

# Enterprise Architecture Patterns Practical Solutions For Recurring It Architecture Problems

Putting Service-Oriented Architecture (SOA) into Practice “This book is a must-have for enterprise architects implementing SOA. Through practical examples, it explains the relationship between business requirements, business process design, and service architecture. By tying the SOA implementation directly to business value, it reveals the key to ongoing success and funding.” —Maja Tibbling, Lead Enterprise Architect, Con-way, Inc.

“While there are other books on architecture and the implementation of ESB, SOA, and related technologies, this new book uniquely captures the knowledge and experience of the real world. It shows how you can transform requirements and vision into solid, repeatable, and value-added architectures. I heartily recommend it.” —Mark Wencek, SVP, Consulting Services & Alliances, Ultimo Software Solutions, Inc.

In his first book, *Succeeding with SOA*, Paul Brown explained that if enterprise goals are to be met, business processes and information systems must be designed together as parts of a total architecture. In this second book, *Implementing SOA*, he guides you through the entire process of designing and developing a successful total architecture at both project and enterprise levels. Drawing on his own extensive experience, he provides best practices for creating services and leveraging them to create robust and flexible SOA solutions. Coverage includes Evolving the enterprise architecture towards an SOA while continuing to deliver business value on a project-by-project basis Understanding the fundamentals of SOA and distributed systems, the dominant architectural issues, and the

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design patterns for addressing them Understanding the distinct roles of project and enterprise architects and how they must collaborate to create an SOA Understanding the need for a comprehensive total architecture approach that encompasses business processes, people, systems, data, and infrastructure Understanding the strategies and tradeoffs for implementing robust, secure, high-performance, and high-availability solutions Understanding how to incorporate business process management (BPM) and business process monitoring into the enterprise architecture Whether you're defining an enterprise architecture or delivering individual SOA projects, this book will give you the practical advice you need to get the job done.

Enterprise Integration Patterns provides an invaluable catalog of sixty-five patterns, with real world solutions that demonstrate the formidability of messaging and help you to design effective messaging solutions for your enterprise. The authors also include examples covering a variety of different integration technologies, such as JMS, MSMQ, TIBCO ActiveEnterprise, Microsoft BizTalk, SOAP, and XSL. A case study describing a bond trading system illustrates the patterns in practice, and the book offers a look at emerging standards, as well as insights into what the future of enterprise integration might hold. This book provides a consistent vocabulary and visual notation framework to describe large-scale integration solutions across many technologies. It also explores in detail the advantages and limitations of asynchronous messaging architectures. The authors present practical advice on designing code that connects an application to a messaging system, and provide extensive information to help you determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system. If you want to know how to manage, monitor, and

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maintain a messaging system once it is in use, get this book.

Architect and deliver packaged Force.com applications that cater to enterprise business needs

About This Book Explore the lightning framework, advanced application life cycle processes,

and testing Use the Force.com platform to build truly integrated, scalable, and robustly

engineered applications focused on enterprise-level customer demands Using the Lightning

technology to deliver modern and responsive user experiences targeting multiple devices

through Lightning Experience and Salesforce1 Mobile. Step-by-step, work on examples to get

you building your own ready-to-install packaged application Who This Book Is For This book is

for advanced Force.com developers and architects who need to understand the Salesforce

platform from the perspective of enterprise-level requirements. A prior understanding of Apex

and Visualforce is a must. Those familiar with other enterprise software ecosystems will also

find this book ideal as they adopt Force.com. What You Will Learn Package, install, test, and

upgrade an application Define architecture-aligning data storage and functional requirements

Develop Apex code that is easy to navigate, self-documenting, testable, robust, and organic

Leverage your application's clientagnostic Service layer backbone to support numerous

platform areas Get the most from hosting your application within the Lightning Experience and

Salesforce1 Mobile clients Apply querying, indexing, and asynchronous best practices

Leverage mocking and dependency injection in your Apex tests Explore tips for developing

advanced applications In Detail Companies of all sizes have seen the need for Force.com's

architectural strategy focused on enabling their business objectives. Successful enterprise

applications require planning, commitment, and investment in the best tools, processes, and

features available. This book will teach you how to architect and support enduring application

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for enterprise clients with Salesforce by exploring how to identify architecture needs and design solutions based on industry standard patterns. There are several ways to build solutions on Force.com, and this book will guide you through a logical path and show you the steps and considerations required to build packaged solutions from start to finish. It covers all aspects, from engineering to getting your application into the hands of your customers, and ensuring that they get the best value possible from your Force.com application. You will get acquainted with extending tools such as Lightning App Builder, Process Builder, and Flow with your own application logic. In addition to building your own application API, you will learn the techniques required to leverage the latest Lightning technologies on desktop and mobile platforms. Style and approach The book takes a straightforward approach, taking apart the Force.com architecture for you to gain a deep understanding of how you can implement the Salesforce platform based on enterprise-level requirements.

As the digital economy changes the rules of the game for enterprises, the role of software architects and IT architects is also transforming. Rather than focus on technical decisions alone, architects and senior technologists need to combine organizational and technical knowledge to effect change in their company's structure and processes. To accomplish that, they need to connect the IT engine room to the penthouse, where the business strategy is defined. In this guide, author Gregor Hohpe shares real-world advice and hard-learned lessons from actual IT transformations. His anecdotes help architects, senior developers, and other IT professionals prepare for a more complex but rewarding role in the enterprise. This book is ideal for: Software architects and senior developers looking to shape the company's technology direction or assist in an organizational transformation Enterprise architects and senior

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technologists searching for practical advice on how to navigate technical and organizational topics CTOs and senior technical architects who are devising an IT strategy that impacts the way the organization works IT managers who want to learn what's worked and what hasn't in large-scale transformation

7th Workshop, TEAR 2012, and 5th Working Conference, PRET 2012, Held at The Open Group Conference 2012, Barcelona, Spain, October 23-24, 2012, Proceedings

Reaching the Pinnacle

Redefining the Architect's Role in the Digital Enterprise

Towns, Buildings, Construction

Enterprise Integration Patterns

Architecture Principles

The Oregon Experiment

*Gain a deeper understanding of how distributed systems work, as well as which applications and systems are used for specific business domains or industries. This book provides a set of solution architecture patterns that were developed based on the author's experience building enterprise software systems for hundreds of different organizations across the globe. The architecture diagrams (patterns) and examples allow you to not only grasp the concepts, but to build working projects. Solution Architecture Patterns for Enterprise starts with an introduction to the concepts of enterprise software systems and solution architecture and later moves to individual solution architecture patterns used in real-world enterprises. Subsequent sections cover various industry-specific solution architecture patterns that can be used to build domain-*

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*specific software systems. The book concludes with a view of what the future holds for solution architecture, including likely new developments in the field. This book will help enterprise software architects and engineers to design and implement real-world enterprise software systems using best practices and techniques adopted by organizations across the globe. It provides software architecture blueprints to build domain-specific enterprise software systems. If you are working on any digital transformation project or initiative, you will find this book useful, as it provides quick reference on architecture and implementation to get started with your work. What You Will Learn Understand the key elements of enterprise software systems and how to design and implement them Master different approaches to build real-world software applications Build domain specific enterprise software systems Use open-source tools to build enterprise software systems Who This Book Is For Software Developers, software architect, solution architects, and enterprise architects.*

*Gain a 360-degree view of Microsoft Power Platform and combine the benefits of Power Apps, Power BI, Power Automate, Azure, and Dynamics 365 to build an enterprise application platform for your organization Key Features Explore various Microsoft cloud components and find out how they can enhance your Power Platform solutions Get to grips with Microsoft Power Platform's security and extensibility, integration, and data migration models Discover architectural best practices for designing complex enterprise solutions Book Description For forward-looking architects and decision makers who want to craft complex solutions to serve growing business needs, Microsoft Power Platform Enterprise Architecture offers an array of*

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*architectural best practices and techniques. With this book, you'll learn how to design robust software using the tools available in the Power Platform suite and be able to integrate them seamlessly with various Microsoft 365 and Azure components. Unlike most other resources that are overwhelmingly long and unstructured, this book covers essential concepts using concise yet practical examples to help you save time. You'll develop the skills you need to architect, design, and manage a complex solution as you follow the journey of a fictitious enterprise customer as they enter the world of Power Platform. Throughout the book, you'll discover how to combine the functionality of Power Apps, Power Automate, Power BI, and Power Virtual Agents with various methodologies to effectively address application lifecycle management, security, and extensibility. Finally, you'll learn how to overcome common challenges in migrating data to and from Microsoft Power Platform using proven techniques. By the end of this book, you'll have the strategic perspective of an enterprise architect to make accurate architectural decisions for your complex Power Platform projects. What you will learn*

*Understand various Dynamics 365 CRM, ERP, and AI modules for creating Power Platform solutions*

*Enhance Power Platform with Microsoft 365 and Azure*

*Find out which regions, staging environments, and user licensing groups need to be employed when creating enterprise solutions*

*Implement sophisticated security by using various authentication and authorization techniques*

*Extend Power Apps, Power BI, and Power Automate to create custom applications*

*Integrate your solution with various in-house Microsoft components or third-party systems using integration patterns*

*Who this book is for* This book is for enterprise architects and technical decision makers who want to craft complex

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*solutions using Microsoft Power Platform to serve growing business needs and to stay competitive in the modern IT world. A basic understanding of Microsoft Power Platform will help you to get started with this book.*

*This book focuses on software architecture and the value of architecture in the development of long-lived, mission-critical, trustworthy software-systems. The author introduces and demonstrates the powerful strategy of “Managed Evolution,” along with the engineering best practice known as “Principle-based Architecting.” The book examines in detail architecture principles for e.g., Business Value, Changeability, Resilience, and Dependability. The author argues that the software development community has a strong responsibility to produce and operate useful, dependable, and trustworthy software. Software should at the same time provide business value and guarantee many quality-of-service properties, including security, safety, performance, and integrity. As Dr. Furrer states, “Producing dependable software is a balancing act between investing in the implementation of business functionality and investing in the quality-of-service properties of the software-systems.” The book presents extensive coverage of such concepts as: Principle-Based Architecting Managed Evolution Strategy The Future Principles for Business Value Legacy Software Modernization/Migration Architecture Principles for Changeability Architecture Principles for Resilience Architecture Principles for Dependability The text is supplemented with numerous figures, tables, examples and illustrative quotations. Future-Proof Software-Systems provides a set of good engineering practices, devised for integration into most software development processes dedicated to the creation of*

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*software-systems that incorporate Managed Evolution.*

*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)*

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*Designing, Building, and Deploying Messaging Solutions*

*Troux Enterprise Architecture Solutions*

*Architecting Enterprise Solutions*

*Architecting Solutions with SAP Business Technology Platform*

*Practical Solutions for Recurring It-architecture Problems*

*Adaptive Integrated Digital Architecture Framework (AIDAF)*

*A Sustainable Evolution Strategy*

***Take your distributed applications to the next level and see what the reference architectures associated with microservices can do for you. This book begins by showing you the distributed computing architecture landscape and provides an in-depth view of microservices architecture. Following this, you will work with CQRS, an essential pattern for microservices, and get a view of how distributed messaging works. Moving on, you will take a deep dive into Spring Boot and Spring Cloud. Coming back to CQRS, you will learn how event-driven microservices work with this pattern, using the Axon 2 framework. This takes you on to how transactions work with microservices followed by advanced architectures to address non-functional aspects such as high availability and scalability. In the concluding part of the book you develop your own enterprise-grade microservices application using the Axon framework and true BASE transactions, while making it as secure as possible. What You Will Learn Shift from monolith architecture to microservices Work with distributed and ACID transactions Build solid architectures without two-phase commit transactions Discover the high availability principles in microservices Who This Book Is For Java developers with basic knowledge of distributed and multi-threaded application architecture, and no knowledge of Spring Boot or***

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*Spring Cloud. Knowledge of CQRS and event-driven architecture is not mandatory as this book will cover these in depth.*

*Architecting High Performing, Scalable and Available Enterprise Web Applications provides in-depth insights into techniques for achieving desired scalability, availability and performance quality goals for enterprise web applications. The book provides an integrated 360-degree view of achieving and maintaining these attributes through practical, proven patterns, novel models, best practices, performance strategies, and continuous improvement methodologies and case studies. The author shares his years of experience in application security, enterprise application testing, caching techniques, production operations and maintenance, and efficient project management techniques. Delivers holistic view of scalability, availability and security, caching, testing and project management Includes patterns and frameworks that are illustrated with end-to-end case studies Offers tips and troubleshooting methods for enterprise application testing, security, caching, production operations and project management Exploration of synergies between techniques and methodologies to achieve end-to-end availability, scalability, performance and security quality attributes 360-degree viewpoint approach for achieving overall quality Practitioner viewpoint on proven patterns, techniques, methodologies, models and best practices. Bulleted summary and tabular representation of concepts for effective understanding Production operations and troubleshooting tips You are working very hard, but does it really make a difference? Are you: ? An Enterprise Architect finding your great ideas have a very limited impact on business decisions? ? A Service or UX designer tired of creating concepts that are never implemented the way you envisioned them? ? A Business Analyst wanting to work on the big picture instead of point solutions? Then this book is for you. The patterns in this book capture the wisdom of practitioners from many different fields and provide*

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*practical guidance on: ? How to deal with common obstacles in the enterprise design practice; ? Producing creations that people love to co-create; ? Building the relationships you need for collaborative design; ? Applying experience-based, pragmatic design practices. This book lays the foundation for the practice of designing enterprises to improve their Identity, Experience and Architecture.*

*This is the eagerly-anticipated revision to one of the seminal books in the field of software architecture which clearly defines and explains the topic.*

*Cloud Architecture, Patterns, and Microservices with Azure PaaS and IaaS  
Solution Architecture Patterns for Enterprise*

*A Guide To Build Enterprise Software Systems*

*Event-Based Java Microservices with Spring Boot and Spring Cloud*

*SOA with REST Principles, Patterns and Constraints for Building Enterprise Solutions with REST  
(paperback)*

*Azure in the Enterprise*

*Data Management at Scale*

**Modeling Enterprise Architecture with TOGAF explains everything you need to know to effectively model enterprise architecture with The Open Group Architecture Framework (TOGAF), the leading EA standard. This solution-focused reference presents key techniques and illustrative examples to help you model enterprise architecture. This book describes**

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**the TOGAF standard and its structure, from the architecture transformation method to governance, and presents enterprise architecture modeling practices with plenty of examples of TOGAF deliverables in the context of a case study. Although widespread and growing quickly, enterprise architecture is delicate to manage across all its dimensions. Focusing on the architecture transformation method, TOGAF provides a wide framework, which covers the repository, governance, and a set of recognized best practices. The examples featured in this book were realized using the open source Modelio tool, which includes extensions for TOGAF. Includes intuitive summaries of the complex TOGAF standard to let you effectively model enterprise architecture Uses practical examples to illustrate ways to adapt TOGAF to the needs of your enterprise Provides model examples with Modelio, a free modeling tool, letting you exercise TOGAF modeling immediately using a dedicated tool Combines existing modeling standards with TOGAF bull; Written by expert practitioners who have hands-on experience solving real-world problems for large corporations**

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**bull; Helps enterprise architects make sense of data, systems, software, services, product lines, methodologies, and much more bull; Provides explanation of theory and implementation with real-world business examples to support key points**

**The design of digital solutions has become a pressing concern for practitioners faced with a plethora of technology impacting their business. From cloud computing to social networks, mobile computing and big data, to the emerging of Internet of things, all of which are changing how enterprise products, services, rooms and buildings are connected to the wider ecosystem of networks and services. This book defines digital ecosystems with examples from real industry cases and explores how enterprise architecture is evolving to enable physical and virtual, social, and material object collaboration and experience. The key topics covered include: Concepts of digitization Types of technological ecosystems Architecting digital workspaces Principles of architecture design Examples architecting digital business models Examples of digital design patterns Methods of monetization Conclusions**

Read Free Enterprise Architecture Patterns Practical Solutions For Recurring It Architecture Problems

**Enterprise Architecture Patterns Practical Solutions for Recurring IT-Architecture Problems Springer**  
**Architecting High Performing, Scalable and Available Enterprise Web Applications**  
**Software Architecture in Practice**  
**Pattern Enterpr Applica Arch**  
**Enterprise Architecture Function**  
**Practical Solutions for Recurring IT-Architecture Problems**  
**Total Architecture in Practice**

**A Guide to Enterprise Architecting Digital Technologies in the Digital Enterprise**

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often occur because their developers do not understand the architectural lessons that experienced object developers have learned.

**Patterns of Enterprise Application Architecture is written in direct response**

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**to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology--from Smalltalk to CORBA to Java to .NET--the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns. The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually two books in one. The first section is a short tutorial on developing enterprise applications, which you can read from start to finish to understand the scope of the book's lessons. The next section, the bulk of the book, is a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The topics covered include**

- Dividing an enterprise application into layers
- The major approaches to organizing business logic
- An in-depth treatment of mapping between objects and relational databases
- Using Model-View-Controller to organize a Web presentation

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**Handling concurrency for data that spans multiple transactions · Designing distributed object interfaces**

**A practical handbook packed with expert advice on architectural considerations for designing solutions using SAP BTP to drive digital innovation Purchase of the print or Kindle book includes a free eBook in the PDF format Key Features Guide your customers with proven architectural strategies and considerations on SAP BTP Tackle challenges in building process and data integration across complex and hybrid landscapes Discover SAP BTP services, including visualizations, practical business scenarios, and more Book Description SAP BTP is the foundation of SAP's intelligent and sustainable enterprise vision for its customers. It's efficient, agile, and an enabler of innovation. It's technically robust, yet its superpower is its business centricity. If you're involved in building IT and business strategies, it's essential to familiarize yourself with SAP BTP to see the big picture for digitalization with SAP solutions. Similarly, if you have design responsibilities for enterprise solutions, learning SAP BTP is crucial to produce effective and complete architecture designs. This book teaches you about SAP BTP in five parts. First, you'll see how SAP BTP is positioned in the intelligent enterprise. In the second part, you'll learn the foundational elements of SAP BTP and find out how it operates. The next**

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**part covers integration architecture guidelines, integration strategy considerations, and integration styles with SAP's integration technologies. Later, you'll learn how to use application development capabilities to extend enterprise solutions for innovation and agility. This part also includes digital experience and process automation capabilities. The last part covers how SAP BTP can facilitate data-to-value use cases to produce actionable business insights. By the end of this SAP book, you'll be able to architect solutions using SAP BTP to deliver high business value. What you will learn Explore value propositions and business processes enabled by SAP's Intelligent and Sustainable Enterprise Understand SAP BTP's foundational elements, such as commercial and account models Discover services that can be part of solution designs to fulfill non-functional requirements Get to grips with integration and extensibility services for building robust solutions Understand what SAP BTP offers for digital experience and process automation Explore data-to-value services that can help manage data and build analytics use cases Who this book is for This SAP guide is for technical architects, solutions architects, and enterprise architects working with SAP solutions to drive digital transformation and innovation with SAP BTP. Some IT background and an understanding of basic cloud concepts is assumed. Working knowledge of the SAP ecosystem**

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**will also be beneficial.**

**You can use this book to design a house for yourself with your family; you can use it to work with your neighbors to improve your town and neighborhood; you can use it to design an office, or a workshop, or a public building. And you can use it to guide you in the actual process of construction. After a ten-year silence, Christopher Alexander and his colleagues at the Center for Environmental Structure are now publishing a major statement in the form of three books which will, in their words, "lay the basis for an entirely new approach to architecture, building and planning, which will we hope replace existing ideas and practices entirely." The three books are The Timeless Way of Building, The Oregon Experiment, and this book, A Pattern Language. At the core of these books is the idea that people should design for themselves their own houses, streets, and communities. This idea may be radical (it implies a radical transformation of the architectural profession) but it comes simply from the observation that most of the wonderful places of the world were not made by architects but by the people. At the core of the books, too, is the point that in designing their environments people always rely on certain "languages," which, like the languages we speak, allow them to articulate and communicate an infinite variety of designs within a forma system which**

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**gives them coherence. This book provides a language of this kind. It will enable a person to make a design for almost any kind of building, or any part of the built environment. "Patterns," the units of this language, are answers to design problems (How high should a window sill be? How many stories should a building have? How much space in a neighborhood should be devoted to grass and trees?). More than 250 of the patterns in this pattern language are given: each consists of a problem statement, a discussion of the problem with an illustration, and a solution. As the authors say in their introduction, many of the patterns are archetypal, so deeply rooted in the nature of things that it seems likely that they will be a part of human nature, and human action, as much in five hundred years as they are today.**

**Software engineering and computer science students need a resource that explains how to apply design patterns at the enterprise level, allowing them to design and implement systems of high stability and quality. Software Architecture Design Patterns in Java is a detailed explanation of how to apply design patterns and develop software architectures. It provides in-depth examples in Java, and guides students by detailing when, why, and how to use specific patterns. This textbook presents 42 design patterns, including 23 GoF patterns. Categories include: Basic, Creational,**

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**Collectional, Structural, Behavioral, and Concurrency, with multiple examples for each. The discussion of each pattern includes an example implemented in Java. The source code for all examples is found on a companion Web site. The author explains the content so that it is easy to understand, and each pattern discussion includes Practice Questions to aid instructors. The textbook concludes with a case study that pulls several patterns together to demonstrate how patterns are not applied in isolation, but collaborate within domains to solve complicated problems.**

**Enterprise Application Architecture with .NET Core**

**Engineering Process-Centric Enterprise Systems using BPMN 2.0**

**Practical Microservices Architectural Patterns**

**Modeling Enterprise Architecture with TOGAF**

**Enterprise Design Patterns**

**A guide for architects and decision makers to craft complex solutions tailored to meet business needs**

**Microsoft Power Platform Enterprise Architecture**

*This volume constitutes the proceedings of the combined 7th International Workshop on Trends in Enterprise Architecture Research (TEAR 2012) and the 5th Working Conference on Practice-Driven Research on Enterprise Transformation (PRET-5), held in Barcelona, Spain, October 23-24, 2012, and co-located with The Open Group's Conference on Enterprise Architecture, Cloud Computing, and*

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*Security. Joining the forces of the two events with The Open Group Conference provided the unique opportunity for an intensive exchange between practitioners as well as for discussions on standardization efforts and academic research in the areas of enterprise transformation and enterprise architecture (EA). Based on careful reviews by at least three Program Committee members, 18 papers were chosen for inclusion in these proceedings. They were presented in six sessions on enterprise architecture management (EAM) effectivity, languages for EA, EAM and the ability to change, advanced topics in EA, governing enterprise transformations, and EA applications. Enterprise Process Management Systems: Engineering Process-Centric Enterprise Systems using BPMN 2.0 proposes a process-centric paradigm to replace the traditional data-centric paradigm for Enterprise Systems (ES)--ES should be reengineered from the present data-centric enterprise architecture to process-centric process architecture to be called as Enterprise Process Management Systems (EPMS). The real significance of business processes can be understood in the context of current heightened priority on digital transformation or digitalization of enterprises. Conceiving the roadmap to realize a digitalized enterprise via the business model innovation becomes amenable only from the process-centric view of the enterprise. This pragmatic book: Introduces Enterprise Process Management Systems (EPMS) solutions that enable an agile enterprise. Describes distributed systems and Service Oriented Architecture (SOA) that paved the road to EPMS. Leverages SOA to explain the cloud-based realization of business processes in terms of Web Services. Describes how BPMN 2.0 addresses the requirements for agility by ensuring a seamless methodological path from process requirements modeling to execution and back (to enable process improvements). Presents the spreadsheet-driven Spreadsheets Application Development (SAD) methodology for the design and development of process-centric application systems. Describes process improvement programs ranging right from disruptive*

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*programs like BPR to continuous improvement programs like lean, six sigma and TOC. Enterprise Process Management Systems: Engineering Process-Centric Enterprise Systems using BPMN 2.0 describes how BPMN 2.0 can not only capture business requirements but it can also provide the backbone of the actual solution implementation. Thus, the same diagram prepared by the business analyst to describe the business's desired To-Be process can also be used to automate the execution of that process on a modern process engine.*

*A practical, nuts-and-bolts guide to architectural solutions that describes step-by-step how to design robustness and flexibility into an Internet-based system Based on real-world problems and systems, and illustrated with a running case study Enables software architects and project managers to ensure that nonfunctional requirements are met so that the system won't fall over, that it can be maintained and upgraded without being switched off, and that it can deal with security, scalability, and performance demands Platform and vendor independence will empower architects to challenge product-dictated limitations*

*"Reaching the Pinnacle: A Methodology of Business Understanding, Technology Planning, and Change (Implementing and Managing Enterprise Architecture)" by Samuel B. Holcman explains the detailed process of building an enterprise architecture. Samuel B. Holcman brings his strategic business plans to business and technology professionals with "Reaching the Pinnacle: A Methodology of Business Understanding, Technology Planning, and Change (Implementing and Managing Enterprise Architecture)." In order to bring a method to the madness that can often be today's business structure, Holcman uses "Reaching the Pinnacle" to introduce the process of building an enterprise architecture. Holcman uses his 40 years of experience as a leading trainer and consultant in enterprise architecture in writing "Reaching the Pinnacle." He explains enterprise architecture as the rethinking*

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*of how business planning and information technology work together in order to achieve strategic goals. "Reaching the Pinnacle" explains how an organization and its important departments can achieve their goals through a series of project initiatives. Holcman offers a simple, easy-to-understand way to implement an enterprise architecture project into one's organization. "While the approach is not quick - it may take up to a few years to transform an organization - my methodology provides an effective means for moving the organization from its as-is state to its desired state in an iterative manner," says Holcman. Holcman's methods and approach have been used by numerous Fortune 500 companies and have led him to be the top consultant on the topic. He believes the 'for practitioners, by practitioners' approach of "Reaching the Pinnacle" will make the book a crucial resource among business and technology personnel everywhere. "Reaching the Pinnacle: A Methodology of Business Understanding, Technology Planning, and Change (Implementing and Managing Enterprise Architecture)" is available for sale online at Amazon.com, directly from the author at [www.PinnacleBusGrp.com](http://www.PinnacleBusGrp.com), and other channels. REVIEW COPIES AND INTERVIEWS AVAILABLE*

### *Cloud Computing Patterns*

*A Pattern Language for Planning, Design and Execution*

*SOA with REST*

*The Cornerstones of Enterprise Architecture*

*Architecting for innovation with events, autonomous services, and micro frontends*

*Force.com Enterprise Architecture*

*A Practical Guide to Enterprise Architecture*

*Enterprises, from small to large, evolve continuously. As a result, their structures are transformed and extended continuously. Without some means of control, such changes are*

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*bound to lead to an overly complex, uncoordinated and heterogeneous environment that is hard to manage and hard to adapt to future changes. Enterprise architecture principles provide a means to direct transformations of enterprises. As a consequence, architecture principles should be seen as the cornerstones of any architecture. In this book, Greefhorst and Proper focus on the role of architecture principles. They provide both a theoretical and a practical perspective on architecture principles. The theoretical perspective involves a brief survey of the general concept of principle as well as an analysis of different flavors of principles. Architecture principles are regarded as a specific class of normative principles that direct the design of an enterprise, from the definition of its business to its supporting IT. The practical perspective on architecture principles is concerned with an approach to the formulation of architecture principles, as well as their actual use in organizations. To illustrate their use in practice, several real-life cases are discussed, an application of architecture principles in TOGAF is included, and a catalogue of example architecture principles is provided. With this broad coverage, the authors target students and researchers specializing in enterprise architecture or business information systems, as well as practitioners who want to understand the foundations underlying their practical daily work.*

*The Definitive Guide to Building Web-Centric SOA with REST The World Wide Web is based on the most successful technology architecture in history. It has changed how we view, access, and exchange information and, with the advent of REST, it has also provided us with compelling ways to build and improve automation solutions. REST provides a great deal of guidance to ensure that an architecture and its automation logic are technically sound, though it is still your responsibility to build services that actually add value to your business. SOA with REST is the*

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*first comprehensive tutorial and reference for designing and building RESTful services as part of service-oriented solutions and in conjunction with service-oriented architecture (SOA). This book demonstrates that REST is not only a suitable medium for building truly service-oriented solutions, but also that the service-oriented architectural model is a necessary foundation for REST technology architectures to realize their full business potential. The authors provide thorough mapping of REST constraints and architectural goals with service-orientation principles and SOA characteristics. Using real-world examples, they show how to leverage REST's simplicity, flexibility, and low overhead without compromising the power or manageability of service-oriented solutions and architectures. This ebook will be valuable to IT architects, developers, and any practitioner seeking to use SOA and REST together. The current work provides CIOs, software architects, project managers, developers, and cloud strategy initiatives with a set of architectural patterns that offer nuggets of advice on how to achieve common cloud computing-related goals. The cloud computing patterns capture knowledge and experience in an abstract format that is independent of concrete vendor products. Readers are provided with a toolbox to structure cloud computing strategies and design cloud application architectures. By using this book cloud-native applications can be implemented and best suited cloud vendors and tooling for individual usage scenarios can be selected. The cloud computing patterns offer a unique blend of academic knowledge and practical experience due to the mix of authors. Academic knowledge is brought in by Christoph Fehling and Professor Dr. Frank Leymann who work on cloud research at the University of Stuttgart. Practical experience in building cloud applications, selecting cloud vendors, and designing enterprise architecture as a cloud customer is brought in by Dr. Ralph Retter who*

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*works as an IT architect at T-Systems, Walter Schupeck, who works as a Technology Manager in the field of Enterprise Architecture at Daimler AG, and Peter Arbitter, the former head of T Systems' cloud architecture and IT portfolio team and now working for Microsoft. Voices on Cloud Computing Patterns Cloud computing is especially beneficial for large companies such as Daimler AG. Prerequisite is a thorough analysis of its impact on the existing applications and the IT architectures. During our collaborative research with the University of Stuttgart, we identified a vendor-neutral and structured approach to describe properties of cloud offerings and requirements on cloud environments. The resulting Cloud Computing Patterns have profoundly impacted our corporate IT strategy regarding the adoption of cloud computing. They help our architects, project managers and developers in the refinement of architectural guidelines and communicate requirements to our integration partners and software suppliers. Dr. Michael Gorriz – CIO Daimler AG Ever since 2005 T-Systems has provided a flexible and reliable cloud platform with its "Dynamic Services". Today these cloud services cover a huge variety of corporate applications, especially enterprise resource planning, business intelligence, video, voice communication, collaboration, messaging and mobility services. The book was written by senior cloud pioneers sharing their technology foresight combining essential information and practical experiences. This valuable compilation helps both practitioners and clients to really understand which new types of services are readily available, how they really work and importantly how to benefit from the cloud. Dr. Marcus Hacke – Senior Vice President, T-Systems International GmbH This book provides a conceptual framework and very timely guidance for people and organizations building applications for the cloud. Patterns are a proven approach to building robust and sustainable applications and systems. The authors adapt and*

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*extend it to cloud computing, drawing on their own experience and deep contributions to the field. Each pattern includes an extensive discussion of the state of the art, with implementation considerations and practical examples that the reader can apply to their own projects. By capturing our collective knowledge about building good cloud applications and by providing a format to integrate new insights, this book provides an important tool not just for individual practitioners and teams, but for the cloud computing community at large. Kristof Kloeckner – General Manager, Rational Software, IBM Software Group*

*A professional's guide to solving complex problems while designing modern software Key Features Learn best practices for designing enterprise-grade software systems from a seasoned CTO Deeper your understanding of system reliability, maintainability, and scalability Elevate your skills to a professional level by learning the most effective software design patterns and architectural concepts Book Description As businesses are undergoing a digital transformation to keep up with competition, it is now more important than ever for IT professionals to design systems to keep up with the rate of change while maintaining stability. This book takes you through the architectural patterns that power enterprise-grade software systems and the key architectural elements that enable change (such as events, autonomous services, and micro frontends), along with showing you how to implement and operate anti-fragile systems. First, you'll divide up a system and define boundaries so that your teams can work autonomously and accelerate innovation. You'll cover low-level event and data patterns that support the entire architecture, while getting up and running with the different autonomous service design patterns. Next, the book will focus on best practices for security, reliability, testability, observability, and performance. You'll combine all that you've learned and build upon that foundation, exploring*

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*the methodologies of continuous experimentation, deployment, and delivery before delving into some final thoughts on how to start making progress. By the end of this book, you'll be able to architect your own event-driven, serverless systems that are ready to adapt and change so that you can deliver value at the pace needed by your business. What you will learn*

*Explore architectural patterns to create anti-fragile systems that thrive with change*  
*Focus on DevOps practices that empower self-sufficient, full-stack teams*  
*Build enterprise-scale serverless systems*  
*Apply microservices principles to the frontend*  
*Discover how SOLID principles apply to software and database architecture*  
*Create event stream processors that power the event sourcing and CQRS pattern*  
*Deploy a multi-regional system, including regional health checks, latency-based routing, and replication*  
*Explore the Strangler pattern for migrating legacy systems*

*Who this book is for* This book is for software architects who want to learn more about different software design patterns and best practices. This isn't a beginner's manual – you'll need an intermediate level of programming proficiency and software design to get started. You'll get the most out of this software design book if you already know the basics of the cloud, but it isn't a prerequisite.

*Enterprise Architecture for Global Companies in a Digital IT Era*

*A Pattern Language*

*ICMLG 2018 6th International Conference on Management Leadership and Governance*

*Fundamentals to Design, Build, and Manage Cloud Applications*

*The Software Architect Elevator*

*Software Architecture Patterns for Serverless Systems*

*Future-Proof Software-Systems*

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As data management and integration continue to evolve rapidly, storing all your data in one place, such as a data warehouse, is no longer scalable. In the very near future, data will need to be distributed and available for several technological solutions. With this practical book, you ' ll learn how to migrate your enterprise from a complex and tightly coupled data landscape to a more flexible architecture ready for the modern world of data consumption.

Executives, data architects, analytics teams, and compliance and governance staff will learn how to build a modern scalable data landscape using the Scaled Architecture, which you can introduce incrementally without a large upfront investment. Author Piethein Strengholt provides blueprints, principles, observations, best practices, and patterns to get you up to speed. Examine data management trends, including technological developments, regulatory requirements, and privacy concerns Go deep into the Scaled Architecture and learn how the pieces fit together Explore data governance and data security, master data management, self-service data marketplaces, and the importance of metadata

The book introduces topics in a broad context using a “ best practices ” model. Then the Trous Transformation Platform is used to provide concrete examples for the concepts. The book reads more like a novel than a manual,

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but provides insight and background to topics. In addition to clear language, many illustrations and graphics are included to enhance concepts. The book is not intended to be a user manual nor does it take the place of online content best managed by websites. This book is for the IT professional interested in using the rich content available in IT management systems to drive business value. Anyone involved in managing IT systems, defining IT architectures, managing IT standards, responsible for Enterprise Architecture, or the Enterprise Program Management Office, will enjoy reading this book. In addition, users of the Trous Transformation Platform or IT professionals implementing the TOGAFTM methodology will find this book a useful reference tool.

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

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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,

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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.

Every enterprise architect faces similar problems when designing and governing the enterprise architecture of a medium to large enterprise. Design patterns are a well-established concept in software engineering, used to define universally applicable solution schemes. By applying this approach to enterprise architectures, recurring problems in the design and implementation of enterprise architectures can be solved over all layers, from the business layer to the application and data layer down to the technology layer. Inversini and Perroud describe patterns at the level of enterprise architecture, which they

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refer to as Enterprise Architecture Patterns. These patterns are motivated by recurring problems originating from both the business and the underlying application, or from data and technology architectures of an enterprise such as identity and access management or integration needs. The Enterprise Architecture Patterns help in planning the technological and organizational landscape of an enterprise and its information technology, and are easily embedded into frameworks such as TOGAF, Zachman or FEA. This book is aimed at enterprise architects, software architects, project leaders, business consultants and everyone concerned with questions of IT and enterprise architecture and provides them with a comprehensive catalogue of ready-to-use patterns as well as an extensive theoretical framework to define their own new patterns.

Patterns for High-Capability Internet-based Systems

A Practical Guide Using UML and BPMN

Implementing SOA

Enterprise Architecture Patterns

Fowler

Software Architecture Design Patterns in Java

Enterprise Process Management Systems

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***This book is aimed at enterprise architects, software architects, project leaders, business consultants and everyone concerned with questions of IT and enterprise architecture and provides them with a comprehensive catalogue of ready-to-use patterns as well as an extensive theoretical framework to define their own new patterns. Design patterns are a well-established concept in software engineering, used to define universally applicable solution schemes. By applying this approach to enterprise architectures, recurring problems in the design and implementation of enterprise architectures can be solved over all layers, from the business layer to the application and data layer down to the technology layer.***

***"A comprehensive overview of the challenges teams face when moving to microservices, with industry-tested solutions to these problems." - Tim Moore, Lightbend 44 reusable patterns to develop and deploy reliable production-quality microservices-based applications, with worked examples in Java Key Features 44 design patterns for building and deploying microservices applications Drawing on decades of unique experience from author and microservice architecture pioneer Chris Richardson A pragmatic approach to the benefits and the drawbacks of microservices architecture Solve service decomposition, transaction***

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***management, and inter-service communication Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Microservices Patterns teaches you 44 reusable patterns to reliably develop and deploy production-quality microservices-based applications. This invaluable set of design patterns builds on decades of distributed system experience, adding new patterns for composing services into systems that scale and perform under real-world conditions. More than just a patterns catalog, this practical guide with worked examples offers industry-tested advice to help you design, implement, test, and deploy your microservices-based application. What You Will Learn How (and why!) to use microservices architecture Service decomposition strategies Transaction management and querying patterns Effective testing strategies Deployment patterns This Book Is Written For Written for enterprise developers familiar with standard enterprise application architecture. Examples are in Java. About The Author Chris Richardson is a Java Champion, a JavaOne rock star, author of Manning's POJOs in Action, and creator of the original CloudFoundry.com. Table of Contents Escaping monolithic hell Decomposition strategies Interprocess communication in a microservice architecture Managing transactions with***

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***sagas Designing business logic in a microservice architecture Developing business logic with event sourcing Implementing queries in a microservice architecture External API patterns Testing microservices: part 1 Testing microservices: part 2 Developing production-ready services Deploying microservices Refactoring to microservices***

***This book provides a method to plan, develop, validate, or evolve the design of an enterprise architecture function so that it fully meets the organization's needs. The reader will benefit from this book in two ways. First, it provides a structured overview and orientation to the subject of architecture from an architecture function perspective. Second, it guides through the process of planning, building, and operating your own architecture organization based on a generic architecture function blueprint presented in the form of a pattern language offering a structured means for navigating, contextualizing, combining, and composing the architecture function patterns. The book is structured in six chapters. Chapter 1 "Introduction" explains the starting position and objectives of the book and introduces key concepts that will be explained further in subsequent chapters. Chapter 2 "Architecture Function Pattern Language" introduces the concepts of pattern, pattern catalogue, pattern topology,***

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***and ontology and explains how these concepts are combined to form a pattern language for planning, designing, and operating an architecture function. Next, Chapter 3 “Architecture Function – Context“ introduces concepts that are crucial for understanding the challenges that an architecture function faces and presents a generic schema for the business organizations and value chain. Chapter 4 “Architecture Function – Challenge” looks at an architecture function from a black box perspective and outlines the expectations and requirements that companies place on architecture organizations. It discusses the building blocks of an architecture function, the services it provides along the enterprise value chain, and the quality attributes that enterprises expect from their functions. Chapter 5 “Architecture Function – Constitution” then shifts from a black-box perspective to a white-box perspective and outlines the generic design of an architecture function in order to realize functional and quality-related requirements. Chapter 6 “Pattern Catalogue“ eventually introduces the pattern catalogue with a total of 48 architecture function patterns. These patterns suggest designs for collaboration between the architecture function and enterprise organizations, for the elaboration and development of enterprise services along the enterprise value chain, or for***

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***aligning architecture governance with enterprise governance. The book is intended for a broad readership, including enterprise, domain, and solution architects, lecturers and students, and anyone else interested in understanding the value proposition, responsibilities, outcomes, methods, and practices of architecture functions. It introduces the basic concepts and theories needed to understand the pattern language presented and the patterns it summarizes.***

***Use this hands-on guide to build enterprise-class applications and manage on-premise infrastructure with Azure. You will use Azure's limitless opportunities to design cloud-based architectures that are uniquely tailored to your environment. Unsure where to begin with Azure? You are not alone. No other cloud platform comes close to delivering a uniform and interoperable footprint, while encompassing such a wide range of concerns across multiple operating systems, interaction patterns, architectural models, and infrastructure capabilities. Azure in the Enterprise is written for developers and architects who are interested in getting up to speed on the most important aspects of Azure architecture. Enlisting his no fluff, top-down approach, enterprise architect Moemeka shares his deep knowledge of Azure to guide you through making the rights choices regarding***

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***components and capabilities offered by the platform, so that you can begin building cloud-based architectures that are scalable, reliable, and secure. Strong emphasis is given to identifying enterprise needs and delving into the various capabilities in Azure that can resolve those needs. What You'll Learn Understand through example-driven tutorials how to design microservices using Azure PaaS technologies such as App Services, Service Bus, and Azure functions Connect Azure back into the enterprise using point-to-site, site-to-site, and ExpressRoute and utilize Service Fabric and Container-based technology to build isolated, reliable, and highly scalable, self-healing, enterprise-wide capabilities Create application, solution, and enterprise architectures using Azure components such as App Services, Web Jobs, Azure Storage, SQL Azure, Redis, Storage Queues, VNets, App Service Environments, Service Bus, Azure AD, Azure Traffic Manager, API Management, and Application Gateway Who This Book Is For Architects and developers who want to bring Azure into their enterprise. They understand the value of Azure, but want practical guidance on how to deliver their enterprise applications to a cloud environment.***

***Microservices Patterns***

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***An architectural guide to integrating, extending, and innovating enterprise solutions using SAP BTP***

***Trends in Enterprise Architecture Research and Practice-Driven Research on Enterprise Transformation***

***Principles, Patterns & Constraints for Building Enterprise Solutions with REST***

***Building Digital Ecosystem Architectures  
With examples in Java***

These proceedings represent the work of researchers participating in the 6th International Conference on Management, Leadership and Governance (ICMLG 2018) which is being hosted this year by the Institute for Knowledge and Innovation Southeast Asia (IKI-SEA), a Centre of Excellence of at Bangkok University, Thailand on 24-25 May 2018.

Details the master architectural design plan currently being implemented at the University of Oregon, illustrating the participation of all members of a small community in the designing of their own environment

"This book illuminates the connection of the two domains--SOA and REST--in a manner that is concrete and practical, providing concise application to

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everyday architectural challenges. Fantastic!" --Ryan Frazier, Technology Strategist, Microsoft "...a tour de force that elegantly applies REST principles to the industry-standard SOA framework described in prior titles in this series.... This book is a must-read for anyone developing REST services." --Dave Slotnick, Enterprise Architect, Rackspace Hosting "This book undoubtedly will help SOA to reap the benefits from the main value propositions of Web architecture...." --Dr. Erik Wilde, Architect, EMC Corporation "REST is so much more than just another type of interface implementation--SOA with REST shows how the ecosystem of service compositions changes as new opportunities arise for service composition architecture designs. A comprehensive guide and a must-read for any serious IT architect considering REST-style services for application architectures." --Roger Stoffers, Solution Architect, Hewlett Packard "Service-orientation and REST both are architectural styles that are cornerstones of modern applications and cloud computing. Both aim to deliver scalable, interoperable solutions, but their different roots don't always make them a natural fit. SOA with REST explains how the two styles can work together in enterprise environments. It discusses a design process for a services portfolio that meets the goals of SOA and at the same time designs services that comply with the established REST constraints. It also shows

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pragmatic approaches to meet enterprise-grade requirements with the REST programming style but relaxes constraints where necessary." --Christoph Schittko, Director of Cloud Strategy, Microsoft "An excellent repertoire of service-oriented patterns that will prove handy when solving problems in the real world. The REST perspectives and principles will provide complete coverage of modern-day Web 2.0 style approaches. Highly recommended."

--Sid Sanyal, IT Architect, Zurich Financial Services "An inspirational book that provides deep insight into the design and development of next-generation service-oriented systems based on the use of REST. This book clarifies the convergence of SOA and REST with no-nonsense content that addresses common questions and issues head-on. An essential "instrument of modern service implementation" and a powerful body of knowledge for software designers, architects, and consultants."

--Pethuru Raj, Ph.D., Enterprise Architecture (EA) Consultant, Wipro Consulting Services "REST and SOA are two of the most misunderstood terms in the software industry over the past decade. Yet the REST architectural style coupled with modern RESTful framework implementations provides a scalable and reliable approach to SOA. This book covers all you need to know about how to take the principles of REST and apply them in small and large SOA developments. If you are familiar with

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REST and thinking about SOA, then you need this book. If you have not considered REST in your SOA work, then this book is for you, too. Covering concepts of both REST and SOA, as well as design patterns and when to use them, the book is a wonderful companion and a good tool for architects and engineers." --Dr. Mark Little, CTO JBoss, Red Hat "Unlike many other texts on the subject, SOA with REST is a well-rounded, easy-to-read narrative, including real-world case studies that appeal to both developers and analysts. This makes it an indispensable source for any SOA practitioner or any professional who is planning to initiate an SOA project." --Theodore T. Morrison, Certified SOA Analyst, CSM, Geocent, LLC "SOA and REST are two very important architectural styles for distributed computing. SOA is successfully adopted by most enterprises, and the REST style is getting more attention from both researcher and industry users. The book SOA with REST introduces a new architectural style that is ingeniously combining both SOA and REST styles and clearly reveals how SOA and REST can work together to generate successful enterprise SOA strategies with REST, along with guidance for making architecture design decisions. This book is a bible of best practices for designing and implementing SOA architecture with REST. It is a must-have reference book for both IT practitioners and researchers." --Longji Tang, FedEx

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IT Senior Technical Advisor, Ph.D. in CSSE The Definitive Guide to Building Web-Centric SOA with REST The World Wide Web is based on the most successful technology architecture in history. It has changed how we view, access, and exchange information and, with the advent of REST, it has also provided us with compelling ways to build and improve automation solutions. REST provides a great deal of guidance to ensure that an architecture and its automation logic are technically sound, though it is still your responsibility to build services that actually add value to your business. SOA with REST is the first comprehensive tutorial and reference for designing and building RESTful services as part of service-oriented solutions and in conjunction with service-oriented architecture (SOA). This book demonstrates that REST is not only a suitable medium for building truly service-oriented solutions, but also that the service-oriented architectural model is a necessary foundation for REST technology architectures to realize their full business potential. The authors provide thorough mapping of REST constraints and architectural goals with service-orientation principles and SOA characteristics. Using real-world examples, they show how to leverage REST's simplicity, flexibility, and low overhead without compromising the power or manageability of service-oriented solutions and architectures. This book will be valuable to IT architects,

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developers, and any practitioner seeking to use SOA and REST together. Topic Areas Distributed solution design with HTTP and REST REST-based service composition architectures REST service modeling and a service-oriented analysis process for REST service candidates Technical service contract notation for REST services based on a uniform contract Designing REST service contracts with service-orientation Understanding REST constraints in relation to service-orientation principles Using hypermedia and dynamic binding within SOA and service compositions Creating complex HTTP-based methods for enterprise solutions Advanced design techniques, including composition deepening, runtime logic deferral, and dynamic binding with common properties Cross-service transactions and event-driven messaging with REST Addressing enterprise solution concerns in relation to REST-based state management Applying SOA design patterns to REST-based solutions Distinguishing REST and SOA service concepts and terminology Designing REST architectures with SOA Versioning REST services and uniform contracts Fundamental REST, SOA, and service-orientation concepts and terminology REST constraints, REST architectural goals, and properties Seven new REST-inspired design patterns Defining common goals of REST and SOA