

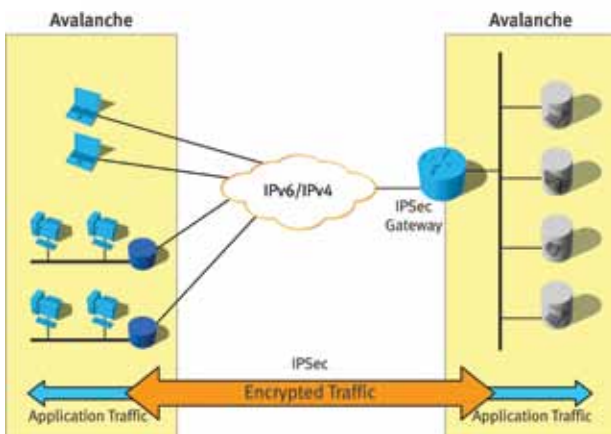


Alavanche/Layer 4-7 on Spirent Testcenter IPSEC TESTING

Road warriors, telecommuters and business partners all rely on the secure communications capabilities offered by IPsec. Spirent Avalanche enables Network Equipment Manufacturers, Service Providers and Enterprise customers realistic testing of their IPsec VPN gateways.

APPLICATIONS

- Compare application performance with and without IPsec
- Test voice, video, and data over IPsec tunnels
- Determine maximum tunnel capacity of IPsec gateways
- Measure tunnel setup and tear-down rates
- Find maximum tunnel throughput
- Analyze the affects of aggressive tunnel re-keying
- Measure the user experience through encrypted tunnels
- Emulate IPsec deployment scenarios for IPv4 and IPv6 networks, including:
 - IPv4 over IPv4
 - IPv4 over IPv6
 - IPv6 over IPv6
- Test site-to-site and remote access tunnels



BENEFITS

- Spirent Avalanche's IPsec feature provides complete performance assessment of IPsec gateways to quickly understand and correct deficiencies before deployment. The use of real application protocols over encrypted tunnels is the best way to truly understand the gateway's effect on user experience.
- *Quicker Time to Test*: Integrated IPsec allows full performance characterization of gateways, leading to faster production roll-outs
 - *Avoiding Downtime*: High-performance testing with real traffic identifies proper sizing for your environment while provide comprehensive statistics to locate problem areas
 - *Investment Protection*: Support for both IPv4 and IPv6 ensures testing needs can be supported now and for future generation testing
 - *Minimizing Cost*: IPsec is a fully integrated Avalanche application that supports many use cases, minimizing the number of test applications to learn
 - Comprehensive statistics quickly identify problem areas
 - *Tunnel Control*
 - Persistent and non-persistent tunnels
 - IKE Message Retry timers
 - Max Retry
 - Expire timers
 - Commit Bit support
 - Re-Keying
 - Phase 1 Reconnect
 - Phase 2 Re-Key w/old key timer
 - SA lifetimes
 - Manual Keying

TECHNICAL SPECIFICATIONS

■ IPsec Security Protocols

- AH+ESP
- Tunnel Mode

■ IPsec Parameters

- Main Mode and Aggressive Mode
- Authentication
 - Pre-Shared Keys
 - X.509 Certificates
 - RSA Digital Signatures
- Encryption: DES, 3DES, ESP NULL, AES-128, AES-192, AES-256
- HASH: HMAC-MD5 and HMAC SHA-1
- Diffie-Hellman Groups 1,2, & 5
- NAT Traversal (NAT-T)
- Extended Authentication (XAuth)
 - ModeConfig address assignment
 - Generic (username and password)
 - RemoteVPN
 - Nortel Contivity
 - Checkpoint Hybrid

- IKE Phase 2
 - Quick Mode
 - Perfect Forward Secrecy (PFS)
 - Encryption: NULL, 3DES, AES-256
 - HASH: HMAC-MD5 and HMAC SHA-1
 - Dead Peer Detection
 - Diffie Hellman Groups 1,2 & 5
- Tunnel Control
 - Persistent and non-persistent tunnels
 - IKE Message Retry timers
 - Max Retry
 - Expire timers
 - Commit Bit Support
 - Re-Keying
 - Phase 1 Reconnect
 - Phase 2 Re-Key with old key timer
 - SA Lifetimes
 - Manual Keying
- Avalanche 2900 Appliance Performance
 - Number of Concurrent Tunnels: 109,000
 - Tunnel Setup Rate: 1,600/sec
 - Encrypted Bandwidth: 2.6 Gbps

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- 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 Avalanche IPsec option

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

IPSEC TESTING

Ordering Information

description	Part Number
Avalanche Extreme Ver 3 SW Bundle	CEE-SWB-009
Avalanche Security SW Bundle	CEE-SWB-005
Avalanche IPSec	CEE-SQ-IPSEC
Note:	Other ordering options are available

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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