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Sign up

Oracle Data Integrator Training

3 days (21 hours)

Overview

Master large-scale data integration with this comprehensive training course dedicated to Oracle Data Integrator (ODI). Designed for data professionals, this course will enable you to get to grips with the full range of ODI functionalities, from ELT modeling to data flow industrialization.

You'll start by exploring the fundamental concepts and architecture of ODI, before configuring the technical environment to build a solid foundation. Particular attention is paid to multi-source configuration and best practices for interoperability with Oracle, SQL Server or flat-file databases.

You'll then learn how to create powerful mappings, orchestrate conditional processing with packages and automate your workflows with scenarios, variables and dynamic procedures. Each notion is accompanied by concrete examples and real-life use cases.

Supervision, error management and processing security are also covered, enabling you to ensure fine, reliable and industrialized monitoring of your integration chains. You'll also learn about planning, deployment and integration in a DevOps context.

As with all our training courses, this one will be presented with the latest updates of Oracle Data Integrator.

Objectives

- Understand the Oracle Data Integrator ecosystem and its ELT architecture
- Configure the technical environment
- Create and automate multi-source data flows (mappings, packages, scenarios)
- Supervise processing and manage errors in a production context
- Integrate ODI into a DevOps approach and deploy industrialized pipelines

Target audience

- ETL / ELT developers
- Data engineers

Prerequisites

- Mastery of SQL

Oracle Data Integrator training program

Introduction to Oracle Data Integrator

- Positioning ODI in the Oracle ecosystem
- Comparison with other tools
- ELT vs. ETL: fundamental differences
- Component architecture : Repositories, Agents, Studio
- Topology, models, projects, scenarios

Architecture and installation

- Master Repository and Work Repository
- ODI Studio: Designer, Operator, Topology, Security
- Agent
- Software and hardware requirements
- Installing the Master Repository
- Creating a Work Repository
- Agent installation and registration

Topology configuration

- Creation of source/target technologies
- Declaration of Dataservers and Contexts
- Definition of physical and logical schemas
- JDBC parameterization
- Handling connection errors
- Configuration validation

Templates and Reverse Engineering

- Manual or automatic creation via Reverse Engineering
- Mapping between logical and physical models
- Use of datastores and columns
- Automatic structure detection
- Metadata refresh
- Use of constraints and indexes

Creating mappings

- Sources and targets
- Joins, filters, aggregates, expressions
- Custom queries
- Naming components
- ELT performance optimization
- Debugging and partial execution
- CSV file integration in an Oracle table
- Transformation with join and aggregation
- Incremental loading

Packages, sequences and scenarios

- Creation of processing flows
- Conditional calls, loops, parallel processing
- Actions: execute, mail, pause, etc.
- Scenario generation from mapping or packages
- Versioning and deployment
- Calling up a scenario from another

Dynamic variables, procedures and queries

- Types
- Dynamic initialization
- Use in mappings and packages
- Creating SQL or Shell procedures
- Use of dynamic parameters
- Linking in a package

Supervision and error handling

- Monitoring job execution
- Detailed logs: steps, errors, statistics
- Partial or total restart of a process
- Declarative error management
- Error handling via packages
- Automatic recovery

Security and user management

- Definition of ODI roles
- Object and module access rights
- Integrated or external authentication
- Password encryption
- Agent security
- Audits and traceability

Continuous integration and automation

- Export / import of scenarios
- Versioning with Git or SVN
- Deployment via ODI SDK or API REST
- Use of Oracle or external Scheduler
- Execution via ODI Agent or ODI Command
- Logs and automated alerts

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the forthcoming training course, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical training: 60% hands-on, 40% theory. Training material distributed in digital format

format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Certification

A certificate will be awarded to each trainee who has completed the entire course.