

Oracle Database 10g: New Features for Administrators Release 2

What you will learn:

This course introduces students to the new features in Oracle Database 10g Release 2 - the database for Grid computing. Students learn how to use Oracle Database 10g new features to increase database availability, to simplify database performance monitoring and tuning through the use of Oracle Database 10g Advisors, and to offer simplified database manageability. The course also covers security changes that students need to understand. Hands-on practice sessions give students an opportunity to examine many of the new features, and to practice database administration with Enterprise Manager Database Control.

Learn to:

- VLDB Enhancements
- Flashback Recovery
- Automatic Management
- Enhancements to Storage Management
- Backup and Recovery Enhancements
- Enhancements Space Management

This course counts towards the [Hands-on course requirement](#) for the Oracle 9i Database Administrator Certification.

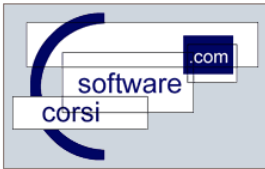
Audience:

Database Administrators
Data Warehouse Administrator
Sales Consultants
Support Engineer
Project Manager
Database Designers
Technical Consultant

Prerequisites:

Required Prerequisites:

9i DBA Fundamentals
[Oracle9i Database Administration Fundamentals I](#)
[Oracle9i Database Administration Fundamentals II](#)



[Oracle9i Database: New Features for Administrators](#)

Course Objectives:

- Using Database Control to simplify database management
- Proactively monitoring the database
- Increasing data availability by using improved point in time recovery features
- Implementing Automatic Storage Management
- Managing Metric Baselines
- Using Oracle Secure Backup
- Simplifying Instance Configuration
- Using Data Pump Export and Import
- Configuring the Scheduler
- Using the Automatic Workload Repository
- Managing Services
- Creating Bigfile Tablespaces
- Creating Hash-Partitioned Global Indexes
- Creating Compressed Backup sets in RMAN
- Configuring Flashback Database
- Creating the SYSAUX Tablespace

[Return to top](#)

Course Topics:

Installation

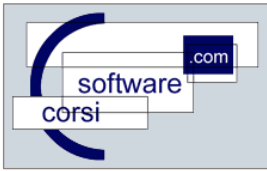
- Installation New Feature Support
- Performance Enhancements to Installation
- Checking the Pre-Install Requirements
- Management, File Storage, and Backup and Recovery Options
- Passwords
- Info about installation directories for the DB and EM
- Grid control architectures and installation
- Distinction between Grid Control and Database Control

Server Configuration

- SYSAUX and DBCA
- Using Enterprise Manager: - Command line interfaces: emctl/emca
- Database Cloning
- Database Feature Usage
- Managing Policies
- Response File Improvements
- Policy Framework
- Blackouts

Data Pump, SQL*Loader, and External Tables

- Data Pump: General Architecture
- Data Pump Direct Path Considerations
- Data Pump Utility: Interfaces and Modes
- Data Pump Job Monitoring Views



Data Pump Import Transformations
Using EM to Monitor Data Pump Jobs
Loading Data From Flat Files Using EM
External Table Parallel Populate Operation

Database and Tablespace Data Movements

Cross-Platform Transportable Tablespaces
Minimum Compatibility Level
Transportable Tablespace Procedure
Dynamic Performance View Changes
Using Enterprise Manager to Transport Tablespaces
Transportable Database
Transport Tablespace From Backup
Tablespace Repository

Automatic Management

Automatic Database Diagnostic Monitor
Retrieving ADDM Reports Using SQL and EM
Automatic Shared Memory Management (including streams pool)
SGA Advisor
Automatic Optimizer Statistics Collection
Locking Statistics
Automatic Undo Retention Tuning
Automatically Tuned Multiblock Reads

Manageability Infrastructure

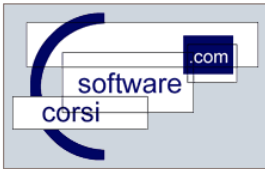
Automatic Workload Repository Data
Active Session History
AWR Snapshot Baselines and Purging Policy
Server-Generated Alerts
Metric and Alert Views
Job Scheduler Concepts
DBCA and Automated Tasks
Dictionary Changes

Managing Metric Baselines

The Cyclic Nature of Workloads
Thresholds and Metric Baselines
Enable Metric Baselineing
Set Adaptive Alert Thresholds
Create Static Metric Baselines
Metric Baseline and Adaptive Threshold Considerations
Classification of Eligible Metrics
Configure Normalization Metrics

Application Tuning

Automatic Statistics Gathering



Enhanced Query Optimization
Using Enterprise Manager to Gather Dictionary Statistics
Automatic SQL Tuning
SQL Tuning Loop
SQL Tuning Advisor
Concurrency Wait Class: Drill Down
Duplicate SQL page

System Resource Management

Database Resource Manager
Setting Idle Timeouts
Switching Back to the Initial Consumer Group at End of Call
Creating a Mapping Using Database Control
Using the RATIO Allocation Method
Monitoring the Resource Manager Using EM
Switching Plans at Scheduler Window Boundaries

Automating Tasks with the Scheduler

Privileges for Scheduler Components
Creating a Scheduler Job
Creating a Job Class
Creating a Window
Managing Jobs, Programs, Schedules, Windows, and Priority
Job chains
Using events

Space Management

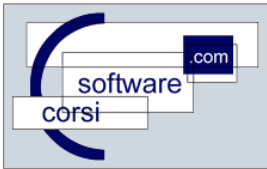
Tablespace Space Usage Monitoring
Shrinking Segments
Automatic Segment Advisor
Fast Ramp-Up
Sorted Hash Cluster
Segment Metadata Dump and Verification

Improved VLDB Support

Create and maintain bigfile tablespaces
Interpret ROWIDs referencing bigfile tablespaces
Create temporary tablespace groups
Create list-partitioned index-organized tables
Create hash-partitioned global indexes
Partitioned IOT Enhancements
Skipping Unusable Indexes
Bitmap Index Storage Enhancements

Backup and Recovery Enhancements

New Backup and Recovery Strategy
Flash Backup and Recovery



Best Practices for the Database and Flash Recovery Area
Backup Maintenance
Implementing Fast Recovery
Automated Instance Creation and TSPITR
RMAN Command Changes
Setting Duration and Throttling Option

Oracle Backup

Installation
Implement the Oracle suggested strategy
RMAN and Oracle Backup
Database Backup/restore to tape
Install Oracle Backup (CLI)

Flashback Any Error

Flashback Database
Flashback Drop
Recycle Bin
Resource optimized DROP TABLE...PURGE for partitioned tables
Flashback Versions Query
Guaranteed Undo Retention
SCN and Time Mapping Enhancements
Restore Point Usage

General Storage Enhancements

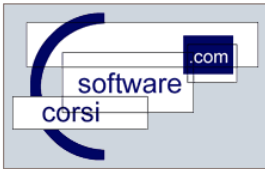
SYSAUX Tablespace and Occupants
Tablespace Rename
Default Permanent Tablespace
Designating a Default Permanent Tablespace
Copying Files Using the Database Server
Redo Logfile Size Advisor
Dropping an Empty Data File

Automatic Storage Management

ASM: Key Features and Benefits
ASM Instance Creation
Accessing an ASM Instance
Starting Up and Shutting Down an ASM Instance
ASM Disk Group
ASM Files
Migrate Your Database to ASM
ASM and XML DB

Maintaining Software

Oracle Database 10g Upgrade Paths
Pre-Upgrade Utility Enhancements
DBUA Advantages



New Post-Upgrade Status Utility
Recompiling Invalid Objects
Performing the Manual Upgrade
OPatch Utility
Support for ASM only upgrade

Security

Virtual Private Database enhancements
Policy Types
Enhanced Enterprise User Auditing
Transparent Data Encryption
Enhanced Proxy Capabilities
Username and Password in Wallet
OS Audit in XML format
Connect role change

Services

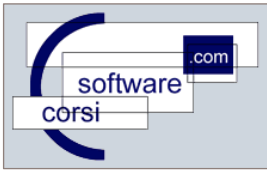
Traditional Workload Dispatching
Grid Workload Dispatching
High Availability of Services in RAC
Service Aggregation and Tracing
The trcsess Utility
Session-Based and End-to-End Tracing
Using Enterprise Manager to Enable Statistics Aggregation
Using Enterprise Manager to Enable and View SQL Tracing

Miscellaneous New Features

Transaction Monitoring
Configurationless Client Connect
Resumable Space Allocation Enhancements
Implicit Conversion Between CLOB and NCLOB
UTL_MAIL and UTL_COMPRESS Package
LogMiner Enhancements
Asynchronous COMMIT
Direct Attach to SGA for Statistic Collection

Suggested Next Courses:

[Oracle Enterprise Manager 10g Grid Control](#)
[Oracle Enterprise Manager 10g Grid Control Release 2 **NEW**](#)
[Oracle Database 10g: Administering Real Application Clusters](#)
[Oracle Database 10g: Real Application Clusters](#)
[Oracle Database 10g: Data Guard Administration](#)
[Oracle Database 10g: Implement Streams](#)



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[Oracle Database 10g: Security](#)