



PROSBC SESSION BORDER CONTROLLER

TelcoBridges' **ProSBC** is a carrier-grade session border controller software package, designed for Network-to-network interface (NNI SBC) peering and access functions (access SBC). Scalable up to 60,000 sessions. ProSBC is a flexible pure-software solution that can be installed seamlessly onto general purpose servers, popular virtualization platforms and TelcoBridges' certified servers giving access to an extensive set of call routing, network adaptation and policing functions. With integrated analytics and network troubleshooting tools and a field-proven SIP stack deployed in more than 100 countries, ProSBC is the ideal choice for VoIP service providers and enterprises.

PRODUCT CHARACTERISTICS

- Back-to-back user agent (B2BUA) and topology hiding
- Line rate DOS/DDOS protection (64 bytes packets)
- Up to 60,000 simultaneous signaling and media sessions
- Encryption support with SIP/TLS and SRTP
- High Availability with 1+1 redundancy
- Flexible and extensive call routing capabilities
- TB Analytics network troubleshooting tools (traces, media/signaling recording, test call generation, etc)
- Versions for installation on bare-metal servers and popular virtualized environments
- Easy installation and upgrades with no down time

NETWORK FUNCTION

Back-to-back user agent (B2BUA)
Overlapping IP realms
SIP registration pass-through/forwarding and throttling

IP NETWORK SECURITY

SIP/TLS and SRTP support
Topology hiding
Line-rate DOS/DDOS protection (64 bytes packets)
Rogue RTP detection
Dynamic blacklisting
Access control list (ACL)
Session admission control
Session bandwidth control (per trunk group)
Call access based on successful registration

INTEROPERABILITY FUNCTIONS

SIP header manipulation
Error/cause code adaptation
Local and remote NAT traversal adaptation
SIP to SIP-I interworking
SIP UDP/TCP interworking

TRANSCODING AND MEDIA ADAPTATION

(Using external TSBC-HW-TRANS)
DTMF transcoding (inband, INFO, RFC2833/4733)
T.38 V.17 & V.34 fax conversion to pass-through
NSE and VBD conversion
Transcoding unit IPs invisible from WAN/LAN
Media transcoding:
G.711, G.723.1, G.726, G.729ab, G.729eg, Clear mode (RFC 4040), G.728, iLBC, G.722, AMR-NB, G.722.2 (AMR-WB), GSM FR/EFR, T.38

VOICE SERVICES

(Using external TSBC-HW-TRANS)
Call progress tone generation
Announcement prompts playback
Call recording

ROUTING

Built-in Class 4 routing engine
Least cost routing
Scheduled routing
Load-balancing and percentage routing
Routing customization through scripts
SIP REFER/3xx based routing
RADIUS based routing
Routing alternate retry routes
Digit/From/To matching and manipulation
Call blocking
Loop detection and prevention

QUALITY OF SERVICE

Per session network quality analysis and MOS scoring
Per session statistics
DSCP/TOS marking
Network quality indicator

MANAGEMENT CAPABILITIES

Provisioning and status graphical interface (GUI)
 HTTPS secured transport
 CLI interface for local and remote management
 RESTful northbound provisioning and status API
 Level-based user access
 Configuration change audit logging
 SSH, sFTP, NTP, DNS, DHCP
 SNMP v2, v3 GET, TRAPs (alarms)
 Extensive SNMP call statistics MIBs
 Configurable Call detail records (CDRs)
 Customizable text-based CDRs
 Customizable RADIUS accounting

TB ANALYTICS (NETWORK ANALYTICS)

Live session trace with protocol information (ladder)
 Raw signaling protocol capture (pcap format)
 Live test call

PERFORMANCE

METRICS

	<u>HARDWARE PLATFORMS</u>			
	<u>VMWARE 6.5¹</u>	<u>OPENSTACK KVM²</u>	<u>BARE-METAL³</u>	<u>AZURE⁴</u>
Max. concurrent sessions (no transcoding)	26,000	32,000	60,000	4000
Max. concurrent sessions (with 100% transcoding)	13,000	16,000	30,000	0
Max. completed sessions per seconds (CPS/CSPPS)	600	600	1,100	200
Max. sessions attempts per seconds (CAPS/SAPPS) when refused by routed destination endpoint	1,250	1,250	1,400	740
when refused by routing engine	1,920	1,920	2,000	2,000
when refused while in congestion	4,000	4,000	6,000	6,500
Max. registration per seconds (RPS)	3,400	3,400	4,700	2,200
Max. registration refresh per seconds (RRPS)	13,000	13,000	19,800	6,100
Max. registered devices ⁵	350,000	350,000	350,000	350,000

(1) As tested on TelcoBridges-installed Vmware 6.5.0 executing on Dell R610 (3.07GHz), VM with 6 vCPUs, 8GB RAM and PCI-Passthrough access to one Intel X540-AT2 (10GE) copper interface.

(2) As tested on TelcoBridges-installed 'OpenStack Newton' executing on Dell R610 (2.93GHz), Instance with 6 vCPUs (directly pinned to pCPUs), 16GB RAM and SR-IOV access to one Intel X710DA-2 (10GE) SFP+ optical interface.

(3) As tested on Dell R630 (3.4 Ghz), 24GB RAM

(4) On D16s_v3

(5) With one contact per address-of-record (AOR)

* = Roadmap capabilities – check with TelcoBridges Sales for current status

SUPPORTED PLATFORMS

Bare-metal servers
 OpenStack with KVM hypervisor
 Native KVM hypervisor
 VMware with vSphere hypervisor
 Amazon Web Services (AWS)
 Microsoft Azure
 Universal CPE (uCPE)
 See docs.telcobridges.com for more platforms

REGULATORY

Lawful interception (ETSI 201 671)

HIGH AVAILABILITY & GEO-REDUNDANCY

1+1 redundancy support (active/standby)
 No loss of service
 Ethernet port bonding support
 Fault-tolerant software
 Seamless software upgrade
 Emergency routing*



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