

INTENDED PARTICIPANTS	This intensive course is for administrators or other individuals responsible for Oracle Database 11g/12c management. Experience and a good grasp of relational database concepts are necessary, as well as knowledge of the Linux operating system.
LEARNING OBJECTIVES	Getting to know the features of Oracle 11g/12c in detail, along with its architecture, concepts and mechanisms. Knowing how to create an Oracle database and perform the main administration operations (installation, instance management, disk space, objects, undo data, users and access rights, database backup and recovery, moving data).
DURATION	5 days
DELIVERY PRICE	Contact Us

COURSE CONTENT

INTRODUCTION

- Tasks of an Oracle administrator
- Introduction to Oracle 11g/12c (Oracle products)
- Introducing the Administration Tools for Oracle 11g/12c
 - Oracle Universal Installer
 - Oracle Database Configuration Assistant
 - Database Upgrade Assistant
 - Net Configuration Assistant
 - Oracle Enterprise Manager Database Express (only for Oracle 12c)
 - Oracle Enterprise Manager Database Control (only for Oracle 11g)
 - SQL Developer

ORACLE 11g/12c ARCHITECTURE

- Overview of the Oracle database architecture
- Configuring an Oracle database instance
- Connecting to the Oracle database instance
- Oracle Database memory structures
- Process architecture
- Process structure
- Database Storage Architecture

INSTALLING ORACLE 11g/12c

- Oracle Installation for Unix/Linux
- Oracle Universal Installer
- OFA (Optimal Flexible Architecture)
- Default database administrators: SYS and SYSTEM
- Authentication by the operating system or the password file
- Installation in Shared Server mode

ORACLE NET ENVIRONMENT NETWORK CONFIGURATION

- Overview of Oracle Net Services
- Overview of Oracle Net listener
- Establishing a network connection
- Tools to configure and manage the Oracle Network
 - Using the Listener configuration utility
 - Using the Oracle Net Configuration Assistant (netca)
 - Using Oracle Net Manager (netmgr)

CREATION AND REMOVAL OF AN ORACLE 11g/12c DATABASE

- Manually creating the database
- Environment variables
- Setting initialization parameters
- Manually creating the database using the CREATE DATABASE command
- Dynamic and static parameters
- Creating the data dictionary
- Creation of the database using DBCA
- Removing the database

ORACLE INSTANCE MANAGEMENT

- Understanding the Enterprise Manager framework
- Connecting to Oracle Enterprise Manager Database Express (Oracle 12c)
- Using the home page of Enterprise Manager Database Express (Oracle 12c)
- Using Enterprise Manager Cloud Control (Oracle 12c)
- Connecting to Oracle Enterprise Manager Database Control (Oracle 11g)
- Using the home page of Enterprise Manager Database Control (Oracle 11g)
- Using SQL* Plus
- Using SQL Developer
- File initialization parameters
- Changing initialization parameter values
- Stopping and starting the instance
- Journal of alerts, alert history, track files
- Dynamic views of the data dictionary

STORAGE STRUCTURES MANAGEMENT

- Understanding data storage
- Content of database blocks
- Exploring the storage structure
- Managing tablespaces
- Tablespaces locally managed by the dictionary
- Tablespace information using views
- Using Oracle Managed Files (OMF)
- Oracle Automatic Storage Management (ASM)

UNDO DATA MANAGEMENT

- Overview of Undo data
- Transactions and Undo Data
- Undo Storage Information
- Comparison of Undo Data and Redo Data
- Undo management
- Configuring Undo Retention
- Warranty of Undo Retention
- Changing an Undo tablespace to a fixed size

SECURITY MANAGEMENT OF USERS AND RESOURCES

- Creating user accounts
- Authentication
- Unlocking a user account and resetting/changing the password
- Managing user accounts
- System and object privileges
- Implementation and use of roles
- Password controls
- Space quotas on tablespaces
- Limitation of resources with profiles

BACKUP AND RECOVERY CONCEPTS

- Failure categories
- Understanding Instance Recovery
- Instance Recovery phases
- Instance Recovery setting
- Using the MTTR Advisor
- Media Failure
- Flashback Technology
- Configuration for recovery

DATABASE BACKUP AND RECOVERY USING RMAN

- Backup managed by the user
- Introducing Recovery Manager (RMAN)
- RMAN configuration (device, retention policy, backup tags, etc.)
- Configuring recovery settings
- Configuring the Flash Recovery Area
- Enabling log file archiving
- Enabling Flashback Database
- Enabling Block Change Tracking
- Scheduling backups using RMAN
- Backing up the database using RMAN
- Recovering the database using RMAN

MOVING DATA

- Oracle Data Pump
- SQL*Loader
- External tables

PRACTICAL WORK

Theoretical lectures alternate with immediate application through several practical sessions to provide effective instruction.

Methods and best practices to efficiently administer Oracle databases.

Feedback from Oracle specialists.