

Course : Spring Batch

Batch processing with Java and the Spring framework

Practical course - 2d - 14h00 - Ref. DSB

Price : 1500 CHF E.T.

Spring Batch is a Java framework specially designed for processing large volumes of data. At the end of this training course, you'll master the fundamentals of Spring Batch, key concepts such as Jobs, Steps, ItemReaders and ItemWriters, and the different types of batch processing.

Teaching objectives

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

- ✓ Mastering Spring Batch concepts
- ✓ Implementing the framework
- ✓ Setting up and running jobs
- ✓ Managing errors and exceptions

Intended audience

Architects, project managers, developers, engineers.

Prerequisites

Master the basics of Spring and Spring Core.

Practical details

Hands-on work

Alternating exercises, case studies and theoretical concepts.

Course schedule

1 Introduction

- What is batch processing?
- The solutions proposed by Java.
- Spring Batch architecture: Job, Step, Tasklet, ItemReader, ItemWriter.

Hands-on work

Create a simple Spring project and integrate Spring Batch.

PARTICIPANTS

Architects, project managers, developers, engineers.

PREREQUISITES

Master the basics of Spring and Spring Core.

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.

2 Job configuration

- Job creation: JobRepository, JobLauncher.
- Steps configuration: StepBuilderFactory.
- Tasklet definition: execution of customized tasks.
- Job execution: launch and follow-up.

Hands-on work

Set up a simple Job to read a CSV file, process the data and write to an output file.

3 ItemReaders

- ItemReader interface: reading items.
- Common implementations: FlatFileItemReader, JdbcPagingItemReader.
- Customizing an ItemReader.
- Exception handling during playback.

Hands-on work

Create a custom ItemReader to read data from a database.

4 ItemWriters

- ItemWriter interface: item writing.
- Common implementations: FlatFileItemWriter, JdbcBatchItemWriter.
- Customizing an ItemWriter.
- Exception handling during writing.

Hands-on work

Create a custom ItemWriter to write data to a database.

5 Error management

- The different types of error: skip, retry, fail.
- Configure error handling strategies.
- Customization of error handlers.
- Error logging.

Hands-on work

Implement an error management strategy for a complex job.

6 Performance optimization

- Optimization of ItemReaders and ItemWriters.
- Partitioning Jobs.
- Use of threads.
- Tuning Spring Batch parameters.

Hands-on work

Optimize a Job to process large volumes of data.

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.

7 Advanced features

- Error recovery.
- Logging and monitoring.
- Integration with other frameworks (Spring Integration, Apache Camel).
- Unit and integration testing.

Hands-on work

Implement error recovery for a critical Job.

8 Real-life use cases

- ETL (Extract, Transform, Load).
- Data migration.
- Flat file processing.
- Integration with external systems.

Hands-on work

Develop a simple ETL Job.

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Dates and locations

REMOTE CLASS

2026 : 30 Nov.

2027 : 11 Mar., 11 Mar., 27 May, 27 May, 30 Aug.,
30 Aug., 9 Dec., 9 Dec.