



Oracle Database 11g R2: New & Advanced Features For Developers



ora11g005-ver2

Instructor Resources From The Sideris Training Portal

3 Days

General Description

This Oracle 11g courseware training guide book will present some of the most advanced features available to database developers. In addition to receiving the print copy of this course book, all students will receive e-Learning modules.

Target Audience

The target audience for this course is senior application developers. Using these features one can rely upon less-frequently used database options to extend the capabilities and flexibility of business applications.

Prerequisites

The following Sideris courses are mandatory prerequisites:

- ORACLE DATABASE 11g: INTRODUCTION TO SQL – COMPLETE LIBRARY
- ORACLE DATABASE 11g: PROGRAM WITH PL/SQL – COMPLETE LIBRARY

Objectives

Many new features are either newly available with the Oracle 11g release or have been substantially improved with that release. Specific subjects presented in this course are:

- Creating and using directory objects within the database.
- A comprehensive look at all index types available when building an application schema, including B-tree internals, function-based, compressed, reverse key, invisible, linguistic, bitmap and bitmap join indexes.
- A comprehensive look at all table types available when building an application schema, including heap-organized tables, index clusters, hash clusters, index-organized tables, external tables, temporary tables, read-only and compressed tables.
- Advanced SQL hierarchal data processing capabilities available from the CONNECT BY PRIOR and related language structures.
- Enhanced SQL and transactional capabilities, including asynchronous commits, DML error trapping and use of regular expressions.
- How to use the result cache to achieve dramatic performance improvement for frequently executed SQL queries and PL/SQL functions.
- Enhancements to the PL/SQL programming language and coding capabilities.
- New and advanced SQL language application development capabilities.

Pages
Duration

460
3 days

Instructor Resources

Instructor resources from the [Sideris Training Portal](#). There is no substitute for a subject matter expert. Sideris custom print courseware combined with our online resources make distance-learning and virtual training more effective than ever. Download the instructor resources for this courseware and see how your instructor presentations improve!

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Contents

MOVING DATA: EXPORT & IMPORT

- MANAGE DIRECTORY OBJECTS
- ABOUT THE DATA PUMP ARCHITECTURE
- DATA PUMP EXPORT
- DATA PUMP IMPORT

SECURITY ENHANCEMENTS

- TRANSPARENT DATA ENCRYPTION
- What Is A Database Wallet?
- TDE Encryption Algorithms
- COLUMN ENCRYPTION

ORACLE SECUREFILES

- LOB CONCEPTS & TERMINOLOGY
- BASICFILES LOB
- Table DDL With LOBs
- Controlling LOB Physical Storage
- Initialize Internal LOBs
- Initialize External LOBs
- LOB Columns & SQL
- SECUREFILES LOBS
- MIGRATING BASICFILES TO SECUREFILES

INDEXES WITHIN THE APPLICATION SCHEMA

- B-TREE INDEXES
- Indexes & Performance
- Rebuild & Coalesce Indexes
- Creating Very Large Indexes
- Data Dictionary Storage
- FUNCTION-BASED INDEXES
- COMPRESSED INDEXES

- REVERSE-KEY INDEXES
- BITMAP INDEXES
- BITMAP JOIN INDEXES
- LINGUISTIC INDEXES
- INVISIBLE INDEXES

ADVANCED TABLES: CLUSTERS & IOTS

- ABOUT INDEX CLUSTERS
- ABOUT HASH CLUSTERS
- ABOUT INDEX-ORGANIZED TABLES
- Defining Index-Organized Tables

ADVANCED TABLES: EXTERNAL TABLES

- ABOUT EXTERNAL TABLES
- Creating The Table
- ORACLE_LOADER ACCESS PARAMETERS
- The General Access Parameters
- Access Parameters Which Define Fields
- Performance Considerations
- ORACLE_DATAPUMP ACCESS DRIVER
- MANAGING EXTERNAL TABLE PROPERTIES

ADVANCED TABLES: SPECIALIZED TABLES

- TEMPORARY TABLES
- COMPRESSED TABLES
- READ-ONLY TABLES
- COLUMN DEFAULT VALUES
- VIRTUAL COLUMNS
- UNUSED COLUMNS

PROCESSING HIERARCHIES

- WHY WE NEED HIERARCHIES

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- PROCESSING 1:N HIERARCHIES
- Oracle-Specific Form
- ANSI/ISO Standard SQL Form
- PROCESSING M:N HIERARCHIES
- Bill-of-materials (Explosion & Implosion)
- More Explosion Examples
- More Implosion Examples
- ADVANCED HIERARCHY PROCESSING

USING THE DATABASE RESULT CACHE

- ABOUT THE RESULT CACHE
- CONFIGURING THE RESULT CACHE
- RESULT_CACHE_MAX_SIZE
- RESULT_CACHE_MODE
- RESULT_CACHE_MAX_RESULT
- RESULT_CACHE_REMOTE_EXPIRATION
- USING THE RESULT CACHE
- MANAGING & MONITORING RESULT CACHE
- Managing The Cache With DBMS_RESULT_CACHE()
- Monitoring The Cache With The System Views

SQL NEW & ADVANCED FEATURES

- ASYNCHRONOUS COMMIT OPTIONS
- HANDLING DML ERRORS
- INFLUENCING LOCKING BEHAVIOR
- REGULAR EXPRESSIONS

PL/SQL PROGRAMMING ENHANCEMENTS

- PROGRAM LOGIC ENHANCEMENTS
- DATABASE-RESIDENT TRIGGERS
- USING COMPOUND TRIGGERS

EDITION-BASED REDEFINITION

- WHY ONLINE REDEFINITION?
- EDITION-BASED ARCHITECTURE
- IMPLEMENTING EDITIONS
- USING EDITIONS

REDEFINITION WITH CROSS-EDITION TRIGGERS

- REDEFINITION THEORETICAL CHALLENGES
- FORWARD CROSS-EDITION TRIGGERS
- REVERSE CROSS-EDITION TRIGGERS
- POST-UPGRADE TASKS
- Prepare To Transform Legacy Data
- Transform Legacy Data
- Retire The Old Application

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