

## Oracle Database 11g: Backup and Recovery Workshop New

**Duration:** 3 Days

### What you will learn

This backup and recovery workshop will teach you how to evaluate your own recovery requirements. You'll learn to develop an appropriate strategy for backup and recovery procedures.

Learn To:

Develop appropriate backup and recovery procedures to address your business needs

Employ Oracle Database recovery procedures to recover from media failure

Use Flashback Technologies to complement backup and recovery procedures

### Backup & Recovery Techniques

This course reviews the backup and recovery techniques that are discussed in the Oracle Database 11g: Administration Workshop I and II courses. It examines various backup, failure, restore and recovery scenarios.

### Recovery Manager (RMAN) & Enterprise Manager

You're expected to have some knowledge of Recovery Manager (RMAN) and Enterprise Manager, as you'll use RMAN and Enterprise Manager to perform backup and recovery operations. Flashback features are also described as an additional way to recover from various errors.

### Hands-On Practices

Extensive hands-on practices and workshops give you experience in a realistic, technical environment. This course includes interactive workshops that give you the opportunity to diagnose and recover from numerous failure scenarios, based on backup and recovery case studies.

This course is based on Oracle Database 11g Release 2 Patch Set 1.

### Audience

Database Administrators

Technical Administrator

Technical Consultant

### Related Training

*Required Prerequisites*

Knowledge of Oracle Database administration

Oracle Database 11g: Administration Workshop I Release 2

Oracle Database 11g: Administration Workshop II Release 2

#### *Suggested Prerequisites*

Knowledge of RMAN and Enterprise Manager

#### **Course Objectives**

Perform tablespace point-in-time recovery

Describe the Oracle Database architecture components related to backup and recovery operations

Describe additional high availability features such as Oracle Data Guard and Oracle Secure Backup

Plan effective backup and recovery procedures

Describe Oracle Database backup methods and recovery operations that can be used to resolve database failure

Configure the database for recoverability

Use Recovery Manager (RMAN) to create backups and perform recovery operations

Use the Data Recovery Advisor to diagnose and repair failures

Use Oracle Flashback Technologies to recover from human error

Perform an encrypted database backup and restore

#### **Course Topics**

##### **Introduction**

Assessing Your Recovery Requirements

Data Failures Examples

Failure Categories

Oracle Data Protection Solutions

Oracle Backup and Recovery Solutions

Oracle Maximum Availability Architecture

Oracle Secure Backup (overview only)

Oracle Active Data Guard (overview only)

##### **Using Recovery Manager (RMAN) and Enterprise Manager**

Oracle Recovery Manager (architecture overview)

Enterprise Manager (backup and recovery interface overview)

Using the RMAN Command-Line

RMAN Commands (overview)

Configuring RMAN Persistent Settings

## **Configuring for Recoverability**

- Fast Recovery Area (overview)
- Fast Recovery Area Sizing and Configuration
- Control File Multiplexing & Autobackup
- Redo Log Files and the LGWR Process
- Redo Log File Multiplexing
- RCHIVELOG Mode and the Archiver Process
- Archived Redo Log Files
- Undo Retention

## **Using the RMAN Recovery Catalog**

- Repository Comparison
- Recovery Catalog Overview
- Creating the Recovery Catalog
- Managing Records in the Catalog
- Registering the Database
- Catalog Resynchronization
- Backing Up the Recovery Catalog

## **Backup Concepts and Strategies**

- Backup Solutions Overview
- Backup Terminology
- RMAN Backup Types
- Understanding RMAN Backup Data Flow
- Balancing Backup and Restore Requirements
- Comparing Backup Strategies
- Best Practices for Data Warehouse Backups

## **Creating Backups**

- Oracle Suggested Backup Strategy
- Backups Sets & Image Copies (RMAN)
- Whole Database Backups
- Read-Only Tablespace Backups
- Checking for Block Corruption
- Block Change Tracking/Fast Incremental Backups
- Backup Compression & RMAN Encrypted Backups
- Control File Backups & Cataloging Backups Files

## **Restore and Recovery Concepts**

- Employing the Best Oracle Technology for Recovery
- Instance Failure and Instance/Crash Recovery
- Media Failure
- Complete Recovery (Overview)
- Point-in-Time Recovery (Overview)
- Recovery Through RESETLOGS
- Recovery to an Abandoned Incarnation

## **Using Data Recovery Advisor**

- Data Recovery Advisor Overview
- Using the Data Recovery Advisor (overview)

Using the Data Recovery Advisor in Enterprise Manager  
Using the Data Recovery Advisor RMAN Command-Line Interface

## **Performing Recovery**

Data File Loss (file system and ASM)  
RMAN Recovery: NOARCHIVELOG Mode, Complete, Image Files & Point-in-Time (Incomplete recovery)  
Control File Loss and Recovery & RMAN Recovery: Backup Control File  
Redo Log File Loss and Recovery, Index Tablespace Recovery & Read-Only Tablespace Recovery  
Password Authentication File Re-creation, Server Parameter File Recovery & Tempfile Recovery  
Restoring RMAN Encrypted Backups  
Block Media Recovery  
Restore and Recovery Performance Best Practices

## **Using Flashback Technologies**

Flashback Technologies Overview  
Preparing to use Flashback Technologies  
Flashback Query & Flashback Version Query  
Flashback Table  
Flashback Transaction Query  
Flashback Transaction  
Flashback Drop  
Best Practices for Undo-Based Flashback Technologies

## **Flashback Database**

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

## **RMAN Performance and Tuning**

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

## **Backup and Recovery Workshop Scenarios**

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