



Avalanche/290

AVALANCHE/290 PORTABLE LAYER 4-7 TESTING SOLUTION

Spirent's Avalanche/290 portable appliance solution provides high capacity, security and performance testing for network infrastructures in a small portable package. The Avalanche/290 has all the power of the industry leading Avalanche testing solution, and it can be carried under your arm: Web application infrastructures, Triple Play services ensuring Quality of Service (QoS), Vulnerability Assessment and Quality of Experience (QoE) for your customers.

APPLICATIONS

- Field Web and Infrastructure Testing
- Remote Server Farm Emulation
- Advanced Security Testing
- Proof of Concept/Pre-deployment Network Verification

The Avalanche/290 rounds out Spirent's end-to-end Layer 4-7 family of solutions. Today, it is essential that the performance of content-aware networks, security systems and Web applications are carefully tested to ensure business transactions and communication are not adversely affected. The Spirent Avalanche/290 is a high performance, stateful traffic functional testing solution capable of high throughput and high capacity application layer testing using the power of the Avalanche testing architecture.

BENEFITS

- Full-featured Avalanche test solution in a small package that can be taken on the road for tests anywhere, anytime
- Compatible with Avalanche/2900 and Avalanche for Spirent TestCenter™; all tests conducted on Avalanche/290 can be used on any platform supported by Avalanche – tests will scale from 1G to 10G
- Client and Server in same appliance: Avalanche/290 is fully self-contained and provides simultaneous client and server emulation for complete testing
- Drives 1Gbps of high performance traffic for demanding Layer 4-7 testing applications



USER REALISM

- Portable high-performance appliance for realistic Layer 4-7 testing
- Emulates client and server in same appliance
- Allows flexible load specifications that can be applied globally or per user profile: user sessions, new sessions per second, transactions, transactions per second, connections or new connections per second
- Supports Web Services testing
- Allows interaction with dynamic content sites
- Emulates multiple browser types
- Supports cookies, session IDs, HTML forms, HTTP posts and HTTP basic and proxy authentication
- Simulates user click patterns with configurable “think times”
- Simulates user click-aways (HTTP aborts)

NETWORK REALISM

- Handles multi-level HTTP redirects
- Supports HTTP proxies and proxy caches
- Enables network delay settings
- Packet loss simulation
- Allows simulation of TCP/IP stack characteristics and control over:
 - Maximum segment size
 - Slow start/congestion avoidance
 - VLAN tagging
 - IP fragmentation
 - TCP timeout behavior
- Link-speed emulation (from 9600 bps to gigabit LAN speeds)
- Network Access Protocol - DHCP, PPPoE and IPSec
- Network realism - Line speed limitation, network latency, packet loss and fragmentation
- IP Version Supported - IPv4 and IPv6
- Encapsulation - Protocol 802.1Q and 802.1Q-in-Q
- Transport - TCP, UDP, SSLv2, SSLv3 and TLSv1
- Data Protocol - HTTP, HTTPS, FTP (Active/Passive), DNS, TELNET, SMTP, POP3, IMAP4, RADIUS, CIFS, MM4, ICMP and Capture/Replay

- Authentication - 802.1x, Network Access Control (NAC), Radius
- Voice Protocol - SIP over TCP and SIP over UDP
- Voice Codec Supported - G711A, G711U, G.723.1, G726-32, G.728 and G729AB
- Voice Quality measurement - MOS score based on R-Factor
- Video Protocol - Unicast Streaming Quicktime RTSP/RTP, Unicast Streaming RealNetwork RTSP/RTP, RTMP
- Unicast Streaming Microsoft MMS, Multicast Streaming IGMPv2, IGMPv3 and MLDv2
- Video Codec Supported - MPEG-1, H.261, MPEG-2, H.262, MPEG-4/H.264
- Video Quality measurement - MDI:DF and MDI:LR
- Vulnerability Assessment - L2/L4 DDOS Attacks and L4/L7 Application Attacks including SANS Top 20 Internet Security Attacks

HIGH PERFORMANCE 1000MBPS OF BACK-TO-BACK LAYER 4-7 BANDWIDTH

- Simulates up to 250,000 simultaneously connected users
- Generates up to 10,000 requests per second (HTTP 1.0 with no persistence) and over 25,000 requests per second (HTTP 1.1 with persistence)
- Sustains over 1000 HTTPS requests per second with no SSL session ID re-use
- Generates over 5,000 streaming requests

FLEXIBLE REPORTING

- Avalanche Analyzer generates reports and graphs that can be exported in JPG, PDF and HTML formats
- Real-time statistics provide instant feedback during infrastructure performance tests

INTUITIVE OPERATION

- Fast set-up
- Easy-to-use, browser-based GUI
- Test new functionality without writing extensive scripts

Technical Specifications	
Integrated Hardware and Software	<ul style="list-style-type: none"> ■ 4 ports 10/100/1000bps client/server operation ■ Portable, compact load testing appliance
Dimensions	4" H x 9" W x 11" D (10.1cm H x 22.8cm W x 27.9cm D)
Weight	7 lbs. (3.2 kg)
Operating Environment	0°C – 45°C
Non-Operating (Storage) Environment	20°C – 80°C
Relative Humidity	10% to 90% (non-condensing)
Power Requirements	<ul style="list-style-type: none"> ■ Input rating 100–240V AC, 2A, 50/60 Hz ■ Output rating 24V DC, 2.5A, 60W (max)
Maximum Power Consumption	2A, 110V
Network Interfaces	<ul style="list-style-type: none"> ■ Four 10/100/1000Base-T test interfaces ■ One management 10/100Base-T port
Regulatory Approvals	<ul style="list-style-type: none"> ■ FCC Class A ■ CE

REQUIREMENTS

An IBM® compatible PC must meet the following minimum requirements to run the Spirent Avalanche:

- One 10/100/1000Base-T unshielded twisted pair (UTP) cable
- One 10 Mbps or 10/100/1000 Mbps
- Ethernet NIC card
- Intel® E6300 Core 2 Duo 4 (or equivalent)
- One serial port
- Minimum of 2 GB of RAM
- Minimum 10 GB free space on the hard drive
- Windows® XP operating system, Service Pack 2 (SP2)
- An SVGA color monitor (or equivalent) and a mouse
- Microsoft Terminal Services™ or HyperTerminal™ or equivalent communications software package
- CD-ROM drive

Ordering Information

Part Number	Description
CEE-290	Avalanche/290 with 4-Port GIGE and Base Avalanche Software (HTTP/FTP/DNS and Telnet)
CEE-SW-8021X-PT	AVALANCHE/290 802.1X CLIENT
CEE-SW-APP-PT	AVALANCHE/290 APPLICATION TESTING CLIENT
CEE-SW-CIFS-PT	AVALANCHE/290 CIFS CLIENT/SERVER
CEE-SW-CR-PT	AVALANCHE/290 APPLICATION CAPTURE & REPLAY CLIENT/SERVER
CEE-SW-DHCP-PT	AVALANCHE/290 DHCP CLIENT/SERVER
CEE-SW-DOS-PT	AVALANCHE/290 DENIAL OF SERVICE CLIENT
CEE-SW-IPSEC-PT	AVALANCHE/290 IPSEC CLIENT
CEE-SW-IPV6-PT	AVALANCHE/290 IPV6 CLIENT/SERVER
CEE-SW-MAIL-PT	AVALANCHE/290 SMTP/POP3/IMAP4 CLIENT/SERVER
CEE-SW-MM4-PT	AVALANCHE/290 MULTIMEDIA MESSAGING SVC MM4 CLIENT/SERVER
CEE-SW-MS-PT	AVALANCHE/290 WINDOWS MEDIA STREAMING CLIENT/SERVER
CEE-SW-NAC-PT	AVALANCHE/290 NAC CLIENT
CEE-SW-PPP-PT	AVALANCHE/290 PPP OVER ETHERNET CLIENT/SERVER
CEE-SW-RAD-PT	AVALANCHE/290 RADIUS CLIENT
CEE-SW-REAL-PT	AVALANCHE/290 REAL PROXY CLIENT
CEE-SW-RTMP-PT	AVALANCHE/290 RTMP CLIENT
CEE-SW-RTSP-PT	AVALANCHE/290 RTSP/RTP CLIENT/SERVER
CEE-SW-SANS-PT	AVALANCHE/290 SANS TOP 20 ATTCK TESTING
CEE-SW-SIP-PT	AVALANCHE/290 SIP CLIENT/SERVER
CEE-SW-SSL-PT	AVALANCHE/290 SSL CLIENT/SERVER
CEE-SW-VOD-PT	AVALANCHE/290 VIDEO ON DEMAND MULTICAST CLIENT/SERVER
CEE-SW-VQA-PT	AVALANCHE/290 VIDEO QUALITY ANALYSIS CLIENT
CEE-SW-WSM-PT	AVALANCHE/290 WORKSUITE MANAGER



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