

Preface



When this book first appeared in the summer of 1998, Enterprise JavaBeans™ (EJB) was a new specification, and there were only a handful of products which implemented it. There also were only a few products which implemented the Java Servlet API. Server-side Java™-based applications in general were not in widespread use, primarily because of the lack of standards-based application server products and also because of questions about reliability and performance. Java 2 was also still a beta release.

The situation today has greatly changed. The Java programming language is in widespread use as a server application technology, and there are many mature products which support its use in that role. Most of these products support Java 2 and its associated Enterprise APIs. A great many major commerce web sites now employ servlet, EJB, or other Java technologies. The combination of EJB components and Java Web servlets has emerged as a powerful and scalable tool for building electronic commerce, supply chain, and many diverse kinds of applications. It is truly amazing that this has happened in so short a time.

The questions about performance and reliability have also largely gone away, as the Java platform has proven itself on these issues. In my company we have seen Java-based application servers scale to large numbers of users and transaction rates, and the Java platform's ability to handle large volumes will certainly continue to increase. One recent benchmark we participated in demonstrated Java-based application server cluster scalability on UNIX processors at the level of more than 500 EJB transactions per second over long periods of time without any apparent instability, with relatively flat response time behavior never exceeding 600 ms.

The Enterprise JavaBeans and servlet standards have also evolved. Experience from the first version of EJB has led to improvements and clarifications, and the current generation of EJB



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products now incorporate these improvements and the Java 2 platform as well. EJB has become a robust and universal middle tier for transaction-based applications. The servlet standard has expanded to include provisions for security interoperability and XML messaging and the addition of JavaServer™ Pages (JSP). JSP provides a widely supported model for embedding dynamic content within web pages which leverages directly on Java technology and which is also more maintainable than earlier approaches to dynamic web content.

Perhaps the most significant development is the definition of the Enterprise Edition of the Java Platform (J2EE). This is an attempt to pull together the many Java technology specifications which are of special importance to enterprise applications, and also to specifically address issues such as interoperability, deployment, and security.

This Book's Goals

This book explains Java-related technologies of particular importance to enterprise-wide software development. This book is not intended to be an in-depth treatment of all enterprise subjects. In fact, the topic of enterprise application development is so broad that it would require a library of books to cover each area. I therefore do not promise to even mention every topic that is relevant, much less cover each in detail. However, an advanced programmer needs to have a working knowledge of most aspects of a system in order to understand the entire system. For example, a developer working on a set of Enterprise JavaBeans does not need to understand all aspects of all security issues but does need to have a working knowledge of the security techniques used by the servers involved and the application. This book endeavors to provide a big picture, in a highly practical manner that is immediately useful to most developers, regardless of what their particular expertise is. I avoid most user-interface-related topics, because those are covered extensively in other books.

The readers of this book are expected to be advanced but with varied backgrounds. I assume that most know basic Java platform programming, but that some will know some aspects of the Java programming language and not others. I emphasize showing actual implementation details, with real products used in examples. The real-world examples give advanced developers an immediate feeling for what the code really looks like without a lot of explanatory text.

In this book I avoid Java technologies that depart from the 100% Pure Java standards. I believe that standards are extremely important for large applications and enterprise-wide development. The success of open technologies hinges on their acceptance as standards, so it is illogical to embrace nonstandard implementations. Furthermore, standardization is in the best interest of the vast majority of the companies now building Java-based products and solutions and of the customers that depend on them.



Companion Web Site

This edition of this book is supported by the web site:

<http://www.ajdea.com>

I will post new material and any errata to this web site.

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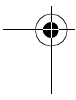
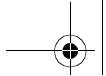
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