

# Course : Oracle Database, tuning

Versions 23ai to 12c

*Practical course - 4d - 28h00 - Ref. ORL*

*Price : 2760 CHF E.T.*

★★★★☆ 3,8 / 5

This training course will teach you how to identify performance problems in your Oracle databases and implement the appropriate solutions. In particular, you'll learn how to size the various memory zones (PGA, buffer cache, Shared Pool) and optimize logging and I/O.

## Teaching objectives

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

- ✓ Define the main Oracle database performance issues
- ✓ Sizing the various memory zones
- ✓ Diagnose and adjust various database objects
- ✓ Apply Oracle database optimization solutions

## Intended audience

Experienced Oracle Database administrators (18c to 23ai).

## Prerequisites

Good knowledge of Oracle DBMS administration or knowledge equivalent to that provided by the course "Oracle, DBMS administration" (ref. ORC).  
Experience required.

## Practical details

### Exercise

Alternating conceptual and practical presentations, applying to different versions of Oracle Database (from 18c to 23ai).

### Teaching methods

Active teaching methods enable constant exchange with participants. Exercises and feedback help to anchor the theoretical inputs.

## Course schedule

### PARTICIPANTS

Experienced Oracle Database administrators (18c to 23ai).

### PREREQUISITES

Good knowledge of Oracle DBMS administration or knowledge equivalent to that provided by the course "Oracle, DBMS administration" (ref. ORC).  
Experience required.

### 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.

## 1 Introduction

- How to optimize an Oracle database.
- Possible benefits, objectives, drawbacks.
- Surveillance service.
- Network compression.

### Exercise

Creation of a surveillance department.

## 2 Statistics and waiting events

- Dynamic performance views.
- EM Cloud Control or BD Express.
- Alert file, user trace and waiting events.
- AWR and Statspack repository, snapshots and reports.

### Exercise

Retrieve waiting events. Change shot collection frequency. Generate reports.

## 3 Statistics collection

- Statistical data collection.
- Dynamic statistics collection.
- Collection of system statistics.

### Hands-on work

Configuration and optimization of statistical data collection.

## 4 Optimizer and SQL Plan Management

- Manage statistics and execution plans.
- Identify access to database objects.
- SQL Plan Management. Automatic management of maintenance tasks.
- SQL Profile to optimize queries.
- Adaptive SQL plan management.

### Exercise

Generate execution plans. Use SQL Plan Management for application upgrades.

## 5 Managing reference measurements

- Adaptive thresholds and reference measurements.
- Define adaptive alert thresholds.
- Configure normalization measures.
- Real-time ADDM operations and diagnostics.

### Exercise

Monitor department processing.

### 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.

### TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

### ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at [psh-accueil@orsys.fr](mailto:psh-accueil@orsys.fr) to review your request and its feasibility.

## 6 Diagnostics and settings

- Problems related to SGA, PGA and automatic memory management.
- Dedicated/shared servers and connection pools.
- Library Cache activity. Buffer Cache, Flash Cache and block size.
- Segment optimization, automatic shifting and compression.
- Tablespaces, checkpoints, I/O, Striping And Mirroring Everywhere.
- Use Database Replay to diagnose problems and test the effects of modifications.

### Exercise

Optimization of Library Cache, Buffer Cache and automatic memory management.

## 7 Logging

- Setting checkpoints.
- Buffer Redo Log and log files.
- Impact of archiving.

### Exercise

Optimize file size.

## Dates and locations

### REMOTE CLASS

2026 : 7 Apr., 9 June, 15 Sep., 17 Nov.