the Performer Analyzer

High Performance Protocol Analyzer

Multi-technology Protocol Analyzer at
Full Line Rate for
LAN/WAN/ATM/PoS/Metro

RAD COM

TEST-OF-THE-ART

the Performer
Analyzer

The Performer Analyzer is a comprehensive high performance test solution for vendor R&D and QA labs, service provider QA labs and field service technicians. Based on the field-proven Performer platform, it integrates RADCOM's proprietary GEAR (GEneric AnalyzeR) processor chip, which provides hardware-based full line rate analysis capabilities at up to 2.5 Gbps. The complete Performer Analyzer suite offers a range of interfaces and tools for troubleshooting and monitoring LAN/WAN/ATM/PoS/Metro networks.

Flexible, versatile and distributed

The Performer Analyzer is an ideal tool for monitoring and troubleshooting performance of WAN/LAN/ATM/PoS/Metro networks at all seven layers.

Both portable and scalable rack-mount configurations are available. A distributed model allows any user to remotely access resources, optimizing test equipment usage. Automated testing procedures use scripting tools running on a single Performer Analyzer or on an entire lab setup.

GEAR (GEneric AnalyzeR)

The independent GEAR chip, an online proprietary full-custom ASIC chip based processor, is the core engine for online processing, offering hardware-based full line rate filters, analysis and capture capabilities at up to 2.5 Gbps.

Powerful analysis capabilities

Capturing and analyzing the traffic in real time at a full line rate of up to 2.5 Gbps, the Performer Analyzer offers both predefined and user-defined analyses and filters to allow fast realization of traffic characteristics and pinpointing of abnormal conditions at different layers, regardless of the interface types and protocols.

The Performer Analyzer offers an extensive set of physical and link layer measurements, which monitor network efficiency. Session-level analysis of applications and services offer a simple, intuitive and powerful troubleshooting tool.
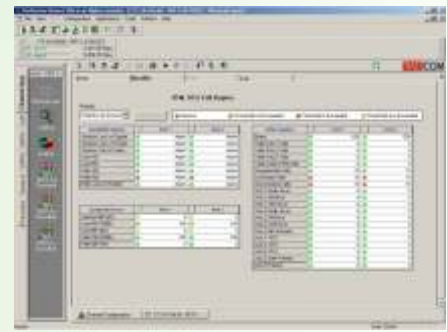
GenFEP
(Generic Front-End-Processor)

The new all-in-one GenFEP offers a protocol, technology and rate independent hardware solution. One FEP for all technologies and protocols makes the GenFEP a worthwhile investment for any customer, saving the cost of ownership.
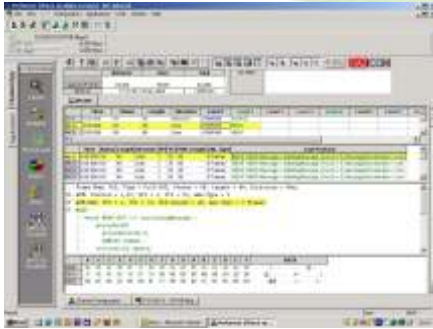
Multi-technology, multi-port and multi-slot

The Performer Analyzer offers wide technology support, ranging from as low as 1.544 Mbps E1 rates, through all commonly used LAN/WAN/ATM/PoS/Metro technologies, and up to 2.48 Gbps OC-48 (STM16) rates. two to-eight slots are available and the multi-port Line Interface Modules (LIM) offer load balancing access, high port density and low cost per port.

Synchronization

Versatile synchronization methods enable accurate and time-dependent measurements between several Performer Analyzers in labs or at remote sites (using GPS or NTP).

Physical Layer statistics

The Performer Analyzer measures a comprehensive set of line traffic counters and statuses per technology. Each counter/status has a dedicated user-defined threshold after which alarms are displayed and logged. Results are presented both as values, and by a series of color coded LEDs.

Physical Layer

Decode

Protocol decode verification

The Performer Analyzer decodes 600 telecom and datacom protocols, including standard protocols such as ITU-T, ANSI, IETF, 3GPP and 3GPP2, and country/vendor-specific variants, as well. All layers of protocols are supported. Complex decoding such as Cellular, VoIP and Datacom networks can be seamlessly integrated as part of the protocol decode process, with minimal hassle. The wide range of online and offline filters enable users to focus only on important data. A professional team is dedicated to providing instant response for new emerging and customer proprietary protocols.
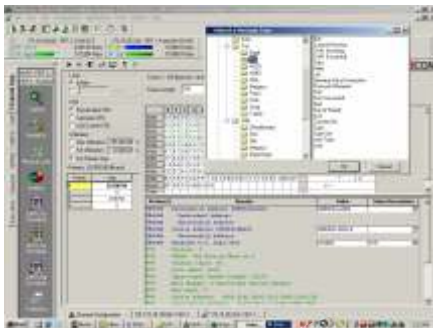
Network analyses and statistics

The Performer Analyzer provides useful analyses, including distribution of protocols, protocol fields, station addresses, communicating pairs, frame lengths and frame status. The wide range of online filters enables users to analyze only significant data. A flexible and user-defined set of threshold-based alarms can be set to locate abnormal situations and phenomena of the network under test; while a log file schedules all events for further investigation.

Analysis

Traffic Generator
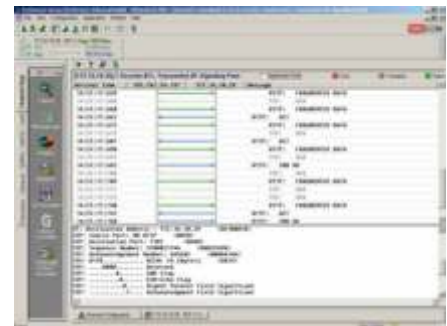
Live network protocol generation

The Performer Analyzer generates pre-capture live network traffic on a variety of interfaces. A unique protocol & message driven editor offers flexibility of packet timing, protocol stack & flow, protocol fields, station addresses and payloads. Users can utilize the combination of more than 330 messages in over 40 protocols to create a wide variety of customized messages. Full line rate, at up to 2.5Gpbs, as well as a set of pre-defined traffic distribution models, are guaranteed.

Session level signaling & user data analysis

The Internet Consultant provides online/offline session analysis and QoS monitoring for Internet traffic, addressing issues on both the signaling and user planes. It focuses on the key troubleshooting issues of Internet networks, such as signaling and user data transmission problems, QoS, performance and network functioning. The Internet Consultant analyzes the various transactions on the line, providing a top-down display of sessions and network traffic, offering a unique investigating and troubleshooting tool for infrastructure problems related to configuration or capacity.

Internet Consultant

Specifications

PerformerLite Portable Configuration
System includes display, keyboard and pointing device.
Operating System: Windows XP. *CPU:* Intel Pentium 4 2.0 Ghz
RAM: 1 Gbyte. *Hard Disk:* 80 Gbyte (minimum)
FEPs: up to 3, plus sync card
Dimensions: (d x w x h) 171 x 401 x 259 mm (6.7 x 16 x 10.2 in)
Weight: 8.18 kg (18 lb). *Power supply:* Maximum 110V/2A,
220V/1A

Performer R1000 2U Rack-mount Configuration
CPU: Intel Pentium 4, 2.4 Ghz
RAM: 1 GByte. *Hard Disk:* 80 Gbyte (minimum)
FEPs: up to 2 plus sync card
2U, 19" rack-mount configuration
Dimensions: (d x w x h) 470 x 440 x 88 mm (18.7 x 17.5 x 3.5 in)
Weight: 9 kg (19.9 lb).
Power supply: Maximum 300W

Performer R4000 5U Rack-mount Configuration
Consists of 4 segments each including:
CPU: Intel Pentium 4 2,.4 Ghz
RAM: 1 GByte. *Hard Disk:* 80 Gbyte (minimum)
FEPs: up to 8 plus sync card
5U, 19" rack-mount configuration
Dimensions: (d x w x h) 680 x 430 x 220 mm (27 x 17 x 8.7 in)
Weight: 30 kg (66.25 lb).
Power supply: Maximum 1000W

GenFEP (Generic Front End Processor)
Technologies: ATM, POS, Ethernet, WAN & IMA
Processor: GEAR
On-board memory: 256 Mbyte (512 Mbyte - optional)
Processing speed: up to 2.5 Gbps

Line interface Modules (LIMs)
Ethernet: Dual port copper 10/100/1000 and single port
fiber optic GbE.
ATM: OC3/12 (STM1/4), OC48 (STM16), Multi port
ATMoE1/T1/J1, Dual port ATMoE3/DS3,
IMA (Inverse Multiplexing ATM)
PoS: OC3/12 (STM1/4), OC48 (STM16)
WAN: Multi port E1/T1/J1
V-series: V.24/RS-232, V.35, V.36/RS-449 and X.21

Time synchronization
All FEPs within a Performer analyzer are synchronized
Modes: Local and global (GPS)
Synchronization sources and accuracy:
    Local master 150 nanoseconds
    Global (GPS) 150 nanoseconds
    Global (NTP) 10 milliseconds

Supported Protocols (sample list)
DataCom Protocols:
TCP/IP: BGP4, FTP, HTTP, ICMP, IGMP, IP, IPv6, L2TP, MGCP,
MGCP/SGCP, MPLS, NTP, OSPF.
ATM: ATM Signaling, ILMI, IP/ATM, LE 802.3, MPLS/ATM, OAM
F4, OAM F5, PNNI routing.
Frame Relay: DCP, FR/ATM, GPRS (NS/FR), IP/X.25/LAPB/FR.
PPP: DNCP, IPCP, IPv6CP, OSINLCP, PoS, PPP, PPPoE, SNACP.
Cellular Protocols:
ETSI R97, R98; 3GPP R99, R4, R5; 3GPP2 IOS 3.x and 4.x.
GSM/GPRS: BISUP, ISUP, INAP, DUP, MTP2, MTP3, SCCP, TCAP,
TUP, M2UA,M3UA, SCTP, M2PA, GMM/SM, SMS.
UMTS: CM/SM/MM, SMS, SMSCB, RLP, SS, MAC, RLC, PDCP, BMC,
RRC,RANAP, Iu-UP, RNSAP, FP, NBAP, AMR, MAP ,BSSAP+, CAP.
CDMA: 3GPP IOS 3.x,and IOS 4.x, IP, TCP, UDP, SCCP, MTP3,
MTP2, MTP1, GRE, PPP.
VoIP Protocols:
H.323, H.225, H.245, H.235, H.450, SIP, SIP-T, MGCP, SDP, NCP,
TGCP, Megaco, SKINNY, RTP, RTCP.

Applications
Physical Layer
Capture
Analysis
Traffic Generator
Internet Consultant
Loss and Latency

Console PC Requirements

PC:	Pentium III 1Ghz, 512 MB RAM or more (recommended)
Monitor:	VGA 1024 x 768
Hard Disk:	Minimum 4 GB free for program files At least 2 GB recommended for data storage
Operating System:	Windows 2000/XP

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