

Oracle Database 12c R2: Backup and Recovery Workshop Ed2

Target Audience: DBA/Developers/Technical Administrators

Pre-Requisites: Working Knowledge of Oracle 11g

Course Duration: 5 Days

Day 1:

Configuring for Recoverability

- RMAN commands
- Configuring and managing persistent settings
- Using the Fast Recovery Area (FRA)
- Control File
- Redo Log File
- Archiving Logs

Using the RMAN Recovery Catalog

- Creating and Configuring the Recovery Catalog
- Managing Target Database Records in the Recovery Catalog
- Using RMAN Stored Scripts
- Maintaining and Protecting the Recovery Catalog
- Virtual Private Catalogs

Backup Strategies and Terminology

- Backup Solutions Overview and Terminology
- Balancing Backup and Restore Requirements
- Backing Up Read-Only Tablespaces
- Best Practices for Data Warehouse Backups
- Additional Backup Terminology

Performing Backups

- RMAN Backup Types
- Incrementally Updated Backups
- Fast Incremental Backup
- Block Change Tracking
- Oracle-Suggested Backup



- Reporting on Backups
- Managing Backups

Day 2:

Improving Your Backups

- Compressing Backups
- Using a Media Manager
- Creating RMAN Multisection Backups, Proxy Copies, Duplexed Backup Sets and Backups of Backup Sets
- Creating and Managing Archival Backups
- Backing Up Recovery Files
- Backing Up the Control File to a Trace File
- Cataloging Additional Backup Files
- Backing Up ASM Disk Group Metadata

Using RMAN-Encrypted Backups

- Creating RMAN-Encrypted Backups
- Using Transparent-Mode Encryption
- Using Password-Mode Encryption
- Using Dual-Mode Encryption

Diagnosing Database Failures

- Reducing Problem Diagnosis Time
- Automatic Diagnostic Repository
- Interpreting RMAN Message Output and Error Stacks
- Data Recovery Advisor
- Diagnosing Data File Loss (file system and ASM)
- Handling Block Corruption

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

Day 3:

Performing Recovery, Part 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, Part 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

RMAN and Oracle Secure Backup

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

Day 4:

Performing Tape Backups and Restores

- Scheduling Backups with EM
- Oracle-Suggested Backup
- RMAN and OSB Process Flow
- RMAN and Oracle Secure Backup Jobs
- Managing Database Tape Backups
- Performing Database Recovery
- RMAN Automatic Failover to Previous Backup

Using Flashback Technologies

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

Using Flashback Database

- Flashback Database Architecture
- Configuring Flashback Database
- Performing Flashback Database
- Best Practices for Flashback Database

Day 5:

Managing Backup Space or Transporting Data

- Transporting Tablespaces
- Transporting Databases

Duplicating a Database

- Using a Duplicate Database
- Choosing Database Duplication Techniques
- Creating a Backup-up Based Duplicate Database
- Understanding the RMAN Duplication Operation
- Using Cloud Control to Clone a Database

RMAN Performance and Tuning

- Tuning Principles
- RMAN Multiplexing
- Diagnosing Performance Bottlenecks
- Restore and Recovery Performance Best Practices

Backup and Recovery Workshop

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

Oracle Database Cloud Service: Overview

- Database as a Service Architecture & Features and Tooling

- Automated Database Provisioning
- Managing the Compute Node Associated With a Database Deployment
- Backing Up and Recovering Databases on Database as a Service
- Backup Configuration & Creating an On-Demand Backup
- Customizing the Backup Configuration: Single-Instance Databases
- Performing Recovery by Using the Service Console
- Restoring and Recovering: Single-Instance Databases