Advanced and Useful PL/SQL Tools and Techniques

24 hours

Write PL/SQL the way the designer intended

Course Overview:

In this Oracle Database 11G Advanced PL/SQL training, expert Oracle University instructors will help you explore the advanced features of PL/SQL to design and tune PL/SQL. You'll learn how it interfaces with the database and other applications in the most efficient manner.

Course Objectives:

- PL/SQL designing best practices
- Create PL/SQL applications that use collections
- Implement a virtual private database with fine-grained access control
- Write code to interface with external C and Java applications
- Write code to interface with large objects and use SecureFile LOBs
- Write and tune PL/SQL code effectively to maximize performance

Who Should Attend:

- Application Developers
- Database Administrators
- PL/SQL Developer

Required Skills:

- Knowledge of SQL
- PL/SQL Programming experience

Course Contents:

Bulk Binding

- FORALL
  - Bulk DML operations
  - Sparse collections and the INDICES OF clause
  - Handling bulk exceptions
- BULK COLLECT
  - Bulk cursor queries
  - Using the LIMIT clause

Using Autonomous Transactions

- Autonomous transactions and subprograms
- Autonomous transactions and triggers

The RETURNING clause

- Eliminate redundant table access and IO during bulk/single-row SQLs.

Using Dynamic SQL

- EXECUTE IMMEDIATE & DBMS_SQL
- Bind aware dynamic SQL
- Efficient dynamic SQL tips
- DBMS_SQL – old, but not obsolete

Advanced Cursor usage

- Cursor For Loops
- Ref Cursors
- Updatable cursors

Advanced Collections

- TABLE OF arrays, VARRAYs and Nested Tables
- Using Nested Tables to create parameterized views
- Using composite variables as procedural parameters

Invoker's Rights vs. Definer's Rights

- Altering the execution context of subprograms

Selected Oracle 11g new features, including

- Triggers
  - Using Follows/preceding to set triggering order
  - Compound triggers
  - Disabled triggers
- General
  - Changes in Sequences calls
  - New CONTINUE statement for loops

Advanced Packages issues

- Overloading
- Forward Declarations
- One-Time-Only procedures
- Securing package text in the database
- Using packages to
  - Enable compound parameters
  - Standardize constants and exceptions.

Advanced memory and design issues

- Using DBMS_SHARED_POOL
- Using PRAGMA SERIALLY_REUSABLE
- NOCOPY clause

Using PL/SQL compiler warnings to detect problematic code

Oracle Supplied Packages: Overview

- UTL_FILE
- DBMS_PROFILER
- DBMS_LOCK
- DBMS_METADATA
- Others (as time permits..)

Useful PL/SQL code, tips and tricks from the real world.