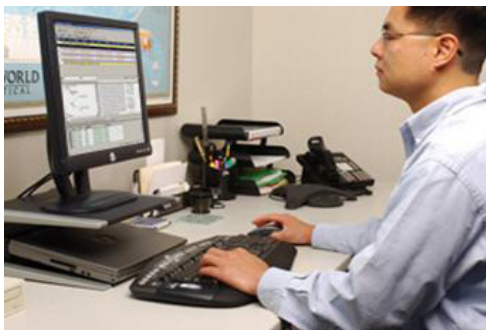
Tektronix Communications

Spectra2 Test Solutions

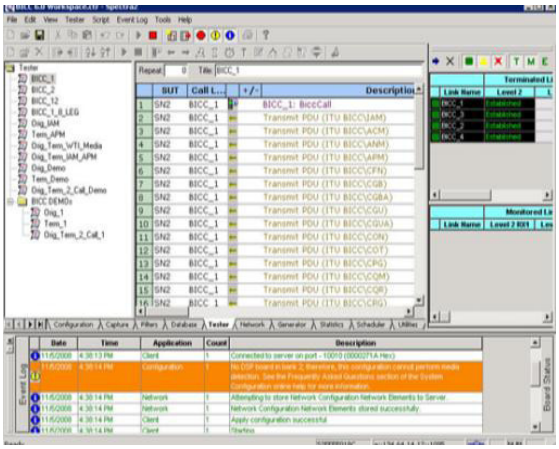
Overview



The Spectra2|SE² software-only testing solution is a Windows Operating System software application that provides users the capability to test their NGN IP networks using any off-the-shelf computing platform. Spectra2|SE² is a multi-user software application that pro-vides functional testing, load/stress testing, media quality testing /analysis and monitoring capabilities to assist with: product / application development; product testing; first market application validation; live network monitoring; and live network troubleshooting.

Common Use Cases

- Network Element validation in Equipment Manufacturer lab: Use Spectra2|SE² in the lab to validate protocol conform-ance, functionality, and capacity of individual elements by simulating the surrounding elements.
- E2E testing in the Carrier or Equipment Manufacturer lab: Use Spectra2|SE² to validate E2E call quality and QoS across IP domains using various call control protocols and media codecs.
- Field Deployment: Easily validate E2E call quality and capacity for new system deployments without having to ship costly test equipment.
- Field Troubleshooting: Equip field engineers with Spectra2|SE² on their existing Windows laptops to enable capture and recreation of errant call scenarios in the field while avoiding the hassles of carrying bulky test equipment.
- Point Monitoring: Use Spectra2|SE² in the field to monitor and troubleshoot problem areas in the network.



Spectra2|SE² Capabilities

- Functional Testing: Test individual call scenarios for functional correctness
- Load Testing: Test elements or network for capacity limitations under burst or sustained traffic
- Media Testing: Simulate call control protocols along with media and use PESQ algorithms to confirm media quality
- Negative Testing: Test with purposeful sabotage in mind to ensure that the network responds properly to failure.

Spectra2|SE² Capability Matrix

Functionality	Spectra2|SE²
Maximum Simultaneous Users	8
Maximum Ethernet Interfaces	8
IP Addresses per Ethernet Port	Up to 32K per GigE port (Max 250K per System)
Transport Capabilities	IP Only (TCP, UDP, SCTP)
IP Versions	IPv4 /IPv6
Transport	TCP / UDP / SCTP
Call Control Protocols	SIP, SIP-I, SIP-T, SIP TLS, H.323, MGCP, H.248
Diameter Interfaces	Authentication and Authorization: Cx/Dx, S6a Charging: Rf / Gz, Ro / Gy Policy: Gx, Rx, Gq/Gq', Rq, e2/e4, S9 Services: Sh / Dh NGN: Diameter, XCAP, HTTP, RTSP
PSTN	ISUP, BICC,
TCAP	AIN, CAMEL, GSM, INAP, IS-41, IS-634A, IS-826, INCS2, UMTS MAP
SIGTRAN	M2PA, M3UA
Media	Transport: RTP, RTCP, Secure RTP Audio: G.711, G.723, G.726, G.729 Audio: EVRC, AMR NB/WB Tones: RFC 2283, SF, DTMF Video: H.263, H.263+, H.264, MP4 Fax: T.38 Fax
CPS Load	Unlimited (Hardware Dependent)
Simultaneous RTP Open Streams	Hardware Dependent
Automation	API Control, Automated Test Scheduling, Automatic Message Parameter Population, Completely Automated L1-L3
Element Simulation	AF, AS, BGF, CTF, CGF, CSCF, HLR, HSS, MGC, MGW, MMS, OCS, PCRF, PCEF, SBC, SGW, SLF, SSP, STP, UE, and more.
Multi-Protocol Testing	Cross-Domain IP Testing, Simultaneous Multi-Protocol
Productivity	Built-in protocol libraries, Built-in Element Simulations, Wireshark Import / Export, Conformance Test Suites, Traffic Modeling, Filtering, Ladder Dia-grams, Statistics, Reporting
Operating System	Windows XP / Windows 7 (32 bit)
Minimum Recommended Hardware	PC / Server with Quad Core Processor, 4 Gb Memory, 300 Gb Hard Driver