

5 Days

## Oracle Database 12c: New Features for Administrators Ed 2 NEW

This Oracle Database 12c: New Features for Administrators Ed 2 training will teach participants of the new and improved features of Oracle Database 12c. This course will also introduce participants to Oracle Database Cloud Service. The various new features include heat map configuration, in-database archiving, security enforcement, manageability, and performance.

Completion of this training course will enable candidates in:

- Managing the Oracle multitenant container databases and pluggable databases.
- Configuring Heat Map and use Automatic Data Optimization.
- Understanding the new Temporal capabilities along with In-Database Archiving with Row-archival.
- Enforcing security with the Unified Auditing, the new administrative privileges, and Data Redaction.
- Using enhanced features of Resource Manager in multitenant pluggable databases and container databases.
- Understanding how and when to use enhancements in Data Pump, partitioning, and SQL.
- Gaining an understanding of the Oracle Database Cloud Service.

## Course Details

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### Course Outline

#### 1. Enterprise Manager and Other Tools

- Enterprise Manager (EM) Cloud Control home page
- Enterprise Manager Express home page versus Enterprise Manager Database Control
- OUI, DBCA
- SQL Developer with new functionalities

#### 2. Basics of Multitenant Container Database (CDB)

- Discuss the benefits of the multitenant architecture
- Differentiate between the root container and pluggable database containers
- Structure of the root
- Defining the structure of Pluggable Database (PDB)

- CDB\_xxx and DBA\_xxx views

### **3. Configuring and Creating CDB and PDBs**

- Tools: DBCA and SQL\*Plus
- Configuring and creating CDB
- Exploring the Structure (CDB\_xxx views and EM)
- Using Tools like SQL Developer, DBCA and SQL\*Plus and EM Database Express
- Creating a new PDB from PDB\$SEED
- Creating a PDB from a non-CDB
- Cloning a PDB into the same CDB or into another CDB using DB links
- Plugging in an unplugged PDB

### **4. Managing CDB and PDBs**

- Connecting to CDB as administrator
- Connecting to a PDB using a service name
- Starting up a CDB
- Opening / Closing a PDB (SQL\*Plus, srvctl, EM)
- Opening / Closing all PDBs
- Shutting down a CDB
- Preserving/ Discarding the PDBs open mode when the CDB restarts
- Changing PDB state

### **5. Managing Tablespaces, Common and Local Users, Privileges and Roles**

- Creating permanent tablespaces in the root and PDBs
- Managing common and local schemas and users in the root and PDBs
- Managing common and local roles granted "commonly" or "locally"

### **6. Managing Backup / Recovery / Flashback**

- Taking a Backup of the whole CDB
- Taking the Backup of PDB
- Recovering CDB from redo log files, control files, undo datafiles loss
- Recovering PDB from PDB datafiles loss
- Flashback at CDB level
- Explaining the two methods of migration

### **7. Online Data File Move and Automatic Data Optimization**

- Data classification in 12c: tablespace, group, object, row levels

- Configuring heat map
- Discussing Automatic movement and compression
- Exploring Compression levels and types
- Customized automated action execution with user-defined function
- Policy declaration: simple declarative SQL extension
- Customized schedule with DBMS\_ILM package
- Execution in scheduled maintenance windows and by MMON

## 8. In-Database Archiving

- Identifying Challenges of old data in tables and 11g solutions
- In-database archiving new solutions
- Using ROW ARCHIVAL clause to enable row lifecycle state for applications
- Setting ROW ARCHIVAL VISIBILITY for session level visibility control
- Using predicate on ORA\_ARCHIVE\_STATE column
- Comparing Temporal Validity and Temporal History (Transaction Time of FDA)
- Using New clause of CREATE / ALTER TABLE to set a Temporal Validity: PERIOD FOR
- Using New SQL temporal data type

## 9. Auditing Enhancements

- Reviewing 11g R2 audit trail implementation
- Unified Audit Trail Overview
- Creating a separate tablespace for the unified audit trail
- Enabling the Unified Audit Trail
- Creating audit policies
- Configuring the Unified Audit Trail to set a tolerance level for loss of audit records

## 10. Privileges Enhancements

- Implementing Separation of Duty for Database Administration Tasks
- Using Database Privilege Analysis
- Overview of Database Privilege Analysis
- Querying DBA\_PRIV\_CAPTURES
- Creating and starting/stopping privilege captures
- Viewing privilege profile data
- Granting the CAPTURE\_ADMIN role to enable management of privilege captures
- Explaining the purpose of the default ORA\$DEPENDENCY profile

## 11. Oracle Data Redaction

- Oracle Data Redaction Overview

- Types of Masking Policies
- Administering the EXEMPT REDACTION POLICY system privilege to enable a user to view unmasked values
- Managing Masking Policies
- Best practices for defining policy expressions
- Understanding Masking of Statements Containing Subqueries

## **12. General RMAN New Features and FDA Enhancements**

- Making Database Connections with RMAN
- Using the SYSBACKUP Privilege
- Backing up and Restoring Very Large Files
- Creating Multisection Backups
- Transporting Data Across Platforms
- Prerequisites and Limitations
- Transporting Data: Processing steps

## **13. Monitoring DB Operations**

- Use cases & Current Tools
- Defining a DB operation
- Bracketing an Operation
- Monitoring the Progress of Operations
- DB Operation Active Report
- DB Operation Tuning

## **14. Real-Time ADDM and Compare Period Advisor**

- Real time ADDM
- Define Workload dimensions
- Emergency Monitoring
- Root Causes
- Use cases
- Requirements for a report

## **15. ADR and Network Enhancements**

- Defining ADR file types
- Identifying New File types & locations
- Building New command for ADRCI
- Improving performance by Compression
- Setup Compression

## Who Should Attend

The Oracle 12c: New Features for Administrators Ed 2 training course is ideal for those working with the profiles of:

- Database Administrators
- System Administrator
- Administrator

## Pre Requisite

### Required:

- Knowledge of Oracle Database 11g

### Suggested Prerequisites:

- Knowledge of Using Oracle Enterprise Manager Cloud Control 12c Ed 2

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