



A Guide to QA Automation Tools in 2019

Reviewing and comparing commonly used tools in today's market

2019 | Ramin Mammadov

Introduction

Today, test automation is being considered as the most effective way to enhance the testing process for any software application. Choosing and using the right set of test automation tools is the major factor for the successful automation of software testing. This can be very challenging because there are so many tools in the market, each with their own strengths and weaknesses. There is not a single universal tool that can fit all automated testing needs.

One of the options to identify the appropriate automation tool would be a qualitative comparison of popular tools. When searching for the best automation tool, the focus should not only be on how to ease the testing process, but also on how to bring more efficiency to the testing mechanism. A decision should be based on testing objectives, business goals, and budget. There should be a strategic approach to choosing the right automation tool. Depending on these factors, a decision can be made either to choose a licensed tool or an open-source tool. Read on for an overview and comparison of some commonly used tools in the market today.

Selenium

Selenium is perhaps the most popular automation framework because it combines so many tools and plugins for web and mobile application testing, and it's free to use. It has an extremely powerful capability for performance testing of a web application. With Selenium, a user is able to run tests under multiple browsers simultaneously, which makes it a favorite amongst testing teams. Developers and testers can use Selenium with any coding language that they are comfortable with, such as C#, Java, JavaScript, PHP, Python, and others.

The only downside of this tool is that it requires teams to invest time upfront for setup and integration, requiring testing teams to have strong programming skills and experience.

TestComplete

TestComplete is a platform for desktop, mobile, and web application testing. It has a number of key test automation features such as keyword and data driven testing, cross-browser testing, API testing, and CI integrations. TestComplete supports a number of languages including JavaScript, Python, VBScript, JScript, DelphiScript, C++Script, and C#Script for writing automated test scripts. This tool can be used by highly skilled and experienced testers as well as beginners.

Appium

Appium is an open-source tool. The significance of this tool lies in its ability to test native apps that are written using iOS, Android, or Windows SDKs, mobile web apps that are accessed using a mobile browser, and hybrid apps, which are for testing iOS, Android mobile, and Windows desktop platforms. However, the most important feature of Appium is “cross-platform”, which allows users to write tests against multiple platforms (iOS, Android, Windows) using the same API. This enables code reuse between iOS, Android, and Windows test suites.

Katalon Studio

Katalon Studio is a testing platform that offers a comprehensive set of features to implement full automated testing solutions for web, API, and mobile. Built on top of the open-source Selenium and Appium frameworks, Katalon Studio allows teams to get started with test automation quickly by reducing the effort and expertise required for learning and integrating these framework. However, this tool has a lack of choices for scripting languages as it only supports Java/Groovy.

Unified Functional Testing

Unified Functional Testing (UFT) formerly known as QuickTest Professional (QTP), is probably the most popular commercial tool for functional test automation. UFT offers a comprehensive set of features that can cover most functional automated testing needs on desktop, mobile, and web platforms. However, UFT only supports VBScript.

EggPlant

EggPlant is known for its various features which enables testing the functionality and performance of a developed application across devices and operating systems. It works with any coding language with one or more scripts where users can establish test scenarios on multiple devices and operating systems. It offers multiple ways for integration with application lifecycle management software such as HPE Quality Center, IBM Rational Quality Manager, and Jenkins. It also provides the developers and testers with the ability to create, plan, schedule, and execute automated tests on various mobile platforms.

Ranorex

Ranorex is known for its cost-effectiveness. It is very user-friendly for effective testing via desktop, web, or mobile. This tool can be seamlessly integrated into testing environments, can be adapted across standard programming languages,

and offers a leaner test suite structure. For example, it enables Selenium WebDriver integration in Ranorex Studio, provides access to Selenium with the Ranorex tools, and provides plug-in free web testing across major platforms and browsers. Ranorex tests functionality of the application with required inputs from both the tester and developer and increases the chance to easily identify bugs. It can be Implemented for both small and large-scale projects.

Tosca

Tosca is one of the most sophisticated tools on the market. It enables users to effectively manage test cases. Specifically, it reduces testing time, manual testing efforts, and brings down the costs by executing the tests on the platform. It requires less maintenance and helps to adopt more agile working patterns. Hence, it helps the user to focus more on business goals for the application. Some key features of implementing Tosca are re-using test assets, redundancy-free test cases, and test cases that can be executed with a simple drag and drop pattern. Moreover, it helps cut downtime and hardware by disseminating automated tests across virtual machines, computers on the network, or the Cloud.

Conclusion

Any automation testing effort has to be implemented and planned by keeping the business objectives, goals, and budget in perspective. There is no one-size-fits-all tool. Testers must thoroughly evaluate various tools in order to choose what would best meet their automated testing needs.

Programming languages and technologies used to develop software continue to evolve, as do the automated testing tools, making cost a significant factor in selection. Commercial vendors often charge for tool upgrades, which can be substantial if the software uses emerging and frequently changing technologies.

To start the process of selecting the right tool for current project, one must create a list of tools that appear to be a good fit for current automation requirements, schedule a demo, talk to the tool vendor, and see if the tool matches specific automation testing requirements. By evaluating every feature of the tool and dedicating enough time for research, the right tool will become clear.

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