

Msdn Architecture Guide

This book introduces one of the most exciting and popular .NET-oriented initiatives; the Enterprise Application Library, which offers nine classes of reusable code used to solve a variety of common problem spaces. It is the first book to introduce all ten of the enterprise application blocks, which have been recently updated for .NET 2.0. It covers a number of topics, including configuration, data access, exception management, caching, application updates, UI separation, asynchronous invocation, logging, security, and XML-based information aggregation. With this book readers will be able to build .NET applications faster and more efficiently. Defining the various types of IT architecture in the industry, this one-of-a-kind resource highlights the rewards of becoming an architect and explores the details of the deliverables, project structure, and how to approach their creation. --

Java EE and .NET Interoperability addresses issues encountered during the integration process, such as a diverse technology set, incompatible APIs, and disparate environment maintenance. The experienced authors outline strategies, approaches, and best practices, including messaging, Web services, and integration-related frameworks and patterns. The book also introduces readers to Service Oriented Architecture (SOA), the building block for scalable and reliable enterprise integration solutions. This indispensable book provides the Java EE and .NET developer community with multiple strategies to integrate between Java EE and .NET platforms that save developers time and effort. Applying proven interoperability solutions significantly reduces the application development cycle. Coverage includes · Effective Java EE—.NET integration strategies and best practices · Detailed enterprise coverage, as well as standalone Java EE component integration with .NET · SOA as a building block for Java EE—.NET interoperability · Interoperability security issues and risk mitigation · Managing reliability, availability, and scalability for Web services built on Java EE and .NET · The latest interoperability standards and specifications, including Web SSO MEX and WS-Management · Current interoperability technologies, such as Windows Communication Foundation, WSE 3.0, JAX-WS, and Enterprise Service Bus

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.

* Teaches Web development using real world tutorials * Approach to subject is no nonsense, wastes little time on history and unnecessary information; therefore it is very concise and results driven * Covers vital Web development subjects such as Web standards principles and implementation

Internet 2.0 (previously called the Internet of Things) presents a tantalizing vision of bridging the cyber and physical worlds to forge a seamless planet-wide infrastructure in which cyber resources and physical objects can interact without human intervention. The technology needed to build the infrastructure already exists. However, more than a d

This book constitutes the refereed proceedings of the 16th IFIP WG 8.1 International Conference on Informatics and Semiotics in Organisations, ICISO 2015, held in Toulouse, France, in March 2015. The 21 revised papers presented were carefully reviewed and selected from 46 submissions. The papers are organized in the following topical sections: organisational semiotics: theory and concepts; organisational semiotics and applications; information systems and services; complex system modeling and simulation; and innovation and organisational learning.

You can have the best coders in the world working in your teams, but if your project management isn't up to scratch, your project is almost certain to be delayed, to come in over budget, and in some cases to fail entirely. By taking precise control of your application development process, you can make changes, both large and small, throughout your project's life cycle that will lead to better-quality finished products that are consistently delivered on time and within budget. Application lifecycle management (ALM) is an area of rapidly growing interest within the development community. Because its techniques allow you to deal with the process of developing applications across many areas of responsibility and across many different disciplines, its effects on your project can be wide ranging and pronounced. It is a project management tool that has practical implications for the whole

team—from architects to designers, from developers to testers. Pro Application Lifecycle Management with Visual Studio 2012 focuses on the most powerful ALM tool available for the Microsoft .NET Framework: Visual Studio Team Foundation Server. It demonstrates the key concepts and techniques of ALM at first with a guide to the overall methodology, and then delves into architecture and testing--illustrating all of the concepts, tips and tricks using the tools TFS provides. The book serves as a complete guide to the ALM style--with no fluff and many relevant code samples and examples. After reading the book, you will understand how TFS can be used to generate continuous meaningful reporting on your project's health for the decision makers on your team as well as for your project's sponsors.

Job titles like "Technical Architect" and "Chief Architect" nowadays abound in the software industry, yet many people suspect that "architecture" is one of the most overused and least understood terms in professional software development. Gorton's book helps resolve this predicament. It concisely describes the essential elements of knowledge and key skills required to be a software architect. The explanations encompass the essentials of architecture thinking, practices, and supporting technologies. They range from a general understanding of software structure and quality attributes, through technical issues like middleware components and documentation techniques, to emerging technologies like model-driven architecture, software product lines, aspect-oriented design, service-oriented architectures, and the Semantic Web, all of which will influence future software system architectures. All approaches are illustrated by an ongoing real-world example. So if you work as an architect or senior designer (or want to someday), or if you are a student in software engineering, here is a valuable and yet approachable source of knowledge. "Ian's book helps us to head in the right direction through the various techniques and approaches... An essential guide to computer science students as well as developers and IT professionals who aspire to become an IT architect". (Anna Liu, Architect Advisor, Microsoft Australia)

"I am sure practitioners, auditors, and regulators will find the content of Mr Shaik's book of value. The accessible style is also welcome. All in all, a worthwhile addition to the finance literature and one that hopefully helps plug the knowledge gap in this field." — from the foreword by Professor Moorad Choudhry, Brunel University

Managing Derivatives Contracts is a comprehensive and practical treatment of the end-to-end management of the derivatives contract operations, systems, and platforms that support the trading and business of derivative products. This book focuses on the processes and systems in the derivatives contract life cycle that underlie and implement the activities of derivatives trading, pricing, and risk management. Khader Shaik, a Wall Street derivatives platform implementation expert, lays out all the fundamentals needed to understand, conduct, and manage derivatives operations. In particular, he provides both introductory and in-depth treatment of the following topics: derivative product classes; the market structure, mechanics, and players of derivatives markets; types of derivative contracts and life cycle management; derivatives technology platforms, software systems, and protocols; derivatives contracts management; and the new regulatory landscape as shaped by reforms such as Dodd-Frank Title VII and EMIR. Managing Derivatives Contracts focuses on the operational processes and market environment of the derivatives life cycle; it does not address the mathematics or finance of

derivatives trading, which are abundantly treated in the standard literature. *Managing Derivatives Contracts* is divided into four parts. The first part provides a structural overview of the derivatives markets and product classes. The second part examines the roles of derivatives market players, the organization of buy-side and sell-side firms, critical data elements, and the Dodd-Frank reforms. Within the framework of total market flow and straight-through processing as constrained by regulatory compliance, the core of the book details the contract life cycle from origination to expiration for each of the major derivatives product classes, including listed futures and options, cleared and bilateral OTC swaps, and credit derivatives. The final part of the book explores the underlying information technology platform, software systems, and protocols that drive the end-to-end business of derivatives. In particular, it supplies actionable guidelines on how to build a platform using vendor products, in-house development, or a hybrid approach.

A fascinating bird's eye view on a hugely relevant topic. This book constitutes the refereed proceedings of the 4th International Conference on Ubiquitous Intelligence and Computing held in Hong Kong, China in 2007, co-located with ATC 2007, the 4th International Conference on Autonomic and Trusted Computing. The 119 revised full papers presented together with 1 keynote paper and 1 invited paper were carefully reviewed and selected from 463 submissions. The papers are organized in topical sections.

In light of the rising cost of healthcare and the overall challenges associated with delivering quality care to patients across regions, scientists and pharmacists are exploring new initiatives in drug discovery and design. One such initiative is the adoption of information technology and software applications to improve healthcare and pharmaceutical processes. *Software Innovations in Clinical Drug Development and Safety* is a comprehensive resource analyzing the integration of software engineering for the purpose of drug discovery, clinical trials, genomics, and drug safety testing. Taking a multi-faceted approach to the application of computational methods to pharmaceutical science, this publication is ideal for healthcare professionals, pharmacists, computer scientists, researchers, and students seeking the latest information on the architecture and design of software in clinical settings, the impact of clinical technologies on business models, and the safety and privacy of patients and patient data. This timely resource features a well-rounded discussion on topics pertaining to the integration of computational methods in pharmaceutical science and practice including, the impact of software integration on business models, patient safety concerns, software architecture and design, and data security.

This book shows the conference proceedings of CloudComp 2009 held in Munich, Germany, in October 2009.

Eliminate unnecessary code by taking advantage of the MVVM pattern in Silverlight and WPF using this book and eBook ? less code, fewer bugs

This book illustrates the role of software architecture and its application in business. The author describes enterprise architecture along with business architecture to show the role of software architecture in both areas. The place of software architecture in business is outlined from many perspectives in this context. The book outlines quality attributes and how managers can use

software architecture to build high quality products. Topics include business software architecture, dealing with qualities, achieving quality attributes, managing business qualities, software product line, Internet of Things (IOT), and Service Oriented Business Architecture. The book is intended to benefit students, researchers, software architects, and business architects. Provides quick and easy access to all the important aspects of software architecture in business; Highlights a wide variety of concepts of software architecture in a straightforward manner, for students, practitioners, or architects; Presents different applications of software architecture in business.

This unique text/reference provides a comprehensive review of distributed simulation (DS) from the perspective of Model Driven Engineering (MDE), illustrating how MDE affects the overall lifecycle of the simulation development process. Numerous practical case studies are included to demonstrate the utility and applicability of the methodology, many of which are developed from tools available to download from the public domain. Topics and features: Provides a thorough introduction to the fundamental concepts, principles and processes of modeling and simulation, MDE and high-level architecture Describes a road map for building a DS system in accordance with the MDE perspective, and a technical framework for the development of conceptual models Presents a focus on federate (simulation environment) architectures, detailing a practical approach to the design of federations (i.e., simulation member design) Discusses the main activities related to scenario management in DS, and explores the process of MDE-based implementation, integration and testing Reviews approaches to simulation evolution and modernization, including architecture-driven modernization for simulation modernization Examines the potential synergies between the agent, DS, and MDE methodologies, suggesting avenues for future research at the intersection of these three fields Distributed Simulation – A Model Driven Engineering Approach is an important resource for all researchers and practitioners involved in modeling and simulation, and software engineering, who may be interested in adopting MDE principles when developing complex DS systems.

? Supports collaborative planning with Microsoft Project ? Distributes project documents with SharePoint Team Services ? Provides projects over intranet or internet ? Communicates using real-time data ? Involves all project stakeholders in the planning process

Pro SQL Server Internals explains how different SQL Server components work "under the hood" and how they communicate with each other. This is the practical book with a large number of examples that will show you how various design and implementation decisions affect the behavior and performance of your systems. Pro SQL Server Internals covers a multiple SQL Server versions starting with SQL Server 2005 all the way up to the recently released SQL Server 2014. You'll learn about new SQL Server 2014 features including the new Cardinality Estimator, In-Memory OLTP Engine (codename Hekaton), and Clustered Columnstore Indexes. With Pro SQL Server Internals, you have a solid roadmap for understanding the depth and power of the SQL Server database backend, regardless of the version and edition of SQL Server you use. Pro SQL Server Internals does the following: Explains how to design efficient database schema, indexing, and transaction strategies. Shows how various database objects and technologies are implemented internally and when they should or should not be used. Demonstrates how SQL Server executes queries and works with data and transaction logs.

For technology-based online courses, computer labs are necessary to support hands-on practice for IT products. The implementation of an online computer teaching lab is a challenging task. Strategies & Technologies for Developing Online Computer Labs for Technology-Based

Courses discusses design strategies, implementation difficulties, and the effectiveness of online labs. This book provides scholars, researchers, and practitioners support for lab-based e-learning, gives guidance on the selection of technologies for various projects, and illustrates Web-based teaching with case studies.

This is a comprehensive .NET-retraining guide written for the COBOL/CICS mainframe programmer from the perspective of a former COBOL/CICS programmer.

"... Contains a catalog of 18 integration patterns, including implementations that use BizTalk Server 2004, Host Integration Server 2004, ASP.NET, Visual Studio .NET, Visio 2003 and the .Net Framework"--Preface.

Wolfgang Engel's GPU Pro 360 Guide to Rendering gathers all the cutting-edge information from his previous seven GPU Pro volumes into a convenient single source anthology that covers real-time rendering. This volume is complete with 32 articles by leading programmers that focus on the ability of graphics processing units to process and generate rendering in exciting ways. GPU Pro 360 Guide to Rendering is comprised of ready-to-use ideas and efficient procedures that can help solve many rendering programming challenges that may arise. Key Features: Presents tips and tricks on real-time rendering of special effects and visualization data on common consumer software platforms such as PCs, video consoles, and mobile devices Covers specific challenges involved in creating games on various platforms Explores the latest developments in the rapidly evolving field of real-time rendering Takes a practical approach that helps graphics programmers solve their daily challenges

I have been writing and presenting about Row-Level Security in Power BI for many years. Through the comments and feedback I got from my presentations and articles, I felt a need for a place to have everything gathered in one place. The lack of a book that explains everything about the current subject motivated me to end up gathering all my articles in this book. The result is what you are reading. Row-Level Security in Power BI is not about sharing your content. It is, on the other hand, about sharing the same content with a different audience in the way that they see different views of the data. They will have different access to the data. Some of them might see the entire data, and some others might see part of the data that they are authorized to see. Instead of creating multiple reports with the same format, fields, calculations, and visualizations, and only making them different in filtering, the correct way to do it is through row-level security. This will make sure you have the maximum consistency and minimum maintenance for your Power BI project. This is not a book about theories. This is a hands-on book. There are tons of demos and examples with the code samples that you can try. You will learn through this book, what is row-level security. You will learn different types of security and patterns in which you will see the most common challenges for implementing the security and the solution to solve them. The book starts with the basics of row-level security, then you will learn about static vs. dynamic row-level security. You will learn patterns such as everyone see their own data, but the manager sees a different view or users and profiles for branch managers. Or the organizational hierarchy, or even the many-to-many relationship challenge of row-level security etc. through this book. This book is not about how to create a report, build a visualization, connect to a dataset, or set up a gateway. If you want to learn those, I do recommend reading my other book: Power BI online book, from Rookie to Rock Star.

For many years now Enterprise Information Systems have been critical in helping businesses successfully navigate the global market. The development that started with design and implementation of integrated systems has evolved to incorporate a multitude of perspectives and ideas. The Enterprise Information Systems functionality extends from principally an ERP (Enterprise Resource Planning) system to a portfolio of standard systems including CRM (Customer Relationship Management) systems and SCM (Supply Chain Management) systems.

Advances in Enterprise Information Systems II is divided into seven thematic sections, each exploring a distinct topic. In “Concepts in Enterprise Information Systems” the authors present new concepts and ideas for the field. “Cases in Enterprise Information Systems” introduces studies of enterprise information systems in an organizational context. “Business Process Management” is one of the major themes within enterprise information systems and “Designing Enterprise Information Systems” discusses new approaches to the design of processes and system and also deals with how design can be taken as a specific perspective. “Enterprise Information Systems in various domains” features generic studies that contribute to advancing the practical knowledge of the field as well as towards “Global issues of Enterprise Information Systems”. Finally, in “Emerging Topics in Enterprise Information Systems”, new technologies and ideas are explored. Cloud computing in particular seems to be setting the agenda for future research in enterprise information systems. The book will be invaluable to academics and professionals interested in recent developments in the field of enterprise information systems.

This book demonstrates how you can use the Enterprise Library Integration Pack for Windows Azure in an existing Windows Azure application to enhance the maintainability, manageability, scalability, stability, and extensibility of the application. The book is intended for any architect, developer, or information technology (IT) professional who designs, builds, or operates applications and services that are appropriate for the cloud and who wants to learn how to realize the benefits of using Enterprise Library in a cloud-based application. You should be familiar with Windows Azure, the Microsoft .NET Framework, Microsoft Visual Studio development system, ASP.NET, and Microsoft Visual C# to derive full benefit from reading this guide.

Over the past 20 years, software architectures have significantly contributed to the development of complex and distributed systems. Nowadays, it is recognized that one of the critical problems in the design and development of any complex software system is its architecture, i.e. the organization of its architectural elements. Software Architecture presents the software architecture paradigms based on objects, components, services and models, as well as the various architectural techniques and methods, the analysis of architectural qualities, models of representation of architectural templates and styles, their formalization, validation and testing and finally the engineering approach in which these consistent and autonomous elements can be tackled.

Presenting cutting-edge insights from industry practitioners, .NET 4 for Enterprise Architects and Developers supplies in-depth coverage of the various server-side features of Microsoft .NET Framework 4 that can be leveraged in Enterprise Application development. It provides a fundamental understanding of the technical aspects of implementation and

Your one stop guide to making the most out of Azure Cloud About This Book Get familiar with the different design patterns available in Microsoft Azure Develop Azure cloud architecture and a pipeline management system Get to know the security best practices for your Azure deployment Who This Book Is For If you are Cloud Architects, DevOps Engineers, or developers who want to learn key architectural aspects of the Azure Cloud platform, then this book is for you. Prior basic knowledge of the Azure Cloud platform is good to have. What You Will Learn Familiarize yourself with the components of the Azure Cloud platform Understand the cloud design patterns Use enterprise security guidelines for your Azure deployment Design and implement Serverless solutions See Cloud architecture and the deployment pipeline Understand cost management for Azure solutions In Detail Over the years, Azure cloud services has grown quickly, and the number of organizations adopting Azure for their cloud services is also gradually increasing. Leading industry giants are finding that Azure fulfills their extensive cloud requirements. This book will guide you through all the important and tough decision-making aspects involved in architecting a Azure public cloud for your organization. The book starts with an extensive introduction to all the categories of designs available with Azure.

These design patterns focus on different aspects of cloud such as high availability, data management, and so on. Gradually, we move on to various aspects such as building your cloud structure and architecture. It will also include a brief description about different types of services provided by Azure, such as Azure functions and Azure Analytics, which can prove beneficial for an organization. This book will cover each and every aspect and function required to develop a Azure cloud based on your organizational requirements. By the end of this book, you will be in a position to develop a full-fledged Azure cloud. Style and approach This hands-on guide to the Azure Cloud platform covers different architectural concepts and implementations necessary for any enterprise scale deployment.

This book contains the extended and revised versions of selected papers from the 4th International Symposium on Business Modeling and Software Design, BMSD 2014, held in Luxembourg, Luxembourg, in June 2014. The symposium was organized and sponsored by the Interdisciplinary Institute for Collaboration and Research on Enterprise Systems and Technology (IICREST), in collaboration with the Public Research Centre Henri Tudor (TUDOR). Cooperating organizations were the Dutch Research School for Information and Knowledge Systems (SIKS), Aristotle University of Thessaloniki (AUTH), the UTwente Center for Telematics and Information Technology (CTIT), and AMAKOTA Ltd. The 37 papers presented at BMSD 2014 were selected from 52 submissions. The seven papers published in this book were carefully reviewed, selected, revised, and extended from the presented papers. The selection considers a large number of BMSD-relevant research topics: from modeling and simulation-related subjects, such as declarative business rules, business (process) modeling, business process simulation, and information systems modeling, through architectures-related areas, such as impact analysis with regard to enterprise architectures and architectural principles for service cloud applications, to topics touching upon quality-of-service-aware service systems. The purpose of the 9th International Conference on Software Engineering Research, Management and Applications (SERA 2011) held on August 10-12, 2011 in Baltimore, Maryland was to bring together scientists, engineers, computer users, and students to share their experiences and exchange new ideas and research results about all aspects (theory, applications and tools) of computer and information sciences, and to discuss the practical challenges encountered along the way and the solutions adopted to solve them. The conference organizers selected 12 outstanding papers from SERA 2011, all of which you will find in this volume of Springer's Studies in Computational Intelligence.

Why collaborative enterprise architecture? -- What is enterprise architecture -- What enterprise architects do: core activities of EA -- EA frameworks -- EA maturity models -- Foundations of collaborative EA -- Towards pragmatism: lean and agile EA -- Inviting to participation: eam 2.0 -- The next steps: taking collaborative EA forward.

For more and more systems, software has moved from a peripheral to a central role, replacing mechanical parts and hardware and giving the product a competitive edge. Consequences of this trend are an increase in: the size of software systems, the variability in software artifacts, and the importance of software in achieving the system-level properties. Software architecture provides the necessary abstractions for managing the resulting complexity. We here introduce the Third Working IEEE/IFIP Conference on Software Architecture, WICSA3. That it is already the third such conference is in itself a clear indication that software architecture continues to be an important topic in industrial software development and in software engineering research. However, becoming an established field does not mean that software architecture provides less opportunity for innovation and new directions. On the contrary, one can identify a number of interesting trends within software architecture research. The first trend is that the role of the software architecture in all phases of software development is more explicitly recognized. Whereas initially software architecture was primarily associated with the architecture design phase, we now see that the

software architecture is treated explicitly during development, product derivation in software product lines, at run-time, and during system evolution. Software architecture as an artifact has been decoupled from a particular lifecycle phase.

"This book provides an integrated approach and guidelines to performance testing of Web based systems"--Provided by publisher.

Learn best practices and proven techniques for integrating disparate enterprise applications into solutions that work together to address ever-evolving business needs, extend IT investments, and improve ROI.

Your one stop guide to making the most out of Azure Cloud

About This Book* Get familiar with the different design patterns available in Microsoft Azure* Develop Azure cloud architecture and a pipeline management system* Get to know the security best practices for your Azure deployment

Who This Book Is For If you are Cloud Architects, DevOps Engineers, or developers who want to learn key architectural aspects of the Azure Cloud platform, then this book is for you. Prior basic knowledge of the Azure Cloud platform is good to have.

What You Will Learn* Familiarize yourself with the components of the Azure Cloud platform* Understand the cloud design patterns* Use enterprise security guidelines for your Azure deployment* Design and implement Serverless solutions* See Cloud architecture and the deployment pipeline* Understand cost management for Azure solutions

In Detail

Over the years, Azure cloud services has grown quickly, and the number of organizations adopting Azure for their cloud services is also gradually increasing. Leading industry giants are finding that Azure fulfills their extensive cloud requirements. This book will guide you through all the important and tough decision-making aspects involved in architecting a Azure public cloud for your organization. The book starts with an extensive introduction to all the categories of designs available with Azure. These design patterns focus on different aspects of cloud such as high availability, data management, and so on. Gradually, we move on to various aspects such as building your cloud structure and architecture. It will also include a brief description about different types of services provided by Azure, such as Azure functions and Azure Analytics, which can prove beneficial for an organization. This book will cover each and every aspect and function required to develop a Azure cloud based on your organizational requirements. By the end of this book, you will be in a position to develop a full-fledged Azure cloud.

Style and approach

This hands-on guide to the Azure Cloud platform covers different architectural concepts and implementations necessary for any enterprise scale deployment.

"A stereotype of computer science textbooks is that they are dry, boring, and sometimes even intimidating. As a result, they turn students' interests off from the subject matter instead of enticing them into it. This textbook is the opposite of such a stereotype. The author presents the subject matter in a refreshing story-telling style and aims to bring the Internet-generation of students closer to her stories." --Yingcai Xiao, The University of Akron

Introduction to Middleware: Web

Services, Object Components, and Cloud Computing provides a comparison of different middleware technologies and the overarching middleware concepts they are based on. The various major paradigms of middleware are introduced and their pros and cons are discussed. This includes modern cloud interfaces, including the utility of Service Oriented Architectures. The text discusses pros and cons of RESTful vs. non-RESTful web services, and also compares these to older but still heavily used distributed object/component middleware. The text guides readers to select an appropriate middleware technology to use for any given task, and to learn new middleware technologies as they appear over time without being greatly overwhelmed by any new concept. The book begins with an introduction to different distributed computing paradigms, and a review of the different kinds of architectures, architectural styles/patterns, and properties that various researchers have used in the past to examine distributed applications and determine the quality of distributed applications. Then it includes appropriate background material in networking and the web, security, and encoding necessary to understand detailed discussion in this area. The major middleware paradigms are compared, and a comparison methodology is developed. Readers will learn how to select a paradigm and technology for a particular task, after reading this text. Detailed middleware technology review sections allow students or industry practitioners working to expand their knowledge to achieve practical skills based on real projects so as to become well-functional in that technology in industry. Major technologies examined include: RESTful web services (RESTful cloud interfaces such as OpenStack, AWS EC2 interface, CloudStack; AJAX, JAX-RS, ASP.NET MVC and ASP.NET Core), non-RESTful (SOAP and WSDL-based) web services (JAX-WS, Windows Communication Foundation), distributed objects/ components (Enterprise Java Beans, .NET Remoting, CORBA). The book presents two projects that can be used to illustrate the practical use of middleware, and provides implementations of these projects over different technologies. This versatile and class-tested textbook is suitable (depending on chapters selected) for undergraduate or first-year graduate courses on client server architectures, middleware, and cloud computing, web services, and web programming.

The five-volume set LNCS 9786-9790 constitutes the refereed proceedings of the 16th International Conference on Computational Science and Its Applications, ICCSA 2016, held in Beijing, China, in July 2016. The 239 revised full papers and 14 short papers presented at 33 workshops were carefully reviewed and selected from 849 submissions. They are organized in five thematical tracks: computational methods, algorithms and scientific applications; high performance computing and networks; geometric modeling, graphics and visualization; advanced and emerging applications; and information systems and technologies.

The authors make performance issues the central topic, with very in-depth discussion and examples.

.NET 4 for Enterprise Architects and DevelopersCRC Press

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