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PIKA TECHNOLOGIES INC.

Case Study: **Unlimitel**

Customer-Specified Asterisk-Based IP-PBX Offers One-of-a-Kind Features and Quality

Customer: Unlimitel is a VoIP services provider to small- and mid-size businesses.

Challenge: Build a low-maintenance, customizable IP-PBX with all the features of traditional telephony systems.

Solution: PIKA WARP™ Appliance for Asterisk.

Benefits: Unlimitel is the largest national provider in Canada of VoIP trunks to be first-to-market with a flexible, economical and feature-rich Asterisk-based PBX offering.

Through a combination of good planning and a commitment to high quality, Unlimitel has remained a leading telephony provider to Canada's small- and mid-size businesses (SMB) since 1998. Today, its voice over IP (VoIP) network extends across all major Canadian cities, and Unlimitel is one of the largest providers of VoIP trunks to IP-PBX customers.

The majority of Unlimitel's SMB installations are hybrid solutions, many of them serving rurally located businesses where high-speed Internet access is scarce. These systems use VoIP internally within the business and connect to the public phone network (PSTN) for external calls. But Stephan Monette, CEO of Unlimitel, saw a major opportunity to replace legacy telephone systems with a more flexible, feature-rich and economical IP-PBX.

Unlimitel began by delivering its own in-house-built system. "We used to purchase Dell servers and telephony cards, put the systems together in-house and deliver them to customer sites," Monette remembers. But he quickly discovered the shortcomings of that approach.

"Customers didn't want to use a computer-based phone system," he explains. "It looked cheap and unreliable. They didn't want to pay so much for what looks like a Dell computer, and like any computer it would often have to be reset, which isn't something you want to do with a phone system."

A second problem with the assembled system was the cost of delivery and maintenance. "Hard drives would die, telephony ports wouldn't work properly, and so on," Monette continues. "We'd often have to go onsite and do upgrades – it was too costly to maintain."

While Monette clearly saw the need for a VoIP phone system to serve the 5-50 user market segment, he knew he would need a much higher quality, purpose-built and feature-rich system to satisfy both his customers and his business model.

Building the "Dream" IP-PBX

Monette and his team set about creating a blueprint for the ideal SMB VoIP system. "We wanted to be able to go into businesses that had legacy systems and plug in a new box with all the features they were used to, and more," Monette says.

"We're not hardware specialists," he emphasizes. "We're really good at building the software and managing the VoIP network – but we look for partners to work with who are experts in hardware." But, most companies that Monette approached about building his dream IP-PBX were not comfortable building a PBX from scratch.

PIKA was the exception. "PIKA has more experience building things from scratch and they were really interested in working with us on this system. Together, the companies collaborated on the PIKA WARP Appliance for Asterisk, on which Unlimitel bases its new IP-PBX application.

An Asterisk-based platform was a fundamental criterion for Monette, who had worked with the open-source PBX software since 2004. One of the most attractive features of Asterisk, he says, is that "We can modify it with our own tools and features to meet our customers' specific needs."

Customizability of the PIKA WARP Appliance enabled Unlimitel to include its custom web management tools with simple phone provisioning for Aastra and Polycom IP phones. Monette continues, "We can build interfaces that let customers enter only a minimum amount of information and the box will configure itself."

The simpler a system is to configure and manage, the easier it is for Unlmitel to train its resellers – and the more likely resellers will be to offer it to their customers. This led to another key feature of the appliance: a removable SD card on which all configuration information, voice mail messages and so on are saved. "Let's say you get hit by lightning and it kills your IP-PBX – you simply get a new appliance and plug in the SD card – you don't have to reconfigure anything."

Other critical features of the appliance include an emergency analog telephone port (known as FXS), which ensures phone service continuity in the case of a power outage. An optional 4 port trunk/FXO interface module also enables the appliance to connect to an analog PBX, thus serving as a VoIP gateway in hybrid scenarios. The trunk module can also connect to analog PSTN lines and a 4 port analog station /FXS module allows for connection of analog phones, cordless phones and other analog devices.

The appliance also provides audio jacks to connect a music source for music on hold (MOH). "Legacy systems are equipped for MOH but new VoIP systems never have the hardware jacks," Monette notes, "and sometimes you have to pay for and manage a separate server just for that service. We wanted MOH to be plug-and-play."

High Performance and High Reliability

Unlimitel has grown based largely on strong customer referrals, so a high-quality solution was important. Monette knew he could expect top-notch service from PIKA. "We've been using PIKA products since 1999 and each time we've had an issue they have always been quick to find a solution or resolve the issue."

Monette is impressed with the performance of the WARP Appliance, which has been heavily tested in Unlimitel's labs. "We were surprised to see that the WARP appliance can handle between 40 and 44 simultaneous calls in our particular configuration, with perfect quality," Monette enthuses. "That's pretty amazing for a small box."

A special feature called auto-adjustable gain further ensures voice quality. "With PIKA, the call volume will always be the same," Monette explains. "We used to run into problems installing hybrid solutions in rural locations. We'd get a lot of echo and voice quality issues and we needed a special test set to adjust the lines. With PIKA, you don't need that – the system automatically adjusts itself every few seconds."

Economical power consumption is also a strong selling point. The system has enough power to support up to 75 VoIP end points (stations and trunks) and up to 8 additional analog ports for phones or trunks, and 24 VoIP trunks. This supports Unlimitel's future plans to offer hosted VoIP services.

"When you go into a data center, power consumption is a big concern – but with this device we can have five appliances and consume about the same amount of power as one server – so it will increase our capacity in a data center environment by five times."

Monette concludes that the most important advantage of working with PIKA and basing his new IP-PBX on the PIKA WARP Appliance is peace of mind. "Our success is about more than our services. We're not the cheapest option and we never will be, but people are referred to us because of the quality and stability of our services. By using PIKA products we know we're offering a high-quality product that fits really well with our services."

About PIKA

PIKA Technologies for over 20 years has been providing developers with the tools they need to build advanced voice and fax applications like IP PBX, fax broadcast and self-service IVR. As the technology landscape has changed, so too has PIKA, building out its product offering so its customers can choose the right tool set for their applications. Whether building applications using board-based media processing or using host-based solutions, application developers of all kinds turn to PIKA for their development tools.

In addition to its traditional line of hardware and software solutions, PIKA now offers a family of gateways and appliances that provide top-quality performance out of the box. PIKA sells these products directly and also makes them available through its growing network of resellers and distributors. Known for its exceptional customer service, PIKA's customers can expect the same high level of personalized, fast and free support that the company has always delivered. Headquartered in Ottawa, Canada, the company has ranked in The Branham 300, an authoritative ranking of successful Canadian high tech firms, for five consecutive years. Visit www.pikatechnologies.com or call +1-613-591-1555 for more information.