

# Oracle 11g Release 1: New Features for Administrators

Duration: 4 days

*Develop the skills to effectively administer an Oracle11g Release 1 Database.*

## Course Description

This course gives students the opportunity to explore and do hands-on exercises with the new change management features and other key enhancements in Oracle Database 11g R1. The course covers 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 concern for database administrators.

## You can learn to ...

- Simplify database management by implementing manageability features
- Provide proactive database monitoring by utilizing database advisors
- Use improved ASM, RMAN, and Flashback features to increase data availability
- Master database changes by using change management features

## Who Needs to Attend:

Database and Data Warehouse Administrators, Support Professionals, Technical Consultants

## Prerequisites:

Experience with Oracle Database 10g concepts, Oracle 10g: New Features for Administrators, Oracle 10g: DBA II

## Course Content:

1. **Installation and Upgrade Enhancements**  
Oracle 11g: Software Installation, Changes, & Upgrade Enhancements  
Upgrade Performance Enhancement, Process  
Oracle 11g R1: Upgrade Paths, Database Upgrade Assistant (DBUA), Hot Patching
2. **Storage Enhancements**  
ASM Fast Mirror Resync, Preferred Mirror Read, Scalability & Performance, Enhancements, Disk Group Compatibility ASMCMD Extensions
3. **Change Management Unit Overview**  
Change Management in Oracle 11g  
Challenges Faced by DBAs When Performing Changes  
Lifecycle of Change Management  
Setting Up a Test Environment by Using the Snapshot Standby Database  
SQL Performance Analyzer, Capturing the SQL Workload, Data Dictionary Views
4. **SQL Plan Management**  
SQL Plan Management, Baseline, Architecture  
Evolving SQL Plan Baselines, SQL Plan Selection  
Possible SQL Plan Manageability Scenarios  
SQL Performance Analyzer and SQL Plan Baseline Scenario  
Loading a SQL Plan Baseline Automatically  
Purging SQL Management Base Policy
5. **Database Replay**  
System Architecture: Capture, Processing the Workload, Replay  
Pre-Change Production System  
Supported Workloads  
Database Replay Workflow in Enterprise Manager  
Using the Capture Wizard  
Packages and Procedures
6. **Automatic SQL Tuning**  
Automatic SQL Tuning in Oracle 11g  
Selecting Potential SQL Statements for Tuning  
Maintenance Window Timeline  
Automatic Tuning Process, DBA Controls, Automatic SQL Tuning Task, Fine Tune, Considerations
7. **Intelligent Infrastructure Enhancements**  
Automatic Workload Repository Baselines, Performance Monitoring and Baselines  
Automated Maintenance Tasks  
Resource Manager: New EM Interface
8. **Performance Enhancements**  
ADDM Enhancements in Oracle 11g  
Oracle 11g: Automatic Database Diagnostic Monitor for RAC, New ADDM Views  
Automatic Memory Management, Oracle 11g Memory Parameters, Automatic Memory Parameter Dependency, Monitoring  
Automatic Memory Management
9. **Partitioning and Storage-Related Enhancements**  
Oracle Partitioning, Partitioning Enhancements  
Interval Partitioning, System Partitioning, Virtual Column-Based Partitioning, Reference Partitioning, Table Compression, SQL Access Advisor
10. **Using RMAN Enhancements**  
RMAN: New Features  
Optimized Backups, Parallel Backup and Restore for Very Large Files  
Using RMAN Multisection Backups, Duplicating a Database  
Managing Recovery Catalogs, Creating and Using Virtual Private Catalogs  
Using RMAN Virtual Private Catalogs
11. **Using Flashback and LogMiner**  
New and Enhanced Features for Flashback and LogMiner  
Flashback Data Archive, "Oracle Total Recall", Architecture, Workflow Guidelines and Usage Tips, Flashback Transaction Backout, Wizard  
Using LogMiner
12. **Diagnostics Enhancements**  
Oracle 11g R1 Fault Management  
Ease Diagnosis: Automatic Diagnostic Workflow  
Automatic Diagnostic Repository, Location for Diagnostic Traces  
Incident Packaging Service (IPS)  
EM Support Workbench, Health Monitor, Data Recovery Advisor
13. **Using the Data Recovery Advisor**  
Repairing Data Failures, Data Recovery Advisor RMAN Command-Line Interface  
Best Practice: Proactive Checks, Setting Parameters to Detect Corruption
14. **Security: New Features**  
Secure Password Support, Automatic Secure Configuration, Managing Default Audits  
Setting Database Administrator Authentication, Transparent Data Encryption  
Hardware Security Module, Using RMAN Security Enhancements
15. **Oracle SecureFiles**  
Managing Enterprise Information, Problems with Existing LOB Implementation  
Oracle SecureFiles, Altering SecureFiles, Accessing SecureFiles Metadata,  
Migrating to SecureFiles, Monitoring SecureFiles  
Shared I/O Pool
16. **Miscellaneous New Features**  
Foreground Statistics, Online Redefinition Enhancements  
Minimizing Dependent Recompilations  
Locking Enhancements, Invisible Index  
SQL Query Result Cache, Adaptive Cursor Sharing  
Temporary Tablespace Shrink

## Course Labs

1. Installation and Upgrade Enhancements
2. Storage Enhancements
3. Change Management Unit Overview
4. SQL Plan Management
5. Database Replay
6. Automatic SQL Tuning
7. Intelligent Infrastructure Enhancements
8. Performance Enhancements
9. Partitioning and Storage-Related Enhancements
10. Using RMAN Enhancements
11. Using Flashback and LogMiner
12. Diagnostics Enhancements
13. Using the Data Recovery Advisor
14. Security: New Features
15. Oracle SecureFiles
16. Miscellaneous New Features