



REAL WORLD
TECHNOLOGY TRAINING & SOLUTIONS
"Training You Can Really Use"

Oracle® Database 11g: Administration Workshop II

Duration: 5 Days

Method: Instructor-Led Training (ILT) | Live Online Training

Certification: Oracle® Database 11g Administrator Certified Professional — **Exam:** 1Z0-053-Oracle® Database 11g Administration II

Course Description

This training takes the database administrator beyond the basic tasks covered in Workshop I. You'll begin by gaining a deep understanding of the most important responsibilities a DBA has: performing backup and recovery.

Target Audience

This course is intended for:

- Database Administrators
- Support Engineers
- Technical Consultants
- Technical Administrators

Prerequisites

To attend this course, candidates must have:

- Taken Oracle® Database 11g: Administration Workshop I
- Working knowledge of SQL and how to use PL/SQL® packages



Exam Details

Exam Code:	• 1Z0-053
Length of Exam:	• 120 minutes
Number of Questions:	• 78
Passing Score:	• 66
Question Format:	• Multiple Choice

Course Objectives

Upon successful completion of this course, attendees will be able to:

- 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 optimize database storage and duplicate a database
- 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

Course Topics

Module 1: Core Concepts and Tools of the Oracle® Database

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



Course Topics *Continued*

Module 2: Configuring for Recoverability

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

Module 3: Using the RMAN Recovery Catalog

- 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 Private Catalog)

Module 4: Configuring Backup Settings

- Configuring and Managing Persistent Settings for RMAN
- Configuring Auto backup of Control File
- Backup optimization
- Advanced Configuration Settings: Compressing Backups
- Configuring Backup and Restore for Very Large Files (Multi-section)

Module 5: Creating Backups with RMAN

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

Module 6: Restore and Recovery Task

- Restoring and Recovering
- Causes of File Loss
- Automatic Temp file 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
- Other Recovery Operations

Module 7: Using RMAN to Perform 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 from Auto backup: Server Parameter File and Control File
- Restoring and Recovering the Database on a New Host





Course Topics *Continued*

Module 8: Monitoring and Tuning RMAN

- 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 DURATION

Module 9: Diagnosing the Database

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

Module 10: Using Flashback Technology I

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

Module 11: Using Flashback Technology II

- Oracle® Total Recall
- Flashback Drop and the Recycle Bin

Module 12: Performing Flashback Database

- Configuring Flashback Database
- Monitoring Flashback Database
- Performing Flashback Database Operations

Module 13: Managing Memory

- Oracle® Memory Structures
- Oracle® Database Memory Parameters
- Using Automatic Memory Management
- Automatic Shared Memory Management
- Using Memory Advisors
- Using Data Dictionary Views

Module 14: Managing Database Performance

- Monitor the Performance of Sessions and Services
- Automatic Workload Repository (AWR)
- Describing the Benefits of Database Replay
- Optimizer Statistics Collection
- Using Statistic Preferences
- Tuning Activities



Course Topics *Continued*

Module 15: Managing Performance by SQL Tuning

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

Module 16: Managing Resources

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

Module 17: Automating Tasks with the Scheduler

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

Module 18: Managing Space in Blocks

- Free Space Management
- Monitoring Space
- Compressing Data

Module 19: Managing Space in Segments

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

Module 20: Managing Space for the Database

- Using 4 KB-Sector Disks
- Transporting Tablespaces
- Transporting Databases

Module 21: Duplicating a Database

- 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

