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## A Curated List of Best Software Testing Tools for Automation and Manual Testers.

*An essential toolkit for a Software Tester. It has worked for us! It will work for you!*



Essential list of tools for Software Testers

**T**here are multitude of free and paid tools available in the market for Software Testing. Everyday more get added. With so many options at hand it becomes a daunting task to choose the right one. One can find a plethora of articles on the Internet which describe and compares various different tools. What is missing is a comprehensive article which recommends the **ONE** best tool in each Software testing area such as functional, performance, manual, automation etc.

This article serves to give a master list of tools which you may need to do your job as a Software tester, efficiently. I have listed **ONE** of our favorite tools in each Software Testing category which are used by our Testing team at [TestFramework.io](https://testframework.io). The recommended tools listed below are extensively vetted and used by our team, which makes me

confident to say that you wouldn't go wrong by adopting these tools in your testing arsenal.

**Disclaimer : We are not affiliated with any of the tools recommended here, nor do we make any money by recommending them. This article is written solely to help the testing community pick the set of tools which we feel are the most stable and best in their class. This is based on our opinions and experience and your experience may differ. Please free to comment with constructive information to add to this list to benefit the software testing community.**

This article is organised to help you skip to the section which is relevant to you based on your Software Testing type and platform.

## Automated Testing Toolkit

This is a list of all the tools which we highly recommend for functional testing of Browser based and native apps.

**Selenium**—Though there are a lot of companies marketing Script-less Browser automation testing tools, none of them comes closer to the stability, functionality and the scalability of Selenium WebDriver. Selenium Webdriver is the essential tool for the UI Automation of web browser based apps.

*License : Free*

*Where to get it from : <https://www.seleniumhq.org/>*

**Selenium Page Object Generator**—If you are using Selenium, this Page Object Generator Chrome Plug-in is a must-have tool. This tool which generates the Page Object Model on an active Chrome tab with a single click, almost like magic. You do not have to hand code those page objects for every elements any more if you use this tool.

*License : Free*

*Where to get it from : <https://chrome.google.com/webstore/detail/selenium-page-object-gene/epgmnmcjdhapiojbohkkemlfkegmbebb>*

**Firebug**—This Firefox add-on is a must have for Automation testers. Firebug integrates with Firefox to put a wealth of development tools at your fingertips while you browse. You can edit, debug, and monitor CSS, HTML, and JavaScript live in any web page.

*License* : Free

*Where to get it from* : <https://addons.mozilla.org/en-US/firefox/addon/firebug/>

**Appium**—Though not perfect, this is still the best test automation framework for use with native, hybrid and mobile apps. Plus it supports iOS, Android and Windows apps, making it a versatile framework for use on most mobile platforms.

*License* : Free

*Where to get it from* : <http://appium.io/>

**TestNG(Java) or pytest(Python) or NUnit (C#)**—With Selenium/Appium, you would need a Testing Framework tool which will help you define test cases, test suites and run them efficiently. Depending on which programming language you are using with Selenium or Appium, pick the associated Test Framework to run your test scripts. These frameworks are also used to run your Unit test cases.

*License* : Free

*Where to get it from* : TestNG—<https://testng.org/> , pytest—<https://pytest.org/> , NUnit—<https://nunit.org/>

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## Manual Testing Toolkit

The following tools are the ones you should have in your toolkit if you are a manual Web/Mobile tester. Each of these tools does some thing specific to help you increase your testing speed and overall efficiency.

**Web Developer**—The Web Developer extension adds a toolbar button to the browser with various web developer tools. There are million plus

users of this extension, which is a testament to its usefulness.

*Where to get it from :*

<https://chrome.google.com/webstore/detail/web-developer/bfbameneiokkkgbdmiekhjnfmfcnldhdm?hl=en-US>

*License :* Free

**Responsive Web Design Tester**—Responsive Web Design Tester is a quick and easy way to test your responsive website. You can use this to test your mobile site on a variety of mobile devices. This extension mimics both the size and the browser of the mobile device.

*Where to get it from :*

<https://chrome.google.com/webstore/detail/responsive-web-design-tes/bdpekpjhfiacjebkhlkkgaphboba?hl=en-US>

*License :* Free

**Bug Magnet**—Exploratory testing assistant for Chrome and Firefox. This tool adds common problematic values and edge cases to the context menu (right-click) for editable elements, so you can keep them handy and access them easily during exploratory testing sessions.

*Where to get it from :* <https://bugmagnet.org/>

*License :* Free

**ColorZilla**—Advanced Eyedropper, Color Picker, Gradient Generator and other colorful goodies.

*Where to get it from :*

<https://chrome.google.com/webstore/detail/colorzilla/bhlhnicpbhignbdhedgjhgdncnmhomnp?hl=en>

*License :* Free

**Whatfont**—The easiest way to identify fonts on web pages.

*Where to get it from :*

<https://chrome.google.com/webstore/detail/whatfont/jabopobgcpjm-edljpbcaablplmlfcogm?hl=en>

*License : Free*

**Page Ruler**—Draw a ruler to get pixel dimensions and positioning, and measure elements on any web page.

*Where to get it from :*

<https://chrome.google.com/webstore/detail/page-ruler/emliamioobfffbgcfchabfibonehkme?hl=en>

*License : Free*

**Email on Acid**—It offers unlimited email rendering testing across 70+ clients and devices, so you know how your email will look before it hits the intended inbox.

*Where to get it from :* <https://www.emailonacid.com/>

*License : Paid*

**Snagit**—You will never want any other screen capturing tool after this. Snagit does it all and much more.

*Where to get it from :* <https://www.techsmith.com/screen-capture.html>

*License : Paid*

**WorldSpace Assure**—Accessibility testing with Step-by-step guidance and report-building.

*Where to get it from :* <https://www.deque.com/tools/worldspace-assure/>

*License : Paid*

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## **API Testing**

API Testing has become as important as UI testing if not more in the modern testing pyramid. Manual and Automation testers are required to test APIs in their respective roles.

| *For Automation Testers*

**SoapUI or SoapUI Pro**—SoapUI is an open source api testing tool which supports both SOAP and REST. SoapUI Pro is a licensed version with more features if you need those. For 80% of our clients, SoapUI has been sufficient. SoapUI or SoapUI Pro is the only tool you need for your API testing needs if you are a Automation tester.

*License* : SoapUI—Free, SoapUI Pro—Paid

*Where to get it from* : SoapUI—<https://www.soapui.org/open-source.html> , SoapUI Pro <https://www.soapui.org/>

| *For Manual Testers*

**Runscope**—If you are manually testing your APIs, we find Runscope has an easier interface with all the options you may need. Note: Runscope could also do Automated API testing.

*License* : Paid

*Where to get it from* : <https://www.runscope.com/>

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## Performance Testing

We have 2 favorites here. One is open source and other one is paid. Both tools have similar features but if your company is Open Source averse then go with the paid tool, Apica.

**Jmeter**—Apache JMeter is used to test performance both on static and dynamic resources, Web dynamic applications. It is also used to simulate a heavy load on a server, group of servers, network or object to test its strength or to analyze overall performance under different load types.

*License* : Free

*Where to get it from* : <https://jmeter.apache.org/>

**Apica**—Apica is a paid version to do essentially the same thing as Jmeter with a better support team and a shorter learning curve.

*License* : Paid

*Where to get it from* : <https://www.apicasystems.com/load-testing/>

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## Code Coverage

You should have code coverage as part of your overall testing strategy as this is an essential part of the Testing equation and surprisingly, is not difficult to set up. Once you have it up and running, you do not have to tweak it very much. Code coverage tools are programming language specific, so I have listed one for each of the popular languages.

**Atlassian Clover (Java, Groovy)** or **Bullseye (C / C++)** or **Istanbul (Javascript)** or **Coverage.py (Python)**—Based on your platform's programming language, pick one and start instrumenting your code to report code coverage on every test run. Start setting goals to reach closer to 100% code coverage in your test plan.

*Where to get it from* : Atlassian Clover—

<https://www.atlassian.com/software/clover> , Bullseye—

<https://www.bullseye.com/> , Istanbul—<https://istanbul.js.org/> ,

Coverage.py—<https://coverage.readthedocs.io/en/v4.5.x/>

*License* : Atlassian Clover, Bullseye—Paid, Istanbul , Coverage.py—Free

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## Test Management

You need a test management tool to document and manage all your test plans, manual test suites, manual test cases, results etc. There are many tools in the market which range from free to tens of thousands of dollars, all essentially doing test management functionality with varying degrees of feature sets and customization.

### ***Test Management solution within your JIRA.***

**Zephyr**—does full test management and execution within JIRA. You can tag each tests with a specific requirement and track bugs all within JIRA. We only use Zephyr if our client wants a Test Management system within JIRA.

Where to get it from : <https://www.getzephyr.com/products/zephyr-for-jira>

License : Paid

### ***Standalone Test Management tool***

**TestRail**—If your test management doesn't have to be within JIRA, then you are better off using TestRail. TestRail has all the functionality you need from a modern Test management tool and it is also lighter on your company's coffers!

Where to get it from : <https://www.gurock.com/testrail/tour/modern-test-management>

License : Paid

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## **Test Data Generation**

For any tests, conducted either manually or automatically, you will need large sets of data to input. You do not want to feed the same data to your application under test in all your test runs. There are tools available which can generate data for you.

**Mockaroo**—Mockaroo lets you generate realistic test data in CSV, JSON, SQL, and Excel formats. Field types includes name, email, ssn, gender, IP, VIN, and many many others.

Where to get it from : <https://www.mockaroo.com/>

License : Free for smaller set of data/ Paid for larger set of data

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## Test Dashboard

After you have built impressive test suites, achieved excellent test coverage, you need a place to display your testing status so others in the team can see your hard work. Awesome looking dashboards can help not only impress your team but also helps you make smarter decisions.

**ReportPortal.io**—It is an opensource test automation dashboard which is highly configurable and guaranteed to impress your team members. Look no further than ReportPortal.io as an excellent test reporting tool.

Where to get it from : <http://reportportal.io/>

License : Free

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## Cloud Testing

With ever increasing device, OS and browser combinations, it is impossible to keep your in-house device farm up to date. You need to rely on Cloud Testing infrastructure provider to provide different combination of devices, OSes and browsers for your Web and Mobile testing needs.

**Sauce Labs**—While there are many copy cats and cheaper options, we recommend Sauce Labs for Cloud based testing. They have the best virtual and physical resource infrastructure and great customer support. Moreover, if you are putting your IP on the cloud, you better go with the best provider as opposed to other cheaper and possibly less secure alternatives.

Where to get it from : <https://saucelabs.com/>

License : Paid

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## Crowd Testing

If you want to have your web or mobile application tested by “real” users across the globe, it is easier to use a Crowd Testing service provider instead of trying to find those users yourself.

**Applause**—They claim to be the world leaders in crowd testing and we have no reason to refute their claim. They have 400K+ testers in their testing community who can test your application for functional, accessibility, security and usability in a matter of minutes.

*Where to get it from :* <https://www.applause.com/>

*License :* Paid

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## Database Testing

As part of our testing strategy, we always add test suites to test the Database transactions. If database testing is part of your overall test strategy then you should look to deploy a Database testing tool which helps improve efficiency in both Manual and Automated testing.

**DbFit** : is a complete solution to write, manage and execute database related tests directly from the browser. This test could easily be automated and integrated into your CI system.

*Where to get it from :* <http://dbfit.github.io/dbfit/>

*License :* Free

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## Behavior Driven Development

We at TestFramework.io are a big proponent of BDD. BDD not only helps you develop the product exactly as you intend to, but also increases collaboration between different technical and non technical stake holders.

**Behave (Python) or Cucumber (Javascript, Java, Ruby, Kotlin)**—Cucumber and Behave are both open source BDD platforms with a strong community behind it. If you are using BDD, you couldn't go wrong by choosing either of them depending on the language you are using.

*Where to get it from* : Behave—<https://github.com/behave/behave>,  
Cucumber—<https://docs.cucumber.io/>

*License* : Free

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## AI based Testing

AI based Software Testing is gaining momentum in 2018. From AI bots testing your application, to NLP engines reading your test plan and auto generating test scripts, there are a lot of emerging companies in this field. Time will tell which company succeeds and which vanishes.

**Autonomiq**—This is one of the AI based testing companies whose technology seems most promising. The Autonomiq AI engine can generate Selenium scripts for your Web based application in matter of seconds by just reading your test plan written in plain English. While the platform still has various kinks, it is a just a matter of time—before it offers a complete solution.

*Where to get it from* : <https://autonomiq.io/>

*License* : Paid

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## Data Virtualization

For some specific scenarios you may occasionally want to run your testing on the production data but your security policies might not allow you to access the production data. Data Virtualization tools can help you to replicate, provision and mask the production data with ease.

**Delphix**—Delphix puts sufficient levels of automation in place to enable QA teams to access their data via self service. Instead of relying on an IT ticketing systems, QA engineers can easily bookmark and reset their data to any previous state.

*Where to get it from* : <https://www.delphix.com/solutions/test-data-management>

*License* : Paid

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## Conclusion

The aim of this article was to give you a sneak peek into the toolbox used by our Test experts at [TestFramework.io](https://www.testframework.io). These tools are well researched and used by our team extensively on a daily basis. I hope this list will help some of you avoid spending many hours researching different tools, many of which are not functional and some which are essentially overpriced. To keep this article concise, I have skipped the in-depth pros and cons of each tool. If you are interested in getting more information on any particular tool, post your comment and I will give more detailed feedback in response.