

Training Course Content

Implement continuous integration with JENKINS

Duration : 3 days

Languages : EN & FR

Continuous integration improves productivity by identifying problems during development rather than during a final "big bang" integration.

To achieve this, all project stakeholders must have access to an assembled, verified, tested and usable version of the current state of development at all times. To increase productivity, continuous integration is ensured by specialized software, which is the centerpiece of a true software manufacturing plant.

In this field, Jenkins software is the reference open-source product. Jenkins will automate countless tasks of construction, quality control, testing, deployment, monitoring and many other productivity gains.

Learning Objectives :

- Master the principles of Continuous Integration
- Understand the processes and methods
- Understand the notion of build
- Automate software production
- Deploy Jenkins on projects and administer Jenkins

Pre-requisites

The training requires to have followed the IJ-MAV1 Maven Development course or have equivalent knowledge or practice a programming language.

Audience

This training is intended for architects and consultants.

Course Content

Continuous Integration

- Definition, principles
- Software engineering concepts
- Best practices of continuous integration
- The software manufacturing chain

Using Jenkins

- Concepts, definitions
- Presentation of Jenkins as a build server
- Project archetype
- Build triggers
- Build result
- Workspace
- Guided tour of the interface
- Jenkins in the IDE
- Installing and starting Jenkins
- General configuration
- Installing plugins

Building a Java project with Maven

- Maven reminders
- Creating a Job
- Accessing the sources
- Guided tour of the JENKINS_HOME
- Monitoring and saving Jenkins
- Setting up Maven
- Unit test reports
- Sending notification emails
- Automatic deployment
- Quality analysis reports
- Entitlements

Building complex projects

- Chaining Maven projects
- Building a complete J2EE application
- Building a project with Ant
- Combining several tools
- Deploy in Maven repositories
- Managing application deployment

Using Jenkins in a cluster

- Configuring slaves
- Unix, Windows startup modes
- Distribution of jobs between slaves
- Good deployment practices

Jenkins administration

- Configuring Jenkins views
- Cross-platform considerations
- Jenkins scripts in the Groovy language
- Using the administrative command line

Practical exercises

This training consists of practical exercises to illustrate the subjects discussed and provides trainees with the opportunity to learn through practice.

Trainer skills

Our experts who run our training courses or those we organize with a partner are specialists in the subjects covered. They are validated by our internal teams, both in terms of business knowledge and pedagogy, for each course they teach. They have at least five to ten years of experience in their field and hold or have held positions covering business topics.