

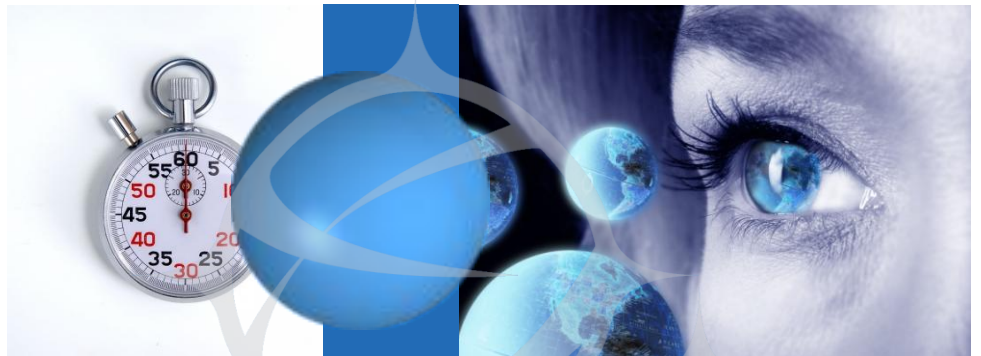


Driving high performance and  
cost effective solutions

# Testadon

5 Types of Testing in One Platform! *Never Code Again!*

Albia® Software



## Introduction

Testadon is pioneering testing platform software developed by Albia® which incorporates User Interface, Functional, Load & Stress, System, and Integration testing and simulation for web enterprise systems. It is based on Test Execution and Modelling Platform (TEMP) - an innovative concept for a test platform researched and developed by Albia®. Testadon allows business users and developers to create test cases without writing a single line of code or script, and then to model test cases using GUI tools. This means that new test cases can be created within minutes, and existing test cases can be modified within seconds. Testadon allows real-time monitoring. It includes automated report generation, and it allows running unbeaten test cases for any web enterprise system. Testadon saves enormous amount of development and maintenance time, and has a great ROI. Testadon provides tools and features for effective Continuous Integration and Test Driven Methodology.

### Albia® Testadon



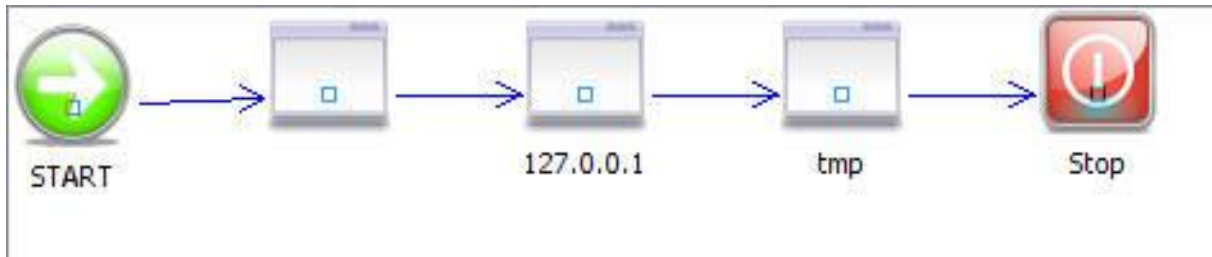
## User Interface Testing

For decades testing User Interface (UI) has been a challenge for many companies. One of the temptations with UI testing was to do it manually: opening a website, browsing pages, checking graphics, verifying dynamic functionality, etc. The biggest problem with relying on human effort to detect bugs is that it highly depends on how much the person pays attention to detail, and if that person can repeat the same task every time the project needs re-testing.

Testadon provides a generic mechanism for writing and running UI test cases. It contains Web Browser where test cases can be recorded for a later playback. Testadon can validate and verify any web pages, check HTML tags, presence or absence of any web page elements, even download images. Testadon can turn UI testing into regression testing, helping to deliver higher quality systems, while making life of testers and developers easier. Testadon allows creating and running user-interface testing, with full test automation. Using Web Browser, test case author can create a comprehensive user interface test case scenario, which can then be executed on the platform automatically. Validations can be set for checking presence or absence of web page elements, applying regular expressions, and other conditional rules.

- Testadon provides:**
- ✓ **User Interface Testing**
  - ✓ **Functional Testing**
  - ✓ **Load & Stress Testing**
  - ✓ **System Testing**
  - ✓ **Integration Testing**

Testadon also provides Modeller where recorded test cases can be modelled or edited, as well as new test cases can be created without the Web Browser (for instance in case end user wishes to write a test case before the system is created). User Interface (UI) Testing under Testadon can be fully automated, so that once a test case is created it can be ran as many times as required, mimicking end user activities, and applying validation and verification rules. While using Testadon Modeller it is possible to create decision logic, apply integration blocks, and set detailed validation that is too impossible or tedious to be done by humans. Once a UI test case is created, it can be then scheduled and ran as many times, each time providing a detailed report. UI testing can be done as part of regression testing, ensuring that the system complies with set expectations, and alerting end users if it does not.



## Functional Testing

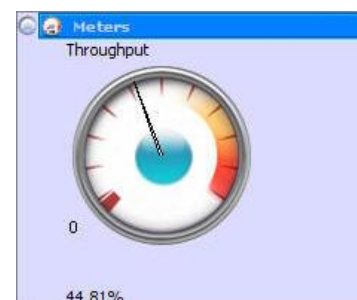
Functional Testing is also known as black-box testing, release acceptance, QA testing, application testing, confidence testing, final testing, validation testing, usability testing, or factory acceptance testing. Normally it involves running a suite of tests on the completed system, where each test case is targeting a particular operation condition of the user's environment, which can be system's feature. The outcomes are usually measured as a pass or fail result. There is generally no degree of success or failure. Testadon provides tools for different methods of inserting test input data, decision blocks for verifying systems' functionality, reporting, alerting, and monitoring mechanisms for ensuring Functional Testing gets executed in line with set criterion. Testadon can be used for creating and running Functional Testing. This includes writing test cases that test system functionality from the front end. It is also possible to write test cases that test different parts of the back-end of system under test, as long as integration adapters are available in Testadon, and if they are not Albia® Professional Services can develop custom adapters.

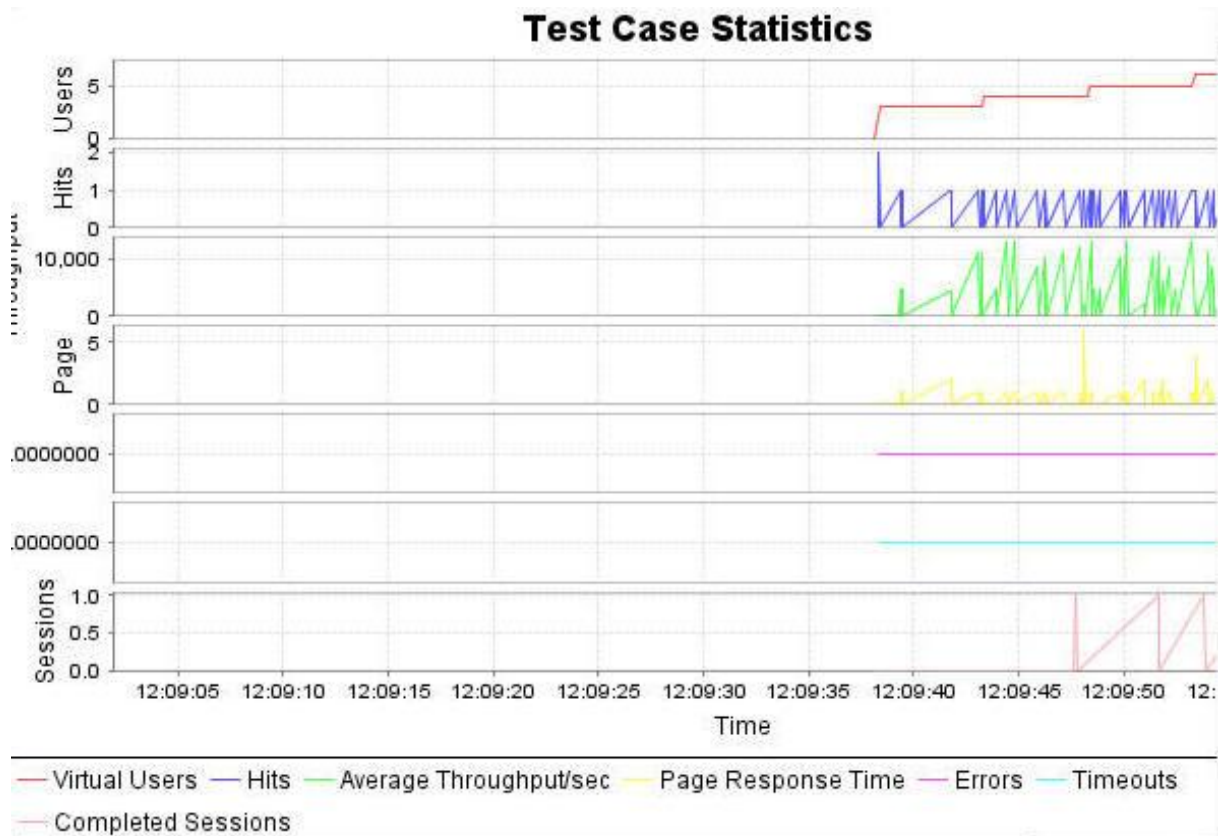
## Load & Stress Testing

Testadon provides full functionality for load and stress testing. Test cases can be recorded using Web Browser, then edited, and ran with real-time monitoring.

Testadon allows running test cases that can determine how fast some aspects of an enterprise system perform under a particular workload. Testadon can reveal if the system meets performance criteria. Detailed reports that contain statistics produced after each testing can be used to compare two or more systems or segments of the same system to find which performs better.

Load testing allows creating demand on an enterprise system to measure its response. Testadon allows modelling the expected usage of a system while simulating multiple concurrent users and their activities. In general load testing is used for determining how the system would perform under a high load of concurrent users and their activity.





Stress testing allows determining enterprise system's response at unusually high or peak loads. It is used for discovering robustness, availability, error handling, and other aspects of an enterprise system under a heavy load. Stress testing can ensure the system does not crash, or can be used for discovering the point of system crash, when facing insufficient resources or high concurrency. Stress testing can be also used for staging denial of service attacks. Some examples of stress testing include:

- ✓ Testing mission critical enterprise systems for determining failure consequences
- ✓ Discovering system point of failure when facing high concurrency users and activities
- ✓ Testing enterprise systems for race conditions and deadlocks
- ✓ Stimulating denial of service attacks upon enterprise and web systems
- ✓ Discovering bugs, memory leaks, and other type of errors under abnormal high concurrency

Testadon provides the following features for Load & Stress testing:

- ✓ Unlimited number of virtual users
- ✓ Real-time monitoring
- ✓ Ability to run different load/stress test cases simultaneously (plus adding functionality testing when required)
- ✓ Auto-generation of reports and statistics with diagrams and charts

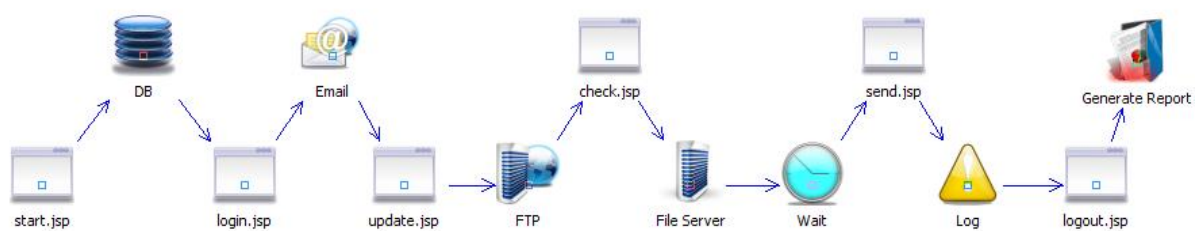
## System Testing

Testadon allows performing functional, load, performance, functional, user interface, and integration tests at the same time. Under Testadon bulk of the regression test suite can be constructed and executed before any development takes place. No matter how complex or large an enterprise system can be, Testadon provides tools and environment for carrying out any system testing activities. Testing system as whole can be a long and tedious process. Testadon lets you set any destructive conditions and to test not only the design but also the behaviour and even the believed expectations

of end users. It is also intended to test up to and beyond the bounds defined in the software requirements specifications.

## Integration Testing

Integration testing is the level of test done to ensure that the various components of a system interact and pass data correctly among one another and function cohesively. Integration testing can be accomplished at various levels. Testadon allows for Integration Testing. The platform has many adapters that can be used for testing any standard enterprise system. Testers can validate system's required integrations as well as get a full report of what is going on inside of their enterprise system. At the lowest level, Testadon can be used to verify through running integration testing, that units of an enterprise system work properly together. Integration can occur at various levels, and Testadon has innovative tools for ensuring that integration complies with your specifications.



## Testadon Components

Testadon is the ultimate testing suite for web enterprise systems. It consists of Web Browser test creator for recording functionality and load test cases, Modeller for modelling test cases to test an enterprise system, Monitor for viewing test case execution in real-time (with meters, graphs, and dashboards), and Scheduler for scheduling and running test cases (both functional and load). Testadon allows creating test cases using GUI for any complex web enterprise system. It includes a built-in Rules Engine that supports several logical functionalities and can execute any complicated logic that normally requires weeks of programming effort. With Testadon this can be achieved within minutes, and then modified within seconds.

### *Testadon helps to measure:*

- ✓ *Number and type of errors remediated*
- ✓ *Number and type of errors not remediated*
- ✓ *Load & Stress testing specific benchmarks*
- ✓ *User interface compliance*
- ✓ *Integration testing benchmarks*

# Albia® Testadon



## Complete Automation

Test cases for 5 levels of tests can be automated and scheduled, making your testing project well structured and easy managed. Using TEMP human effort is only used for design; the rest is carried out by TEMP.

### Plan



Each test case needs to be planned. Depending on the nature of testing, planning could be based on functional or non-functional requirements, or on results of previously executed test cases.

### Design



Test cases can be designed using GUI tools without any programming or scripting. This gives a significant advantage for the tester, as any complex test case can be created in a short timeframe. This also improves test case maintenance, as any complicated test case scenario can be modified within seconds.

## Configure



Testadon provides some configuration tools responsible for full test case/scenario management, test environment configuration and customization.

## Run



Testadon test case execution engine is a complete end-to-end business rules and integration platform designed for running any number and any type of test cases simultaneously.

## Acquire



Testadon provides innovative statistics gathering techniques together with monitoring and alerting mechanism.

## Alert



Testadon allows sending alerts during run-time. This can be utilized for notifying interested parties when something goes wrong, and alerts can be sent through email, FTP, or local file system.

## Measure

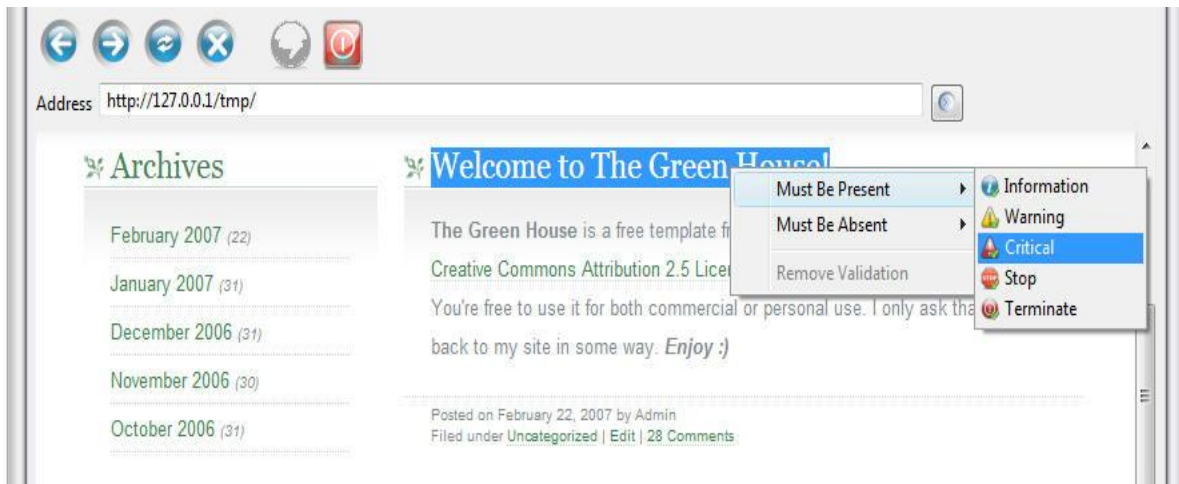


Testadon can measure any acquired results for all test cases during and after test case execution. This provides an extensive view with statistics for measuring test case results, which enables testers with a system snapshot providing a complete report of what has been accomplished during the testing.

## Web Browser

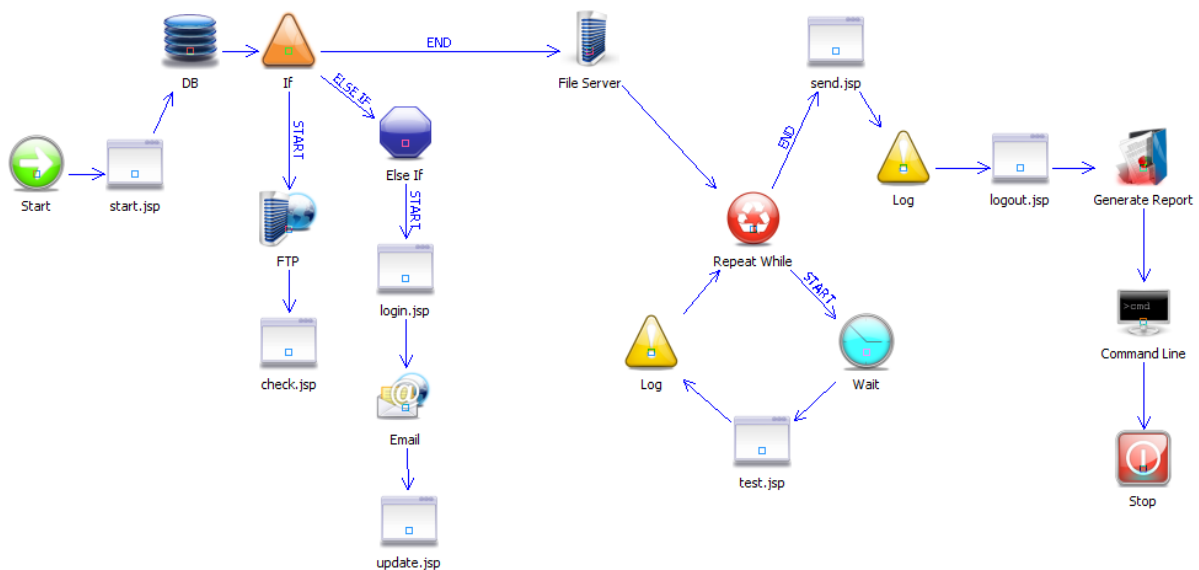
Recording a test case in Testadon is a very simple process. Using a built-in web browser that includes useful GUI tools it is possible to record a test case for any web application (regardless what technology it uses – e.g. Apache, JEE, PHP, ASP, etc). Using the web browser you can record User Interface, Functional, and Load & Stress test cases. It does not require any scripting or programming. You can right click on any web page element, and set a testing condition that can be either testing for absence or presence, for up to 5 levels of severity:

- 1.Information
- 2.Warning
- 3.Critical
- 4.Stop
- 5.Terminate



## Modeller

Testadon Modeller brings you innovative testing tools, which require ZERO programming or scripting. All tests can be modelled within seconds using the Modeller, where you can design blocks for any complex testing processes with a simple drag-and-drop. Inside of the Modeller you can model your test case as a diagram similar to flow-chart or BPEL. This visual tool can save you hours on development and maintenance of your test cases, since using it you can design and re-design any complicated test case scenario, build test cases for User Interface, Functional, System, and Integration testing.



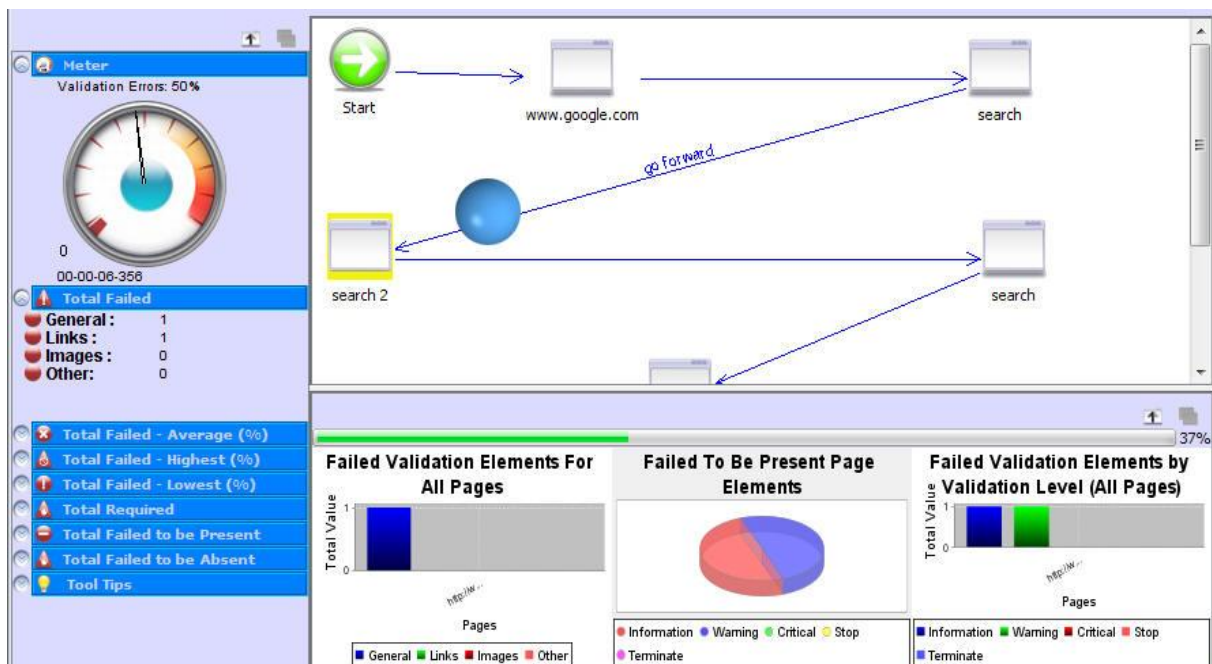
Whether it is user interface test, functional, or integration test – everything can be visually modelled inside of the Modeller. It provides with a palette that contains building blocks which can be connected with arrows, and it also allows setting conditional operations, a decision tree, that can have conditional statements (IF, ELSE, FOR, WHILE, DO WHILE). It can open for editing all HTTP parameters. You can also set any testing conditions for a web page (e.g. checking that a web page element is present/absent, performing regular expressions, setting random or stored input, etc).

Testadon Modeller also contains build-in adapters, which you can drag-and-drop into your test case diagram (i.e. http & https, SQL, FTP, SMTP, and File servers). You have an option of setting a timer, logging, generating a report, or even terminating test case. Everything can be modelled as blocks

using the mouse. Testadon Modeller provides automated syntax check and errors highlighting of your test case. It also contains many configuration tools. You can export your test case diagram as an image (PNG, JPG, TIFF, and BMP). It also allows for dynamic layout and zoom.

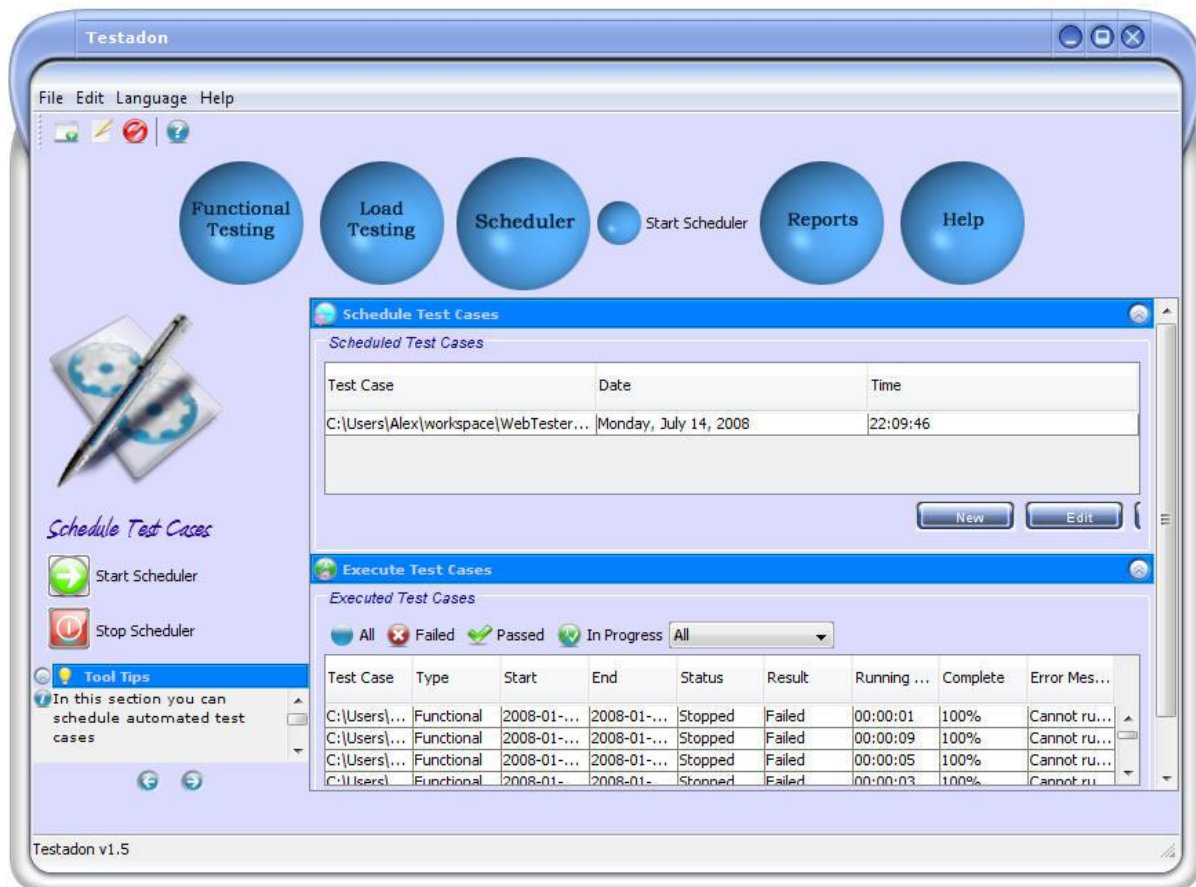
## Monitor

Testadon Monitor allows real-time monitoring of test case execution. Inside of the Monitor it is possible to visually see how test case is being executed step-by-step. It contains dashboards, charts, and meters. Using the Monitor you would get a full and detailed view on all real-time results and statistics.



## Testadon Scheduler

Testadon Scheduler allows setting execution time for test cases, creating test suites, monitoring progress of test cases in real time, and getting access to final test case reports. Using the Scheduler it is possible to shuffle test cases, create test suites, set test cases to executing time, repeat execution for any test case, view overall results for all executed test cases, and open final reports. Testadon Scheduler can be run as a separate background process to minimize resource consumption. It acts as an administrative tool for orchestrating your test case execution.



## Execution Engine

Testadon is equipped with a robust execution engine, capable to execute any number of test cases simultaneously. It comes with a rules engine, real-time statistics, monitoring, and alerts mechanisms, and is optimized to have the best performance. The execution engine is capable to simultaneously run Load & Stress, User Interface, Functional, System, and Integration Testing. This allows endless possibilities to test your enterprise system. During run-time test case input can be inserted randomly, from a dictionary or custom file, or stored values. During run-time the execution engine can also send alerts and generate reports. Build-in rules engine allows executing test case decision trees. The execution engine can run as a background process initiated by Testadon Scheduler.

## Real-time Alerts

Testadon lets you set customized alerts to inform interested parties when some error or even is detected during test case execution. Usually alerts can flag if a critical error gets spotted, and it can be sent via email, placed into a file using FTP or file server, or even write a message to the database. This is a great feature for all types of test cases, especially regression testing, and once you set alerts they would be automatically activated if the condition is met during test case execution.

## Report & Statistics Generators

Testadon allows generating test case reports that fully document your test case execution, and this is done automatically for you at the end of each test case, in your preferred language. It is possible to also generate a customized report at any point during test case execution. In fact you can place as many reports into your test case as you wish using simple drag-and-drop inside of the Modeller.

Whenever there is an error discovered during test case execution, and you wish that particular error to be documented in a report, and the send a report via email or put it into the file server or FTP, Testadon allows easy configuration tools inside of the Modeller.

Auto-generated reports contain full statistics and results, with test case diagrams, charts, and analysis of how your test case got executed. Testadon reports provide a complete documentation that is usually enough to submit to the stakeholders:

- Automated report generation for each test case
- Charts generation (pie, bar, etc)
- Automated report generation, explaining test case results with visual diagrams, charts, and detailed statistics
- Ability to create reports for each test in HTML, PDF, and RTF formats
- Ability to e-mail reports or sent to FTP
- Ability to view statistics including charts for each test

*Testadon provides metrics for software quality to measure errors:*

- ✓ *by category*
- ✓ *density*
- ✓ *by type*
- ✓ *by severity*
- ✓ *arrival rate*
- ✓ *reporting*

## Adapters

Testadon comes with built-in adapters that make your integration easy:

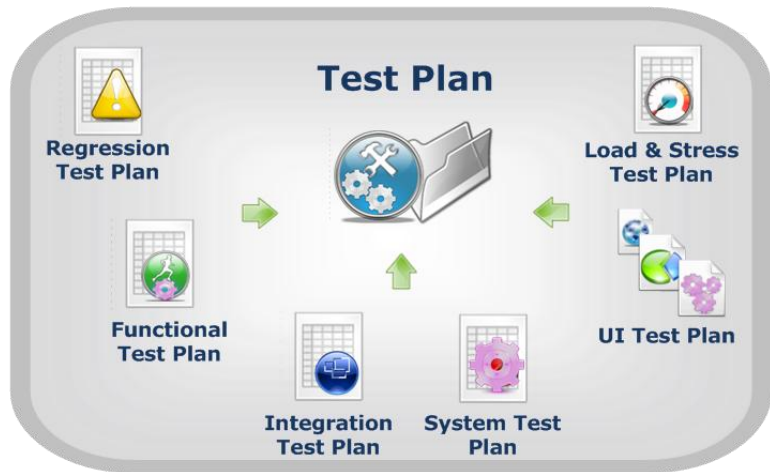
- ✓ http & https
- ✓ SQL
- ✓ FTP
- ✓ SMTP
- ✓ File server

In order to test your enterprise system, it might require setting up test cases that ensure the data is travelling correctly and external systems are properly processing your data. Testadon allows modelling test cases that include external systems, and some essential functionality to ensure correct integration and check your expected results. For instance you might need to open a database, verify that data has been properly saved, insert or delete some elements, and match your result to a regular expression or stored values. You might also want to send an email to mimic end user activities, or simply download a file from an FTP server to perform some operations over it. All external system's activities can be easily put together into your test case with a simple drag-and-drop and setting test conditions. Testadon also allows incorporating custom adapters which Albia® Professional Services can develop for you. No matter how your enterprise complex and large, testing integration and data integrity can be easy using Testadon adapters.



## Testing Process

Testing web enterprise systems with Testadon is simple. First you create a test case. You can do this by either recording it using the built-in Web Browser, or design it using the Modeller where you have a palette of building blocks. Then you can optionally configure your test case, or go straight to the execution. During the execution you can monitor in real-time your test case having meters, dashboards, and charts. Upon completion you will get a detailed report that fully documents all results and metrics obtained during the execution: detailed results, statistics, charts, and diagrams. It's that simple! You can optionally set alerts so that during the execution time you will be getting automated notifications in case something goes wrong. All scheduling can be done with a couple of mouse clicks. Any test case can be run whenever you need, as many times as you need. Testing can be really fun when using Testadon!



## Test Driven Methodology

Testadon can be used for Test Driven Methodology. Using Testadon Modeller it is possible to create test cases for systems that do not even exist. For instance it is possible to design a test case that

would test web enterprise system functionality without have a single web page online. Using drag and drop icons it is possible to design user browsing activities, set validation and verification rules, and even add validation blocks that connect to external systems such as databases, FTP server, SMTP server, or file system. Since Testadon Modeller is a visual tool where end user does not need to write a single line of code or script, it is possible to create any test case that can include decision logic (e.g. IF, ELSE, ELSE IF, REPEAT, WHILE, etc) enabling a detailed level of testing for the system before development takes place. This enables test driven methodology since test cases created and then ran in Testadon can guide development team’s activities.

### Continuous Integration

Using Testadon it is possible to have Continuous Integration (CI) since Testadon includes tools that can setup testing environment, and then run regression testing. This can be applied for any type of supported testing (User Interface, Functional, Load & Stress, System, or Integration). Continuous Integration will ensure that regression tests are ran every time new code gets committed, or at a specific time. Testadon can automate any CI activities and allow taking full advantage of it in order to deliver higher quality of software.

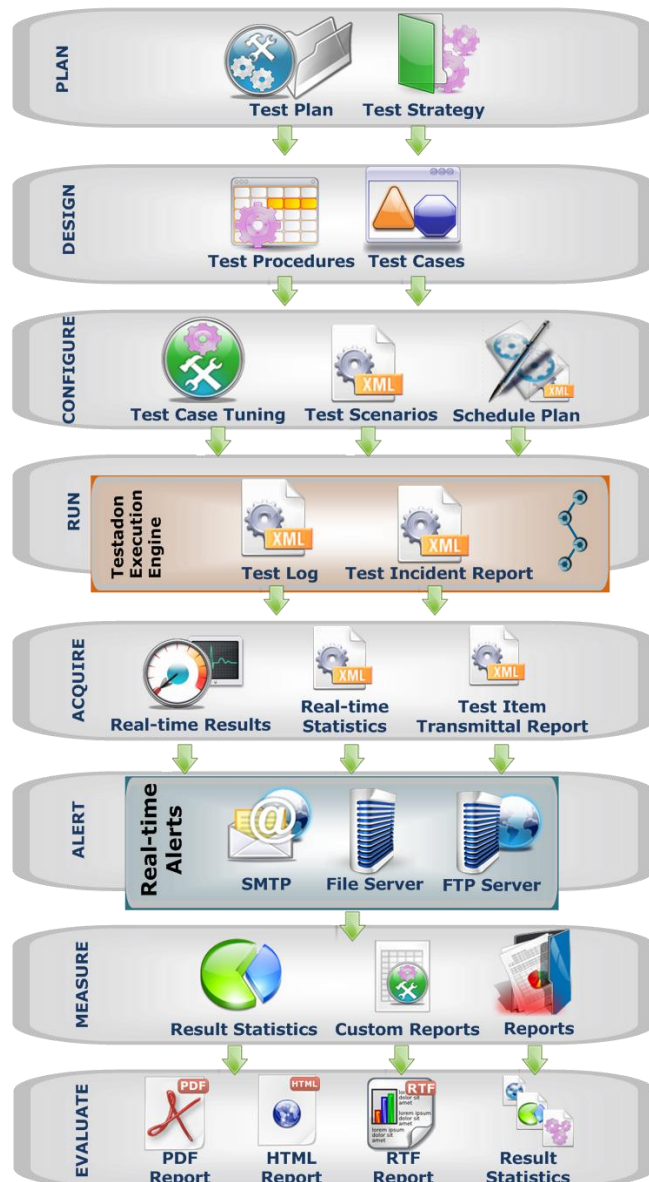
### Testadon Architecture

Testadon provides end-to-end architecture that enables planning, designing, configuring, running, acquiring, and measuring enterprise system testing. Testadon architecture consists of integrated solutions that enable testing external enterprise systems. Testadon provides a unique platform for creating, maintaining, and running all different types of tests for enterprise systems, and it consists of 6 different layers, each isolated from one another, but at the same time integrated into one platform:

- ✓ Design
- ✓ Configuration
- ✓ Test Case Execution Engine
- ✓ Run-time Data
- ✓ Adapters

Testadon architecture provides many benefits both for testers and developers. Its layered scalable design allows adding and integrating extra features. The platform covers all main areas needed for a testing project: from creation of test cases, to executing and reporting. Many tasks can be automated and optimized thanks to the flexibility design of Testadon architecture layers.

## Albia® Testadon



## Why Choose Testadon?

Albia® Testadon is the only platform where business analyst and non-programmers can create powerful and complex test cases!

Thanks to Albia® Testadon testers and business analysts can finally focus on testing without having to write a single line of code or script. That means that finally the main objective of testing phase is to detect what is wrong with the system, instead of spending weeks and months on developing test cases. With Albia® Testadon a test case can be written within 5 minutes, then modified within 20 seconds, all because we provide you with GUI where using your mouse you can create any test case you want – either functional or load. Reports get automatically generated, providing full documentation of test case results with figures, statistics, diagrams and charts – so that the tester does not need to do much. Every time you run a test case, a report gets generated in PDF, HTML, or RTF formats.

- ✓ We provide training based on **YOUR** applications!
- ✓ We can be available for assistance during **YOUR** implementation of Testadon!
- ✓ We provide on-site assistance immediately after **YOU** get Testadon!
- ✓ We can send **YOU** our technical consultants to demonstrate and explain Testadon! (Please note: this is subject to geographical area availability)
- ✓ Testadon conference is being held every year. Please check our schedule for our next annual conference!
- ✓ In case **YOU** require some extra functionality in Testadon to support **YOUR** personal needs, we can send our Professional Services consultant to customize Testadon for **YOU**!



### **24x7 Helpdesk**

Albia® provides 24x7 Online Support, which includes assistance, access to our technical resources, help on all levels, and technical guide for all your queries.

- ✓ 24x7 Support
- ✓ Online assistance
- ✓ Dedicated technical engineers
- ✓ Professional Services support

Get in touch with our help desk today by logging at [www.albia.biz](http://www.albia.biz)

### **Training & Certification**

Albia® provides industrial certification for Testadon that will help you to demonstrate your competency, dedication, and high standard of knowledge within software testing and Testadon.

- ✓ Testadon Associate
- ✓ Testadon Architect

Albia® conducts regular training courses, as well as on demand trainings at customer site.

### **Professional Services**

Albia® Professional Services main mission is to ensure customer success, which is why we leverage business integration expertise to help our customers and partners become more self-sufficient in achieving, sustaining, and growing business results using Albia® solutions.

### **About Albia®**

Albia® provides a broad range of business and technology services that deliver real business results.

Being an independent software vendor and IT services provider, we deliver innovative software platforms and integrated enterprise systems. By establishing long term partnerships, we work towards the success of our clients in Europe and the Middle East.

With headquarters in Sarajevo (Bosnia and Herzegovina) we cover many private and public sectors by bringing agile solutions delivered by top consultants with specially designed methodology. Our proven technologies and solutions help our customers to grow, be competitive, and get to the next level faster!

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