GX-SW

Session Border Controller (SBC)

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The **Nuera GX Server Edition (SE) and Virtual Edition (VE) Session Border Controllers (SBC**) are software-only versions of Nuera field-proven hardware-based SBC products, designed to offer service providers and enterprises a flexible and scalable SBC solution that meets the requirements of today's data center infrastructures. The GX SE/VE SBCs support wide-ranging SIP interoperability, delivering service assurance and enabling scalable, reliable and secured connectivity between different VoIP networks.

GX SE (Server Edition)
• Runs on dedicated Commercial Off-the-Shelf (COTS) servers
• Aimed at high-scale environments

GX VE (Virtual Edition)
• Runs in virtualized datacenter environments
• Supports VMware and Hyper-V

Extensive Mediation Capabilities and Proven Interoperability
The GX SE/VE SBCs include comprehensive media security and SIP normalization capabilities. It offers full interoperability with an extensive list of IP-PBXs, unified communications solutions and SIP trunking provider networks.

Security
The GX SE/VE SBCs provide robust protection for the IP communications infrastructure, preventing fraud and service theft and guarding against cyber-attacks and other service-impacting events.

Reliability
The GX SE/VE SBCs offer active/standby high availability and maintain high voice quality to deliver reliable enterprise VoIP communications. Advanced call routing mechanisms, network voice quality monitoring and branch survivability capabilities result in minimum communications downtime.

Applications
• SIP trunking
• Hosted PBX & UC as a Service
• IP contact centers
• Remote and mobile worker support
• SIP mediation between UC and IP-PBX systems
• Residential VoIP

Benefits
• Designed for deployment in standardized data center environments
• Supports Network Functions Virtualization (NFV)
• Same code base as Nuera field-proven hardware-based SBCs
• Simplifies and accelerates SBC deployments
• Offers comprehensive security, interoperability and reliability
• Delivers high service performance and voice quality
• Flexible licensing options for cost-effective scalability
• Runs on dedicated COTS servers and in virtualized environments

Key Features
• Scalable to thousands of SBC sessions
• Extensive SIP mediation capabilities
• Supports remote workers and mobile SIP clients
• Perimeter defense against denial of service, fraud and eavesdropping
• VoIP quality monitoring and enforcement
• Branch survivability during WAN failure
• Active/Standby High Availability

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SPECIFICATIONS

Capacities	GX VE SBC	GX SE SBC
Max. Signaling/Media Sessions	6,000	24,000
Max. SRTP-RTP Sessions	4,000	16,000
Max. Registered Users	30,000	120,000

Security	
Access Control	DoS/DDoS line rate protection, bandwidth throttling, Dynamic Blacklisting
VoIP Firewall	RTP pinhole management, Rogue RTP detection and prevention, SIP message policy
Encryption and Authentication	TLS, SRTP, HTTPS, SSH, Client/Server SIP Digest authentication, RADIUS Digest
Privacy	Topology Hiding, User Privacy
Traffic Separation	VLAN/physical interface separation for multiple Media, Control and OAM interfaces
Intrusion Detection System	Detect and mitigate VoIP attacks, prevent Theft of Service and unauthorized access.

Interoperability	
SIP B2BUA	Full SIP transparency, mature & broadly deployed SIP stack
SIP interworking	3xx redirect, REFER, PRACK, Session Timer, Early media, Call hold, Delayed offer
Registration	Registration and authentication on behalf of an IP-PBX
Transport Mediation	SIP over UDP to SIP over TCP or SIP over TLS, IPv4 to IPv6, RTP to SRTP
Header Manipulation	Ability to add/modify/delete headers using advanced regular expressions
URI and Number Manipulations	URI User and Host name manipulations. Ingress & Egress Digit Manipulation
Coder normalization	Coder enforcement and re-prioritization
NAT	Local and Far End NAT traversal for support of remote workers

Voice Quality and SLA	
Call Admission Control	Based on bandwidth, session establishment rate, number of connections/registrations
Packet Marking	802.1p/Q VLAN tagging, DiffServ, TOS
Stand Alone Survivability	Maintain local calls in the event of WAN failure
Transparent Media	Low latency, unprocessed payload transfer
Media De-anchoring	Hair-pinning of local calls to avoid unnecessary media delays and bandwidth consumption
Redundancy	High availability with two box redundancy, Active calls preserved
Voice Quality Monitoring	Session Experience Manager (SEM)
Quality of Experience	Access control and media quality enhancements based on QoE and bandwidth utilization
Test agent	Ability to remotely verify connectivity, voice quality and SIP message flow between SIP UAs

SIP Routing	
Routing Methods	Request URL, IP Address, FQDN, ENUM, advanced LDAP
Advanced Routing Criteria	QoE, bandwidth, SIP message (SIP request, Coder type etc)
Redundancy	Detect proxy failures and route to alternative proxies
Routing Features	Least cost routing, call forking, load balancing
SIPRec	IETF standard SIP recording interface

GX VE SBC Minimum Requirements			
Hypervisor	VMware ESXi version 5.1 or later / Hyper-V 2008 & 2012	Virtual NICs	2 (Standalone) 3 (High Availability)
Memory	2 GB	Virtual CPUs	2
Disk space	10 GB		

GX SE SBC Minimum Requirements	
Contact Nuera or an authorized Nuera reseller for a list of recommended server specifications	

About Nuera Communications

Nuera Communications, designs, manufactures & sells packet voice gateways to communication service providers worldwide. These products work over any medium (cable, wireless, copper and fiber). Nuera's ORCA (Open Reliable Communications Architecture) product portfolio of VoIP gateways, softswitches, and management systems provide telephony solutions for cable and DSL networks, international long distance networks and enterprise networks. Nuera is a leader in the broadband telephony market.

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