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# Soa Principles Of Service Design Prentice Hall Service Oriented Computing Series From Thomas Erl

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Service Analysis, Design, and Architecture

SOA with REST

Design Principles for Process-driven Architectures Using Oracle BPM and SOA Suite 12c

Patterns for Aligning Business and IT

Cloud Computing Design Patterns (paperback)

Learning WCF

Service-Oriented Architecture

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Principles, Techniques, and Standards

Service-Oriented Architecture and Design Strategies

20th International Conference, CAiSE 2008 Montpellier, France, June 18-20, 2008, Proceedings

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Web Service Contract Design and Versioning for SOA

Concepts, Technology, and Design

Service-oriented Architecture Best Practices

A Field Guide to Integrating XML and Web Services

Enterprise SOA

SOA and Web Services Interface Design

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Semantics, Processes, Agents

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Service-Driven Approaches to Architecture and Enterprise Integration

Service-oriented Architecture

With SOA, BPM and MBM

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A Concise Introduction to Service Technology & Service-orientation

Advanced Information Systems Engineering

Principles, Patterns & Constraints for Building Enterprise Solutions with REST

Requirements, Models and Methods

Concepts, Technology, and Design

Enterprise Ontology  
Realizing Service-Oriented Architecture with the Microsoft Platform  
Cloud Computing  
Process-Driven SOA  
A Hands-on Guide

*Soa Principles Of Service Design*  
Prentice Hall Service Oriented  
Computing Series From Thomas Erl

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## ALLEN RIDDLE

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Service Analysis, Design, and Architecture Elsevier

The Definitive Guide to Service Engineering The key to succeeding with service-oriented architecture (SOA) is in comprehending the meaning and significance of its most fundamental building block: the service. It is through an understanding of service design that truly "service-oriented" solution logic can be created in support of achieving the strategic goals associated with SOA and service-oriented computing. Bestselling SOA author Thomas Erl guides you through a comprehensive, insightful, and visually rich exploration of the service-orientation design paradigm, revealing exactly how services should and should not be designed for real-world SOA. *SOA with REST* Pearson Education

This book demonstrates service-oriented architecture (SOA) as a concrete discipline rather than a hopeful collection of cloud charts. Built upon the author's firsthand experience rolling out a SOA at a major corporation, *SOA in Practice* explains how SOA can simplify the creation and maintenance of large-scale applications. Whether your project involves a large set of Web Services-based components, or connects legacy applications to modern business processes, this book clarifies how -- and whether -- SOA fits your needs. SOA has been a vision for years. This book brings it down to earth by describing the real-world problems of implementing and running a SOA in practice. After defining SOA's many facets, examining typical use patterns, and exploring how loose coupling helps build stronger applications, *SOA in Practice* presents a framework to help you determine when to take advantage of SOA. In this book you will: Focus squarely on real deployment and technology, not just standards maps Examine business problems to determine which ones fit a SOA approach before plastering a

SOA solution on top of them Find clear paths for building solutions without getting trapped in the mire of changing web services details Gain the experience of a systems analyst intimately involved with SOA "The principles and experiences described in this book played an important role in making SOA at T-Mobile a success story, with more than 10 million service calls per day." -- Dr. Steffen Roehn, Member of the Executive Committee T-Mobile International (CIO) "Nicolai Josuttis has produced something that is rare in the over-hyped world of SOA; a thoughtful work with deep insights based on hands-on experiences. This book is a significant milestone in promoting practical disciplines for all SOA practitioners." --John Schmidt, Chairman, Integration Consortium "The book belongs in the hands of every CIO, IT Director and IT planning manager." --Dr. Richard Mark Soley, Chairman and CEO, Object Management Group; Executive Director, SOA Consortium Design Principles for Process-driven Architectures Using Oracle BPM and SOA Suite 12c Prentice Hall

Reap the benefits of increased ROI by integrating Service-Oriented Design principles and XML Web services into your IT infrastructure.

*Patterns for Aligning Business and IT* John Wiley & Sons

Web services are leading to the use of more packaged software either as an internal service or an external service available over the Internet. These services, which will be connected together to create the information technology systems of the future, will require less custom software in our organizations and more creativity in the connections between the services. This book begins with a high-level example of how an average person in an organization might interact with a service-oriented architecture. As the book progresses, more technical detail is added in a "peeling of the onion" approach. The leadership opportunities within these developing service-oriented architectures are also explained. At the end of the book there is a compendium or "pocket library" for software technology related to service-oriented architectures. · Only web services book to cover both

data management and software engineering perspectives, excellent resource for ALL members of IT teams · Jargon free, highly illustrated, with introduction that anyone can read that then leads into increasing technical detail · Provides a set of leadership principles and suggested application for using this technology.

*Cloud Computing Design Patterns (paperback)* John Wiley & Sons  
A complete practitioner's catalog of proven domain services design solutions that can help any organization leverage SOA's full benefits \* \*Provides a vocabulary of proven SOA design solutions, with concrete examples and code that is easy for architects to adapt and implement. \*By Rob Daigneau, one of the industry's leading experts in complex systems integration. \*Helps architects and IT leaders accurately set stakeholder expectations for major SOA initiatives. Service-oriented architectures are typically called upon to deliver two general categories of services: enterprise services and domain services. Enterprise services are essentially composite services that typically leverage technologies such as message-oriented middleware. Domain services are the building blocks these composites depend upon. Each service category is best served by a distinct set of design solutions. This is the first book to systematically identify and explain best practice patterns for domain services. Rob Daigneau expands upon the Service Layer concept (covered expertly by Fowler in *Patterns of Enterprise Application Architecture* ) domain services can be used with *Enterprise Integration Patterns* (made famous by Hohpe and Woolf). Daigneau begins by reviewing SOA concepts, illuminating the distinctions between enterprise and domain services, and identifying key relationships between domain services and other pattern groups. Next, he introduces each essential pattern for creating and delivering domain services, providing a vocabulary of design solutions that architects and other IT professionals can implement by referencing and adapting the concrete examples he supplies.  
**Learning WCF** Morgan Kaufmann

The Authoritative Guide to Building Service-Oriented Solutions with Microsoft .NET Technologies and the Windows Azure Cloud Computing Platform In SOA with .NET and Windows Azure, top Microsoft technology experts team up with Thomas Erl to explore service-oriented computing with Microsoft's latest .NET service technologies and Windows Azure innovations. The authors provide comprehensive documentation of on-premise and cloud-based modern service technology advancements within the Microsoft platform and further show how these technologies have increased the potential for applying and realizing service-orientation practices and goals. Specifically, the book delves into Microsoft enterprise technologies, such as: Windows Communication Foundation (WCF) Windows Azure Windows Workflow Foundation (WF) Windows Azure AppFabric BizTalk Server Windows Presentation Foundation (WPF) ...as well as industry service mediums, including WS-\* and REST, and many related service industry standards and technologies. The book steps through common SOA design patterns and service-orientation principles, along with numerous code-level examples that further detail various technology architectures and implementations. Topic Areas This book covers the following primary topics: Microsoft Service Technologies Microsoft Enterprise Technologies On-Premise & Cloud-Based Service Topics Industry Service Technologies & Mediums Service-Oriented Technology Architectural Models Service-Orientation Design Paradigm Service-Orientation Design Principles SOA Design Patterns About the Web Sites This book series is further supported by a series of resources sites, including: [www.soabooks.com](http://www.soabooks.com) [www.soaspecs.com](http://www.soaspecs.com) [www.soamag.com](http://www.soamag.com) [www.serviceorientation.com](http://www.serviceorientation.com) [www.soapatterns.org](http://www.soapatterns.org) [www.soaprinciples.com](http://www.soaprinciples.com) [www.whatissoa.com](http://www.whatissoa.com)

**Service-Oriented Architecture** Pearson Education  
 Praise for Service-Oriented Architecture Compass "A comprehensive roadmap to Service-Oriented Architecture (SOA). SOA is, in reality, a business architecture to be used by those enterprises intending to prosper in the 21st century. Decision makers who desire that their business become flexible can jumpstart that process by adopting the best practices and rules of thumb described in SOA Compass." -Bob Laird, MCI IT Chief Architect "The book Service-Oriented Architecture Compass shows very clearly by means of real projects how agile business

processes can be implemented using Service-Oriented Architectures. The entire development cycle from planning through implementation is presented very close to practice and the critical success factors are presented very convincingly." - Professor Dr. Thomas Obermeier, Vice Dean of FHDW Bergisch Gladbach, Germany "This book is a major improvement in the field. It gives a clear view and all the key points on how to really face a SOA deployment in today's organizations." -Mario Moreno, IT Architect Leader, Generali France "Service-Oriented Architecture enables organizations to be agile and flexible enough to adopt new business strategies and produce new services to overcome the challenges created by business dynamism today. CIOs have to consider SOA as a foundation of their Enterprise Applications Architecture primarily because it demonstrates that IT aligns to business processes and also because it positions IT as a service enabler and maximizes previous investments on business applications. To understand and profit from SOA, this book provides CIOs with the necessary concepts and knowledge needed to understand and adapt it into their IT organizations." - Sabri Hamed Al-Azazi, CIO of Dubai Holding, Sabri "I am extremely impressed by the depth and scale of this book! The title is perfect-when you know where you want to go, you need a compass to guide you there! After good IT strategy leads you to SOA, this book is the perfect vehicle that will drive you from dream to reality. We in DSK Bank will use it as our SOA bible in the ongoing project." -Miro Vichev, CIO, DSK Bank, Bulgaria, member of OTP Group "Service-Oriented Architecture offers a pathway to networking of intra- and inter-corporate business systems. The standards have the potential to create far more flexible and resilient business information systems than have been possible in the past. This book is a must-read for those who care about the future of business IT." -Elizabeth Hackenson, CIO, MCI "Service-Oriented Architecture is key to help customers become on demand businesses-a business that can quickly respond to competitive threats and be first to take advantage of marketplace opportunities. SOA Compass is a must-read for those individuals looking to bridge the gap between IT and business in order to help their enterprises become more flexible and responsive." -Michael Liebow, Vice President, Web Services and Service-Oriented Architecture, IBM Business Consulting Services "This book is a welcome addition to SOA literature. It articulates

the business case and provides practical proven real-world advice, guidance, tips, and techniques for organizations to make the evolution from simple point-to-point web services to true SOA by addressing such topics as planning, organization, analysis and design, security, and systems management." -Denis O'Sullivan, Fireman's Fund Enterprise Architect Maximize the business value and flexibility of your SOA deployment In this book, IBM Enterprise Integration Team experts present a start-to-finish guide to planning, implementing, and managing Service-Oriented Architecture. Drawing on their extensive experience helping enterprise customers migrate to SOA, the authors share hard-earned lessons and best practices for architects, project managers, and software development leaders alike. Well-written and practical, Service-Oriented Architecture Compass offers the perfect blend of principles and "how-to" guidance for transitioning your infrastructure to SOA. The authors clearly explain what SOA is, the opportunities it offers, and how it differs from earlier approaches. Using detailed examples from IBM consulting engagements, they show how to deploy SOA solutions that tightly integrate with your processes and operations, delivering maximum flexibility and value. With detailed coverage of topics ranging from policy-based management to workflow implementation, no other SOA book offers comparable value to workingIT professionals. Coverage includes SOA from both a business and technical standpoint-and how to make the business case Planning your SOA project: best practices and pitfalls to avoid SOA analysis and design for superior flexibility and value Securing and managing your SOA environment Using SOA to simplify enterprise application integration Implementing business processes and workflow in SOA environments Case studies in SOA deployment After you've deployed: delivering better collaboration, greater scalability, and more sophisticated applications The IBM Press developerWorks® Series is a unique undertaking in which print books and the Web are mutually supportive. The publications in this series are complemented by resources on the developerWorks Web site on [ibm.com](http://ibm.com). Icons throughout the book alert the reader to these valuable resources.

**Soa with Java** IGI Global  
 SOA Principles of Service Design Prentice Hall  
*Principles, Techniques, and Standards* John Wiley & Sons  
 "This book continues the very high standard we have come to

expect from ServiceTech Press. The book provides well-explained vendor-agnostic patterns to the challenges of providing or using cloud solutions from PaaS to SaaS. The book is not only a great patterns reference, but also worth reading from cover to cover as the patterns are thought-provoking, drawing out points that you should consider and ask of a potential vendor if you're adopting a cloud solution." --Phil Wilkins, Enterprise Integration Architect, Specsavers "Thomas Erl's text provides a unique and comprehensive perspective on cloud design patterns that is clearly and concisely explained for the technical professional and layman alike. It is an informative, knowledgeable, and powerful insight that may guide cloud experts in achieving extraordinary results based on extraordinary expertise identified in this text. I will use this text as a resource in future cloud designs and architectural considerations." --Dr. Nancy M. Landreville, CEO/CISO, NML Computer Consulting The Definitive Guide to Cloud Architecture and Design Best-selling service technology author Thomas Erl has brought together the de facto catalog of design patterns for modern cloud-based architecture and solution design. More than two years in development, this book's 100+ patterns illustrate proven solutions to common cloud challenges and requirements. Its patterns are supported by rich, visual documentation, including 300+ diagrams. The authors address topics covering scalability, elasticity, reliability, resiliency, recovery, data management, storage, virtualization, monitoring, provisioning, administration, and much more. Readers will further find detailed coverage of cloud security, from networking and storage safeguards to identity systems, trust assurance, and auditing. This book's unprecedented technical depth makes it a must-have resource for every cloud technology architect, solution designer, developer, administrator, and manager. Topic Areas Enabling ubiquitous, on-demand, scalable network access to shared pools of configurable IT resources Optimizing multitenant environments to efficiently serve multiple unpredictable consumers Using elasticity best practices to scale IT resources transparently and automatically Ensuring runtime reliability, operational resiliency, and automated recovery from any failure Establishing resilient cloud architectures that act as pillars for enterprise cloud solutions Rapidly provisioning cloud storage devices, resources, and data with minimal management effort Enabling customers to configure and operate custom virtual

networks in SaaS, PaaS, or IaaS environments Efficiently provisioning resources, monitoring runtimes, and handling day-to-day administration Implementing best-practice security controls for cloud service architectures and cloud storage Securing on-premise Internet access, external cloud connections, and scaled VMs Protecting cloud services against denial-of-service attacks and traffic hijacking Establishing cloud authentication gateways, federated cloud authentication, and cloud key management Providing trust attestation services to customers Monitoring and independently auditing cloud security Solving complex cloud design problems with compound super-patterns

**Service-Oriented Architecture and Design Strategies** Packt Publishing Ltd

Endorsed by all major vendors (Microsoft, Oracle, IBM, and SAP), SOA has quickly become the industry standard for building next-generation software; this practical guide shows readers how to achieve the many benefits of SOA Begins with a look at the architectural principles needed to create successful applications and then goes on to examine the process for designing services and SOA implementations Each stage of the design process has an accompanying chapter that walks readers through the details and provides helpful tips, techniques, and examples The author team of SOA practitioners also provides two unique, comprehensive, end-to-end case studies illustrating the architectural and design techniques presented in the book 20th International Conference, CAiSE 2008 Montpellier, France, June 18-20, 2008, Proceedings Springer Science & Business Media Information Technology professionals can use this book to move beyond the excitement of web services and service oriented architecture (SOA) and begin the process of finding actionable ideas to innovate and create business value. In Enterprise SOA: Designing IT for Business Innovation, SAP's blueprint for putting SOA to work is analyzed from top to bottom. In addition to design, development, and architecture, vital contextual issues such as governance, security, change management, and culture are also explored. This comprehensive perspective reduces risk as IT departments implement ESA, a sound, flexible architecture for adapting business processes in response to changing market conditions. This book answers the following questions: What forces created the need for Enterprise Services Architecture? How does ESA enable business process innovation? How is model-

driven development used at all levels of design, configuration, and deployment? How do all the layers of technology that support ESA work together? How will composite applications extend business process automation? How does ESA create new models for IT governance? How can companies manage disruptive change? How can enterprise services be discovered and designed? How will the process of adapting applications be simplified? Based on extensive research with experts from the German software company SAP, this definitive book is ideal for architects, developers, and other IT professionals who want to understand the technology and business relevance of ESA in a detailed way--especially those who want to move on the technology now, rather than in the next year or two.

Soa Made Simple Pearson Education

If one thing catches the eye in almost all literature about (re)designing or (re)engineering of enterprises, it is the lack of a well-founded theory about their construction and operation. Often even the most basic notions like "action" or "process" are not precisely defined. Next, in order to master the diversity and the complexity of contemporary enterprises, theories are needed that separate the stable essence of an enterprise from the variable way in which it is realized and implemented. Such a theory and a matching methodology, which has passed the test of practical experience, constitute the contents of this book. The enterprise ontology, as developed by Dietz, is the starting point for profoundly understanding the organization of an enterprise and subsequently for analyzing, (re)designing, and (re)engineering it. The approach covers numerous issues in an integrated way: business processes, in- and outsourcing, information systems, management control, staffing etc. Researchers and students in enterprise engineering or related fields will discover in this book a revolutionary new way of thinking about business and organization. In addition, it provides managers, business analysts, and enterprise information system designers for the first time with a solid and integrated insight into their daily work.

**A Planning and Implementation Guide for Business and Technology** Packt Publishing Ltd

The Top-Selling, De Facto Guide to SOA--Now Updated with New Content and Coverage of Microservices! For more than a decade, Thomas Erl's best-selling Service-Oriented Architecture: Concepts, Technology, and Design has been the definitive end-to-end



tutorial on SOA, service-orientation, and service technologies. Now, Erl has thoroughly updated the industry's de facto guide to SOA to reflect new practices, technologies, and strategies that have emerged through hard-won experience and creative innovation. This Second Edition officially introduces microservices and micro task abstraction as part of service-oriented architecture and its associated service layers. Updated case study examples and illustrations further explain and position the microservice model alongside and in relation to more traditional types of services. Coverage includes:

- Easy-to-understand, plain English explanations of SOA and service-orientation fundamentals (as compiled from series titles)
- Microservices, micro task abstraction, and containerization
- Service delivery lifecycle and associated phases
- Analysis and conceptualization of services and microservices
- Service API design with REST services, web services, and microservices
- Modern service API and contract versioning techniques for web services and REST services
- Up-to-date appendices with service-orientation principles, REST constraints, and SOA patterns (including three new patterns)

Service-Oriented Architecture: Analysis and Design for Services and Microservices, Second Edition, will be indispensable to application architects, enterprise architects, software developers, and any IT professionals interested in learning about or responsible for designing or implementing modern-day, service-oriented solutions.

Chapter 1: Introduction Chapter 2: Case Study Backgrounds Part I: Fundamentals Chapter 3: Understanding Service-Oriented Architecture Chapter 4: Understanding SOA Chapter 5: Understanding Layers with Services and Microservices Part II: Service-Oriented Analysis and Design Chapter 6: Analysis and Modeling with Web Services and Microservices Chapter 7: Analysis and Modeling with REST Services and Microservices Chapter 8: Service API and Contract Design with Web Services Chapter 9: Service API and Contract Design with REST Services and Microservices Chapter 10: Service API and Contract Versioning with Web Services and REST Services Part III: Appendices Appendix A: Service-Oriented Principles Reference Appendix B: REST Constraints Reference Appendix C: SOA Design Patterns Reference Appendix D: The Annotated SOA Manifesto

[Web Service Contract Design and Versioning for SOA](#) Pearson Education

"This book could be described as an encyclopedia of service

design-Erl leaves nothing to chance. Indispensable." -Steve Birkel, Chief IT Technical Architect, Intel Corp. "An absolute pleasure to read...the best SOA book I've read. A book I would recommend to all of my colleagues; it provides much insight to the topics often overlooked by most books in this genre...the visuals were fantastic." -Brandon Bohling, SOA Architecture and Strategy, Intel Corporation "This book is a milestone in SOA literature. For the first time we are provided with a practical guide on defining service characteristics and service design principles for SOA from a vendor-agnostic viewpoint. It's a great reference for SOA discovery, adoptions, and implementation projects." -Canyang Kevin Liu, Principal Enterprise Architect, SAP Americas, Inc. "I liked this book. It contains extremely important material for those who need to design services." -Farzin Yashar, IBM SOA Advanced Technologies "This book does a great job laying out benefits, key ideas and design principles behind successfully adopting service-oriented computing. At the same time, the book openly addresses challenges, risks and trade-offs that are in the way of adopting SOA in the real-world today. It moves away from ivory-tower views of service orientation, but still lays out a strong vision for SOA and outlines the changes necessary to realize the full potential." -Christoph Schittko, Senior Architect, Microsoft "I recommend this book to any SOA practitioner who wishes to empower themselves in making service design real...gives readers the 360° view into service design [and] gives SOA practitioners the depth and understanding needed into the principles of SOA to assist in the design of a mature and successful SOA program." -Stephen G. Bennett, Americas SOA Practice Lead, BEA Systems "SOA projects are most successful when they are based on a solid technical foundation. Well accepted and established design principles are part of this foundation. This book takes a very structured approach at defining the core design principles for SOA, thus allowing the reader to immediately applying them to a project. Each principle is formally introduced and explained, and examples are given for how to apply it to a real design problem. A 'must read' for any architect, designer or developer of service oriented solutions." -Andre Tost, Senior Technical Staff Member, IBM Software Group "There are few references for SOA that give you the nuts and bolts and this one is at the top of the list. Well written and valuable as a reference book to any SOA practitioner." -Dr.

Mohamad Afshar, Director of Product Management, Oracle Fusion Middleware, Oracle Corporation "A thorough examination of the considerations of service design. Both seasoned SOA practitioners and those endeavoring to realize services can benefit from reading this book." -Bill Draven, Enterprise Architect, Intel Corporation "There are very few who understand SOA like Thomas Erl does! The principle centric description of service orientation from Thomas canonizes the underpinnings of this important paradigm shift in creating agile and reusable software capabilities. The principles, so eloquently explained, leave little room for any ambiguity attached to the greater purpose of SOA. Most organizations today are creating services in a bottoms-up approach, realizing composition and reuse organically. The time is ripe for a book like this that prepares architects for a principle centric approach to SOA." -Hanu Kommalapati, Architect, Microsoft Corporation "Outstanding SOA literature uniquely focused on the fundamental services design with thorough and in-depth study on all practical aspects from design principles to methodologies. This book provides a systematic approach for SOA adoption essential for both IT management and professionals." -Robin Chen, PhD, Google, Inc. "Thomas Erl's books are always densely filled with information that's well structured. This book is especially insightful for Enterprise Architects because it provides great context and practical examples. Part 1 of the book alone is worth getting the book for." -Markus Zirner, Senior Director, Product Management, Oracle Fusion Middleware, Oracle Corporation "A very clear discussion of the subject matter. Provides a good structure that facilitates understanding and readily highlights key points." -Kareem Yusuf, Director of SOA Strategy and Planning, IBM Software Group "I am very impressed. Comprehensive. Educative. This book helped me to step back and look at the SOA principles from broader perspective. I'd say this is a must-read book for SOA stakeholders." -Radovan Janecek, Director R&D, SOA Center, Hewlett-Packard "Very valuable guidance for understanding and applying SOA service design principles with concrete examples. A must read for the practitioner of SOA service design." -Umit Yalcinalp, PhD, Standards Architect, SAP "This book really does an excellent job of explaining the principles underpinning the value of SOA...Erl goes to great length to explain and give examples of each of the 8 principles that will significantly increase the readers ability to drive an SOA service

design that benefits both business and IT." -Robert Laird, IT Architect, IBM EAI/SOA Advanced Technologies Group "This book strikes a healthy balance between theory and practice. It is a perfect complement to the SOA series by the author." -Prakash Narayan, Sun Microsystems "If you are going to be designing, developing, or implementing SOA, this is a must have book." - Jason "AJ" Comfort Sr., Booz Allen Hamilton "An excellent book for anyone who wants to understand service-orientation and the principles involved in designing services...a clear, concise and articulate exploration of the eight design principles involved in analyzing, designing, implementing, and maintaining services..." - Anish Karmarkar, Oracle Corporation "Very well written, succinct, and easy to understand." -Raj Balasubramanian, IBM Software Group "A comprehensive exploration of the issues of service design which has the potential to become the definitive work in this area." -James Pasley, Chief Technology Officer, Cape Clear Software "An excellent addition to any SOA library; it covers a wide range of issues in enough detail to be a valuable asset to anyone considering designing or using SOA based technologies." - Mark Little, Director of Standards, Red Hat "This book communicates complex concepts in a clear and concise manner. Examples and illustrations are used very effectively." -Darryl Hogan, Senior Architect, Microsoft "A work of genius...Offers the most comprehensive and thorough explanation on the principles of service design and what it means to be 'service oriented.'" "Erl's treatment of the complex world of service oriented architecture is pragmatic, inclusive of real world situations and offers readers ways to communicate these ideas through illustrations and well formulated processes." -David Michalowicz, MITRE Corporation "This is the book for the large organization trying to rationalize its IT assets and establish an agile platform for the future. By highlighting risk and rewards, Thomas Erl brings clarity to how Service Orientation can be applied to ensure a responsive IT organization. This book finally brings software engineering principles to address the real world development challenges being faced. To effectively serve the business, let alone embrace SOA, everyone involved should be familiar with the concepts investigated here. Thomas Erl thoroughly clarifies the nuances and defines the practice of service design. We expect that this will become a classic text in software engineering, corporate training and colleges." -Cory Isaacson, President, Rogue Wave Software

and Ravi Palepu, SOA Author and Speaker "Thomas Erl does a great job...an easy read." -Michael H. Sor, Booz Allen Hamilton "...a must read for SOA Architects to develop a firm foundation and understanding of the principles (and trade-offs) that make up a good SOA service. After reading this book, it finally 'clicked' as to why a properly designed SOA system is different (and better) than a system based on previous enterprise architectures." -Fred Ingham, Platinum Solutions Inc. "Lays a tremendous foundation for business and technical workers to come to common terms and expectations...incredibly enlightening to see the details associated with achieving the SOA vision." -Wayne P. Ariola, Vice President of Strategy, Parasoft "[Erl does] an excellent job of addressing the breadth of [his] audience to present to those new to SOA and weaved in enough detail to assist those who are already actively involved in SOA development." -R. Perry Smith, Application Program Manager, EDS/OnStar "It is easy to miss the big picture of what SOA means for the design of larger scale systems amidst the details of WS technologies. Erl helps provide a broader perspective, surveying the landscape from a design standpoint." -Jim Clune, Chief Architect, Parasoft "Lays a firm foundation for the underlying principles of good service design. Cuts through the hype and provides a cogent resource for improving architectural judgment on SOA projects." -Jim Murphy, Vice President of Product Management, Mindreef, Inc. "The first book to concisely, gradually and comprehensively explain how to apply SOA principles into enterprise-level software design. It is an excellent book." -Robin G. Qiu, Ph.D., Division of Engineering and Information Science, Pennsylvania State University "I really think that this is a very useful book that a lot of people really need out there in the industry." -Dr. Arnaud Simon, Principal Software Engineer, Red Hat "...indispensable companion to designing and implementing a service-oriented architecture. It condenses all information necessary to design services and is the most relevant source I know if in the field." "[This book is] not only helpful, but fundamental to successfully designing an SOA." -Phillipp Offermann, Research Analyst, University of Berlin "Service-Oriented Architecture is an important topic in IT today. Its vast scope could span an organization's enterprise. Designing it properly is a major undertaking. This book provides timely, expert and comprehensive discussions on the principles of service design. Thomas has a keen sense in identifying the subtle points

of various subjects and explains them in an easy-to-understand way. The book is a valuable resource for IT professionals working in SOA." -Peter H. Chang, PhD, Associate Professor of Information Systems, Lawrence Technological University The Definitive Guide to Service Engineering The key to succeeding with service-oriented architecture (SOA) is in comprehending the meaning and significance of its most fundamental building block: the service. It is through an understanding of service design that truly "service-oriented" solution logic can be created in support of achieving the strategic goals associated with SOA and service-oriented computing. Bestselling SOA author Thomas Erl guides you through a comprehensive, insightful, and visually rich exploration of the service-orientation design paradigm, revealing exactly how services should and should not be designed for real-world SOA. This book's in-depth coverage includes Over 240 full-color illustrations. A concise introduction to SOA and service-oriented computing concepts and benefits. A thorough exploration of the service-orientation design paradigm as represented by eight specific design principles. A comparison of service-oriented and object-oriented concepts and principles and a clear definition of what qualifies as "service-oriented" logic. Detailed coverage of four different forms of service-related design granularity. An exhaustive examination of service contracts, with an emphasis on standardization, abstraction, and the utilization of WS-Policy, XML Schema, and WSDL definitions. A comprehensive study of positive and negative service-related coupling types with an emphasis on the requirements to attaining a suitable level of loose coupling. An inside look into how commercial design approaches are incorporated to achieve truly agnostic and reusable service logic. Techniques for maximizing service reliability, scalability, and performance by instilling high levels of autonomy and emphasizing stateless design. Approaches for positioning services as highly discoverable and interpretable enterprise resources. Unprecedented coverage of how to design services for participation in complex compositions. The definition of concrete links between each design principle and the strategic goals and benefits of SOA and service-oriented computing. Numerous cross-references to key design patterns documented separately in SOA: Design Patterns. [www.prenhallprofessional.com](http://www.prenhallprofessional.com) [www.soabooks.com](http://www.soabooks.com) [www.soasystems.com](http://www.soasystems.com) Preface xxv Chapter 1: Introduction 1 Chapter 2: Case Study Background 19 Part I:

Fundamentals Chapter 3: Service-Oriented Computing and SOA 25 Chapter 4: Service-Oriented Design Principles 103 Part II: Design Principles Chapter 6: Service Contracts (Standardization and Design) 125 Chapter 7: Service Coupling (Intra-Service and Consumer Dependencies) 163 Chapter 8: Service Abstraction (Information Hiding and Meta Abstraction Types) 211 Chapter 9: Service Reusability (Commercial and Agnostic Design) 253 Chapter 10: Service Autonomy (Processing Boundaries and Control) 293 Chapter 11: Service Statelessness (State Management Deferral and Stateless Design) 325 Chapter 12: Service Discoverability (Interpretability and Communication) 361 Chapter 13: Service Composability (Composition Member Design and Complex Compositions) 387 Part III: Supplemental Chapter 14: Service-Oriented and Object-Oriented: A Comparison of Principles and Concepts 445 Chapter 15: Supporting Practices 477 Chapter 16: Mapping Service-Oriented Architecture Principles to Strategic Goals 497 Appendices Appendix A: Case Study Conclusion 513 Appendix B: Process Descriptions 517 Appendix C: Principles and Patterns Cross-Reference 529 Additional Resources 533 About the Author 535 About the Photos 537 Index 539

#### **Concepts, Technology, and Design** Prentice Hall

"SOA Made Simple" is a concise and indispensable handbook for finally understanding exactly what Service Oriented Architecture is. Split into three clear sections, in this book you'll learn from both theory as well as step-by-step implementation examples to aid in your understanding of this often poorly-articulated industry term. If you are an architect who wants to be completely clear in your understanding of what SOA is, then this book is essential. In fact, anyone (designer, developer, administrator or team lead) who is implementing or about to implement an architecture in an IT environment should not miss out on "SOA Made Simple." Some previous experience with general software architecture is required, but this guide will tell you everything you need to know about SOA in a clear and easy fashion.

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Enterprise SOA "O'Reilly Media, Inc."

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associated with SOA and service-orientation within the context of Java Reviewing relevant Java platforms, technologies, and APIs Understanding the standards and conventions that REST and SOAP services are built upon in relation to Java implementations Building Java Web-based services with JAX-WS and JAX-RS Applying the eight key principles of service-orientation design using Java tools and technologies Creating Java utility services: architectural, design, and implementation issues Constructing effective entity services: service contracts, messages, data access, and processing Constructing task services, including detailed guidance on service composition Using ESBs to support infrastructure requirements in complex services ecosystems **SOA and Web Services Interface Design** Prentice Hall *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 ebook will be valuable to IT architects, developers, and any practitioner seeking to use SOA and REST together.

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