

# Functional Test Automation with DevOps Capabilities for Dolphin Dynamics Using Selenium Framework



## A Case Study

Case Study: Functional Test Automation with DevOps for Dolphin Dynamics



## Background

Dolphin Dynamics provides sales and back-office software solutions for travel agents and tour operators. They build solutions on the Microsoft stack, developing their software using Visual Studio, SQL Server and TFS. Testhouse had engaged with them to review their software processes and they identified a need for functional test automation support to assist their ongoing drive for quality improvements. They decided to explore the use of Selenium for automating tests as a replacement for their existing Telerik Test automation suite which was not fulfilling their demands for a scalable and easy to maintain test automation solution.

## Challenges

Dolphin had a clear view of the automation solution they were looking to achieve. This needed to ensure a wide range of test coverage which would integrate into their CI process (using TFS) so that automation scripts could be run against every CI build (3+ times per day) and against their main QA environment (daily). They also required detailed reporting that could be easily understood by their QA team, who had limited automation or developer skills. As a small business, budget was also a challenge and needed to compete with their previous automation approach of using internal staff for automated testing.

## Solution

Testhouse provided a free proof of concept (POC) to demonstrate the capability of their custom-built Selenium frameworks. The client was given a choice of the implementation language to be used and choose C#, as this fitted with their internal development processes. A team of offshore automation testers were deployed by Testhouse to automate a pack of test cases that were pre-defined by Dolphin Dynamics. Our team contained Microsoft experts so that code could be stored in TFS and we could assist in setting up the automated test into their CI process. During

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the automation build phase, we had weekly progress calls with the client team to ensure that what was delivered met their expectations. This allowed us to identify any scripts issues at an early stage and refine the reporting standards to meet the needs of the Dolphin Dynamics QA team. Scripts were delivered incrementally throughout the project so that value could be derived from the automation pack at an early stage.

## Impact and Outcomes

- Testhouse worked closely with Dolphin Dynamics to ensure that they received an automation solution that would align with their agile processes and fit their ongoing requirements.
- Using Testhouse's Selenium framework saved Dolphin Dynamics time and money and created a solution that can be maintained easily as part of their fast-paced release schedule.
- Testhouse's offshore team provided first class automation and DevOps capability whilst also aligning with the client's budget constraints.
- The client is now running 27 automated test flows against their application daily. Previously, these tests would only have been able to be run once every 40-day development cycle period.
- Dolphin Dynamics have now engaged with Testhouse to provide on-going, flexible support to maintain their automated test pack.

## Testimonial

“The key to our success with Testhouse was taking a collaborative approach in which we provided detailed requirements from the outset which were accurately converted by the Testhouse team into the end tests we sought. We met regularly to ensure the project was meeting our expectations and so any issues could be detected and rectified quickly and early

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in the process. We talked through any concerns we had and, on such occasions, achieved a resolution both parties agreed with.

We now have a suite of automated high-level tests flows that run daily. These will be also integrated into our CI process to enables us to run against multiple environments, providing a benchmark of quality daily. We fully expect to extend the suite to provide even greater coverage of the critical flows with in our web based applications, providing us with an even broader indicator of product quality.

Previously, workflow tests were only being run once per development cycle, during our regression period, and so the benefit gained has been two-fold. First, we are now able to catch issues as soon as they are introduced and, secondly, these tests can be run repeatedly, with the reporting feature requiring with minimal manual effort when reviewing test run results."

### *Test Manager - Dolphin Dynamics*



Testhouse is a thought and market leader in Software Quality Management, Application Lifecycle Management (ALM) and DevOps, providing on-site, on-shore and off-shore test services, either on-demand or outsourced, including consulting, software testing solutions and training globally, focussing on traditional IT, mobile, cloud and internet of things platforms. The expertise of Testhouse's 200 staff across four continents, our innovations, and strong global partners ecosystem, which includes Microsoft, IBM, and HP, provides the knowledge and solutions to fill the largest gap in the testing industry identified by business leaders: how to accelerate software delivery at optimal quality in the most cost-effective way to meet their business priorities and their clients' needs. [Contact us](#) to know more about how our offerings can vastly improve your customer satisfaction levels.

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