

Oracle Database 11g: Backup and Recovery Workshop

Duration: 3 Days

What you will learn

This Oracle Database 11g: 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; please note that this course is based on Oracle Database 11g Release 2 Patch Set 1.

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.

Benefits to You

By enrolling in this course, you'll get a chance to participate in hands-on practices and workshops that give you experience working within a realistic technical environment. These interactive workshops give you the opportunity to diagnose and recover from numerous failure scenarios, based on backup and recovery case studies.

Backup & Recovery Techniques

This course reviews the backup and recovery techniques discussed in the Oracle Database 11g: Administration Workshop I and II courses. Expert Oracle University instructors will help you examine various backup, failure, restore and recovery scenarios.

Recovery Manager (RMAN) & Enterprise Manager

Please note that 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.

Related Training

Required Prerequisites

Knowledge of Oracle Database administration

Oracle Database 11g: Administration Workshop II Release 2

Oracle Database 11g: Administration Workshop I 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
- Viewing and Managing 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