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OCP Oracle9i Database: Fundamentals I Exam Guide


(Exam 1Z0-031)

Prepare for This Oracle Certified Professional Exam with The Ultimate Preparation Kit

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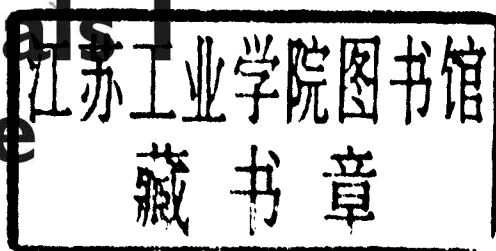
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OCP Oracle9i Database: Fundamentals I Exam Guide

To my wife Stacy
—*Jason Couchman*

To my wife Sujani and my sons, Rahath and Rishabh
—*Sudheer Marisetti*

About the Authors

Jason S. Couchman

Jason S. Couchman is a database consultant and the author of *Oracle8i Certified Professional DBA Certification Exam Guide*, also from Oracle Press. He is a regular presenter on Oracle and OCP at international Oracle user conferences and meetings. His work has been published by *Oracle Magazine*, Harvard Business School Publishing, and Gannett Newspapers, among others.

Sudheer N. Marisetti

Sudheer N. Marisetti is a database, Unix, and Web administrator and president of Abacus Concepts Inc., a New Jersey-based consulting firm specializing in designing, building, and maintaining database systems. He is an adjunct faculty member at Columbia University teaching advanced Oracle administration classes. He holds a master's degree in electrical engineering.

OracleCertified Professional

About the Oracle Certification Exams

The expertise of Oracle database administrators (DBAs) is integral to the success of today's increasingly complex system environments. The best DBAs operate primarily behind the scenes, looking for ways to fine-tune day-to-day performance to prevent unscheduled crises and hours of expensive downtime. They know they stand between optimal performance and a crisis that could bring a company to a standstill. The Oracle Certified Database Administrator Track provides DBAs with tangible evidence of their skills with the Oracle database.

The Oracle Certified Professional (OCP) Program was developed by Oracle to recognize technical professionals who can demonstrate the depth of knowledge and hands-on skills required to maximize Oracle's core products according to a rigorous standard established by Oracle. By earning professional certification, you can translate the impressive knowledge and skill you have worked so hard to accumulate into a tangible credential that can lead to greater job security or more challenging, better-paying opportunities.

Oracle Certified Professionals are eligible to receive use of the Oracle Certified Professional logo and a certificate for framing.

Requirements for Certification

To become an Oracle Certified Database Administrator for the Oracle9i track, you must pass four tests. These exams cover knowledge of the essential aspects of the SQL language, Oracle administration, backup and recovery, and performance tuning of systems. The certification process requires that you pass the following four exams:

- Exam 1: Introduction to Oracle9i: SQL (1Z0-007)
- Exam 2: Oracle9i Database: Fundamentals I (1Z0-031)
- Exam 3: Oracle9i Database: Fundamentals II (1Z0-032)
- Exam 4: Oracle9i Database: Performance Tuning (1Z0-033)

If you fail a test, you must wait at least 30 days before you retake that exam. You may attempt a particular test up to three times in a twelve-month period.

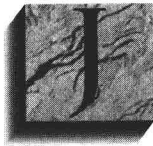
Recertification

Oracle announces the requirements for upgrading your certification based on the release of new products and upgrades. Oracle will give six months' notice announcing when an exam version is expiring.

Exam Format

The computer-based exams are multiple-choice tests, consisting of 50–65 questions that must be completed in 90–120 minutes.

Preface



Jason's interest in Oracle certification began in 1996 when he read about the Oracle DBA certificate offered by the Chauncey Group. He found it difficult to prepare for that certification exam for two reasons. First, there was an absence of practice questions readily available. Second, preparation for the exam involved reviewing six or seven different manuals and Oracle Press books, none of which were particularly suited to the task. Judging from the response to the proliferation of titles now available in the Oracle Certified Professional (OCP) Exam Guide Series from Oracle Press, it would seem others have had similar experiences.

This book is divided into two units, the first containing preparatory material for the Oracle9i DBA Fundamentals I exam, part of the Oracle's Oracle9i DBA certification track. The first unit has six chapters, each containing several discussions that focus on a particular topic or subtopic objective listed by the Oracle Certified Professional Oracle9i DBA Track Candidate Guide for the DBA Fundamentals I exam. (For a complete listing of all the topics tested for this exam, see Chapter 1.) These discussions are followed by a For Review section, each listing the three or four most important concepts for you to retain from the discussion. After the review, you'll see two to six exercise questions in exam-based multiple choice or short answer format. Following the questions you will find an answer key for those questions, which should help you master the material even more quickly. Thus, with this book you're never more than a few pages away from demonstrating what you've learned about Oracle9i DBA topics for the OCP exam.

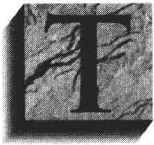
At the end of each chapter, you will find a short summary of what was covered in the chapter, followed by a Two-Minute Drill. The Two-Minute Drill contains another bulleted list of fast facts to review, or crib notes for the days leading up to your OCP exam. The chapters conclude with 5 to 20 short answer and exam-based multiple choice questions designed to help you further test your understanding of the materials you learned in the chapter.

The second unit consists of one chapter containing three full-length practice exams. Each test contains exam-based multiple choice and scenario-based questions that are designed to help you strengthen your test-taking skills for the OCP exams. You will also find answers and in-depth explanations for every question in the practice exams in the back of that chapter, along with a reference back to the exam topic and subtopic objectives from the OCP Candidate Guide. This feature should help you determine your areas requiring further improvement with pinpoint accuracy.

Finally, a note about updates and errata. Because OCP covers such vast ground in a short time, this has become a living text. If you feel you have encountered difficulties due to errors, you can check out **www.OraclePressBooks.com** to find the latest errata.

Good luck!

Acknowledgments



here are many people I would like to thank for their help with writing this book. My first and most heartfelt thanks goes to the dedicated readers of other books who took time out of their busy schedules to send feedback on the book. I have listened to your praise and constructive criticism, and made every effort to correct and amplify my work based on the points you made. Next, a note of gratitude to the folks at Oracle who made the book possible. Ulrike Schwinn and Jim Dilanni have both been loyal associates, colleagues, and friends during my ongoing effort to help 110,000-plus readers get Oracle certified. Thanks also to Oracle University for its feedback and assistance with the overall direction for the OCP DBA track. As always, thanks to the fine folks at Osborne and MacAllister Publishing Services for their hard work in assembling the manuscript into a finished product.

This book is dedicated to my wife, Stacy, who makes every part of my life better. Stacy, I strive to be a better husband to you, and to help you grow as a person. As you take this next step in your life from student to professional, I want you to know that I support you wholeheartedly and will do everything in my power to keep our marriage strong and solid—especially when you have to work late! I love you.

—Jason Couchman

I wish to thank Jason for giving me an opportunity to coauthor this book with him. Working with him on this book and the guidance he provided me were invaluable. I thank all the folks at Osborne/McGraw-Hill in helping us complete this book. I also thank Oracle Corporation for reviewing each chapter and providing valuable feedback. I thank all my previous, current, and future students, whose interaction was invaluable in building my technical expertise.

I thank my good friend Ravi Kadeermangalan, whose support and advice helped me in my life and in writing this book. I am fortunate to have such a friend. Most of all I am indebted to my beloved wife, Sujani “Puppala” Marisetti, who held the fort and kept our two active kids preoccupied while I toiled on this book during the weekends and nights. Without her patience, support, and affection I would not have traveled so far in my life.

For your comments, I can be reached at smarisetti@yahoo.com.

—*Sudheer Marisetti, Piscataway, New Jersey*

Introduction



The Oracle Certified Professional DBA certification exam series from Oracle Corporation is a great opportunity for you to demonstrate your expertise on the use of Oracle database software. Called OCP, it represents the culmination of many people's requests for objective standards in Oracle database administration, one of the hottest markets in the software field. The presence of OCP on the market indicates an important reality about Oracle as a career path. Oracle is mature, robust, and stable for enterprisewide information management. However, corporations facing a severe shortage of qualified Oracle professionals need a measurement for Oracle expertise.

The OCP certification core track for DBAs consists of four tests in the following areas of Oracle9i: SQL, DBA Fundamentals I and II, and Tuning, with the current content of those exams covering Oracle through Oracle9i. As of this printing, each test consists of about 60 multiple choice questions pertaining to the recommended usage of Oracle databases. You have about 90 minutes to take each exam. Obtaining certification for Oracle9i through the core track is contingent on taking and passing *all* core examinations. This book will help you prepare for the DBA Fundamentals I exam in the DBA track.

Why Get Certified?

If you are already an Oracle professional, you may wonder, “Why should I get certified?” Perhaps you have a successful career as an Oracle DBA or developer, enjoying the instant prestige your résumé gets with that one magic word on it. With market forces currently in your favor, you’re right to wonder. But while no one is saying you don’t know Oracle when you put the magic word on your résumé, can you prove how well you *do* know Oracle without undergoing a technical interview? We started asking ourselves that question when Oracle certification began to emerge and were surprised to find out that, after years of using Oracle, developing Oracle applications, and administering Oracle databases for Fortune 500 companies, there were a lot of things about Oracle we *didn’t* know. And the only reason we know them now is because we took the time and effort to become certified.

If you’re looking for another reason to become certified in Oracle, consider the experience of computer professionals with Novell NetWare experience in the late 1980s and early 1990s. Back then, it seemed that anyone with even a little experience in Novell could count on a fantastic job offer. Then Novell introduced its CNE/CNA programs. At first, employers were okay with hiring Novell professionals whether they had a certificate or not. As time went on, however, employers no longer asked for computer professionals with Novell NetWare *experience*; they asked for CNEs and CNAs. A similar phenomenon can be seen in the arena of Microsoft Windows NT, where the MCSE has already become the standard by which those professionals are measuring their skills. Furthermore, with the latest economic downturn in the technology-driven U.S. economy comes the possibility of involuntary information technologies (IT) job changes. If you want to stay competitive in the field of Oracle database administration or development through those changes, your real question shouldn’t be *whether* you should become certified, but *when*.

If you are not in the field of Oracle development or database management, or if you want to advance your career using Oracle products, there has never been a better time to do so. OCP is already altering the playing field for DBAs and developers by changing the focus of the Oracle skill set from “How many years have you used it?” to “Do you know *how* to use it?” That shift benefits organizations using Oracle as much as it benefits the professionals who use Oracle because the emphasis is on *skills*, not attrition.

Managers who are faced with the task of hiring Oracle professionals can breathe a sigh of relief with the debut of OCP as well. By seeking professionals who are certified, managers can spend less time trying to determine if the candidate possesses the Oracle skills for the job, and spend more time assessing the candidate’s work habits and compatibility with the team.

**TIP**

You can find the exam objectives tested on the OCP exam on DBA Fundamentals I at the beginning of Chapter 1.

How Should You Prepare for the Exam?

If you spend your free time studying things like the feature that permits Oracle to remove database files after you issue the `DROP TABLESPACE` command, you are probably ready to take the OCP Oracle9i DBA Fundamentals I exam now. For the rest of us, Oracle and other companies offer classroom- and computer-based training options to learn Oracle. Now users have another option—this book! By selecting this book, you demonstrate two excellent characteristics—that you are committed to a superior career using Oracle products and that you care about preparing for the exam correctly and thoroughly. And by the way, the feature that permits Oracle to remove database files after you drop a tablespace is the Oracle-Managed Files feature, and it is tested heavily on the OCP Oracle9i DBA Fundamentals I exam. That fact, along with thousands of others, is covered extensively in this book to help you prepare for, and pass, the OCP Oracle9i DBA Fundamentals I exam.

DBA Certification Past and Present

Oracle certification started in the mid-1990s with the involvement of the Chauncey Group International, a division of the Educational Testing Service. With the help of many Oracle DBAs, Chauncey put together an objective, fact-based, and scenario-based examination on Oracle database administration. This test did an excellent job of measuring knowledge of Oracle7, versions 7.0 to 7.2. Consisting of 60 questions, Chauncey's exam covered several different topic areas, including backup and recovery, security, administration, and performance tuning, all in one test.

Oracle Corporation has taken DBA certification ahead with the advent of OCP. Their core DBA certification consists of four tests, each about 60 questions in length. By quadrupling the number of questions you must answer, Oracle requires that you have an unprecedented depth of knowledge in Oracle database administration. Oracle has also committed to including scenario-based questions on the OCP examinations, and preparation material for these new questions is included in this book as well. Scenario-based questions require you to not only know the facts about Oracle, but also to understand how to apply those facts in real-life situations.

Oracle's final contribution to the area of Oracle certification is a commitment to reviewing and updating the material presented in the certification exams. Oracle-certified DBAs will be required to maintain their certification by retaking the certification exams periodically, meaning that those who certify will stay on the cutting edge of the Oracle database better than those who do not.

The Next Steps

Next, let's examine the test interface you will encounter on exam day. Figure I-1 contains a diagram of the actual test graphical user interface (GUI). The top of the interface tells you how much time has elapsed and the number of questions you have answered. You can use the checkbox in the upper left-hand corner of the interface to mark questions you would like to review later. In the main window of the interface you'll find the actual exam question, along with the choices.

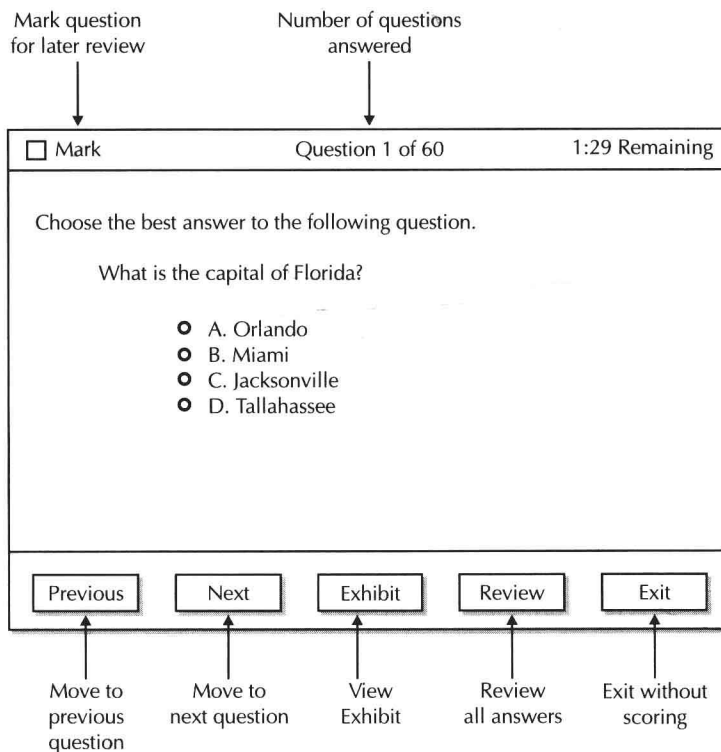


FIGURE I-1 *Sylvan Prometric exam interface illustration*

Generally, the interface enables the user to select only one answer (unless the question specifically directs you to select more answers). In this case, the interface will enable you to select only as many answers as the question requests. After answering a question, or marking the question for later review, the candidate can move onto the next question by clicking the appropriate button in the lower left-hand corner. To return to the previous question on the OCP exam, hit the Next button over to the left. You can score your questions at any time by pressing the Grade Test button on the bottom right-hand side.

The final point feature to cover is the Exhibit button. In some cases, you may require the use of an exhibit consisting of extra information from the database, which is useful in answering a question. If the question does not require the use of an exhibit, the button will be grayed out.

Once you've completed all questions on the exam, the Sylvan Prometric interface will display a listing of all the answers you selected, shown in Figure I-2.

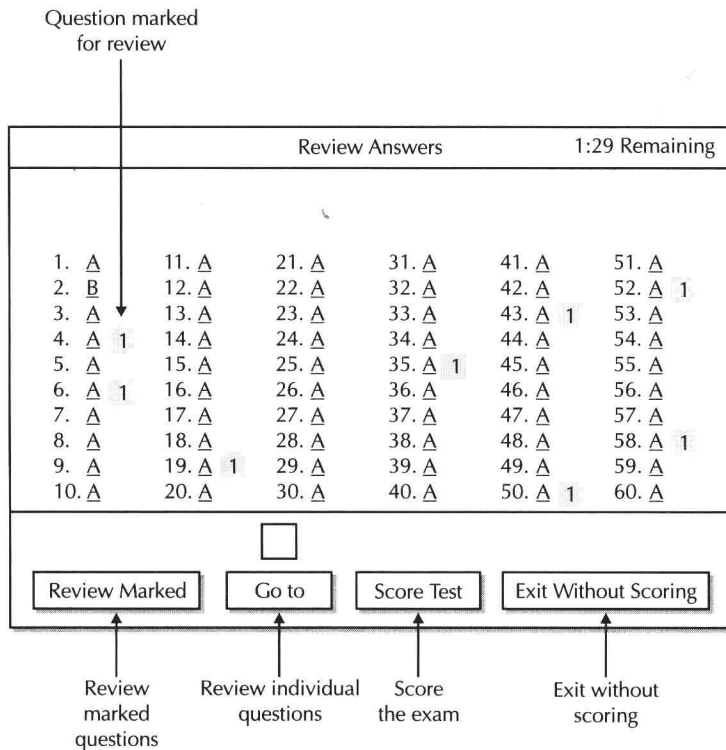


FIGURE I-2 Sylvan Prometric answer interface illustration