

Oracle Database 12c R2: Backup and Recovery Workshop Ed 3 NEW

Duration: 5 Days

What you will learn

In this Oracle Database 12c R2: Backup and Recovery Workshop, students learn how to perform backup and recovery based on the related Oracle Database architecture components. Various backup, failure, restore, and recovery scenarios are provided so that students learn to evaluate their own recovery requirements and develop an appropriate strategy for backup and recovery procedures. This course includes an interactive workshop, with scenarios that provide participants with opportunities to diagnose and recover from several failure situations.

Learn To:

Develop appropriate backup and recovery procedures to address your business needs.

Implement backup and recovery settings and perform backup operations to disk and tape.

Employ Oracle Database recovery procedures to recover from media and other failures.

Diagnose and repair data failures.

Use Flashback Technologies and data duplication to complement backup and recovery procedures.

Secure the availability of your database by appropriate backup and recovery strategies.

Benefits to You

The student benefits by gaining a deeper understanding of possibly the most important job of a DBA – backup and recovery. The concepts and architecture that support backup and recovery, along with the steps of how to carry it out in various ways and situations, are covered in detail.

Students gain knowledge of the Recovery Manager (RMAN) command line interface for various backup, failure, restore, and recovery scenarios, including tape backup and data duplication. (Familiarity with basic database tools and utilities, such as, SQL*Plus, is assumed.)

Hands-On Lessons

Extensive hands-on practices and workshop scenarios provide the student with experience in a realistic technical environment. This course includes an interactive workshop that provide participants with opportunities to diagnose and recover from several failure scenarios, based on backup and recovery case studies.

After completing this course, students should be able to evaluate their own recovery requirements and develop an appropriate strategy for backup and recovery procedures.

Audience

Data Warehouse Administrator

EZY Intellect Pte. Ltd.,

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Database Administrators
Support Engineer
Technical Administrator
Technical Consultant

Related Training

Required Prerequisites

Knowledge of Oracle Database 12c

Knowledge of SQL and PL/SQL (for DBA use)

Oracle Database 12c R2: Administration Workshop Ed 3

Suggested Prerequisites

Using Oracle Enterprise Manager Cloud Control 13c Ed 1

Using Oracle Enterprise Manager Cloud Control 13c Ed 2

Course Objectives

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

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

Perform tablespace point-in-time recovery

Describe Cloud Tooling for Backup and Recovery

Course Topics

Introduction

Curriculum Context

Assess your recovery requirements

Categories of failures

Oracle backup and recovery solutions

Oracle Maximum Availability Architecture

Oracle Secure Backup

Benefits of using Oracle Data Guard

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Basic Workshop Architecture

Getting Started

Core Concepts of the Oracle Database, critical for Backup and Recovery

Oracle DBA Tools for Backup and Recovery

Connecting to Oracle Recovery Manager (RMAN)

Quick Start: A Problem-Solution Approach

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

Data Warehouse Backup and Recovery: Best Practices

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

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Improving Your Backups

Compressing Backups

Using a Media Manager

Backup and Restore for Very Large Files

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

Using RMAN-Encrypted Backups

Creating RMAN-Encrypted Backups

Using Transparent-Mode Encryption

Using Password-Mode Encryption

Using Dual-Mode Encryption

Diagnosing Failures

Reducing Problem Diagnosis Time

Automatic Diagnostic Repository

Data Recovery Advisor

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 with the RESETLOGS Option

Performing Recovery, Part I

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

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Performing Recovery, Part II

- Recovery of Server Parameter File, Control File (One and All)
- 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 and Interface
- RMAN and OSB: Overview and Basic Process Flow
- Starting with Oracle Secure Backup
- Configuring Oracle Secure Backup for RMAN
- RMAN Backup and Restore Operations
- Oracle Secure Backup Jobs
- Displaying OSB log files and transcripts for RMAN activities

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

Transporting Data

- Transporting Data Across Platforms
- Transporting Data with Backup Sets
- Database Transport: Using Data Files

Performing Point-in-Time Recovery

When to use TSPITR

TSPITR Architecture

Performing RMAN TS Point-in-time Recovery

Recovering Tables from Backups

Duplicating a Database

Using a Duplicate Database

Duplicating Database with "push" and "pull" techniques

Choosing Database Duplication Techniques

Creating a Backup-up Based Duplicate Database

Understanding the RMAN Duplication Operation

RMAN Troubleshooting and Tuning

Interpreting RMAN Message Output

Tuning Principles

Diagnosing Performance Bottlenecks

RMAN Multiplexing

Restore and Recovery Performance Best Practices

Cloud Tooling for Backup and Recovery

Backup Destinations

Customize Backup Configuration

On-Demand Backup and Recovery

Oracle Backup Cloud Service

Installing the Backup Module

Backup and Recovery Workshop

Workshop Structure and Approach

Business Requirements for Database Availability and Procedures

Diagnosing the Failures