

2015 Unified Communications, SIP, and SBC Plans and Priorities

What's hot, and what's not

December 2014

Sponsored by: Sonus Networks, Inc.

Introduction

Unified Communications (UC) has been one of the most far-reaching developments in enterprise networking, and it represents a technology that continues to grow and evolve. Initially focused on integrating all of a user's real-time (voice and video), near real-time (instant messaging or "IM"), and asynchronous (email, fax) communications together in single dashboard with instant access to colleagues' presence status (in/out of office, in a meeting, on the phone, etc.) and available modes of communications, UC has now expanded to embrace collaboration (audio/video conferencing, web meetings, and desktop sharing) as well as social networking functions like user profiles, skills search, and collaborative workspaces.

One of the most significant developments in recent years has been a move from UC solutions based on a single-vendor to multi-vendor solutions based on standards. The key enabling technology for this is the introduction and adoption of the Session Initiation Protocol (SIP) in both enterprise and Service Provider networks. We've seen an explosion in SIP usage due to Service Providers' providing better pricing and bundling offers (using SIP trunks as a replacement for traditional T1, PRI and analog trunks) and the ability of SIP to support multiple interactive media.

But SIP by itself is not enough. In order for SIP to be used within a network typically a Session Border Controller (SBC) must be used to provide security, interworking and policy. Simply put, Session Border Control is an application that governs the manner in which voice or video calls are initiated, conducted and terminated over an IP network. Session Border Control also handles interconnection with legacy equipment as well as network security and NAT traversal. The Session Border Controller, which handles Session Border Control, may be implemented in several form factors, for instance as an appliance or as a virtualized function. It also may be implemented as a service or an on-premises function.

In December 2012, Webtorials surveyed IT professionals in organizations with more than 1,000 employees to determine their plans and priorities for UC as well as their attitudes toward the inextricably linked SIP protocol and SBCs. Almost two years later, in September of 2014, we repeated the survey with an identical set of questions to the extent possible. The purpose of this latter survey

was to identify which trends have changed and which have not, plus measuring the growth of adoption for certain technologies.

Among the key findings are:

- The percentage of respondents had either partially or fully deployed UC solutions moved from 68% to 72%, and most of the rest were or would soon be in the planning phase. The number of respondents with no plans to implement was essentially unchanged, moving from 6% to 7%.
- Currently, most UC and enterprise voice deployments are premises-based, though that is expected to drop to as future deployments move more to the cloud. Hybrid deployments are the preferred approach to UC in the future. For both data sets, this trend for “now” and “in the future” is similar, indicating that the timeframe for this movement is evolving slowly.
- Similarly, respondents indicated a desire to move from proprietary to standards-based solutions, although the movement toward that goal is not happening rapidly.
- The most dramatic finding is the increase in the use or planned use of SIP for various functions. The largest increase was for “Web conferencing” at 131%, and the overall average increase for all functions queried was 80%. The smallest increase was 21% for “Enterprise voice” because it already had a 59% usage that increased to 71%.
- As an integral part of UC capabilities with SIP trunking, the functions of SBCs are becoming much more recognized, with an increase of about 10% among respondents who claim to be extremely familiar with these capabilities. The primary reasons cited for deployment involve security, with ensuring a high quality of service also showing great importance.

The bottom line is that UC is continuing to evolve and grow, and there is no longer any question as to what “is” or “is not” UC. Rather, just as the lines between telephony and “data communications” dissolved in the past, the distinction between “applications” and all modes of communications will no longer exist.

In the following pages we will look at the supporting results for the above statements in detail.

UC Implementation

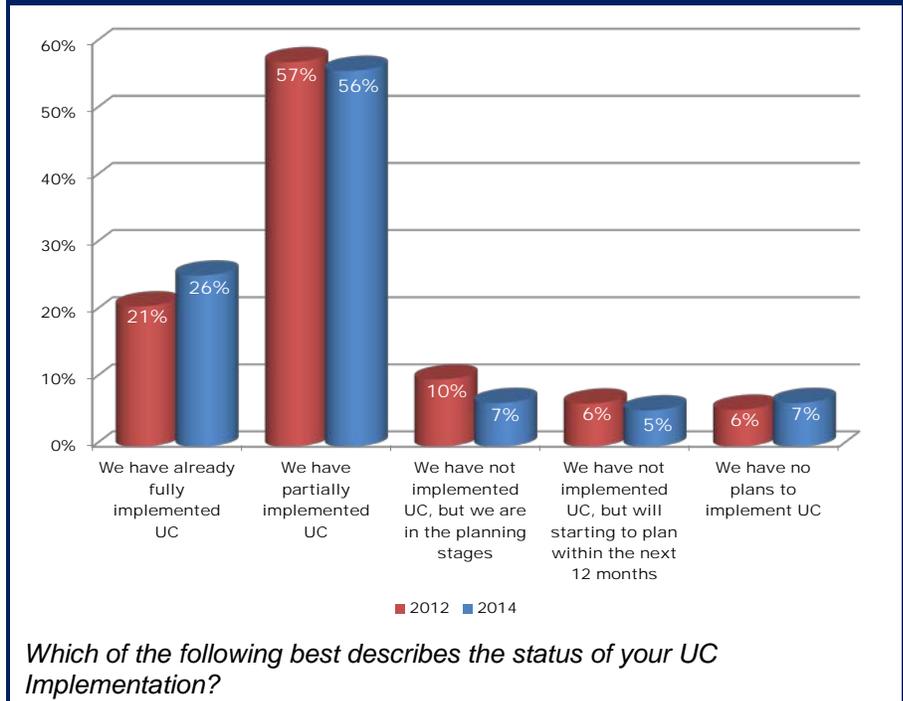
In comparing the two survey data sets under consideration, we find that the level number of respondents indicating that they have either partially or fully implemented UC has grown from 68% to 72%. (See Figure 1.)

This percentage of implementation is quite high, and the modest growth can be attributed to the fact that there was already quite significant adoption. Other surveys have shown lower overall penetrations, so the high totals, particularly, the large percentage of “partial” implementations, may indicate that respondents may have implemented only one or a few UC applications like web meetings and unified messaging. Additionally, the community surveyed is known to have a high number of thought leaders and early adopters.

There are relatively few respondents who claimed to have no plans to deploy UC or have not yet started planning. Again, this is typical of the base, plus the obvious factor that one is not tempted to respond to a survey about UC if there is absolutely no interest.

Overall, this shows that the UC market itself is maturing nicely, but, as we will see in the following sections, the way in which the market is growing is shifting dramatically.

Figure 1: UC Implementation



UC Deployment Plans

While the majority of deployment are premises-based today, the survey found a clear trend towards cloud-based deployments for both UC and enterprise voice, as shown in Table 1.

Currently, 65% of UC deployments and 70% of enterprise voice deployments are premises-based. This is a little surprising at first glance in that these premises-based deployments actually increased slightly from 2012. We attribute this to premises-based systems deployments are easier to implement. So, even though the ultimate goal was and is to move toward more cloud-based and hybrid deployments, this is yet to occur.

It is not at all surprising that the percentage of answers for “N/A / Still Planning” increases dramatically from “Now” versus “In the Future.” In the case of UC with the 2014 data, this increases from 8% to 18%. For enterprise voice, the increase is slightly stronger – from 8% to 21%. This simply reflects the fact that the respondents truly do not know what the future holds.

However, once the future implementations are decided on, there will be an increase in the percentage for each of the categories. If one assumes that the “unknowns” are divided equally among the “known” categories, then breakdown looks like this for 2014:

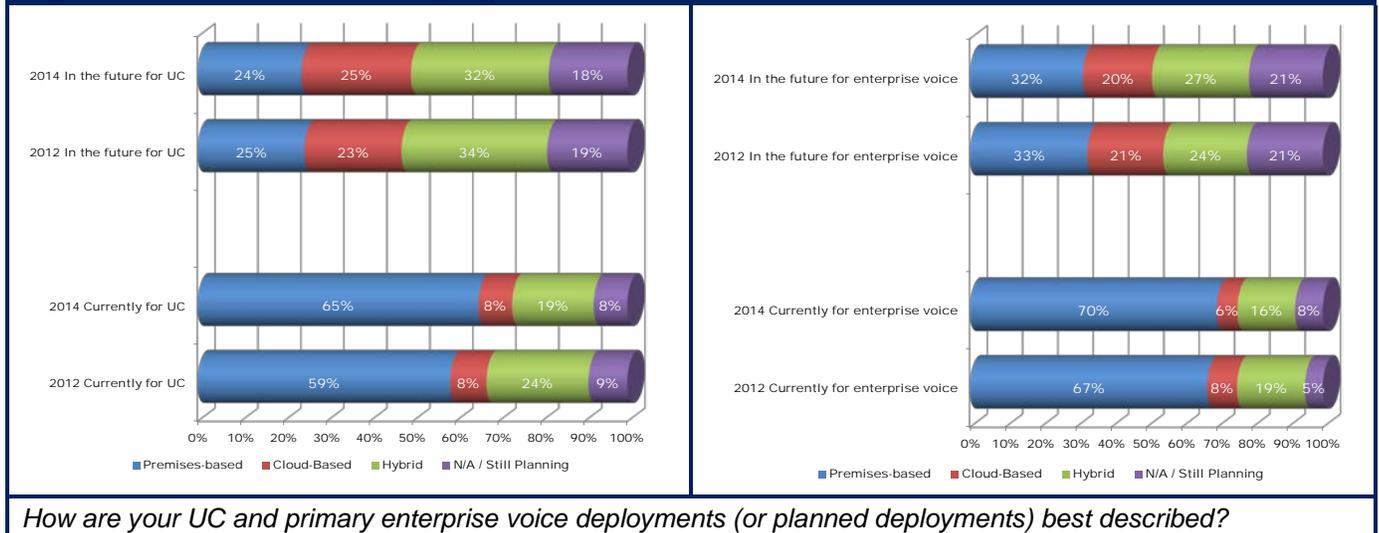
	Premises-based	Cloud-based	Hybrid	N/A / Still Planning
UC Including	24%	25%	32%	18%
UC Excluding	30%	31%	39%	-
Voice Including	32%	20%	27%	21%
Voice Excluding	40%	25%	35%	-
<i>How are your UC and primary enterprise voice deployments (or planned deployments) best described?</i>				

So what can we draw from this?

- Reality will be somewhere between the two views, and the distribution of “unknowns” probably will not be equal.
- It appears that voice will continue to be more strongly based on the premises than will the full UC solution.
- Hybrid UC solutions will eventually outpace premises-based solutions.

But perhaps most striking, again, is that none of this movement is happening overnight, and it is amazing how similar the “Now” and “In the Future” bars are for the two surveys. (See Figure 2.)

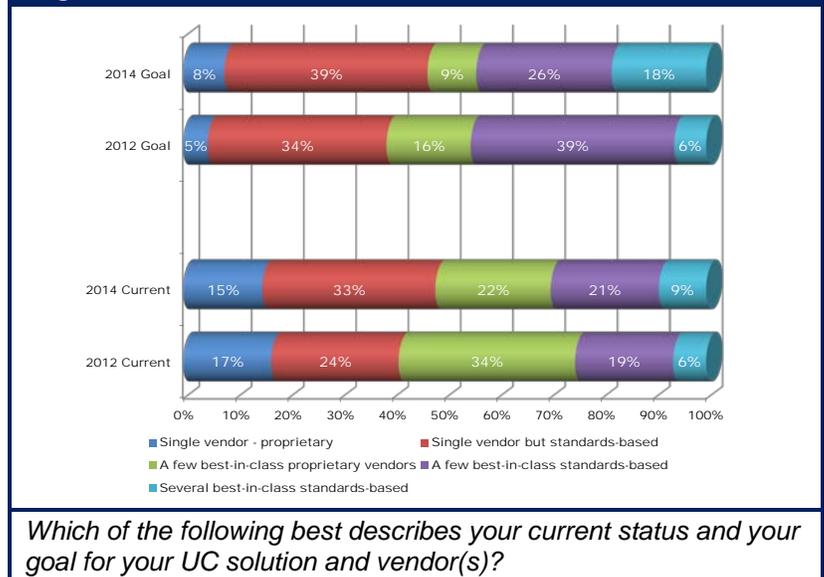
Figure 2: UC and Voice Deployments – now and in the future



How are your UC and primary enterprise voice deployments (or planned deployments) best described?

We also asked about the use of standards-based versus proprietary vendors, as shown in Figure 3. In this case, the goals are already being met to a significant extent. 24% of the 2012 respondents indicated that they were currently using a single vendor that was based on standards, and the stated goal was to increase that percentage to 34%. In 2014, the usage of that model was 33%, but the goal moved to 39%. Nevertheless, this represents a significant shift of roughly 18%. This shift seems to have come primarily as a drop in using “a few best-in-class proprietary vendors.”

Figure 3: UC Solution & Vendors: Status / Goal

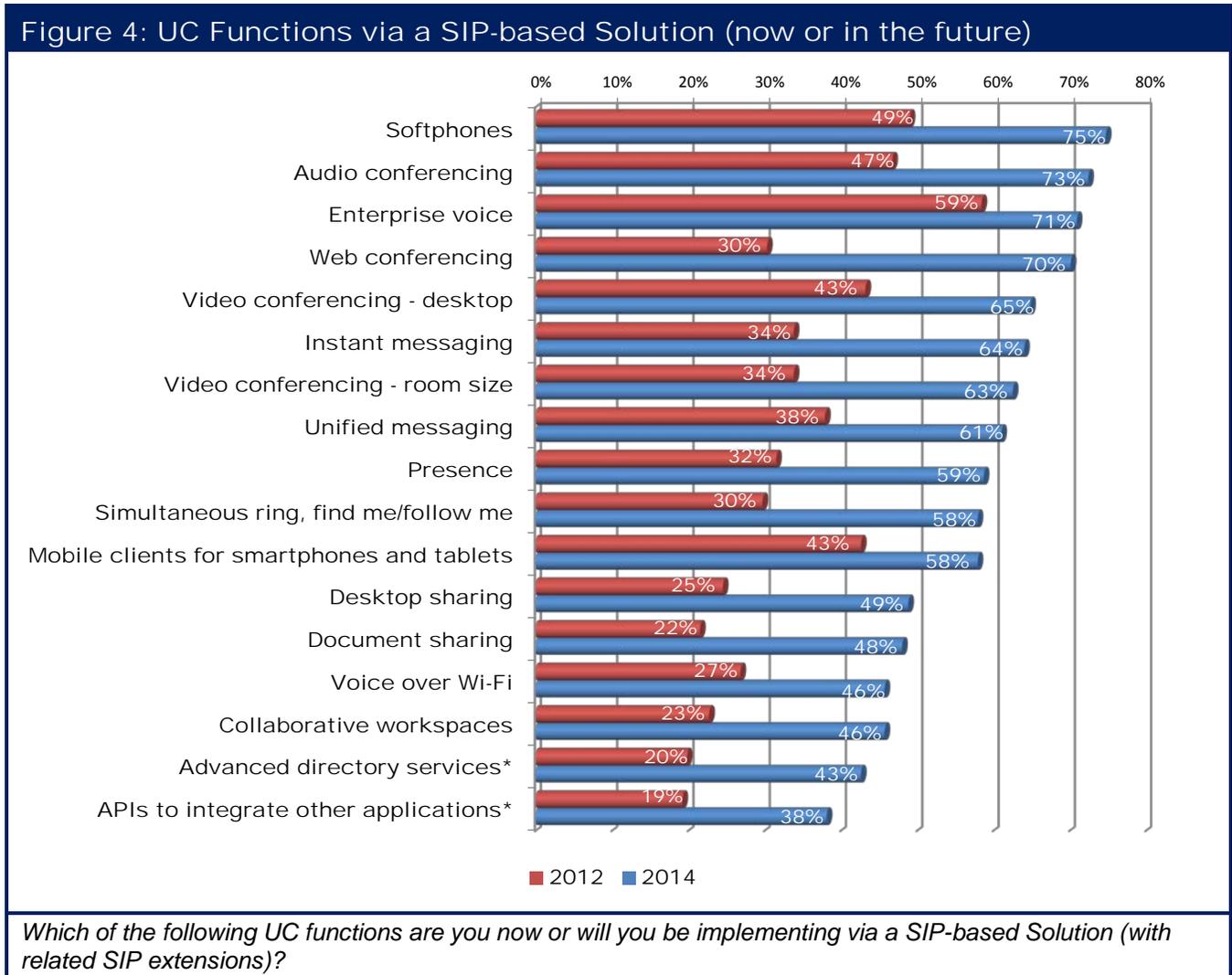


Which of the following best describes your current status and your goal for your UC solution and vendor(s)?

It’s also of note that the goal of using “a few best-in-class standards-based vendors” seems to have decreased significantly as a goal in favor of a single standards-based vendor. However, and somewhat ironically, the other shift in strategy has gone from “a few” to “several” standards-based vendors, though overall support for this model is still marginal.

The SIP Explosion

The most significant and surprising set of answers involved the question: Which of the following UC functions are you now or will you be implementing via a SIP-based solution (with related SIP extensions)?



As shown in Figure 4, all categories showed a great increase, indicating the advancement in both the awareness of SIP and of SIP utilization moving into the mainstream. The most significant growth was in planned use for “Web conferencing” with 133% growth, and, as noted in the introduction, the least growth was in “Enterprise voice,” primarily because of the strong showing for this category two years ago. The average growth over all categories was a whopping 80%. (See Table 2.)

There are actually two major factors demonstrated here. First, and most obvious, is that SIP is top-of-mind. The more interesting factor, though, is that the scope of use for SIP is expanding widely. Rather

than being viewed as mostly for voice and voice-related functions, SIP is now being viewed on both an absolute scale and a relative scale as a part of overall UC, and indeed as a part of an overall computing architecture.

Table 2: 2014 growth	
Functions	Growth
Web conferencing	131%
Document sharing	123%
Advanced directory services*	115%
Collaborative workspaces	101%
Desktop sharing	99%
APIs to integrate other applications*	98%
Simultaneous ring, find me/follow me	95%
Instant messaging	89%
Presence	86%
Video conferencing - room size	85%
Voice over Wi-Fi	70%
Unified messaging	61%
Audio conferencing	55%
Softphones	52%
Video conferencing - desktop	50%
Mobile clients for smartphones and tablets	36%
Enterprise voice	21%
Average	80%

SBCs: Bringing IT All Together

While the usage of SIP is exploding, one must remember that SIP is just a protocol. There needs to be a way to actually control the functions specified by SIP, and this is where the Session Border Controller (SBC) comes in.

Even though the need for a Session Border Controller has been recognized for several years, especially for call control, security, and address interworking when using SIP, the awareness of this technology has grown side-by-side with the plans for SIP implementation. To this point, as shown in Figure 5, while the percentage of respondents who are “quite familiar” with the roles and capabilities of SBCs remained essentially static, the number of respondents who are “extremely familiar” grew by 84%, those who are “kinda familiar” dropped by 19%, and the number who are “not at all familiar” dropped by 25%. Thus, we are now looking at a community where 85% of the respondents have at least some knowledge of an SBC.

When asked about the primary reasons for deploying an SBC in their network, various issues related to security was clearly the primary concern. The respondents were asked to choose “all that apply” among some choices, and “Secure endpoints and mobile devices” was the top reason with 59% of respondent choosing this. “Network protection against malware/attacks” was the second most important reason, with 53% choosing this. Both of these could be considered to be “classic” reasons in that they involve issues such as translating IP addresses from public to private address spaces.

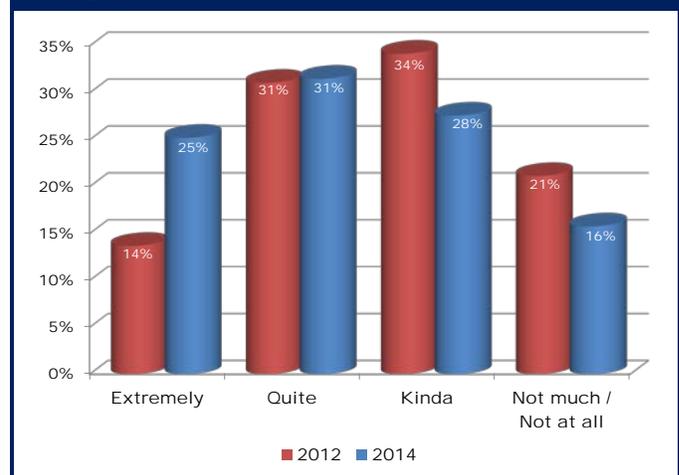
The third most popular response, “Ensure high quality of service,” selected by 44% of respondents, is important, but also somewhat classic. For instance, a major feature that an SBC can perform is to implement some form of Call Admission Control (CAC) to ensure that there is sufficient bandwidth available to support calls (voice and video) when a call setup request is received.

The fourth most popular response, “Efficiently integrate business processes and applications with unified communications,” selected by 37% of respondents, is quite significant in that it moves the SBC beyond the traditional role to one where it’s position within the network architecture facilitates the use of multimedia features within SIP, as noted above. This, of course, includes key features such as translating between various voice and video codecs. Additionally, the SBC can play a unique role in translating between SIP and non-SIP protocols.

While the classic reasons for SBCs will obviously remain tantamount, the exciting areas for growth and product differentiation are in the “enhanced” feature category that is starting to emerge.

Finally, digging deeper into the trends of what is important in an SBC, we presented a number of features and asked “How important are each of the following factors in your choice of an SBC (or a

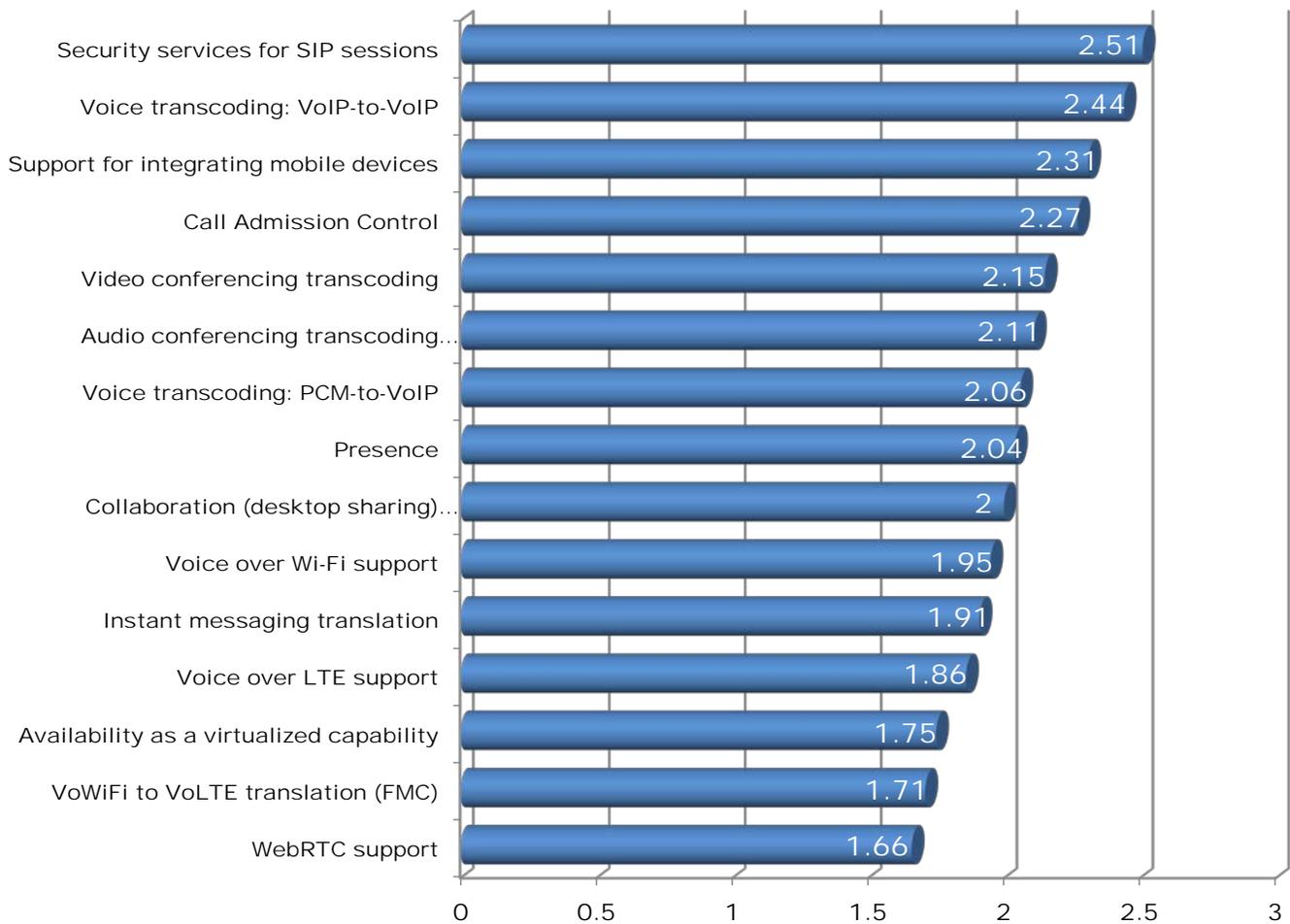
Figure 5: Familiarity of roles and capabilities of SBCs



service that provides SBC functions)?” For each item, choices were available to rank on a numerical scale from “Must Have” with a weight of 3, “Nice to Have” with a weight of 2, or “Not important” with a weight of 1. “Don’t know” and “N/A” were not weighted.

Figure 6 shows the results of this analysis, and there is no equivalent data from 2012 because many of these features were just emerging.

Figure 6: Importance of SBC Features



How important are each of the following factors in your choice of an SBC (or a service that provides Session Border Control)?

Not surprisingly, “Security” topped the list. However, many of the more advanced features made a very strong showing, indicating the move of the SBC from a simple appliance standing to offering advanced features. Some that are particularly of note are voice transcoding (2.44), video conference transcoding (2.15), and collaboration features (2.0). Some other areas that are just emerging but still showed strong support include Voice over LTE (VoLTE) support and VoWiFi to VoLTE translation.

Summary

Unified Communications continues to be on a roll, with a major shift toward UC solutions being implemented via SIP. In looking at the plans for implementing a wide variety of UC functions via SIP, there is a clear indication that Session Border Controllers will be the enabling technology that provides the necessary interoperability among diverse functions along with the requisite Operations, Administration and Management (OA&M) necessary for a secure, reliable, and highly functional network.

In comparing data collected over the past two years, major progress has been shown in many areas, but many implementations are still similar to what they were previously. However, the intended paths remain consistent.

About Sonus Networks



[Sonus](#) enables and secures real-time communications so the world's leading service providers and enterprises can embrace the next generation of SIP and 4G/LTE solutions including VoIP, video, instant messaging and online collaboration. With customers in nearly 100 countries and nearly two decades of experience, Sonus offers a complete portfolio of hardware-based and virtualized Session Border Controllers (SBCs), Diameter Signaling Controllers (DSCs), policy/routing servers and media and signaling gateways. For more information, visit www.sonus.net or call 1-855-GO-SONUS.

About the Webtorials® Editorial/Analyst Division

The Webtorials® Editorial/Analyst Division, a joint venture of industry veterans Steven Taylor and Jim Metzler, is devoted to performing in-depth analysis and research in focused areas such as Metro Ethernet and MPLS, as well as in areas that cross the traditional functional boundaries of IT, such as Unified Communications and Application Delivery. The Editorial/Analyst Division's focus is on providing actionable insight through custom research with a forward looking viewpoint. Through reports that examine industry dynamics from both a demand and a supply perspective, the firm educates the marketplace both on emerging trends and the role that IT products, services and processes play in responding to those trends.

The primary authors of this study are Steven Taylor and Leslie Barteaux, Webtorials.

**Published by Webtorials
Editorial/Analyst
Division**

www.Webtorials.com

Division Cofounders:

[Jim Metzler](#)

[Steven Taylor](#)

Professional Opinions Disclaimer

All information presented and opinions expressed in this publication represent the current opinions of the author(s) based on professional judgment and best available information at the time of the presentation. Consequently, the information is subject to change, and no liability for advice presented is assumed. Ultimate responsibility for choice of appropriate solutions remains with the reader.

Copyright © 2014, Webtorials

For editorial and sponsorship information, contact Jim Metzler or Steven Taylor. The Webtorials Editorial/Analyst Division is an analyst and consulting joint venture of [Steven Taylor](#) and [Jim Metzler](#)