

Course : Test automation for Web applications

Practical course - 3d - 21h00 - Ref. ATO

Price : 2260 CHF E.T.

The diversity of technologies, browsers and servers complicates Web application testing. This course presents best practices for organizing the automation of this type of testing. Different types of proprietary and Open Source tools are presented and handled.

Teaching objectives

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

- ✓ Know the different phases and tools for implementing a test automation chain
- ✓ Discover and apply Web server automation tools
- ✓ Know and use different tools for testing Web GUIs on multiple browsers
- ✓ Organize and manage an automated test database for the Web over the long term

Intended audience

Development engineers, certifiers, testers, wishing to improve or acquire technical knowledge specific to Web application test automation.

Prerequisites

Good knowledge of a procedural or object-oriented language.

Course schedule

1 Introduction

- Review of test types (unit, integration, functional, stress, load, etc.).
- Server-side testing (business component unit, performance, stress).
- Client-side testing (GUI, robustness).

PARTICIPANTS

Development engineers, certifiers, testers, wishing to improve or acquire technical knowledge specific to Web application test automation.

PREREQUISITES

Good knowledge of a procedural or object-oriented 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.

2 Automation phases and tools

- Preparation of test data and oracles.
- Test execution and evaluation.
- Production of test reports.
- Test automation chain.
- Continuous integration server.

Hands-on work

Automatic test chain integrated into a continuous integration server.

3 Automate server-side testing

- Tools available for different platforms: Java EE, .Net, PHP.
- Unit testing of business components with and without containers.
- Integration tests with and without dummy objects (Mocks).
- Web services testing.
- Server stress tests. Deployment tests.

Hands-on work

Implementation with EJB3Unit, PHPUnit, DBUnit, WSUnit, TestNG and DBUnit. Comparison with tools dedicated to the .NET platform. Stress testing with JMeter or Gatling.

4 Automate client-side testing

- Client-side testing and tuning tools.
- Test robots for functional user testing.
- Development libraries dedicated to automation.
- Locate GUI components (position, Id, Css, XPath...).
- Manage message boxes and alerts.
- Unit testing and Javascript.
- HTML page testing, cross-browser testing.
- Automatic tests and Rich Internet Application (Flex, JavaFX, ...)

Hands-on work

Automate tests on HTML pages of increasing difficulty. JsUnit, HTMLUnit, Ranorex or testComplete. Test programming with Selenium IDE and Selenium Server with Katalon Studio.

5 Organizing and maintaining automated tests

- Tools for test management and upstream traceability to requirements.
- Coping with functional and technical changes.
- Web component repository.
- Notion of layers and functional abstraction.
- Parallelize tests on a network of machines.

Hands-on work

Implement a complete test cycle with TestLink, Mantis, Selenium: manage requirements, tests, anomalies, robot and results. Demonstration of Selenium GRID.

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.

Dates and locations

REMOTE CLASS

2026 : 3 June, 9 Dec.