Course Catalog
2012-2013

Oracle Database Administration

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Oracle Database Administration (DBA)

This Oracle Database Administration training course will teach you skills that have been growing in demand over recent years, despite the downturn in the global economy. It will build on the SQL*Plus and PL/SQL skills from the perspective of a technician responsible for creating and administering physical and logical file structures, in this powerful relational database product.

Objectives

This Oracle Database Administration training course is for technical staff who are becoming responsible for creating and administering Oracle databases. Development staff may also benefit from attending this class to gain an overview of the work of a Database Administrator to aid in developing effective software systems that will be based on Oracle.

Who should attend?

This course is designed for database administrators and technical support staff who are required to plan and implement database backup and recovery strategies for Oracle Database. This course is also suitable for delegates who need to be able to monitor and improve the database performance. They will be able to ensure the integrity and availability of a company's data within the Oracle environment.

Prerequisite

A grounding in relational database concepts; familiarity with the use of graphical user interfaces. Some expertise with both SQL and PL/SQL in an Oracle environment is expected

Course Duration

72 Hours, 24 Classes, 3 Hours per class

Course Content

Lesson 01: Database Administration

- Memory, process and disk structure
- Instances and databases
- Storage structures
- Backup and recovery
- SQL and database tuning
- Network resource management

Lesson 02: Oracle Architecture

- Disk structures
- Parameter files
- Control files
- Data files
- Redo log files
- Password files
- Segments, extents and blocks
- Memory areas
- Shared pool
- Buffer cache
- Processes
- Database writer
- Log writer
- System monitor
- Process monitor
- Archiver
- Processing overview

Lesson 03: Creating a Database

- Configuring the operating system
- Privileged account authentication
- Creating a parameter file
- Creating a database
- Creation commands
- Post creation actions
- Data dictionary management

Lesson 04: Starting and Stopping Oracle

- Instance processing overview
- Startup command
- Startup stages
- Command options
- Shutdown commands and options
- Checking instance status
- Using the alert logs
- Trace files

Lesson 05: Tablespaces, Datafiles and Rollback Segments

- Structure review
- Tablespace types
- System tablespace
- Non-system tablespaces
- Inside a tablespace
- Locally managed and dictionary managed tablespaces
- Datafiles
- Tablespace and datafile management
- Segments, extents and blocks
- Rollback segment operations
- Creating and managing rollback segments

Lesson 06: Tables and Indexes

- Creating tables
- Data types
- Creation and management commands
- Inside a table
- Table management (alter, drop, move)
- Partitioned tables
- Indexes
- Creating indexes and setting storage criteria
- Index management

Lesson 07: Database Integrity

- Creating, altering and dropping constraints
- Enabling and disabling constraints
- Constraints and indexes
- More on index types
- Index-organised tables
- Bitmap indexes
- Reverse key indexes

Course Content

Lesson 08: User and Resource Management

- User accounts overview
- Resource profiles
- System and password limits
- Profile management
- Authentication choices:
- Password
- Operating system
- Database
- Users and tablespaces
- Privileges and roles
- Creating and managing user account
- Tablespace quotas; data dictionary information

Lesson 09: Privileges

- User and system privileges
- Assigning privileges to users
- Using roles
- Stored code privileges
- Invoker and definers rights

Lesson 10: Oracle Best Practices

- User and system privileges
- Assigning privileges to users
- Using roles
- Stored code privileges
- Invoker and definers rights

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