI. To navigate it all, you need a trustworthy guide. In this book, Microsoft engineer and Azure trainer Iain Foulds focuses on core skills for creating cloud-based applications. About the book Learn Azure in a Month of Lunches, Second Edition, is a tutorial on writing, deploying, and running applications in Azure. In it, you'll work through 21 short lessons that give you real-world experience. Each lesson includes a hands-on lab so you can try out and lock in your new skills. What's inside Understanding Azure beyond point-and-click Securing applications and data Automating your environment Azure services for machine learning, containers, and more About the reader This book is for readers who can write and deploy simple web or client/server applications. About the author Iain Foulds is an engineer and senior content developer with Microsoft. Table of Contents PART 1 - AZURE CORE SERVICES 1 Before you begin 2 Creating a virtual machine 3 Azure Web Apps 4 Introduction to Azure Storage 5 Azure Networking basics PART 2 - HIGH AVAILABILITY AND SCALE 6 Azure Resource Manager 7 High availability and redundancy 8 Load-balancing applications 9 Applications that scale 10 Global databases with Cosmos DB 11 Managing network traffic and routing 12 Monitoring and troubleshooting PART 3 - SECURE BY DEFAULT 13 Backup, recovery, and replication 14 Data encryption 15 Securing information with Azure Key Vault 16 Azure Security Center and updates PART 4 - THE COOL STUFF 17 Machine learning and artificial intelligence 18 Azure Automation 19 Azure containers 20 Azure and the Internet of Things 21 Serverless computing