

GWE1702ORA: Oracle Database 10g: Advanced PL/SQL Programming & Tuning (4 Days)



Objectives

The objective of this course is to allow experienced PL/SQL developers to write efficient programs. Advanced techniques which not only improve execution speed but also enhance the functionality of the programs are also discussed. Among the specific objectives to be met with this course are these:

- Exploiting and managing cursor sharing.
- Utilizing cursor variables.
- Invoking external procedures.
- Including dynamic SQL and other advanced programming techniques.
- Efficiently executing dynamic SQL using bulk bind techniques.
- Tuning with the DBMS_PROFILER() system-supplied package.
- Debugging with the DBMS_TRACE() system-supplied package.
- Performance tuning and analysis of PL/SQL applications

Audience

The target audience for this course is senior application developers. Developers who will be building, debugging and tuning PL/SQL program units will benefit from this course.

Mandatory Prerequisites

- Oracle Database 10g: Introduction to SQL
- Oracle Database 10g: Program With PL/SQL

Course Outline

PL/SQL DEVELOPMENT SUPPORT FROM EM

- ABOUT EM & PL/SQL
- MANAGING INVALID OBJECTS

EXPLOITING & MANAGING CURSOR SHARING

- ABOUT CURSOR SHARING
- BIND VARIABLES & CURSOR PEEKING
- USING THE CURSOR_SHARING PARAMETER

DYNAMIC SQL

- NATIVE DYNAMIC SQL

USING COLLECTIONS

- ABOUT COLLECTIONS
- BULK BIND USING COLLECTIONS
- COLLECTION METHODS

RETRIEVING DDL WITH DBMS_METADATA()

- WHY RETRIEVE OBJECT DEFINITIONS?
- RETRIEVING DEFAULT METADATA
- RETRIEVING CUSTOMIZED METADATA

ADVANCED DBMS_METADATA() PROCESSING

- SET_TRANSFORM_PARAM()
- GET_QUERY()

PROCESSING DEPENDENT OBJECTS WITH DBMS_METADATA()

REDEFINING TABLES WITH DBMS_REDEFINITION()

- ABOUT TABLE REDEFINITION
- USING THE DBMS_REDEFINITION() PACKAGE

USING OTHER SYSTEM-SUPPLIED PACKAGES

- DBMS_DESCRIBE()
- UTL_MAIL
- DBMS_SCHEDULER()

USING LARGE OBJECTS (LOBs)

ADVANCED INTERFACE METHODS

- ABOUT EXTERNAL PROCEDURES
- REGISTERING WITH THE DATABASE
- ORACLE NET CONFIGURATION
- CALLING EXTERNAL PROCEDURES

ABOUT PL/SQL PERFORMANCE TUNING

- ABOUT THE TUNING EFFORT
- THE DIFFICULTY OF TUNING
- THE SQL & PL/SQL EXECUTION ENVIRONMENT
- THE IMPACT OF THE SYSTEMS INFRASTRUCTURE

USING THE TUNING UTILITIES

INFLUENCING ORACLE10G PL/SQL COMPILATION

- PLSQL_WARNINGS
- PLSQL_OPTIMIZE_LEVEL
- PL/SQL NATIVE EXECUTION

PL/SQL TUNING WITH DBMS_PROFILER()

- ABOUT DBMS_PROFILER()
- INSTALLING DBMS_PROFILER()
- USING DBMS_PROFILER() TO MANAGE RUNS
- EXAMINING THE PROFILER TABLES

EVALUATING THE PL/SQL PROFILER DATA

- ABOUT THE PROFILER DATA
- USER QUERIES OF THE CROSS RUN TABLES
- SYSTEM-SUPPLIED CROSS RUN TABLES QUERIES

PL/SQL ADVANCED PROGRAMMING & TUNING TECHNIQUES

- AUTONOMOUS TRANSACTIONS
- USING NOCOPY FOR PARAMETERS
- CHOOSING THE OPTIMUM DATATYPE
- USEFUL PL/SQL CODING TECHNIQUES

PL/SQL DEBUGGING WITH DBMS_TRACE

- ABOUT THE TRACE FACILITY
- INSTALLING DBMS_TRACE
- USING DBMS_TRACE TO MANAGE RUNS
- EXAMINING THE PLSQL_TRACE TABLES