

Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

This book contains revised selected and invited papers presented at the International Workshop on Massively Multi-Agent Systems, MMAS 2018, held in Stockholm, Sweden, in July 2018. The 7 revised full papers presented were carefully reviewed and selected for inclusion in this volume. Also included are 3 post-workshop papers. The papers discuss enabling technologies, new architectures, promising applications, and challenges of massively multi-agent systems in the era of IoT. They are organized in the following topical sections: multi-agent systems and Internet of Things; architectures for massively multi-agent systems; and applications of massively multi-agent systems.

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer--even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?", Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

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

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

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.

This book predominately covers Microservices architecture with real-world example which can help professionals with ease of adoption of this technology. Following the trend of modularity in real world, the idea behind Microservice by Examples is to allow developers to build their applications from various independent components which can be easily changed, removed or upgraded. Also, it is relevant now because of enterprises are moving towards DevOps/ Modernization, this book will emphasize on containers and Dockers as well.

Hands-On Azure Digital Twins

Pro Spring Boot 2

A SOLID adventure into architectural principles, design patterns, .NET 5, and C#

How to Create World-Class Agility, Reliability, and Security in Technology Organizations

Develop a Fully Flexible and Scalable Internet of Things Platform in 24 Hours

Complexity in Information Systems Development

The DevOps Handbook

Increase profitability, elevate work culture, and exceed productivity goals through DevOps practices. More than ever, the effective management of technology is critical for business competitiveness. For decades, technology leaders have struggled to balance agility, reliability, and security. The consequences of failure have never been greater whether it's the healthcare.gov debacle, cardholder data breaches, or missing the boat with Big Data in the cloud. And yet, high performers using DevOps principles, such

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

as Google, Amazon, Facebook, Etsy, and Netflix, are routinely and reliably deploying code into production hundreds, or even thousands, of times per day. Following in the footsteps of The Phoenix Project, The DevOps Handbook shows leaders how to replicate these incredible outcomes, by showing how to integrate Product Management, Development, QA, IT Operations, and Information Security to elevate your company and win in the marketplace.

This book contains the proceedings of the KES International conferences on Innovation in Medicine and Healthcare (KES-InMed-19) and Intelligent Interactive Multimedia Systems and Services (KES-IIMSS-19), held on 17–19 June 2019 and co-located in St. Julians, on the island of Malta, as part of the KES Smart Digital Futures 2019 multi-theme conference. The major areas covered by KES-InMed-19 include: Digital IT Architecture in Healthcare; Advanced ICT for Medical and Healthcare; Biomedical Engineering, Trends, Research and Technologies and Healthcare Support System. The major areas covered by KES-IIMSS-19 were: Interactive Technologies; Artificial Intelligence and Data Analytics; Intelligent Services and Architectures and Applications. This book is of use to researchers in these vibrant areas, managers, industrialists and anyone wishing to gain an overview of the latest research in these fields.

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.

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

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

Cloud computing has experienced explosive growth and is expected to continue to rise in popularity as new services and

applications become available. As with any new technology, security issues continue to be a concern, and developing effective methods to protect sensitive information and data on the cloud is imperative. *Cloud Security: Concepts, Methodologies, Tools, and Applications* explores the difficulties and challenges of securing user data and information on cloud platforms. It also examines the current approaches to cloud-based technologies and assesses the possibilities for future advancements in this field. Highlighting a range of topics such as cloud forensics, information privacy, and standardization and security in the cloud, this multi-volume book is ideally designed for IT specialists, web designers, computer engineers, software developers, academicians, researchers, and graduate-level students interested in cloud computing concepts and security.

A Practitioner's Guide to Design, Develop and Deploy Apps

Developing Cloud Native Applications in Azure using .NET Core

Confederated International Conferences: CoopIS, C&TC, and ODBASE 2017, Rhodes, Greece, October 23-27, 2017, Proceedings, Part II

Achieving DevOps

Evolutionary Patterns to Transform Your Monolith

Analysis and Design for Services and Microservices

Microservices, IoT and Azure

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

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

organization who are being asked to lend their support toward DevOps implementation efforts

The highly dynamic world of information technology service management stresses the benefits of the quick and correct implementation of IT services. A disciplined approach relies on a separate set of assumptions and principles as an agile approach, both of which have complicated implementation processes as well as copious benefits. Combining these two approaches to enhance the effectiveness of each, while difficult, can yield exceptional dividends. Balancing Agile and Disciplined Engineering and Management Approaches for IT Services and Software Products is an essential publication that focuses on clarifying theoretical foundations of balanced design methods with conceptual frameworks and empirical cases. Highlighting a broad range of topics including business trends, IT service, and software development, this book is ideally designed for software engineers, software developers, programmers, information technology professionals, researchers, academicians, and students.

Quickly and productively develop complex Spring applications and microservices out of the box, with minimal concern over things like configurations. This revised book will show you how to fully leverage the Spring Boot 2 technology and how to apply it to create enterprise ready applications that just work. It will also cover what's been added to the new Spring Boot 2 release, including Spring Framework 5 features like WebFlux, Security, Actuator and the new way to expose Metrics through Micrometer framework, and more. This book is your authoritative hands-on practical guide for increasing your enterprise Java and cloud application productivity while decreasing development time. It's a no nonsense guide with case studies of increasing complexity throughout the book. The author, a senior solutions architect and Principal Technical instructor with Pivotal, the company behind the Spring Framework, shares his experience, insights and first-hand knowledge about how Spring Boot technology works and best practices. Pro Spring Boot 2 is an essential book for your Spring learning and reference library. What You Will Learn Configure and use Spring Boot Use non-functional requirements with Spring Boot Actuator Carry out web development with Spring Boot Persistence with JDBC, JPA and NoSQL Databases Messaging with JMS, RabbitMQ and WebSockets Test and deploy with Spring Boot A quick look at the Spring Cloud projects Microservices and deployment to the Cloud Extend Spring Boot by creating your own Spring Boot Starter and @Enable feature Who This Book Is For Experienced Spring and Java developers seeking increased productivity gains and decreased complexity and development time in their applications and software services.

Build your own digital twin in no time! Key FeaturesBuild and design simple to complex digital twins solutionsCreate end-to-end solutions with Azure Digital TwinsIntegrate the Azure Digital Twins service with other Azure services to provide even richer solutionsBook Description In today's world, clients are using more and more IoT sensors to monitor their business processes and assets. Think about collecting information such as pressure in an engine, the temperature, or a light switch being turned on or off in

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

a room. The data collected can be used to create smart solutions for predicting future trends, creating simulations, and drawing insights using visualizations. This makes it beneficial for organizations to make digital twins, which are digital replicas of the real environment, to support these smart solutions. This book will help you understand the concept of digital twins and how it can be implemented using an Azure service called Azure Digital Twins. Starting with the requirements and installation of the Azure Digital Twins service, the book will explain the definition language used for modeling digital twins. From there, you'll go through each step of building digital twins using Azure Digital Twins and learn about the different SDKs and APIs and how to use them with several Azure services. Finally, you'll learn how digital twins can be used in practice with the help of several real-world scenarios. By the end of this book, you'll be confident in building and designing digital twins and integrating them with various Azure services. What you will learn

Understand the concept and architecture of Azure Digital Twins
Get to grips with installing and configuring the service and required tools
Understand the Digital Twin Definition Language (DTDL) and digital twin models
Explore the APIs and SDKs available to access the Azure Digital Twins services
Monitor, troubleshoot, and secure digital twins
Discover how to build, design, and integrate applications with various Azure services
Explore real-life scenarios with Azure Digital Twins

Who this book is for This book is for Azure developers, Azure architects, and anyone who wants to learn more about how to implement IoT solutions using Azure Digital Twins and additional Azure services. Prior experience using the Azure Portal and a clear understanding of building applications using .NET will be helpful.

A SOLID adventure into architectural principles and design patterns using .NET 6 and C# 10

Proceedings of 8th KES-InMed 2020

Communication Technologies and Intelligent Applications

Enterprise Application Architecture with .NET Core

Designing, Developing, Deploying, and Monitoring

Synergizing Strategies and Intelligence with Architecture

Innovation in Medicine and Healthcare Systems, and Multimedia

This volume presents a series of carefully selected papers on the theme of Intelligent Interactive Multimedia Systems and Services (IIMSS-18), but also including contributions on Innovation in Medicine and Healthcare (InMed-18) and Smart Transportation Systems (STS-18). The papers were presented at the Smart Digital Futures 2018 multi-theme conference, which grouped the AMSTA, IDT, InMed, SEEL, STS and IIMSS conferences in one venue in Gold Coast, Australia in June 2018. IIMSS-18 included sessions on 'Cognitive Systems and Big Data Analytics', 'Data Processing and Secure Systems', 'Innovative Information Services for Advanced Knowledge Activity', 'Autonomous System' and 'Image Processing'. InMed-18 papers cover major areas of 'Digital Architecture for Internet of Things, Big data, Cloud and Mobile IT in Healthcare' and

'Advanced ICT for Medical and Healthcare'. STS-18 papers provide a comprehensive overview of various aspects of current research into intelligent transportation technology.

This book highlights new trends and challenges in intelligent systems, which play an important part in the digital transformation of many areas of science and practice. It includes papers offering a deeper understanding of the human-centred perspective on artificial intelligence, of intelligent value co-creation, ethics, value-oriented digital models, transparency, and intelligent digital architectures and engineering to support digital services and intelligent systems, the transformation of structures in digital businesses and intelligent systems based on human practices, as well as the study of interaction and the co-adaptation of humans and systems. All papers were originally presented at the International KES Conference on Human Centred Intelligent Systems 2020 (KES HCIS 2020), held on June 17-19, 2020, in Split, Croatia.

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.

This volume is a collection of papers on emerging concepts, approaches and ideas in information systems research. It examines theoretical and methodological issues related to both information systems development in general and the complexity of information systems as socio-technical systems. The book draws on invited papers selected from the proceedings of the 25th International Conference on Information Systems Development (ISD) held in Katowice, Poland, August 24 - 26, 2016. The invited conference papers were revised and expanded and present research that is focused on context, creativity, and cognition in information systems development. These issues are significant as they provide the basis for organizations to

identify new markets, support innovative technology deployment, and enable mobile applications to detect, sense, interpret, and respond to the environment.

Innovation in Medicine and Healthcare

Proceedings of the 25th International Conference on Information Systems Development

Monolith to Microservices

Análise de sistemas

Holistic Approach to Quantum Cryptography in Cyber Security

Microservice by examples using .NET Core

A comprehensive and practical guide to implementing end-to-end IoT solutions

Smart Sensors Networks: Communication Technologies and Intelligent Applications explores the latest sensor and sensor networks techniques and applications, showing how networked wireless sensors are used to monitor and gather intelligence from our surrounding environment. It provides a systematic look at the unique characteristics of wireless sensor networks through their usage in a broad range of areas, including healthcare for the elderly, energy consumption, industrial automation, intelligent transportation systems, smart homes and cities, and more. The book shows how sensor-networks work and how they are applied to monitor our surrounding environment. It explores the most important aspects of modern sensors technologies, providing insights on the newest technologies and the systems needed to operate them. Readers will find the book to be an entry point for understanding the fundamental differences between the various sensor technologies and their use in for different scenarios. Indexing: The books of this series are submitted to EI-Compendex and SCOPUS Presents numerous specific use-cases throughout, showing practical applications of concepts Contains contributions from leading experts around the globe Collects, in one place, the latest thinking on an emerging topic Addresses the security and privacy issues inherent in sensor deployment

The Top-Selling, De Facto Guide to SOA--Now Updated with New Content and Coverage of Microservices! For more than a decade, Thomas Erl's best-selling Service-Oriented Architecture: Concepts, Technology, and Design has been the definitive end-to-end tutorial on SOA, service-orientation, and service technologies. Now, Erl has thoroughly updated the industry's de facto guide to SOA to reflect new practices, technologies, and strategies that have emerged through hard-won experience and creative innovation. This Second Edition officially introduces microservices and micro task abstraction as part of service-oriented architecture and its associated service layers. Updated case study examples and illustrations further explain and position the microservice model alongside and in relation to more traditional types of services. Coverage includes: • Easy-to-

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

understand, plain English explanations of SOA and service-orientation fundamentals (as compiled from series titles) • Microservices, micro task abstraction, and containerization • Service delivery lifecycle and associated phases • Analysis and conceptualization of services and microservices • Service API design with REST services, web services, and microservices • Modern service API and contract versioning techniques for web services and REST services • Up-to-date appendices with service-orientation principles, REST constraints, and SOA patterns (including three new patterns) Service-Oriented Architecture: Analysis and Design for Services and Microservices, Second Edition, will be indispensable to application architects, enterprise architects, software developers, and any IT professionals interested in learning about or responsible for designing or implementing modern-day, service-oriented solutions. Chapter 1: Introduction Chapter 2: Case Study Backgrounds Part I: Fundamentals Chapter 3: Understanding Service-Orientation Chapter 4: Understanding SOA Chapter 5: Understanding Layers with Services and Microservices Part II: Service-Oriented Analysis and Design Chapter 6: Analysis and Modeling with Web Services and Microservices Chapter 7: Analysis and Modeling with REST Services and Microservices Chapter 8: Service API and Contract Design with Web Services Chapter 9: Service API and Contract Design with REST Services and Microservices Chapter 10: Service API and Contract Versioning with Web Services and REST Services Part III: Appendices Appendix A: Service-Orientation Principles Reference Appendix B: REST Constraints Reference Appendix C: SOA Design Patterns Reference Appendix D: The Annotated SOA Manifesto

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.

This double volumes LNCS 10573-10574 constitutes the refereed proceedings of the Confederated International Conferences: Cooperative Information Systems, CoopIS 2017, Ontologies, Databases, and Applications of Semantics, ODBASE 2017, and Cloud and Trusted Computing, C&TC, held as part of OTM 2017 in October 2017 in Rhodes, Greece. The 61 full papers presented together with 19 short papers were carefully reviewed and selected from 180 submissions. The OTM program every year covers data and Web semantics, distributed objects, Web services, databases, information systems, enterprise workflow and collaboration, ubiquity, interoperability, mobility, grid and high-performance computing.

Transform your software deployment process with Microsoft Azure

Massively Multi-Agent Systems II

Emerging Research and Opportunities

On the Move to Meaningful Internet Systems. OTM 2017 Conferences

Proceedings of KES-InMed-19 and KES-IIMSS-19 Conferences

Enabling Technologies, Platforms, and Use Cases

Designing Production-Grade and Large-Scale IoT Solutions

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

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

This book discusses business architecture as a basis for aligning efforts with outcomes. It views BA as complementary to enterprise architecture, where the focus of technological initiatives and inventories is to understand and improve business organization, business direction, and business decision-making. This book provides a practical, long-term view on BA. Based on the authors' consulting experience and industrial research, the material in this book is a valuable addition to the thought processes around BA and EA. The lead author has direct and practical experience with large clients in applying APQC capability framework for undertaking multiple enterprise-wide capability assessments.

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

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

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.

Get to grips with key IoT aspects along with modern trends, architectures, and technologies that support IoT solutions, such as cloud computing, modern app architecture paradigms, and data analytics

Key Features

- Understand the big picture of designing production-grade IoT solutions from an industry expert
- Get up and running with the development and designing aspects of the Internet of Things
- Solve business problems specific to your domain using different IoT platforms and technologies

Book Description With the rising demand for and recent enhancements in IoT, a developer with sound knowledge of IoT is the need of the hour. This book will help you design, build, and operate large-scale E2E IoT solutions to transform your business and products, increase revenue, and reduce operational costs. Starting with an overview of how IoT technologies can help you solve your business problems, this book will be a useful guide to helping you implement end-to-end IoT solution architecture. You'll learn to select IoT devices; real-time operating systems; IoT Edge covering Edge location, software, and hardware; and the best IoT connectivity for your IoT solution. As you progress, you'll work with IoT device management, IoT data analytics, IoT platforms, and put these components to work as part of your IoT solution. You'll also be able to build IoT backend cloud from scratch by leveraging the modern app architecture paradigms and cloud-native technologies such as containers and microservices. Finally, you'll discover best practices for different operational excellence pillars, including high availability, resiliency, reliability, security, cost optimization, and high performance, which should be applied for large-scale production-grade IoT solutions. By the end of this IoT book, you'll be confident in designing, building, and operating IoT solutions.

What you will learn

- Understand the detailed anatomy of IoT solutions and explore their building blocks
- Explore IoT connectivity options and protocols used in designing IoT solutions
- Understand the value of IoT platforms in building IoT solutions
- Explore real-time operating systems used in microcontrollers
- Automate device administration tasks with IoT device management
- Master different architecture paradigms and decisions in IoT solutions
- Build and

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

gain insights from IoT analytics solutions • Get an overview of IoT solution operational excellence pillars Who this book is for This book is for E2E solution architects, systems and technical architects, and IoT developers looking to design, build, and operate E2E IoT applications and solutions. Basic knowledge of cloud computing, software engineering, and distributed system design will help you get the most out of this book.

Balancing Agile and Disciplined Engineering and Management Approaches for IT Services and Software Products

Kubernetes Microservices with Docker

Smart Sensors Networks

Proceedings of KES-HCIS 2020 Conference

Business in Real-Time Using Azure IoT and Cortana Intelligence Suite

Adaptive Integrated Digital Architecture Framework (AIDAF)

Leveraging DevOps and Microservice Architecture to deliver SaaS Solutions

As more and more devices become interconnected through the Internet of Things (IoT), there is an even greater need for this book, which explains the technology, the internetworking, and applications that are making IoT an everyday reality. The book begins with a discussion of IoT "ecosystems" and the technology that enables them, which includes: Wireless Infrastructure and Service Discovery Protocols Integration

Technologies and Tools Application and Analytics Enablement Platforms A chapter on next-generation cloud infrastructure explains hosting IoT platforms and applications. A chapter on data analytics throws light on IoT data collection, storage, translation, real-time processing, mining, and analysis, all of which can yield actionable insights from the data collected by IoT applications. There is also a chapter on edge/fog computing.

The second half of the book presents various IoT ecosystem use cases. One chapter discusses smart airports and highlights the role of IoT integration. It explains how mobile devices, mobile technology, wearables, RFID sensors, and beacons work together as the core technologies of a smart airport. Integrating these components into the airport ecosystem is examined in detail, and use cases and real-life examples illustrate this IoT ecosystem in operation. Another in-depth look is on envisioning smart healthcare systems in a connected world. This chapter focuses on the requirements, promising applications,

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

and roles of cloud computing and data analytics. The book also examines smart homes, smart cities, and smart governments. The book concludes with a chapter on IoT security and privacy. This chapter examines the emerging security and privacy requirements of IoT environments. The security issues and an assortment of surmounting techniques and best practices are also discussed in this chapter.

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

A guide to cloud computing for students, scientists, and engineers, with advice and many hands-on examples. The emergence of powerful, always-on cloud utilities has transformed how consumers interact with information technology, enabling video streaming, intelligent personal assistants, and the sharing of content. Businesses, too, have benefited from the cloud, outsourcing much of their information technology to cloud services. Science, however, has not fully exploited the advantages of the cloud. Could scientific discovery be accelerated if mundane chores were automated and outsourced to the cloud? Leading

computer scientists Ian Foster and Dennis Gannon argue that it can, and in this book offer a guide to cloud computing for students, scientists, and engineers, with advice and many hands-on examples. The book surveys the technology that underpins the cloud, new approaches to technical problems enabled by the cloud, and the concepts required to integrate cloud services into scientific work. It covers managing data in the cloud, and how to program these services; computing in the cloud, from deploying single virtual machines or containers to supporting basic interactive science experiments to gathering clusters of machines to do data analytics; using the cloud as a platform for automating analysis procedures, machine learning, and analyzing streaming data; building your own cloud with open source software; and cloud security. The book is accompanied by a website, Cloud4SciEng.org, that provides a variety of supplementary material, including exercises, lecture slides, and other resources helpful to readers and instructors.

Start using Kubernetes in complex big data and enterprise applications, including Docker containers. Starting with installing Kubernetes on a single node, the book introduces Kubernetes with a simple Hello example and discusses using environment variables in Kubernetes. Next, Kubernetes Microservices with Docker discusses using Kubernetes with all major groups of technologies such as relational databases, NoSQL databases, and in the Apache Hadoop ecosystem. The book concludes with using multi container pods and installing Kubernetes on a multi node cluster. /div "a concise but clear introduction to containers, Docker and Kubernetes, using simple real-world examples to pass on the core concepts, via repetition, and is a very useful enabler." 10/10 Dave Hay MBCS CITP: review for BCS, The Chartered Institute for IT (<http://www.bcs.org/content/conWebDoc/58512>) What You Will Learn Install Kubernetes on a single node Set environment variables Create multi-container pods using Docker Use volumes Use Kubernetes with the Apache Hadoop ecosystem, NoSQL databases, and RDBMSs Install Kubernetes on a multi-node cluster Who This Book Is For Application developers including Apache Hadoop developers, database developers and NoSQL developers.

Proceedings of 2018 Conference

An An Atypical ASP.NET Core 5 Design Patterns Guide

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

Driving Your Digital Transformation

Cloud Computing for Science and Engineering

International Workshop, MMAS 2018, Stockholm, Sweden, July 14, 2018, Revised Selected Papers

The Internet of Things

Cloud Security: Concepts, Methodologies, Tools, and Applications

This book investigates solutions incorporated by architecture boards in global enterprises to resolve issues and mitigate related architecture risks, while also proposing and implementing an adaptive integrated digital architecture framework (AIDAF) and related models and approaches/platforms, which can be applied in companies to promote IT strategies using cloud/mobile IT/digital IT. The book is divided into three main parts, the first of which (Chapters 1–2) addresses the background and motivation for AIDAF aligned with digital IT strategies. The second part (Chapter 3) provides an overview of strategic enterprise architecture (EA) frameworks for digital IT, elaborates on the essential elements of EA frameworks in the digital IT era, and advocates using AIDAF, models for architecture assessment/risk management, knowledge management on digital platforms. In turn, the third part (Chapters 4–7) demonstrates the application and benefits of AIDAF and related models, as shown in three case studies. “I found this book to be a very nice contribution to the EA community of practice. I can recommend this book as a textbook for digital IT strategists/practitioners, EA practitioners, students in universities and graduate schools.” (From the Foreword by Scott A. Bernard) “In this new age of the digital information society, it is necessary to advocate a new EA framework. This book provides state-of-the-art knowledge and practices about EA frameworks beneficial for IT practitioners, IT strategists, CIO, IT architects, and even students. It serves as an introductory textbook for all who drive the information society in this era.”(From the Foreword by Jun Murai)

A .NET developer’s guide to crafting robust, maintainable, and flexible web apps by leveraging C# 9 and .NET 5 features and component-scale and application-scale design patterns Key FeaturesApply software design patterns effectively, starting small and progressing to cloud-scaleDiscover modern application architectures such as vertical slice, clean architecture, and event-driven microservicesExplore ASP.NET design patterns, from options to full-stack web development using BlazorBook Description Design patterns are a set of solutions to many of the common problems occurring in software development. Knowledge of these design patterns helps developers and professionals to craft software solutions of any scale. ASP.NET Core 5 Design Patterns starts by exploring basic design patterns, architectural principles, dependency injection, and other ASP.NET Core mechanisms. You’ll explore the component scale as you discover patterns oriented toward small chunks of the software, and then move to application-scale patterns and techniques to understand higher-level patterns and how to structure the application as a whole. The book covers a range of significant GoF (Gangs of Four) design patterns such as strategy, singleton, decorator, facade, and composite.

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

The chapters are organized based on scale and topics, allowing you to start small and build on a strong base, the same way that you would develop a program. With the help of use cases, the book will show you how to combine design patterns to display alternate usage and help you feel comfortable working with a variety of design patterns. Finally, you'll advance to the client side to connect the dots and make ASP.NET Core a viable full-stack alternative. By the end of the book, you'll be able to mix and match design patterns and have learned how to think about architecture and how it works. What you will learn

- Apply the SOLID principles for building flexible and maintainable software
- Get to grips with .NET 5 dependency injection
- Work with GoF design patterns such as strategy, decorator, and composite
- Explore the MVC patterns for designing web APIs and web applications using Razor
- Discover layering techniques and tenets of clean architecture
- Become familiar with CQRS and vertical slice architecture as an alternative to layering
- Understand microservices, what they are, and what they are not
- Build ASP.NET UI from server-side to client-side Blazor

Who this book is for This design patterns book is for intermediate-level software and web developers with some knowledge of .NET who want to write flexible, maintainable, and robust code for building scalable web applications. Knowledge of C# programming and an understanding of web concepts like HTTP is necessary.

Guide to designing and developing cloud native applications in Azure Key Features

- a- Basics of Cloud Native Applications
- a- Designing Microservices
- a- Different cloud native options for developing Cloud Native Applications in Azure
- a- BOTs, Web Apps, Mobile Apps, Logic Apps, Service Bus, Azure Functions
- a- Azure IOT Applications
- a- Azure Machine Learning Basics
- a- Enterprise Digital Journeys

Description The mainstreaming of the cloud-native architecture as an enterprise discipline is well underway. According to the Forbes report, in January 2018, 83% of enterprise workloads will be in the cloud by 2020, 41% of enterprise workloads will run on public cloud platforms while another 22% will be running on hybrid cloud platforms. Customers are embarking on enterprise digital transformation journeys. Adopting cloud, cloud-native architectures, and microservices is an important aspect of the journey. This book starts with a brief introduction to the basics of cloud-native applications and cloud-native application patterns. It covers cloud-native options available in Azure. The objective of the book is to provide practical guidelines to an architect/designer/consultant/developer who is part of the Cloud application definition team. The book articulates a methodology that the implementation team needs to follow in a systematic manner and adapt them to fulfill the requirements for enabling the cloud-native application. It emphasizes on the interpersonal skills and techniques for organizing and directing the cloud-native definition, leadership buy-in, and leading the transition from planning to implementation. It also highlights steps to be followed and the patterns for developing cloud-native applications, cloud-native options available in Azure, developing BOT, and microservices based on Azure. It also covers how to develop simple IoT applications, Machine learning-based applications, and the serverless architecture using Azure with a practical and pragmatic approach. This book embraces a structured approach around the following key themes that represent the typical phases an enterprise traverses during its cloud-native application journey.

What will you learn This book aims to:

- a- Demonstrate the importance of cloud-native applications in elevating the effectiveness of organizational transformation programs and digital enterprise journeys using MS Azure.
- a- Disseminate current

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

advancements and thought leadership in the area of cloud-native architecture in the context of digital enterprises. a- Provide initiatives with evidence-based, credible, field-tested and practical guidance in designing their respective architectures. Who this book is for The book is intended for anyone looking for a career in Cloud technology, especially all aspiring Cloud Architects who want to learn cloud-native architectures, Microservices, IoT, BOT and Microsoft Azure platform. 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

Unleash the power of serverless integration with Azure About This Book Build and support highly available and scalable API Apps by learning powerful Azure-based cloud integration Deploy and deliver applications that integrate seamlessly in the cloud and quickly adapt as per your integration needs Deploy hybrid applications that work and integrate on the cloud (using Logic Apps and BizTalk Server) Who This Book Is For This book is for Microsoft Enterprise developers, DevOps, and IT professionals who would like to use Azure App Service and Microsoft Cloud Integration technologies to create cloud-based web and mobile apps. What You Will Learn Explore new models of robust cloud integration in Microsoft Azure Create your own connector and learn how to publish and manage it Build reliable, scalable, and secure business workflows using Azure Logic Apps Simplify SaaS connectivity with Azure using Logic Apps Connect your on-premises system to Azure securely Get to know more about Logic Apps and how to connect to on-premises “line-of-business” applications using Microsoft BizTalk Server In Detail Microsoft is focusing heavily on Enterprise connectivity so that developers can build scalable web and mobile apps and services in the cloud. In short, Enterprise connectivity from anywhere and to any device. These integration services are being offered through powerful Azure-based services. This book will teach you how to design and implement cloud integration using Microsoft Azure. It starts by showing you how to build, deploy, and secure the API app. Next, it introduces you to Logic Apps and helps you quickly start building your integration applications. We'll then go through the different connectors available for Logic Apps to build your automated business process workflow. Further on, you will see how to create a complex workflow in Logic Apps using Azure Function. You will then add a SaaS application to your existing cloud applications and create Queues and Topics in Service Bus on Azure using Azure Portal. Towards the end, we'll explore event hubs and IoT hubs, and you'll get to know more about how to tool and monitor the business workflow in Logic Apps. Using this book, you will be able to support your apps that connect to data anywhere—be it in the cloud or on-premises. Style and approach This practical hands-on tutorial shows you the full capability of App Service and other Azure-based integration services to build scalable and highly available web and mobile apps. It helps you successfully build and support your applications in the cloud or on-premises successfully. We'll debunk the popular myth that switching to cloud is risky—it's not!

Intelligent Interactive Multimedia Systems and Services

Driving Efficiency in Local Government Using a Collaborative Enterprise Architecture Framework: Emerging Research and Opportunities

Human Centred Intelligent Systems

97 Things Every Cloud Engineer Should Know

Robust Cloud Integration with Azure

An Atypical ASP.NET Core 6 Design Patterns Guide

An Authoritative Guide to Building Microservices, Web and Enterprise Applications, and Best Practices

This book presents the proceedings of the KES International Conferences on Innovation in Medicine and Healthcare (KES-InMed-19), held in Split, Croatia, on June 17–19, 2020. Covering a number of key areas, including digital IT architecture in healthcare; advanced ICT for medicine and healthcare; biomedical engineering, trends, research and technologies; and healthcare support systems, this book is a valuable resource for researchers, managers, industrialists and anyone wishing to gain an overview of the latest research in these fields.

A Série Universitária foi desenvolvida pelo Senac São Paulo com o intuito de preparar profissionais para o mercado de trabalho. Os títulos abrangem diversas áreas, abordando desde conhecimentos teóricos e práticos adequados às exigências profissionais até a formação ética e sólida. Análise de sistemas aborda o ciclo de vida de desenvolvimento de sistemas de software, apresentando modelos, metodologias, ferramentas de desenvolvimento, fundamentos e características do gerenciamento de projetos de sistemas de software, suas principais etapas e atividades. Abrange os principais elementos e métodos de identificação e análise de requisitos de sistemas e discute as principais ferramentas utilizadas no processo de desenvolvimento de software. Por fim, apresenta conceitos essenciais da lógica de programação, principais estruturas, comandos e operações. Esta obra tem como principal objetivo apresentar ao leitor um panorama dos princípios da engenharia de software.

This new book discusses the concepts while also highlighting the challenges in the field of quantum cryptography and also covering cryptographic techniques and cyber security techniques, in a single volume. It comprehensively covers important topics in the field of quantum cryptography with applications, including quantum key distribution, position-based quantum cryptography, quantum teleportation, quantum e-commerce, quantum cloning, cyber security techniques' architectures and design, cyber security techniques management, software-defined

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

networks, and cyber security techniques for 5G communication. The text also discusses the security of practical quantum key distribution systems, applications and algorithms developed for quantum cryptography, as well as cyber security through quantum computing and quantum cryptography. The text will be beneficial for graduate students, academic researchers, and professionals working in the fields of electrical engineering, electronics and communications engineering, computer science, and information technology.

Discover how every solution that is in some way related to the IoT needs a platform and how to create that platform. This book is about being agile and reducing your time to market without breaking the bank. It is about designing something that you can scale incrementally without a lot of rework and potentially disrupting the current work. So, the key questions are: What does it take? How long does it take? And, how much does it take to build your own IoT platform? This book answers these questions and provides you with a step-by-step guidance on how to build your own IoT platform. In this book, the author bursts the bubble and highlights how the core of an IoT platform looks like. There are always some must-haves and some nice-to-haves. This book will distinguish the two and focus on how to build the must-haves. Building your IoT platform is not only the biggest cost saver but can also be a satisfying learning experience. In this edition, we will undertake a sample project to further clarify the concepts we learn; additional chapters would show you the hardware interface. What You Will Learn:

- Learn how to architect an interconnected system.
- Learn how to develop flexible architecture.
- Learn to prioritize system requirements with a bottom-up approach.
- Be able to create a redundant communications platform.
- Be able to create an end-to-end application using the guidelines in this book.

Who Is This Book For IoT developers with basic-to-intermediate programming skills would benefit from this book.

Microsoft Azure Essentials - Fundamentals of Azure

A practical guide to building distributed IoT solutions

Outcome-Driven Business Architecture

Build Your Own IoT Platform

Enterprise Architecture for Global Companies in a Digital IT Era

Building Microservices Applications on Microsoft Azure

Service-Oriented Architecture

Learn how today's businesses can transform themselves by leveraging real-time data and advanced

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

machine learning analytics. This book provides prescriptive guidance for architects and developers on the design and development of modern Internet of Things (IoT) and Advanced Analytics solutions. In addition, Business in Real-Time Using Azure IoT and Cortana Intelligence Suite offers patterns and practices for those looking to engage their customers and partners through Software-as-a-Service solutions that work on any device. Whether you're working in Health & Life Sciences, Manufacturing, Retail, Smart Cities and Buildings or Process Control, there exists a common platform from which you can create your targeted vertical solutions. Business in Real-Time Using Azure IoT and Cortana Intelligence Suite uses a reference architecture as a road map. Building on Azure's PaaS services, you'll see how a solution architecture unfolds that demonstrates a complete end-to-end IoT and Advanced Analytics scenario. What You'll Learn: Automate your software product life cycle using PowerShell, Azure Resource Manager Templates, and Visual Studio Team Services Implement smart devices using Node.JS and C# Use Azure Streaming Analytics to ingest millions of events Provide both "Hot" and "Cold" path outputs for real-time alerts, data transformations, and aggregation analytics Implement batch processing using Azure Data Factory Create a new form of Actionable Intelligence (AI) to drive mission critical business processes Provide rich Data Visualizations across a wide variety of mobile and web devices Who This Book is For: Solution Architects, Software Developers, Data Architects, Data Scientists, and CIO/CTA Technical Leadership Professionals The professional developer's essential guide to building robust, maintainable, and flexible web apps by leveraging C# 10 and .NET 6 features and component- and application-scale design patterns Key FeaturesApply the SOLID architectural principles and software design patterns effectively with a focus on dependency injectionDiscover modern application architectures such as vertical slice, clean architecture, and event-driven microservicesExplore full-stack ASP.NET Core with an overview of BlazorBook Description An Atypical ASP.NET Core 6 Design Patterns Guide, Second Edition approaches programming like playing with LEGO®: snapping small pieces together to create something beautiful. Thoroughly updated for ASP.NET Core 6, with further coverage of microservices patterns, data contracts, and event-driven architecture, this book gives you the tools to build and glue reliable components together to improve your programmatic masterpieces. The chapters are organized based on scale and topic, allowing you to start small and build on a strong base, the same way that you would develop a program. You will begin by exploring basic design patterns, SOLID architectural principles, dependency injection, and other

Read Online Microservices, IoT And Azure: Leveraging DevOps And Microservice Architecture To Deliver SaaS Solutions

ASP.NET Core 6 mechanisms. You will explore component-scale patterns, and then move to higher level application-scale patterns and techniques to better structure your applications. Finally, you'll advance to the client side to connect the dots with tools like Blazor and make ASP.NET Core a viable full-stack web development framework. You will supplement your learning with practical use cases and best practices, exploring a range of significant Gang of Four (GoF) design patterns along the way. By the end of the book, you will be comfortable combining and implementing patterns in different ways, and crafting software solutions of any scale. What you will learn

Apply the SOLID principles for building flexible and maintainable software
Get to grasp .NET dependency Injection
Work with GoF design patterns such as strategy, decorator, facade, and composite
Explore the MVC patterns for designing web APIs and web applications using Razor
Discover layering techniques and tenets of clean architecture
Become familiar with CORS and vertical slice architecture as an alternate to layering
Understand microservices and when they can benefit your applications
Build an ASP.NET user interfaces from server-side to client-side
Blazor
Who this book is for
The book is intended for intermediate software and web developers with an understanding of .NET who want to write flexible, maintainable, and robust code for building scalable web applications. Knowledge of C# programming and an understanding of web concepts like HTTP is necessary.

The overall functions of a government impact a wide range of sectors in society. It is imperative for governments to work at full capacity and potential in order to ensure quality progress for its citizens. Driving Efficiency in Local Government Using a Collaborative Enterprise Architecture Framework: Emerging Research and Opportunities is an essential scholarly publication for the latest research on methods for smart government initiatives and implementations, and addresses prevalent internal and external security risks. Featuring extensive coverage on a broad range of topics such as technology funds, mobile technology, and cloud computing, this book is ideally designed for professionals, academicians, researchers, and students seeking current research on the ways in which governments can advance and prosper.

Implementing Azure: Putting Modern DevOps to Use

A Novel About Delivering the Best of Agile, DevOps, and Microservices
Concepts, Methodologies, Tools, and Applications