



Test Automation



“Every time you fix a bug, you risk introducing another one.” -Eric Sink

Every time you change a portion of your code, you risk the effect of introducing involuntarily a new bug in the system. This problem is shared within the software industry. In fact, it is not rare for a software company to provide a patch for their latest product, because something in the system broke due to a code change. Executing regression tests will insure that your development team didn't accidentally break the logic behind the code. However, automating your test process in a blindly manner can highly increase the complexity and the costs associated in testing the entire application by your testing team. On the other hand, test automation can be very useful to an organization when done by the right people and the appropriate development environment.

Test automation gives you the possibility of running all your tests, as many times as necessary, on subsequent versions of your product via regression testing. Furthermore, automating your test process will allow you to :

- **Decrease costs related to testing**
- **Reduce time to market**
- **Satisfy your software quality objectives**
- **Ensure the consistency and purpose of your tests**
- **Execute your tests faster and as many times as you need**

Qualibre Technologies can intervene early in the project's life cycle in order to help you define a diverse library of tests, such as :

- **Unit tests**
After code inspection, the unit testing phase is the one that eliminates most of the defects in the software prior to delivery. Having a diverse library of unit tests targeting high risk regions in your architecture will save your organization precious time when debugging your application during system testing.
- **Functional tests**
Recording graphic user interface (GUI) actions by the user and playing them back allows you to execute, whenever necessary, a suite of regression tests and avoid laborious, repetitive and time-consuming manual regression tests.
- **Performance and volume tests**
This service is very popular for testing client-server applications. By using performance tools, we can easily simulate a variable number of virtual users to concurrently test the application. Their objective is to identify excess use of system resources and weak spots in the application.

The consultants of Qualibre Technologies approach test automation by following software development best practices. We first perform a systematic analysis of costs and benefits on the manual tests that you would like to automate. Then, based on your organization's culture and technical expertise, we define the infrastructure model, the standards and the process used to automating the tests. In sum, a systematic and disciplined approach in planning and implementing automated tests will highly increase your return on investment (ROI) associated with software testing. Our consultants believe in sharing expertise and knowledge with its clients, and will do so with your resources responsible for creating and maintaining test scripts, in order to allow your organization to focus more on business objectives and less on tracking bugs.