5 Days

Oracle Database 11g: Administration Workshop II Release 2

Oracle Database 11g – Administration Workshop II training is an added version of Workshop 1 that equips the knowledge base of database administrator beyond the basic tasks covered in the first workshop. Through this training course, participants will get an in-depth understanding of the most important responsibilities a DBA has i.e., performing backup and recovery.

Completion of this training course will enable candidates in:

- Diagnosing and repairing data failures with Flashback technology.
- Managing space to optimize database storage so you can respond to growing space requirements.
- Monitoring and managing major database components, including memory, performance, and resources.
- Securing the availability of your database through appropriate backup and recovery strategies.
- Automating DBA tasks with the Scheduler.

Course Benefits:

Attaining certification of this course will ensure fast, reliable, secure and easy to manage performance. Also, this training will help individuals to optimize database workloads, at lower IT costs and deliver a better quality of service by enabling smooth and rapid consolidation within your Datacenter.

Course Details

Course Outline

1. Core Concepts and Tools of the Oracle Database

- Overview of Oracle Database Architecture
- ASM Storage Concepts
- Connecting to the Database and the ASM Instance
- DBA Tools

2. Configuring for Recoverability

- Define the Purpose of Backup and Recovery (B&R)
- Typical Tasks and Terminology
- Use the Recovery Manager (RMAN)
- Configure your Database for B&R Operations
- Configure Backup Retention
- Configure Archive Log Mode
- Configure and Using a Flash Recovery Area (FRA)

3. Using the RMAN Recovery Catalog

- Track and Store Backup Information
- Set up a Recovery Catalog
- Record Backups
- Use RMAN Stored Scripts
- Manage the Recovery Catalog (Backup, Export, Import, Upgrade, Drop and Virtual Private Catalog)

4. Configuring Backup Settings

- Configure and Manage Persistent Settings for RMAN
- Configure Auto backup of Control File
- Backup optimization
- Advanced Configuration Settings: Compressing Backups
- Configure Backup and Restore for Very Large Files (Multisection)

5. Creating Backups with RMAN

- RMAN backup types
- Create and Use the following:
    - Backup Sets and Image Copies
    - Fast Incremental Backup
    - Whole Database Backup
    - Configure Backup Destinations
    - Archival Backups
    - Duplexed Backup Sets

6. Restore and Recovery Task

- Restore and Recover
- Causes of File Loss
- Automatic Tempfile Recovery
- Recover from the Loss of a Redo Log Group
- Recover from a Lost Index Tablespace
- Re-create a Password Authentication File
- Complete and Incomplete Recovery
- Other Recovery Operations

7. Using RMAN to Perform Recovery

- Restore and Recovery of a Database in NOARCHIVELOG Mode
- Complete Recovery after Loss of a Critical or Noncritical Data File
- Recover Image Copies and Switching Files
- Incomplete Recovery
- Perform Recovery with a Backup Control File
- Restore from Autobackup: Server Parameter File and Control File
- Restore and Recovering the Database on a New Host

8. Monitoring and Tuning RMAN

- Monitor RMAN Jobs
- Create balance Between Speed of Backup Versus Speed of Recovery
- RMAN Multiplexing
- Synchronous and Asynchronous I/O
- Explain Performance Impact of FILESPERSET, MAXPIECESIZE, BACKUP DURATION and MAXOPENFILES

9. Diagnosing the Database

- Data Recovery Advisor (DRA)
- Automatic Diagnostic Repository (ADR)
- Block Corruption
- Health Monitor
- The ADR Command-Line Tool, ADRCI

10. Using Flashback Technology I

- Flashback Technology: Overview and Setup
- Use Flashback Technology to Query Data
- Flashback Transaction Query
- Flashback Table
- Perform Flashback Transaction Backout

11. Using Flashback Technology II

- Oracle Total Recall
- Flashback Drop and the Recycle Bin

12. Performing Flashback Database

- Configure Flashback Database
- Perform Flashback Database Operations
- Monitor Flashback Database

13. Managing Memory

- Explore Oracle Memory Structures
- Discuss Oracle Database Memory Parameters
- Use Automatic Memory Management
- Automatic Shared Memory Management
- Use Memory Advisors
- Use Data Dictionary Views

14. Managing Database Performance

- Tune Activities
- Deploy Statistic Preferences
- Optimize Statistics Collection
- Monitor Performance of Sessions and Services
- Automatic Workload Repository (AWR)
- Describe Benefits of Database Replay

15. Managing Performance by SQL Tuning

- SQL Tuning and SQL Advisors
- Use SQL Tuning Advisor
- SQL Access Advisor
- SQL Performance Analyzer Overview

16. Managing Resources

- Database Resource Manager: Overview and Concepts
- Access and Create Resource Plans
- Create Consumer Group
- Specify Resource Plan Directives, including:
    - Limit CPU Utilization at the Database Level
    - Instance Caging
- Activate a Resource Plan
- Monitor the Resource Manager

17. Automating Tasks with the Scheduler

- Simplify Management Tasks
- Create a Job, Program, and Schedule
- Use Time-Based, Event-Based, and Complex Schedules
- Describe the Use of Windows, Window Groups, Job Classes, and Consumer Groups
- Multi-Destination Jobs

18. Managing Space in Blocks

- Free Space Management
- Monitor Space
- Compress Data

19. Managing Space in Segments

- Segment Creation on Demand
- Additional Automatic Space-Saving Functionality
- Shrink Segments
- Segment Advisor
- Manage Resumable Space Allocation

20. Managing Space for the Database

- Use 4 KB-Sector Disks
- Transport Tablespaces
- Transport Databases

21. Duplicating a Database

- Purpose and Methods of Cloning a Database
- Use RMAN to Create a Duplicate Database
- Clone a Database from a Backup
- Duplicate a Database Based on a Running Instance
- Target less Duplicate a Database

Who Should Attend

- Database Administrators
- Technical Administrator
- Support Engineer
- Technical Consultant

Pre Requisite

Required Prerequisites:

- Oracle Database 11g Database Administration
- Oracle Database 11g: Administration Workshop I

Suggested Prerequisites:

- Should possess working knowledge of SQL and how to use PL/SQL packages

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Date - Oct 30, 2026