



Oracle Database 10g: Administration Workshop II

(5 days)

Description

Oracle DBAs manage the industries most advanced information systems and command some of the highest salaries. This course advances your success as an Oracle professional in the area of database administration.

In this class, you'll learn how to configure an Oracle database for multilingual applications. Students will practice various methods of recovering the database, using RMAN, SQL, and Flashback technology. Tools to monitor database performance and what steps to take to improve database performance are also covered in this course. Students will also learn how to use various database technologies, such as Resource Manager, the Scheduler, and Automatic Storage Management (ASM). The lesson topics are reinforced with structured hands-on practices and a workshop. This course is designed to prepare you for the corresponding Oracle Certified Professional exam.

Audience

- Database Administrators
- Sales Consultants
- Support Engineer
- Technical Consultant

Required Prerequisites

- Oracle Database 10g: SQL Fundamentals I
- Oracle Database 10g: Administration Workshop I
- Oracle Database 10g: SQL and PL/SQL Fundamentals

Objectives

After completing this course, students should be able to:

- Use RMAN to create and manage backup sets and image copies
- Recover the database to a previous point in time
- Use Oracle's Flashback technology to recover your database
- Detect block corruptions and take appropriate measures to correct them
- Use the various Database advisors and views to monitor and improve database performance
- Control database resource usage with the Resource Manager
- Simplify management tasks by using the Scheduler
- Improve the security of the listener
- Review database log files for diagnostic purposes
- Customize language-dependent behavior for the database and individual sessions

Topics

Using Globalization Support

- Datetimes with Timezones
- Specifying Language-Dependent Behavior
- Locale Variants
- Linguistic Sorting

- Case and Accent Insensitive Sorts
- Linguistic Comparisons
- Obtaining Information about the Current NLS Configuration

Securing the Oracle Listener

- Listener Password Authentication
- Controlling Database Access
- Securing the EXTPROC Service Entry

Configuring Recovery Manager

- Using a Flash Recovery Area with RMAN
- Setting Parameters for RMAN
- Starting RMAN
- Configuring Persistent Settings for RMAN
- Control File Autobackups
- Retention Policies

Using Recovery Manager

- Issuing Recovery Manager Commands
- Parallelization of Backup Sets
- Compressed Backups
- Copying the Whole Database
- Making Incremental Backups
- Block Change Tracking
- Incrementally Updating Backups
- Monitoring RMAN Backups

Diagnostic Sources

- The Alert Log
- Viewing Alerts with EM
- Alerts Notification
- Editing Thresholds
- Trace Files

Recovering from non-critical losses

- Creating New Temporary Tablespace
- Recreating Redo Log Files
- Recovering an Index Tablespace
- Read-Only Tablespace Recovery
- Loss of Password Authentication File

Database Recovery

- Recovery Steps
- User-Managed Recovery Procedures: RECOVER Command
- Types of incomplete recovery
- Incomplete Recovery Best Practices
- Recovery Using EM
- Simple Recovery Through RESETLOGS
- Point-in-time recovery using RMAN

Flashback database

- When to Use Flashback Technology
- Configuring Flashback Database
- Monitoring Flashback Database
- Best Practices for the Database and Flash Recovery Area
- Flash Recovery Area Space Usage
- Flashback Database Examples

Recovering from User Errors

- Recycle Bin
- Flashback Dropped Tables Using EM
- Querying Dropped Tables
- Flashback Versions Query
- Flashback Transaction Query
- Using Flashback Versions Query and Flashback Transaction Query
- Flashback Table
- Using EM To Flashback Tables

Dealing with Database Corruption

- What is block corruption?
- Interpreting DBVERIFY
- The ANALYZE command
- How to Handle Corruptions
- The DBMS_REPAIR Package
- Block Media Recovery (BMR)
- Detecting Database Corruptions Using DBVERIFY
- Using RMAN to Repair Corrupt Blocks

Automatic Database Management

- Automatic Optimizer Statistics Collection
- Workload Repository
- Database Control and Advisors
- Using the SQL Tuning Advisor
- Using the SQL Access Advisor
- Automatic Undo Retention Tuning

Monitoring and Managing Storage

- Redo Logfile Size Advisor
- Resumable Statements
- Tablespace Space Usage Monitoring
- Accessing the Segment Advisor
- Shrinking Segments Using SQL
- Segment Resource Estimation
- Monitoring Index Space
- Identifying Unused Indexes

Automatic Storage Management

- ASM Concepts
- ASM General Architecture
- Creating an ASM instance
- Creating tablespaces that use ASM storage
- Viewing ASM information
- Migrating a tablespace to use ASM storage

Monitoring and Managing Memory

- Oracle Memory Structures
- Automatic PGA Memory Management
- Using the Memory Advisor
- Using Automatic Shared Memory Management to avoid long running query issues

Managing Resources

- Creating a New Resource Plan
- Creating Resource Consumer Groups
- Assigning Users to Resource Consumer Groups

- Adaptive Consumer Group Mapping
- Using Sub-Plans to limit CPU Utilization
- Administering the Resource Manager
- Resource Plan Directives

Automating Tasks with the Scheduler

- Creating a Scheduler Job
- Using Scheduler Programs
- Creating and Using Schedules
- Creating a Job Class
- Prioritizing Jobs within a Window
- Viewing Job Execution Details
- Creating a job that runs a program outside of the database

