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Updated on 10/08/2026

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Advanced Semarchy xDI Training

2 days (14 hours)

Overview

Semarchy xDI is an integration platform that enables you to design reliable, high-performance data flows suitable for production use. With advanced mappings, orchestration, error handling, deployments, and monitoring, you can scale complex data exchanges.

Our Advanced Semarchy xDI training course enables you to go beyond creating standard data flows to master the critical challenges encountered in demanding integration environments. You'll gain in-depth knowledge of designing robust mappings, using stages, handling rejections, and implementing loading strategies suited for large volumes.

You'll learn to build reusable, configurable, and maintainable processes, orchestrate dependencies, and secure executions. The training also covers environment variables, configuration management, and disaster recovery mechanisms.

Upon completion of the training, you will be able to optimize the performance of a Semarchy xDI flow, ensure the reliability of batch and real-time processing, and prepare consistent deployments across development, testing, and production environments.

Finally, this training addresses operational monitoring, log analysis, incident diagnosis, industrialized deployments, and best practices in technical governance to ensure the long-term operation of your integration flows.

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

Objectives

- Design complex, high-performance, and maintainable Semarchy xDI mappings
- Implement staging, rejection, and incident recovery strategies
- Orchestrate configurable and reusable processes
- Standardize deployments across environments
- Monitor executions and diagnose production anomalies

Target Audience

- Data Engineer
- ETL Developer
- Data Architect
- Semarchy xDI Administrator
- Data Project Manager

Prerequisites

- Proficiency in the fundamentals of Semarchy xDI
- Experience designing mappings and processes with Semarchy xDI
- Working knowledge of SQL and relational modeling
- Basic understanding of data exchange via files, databases, or REST services

Technical Requirements

- Computer running Windows 10 or Windows 11, or an environment compatible with Semarchy xDI Designer 2026.1.2
- Computer with 16 GB of RAM (recommended) and local installation permissions
- Access to a training environment that includes Semarchy xDI Runtime and Semarchy xDI Analytics
- Stable Internet connection allowing communication with training repositories, services, and training data sources

Agenda for our Advanced Semarchy xDI Training

[Day 1 - Morning]

Designing complex and resilient mappings

- Review of architectural principles for a maintainability-focused Semarchy xDI project
- Designing multi-source mappings with joins, unions, filters, and complex expressions
- Mastering stages to isolate transformations, validate data, and optimize processing
- Managing constraints, null values, duplicates, and quality rules in data flows
- Structuring rejection flows to ensure traceability and the reprocessing of anomalies

- Hands-on workshop: Building a multi-source mapping with staging, validation rules, and a rejection table.

[Day 1 - Afternoon]

Optimizing data loads and processing

- Analysis of factors influencing the performance of mappings and processes
- Selecting strategies for loading, inserts, updates, deletes, and detection of unchanged data
- Optimizing processing through logical partitioning, volume limiting, and reduction of data movement
- Leveraging the capabilities of JDBC connectors and processing executed as close as possible to the sources
- Implementing mechanisms for volume control, reconciliation, and load auditing
- Hands-on workshop: Optimizing an incremental load and measuring the gains achieved on a large dataset.

[Day 2 - Morning]

Orchestration, configuration, and operational reliability

- Designing reusable processes to orchestrate complex processing chains
- Advanced use of variables, parameters, execution contexts, and environment-specific configurations
- Managing dependencies, conditional branches, loops, and parallel executions
- Implementation of failover, idempotence, and controlled restart strategies
- Integration of files, REST services, and authentication mechanisms into a secure orchestration
- Hands-on Workshop: Creating a Configurable Process with Checks, Error Branching, and Recovery after failure.

[Day 2 - Afternoon]

Industrialization, deployment, and monitoring

- Organizing projects, deliverables, and versions to ensure the reliability of the development lifecycle
- Preparing packages and managing deployment configurations across development, acceptance, and production
- Managing executions with Semarchy xDI Analytics and interpreting monitoring metrics
- Log analysis, error diagnosis, and root cause identification
- Defining best practices for monitoring, alerting, documentation, and production support
- Hands-on Workshop: Deploying a Configured Workflow, Analyzing a Failed Execution, and Implementing a remediation plan.

Target Audience

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

Assessment at the Start of Training

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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