

Load and Performance Testing

According to Information Technology Infrastructure Library (ITIL) best practices, proper running of user service-oriented information systems begins before applications go into production.

A poor assessment of the results that your applications will deliver in production can lead to performance problems that are costly for your business. Yet applications are often implemented within very tight deadlines due to the demands of operational departments and to the technology being used. These are increasingly complex and heterogeneous.

- How do we know if the application will meet the needs of the business managers concerned ?
- Will the application run in a way that is consistent with the quality of service that users expect (response time, availability) ?
- Have bottlenecks and operating defects been identified and corrected ?

Quotium Test (Qtest) lets you make sure that your applications will deliver the business results that you are seeking and meet your quality of service commitments.

Load tests conducted using Qtest will permit worry-free roll-out and production launches of your applications, providing answers to your main concerns:

- We have identified and corrected any operating defects,
- There are no more bottlenecks to interfere with running the application,
- We can guarantee our users that we will provide a given quality of service level.

Features

Qtest is an automated load testing and monitoring program, designed to follow the entire life cycle of an application..

Thanks to the unique interface, Qtest Center, the administrator has a complete view of the performances of both application and infrastructure.

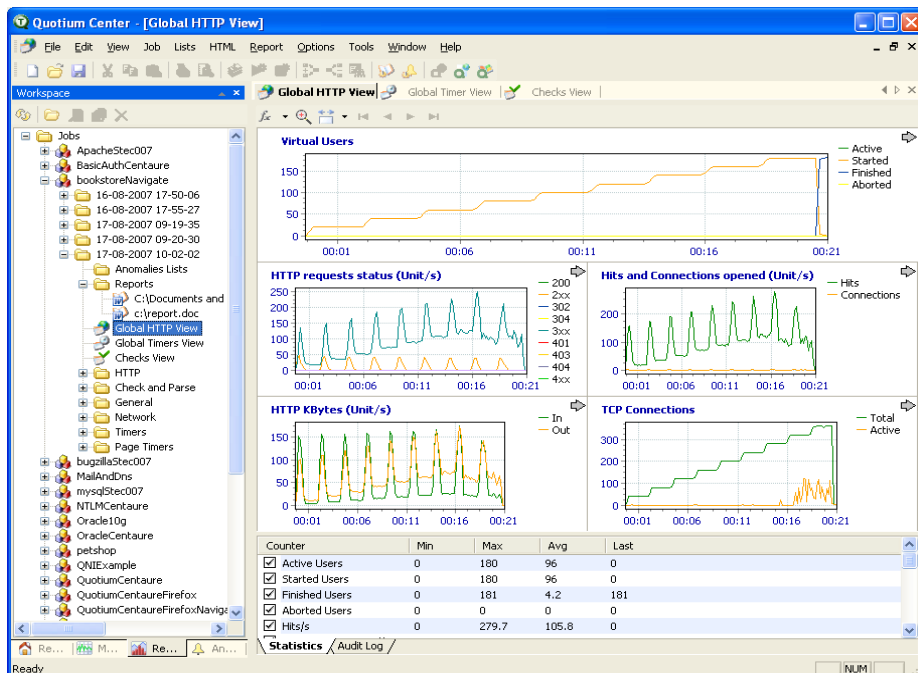
Using limited hardware resources, Qtest simulates as many as several tens of thousands of simultaneous virtual users in order to check whether the application performance is sufficient to match the service commitments made to the users.

Qtest has built-in, non-intrusive monitors (QMonitor), for real-time capture and display of the performance data on the network, application servers, web servers and databases.

By means of its unique technology (Qtest Anomaly Detector), Qtest automatically detects, locates and traces any anomalies in the network, servers or software, even the most complex architecture.

These anomalies, classified in chronological order or according to application components, provide an immediate picture of their severity, the component affected, and the time period during which the values exceeded the predetermined limits.

The Qtest Report Designer module saves time and improves the effectiveness of report production. This module makes it possible to create custom report models for different recipients



Load testing interface

(decision makers, project managers, technical experts, etc.). In the Qtest Center console, the reports are generated in one click by associating these models with the test results.

Environment

Qtest is compatible with all web browsers.

Qtest is designed to evaluate all types of web services and applications. Qtest handles all Web, Web Service, J2EE, .Net, ASP, AJAX, CGI, and Mainframe Portal environments and, in particular, complex Web applications like Siebel, SAP, and Epiphany.

With the Winload module, Qtest makes it possible to expand load testing to all Windows, client/server and ERP applications, in particular SAP Fat Clients, PeopleSoft, Oracle, Citrix and Siebel

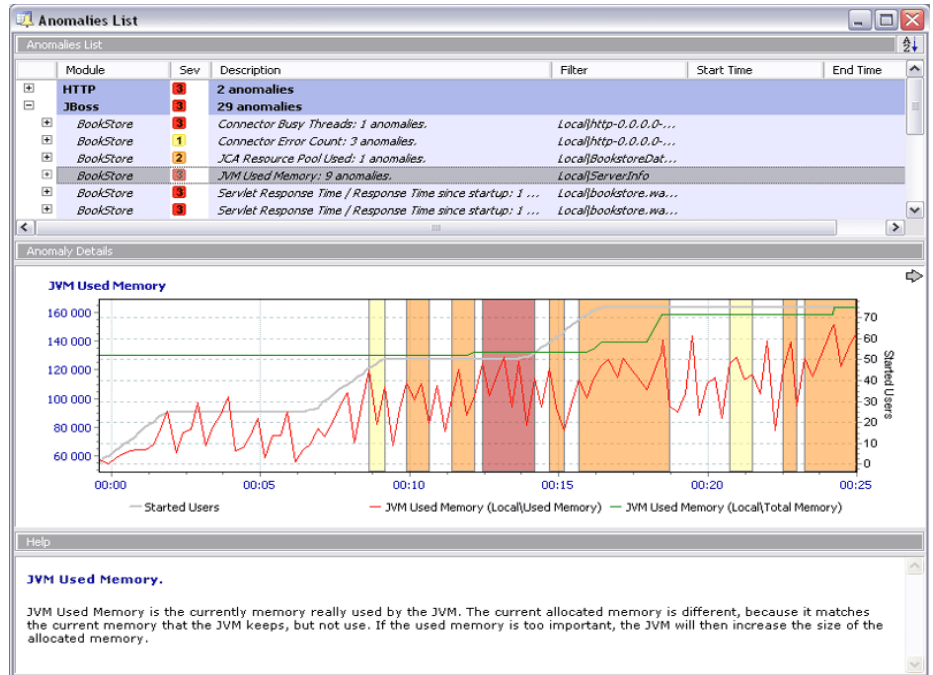
Thanks to its QNI module, Qtest can be adapted to specific environments.

Anomaly Detection

In general, load test and performance tools produce a huge amount of information relating to the health of a system. Other than the basics such as CPU & memory, often it is difficult to understand what all of this information means and how it relates to performance. Typically, another step is necessary to manually diagnose system bottlenecks or performance issues.

Qtest eliminates the manual process by doing it for you with its built-in 'Anomaly Detector'. This tool is integrated into the Qtest Center which automatically detects, locates and traces even the most sensitive transactional, system and application anomalies in your infrastructure.

The Anomaly Detector enables you to identify the origin of performance degradation for each component and measure the impact that each optimization has on the entire infrastructure. It will comb through all of the information generated and collected from the load test, analyze it for you and highlight the areas from the data that may be the cause of a bottleneck in the system.. It will also suggest a course of action to take to remedy the problem. The Detector's built-in



Anomaly Detection Interface

rules do not require that the person running the test be an expert in the technology they are testing.

From the example above, it's clear that from the hundreds of counters that Qtest monitored, there is only one potential problem and it relates to a database. The problem is quite severe as it has a rating of 3 (1 being the lowest).

Qtest has highlighted the area of the graph where the issue is apparent (after 50 users are on the system). The highlighted issue also explains what the problem is and why it is there. This process takes seconds to produce these results rather than hours that it would take to detect this issue in a manual procedure.

The Qtest Anomaly Detector can be applied to any test result in the Qtest Center using a simple drag and drop operation. Test Managers can also define their own anomaly profiles to provide different views of the test data and focus in on particular areas.

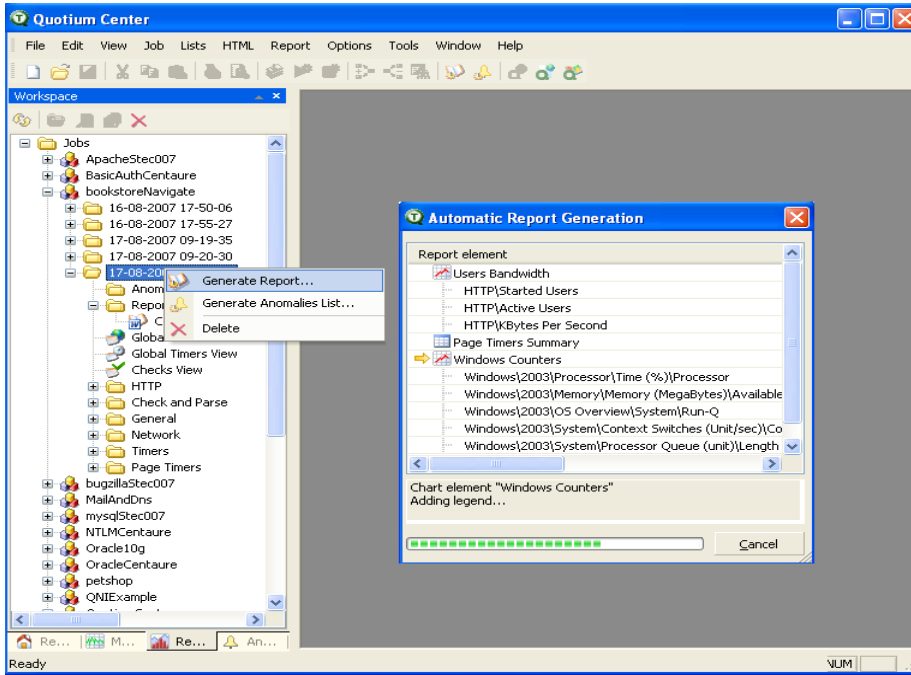
Report Designer

Qtest includes new features to significantly reduce the time it takes to create customized reports. With the powerful new Report Designer, you can create templates using Microsoft Word which can be dragged and dropped on any test result to automatically populate sophisticated reports with the results data.

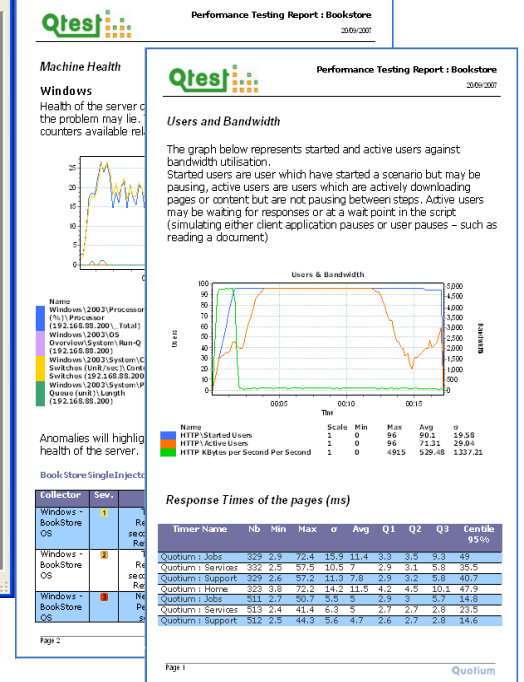
A large investment in time is necessary to produce test results which contain valuable and potentially critical information for many people in your organization. To get the most value out of these multiple test results, you should be able to quickly extract the essence of each result, and suitably present them to each Executive, Manager and Engineer.

For instance, Executives may be interested in the scalability of the application, while Marketing may be interested in information such as response time or maximum number of users supported at a minimum level of performance. The development team may be much more interested in cross analysis of resource counters from the back-end components.

Without the appropriate automation, reports take a long time to craft.



Create reports by drag and drop



Extracting the information needed by a particular "customer" and placing it into a professional looking report requires skill and time, especially with multiple test runs. The ability to automatically extract data and arrange it in reusable templates dramatically cuts the report generation time and cost, extending the value of our solution by getting the right data to the right people.

Using the Report Designer, simply drag and drop graphs, tables, summaries and other selected data at the appropriate place into a template ONCE (See Diagram). These elements are automatically combined with the existing text, images and other existing Word compatible content to produce professional looking reports.

Once a template has been defined, it can be reused on any test result. Simply drag and drop the template on a test result folder and voila!

The appropriate data will be extracted to automatically populate the template and saved into your report, ready for distribution. Standard document formats and content such as table of contents, logos, headers, etc. that are repeatable can be applied to all test reports for consistency and ease of use for repeat test runs.

After the template is created, graphs, tables and summaries can be dragged from the workspace and dropped right into the document template. When finished, the template can be saved and is ready to be applied to any set of results to generate your report.

Web Services

Unlike more traditional scripting tools, Qtest can take information from the service itself using WSDL (Web Services Definition Layer) and generate a check and test for the service using an intuitive graphical user interface. Qtest can be used throughout development and of course in the pre-production verification phase where it can simulate production scenarios to ensure that the Web services that make up the SOA are both high performance and robust.

Qtest builds a test using the WSDL from the Web service which can be either extracted from the Web server itself or from a file.

The Web services tests that we have created can be used to generate

load in exactly the same way as standard recorded Qtest tests. All the results, reporting and anomaly detection capabilities of Qtest can still be used to quickly produce results and help diagnose performance bottlenecks.

Advantages & Benefits

With a high level of technical innovation and exceptional performance quality, Qtest is a world leader in the market for load testing software.

Qtest features five strong points that make it unique :

Integration with the Quotium APM solution

Quotium Application Performance Management enables you to manage the end-to-end performance of load testing for your production cycle follow-up.

A strong capacity for load simulation

Qtest is capable of simulating several tens of thousands of virtual users on machines with standard specifications. Qtest covers all of the load increase needs of your business applications

Automatic anomaly detection

Thanks to its unique technology, the Qtest Anomaly Detector module automatically analyzes all of the performance measurements of the network, operating systems, application servers, web servers and databases on which the tested applications are running. In case of any problem, you will get an immediate view of the component affected, and the time frame in which the problem arose. The origin of the problems affecting the performance of your application is thereby detected automatically.

Complete monitoring of the hardware and software infrastructure.

Qtest has a set of non-intrusive performance monitors. These collect and display, in real time, all of the performance measurements of the network, operating systems, application servers, web servers and databases on which the tested application is running. This data is then presented in tables and graphs.

Automatic creation of custom reports.

Qtest lets you create custom report models, adapted to the various recipients (decision makers, project managers, technical experts, etc.). The reports can then be generated with a single click by associating these models with the test results.

Adapts to all environments

Qtest is designed to evaluate all types of web services and applications that use the HTTP/S protocol. Qtest handles all Web Service, J2EE, .Net, ASP, AJAX, CGI, and Mainframe Portal environments and, in particular, complex web applications like Siebel, SAP, and Epiphany.

With the Winload module, Qtest makes it possible to expand load testing to all Windows, client/server and ERP applications, in particular SAP Fat Clients, PeopleSoft, Oracle, and Citrix.

Thanks to its QNI module, Qtest can be adapted to specific environments.

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