

Product Testing and Performance Enhancement



“Client required reliable and extensive quality assurance and testing services...”

The Client

The Client is an award-winning video content management system that enables efficient, coordinated, and collaborative rich media management for a small group of users or all the users-within a large organization. The video management application is flexible, easy to deploy and support, easy to use, and integrates easily with a wide range of complementary video and Web technologies.

The Business Challenge

The client requirements included for us to set a process of executing a system with the intent of finding defects in their product. This process provided a set of activities designed to ensure that the development and/or maintenance process they are employing was adequate to ensure their system meets their expanding objectives at optimal levels. The client required the use of open source tools to automate the entire testing process & provide quality assurance.

Initially the process of testing was manual but with our urging the client agreed to convert the testing process into automated test scripts using an open source tool.

Manual Testing

Manual Testing is a process carried out to find the defects. In this method the tester plays an important role as end user to verify all the application features to ensure the application was performs at optimal levels. Manual testing is a very basic type of testing to help to find the initial bugs in the application when it is placed under stress. It is the preliminary testing that must be carried out prior to the automated testing. This manual testing is also used to check the feasibility of automation testing. A “Test Plan” is created and followed by the tester to ensure the comprehensiveness of testing. Executing the test cases manually without using automation testing tool in the beginning will improve the automated testing capabilities.

Automated Testing

This type of testing uses automation tools to write and execute test cases. No manual intervention is required while executing an automated test suite.

Testers write test scripts and test cases using the automation tool and then group into test suites.

Benefits of Automation Testing

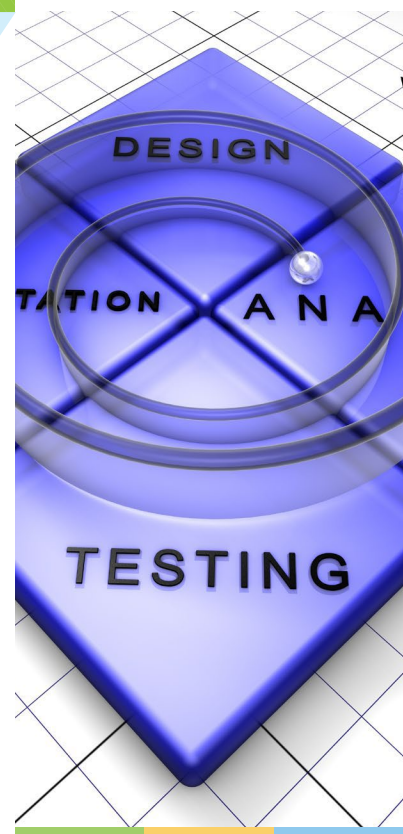
- > Reduction of repetitive work
- > Repeatability
- > Greater consistency
- > Increased access to information about tests or testing

Quality Assurance

Q.A. includes a systematic process of checking to see whether a product or service being developed is meeting specified requirements. Many companies employ a whole department devoted to quality assurance. The focus for most Q.A. departments is to increase customer confidence and a company's credibility, to improve work processes and efficiency, enabling a company to better compete in the marketplace. Our client partnered with Telliant to be their Quality Assurance team reducing the need to employ their own while still completing the necessary testing to be highly competitive in the market-place.

Telliant Differentiators

- > Excellent understanding of the video content management domain
- > Offshore customer-centric delivery model reduces time to market and lowers cost of test driven development
- > Quick response to issues and operational challenges
- > Flexible and scalable pool of technically skilled resources



“ Telliant assembled a team consisting of Business Analysts, Software Engineers, QA Engineers and a Project Manager that worked with consultants & 3rd party partners to achieve the objective optimally. ”



The Engagement

The scope of services provided by Telliant included the following:

- Gathering of business requirements and technical specifications
- Performance analysis and benchmarking
- Project based and routine application testing & quality assurance management
- Ongoing testing and quality assurance for the project

Solution Highlights

Telliant provided the necessary services to comprehensively address the client's application testing needs. The highlights of the solution are provided below:

- Quickly addressed customer requirements and specifications, detailed analysis and documentation as performed for writing the test cases and test plan
- Prepared and executed comprehensive module-wise test cases for the entire application to identify the defects to assist the developers with their application updates plan
- Capability testing was performed on the various operating systems (Windows & Mac) and browsers (IE, Chrome, Firefox and Safari).
- Manual testing was used to identify GUI (Graphical User Interface) issues and address them.
- Testing Team provided timely inputs and detailed reports to assist developers with correcting both the UI and functional bugs before application went into production to end users.
- Automated entire process of testing using Selenium Web driver Testing Tool

➤ Selenium Web Driver

WebDriver uses a different underlying framework from Selenium's javascript Selenium-Core. It also provides an alternative API with functionality not supported in Selenium-RC. WebDriver does not depend on a javascript core embedded within the browser, therefore it is able to avoid some long-running Selenium limitations.

WebDriver's goal is to provide an API that establishes

- A well-designed standard programming interface for web-app testing.
- Improved consistency between browsers.
- Additional functionality addressing testing problems not well-supported in Selenium 1.0

➤ Benefits of Selenium Web Driver

- Multi-browser testing including improved functionality for browsers
 - Handling multiple frames, multiple browser windows, popups, and alerts.
 - Page navigation.
 - Drag-and-drop.
- Regression testing was performed using the automated testing scripts to increase the efficiencies of the application
 - Test Suite was created to be very dynamic and flexible, which can be executed on any of the browser Chrome, Firefox an I.E
 - Automated test inputs were delivered using configuration files which can be executed on development, staging or production server by simply changing the values in the configuration file
 - Provided solution based bug reports with which the programmers/developers were able to efficiently fix the defects at ease without much effort which saved lot of the developers time

Benefits

- Building a testing solution that was rich in functionality, high on performance and easy to administer
- Low cost of testing and quick time to market to capitalize on the emerging opportunities in the industry
- Improved user experience.

To learn more about how we can help achieve your goals in the ever-evolving world of IT and innovation, please visit www.telliant.com

TECHNOLOGY ENVIRONMENT

Telliant was responsible for identifying and implementing the most appropriate technology for the testing.

The Major Technology Components and Tools:

- **Languages:**
Java, Microsoft .NET 4.5, C#.Net and VB.Net, AJAX, J-Query, JavaScript, CSS, JSON
- **Tools:**
Selenium Web driver, Chrome driver, IE Driver, MS- Excel, Microsoft TFS, Basecamp
- **LMS/CMS:**
Blackboard Building Block, Canvas (Q4 2013), Desire2Learn (Q1 2014), Drupal, Moodle, Word Press.
- **Database:**
SQL Server 2008
- **Third Party tools:**
Wowza Media Server

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