UNIVERGE BX9000

Enterprise Session Border Controller

Secure Communication for **your Business**

The NEC UNIVERGE BX9000 is a software only Enterprise Session Border Controller (E-SBC), designed to offer enterprises a flexible and scalable SBC solution that meets the requirements of today's data centre infrastructure. The BX9000 SBC supports flexible SIP interoperability, delivering service assurance and enabling scalable, reliable and secure connectivity between VoIP networks. Supporting thousands of concurrent sessions, it will scale to meet your business demands.

The BX9000 allows your employees to securely connect to your IP PBX platform from virtually anywhere using their smartphones, softphones or desk phones.

Advanced mediation and proven interoperability

The UNIVERGE BX9000 E-SBC includes comprehensive media security and SIP normalisation capabilities. It offers full interoperability with an extensive list of IP-PBXs, unified communications solutions and SIP trunk provider networks.

Security

The UNIVERGE BX9000 provides robust protection for the IP communications infrastructure, preventing Denial of Service (DoS), fraud and service theft guarding your organisation against cyber-attacks and other service-impacting events.

Reliability

The UNIVERGE BX9000 ESBC 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.

Benefits

- Designed for deployment in standardised data centre environments
- Supports Network Functions Virtualisation (NFV)
- Offers comprehensive security, interoperability and reliability
- Delivers high service performance and voice quality
- Flexible licensing options for cost-effective scalability

Key features

- Supports VMware, Hyper-V and KVM, Openstack, Amazon Web Services (AWS) and Cloudband (ALU)
- Scalable to thousands of SBC sessions
- Supports remote workers and mobile SIP clients
- Perimeter defence against denial of service, fraud and eavesdropping
- VoIP quality monitoring and enforcement
- Active/Standby High Availability

Applications

- SIP trunks
- Hosted PBX & UC as a Service
- Remote and mobile worker support
- SIP mediation between UC and IP-PBX systems

Work anywhere, securely

Capacities	
Registered Users	75,000
Media Sessions	6,000
Transcoding	1,200

Security / Management	
Access control	> DoS/DDoS line rate protection > Bandwidth throttling > Dynamic blacklisting
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 > RADIUS Digest
Privacy	> Topology hiding, User privacy
Traffic separation	> VLAN / Physical interface separation
Intrusion detection	> System Detection and prevention of VoIP attacks, theft of service and unauthorised access
Operation & Management	> Browser-based GUI, CLI, SNMP, INI Configuration file, REST API, EMS
Multi Tenancy	> Advanced multi-tenant SBC partitioning

Voice Quality	
Call admission control	> Based on bandwidth, sessions, number of connections/registrations
Packet marking	> 802.1p/Q VLAN tagging, DiffServ, TOS
Impairment mitigation	> Packet Loss Concealment, Dynamic Jitter Buffer, Silence Suppression, Noise Generation, RTP redundancy, broken connection detection
Voice enhancement	> Transrating, Acoustic echo cancellation, replacing voice, Fixed & dynamic voice gain control
Direct media	> Hair-pinning of local calls
Voice quality monitoring	> RTCP-XR
High availability	> Two-box redundancy > active calls preserved
Quality of Experience	> Access control and media quality based on Quality of Experience (QoE) and bandwidth utilisation
Test agent	> Ability to remotely verify connectivity, voice quality and SIP message flow between SIP UA

Interoperability	
SIP B2BUA	> Full SIP transparency, stateful proxy
SIP interworking	> 3xx redirect, REFER, PRACK session timer, early media, call hold, delayed offer
Registration and authentication	> User registration restriction control > registration 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	> Ability to add/modify/delete SIP headers and message body using regex.
URI and number manipulation	> URI user and host name manipulations, ingress and egress digit manipulation
Transcoding and codecs	> Coder normalisation including transcoding, codec enforcement and re-prioritisation > G.711, G.723.1, G.726, G.729, GSM-FR, AMR-NB/WB, 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 > WebSocket, Opus, VP8 video codec, lite ICE, DTLS, RTP multiplexing, secure RTCP with feedback
NAT	> Local and far-end NAT traversal for support of remote workers

SIP Routing	
Routing methods	> Request URL, IP address, FQDN, ENUM, advanced LDAP, 3rd party control via API
Advanced routing criteria	> QoE, bandwidth, SIP message (SIP request, codec type, etc.), Layer-3 parameters
Redundancy	> Detection of proxy failure / re-routing
Routing features	> Least-cost routing, call forking, load balancing, emergency call detection and prioritisation
SIPRec	> IETF standard SIP recording interface

Minimum Requirements	
Hypervisor	VMware® vSphere ESXi™ 5.x, Linux KVM, Microsoft Hyper-V
Memory	2 GB
Disk Space	10 GB
Virtual NIC's	2 (standalone) / 3 (high availability)
Virtual CPU's	1

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NEC Australia specialises in information and communications technology solutions and services in multi-vendor environments. Solutions and services include: IT applications and solutions development, unified communications, complex communications solutions, network solutions, display solutions, identity management, research and development services, systems integration and professional, technical and managed services.

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