



GENBAND™

DRIVING THE NETWORK EVOLUTION

GENVIEW-REAL TIME SESSION MANAGER RSM

Session-based VoIP and rich media services such as video can place unique demands on the network. Service providers require tools to enable service level agreements (SLAs) proactively, provide QoS metrics, and enforce subscriber and network policies for consistent delivery of services. In addition, VoIP providers must manage supplier routes and rates for maximizing margins and ensuring quality. Using GENBAND's GenView-RSM – the industry's first session analysis engine – service providers can extract performance metrics based on the analysis of Session Detail Records (SDRs) generated by the GENBAND Session Border Controller (SBC) network entities. A feedback mechanism between GenView-RSM and the SBC entities provides operators the ability to leverage the analysis and address each session's behavior in the network comprehensively. GenView-RSM also includes element management system (EMS) functionality for provisioning and element configuration and carrier-grade FCAPS capabilities

GENVIEW-RSM DEPLOYED IN CARRIER NETWORKS

Built on a carrier-grade, J2EE-based architecture, the GenView-RSM scales easily with the number of GENBAND SBC's deployed in the network. The GenView-RSM database houses service provisioning, session analytics and service usage information. Using a standard SOAP/XML interface, GenView-RSM integrates with Operation Support Systems (OSS), web services, and business support systems (BSS). It provides session data, SNMP, and CDR analytics and performance metrics as well as a robust set of reporting tools.

GENVIEW-RSM FUNCTIONALITY

ELEMENT MANAGEMENT SYSTEM (EMS) FOR EFFICIENT PROVISIONING AND ADMINISTRATION

Multiple efficient provisioning options exist to accelerate service deployments, including:

- EMS with FCAPS functionality
- Centralized provisioning via a GUI interface for endpoints, routes/calling plans, and virtual subscriber groups
- Automated software image and license management of one or multiple SBC/MSX(s) through GenView-RSM
- On-demand and scheduled backup and restoration of S-Series SBC configuration and provisioning data
- GENBAND SBC configuration via the HTTP over SSLv2 and HTTP/SOAP XML over SSLv2

GENVIEW-RSM FUNCTIONALITY

- Element Management System (EMS)
- Full FCAPS support
- 1000 SDR's processed per second
- Session analytics
- QoS and SLA Management
- Least Cost Routing Engine (LCR)
- Adaptive Routing and Lossless LCR
- Up to 2 Million Routes

SESSION ANALYTICS

SDRs are processed to extract detailed performance measures per session. The GenView-RSM analytics engine:

- Processes 1,000 streamed SDRs per second
- Provides over 35 pre-defined session quality reports to monitor:
 - Listening and conversational R-Factor, Jitter, Latency, and Packet Loss Metrics
 - Service Quality metrics such as Post Dial Delay (PDD), Answer Seizure Ratio (ASR) and cause codes
 - Service Economics (e.g., Profit/Loss per Service Region, Customer, Route)



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SESSION ANALYTICS *continued*

- Supports definition of threshold levels on all measured metrics for alarm generation.
 - QoS analytics on media quality – per realm, region, and subscriber endpoint

ROUTE POLICY MANAGEMENT

GenView-RSM includes support for establishing policies to handle session routing at call establishment. Its automated support for route prioritization allows wholesale VoIP operators to leverage the built-in adaptive routing.

- Policies based on bandwidth performance, cost, profits requirements
- 5 million policies to support route selection
- GenView-RSM Dynamic Policy Management™ (DPM) feedback loop between GenView-RSM and the S-Series SBC

LEAST-COST ROUTING (LCR), LOSSLESS LCR (LLCR)

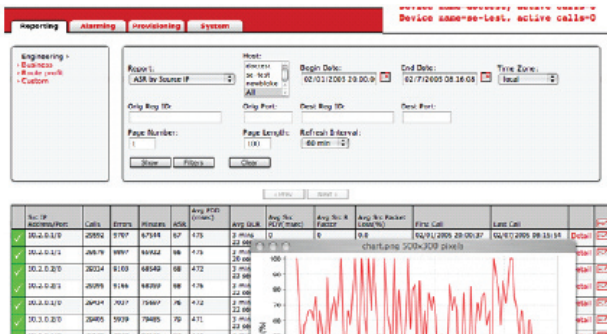
Cost and revenue-based session routing for wholesale and International Long Distance (ILD) operators. The LLCR application provides realtime comparisons between supplier and subscriber rates to determine profitable route choices. The LCR and LLCR handle complex interconnect arrangements and support:

- 2 million entries (routes plus bindings) updates in 2 hours
- Transfer rate for route bindings of 3 milliseconds per route/binding.

ENGINEERING AND BUSINESS REPORTING

Two classes of reports are supported – Engineering Reports and Business Reports.

- 6 major report types, over 90 pre-defined reports, including the industry-first Network Efficiency Report (NER)
- Reports downloadable to be e-mailed or saved locally in XML, CSV, and text formats
- System availability reports



SESSION AND SERVICE ALARMING

Operator-defined and threshold applicable alarms based on session-specific performance and business metrics

- SNMP-based alarm generation
- Configurable action triggers per alarm event to alert required personnel
- 5-tier color-coding for easy identification of alarm levels

OPERATIONS AND USAGE MANAGEMENT

Authoritative SDRs with over 88 key session parameters, including call duration, error codes, jitter, and packet loss, streamed to GenView-RSM for analysis and storage:

- Local storage and analysis of up to 200 million SDRs
- Export to external SQL-based billing systems in standard or specified format
- Password-secured multiple user profiles to define operational hierarchy
- Audit trail with full backup and search capability

HIGH AVAILABILITY

Support of one-plus-one high-availability architecture via paired active/standby RSM servers deployed with shared, fiber channel-connected RAID 10 SAN storage.

PARTITIONING

Virtual partitioning of the GENBAND SBC for shared subscriber management of access to and consumption of resources at the services layer:

- Up to 64 partitions per RSM with unlimited users per partition and private branding available
- Partition-specific policies and applications





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RSM HARDWARE SPECIFICATIONS

GenView-RSM is a feature in the GenView Element Management System of GENBAND's S-Series SBCs

- Multi-core processor-based platform running a carrier-grade OS
- Data center and NEBS versions available
- Redundant option available with shared, fiber channel connected RAID 10 SAN storage – 4x 250 GB, 10K RPM SATA-II Drives

POWER – REDUNDANCY (1+1)

- 700W 120/240V AC
- 600W – 48V DC

SYSTEM

- Processors – (2) Intel CPU Xeon 3.2 GHz, 1MB 800MHz FSB, S604
- Memory – (6) 1GB DDR ECC RAM modules Interfaces
- (2) 10Mb/100Mb/1000Mb Ethernet interfaces (On-Board)
- Serial console ports, keyboard, monitor, mouse (2) USB ports

DISK STORAGE

- (2) 73GB 10K RPM SCA HDD - RAID 1
- (4) 146GB, 15K RPM SCA HDD - RAID 10
- (1) CD-ROM

LIGHTS

- Diagnostic LEDs, power, disk activity

OPERATING TEMPERATURE

- +10°C to +35°C

NON-OPERATING TEMPERATURE

- 40°C to +70°C

SYSTEM COOLING REQUIREMENTS

- 1826 BTU/Hr

NON-OPERATING HUMIDITY

- 90%, non-condensing @ 35°C

GENVIEW-RSM HARDWARE CERTIFICATIONS *

SAFETY

- UL60950 – CSA 60950 (USA/Canada)
- EN60950 (Europe)
- IEC60950 (International)

EMC

- FCC Class A (USA)
- NEBS Level 3 Certified
- CISPR 22 (International)
- EN55022 (Europe) ROHS
- 6B 9254 (China)
- AS/NZ5 3548 (Australia/New Zealand)

* This is a partial list of certifications. For a complete list, please contact GENBAND Sales or Marketing.

