

# **Oracle Database 19c: Administration Workshop**

**Duration: 5 Days** 

# **Course Description:**

This course provides detailed information on the architecture of an Oracle Database instance and database, enabling you to manage your database resources effectively. You learn how to create database storage structures appropriate for the business applications supported by your database. In addition, you learn how to create users and administer database security to meet your business requirements. This course provides basic information on backup and recovery techniques. To provide an acceptable response time to users and manage resources effectively, you learn how to monitor your database and manage performance.

# **Course Objectives:**

- Create an Entity Relationship Diagram by identifying entities, attributes, relationships and constraints from a set of requirements
- Normalize the Entity Relationship Diagram to third Normal form
- Enhance the Entity Relationship Diagram to utilize several data modeling techniques
- Create a Data Flow Diagram by identifying processes, external agents, information stores and information flows that show how the information flows and how it is being transformed
- Engineer the Entity Relationship Model into an initial relational database design
- Optimize the Relational Database Design
- Complete the Physical Model and generate the DDL
- Use Oracle SQL Developer Data Modeler to document all the concepts learned throughout the course

# **Course Objectives:**

Upon completion of this course, the student should be able to:

- Describe Oracle Database Architecture Explain Oracle Database Cloud Service
- (DBCS) architecture and features
- Create and manage DBCS database deployments
- Configure the database to support your applications
- Manage database security and implement auditing
- Implement basic backup and recovery procedures
- Move data between databases and files
- Employ basic monitoring procedures and manage performance

# **Audience**

- Administrator
- Architect
- Database Administrator

### **Course Outlines:**

Introduction to Oracle Database

- Database Server Architecture
- Course Practice Environment: Security Credentials

Accessing an Oracle Database

- Accessing an Oracle Database
- Demonstration: Usage of general DBCA Tools to Interact with Database

Creating an Oracle Database by Using DBCA

Creating a Database Using DBCA

Creating an Oracle Database by Using a SQL Command

Creating Database using SQL Command

Starting Up and Shutting Down a Database Instance

- > Starting Up and Shutting Down a Database Instance
- Opening and Closing PDBs

Managing Database Instances

Managing the Database

Oracle Net Service: Overview

- Configuring and Administering Oracle Net Service
- > Course Practice Environment: Security Credentials

**Configuring Naming Methods** 

- Oracle Net Components
- Naming Method

Configuring and Administering the Listener

> Configuring and Administering the Listener

Configuring a Shared Server Architecture

Configuring a Shared Server Architecture

Configuring Oracle Connection Manager for Multiplexing and Access Control

Connection Manager

### **COURSE OUTLINE**



# Creating PDBs from Seed

- Creating PDBs from Seed
- Provisioning New Pluggable Databases

### Using Other Techniques to Create PDBs

- Using Other Techniques to Create PDBs
- Method of Creating and Migrating PDBs

# Managing PDBs

Managing PDBs

# **Database Storage Overview**

- Database Storage Overview
- Purpose of the Default Tablespaces
- Storage of Data in Blocks
- > Advantage of Deferred Segment Creation
- Course Practice Environment: Security Credentials

# Creating and Managing Tablespaces

- Creating and Managing Tablespaces
- Viewing Tablespace Information

# Improving Space Usage

- Space Management Features
- Creating Global Temporary Tables

### Managing Undo Data

- Managing the Undo
- Enabling Temporary Undo

# Creating and Managing User Accounts

- Creating and Managing User Accounts
- Creating Common Users in the CDB and PDBs
- Assigning Quotas

# Configuring Privilege and Roles Authorization

> Configuring Privilege and Roles Authorization

## Configuring User Resource Limits

Configuring User Resource Limits

### Implementing Oracle Database Auditing

- Implementing Oracle Database Auditing
- Configuring Auditing
- Viewing Audit Policy Information

### Introduction Loading and Transporting Data

- > Introduction Loading and Transporting Data
- Course Practice Environment: Security Credentials

### Loading Data

Loading Data

### Transporting Data

- Transporting Data
- Using the RMAN Convert Command

### Using External Tables to Load and Transport Data

- Using External Tables to load Transport Data
- External Table Demo

### Automated Maintenance Tasks: Overview

- > Automated Maintenance Tasks: Overview
- > Automated Maintenance Tasks: Components
- > Course Practice Environment: Security Credentials

### Automated Maintenance Tasks: Managing Tasks and Windows

Configuring Automated Maintenance Tasks

### Database Monitoring and Performance Tuning Overview

> Database Monitoring and Tuning Performance Overview

### Monitoring Database Performance

Understanding What Database Performance is Monitored

### **Tuning Database Performance**

- > Tuning Database Performance
- Demo: Navigating around Cloud Control, Using and Accessing information
- Demo: Navigating around Performance area in your Database

# Analyzing SQL and Optimizing Access Paths

- > Analyzing SQL and Optimizing Access Paths
- Adaptive Execution Plans