# Oracle Database 11g: New Features for Oracle 9i DBAs

**Duration:** 5 Days

## What you will learn

This course introduces students to the new features of Oracle Database 10g and Oracle Database 11g. You will learn how to upgrade from an Oracle9i database to Oracle Database 11g. As a Database Administrator, you learn how to set up and perform typical tasks using the new features available with Oracle Database 10g and Oracle Database 11g including many of the Advisors. Students learn how to use features that increase database availability, simplify overall database management, and improve performance. Hands-on practice sessions provide students with an opportunity to upgrade an Oracle9i database to Oracle Database 11g and use many of the new features.
This course counts toward the Hands-on course requirement for the following certifications

Oracle Database 9i Administrator Certification
Oracle Database 10g Administrator Certification
Oracle Database 11g Administrator Certification
Oracle Database 10g Administrator Certified Master

Only instructor-led inclass or instructor-led online formats of this course will meet the Certification Hands-on Requirement. Self Study CD-Rom and Knowledge Center courses DO NOT meet the Hands-on Requirement.

Learn To:

Upgrade to Oracle Database 11gPerform typical DBA tasks tailored to an 11g database

## Audience

Database Administrators
Technical Administrator

## Related Training

*Required Prerequisites*

Oracle9i Database: New Features for Administrators

## Course Objectives

Upgrade your database from 9i to Oracle Database 11g

Use improved ASM, RMAN, and Flashback features

Use database advisors for proactive database monitoring

Implement improved manageability features simplifying database management

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Utilize Enterprise Manager to efficiently manage diagnostic data

Use change management features to master database changes

## Course Topics

**Planning Your Upgrade to Oracle Database 11g**
Steps to Upgrade to Oracle Database 11g
Choosing an Upgrade Method
Performing Character Conversion

**Upgrading the Oracle Database 11g**
Installing Oracle Database 11g Software
Applying Oracle Software Patches
Creating a Database

**Real Application Testing**
Why Use Database Replay?
Pre-Change Production System
Capture / Replay Considerations
Performing Workload Capture
Performing Workload Replay
Using SQL Performance Analyzer
Using Database Replay to test system changes
Using SQL Performance Replay to test SQL changes

**Upgrading Your Database Using other Methods**
Using DBUA to Upgrade the Database
Oracle Database 11g: Upgrade Enhancements
Backing Up the Database Before Upgrade
Using the Preupgrade Information Tool
Using New Postupgrade Status Utility

**Performing Post-Upgrade Steps**
Upgrading Server Manager scripts
Performing Additional Upgrade Tasks
Using New Features in Your Upgraded Database
Executing the Postupgrade Script
Upgrading the National Character Set toAL16UTF16
Checking for Unusable Function-based Indexes
Upgrading the Recovery Catalog

**Using EM: Database Control and Grid Control**
Administering the Database Using Enterprise Manager: Overview
Using Database Control
Granting Database Control Administrative Privileges
Using Grid Control to Manage Your Environment
Setting Preferred Credentials

**Proactively Maintaining the Database**

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Oracle Database 11g: Self-Managing Database
Automatic Workload Repository
Job Scheduler Concepts
Server-Generated Alerts
Advisor Framework
Automatic Database Diagnostic Monitor
Configuring Alerts

**Managing System Resources**
Database Resource Manager: Concepts (auto enabled)
Using New Features of Database Resource Manager
Exploring Allocation methods
Maximum Estimated Execution Time
Automatic Consumer Group Switching
Using Resource Manager Statistics

**Automating Tasks with the Scheduler**
Scheduler Concepts
Using Scheduler Programs
Windows and Resources
Administering the Scheduler

**Managing Memory Structures**
Enabling Automatic Memory Management
Modifying Parameters for Automatically Managed Components
Modifying Parameters for Manually Sized Components
Monitoring Automatic Memory Management

**Managing Database Storage Structures**
Using the SYSAUX Tablespace
Specifying a Default User Tablespace
Using Oracle Managed Files (OMF
Creating Bigfile Tablespaces
Using Nonstandard Block Sizes
Proactively Monitoring Tablespaces
Using the Redo Logfile Sizing Advisor

**Implementing Automatic Storage Management (ASM)**
ASM: Key Features and Benefits
ASM: General Architecture
Accessing an ASM Instance
ASM Administration
Database Instance Parameter Changes
Migrating Your Database to ASM

**Managing Database Space**
Understanding Automatic Undo Management
Specifying the Undo Management Mode
Setting the Undo Management Initialization Parameters
Using the Undo Advisor

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**Administering Users and Database Security**
Unlocking Default User Accounts
Specifying a Common Password for System
Securing access by user
Using Fine-Grained Auditing
Auditing the SYS User
Understanding Changes to the Audit Trail

**Managing Schema Objects**
Using Automatic Segment-space Management
Estimating Table and Index Size Before Creation
Granting Object Privileges on Behalf of the Object Owner
Performing Online Redefinition of Tables
Enabling Data Segment Compression
Automatically Collecting Statistics
Using the Segment Advisor

**Accessing and Loading Data**
Using Data Pump to Import and Export Data
Managing External Tables
Cross-Platform Transportable Tablespaces

**Performing Backup and Recovery Operations**
Using RMAN to Back up the SPFILE
Creating Change-aware Incremental Backups
Encrypting backups
Using backup compression
Using RMAN to Perform Recovery: Automatic File Creation During Recovery
Performing Trial Recovery
Enabling and Performing Flashback Database

**Recovering From User Errors**
Using Flashback Query
Auditing and Recovering Transactions Using the Flashback Transaction Query Feature
Retrieving Row History Information Using the Flashback Version Query Feature
Recovering Table Data Using the Flashback Table Feature
Recovering Dropped Tables using Flashback Drop Feature
Flashing back a transaction
Using LogMiner Enhancements

**Managing Performance**
Using the SQL Tuning Advisor
Using the SQL Access Advisor
Using the trcsess Utility to Consolidate Output from Trace Files
Using DBMS_MONITOR

**Diagnosability Enhancements**
Oracle Database 11g Fault Management
Ease Diagnosis: Automatic Diagnostic Workflow
Automatic Diagnostic Repository
Incident Packaging Configuration
Running Health Checks

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Using the SQL Repair Advisor
Viewing, Disabling, or Removing a SQL Patch

**Miscellaneous New Features**
Managing & Using SQL Query Result Cache
Adaptive Cursor Sharing: Architecture
Temporary tablespace shrinkage
Using the client result cache

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