Oracle 18c Administration

Course Summary

Description

The course will provide you a firm foundation in administration of an Oracle database. In this course, you will gain a conceptual understanding of Oracle Database architecture and learn how to manage an Oracle database in an effective and efficient manner.

Topics

- Introduction
- Oracle Database Architecture
- Introduction to Oracle Database Cloud Service
- Creating DBCS Database Deployments
- Accessing an Oracle Database
- Managing DBCS Database Deployments
- Managing Database Instances
- Oracle Net Services
- Administering User Security
- Creating PDBs
- Creating Master Encryption Keys for PDBs
- Creating and Managing Tablespaces
- Managing Storage Space
- Moving Data
- Backup and Recovery Concepts
- Backup and Recovery Configuration
- Creating Database Backups
- Performing Database Recovery
- Monitoring and Tuning Database Performance
- Tuning SQL

Prerequisite

Required: Basic computer skills, internet access, basic analytic or programming skills.

Duration

Five Days

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Course Outline

I. Introduction
   A. Differences in Oracle Database editions, options, and packs
   B. Database offerings in Oracle Cloud
   C. Sample Database

II. Oracle Database Architecture
   A. Architectural components of Oracle Database
   B. Memory structures
   C. Background processes
   D. Logical and physical storage structures
   E. Multitenant architecture

III. Introduction to Oracle Database Cloud Service
    A. Oracle Cloud and Database Cloud offerings
    B. Architecture and features of Oracle Database Cloud Service

IV. Creating DBCS Database Deployments
    A. DBCS database deployment
    B. SSH key pair
    C. Storage volumes

V. Accessing an Oracle Database
    A. Connecting to an Oracle Database
    B. Tools used to access an Oracle Database
    C. Oracle-supplied user accounts for Oracle Database
    D. Data dictionary in an Oracle

VI. Managing DBCS Database Deployments
    A. Compute node
    B. Network access
    C. Compute shape and storage
    D. Database deployment

VII. Managing Database Instances
    A. Initialization parameter
    B. Initialization parameters in SQL*Plus

C. Oracle databases
D. PDBs
E. Automatic Diagnostic Repository (ADR)
F. Dynamic performance views

VIII. Oracle Net Services
    A. Oracle Net Services
    B. Listeners
    C. Local naming
    D. Test Oracle Net connectivity with tnsping
    E. Communication between databases
    F. Difference between dedicated and shared server configurations

IX. Administering User Security
    A. Database users
    B. Create and grant roles to users or other
    C. Revoke privileges and roles from users and other roles
    D. Create and assign profiles to users
    E. Authentication options
    F. Assign quota
    G. Apply the principle of least privilege

X. Creating PDBs
    A. Creating a PDB
    B. Cloning a PDB
    C. Unplugging and Plugging in a PDB
    D. Dropping a PDB

XI. Creating Master Encryption Keys for PDBs
    A. Implementation of master encryption keys for PDBs
    B. Creating and Activating an Encryption Key

XII. Creating and Managing Tablespaces
    A. Explaining how table data is stored in the database
    B. Using SQL*Plus
    C. Oracle Managed Files (OMF)
    D. Implementing tablespace encryption

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Course Outline (cont.)

XIII. Managing Storage Space
A. Managing Tablespace Space
B. Using Compression
C. Handling Resumable Space Allocation

XIV. Managing Undo Data
A. DML and undo data generation
B. Undo data
C. Undo retention
D. Undo Advisor

XV. Moving Data
A. Ways to move data
B. Oracle Data Pump
C. Data Pump Export and Import
D. SQL*Loader
E. External tables
F. Methods to migrate databases

XVI. Backup and Recovery Concepts
A. DBA responsibilities
B. Types of failure
C. Instance recovery
D. Complete and incomplete recovery

XVII. Backup and Recovery Configuration
A. Fast recovery area
B. Control file
C. Redo log files
D. ARCHIVELOG

XVIII. Creating Database Backups
A. Database backups
B. Incremental backups
C. DBCS

XIX. Performing Database Recovery
A. Recovery
B. Recovery Manager (RMAN) and the Data Recovery Advisor
C. Data files
D. DBCS database

XX. Monitoring and Tuning Database Performance
A. Activities to manage database performance
B. Monitor database instance performance
C. Oracle performance
D. Oracle Database server
E. Monitor memory components

XXI. Tuning SQL
A. SQL tuning methodology
B. Optimizer statistics
C. SQL Tuning Advisor
D. SQL Access Advisor

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