Worksoft Case Study
Improved Stability and Faster Development

"Because of the evolving nature of disease organisms and emerging antibiotic resistance and new drug therapies, Dade Behring needed an automated testing software solution that could keep pace with our product development. Worksoft® Certify vastly improved our coverage-the amount of testing we could do in a short period of time-and gave us the flexibility to work on multiple products simultaneously. Most importantly, we have an increased confidence that our software is essentially free of significant defects, which is critical with a product that can impact the health of critically ill patients."

- Bob Mende, Senior Systems Engineer, Group Leader of Automated Testing, Systems Integration Group, Dade Behring

Point2 Technologies, Inc.

Point2 Technologies Inc. is a global leader in the development of complex capital asset management services for the heavy equipment and real estate industries. Software from Saskatoon, Canada-based Point2 puts sophisticated inventory management, large-scale branded marketing tools, and advanced customer relationship management into the hands of non-technical users.

CHALLENGE

For more than two years, Point2 tested its software using the Mercury Quick Test Professional™ (QTP) solution from Mercury Interactive. However, scripts and tests took too long to update with each new release of the testing application. QTP also proved unstable, delivering different results from the same script.

Having lost confidence in this testing software, Point2 decided to compare QTP's results to those of the Worksoft Certify® automated testing solution. The primary objective of this comparison was to determine whether the company should switch to the Worksoft Certify solution.

Points of comparison included speed of test creation and maintenance, tester sharing issues, test organization and reporting capabilities. To make the comparison, Point2 tested CatUsed software from Caterpillar, Inc., one of the company's major licensees. Peoria, Illinois-based Caterpillar is the world's largest manufacturer of construction and mining equipment, diesel and natural gas engines, and industrial gas turbines.

WORKSOFT CUSTOMERS

Worksoft's customers are among the most successful companies in their respective industries. A common thread among Worksoft customers is a commitment to exploiting leading edge technology solutions that lead to a sustainable and significant competitive advantage in the marketplace.

Worksoft's customers include such industry leaders as AFLAC, Charles Schwab and Northrop Grumman, all of whom have deployed Worksoft's flagship product, Worksoft Certify, within their organizations.

WORKSOFT CERTIFY®

From the back office to the front line, software applications once viewed as a productivity enhancement are now seen as a competitive weapon. In the past, however, software test automation required that test cases be documented by business and quality analysts, then translated into a specialized scripting language by programmers. As a result, test automation hasn't delivered on the promise of cutting testing time and costs.

Until now. Seeking to simplify and accelerate software quality testing, Worksoft Inc. offers an innovative approach called progression testing. Our comprehensive software testing solution eliminates the need for programming, so it can be used by business analysts and other expert users who know the business best. Our flagship product, Worksoft Certify, structures information about critical business processes and how they should operate in a way that is easy to define, automate and maintain. This approach slashes the time and cost of software test automation by 60% or more, helping businesses attain significant and sustainable competitive advantage.

RESULTS

Worksoft Certify trumped Point2's existing QTP testing solution across all areas of comparison.

TEST CREATION AND MAINTENANCE

QTP could only record objects that the user interacts with during the test; alternatively, it could capture all page objects. This page capture operation takes a great deal of time and results in a huge binary repository plagued with stability, ease of use and maintainability issues. To interact with dynamic objects, the tester must use a scripting language-one of Point2's biggest maintenance issues with the existing solution.

Test creation in Worksoft Certify involves mapping each page in the application using the Learn utility. This utility allows testers to rename objects in a user-friendly fashion based on a pre-defined naming convention; it also allows for quick capture of a tree structure representation of page objects. Once learned, objects can be hidden, renamed and dynamically generated. The utility quickly imports the maps into SQL, making them available for direct selection by the test creation interface. Functions within Worksoft Certify allow testers to easily interact with dynamic objects captured during the mapping phase.

The strength of the Worksoft Certify application centers on its ability to generate and maintain browser test objects and to efficiently search, replace, add or delete objects in the SQL Server backend database. If the application under test (AUT) changes between regression tests, the page in question can be quickly loaded, remapped and re-imported into Worksoft Certify. While it initially takes longer to set up the maps with Worksoft Certify, the time involved in subsequent test creation and maintenance improves dramatically. After initial map creation, Worksoft Certify test generation proved to be fast, self-documenting and low maintenance.

TESTER SHARING ISSUES

The QTP testing solution uses either a standalone repository for each test or a shared repository-the shared repository being helpful in terms of test maintenance. To maximize shared use of tests, Point2 had divided CatUsed into three different repositories. However, only one tester could work in each repository at any given time. Also, since this information resided on the file system, Point2 had to use an open source offering (SVN) for version control. The large files created during report generation can take a very long time to update; also, too much overhead is created when changes are added or committed.

Worksoft Certify uses an SQL database that contains all testing plans, application and environment data, page mappings, reports and tests. Worksoft Certify Admin is installed on a server, and each tester runs a client application that communicates through the network. Testers can work independently of one another, except when importing maps into the SQL database. When creating or modifying existing tests, testers can interact independently with mapped objects in the database. If a user has an existing test open, a second tester attempting to open that same test will see it as read-only.

Because Worksoft Certify uses SQL as the backend, Point2 can benefit from concurrent test creation, version control that does not rely on SVN, and reduced test management time.

TEST ORGANIZATION

QTP provides only one main application window in which a user can define, run and debug tests. In addition, an Excel-style interface may be used to define data for data-driven tests. While the software allows for the running of VBScripts, debugging is not supported at this level. A test results viewer allows for test execution analysis; however, clear descriptions of test steps are not provided and a great deal of additional coding is required to add more descriptive information. While the report displays a visual result for failed steps, this feature is not very reliable.

Worksoft Certify gives users greater control over the testing process through the following test organization modules:

- The Plan module, which enables users to define requirements for the product and assign them to other testers.
- The Organize module, which enables the definition of users, groups, roles, applications, environments and user-defined fields. Users may also easily copy complete environments, facilitating versioning between different product releases.
- The Define module, which allows users to create variables for tests, create data layouts for data-driven tests, and import maps into the database.
- The Perform module, which allows users to define, run and debug tests for an application. It also provides the means to quickly search for objects in the application.
- The Analyze module, which allows users to determine the number of steps passed and failed in each test run. Testers may also drill down to analyze the reason for failure and log incidents from the reporting section.

With Worksoft Certify, Point2 can define requirements and always have all application objects available for test generation. Object naming practices in Worksoft Certify ensure the availability of easy-to-understand reports. Worksoft Certify also contains built in functions that allow for working with dynamic objects, searching, and screen verification without programming.

REPORTING CAPABILITIES

Only a test results viewer is included in QTP. For a thorough reporting function, Point2 would need to purchase the Mercury Test Director™ application separately. Worksoft Certify, on the other hand, provides a number of testing reports for use in monitoring and evaluating applications: Test Coverage, Requirements Coverage, Process Analysis, Cycle Analysis, Status Analysis, Test Execution Progress Analysis, Repository Metrics and Execution Metrics. Each of these reports may be exported to Excel, Crystal Reports, Access, Word and other formats.

Worksoft Certify's reporting capabilities allows Point2 to track test progress and share it globally. In addition, Worksoft Certify provides Point2 with the ability to define and generate its own reports using Crystal Reports with the SQL database as the foundation.

CONCLUSION

The Point2 Testing Team believes the above results indicate that the Worksoft Certify software testing solution will promote faster development, improve maintainability and stability, and provide a more collaborative and scalable test environment than the Mercury QTP solution. Over the long term, Worksoft Certify's built-in functions for interacting with dynamic objects should increase the robustness of Point2's tests, decrease maintenance, and allow testers to increase the number of test cases and improve regression coverage.

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