

Course 269:

Oracle Database 11g: New Features for Administration and Tuning, Hands-On (4 days)

Course Description...

Oracle 11g is designed to handle the ever-increasing data needs of modern organizations. Effective management of Oracle 11g capabilities can help organizations ensure the integrity and security of data. This course provides the opportunity to explore and do hands-on exercises with several of the key new features and an increased range of tools for managing and tuning the database. The course covers benefits and use of the new features for managing change, diagnosing and recovering from problems, ensuring high availability, strengthening security, and improving performance. This course is based on and will use Oracle Database 11g, Release 2.

This course lays the foundation for managing the Oracle 11g database.

Learning Objectives...

- Enhance the usability and management of database storage
- Manage large databases with enhanced partitioning options
- Generate workloads for predictive testing with Database Replay
- Maintain database availability using backup and recovery enhancements
- Retain diagnostic information with the Automatic Diagnostic Repository
- Use the Data Recovery Advisor to for fast detection, analysis, and repair of failures
- Automatically control SQL plan evolution
- Accurately assess the impact of change to SQL statements
- Automatically tune SQL statements
- Enhance performance management with automated tools

Who should attend...

Audience includes database administrators, support professionals, technical consultants, and others responsible for maintaining and tuning the Oracle 11g database.

Prerequisites...

A solid understanding of Oracle database administration is essential. This course covers new features without going into the detail of the base tools.



Course Outline...

Introduction and Overview

- Course Objectives
- Course Contents

Unit 1: Introduction to Oracle 11g

- Upgrade Paths
- Oracle Architecture Overview
- Review of the Data Dictionary
- Additional Information

Unit 2: Storage Enhancements

- ASM Enhancements
 - Fast Mirror Resync
 - Preferred Mirror Read
 - Scalability Enhancements
 - SYSASM Role
 - ASM Access Control Lists
 - Intelligent Data Placement
- Compressing Table Data
- Virtual Columns
- Read-Only Tables
- Segment Creation on Demand
- Temporary Tablespace Enhancements
- Using 4 KB Sector Drives

Unit 3: SQL Performance Analyzer

- Usage Model
- Analysis Options
- SQL Plan Baselines
- Manageability Scenarios

Unit 4: SQL Plan Management

- Architecture
- SQL Plan Baselines
- Manageability Scenarios

Unit 5: Database Replay

- Usage Scenarios
- Architecture
- Capture
- Process
- Replay
- Analysis

Unit 6: Backup and Recovery

- RMAN Enhancements
 - Archival Backups
 - Merging Catalogs
 - Virtual Private Catalogs
 - Multisection Backups
 - Duplication from Active Database
 - Targetless Duplication



- Data Recovery Advisor
- Active Data Guard
- Snapshot Database
- Flashback Data Archive
- Undo Optimization
- Data Pump Legacy Mode

Unit 7: Diagnostics Enhancements

- Automatic Diagnostics Repository
- Data Recovery Advisor
- Alert Log in OEM

Unit 8: Automatic SQL Tuning

- Autotask framework
- Workload Selection
- SQL Profiles
- Regression Testing

Unit 9: Partitioning

- Interval Partitioning
- Reference Partitioning
- System Partitioning
- Virtual Column Partitioning
- Composite Partitioning
- SQL Access Advisor

Unit 10: Real-Time SQL Monitoring

- SQL Monitoring Concepts
- Using Enterprise Manager to Monitor SQL Commands

Unit 11: Miscellaneous Performance Enhancements

- Automatic Memory Management
- Statistics Management
 - Setting Preferences
 - Deferred Statistics Publishing
 - Historical Statistics
 - Incremental Partition Statistics
- Result Cache
- Adaptive Cursor Sharing
- Fine-Grained Dependency
- DB Smart Cache

Unit 12: Course Summary

Please contact your ROI representative to discuss course tailoring!!!