Data sheet

\Orchestrating a brighter world

NEC

Session Border Controller

UNIVERGE BX9000

Benefits

- Meets demands for datacenter infrastructure harmonization and NFV
- Supports Network Functions Virtualization (NFV)
- Offers comprehensive security, interoperability and reliability
- Flexible licensing options for cost-effective scalability
- Delivers high service performance and voice quality

Key features

- Hypervisors: VMware, Hyper-V and KVM
- 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

The UNIVERGE BX9000 is a sofware Enterprise Session Border Controller (E-SBC), designed to offer enterprises a flexible and scalable SBC solution that meets the requirements of today's data center infrastructures. The UNIVERGE BX9000 supports flexible SIP interoperability, delivering service assurance and enabling scalable, reliable and secured connectivity between different VoIP networks.

Extensive Mediation Capabilities and Proven Interoperability

The UNIVERGE BX9000 includes 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 UNIVERGE BX9000 provides robust protection for the IP communications infrastructure, preventing fraud and service theft and guarding against cyber-attacks and other service-impacting events.

Reliability

The UNIVERGE BX9000 offers active/standby high availability and maintains 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 trunks
- Hosted PBX & UC as a Service
- Remote and mobile worker support
- SIP mediation between UC and IP-PBX systems

Specifications

Capacities	
Max. Signaling Sessions	24,000
Max. SRTP-RTP Sessions	10,000
Max. Transcoding	1,200
Max. Registered Users	75,000
Security	
Access Control	DoS/DDoS line rate protection, bandwidth throttling, dynamic blacklisting (Intrusion Detection System)
VoIP Firewall	RTP pinhole management, rogue RTP detection and prevention, SIP message policy, advanced RTP latching
Encryption/Authentication	TLS, DTLS, 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 OAMP interfaces
Interoperability	
SIP B2BUA	Full SIP transparency, mature and broadly deployed SIP stack, stateful proxy mode
SIP interworking	3xx redirect, REFER, PRACK, session timer, early media, call hold, delayed offer and more
Registration and Authentication	User registration restriction control, registration and authentication on behalf of users, SIP authentication server for SBC users
Transport Mediation	SIP over UDP/TCP/TLS/WebSocket, IPv4 / IPv6, RTP / SRTP (SDES/DTLS)
Message Manipulation	Add/modify/delete SIP headers and message body using simple WireShark-like language with powerful capabilities such as variables and utility functions
URI and Number Manipulations	URI user and host name manipulations, ingress and egress digit manipulation
Transcoding and Vocoders	Coder normalization including transcoding, coder enforcement and re-prioritization, extensive vocoder support: G.711, G.723.1, G.726, G.729, GSM-FR, AMR-NB, AMR-WB (G.722.2), SILK-NB/WB, Opus-NB/WB
Signal Conversion	DTMF/RFC 2833/SIP, T.38 fax, packet-time conversion
WebRTC Controller	Interworking between WebRTC devices and SIP networks, Supports WebSocket, Opus, VP8 video coder, lite ICE, DTLS, RTP multiplexing, secure RTCP with feedback
Voice Quality and SLA	Local and far-end NAT traversal for support of remote workers
Call Admission Control	Based on bandwidth, session establishment rate, number of connections/registrations
Packet marking	802.1p/Q VLAN tagging, DiffServ, TOS
Standalone Survivability	Maintains local calls in the event of WAN failure
Impairment Mitigation	Packet Loss Concealment, Dynamic Programmable Jitter Buffer, Silence Suppression/Comfort Noise Generation, RTP redundancy, broken connection detection
Voice Monitoring and Enhancement	Transrating, RTCP-XR, Acoustic echo cancellation, replacing voice profile due to impairment detection, Fixed & dynamic voice gain control, packet loss concealment, dynamic programmable jitter buffer, silence suppression/comfort noise generation, RTP redundancy, broken connection detection
Direct Media	Hair-pinning (No Media Anchoring)of local calls to avoid unnecessary media delays and bandwidth consumption
High Availability (Redundancy)	SBC high availability with two-box redundancy, active calls preserved
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, third-party routing control through REST API
Advanced Routing Criteria	QoE, bandwidth, SIP message (SIP request, coder type, etc.), Layer-3 parameters
Routing Features	Least-cost routing, call forking, load balancing, E911 gateway support, emergency call detection and prioritization
SIPRec	IETF standard SIP recording interface
Management	
OAM&P	Browser-based GUI, CLI, SNMP, INI Configuration file, REST API OVOC, HTTP reverse proxy
Multi Tenancy	Advanced multi-tenant SBC partitioning
Minimum Requirements	
Hypervisor	VMware® vSphere ESXi™, Linux KVM, Microsoft Hyper-V
Memory	2 GB
Disk space	10 GB
Virtual NICs	2 (Standalone) / 3 (High Availability)
Virtual CPUs	2

Some models are not available in all countries. Please contact your local NEC representative for availability in your country. For further information please contact your local NEC representative or:

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