

BISK EDUCATION



CASE STUDY

ASTERISK

Bisk Education Saves Over \$150,000 in User Fees Switching to Asterisk

OVERVIEW

Upgraded several times throughout the 1990s to convert a digital Nortel PBX TS-1000 into a hybrid telecom system with limited VoIP capabilities, Bisk Education cites three primary factors for abandoning further investment in the Nortel system, and adopting Asterisk as their alternative telecommunications solution. First, since Avaya purchased Nortel in 2009, Calvin Wells, director of Network Operations and Engineering at Bisk Education saw cracks in both Nortel and Avaya's stability as they made the transition. "They seemed to be facing an uncertain future regarding the direction of their technology, making them unable to provide the dependability of service and flexibility Bisk Education needed," Wells says. This ambiguity perpetuated a breakdown in Bisk's business model for the future, while the same volatility had Nortel selling features and components that did not yet integrate well with Avaya products – a disparagement that made it nearly impossible to correlate data across multiple systems. Finally and most importantly, Nortel costs continued to skyrocket as the two companies tried to reconcile these issues. "Each user needed a separate license for every individual feature," Wells explains. "For instance you need a license for call recording; another license for skill set routing; yet another license for a soft phone; etcetera. In the end, each employee license was costing sometimes as much as \$1,000 apiece."

Bisk Education, located in Tampa, Florida, offers technical support as an online facilitator of accredited college degrees and certifications from leading universities across the United States. Started in 1971, Bisk was one of the first companies to offer online educational opportunities, initially aimed at helping accountants with their continuing CPA requirements. Today Bisk Education manages the online business curriculum for a number of major "brick and mortar" U.S. colleges including Tulane University, the University of Notre Dame, and Villanova University, to name a few. They offer undergraduate and Master's degree programs, and professional certifications in a number of fields for students worldwide.

The Tampa facility has 765 employees, of which a little over half make up the 400-person recruiting and student-support call center. According to Wells, Bisk found Asterisk to be a powerful but affordable and flexible solution to all three of Bisk's priorities. "To say they saved us money is a no-brainer. We are talking about savings of well over \$150,000.00 in licensing alone."

CHALLENGE & SOLUTION

Bisk was facing some upgrades to several of the Nortel components and were scheduled for an Avaya revision that would require using SIP (Session Initiation Protocol), a signaling protocol used for establishing sessions in an IP network. While Nortel and Avaya sought ways to make the components talk to each other, Bisk's director of Network Operations and Engineering, Calvin Wells, realized there was really no reason to bring Avaya to the party. "I felt like they were more or less forcing uncertainty on us and charging a fortune for it," Wells admits. "I understand the concept of the more you need, the more it costs, but there were no guarantees any of the feature packages they offered were going to talk to each other. We needed a reliable, comprehensive solution."

Faced with the task of fully integrating the patchwork hybrid Nortel PBX with a web-centric VoIP system, Wells needed them to communicate transparently, at least until he could switch the entire internal operations over to VoIP. With expertise in open source software and having taught himself Asterisk back in 2008 while on a job, Wells decided to engineer the whole solution himself, using Asterisk.

Based on open source technology, Asterisk was designed for the tech savvy, hands-on telecom and VoIP technology community, and ensures greater reliability, quality, freedom of use, and a faster return on investment than proprietary telecom models. Today, Asterisk is the world's most flexible and widely-used communications platform, providing features that are highly competitive with, or exceed the power of other telephone systems on the market. Asterisk software is free but incredibly, turns an ordinary computer into a communications server.

"I first set up a prototype and put my team on it with some technical support to work out all the problems and troubleshoot any mistakes," he says. "I made recommendations and crafted a cost proposal that I knew would get the attention of the executives and consultants who would be making the final decisions." Explaining that he could eliminate Avaya and replace it with free Asterisk software, which he could then configure to bridge the gap Avaya was struggling to accomplish while saving over \$150,000 in the first year, was a winner for everyone.

Until then, Bisk had been using the upgraded Nortel PBX's IP capabilities for remote monitoring only. They could not use it for internal communications due to its limitations. What's more, they were contracted to a company in India for all their outgoing calls; and for international calling, they were connecting to a network through a VPN (Virtual Private Network) using a European DID (Direct Inward Dialing) provider that delivered calls over VoIP using SIP. VPNs supply network connectivity over a long physical distance at a relatively low cost. Wells knew he could make Asterisk talk to Europe and save even more money implementing SIP trunks.

Wells and his 2-man staff has been implementing Asterisk over the past couple of years, working his way through the more than 750 employees located at the Tampa facility. Bisk Education manages over 200 toll free numbers and well over a hundred area numbers. Technicians began the conversion with the call center that includes recruiting and technical support; then moved into accounting, technology, and the executive offices. Wells says that although they still have a smattering of employees on the old system, Asterisk allows them to communicate seamlessly with new system users. "Since Asterisk lets us talk to each other with no loss of call quality, we decided against a massive cutover and have not been in any hurry. We expect to have everyone switched over by August 2011."

Wells says he ran into a couple of bumps along the way. "One of the challenges I faced is the fact that Asterisk is designed for programmers more than for administrators. Administrators are accustomed to following procedures and tend to read the manual or attend a training class to learn to operate the system. As a network engineer, I have run the gamut. Learning the intricacies of the Asterisk software is no big deal for me, but administrators didn't find it so straightforward. I have taught most of them myself."

Wells is particularly pleased with Asterisk's consolidated, web-centric dashboard. The administrator uses a single tool Command Center with a plethora of features to choose from like the workforce management tools that include call reporting, call recording, and call monitoring. Managers can automatically track and listen in to calls, or tap in anonymously via soft phone. Reports provide information like threshold violations, and measure the number of inbound and outbound calls. "The great part is that we have more functionality with Asterisk than we did before, and we don't have to pay individual fees for every individual feature. Instead, the licenses allow us access to everything."

He says the default call queues were not robust enough for their needs, but in true open source form, Wells was able to write his own rules for call queues to give them a boost. In addition, Wells says the unified messaging system in Asterisk is far superior to Nortel's, which only allows you to interface with Microsoft Outlook - and once again - it came at an additional cost per user. "Asterisk lets you use any email provider, any inbox system, and you can send voice mail to email on your ipad, iphone, Blackberry, or any other mobile device with no additional costs attached."

RESULTS

The benefits of Asterisk are enormous but according to Wells, none can compare to the cost savings involved. "When you think about all those charges for individual, customized features that are now included in Asterisk, plus the savings using SIP trunks to connect with our European offices, and the time and effort we would have put into experimenting with the Nortel system, we have saved many hours in time and several hundred thousand dollars in costs!"

Digium's vision is a world based upon open communications.

Our mission is to transform the way businesses acquire and operate their communications systems through the application of open source software.



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