

Fortune 100  
Retailer Centralizes  
Communications and  
Saves Money with Sonus  
SIP Network Solution

## Challenge:

- Reduce OpEx (incl. toll and leasing fees) by moving from TDM to SIP trunking
- Consolidate subscriber data and call routing plans that were spread out across hundreds of PBXs from different vendors

## Results:

- Saved over \$500,000 in toll and PRI lease fees within the first year
- Eliminated hundreds of hours per week spent on provisioning and updating PBXs at each store location
- Delivers PSTN-level quality and comfort features (e.g., dial tone on redirected calls) to their customers for a superior call experience

# Fortune 100 Retailer Centralizes Communications and Saves Money with Sonus SIP Network Solution

## The Company

As a Fortune 100 company, this Retailer operates a vast network of retail stores in North America, each of them a virtual mecca of merchandise where consumers can find everything from fashionable clothing and home goods to food and medicine (through its in-store pharmacies). Behind the scenes, information technology plays an important role in the Retailer's success, with millions of financial and medical transactions flowing through the company's data centers every week. In addition, with more than a quarter-million employees, the Retailer's store-to-store communications needs rival those of a small city.

## The Challenge

Real-time voice communications are vital to the Retailer's success, whether it's a phone call between stores to replenish an out-of-stock item or a customer refilling a prescription at one of the Retailer's in-store pharmacies. In a single day, the Retailer generates millions of minutes of local and long-distance phone calls. Yet while the Retailer's data communications were consolidated into two major data centers, its voice communications were still being handled by hundreds of private branch exchanges (PBXs) from different vendors; a solution that, while reliable, was also expensive and complex to manage. In order to simplify its voice communications and reduce costs, the Retailer decided to migrate its multivendor PBX environment to a more efficient, centralized SIP-based solution while leveraging the internal multi-protocol label switching (MPLS) network that spanned its two data centers. The Retailer needed full assurance, however, that the new SIP-based solution would provide the same PSTN-like levels of reliability and quality to its customers, as well as delivering a secure voice channel for highly confidential data such as medical information shared through its pharmacies.

In any SIP network deployment, the session border controller (SBC) plays a critical role as the device that both securely handles SIP traffic at the enterprise network border and routes calls between and beyond the enterprise's MPLS network. When evaluating SBC vendors, the Retailer had several selection criteria in mind: security, features and time. The SBC had to provide strong media and signaling encryption to protect



confidential customer calls to its pharmacies, without taking a hit in performance during heavy traffic. The SBC also needed to support unique, customized features like dial-tone generation for voice calls routed from the Retailer's central Interactive Voice Response system to local stores, which required a robust and customizable digital signal processing (DSP) system. And, most importantly, the SBC needed to consolidate all of the PBX-based information—subscriber names and numbers, routing plans, policies, etc.—into a centrally managed solution that could save the Retailer time in terms of provisioning and moves/add/changes.

## The Solution

The Retailer chose Sonus as its SBC vendor because only Sonus offered everything the Retailer needed—from high-performance encryption to built-in and customizable DSP elements—and could deploy the solution in a phased migration that would not disrupt the Retailer's existing business. The Retailer's goals for their new SIP network were ambitious: a partial migration of 3,000 SIP sessions turned on in the first year to support selected stores, and a total migration of 10,000 SIP sessions to be implemented over a three-year span for all of

its nationwide store locations. Like most enterprises, the Retailer's network expertise was focused more on data than voice, so they brought in the experts at Sonus Global Services to manage the TDM-to-SIP migration, map out the new network design, and create a centralized dial plan and call routing database. The Sonus services team moved quickly, working with the Retailer's networking team to determine network requirements for least cost routing, call features, security and session capacity. The Retailer chose a high-availability (99.999%) hardware configuration that leveraged a flexible, blade-based design to allow for a seamless migration from TDM to SIP sessions. The Sonus SBC allowed the Retailer to preserve session stability even during card failover, and also add/swap cards without affecting live SBC performance.

For the centralized dial plan, the Sonus services team took the Retailer's existing dial plans, created a new enterprise-wide plan, loaded it onto a centrally managed PSX Policy and Routing Server, and tested it in Sonus' verification labs to validate its performance. During the actual migration process, Sonus resident engineers helped to provision the SIP trunk groups, creating a template that the Retailer's own network engineers could easily follow for self-provisioning of subsequent SIP trunks. Shortly after the initial network design plan, the Sonus SBC was operational and handling production traffic in the Retailer's network—just in time for the busy holiday season.

## The Results

Since implementing the first phase of its new SIP-based communications network, the Retailer has realized more than \$500,000 in annual savings from reduced toll fees and TDM/PRI trunk leases. Unlike the dedicated TDM lines it had previously, which required the company to buy its voice trunks in 23-line bundles for every store, the new Sonus SIP trunking solution enables the Retailer to buy its SIP sessions "in bulk" and distribute those sessions across its many stores. The greatest savings, however, has come as a result of streamlining the Retailer's complex PBX environment with the PSX-based routing and policy solution. The PSX enables the Retailer to connect the multivendor PBXs across its many stores and manage all of its dial plan and routing information in a single location through its master PSX server. The centralized dial plan management offered by the PSX solution will save the Retailer hundreds of hours per week that normally went to PBX provisioning and upgrades, enabling the Retailer's IT team to divert its internal resources to more critical, revenue-generating projects.

Beyond the new solution's simplicity, the Retailer is also getting plenty of use out of the Sonus SBC's security features. The Sonus SBC not only provides built-in TLS, SRTP and IPsec encryption, but handles encryption in a seamless manner that offers very little degradation in session performance even when 100% of voice traffic is encrypted on both legs of a call. In addition, the Sonus SBC provides much-needed protection against potential network threats like Denial of Service attacks, which can be especially damaging to a large retail business during the holiday season—especially one that relies heavily on its communications network for sales and customer service.

Most importantly, the new SIP trunking solution continues to provide the same SIP high-quality voice service that the Retailer's customers have come to expect—to the extent that the SIP migration went unnoticed by the Retailer's millions of customers. And with the current trend toward HD-voice communications in enterprise call centers, the Sonus SBC's built-in HD-voice transcoding delivers a communications platform that not only looks good on the balance sheet but will sound good, too, for years to come.

## About Sonus Networks

Sonus is a leader in IP networking with proven expertise in delivering secure, reliable and scalable next-generation infrastructure and subscriber solutions. With customers in over 50 countries across the globe and over a decade of experience in transforming networks to IP, Sonus has enabled service providers and enterprises to capture and retain users and generate significant ROI. Sonus products include session border controllers, policy/routing servers and media and signaling gateways. Sonus products are supported by a global services team with experience in design, deployment and maintenance of some of the world's largest IP networks. For more information, call 1-855-GO-SONUS

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