

Oracle Database 10g SQL Tuning

Course information

Days : 3

Total lessons : 14

Suggested Prerequisites :

- Oracle Database 10g: SQL Fundamentals I
- Oracle Database 10g: PL/SQL Fundamentals

Training includes :

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

Public price :

- 15,000 baht(THB) : 1 person

In-house price :

- 45,000 baht(THB) : Small Class : 1 – 5 people
- 67,000 baht(THB) : Small Class : 6 - 10 people
- 86,000 baht(THB) : Middle Class : 11 - 20 people
- 105,000 baht(THB) : Large Class : 21 - 30 people

All prices exclude VAT 7 %

Course details

Day 1

Lesson 1 : Oracle Database Architecture: Overview

Lesson 2 : Following a Tuning Methodology

Lesson 3 : Designing and Developing for Performance

Lesson 4 : Introduction to the Optimizer

Lesson 5 : Optimizer Operations

Day 2

Lesson 6 : Execution Plans

Lesson 7 : Gathering Statistics

Lesson 8 : Application Tracing

Lesson 9 : Identifying High-Load SQL

Lesson 10 : Automatic SQL Tuning

Day 3

Lesson 11 : Index Usage

Lesson 12 : Using Different Indexes

Lesson 13 : Optimizer Hints

Lesson 14 : Materialized Views

Lesson details

Lesson 1 : Oracle Database Architecture: Overview

- Describe the Oracle Database architecture and components
- Make qualified decisions about your tuning actions

Lesson 2 : Following a Tuning Methodology

- Determine performance problems
- Manage performance
- Describe tuning methodologies
- Identify goals for tuning
- Describe automatic SQL tuning features
- List manual SQL tuning steps



Lesson 3 : Designing and Developing for Performance

- describe the basic steps involved in designing and developing for performance

Lesson 4 : Introduction to the Optimizer

- Describe the functions of the Oracle optimizer
- Identify the factors influencing the optimizer
- Set the optimizer approach at the instance and session level

Lesson 5 : Optimizer Operations

- Describe different access paths
- Optimize sort performance
- Describe different join techniques
- Explain join optimization
- Find optimal join execution plans

Lesson 6 : Execution Plans

- Use the EXPLAIN PLAN command to show how a statement is processed
- Use the DBMS_XPLAN package
- Use the Automatic Workload Repository
- Query the V\$SQL_PLAN performance view
- Use the SQL*Plus AUTOTRACE setting to show SQL statement execution plans and statistics

Lesson 7 : Gathering Statistics

- Identify table, index, and column statistics
- Describe the Automatic Statistics Gathering mechanism
- Use the DBMS_STATS package to collect statistics manually
- Identify predicate selectivity calculations

Lesson 8 : Application Tracing

- Configure the SQL Trace facility to collect session statistics
- Enable SQL Trace and locate your trace files
- Format trace files using the TKPROF utility
- Interpret the output of the TKPROF command

Lesson 9 : Identifying High-Load SQL

- ADDM
- Top SQL
- Dynamic performance views
- Statspack

Lesson 10 : Automatic SQL Tuning

- Describe automatic SQL tuning
- Describe the Automatic Workload Repository
- Use Automatic Database Diagnostic Monitor
- View the cursor cache
- Perform automatic SQL tuning
- Use the SQL Tuning Advisor
- Use the SQL Access Advisor

Lesson 11 : Index Usage

- Identify index types
- Identify basic access methods
- Monitor index usage



Lesson 12 : Using Different Indexes

- Use composite indexes
- Use bitmap indexes
- Use bitmap join indexes
- Identify bitmap index operations
- Create function-based indexes
- Use index-organized tables

Lesson 13 : Optimizer Hints

- Optimizer mode
- Query transformation
- Access path
- Join orders
- Join methods

Lesson 14 : Materialized Views

- Identify the characteristics and benefits of materialized views
- Use materialized views to enable query rewrites
- Verify the properties of materialized views
- Perform refreshes on materialized views

Lesson 11 : Managing Objects with Data Dictionary Views

- Use the data dictionary views to research data on your objects
- Query various data dictionary views

For more information please contact :
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