DAFT - Digital Automation Framework for Testing

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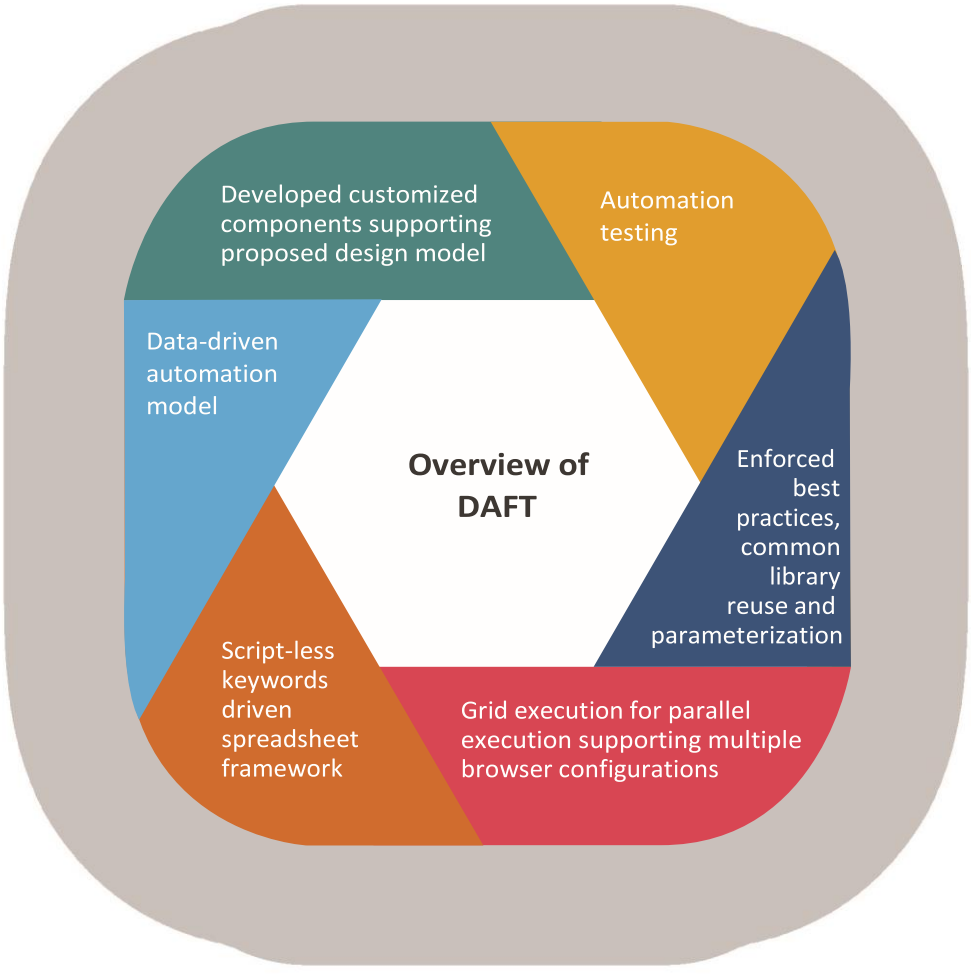
In today's environment of highly stringent project deadlines, it is imperative to adapt effective testing methods. The high-quality applications can be achieved in shorter sprints with the help of effective automation testing rather than traditional manual testing. With the changing business needs, there is a high pressure on enterprises to deliver robust applications with good quality, reduced cost and high efficiency. However, it is critical to select appropriate Automation tool which fits vast variety of applications like Web, mobile, tablet, desktop and client-server software applications. Thus, enterprises define a concise strategy for automation testing and adopt right tools and frameworks.

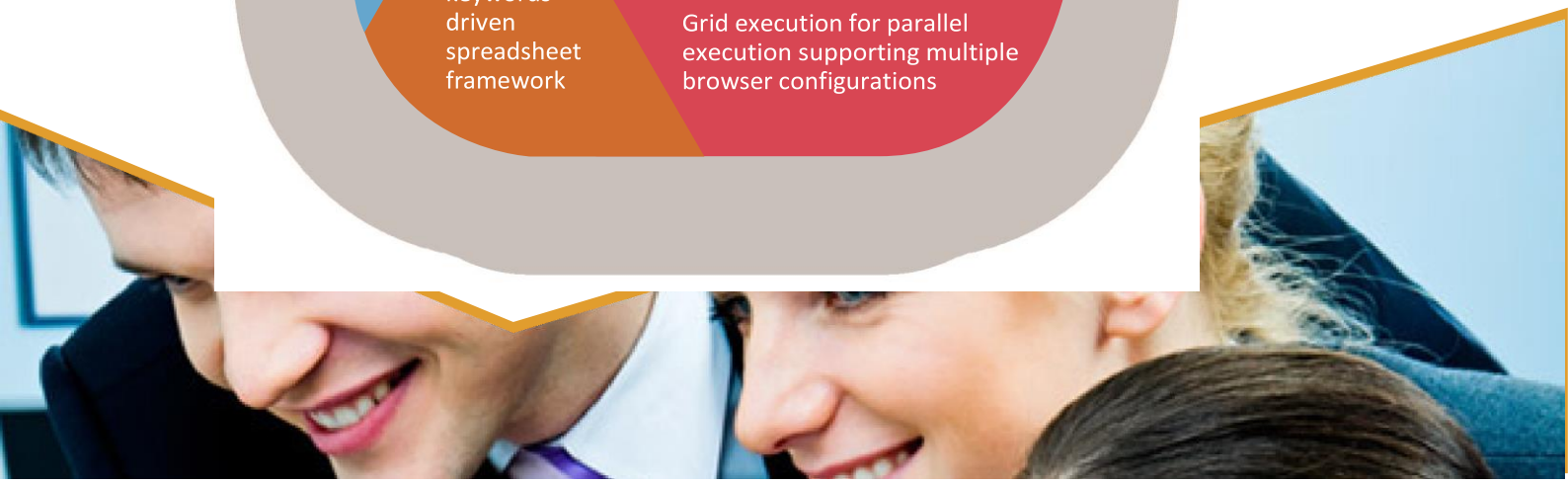
With regards to this, the Digital Group introduces **Digital Automation Framework for Testing (DAFT).** DAFT is a comprehensive framework developed by using Selenium. Selenium being open source, there is significant *cost advantage*. DAFT is proposed to choose appropriate automation tools by reducing risk, cost, ROI and increasing efficiency.

Automation Framework Overview

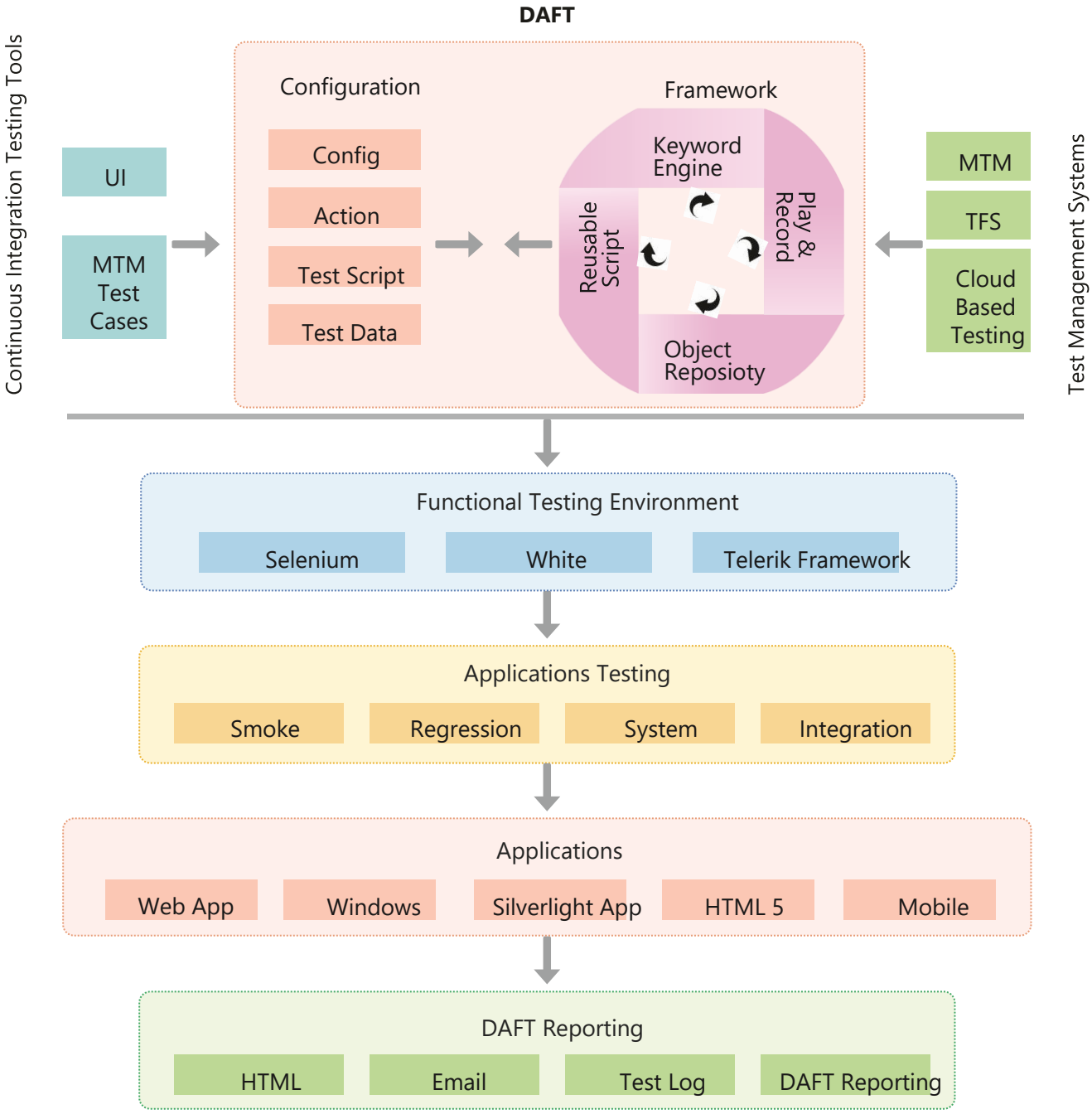
The effective automation testing is the necessity of every organization to enhance application performance. Certainly it is not feasible to use manual testing procedures where most of the enterprises prefer applications in agile methodology. At the same time, it is challenging to select automation tool or develop frameworks for a wide range of applications.

DAFT is a customized platform that facilitates to select appropriate automation tool, evaluate suitable framework, build the proof of concept, develop automation framework and execute tests. Indeed, Digital Automation Framework for Testing (DAFT) is Digital Group's automation software that provides open platform for easily creating, maintaining and executing automated tests for desktop, web, hand-held devices and client-server software applications.





Automation Framework Architecture



- DAFT architecture is designed to utilize continuous integration tools of the various test cases.
- Firstly UI or MTM test cases are used to execute test scripts or test suites. A bunch of test cases is referred as test suites.

  Configuration consists of Actions, Config, Test Data and Test Script. Client configuration allows clients to configure the test cases on different browsers or applications depending on their requirements.

- DAFT is a Keyword driven engine framework. Intelligent keyword driven framework enables great abstraction over all the tools and frameworks and provides ease of automation. Automation Framework also has features like Reusable scripts, Object Repository, Embed, Play & Record, and Parameterization.
- Test Management Systems include MTM, TFS and Cloud based testing

Functional Testing environment consists of Selenium, White and Telerik framework. This forms the base of the framework architecture. Selenium is open source and hence saves cost. It has tremendous advantages over QTP and also has varied functionalities.

- The different types of testing conducted are Smoke, Regression, System and Integration testing.
- The applications that can be handled include Web/Windows/Silverlight/HTML5/Mobile and also Browser Stack. Browser Stack is an additional functionality incorporated in the automation.
- Finally, the testing reports are generated. These are generated in HTML, plain records, test logs or DAFT Reporting. At the same time, the test results or screen shots are delivered to the respective email.
- Intelligent keyword driven framework enables great abstraction over all the tools and frameworks and provides ease of automation.

not rectified.

- Combination of multiple internal applications to complete complex workflows.

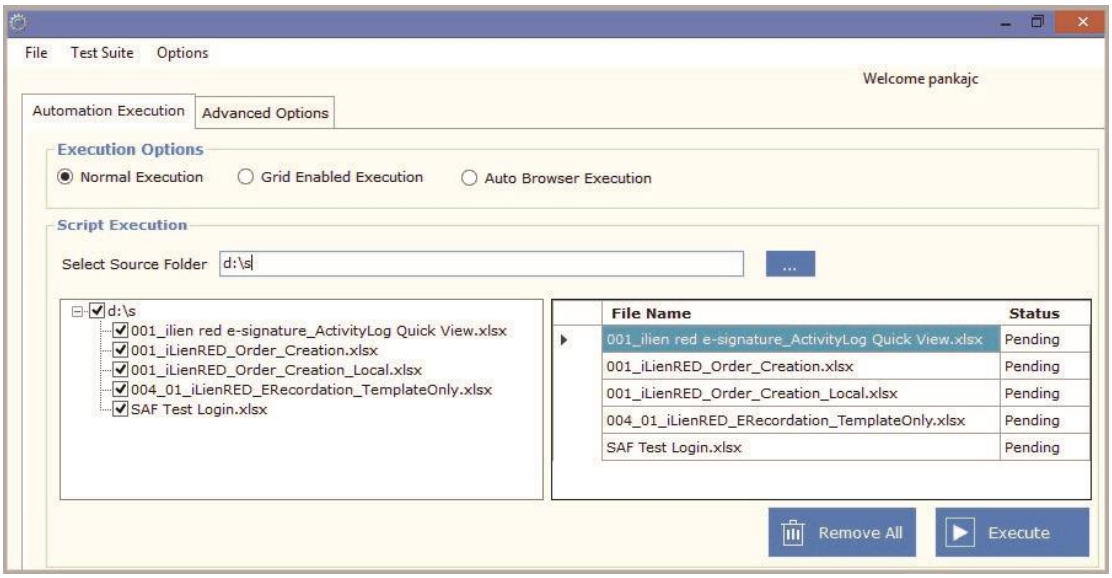
Business Challenges

- It is challenging to carry out test against multiple browsers.
- End to end testing involves limited testing of applications, as it is critical to cover all applications.
- Many test cases are not properly documented. The test results are not acquired properly and hence errors are

Parallel test execution is critical and hence single test execution is carried out.

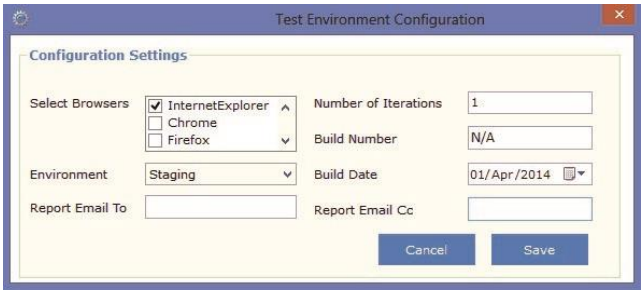
Key Features

Enterprise Automation UI

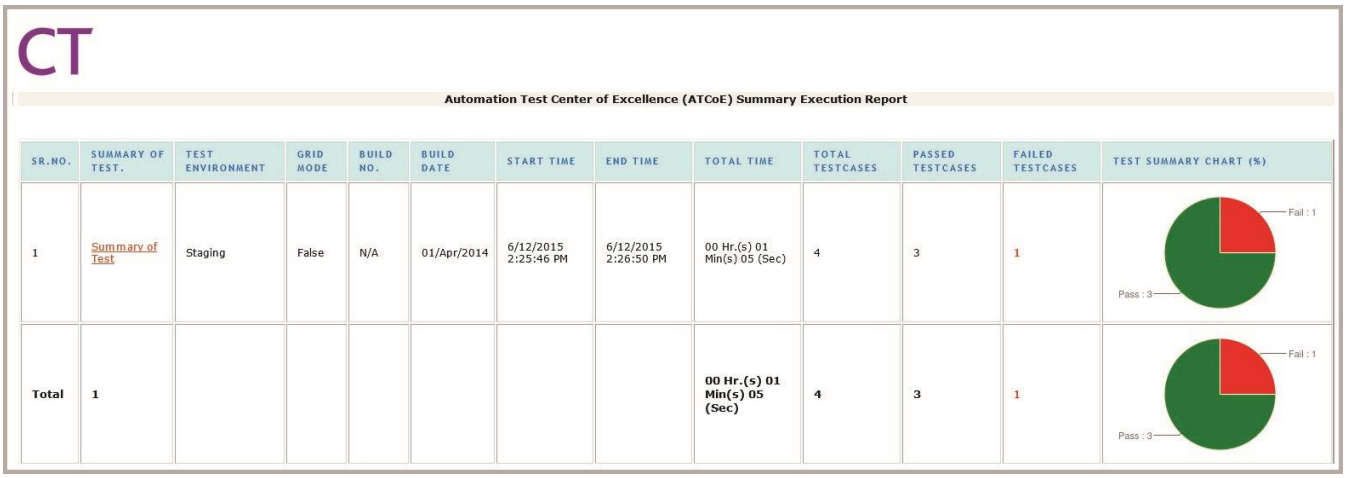


Multiple browsers support

Enterprise Automation Framework™



Reporting- Plain Records and Email Reports



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Automation Test Center of Excellence (ATCoE) Summary Execution Report

SR.NO.	SUMMARY OF TEST.	TEST ENVIRONMENT	GRID MODE	BUILD NO.	BUILD DATE	START TIME	END TIME	TOTAL TIME	TOTAL TESTCASES	PASSED TESTCASES	FAILED TESTCASES	TEST SUMMARY CHART (%)
1	Summary of Test	Staging	False	N/A	01/Apr/2014	6/12/2015 2:25:46 PM	6/12/2015 2:26:50 PM	00 Hr.(s) 01 Min(s) 05 (Sec)	4	3	1	Fail : 1 Pass : 3
Total	**1**							**00 Hr.(s) 01 Min(s) 05 (Sec)**	**4**	**3**	**1**	Fail : 1 Pass : 3

Our Automation Framework is loaded with features. Some of them are listed below:

- Automation Spreadsheets
- Object Identification & Object Repository
- Parameterization
- Embedded spreadsheets
- Grid configuration for parallel execution
- DAFT with Browser Stack Support

Benefits

Our DAFT framework reduces the testing cycle times, long regression hours and eventually improves quality of testing. Our grid configuration for parallel execution feature facilitates multiple test execution simultaneously and hence saves a lot of time and efforts. In addition to this, DAFT has tremendous benefits, which are as follows:

- Automates web, desktop, mobile, client-server and database applications.
- Reduced dependencies on SME's and tool experience.
- Keyword Driven Framework with user friendly keywords.
- Reduced test data setup time.
- Increased quality and reliability; reduced defects and faster time to market.
- Faster realization of ROI.
- Increased flexibility to reach multiple target devices and browsers.
- Significant cut down in Regression and Integration test cycles.
- Reduced (nearly 60%) manual regression, testing efforts and risk
- Early defect identification due to parallel execution.

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