



Avalanche/Layer 4-7 on Spirent TestCenter™

APPLICATION TESTING AND ENHANCED HTTP

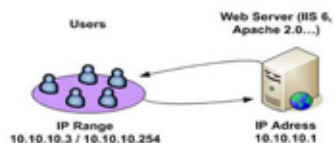
The Application Testing and Enhanced HTTP Bundle are two features of Spirent Avalanche that are targeted specifically at Web application testing – whether the end goal is to test a Web application, a Web service or a network device.

APPLICATIONS

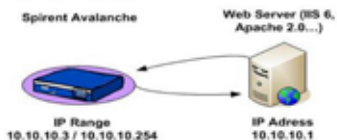
- Testing web applications for scalability and response-time behavior under load
- The web applications handle increased load without dropping users
- The web applications continue to handle users without degrading the response time under load
- Testing web applications for high performance, user realism, and network realism

APPLICATION TESTING

Customer Infrastructure



Spirent Test Infrastructure

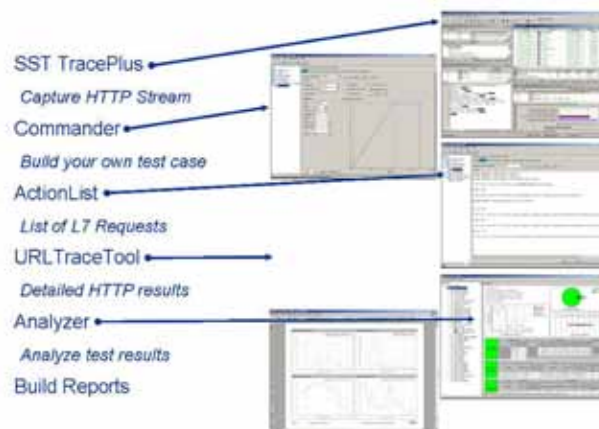


The Application Testing option provides support for testing of forms databases, dynamic variables (dynamic URLs, session IDs, etc.), Web services.

The Enhanced HTTP option for Avalanche provides support for testing of cookies, redirects, POSTS and content validation.

FEATURES AND BENEFITS

APPLICATION TESTING AND ENHANCED HTTP



Features of Application Testing

- **Forms Databases** - This feature is very useful when sometimes requests are dynamically constructed based on external data from a forms database. For example, the retailer may have a lot of inventory that can potentially be part of the test. The inventory list is maintained in a forms database and is picked up by the action list (which is parameterized). The forms databases in Spirent Avalanche are very flexible and allow for both global and user level control.
- **Dynamic Variables** - This feature allows users to test the web applications that are involved with the dynamic requests and contents. Dynamic variables are analogous to variables in a programming language.
- **Web Services** - Spirent Avalanche supports testing with real HTTP content. This is especially useful for testing Web services (SOAP over HTTP) where the SOAP message is stored in an XML file. The data in this file can be parameterized as well.

FEATURES AND BENEFITS (CONTINUED)

- **User Based Load Profiles** - Large websites have customers from different locations accessing the site independently but simultaneously. For example, a large retailer may have a set of users on the east coast over dial-up lines and another set of users from the west coast using faster cable modems or DSL hookups. Each of these users has separate characteristics and can be modeled separately using user based load profiles. In User Based Load Profiles, the user characteristics and the loads of individual sets of users can be modeled separately. Spirent Avalanche aggregates the user descriptions before execution. This feature gives a tester a great deal of flexibility in modeling a test with as much realism as possible to the real customer base.
- **Nested Directories** - All of the features discussed so far are associated with client execution. That is, they simulate the behavior of a real user using their browser to access a Web application. Nested directories are a feature of Spirent Reflector – a partner product of Spirent Avalanche – that models the server side infrastructure. It supports a lot of protocols - including HTTP and HTTPS. On an HTTP (or HTTPS) server on Reflector, a user can upload real static Web content. With nested directories, Spirent Reflector simulates a real Web server.
- **Proxy Recorder** - Determining the correct workflow – i.e. the set of actions typically followed when a user peruses the website - is the first step in testing an application. For example, to test a retailer's website, one must record the actions of a typical customer. To aid in this recording process, Spirent work with SST TracePlus. TracePlus/ Web Detective is an HTTP trace/analysis that sniffs on the HTTP protocol which the Web browser uses to communicate with the Web server, and displays it in an easy to understand format.

Features of Enhanced HTTP

- **POSTs, Cookies, and Redirects** - At a minimum, modern Web applications use HTTP POST requests, cookies and redirects. Spirent Avalanche completely supports cookies, redirects – both in the response header and in the response body (as a META-REFRESH tag) – as well as HTTP POST statements.
- **Timers** - To adequately gauge the performance of a site, it is ideal to separate out and individually measure different parts of the website. For example, a retailer may need to determine the time spent by users to browse the inventory as well as the performance of the checkout section of the website. To do this, the workflow is set up to group and separately measure the two sets of actions. This grouping of actions is done in Spirent Avalanche with Timers.
- **Loops** - A set of actions may need to be repeated several times. For example, if a workflow models the purchase of three books on a retailer's website, then action can be set up once and repeated three times in a loop. Avalanche can execute loops either by count or for a specified amount of time.
- **Content Validation** - In certain workflow situations, it is necessary to search for a literal string as part of the return content and take an action based on whether or not the search was successful. For example, if the retail website has a login page, then the validity of the test is dependent on correct credentials being presented to the login page before the rest of the steps in the workflow can be executed. If correct credentials are not presented, then the workflow should not continue for that user. With content validation in Avalanche, the test can be set up to look for a pattern in the response (for example, "Sign-In Error") to determine whether the credentials presented have failed. At this point, the test or the current user can be stopped.

FEATURES AND BENEFITS (CONTINUED)

- **Search Criteria** - This feature is useful when the pattern is known, but not the exact string or the position of the string in the response. With search criteria, when the prefix and the postfix are known, it is possible to grab a string from the response header or response body and reuse it in a subsequent request. This is useful when a Web application uses VIEWSTATE IDs or session IDs for state management. If the session ID is dynamic and has to be used across requests, then the session ID needs to be captured and reused. Another use case is to grab the URL from a response page and use that as the subsequent request. For example, this can be used when the first link from the response from a search engine should be set as the next request in the workflow.

SUPPORTED MODULES & PLATFORMS

- Spirent Avalanche 2700
- Spirent Avalanche 2900
- Spirent Avalanche 290
- Spirent TestCenter HyperMetrics AP, 8-port 1GbE and 2-port 10GbE
- Spirent TestCenter HyperMetrics CM, 4- port and 12-port 1GbE
- Spirent TestCenter Application Performance CPU Module, 8-port 1GbE
- Spirent TestCenter EDM-2001B 10/100/1000 Dual Media, 4 port (SFF)
- Spirent TestCenter EDM-2002B 10/100/1000 Dual Media, 2 port
- Spirent TestCenter EDM-2003B 10/100/1000 Dual Media, 12 port
- Spirent TestCenter CPR-2001B 10/100/1000 Copper RJ-45, 8 port (SFF)
- Spirent TestCenter CPR-2002B 10/100/1000 Copper RJ-45, 8 port (SFF)
- SPT-2000A Spirent 2U Chassis and Controller or SPT-9000A Spirent 9u Chassis and Controller
- Software:
 - Avalanche Commander version 7.58 or higher with Application Testing and Enhanced HTTP options

REQUIREMENTS

- An IBM compatible PC must meet the following minimum requirements to run Spirent Avalanche:
 - One 10/100/1000Base-T unshielded twisted pair (UTP) cable
 - One 10 Mbps or 10/100/1000 Mbps Ethernet NIC
 - Intel E6300 Core 2 Duo 4 (or equivalent)
 - One serial port
 - Minimum of 2 GB of RAM
 - Minimum of 15 GB free space on the hard drive
 - Windows XP Operating Systems, Service Pack 2 (SP2)
 - An SVGA color monitor (or equivalent) and a mouse
 - CD-ROM drive

Ordering Information

Description	Part Number
AVALANCHE EXTREME SW BUNDLE	CEE-SWB-006
AVALANCHE EXTREME 2008 SW BUNDLE	CEE-SWB-008
AVALANCHE EXTREME VER 3 SW BUNDLE	CEE-SWB-009
AVALANCHE APPLICATION TESTING	CEE-SW-APP
AVALANCHE PORTABLE APPLICATION TESTING SW BUNDLE	CEE-SWB-002-PT
AVALANCHE PORTABLE EXTREME SW BUNDLE	CEE-SWB-006-PT
AVALANCHE PORTABLE EXTREME 2008 SW BUNDLE	CEE-SWB-008-PT
AVALANCHE PORTABLE EXTREME VER 3 SW BUNDLE	CEE-SWB-009-PT
AVALANCHE PORTABLE APPLICATION TESTING CLIENT	CEE-SW-APP-PT
AVALANCHE EXTREME 2008 TEST SOLUTION	SPK-0017
AVALANCHE APPLICATION TESTING TEST SOLUTION	SPK-0018
AVALANCHE EXTREME TEST SOLUTION	SPK-1022
AVALANCHE EXTREME 2008 TEST SOLUTION -2U	SPK-0017-2U
AVALANCHE APPLICATION TESTING TEST SOLUTION – 2U	SPK-1018-2U
AVALANCHE EXTREME TEST SOLUTION – 2U	SPK-1022-2U

SPIRENT SERVICES

Spirent Global Services provides a variety of professional services, support services and education services — all focused on helping customers meet their complex testing and service assurance requirements. For more information, visit the Global Services' Web site at www.spirentcom.com/gs or contact your Spirent sales representative.



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