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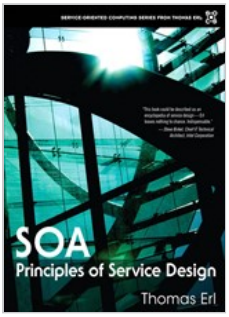

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SOA Principles of Service Design

By Thomas Erl

Published Jul 2, 2007 by Pearson. Part of the The Pearson Service Technology Series from Thomas Erl series.

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"This book could be described as an encyclopedia of service design–Erl leaves nothing to chance. Indispensable."

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"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."

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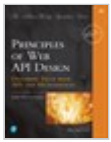

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"I recommend this book to any SOA practitioner who wishes to empower themselves in making service design real…gives readers the 360º view into service design [and] gives SOA practitioners the depth and understanding needed into the principles of SOA 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 provide s great context and practical examples. Part 1 of the book alone is worth getting the book for."

–Markus Zirn, 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

"Acomprehensive 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] and 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.*

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