

# Course : Oracle's SQL and PL/SQL contributions from 12c to 26ai

Discover Oracle's database evolutions

*Practical course - 2d - 14h00 - Ref. NSA*

*Price : 1600 CHF E.T.*

NEW

Alors que la version 19c restera supportée jusqu'en 2027, avant d'entrer en support étendu jusqu'en 2032, Oracle 26ai deviendra la prochaine version "long terme", à compter de sa sortie fin 2025. Les développeurs, bien qu'étant en alerte des nouveautés, manquent de temps pour les mettre en pratique. Cette formation condense les techniques de SQL et de PL/SQL qui n'ont cessé d'évoluer depuis la version 12c. Elle offre un tour d'horizon, avec la description des fonctions et packages récents, ainsi que la manipulation de données JSON et les aspects d'IA inclus dans la base.

## Teaching objectives

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

- ✓ Identify the benefits of different Oracle versions
- ✓ SQL and PL/SQL contributions from 12c to 19c
- ✓ Discover what's new in version 26ai
- ✓ Management of semi-structured data and AI in the database

## Intended audience

All those involved in SQL and PL/SQL development (developers, DBAs, data analysts, project managers, etc.).

## Prerequisites

Good knowledge of SQL and PL/SQL or those brought by the training courses "Oracle SQL", "Oracle SQL Perfectionnement" (ref. OSL, OSP) and "Oracle PL/SQL" (ref. ORD). Experience required.

## Course schedule

### PARTICIPANTS

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### 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

- Oracle version evolution.
- Support for Database product versions and editions.
- New features in the optimizer.
- Documentation, webography.

### Storyboarding workshops

Oracle Database versions since 12c.

## 2 SQL and PL/SQL contributions from 12c to 19c

- New column properties.
- ANSI joints with LATERAL, CROSS APPLY and OUTER APPLY.
- Temporal validity.
- Pattern recognition with MATCH\_RECOGNIZE.
- Qualified expressions.
- PL/SQL call restrictions (white lists).
- PL calls with WITH.
- Polymorphic PL/SQL functions.
- SQL macros.

### Hands-on work

Practical application of detailed points.

## 3 Discover what's new in version 26ai

- Annotations on objects.
- New SQL types and domains.
- What's new for SELECT.
- New functions for intervals and dates.
- New options for analytical functions.
- Table builders.
- New updates (direct joins, lock free).
- Automatic translation and compilation (SQL Transpiler).

### Hands-on work

Practical application of the new 26c features covered in this chapter.

## 4 Management of semi-structured data and AI in the database

- JSON management (SQL functions, indexing, data guide).
- Use of JSON (mapping with types and duality with relations).
- Graph manipulation with PGQL (Property Graph Query Language).
- Special tables (external online, blockchain and immutable).
- Vector searches (type and index).
- Remote functions and ONNX support.

### Storyboarding workshops

New features and benefits of version 26ai.

### 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 to review your request and its feasibility.

## 5 Supplements

- Temporary private tables.
- New in DDL.
- New roles and privileges.
- Roles for program units.

### Storyboarding workshops

What are the benefits of these supplements?

## Dates and locations

### REMOTE CLASS

2026 : 18 June, 17 Sep., 10 Dec.