Book Review

*IT Architectures and Middleware: Strategies for Building Large, Integrated Systems*

by

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**Appeared:** May 22, 2003, Computing Reviews, Association of Computing Machinery (ACM).

A comprehensive presentation of middleware concepts is given in this book. It is about IT architecture, and how to build and run large distributed systems. The subject matter and the technologies involved are so many that even seasoned IT architects will find many of the chapters very informative. To support these seasoned readers, each chapter has been written to stand autonomously. The book does maintain a logical progression of topics, however, if it is read in chapter order.

The first chapter describes the problem at hand, and serves as a roadmap for the topics. The next three chapters provide an exemplary historical technology review, focusing on platform and tool evolution. The covered technologies may seem elementary to the seasoned architect, but this part should be invaluable reading for management professionals.

Chapters 5 and 6 classify middleware architectures, presenting typically used technologies, as well as others that may have been justly (or otherwise) overlooked. Chapters 7 through 9 are very well written, and cover the fundamental principles of designing and implementing distributed systems to achieve resilience, scalability and security. Chapter 10 describes the guidelines for implementation design, and how to decompose applications into components.

Components and their reuse are addressed, along with operating environment issues, such as the differences between functions and processes.

The rest of the chapters are about the actual design implementation; many different issues are covered, for example, data sharing, development of the presentation layer, and the impact on user perspective. Particular attention is paid to identifying business process models, and to matching them with the required application functionality.

Overall, some of the best features of the book are its well-organized chapter layout, good index, and easy-to-read typography. The physical layout is clear, and helps in the thematic separation of the contents. Diagrams are unadorned, and successfully enhance and support the text. Undoubtedly, the book fulfills its purpose of being a thorough overview of IT architecture and middleware.

Every chapter is a pleasure to read; the analysis is clear and well supported. My only criticism of the otherwise excellent material is that there is no bibliography at the end of each chapter. Since many of the topics are based on well-defined, already-solved, or existing problems in computer science, some references to seminal work would have substantially increased the value of the book.

The author manages a fine balance between concepts and technology. He keeps the subject matter at a conceptual level when discussing design issues, while injecting appropriate technical details when discussing implementation issues.

One of the authors greatest accomplishments is his setting aside of the unnecessary software and platform fanaticisms that exist in IT. Throughout the book, he addresses problems, reviews solutions, and evaluates architectures critically and rationally, without prejudice for particular technologies.