

Oracle Database 11gR2 Advanced PL/SQL

Course information

Days : 4

Total lessons : 16

Suggested Prerequisites :

- Oracle Database 11g: PL/SQL Fundamental
- Previous programming experience

Training includes :

- Experienced trainer(s)
- Pre-test and Post-test
- Practices and solutions

All prices exclude VAT 7 %

Course details

Day 1

Lesson 1: PL/SQL Review

Lesson 2: Designing PL/SQL Code

Lesson 3: Working with Collections

Lesson 4: Using Advanced Interface Methods

Day 2

Lesson 5: Implementing Fine-Grained Access Control for VPD

Lesson 6: Manipulating Large Objects

Lesson 7: Administering SecureFile LOBs

Lesson 8: Performance and Tuning

Day 3

Lesson 9: Improving Performance with Caching

Lesson 10: Analyzing PL/SQL Code

Lesson 11: Profiling and Tracing PL/SQL Code

Lesson 12: Safeguarding Your Code Against SQL Injection Attacks

Day 4

Lesson 13 : Using the PL/SQL Compiler

Lesson 14 : Managing PL/SQL Code

Lesson 15 : Managing Dependencies

Lesson 16 : PL/SQL for large data(Example use in real life)

Lesson details

Lesson 1: PL/SQL Review

- Describe PL/SQL basics
- List restrictions on calling functions from SQL expressions
- Identify how explicit cursors are processed
- Handle exceptions
- Use the raise_application_error procedure
- Manage dependencies
- Use Oracle-supplied packages

Lesson 2: Designing PL/SQL Code

- Identify guidelines for cursor design
- Use cursor variables
- Create subtypes based on the existing types for an application



Lesson 3: Working with Collections

- Create collections
 - Nested table, varray
 - Associative arrays/PLSQL tables
- Integer indexed
- String indexed
- Use collections methods
- Manipulate collections
- Distinguish between the different types of collections and when to use them

Lesson 4: Using Advanced Interface Methods

- Execute external C programs from PL/SQL
- Execute Java programs from PL/SQL

Lesson 5: Implementing Fine-Grained Access Control for VPD

- Describe the process of fine-grained access control
- Implement and test fine-grained access control

Lesson 6: Manipulating Large Objects

- Compare and contrast LONG and large object (LOB) data types
- Create and maintain LOB data types
- Differentiate between internal and external LOBs
- Use the DBMS_LOB PL/SQL package
- Describe the use of temporary LOBs

Lesson 7: Administering SecureFile LOBs

- Describe SecureFile LOB features
- Enable SecureFile LOB deduplication, compression, and encryption
- Migrate BasicFile LOBs to the SecureFile LOB format
- Analyze the performance of LOBs

Lesson 8: Performance and Tuning

- Understand and influence the compiler
- Tune PL/SQL code
- Enable intraunit inlining

Lesson 9: Improving Performance with Caching

- Improve memory usage by caching SQL result sets
- Write queries that use the result cache hint
- Use the DBMS_RESULT_CACHE package
- Set up PL/SQL functions to use PL/SQL result caching

Lesson 10: Analyzing PL/SQL Code

- Use the supplied packages and dictionary views to find coding information
- Determine identifier types and usages with PL/Scope
- Use the DBMS_METADATA package to obtain metadata from the data dictionary as XML or creation DDL that can be used to re-create the objects

Lesson 11: Profiling and Tracing PL/SQL Code

- Trace PL/SQL program execution
- Profile PL/SQL applications

Lesson 12: Safeguarding Your Code Against SQL Injection Attacks

- Describe SQL injections
- Reduce attack surfaces
- Use DBMS_ASSERT
 - Design immune code
 - Test code for SQL injection flaws



Lesson 13 : Using the PL/SQL Compiler

- Use the PL/SQL compiler initialization parameters
- Use the PL/SQL compile-time warnings

Lesson 14 : Managing PL/SQL Code

- Describe and use conditional compilation
- Hide PL/SQL source code using dynamic obfuscation and the Wrap utility

Lesson 15 : Managing Dependencies

- Track procedural dependencies
- Predict the effect of changing a database object on procedures and functions
- Manage procedural dependencies

Lesson 16 : PL/SQL for large data(Example use in real life)

- Making summary tables
- Making report tracking behavior of customers
- Another examples

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