

## DATABASE MANAGEMENT SYSTEMS USING ORACLE (DBMS)

Oracle Certified Data Base Administration certification can help you gain more visibility and greater access to the industry's most challenging opportunities. Becoming professionally certified can be a smart career move for a technical professional. Unlike a college degree or even continuing education credits, OCP certification is a proof that you have the depth of knowledge and hands-on skills required to support Oracle core products according to a rigorous standard established by Oracle Corporation.

**Objective:** This will provide participants with the skills and techniques needed to implement and administer databases especially using the Oracle 8i database product.

**Methodology** This seven -day, hands-on course begins with a brief review of relational databases, the standard SQL language, and data modeling concepts, and then uses a case study method to introduce the process of building a database and designing an application to access and manipulate this data with Oracle. Participants will learn to:

- Use standard Oracle tools to administer and monitor the database
- Use data modeling techniques to design a database and applications
- Convert that design into a usable application to store, sort and access data
- Use PL/SQL to implement table data manipulation tasks
- Administer the activities of users in importing, exporting, manipulating and distributing data to and from a database in a secure and orderly manner

## ORACLE 9i DATABASE ADMINISTRATOR CERTIFIED ASSOCIATE (OCA)

The oracle certification 9i consists of two paths that are to be taken in sequence:

### Oracle 9i Database Administrator Certified Associate (OCA)

The oracle certification program begins with the associate level. At this apprentice skill level, oracle associates have a foundation knowledge that will allow them to act as junior team member working with database administrators or as application developers utilizing oracle. To earn the oracle 9i database administrator certified associate credential, two exams are required; the first one can be taken via the Internet, while subsequent exams must be taken in a proctored environment. Two exams are required to obtain the oracle9i DBA OCA credential:

- Introduction to Oracle9i: SQL or Oracle: SQL and PL/SQL
- Oracle 9i Database: Fundamentals I

### Oracle 9i Database Administrator Certified Professional (OCP)

The oracle certified professional credential is the next step. After achieving the oracle associate credential, oracle training has to be continued along with gaining on-the -job experience to pass the required exams and move up to the OCP level. For 9i OCP one instructor led course is a requirement.

- Oracle 9i Database: Fundamentals II
- Oracle 9i Database: Performance & Tuning

## Course contents OCA

Introduction to 9i SQL

Writing a Basic SQL Statement, Restricting and Sorting Data, Single Row Functions, Displaying Data from, Multiple Tables, Writing Sub Queries, Producing Readable Output with SQL \*Plus, Manipulating Data, Creating and Managing Tables, Including Constraints, Creating Views, Other Database Objects, SQL Workshop, Using Set Operators, Oracle9i Single Row Functions, Enhancements to the GROUP by Clause

Advanced Sub Queries, Hierarchical Retrieval, Extensions to DDL and DML Statements, Writing Scripts and Generates Scripts

## Fundamentals I

Oracle Architectural Components, Getting started with the Oracle Server, Identifying the Features of the Universal Installer, Defining the Optimal Flexible Architecture, Identifying Database Administrative Users

Managing an Oracle Instance, Creating a Database, Using the Data Dictionary, Maintaining the Control File

Maintaining Redo Log Files, Managing Tablespaces and Data Files, Describing Storage Hierarchy, Establishing the Difference between SYSTEM and Non SYSTEM Tablespaces, Storage Structures and Relationships, Managing Undo Data, Creating and Maintaining UNDO Tablespaces, Managing Indexes

OCP Certification

## Fundamentals II

Networking Overview, Basic Oracle Net Architecture, Basic Oracle Net services Server-Side Configuration

Basic Oracle Net Service Client-Side Configuration, Usage and Configuration of the Oracle Shared Server

Backup and Recovery Overview, Instance and Media Recovery Manager (RMAN) Overview and Configuration, User-Managed Backups, RMAN Backups, User-Managed Incomplete Recovery, RMAN Incomplete Recovery, RMAN Repository Maintenance, RMAN Catalog Creation and Usage, Transporting Data Between Databases, Backups and Recovery and Networking Workshop

## Performance and Tuning

Overview of Oracle 9i Performance Tuning, Diagnostic and Tuning Tools, Sizing the Shared Pool, Sizing the Buffer Cache, Sizing other SGA Structures, Database Configuration and I/O issues, Optimize Sort Operations, Diagnosing Contention for Latches, Tuning Rollback or (UNDO) Segments, Monitoring and Detection Lock Contention, Tuning Oracle Shared Server, Application Tuning, Using Oracle Blocks

Efficiency, SQL Statement Tuning, Tuning the Operating System and using Resource Manager Workshop

Course contents OCA	OCP Certification
<p>Introduction to 9i SQL            Writing a Basic SQL Statement            Restricting and Sorting Data            Single Row Functions            Displaying Data from Multiple Tables            Writing Sub Queries            Producing Readable Output with SQL *Plus            Manipulating Data            Creating and Managing Tables            Including Constraints            Creating Views            Other Database Objects            SQL Workshop            Using Set Operators            Oracle9i Single Row Functions            Enhancements to the GROUP by Clause            Advanced Sub Queries            Hierarchical Retrieval            Extensions to DDL and DML Statements.            Writing Scripts and Generates Scripts</p> <p><b>Fundamentals I</b>            Oracle Architectural Components            Getting started with the Oracle Server            Identifying the Features of the Universal Installer            Defining the Optimal Flexible Architecture            Identifying Database Administrative Users            Managing an Oracle Instance            Creating a Database            Using the Data Dictionary            Maintaining the Control File            Maintaining Redo Log Files            Managing Tablespaces and Data Files            Describing Storage Hierarchy            Establishing the Difference between SYSTEM and Non SYSTEM Tablespaces            Storage Structures and Relationships            Managing Undo Data            Creating and Maintaining UNDO Tablespaces            Managing Indexes</p>	<p><b>Fundamentals II</b>            Networking Overview            Basic Oracle Net Architecture            Basic Oracle Net services Server- Side Configuration            Basic Oracle Net Service Client-Side Configuration            Usage and Configuration of the Oracle Shared Server            Backup and Recovery Overview            Instance and Media Recovery Manager (RMAN) Overview and Configuration            User-Managed Backups            RMAN Backups            User-Managed Incomplete Recovery            RMAN Incomplete Recovery            RMAN Repository Maintenance            RMAN Catalog Creation and Usage            Transporting Data Between Databases            Backups and Recovery and Networking Workshop</p> <p><b>Performance and Tuning</b>            Overview of Oracle 9i Performance Tuning            Diagnostic and Tuning Tools            Sizing the Shared Pool            Sizing the Buffer Cache            Sizing other SGA Structures            Database Configuration and I/O issues            Optimize Sort Operations            Diagnosing Contention for Latches            Tuning Rollback or (UNDO) Segments            Monitoring and Detection Lock Contention            Tuning Oracle Shared Server            Application Tuning            Using Oracle Blocks Efficiency            SQL Statement Tuning            Tuning the Operating System and using Resource Manager Workshop</p>