AMBIENT-IT

+33 (0)1 48 10 09 46
formation@ambient-it.net
140 Avenue Jean Lolive 93500 Pantin - France

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Sign Up

Semarchy xDI Training: Data Integration

3 days (21 hours)

Overview

Semarchy xDI is a data integration solution that enables you to design, execute, and monitor reliable data flows between databases, files, applications, and services.

Our Semarchy xDI training course will help you master the essential mechanisms for designing data flows, from modeling sources to loading data into target systems.

You'll learn how to use xDI Designer, create metadata, perform reverse-engineer them, and build mappings that include transformations, filters, joins, validations, and rejection handling.

The training will also guide you through process orchestration, execution in a runtime environment, monitoring of processing, and preparing deployments for production environments.

By the end of the training, you will be able to develop maintainable integration flows, diagnose loading anomalies, and apply best practices for performance, traceability, and deployment.

Like all our training courses, this one will introduce you to **the latest stable version** of the technology and its new features.

Objectives

- Understand the architecture and components of Semarchy xDI
- Create and organize an integration project in xDI Designer
- Model sources and targets using metadata and datastores

- Design mappings using transformations, joins, filters, and validations
- Orchestrate, execute, and monitor data flows using processes and the Runtime
- Preparing for the deployment and troubleshooting of production processes

Target Audience

- Data Engineer
- ETL Developer
- BI Developer
- Data Architect
- Database Administrator

Prerequisites

- Knowledge of data integration concepts and ETL processes
- Experience with SQL queries
- Knowledge of tables, keys, and relationships in a relational database
- Basic understanding of working with CSV and XML files

Technical Prerequisites

- Computer running Windows, Linux, or macOS with installation privileges
- Installation of Semarchy xDI Designer and access to an evaluation or enterprise license
- At least 8 GB of RAM and a recent processor to run the Designer and the local Runtime
- Access to a demo database and an SQL client
- Stable internet connection to download components and access technical resources

Semarchy xDI Training Agenda

[Day 1 - Morning]

Architecture and Design Environment

- Overview of Semarchy xDI and its role in an integration architecture
- Role of xDI Designer, Runtime, and xDI Analytics
- Organizing the workspace, projects, and development resources
- Exploring the interface, views, perspectives, and design wizards
- Principles of traceability, reusability, and naming of technical objects

[Day 1 - Afternoon] Metadata

and Initial Data Flows

- Creating metadata to represent databases, files, and directories
- Concepts of datastores, source structures, target structures, and connections
- Reverse engineering schemas and verifying technical properties
- Creating a simple mapping between a source file and a target table
- Local execution, reading logs, and verifying the load results
- Hands-on workshop: Create a project, import metadata from a source, and load a CSV file into a local database.

[Day 2 - Morning]

Designing transformation mappings

- Structure of a mapping and the design cycle for a data flow
- Column mapping, data types, conversions, and transformation expressions
- Implementing filters to select relevant data
- Using joins to consolidate multiple data sources
- Managing integrity constraints and quality rules in mappings

[Day 2 - Afternoon]

Data quality and rejection handling

- Identifying functional and technical errors during data loads
- Configuring rejection handling and control tables
- Using stages to separate the preparation and load phases
- Designing incremental data flows and handling duplicates
- Reviewing execution statistics and analyzing data anomalies
- Hands-on workshop: building a mapping with joins, filtering, transformation, and redirection of rejected records.

[Day 3 - Morning]

Orchestration and Execution of Processes

- The role of processes in the orchestration of mappings and processing
- Generating actions from mappings and configuring their execution
- Task sequencing, conditions, variables, and dependency management
- Logical scheduling of datamart loads
- Using Runtime logs to diagnose a runtime error

[Day 3 - Afternoon]

Deployment and Scaling of Workflows

- Preparing releases and managing versions of integration projects
- Deployment of metadata, mappings, and processes to a runtime environment
- Principles of configuring development, acceptance testing, and production environments
- Monitoring executions with xDI Analytics and tracking incidents
- Best practices for performance, connection security, and maintenance
- Hands-on workshop: finalize a complete flow, generate its process, run it in a runtime environment, and analyze its processing log.

Target Audience

This training is intended for both individuals and companies—large or small—that wish to train their teams in a new advanced IT technology or to acquire specific business knowledge or modern methods.

Assessment upon enrollment

The pre-training assessment complies with Qualiopi quality standards. Upon final registration, the learner receives a self-assessment questionnaire that allows us to evaluate their estimated proficiency level across various types of technologies, as well as their expectations and personal goals for the upcoming training, within the limits imposed by the selected format. This questionnaire also allows us to anticipate certain connection or internal security issues within the company (intra-company or virtual classroom) that could pose challenges for monitoring and ensuring the smooth operation of the training session.

Teaching Methods

Hands-On Training: 60% Practical, 40% Theoretical. Training materials distributed in digital format to all participants.

Organization

The course alternates between theoretical input from the instructor—supported by examples and reflection sessions—and group work.

Assessment

At the end of the session, a multiple-choice quiz is administered to verify that participants have successfully acquired the skills.

Certification

A certificate will be issued to each trainee who has completed the entire training program.

Training organization registered under number 11 75 54743 75. This registration does not constitute state accreditation.
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