Practical Azure Application Development A Step By Step Approach To Build Feature Rich Cloud Ready Solutions

Developing Applications with Azure Active DirectoryWeb Applications on AzureAzure Automation Using the ARM ModelKubernetes: Up and RunningPractical Azure Application DevelopmentApplication Delivery and Load Balancing in Microsoft AzureHands-On Azure for DevelopersPractical Microsoft Azure IaaSXamarin Cross-platform Application Development - Second EditionAzure Serverless Computing Cookbook,Developing Cloud Native Applications in Azure using .NET CorePractical Automated Machine Learning on AzureBuilding Intelligent Cloud ApplicationsPractical Azure Application DevelopmentMicrosoft Azure Essentials - Fundamentals of AzureEnterprise Application Architecture with .NET CoreBuilding Cloud Apps with Microsoft AzureMicrosoft SQL Azure Enterprise Application DevelopmentBeginning Azure FunctionsUnlocking Blockchain on AzureLearning Node.js DevelopmentWindows Azure Step by StepBriggsMastering Azure Serverless ComputingPractical Bot DevelopmentPractical Azure SQL Database for Modern DevelopersMicrosoft SQL Azure Enterprise Application DevelopmentAzure Serverless Computing CookbookIntroducing Azure Kubernetes ServiceMicrosoft AzureMicrosoft Windows Azure Development Cookbook.NET DevOps for AzureMicrosoft Azure SQL Database Step by StepExam Ref 70-487 Developing Windows Azure and Web Services (MCSD)Practical Azure FunctionsBuilding Microservices Applications on Microsoft AzurePractical API Architecture and Development with Azure and AWSDesigning Distributed SystemsLearn Microsoft AzureCloud Architecture Patterns

Developing Applications with Azure Active Directory

Prepare for Microsoft Exam 70-487—and help demonstrate your real-world mastery of developing Windows Azure and web services. Designed for experienced developers ready to advance their status, Exam Ref focuses on the critical-thinking and decision-making acumen needed for success at the Microsoft Specialist level. Focus on the expertise measured by these objectives: Accessing data Querying and manipulating data by using the Entity Framework Designing and implementing WCF Services Creating and consuming Web API-based services Deploying web applications and services This Microsoft Exam Ref: Organizes its coverage by exam objectives. Features strategic, what-if scenarios to challenge you.

Web Applications on Azure

How do you start? How should you build a plan for cloud migration for your entire portfolio? How will your organization be affected by these changes? This book, based on real-world cloud experiences by enterprise IT teams, seeks to provide the answers to these questions. Here, you'll see what makes the cloud so compelling to enterprises; with which applications you should start your cloud journey; how your organization will change, and how skill sets will evolve; how to measure progress; how to think about security, compliance, and business buy-in; and how to exploit the ever-growing feature set that the cloud offers to gain strategic and

competitive advantage.

Azure Automation Using the ARM Model

Here is the expert-level, insider guidance you need on using Azure SQL Database as your back-end data store. This book highlights best practices in everything ranging from full-stack projects to mobile applications to critical, back-end APIs. The book provides instruction on accessing your data from any language and platform. And you learn how to push processing-intensive work into the database engine to be near the data and avoid undue networking traffic. Azure SQL is explained from a developer's point of view, helping you master its feature set and create applications that perform well and delight users. Core to the book is showing you how Azure SQL Database provides relational and post-relational support so that any workload can be managed with easy accessibility from any platform and any language. You will learn about features ranging from lock-free tables to columnstore indexes, and about support for data formats ranging from JSON and key-values to the nodes and edges in the graph database paradigm. Reading this book prepares you to deal with almost all data management challenges, allowing you to create lean and specialized solutions having the elasticity and scalability that are needed in the modern world. What You Will Learn Master Azure SQL Database in your development projects from design to the CI/CD pipeline Access your data from any programming language and platform Combine key-value, JSON, and relational data in the same database Push data-intensive compute work into the database for improved efficiency Delight your customers by detecting and improving poorly performing queries Enhance performance through features such as columnstore indexes and lock-free tables Build confidence in your mastery of Azure SQL Database's feature set Who This Book Is For Developers of applications and APIs that benefit from cloud database support, developers who wish to master their tools (including Azure SQL Database, and those who want their applications to be known for speedy performance and the elegance of their code

Kubernetes: Up and Running

Create highly scalable apps and monitor Azure functions in production using Azure Functions 2.0. This book takes you through durable functions for statefulness and covers not only the basics, but also how to create bindings in durable functions. It is a deep dive into the Azure Functions serverless API and will guide you through the process of converting monolithic applications to use Azure functions. The author starts by giving an overview of serverless architecture and Azure functions along with Azure App Services. You will then learn to create basic Azure functions using the Azure portal and Visual Studio. Next, you will create a serverless API using Azure Functions and migrate an existing application to Azure Functions. Finally, you will deploy an Azure function and monitor it in production. Here you will deploy the Azure function using ARM templates and secure and configure CORS for Azure functions. After reading this book, you will be able to understand Azure functions and create them using the Azure portal and Visual Studio. What You Will Learn Understand and use triggers and bindings in an Azure function Create a serverless API using Azure Functions and OpenAPI Deploy an Azure function and monitor it in production Understand durable Azure functions, including

scalability, disaster recovery, and geo-distribution Who This Book Is ForDevelopers who want to get started with Azure Functions. DevOps will also find value in the guidance for deploying and monitoring functions.

Practical Azure Application Development

Each chapter starts with a general overview reviewing the software architecture related information or the underpinning programming concepts followed by an example of working with specific examples. This is then followed by a description of the specific software used in the chapter. The topics that require you to write code are fully explained using annotations and the code is presented in both VB and C# (in most cases). If you are a .Net developer, an architect, or a DBA who wants to develop enterprise applications and projects and extend your on-site skills with SQL Azure, then this book is for you. This book does not assume experience in Windows Azure or SQL Azure, nor is a high level of competency in SQL Server or the .NET Framework and associated technology required. However, a basic understanding of Visual Studio, C#, VB, SQL Servers, XML, web and WCF is required. If you decide to work with SQL Azure, then this book will provide you with the most up to date and practical information.

Application Delivery and Load Balancing in Microsoft Azure

Learn the business and technical importance of API design and architecture using the available cloud services from Azure and AWS. This book starts off with an introduction to APIs and the concept of API Economy from a business and organizational perspective. You'll decide on a sustainable API strategy and API architecture based on different case scenarios. You'll then look at actual examples on API development guidelines, providing a practical view and approach towards the API development and aligning teams in API development. This book walks you through the API gateway services available in Azure and AWS and reviews different approaches to API Security. This will prepare you for understanding the trade-off between security and the frictionless API experience. What You'll Learn Implement API Gateways to streamline API Development Examine Security Mapping with API gateways from Azure and AWS Apply API implementation using Serverless architecture Review evolving APIs for monitoring and changing business requirements Use code samples in API security implementations Who This Book Is For Developers and architects with .NET and web development experience who want to learn about API design.

Hands-On Azure for Developers

Build enterprise-ready applications and projects with Microsoft SQL Azure using this book and eBook.

Practical Microsoft Azure IaaS

Gain practical skills with Azure and understand how to start developing scalable and easy-to-maintain cloud applications Key Features Get up and running with the development aspects of Azure cloud Build fault-tolerant and scalable applications

on Azure A practical, developer-centric guide for Azure developers Book Description Microsoft Azure is one of the fastest growing public cloud service providers in the market currently, and also holds the second highest market share after AWS. Azure has a sophisticated set of services that will help you build fault-tolerant and scalable cloud-based applications. Hands-On Azure for Developers will take you on a journey through multiple PaaS services available in Azure, including App Services, Functions, and Service Fabric, and explain in detail how to build a complete and reliable system with ease. You will learn about how to maximize your skills when building cloud-based solutions leveraging different SQL/NoSQL databases, serverless and messaging components, and even search engines such as Azure Search. In the concluding chapters, this book covers more advanced scenarios such as scalability best practices, serving static content with Azure CDN, and distributing loads with Azure Traffic Manager. By the end of the book, you will be able to build modern applications on the Azure cloud using the most popular and promising technologies, which will help make your solutions reliable, stable, and efficient. What you will learn Implement serverless components such as Azure functions and logic apps Integrate applications with available storages and containers Understand messaging components, including Azure Event Hubs and Azure Queue Storage Gain an understanding of Application Insights and other proper monitoring solutions Store your data with services such as Azure SQL and Azure Data Lake Storage Develop fast and scalable cloud applications Who this book is for Hands-On Azure for Developers is for developers who want to build highly scalable cloud-based applications on Azure. Prior knowledge of Azure services will be an added advantage.

Xamarin Cross-platform Application Development - Second Edition

Serverless computing is radically changing the way we build and deploy applications. With cloud providers running servers and managing machine resources, companies now can focus solely on the application’s business logic and functionality. This hands-on book shows experienced programmers how to build and deploy scalable machine learning and deep learning models using serverless architectures with Microsoft Azure. You’ll learn step-by-step how to code machine learning into your projects using Python and pre-trained models that include tools such as image recognition, speech recognition, and classification. You’ll also examine issues around deployment and continuous delivery including scaling, security, and monitoring. This book is divided into four parts: Cloud-based development: learn the basics of serverless computing with machine learning, functions as a service (FaaS), and the use of APIs Adding intelligence: create serverless applications using Azure Functions; learn how to use pre-built machine-learning and deep-learning models Deployment and continuous delivery: get up to speed with Azure Kubernetes Service, as well as Azure Security Center, and Azure Monitoring Application examples: deliver data at the edge, build conversational interfaces, and use convolutional neural networks for image classification

Azure Serverless Computing Cookbook,

Kubernetes radically changes the way applications are built and deployed in the

cloud. Since its introduction in 2014, this container orchestrator has become one of the largest and most popular open source projects in the world. The updated edition of this practical book shows developers and ops personnel how Kubernetes and container technology can help you achieve new levels of velocity, agility, reliability, and efficiency. Kelsey Hightower, Brendan Burns, and Joe Beda—who've worked on Kubernetes at Google and beyond—explain how this system fits into the lifecycle of a distributed application. You'll learn how to use tools and APIs to automate scalable distributed systems, whether it's for online services, machine learning applications, or a cluster of Raspberry Pi computers. Create a simple cluster to learn how Kubernetes works Dive into the details of deploying an application using Kubernetes Learn specialized objects in Kubernetes, such as DaemonSets, jobs, ConfigMaps, and secrets Explore deployments that tie together the lifecycle of a complete application Get practical examples of how to develop and deploy real-world applications in Kubernetes

Developing Cloud Native Applications in Azure using .NET Core

In the race to compete in today's fast-moving markets, large enterprises are busy adopting new technologies for creating new products, processes, and business models. But one obstacle on the road to digital transformation is placing too much emphasis on technology, and not enough on the types of processes technology enables. What if different lines of business could build their own services and applications—and decision-making was distributed rather than centralized? This report explores the concept of a digital business platform as a way of empowering individual business sectors to act on data in real time. Much innovation in a digital enterprise will increasingly happen at the edge, whether it involves business users (from marketers to data scientists) or IoT devices. To facilitate the process, your core IT team can provide these sectors with the digital tools they need to innovate quickly. This report explores: Key cultural and organizational changes for developing business capabilities through cross-functional product teams A platform for integrating applications, data sources, business partners, clients, mobile apps, social networks, and IoT devices Creating internal API programs for building innovative edge services in low-code or no-code environments Tools including Integration Platform as a Service, Application Platform as a Service, and Integration Software as a Service The challenge of integrating microservices and serverless architectures Event-driven architectures for processing and reacting to events in real time You'll also learn about a complete pervasive integration solution as a core component of a digital business platform to serve every audience in your organization.

Practical Automated Machine Learning on Azure

Implement rich Azure SAAS-PAAS-IAAS ecosystems using containers, serverless services, and storage solutions DESCRIPTION Book explains Azure services offerings to advance resource creation to see how all the moving parts go together. It walks through various cloud development tools which will speed our development process. Books majorly covers practical information to get you started to a Proficient level and towards cloud mindset Azure Cloud offers enormous services to solve your problem in this modern world. Microsoft Azure has Web, Mobile, Big Data, IoT, AI + Machine Learning, Storage, Database, and so on.

We will be going through some of these available services to solve our business problem in this book. If you are a .NET developer who wants to learn Microsoft Azure and want to have cloud mindset, this book is for you. Cloud application development requires a Cloud mindset. Cloud mindset is developed by gradually going through all the available services provided by Microsoft Azure and using the best fit solution for your problem. “If you are C# DEVELOPER who wants to start with Azure, then this book is for you." KEY FEATURES This book starts from basic fundamentals and takes you to a professional level. Books emphasizes on real life project use case and in-depth implementation. Books starts right from scratch with creation of Azure account to manually creating Azure resources and deploying them. Exclusive topics are dedicated for Azure Web App, Web Job, Cloud Service (Web Role, Worker Role), Azure functions. All practical implementation of Azure services (PASS, Server less computing) are covered. WHAT WILL YOU LEARN Azure and Services Offered for .NET Developers To create Free Azure Account and Web App Service on Azure Creating and Deploying a Sample ASP.NET Core on Azure Web App. Creating and Running a Background Job with help of Web Jobs on Azure Creating and Running a Service Bus Triggered Web Jobs on Azure to send mail to the Customer using Send Grid Creating your first Cloud Service app on Azure WHO THIS BOOK IS FOR Students of Polytechnic Diploma Classes- Computer Science/ Information Technology Graduate Students- Computer Science/ CSE / IT/ Computer Applications Master Class Students—Msc (CS/IT)/ MCA/ M.Phil, M.Tech, M.S. .NET developer, C# developer Table of Contents 1. The Era of Data Center 2. Abstract 3. Introduction Day 1: Understanding Azure and Services Offered for .NET Developers Day 2: Creating your Free Azure Account and Create Your First Web App Service on Azure Day 3: Creating and Deploying a Sample ASP.NET Core on Azure Web App. Day 4: Creating and Running a Background Job with help of Web Jobs on Azure Day 5: Creating and Running a Service Bus Triggered Web Jobs on Azure to send mail to the Customer using Send Grid Day 6: Creating your first Cloud Service app on Azure Day 7: Logic/Function as a Service Often Termed has Serverless Computing, Creating your First Azure Function on Microsoft Azure References

Building Intelligent Cloud Applications

Become an expert in implementing Azure Functions to work seamlessly with your serverless applications Key Features Develop scalable, robust multi-tier apps without worrying about infrastructure needs Deploy and manage cost-effective and highly available serverless apps using Azure Functions Accelerate enterprise-level application development by seamlessly integrating different cloud services with Azure Functions Book Description Application development has evolved from traditional monolithic app development to using serverless options and microservices. This book is designed to guide you through using Microsoft's Azure Functions to process data, integrate systems, and build simple APIs and microservices. You will discover how to apply serverless computing to speed up deployment and reduce downtime. You'll also explore Azure Functions, including its core functionalities and essential tools, along with understanding how to debug and even customize Azure Functions. In addition to this, the book will take you through how you can effectively implement DevOps and automation in your working environment. Toward the concluding chapters, you'll cover some quick tips, troubleshooting techniques, and real-world serverless use cases that will help you make the most of serverless computing. By the end of this book, you will have

gained the skills you need to develop and deliver cost-effective Azure serverless solutions. What you will learn Create and deploy advanced Azure Functions Learn to extend the runtime of Azure Functions Orchestrate your logic through code or a visual workflow Add caching, security, routing, and filtering to your APIs Use serverless technologies in real-world scenarios Understand how to apply DevOps and automation to your working environment Who this book is for This book is designed for cloud administrators, architects, and developers interested in building scalable systems and deploying serverless applications with Azure Functions. Prior knowledge of core Microsoft Azure services and Azure Functions is necessary to understand the topics covered in this book.

Practical Azure Application Development

Do you need to learn about cloud computing architecture with Microsoft's Azure quickly? Read this book! It gives you just enough info on the big picture and is filled with key terminology so that you can join the discussion on cloud architecture.

Microsoft Azure Essentials - Fundamentals of Azure

Explore tools for integrating resources and applications with Azure Active Directory for authentication and authorization. This book starts with an introduction to Azure Active Directory (AAD) where you will learn the core concepts necessary to understand AAD and authentication in general. You will then move on to learn OpenID Connect and OAuth along with its flows, followed by a deep dive into the integration of web applications for user-based authentication. Next, you go through user authentication and how to enable the integration of various native applications with AAD. This is followed by an overview of authenticating applications along with a detailed discussion on collaboration with external users and other AD tenants. Moving forward, Developing Applications with Azure Active Directory covers using schemas of AD objects, such as users, to add custom attributes on top of ADD’s predefined attributes. You will see how multi-tenancy can be supported in Azure AD as well as how to design authorization with Azure AD. After reading this book, you will be able to integrate, design, and develop authentication and authorization techniques in Azure Active Directory. What You Will Learn Integrate applications with Azure AD for authentication Explore various Azure AD authentication scenarios Master core Azure AD concepts Integrate external users and tenants Who is this book for: The book will be useful for architects and developers, planning to use Azure AD for authentication.

Enterprise Application Architecture with .NET Core

Design, architect, and build Blockchain applications with Azure in industrial scenarios to revolutionize conventional processes and data security. This book will empower you to build better decentralized applications that have stronger encryption, better architectures, and effective deployment structures over the cloud. You’ll start with an overview of Blockchain, distributed networks, Azure components in Blockchain, such as Azure Workbench, and independent Blockchain-as-a-service solutions. Next, you’ll move on to aspects of Blockchain transactions

where the author discusses encryption and distribution along with practical examples. You'll cover permissioned Blockchains and distributed ledgers with the help of use cases of financial institutions, followed by code and development aspects of smart contracts. Here, you will learn how to utilise the templates provided by Azure Resource Manager to quickly develop an Ethereum-based smart contract. Further, you will go through Blockchain points of integration, where the author demonstrates enterprise integration, automated processing of smart contracts, and lifecycle events. Finally, you will go through every deployment of HyperLedger, Ethereum, and other decentralized ledger examples over Azure, thus understanding the elements of creation, design, development, security, and deployment. After reading Unlocking Blockchain on Azure you will be able to design and develop Blockchain applications in Azure to decentralize social networks, financial organisations, and data. You'll be able to implement encryption over a Blockchain and have full control over shared instances digitally. You will be able to program smart contracts to digitize rules and trigger timely transactions. What You Will Learn Build decentralized applications Program, design, and deploy dynamic smart contracts Model Blockchains in the form of token economics, hybrid networks, and infrastructure Develop end-to-end encryption and distributed systems Who This Book Is For Developers and solutions architects who want to develop Blockchain applications in Azure and decentralize applications in different scenarios.

Building Cloud Apps with Microsoft Azure

Get started and learn a step-by-step approach to application development using Microsoft Azure. Select the right services to solve the problem at hand in a cost-effective manner and explore the many services designed to help you in building enterprise applications. This new edition covers Azure PaaS and serverless cloud native solutions and gives you the holistic approach to Azure as a solutions development platform. It discusses recent developments in cloud applications and architecture such as the modern application development landscape and serverless middleware. You will learn about web application development in Azure PaaS with modern JavaScript. Since the last edition was based on the legacy .NET Framework, Practical Azure Application Development has been updated with significant ASP.NET Core changes. Also new in this edition: production-ready setup with traffic flow and configuration of the application with production-ready features. Finally, you'll cover extended architecture patterns to see how you can integrate additional services with the application. After reading this book, you will be able to build complete business solutions on Azure using different services. What You Will Learn Discover end-to-end solution design and development in Azure Integrate additional services with the application Understand the basics of security, data protection, and cost controls in Azure Who This Book Is For Developers and architects who have experience in .NET and web development, but have little or no knowledge in planning and developing an application on Azure.

Microsoft SQL Azure Enterprise Application Development

If you are a developer with experience in C# and are just getting into mobile development, this is the book for you. If you have experience with desktop applications or the Web, this book will give you a head start on cross-platform

development.

Beginning Azure Functions

This ebook walks you through a patterns-based approach to building real-world cloud solutions. The patterns apply to the development process as well as to architecture and coding practices. The content is based on a presentation developed by Scott Guthrie and delivered by him at the Norwegian Developers Conference (NDC) in June of 2013 (part 1, part 2), and at Microsoft Tech Ed Australia in September 2013 (part 1, part 2). Many others updated and augmented the content while transitioning it from video to written form. Who should read this book Developers who are curious about developing for the cloud, are considering a move to the cloud, or are new to cloud development will find here a concise overview of the most important concepts and practices they need to know. The concepts are illustrated with concrete examples, and each chapter includes links to other resources that provide more in-depth information. The examples and the links to additional resources are for Microsoft frameworks and services, but the principles illustrated apply to other web development frameworks and cloud environments as well. Developers who are already developing for the cloud may find ideas here that will help make them more successful. Each chapter in the series can be read independently, so you can pick and choose topics that you're interested in. Anyone who watched Scott Guthrie's "Building Real World Cloud Apps with Windows Azure" presentation and wants more details and updated information will find that here. Assumptions This ebook expects that you have experience developing web applications by using Visual Studio and ASP.NET. Familiarity with C# would be helpful in places.

Unlocking Blockchain on Azure

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.

Learning Node.js Development

Build .NET apps on Microsoft Azure services that can grow to Internet scale. Learn how you can make smart application architecture decisions and follow best practices so that your website can handle tens of thousands of concurrent users and deliver your content globally. Author Rob Reagan takes you through key Azure technologies targeted toward building web applications, and along the way shares his lessons learned in scaling out a real-world web application. After an overview of web application building blocks, the book dives into relational and NoSQL data

storage options on Azure, including Azure Table Storage and CosmosDB. You'll then discover how to make best use of Redis Cache, Web Jobs, Messaging Queues, and more, alongside other tips, tricks, and troubleshooting advice for when things go wrong. The book concludes with a thorough exploration of best practices for deployment at scale. What You'll Learn Develop scalable architecture patterns on Azure with ASP.NET MVC Understand the pros and cons of using SQL Azure vs. NoSQL solutions (Azure Tables, CosmosDB) Perform data migration, backup, and recovery in SQL Azure Use effective caching Troubleshoot your web applications Know best practices for deployment Who This Book Is For Professional developers or serious hobbyists with experience developing web applications with ASP.NET MVC or Web API

Windows Azure Step by Step

Use this book as your one-stop shop for architecting a world-class DevOps environment with Microsoft technologies. .NET DevOps for Azure is a synthesis of practices, tools, and process that, together, can equip a software organization to move fast and deliver the highest quality software. The book begins by discussing the most common challenges faced by developers in DevOps today and offers options and proven solutions on how to implement DevOps for your team. Daily, millions of developers use .NET to build and operate mission-critical software systems for organizations around the world. While the marketplace has scores of information about the technology, it is completely up to you to put together all the blocks in the right way for your environment. This book provides you with a model to build on. The relevant principles are covered first along with how to implement that part of the environment. And while variances in tools, language, or requirements will change the needed implementation, the DevOps model is the architecture for the working environment for your team. You can modify parts of the model to customize it to your enterprise, but the architecture will enable all of your teams and applications to accelerate in performance. What You Will Learn Get your .NET applications into a DevOps environment in Azure Analyze and address the part of your DevOps process that causes delays or bottlenecks Track code using Azure Repos and conduct acceptance tests Apply the rules for segmenting applications into Git repositories Understand the different types of builds and when to use each Know how to think about code validation in your DevOps environment Provision and configure environments; deploy release candidates across the environments in Azure Monitor and support software that has been deployed to a production environment Who This Book Is For .NET Developers who are using or want to use DevOps in Azure but don't know where to begin

Briggs

Provides information on developing cloud-based applications on the Windows Azure Platform.

Mastering Azure Serverless Computing

Over 50 practical recipes that will help you develop and deliver high-quality and reliable cloud-centric Azure serverless applications for your organization Key

Features Leverage practical use cases to build a robust serverless environment Enhance Azure Functions with continuous deployment using Visual Studio Team Services Deploy and manage cost-effective and highly available serverless applications using Azure Functions Book Description Microsoft provides a solution for easily running small segments of code in the cloud with Azure Functions. The second edition of Azure Serverless Computing Cookbook starts with intermediate-level recipes on serverless computing along with some use cases demonstrating the benefits and key features of Azure Functions. You'll explore 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. As you make your way through the chapters, you'll get practical recipes on integrating DevOps with Azure Functions, and providing continuous integration and continuous deployment with Azure DevOps. This book also provides hands-on, step-by-step tutorials based on real-world serverless use cases to guide you through configuring and setting up your serverless environments with ease. You will also learn how to build solutions for complex, real-world, workflow-based scenarios quickly and with minimal code using Durable Functions. In the concluding chapters, you will ensure enterprise-level security within your serverless environment. The most common tips and tricks that you need to be aware of when working with Azure Functions on production environments will also be covered in this book. By the end of this book, you will have all the skills required for working with serverless code architecture, providing continuous delivery to your users. What you will learn Integrate Azure Functions with other Azure services Understand cloud application development using Azure Functions Employ durable functions for developing reliable and durable serverless applications Use SendGrid and Twilio services Explore code reusability and refactoring in Azure Functions Configure serverless applications in a production 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 the Azure Serverless Computing Cookbook is for you. Hands-on experience with Microsoft Azure core services is required.

Practical Bot Development

Develop smart applications without spending days and weeks building machine-learning models. With this practical book, you'll learn how to apply automated machine learning (AutoML), a process that uses machine learning to help people build machine learning models. Deepak Mukunthu, Parashar Shah, and Wee Hyong Tok provide a mix of technical depth, hands-on examples, and case studies that show how customers are solving real-world problems with this technology. Building machine-learning models is an iterative and time-consuming process. Even those who know how to create ML models may be limited in how much they can explore. Once you complete this book, you'll understand how to apply AutoML to your data right away. Learn how companies in different industries are benefiting from AutoML Get started with AutoML using Azure Explore aspects such as algorithm selection, auto featurization, and hyperparameter tuning Understand how data analysts, BI professions, developers can use AutoML in their familiar tools and experiences Learn how to get started using AutoML for use cases including classification, regression, and forecasting.

Practical Azure SQL Database for Modern Developers

Adopt Azure IaaS and migrate your on-premise infrastructure partially or fully to Azure. This book provides practical solutions by following Microsoft's design and best practice guidelines for building highly available, scalable, and secure solution stacks using Microsoft Azure IaaS. The author starts by giving an overview of Azure IaaS and its components: you'll see the new aspects of Azure Resource Manager, storage in IaaS, and Azure networking. As such, you'll cover design considerations for migration and implementation of infrastructure services, giving you practical skills to apply to your own projects. The next part of the book takes you through the different components of Azure IaaS that need to be included in a resilient architecture and how to set up a highly available infrastructure in Azure. The author focuses on the tools available for Azure IaaS automated provisioning and the different performance monitoring and fine-tuning options available for the platform. Finally, you'll gain practical skills in Azure security and implementing Azure architectures. After reading Practical Microsoft Azure IaaS, you will have learned how to map the familiar on-premise architecture components to their cloud infrastructure counterparts. This book provides a focused and practical approach to designing solutions to be hosted in Azure IaaS. What You Will Learn Map the key Azure components to familiar concepts in infrastructure, such as virtualization, storage provisioning, switching, and firewalls Implement Azure IaaS deployment architectures Design IaaS environments in line with the Microsoft recommended best practices for scalability, resiliency, availability, performance, and security Manage the operational aspects of hosted environments, leverage automation, and fine tune for optimal performance Who This Book Is For Infrastructure and solution architects with skills in on-premise infrastructure design who want to up-skill in Azure IaaS.

Microsoft SQL Azure Enterprise Application Development

A comprehensive, easy-to-follow guide to creating complete Node apps and understanding how to build, deploy, and test your own apps. Key Features Entirely project-based and practical Explains the "Why" of Node.js features, not just the "how", providing you with a deep understanding and enabling you to easily apply concepts in your own applications Covers the full range of technologies around Node.js – NPM, version control with Git, and much more Book Description Learning Node.js Development is a practical, project-based book that provides you with all you need to get started as a Node.js developer. Node is a ubiquitous technology on the modern web, and an essential part of any web developers' toolkit. If you are looking to create real-world Node applications, or you want to switch careers or launch a side project to generate some extra income, then you're in the right place. This book has been written around a single goal—turning you into a professional Node developer capable of developing, testing, and deploying real-world production applications. Learning Node.js Development is built from the ground up around the latest version of Node.js (version 9.x.x). You'll be learning all the cutting-edge features available only in the latest software versions. This book cuts through the mass of information available around Node and delivers the essential skills that you need to become a Node developer. It takes you through creating complete apps and understanding how to build, deploy, and test your own Node apps. It maps out everything in a comprehensive, easy-to-follow package designed to get you up and running quickly. What you will learn Learn the

fundamentals of Node Build apps that respond to user input Master working with servers Learn how to test and debug applications Deploy and update your apps in the real world Create responsive asynchronous web applications Who this book is for This book targets anyone looking to launch their own Node applications, switch careers, or freelance as a Node developer. You should have a basic understanding of JavaScript in order to follow this course.

Azure Serverless Computing Cookbook

Explore the concept of bots and discover the motivation behind working with these new apps with messaging platforms. This book is an accessible resource teaching the basic concepts behind bot design and implementation. Each chapter builds on previous topics and, where appropriate, real working code is shown that implements the concepts. By just picking up a code editor, you can start creating smart, engaging, and useful bot experiences today. Practical Bot Development will teach you how to create your own bots on platforms like Facebook Messenger and Slack, incorporate extension APIs, and apply AI and ML algorithms in the cloud. By the end of this book, you'll be equipped with the information to reach thousands of new users with the bots you create! The book is a great resource for those looking to harness the benefits of building their own bots and leveraging the platform feasibility of them. What You'll Learn Understand the general architecture of a bot Distinguish between a great bot experience versus a bad bot experience. Explore the ideas behind natural language processing and apply them to bot development Implement real Messenger, Slack, and custom channel bots using Node.js and the Microsoft Bot Builder framework Deploy bots to Facebook Messenger and Slack Who This Book Is For Engineers, hobbyists, and the design oriented community looking looking for an introduction to the technologies and concepts involved in building bots. The experience level could be from beginner to expert, although some familiarity with Node.js and APIs will be assumed.

Introducing Azure Kubernetes Service

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.

Microsoft Azure

Guide to designing and developing cloud native applications in Azure DESCRIPTION The mainstreaming of Cloud Native Architecture as an enterprise discipline is well underway. According to the Forbes report in January 2018, 83% of the enterprise workloads will be in the cloud by 2020 and 41% of the enterprise workloads will run on public cloud platforms, while another 22% will be running on hybrid cloud platforms. Customers are embarking on the enterprise digital transformation journeys. Adopting cloud and cloud native architectures and microservices is an important aspect of the journey. This book starts with a brief introduction on the basics of cloud native applications, cloud native application patterns. Then it covers the cloud native options available in Azure. The objective of the book is to provide practical guidelines to an architect/designer/consultant/developer, who is a part of the Cloud application definition Team. The book articulates a methodology that the implementation team needs to follow in a step-by-step manner and adopt them to fulfil the requirements for enablement of the Cloud Native application. It emphasizes on the interpersonal skills and techniques for organizing and directing the Cloud Native definition, leadership buy-in, leading the transition from planning to implementation. It also highlights the steps to be followed for performing the cloud native applications, cloud native patterns in the development of Cloud native applications, Cloud native options available in Azure, Developing BOT, Microservices based on Azure. It also covers how to develop simple IoT applications, Machine learning based applications, server less architecture, using Azure with a practical and pragmatic approach. This book embraces a structured approach organized around the following key themes, which represent the typical phases that an enterprise traverses during its Cloud Native application journey: ● Basics of Cloud Native Applications: It covers basics of cloud native applications using .NET core. ● Cloud Native Application Patterns: The reader will understand the patterns for developing Cloud Native Applications. ● Cloud Native Options available in Azure: The reader will understand the different options available in Azure. ● Developing a Simple BOT using .NET Core: The reader will understand the

Azure BOT framework basics and will learn how to develop a simple BOT. ● Developing cloud native applications leveraging Microservices: The reader will understand the concepts of developing micro services using the Azure API Gateway Manager. ● Developing Integration capabilities using serverless architecture: The reader will understand the integration capabilities and various options available in Azure ● Developing a simple IoT application: The reader will understand the basics of developing IoT applications. ● Developing a simple ML based application: The reader will understand Machine Learning basics and how to develop a simple ML application ● Different enterprise use cases, which enable digital transformation using the Cloud Native Applications: The reader will learn about different use cases that can be built using cloud native applications KEY FEATURES (Add 5-7 key features only) ● Basics of Cloud Native Applications ● Designing Microservices ● Different cloud native options for developing Cloud Native Applications in Azure ● BOTs, Web Apps, Mobile Apps, Logic Apps, Service Bus, Azure Functions ● Azure IOT Applications ● Azure Machine Learning Basics ● Enterprise Digital Journeys WHAT WILL YOU LEARN This book aims to: ● Demonstrate the importance of a Cloud Native application in elevating the effectiveness of organizational transformation programs and digital enterprise journeys, using MS Azure ● Disseminate current advancements and thought leadership in the area of Cloud Native architecture, in the context of digital enterprises ● Provide initiatives with evidence-based, credible, field tested and practical guidance in crafting their respective architectures; and ● Showcase examples and experiences of the innovative use of Cloud Native Applications in enhancing transformation initiatives. WHO THIS BOOK IS FOR The book is intended for anyone looking for a career in Cloud technology, all aspiring Cloud Architects who want to learn Cloud Native Architectures, Microservices, IoT, BoT and Microsoft Azure platform and working professionals who want to switch their career in Cloud Technology. While no prior knowledge of Azure or related technologies is assumed, it will be helpful to have some .Net programming experience. In addition, the target audience of this book are, ● Business Leaders, Chief Architects, Analysts and Designers seeking better, quicker and easier approaches to respond to needs of their internal and external customers; ● CIOs/CTOs of business software companies interested in incorporating Cloud Native architecture to differentiate their products and services offerings and increasing the value proposition to their customers; ● Consultants and practitioners desirous of new solutions and technologies to improve productivity of their clients; ● Academic and consulting researchers looking to uncover and characterize new research problems and programmes ● Practitioners and professionals involved with organizational technology strategic planning, technology procurement, management of technology projects, consulting and advising on technology issues and management of total cost of ownership. Table of Contents 1. Basics of Cloud Native Applications 2. Cloud Native Application Patterns 3. Cloud Native Options available in Azure – BOTs, Logic Apps, Service Bus, Azure Microservices, ML services 4. Developing a Simple BOT using .NET Core 5. Developing Cloud Native applications leveraging Microservices and Azure API Gateway 6. Developing Integration capabilities using serverless architecture 7. Developing a simple IoT application 8. Developing a simple ML based application 9. Different enterprise use cases which enable digital transformation using Cloud Native Applications

Microsoft Windows Azure Development Cookbook

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 statefulserverless applications and also self-healing jobs using DurableFunctions 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 continous 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.

.NET DevOps for Azure

Get started and learn a step-by-step approach to application development using Microsoft Azure. Select the right services to solve the problem at hand in a cost-effective manner and explore the potential different services and how they can help in building enterprise applications. Azure has an ample amount of resources and tutorials, but most of them focus on specific services and explain those services on their own and in a given context. Practical Azure Application Development focuses on building complete solutions on Azure using different services. This book gives you the holistic approach to Azure as a solutions development platform. This book: Covers Azure as a solution development

platform for building applications Provides real-world examples to understand why and when an Azure service is required Discusses how Azure helps to achieve continuous improvement and expansion of an application Provides application development experience from purchasing Azure to integrating with core Azure services, including an introduction to DevOps with VSTS What You'll Learn Use Azure services to solve real-world software problems Define the usage of Azure services and select the right services to solve the problem at hand Make clear and less ambiguous decisions about using different Azure services Take a holistic approach to Azure as a solution platform Understand the basics of security, data protection, and cost controls in Azure Who This Book Is For Developers, software engineers, and architects who have experience in .NET and web development, but have little or no knowledge in planning and developing an application on Azure

Microsoft Azure SQL Database Step by Step

With more and more companies moving on-premises applications to the cloud, software and cloud solution architects alike are busy investigating ways to improve load balancing, performance, security, and high availability for workloads. This practical book describes Microsoft Azure's load balancing options and explains how NGINX can contribute to a comprehensive solution. Cloud architects Derek DeJonghe and Arlan Nugara take you through the steps necessary to design a practical solution for your network. Software developers and technical managers will learn how these technologies have a direct impact on application development and architecture. While the examples are specific to Azure, these load balancing concepts and implementations also apply to cloud providers such as AWS, Google Cloud, DigitalOcean, and IBM Cloud. Understand application delivery and load balancing--and why they're important Explore Azure's managed load balancing options Learn how to run NGINX OSS and NGINX Plus on Azure Examine similarities and complementing features between Azure-managed solutions and NGINX Use Azure Front Door to define, manage, and monitor global routing for your web traffic Monitor application performance using Azure and NGINX tools and plug-ins Explore security choices using NGINX and Azure Firewall solutions

Exam Ref 70-487 Developing Windows Azure and Web Services (MCSD)

Implement microservices starting with their architecture and moving on to their deployment, manageability, security, and monitoring. This book focuses on the key scenarios where microservices architecture is preferred over a monolithic architecture. Building Microservices Applications on Microsoft Azure begins with a survey of microservices architecture compared to monolithic architecture and covers microservices implementation in detail. You'll see the key scenarios where microservices architecture is preferred over a monolithic approach. From there, you will explore the critical components and various deployment options of microservices on platforms such as Microsoft Azure (public cloud) and Azure Stack (hybrid cloud). This includes in-depth coverage of developing, deploying, and monitoring microservices on containers and orchestrating with Azure Service Fabric and Azure Kubernetes Cluster (AKS). This book includes practical experience from large-scale enterprise deployments, therefore it can be a quick reference for

solution architects and developers to understand the critical factors while designing a microservices application. What You Will Learn Explore the use cases of microservices and monolithic architecture Discover the architecture patterns to build scalable, agile, and secure microservices applications Develop and deploy microservices using Azure Service Fabric and Azure Kubernetes Service Secure microservices using the gateway pattern See the deployment options for Microservices on Azure Stack Implement database patterns to handle the complexities introduced by microservices Who This Book Is For Architects and consultants who work on Microsoft Azure and manage large-scale deployments.

Practical Azure Functions

Focus exclusively on the Azure Resource Manager (ARM) deployment model for Azure automation and gain in-depth knowledge of topics such as runbook authoring, different types of automation runbooks, and hybrid cloud automation. This book covers practical approaches to creating runbooks for multiple use cases, including operational tasks such as VM management and integration of Azure automation with infrastructure monitoring solutions, such as Operations Management Suite (OMS). Along the way you'll see how to use PowerShell in Azure automation and cover essentials including Azure automation security, source control integration, and runbook output streams. Finally, you learn about integrating Azure automation with Desired State Configuration (DSC) to include various cloud, on-premise, and hybrid scenarios. What You Will Learn · Work with the building blocks of Azure automation · Create different types of runbook · Master hybrid cloud automation with ARM · Implement cloud automation use cases with practical examples Who This Book Is For Infrastructure and cloud architects, cloud support engineers, and system administrators.

Building Microservices Applications on Microsoft Azure

Your hands-on guide to Azure SQL Database fundamentals Expand your expertise—and teach yourself the fundamentals of Windows Azure SQL Database. If you have previous programming experience but are new to Azure, this tutorial delivers the step-by-step guidance and coding exercises you need to master core topics and techniques. Discover how to: Perform Azure setup and configuration Explore design and security considerations Use programming and reporting services Migrate data Backup and sync data Work with scalability and high performance Understand the differences between SQL Server and Windows Azure SQL Database

Practical API Architecture and Development with Azure and AWS

Start developing Azure Functions and building simple solutions for serverless computing without worrying about infrastructure. With the increased need for deploying serverless computing, Azure Functions integrates with other Azure resources. This book is a quick reference and consists of a practical and problem-driven approach with the latest technology. Guided by step-by-step explanations and sample projects, you'll set up, build, and deploy Azure Functions to get the

most out of this compute-on-demand service. After a foundational introduction to Azure Functions you'll prepare a development environment to serve and process an IoT Telemetry system, create Microservices, and monitor Azure Functions services to get application insights. What You'll Learn Review the Interaction between Azure Functions and Azure data services Apply Azure Functions in web applications and build interaction systems for mobile applications Develop a serverless micro-service Serve and process IoT Telemetry systems Monitor Azure Functions services and get application insights Who This Book Is For Developers, students, professionals and anyone interested in Azure Function technology and the Azure platform.

Designing Distributed Systems

Over 80 advanced recipes for developing scalable services with the Windows Azure platform.

Learn Microsoft Azure

Go from zero to sixty deploying and running a Kubernetes cluster on Microsoft Azure! This hands-on practical guide to Microsoft's Azure Kubernetes Service (AKS), a managed container orchestration platform, arms you with the tools and knowledge you need to easily deploy and operate on this complex platform. Take a journey inside Docker containers, container registries, Kubernetes architecture, Kubernetes components, and core Kubectl commands. Drawing on hard-earned experience in the field, the authors provide just enough theory to help you grasp important concepts, teaching the practical straightforward knowledge you need to start running your own AKS cluster. You will dive into topics related to the deployment and operation of AKS, including Rancher for management, security, networking, storage, monitoring, backup, scaling, identity, package management with HELM, and AKS in CI/CD. What You Will Learn Develop core knowledge of Docker containers, registries, and Kubernetes Gain AKS skills for Microsoft's fastest growing services in the cloud Understand the pros and cons of deploying and operating AKS Deploy and manage applications on the AKS platform Use AKS within a DevOps CI/CD process Who This Book Is For IT professionals who work with DevOps, the cloud, Docker, networking, storage, Linux, or Windows. Experience with cloud, DevOps, Docker, or application development is helpful.

Cloud Architecture Patterns

Straight talking advice on how to design and build enterprise applications for the cloud using Microsoft Azure with this book and eBook.