

Fundamentals of DBA

5 Days

COURSE OVERVIEW

This course is designed to give the delegate an introduction into Oracle Database Administration. It will give a firm foundation allowing the delegate to succeed at maintaining, troubleshooting and backup and recovery of an Oracle database.

The course will show the delegates how to use the Administration tool provided. It will cover database creation, user management and other general areas associated with an Oracle database. As well as being able to use the tool the delegate will also learn how to do the same procedures manually so as they get a full understanding of the tasks they are doing. They will also learn how they can do more than the tools offer.

The course will give the delegate a hands-on approach to all areas of database administration. Each chapter will have practical exercises where possible and in addition will contain OCP questions for each chapter.

TARGET AUDIENCE

This course is suitable for database administrators.

PREREQUISITES

A good knowledge of SQL and PL/SQL is essential, together with knowledge of basic operating system commands (e.g. copy, delete, move). Ideally delegates will have attended the Fundamentals of SQL and SQL*Plus and the Fundamentals of PL/SQL courses.

COURSE OBJECTIVES

By the end of the course attendees will:

- Understand the architecture of an Oracle database
- Be able to create a database in different ways
- Manage database files, tablespaces, segments, extents and blocks
- Manage users
- Audit users
- Diagnose and troubleshoot database problems
- Be able to use a number of different backup and recovery techniques
- Be able to use Recovery Manager (RMAN)
- Identify areas where database performance can be improved
- Carry out tasks to improve the performance of the database.
- Be aware of network configurations
- Know how to configure parallel and distributed databases

COURSE CONTENT

Introduction

- Role of the DBA
- Tools & Utilities

Oracle Database Architecture

Creating a Database

- Optimal Flexible Architecture
- Planning a Database
- The CREATE DATABASE Command
- Catproc and Catalog
- Database Configuration Assistant

Managing an Instance

- Startup
- Shutdown
- The Parameter File

Oracle Enterprise Manager

The Data Dictionary

- Base Tables
- Views

Maintaining Database Files

- Control File
- Redo Log Files
- Data Files
- Obtaining Log and Archive Information
- Maintaining Online Redo Log Files

Managing Tablespaces and Rollback Segments

- Logical Structure of the Database
- Dictionary-managed Tablespaces and their uses
- Locally-managed Tablespaces and their uses
- Creating Tablespaces
- Relocating Tablespaces
- Creating Rollback Segments
- Maintaining Rollback Segments
- Deciding on the number of Rollback Segments
- Overcoming common Rollback Segment problems

Managing Tables and Indexes

- Creating tables
- Creating Indexes
- Controlling space used by tables
- Analysing tables for performance

Users and Security

- System and Object Level Privileges
- Roles
- Creating Users
- Auditing
- Controlling Operating System or Password File Authentication

Utilities

- SQL Loader
- Import and Export

Overview of Backup and Recovery

- Hot and Cold Backups
- Incremental and Cumulative Backups
- Recovery Manager (RMAN)
- Early detection of block corruption
- Recovering a Table/Index with block corruption
- Using Log and Trace Files to diagnose problems