



# Maintain and Improve Application Quality on All Target Platforms

Whitepaper, May 2012

## **Manage Cross-Platform Automated Testing from a Centralized Location by adding froglogic's Squish to HP's Quality Center ALM**

Maintaining product quality for every supported platform while keeping pace with rapid software development is a major challenge for any organization. Many businesses are finding it increasingly difficult to perform adequate testing for every supported platform, especially now, with the increasing number of platforms. Manual testing or single-platform testing, such as Windows-only solutions, no longer suffice, and even with automated testing in place, the ability to manage and make the most of automated test suites can be challenging. Selecting and implementing the best combination of toolsets can make the difference between success or failure in the marketplace as customers increasingly demand stable and properly tested products.

### **Testing Coverage**

For each operating system or technology interface your customers or prospects use, how many are tested using your current automated testing solution? And how about the new platforms you plan to sell your products on in the future? Without proper software testing your company risks loss of reputation and all its consequences.

Many automated testing solutions support only a small proportion of the technology platforms active in today's market. Simply maintaining the same level of quality for each software release when only a small percentage of tests can be automated greatly reduces the amount of time available to thoroughly test the application.

And for all its importance, automated testing is only one aspect; also consider management of the tests, test results, testing coverage, and which areas of your application are more prone to bugs than others. Using an integrated Cross-Platform Automated Testing and Application Lifecycle Management solution can provide visibility into testing coverage and vulnerabilities as well as greatly increase testing coverage without requiring more staff or more testing time.

With the right tool chain in place you can know the percentage of defects found pre-release by automated testing and manual testing versus post-release by customers. Using this information, you can determine what additional automated testing needs to be put in place to reduce the post-release customer-reported defects, and you can actively view the progress of your adjustments over time. A centrally managed automated test suite can optimize your test suite's value and help you maintain a level of test coverage, enabling you to provide a quality application for release after release.

## Evaluating the Problem

With so many different technologies in use today, comprehensive testing across all platforms is a daunting task. As a first step, identify all the current and likely future platform and technology variations for your software solution. To successfully test each platform and technology variation, both manually and using automated testing, it is essential to find the best set of tools for the task. Identifying a solution that enables teams to collaborate, create, execute, maintain and manage the resulting suite of tests is essential. Ensuring all the required tools can work together, keeps teams from operating in silos, and increases the effectiveness of the organization as a whole. For multiple-platform testing, consider using froglogic's Squish, a cross-platform automated testing tool, and integration with HP's Quality Center ALM.

## Squish and HP QC ALM—Perfect Partners

Adding froglogic's Squish to HP's Quality Center ALM, increases your automated testing coverage and management capabilities from either zero, or merely Windows-based, to a broad range of supported platforms and technologies.

Consider the number of widely used operating systems and software technology interfaces used today:

- Operation Systems: Window, Unix, Linux, Mac OS X, iOS and Android
- Technology Interfaces: Qt, Qt/Embedded, Java, Web, Windows, Mac, iOS, Tk, 4js, Android

Combined, these technologies represent more than 20 Operating System / Technology combinations. To keep things simple, we will only concern ourselves with a single version of each operating system as well as technology interface, but in most cases, multiple versions are supported (e.g., Windows XP, Windows Vista, and Windows 7), further increasing the number of permutations.

Many industry automated testing solutions have limited automated testing coverage for a single operating system with support for just a few technology interfaces.

Using froglogic's Squish, a wide variety of Operating Systems and Technology Interfaces are supported:

Operating Systems	Squish	QTP
Windows	YES	YES
Unix	YES	NO
Linux	YES	NO
Mac OS X	YES	NO
iOS	YES	NO
Android	coming soon	NO

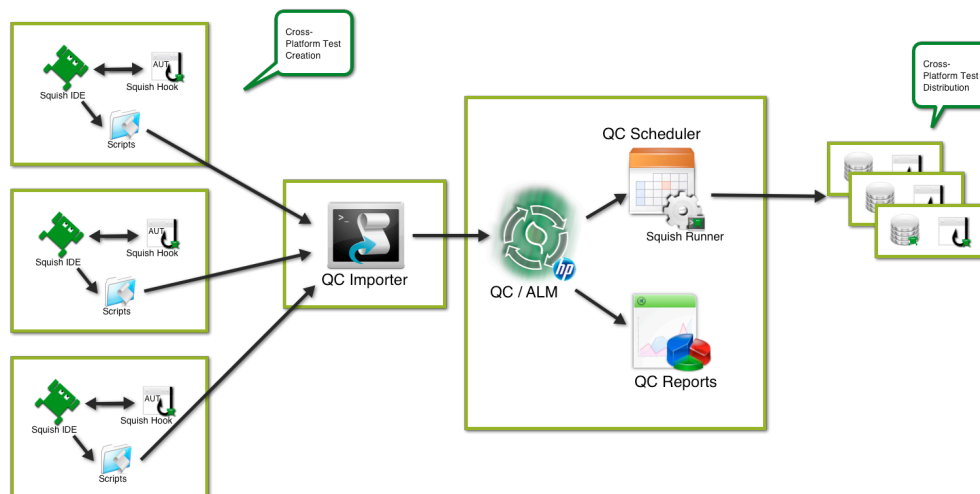
Technology Interfaces	Squish	QTP
Qt	YES	NO
Qt Embedded	YES	NO
Java	YES	YES
Web	YES	YES
Windows	YES	YES
Mac	YES	NO
iOS	YES	NO
Tk	YES	NO
4js	YES	NO
Android	coming soon	NO



Furthermore, using froglogic's Squish integration with HP Quality Center ALM, you can produce high-quality software for each supported Operating System and Technology Interface, executing and managing your automated testing from a centralized location.

Whether you're a Squish or HP QC ALM / QTP user, new to the automated testing industry, or considering complementing or replacing your automated testing tool, adding Squish to HP QC ALM will expand your testing coverage capabilities and optimize your management experience.

Let's examine how the tools work together. Figure 1: Architecture (below) depicts Squish, the Application Under Test (AUT) and the resulting scripts, or test cases, on multiple remote systems;



- Squish's QC Importer which remotely receives commands and imports scripts to HP QC ALM;
- HP QC ALM as the centralized management interface;
- HP QC ALM's Scheduler which works with Squish Runner, triggers the execution of a set of given scripts (test cases) as per a user-defined schedule and runs on one or more remote systems;
- HP QC ALM's Reports that contain the results of test case executions.

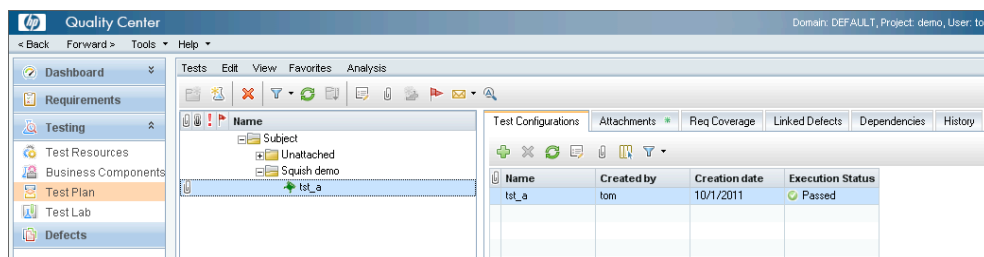
Squish's QC Importer makes it easy to synchronize your Squish Test Suites with HP QC ALM and maintain your Squish Test Suites.

## QC Importer Sample Import

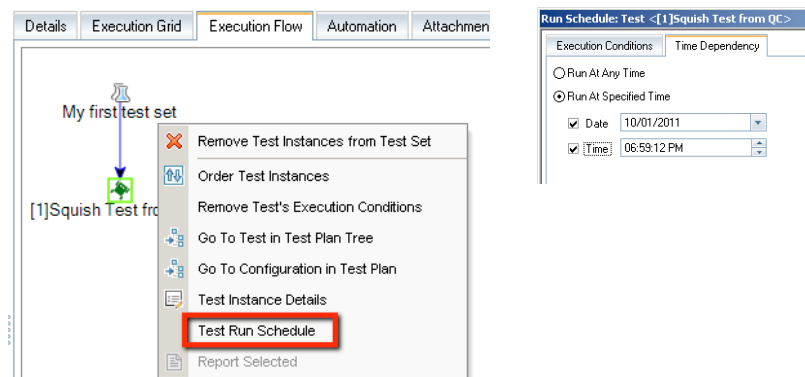
```
d C:\qc11\qcimporter
set TESTCASE=C:\qc11\tests\suite_demo\tst_demo1
set OBJECTMAP=C:\qc11\tests\suite_demo\objects.map
set SERVER=localhost
set DOMAIN=DEFAULT
set PROJECT=demo
set USER=tom
set PATH="/Squish demo"

qcimporter.exe --testcase %TESTCASE% --objectmap %OBJECT-
MAP% --server %SERVER% --domain %DOMAIN% --project %PROJECT%
--user %USER% --path %PATH% --replace
```

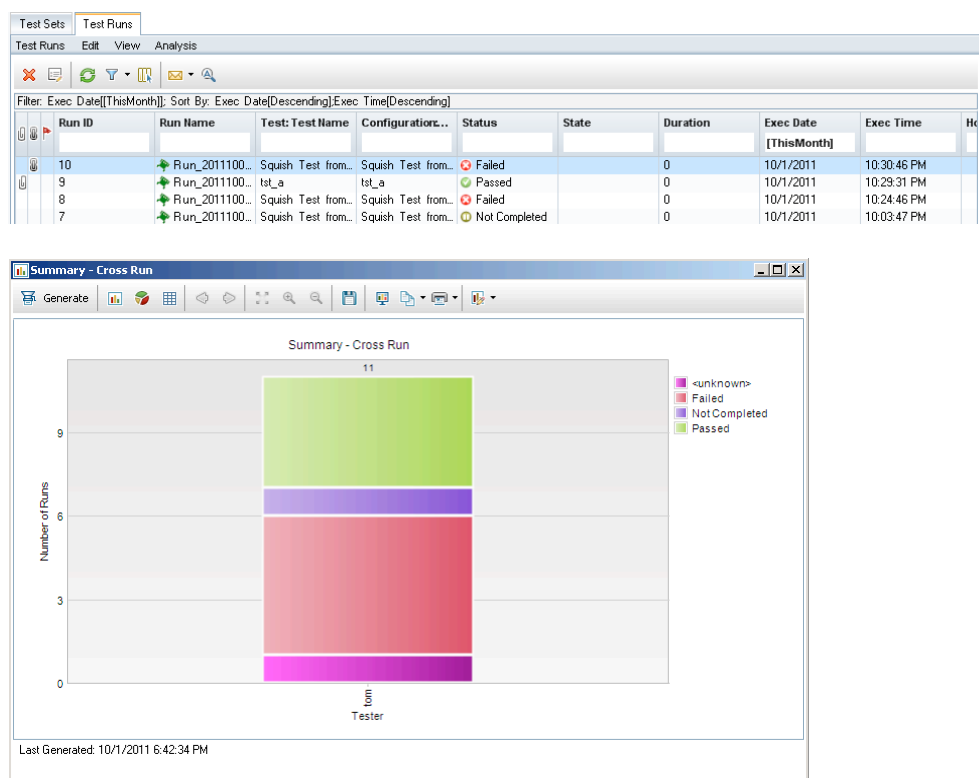
Imported Squish test cases appear in the Test Plan as shown in the figure below:



Once imported you can execute your Squish Test Suites either manually or using the QC Scheduler which can run tests unattended, day or night.



Reporting metrics and the test execution history are automatically captured and illustrated using HP QC ALM's extensive reporting compatibilities. It is also easy to configure Squish to capture screenshots and details automatically when errors occur running your Squish Test Cases, and include these details in the associated defects listed within HP QC ALM's defect tracking feature.



## Test Runs and Reporting

The comprehensive reports derived from running your Squish Test Suites not only capture existing defects, and confirm the accuracy of critical features, but also provide traceability and insight into key areas for improvement within the software solution, development life cycle and testing strategies.



## Conclusion

Collaborating your testing efforts from a single management interface, and expanding your automated testing coverage to a larger set of Operating Systems and Technology Interfaces can produce higher quality software solutions for your expanding community of end users. Comprehensive automated testing coverage promotes confidence and increased release reliability with expanded testing coverage and visibility.

**For more information, or to schedule a demonstration contact [sales@froglogic.com](mailto:sales@froglogic.com) or visit [www.froglogic.com](http://www.froglogic.com).**