

Ensure Secure, Reliable, and Compliant Web Services with Parasoft SOAtest

Parasoft SOAtest is the industry gold standard for ensuring secure, reliable, and compliant Service Oriented Architectures. SOAtest was built from the ground up to support your Web services initiative and has been on the market for over four years. SOAtest is a proven solution with clients such as: Yahoo!, Sabre, LexisNexis, IBM, and the US Government.

Enterprises select Parasoft SOAtest for its wide breadth of functionality, including four-tier WSDL validation, unit and functional testing of the client, unit and functional testing of the server, performance testing, as well as the ability to graphically model and test complex scenarios. SOAtest addresses key Web service issues such as interoperability, security, change management, and scalability. SOAtest features a collaborative workflow that allows any test asset created by an engineer to be leveraged by QA into scenario-based tests and load tests without the use of scripting!

Parasoft SOAtest is also the only Web services solution that automatically creates security penetration tests that protect Web services from threats such as SQL injections, XPath injections, parameter fuzzing, XML bombs, and external entities. Employing SOAtest throughout the software development lifecycle, users can prevent errors, improve quality and reliability, and accelerate the time to market for their Web service initiatives.

Server Functional Testing

Server functional testing ensures that the server delivers appropriate responses for the given requests. SOAtest facilitates server testing by automatically creating a test suite from a WSDL document or any Web Service asset. With SOAtest, you have the ability to create scenario-based tests that span multiple Web service invocations. A test suite containing any combination of user-defined and automatically generated tests can instantly be converted to a regression test, which helps you determine whether functionality changes over time.

You can also increase the coverage of your testing by configuring SOAtest to send data source values as part of a request to a server. The values that SOAtest receives in response can then be compared to other data source values. SOAtest also provides Test Suite Logic in which you can create tests that are dependent on the success or failure of previous tests – allowing you to create an efficient workflow within the test suite. In addition, SOAtest provides UDDI support, allowing you to query a UDDI, validate the results, and test the UDDI under load.

Load Testing

Load testing not only monitors the server's response rate with the specified number and mixture of simultaneous requests, but also verifies whether the test loads cause functionality problems.

SOAtest facilitates load testing by allowing you to load test your server functional test suite according to preset or customized load test scenarios. Preset scenarios include bell curve, buffer test, linear increase, and steady load. You can easily customize these scenarios to use different test cases, load levels, load distributions, and so on. You can also distribute virtual users across remote server machines to simulate extreme loads and/or test from different locations.

In addition, SOAtest can create Windows Perfmon, SNMP, and JMX monitors to collect network information and system performance data during load testing. SOAtest also provides a Detailed Report option in which load test graphs, histograms, and errors can be saved as a Detailed Report that can be viewed after the load test completes. Within the Detailed Report, you also have the ability to select and view individual hits in graphical or table mode. A load test time interval can also be selected through the Detailed Report to view either errors or individual hits within that time frame.

Client Testing

Client testing verifies that the client can correctly send a request, and whether the client behaves correctly when it receives a response. SOAtest provides a Web service deployment feature that lets your workstation function as the server in your client-server relationship. SOAtest instantly begins emulating a server based on a WSDL document. This lets you test client functionality and emulate server-supplied responses driven by data sources. With SOAtest, you have the full capabilities to manipulate the server-side response. Emulating the server is especially useful when the server is still being implemented, has bugs, or should not be accessed during testing.

Interoperability Testing

SOAtest verifies the WSDL and SOA traffic for conformance to Basic Profile 1.1 using WS-I Testing Tools. Functioning as both a traffic monitor and analyzer, SOAtest enhances the usability of WS-I Testing Tools by eliminating the need to set up man-in-the-middle Monitor and configuration files for the Analyzer. The only required input to SOAtest is the WSDL URL.

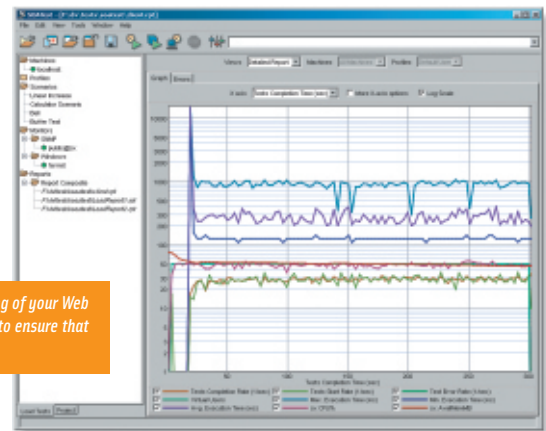
WS-Security Testing

SOAtest includes security support for testing Web services with security layers. At the transport level, SOAtest supports SSL (both server and client authentication), basic authentication, and cookies for session management. At the wire level, SOAtest supports WS-Security including X509, SAML, Username security tokens, XML Encryption and XML Digital Signature.

Security Penetration Testing

SOAtest automatically generates tests to perform security penetration testing. By testing the Web service with penetration attacks and analyzing the responses, security vulnerabilities can be discovered and fixed earlier in the software development cycle. The following penetration tests are currently supported: SQL injections, XPath injections, parameter fuzzing, XML bombs, and external entities.

SOAtest can automatically create test suites that will make the testing of your Web service quick and easy. With SOAtest, you can perform load testing to ensure that the Web service server can handle client requests under heavy load.



Features

- Scriptless testing.
- WS-Security, SAML, Username Token, X.509, XML Encryption, and XML Signature support.
- UDDI support: query verification, validation, and load testing.
- Automatic test creation from WSDL, WSIL, UDDI and HTTP Traffic.
- Asynchronous Testing: JMS, Parlay (X), SCP, WS-Addressing support.
- Complete coverage testing workflow through complex scenarios and multiple service endpoints.
- WSDL schema and semantic verification and compliance to WS-I Basic Profile 1.1.
- Data-driven testing through data sources (Excel, CSV, Database Queries, etc).
- MIME Attachment support.
- Windows Perfmon, SNMP, and JMX Monitors.
- Detailed Report generation in HTML, XML and Text formats.
- Real-Time graphs and charts.

Benefits

- Ensure the reliability, quality, security and interoperability of your Web service.
- Penetration testing integrated with functional testing for complete coverage
- Uniform test suites can be rolled over from unit testing to functional testing to load testing to security testing.
- Prevent errors, pinpoint weaknesses, and stress test long before deployment.
- Verify data integrity and server/client functionality.
- Identify server capabilities under stress and load.
- Accelerate time to market.

Protocol Support

- HTTP 1.0
- HTTP 1.1 w/Keep-Alive Connection
- HTTPS
- TCP/IP
- JMS

Platforms

- Windows 2000 and XP
- Linux
- Solaris

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