Optimising And Protecting Oracle Databases

Course: **00172**
Filter: **Beginner**
Duration: **3 days**
Category:: **Oracle Database**
Price: **1226,00 €**

About Course

Among the best database management systems (DBMS), Oracle Database is recognised for its performance, scalability and security, both on site and in the Cloud. both on site and in the Cloud. It also stands out for its ability to manage very large volumes of data. This level of technical This level of technical performance has been achieved through extensive research and expertise at Oracle. Nevertheless, to get the most out of Oracle Database, it is important to know how to optimise and secure it. In this training course, you will learn the skills you need to optimise and protect optimise and protect your databases and master database administration.

What you'll learn

- Optimising and protecting Oracle databases
- Optimising SQL queries
- Choosing the right infrastructure for Oracle databases
- Know how to optimise the server and its resources (storage and diagnostic processes)
- Know the solutions available for optimising and protecting Oracle databases
- Have the right database administration attitude
- Make good use of performance measurement tools

Targeted audience

- Database and system administrators
- IT Managers

- CISOs
- Developers wishing to extend their knowledge or learn about best practices for optimising and protecting Oracle databases, as well as anyone wishing to implement an Oracle database

Pre-requisites

- Pre-Requisite 1: Knowledge of database architecture in general and the Oracle database in particular. Pre-Requisite 2: Knowledge of the RDBMS
- Knowledge of the RDBMS

Curriculum

Module 1: Choosing the right infrastructure

- Knowing which infrastructure is best suited to your architecture
- Understanding the advantages and disadvantages of each infrastructure
- Explore the main infrastructures
- Understanding their licensing

Module 2: Introduction to Oracle optimisation principles

- The fundamental procedures to follow to optimise performance
- The importance of following the different optimisation procedures
- Desired and acceptable performance objectives

Module 3: Optimising Oracle database memory

- Setting up the System Global Area (SGA)
- Managing the size of data blocks in memory
- Optimising and sizing the System Global Area (SGA)
- Set up the Program Global Area (PGA)
- Implement automatic management of the SGA and PGA

Module 4: Using performance measurement tools

- Using the trace function in the server process
- Applying an optimisation strategy
- Set up the autotrace session, sqldeveloper, database control for the execution plan
- Trace an SQL query
- Analyse the current session and other instances

Module 5: Understanding automatic performance tuning functions

- Introduction to the AWR (Automatic Workload Repository) reporting tool
- Presentation of the performance collection tool ADDM (Automatic Database Diagnostic Monitor analysis)

Module 6: Optimising SQL queries

- Defining the optimisation strategy
- Generating SQL queries
- Optimising SQL queries manually

Module 7: Optimising the Oracle database

- Using the ‘UNDO’ tablespace
- Optimising logging and the size of log files

Module 8: Optimising Oracle database storage

- Managing spaces in tables
- Reorganising segments
- Using the ‘dbms_compression’ package

Module 9: Securing databases

- Security recommendations
- Database access control
- Managing database deletion access rights

Module 10: Database encryption and key management

- Configuring Advanced security
- Mastering TDE

Module 11: Applying patches to the database

- Managing database core updates
- Good database upgrade practic

Module 12: Database Security Configuration Verification

- Managing the Oracle Database Security Assessment Tool (DBSAT)
- Mastering the company's security posture and taking account of recommendations

Module 13: Database Security Audit

- Install and Configure Oracle Audit Vault and Database Firewall (AVDF)
- Installing and configuring Data Safe

Module 14: Database backups

- Using RMAN