Big Solutions for Small Business
Enabling SMB Converged Data and Voice Services

By Itzik Feiglevitch, Marketing Director
Introduction
In the coming years, the demand for business VoIP services is expected to grow dramatically, driven by Hosted PBX and SIP Trunking services and its value to business customers in cost savings and productivity. According to the latest market reports, VoIP business lines are expected to grow from 44 million in 2012 to almost 150 million in 2017, representing half of all the global business voice lines. Small Medium Businesses (SMB) are expected to be a significant part of this market opportunity with more than 15 million SMBs expected to deploy new VoIP services in the coming years. Although service providers targeting these SMBs see this as an opportunity for revenue growth in the coming years, they worry about the complexity inherent in effectively delivering VoIP services to their customer’s premises.

The SMB Perspective
From the business perspective, in most cases SMB customers do not understand technology and products, but they do recognize the need for solutions and services. SMBs typically have limited resources; they do not have the finances, technical staff or expertise needed to manage and maintain their communication system and they tend to outsource the data and voice services management to a service provider that will offer better quality and reliability than they can achieve on their own. Still, even though the SMBs prefer to let the service providers manage their data and voice services, they are fully aware of the importance of these services and the critical impact they can have on their business, and accordingly, they carefully evaluate these services when interacting with the service provider.

Effective Communication
Businesses must communicate effectively with their customers and suppliers. Customers today are more demanding than ever when confronting more choices in what and how they buy. When a customer calls a business, they expect an instant response. An unreachable business, even for just a few minutes, will reduce customer satisfaction and eventually cost the business money. In addition, when the call is made, the customer expects good service and this means that the quality of the voice line must be excellent. Noisy and unreliable lines will make it extremely difficult to effectively handle customers over the phone.

Productivity
Businesses always look to increase productivity. They need to provide the right tools and the right communication environment to their employees in order to get the job done. Among other things, this means ensuring business continuity; making sure that data and voice services are always available with the right quality of service. In addition, some businesses need to allow their employees remote and reliable access to the business.
Security
20% of cyber-attacks are on firms with less than 250 employees. The SMBs must protect their business network and the information housed on the business network against threats such as hackers, viruses and worms.

Cost
There are two types of costs businesses need to consider when deploying communication services. The first is operating expenses that include data and voice services, licenses, fees and support. The second is the capital expense for on-premises equipment. While it is clear that a major objective of the SMB is optimizing and controlling the cost, the SMB must be careful not to do so at the expense of other objectives such as effective communication and the productivity of the business.

The Service Provider Perspective
From the service provider perspective, it is a challenge to serve all of these SMB customers. The service providers are concerned about the cost and complexity of providing high quality, managed services and they need an array of solutions that will drive down the total cost of ownership (TCO) and maximize the profit.

Customer Diversity
Every business is different and there isn’t one size that fits all. At the low end there are SOHO customers, such as your local grocery stores, that need only basic services and are very price sensitive. Then there are those in the middle, such as travel agencies, that may need several phone lines and require survivable services when working with customers around-the-clock. Towards the higher end, there are customers such as medium-size law offices with tens of employees that will require high end data, voice and security services. In addition, there are business customers in branches that require features such as remote and secure access. In many cases, the service provider services all these different types of customer under the same roof, no doubt a challenging effort to support all these different requirements while always trying to maximize the profit.

Service Modularity
The two common VoIP services in the market are SIP Trunking and Hosted PBX (often referred to as cloud service). In many cases, service providers promote SIP Trunking services to their SMB customers, pulling them away from the TDM trunks. However, at the same time, more and more service providers are also promoting Hosted PBX and cloud solutions to the same customer segment. In such cases, the service providers need to migrate or actually upgrade their customers to new services, but would like to do it at minimum cost and effort, meaning using the same on-premises equipment with appropriate software updates.

Multiple Devices and Multiple Services
The scenario of separate devices for separate services is not a healthy one for the service provider. The service provider needs to take into consideration that when the number of devices increase, so does the maintenance cost of these devices. The management tasks and provisioning become very complicated; interoperability problems will occur and support will become more difficult given the need to identify and isolate problems emanating from multiple devices. All of these issues will have an increasingly major impact on the service provider’s OPEX.
Matching the Right Solution for the Right Customer

Service providers are looking for solutions that will overcome the challenges described above and at the same time will satisfy their business customers. As mentioned, there is no one solution that fits all. Even though in many cases SOHO and the SMB customers are serviced by the same entity at the service provider, they are being viewed in different ways. The following figure shows a global overview of 2012 SOHO and SMB VoIP customers:

**2012 Business VoIP Customers**

<table>
<thead>
<tr>
<th>SOHO (1-4)</th>
<th>SMB (&lt;250)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total firms: 5.8M</td>
<td>Total firms: 3.3M</td>
</tr>
<tr>
<td>Total VoIP users: ~10M</td>
<td>Total VoIP users: ~40M</td>
</tr>
<tr>
<td>Average Annual Revenue: ~$650</td>
<td>Average Annual Revenue: ~$4200</td>
</tr>
</tbody>
</table>

Even though there are almost double the amount of SOHO firms than SMB ones, these customers are much less profitable in terms of revenue. Service providers want to attract these SOHO customers and, of course, profit from the services they provide them. But as the revenue per customer is very low, they also want to expend the minimum effort in doing so. The key question is: how can they provide these SOHO customers cost-effective products that require minimum support while providing the suitable, high-quality, business grade data and voice services that they demand?

Using **AudioCodes SOHO Gateways** allows service providers to offer their SOHO customers a cost-effective solution with business class services. These SOHO gateways, which are based on AudioCodes’ residential gateway line, are cost-effective, all-in-one devices that allow for the service providers to install, manage and provision them with minimum support and effort, just like with residential customers. However, these all-in-one SOHO gateways are more powerful than the residential gateways and include unique and enhanced data and voice features required by the SOHO customers. Such features include integrated PBX, multi-lines, multi-extensions, auto attendant and gigabit Ethernet interfaces.

In the SMB segment, it is a different story. While there are fewer SMB as compared to SOHO customers, they are much more profitable. In addition, these customers are more demanding in terms of high-quality and business grade services, as they need powerful solutions that enable high performances data, voice and security services. In this case, the **AudioCodes Multi Service Business Router (MSBR)** will be an ideal solution as it combines into one device access, data, voice and security services. The AudioCodes MSBR is specifically designed to meet the high end needs of these SMB customers based on a unique architecture that ensures consistent high performance across all business services.

The AudioCodes MSBR family fits perfectly with both SIP Trunking and hosted PBX services. When deploying hosted PBX services for SMB customers, there will likely be a need for IP Phone devices as well. Combining AudioCodes IP Phones and AudioCodes Multi Service Business Routers into one solution allows the service provider to offer its SMB customers a complete on-premises solution for hosted PBX services. These two products, working seamlessly together with hosted PBX platforms such as Broadsoft, provide the service provider and the end customer the necessary confidence when deploying cloud-based services. Using a single source will also considerably lower the total cost of ownership (TCO).
One Box. Delivering Smart Business Services

AudioCodes’ family of Multi Service Business Routers (MSBR) offers service providers a range of all-in-one SMB routers combining access, data, voice and security into a single device. It is perfectly suited for SIP Trunking, hosted PBX and data cloud services, and allows the service provider to deploy flexible and cost-effective solutions.

The MSBR includes unique benefits that will help the service provider maximize revenue opportunities at minimum CAPEX and OPEX.

Scalable Hardware
The MSBR family includes a range of products that allows the service provider to deploy cost-effective solutions that matches the end-customer’s characteristics and size (SOHO, teleworker, SMB and branch offices). And while businesses continue to grow and change, the MSBR hardware is designed with additional features that are available without the need to replace the product.

Modular Software
The MSBR firmware modular design allows for easy activation of new services running on the same hardware. This modular design enables the service provider to easily migrate their end customers from basic services to more advanced and revenue generating services such as hosted PBX and cloud applications, without the need to replace on-premises equipment.

Multiple WAN
One of the important features for SMB customers is to maintain business continuity. The MSBR is equipped with multiple WAN interfaces including copper and fiber Ethernet, xDSL and Mobile 3G/4G. With up to 3 redundant WAN interfaces, the MSBR allows the service providers to offer their business customers a crucial “always on” Internet connection that will ensure business continuity in case of a connectivity loss.

Consistent Performance
One of the important features that need to be considered in a router is data performance. Even though many vendors use a single core design in their routers, allowing for both data and voice tasks to be handled by the CPU core, both the voice and data tasks consume CPU and memory resources. When activating the voice and the data tasks using the same CPU core it will have a detrimental impact on the overall data performance. The AudioCodes MSBR is designed with a unique multi-core architecture to meet the service providers’ demand for providing data and voice services with predictable and consistent performance. By using dedicated CPUs for data and voice, the MSBR ensures that heavy tasks such as firewall, SBC and routing have minimal effect on overall performance.

Survivable and Resilience
Ensuring the business telephony service remains operational in case of the loss of the connection with the service provider network is a critical requirement. The MSBR enables guaranteed voice services to the SMB customers. Using AudioCodes Standalone Survivability (SAS) and Cloud Resilience Package (CRP), the MSBR ensures that critical business telephony services continue operation, routing the outgoing calls to the backup PSTN and maintaining internal business telephony in case of a WAN failure or a connection loss with the hosted PBX.

High Quality Data and Voice
The integrated data and voice quality monitoring, troubleshooting and management tools in the MSBR, allow the service provider to monitor network quality, to identify and fix problems and to better support their customers while reducing the costs of that support. This set of tools includes integration with AudioCodes’ Session Experience Manager (SEM) which offers service providers a complete view of the state of their VoIP networks, and enables early detection of potential QoS issues. The data provided by SEM allows for problems to be resolved promptly before service degradation occurs.
Enabling Converged Data and Voice Services

Service providers that deploy managed data and voice services need a platform that will support these services. This platform needs to support a flexible range of services that include access, data, security and voice. The next section describes some of the common services being deployed by service providers.

Data and Cloud Services

The service provider offers the SMBs much more than just a simple Internet connection. The data services offered by the service provider include high speed and reliable connections with backup options to support business continuity, support for private and secure networks, cloud services (such as storage and backup for business data), securing the business network and information against threats, and enabling network connections for wired and WiFi devices with guaranteed quality of service (QoS).

The AudioCodes MSBR meets the requirements to support these services. Integrated with multiple and redundant WAN options, the MSBR can connect the business to the Internet using xDSL, Cooper and Fiber Ethernet and Mobile 3G/4G and maintain business continuity with an auto-switch backup WAN in the case of a failure in the primary WAN connection. The MSBR has up to 12 Gigabit Ethernet LAN ports, an optional 802.11n WiFi as well as a routing application that runs in a separate core, equipping the business Internet connection with guaranteed performance and quality of service. In addition, the MSBR will secure the business with an integrated firewall that includes, among other things, Denial of Service (DoS), protection and packet filtering.

The MSBR is also a perfect solution for cloud data services. The viable back-up options with consistent high performance allow the service providers to allay their customers’ fear of the cloud and provide them with the confidence they need to place their key business functions in the cloud.
Voice Services
As service providers move to all-IP services, they encourage their SMB customers to replace their TDM trunks with SIP trunks and hosted PBX services and to take advantage of cost savings and a greater variety of collaborative services. The AudioCodes MSBR offers the service provider a robust set of voice features including an integrated voice gateway, analog and digital interfaces with various codecs that supports analog phones, fax, PBX and PSTN connectivity, and session border controllers (SBC). The integrated SBC, acting as the demarcation point between the business network and the service provider SIP network, provides the interoperability, survivability, security and the quality assurance. The MSBR supports both SIP trunking and hosted PBX deployments.

SIP Trunking
In a SIP trunking scenario, the MSBR will interconnect between the business PBX system or/and the analog endpoints and the SIP soft-switch while supporting the service provider SIP trunks to the business. The MSBR is equipped with a business survivability feature that backs up business telephony services to the PSTN in the case of a connection loss with the soft-switch, ensuring business continuity.

Hosted PBX
When using hosted PBX services (also referred to as IP Centrex services), the MSBR enables service providers to offer and support a broad range of SIP phones which connect directly and seamlessly to their services. In addition, with support for AudioCodes’ Cloud Resilience Package (CRP), the MSBR ensures uninterrupted communications in the event of a loss of connectivity with the cloud providers’ control systems and thus allays the concerns of businesses regarding a move to the cloud. The MSBR will ensure that critical business telephony services will continue working, auto routing the outgoing calls to the PSTN backup network in case of a WAN link failure, and will continue managing internal business communications in case of a loss of connection to the Hosted PBX.
Summary
The SMB segment represents a revenue opportunity for service providers in the coming years while more and more business will move to managed data and voice services. Whilst service providers welcome the increased business, they face various challenges in order to provide high quality, secure, available, manageable and cost effective solutions. Throughout this white paper, we covered these challenges and presented AudioCodes suitable solutions while focusing on the Multi Service Business Routers.

For more information visit: http://www.audiocodes.com/service-provider-business-services

About AudioCodes
AudioCodes Ltd. (NasdaqGS: AUDC) designs, develops and sells advanced Voice over IP (VoIP) and converged VoIP and Data networking products and applications to Service Providers and Enterprises. AudioCodes is a VoIP technology market leader focused on converged VoIP & data communications and its products are deployed globally in Broadband, Mobile, Cable, and Enterprise networks. The company provides a range of innovative, cost-effective products including Media Gateways, Multi-Service Business Routers, Session Border Controllers (SBC), Residential Gateways, IP Phones, Media Servers and Value Added Applications. AudioCodes' underlying technology, VoIPerfectHD™, relies on AudioCodes’ leadership in DSP, voice coding and voice processing technologies. AudioCodes High Definition (HD) VoIP technologies and products provide enhanced intelligibility and a better end user communication experience in Voice communications.

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