

Spirent Avalanche™ Layer 4-7 Test Solution

SECURITY TESTING AND APPLICATION PERFORMANCE

Spirent's Avalanche Layer 4-7 provides capacity, security and performance testing for network infrastructures, Web application infrastructures and Triple Play services that ensures Quality of Service (QoS) and Quality of Experience (QoE) for your customers. Avalanche pinpoints network capacity with the highest performing Layer 4-7 traffic generation capability available (up to 10Gbps).

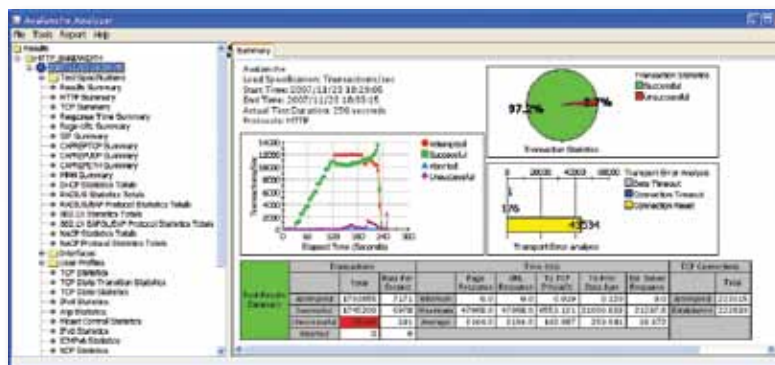
APPLICATIONS

- Network Performance Testing
- Web Application Testing
- Triple Play Testing
- Security Testing

FEATURES & BENEFITS

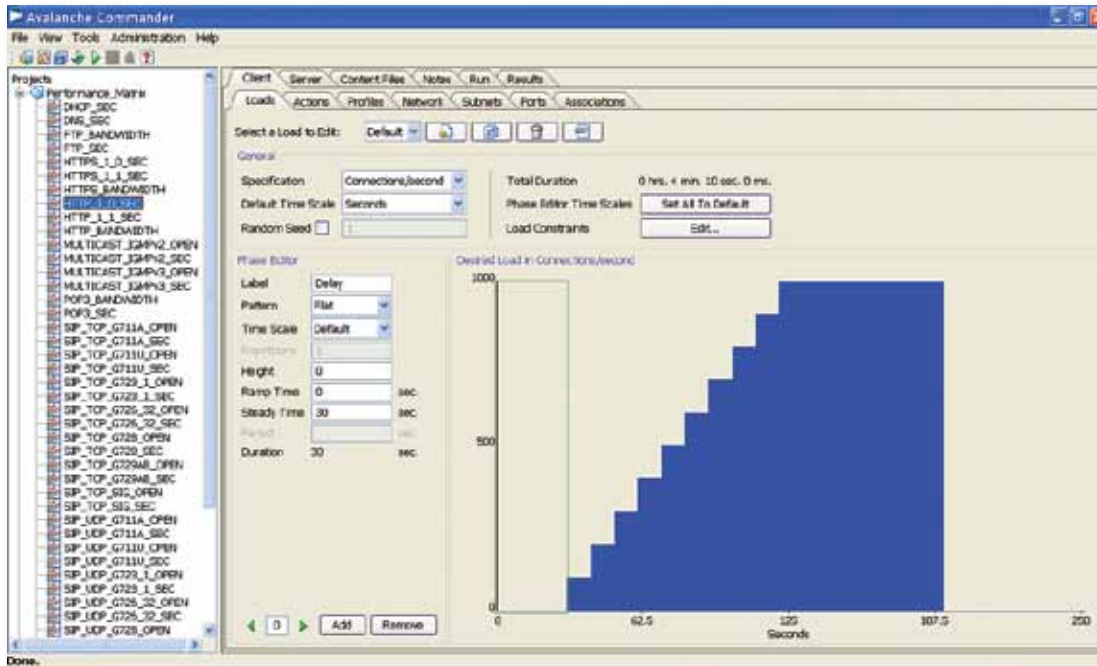
- **10Gbps Line Rate Stateful Traffic** – Spirent Avalanche provides the capability to generate line rate stateful traffic up to 10Gbps allowing trunk ports to be directly tested or to determine the impact of multiple GigE ports being aggregated over 10Gbps
- **Flexible Load Profile** – Spirent Avalanche's flexible load profile offers testers the flexibility to specify load variables such as connections per second, concurrent connections, transactions per second, new user sessions per second and concurrent users
- **Real-Time Statistics** – Spirent Avalanche offers real-time statistics across all protocols and reporting tool that makes analyzing results faster and easier
- **Network Devices Performance Testing** – Spirent Avalanche provides performance and capacity testing on a variety of network devices including: Firewall, Application Firewall, Load Balancer, Cache, Proxy, URL Filter, Content Filter, Anti-Virus, Anti-Spyware, Reverse-Proxy, SSL Accelerator, HTTP/HTTPS Accelerator, SMTP Relay, IDS/IPS, IPSec VPN Gateway and SSL VPN Gateway

- **Application Server Performance Testing** – Spirent Avalanche can validate performance of several types of real servers including Web Server, Application Server, Mail Server, DHCP Services, FTP Server, DNS Server, Telnet Server, RTSP/RTP QuickTime Streaming Server, Multicast Server and more
- **Triple Play Performance Testing** – Spirent Avalanche can perform Triple Play testing, validate Triple Play service from the user's point of view with realistic voice calling, unicast and multicast streaming video, and simulate Internet data traffic using static IP address or IP address assign by DHCP over PPPoE, VLAN and Stacked VLANs (e.g. Q-in-Q)
- **Web Application Testing** – Spirent Avalanche can perform Web application testing including Web services, SOA, ERP and CRM applications with Spirent Avalanche's application testing capability to support cookie, session ID, dynamic link, automatic follow redirect, additional header, content validation, SOAP message, think time, variable think time and variable assignment
- **Network Security Testing** – Spirent Avalanche provides extensive testing for secure network communication, vulnerability assessment and user authentication including: IPSec, SSL, 802.1x, Network Access Control (NAC) and RADIUS



Avalanche Analyzer

Feature	Spirent Avalanche™		Spirent TestCenter™	
	290	2900	HyperMetrics CM	HyperMetrics AP
	Per appliance		Per pair port	Per module
Number of Test User	2 Test Users	8 Test Users	1 Test User	Up to 8 Test Users
Type of Simulation	Client and Server	Client and Server	Client and Server	Client and Server
Network Interfaces	<ul style="list-style-type: none"> ■ 4x 10/100/1000 Copper 	<ul style="list-style-type: none"> ■ 8x 10/100/1000 Copper ■ 8x 10/100/1000 Fiber ■ 4x 10/100/1000 Copper and 4x 10/100/1000 Fiber ■ 4x 10/100/1000 Copper and 1x 10GbE ■ 4x 10/100/1000 Fiber and 1x 10GbE 	<ul style="list-style-type: none"> • CM-1G-D12 HYPERMETRICS CM 10/100/1000 DUAL MEDIA 12-PORTS • CM-1G-D4 HYPERMETRICS CM 10/100/1000 DUAL MEDIA 4-PORTS • CPR-2001B 10/100/1000 Copper RJ-45, 8 Port (SFF) • CPR-2002B 10/100 Copper RJ-45, 8 Port (SFF) • EDM-2001B 10/100/1000 Dual Media, 4 Port (SFF) • EDM-2002B 10/100/1000 Dual Media, 2 Port • EDM-2003B 10/100/1000 Dual Media, 12 Port • FBR-2001B 1GbE Fiber SFP, 8 Port (SFF) • XFP-2001B 10GbE 1 Port • MSA-2001B 10GbE Multi-MSA Host Module, 2 Port 	<ul style="list-style-type: none"> ■ CPU-5002A 8 x 10/100/1000 dual media ■ CPU-5003A 2 x 10G XFP Module
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, MM4, ICMP, CIFS 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, G.726-32, G.728 and G.729AB			
Voice Quality Measurement	MOS score based on R-factor formula provided by Telchemy			
File Access Protocol	CIFS			
Video Protocol	Flash Media Streaming using RTMP and RTMPT, Unicast Streaming Quicktime RTSP/RTP, Unicast Streaming RealNetwork RTSP/RTP, 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	Telchemy's MDI measurements along with additional stats to detect picture quality			
Vulnerability Assessment	L2/L4 DDOS Attacks and L4/L7 Application Attacks including SANs Top-20 Internet Security Attacks			
Reporting	Integrated CSV test results analyzer fully customizable with report generation in PDF and HTML; also provides over 300 statistics for Per IPaddress			
Automation	GUI to TCL and Automatic goal seeking using WorkSuite Manager			
Physical Specifications				
Dimensions	5.25" H x 16.53" W x 19.75" D/Fits standard 19" rack, 3U high		Board size: 9.25" W x 13.5" D	
Weight	31 lbs. (14 kg)		4 lbs. 4 oz.	
Operating Environment	5°C – 35°C		5°C – 35°C	
Non-Operating Environment	0°C – 50°C		0°C – 50°C	
Relative Humidity	10%–90% (non-condensing)		10%–90% (non-condensing)	
Power Requirements	115-230V, 50/60 Hz – 460W		160 W	



Avalanche Commander

SUPPORTED MODULES & PLATFORMS

- Spirent Avalanche 2700
- Spirent Avalanche 2900
- Spirent TestCenter Application Performance Dual Media CPU Module, 8 Port
- Spirent TestCenter CPR-2001B 10/100/1000 Copper RJ-45, 8 Port (SFF)
- Spirent TestCenter CPR-2002B 10/100 Copper RJ-45, 8 Port (SFF)
- Spirent TestCenter 8-port GIGE Dual Media CPU Module
- 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 FBR-2001B 1GbE Fiber SFP, 8 Port (SFF)
- Spirent TestCenter XFP-2001B 10GbE 1 Port
- Spirent TestCenter MSA-2001B 10GbE Multi-MSA Host Module, 2 Port

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 2GB 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

Product	Part Number
Spirent Avalanche 2900	CEE-2900
Spirent TestCenter Application Performance Dual Media CPU Module for 2U Chassis and 9U Chassis	KIT-1025
Spirent TestCenter Layer 4-7 System Software Base Package A For 2U Chassis	BPK-1033A-2U

SPIRENT SERVICES

Professional Services

- Test lab optimization: Test automation engineering services
- Service deployment and service-level optimization: Vendor acceptance testing, SLA benchmarking, infrastructure and security validation
- Device scalability optimization: POC high scalability validation testing

Education Services

- Web-based training: 24 x 7 hardware and software training
- Instructor-led training: Hands-on methodology and product training
- Certifications: SCPA and SCPE

Implementation Services

- Optimized new customer productivity with up to three days of on-site assistance

SPIRENT GLOBAL 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.spirentcom.com/gs or contact your Spirent sales representative



Spirent Communications
1325 Borregas Avenue
Sunnyvale, CA 94089 USA

SALES AND INFORMATION
sales-spirent@spirent.com
www.spirent.com

Americas
T: +1 800.SPIRENT
+818 676.2683

Europe, Middle East, Africa
T: +33 1 6137.2250

Asia Pacific
T: +852 2511.3822