

WebSpray™

Windows-based stress-testing software to measure web server performance and capacity and detect problems

Introduction

- ▶ Do you know how much traffic your web server can handle?
- ▶ Can you tell if your hosting service is doing a good job?
- ▶ Does your Web site have any dead links?
- ▶ Are you just throwing money at your Web server with constant upgrades hoping it can keep up with expected traffic?

With WebSpray™, the guessing game is over. This powerful, easy-to-use tool Windows-based stress-tests any web server and reports on errors and performance.

Easy to Use

With WebSpray's simple, intuitive user interface, testing a Web site could not be easier: just enter the URL of the web site to be tested and some optional tuning settings and WebSpray tests automatically.

WebSpray requires no scripting, no complicated setup, no cumbersome scenario definitions: just set some basic parameters and testing is done automatically.

Both a Windows GUI and command-line version are provided to facilitate ad-hoc interactive and repetitive batch-oriented testing. Configuration profiles are supported so that different settings can be preset depending on the test scenario.

WebSpray uses Internet standards so it does not require the use of agents, drivers, or any host software to be installed.

Simulates Multiple Accessors

Many less capable testing programs only use one IP address to test a target web site; the least capable ones cannot even simulate more than one client from the IP address.

WebSpray is not only capable of simulating up to 1,000 clients from a single IP address but also of supporting multiple IP addresses with or without aliases. This important feature is typically found only in products costing much more.

Simulates Popular Browsers

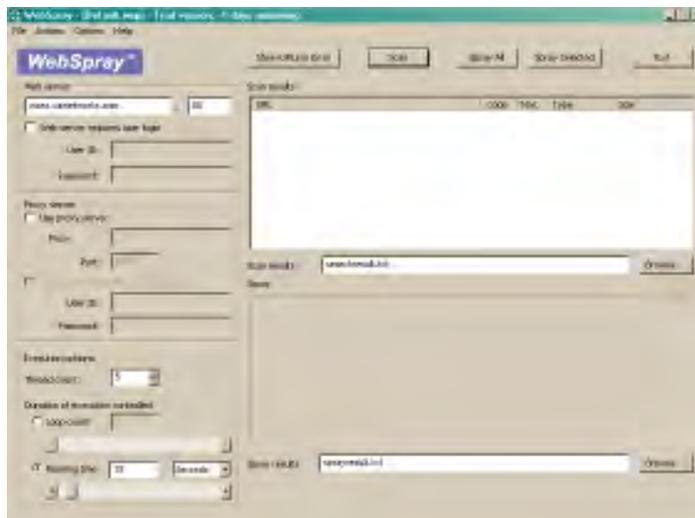
WebSpray can simulate various popular browsers (IE, NetScape, etc.) so you can see performance differences based on browser type.

Tests All Pages, Including Linked Sites

Some testing utilities only test the home page of the target web site, which is not a representative real-user simulation for a number of reasons:

- Home pages are often cached by the web server
- Accesses may be against pages other than the home page
- Linked pages may be on other web servers

WebSpray GUI Main Menu



WebSpray is able to crawl an entire web site or just portions of it. It is able to follow links that point to other web sites to a specified depth.

Tests Multiple Times

To fully stress-test a web site over time, WebSpray is able to run multiple consecutive iterations, configured by either number of loops or period of time. Pages are tested repeatedly over this period and the performance results reported at the end of testing, with averages and variations during testing indicated.



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Methodology

WebSpray's methodology for web server testing is to first perform a complete *scan* of all the qualifying pages on a target web server (and linked servers, if so configured) and extract all the URLs encountered.

It then performs one or more *sprays* of selected URLs or all URLs and collects performance metrics and reports them. You can select particular URLs to be sprayed or specify that all URLs be sprayed.

The scan results are saved for additional sprays should those be desired. The testing parameters may be saved as profiles for future testing.

Testing Parameters

WebSpray supports the following parameters for configuring tests to be executed:

- Web server name or IP address to test
- Port to test via
- Optional login info for target web server (user name and password)
- Optional proxy server name or IP address, port, and login
- How many clients to simulate
- Test duration (specified as number of loops or running time)
- Client IP address(es) to use when testing
- Whether to follow foreign links and, if so, to what depth
- What type of browser to emulate
- Where to save spray and search results files

Standards supported

WebSpray supports popular HTML standards including:

- HTTPS (SSL)
- Basic and digest authentication (for proxy server as well as web server)
- Deflate and GZIP compression
- Chunked encoding
- Etc.

Qualifying URLs and error reporting

WebSpray produces a report of all URLs found via a scan of the target web site and any outside links referenced to a specified depth.

In performing its test operations, WebSpray reports any broken links found and any other errors encountered during testing. This is both for the primary web server being tested as well as foreign web servers which may be linked to from the primary web server.

WebSpray produces a report of broken links and pages in error for later inspection and possible action.

Performance Reporting

WebSpray's extensive performance reporting capabilities include:

- Total number of "good" and "bad" URLs that were tested (where "bad" pages are those that could not be tested due to errors)
- Percentage of pages tested that use SSL encryption
- Minimum, maximum, and average number of bytes processed and their standard deviation across all pages tested, shown separately for headers and body
- Minimum, maximum, and average connection (TTFB) and download (TTLB) time and their standard deviation across all pages tested
- Minimum, maximum, and average throughput (bytes per second) and their standard deviation across all pages tested

Summary Statistics	Clients	Loops	Good	Bad Pages	SSL
	15	3	8	0	0.00%
Downloaded Data (bytes)	Minimum	Maximum	Average	Std. Dev.	%
Headers	232	232	232.00	0.00	6.00%
Body	4097	4097	4097.00	0.00	94.00%
Total	4329	4329	4329.00	0.00	
Average Time (in ms.)					
Connection (TTFB)	721	2524	1631.47	822.52	-
Download (TTLB)	1582	5068	3486.78	1016.46	-
Throughput (bytes/sec)	854	2736	1379.83	543.32	-

Performance results are shown on the screen and also written to a result file for later analysis.

System Requirements

The PC on which WebSpray will run must meet the following hardware configuration:

- A Pentium class CPU. The higher the CPU performance, the more the web server can be stressed
- 64 megabytes of RAM
- 20 megabytes of disk space
- A Network Interface Card if testing will be over a Local Area Network or broadband connection, or
- A modem if testing will be over a dialup connection.

One of the following Windows versions:

- Windows 2003
- Windows XP
- Windows 2000
- Windows NT 4.0
- Windows 98