5 Days

# Oracle Database 12c: Administration Workshop Ed 2 NEW

This five-days Oracle Database 12c: Administration Workshop helps participants deploy the Oracle Database architecture. This administration workshop will equip participants to efficiently manage an Oracle Database instance, Configuring the Oracle Network Environment and performing database maintenance. This course will also introduce participants to Oracle Database Cloud Service.

Completion of this training course will enable candidates in:

- Creating and managing an Oracle Database Instance.
- Creating and managing Storage Structures.
- Configuring the Oracle Network Environment.
- Creating and managing users.
- Monitoring the database and managing performance.
- Learning basic information on backup and using recovery techniques.
- Using the Oracle Support Workbench and My Oracle Support for updating Oracle Database software.
- Acquiring an understanding of the Oracle Database Cloud Service.

**Course Benefits:**

Attaining certification of this course will ensure fast, reliable, secure and easy to manage performance. Also, this training will help individuals to optimize database workloads, at lower IT costs and deliver the better quality of service by enabling smooth and rapid consolidation within your Data Clouds.

## Course Details

## Course Outline

**1. Introduction**

- Course Objectives & Schedule
- Overview of Oracle Database 12c
- Overview of Oracle Cloud & HR Schema

**2. Exploring the Oracle Database Architecture**

- Oracle Database Architecture: Overview
- Oracle Database Instance Configurations
- Connecting to the Oracle Database Instance
- Oracle Database Memory Structures
- Process Architecture & Structures
- Process Startup Sequence
- Database Storage Architecture

**3. Managing the Database Instance**

- Introduce Oracle Database Management Tools
- Understand the Enterprise Manager Management Framework
- Log in to Oracle Enterprise Manager Database Express
- Use the Enterprise Manager Database Express Home Page
- Use Enterprise Manager Cloud Control
- Use SQL*Plus & SQL Developer
- Initialization Parameter Files

**4. Configuring the Oracle Network Environment**

- Oracle Net Services & Net Listener Overview
- Establish Oracle Network Connections
- Tools for Configuring and Managing the Oracle Network
- Use the Listener Control Utility
- Use Oracle Net Configuration Assistant
- Use Oracle Net Manager
- Use Enterprise Manager Cloud Control

**5. Managing Database Storage Structures**

- Understand Storage of Data
- Database Block Contents
- Explore the Storage Structure
- Create a New Tablespace
- Overview of Tablespaces Created by Default
- Manage Tablespaces
- View Tablespace Information
- Use Oracle Managed Files

**6. Administering User Security**

- Database User Accounts

- Predefined Administrative Accounts
- Creating a User
- Authentication
- Unlocking a User Account and Resetting the Password
- Privileges, Roles & Profiles

**7. Managing Data Concurrency**

- Locking Mechanism
- Data Concurrency
- DML Locks
- Enqueue Mechanism
- Lock Conflicts

**8. Managing Undo Data**

- Undo Data Overview
- Transactions and Undo Data
- Store Undo Information
- Compare Undo Data and Redo Data
- Manage Undo
- Configure Undo Retention
- Guarantee Undo Retention
- Change an Undo Tablespace to a Fixed Size

**9. Implementing Oracle Database Auditing**

- Separating Responsibilities
- Database Security
- Monitor for Compliance
- Standard Database Auditing
- Unified Audit Data Trail
- Separation for Duties for Audit Administration
- Configure the Audit trail
- Specify Audit Options

**10. Performing Database Maintenance**

- Database Maintenance
- Viewing the Alert History
- Automatic Workload Repository (AWR)

- Automatic Database Diagnostic Monitor (ADDM)
- Statistic Levels
- Advisory Framework
- Enterprise Manager and Advisors

**11. Managing Performance**

- Performance Monitoring & Planning
- Tune Activities
- Performance Tuning Methodology
- Monitor Performance
- Performance Tuning Data
- Manage Memory

**12. Managing Performance: SQL Tuning**

- SQL Tuning
- Oracle Optimizer
- SQL Plan Directives
- Adaptive Execution Plans
- SQL Advisors
- SQL Tuning Results Automation
- Implement Automated Tuning Recommendations
- SQL Tuning Advisor

**13. Managing Resources by Using Database Resource Manager**

- Database Resource Manager Overview, Concepts & Utility
- Default Maintenance Resource Manager Plan
- Default Plan Example
- Resource Manager Workflow
- Specify Resource Plan Directives
- Resource Allocation Methods for Resource Plans

**14. Automating Tasks by Using Oracle Scheduler**

- Simplify Management Tasks
- Understand a Simple Job
- Core Components
- Basic Work Flow
- Persistent Lightweight Jobs
- Use a Time-Based or Event-Based Schedule

- Create a Time-Based Job
- Create an Event-Based Schedule

**15. Managing Space**

- Space Management Overview
- Block Space Management
- Row Chaining and Migration
- Free Space Management Within Segments
- Types of Segments
- Allocate Extents & Space
- Create Tables Without Segments

**16. Backup and Recovery Concepts**

- Categories of Failures
- Flashback Technology
- Understand Instance Recovery
- Phases of Instance Recovery
- Tune Instance Recovery
- Use the MTTR Advisor
- Media Failure
- Configure for Recoverability

**17. Moving Data**

- General Architecture of Moving Data
- Oracle Data Pump
- SQL*Loader
- External Tables

**18. Working with Oracle Support**

- Use the Support Workbench
- Use Enterprise Manager
- Work with Oracle Support
- My Oracle Support Integration
- Research an Issue
- Log in to Service Requests
- Manage Patches
- Apply a Patch Release

**19. Oracle Database Cloud Service: Overview**

- Database as a Service Architecture, Features and Tooling
- Automated Database Provisioning
- Manage the Compute Node Associated with a Database Deployment
- Enable Access to a Compute Node Port
- Scale a Database Deployment & Patching Database as a Service
- Use the Oracle Database Cloud Service Console to Manage Patches

## Who Should Attend

This Oracle Database 12C Administration Workshop is ideal for:

- Database Administrators
- Database Designers
- Technical Administrator
- Data Warehouse Administrator

## Pre Requisite

**Required:**

- Working experience and knowledge of SQL and use of PL/SQL packages

**Suggested Prerequisites:**

- Basic knowledge of Linux operating system

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