Course : Oracle, application optimization

Practical course - 4d - 28h00 - Ref. OPT
Price : 2350 € E.T.

★★★★★ **5 / 5**

In this hands-on course, you'll learn how to decisively reduce the response times of your applications. You'll understand how Oracle Database's integrated optimizer, analysis and management tools work. You'll be able to write high-performance SQL queries.

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Discover application optimization tools and techniques
- ✓ Get to grips with Oracle's integrated optimizer
- ✓ Optimize relational schema and SQL queries
- ✓ Analyze and optimize application performance
- ✓ Parallel query execution

Intended audience

This course is aimed at application developers and administrators.

Prerequisites

Good knowledge of SQL and PL/SQL.

Course schedule

1 Introduction

- Optimization approach, stages and players.
- Performance problems.
- Particularities of application types. Problem areas.

2 SQL query processing

- Internal mechanisms. Cursor sharing. Link variables in SQL*Plus and Enterprise Manager.
- Cursor sharing. Adaptive Cursor Sharing. Result cache.

Hands-on work
Use bind variables to share cursors.

PARTICIPANTS
This course is aimed at application developers and administrators.

PREREQUISITES
Good knowledge of SQL and PL/SQL.

TRAINER QUALIFICATIONS
The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS
The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES
• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

3 Diagnostics and performance measurement

- Optimization tools. Diagnostic traces. Services with customer applications.
- Trace your session. SQL trace files. SQL trace files.

Hands-on work
Using Tkprof.

4 Optimizing relational schema

- Main structures and access paths. Complete table scan.
- Speed up queries. B*Tree and Bitmap indexes. Index tables. Composite and invisible indexes.
- Index management rules. Temporary global tables.
- Data partitioning. Materialized views. Virtual columns.

Hands-on work
Query optimization.

5 The optimizer

- Data searches. Statistical or syntactic optimization. Statistics for the optimizer.
- Dynamic statistics collection. Data type conversions. Expression evaluation.
- Comparison operators. Subqueries. Join and data access methods.
- Manual query optimization using hints.

Hands-on work
Comparison of statistical and syntactic optimizers.

6 Query optimization

- Design and application. Compound predicates. Tree structures. Group functions.
- Unnecessary loops. Nested views and queries. Synchronized updates. Arrays in PL/SQL.
- Implicit/explicit cursors and batch line retrieval. FORALL.

Hands-on work
Optimization of batch processes.

7 Parallel execution of requests

- Multi-CPU server. Parallel queries. Automatic SQL statement tuning.
- Setting an application. STA advice function. Obsolete object statistics.
- SQL statement profiling. Plan setup flow and SQL profile creation.
- Database Control and STA consulting. Implementation recommendations.

Dates and locations

REMOTE CLASS
2026 : 26 May, 6 Oct.

PARIS LA DÉFENSE
2026 : 26 May, 6 Oct.