

5 Days

## Oracle Database 12c: Backup and Recovery Workshop

This Oracle Database 12c: Backup and Recovery Workshop training is a five-day course that will help participants to explore their own recovery requirements. Through this training, instructors help participants to develop suitable strategies for backup, restore and recovery procedures from contemporary scenarios.

Completion of this training course will enable candidates to:

- Develop appropriate backup and recovery procedures to address your business needs.
- Implement backup and recovery settings and performing backup operations to disk and tape.
- Employ Oracle Database recovery procedures to recover from media and other failures.
- Diagnose and repair data failures.
- Use of Flashback Technologies and data duplication so to complement backup and recovery procedures.
- Secure the availability of your database through appropriate backup and recovery strategies.
- Gain 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, it helps 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

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### Course Outline

#### 1. Introduction

- Curriculum Context
- Assess your Recovery Requirements
- Categories of failures
- Oracle Maximum Availability Architecture
- Oracle Backup and Recovery Solutions
- Benefits of using Oracle Data Guard
- Basic Workshop Architecture

## 2. Getting Started

- Concepts of the Oracle Database
- Oracle DBA Tools for Backup and Recovery
- Quick Start: A Problem-Solution Approach
- Connect to Oracle Recovery Manager (RMAN)

## 3. Configuring for Recoverability

- RMAN commands
- Configure and manage persistent settings
- Use the Fast Recovery Area (FRA)
- Control File
- Redo Log File & Archive Logs

## 4. Using the RMAN Recovery Catalog

- Create and Configure the Recovery Catalog
- Manage Target Database Records in the Recovery Catalog
- Use RMAN Stored Scripts
- Virtual Private Catalogs
- Maintain and Protect the Recovery Catalog

## 5. Backup Strategies and Terminology

- Backup Solutions Overview and Terminology
- Balance Backup and Restore Requirements
- Back Up Read-Only Tablespaces
- Best Practices for Data Warehouse Backups

## 6. Performing Backups

- RMAN Backup Types
- Block Change Tracking
- Oracle-Suggested Backup
- Report on Backups
- Manage Backups

## 7. Improving Your Backups

- Compressing Backups
- Use a Media Manager
- Create RMAN Multi-Section Backups, Proxy Copies, & Duplexed Backup Sets

- Backup Recovery Files
- Back Up the Control File to a Trace File
- Catalog Additional Backup Files
- Backup ASM Disk Group Metadata

## **8. Using RMAN-Encrypted Backups**

- Creation of RMAN-Encrypted Backups
- Use Transparent-Mode Encryption
- Use Password-Mode Encryption
- Use Dual-Mode Encryption

## **9. Diagnosing Database Failures**

- Reduce Problem Diagnosis Time
- Automatic Diagnostic Repository
- Interpret RMAN Message Output and Error Stacks
- Data Recovery Advisor
- Diagnose Data File Loss (file system and ASM)
- Handle Block Corruption

## **10. Restore and Recovery Concepts**

- Restore and Recover
- Instance Failure and Instance/Crash Recovery
- Media Failure
- Complete Recovery
- Point-in-Time Recovery

## **11. Performing Recovery, Part 1**

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

## **12. Performing Recovery, Part 2**

- Index, Read-Only Tablespace, and Tempfile Recovery
- Recovery of Server Parameter File & Control File

- Redo Log File Loss and Recovery
- Password Authentication & File Re-creation
- Restore the Database to a New Host
- Restore RMAN Encrypted Backups

### **13. RMAN and Oracle Secure Backup**

- Oracle Secure Backup Overview
- Oracle Database Disk and Tape Backup Solution
- Back Up the Fast Recovery Area to Tape
- Define Retention for RMAN Backups
- RMAN and Oracle Secure Backup Basic Process Flow
- Integrating with Cloud Control
- RMAN Database Backup to Tape

### **14. Performing Tape Backups and Restores**

- Schedule Backups with EM
- Oracle-Suggested Backup
- RMAN and OSB Process Flow
- RMAN and Oracle Secure Backup Jobs
- Manage Database Tape Backups
- Perform Database Recovery

### **15. Using Flashback Technologies**

- Flashback Technology: Overview and Setup
- Using Flashback Technology to Query Data
- Query and Backout in Flashback Transaction
- Flashback Drop and the Recycle Bin
- Flashback Data Archive

### **16. Using Flashback Database**

- Flashback Database Architecture
- Configure Flashback Database
- Perform Flashback Database
- Flashback Database Best Practices

### **17. Managing Backup Space or Transporting Data**

- Transport Tablespaces
- Transport Databases

## 18. Duplicating a Database

- Use a Duplicate Database
- Choose Database Duplication Techniques
- Create a Backup-up Based Duplicate Database
- Understand the RMAN Duplication Operation
- Use Cloud Control to Clone a Database

## 19. RMAN Performance and Tuning

- Tune Principles
- RMAN Multiplexing
- Diagnose Performance Bottlenecks
- Restore and Recovery Performance Best Practices

## 20. Backup and Recovery Workshop

- Structure of Workshop
- Business Requirements for Database Availability and Procedures
- Workshop Approach to Solving Failure Scenarios

# Who Should Attend

This Workshop on Oracle Database 12c backup and recovery is ideal for:

- Support Engineer
- Database Administrators
- Technical Administrator
- Data Warehouse Administrator

# Pre Requisite

### Required:

- Possess Knowledge of SQL and PL/SQL
- Possess Knowledge of Oracle Database 12c
- Should be certified with Oracle Database 12c: Administration Workshop Ed 2

**Suggested Prerequisites:**

- Should know how to use Oracle Enterprise Manager Cloud Control 12c Ed 2

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Date - Mar 28, 2024