

Oracle Database 11g: Administration Workshop II Ed. 2

Duration: 5 Days Course Code: OAW2

Overview:

This course takes the database administrator beyond the basic tasks covered in the first workshop. The student begins by gaining a much 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. This includes how to define and test your own backup and recovery scenarios.

Also, the DBA learns how to manage memory effectively and how to perform some performance evaluation and tuning tasks, including using some of the advisors. All types of flashback technologies, scheduling jobs inside and outside of the database, and controlling system resource usage are also covered.

Target Audience:

Database Administrators
Support Engineer
Technical Consultant
Technical Administrator

Objectives:

- Back and recover a database (and its parts) with RMAN (command-line and Enterprise Manager)
 - Use flashback technology to view past states of data and to revert either objects or the entire database back to a past state
 - Use an appropriate and flexible memory configuration for your database
 - Identify burdensome database sessions and poorly performing SQL
 - Configure the Oracle Database for optimal recovery
 - Configure the database instance such that resources are appropriately allocated among sessions and tasks
 - Schedule jobs to run inside or outside of the database
 - Use compression to optimise database storage and duplicate a database
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Prerequisites:

- Oracle Database 11g Database Administration
 - Oracle Database 11g: Administration Workshop I DBA Release 2
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Content:

Core Concepts and Tools of the Oracle Database

- The Oracle Database Architecture: Overview
- ASM Storage Concepts
- Connecting to the Database and the ASM Instance

- Purpose of Backup and Recovery (B;R), Typical Tasks and Terminology
- Using the Recovery Manager (RMAN)
- Configuring your Database for B;R Operations
- Configuring Archivelog Mode
- Configuring Backup Retention

Configuring and Using a Flash Recovery Area

- Tracking and Storing Backup Information
- Setting up a Recovery Catalog
- Recording Backups
- Using RMAN Stored Scripts

Managing the Recovery Catalog (Backup, Export, Import, Upgrade, Drop and Virtual

- Configuring and Managing Persistent Settings for RMAN
- Configuring Autobackup of Control File
- Backup optimisation
- Advanced Configuration Settings: Compressing Backups

Configuring Backup and Restore for Very Large

- RMAN backup types
- Creating and Using the following:
 - Backup Sets and Image Copies
 - Whole Database Backup
 - Fast Incremental Backup
 - Configure Backup Destinations
 - Duplexed Backup Sets

- Restoring and Recovering
- Causes of File Loss
- Automatic Tempfile Recovery
- Recovering from the Loss of a Redo Log Group
- Recovering from a Lost Index Tablespace
- Re-creating a Password Authentication File
- Complete and Incomplete Recovery

- Complete Recovery after Loss of a Critical or Noncritical Data File
- Recovering Image Copies and Switching Files
- Restore and Recovery of a Database in NOARCHIVELOG Mode
- Incomplete Recovery
- Performing Recovery with a Backup Control File

Restoring and Recovering the Database on a

- Monitoring RMAN Jobs
- Balance Between Speed of Backup Versus Speed of Recovery
- RMAN Multiplexing
- Synchronous and Asynchronous I/O

Explaining Performance Impact of MAXPIECESIZE, FILESPERSET, MAXOPENFILES and BACKUP

- Data Recovery Advisor (DRA)
- Block Corruption
- Automatic Diagnostic Repository (ADR)
- Health Monitor

The ADR Command-Line Tool, ADRCI

- Flashback Technology: Overview and Setup
- Using Flashback Technology to Query Data
- Flashback Table
- Flashback Transaction Query

Performing Flashback Transaction

- Oracle Total Recall

Flashback Drop and the Recycle Bin

- Configuring Flashback Database
- Performing Flashback Database Operations

Monitoring Flashback Database

- Oracle Memory Structures
- Oracle Database Memory Parameters
- Using Automatic Memory Management
- Automatic Shared Memory Management
- Using Memory Advisors

- Tuning Activities
- Using Statistic Preferences
- Optimiser Statistics Collection
- Monitor the Performance of Sessions and Services
- Automatic Workload Repository (AWR)

Describing the Benefits of Database

- SQL Tuning and SQL Advisors
- Using SQL Tuning Advisor
- SQL Access Advisor

SQL Performance Analyser Overview

- Database Resource Manager: Overview and Concepts
- Accessing and Creating Resource Plans
- Creating Consumer Group
- Specifying Resource Plan Directives, including:
 - Limiting CPU Utilisation at the Database Level
 - Instance Caging
 - Activating a Resource Plan

Monitoring the Resource

- Simplifying Management Tasks
- Creating a Job, Program, and Schedule
- Using Time-Based, Event-Based, and Complex Schedules
- Describing the Use of Windows, Window Groups, Job Classes, and Consumer Groups

- Free Space Management
- Monitoring Space

- Segment Creation on Demand
- Additional Automatic Space-Saving Functionality
- Shrinking Segments
- Segment Advisor

Managing Resumable Space Allocation

- Using 4 KB-Sector Disks
- Transporting Tablespaces

- Purpose and Methods of Cloning a Database
- Using RMAN to Create a Duplicate Database
- Cloning a Database from a Backup
- Duplicate a Database Based on a Running Instance
- Targetless Duplicating a Database

Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

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