Oracle Database 19C: Administrator & Backup and Recovery Concepts.

Duration: 5 Days

Course Objectives

- ✓ Manage Oracle Database Storage structures
- ✓ Gain an understand of the Oracle Database Cloud Service
- ✓ Install Oracle Database 19 C software
- ✓ Upgrade database to Oracle Database 19 C Create an Oracle Database
- ✓ Create a container database Monitor the Database
- ✓ Manage Database Performance
- ✓ Implement Database Auditing
- ✓ Configure the Database Instance Such That Resources Are Appropriately Allocated Among Sessions and Tasks Schedule Jobs to Run Inside or Outside of the Database
- ✓ Configure Oracle Net Services
- ✓ Configure your Database For Backup and Recovery Operations
- ✓ Describe Oracle Database Architecture
- ✓ Manage the Oracle Database Instance

Exploring the Oracle Database Architecture

- ✓ Oracle Database Architecture: Overview
- ✓ Oracle Database Instance Configurations
- ✓ Connecting to the Oracle Database Instance
- ✓ Oracle Database Memory Structures (overview)
- ✓ Process Architecture
- ✓ Process Structures
- ✓ Process Startup Sequence
- ✓ Database Storage Architecture

Oracle Software Installation Basics

- ✓ Planning Your Installation
- ✓ Configuring Oracle Linux with Oracle RDBMS
- ✓ Pre-Install RPM Operating System Groups and Users
- ✓ Environment Variables
- ✓ Configuring the Oracle Software Owner Environment Using Oracle Universal Installer (OUI)
- ✓ Installation Option: Silent Mode

Installing Oracle Database Software

- ✓ System Requirements for Oracle Database
- ✓ Creating Operating System Groups and Users
- ✓ Types of Installations

Creating an Oracle Database by Using DBCA

- ✓ Planning the Database Storage Structure
- ✓ Types of Databases (based on workload)
- ✓ Choosing the Appropriate Character Set
- ✓ Understanding How Character Sets Are Used
- ✓ Setting the NLS_LANG Initialization Parameter

✓   Using the Database Configuration Assistant (DBCA)

Managing the Database Instance

- ✓ Initialization Parameter Files
- ✓ Starting an Oracle Database Instance
- ✓ Shutting Down an Oracle Database Instance
- ✓ Viewing Log Files
- ✓ Using Trace Files
- ✓ Using the Dynamic Performance Views
- ✓ Data Dictionary

Administering User Security

- ✓ Database User Accounts (overview)
- ✓ Predefined Administrative Accounts
- ✓ Creating a User
- ✓ Authentication
- ✓ Unlocking a User Account and Resetting the Password Privileges
- ✓ Roles Profiles

Managing Database Storage Structures

- ✓ Understanding Storage of Data Database Block contents
- ✓ Exploring the Storage Structure
- ✓ Creating a New Tablespace
- ✓ Overview of Tablespaces Created by Default Managing Tablespaces
- ✓ Viewing Tablespace Information Using Oracle Managed Files

Managing Space

- ✓ Space Management Overview
- ✓ Block Space Management Row Chaining and Migration
- ✓ Free Space Management Within Segments Types of Segments
- ✓ Allocating Extents Allocating Space
- ✓ Creating Tables Without Segments

Managing Undo Data

- ✓ Undo Data Overview
- ✓ Transactions and Undo Data
- ✓ Storing Undo Information
- ✓ Comparing Undo Data and Redo Data Managing Undo
- ✓ Configuring Undo Retention Guaranteeing Undo Retention
- ✓ Changing an Undo Tablespace to a Fixed Size

Managing Data Concurrency

- ✓ Overview of Locks Locking Mechanism
- ✓ Data Concurrency DML Locks
- ✓ Enqueue Mechanism
- ✓ Lock Conflicts

Backup and Recovery Concepts

- ✓ Categories of Failures Flashback Technology
- ✓ Understanding Instance Recovery
- ✓ Phases of Instance Recovery Tuning Instance Recovery
- ✓ Using the MTTR Advisor
- ✓ Comparing Complete and Incomplete Recovery

✓ Oracle Data Protection Solutions

Backup and Recovery Configuration

✓ Configuring for Recoverability
✓ Configuring the Fast Recovery Area
✓ Multiplexing the Control File
✓ Online Redo Log File
✓ Multiplexing Online Redo Log File
✓ Multiplexing Archived Redo Log Files
✓ Archiver Process
✓ Archived Redo Log File Naming and Destinations

Performing Database Backups

✓ Backup Solutions Overview
✓ Oracle Secure Backup (overview)
✓ User Managed Backup (overview)
✓ Backup Terminology and Types of Backups
✓ Using Recovery Manager (RMAN)
✓ Configuring Backup Settings
✓ Oracle-Suggested Backup
✓ Backing Up the Control File to a Trace File

Performing Database Recovery

✓ Data Recovery Advisor
✓ Loss of a Control File
✓ Loss of a Redo Log File
✓ Loss of a Datafile in NOARCHIVELOG Mode
✓ Loss of a Noncritical Datafile in ARCHIVELOG Mode
✓ Loss of a System-Critical Datafile in ARCHIVELOG Mode

Restore and Recovery Concepts

✓ Restoring and Recovering
✓ Instance Failure and Instance/Crash Recovery
✓ Media Failure
✓ Complete Recovery (Overview)
✓ Point-in-Time Recovery (Overview)
✓ Recovery Through RESETLOGS

Performing Recovery-1

✓ RMAN Recovery in NOARCHIVELOG Mode
✓ Performing Complete Recovery (of critical and noncritical data files)
✓ Restoring ASM Disk Groups
✓ Recovery with Image Files
✓ Performing Point-in-Time (PITR) or Incomplete Recovery
✓ Table Recovery from Backups

Performing Recovery-2

✓ Recovery of Server Parameter File, Control File
✓ Redo Log File Loss and Recovery
✓ Password Authentication File Re-creation

- ✓ Index, Read-Only Tablespace, and Tempfile Recovery
- ✓ Restoring the Database to a New Host
- ✓ Disaster Recovery
- ✓ Restoring RMAN Encrypted Backups

Moving Data

- ✓ Oracle Data Pump Architecture
- ✓ Oracle Data Pump Export Import

Performing Database Maintenance

- ✓ Database Maintenance (overview)
- ✓ Viewing the Alert History Terminology
- ✓ Automatic Workload Repository (AWR) Statistic Levels
- ✓ Automatic Database Diagnostic Monitor (ADDM)
- ✓ Advisory Framework
- ✓ Enterprise Manager and Advisors

Managing Performance

- ✓ Performance Monitoring Tuning Activities
- ✓ Performance Planning Instance Tuning
- ✓ Performance Tuning Methodology
- ✓ Performance Tuning Data Monitoring
- ✓ Performance Managing Memory