

# Course : Selenium platform, developer

**Install the Selenium platform and develop test APIs**

**Practical course - 3d - 21h00 - Ref. SLD**

**Price : 1920 € E.T.**

Ce cours à vocation très opérationnelle vous permettra de mettre en place un environnement de test complet autour de la plateforme Selenium et de développer un framework de tests métier à l'aide d'un des langages supportés par le projet Selenium (Java, C#, Python, Javascript).

## Teaching objectives

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

- ✓ Install and operate the Selenium platform and its components
- ✓ Program Web driver APIs for test execution
- ✓ Develop the "Keyword Driven Testing" framework and set up automated tests
- ✓ Integrate automated test suites into integration and validation processes

## Intended audience

Test automation consultants, test automation development engineers, development teams, test automators.

## Prerequisites

Good knowledge of test processes and an Object-Oriented Programming language.

## Practical details

### Hands-on work

Case studies with progressive examples based on management software (HR, CRM, ERP).

### Teaching methods

Teaching by example

## Course schedule

### PARTICIPANTS

Test automation consultants, test automation development engineers, development teams, test automators.

### PREREQUISITES

Good knowledge of test processes and an Object-Oriented Programming language.

### 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.

## 1 Setting up the test platform and development environment

- Presentation of platform components.
- W3C WebDriver API specifications.
- Setting up a complete architecture for test execution.
- Setting up the Java development environment.

### Hands-on work

Installation of the platform and testing of browser functionality.

## 2 Operating the Selenium platform and its components

- General structure of an automated business test. Application with different languages.
- Use Selenium Server to run tests on a remote machine.
- Use Selenium Grid and TestNG to run tests on several machines in parallel.

### Hands-on work

Preparation, execution and monitoring of test suites. Set up a grid of existing test servers.

## 3 API WebDriver: efficient programming of elementary test actions

- Recognition of components in a Web page using CSS and XPath selectors.
- Interaction with components (selection, double-click), application windows and the browser.
- Synchronize the test, wait for an event or an explicit condition.
- Capture an image of the screen in case of error or on demand.
- Additional APIs (Sikuli, OpenCV).

### Hands-on work

Program elementary test actions.

## 4 Towards a framework "Keyword Driven testing"

- Technical keyword frameworks.
- Feeding tests with external data.
- Generate test reports.
- Design and development of a "Keyword driven testing" API.
- Component repository, pattern "Page Object Model".

### Hands-on work

Application of Keyword Driven Testing. Managing keyword obsolescence.

## 5 Integration and deployment of automated tests

- Integration into Jenkins.
- Integration with a test repository, TestLink or Squash-TM.
- Integration with Mantis or Jira fault managers.
- Deploy tests on Docker containers.

### Hands-on work

Implementation and configuration using Jenkins. Demonstration of bridges to Squash-TM and Mantis.

### 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.

## 6 Summary and outlook

- Good organizational and technical practices.
- Successful implementation at key accounts: robot Framework and its Selenium library.
- Technology watch: Katalon Studio Open Source.
- Future prospects.