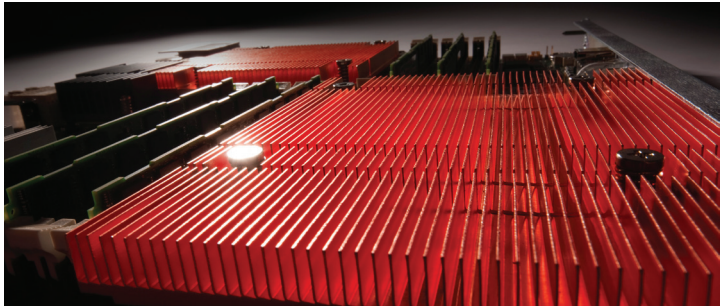


PERIMETA SESSION BORDER CONTROLLERS

6340 SIGNALING SESSION CONTROLLER



- Security
- Policing
- Quality-of-Service
- Accessibility
- Interworking
- Analysis

INFRASTRUCTURES ARE EVOLVING, MESSAGES ARE INCREASING AND TRAFFIC PATTERNS ARE CHANGING. PERIMETA REPRESENTS THE FIRST IN A NEW GENERATION OF SESSION BORDER CONTROLLER (SBC) PLATFORMS CAPABLE OF MEETING THE DEVELOPING ACCESS AND INTERCONNECT REQUIREMENTS OF NEXT GENERATION WIRELINE AND WIRELESS NETWORKS.

PERIMETA

Purpose-built for distributed deployments within both the control and transport layers of emerging next-generation networks, the Perimeta architecture comprises two distinct components: a Signaling Session Controller (SSC) and Media Session Controller (MSC). Data volumes are intensifying and the relationship between signaling and media is becoming increasingly divided. Conforming to 3GPP specifications for decomposed SBC functions, our unique solution enables independent, cost effective scaling of these critical control elements.

Where consolidation of these individual components is preferred, the Perimeta Integrated Session Controller (ISC) combines both SSC and MSC elements within a single platform, without sacrificing performance or scalability.

DISTRIBUTED

The 6340 Signaling Session Controller is specifically designed to handle the rising proportion of signaling messages in next generation networks. The SSC is built to operate in rich unified communications environments, facilitating the explosive growth in SIP messages brought on by services such as sim-ring, presence and IM. As signaling growth outpaces media, additional SSC capacity can be easily installed.

While solely responsible for processing SIP traffic, the SSC can direct voice and video RTP streams across multiple, distinct, Perimeta Media Session Controller platforms. These can be either collocated or geographically dispersed around an access network. While also acting as a P-CSCF, the SSC performs the role of an IMS-ALG or IBCF and controls these MSC elements over a standard H.248 reference interface.

PERFORMANCE

Offered exclusively on a high availability commercial off-the-shelf (COTS) ATCA platform, the 6340 has been designed for performance. Leveraging interrupt mitigation and zero copy packet extraction techniques, the SSC's multi-core, multithreaded software architecture can be focused entirely on the task of processing signaling messages.

Featuring 1:1 redundancy with hitless failover, a single 6340 SSC can scale to support 140,000 concurrent SIP sessions across 1 million endpoints. When handling voice or video calls, the platform supports up to 4 million busy hour call attempts (BHCA). When managing chat and presence sessions, the 6340 can support 8,900 messages per second.

CONTROL

Perimeta offers unmatched, granular ingress packet coloring, connection admission control and rate limiting of messages. These techniques reduce the probability of congestion, thereby preventing damaging networkwide retransmission storms while guaranteeing low, reliable, post dial delay metrics. By classifying traffic and constantly measuring elements such as registration, call set-up and message rate, the SSC can prioritize messages related to calls in-progress. Active queue management intelligently handles new session establishment requests.

ROUTING

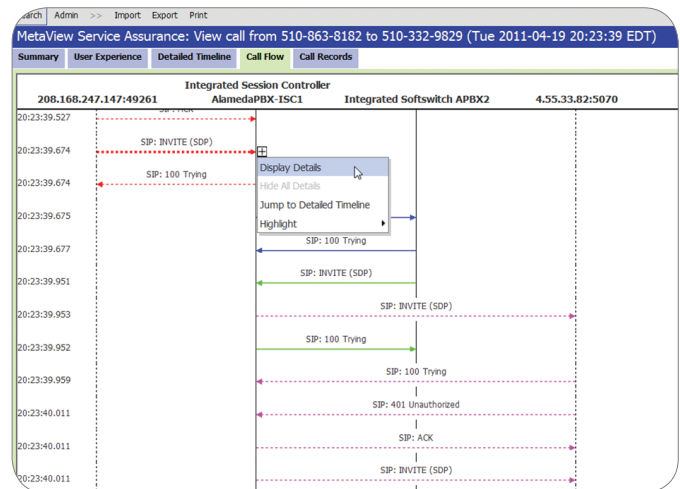
Evolving all-IP communications networks are depending on an increasing number of peering interconnects to deliver ubiquitous service across physical and logical domains. Sophisticated and granular control of traffic is required to ensure that sessions are handled as efficiently and costeffectively as possible, when they egress the host carrier's infrastructure.

Comprehensive policies and dynamic routing functions can be applied to all calls passing through the 6340 SSC platform. Along with providing source and destination number, CIC or domain-based routing, sessions may be directed to specific trunks using static, least-cost or time-of-day parameters. The 6340 can also automatically detect the availability of adjacent peers or load-balance across trunks with identical costs.

ANALYSIS

Integrating with the exclusive MetaView Service Assurance Server, Perimeta session border controller platforms export call detail records down to the individual SIP and H.248 packet payload. Enabling comprehensive always-on postanalysis, without the need to deploy expensive distributed packet capture probes, individual call traces include every internal routing and processing decision made by the Signaling Session Controller. The 6340 SSC delivers total visibility that can dramatically reduce mean-time-to-repair metrics.

Perimeta is the first session border controller platform to export detailed, non-summarized, call quality records to the MetaView Service Assurance Server. Combining these with records collected from other network elements and endpoints, MetaView can provide objective quality of experience measurements while delivering a comprehensive end-to-end view of overall network performance. The 6340 SSC delivers total visibility without degrading router performance or implementing costly network analytics components.



Analysis: Bounce / Ladder Diagram from MetaView SAS

6340 SSC SPECIFICATIONS

PLATFORM

- Perimeta CH6010 ATCA 2-Slot Chassis
- Height: 5.2" / 13.2cm (3RU)
- Width: 19" / 48.3cm
- Depth: 15.5" / 42cm
- Weight: 46.95lbs / 21.3kg
- Power: AC or DC options
- VDC Power: Nominal range -48V to -60V, 18A. (40V to -72V, fused 20A max range)
- VAC Power: 100V to 240V and 8.5A. (90V to 254V range)
- International Network Equipment-Building Systems and Standards (NEBS) compliant
- Service Interfaces: 12 x 100/1000 Ethernet
- Management Interfaces: 2 x 100/1000 Ethernet

REDUNDANCY

- High-Availability (HA) Chassis
- 1:1 redundant service interface
- 1:1 redundant management interface

CAPACITY

- 140,000 simultaneous P2P SIP sessions per system
- 1,000,000 registered end-points per system
- 8,900 SIP messages per second, per system

SECURITY

- DoS/DDoS Detection and Protection
- Bandwidth policing
- Topology hiding
- Static Access Control Lists (ACLs) with whitelisting
- Dynamic ACLs with whitelisting and blacklisting
- Alarm on attack
- TLS
- Separation of management and data traffic

SIGNALING & CONTROL

- SIP
- H.248 (MSC control)
- SIP Message Manipulation
- Lua-scripted SDP editing
- Capacity Control
- QoS packet marking
- NAT traversal
- SIP routing
- Dial plan routing
- Load balancing
- Route policies and profiles
- Service network policies
- Emergency detection and routing
- Call services (Transfer/Hold)
- Privacy
- IPv6-IPv4 Interworking
- DNS
- 3GPP IMS P-CSCF
- 3GPP IMS-ALG and IBCF
- 3GPP IMS Rx Policy Control Interface (Diameter)

MANAGEMENT

- Command-line interface
- SNMPv2c
- Secured management access (SSH, SFTP, SCP)
- Bulk configuration (configuration cloning, export and restore of configuration snapshot)
- Integrated Session Flow / Call Tracing
- MetaView Service Assurance Server Integration
- SNMP Trap/Inform based alarms
- MetaView alarm collection and management Integration
- XML CDRs
- VQM reporting