



# Cloud SBC

Providing a service-aware transit platform with end-to-end QoS and visibility

## Intelligent Connectivity Made Fast and Affordable

Due to the evolution of telecommunication landscape towards all-IP world, there are new challenges ahead for all operators. Mobile, Fixed, Local PSTN providers, GRX network providers and IPX network providers are all reducing their dependence on the traditional TDM interconnects, and as such are opening the door to a new set of mission critical parameters for operational success

At the forefront we now see such operators seeking security, management, reliability, QoS/QoE assurance, and real-time visibility of their IP networks. At Epsilon we understand these requirements and have built a purpose-built platform through our internally developed networking technology to offer such capabilities to our customers, Cloud SBC.

Epsilon's Cloud SBC adds a new dimension to Epsilon's trusted interconnect and transit platform by providing a service-aware (voice, video, data) transit layer. It gives customers end-to-end QoS and visibility into network, session, system, KPI and SLA statistics to enhance service optimisation and monetisation.

It is a subscription based service; meaning the charging model is based on "pay-per-use" term and does not require any upfront CAPEX. IP interconnects are also more cost effective and faster to install. They drive operational efficiency by reducing equipment costs and infrastructure support.

### Epsilon Facts

- 300+ Network Supplier Relationships
- Global Optical Backbone
- 24/7 Expert Support
- MEF 2.0 Accredited
- Over 15 Years of Experience
- Access in over 170 countries
- One Contract Procurement

## Benefits



### Security

Cloud SBC is a Private Network that consists of several safety mechanisms like DoS/DDoS Prevention, SIP Rate/Flooding Protection, Malformed SIP and SIP Profiling. It has the ability to check for unauthorized customer and implement control for Media Bandwidth and Call Limit.



### Session Management

Can offer Extensive SIP Protocol Support, Topology Hiding, Signalling Adaptation Framework(SAF), Transcoding and Call Admission Control (CAC) for better management of call sessions.



### High Availability (HA)

Each Cloud SBC node offers Service level redundancy, whereby each of them is in Active/Standby mode with hot standby. There is also Stateful Session Redundancy Protocol (SSRP) built between Active and Standby units within a single node.



### Service Assurance

Can better manage End-to-End QoS (Quality of Service) and QoE (Quality of Experience) to ensure premium quality. Have capability of dynamic steering of sessions in wake of network challenges.



### Extensive Tools

By using DPI (Deep Packet Inspection) technique, Cloud SBC is able to offer tools to users for end-to-end session tracing, media quality measurements and traffic type monitoring.

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“Business transformation has driven enterprise IT organisations to embrace public cloud as the new centre of gravity for applications and data. Cloud operations teams are facing more challenges including limited visibility, lack of network control and skill gaps. Our cloud networking service will enable businesses to take on these challenges more effectively.”

### James Knowles

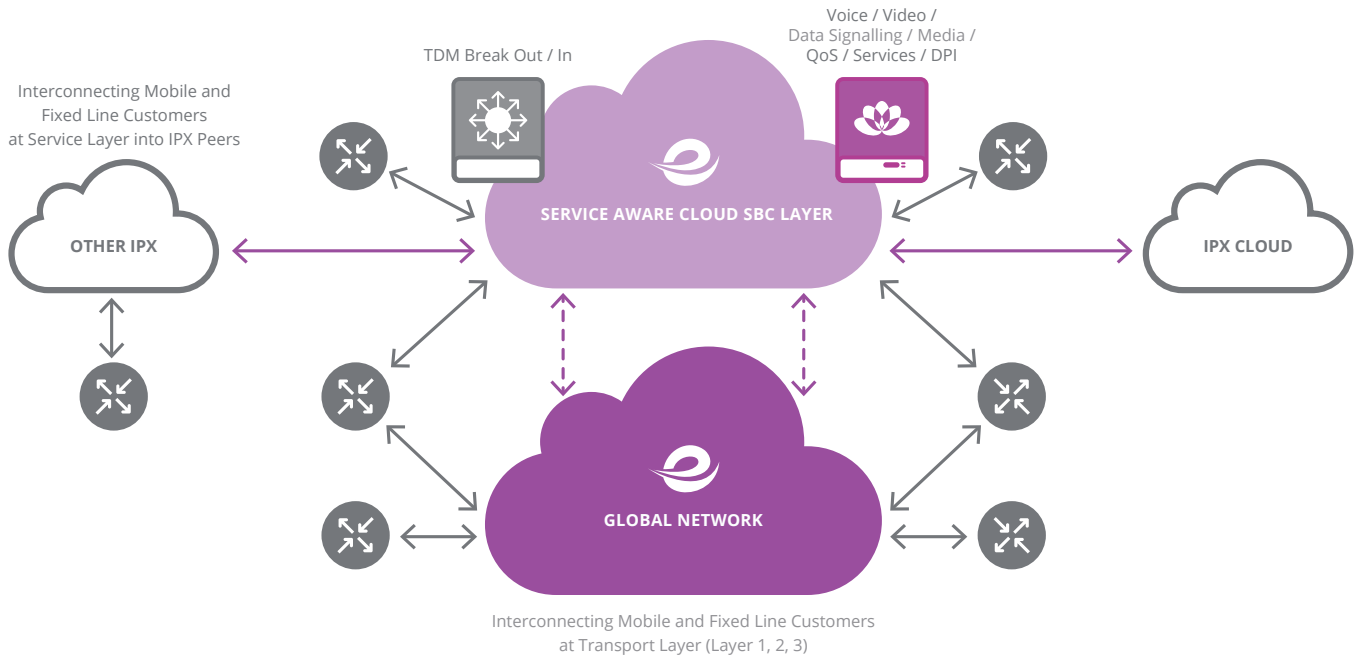
Director, Voice Business Unit  
Epsilon

## Why Choose Us?

- More than 16 years of experience serving the sector
- Direct connection to the leading Cloud and IX service providers
- Rapid lead time to establish service provider connectivity based on exchange concepts
- Software-defined Networking (SDN) platform for on-demand connectivity
- Internally developed intelligent networking technology
- Global team of expert engineers
- Innovative services
- Customer-centric support 24x7x365
- A dense interconnect fabric of 600+ carriers, service providers, Cloud and IX providers
- Flexible application, APIs and web-based self-service portal

## What it can do for you:

Epsilon's Cloud SBC can enhance the performance, privacy, and stability of your bilateral interconnections (TDM/VoIP) with a single interconnection, while extending your global market reach.



### Cloud & Application Providers

**Private Connection**  
Secured community network that is separated from the public Internet.

**Operations and Support**  
24x7 proactive monitoring and customer support.

**Flexible Costing**  
The charging model is based on "pay-as-use" term.

**Single Centralised Portal**  
Access near real-time analytics and traffic summary reports.

### Carriers & Service Providers

**Full Control and Visibility**  
Comprehensive session and call management platform.

**CAPEX and OPEX Savings**  
Subscription based service and no upfront CAPEX. IP interconnects are more cost effective and faster to install.

**Maximize Revenue Opportunity**  
Minimise session failures due to incompatible codecs/parameters.

**HA Redundancy**  
Maximise service uptime and ongoing calls will not be dropped during failover.

### Managed Service Providers

**Simplified Interconnection**  
Multiple services can be provisioned across a single service-aware interconnect.

**Industry Standards**  
Strong collaboration with GSMA and i3 forum.

**Proactive Service Support**  
Dynamic steering of sessions due to predefined QoS and QoE.

**Real-time Service Provider Feed**  
Demonstrate real-time network and service quality.

## TECHNICAL SPECIFICATIONS

<b>Supported Protocols on TDM Side</b>	SS7: ETSI ISUP V1 & V2, ITU ISUP, ISUP, ANSI ISUP and dozens of other country signalling variants
<b>CLOUD SBC Features</b>	<ul style="list-style-type: none"> <li>• Interconnect B2B User Agent Call Model (NAT, Topology Hiding, Security)</li> <li>• RFC 3264 SIP Offer/Answer</li> <li>• RFC 3261 SIP Messages and Header Support (Interconnect Feature set)</li> <li>• Call Admission Control (call rate, call limit, BW) at system and customer level</li> <li>• Codec Negotiation</li> <li>• Media Control (Relay, By-Pass)</li> <li>• PRACK, Forking, Session Refresh Procedure Support</li> <li>• SIP OPTIONS Ping</li> <li>• Reason Header Support (Release cause)</li> <li>• FQDN Resolution for Remote IP Peer (Local)</li> <li>• Load Balancing and CAC policies across customer remote endpoints</li> <li>• Zone Based Session Steering</li> <li>• Profiles (QoS, Codecs, SIP)</li> <li>• Session based KPIs and Stats</li> </ul>
<b>Billing Module</b>	SDRs (Session Detailed Records)
<b>Media &amp; Security Handling</b>	<ul style="list-style-type: none"> <li>• RTP/RTCP Media Relay</li> <li>• Media NAT (address and port translation, topology hiding)</li> <li>• DoS/DDOS attack blocking at H/W</li> <li>• Access Control List</li> <li>• VLAN</li> <li>• Media BW CAC at Customer, System, Port Level</li> <li>• Multiple IP Address Support</li> </ul>
<b>Policy Engine</b>	<ul style="list-style-type: none"> <li>• Static Routing/Default</li> <li>• (Zone to Zone)</li> <li>• Parameter Based Policy Rules</li> <li>• Weight Priority based routing</li> <li>• Session Re-Routing and Redirection</li> <li>• Time of Day</li> </ul>
<b>Transcoding Features</b>	<ul style="list-style-type: none"> <li>• Static Transcoding</li> <li>• Supports Voice and Video codecs</li> <li>• G.711, 723, 729, iLBC, OPUS, SILK, AMR WB, G.722 etc</li> </ul>
<b>Analytics</b>	<ul style="list-style-type: none"> <li>• Customer and System Voice Scores (MOS and R-Factor)</li> <li>• QoS Metrics Calculation for Real time Enforcement</li> </ul>
<b>Overflow Routing</b>	<ul style="list-style-type: none"> <li>• Number Directories</li> <li>• Directory Lookup</li> <li>• Data Manipulations</li> <li>• (Set, Get, Test)</li> <li>• Route Treatments/Actions</li> <li>• Route Filters/Post Processing Rules</li> <li>• Media Transcoding Control</li> <li>• User Interface for Advanced Policy Routing</li> </ul>

<b>Media Plane Features</b>	<ul style="list-style-type: none"> <li>• Media NAT Traversal (Latch)</li> <li>• Hierarchical QoS-Policing</li> <li>• Dynamic Blacklisting</li> <li>• Grey Lists</li> <li>• Policy based IP routing</li> <li>• Dynamic Firewall Policies</li> <li>• Service Availability</li> <li>• High Availability (HA) across Epsilon PoPs globally</li> </ul>
<b>Operational Tools</b>	Tracing (Signalling and Media)
<b>Security</b>	<ul style="list-style-type: none"> <li>• Customer access from Public Domain via IPSEC*</li> <li>• Customer access from Private Domain via Direct Peering model</li> </ul>
<b>Customer Service Portal</b>	<ul style="list-style-type: none"> <li>• Multi-node web based central manager</li> <li>• Maintenance Operations</li> <li>• Role Based Access Control for shared access/partitioning</li> <li>• Graphical User Interface for Configuration</li> <li>• Dashboard View</li> <li>• Alarms</li> </ul>
<b>SIP Features</b>	SIP event package for QoS and SLA management
<b>Policy Engine</b>	<ul style="list-style-type: none"> <li>• QoS Based Session Steering</li> <li>• Policy Based Transcoding Control (Policy Triggers)</li> </ul>
<b>Media Features</b>	<ul style="list-style-type: none"> <li>• RTP Analysis and RTCP-XR generation</li> <li>• Advanced Queuing</li> <li>• (Strict and Priority Queuing)</li> </ul>

## Contact Us

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