\Orchestrating a brighter world NEC

UNIVERGE®
BX Series

Enterprise Session Border Controllers

Smart Communications for the enterprise

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Choose the **UNIVERGE BX Series**

Communicate securely without boundaries

To be successful you need a communications solution that will adapt and grow with your business and NEC's UNIVERGE range of Unified Communications (UC) platforms deliver.

The NEC UNIVERGE® BX Series Enterprise Session Border Controllers (E-SBC) ensures that your UC solution is always secure. Sitting between your organisation and your SIP trunk providers, you are protected from malicious individuals by offering Denial of Service, fraud and eavesdropping protection.

The UNIVERE BX Series will also protect your mobile employees by allowing them to securely make and receive calls using mobile clients on their tablets, smart phones or laptops.

The UNIVERGE BX series E-SBC's are powerful, scalable, secure and easy to manage - they are the perfect addition to your NEC SL1100 or UNIVERGE SV9000 series Unified Communications platforms.

The UNIVERGE BX series delivers the flexible, scalable and secure communications your business needs.

30,000 Users

6,000 Calls

300 Transcoded Sessions

100% Virtualisable

High Availability

At a glance

- Comprehensive security protects your valuable communications infrastructure from unauthorised usage
- Provides perimeter defence against Denial of Service, fraud and eavesdropping
- Can be deployed as a dedicated hardware device or a virtual appliance
- Active / standby redundancy for high availability deployments
- Delivers high service performance and voice quality
- Flexible licensing options for cost-effective scalability up to 30,000 users with up to 6,000 concurrent calls
- Allows remote workers to securely use mobile clients and softphones
- Secure integration (TLS) to SIP trunk providers
- Support for industry leading virtualisation - VMware, Hyper-V and KVM
- Support for industry leading cloud infrastructure providers Openstack, Amazon Web Services (AWS) and Cloudband (ALU)
- Complete web based maintenance, automated test calling minimises deployment time and support issues

Improving the way you work

Simple and secure access to **communications**

Communications Manager

Keeping your communications secure, scalable and always available is what keeps you communications manager up at night.

No one wants a call in the morning to find out that an unsecured phone system was used to rack up thousands of dollars of fraudulent calls or a service carrier outage meant that your contact centre was off line for the last five hours losing you thousands in sales.

A UNIVERGE BX series E-SBC can help secure your network, proactively protecting you from fraud. It can also minimise the impact of failures in SIP trunk providers and data centres with fault tolerance built-in.

IT Manager

Managing a complete networking infrastructure is complex, you have equipment spread across multiple sites, you are always worried about failures and you have a complete business relying on your systems running 24/7 without incident – and they expect if for virtually nothing.

The UNIVERGE BX series is simple to manage (totally web based) and it fits in with your IT infrastructure as an appliance or as virtualised software. It offers fault tolerance and scalability that will meet almost any businesses' needs.

With the security mechanisms that you would expect built-in and advanced proactive protection like DDoS and dynamic black listing you know you are protected.

Financial Controller

Communication costs are in constant flux and shopping around for a better service provider can often result in a significant saving in communications costs.

If your phone system infrastructure is tightly coupled to a carrier this can make switching incredibly expensive. With a UNIVERGE BX series session border controller you can quickly change SIP trunk providers with minor impact on the underlying communications infrastructure - saving you money.

Working from home

Businesses today need to balance the demands of work and the needs of employees. Work location flexibility can lead to happier and more committed employees.

Staff that have traditionally been bound to a desk may be able to leverage working from home.

The flexibility of working from home allows staff to start earlier or later and work around the demands of their work load, all while reducing their travel times and costs. They will still be as contactable as if they were at the desk.

Businesses can also save by reducing expensive dedicated office space and opting for flexible desks for remote workers when they do come in to the office.

Mobile staff

You're in the office and out, you've got calls coming in on your desk phone and your mobile, you've got multiple voicemails to check – your communications are a mess!

Simplify your life with the UNIVERGE BX series E-SBC.

Only give out your desk phone number and calls will follow you, ringing at your desk and on your mobile client. If you miss the call your work voicemail will handle it for you and even send you an email with the message*.

Control your communications, don't let them control you.

Travelling staff

Travelling for work can be a stressful time especially when travelling overseas, not to mention an incredibly expensive experience when having to make calls to colleagues and family back home.

With a UNIVERGE BX series E-SBC and a mobile client installed on their smart device, travelling staff will be able to securely make calls as if they were at their desk anywhere they can get access to Wi-Fi. Calls to phone number back home become a local call not a dollars-per-minute corporate expense - One less thing to worry about when away from home.

** Requires a Unified Messaging solution and remote email access*

Why you need a Session Border Controller

The BX series will **enhance the way you do business**

Complete perimeter defence for the enterprise

NEC provides robust protection for your IP communication infrastructure, preventing fraud and service theft and guarding against cyber-attacks and other service-impacting events.

NEC's extensive security mechanisms provide protection to your unique VoIP traffic behaviour ensuring legitimate traffic passes through without disruption. All while preventing Denial of Service (DoS), fraud and service theft guarding your organisation against cyber-attacks and other service-impacting events.

Simplified connectivity to service providers

The BX series provides an expansive integration capability allowing you to securely connect you Unified Communications infrastructure to virtually any service provider.

Supporting a wide range of voice encoders it is capable of transcoding between voice formats, fax handling, gain control and numerous additional media processing features. It offers certified interoperability with leading unified communications solutions and SIP trunk providers.

Secure access for remote and mobile workers

NEC's BX series will enable your mobile users to benefit from UC capabilities, such as voice, video, presence, instant messaging and web conferencing securely from any location.

Reliability

The BX series offer active / standby high availability and maintains voice quality to deliver reliable enterprise VoIP communications no matter what happens. Advanced call routing mechanisms, network voice quality monitoring and branch survivability capabilities result in minimum communications downtime.

A scalable End-to-End Solution

NEC provides a complete set of products for all connectivity needs, reducing complexity, and cost by bringing SBC, Media Gateway, IP Phone, Voice server capabilities to enterprise networks with a single technology. The BX-series Scale from 5 to 6,000 concurrent sessions.

Software Assurance Program

The NEC BX-series is covered by the NEC software Assurance Program. This means that the customer will automatically benefit from all the enhancements that NEC will add to the products.

Deploy the way you want

Built to integrate **with your business**

Web Based Management

Everything can be managed in a standard web browser from within your network or remotely if enabled. HTTPS and LDAP authentication ensures you are who you say you are and that no one can see or modify your configuration.

The User interface is intuitive and features are logically grouped together for ease-of-use. In the rare case you can't find the feature you are after, the inbuilt search feature will get you there.

If at any time you are unsure about an option or how to configure your E-SBC, comprehensive user guides are provided.

Managing your UNIVERGE BX series E-SBC is simple.

BX800 dedicated appliance

If you like the idea of a dedicated appliance to secure your communications, then the UNIVERGE BX800 E-SBC is the perfect choice for you. Capable of supporting up to 800 users and 180 concurrent voice calls the BX800 has plenty of grunt. When paired with a second BX800 it offers you a high level of fault tolerance that will help you survive a WAN or LAN outage with minimal disruption.

With multiple Ethernet ports it can be tailored to suit your specific environment, offering secure, reliable communications between your NEC phone systems, SIP carriers and remote users.

BX9000 Virtualised Appliance

Many organisations prefer to not install hardware where applicable and enjoy the many benefits of a fully virtualised infrastructure. If that is you, NEC's UNIVERGE BX9000 E-SBC is the perfect solution with the same great performance and security that the hardware model provides.

Run the UNIVERGE BX9000 software in your existing VMware® vSphere ESXi™ 5.x, Linux KVM or Microsoft Hyper-V environment for a hardware free implementation. Alternatively you could host it with your cloud provider of choice using Openstack, Amazon Web Services (AWS) or Cloudband (ALU) for a totally off premises solution.

Features and specifications

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

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

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

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

Capacities	BX800	BX9000
Signalling / Media sessions	250	6,000
Registered users	800	30,000
Transcoding sessions	57	300
Redundancy	1 + 1	1 + 1

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