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J2EE 学习指南

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Sun Certified Enterprise Architect for J2EE

(Exam 310-051)

(英文版)

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[美] Paul R. Allen 著
Joseph J. Bambara

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内容提要

本书以 Sun 认证 Java 2 企业级设计师 (SCEA for J2EE) 认证考试为目标, 内容涵盖了 SCEA (J2EE) 核心考试的所有考试要点, 详细介绍了参加 SCEA (J2EE) 的应试者以及 J2EE 高级用户所应该掌握的技能。

本书在介绍考试要点时针对每个考试目标, 使用了大量的插图、表格、试验、测试等, 使读者在牢固掌握知识点的同时, 轻松地获得丰富的实践经验。

本书由具有丰富 SCEA (J2EE) 考试经验的专家编写, 是参加 SCEA (J2EE) 的考试人员的必备考试教材。本书也是一本学习使用和管理 J2EE 的很好的参考书, 还可以作为一些疑难问题的速查手册。

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(McGraw-Hill, 1995), *Informix: Client /Server Application Development* (McGraw-Hill, 1997), *Informix: Universal Server* (McGraw-Hill, 1998), *Informix: Universal Data Option* (McGraw-Hill, 1998), *SQL Server 7 Developer's Guide* (IDG, 2000), and *J2EE Unleashed* (SAMS, 2002). Over the past seven years, he has presented numerous courses and presentations for Weblogic, WebSphere, SilverStream, and Sybase in several cities and countries, including Los Angeles, Vienna, Paris, Berlin, Orlando, Nashville, New York, Copenhagen, Oslo, and Stockholm.

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—Paul R. Allen and Joseph J. Bambara

Very special thanks to my co-author, Joseph J. Bambara, especially for his encouragement, strength, and perseverance, which make it possible to succeed at all of our endeavors. Thanks to my family who are always there when I need them.

—Paul R. Allen

New York, New York

A very special thanks to my co-author Paul R. Allen, especially for his friendship and for being a great partner no matter what we try. Thanks to my family who are always there when I need them.

—Joseph J. Bambara

Greenvale, New York

PREFACE

Because of the complexities involved in enterprise application development, it is becoming increasingly important for Information Technology architects to become certified as Sun Certified Enterprise Architect (SCEA) for the Java 2 Platform, Enterprise Edition (J2EE) technology. This certification is the highest in Sun Microsystems Java technology. Certification in Java technology will improve your career potential, provide credibility and respect, and increase job security. With certification, you prove that you are qualified to architect J2EE applications, which increases your opportunities for professional advancement.

The SCEA for J2EE exam is the ultimate test in the Sun series. The series presently includes the following certifications:

- Sun Certified Java Programmer (SCJP)
- Sun Certified Web Component Developer (SCWCD)
- Sun Certified Java Developer (SCJD)
- Sun Certified Enterprise Architect (SCEA)

The SCEA for J2EE exam tests the concepts you've gained as a professional architect. These concepts are typically gained in a career that spans ten or more years and includes diverse languages and technology beyond Java. The exam tests your ability to produce an enterprise architecture using J2EE. Chapter 1 provides a detailed overview of the exam and the objectives along with test-taking tips. We will cover all of the objectives in the book's chapters.

In This Book

Sun Certified Enterprise Architect for J2EE Study Guide (Exam 310-051) is organized in such a way as to serve as an in-depth review for the exam for everyone from experienced J2EE architects, professionals, developers, and even newcomers to J2EE

and related technologies. Each chapter covers a major aspect of the exam, with an emphasis on the “why” as well as the “how to” of working with and supporting J2EE-based applications and related enterprise technologies.

On the CD

For more information on the CD-ROM, please see Appendix A.

In Every Chapter

We’ve created a set of chapter components that call your attention to important items, reinforce important points, and provide helpful exam-taking hints. Take a look at what you’ll find in every chapter:

- Every chapter begins with the **Certification Objectives**—what you need to know in order to pass the section on the exam dealing with the chapter topic. The Objective headings identify the objectives within the chapter, so you’ll always know an objective when you see it!
- **Exam Watch** notes call attention to information about, and potential pitfalls in, the exam. These helpful hints are written by authors who have taken the exams and received their certification—who better to tell you what to worry about? They know what you’re about to go through!
- **Practice Exercises** are interspersed throughout the chapters. These exercises help you master skills that are likely to be an area of focus on the exam and give you practice for SCEA Part 3, the essay portion of the certification exam. Don’t just read through the exercises; they are hands-on practice that you should be comfortable completing. Learning by doing is an effective way to increase your competency with a product.
- **On The Job** notes describe the issues that come up most often in real-world settings. They provide a valuable perspective on certification- and product-related topics. They point out common mistakes and address questions that have arisen from on the job discussions and experience.
- **Scenario and Solutions** sections lay out potential problems and solutions in a quick-to-read format:



SCENARIO & SOLUTION

You need to maintain non-enterprise data across method invocations for the duration of a session. What kind of EJB would you use?

You should use a session bean, an EJB that is created by a client and usually exists only for the duration of a single client-server session.

You need to create an EJB to represent enterprise data. What kind of EJB should you use?

You should use an entity bean, which is an object representation of persistent data maintained in a permanent data store such as a database.

- The **Certification Summary** is a succinct review of the chapter and a restatement of salient points regarding the exam.
- ✓ ■ The **Two-Minute Drill** at the end of every chapter is a checklist of the main points of the chapter. It can be used for last-minute review.

Q&A

- The **Self Test** offers questions similar to those found on the certification exams. The answers to these questions, as well as explanations of the answers, can be found at the end of each chapter. By taking the Self Test after completing each chapter, you'll reinforce what you've learned from that chapter while becoming familiar with the structure of the exam questions.

Some Pointers

Once you've finished reading this book, set aside some time to do a thorough review. You might want to return to the book several times and make use of all the methods it offers for reviewing the material:

1. *Re-read all the Two-Minute Drills*, or have someone quiz you. You also can use the drills as a way to do a quick cram before the exam. You might want to make some flash cards out of 3×5 index cards that have the Two-Minute Drill material on them.
2. *Re-read all the Exam Watch notes*. Remember that these notes are written by authors who have taken the exam and passed. They know what you should expect—and what you should be on the lookout for.
3. *Review all the S&S sections* for quick problem solving.

4. *Re-take the Self Tests.* Taking the tests right after you've read the chapter is a good idea, because the questions help reinforce what you've just learned. However, it's an even better idea to go back later and do all the questions in the book in one sitting. Pretend that you're taking the live exam. (When you go through the questions the first time, you should mark your answers on a separate piece of paper. That way, you can run through the questions as many times as you need to until you feel comfortable with the material.)
5. *Complete the Exercises.* Did you do the exercises when you read through each chapter? If not, do them! These exercises are designed to cover exam topics, and there's no better way to get to know this material than by practicing. If there is something you are not clear on, re-read that section in the chapter.

INTRODUCTION

Sun's most advanced certification program in Java technology is the Sun Certified Enterprise Architect ("SCEA") for Java 2 Platform. This book, the *Sun Certified Enterprise Architect for J2EE Study Guide (Exam 310-051)*, provides all the information that you may need to prepare for the SCEA. It has detailed chapters and a CD covering all the topics of the SCEA exam. To pass the certification, the candidate should be familiar with the fundamentals of Java applications programming and should have skill in Java programming. Additionally, there are some specific technologies that the candidate should know well. These topical areas are as follows:

- Basic principles of enterprise architectures
- Object-oriented design using UML
- Two-tier, three-tier, and N-tier common architectures
- Legacy connectivity
- EJB and container models
- Protocols (HTTP, HTTPS, IIOP, JRMP)
- Applicability of J2EE
- Design patterns
- Messaging
- Internationalization
- Security

The final chapter is an enterprise architecture case study (using UML), which will help you prepare for Part 2 of the SCEA exam, an architecture and design project.

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