Market Guide for Enterprise SBC

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Enterprise session border controllers provide security, interoperability, session control, resiliency and supportability between enterprise and carrier SIP trunks, and enterprise UC telephony platforms. We identify key attributes to help IT leaders choose an E-SBC appropriate for their requirements.

Key Findings

- Enterprises require different features than those provided by carrier session border controllers (SBCs), including support for T1/PRI interfaces, small sites, local resiliency and interoperability certification with enterprise unified communications (UC) vendors.

- The enterprise-SBC (E-SBC) market is expected to grow by 20% compound annual growth rate (CAGR) year-over-year 2014 to 2018, as more enterprises adopt Session Initiation Protocol (SIP) trunking worldwide.

- E-SBCs primarily target voice requirements, but the requirement to support video security, interoperability, resiliency and transcoding is emerging.

Recommendations

- Deploy E-SBCs to enhance security, interoperability, resiliency and supportability between enterprise and SIP trunking providers, and between different enterprise UC telephony platforms.

- Select E-SBCs with the capacity to meet today's requirements, plus the ability to incrementally support additional sessions as SIP traffic increases.

- Utilize an E-SBC hardware appliance instead of a virtual server when transcoding or encryption of more than 100 concurrent sessions is a requirement.

Market Definition

E-SBCs are used between enterprise and SIP trunking providers, as well as between different enterprise UC telephony platforms. In speaking of SBC:

- Session refers to a real-time communication connection between two endpoints, typically a voice and/or video call.

- Border refers to the intersection of two networks with different trust levels.

- Controller refers to the ability to control each session that traverses the E-SBC.

E-SBCs should be utilized on all SIP trunking implementations. Some carriers provide E-SBCs as part of their SIP trunking offerings, others offer a managed E-SBC service if the customer does not want to provide one. E-SBCs can be utilized between different UC platforms, such as Microsoft Lync and Cisco Unified Communications Manager (CUCM), and between a UC platform and different vendor endpoints.

The primary role of an E-SBC is to provide:

- Security:

  - Network topology hiding — Utilizing network address translation (NAT) at the Open Systems Interconnection (OSI) Layer 3 Internet Protocol (IP) level and the OSI Layer 5 SIP level

  - Voice application firewall —Telephony denial of service (TDoS), access control, inspection and monitoring

  - Encryption — Encrypting the signaling and media if the traffic goes across the Internet

- Interoperability:

  - Protocol interworking — SIP-H.323, H.323-SIP and SIP-SIP. Although SIP is a standard, there are many variations across vendor implementations.

  - Media interworking — Transcoding and/or transrating between various codecs

  - Media services — Ability to replicate the media for call recording, clean up the media (such as echo cancellation) and inject media on certain call flows, such as music on hold

- Session control:

  - Call admission control — Calculate bandwidth and platform allocation to ensure resources are available to support new sessions

  - High availability — Ensure that if a network or E-SBC fails, then the traffic is rerouted to another network or the public switched telephone network (PSTN)

- Resiliency:

  - SIP trunk load balancing — Support connectivity to more than one SIP trunk for load balancing in case of quality or availability issues

  - Service provider geographic redundancy — Support highly available SIP trunk service with stateful failover

- Local PSTN breakout — Connect to a local time division multiplexing (TDM) service in case of a WAN outage

- Supportability:

  - Reporting — Usage, real-time and historical via a call detail recording (CDR) that is used for billing and alarming based on session performance or security events

  - Alarming — Real-time notification of network, security, resource or other events that are affecting the quality of sessions

  - Troubleshooting — Demarcation point between networks to isolate and fix a problem with the signaling or media

Figure 1 shows an example of an enterprise utilizing SIP trunks from two carriers in two different data centers to provide ultra-high availability. The E-SBC is utilized as a demarcation point between the enterprise and the service providers, providing the SIP trunks to the PSTN.

Figure 1. Ultra-High Available SIP Trunking
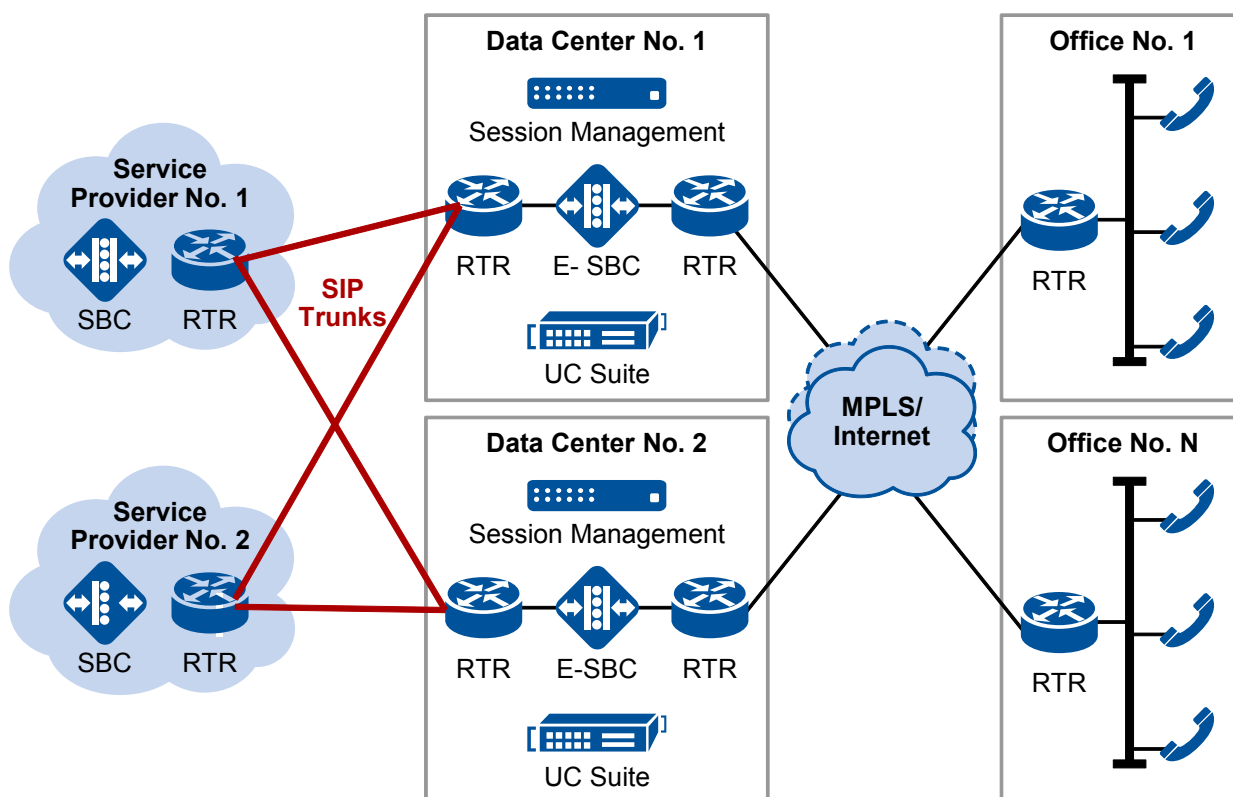
Source: Gartner (June 2014)

This example illustrates an architecture where all SIP trunks are centralized and consolidated into two data centers. Some enterprises prefer to implement SIP trunking in a distributed model, where the SIP trunks are delivered directly at the site level.

Market Direction

Enterprises are moving to SIP trunking to reduce their telecom expenses by 30% to 50% in the U.S., and by 15% to 25% globally. While 80% of enterprises in North America have some SIP trunks in their environments, only 10% of them have fully completed their migration to SIP trunking.[1]

The majority of enterprises upgrade their legacy TDM PBX systems first to voice over IP (VoIP)/SIP, then add SIP trunking. Some enterprises are implementing SIP trunking immediately to capture the cost savings and converting the SIP trunks back to T1/PRIs in their legacy TDM PBX systems. The carriers in North America are starting to encourage their customers to migrate to SIP trunking so they can retire their legacy TDM voice networks.[2]

Global adoption of SIP trunking trails the North American market by a few years, because the cost-savings opportunities are not significant and many countries still have regulations barring the porting of phone numbers and emergency service notifications to another country. More than 35 countries allow SIP trunking, and the number is growing. However, India, China and Russia are notable exceptions, with no announced plans to permit SIP trunking.

As more enterprises migrate to SIP trunking, the market for E-SBCs is expected to grow by an estimated 20% CAGR per year, 2014 to 2018.[3] In addition to SIP trunking applications, E-SBCs can be utilized to help connect different UC vendor platforms. E-SBC suppliers are adding Web real-time communication (WebRTC) gateway functionality to their E-SBC platforms. As desktop video and other real-time video adoption increases, one of the growing roles of the E-SBC will include providing video transcoding and transrating similar to what SBCs provide with voice services. This is expected to supplant the speed matching and transcoding currently performed by video multipoint control units (MCUs), and will complement cloud-based transcoding that several service providers supply.

One potential use of an E-SBC is to provide dynamic session management between UC platforms and endpoints. Dynamic session management is the ability to prioritize, limit and optimize communication sessions in real time as the network becomes congested. As UC applications that utilize voice and video consume more network bandwidth, network resources should be allocated according to business value. Enterprises should look at supplementing their network quality of service (QoS) and static call admission control policies with dynamic session management.

Following are current industry price ranges based on the number of concurrent SIP sessions. Pricing includes the hardware platform, along with assuming that transcoding or encryption is occurring.

Industry list prices vary for site-size simultaneous sessions:

- Small, fewer than 100 sessions per site — $4,000 to $10,000

- Midsize, 101 to 1,000 sessions per site — $20,000 to $60,000

- Large, more than 1,000 sessions per site — $75,000 to $300,000

Market Analysis

There are 12 critical attributes that enterprises should use when deciding which E-SBC vendors to consider for their environments:

1. Security — Deliver voice and video application security above what a firewall can provide, including hiding the OSI layer internal SIP addresses through Layer 5 NAT, TDoS prevention, and encrypting the signaling and media, if required.

2. Scale — Large enterprises that need thousands of concurrent sessions and require transcoding, such as G.711 to G.729 and/or Secure Real-time Transport Protocol (SRTP) encryption, will need special-purpose hardware. Although the SIP signaling functionality and security interworking can be easily supported by a virtual server, the voice or video media transcoding is CPU-intensive and best served by specialized digital signal processors (DSPs).

3. High availability — Stateful failover is a feature whereby if the primary SBC fails due to loss of a power supply, memory corruption or other technical failure, the redundant SBC takes over within three seconds and all calls that are occurring are not affected. Full stateful failover means that the call can be transferred to another number and no features will be lost upon failover.

4. UC telephony platform — Each UC vendor has a certification process whereby it tests its platform with specific SBC vendors. SBC vendors typically will be deployed more often with some UC vendors versus others, based on market opportunities and level of cooperation between the companies.

5. TDM interfaces — T1/E1 and analog interfaces are suitable for enterprises that want to adopt SIP trunking, but support legacy TDM PBX systems, or that deploy SIP trunking in a hybrid mode where some connectivity to the PSTN is done over legacy TDM interfaces.

6. H.323 — Early VoIP and video over IP deployments utilized H.323 as the signaling protocol instead of the new SIP standard. Enterprises that have legacy VoIP or video systems required the support of H.323 for SIP interworking.

7. Ease of configuration — Prebuilt templates and a graphical user interface (GUI) enable an SBC to be set up in five to 10 minutes. Some SBCs utilize a command line interface (CLI) for configuration, which requires that the administrator has a good understanding of the product, and testing can take weeks.

8. Reporting — Most enterprises require real-time and historical reports detailing utilization, security events, performance and billing. Some SBC products come with a Web-based tool and good precanned reports, while other SBC products just capture the CDRs and rely on a third-party toolset to create reports.

9. Video — Most E-SBCs support SIP signaling and security associated with video, but support for video transcoding and transrating is less common. Transcoding involves the ability to interoperate across different video codecs, while transrating or "speed matching" consists of supporting the same video codec at different characteristic bit rates. Some E-SBCs support temporal scaling of video between different frame rates. The most common video codec supported is H.264, with VP8 as an emerging requirement.

10. Active Directory (AD) support — AD support requirement is frequently found by enterprises adopting Microsoft Lync as their UC platform. AD is utilized to store user profiles, phone numbers and permissions, such as the ability to call internationally or which phones to ring on an incoming call. SBC uses this information in multiple ways.

11. SIP Recording (SIPREC) — SIPREC is a new standard for call recording. Traditionally, call recording at the trunk-side level was done by tapping or spanning the network port. SIPREC enables call recording to be forked at the IP layer, which offers a more robust way of balancing the load across multiple call-recording servers and failover options if a call-recording server fails. Verint, Nice Systems, HP Autonomy and other call-recording vendors support the SIPREC standard.

12. Routing — Session control for routing a call over different carriers or networks is based on cost, day, region, quality (QoS), username, IP address, IP network, codec type, domain name or other variables. For example, if the SBC is detecting errors on some calls going over one network, the SBC can then route the next call over a network that is not having any performance problems.

We identify these capabilities in tables for each vendor.[4,5,6]

Representative Vendors

The vendors listed in this Market Guide do not imply an exhaustive list. This section is intended to provide more understanding of the market and its offerings.

AudioCodes

AudioCodes has built a global reputation for providing high-quality SBCs and media gateways that work with virtually any IP telephony or UC platform to support IP and TDM connectivity for trunks and devices.

AudioCodes' international headquarters and R&D facilities are located in Airport City, Israel, with an additional R&D facility in the U.S. located in New Jersey. AudioCodes' E-SBC product line is Mediant. Mediant 500 is the smallest E-SBC, and the recently released Mediant 9000 is the largest. The six platforms in between the smallest and largest E-SBCs are all based on the same code, feature parity and configuration methodology. The Mediant SBC also is offered as software for a virtualized solution. AudioCodes' SBCs are managed either with an embedded Web interface or, for large deployments, via the One Voice Operations Center, a centralized life cycle management suite for AudioCodes' products (see Table 1).

Table 1. AudioCodes

Attributes	Product Capability	Comments
Security	Yes	Including ability to authenticate SIP clients (users) using a Remote Authentication Dial-In User Service (RADIUS) server
Scale	Supports small, midsize and large enterprise business environments	Supports from five to 16,000 concurrent SIP sessions, or 12,000 if transcoding or encryption is utilized. The product portfolio includes seven models to allow for cost-effective pricing within a range of sessions required
High Availability	Yes	
UC Telephony Platforms	Alcatel-Lucent, Asterisk, Avaya, BroadSoft, Cisco, Enghouse Interactive, Genesys, Interactive Intelligence, Microsoft and ShoreTel	
TDM Interfaces	Yes	Supports T1/E1 ISDN interfaces, and two- and four-wire analog interfaces
H.323	No	Low priority based on low market demand
Ease of Configuration	Embedded Web GUI, as well as centralized management system	Includes user-friendly configuration Wizard
Reporting	Yes	Centralized and consolidated reporting, including the ability to manage many SBCs reporting through a common reporting engine
Video	No	Video transrating is on the road map for 1Q15
AD Support	Yes	Including advanced migrations topologies using drop-and-insert configurations
SIPREC	Yes	
Routing	Yes	Leverages AD and supports a full suite of variables, such as prefix, suffix and bandwidth

Source: Gartner (June 2014)

AudioCodes offers all-around E-SBC functionality plus a product suite tuned to meet cost-effective price points for small, midsize and large organizations. The AudioCodes E-SBC portfolio covers the capacity and interface needs of distributed enterprises, which positions the company to be a sole source vendor for centralized and distributed deployments within the same network. The company has been building a significant integration practice that helps organizations migrate from older PBX systems to Microsoft Lync.

Avaya

In October 2011, Avaya purchased Sipera Systems, a SIP security and E-SBC manufacturer. Sipera was best known as a product that resided between an IP-PBX and an endpoint, and provided secure, non-VPN connectivity between the two, in addition to its SIP trunking solution. Since the Sipera acquisition, the focus has been to enable the product to support additional features and enable it to be the sole security device for SIP communications at the edge of an enterprise. The Avaya E-SBC product is the Avaya Session Border Controller for Enterprise (see Table 2). Avaya's headquarters are in Santa Clara, California.

Table 2. Avaya

Attributes	Product Capability	Comments
Security	Partial	IPv6 NAT and logging Real-Time Transport Control Protocol (RTCP) information are on the road map
Scale	Small or midsize business (SMB) environments	Supports up to 5,000 concurrent SIP sessions, or 1,000 sessions if transcoding or encryption is utilized. Support planned for 10,000 sessions by end-of-year 2014
High Availability	Yes	
UC Telephony Platforms	Avaya, Cisco, Asterisk, ShoreTel and Mitel	Microsoft Lync certification likely will come in 2H14
TDM Interfaces	No	
H.323	No	
Ease of Configuration	GUI-based administration	
Reporting	No	This is a major limitation of the product, but there are plans to address this in future releases
Video	Partial	
AD Support	No	
SIPREC	No	On road map for 2H14
Routing	Limited	Offers routing on uniform resource identifier (URI), IP address, virtual LANs (VLANs) and physical interfaces

Source: Gartner (June 2014)

Avaya's E-SBC product is commonly deployed in environments that utilize Avaya UC and/or contact center solution in the SMB and enterprise markets. Avaya's SBC implementation is software only and runs on industry-standard servers or virtual machines. Avaya is investing significantly in its SBC solution to bring it to market parity during the next 12 to 18 months.

Cisco

Cisco's distribution network for E-SBCs includes a long list of global dealers, service providers and system integrators. SBC functionality is within Cisco's Internetwork Operating System (IOS) software and is available on the Integrated Services Router (ISR) and Aggregation Services Router

(ASR). The Cisco E-SBC product, Cisco Unified Border Element (CUBE), is embedded in Cisco's router platform. Enterprises can choose the size of the router based on their architecture and scale, along with TDM interfaces, if integration to legacy systems is a requirement (see Table 3).

Table 3. Cisco

Attributes	Product Capability	Comments
Security	Yes	CUBE enhanced the TDoS prevention capability by leveraging voice policy functionality to identify patterns of calling activity to detect and prevent real-time TDoS attacks
Scale	Small, midsize and large business environments	Supports from two to over 16,000 concurrent SIP sessions; 4,000 sessions if transcoding or encryption is utilized. Product portfolio includes multiple models to allow for cost-effective pricing within range of sessions required
High Availability	Partial	All calls will failover, but the ability to do SIP on existing sessions is limited. This likely will be addressed in 2H14
UC Telephony Platforms	Cisco, Avaya, Mitel, BroadSoft, Alcatel, ShoreTel and Microsoft Lync	Many features optimized for use with CUCM and Business Edition platforms
TDM Interfaces	Yes	T1/E1 ISDN, and two- and four-wire analog interfaces
H.323	Yes	For SIP to H.323, and H.323 to SIP
Ease of Configuration	Web-based GUI enables centralized management	Requires Cisco Prime Collaboration option
Reporting	Yes	Wide range of reporting supported by Cisco Prime Collaboration option. Prebuilt real-time and historical reports are limited
Video	Partial	Transcoding for H.264, H.263 and transrating of 15 and 30 frames per second (FPS)
AD Support	No	
SIPREC	Yes	CUBE has media forking features that comply with SIPREC specifications. Cisco also supports its own standard, MediaSense
Routing	Partial	Offers routing on a few variables, but not the full suite

Source: Gartner (June 2014)

Cisco CUBE is well-suited for organizations that have deployed, or are planning to deploy, CUCM or Business Edition. The ISR and ASR routers enable seamless integration of E-SBC functionality into a Cisco-centric network. This, in turn, enables users to leverage Cisco support resources for troubleshooting, as well as performance monitoring and business continuity.

Edgewater Networks

Edgewater Networks is based in San Jose, California, was founded in 2002, and remains privately held. Edgewater offers a line of E-SBCs that provide VoIP survivability, passive call quality monitoring and traffic-management tools focused on supporting high-quality voice and video transmission. Edgewater offers proactive call quality monitoring tools for IP phone configuration and remote management, as well as monitoring of VoIP endpoints. The E-SBC product, EdgeMarc, features EdgeMarc 4550 on the low end and EdgeMarc 7000 as the high end, with two models in between.

The company's SBCs are deployed by service providers and end-user customers. A channel development initiative includes adding value-added reseller (VAR) partnerships, and building relationships with vendors and service providers in the UC market (see Table 4).

Table 4. Edgewater Networks

Attributes	Product Capability	Comments
Security	Partial	IPv6 NAT and TDoS prevention are not supported, and SRTP media encryption is on the road map
Scale	SMB environments	Supports from 10 to 2,000 concurrent SIP sessions. Transcoding and encryption are not supported
High Availability	No	On the product road map for 2015
UC Telephony Platforms	Avaya, Asterisk, Cisco, Mitel, ShoreTel, Digium and others	Current certifications for over 30 leading PBX systems
TDM Interfaces	No	
H.323	No	
Ease of Configuration	Yes	Prebuilt configuration templates for platforms that are supported
Reporting	Partial	Reports for basic billing. Reporting on real-time and historical utilization and security events is limited
Video	No	
AD Support	No	
SIPREC	No	
Routing	Limited	Supports call routing for variables such as prefix and suffix

Source: Gartner (June 2014)

Edgewater Networks' E-SBC product portfolio is targeted primarily at SMBs. Cost-effectiveness is coupled with functionality that includes ease of configuration. At present, the Edgewater E-SBC product does not support transcoding or encryption of voice or video.

Genband

Genband, founded in 1999, is based in Frisco, Texas, and has been a player in the carrier switching market. In 2013, it revised its entire product portfolio and united its family of SBCs under the QUANTiX solution set. Genband offers a broad range of software- and appliance-based E-SBC products targeted for enterprises from small branch offices to large enterprises. Within the QUANTiX family, Genband offers its SBC product as pure software (QFlex), as well as on multiple off-the-shelf platforms branded as Q10, Q20 and GENiUS.

As part of its go-to-market strategy, Genband markets through channels, distributors and resellers. It is leveraging its installed base of service provider customers to offer managed E-SBC as a service with the service providers' SIP Trunking offering (see Table 5).

Table 5. Genband

Attributes	Product Capability	Comments
Security	Yes	Tightly monitors calling patterns, such as ports utilized after normal business hours, unusual call volumes and call rates, to generate alarms and reports about abnormal use
Scale	Small to large business environments	Up to 28,000 SIP sessions. Plans to increase to 70,000 in 2014. 10,000 sessions if encryption or transcoding are utilized
High Availability	Yes	
UC Telephony Platforms	BroadSoft, Microsoft Lync 2010, Avaya, Cisco, Interactive Intelligence, Alcatel-Lucent, Mitel, NEC, ShoreTel, Siemens and Switchvox	Offers its own UC platform, Experius. Working on certification on Microsoft Lync 2013, but can interoperate with Microsoft Lync 2010
TDM Interfaces	No	
H.323	Yes	For SIP to H.323, and H.323 to SIP
Ease of Configuration	Web-based GUI enables centralized management	Provides APIs for flow-through automated provisioning via network management system
Reporting	Yes	
Video	No	Transcoding and transrating are on the road map
AD Support	No	
SIPREC	No	On the road map
Routing	Yes	Including SIP, electronic numbering (ENUM), DNS and dynamic routing

Source: Gartner (June 2014)

Although Genband is new to the enterprise space, its portfolio of UC and WebRTC solutions, cloud offerings and legacy Nortel migration gives it a solid go-to-market strategy for its E-SBCs. Its SBC

products are widely deployed in the carrier space. Genband differentiates itself through low total cost of ownership (TCO) via networkwide licensing, PBX interoperability for simplified migration to SIP trunks and intelligent session-management capabilities.

Oracle (Acme Packet)

Oracle added E-SBCs to its portfolio by acquiring Acme Packet, an established E-SBC vendor, in June 2013. In addition to the acquired portfolio, Oracle offers a new platform, the Acme Packet 6300, which provides increased capacity, performance and system throughput for current- and future-generation services. The Acme Packet 6300 leverages Oracle's architecture, software, management and high availability.

Oracle plans to expand its reseller relationships with service providers that offer E-SBCs as part of their SIP trunking services, either as a managed service or a resell product. Oracle plans to expand its coverage of the large enterprise market by leveraging its vertical-industry selling strategy (see Table 6).

Table 6. Oracle (Acme Packet)

Attributes	Product Capability	Comments
Security	Yes	
Scale	Small, midsize and large business environments	Supports up to 80,000 concurrent SIP sessions, or 8,000 sessions if transcoding or encryption is utilized
High Availability	Yes	
UC Telephony Platforms	Alcatel-Lucent, Avaya Aura, CUCM and Cisco Unified Contact Center Enterprise with Cisco Unified Customer Voice Portal, IBM Sametime, Microsoft Lync, ShoreTel ShoreWare, Unify OpenScape and Polycom RealPresence	
TDM Interfaces	No	On the road map to provide a unit with a single T1/E1 interface
H.323	Yes	No support for third-party software-defined networking (SDN) or automated provisioning
Ease of Configuration	Yes	
Reporting	Yes	
Video	Partial	Supports SIP-based video sessions. No transcoding or transrating supported for video media
AD Support	Yes	
SIPREC	Yes	One of the industry drivers of the standard
Routing	Yes	

Source: Gartner (June 2014)

Oracle also offers Oracle Enterprise Operations Monitor Suite, which includes SBC-integrated probes. This enables its E-SBC products to perform real-time end-to-end performance monitoring, analytics and troubleshooting, and display the results in real time. It also provides support for a robust set of TDoS capabilities.

Patton Electronics

Patton Electronics is based in Gaithersburg, Maryland, and was founded in 1984. The privately held company offers an E-SBC tailored to the needs of the SMB market. Patton Electronics offers a series of five E-SBC router solutions, including two Session Border integrated access devices (IADs) with built-in WAN interfaces. Patton distributes primarily through channel partners.

The company's SBCs are deployed by service providers and end-user customers. A channel development initiative includes adding VAR partnerships, and building relationships with vendors and service providers in the UC market. Its E-SBC product suite is SmartNode (see Table 7).

Table 7. Patton Electronics

Attributes	Product Capability	Comments
Security	Partial	SRTP is on the road map. RTCP stats are sent via CDR to a RADIUS server
Scale	SMB environments	Supports two to 256 sessions, or 64 sessions if transcoding or encryption is utilized
High Availability	No	
UC Telephony Platforms	BroadSoft, Microsoft Lync, Cirpack, 3CX, Asterisk, Aarenet and Genband	
TDM Interfaces	Yes	T1/E1 PRI, two- and four-wire foreign exchange station/foreign exchange office (FXS/FXO) analog, and ISDN Basic Rate Interface (BRI)
H.323	Yes	
Ease of Configuration	Yes	Automatic provisioning methods. Customized application-oriented configuration Wizards. Integration with SDN controllers is on the road map
Reporting	Partial	Simple Network Management Protocol (SNMP) and RADIUS-based data acquisition. Report generation relies on third-party server and tools
Video	No	
AD Support	No	
SIPREC	No	
Routing	Yes	Supports call routing based on many variables, including prefix, suffix, source, destination and failover

Source: Gartner (June 2014)

Patton Electronics does not charge separately for support and maintenance, creating pricing transparency and cost predictability for small businesses. Another differentiator is its implementation of TCP rate control to help ensure that large file downloads for remote workers do not impact voice traffic.

Sonus

Sonus was established in 1997 in Westford, Massachusetts, and has been a player in the SBC space since the early stages of SBC deployments in 2002. Sonus acquired Network Equipment Technologies (NET) in June 2012 to fill out its portfolio with a smaller SBC tailored for the enterprise and for integration with Microsoft Lync. Sonus offers SBCs as stand-alone products, the SBC 1000 and SBC 2000 from the NET acquisition, the SBC 5100 and SBC 5200, and the newly introduced SBC 7000 for very large enterprises. In addition, Sonus offers the Sonus SBC SWe, a virtualized SBC platform that includes security and media interworking (see Table 8).

Table 8. Sonus

Attributes	Product Capability	Comments
Security	Yes	Federal Information Processing Standard (FIPS) 140-2 certified
Scale	Small, midsize and large enterprise business environments	Supports from 25 to 150,000 concurrent SIP sessions; 120,000 transcoded or encrypted sessions
High Availability	Yes	High availability is not an option on the SBC 1000 and SBC 2000 products, but is available on the SBC 5000 series, SBC 7000 series and virtualized SBC (SWe)
UC Telephony Platforms	Mircrosoft Lync, Avaya, Alcatel-Lucent, Cisco, NEC, Genesys, Ericsson and NSN	Additional UC platforms are undergoing certification
TDM Interfaces	Yes	TDM interfaces are on the SBC 1000 and SBC 2000 products
H.323	Yes	
Ease of Configuration	GUI-based	Includes API support for global provisioning
Reporting	Yes	Supports element-level- and network-level-based reporting
Video	Partial	Supported on SBC 5000 and SBC 7000 series. Support for SBC 1000 and SBC 2000 series is under development
AD Support	Yes	Supported on SBC 1000 and SBC 2000 series, and in the Sonus PSX policy engine, which resides on the SBC 5000 and 7000 series
SIPREC	Yes	
Routing	Yes	Dynamic routing not currently supported

Source: Gartner (June 2014)

Sonus has proven itself to be a contender in the SBC segment in enterprise and carrier environments. It offers midrange and flexible pricing schemes, and tiered support and maintenance packages. It has a wide range of SBC products. It differentiates itself by its ability to scale up or

down without performance compromise, but with reliability, advanced media interworking and policy capabilities. Sonus is working with channels that provide E-SBC as a cloud service.

Market Recommendations

Enterprises should use E-SBCs whether their UC telephony platforms are on-premises, in the cloud, or a hybrid of the two. The E-SBC provides security, interoperability, resiliency and supportability between different networks and/or UC telephony platforms. Enterprises that do not utilize an SBC will experience higher mean time to repair (MTTR) for user-reported problems, such as dropped calls, one-way audio or poor call quality. The higher MTTR is due to the increased time required to isolate and/or replicate the reported problem.

In addition to evaluating the technical requirements and costs of E-SBCs, enterprises should ensure that they have a tight partnership with their E-SBC vendors for planning investments in enterprise UC telephony platforms. A tight customer/vendor partnership will ensure that the E-SBC will be able to manage and support the features and functionality that are added to the UC telephony platform.

E-SBCs can be managed by the enterprise or the SIP trunking service provider. Enterprises typically follow the same strategy for E-SBC management as they do with firewalls: Will the enterprise manage the E-SBC or will it be a managed service? With a primary role as a voice application firewall, the E-SBC is typically managed by the UC telephony team, rather than the security or network teams.

Enterprises should ensure their E-SBC hardware platforms have the capacity for growth for the next three to four years. Consider the number of sessions that will be needed to support additional video sessions along with overall capacity growth as the enterprise and/or usage of real-time collaboration tools grow.

Client inquiries to Gartner are often about AudioCodes, Cisco, Oracle (Acme Packet) and Sonus E-SBCs.[7] These companies are seeing double-digit growth in their E-SBC sales year over year.[3]

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Magic Quadrant for Session Border Controllers"

"How to Secure Enterprise Voice and Video"

"Session Border Control and Session Management: Why Enterprises Need Both"

Evidence

[1] Audience poll of 300 Network Managers at Enterprise Connect 2014

[2] AT&T Public Policy Views & News

[3] Market sizing of communication service provider technology in 1Q14

[4] Vendor responses to detailed questionnaires specific to this Market Guide

[5] Vendor briefings specific to this Market Guide

[6] Periodic vendor briefings during a 12-month interval

[7] More than 100 inquiries with Gartner clients

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