Devops On The Microsoft Stack

Eventually, you will utterly discover a supplementary experience and capability by spending more cash. still when? complete you understand that you require to acquire those all needs past having significantly cash? Why dont you attempt to acquire something basic in the beginning? Thats something that will guide you to understand even more roughly the globe, experience, some places, in the same way as history, amusement, and a lot more?

It is your unconditionally own time to exploit reviewing habit. in the midst of guides you could enjoy now is **Devops On The Microsoft Stack** below.

Software Architecture with C# 10 and .NET 6 Gabriel Baptista 2022-03-15 Design scalable and high-performance enterprise applications using the latest features of C# 10 and .NET 6 Key FeaturesGain comprehensive software architecture knowledge and the skillset to create fully modular appsSolve scalability problems in web apps using enterprise architecture patternsMaster new developments in front-end architecture and the application of AI for software architectsBook Description Software architecture is the practice of implementing structures and systems that streamline the software development process and improve the quality of an app. This fully revised and expanded third edition, featuring the latest features of .NET 6 and C# 10, enables you to acquire the key skills, knowledge, and best practices required to become an effective software architect. Software Architecture with C# 10 and .NET 6, Third Edition features new chapters that describe the importance of the software architect, microservices with ASP.NET Core, and analyzing the architectural aspects of the front-end in the applications, including the new approach of .NET MAUI. It also includes a new chapter focused on providing a short introduction to artificial intelligence and machine learning using ML.NET, and updated chapters on Azure Kubernetes Service, EF Core, and Blazor. You will begin by understanding how to transform user requirements into architectural needs and exploring the differences between functional and non-functional requirements. Next, you will explore how to choose a cloud solution for your infrastructure, taking into account the factors that will help you manage a cloud-based app successfully. Finally, you will analyze and implement software design patterns that will allow you to solve common development problems. By the end of this book, you will be able to build and deliver highly scalable enterprise-ready apps that meet your business requirements. What you will learnUse proven techniques to overcome real-world architectural challengesApply architectural approaches such as layered architectureLeverage tools such as containers to manage microservices effectivelyGet up to speed with Azure features for delivering global solutionsProgram and maintain Azure Functions using C# 10Understand when it is best to use test-driven development (TDD)Implement microservices with ASP.NET CoreEnrich your application with Artificial IntelligenceGet the best of DevOps principles to enable CI/CD environmentsWho this book is for This book is for engineers and senior software developers aspiring to become architects or looking to build enterprise applications with the .NET Stack. Basic familiarity with C# and .NET is required to get the most out of this book.

DevOps on the Microsoft Stack Wouter de Kort 2016-04-29 This book tells you everything you need to know to help your organization implement DevOps on the Microsoft platform. You will learn how to use Visual Studio, Visual Studio Team Services, and Azure to implement a complete DevOps process in your company. You will learn about Agile Project Management, Continuous Integration, Continuous Delivery, Technical Debt Management, Automatic Testing and Monitoring, and see how all these areas fit together. DevOps is important for organizations that want to make the best use of their resources and avoid costly mistakes. Teams that embrace DevOps deploy code up to 30 times more frequently than their competition and less than 50% of their deployments fail according to Puppet Labs State of DevOps survey. DevOps on the Microsoft Stack shows you how to help your organization implement DevOps, covering the tooling they will need and how to make everything work together while following best practices. The focus is not only on technology but also on the cultural issues that teams will face when implementing DevOps. The author's goal is to not only show you which tooling there is but help you to successfully use everything together to implement DevOps in your projects and organization. In this book, you'll learn: What DevOps is and how it can help development teams How to use Visual Studio, Visual Studio Team Services, and Azure to setup a DevOps process How to introduce DevOps to your organization and how to overcome problems

Azure Stack Hub Demystified Richard Young 2021-10-07 Deploy, configure, administer, and run Microsoft Azure Stack Hub Key FeaturesUnderstand the topics required for the Microsoft Azure AZ-600 examConfigure and provide services from Microsoft Azure Stack HubImplement data center integration with Microsoft Azure Stack HubBook Description Azure Stack Hub is the on-premise offering from Microsoft, which provides Azure Cloud services within a customer's own data center. It provides consistent processes between on-site and the cloud, allowing developers to test locally and deploy to the cloud in exactly the same manner. Azure Stack Hub Demystified provides complete coverage of deploying, configuring, administrating, and running Microsoft Azure Stack Hub efficiently. Firstly, you will learn how to deploy Azure Stack Hub within an organization. As you progress, you'll understand configuration and the different services provided by the platform. The book also focuses on the underlying architecture and connectivity options for the modern data center. Later, you will understand various approaches to DevOps and their implementation, and learn key topics for the AZ-600 exam. By the end of this Azure book, you will have a thorough understanding of Azure Stack Hub and the services that are provided by the platform, along with the confidence and information you need to be able to pass the AZ-600 exam. What you will learnUnderstand the architecture of Azure Stack HubGet up to speed with the management and administration of Azure Stack HubExplore how to administer virtual networking within your Azure StackBecome well versed in using the Azure Stack Hub support model and updating Azure Stack HubUnderstand how licensing and billing is done with Azure Stack HubDiscover the tools that can be used to implement security within Azure Stack HubFocus on how DevOps practices can be incorporated with Azure Stack HubWho this book is for If you are an Azure Administrator and Azure Stack Hub Operator who provides or is looking to provide cloud services to end users or customers within their own data center, then this book is for you. This book will also be beneficial to those who are preparing for Exam AZ-600: Configuring and Operating a Hybrid Cloud with Microsoft Azure Stack Hub.

Systems, Software and Services Process Improvement Alastair Walker 2019-09-09 This volume constitutes the refereed proceedings of the 26th European Conference on Systems, Software and Services Process Improvement, EuroSPI conference, held in Edinburgh, Scotland, in September 2019. The 18 revised full papers presented were carefully reviewed and selected from 28 submissions. They are organized in topical sections: Visionary Papers, SPI and Safety and Security, SPI and Assessments, SPI and Future Qualification & Team Performance, and SPI Manifesto and Culture. The selected workshop papers are also presented and organized in following topical sections: GamifySPI, Digitalisation of Industry, Infrastructure and E-Mobility. -Best Practices in Implementing Traceability. -Good and Bad Practices in Improvement. -Functional Safety and Cybersecurity. -Experiences with Agile and Lean. -Standards and Assessment Models. -Team Skills and Diversity Strategies. -Recent Innovations.

Migrating Applications to the Cloud with Azure Sjoukje Zaal 2019-12-06 Modernize your apps with Microsoft Azure by moving web, desktop, and mobile apps to the cloud Key Features Decide which migration strategy is most suitable for your organization and create a migration roadmap Move existing infrastructure to Azure and learn strategies to reduce cost, increase storage, and improve ROI Design secure, scalable, and cost-effective solutions with the help of practical examples Book Description Whether you are trying to re-architect a legacy app or build a cloud-ready app from scratch, using the Azure ecosystem with .NET and Java technologies helps you to strategize and plan your app modernization process effectively. With this book, you'll learn how to modernize your applications by using Azure for containerization, DevOps, microservices, and serverless solutions to reduce development time and costs, while also making your applications robust, secure, and scalable. You will delve into improving application efficiency by using container services such as Azure Container Service, Azure Kubernetes Service (AKS), and more. Next, you will learn to modernize your application by implementing DevOps throughout your application development life cycle. You will then focus on increasing the scalability and performance of your overall application with microservices, before learning how to add extra functionality to your application with Azure serverless solutions. Finally, you'll get up to speed with monitoring and troubleshooting techniques. By the end of this book, you will have learned how to use the Azure ecosystem to refactor, re-architect, and rebuild your web, mobile, and desktop applications. What you will learn Use DevOps and containerization technologies to modernize your applications and infrastructure Build microservices using Azure Service Fabric Develop scalable applications using Azure Functions Manage and deploy your application code and database connectivity Secure and monitor your applications in Azure effectively Design for high availability and disaster recovery Who this book is for This book is for.NET and Java developers who want to modernize their applications using Azure. Solution architects and experienced developers interested in modernizing legacy applications using Azure will also find this book useful. Some prior understanding of cloud computing concepts will be beneficial.

Combining DataOps, MLOps and DevOps Dr. Kalpesh Parikh 2022-05-16 Accelerate the delivery of software, data, and machine learning KEY FEATURES ⬤ Each chapter harmonizes the DevOps, Data Engineering, and Optimized Machine Learning cultures. ⬤ Equips readers with AGILE skills to continuously re-prioritize production backlogs. ⬤ Containerization, Docker, Kubernetes, DataOps, and MLOps are all rolled together. DESCRIPTION This book instructs readers on how to operationalize the creation of systems, software applications, and business information using the best practices of DevOps, DataOps, and MLOps, among other things. From software unit packaging code and its dependencies to automating the software development lifecycle and deployment, the book provides a learning roadmap that begins with the basics and progresses to advanced topics. This book teaches you how to create a culture of cooperation, affinity, and tooling at scale using DevOps, Docker, Kubernetes, Data Engineering, and Machine Learning. Microservices design, setting up clusters and maintaining them, processing data pipelines, and automating operations with machine learning are all topics that will aid you in your career. When you use each of the xOps methods described in the book, you will notice a clear shift in your understanding of system development. Throughout the book, you will also see how every stage of software development is modernized with the most up-to-date technologies and the most effective project management approaches. WHAT YOU WILL LEARN ⬤ Learn about the Packaging code and all its dependencies in a container. ⬤ Utilize DevOps to automate every stage of software development. ⬤ Learn how to create Microservices that are focused on a specific issue. ⬤ Utilize Kubernetes to containerize applications in a variety of settings. ⬤ Using DataOps, you can align people, processes, and technology. WHO THIS BOOK IS FOR This book is meant for the Software Engineering team, Data Professionals, IT Operations and Application Development Team with prior knowledge in software development. TABLE OF CONTENTS 1. Container – Containerization is the New Virtualization 2. Docker with Containers for Developing and Deploying Software 3. DevOps to Build at Scale a Culture of Collaboration, Affinity, and Tooling 4. Docker Containers for Microservices Architecture Design 5. Kubernetes – The Cluster Manager for Container 6. Data Engineering with DataOps 7. MLOps: Engineering Machine Learning Operations 8. xOps Best Practices

Azure for Architects Ritesh Modi 2019-01-31 Create advanced data and integrated solutions using Azure Event Grid, functions, and containers Key FeaturesGet familiar with the different design patterns available in Microsoft AzureDevelop Azure cloud architecture and a pipeline management systemGet to know the security best practices for your Azure deploymentBook Description Over the years, Azure cloud services have 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. Azure for Architects – Second Edition starts with an extensive introduction to major designing and architectural aspects available with Azure. These design patterns focus on different aspects of the cloud, such as high availability, security, and scalability. Gradually, we move on to other aspects, such as ARM template modular design and deployments. This is the age of microservices and serverless is the preferred implementation mechanism for them. This book covers the entire serverless stack available in Azure including Azure Event Grid, Azure Functions, and Azure Logic Apps. New and advance features like durable functions are discussed at length. A complete integration solution using these serverless technologies is also part of the book. A complete chapter discusses all possible options related to containers in Azure including Azure Kubernetes services, Azure Container Instances and Registry, and Web App for Containers. Data management and integration is an integral part of this book that discusses options for implementing OLTP solutions using Azure SQL, Big Data solutions using Azure Data factory and Data Lake Storage, eventing solutions using stream analytics, and Event Hubs. This book will provide insights into Azure governance features such as tagging, RBAC, cost management, and policies. By the end of this book, you will be able to develop a full-fledged Azure cloud solution that is Enterprise class and future-ready. What you will learnCreate an end-to-end integration solution using Azure Serverless StackLearn Big Data solutions and OLTP-based applications on AzureUnderstand DevOps implementations using Azure DevOpsArchitect solutions comprised of multiple resources in AzureDevelop modular ARM templatesDevelop Governance on Azure using locks, RBAC, policies, tags and costLearn ways to build data solutions on AzureUnderstand the various options related to containers including Azure Kubernetes ServicesWho 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.

Achieving DevOps Dave Harrison 2019-05-22 Ben is stuck. A development lead with a strong vision for how the intersection of development and operations at his office can be improved, he can't help but feel overwhelmed and discouraged by common problems such as slow turnaround time, rushed and ineffective handover documentation, mounting technical debt, and a lagging QA process. What steps should Ben take to build the momentum needed to create positive changes within his company? In this unique business novel by Dave Harrison and Knox Lively, two DevOps professionals with years of diverse experience in the industry, you follow Ben as he solves work frustrations in order to adopt Agile, DevOps, and microservices architectures for his organization. Achieving DevOps addresses the "Now what?" moment many DevOps professionals face on their journey. The story provides you with the knowledge you need to navigate the internal political waters, build management support, show measurable results, and bring DevOps successfully into your organization. Come away with practical lessons and timeless business concepts. You'll know how to effect change in a company from the bottom up, gain support, and instill a pattern of progressively building on success. Experience Ben's progress vicariously in Achieving DevOps and bridge the gap between inspiration and the implementation of your own DevOps practices. Who This Book Is For Those serving as change agents who are working to influence and move their organizations toward a DevOps approach to software development and deployment: those working to effect change from the bottom up such as development leads, QA leads, project managers, and individual developers; and IT directors, CTOs, and others at the top of an organization who are being asked to lend their support toward DevOps implementation efforts

Microsoft Hybrid Cloud Unleashed with Azure Stack and Azure, First Edition Kerrie Meyler 2017 Microsoft Hybrid Cloud Unleashed brings together comprehensive and practical insights into hybrid cloud technologies, complete CloudOps and DevOps implementation strategies, and detailed guidance for deploying Microsoft Azure Stack in your environment. Written by five Microsoft Cloud and Datacenter Management MVPs, this book is built on real-world scenarios and the authors' extraordinary hands-on experiences as early adopters. Step by step, the authors help you integrate your optimal mix of private and public cloud, with a unified management experience that lets you move workloads at will, achieving unprecedented flexibility. The authors also guide you through all aspects of building your own secure, high-performance hybrid cloud infrastructure. You'll discover how Azure Stack enables you to run data centers with the same scalability, redundancy, and reliability as Microsoft's Azure data centers; how to integrate Azure infrastructure and platform services with internal operations; and how to manage crucial external dependencies. The book concludes with a deep dive into automating and customizing Azure Stack for maximum reliability, productivity, and cost savings. Detailed information on how to Run a private/hybrid cloud on your hardware in your data center, using APIs and code identical to public Azure Apply ITIL and DevOps lifecycles to your hybrid cloud implementation Gain a deep understanding of Azure Stack architecture, components, and internals Install and configure Azure Stack and master the Azure Stack Portal Integrate and utilize infrastructure, core, and custom resource providers Effectively provision, secure, and manage tenants Manage, monitor, troubleshoot, and back up Azure Stack with CloudOps Automate resource provisioning with PowerShell, the Azure CLI, templates, and Azure Stack's API Write your own Azure Resource Manager templates Centrally automate cloud management and complex tasks connected to external systems Develop customized, production-ready Azure Stack marketplace items

Cloud Native Patterns Cornelia Davis 2019-05-12 Summary Cloud Native Patternsis your guide to developing strong applications that thrive in the dynamic, distributed, virtual world of the cloud. This book presents a mental model for cloud-native applications, along with the patterns, practices, and tooling that set them apart. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Cloud platforms promise the holy grail: near-zero downtime, infinite scalability, short feedback cycles, fault-tolerance, and cost control. But how do you get there? By applying cloudnaTive designs, developers can build resilient, easily adaptable, web-scale distributed applications that handle massive user traffic and data loads. Learn these fundamental patterns and practices, and you'll be ready to thrive in the dynamic, distributed, virtual world of the cloud. About the Book With 25 years of experience under her belt, Cornelia Davis teaches you the practices and patterns that set cloud-native applications apart. With realistic examples and expert advice for working with apps, data, services, routing, and more, she shows you how to design and build software that functions beautifully on modern cloud platforms. As you read, you will start to appreciate that cloud-native computing is more about the how and why rather than the where. What's inside The lifecycle of cloud-native apps Cloud-scale configuration management Zero downtime upgrades, versioned services, and parallel deploys Service discovery and dynamic routing Managing interactions between services, including retries and circuit breakers About the Reader Requires basic software design skills and an ability to read Java or a similar language. About the Author Cornelia Davis is Vice President of Technology at Pivotal Software. A teacher at heart, she's spent the last 25 years making good software and great software developers. Table of Contents PART 1 - THE CLOUD-NATIVE CONTEXT You keep using that word: Defining "cloud-native" Running cloud-native applications in production The platform for cloud-native software PART 2 - CLOUD-NATIVE PATTERNS Event-driven microservices: It's not just request/response App redundancy: Scale-out and statelessness Application configuration: Not just environment variables The application lifecycle: Accounting for constant change Accessing apps: Services, routing, and service discovery Interaction redundancy: Retries and other control loops Fronting services: Circuit breakers and API gateways Troubleshooting: Finding the needle in the haystack Cloud-native data: Breaking the data monolith WinOps Jonathon Lee Wright 2018

Cloud Debugging and Profiling in Microsoft Azure Jeffrey Chilberto 2020-04-11 Use this collection of best practices and tips for assessing the health of a solution. This book provides detailed techniques and instructions to quickly diagnose aspects of your Azure cloud solutions. The initial chapters of this book introduce you to the many facets of Microsoft Azure, explain why and how building for the cloud differs from on-premise development, and outline the need for a development strategy to debugging and profiling in Azure. You learn the major types of blades (FaaS, SaaS, PaaS, IaaS), how different views can be created for different scenarios, and you will become familiar with the Favorites section, Cost Management & Billing blade, support, and Cloud Shell. You also will know how to leverage Application Insights for application performance management, in order to achieve a seamless cloud development experience. Application Insights, Log Analytics, and database storage topics are covered. The authors further guide you on identity security with Azure AD and continuous delivery with CI and CD covered in detail along with the capabilities of Azure DevOps. And you are exposed to external tooling and trouble shooting in a production environment. After reading this book, you will be able to apply methods to key Azure services, including App Service (Web Apps, Function Apps, and Logic Apps), Cloud Services, Azure Container Service, Azure Active Directory, Azure Storage, Azure SQL Database, Cosmos DB, Log Analytics, and many more. What You Will LearnDebug and manage the performance of your applications Leverage Application Insights for application performance management Extend and automate CI/CD with the help of various build tools, including Azure DevOps, TeamCity, and Cake bootstrapper Who This Book Is For Application developers, designers, and DevOps personnel who want to find a one-stop shop in best practices for managing their application's performance in the cloud and for debugging the issues accordingly

Implementing DevOps with Microsoft Azure Mitesh Soni 2017-04-28 Accelerate and Automate Build, Deploy, and Management of applications to achieve High Availability. About This Book This guide highlights tools that offer development and deployment environments for application services Secure and continuously monitor your web application in order to make it highly available Use Visual Studio Team Services for Continuous Integration and Continuous Development to expedite your application life

cycle management process Use Microsoft Azure App Services (Azure Web Apps / Azure Websites), PaaS offering from Microsoft to deploy web application Who This Book Is For This book is for DevOps engineers, system administrators, and developers (.net) who want to implement DevOps for their organization. You do not need to have any knowledge of VSTS or Azure App Services (Azure Web Apps / Azure Websites). What You Will Learn Explore the features of PaaS and aPaaS in DevOps Use Visual Studio Team Services (VSTS) to managing versions of code and integrating VSTS with Eclipse IDE Understand and configure Continuous Integration in VSTS Review Unit Test Execution for Automated Testing Create different environments that can be used to continuous deploy a web application Configure Roll-based Access to enable secure access for Azure Web Apps Create and configure the App Service Environment to enhance security Understand the execution of the end-to-end automation process Conduct Performance Testing using JMeter Discover the different monitoring options available in Microsoft Azure Portal In Detail This book will teach you all about the Visual Studio Team Services and Microsoft Azure PaaS offerings that support Continuous Integration, Continuous Delivery, Continuous Deployment, and execution in the cloud with high availability, disaster recovery, and security. You will first be given a tour of all the concepts and tools that Microsoft Azure has to offer and how these can be used in situations to cultivate the DevOps culture. You'll be taught how to use and manage Visual Studio Team Services (VSTS) and about the structure of the sample application used throughout the book. You will become familiar with the nitty gritty of Continuous Integration and Continuous Development with VSTS and Microsoft Azure Apps. You will not only learn how to create App service environments, but also how to compare Web Apps and App Service Environments to deploy web applications in a more secure environment. Once you have completed Continuous Integration and created the Platform for application deployment, you will learn more about the final stepping stone in achieving end-to-end automation using approval-based Continuous Delivery and Deployment. You will then learn about Continuous Monitoring, using the monitoring and notification options provided by Microsoft Azure and Visual Studio Team Services. Style and Approach This book is an easy-to-follow guide filled with examples and real-world applications for gaining an in-depth understanding of Microsoft Azure and Visual Studio. This book will help you leverage Microsoft Azure and Visual Studio using real-world examples.

Full Stack Development with JHipster Deepu K Sasidharan 2020-01-23 Written by the core development team of JHipster and fully updated for JHipster 6, Java 11, and Spring Boot 2.1, this book will show you how to build modern web applications with real-world examples and best practices Key FeaturesBuild full stack applications with modern JavaScript frameworks such as Angular, React, and VuejsExplore the JHipster microservices stack, which includes Spring Cloud, Netflix OSS, and the Elastic StackLearn advanced local and cloud deployment strategies using Docker and KubernetesBook Description JHipster is an open source development platform that allows you to easily create web apps and microservices from scratch without spending time on wiring and integrating different technologies. Updated to include JHipster 6, Java 11, Spring Boot 2.1, Vuejs, and Istio, this second edition of Full Stack Development with JHipster will help you build full stack applications and microservices seamlessly. You'll start by understanding JHipster and its associated tools, along with the essentials of full stack development, before building a monolithic web app. You'll then learn the JHipster Domain Language (JDL) with entity modeling using JDL-Studio. With this book, you'll create production-ready web apps using Spring Boot, Spring Framework, Angular, and Bootstrap, and run tests and set up continuous integration pipelines with Jenkins. As you advance, you'll learn how to convert your monoliths to microservices and how to package your application for production with various deployment options, including Heroku and Google Cloud. You'll also learn about Docker and Kubernetes, along with an introduction to the Istio service mesh. Finally, you'll build your client-side with React and Vuejs and discover JHipster's best practices. By the end of the book, you'll be able to leverage the best tools available to build modern web apps. What you will learnCreate full stack apps from scratch using the latest features of JHipster 6 and Spring Boot 2.1Build business logic by creating and developing entity models using JDLUnderstand how to convert a monolithic architecture into a full-fledged microservices architectureBuild and package your apps for production using DockerDeploy your application to Google Cloud with KubernetesCreate continuous integration/continuous delivery pipelines with JenkinsCreate applications using Angular, React, and Vuejs client-side frameworksWho this book is for This book is for full stack developers who want to build web applications and microservices speedily without writing a lot of boilerplate code. If you're a backend developer looking to learn full stack development with JavaScript frameworks and libraries such as Angular, React, and Vuejs, you'll find this book useful. Experience in building Java web applications is required. Some exposure to the Spring Framework would be beneficial but not necessary to get the most out of this book.

Xamarin Continuous Integration and Delivery Gerald Versluis 2017-05-09 Learn everything you need to set up a full-featured, automated pipeline for Xamarin development and deployment. Automate everything from the build step through to deployment and delivery to your customer. If you thought this level of automation could be achieved only by large companies with generous funding, think again! You as a single developer, or working in a small team or company, can automate your processes to punch heavier than your weight. What's more, you can achieve this level of automation completely for free! This hands-on guide takes you step-by-step from setting up your first automated build all the way to integrated unit testing, and finally through to delivering a high-quality app to your testers and end users. The automation presented in this book saves a lot of frustration and recurring work, providing you more time to focus on building the robust and compelling apps that delight your customers and keep you steps ahead of the competition. Not only does this book teach how to get a grip on consistent quality, but it covers the use of HockeyApp to track events and usage, and how to report errors and anomalies back to home base for developers to investigate. Many times it's possible to detect and fix errors before a user even notices they are there. This book: Teaches the necessity of an automated development pipeline Helps you set up an automated pipeline for Xamarin development Integrates testing (on physical devices!) to ensure high-quality apps What You'll Learn Why you want an automated development pipeline Obtain and configure the automated tooling Continuously integrate your apps Run automated unit tests Push updates to your customers Monitor and detect errors without user intervention Who This Book Is For App developers looking for ways to ensure consistent quality of work and wanting to know how their apps are doing in actual use by customers

Agile, DevOps and Cloud Computing with Microsoft Azure Mitesh Soni 2019-09-17 A step-by-step guide to understand Agile, Scrum, DevOps and Cloud Computing using Azure DevOps and Microsoft Azure Cloud DESCRIPTION Agile development and implementation of Scrum methodologies require quick delivery of applications. Manual activities to manage application lifecycle management are no longer sufficient. This book will cover the DevOps practices implementation that helps to achieve speed for faster time to market using transformation in culture using people, processes, and tools. This book discusses the definition of Cloud computing and the benefits of Cloud Service Models. You will understand how Agile, DevOps practices implementation and Cloud computing can be utilized effectively to transform the culture of an organization. The main objective of this book is to demonstrate continuous practices of the DevOps culture using Microsoft Azure DevOps and Microsoft Azure Cloud. You will learn how to track features, user stories, backlogs, dashboards, and burndown charts. You will also learn how to create and manage repositories. This book gives an overview of Microsoft Azure Cloud and Azure App Services and a brief description of virtual machines and App Services. It summarizes Build and Release definitions available in Microsoft Azure DevOps and explains how to configure Pipelines and create end-to-end automation pipelines. KEY FEATURES ⬚ Learn how to do Continuous Planning in Azure DevOps ⬚ Learn the basics of Continuous Code Inspection and importance of Code Quality ⬚ Learn how continuous integration can make a difference in the application life cycle ⬚ Learn how to create and configure Cloud resources using Platform as a Service Model ⬚ Learn how to perform continuous integration using the YAML script and continuous delivery pipeline using a release pipeline ⬚ Learn how to configure monitoring for Platform as a Service resources WHAT WILL YOU LEARN By the end of the book, you will get an overview of Agile, Scrum, DevOps and Continuous Practices such as Continuous Integration, Continuous Delivery, Cloud Computing, and Continuous Code Inspection. You will learn how all these practices can be utilized in real-life scenarios with the sample applications. This book will provide detailed insights into Microsoft Azure Cloud, especially Platform as a Service Model. A step-by-step implementation guide of continuous practices of DevOps will help beginners to get started with. WHO THIS BOOK IS FOR DevOps Evangelists, DevOps Engineers, Technical Specialists, Technical Architects, and Cloud Experts Basic knowledge of application development and deployment, Cloud computing, and DevOps practices Beginners Table of Contents 1. An overview of Agile 2. Need for DevOps 3. An overview of Cloud Computing 4. Azure Boards 5. Azure Repos 6. Microsoft Azure Cloud 7. Microsoft Azure Cloud: IaaS and PaaS 8. Azure Pipelines: Continuous Integration and Continuous Delivery 9. Azure Pipelines Implementation

Go for DevOps John Doak 2022-07-08 Achieve reliable release automation and get zero troublesome notifications on your release day Key FeaturesDevelop the skills to build command-line tools to control thousands of nodesUse Go to create Terraform providers and GitHub actions and extend KubernetesGain the knowledge to build DevOps workflows that are understandable, scalable, and safeBook Description Go is the go-to language for DevOps libraries and services, and without it, achieving fast and safe automation is a challenge. With the help of Go for DevOps, you'll learn how to deliver services with ease and safety, becoming a better DevOps engineer in the process. Some of the key things this book will teach you are how to write Go software to automate configuration management, update remote machines, author custom automation in GitHub Actions, and interact with Kubernetes. As you advance through the chapters, you'll explore how to automate the cloud using software development kits (SDKs), extend HashiCorp's Terraform and Packer using Go, develop your own DevOps services with gRPC and REST, design system agents, and build robust workflow systems. By the end of this Go for DevOps book, you'll understand how to apply development principles to automate operations and provide operational insights using Go, which will allow you to react quickly to resolve system failures before your customers realize something has gone wrong. What you will learnUnderstand the basic structure of the Go language to begin your DevOps journeyInteract with filesystems to read or stream dataCommunicate with remote services via REST and gRPCExplore writing tools that can be used in the DevOps environmentDevelop command-line operational software in GoWork with popular frameworks to deploy production softwareCreate GitHub actions that streamline your CI/CD processWrite a ChatOps application with Slack to simplify production visibilityWho this book is for This book is for Ops and DevOps engineers who would like to use Go to develop their own DevOps tooling or integrate custom features with DevOps tools such as Kubernetes, GitHub Actions, HashiCorp Packer, and Terraform. Experience with some type of programming language, but not necessarily Go, is necessary to get started with this book.

Implementing Azure: Putting Modern DevOps to Use Florian Klaffenbach 2019-01-31 Explore powerful Azure DevOps solutions to develop and deploy your software faster and more efficiently Key FeaturesBuild modern microservice-based systems with Azure architectureLearn to deploy and manage cloud services and virtual machinesConfigure clusters with Azure Service Fabric for deploymentBook Description This Learning Path helps you understand microservices architecture and leverage various services of Microsoft Azure Service Fabric to build, deploy, and maintain highly scalable enterprise-grade applications. You will learn to select an appropriate Azure backend structure for your solutions and work with its toolkit and managed apps to share your solutions with its service catalog. As you progress through the Learning Path, you will study Azure Cloud Services, Azure-managed Kubernetes, and Azure Container Services deployment techniques. To apply all that you've understood, you will build an end-to-end Azure system in scalable, decoupled tiers for an industrial bakery with three business domains. Toward the end of this Learning Path, you will build another scalable

architecture using Azure Service Bus topics to send orders between decoupled business domains with scalable worker roles processing these orders. By the end of this Learning Path, you will be comfortable in using development, deployment, and maintenance processes to build robust cloud solutions on Azure. This Learning Path includes content from the following Packt products: Learn Microsoft Azure by Mohamed WaliImplementing Azure Solutions - Second Edition by Florian Klaffenbach, Oliver Michalski, Markus KleinMicroservices with Azure by Namit Tanasseri and Rahul RaiWhat you will learnStudy various Azure Service Fabric application programming modelsCreate and manage a Kubernetes cluster in Azure Kubernetes ServiceUse site-to-site VPN and ExpressRoute connections in your environmentDesign an Azure IoT app and learn to operate it in various scenariosImplement a hybrid Azure design using Azure StackBuild Azure SQL databases with Code First MigrationsIntegrate client applications with Web API and SignalR on AzureImplement the Azure Active Directory (Azure AD) across the entire systemWho this book is for If you are an IT system architect, network admin, or a DevOps engineer who wants to implement Azure solutions for your organization, this Learning Path is for you. Basic knowledge of the Azure Cloud platform will be beneficial.

Azure Infrastructure as Code Henry Been 2022-08-30 Master ARM templates, Bicep, and other Azure Infrastructure-as-Code tools, techniques, and practices to build infrastructure on the Azure cloud. In Azure Infrastructure as Code you will learn how to: Create reusable infrastructure templates using advanced features of the ARM (Azure Resource Manager) syntax Write templates with the Azure Bicep domain-specific language (DSL) Test ARM and Bicep templates Deploy templates using deployment pipelines Guarantee repeated outcomes when you reuse templates to replicate infrastructure Share templates between teams Provision templates to provide standards and Azure Policy to enforce them Orchestrate complex deployments using Azure DevOps and GitHub Actions Pre-provision environments for other teams with deployment stacks Azure Infrastructure as Code teaches you to use Azure's native infrastructure as code (IaC) tools, like ARM and Bicep, to build, manage, and scale infrastructure with just a few lines of code. You'll discover ARM templates, deployment stacks, and the powerful new language Bicep. See how easy they make it to create new environments, safely make infrastructure changes, govern your resources using Azure Policy, and prevent configuration drift. Loaded with in-depth coverage of syntax and lots of illustrative examples, this hands-on guide is a must-read for anyone looking to expand their knowledge of provisioning. About the technology Automating tasks like provisioning servers, operating systems, and storage, saves time and radically increases consistency. The Infrastructure as Code (IaC) approach brings the tools and practices of application deployment, such as Github Actions, automated testing, and pipeline-driven deployments, to infrastructure components. With Azure's native IaC tools, you can create whole new infrastructures with just a few lines of code using declarative specifications and an intuitive domain-specific language. About the book Azure Infrastructure as Code shows you how to manage and automate your infrastructure using Azure's IaC tools. In this practical guide, you'll discover how to set up Azure Resource Manager (ARM) templates and to script infrastructure creation using the Bicep DSL. You'll also explore advanced topics such as testing, reusing templates, and defining policies as code. You'll even build a complete CI/CD pipeline that can orchestrate a complex infrastructure deployment across multiple regions. What's inside Create reusable infrastructure templates Write templates with the Azure Bicep domain-specific language Deploy templates using deployment pipelines Share templates between teams About the reader For operations, infrastructure, or software engineers with some Azure experience. About the author Henry Been is a freelance DevOps and Azure architect and consultant. Erwin Staal is an Azure architect and DevOps consultant. Eduard Keilholz is a cloud solution architect. Table of Contents PART 1 INTRODUCTION 1 Infrastructure as Code 2 Writing your first ARM template PART 2 TAKING IT UP A NOTCH 3 Writing ARM templates 4 Deploying ARM templates 5 Writing advanced ARM templates 6 Simplifying ARM templates using the Bicep DSL 7 Complex deployments using Azure DevOps 8 Complex deployments using GitHub Actions 9 Testing ARM templates PART 3 ADVANCED TOPICS 10 Template specs and Bicep registries: Building a repository of templates 11 Using deployment stacks for grouping resources 12 Governing your subscriptions using Azure Policy 13 Case studies

Software Architecture with C# 9 and .NET 5 Gabriel Baptista 2020-12-28 Design scalable and high-performance enterprise applications using the latest features of C# 9 and .NET 5 Key FeaturesGain fundamental and comprehensive software architecture knowledge and the skillset to create fully modular appsDesign high-performance software systems using the latest features of .NET 5 and C# 9Solve scalability problems in web apps using enterprise architecture patternsBook Description Software architecture is the practice of implementing structures and systems that streamline the software development process and improve the quality of an app. This fully revised and expanded second edition, featuring the latest features of .NET 5 and C# 9, enables you to acquire the key skills, knowledge, and best practices required to become an effective software architect. This second edition features additional explanation of the principles of Software architecture, including new chapters on Azure Service Fabric, Kubernetes, and Blazor. It also includes more discussion on security, microservices, and DevOps, including GitHub deployments for the software development cycle. You will begin by understanding how to transform user requirements into architectural needs and exploring the differences between functional and non-functional requirements. Next, you will explore how to carefully choose a cloud solution for your infrastructure, along with the factors that will help you manage your app in a cloud-based environment. Finally, you will discover software design patterns and various software approaches that will allow you to solve common problems faced during development. By the end of this book, you will be able to build and deliver highly scalable enterprise-ready apps that meet your organization's business requirements. What you will learnUse different techniques to overcome real-world architectural challenges and solve design consideration issuesApply architectural approaches such as layered architecture, service-oriented architecture (SOA), and microservicesLeverage tools such as containers, Docker, Kubernetes, and Blazor to manage microservices effectivelyGet up to speed with Azure tools and features for delivering global solutionsProgram and maintain Azure Functions using C# 9 and its latest featuresUnderstand when it is best to use test-driven development (TDD) as an approach for software developmentWrite automated functional test casesGet the best of DevOps principles to enable CI/CD environmentsWho this book is for This book is for engineers and senior software developers aspiring to become architects or looking to build enterprise applications with the .NET Stack. Basic familiarity with C# and .NET is required to get the most out of this book.

Building Cloud Apps with Microsoft Azure Scott Guthrie 2014-07-18 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.

Mastering Microsoft Dynamics 365 Business Central Stefano Demiliani 2019-12-20 Develop customized business management solutions with the latest features of Microsoft Dynamics 365 Business Central Key FeaturesLearn Dynamics 365 Business Central, the next generation of Dynamics NAVExplore advanced topics for handling complex integrations such as using APIs, OData, and Azure FunctionsDiscover best practices for developing SaaS extensions and moving existing solutions to the cloudBook Description Dynamics 365 Business Central is an all-in-one business management solution, which is easy to adopt and helps you make smarter business decisions. This book is a comprehensive guide to developing solutions with Microsoft ERP (in the cloud and also on-premises). It covers all aspects of developing extensions, right from preparing a sandbox environment to deploying a complete solution. The book starts by introducing you to the Dynamics 365 Business Central platform and the new Modern Development Environment. You'll then explore the sandbox concept, and see how to create sandboxes for development. As you advance, you'll be able to build a complete advanced solution for Dynamics 365 Business Central with AL language and Visual Studio Code. You'll then learn how to debug and deploy the extension and write automatic testing. The book will also take you through advanced topics like integration (with Azure Functions, web services, and APIs), DevOps and CI/CD techniques, and machine learning. You'll discover how Dynamics 365 Business Central can be used with Office 365 apps. Finally, you'll analyze different ways to move existing solutions to the new development model based on extensions. By the end of this book, you'll be able to develop highly customized solutions that meet the requirements of modern businesses using Dynamics 365 Business Central. What you will learnCreate a sandbox environment with Dynamics 365 Business CentralHandle source control management when developing solutionsExplore extension testing, debugging, and deploymentCreate real-world business processes using Business Central and different Azure servicesIntegrate Business Central with external applicationsApply DevOps and CI/CD to development projectsMove existing solutions to the new extension-based architectureWho this book is for If you're a new developer looking to get started with Dynamics 365 Business Central, this book is for you. The book will also help experienced professionals enhance their knowledge and understanding of Dynamics 365 Business Central.

DevOps for SharePoint Oscar Medina 2018-10-29 Deploy a SharePoint farm in a repeatable, predictable, and reliable fashion using Infrastructure as Code (IaC) techniques to automate provisioning. Savvy IT pros will learn how to use DevOps practices and open source tools to greatly reduce costs, and streamline management operations for SharePoint farms deployed via Amazon Web Services (AWS), Azure, or on premise. DevOps for SharePoint will help you navigate the complex challenges of deploying and managing SharePoint Server farms. You will learn how to reduce time-consuming tasks and errors when generating development, testing, or production environments. And you will benefit from learning proven methods to apply Microsoft updates with minimal downtime and productivity loss. Whether you are a SharePoint architect, IT pro, or developer helping customers with the SharePoint platform, this book will teach you the most useful DevOps practices to tackle those issues and broaden your skill set. What You'll Learn Understand the basics of the most popular open source tools—Vagrant, Packer, Terraform, and Ansible—and how to use them in the context of deploying and scaling a SharePoint farm Use Vagrant to build SharePoint development environments in less than an hour, and add automated testing Use Packer to create a "golden image" with preconfigured settings, and then use it as the base image in your Terraform configuration from both AWS and Azure farms Use Terraform to scale your SharePoint farm topology Use Red Hat's Ansible Playbooks to perform configuration management on your farmUse Terraform to deploy immutable infrastructure environments using IaC (Infrastructure as Code)Use InSpec 2.0 to stay in compliance by testing your cloud infrastructureUse Ansible to apply Microsoft updates and patches Who This Book Is For IT pros and developers who are looking to expand their knowledge and take a modern approach by using open source technologies to work with

Microsoft products. Experience installing SharePoint, and a basic understanding of either Azure or AWS, is helpful.

Hands-On Software Architecture with C# 8 and .NET Core 3

Gabriel Baptista 2019-11-29 Design scalable and high-performance enterprise applications using the latest features of C# 8 and .NET Core 3 Key Features Become a software architect capable of creating modular apps for specific business needs Design high-performance software systems using the latest features of C# 8 and .NET Core 3 Solve scalability problems in web apps using enterprise architectural patterns Book Description Software architecture is the practice of implementing structures and systems that streamline the software development process and improve the quality of an app. With this software architecture book, you'll follow a hands-on approach to learning various architectural methods that will help you develop and deliver high-quality products. You'll begin by understanding how to transform user requirements into architectural needs and exploring the differences between functional and non-functional requirements. Next, you'll explore how to carefully choose a cloud solution for your infrastructure, along with covering dos and don'ts that will help you manage your app in a cloud-based environment. Later chapters will cover techniques and processes such as DevOps, microservices, and continuous integration, along with providing insights into implementing them using Microsoft technologies such as ASP.NET Core, the Entity Framework, Cosmos DB, and Azure DevOps. You will also learn about testing frameworks and automation tools that will help you through the development process. Finally, you'll discover design patterns and various software approaches that will allow you to solve common problems faced during development. By the end of this book, you'll be able to develop and deliver highly scalable enterprise-ready apps that meet customers' business needs. What you will learn Overcome real-world architectural challenges and solve design consideration issues Apply architectural approaches like Layered Architecture, service-oriented architecture (SOA), and microservices Learn to use tools like containers, Docker, and Kubernetes to manage microservices Get up to speed with Azure Cosmos DB for delivering multi-continental solutions Learn how to program and maintain Azure Functions using C# Understand when to use test-driven development (TDD) as an approach for software development Write automated functional test cases for your projects Who this book is for This book is for engineers and senior developers aspiring to become architects or looking to build enterprise applications with the .NET Stack. Experience with C# and .NET is required to understand this book.

Machine Learning for Decision Makers

Patanjali Kashyap 2018-01-04 Take a deep dive into the concepts of machine learning as they apply to contemporary business and management. You will learn how machine learning techniques are used to solve fundamental and complex problems in society and industry. Machine Learning for Decision Makers serves as an excellent resource for establishing the relationship of machine learning with IoT, big data, and cognitive and cloud computing to give you an overview of how these modern areas of computing relate to each other. This book introduces a collection of the most important concepts of machine learning and sets them in context with other vital technologies that decision makers need to know about. These concepts span the process from envisioning the problem to applying machine-learning techniques to your particular situation. This discussion also provides an insight to help deploy the results to improve decision-making. The book uses case studies and jargon busting to help you grasp the theory of machine learning quickly. You'll soon gain the big picture of machine learning and how it fits with other cutting-edge IT services. This knowledge will give you confidence in your decisions for the future of your business. What You Will Learn Discover the machine learning, big data, and cloud and cognitive computing technology stack Gain insights into machine learning concepts and practices Understand business and enterprise decision-making using machine learning Absorb machine-learning best practices Who This Book Is For Managers tasked with making key decisions who want to learn how and when machine learning and related technologies can help them.

Professional Application Lifecycle Management with Visual Studio 2013

Mickey Gousset 2014-03-26 Ramp up your software development with this comprehensive resource Microsoft's Application Lifecycle Management (ALM) makes software development easier and now features support for iOS, MacOS, Android, and Java development. If you are an application developer, some of the important factors you undoubtedly consider in selecting development frameworks and tools include agility, seamless collaboration capabilities, flexibility, and ease of use. Microsoft's ALM suite of productivity tools includes new functionality and extensibility that are sure to grab your attention. Professional Application Lifecycle Management with Visual Studio 2013 provides in-depth coverage of these new capabilities. Authors Mickey Gousset, Martin Hinshelwood, Brian A. Randell, Brian Keller, and Martin Woodward are Visual Studio and ALM experts, and their hands-on approach makes adopting new ALM functionality easy. Streamline software design and deployment with Microsoft tools and methodologies Gain a practical overview of ALM with step-by-step guides and reference material Case studies illustrate specific functionality and provide in-depth instruction Use new capabilities to support iOS, MacOS, Android and Java development Discover This comprehensive solution for modeling, designing, and coordinating enterprise software deployments Over 100 pages of new content, forward-compatible with new product releases Professional Application Lifecycle Management with Visual Studio 2013 provides a complete framework for using ALM to streamline software design and deployment processes using well-developed Microsoft tools and methodologies. Professional Application Lifecycle Management with Visual Studio 2013 is your guide to make use of newly-available ALM features to take your enterprise software development to the next level.

DevOps with Windows Server 2016

Ritesh Modi 2017-03-24 Obtain enterprise agility and continuous delivery by implementing DevOps with Windows Server 2016 About This Book This practical learning guide will improve your application lifecycle management and help you manage environments efficiently Showcase through a sample application ways to apply DevOps principles and practices in the real world Implement DevOps using latest technologies in Windows Server 2016 such as Windows Container, Docker, and Nano Servers Who This Book Is For This book is for .NET developers and system administrators who have a basic knowledge of Windows Server 2016 and are now eager to implement DevOps at work using Windows Server 2016. Knowledge of Powershell, Azure, and containers will help. What You Will Learn Take a deep dive into the fundamentals, principles, and practices of DevOps Achieve an end-to-end DevOps implementation Execute source control management using GITHUB and VSTS vNext Automate the provisioning and configuration of infrastructure Build and release pipeline Measure the success of DevOps through application instrumentation and monitoring In Detail Delivering applications swiftly is one of the major challenges faced in fast-paced business environments. Windows Server 2016 DevOps is the solution to these challenges as it helps organizations to respond faster in order to handle the competitive pressures by replacing error-prone manual tasks using automation. This book is a practical description and implementation of DevOps principles and practices using the features provided by Windows Server 2016 and VSTS vNext. It jumps straight into explaining the relevant tools and technologies needed to implement DevOps principles and practices. It implements all major DevOps practices and principles and takes readers through it from envisioning a project up to operations and further. It uses the latest and upcoming concepts and technologies from Microsoft and open source such as Docker, Windows Container, Nano Server, DSC, Pester, and VSTS vNext. By the end of this book, you will be well aware of the DevOps principles and practices and will have implemented all these principles practically for a sample application using the latest technologies on the Microsoft platform. You will be ready to start implementing DevOps within your project/engagement. Style and approach This practical, learning book is linear and progressive, and every chapter builds on the previous chapters. We focus on the practical skills required to implement DevOps, with a summary of the key concepts only where strictly necessary.

Software Project Management for Distributed Computing

Zaigham Mahmood 2017-04-04 This unique volume explores cutting-edge management approaches to developing complex software that is efficient, scalable, sustainable, and suitable for distributed environments. Practical insights are offered by an international selection of pre-eminent authorities, including case studies, best practices, and balanced corporate analyses. Emphasis is placed on the use of the latest software technologies and frameworks for life-cycle methods, including the design, implementation and testing stages of software development. Topics and features: · Reviews approaches for reusability, cost and time estimation, and for functional size measurement of distributed software applications · Discusses the core characteristics of a large-scale defense system, and the design of software project management (SPM) as a service · Introduces the 3PR framework, research on crowdsourcing software development, and an innovative approach to modeling large-scale multi-agent software systems · Examines a strain architecture for ambient assisted living, and an approach to cloud migration and management assessment · Describes a software error proneness mechanism, a novel Scrum process for use in the defense domain, and an ontology annotation for SPM in distributed environments · Investigates the benefits of agile project management for higher education institutions, and SPM that combines software and data engineering This important text/reference is essential reading for project managers and software engineers involved in developing software for distributed computing environments. Students and researchers interested in SPM technologies and frameworks will also find the work to be an invaluable resource. Prof. Zaigham Mahmood is a Senior Technology Consultant at Debesis Education UK and an Associate Lecturer (Research) at the University of Derby, UK. He also holds positions as Foreign Professor at NUST and IIU in Islamabad, Pakistan, and Professor Extraordinaire at the North West University Potchefstroom, South Africa.

DevOps Bootcamp

Mitesh Soni 2017-05-30 Sharpen your DevOps knowledge with DevOps Bootcamp About This Book Improve your organization's performance to ensure smooth production of software and services. Learn how Continuous Integration and Continuous Delivery practices can be utilized to cultivate the DevOps culture. A fast-paced guide filled with illustrations and best practices to help you consistently ship quality software. Who This Book Is For The book is aimed at IT Developers and Operations—administrators who want to quickly learn and implement the DevOps culture in their organization. What You Will Learn Static Code Analysis using SOnarqube Configure a Maven-based JEE Web Application Perform Continuous Integration using Jenkins and VSTS Install and configure Docker Converge a Chef node using a Chef workstation Accomplish Continuous Delivery in Microsoft Azure VM and Microsoft Azure App Services (Azure Web Apps) using Jenkins Perform Load Testing using Apache JMeter Build and Release Automation using Visual Studio Team Services Monitor Cloud-based resources In Detail DevOps Bootcamp delivers practical learning modules in manageable chunks. Each chunk is delivered in a day, and each day is a productive one. Each day builds your competency in DevOps. You will be able to take the task you learn every day and apply it to cultivate the DevOps culture. Each chapter presents core concepts and key takeaways about a topic in DevOps and provides a series of hands-on exercises. You will not only learn the importance of basic concepts or practices of DevOps but also how to use different tools to automate application lifecycle management. We will start off by building the foundation of the DevOps concepts. On day two, we will perform Continuous Integration using Jenkins and VSTS both by configuring Maven-based JEE Web Application?. We will also integrate Jenkins and Sonar qube for Static Code Analysis. Further, on day three, we will focus on Docker containers where we will install and configure Docker and also create a Tomcat Container to deploy our Java based web application. On day four, we will create and configure the environment for application deployment in AWS and Microsoft Azure Cloud for which we will use Infrastructure as a Service and Open Source Configuration Management tool Chef. For day five, our focus would be on Continuous Delivery. We will automate application deployment in Docker container using Jenkins Plugin, AWS EC2 using script, AWS Elastic Beanstalk using Jenkins Plugin, Microsoft Azure VM using script, and Microsoft Azure App Services Using Jenkins. We will also configure Continuous Delivery using VSTS. We will then learn the concept of Automated Testing on day six using Apache JMeter and URL-based tests in VSTS. Further, on day seven,

we will explore various ways to automate application lifecycle management using orchestration. We will see how Pipeline can be created in Jenkins and VSTS, so the moment Continuous? Integration is completed successfully, Continuous Delivery will start and application will be deployed. On the final day, our focus would be on Security access to Jenkins and Monitoring of CI resources, and cloud-based resources in AWS and Microsoft Azure Platform as a Service. Style and Approach This book is all about fast and intensive learning. This means we don't waste time in helping readers get started. The new content is basically about filling in with highly-effective examples to build new things, solving problems in newer and unseen ways, and solving real-world examples.

Hands-On Full-Stack Web Development with ASP.NET Core

Tamir Dresher 2018-10-31 Become a full-stack developer by learning popular Microsoft technologies and platforms such as .NET Core, ASP.NET Core, Entity Framework, and Azure Key FeaturesBring static typing to web development with features compatible in TypeScript 3Implement a slim marketplace single page application (SPA) in Angular, React, and VueModernize your web apps with Microsoft Azure, Visual Studio, and GitBook Description Today, full-stack development is the name of the game. Developers who can build complete solutions, including both backend and frontend products, are in great demand in the industry, hence being able to do so a desirable skill. However, embarking on the path to becoming a modern full-stack developer can be overwhelmingly difficult, so the key purpose of this book is to simplify and ease the process. This comprehensive guide will take you through the journey of becoming a full-stack developer in the realm of the web and .NET. It begins by implementing data-oriented RESTful APIs, leveraging ASP.NET Core and Entity Framework. Afterward, it describes the web development field, including its history and future horizons. Then, you'll build webbased Single-Page Applications (SPAs) by learning about numerous popular technologies, namely TypeScript, Angular, React, and Vue. After that, you'll learn about additional related concerns involving deployment, hosting, and monitoring by leveraging the cloud; specifically, Azure. By the end of this book, you'll be able to build, deploy, and monitor cloud-based, data-oriented, RESTful APIs, as well as modern web apps, using the most popular frameworks and technologies. What you will learnBuild RESTful APIs in C# with ASP.NET Core, web APIs, and Entity FrameworkSee The history and future horizons of the web development fieldBring static-typing to web apps using TypeScriptBuild web applications using Angular, React, and VueDeploy your application to the cloudWrite web applications that scale, can adapt to changes, and are easy to maintainDiscover best practices and real-world tips and tricksSecure your backend server with Authentication and Authorization using OAuth 2.0Who this book is for This book is for developers who are keen on strengthening their skills in the field of cloud-based full-stack web development. You need basic knowledge of web-related pillars, including HTML, CSS, and JavaScript, as well as C# and REST. This book targets novice developers in the realm of Web development and ASP.NET who desire to advance to modern Web and ASP.NET Core development and leverage the Cloud to manage and bring everything together.

Azure DevOps Explained

Sjoukje Zaal 2020-12-11 Implement real-world DevOps and cloud deployment scenarios using Azure Repos, Azure Pipelines, and other Azure DevOps tools Key FeaturesImprove your application development life cycle with Azure DevOps in a step-by-step mannerApply continuous integration and continuous deployment to reduce application downtimeWork with real-world CI/CD scenarios curated by a team of renowned Microsoft MVPs and MCTsBook Description Developing applications for the cloud involves changing development methodologies and procedures. Continuous integration and continuous deployment (CI/CD) processes are a must today, but are often difficult to implement and adopt. Azure DevOps is a Microsoft Azure cloud service that enhances your application development life cycle and enables DevOps capabilities. Starting with a comprehensive product overview, this book helps you to understand Azure DevOps and apply DevOps techniques to your development projects. You'll find out how to adopt DevOps techniques for your development processes by using built-in Azure DevOps tools. Throughout the course of this book, you'll also discover how to manage a project with the help of project management techniques such as Agile and Scrum, and then progress toward development aspects such as source code management, build pipelines, code testing and artifacts, release pipelines, and GitHub integration. As you learn how to implement DevOps practices, this book will also provide you with real-world examples and scenarios of DevOps adoption. By the end of this DevOps book, you will have learned how to adopt and implement Azure DevOps features in your real-world development processes. What you will learnGet to grips with Azure DevOpsFind out about project management with Azure BoardsUnderstand source code management with Azure ReposBuild and release pipelinesRun quality tests in build pipelinesUse artifacts and integrate Azure DevOps in the GitHub flowDiscover real-world CI/CD scenarios on AzureWho this book is for This book is for developers, solutions architects, and DevOps engineers interested in getting started with cloud DevOps practices on Azure. Prior understanding of Azure architecture and services is necessary. Some knowledge of DevOps principles and techniques will be useful.

Microsoft Azure Security Center

Yuri Diogenes 2018-06-04 Discover high-value Azure security insights, tips, and operational optimizations This book presents comprehensive Azure Security Center techniques for safeguarding cloud and hybrid environments. Leading Microsoft security and cloud experts Yuri Diogenes and Dr. Thomas Shinder show how to apply Azure Security Center's full spectrum of features and capabilities to address protection, detection, and response in key operational scenarios. You'll learn how to secure any Azure workload, and optimize virtually all facets of modern security, from policies and identity to incident response and risk management. Whatever your role in Azure security, you'll learn how to save hours, days, or even weeks by solving problems in most efficient, reliable ways possible. Two of Microsoft's leading cloud security experts show how to: • Assess the impact of cloud and hybrid environments on security, compliance, operations, data protection, and risk management • Master a new security paradigm for a world without traditional perimeters • Gain visibility and control to secure compute, network, storage, and application workloads • Incorporate Azure Security Center into your security operations center • Integrate Azure Security Center with Azure AD Identity Protection Center and third-party solutions • Adapt Azure Security Center's built-in policies and definitions for your organization • Perform security assessments and implement Azure Security Center recommendations • Use incident response features to detect, investigate, and address threats • Create high-fidelity fusion alerts to focus attention on your most urgent security issues • Implement application whitelisting and just-in-time VM access • Monitor user behavior and access, and investigate compromised or misused credentials • Customize and perform operating system security baseline assessments • Leverage integrated threat intelligence to identify known bad actors

Azure Strategy and Implementation Guide

Jack Lee 2021-05-14 Leverage Azure's cloud capabilities to find the most optimized path to meet your firm's cloud infrastructure needs Key FeaturesGet to grips with the core Azure infrastructure technologies and solutionsDevelop the ability to opt for cloud design and architecture that best fits your organizationCover the entire spectrum of cloud migration from planning to implementation and best practicesBook Description Microsoft Azure is a powerful cloud computing platform that offers a multitude of services and capabilities for organizations of any size moving to a cloud strategy. This fourth edition comes with the latest updates on cloud security fundamentals, hybrid cloud, cloud migration, Microsoft Azure Active Directory, and Windows Virtual Desktop. It encapsulates the entire spectrum of measures involved in Azure deployment that includes understanding Azure fundamentals, choosing a suitable cloud architecture, building on design principles, becoming familiar with Azure DevOps, and learning best practices for optimization and management. The book begins by introducing you to the Azure cloud platform and demonstrating the substantial scope of digital transformation and innovation that can be achieved with Azure's capabilities. The guide also acquaints you with practical insights into application modernization, Azure Infrastructure as a Service (IaaS) deployment, infrastructure management, key application architectures, best practices of Azure DevOps, and Azure automation. By the end of this book, you will have acquired the skills required to drive Azure operations from the planning and cloud migration stage to cost management and troubleshooting. What you will learnUnderstand core Azure infrastructure technologies and solutionsCarry out detailed planning for migrating applications to the cloud with AzureDeploy and run Azure infrastructure servicesDefine roles and responsibilities in DevOpsGet a firm grip on Azure security fundamentalsCarry out cost optimization in AzureWho this book is for This book is designed to benefit Azure architects, cloud solution architects, Azure developers, Azure administrators, and anyone who wants to develop expertise in operating and administering the Azure cloud. Basic familiarity with operating systems and databases will help you grasp the concepts covered in this book.

Microsoft Hybrid Cloud Unleashed with Azure Stack and Azure

Kerrie Meyler 2017-11-21 Microsoft Hybrid Cloud Unleashed brings together comprehensive and practical insights into hybrid cloud technologies, complete CloudOps and DevOps implementation strategies, and detailed guidance for deploying Microsoft Azure Stack in your environment. Written by five Microsoft Cloud and Datacenter Management MVPs, this book is built on real-world scenarios and the authors' extraordinary hands-on experiences as early adopters. Step by step, the authors help you integrate your optimal mix of private and public cloud, with a unified management experience that lets you move workloads at will, achieving unprecedented flexibility. The authors also guide you through all aspects of building your own secure, high-performance hybrid cloud infrastructure. You'll discover how Azure Stack enables you to run data centers with the same scalability, redundancy, and reliability as Microsoft's Azure data centers; how to integrate Azure infrastructure and platform services with internal operations; and how to manage crucial external dependencies. The book concludes with a deep dive into automating and customizing Azure Stack for maximum reliability, productivity, and cost savings. Detailed information on how to Run a private/hybrid cloud on your own hardware in your data center, using APIs and code identical to public Azure Apply ITIL and DevOps lifecycles to your hybrid cloud implementation Gain a deep understanding of Azure Stack architecture, components, and internals Install and configure Azure Stack and master the Azure Stack Portal Integrate and utilize infrastructure, core, and custom resource providers Effectively provision, secure, and manage tenants Manage, monitor, troubleshoot, and back up Azure Stack with CloudOps Automate resource provisioning with PowerShell, the Azure CLI, templates, and Azure Stack's API Write your own Azure Resource Manager templates Centrally automate cloud management and complex tasks connected to external systems Develop customized, production-ready Azure Stack marketplace items

Building Cloud Apps with Microsoft Azure

Scott Guthrie 2014-07-17 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.

Designing Distributed Systems Brendan Burns 2018-02-20 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.

Hands-on Cloud Analytics with Microsoft Azure Stack Prashila Naik 2020-11-12 Explore and work with various Microsoft Azure services for real-time Data Analytics KEY FEATURES Understanding what Azure can do with your data Understanding the analytics services offered by Azure Understand how data can be transformed to generate more data Understand what is done after a Machine Learning model is built Go through some Data Analytics real-world use cases DESCRIPTION Data is the key input for Analytics. Building and implementing data platforms such as Data Lakes, modern Data Marts, and Analytics at scale require the right cloud platform that Azure provides through its services. The book starts by sharing how analytics has evolved and continues to evolve. Following the introduction, you will deep dive into ingestion technologies. You will learn about Data processing services in Azure. You will next learn about what is meant by a Data Lake and understand how Azure Data Lake Storage is used for analytical workloads. You will then learn about critical services that will provide actual Machine Learning capabilities in Azure. The book also talks about Azure Data Catalog for cataloging, Azure AD for Access Management, Web Apps and PowerApps for cloud web applications, Cognitive services for Speech, Vision, Search and Language, Azure VM for computing and Data Science VMs, Functions as serverless computing, Kubernetes and Containers as deployment options. Towards the end, the book discusses two use cases on Analytics. WHAT WILL YOU LEARN Explore and work with various Azure services Orchestrate and ingest data using Azure Data Factory Learn how to use Azure Stream Analytics Get to know more about Synapse Analytics and its features Learn how to use Azure Analysis Services and its functionalities WHO THIS BOOK IS FOR This book is for anyone who has basic to intermediate knowledge of cloud and analytics concepts and wants to use Microsoft Azure for Data Analytics. This book will also benefit Data Scientists who want to use Azure for Machine Learning. TABLE OF CONTENTS 1. Data and its power 2. Evolution of Analytics and its Types 3. Internet of Things 4. AI and ML 5. Why cloud 6. What are a data lake and a modern datamart 7. Introduction to Azure services 8. Types of data 9. Azure Data Factory 10. Stream Analytics 11. Azure Data Lake Store and Azure Storage 12. Cosmos DB 13. Synapse Analytics 14. Azure Databricks 15. Azure Analysis Services 16. Power BI 17. Azure Machine Learning 18. Sample Architectures and synergies - Real-Time and Batch 19. Azure Data Catalog 20. Azure Active Directory 21. Azure WebApps 22. Power apps 23. Time Series Insights 24. Azure Cognitive Services 25. Azure Logicapps 26. Azure VM 27. Azure Functions 28. Azure Containers 29. Azure Kubernetes Service 30. Use Case 1 31. Use Case 2

Briggs Barry Briggs 2016-01-07 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.

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

Hands-On Security in DevOps Tony Hsiang-Chih Hsu 2018-07-30 Protect your organization's security at all levels by introducing the latest strategies for securing DevOps Key Features Integrate security at each layer of the DevOps pipeline Discover security practices to protect your cloud services by detecting fraud and intrusion Explore solutions to infrastructure security using DevOps principles Book Description DevOps has provided speed and quality benefits with continuous development and deployment methods, but it does not guarantee the security of an entire organization. Hands-On Security in DevOps shows you how to adopt DevOps techniques to continuously improve your organization's security at every level, rather than just focusing on protecting your infrastructure. This guide combines DevOps and security to help you to protect cloud services, and teaches you how to use techniques to integrate security directly in your product. You will learn how to implement security at every layer, such as for the web application, cloud infrastructure, communication, and the delivery pipeline layers. With the help of practical examples, you'll explore the core security aspects, such as blocking attacks, fraud detection, cloud forensics, and incident response. In the concluding chapters, you will cover topics on extending DevOps security, such as risk assessment, threat modeling, and continuous security. By the end of this book, you will be well-versed in implementing security in all layers of your organization and be confident in monitoring and blocking attacks throughout your cloud services. What you will learn Understand DevSecOps culture and organization Learn security requirements, management, and metrics Secure your architecture design by looking at threat modeling, coding tools and practices Handle most common security issues and explore black and white-box testing tools and practices Work with security monitoring toolkits and online fraud detection rules Explore GDPR and PII handling case studies to understand the DevSecOps lifecycle Who this book is for Hands-On Security in DevOps is for system administrators, security consultants, and DevOps engineers who want to secure their entire organization. Basic understanding of Cloud computing, automation frameworks, and programming is necessary.