



SPIRENT AVALANCHE

LAYER 4-7 TESTING SOLUTION

AVALANCHE 290 PORTABLE

Spirent's Avalanche™ 290 portable appliance solution provides high capacity, security and performance testing for network infrastructure in a small portable package. The Avalanche 290 has all the power of the industry-leading Avalanche testing solution supported on hardware small enough to be carried under your arm. Web application infrastructures, Triple Play services ensures 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/Predeployment Network Verification
- Testing cloud and virtualized services
- Storage and WAN acceleration

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 over 1Gbps of high performance traffic for demanding Layer 4-7 testing applications



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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 802.1 Q-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, NFS and advance Capture/Replay

- Extended Protocols—BitTorrent, Gnutella, MSN, Yahoo, SKYPE, SQL, MYSQL, Oracle, SMB, NFS, Remote Desktop, Exchange, LDAP and more
- 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
- HTTP Adaptive Streaming for Apple®, Microsoft®, and Adobe®
- 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—over 7500 IPv4 and IPv6 attacks available

HIGH PERFORMANCE 1,000MBPS 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 1,000 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 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

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AVALANCHE 290 PORTABLE LAYER 4-7 TESTING SOLUTION

ORDERING INFORMATION	
Part Number	Description
CEE-290	Avalanche 290 with 4-Port GIGE and Base Avalanche Software (HTTP/FTP/DNS and Telnet)
CEE-SWB-030-PT	CEE-SWB-030-PT AVALANCHE 290 Extreme Protocol Bundle - Includes all protocols and features
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-DHCP-PT	AVALANCHE 290 DHCP CLIENT/SERVER
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-PPP-PT	AVALANCHE 290 PPP OVER ETHERNET CLIENT/SERVER
CEE-SW-RAD-PT	AVALANCHE 290 RADIUS CLIENT
CEE-SW-RTMP-PT	AVALANCHE 290 RTMP CLIENT
CEE-SW-RTSP-PT	AVALANCHE 290 RTSP/RTP CLIENT/SERVER
CEE-SW-SIP-PT	AVALANCHE290 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
CEE-SW-1XNAC-PT	AVALANCHE 290 802.1x and NAC
CEE-SW-SAPEE-PT	AVALANCHE 290 Scalable Protocol Emulation Engine
CEE-SW-NFS-PT	AVALANCHE 290 NFS Client
CEE-SW-VAD-PT	AVALANCHE 290 Vulnerability Assessment and Attack Generator
CEE-SW-UNICAST-PT	AVALANCHE 290 Video Streaming Package - Unicast

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 website at www.spirent.com or contact your Spirent sales representative.

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