



Product Assessment

# Siemens Enterprise Communications OpenScape VoiceRouter

Enterprise PBX



August 27, 2009

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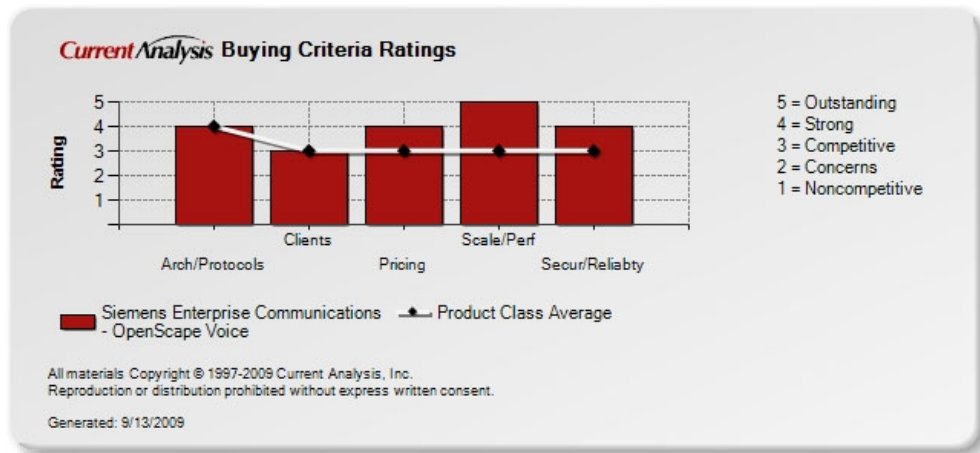
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# Siemens Enterprise Communications OpenScape Voice

Analyst:  
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 Date Updated:  
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 Product Class:  
**Enterprise PBX  
 in Enterprise  
 Communications**

**Summary**

## Buying Criteria



## Current Perspective: Threatening

OpenScape Voice is threatening to competitors in the enterprise PBX market. The most modern and most advanced of Siemens Enterprise’s voice communications solutions, OpenScape Voice is uniquely positioned in the market. It can be configured as an IP PBX, capable of being cost-effectively positioned to mid-market enterprises requiring 500 or fewer lines. Or, thanks to its heritage as a platform for hosted voice services, it can scale up for organizations requiring support for 100,000 or more users. Alternately, OpenScape Voice can be deployed as an overlay to an existing voice network, a configuration called OpenXchange that provides centralized routing and session management for a large, complex network of Siemens Enterprise or third-party PBXs and communications application servers. In either scenario, OpenScape Voice can reside in a data center environment, allowing enterprises to reduce the number of disparate PBX systems distributed across their networks dramatically, and in the case of OpenXchange, reduce the number of T1 lines needed to support voice applications.

OpenScape Voice comes to Siemens Enterprise from a carrier systems division that was once associated with the company. This heritage as a carrier platform benefits OpenScape Voice in terms of scalability, reliability, security and the ability of Siemens Enterprise able to position it to service providers as the basis of their hosted voice services. However, this service provider heritage also means that OpenScape Voice is based on a different software code than Siemens Enterprise’s other, more traditional voice platforms. This has resulted in a call feature set that has historically been smaller than other PBX offerings. Recent OpenScape Voice software revisions have improved this dramatically, but a lack of

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feature parity with HiPath 4000 systems could be an issue for some customers of Siemens Enterprise's venerable and popular HiPath 4000 that may be looking to migrate to the newer OpenScape Voice platform. The architectural differences between OpenScape Voice and HiPath systems also means a less straightforward IP upgrade compared with other vendors' communications platforms. And Siemens Enterprise's dependence on third parties for a wide range of OpenScape Voice solution elements (SBCs, gateways, server hardware, clustering software, survivability software, some media servers) could add complications as the third-party products are variously upgraded, discontinued or otherwise altered.

**Strengths and Weaknesses****Strengths**

- OpenScape Voice utilizes server hardware and operating systems well understood by enterprises and providing the call processing software and voice feature set similar to traditional PBX systems. It scales very high and is also available as a single-server platform for the mid-market, providing Siemens Enterprise with a single platform with which it can target a very wide demographic of enterprises.
- OpenScape Voice can be deployed as a server-based PBX platform that completely decouples the communications software from the underlying hardware. As a software application capable of residing on industry-standard servers in a data center environment, OpenScape Voice can also create an overlay network that cost-effectively brings together diverse communications systems into a cohesive whole, something few competing enterprise communications solutions can do.
- OpenScape Voice can be deployed as a hosted voice platform, allowing service providers to build hosted telephony services based on the platform. This opens up important sales channels beyond the enterprise and can also allow large enterprises to deploy a combination of premise- and cloud- based OpenScape Voice services.
- OpenScape Voice is closely tied to Siemens Enterprise's unified communications software. OpenScape UC and OpenScape Voice can be deployed on a single, easily managed server, providing businesses with an extremely convenient way of deploying very closely aligned call processing and unified communications capabilities. The ability to run both call processing and unified communications software on the same server is a competitive differentiator for Siemens Enterprise.
- OpenScape Voice supports many of the same communications applications (including OpenScape Contact Center, ComAssistant and Xpressions) supported by other Siemens Enterprise communications platforms. This helps Siemens Enterprise customers leverage existing investments when migrating to OpenScape Voice, and also provides new Siemens Enterprise customers a mature set of communications applications fully interoperable with OpenScape Voice. Additionally, many of the same management tools used to administer HiPath 4000 and HiPath 3000 systems (including HiPath MetaManagement (which includes HiPath User Management), HiPath Accounting Management, and HiPath Fault Management) are also used to manage OpenScape Voice. This is convenient for Siemens Enterprise customers with a mix of HiPath and OpenScape Voice systems deployed, allowing them to administer all systems in a cohesive whole.
- OpenScape Voice was built on SIP, rather than proprietary communications protocols,

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from the ground up. This facilitates interoperability with a wide range of third-party end points, systems, software and trunking services. This allows OpenScape Voice to fit well into a multivendor environment, providing customers with a considerable amount of flexibility in how they deploy communications solutions based around OpenScape Voice.

**Weaknesses**

- OpenScape Voice relies heavily on third-party products to make up the overall solution. This includes Mediatrix gateways, Comdasys SIP proxy to provide survivability for certain network elements, Acme Packet session border controllers, Fujitsu-Siemens clustering software, and Movius and Radisys media servers. This has the potential of making OpenScape Voice solutions difficult to source and manage. It could also make the solution vulnerable should Siemens Enterprise business partners replace or fail to regularly update the ancillary systems on which OpenScape Voice relies.
- OpenScape Voice has not been certified to support either Microsoft Office Communications Server 2007 or IBM Sametime as a corporate instant messaging server. This could present a problem for enterprise buyers standardizing on either the IBM or Microsoft platform and are rightfully insistent on certified support from their voice systems vendor.
- At this time there is no straightforward upgrade path from HiPath 4000 and HiPath 3000 systems to OpenScape Voice. Though both systems can be repurposed as voice gateways in an OpenScape Voice environment, neither can be migrated into an OpenScape Voice platform unlike a number of rival voice platforms that boast a clear upgrade path from legacy to IP-based solutions. This has the potential of increasing deployment costs since OpenScape Voice will typically need to be deployed as an overlay to existing communications platforms that remain in the network.
- OpenScape Voice does not directly support digital phones. This has the same disadvantage as all-IP PBX systems that directly compete with OpenScape Voice, preventing customers from retaining their legacy digital handsets, at least not without also maintaining legacy PBX systems.
- Siemens Enterprise has regularly added and retired server and gateway hardware components required to deploy OpenScape Voice and its predecessor HiPath 8000. This includes: the IBM X346 servers which were initially supported but now cannot be used for the most recent software update; IP Unity media servers that have been replaced by those of a different vendor; and the type of session border controllers sold with OpenScape Voice is changing. Changes like these could create a confusing and potentially costly situation for customers needing to replace hardware components to keep up with Siemens Enterprise's otherwise software-only solution.
- Siemens Enterprise's gateway options for OpenScape Voice do currently provide very high scalability for large enterprises but with limited interworking. The RG 8716 can support up to 2,000 subscribers and can be stacked with limited interworking with other RG 8700 systems to provide a more highly scalable solution. This interworking is expected to be improved in the next version of OpenScape Voice which is due out later this year, but it still means customers deploying OpenScape Voice will have to upgrade existing gateway systems with new software to take advantage of the promised interworking.

## Product:

## ■ Point and Counterpoint

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**Point:** OpenScape Voice relies heavily on third-party products to make up the overall solution. This has the potential of making OpenScape Voice solutions difficult to source, manage and maintain. It could also make the solution vulnerable should Siemens Enterprise business partners replace or fail to regularly update the ancillary systems on which OpenScape Voice relies.

**Counterpoint:** OpenScape Voice utilizes standards-based protocols and a service oriented architecture (SOA) framework to create an open platform capable of supporting a wide range of third-party systems, software, and peripherals. This allows customers to deploy best-of-breed products in conjunction with OpenScape Voice, creating highly flexible, customizable communications platform.

**Point:** OpenScape Voice has not been certified to support either Microsoft Office Communications Server 2007 or IBM Sametime as a corporate instant messaging server. This could present a problem for enterprise buyers standardizing on either the IBM or Microsoft platform and accustomed to certified support from their voice systems vendor.

**Counterpoint:** While OCS 2007 has been formally certified, OpenScape Voice has been deployed in production environments with OCS connected to it as the corporate instant messaging software platform. Alternatively, OpenScape Voice can be deployed with OpenScape Unified Communications, which delivers corporate IM and a rich set of other unified communications functionality.

**Point:** At this time there is no straightforward upgrade path from HiPath 4000 and HiPath 3000 systems to OpenScape Voice. Though both systems can be repurposed as voice gateways in an OpenScape Voice environment, neither can be migrated into an OpenScape Voice platform unlike a number of rival voice platforms that boast a clear upgrade path from legacy to IP-based solutions.

**Counterpoint:** As stated, OpenScape Voice can be deployed in conjunction with HiPath PBX systems, utilizing a common dial plan, accessing the same applications, and managed by the same management platform. This allows Siemens Enterprise customers to retain much of their previous investments in communications systems even if HiPath systems are not actually merging into an OpenScape Voice platform.

**Point:** OpenScape Voice does not directly support digital phones. This has the same disadvantage as all-IP PBX systems that directly compete with OpenScape Voice, preventing customers from retaining their legacy digital handsets, at least not without also maintaining legacy PBX systems.

**Counterpoint:** HiPath PBXs (or non-Siemens Enterprise PBX in an OpenXchange environment) can be deployed in conjunction with OpenScape Voice, acting as gateways to digital end points already installed in the network.

## Product:

## ■ Buying/Selecting Criteria

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**Architecture and Protocols: STRONG**

- OpenScape Voice is a software-based voice solution that can be deployed in either a centralized architecture or distributed across a network. Software components include the OpenScape Voice application for call control, OpenScape Voice Assistant management software, and OpenScape Media Server for conferencing, tones and localized announcements and prompts, all of which can be run on separate servers in large-scale environments or on the same server hardware along with Siemens Enterprise's OpenScape Unified Communications software for more modest installations.
- OpenScape Voice software can run on two rack-mountable server platforms: IBM x3650T or Fujitsu-Siemens Primergy FSC RX330 servers (with the Fujitsu-Siemens hardware available in Europe only). Siemens Enterprise's gateway options for OpenScape Voice include the RG 8700 line and, in Europe, the RG 2700 gateways. HiPath 3000 and HiPath 4000 PBXs can be deployed as gateways for OpenScape Voice as well. A wide range of third-party gateways have been variously tested and certified for use with OpenScape Voice. These include all Mediatrix devices, as well as a wide range of gateways from Cisco, Sonus and AudioCodes.
- OpenScape Voice call processing software runs on Novell's SUSE Linux Enterprise Server 9 operating system. Linux is well understood and appreciated among IT departments which have long relied on it as the basis for mission-critical applications.
- Since its inception, OpenScape Voice has run SIP natively. The protocol is used to connect to end points, applications and gateways, both from Siemens Enterprise and many third-party partners. Communications to other OpenScape Voice servers and HiPath resources are over Siemens' SIP-Q protocol. SIP-Q is also used to interconnect with QSIG-compliant PBXs, which is accomplished through an RG 8700 gateway. H.323 is not a supported protocol on OpenScape Voice.
- OpenScape Voice 3.1 includes HiPath 3000/4000 interworking, a SOAP/XML interface, SNMP management, geographic node separation, media encryption on OpenStage phones and integration with Microsoft Office Communications Server.

**Clients: COMPETITIVE**

- OpenScape Voice is a SIP-based communications platform that does not directly support digital handsets. Analog devices are also not directly supported. External gateways can be deployed to support either analog or Siemens Enterprise's digital end points.
- OpenScape Voice supports a number of IP handsets. These include Siemens Enterprise's four OpenStage models (20, 40, 60 and 80) and three optiPoint devices (410 Entry S, 410 Economy S and 420 Economy S). Also supported are Cisco 7940 and 7960 IP phones loaded with a SIP stack, as well as SIP phones from snom, Grandstream and Polycom.
- OpenScape Voice supports one wireless SIP-based wireless LAN handset: Siemens Enterprise's WL2 Professional S. It operates not only over Siemens Enterprise's own wireless LAN networking equipment, but over any standards-based WLAN environments. Support for Siemens Enterprise's HiPath Cordless IP handsets provide OpenScape Voice with a line of SIP DECT devices for intra-office wireless connectivity. A range of dual-mode telephony

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devices (mobile/WiFi) are also supported in combination with the HiPath MobileConnect solution.

- OpenScape Voice supports the same optiClient 130S / OpenScape Personal Edition soft phone supported on Siemens Enterprise’s HiPath 4000 PBX system. The OpenScape Unified Communications soft client interface can be used to make and receive calls, as well as gain access to a wide range call features residing on the OpenScape Voice server. Media encryption is not available on optiClient 130S, WL2 Professional S and third-party SIP phones certified for use with OpenScape Voice. Third-party SIP-based soft clients are not officially certified, though a number of them have been deployed in the field.
- OpenScape Voice supports high-definition HD video conferencing endpoints. This includes Siemens’ OpenScape Video solution devices (including the VP100 conference phone), as well as partner products such as Tandberg.

**Pricing: STRONG**

- The price for the PBX system and software in a 250-user configuration is approximately \$93,000 (\$372 per user).
- The price for the PBX system and software in a 1,000-user configuration is approximately \$359,000 (\$359 per user).

**Reliability and Security: STRONG**

- OpenScape Voice can be deployed in either a redundant or single-server configuration. Redundant servers can either be deployed in the same physical location or geographically dispersed across a network (up to 6,000 miles/9,600 km). Additionally, “any-to-any” IP payload switching allows calls between IP end points to be switched within the network, improving the reliability of OpenScape Voice solutions.
- OpenScape Voice servers are fault tolerant and capable of being deployed in a clustered architecture that improves reliability. The Fujitsu-Siemens’ Primecluster software and Resilient Telco Platform (RTP) middleware, which provides OpenScape Voice’s clustering capabilities regardless of the underlying server hardware and in this way creates a highly reliable platform. Clustered servers can operate be active-active or active-standby, with failover between servers functioning automatically. Clustering is not an option in OpenScape Voice configurations supporting fewer than 5,000 lines.
- Transport-layer security protects SIP signaling between OpenScape Voice servers, between OpenScape Voice and HiPath 4000 PBXs, or between OpenScape Voice and Microsoft Office Communications Server or other third-party applications. Media and payload encryption, based on the Secure Real Time Protocol (SRTP), is performed by the OpenStage and optiPoint end stations connected to the OpenScape Voice server.
- An OpenScape Voice Edge Server is optional at branch sites. Typically operating in cold standby mode, the Edge Server substitutes as the primary voice server in the event connectivity to centralized PBX resources are disabled, delivering the full OpenScape Voice feature set to up to 5,000 users at the remote site. Other branch office options include remotely deployed HiPath 4000 and HiPath 3000 PBX systems, RG 2700 gateways for thirty lines or less, and Mediatrix gateways for small branch offices. Utilizing Comdasys Convergence SIP proxy in conjunction with most of these branch office systems provides



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the remote gateway with the survivability features needed to protect against WAN line failure. RG 8700 gateways deployed at remote sites have inherent survivability features and therefore do not require the Comdasys software.

**Scalability and Performance: OUTSTANDING**

- OpenScape Voice is very highly scalable, capable of supporting 100,000 or more IP lines in a cluster of two servers. Digital lines are not directly supported on OpenScape Voice, though a HiPath 4000 or HiPath 3000 PBX can serve as a gateway if support for Siemens Enterprise digital handsets is required. Analog lines are supported via optional Mediatrrix terminal adapters. Gateway options include the RG 8700 line with three models supporting up to 2,000 subscribers over a maximum of 16 T1/E1s, and the RG2700 Gateway scales to one E1.
- A single server can support up to 5,000 IP lines, regardless of whether it is an IBM or Fujitsu-Siemens Enterprise model. The dramatic decrease in number of lines supported compared with clustered configurations is due to the call control, management software and media server software all residing on a single server. OpenScape Voice and OpenScape UC can run on the OpenScape Voice server, but in such a scenario scalability decreases to 1,000 IP-based voice lines and either 300 or 500 UC users depending on server hardware.
- OpenScape Voice is capable of supporting up to 5,000 IP trunks. The same number of digital or analog trunks can also be supported depending on gateway appliance deployed.
- OpenScape Voice supports up to 15,000 simultaneous calls per server. OpenScape Voice can support 36,000 busy-hour call attempts per server, according to third-party testing.

■ Product Metrics

**Product: Siemens Enterprise Communications OpenScope Voice**

Packet PBX Feature	
<b>Max. No. of Stations Supported</b>	100,000
<b>Max. Number of IP Stations Supported</b>	100,000
<b>Max. Number of Digital Stations</b>	0
<b>Max. Number of Analog Stations Supported</b>	100,000
<b>Max No. of Softphones Supported</b>	No limit defined
<b>Number of Controllers that can be Internetworked</b>	Each cluster has 2 servers. Multiple clusters can be interworked as needed. No limitation defined
<b>Number IP Trunks Supported</b>	15,000
<b>Number Digital Trunks Supported</b>	15,000
<b>Number Analog Trunks Supported</b>	10,000
<b>Maximum Number of Simultaneous Calls</b>	40,000
<b>Switch Type</b>	IP
<b>Switch Matrix Type</b>	Full IP
<b>Call Processor Operating</b>	Suse Linux
<b>Centralized or Distributed Call Processor</b>	Suse Linux
<b>Redundant Call Process</b>	Optional
<b>Signaling Systems Supp</b>	SIP
<b>Call Control and Messaging APIs</b>	SIP, SIP-Q, MGCP
<b>Switch Interfaces Supported</b>	IP
<b>VoIP Protocols Supported</b>	SIP, TLS, SRTP, UDP, TCP
<b>QoS Protocols Supported</b>	802.1P/Q, Diffserv
<b>Voice Mail Platform Support (standard/optional)</b>	optional
<b>Number Voice Mail Boxes</b>	30,000+
<b>Number Voice Mail Subscribers</b>	30,000+
<b>Number Voice Mail Ports</b>	256
<b>Follow-me Forwarding</b>	Basic call forwarding within OS Voice. ONS support with OS UC
<b>Unified Messaging Platform Support</b>	OpenScope UC Application
<b>E-mail Protocol Support</b>	Microsoft Exchange, Lotus Domino/Notes, IMAP, SMTP, POP3
<b>Contact Database Import</b>	Openstage phones support local directory or linking to 3rd party directory for lookup as needed.
<b>Automatic Call Distribution Platform Support</b>	OpenScope Contact Center, Genesys
<b>Number of Agents Supported</b>	2,000 configured/750 active (OpenScope Contact Center)
<b>Number of Supervisors Supported</b>	750
<b>Number of Simultaneous Conference Calls</b>	Unlimited 3 party conference calls
<b>Maximum Participants per Session</b>	from 16 up to 48 depending on the underlying hardware
<b>Management Server Operating System</b>	Suse Linux SLES 10

*Continued*

**Product Metrics** *(Continued)*

**Product: Siemens Enterprise Communications OpenScope Voice** *(Continued)*

<b>Web-based Management Console</b>	Common Management Portal
<b>Built-in/Custom Reporting</b>	Yes
<b>Real-Time Status Monitor</b>	Yes
<b>Time-of-Day Policy Management</b>	Yes
<b>Hot-pluggable Hardware</b>	Yes
<b>RAID Support</b>	Yes
<b>Automated Backup/Client Log-on</b>	Yes
<b>Call-detail Recording</b>	Yes
<b>Accounting/Billing Platform Support</b>	Yes via HiPath Accounting

