

## Open Source Test Automation Framework

### An Operations service provider gets real-time test results with Open Source Test Automation Framework Implementation.

**Challenge:** To attain real-time test updates for the web-based Issue Tracking system based upon Jira and create issues for the bugs found in Defect Tracking system cost-effectively.

**Solution:** fooServ implemented Java-Selenium RC based test framework leveraging open source technologies.

**Result:** Almost real-time automated testing of multiple test instances of system under test.

#### About client?

Client is a Network Operations & Domain Hosting Service Provider with 100s of live domain operations spread across the world. Their need was to have a customized Issue Tracking System conforming to their Issue Lifecycle workflow based upon Jira. This was available in Controlled Availability for System Integration Testing.

#### The Challenge

Being in System Integration Testing the system had multiple instances with different workflow configurations and all had to be tested for possible Production scenarios. Manual testing of all of them could be a Structured and sequential process meaning longer time to be Production ready.

Commercial Test Automation tools were expensive, mammoth to implement and difficult to maintain. Free test tools were second option but their knowledgebase and reliability was flaky. In purview of these constraints, the client approached FooServ and requested to come out with a trustworthy customized test automation solution using best and cost effective utilization of technologies.

#### The Solution

Client's need was not unique. Thousands of small & mid-sized companies are struggling to strike a balance between Commercial Test Automation tool's High Maintainability & High Cost and Free tool's scattered knowledge & expertise availability. FooServ already realized this perennial gap much before and had a solution based upon free Open Source technologies.

The solution is a Java based framework for driving tests using multiple test tools by a single command. Being a Selenium RC implementation, testers can design tests in a spreadsheet; the framework would run them on the Selenium server. Single command can trigger all the tests and generate Test reports without any manual intervention. Subsequently the Jira webservice integration using SOAP protocol enables the framework to log bugs in the Defect Tracking instance of Jira seamlessly and in real time.



Features	Benefits
1. Keyword driven (English words instead of scripting)	1. Low cost
2. Extensible for any open source test tool like Selenium	2. Distributed test design & execution
3. Fully customizable—new keywords can be designed to perform OS/network/other actions.	3. Low infra requirements
4. Flexible for processing keywords related to test tool or other network/OS operation.	4. No learning curve (no scripting or coding required)
5. Spreadsheet based test design.	5. Benefits of multiple test tools can be combined using API integrations.
6. Supports RIA technologies.	6. Integrated Jira Dashboard for defect management.
7. Remote execution.	

**Infrastructure Deployed**

Server	Client
Java 1.5+	Java 1.5+
Selenium RC installation	Spreadsheet package (MS Excel, open office etc)
Other Selenium system requirements	Test Framework client (Executable JAR)

**The Result**

The client got the test execution framework provided by FooServ which shortened the test cycle by significantly thereby reducing the total time to market (Production release) assisting client in saving Commercial test tool and Issue tracking tool costs.

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