REST API Automation using SoapUI with GIT & Jenkins Integration

Objective

Our client is a 20 year old business and technology solutions firm, required to test its enterprise mobile application which helps enterprise sales forces and individual sales associates to manage productivity better and improve sales operations by organizing their customer data, planning daily sales routes and improving customer relationships. Application required automated advanced testing of web services due to frequent changes in the functionality. Also they have plan to integrate other CRM with application, so web services automation can give rapid delivery and smooth releases. Rishabh Software was appointed as their QA and enterprise application development partner.

Challenges

- Increasing volume of regression testing
- Parameter selection, parameter combination, call sequencing
- Identifying the right tools for testing
- No documentation available to understand functionality of app
- Dealing with complex test scenarios resulting from interfaces between heterogonous applications

Approach

The testing team at Rishabh Software understood the mobile app & release model.

- The client was using Chrome plug-in called as Restlet Client - DHC Pro for manual testing, so they wanted the automated scripts for testing the Rest web services using open source tool.
- The client was using Git as central repository, all the scripts were to be linked to this repository for future reference.
- The client had Continuous Integration with Jenkins which is used continuous integration for developers as well as testers scripts. Jenkins was linked to the repository of the latest automation scripts and these scripts were scheduled, so they run every day on the latest code and email the test report to the responsible owner.
- Test suits need to be packaged in a manner such that it can be called independently.

Rishabh Software's QA & Testing team wrote functional test cases to identify input parameters for each services, identify the global properties, project level property, test suite level property, test case level property, identify services to apply property transfer concept – response of one service as an input for another service, verify test cases by defining different types of assertions and generate SoapUI scripts using different features like multiple environment support, data driven approach, different types of assertions : e.g. SOAP Response, XPath Match, XQuery Match, Script Assertion, property transfer, and Groovy scripting. Live automation scripts were integrated with Jenkins through testing.xml for executing test suite and .bat file to execute .xml and sync automatically with the repository ever time a script changes and check-in to the Git repository. HTML test reports were auto-generated and emailed to the testers after successful execution of automation solution.

Business Benefits

- Ensured 100% Functional Test coverage
- Eased testing of REST API-based web services
- Supports test execution of web services in a cloud environment
- Reduced testing efforts over regression cycles

Industry Segment

Digital Enterprise

Customer Profile

A business & technology solutions firm offering IT assessment, systems integration, application development, mobility applications, cloud computing and legacy system modernization to small and large enterprises for over 20 years.

Technology and Tools

- SoapUI
- Jenkins
- Git
- Groovy

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