

# Oracle® Candidate Certification Guide: Oracle8 Certified Database Operator

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## Guide Contents

*This Candidate Certification Guide provides you with detailed information about the Oracle8 Certified Database Operator Track for the Oracle Certified Professional (OCP) Program. It includes the following items:*

### Oracle8 Certified Database Operator Track

- 1 Oracle8 Certified Database Operator Track Overview**
- 2 Oracle Certification Test Preparation**
- 3 Test 1 Oracle8 Database Operator**

For step-by-step instructions on how to schedule your certification test and for an overview of the program, see the *Oracle Candidate Certification Guide: An Overview*, available from Sylvan Prometric or via the Web: <http://education.oracle.com/certification>

# Oracle8 Certified Database Operator

In today's increasingly complex system environments, a new role has emerged as an integral part of efficient, successful database administration. This is the role of the Database Operator (DBO)—an individual who is able to perform simple, operational tasks on an Oracle database with an introductory knowledge of database software and the graphical utilities associated with managing the database.

DBOs provide valuable support to Database Administrators (DBAs) in the management of the database. Because they have the ability to execute routine administrative tasks on the database independently, DBOs enable enterprise DBAs to concentrate on mission-critical operations, including making strategic decisions about database design, maintenance and tuning, as well as diagnosing and troubleshooting complex database issues.

## Oracle8 Certified Database Operator: Overview

Oracle Education has designed an intensive training and certification package to give DBOs the knowledge and skills they need to be successful.

### The training enables participants to:

- Install Oracle database software
- Create and configure Oracle databases
- Load data
- Setup and manage users
- Install and implement applications
- Perform routine backups and performance checks

### The DBO training package includes:

- 4-days of Instructor-Led, hands-on classroom instruction
- 2 self-paced Interactive Courseware (IC) modules
- 2 Oracle Simulator scenarios for applied learning online
- Self-study SQL exercises

## Oracle8 Database Operator Certification

The training package provides complete preparation for the Oracle8 Certified Database Operator certification exam. By earning professional certification, DBOs gain *a tangible, industry-recognized credential* that distinguishes them as top performers and valued members of the database support team.

Typical candidates for the exam are IT professionals, such as network administrators, systems administrators, or Web masters, whose responsibilities affect databases or include assisting in the management of Oracle databases. Ideal candidates have completed Oracle Education's training for Database Operators and have hands-on work experience with Oracle databases before taking the Oracle8 Certified Database Operator exam.

To become an Oracle8 Certified DBO, candidates must pass only one exam. This test challenges them to apply specific knowledge they have gained, through Oracle training and their on-the-job experience, to real-world scenarios.

Working on a computer with no other resources, candidates have to answer a number of questions which test their knowledge and experience as DBO's. Because there is no way for candidates to memorize what they need to know for the exam, only proven performers can achieve a passing grade. The certification tests in the Oracle8 Certified Database Operator Track are created against Oracle8 Server and SQL\*Plus release 3.3.

Candidates are not required to take any Oracle Education courses before attempting the certification exam. However, with a combination of Instructor-Led Training, Interactive Courseware, and Simulator scenarios, Oracle's DBO training package provides excellent preparation, considerably enhancing the knowledge and confidence of candidates preparing for the exam.

## Oracle OCP Program

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 support Oracle's core products according to a standard of excellence established by Oracle.

Contact your local Oracle Education representative for more information about selecting specific courses and products to prepare for your test.

## Oracle8 Certified Database Operator Test Preparation

Oracle recommends combining Oracle Education offerings with practice and on-the-job experience for the best test preparation. Candidates should review the Test Content (starting on page 3) to ensure they have prepared for all topics covered in the OCP tests.

Oracle Database Operator for Windows NT		
<u>ILT</u> <sup>1</sup>	<u>CBT</u> <sup>1</sup>	<u>SIM</u> <sup>2</sup>
Oracle Database Operator for Windows NT (4 days)	Oracle SQL and SQL* Plus: Basic SELECT Statements (6 hours)	Oracle8 Database Administration: Import and Reorganize Tablespaces
	Oracle SQL and SQL* Plus: DML and DDL (6 hours)	Oracle8 Database Administration: Password Management and Security

The following are also included in the DBO Certification Preparation Package, however, the *candidates will only be tested on content in the ILT and the two CBT's*.

- Self Study Guide
- Instructions for Installing Oracle8
- Instructions for installing Workshop Applications
- Information on your next step to certification and to an in-depth knowledge of Oracle

**Note:** If your country does not offer the exact course titles listed above, please contact your local Oracle Education representative.

<sup>1</sup> Candidates should prepare for the exam by taking the ILT and both of the CBTs.

<sup>2</sup> The Oracle Simulator product provides hands-on practice using product simulations in scenario-based lessons.

**ILT**    **Instructor-Led Training**  
**CBT**    **Computer-Based Training**  
**SIM**    **Oracle Simulator**

## **Test 1 Oracle8 Database Operator Test Content**

### **What is an Oracle Database?**

- Explain the difference between a database management system and a flat file system
- List the tasks of the relational database management system (RDBMS)
- Define the components of an Oracle database
- Distinguish the logical and physical structure of an Oracle database
- List the most common terms used in a relational database

### **Which tools are used to access an Oracle Database?**

- Define the SQL and PL/SQL languages
- Define the appropriate tool used to achieve tasks within the database: Designers, Developers, End-Users, DBAs and DBOs

### **What are the duties of an Oracle Database Operator?**

- List the main job tasks of the Oracle Database Operator
- Identify and install the Oracle Server, Oracle Enterprise Manager, Net8, and SQL\*Plus products

### **How to install Oracle database software**

- Identify the appropriate tool required to install Oracle
- Identify and install the Oracle Server, Oracle Enterprise Manager, Net8, and SQL\*Plus products

### **How to create an Oracle Database and Services**

- Create a database using the Database Assistant tool
- Identify the files required to create and open a database
- Identify the directory in which the Oracle database files are stored
- Explain the purpose of an Oracle database service

### **Where to find important Oracle files**

- Create a password file that is used to authenticate a user
- Identify the contents and location of the database trace files

### **Oracle Networking and OEM Configuration**

- Define the purpose of Net8
- Identify the location and purpose of the Net8 configuration files
- Create the Net8 configuration files using Net8 assistant
- Create the OEM repository
- Control the database using the OEM Console Navigator

**How to stop and start an Oracle Database**

- Use OEM Instance Manager to shut down the database
- Shutdown the database in different modes
- Use OEM Instance Manager to start up the database in different modes
- Configure the initial parameters using OEM Instance Manager.

**How to implement the logical and physical structure for new applications**

- Define the components of an application in an Oracle database
- Create the logical and physical structure to set up a new application
- Use OEM Storage Manager to manage the applications
- Define the use of tablespaces
- Create and manage rollback segments

**How to setup users for a new application**

- Describe the function of the three categories of users
- Define the purposes of system privileges
- Assign system privileges to users directly or through roles
- Use OEM Security Manager to manage users, privileges, and roles

**How to create objects to store application data**

- Use SQL\*Worksheet to run scripts that create the objects of an application
- Use OEM Schema Manager to list the objects created by each schema for the applications
- Use OEM Storage Manager to control the space used by the objects in the database

**How to secure application data manipulation**

- Define the object privileges required to access and manipulate data of application objects
- Use OEM Security Manager to grant and revoke object privileges to users and roles

**Why and when to back up databases**

- Define the frequency of database backups
- Backup a database using the operating system backup tool or OEM Backup Manager
- Perform a full database backup
- Define how to automate periodic database backups using OEM job service

**When and how to recover a crashed database**

- Identify different crash scenarios
- Perform a complete recovery in NOARCHIVELOG mode
- Archive redo log files to avoid loss of data and reduce recovery time
- Set a database in ARCHIVELOG mode
- Perform a complete recovery in ARCHIVELOG mode

**How to load non-Oracle data**

- List the types of constraints of a table
- Disable table constraints using OEM Schema Manager
- Load data into a table using OEM Data Manager
- Re-enable constraints after data load using OEM Schema Manager
- Automate periodic data loads using Oracle Enterprise Manager job service

**How to anticipate issues**

- Anticipate and know administration issues:
  - Database down
  - Lack of space for tablespaces or segments
  - Over-consumption of archive and trace files
- Automate detection by using:
  - OEM job service
  - OEM event service

**How to solve blocking situations**

- Define the reason for blocked sessions
- Detect and release blocked sessions
- Use OEM Lock Manager to release blocked sessions

**How to perform high-level performance tuning**

- Use the Oracle Expert tool from the Oracle Tuning Pack to tune the performance of the database
- Create a tuning session
- List the steps of the tuning session
- Review and implement the tuning recommendations

**Oracle SQL and SQL\*Plus:  
Basic Select Statements**

- RDBMS: An Introduction
- Database Design
- Oracle and SQL\*Plus: An Introduction
- SQL Commands
- Customizing Queries
- SQL\*Plus: Application
- Conditional Clauses
- Comparison Operators
- Multiple Conditions: Application
- Single Row Functions: Application
- Single Row Functions: Data Conversion
- Joining Tables: An Introduction
- Simple Join
- Outer and Self Joins
- Group Functions
- Creating and Selecting Groups

**Oracle SQL and SQL\*Plus:  
DML and DDL**

- Tables
- Datatypes and Constraints
- Defining Constraints
- Tables: Creation and Confirmation
- Data Dictionary Views
- Data Dictionary Queries
- Inserting Data
- Manipulating Row Data
- Transaction Processing
- Altering Columns in a Table
- Altering Constraints
- Altering Tables
- Creating and Using Sequences
- Identify the description of the pseudo columns
- Managing Sequences
- Managing Views
- DML Operations
- Index Structure
- Managing Indexes
- Managing System Privileges
- Object Privileges



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