Objective: The objective of this program is to create a POC (Proof of Concept) for Automating the Smoke Testing of BHF eApp Application. The POC will include automating the FRA Product for smoke testing. As part of automation, a new FRA policy will be created and submitted to nbA. During the data entry process, in each page, some client and server-side error message validation will be performed.

Tools Used: Selenium with Java.

Advantages of Selenium:

* **Selenium is an Open Source Software.**

All Selenium Projects (Selenium IDE, Selenium RC, Selenium WebDriver and Selenium Grid) released under the Apache license are free to use.

* **Selenium supports various programming languages to write programs (Test scripts).**

Java, C#, Perl, Python, Ruby and PHP

* **Selenium supports various Browsers (Mozilla Firefox, Google Chrome, IE, Opera, Safari etc…)**

Once we create Test cases then execute the Test Cases using all Popular Browsers without any changes in Test Cases. Browser driver only varies from one Browser to another Browser, but Test cases are same.

Note: Selenium IDE (one of the tools in Selenium’s Tool suite) supports Mozilla Firefox Browser only.

Disadvantages of Selenium:

* **No reliable Technical Support from anybody.**

Since it’s Open Source software, no dedicated support is available. Only user and professional community support is available.

* **Difficult to use, takes more time to create Test cases.**

Selenium WebDriver (Powerful tool in Selenium’s Tool suite) has Programming interface only, no IDE, so we must write steps for each task. They take more time.

If it is UFT/QTP has Programming interface as well as IDE, we can Tool features (Ex: Recording, Checkpoints, Data Table etc…) and VBScript features (Ex: Conditional statements, Loop Statements, Functions etc…) to create Tests/Test Scripts.

* **Limited support for Image Testing.**
* **New features may not work properly.**

Since it is open source software nobody is responsible for new features usage, they may or may not work properly. If it is vendor tool (Ex: UFT or RFT or SilkTest), vendor is responsible for new features usage.

* **No Built-in Reporting facility.**

Selenium WebDriver doesn’t have built in Result Report facility, we need to take help from either JUnit or TestNG Testing Framework to generate Test Reports. We can create our own test report using open source APIs like Extent Reports.

UFT/QTP has built-in Result Reporting facility (Test Result Viewer), UFT provides Test Result for every Test iteration.)

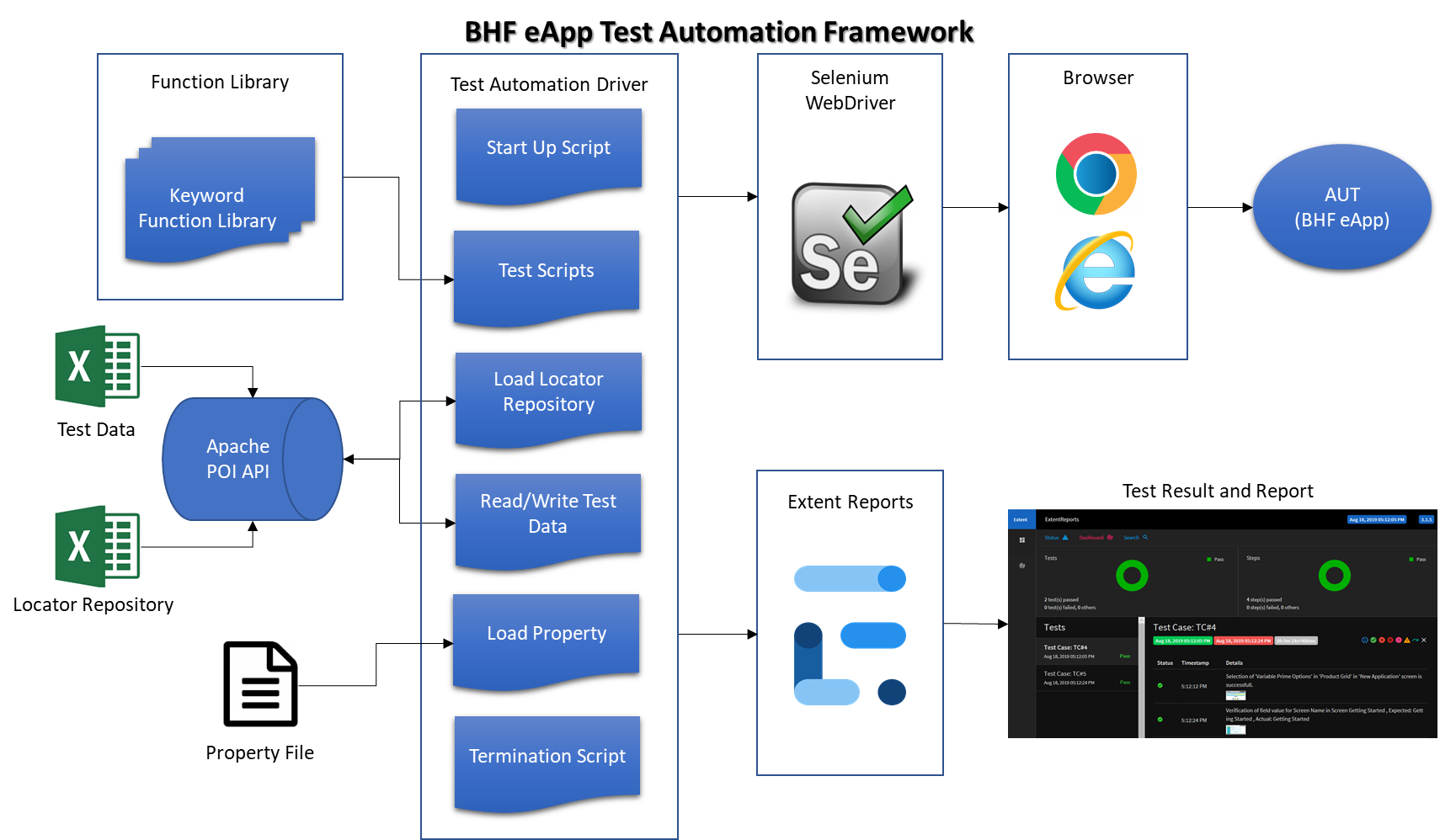
Framework Selection: Hybrid Framework will be used to create the Test Automation for eApp. It will be a combination of Keyword and Data Driven Framework. The keywords will be used to drive the test steps in each test case.

Ex of Sample Keyword:

SetValue – To put a value in a web field

VerifyClientMessage – To verify client-side error message for a field.

VerifyPolicyStatus – Verify the policy stats in In-Progress or Submitted Index.



Result: A simple FRA Product has been automated for smoke testing.

Total time taken for running the case:

Time take for running the same case manually:

Effort Saving:

Areas that cannot be Automated:

* GUI look and feel verification.
* Accord xml verification.
* PDF Generation and Data Population verification.