



SAP Campus in Walldorf, © SAP AG

Simply faster and
more reliable:
automated web
application testing

CASE STUDY

SAP accelerates the automated process
of its testing applications with Lixto



Lixto WATS (Web Application Testing Solution) complements internal tests of SAP Business ByDesign

On the one hand web-based enterprise applications offer customers ready-to-use and intuitive solutions; on the other hand they are often quite complex due to highly dynamic contents, thus posing certain challenges for the internal test environments of software providers (When automating the testing of web interfaces traditional approaches are simply not feasible.).

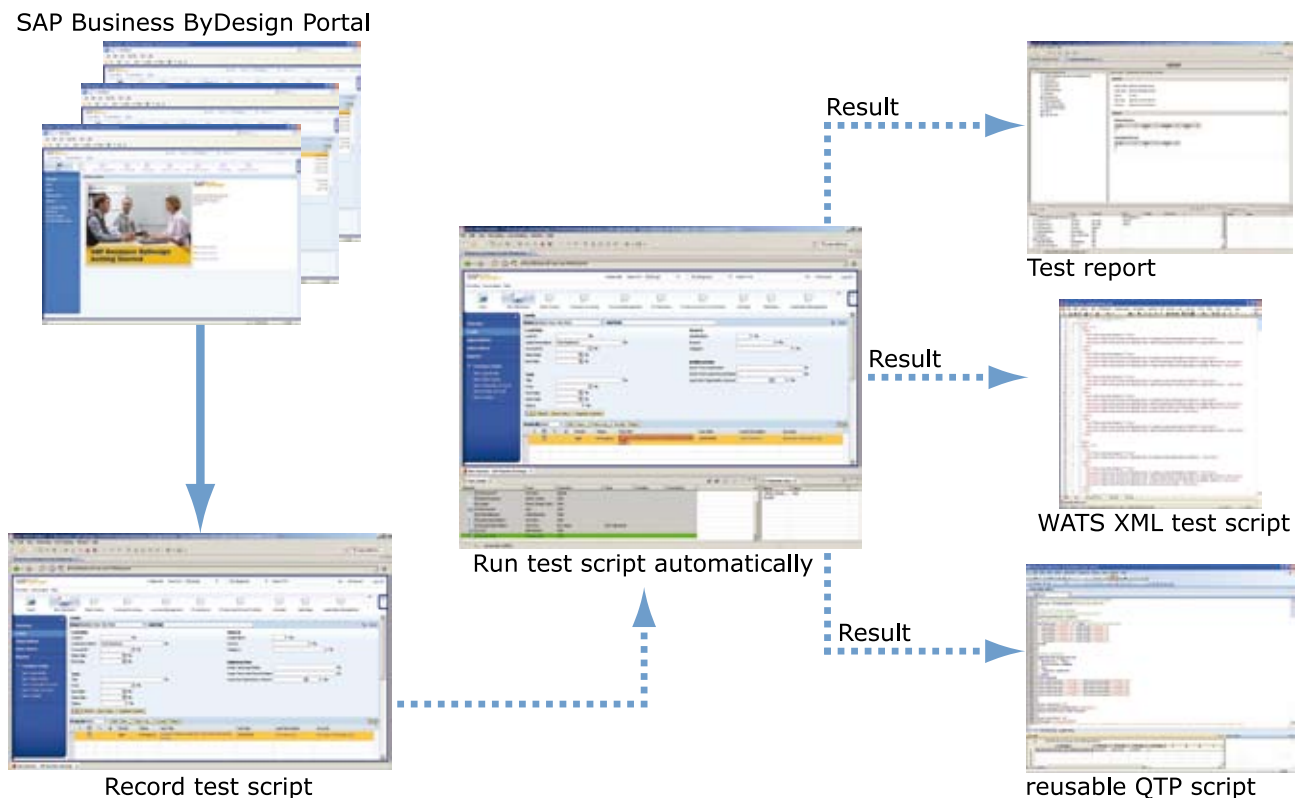
To steadily increase the automation degree of the necessary tests for web interfaces SAP complemented its standard test framework (HP QuickTest Professional, HP QTP) with a solution from Lixto in early 2008. The Lixto Web Application Testing Solution (WATS) supports SAP's internal test environment in the area of GUI regression tests: The functionality of web user interfaces and applications is automatically tested.

Then the test cases can be transferred to HP QTP for further processing. SAP uses Lixto WATS for tests with SAP Business ByDesign, its proprietary solution for medium-sized enterprises.

Visual Test Environment

After a thorough and multi-phase evaluation of technology, feasibility and solution competence SAP has

decided to co-operate with Lixto in terms of web application testing. Lixto WATS is the result of common efforts. It is based on the visual development environment Lixto Visual Developer and features specific requirements such as SAP Widgets. Lixto Visual Developer allows the extraction of web data from highly dynamic web applications and automated processing without manual intervention.



Lixto WATS process: Recording a test script in SAP Business ByDesign Portal and automated execution of the test script. Results of the test run are provided in various formats.

Solution

With Lixto WATS complex tests for web user interfaces can be recorded and automatically executed in various versions of Business ByDesign. The creation and processing of test cases is now easier and faster while test scripts offer automation that in turn makes running these tests more stable.

During the GUI regression tests Lixto helps to simulate human behavior (clicking on items). For this purpose the data extraction steps are tightly integrated with the web navigation that enables automatic recording and reproduction of complex navigation sequences even on web pages with dynamic changes. Web objects are recognized automatically and without manual adaptation.

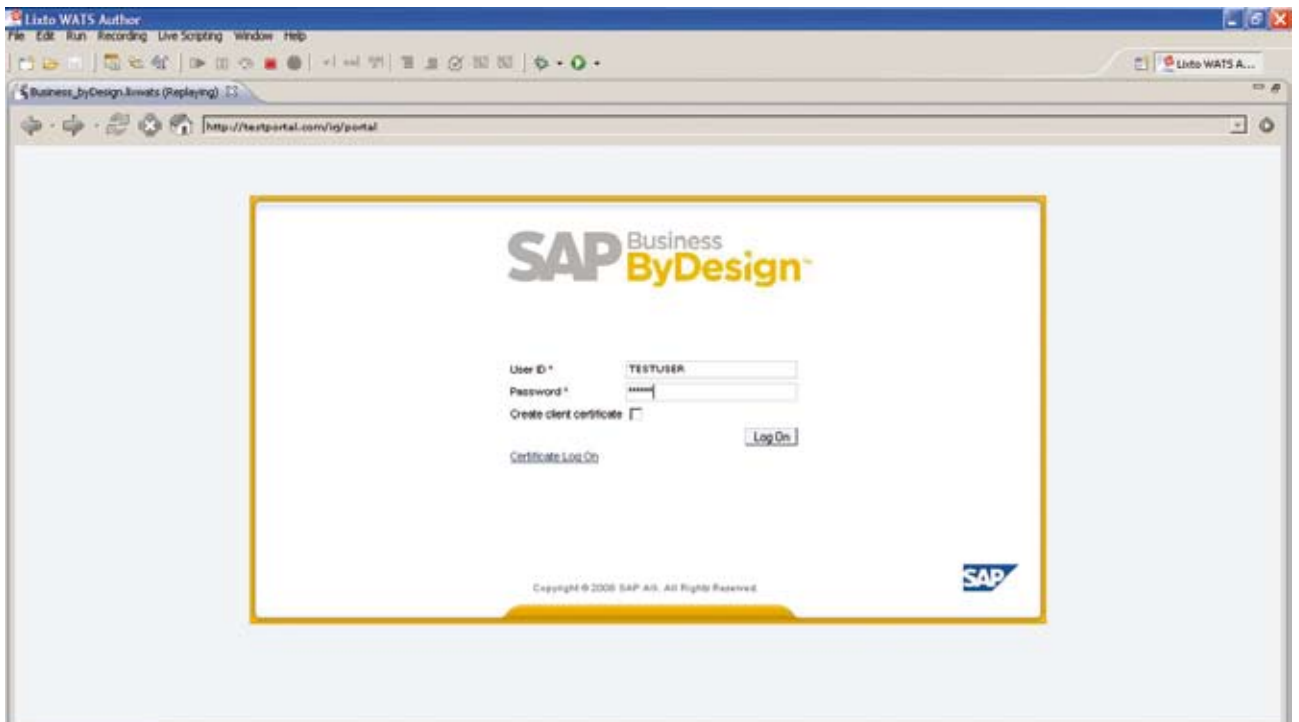
The use of ramifications, values and checkpoints can be controlled with dialog boxes during the recording process. Lixto WATS is ideal for testers who have no skills in web technologies. Variations of test scripts with different parameters are easy to use. Thanks to its recognition mechanisms and fallback strategies Lixto WATS is resistant against changes of the web application to test. Reports on the execution of test cases provide a detailed overview of the processes run and can be integrated with test management platforms and exported to QTP.

Benefits

„With Lixto WATS we are able to test any kind of web user interface in an automated way. Thus we can tremendously accelerate development cycles and time to market,“ says Thorsten Vieth, Head of Operations, Test and Quality Teams at SAP.

„Moreover we see how easy it is to use WATS. There is hardly any training necessary. This allows us to quickly expand test teams during release times.“

With Lixto WATS testers only need a maximum of two days training. In the past the training session took very long. Apart from that, the degree of automation while testing can be increased further. Tests that in the past had to be carried out manually can now be run automatically.

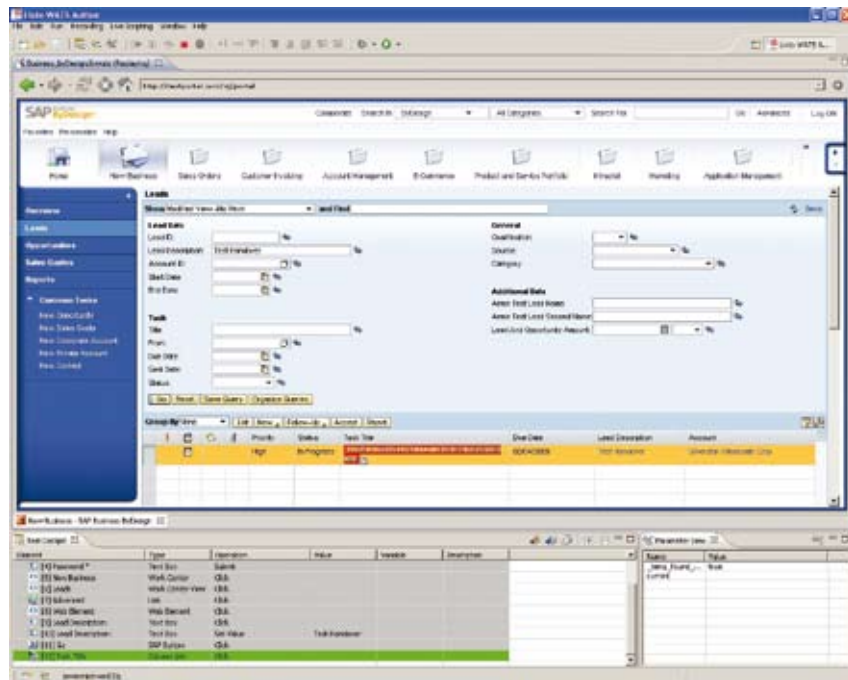


Test script recording via usual browser interaction

Future plans and development

SAP uses Lixto WATS in India and Germany. For the area of test solution management the Bangalore site employs 15 testers, the German one around 15 to 20.

Since the start of the project SAP has transferred all existing 100 test scenarios (workflows) on the Lixto platforms, thereby creating a WATS library with over 300 test cases. After Lixto's solution was implemented in the development center in India in November 2008 further rollouts are planned for China.



Execution of a WATS test run via automated click on a hyperlink

About Lixto Software

Lixto extracts specific and precise data from the web to drive operational performance and real-time competitive price visibility for travel & transport, consumer products and automotive supply chain clients.

Lixto Software was founded in 2001 as a spin-off of the Vienna Technical University. Its customers are international companies in the automotive supply chain, travel & transport, consumer products and IT industry, such as Fujitsu and SAP.

www.lixto.com

Summary

Company

- SAP AG

Industry

- IT

Use

- Solution to test web applications (GUI regression test)

Existing situation, business requirements and aims

- Supplementing solution for SAP's internal test environment for web applications
- Increases the degree of automation in web application testing (when creating test cases)
- Facilitates the creation of test cases
- Automation for a more stable execution
- Reliable detection and ease of use facilitate maintenance processes

Solution

- Web Application Testing Solution (WATS) from Lixto based on the LVD platform
- Graphical recording of complex test cases for web user interfaces and the automated execution of those cases in different versions of Business ByDesign
- Integration with SAP's company-wide testing platform HP Quicktest Pro

Benefits

- Far fewer efforts to create and manage the different test cases used in web interface testing
- User-friendly, no expensive and time-consuming training of test staff necessary, facilitates knowledge transfer
- Speeds up development cycles and time to market of web applications

Future plans and developments

- Implementation in the SAP development centers in China

Lixto products

- Lixto WATS (Web Application Testing Solution) based on the Lixto Visual Developer



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