

## Oracle Database 11g: New Features for Administrators DBA Release 2

**Duration:** 5 Days

### What you will learn

This five-day classroom course gives you the opportunity to learn about and practice with the new change management features and other key enhancements in Oracle Database 11g Release 1 and Release 2. Topics covered include the benefits and use of the new features in managing change, diagnosing and recovering from problems, ensuring high availability, improving scalability and performance, strengthening security, and several other areas of particular interest to database administrators. In addition, hands-on practice sessions help reinforce understanding of the new capabilities.

Learn To:

- Implement manageability features to simplify database management
- Use change management features to master database changes
- Use database advisors to provide proactive database monitoring
- Increase data availability by using ASM, RMAN, and Flashback feature enhancements

### Audience

- Data Warehouse Administrator
- Database Administrators
- Sales Consultants
- Support Engineer
- Technical Consultant

### Prerequisites

*Required Prerequisites*

Working knowledge of Oracle Database 10g

*Suggested Prerequisites*

- Oracle Database 10g: New Features for Administrators Release 2
- Oracle Database 10g: Administration Workshop II Release 2
- Oracle Database 10g: Administration Workshop I Release 2

### Course Objectives

- Install Oracle Grid Infrastructure
- Install Oracle Database 11g Release 2
- Use Oracle Restart to manage components
- Use Automatic Storage Management (ASM) enhancements
- Implement table compression and hybrid columnar compression
- Implement data warehousing and partitioning enhancements
- Use the SQL Performance Analyzer
- Use SQL Plan Management and load SQL plan baselines
- Use Database Replay to record and replay workloads
- Set and manage Automatic SQL Tuning
- Use Resource Manager enhancements

- Use Enterprise Manager to monitor SQL commands
- Use the new and enhanced RMAN features
- Use Total Recall to create, protect, and use history data
- Use Data Pump in legacy mode
- Use Data Recovery Advisor

## **Course Topics**

### **Oracle Grid Infrastructure**

- Installing Oracle Grid Infrastructure for a Standalone Server
- Creating an ASM Disk Group
- ASM Cluster File System
- ASM Dynamic Volume Manager
- ASM File System Snapshot

### **Installation and Upgrade Enhancements**

- Installing Oracle Database 11g Release 2
- Oracle Database Upgrade Enhancements
- Online Patching
- Upgrading Your Time Zone File and Timestamp with Time Zone Data

### **Oracle Restart**

- Controlling Oracle Restart
- Using the srvctl Utility
- Manually Adding Components to the Oracle Restart Configuration

### **ASM Enhancements**

- Setting up ASM fast mirror resync
- Using ASM Scalability and Performance Enhancements
- ASM Disk Group Compatibility
- Using ASMCMD Extensions
- ASM File Access Control
- ASM Optimal Disk Placement

### **Storage Enhancements**

- Using 4 KB-Sector Disks
- Using Table Compression
- Hybrid Columnar Compression
- SQL Access Advisor
- Segment Creation on Demand

### **Data Warehouse and Partitioning Enhancements**

- Preprocessing Data for ORACLE\_LOADER Access Driver in External Tables
- Degree of Parallelism Enhancements
- In-Memory Parallel Query
- Partitioning Enhancements
- System-Managed Indexes for List Partitioning

### **Oracle SecureFiles**

- Enabling SecureFiles Storage
- Creating SecureFiles

- Using SecureFile Compression
- Accessing SecureFiles Metadata
- Migrating to SecureFiles

### **Security and Networking Enhancements**

- Secure Password Support
- Automatic Secure Configuration
- Managing Default Audits
- Setting Database Administrator Authentication
- Transparent Data Encryption
- Hardware Security Module
- Tablespace Master Key Re-Key
- Supporting IPv6 Address Notification

### **SQL Performance Analyzer**

- SQL Performance Analyzer: Overview
- Using SQL Performance Analyzer
- Using Enterprise Manager to Access SQL Performance Analyzer
- SQL Performance Analyzer: PL/SQL Example
- SQL Performance Analyzer: Data Dictionary Views

### **SQL Plan Management**

- SQL Plan Management: Overview
- Loading SQL Plan Baselines
- Using the MIGRATE\_STORED\_OUTLINE Functions
- Viewing Important Baseline SQL Plan Attributes
- Loading a SQL Plan Baseline Automatically
- Purging SQL Management Base Policy

### **Database Replay**

- Using Database Replay
- Database Replay System Architecture
- Supported Workloads
- Database Replay Workflow in Enterprise Manager
- Database Replay PL/SQL Procedures
- Database Replay Data Dictionary Views

### **Automatic SQL Tuning**

- Automatic SQL Tuning in Oracle Database 11g
- Selecting Potential SQL Statements for Tuning
- Controlling the Automatic SQL Tuning Task
- Configuring Automatic SQL Tuning
- Using the PL/SQL Interface to Generate Reports

### **Intelligent Infrastructure Enhancements**

- Using New Automatic Workload Repository Views
- Creating AWR Baselines
- Defining Alert Thresholds Using Static Baseline
- Controlling Automatic Maintenance Tasks
- Fixed Policy CPU Resource Management
- Instance Caging
- Scheduler Enhancements

## **Diagnosability Enhancements**

- Setting Up Automatic Diagnostic Repository
- ADRCI: The ADR Command-Line Tool
- Incident Packaging Service (IPS)
- Using the Enterprise Manager Support Workbench
- Invoking IPS Using ADRCI
- Running Health Checks Manually
- Using the SQL Repair Advisor

## **SQL Monitoring**

- SQL Monitoring in Oracle Database 11g Release 2
- Viewing Session Details
- Viewing the SQL Monitoring Report

## **Performance Enhancements**

- Using the DBMS\_ADDM Package
- New and Modified Views
- Enabling Automatic Memory Management
- Using New Statistic Preferences Features
- Locking Enhancements
- Adaptive Cursor Sharing
- Using Table Annotation to Control Result Caching

## **Application Maintenance and Upgrade Enhancements**

- Online Redefinition Enhancements
- Creating and Using Invisible Indexes

## **Backup and Recovery Enhancements**

- Using New SET NEWNAME Clauses
- Optimized Backups
- Using New Settings for Binary Compression
- Enhancements to Database Duplication
- Creating Archival Backups
- TSPITR Enhancements and Modifications
- Creating and Using Virtual Private Catalogs
- Introduction to Oracle Secure Backup Cloud Module

## **Flashback Technology, LogMiner, and Data Pump**

- Oracle Total Recall
- Flashback Transaction Backout
- Enterprise Manager LogMiner Interface
- Data Pump Legacy Mode

## **Data Recovery Advisor**

- Assessing Data Failures
- Data Recovery Advisor RMAN Command-Line Interface
- Data Recovery Advisor Views
- Setting Parameters to Detect Corruption