VERTEKS CONNECTION

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VOICE & DATA
NETWORKS

Making It Easier

Verteks Consulting helps Marion County Tax Collector improve customer service with IP telephony, and provides top-notch ongoing support.

Steve 'Shorty' Barker can't do much about taxes. But with the help of Verteks Consulting he's done a lot to improve the customer service Marion County residents receive when they go to pay their taxes and license fees.

It all started a few years ago when Barker decided that the Marion County Tax Collector's aging phone system needed to be replaced. As director of Information Services, he is responsible for managing the agency's technology infrastructure, including its voice communications systems. He had heard about the benefits of voice over IP (VoIP) technology and wanted to explore an IP telephony solution.

"I asked around and learned that Don Gulling and the folks at Verteks were the local experts in IP telephony," Barker said. "Verteks came in and did a show-and-tell and we were very impressed."

Of course, price is always a sensitive issue for a government agency. Verteks impressed Barker once again with a very competitive bid.

"I contacted a couple of other companies and they couldn't even come close to Verteks on price. That made you turn your head," Barker said. "And when I asked the other companies about IP telephony at that time, they couldn't show me a solution that worked. Verteks could, and their quote was one-third the price of the more expensive one."

Good Call

Verteks implemented a 3Com NBX IP telephony system that serves the Marion County Tax Collector's six locations via a WAN. Because the sys-

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tem routes voice calls over the data network, Barker has just one phone system and one network to support and maintain. Plus, the system is easy to administer.

"The fact that I can manage my own phones is wonderful, and I didn't have to get extensive training," Barker said. "The system also provides management reports that show us who's been on the phone, what hours of the day are the busiest and other handy information that the other phone system could never give us."

That information led the Marion County Tax Collector to create a separate call center so that the branches wouldn't have to handle incoming calls as well as walk-in customers. Verteks implemented the call center solution as an extension of the existing IP phone system.

"We have six people in the call center handling about 1,000 calls per day," Barker said. "We can use the reporting tool to track what each call is about — taxes, tags, occupational licenses or drivers licenses. That way we know in advance how many employees are needed and the types of questions that will be asked.

"It's much more efficient to route all calls through the call center. Before, someone standing in line waiting for a clerk would have to wait longer if the phone rang and that clerk had to suddenly answer a call. When taxpayers come in they're already spending money they don't want to spend. With the call center in place, the clerk can concentrate on the customer and therefore provide faster and more courteous service."

Sure Thing

Verteks Consulting has certainly made Barker's job easier. The Verteks team serves as an extension of Barker's four-person IT staff, supporting the agency's phone system, network gear, servers and PCs. After working with a string of here-today-gone-tomorrow technology providers, Barker has found a partner he can count on for both voice and data network support.

"When Verteks implemented the IP phone system they also upgraded my WAN. I'm running voice and data over the same network and it doesn't hiccup at all," Barker said. "They did such a great job that I switched all of my network gear to 3Com, supported by Verteks. It's great to have one system for both voice and data because I can point a finger at one person and say, 'Handle it.'

"I even buy my PCs and servers from Verteks. Before, I'd go to one place to get my PCs and they'd go out of business and I'd lose my support. Then I'd go to another place — same thing. Now when I buy 50-odd PCs and plug them into the network, I have one number to call for warranty support if anything breaks. It's great."

Barker says that he has very few problems, and the phone system is very easy to administer. But if problems do arise Verteks is right there to help.

"Anytime anything has come up I've just had to make a phone call and Verteks was right there helping me," he said. "The support that Verteks gives me is second to none."

Power over Ethernet Energizes IP Telephony

No plug? No problem. Power-over-Ethernet (PoE) technology, which allows both power and data to be carried over an Ethernet cable, offers an innovative solution to systems designers struggling with problems involving the availability of electrical outlets.

PoE is helping drive the adoption of IP telephony and a host of other technologies by allowing devices to draw power from switches through standard Ethernet cabling instead of being tethered to wall outlets. Voice over IP (VoIP) handsets, wireless access points, Internet video cameras and RFID tag readers are among the devices most compatible with PoE.

The technology has gained rapid acceptance since being approved by the IEEE (Institute of Electrical and Electronics Engineers) in 2003. In a recent survey of 230 North American enterprise IT managers conducted by NetLink Research, 70 percent reported they are currently using PoE. Continued growth is expected as the technology is refined. Today, the most power a device can pull through that cable is just over 15 watts. But the IEEE is working on a new standard (802.3at) that would boost that to around 50 watts.

The possibilities of PoE seem almost limitless. With power supplied over data cables, network administrators can use simple network management protocol (SNMP) remote management to monitor every device on the network. Potentially, power will be controlled and turned off at the click of a mouse. That means buildings of the future could have lighting and security systems powered, managed and maintained via the LAN.

It also holds promise for an eclectic mix of devices. For instance, Gibson has developed a line of next-generation guitars that utilize PoE technology for digital recording. PowerDsine, a leading PoE vendor, has even adapted a Norelco shaver that is powered by network cabling.

As attractive as this all seems, however, PoE is not a "no-brainer." There are many issues to consider, including the heating and cooling of the switches, backup power supplies and the actual load each switch can handle. There is also the potential for network disruption or interference with data signal transmissions. As a result, experts agree that organizations considering PoE use a qualified electrical engineer when designing systems.

Secure Connections

Network access control helps ensure security of endpoint devices.

Controlling network access is not as simple as it was even just a few years ago. Today, an increasingly mobile workforce, branch offices, business partners, consultants and contractors all require access to corporate networks. And they have more options for gaining that access with pervasive wireless connectivity and a proliferation of mobile devices such as smart cell phones and PDAs that exchange data with desktops, notebooks and wireless devices.

For all their productivity and collaboration benefits, all those devices and connections also create multiple avenues for introducing viruses, worms and other malware into an organization. That's why many organizations are adopting network access control (NAC) technologies, also known as endpoint security solutions.

These solutions work hand-in-glove with identity management to create seamless security for the distributed network. In addition to making users prove their identities, endpoint security makes the devices themselves prove they're secure before they can log onto the network.

"Gartner believes network access control is a critical security process for enterprises to implement today," said John Pescatore, vice president and distinguished analyst at Gartner. "The ability to dynamically and continually protect the network from misconfigured or compromised PCs or servers is key to preventing the most damaging forms of attack, whether internal or external."

Enforcing Policies

Access control solutions help organizations

enforce their security policies by extending traditional definitions of authentication, authorization and access control to include more detailed endpoint inspection. For example, the access control device could be configured to require a device to have current virus signatures and patch levels before allowing it to connect. Or, devices might be required to install critical updates and patches, as well as personal firewalls or other corporate security software. Theoretically, any property of the endpoint system could be used to define requirements for access to the network.

In a recent report, Infonetics Research said all NAC frameworks should enforce policies on the health of the user's computer, the user's identity and the information the user wishes to access. The firm says this enforcement is managed through four basic steps:

1. Authenticating the user (regardless of location)

2. Checking the integrity of the user's endpoint device

3. Comparing authentication and device integrity to centralized policy

4. Granting controlled access, denying access, or quarantining the device for remediation

New Role for SSL VPNs

Infonetics says Secure Sockets Layer Virtual Private Networks (SSL VPNs) are ideal for NAC enforcement because most solutions handle all of these steps. The firm says an SSL VPN device can serve as the secure gateway and the policy enforcement point, controlling access to network resources by both internal and remote users.

"Early visions of NAC involved building up or retrofitting network infrastructure, adding security control into every switch and router, so they could play traffic cop for the network," said Jeff Wilson, principal analyst for Infonetics. "However, you can deploy NAC without having to upgrade or disturb your existing network infrastructure by using standalone NAC appliances and an SSL VPN gateway."

Wilson noted that SSL VPNs are tested, trusted and deployed by thousands of organizations around the globe for remote access. He said enterprises can easily extend utilization of an SSL VPN for NAC enforcement. In fact, Infonetics predicts that more than two-thirds of SSL VPN gateways will be used in NAC deployments by 2008.

"In the future, all users will be treated as if they are remote and all endpoints treated as un-trusted, and our SSL VPN will be the secure gateway between all users and applications," said Chris Witeck, director of product management for SSL VPN vendor Aventail. "We have many customers starting down this path by using our SSL VPN to secure access via their internal wireless networks, and the next step will be using it for all LAN-based application access."

A Hard Look at Softphones

The pros and cons of replacing dedicated phone sets with PC-based phone software.
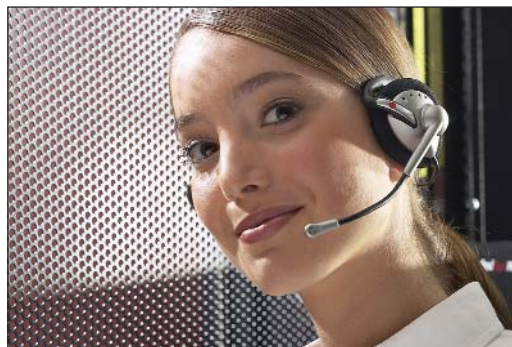
Back in the earliest days of voice over IP (VoIP), savvy geeks used their PCs to make free long-distance calls over the Internet. That novelty has little to do with the robust VoIP phone systems taking the business world by storm. Yet it led to two of the most persistent myths surrounding VoIP: that it's all about free long distance, and that a PC cannot replace a dedicated phone set.

Organizations of all sizes are finding that VoIP's benefits extend far beyond long-distance savings. However, many remain convinced that the quality of voice calls made over a PC is too poor for practical business use.

To be sure, those early Internet phone calls had terrible quality. But that had more to do with the latency of the Internet than the use of a PC as a phone. PC-based phones — or softphones, as they are more commonly known — are viable replacements for dedicated phone sets and can offer a number of benefits depending upon business and end-user needs.

A softphone is multimedia software installed on a general-purpose device such as a PC or PDA that simulates a telephone. A headset is typically used in lieu of a traditional telephone handset, although some softphone PDAs allow the user to make and receive calls without a headset. All of the major VoIP providers offer some sort of softphone application, and the software is typically easy to install and use.

Reasons to Go Soft

Softphones can be terrific tools for mobile professionals because they offer flexibility and convenience. Instead of lugging a cell phone, PDA and laptop, the mobile professional can eliminate the first two and gain greater functionality.

That's because softphones can be linked to customer relationship management (CRM) and other enterprise applications. Mobile sales professionals, for example, can initiate calls directly from the CRM application, and easily track call activity without having to sync their PDAs to their computers. Softphones can also be tied to time-and-billing applications to provide call accounting for mobile professionals.

Those same features benefit desk-bound employees as well. Plus, eliminating the dedicated phone set frees up valuable desk space. In a call center environment, this can add up to significant savings in floor space. Softphones can also increase productivity by giving call center agents a single interface to focus on.

Softphones can also reduce VoIP implementation costs. Organizations faced with replacing analog phone sets after a VoIP implementation can save a significant amount of money by using softphones instead of purchasing IP phone sets.

And Reasons Not To

Of course, softphones aren't without their shortcomings. Although many softphone interfaces mimic a telephone's push buttons, employees may be reluctant to give up their tried-and-true phone sets for the unfamiliar headset attached to a PC. Plus, the value of softphones is somewhat limited if they aren't integrated with applications such as CRM.

Streamlining calls onto PCs can be beneficial, but there's also a basic drawback: Employees become completely reliant on their computers. If there's a hardware problem, or the computer is simply turned off, an employee can't receive phone calls. Many softphone programs route calls to a voice mail system, but in some cases the call simply doesn't go through.

As with any technology decision, organizations should weigh the choice between softphones and dedicated phone sets based on business needs and the IT budget. Luckily it's not an either/or consideration. In fact, it often makes sense to deploy softphones for mobile employees and provide IP phone sets for those in the office.

Softphones have come a long way since those first phone calls made over the Internet. While it's unlikely that softphones will ever completely replace dedicated phone sets, they've evolved into valuable tools that offer real business benefits.

Do the math...

1 wire for all your voice and data needs
1 system ties together all of your locations
1 wise investment that increases employee productivity

1 + 1 + 1 = The 3Com family
of IP Telephony Solutions

The 3Com NBX V3000 platform provides the benefits of convergence applications to enterprises with from 2 to 200 users and up to 1,500 devices. It eliminates the cost and administrative overhead required for separate voice and data networks and affordably improves communications with powerful built-in call-processing, messaging and reporting features. Call today to learn how you can trade-in your old voice system and take advantage of these powerful capabilities.

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