For the People

The City of Eustis relies upon Verteks for help with a wide range of projects, ongoing maintenance and expert support.

Eustis City Hall

While Americans' confidence in federal and state government has declined in recent years, our faith in local government has remained steady. A 2014 Gallup poll found that 72 percent of Americans continue to trust their local governments, the same as in 2013 and only a few percentage points off the historical average.

This can be explained, in part, by the proximity of local government to the average citizen — it's easier to see the impact government has on the community. But many local governments are also using technology to bring services even closer to their constituents. Web-based and mobile applications coupled with IP communications platforms make it easier for citizens to report problems, gain access to information, pay taxes and fees, and apply for permits, licenses and services.

The City of Eustis, Fla., has long taken a forward-thinking approach to IT. Among its goals is "to provide quality, cost-effective public services," and it supports that effort through commonsense technology investments.

Verteks Consulting serves as the city's partner and guide. Since 2002, Verteks has provided sound advice, comprehensive support and expert assistance with a wide range of projects.

"We've had continuing services agreements with Verteks for many years, and I can't place enough emphasis on how important that relationship is," said Tracy Jeanes, Purchasing Director, City of Eustis. "I'm not a tech

For the People

person, but the Verteks engineers will sit down and explain everything in layman's terms and point out the pros and cons of all possible solutions. They help me understand what's going on so I never go into a project feeling like I'm behind the eight ball."

Staying Up-to-Date

Most recently, Verteks replaced the city's aging 3Com NBX phone system with a ShoreTel Unified Communications solution. The old system was obsolete and no longer supported, putting the city at risk of downtime if it failed. The ShoreTel platform provides modern, productivity-enhancing features in a highly reliable solution with N+1 redundancy and a flexible, modular architecture

"One of the most attractive features of the ShoreTel system is the redundancy," said Greg Barron, IT Manager, City of Eustis. "Yet it functions like one system across all our locations. It's also a lot easier to manage than the 3Com system. I do as much of the administration as I can and whenever I can't figure it out I can call Verteks support.

"As far as functionality, I love the new ShoreTel system. It's definitely easier to use and provides the performance and capabilities that we need."

Verteks worked with Barron to install the ShoreTel platform, with a smooth cutover from the old system. Administrator and end-user training helped the city see immediate value from the system.

"Even before we put out an RFP for the project, Verteks came in two or three times to familiarize our staff with the capabilities of the ShoreTel system," Jeanes said. "After the system was installed they spent a whole week here
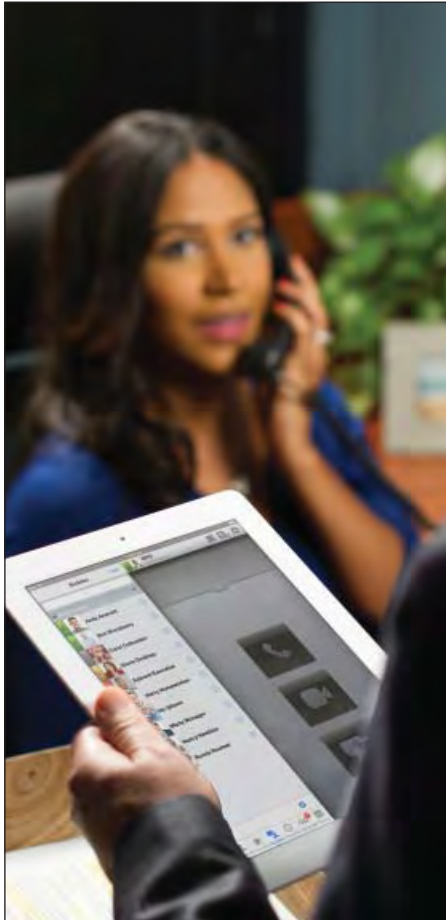
training all of our staff. Everybody was very comfortable and it was a very easy and successful transition. Our staff seems really happy with the ShoreTel system."

Verteks helped maximize the success of the project with a complete network overhaul. The Verteks team worked with Barron to upgrade switches and set up a virtual LAN (VLAN) to optimize the network and ensure quality calls.

Part of the Team

Over the years, Verteks has completed a number of other upgrades for the City of Eustis. Verteks engineers assisted with Windows Exchange Server migrations, and is helping to replace

the city's Windows Server 2003 systems prior to the end-of-support date.

Verteks' relationship with the city goes beyond special projects, however. Verteks serves as an extension of the city's IT team, providing managed services and help-desk support.

"When we first started with Verteks we didn't have a bona fide IT department so we relied upon them a lot more. Now we have IT staff but we still count on Verteks for remote and onsite support when needed," said Jeanes. "In fact, when we were able to hire IT staff, Verteks worked with the finance director to determine the selection criteria for our IT manager and support staff."

As the city built its IT team, Verteks also helped develop processes for keeping up with software patching and assisting end-users. The city even uses Verteks' remote control software.

"I use it every day — it's a lot better than using remote desktop for system support," Barron said. "We also apply patches through the remote control software, and use the Verteks ticketing system to track issues."

The City of Eustis is a small community of fewer than 20,000 people, but the local government relies heavily upon technology to communicate with constituents and ensure that city services are delivered efficiently and cost-effectively. Verteks is a core component of its IT strategy.

"They are the ultimate professionals — one of those companies that goes above and beyond," Jeanes said. "They recommend solutions, and have given us lots of great ideas about how we can save money. I know they will always provide that value-added service that is so important. I can honestly say they care about the customer."

News Briefs

Much Security Spending Wasted

As much as 60 percent of security software in some organizations is "shelfware" — products that are either underutilized or not used at all, according to a recent Osterman Research survey conducted on behalf of Trustwave.

Osterman surveyed 172 small, midsize and large enterprises from multiple industries. The study found the average organization spent $115 per user on security-related software in 2014, but $33 of it — 28 percent — was underutilized or not used at all.

Examples of technologies being underutilized included firewalls that were installed but never properly configured with the right rule sets, database monitoring tools that were implemented but never looked at later, and data leak preventing tools with few policies for monitoring data loss.

Thirty-five percent of survey respondents said that software was sitting on the shelf because IT was too busy to implement it properly, while 33 percent said that IT didn't have enough resources.

Study: IT Hiring Challenges to Persist

IT industry executives anticipate that filling technical positions will continue to be a challenge in the coming year, according to CompTIA's recently released "IT Industry Outlook 2015." In the survey of executives from nearly 650 IT companies, 68 percent of respondents said they expect a challenging or very challenging hiring environment for technical positions this year.

Meanwhile, the U.S. Bureau of Labor Statistics reports an unemployment rate for computer and mathematical occupations at less than half the national rate, further confirming the strong demand for IT workers.

"Companies across our industry are delivering affordable, creative technology solutions for businesses and consumers alike, but the persistent shortage of workers educated, trained and certified in the latest technologies threatens to stall the pace of innovation," said Todd Thibodeaux, president and CEO, CompTIA.

A net 43 percent of U.S. IT companies report having job openings. Another 36 percent say they are fully staffed, but would like to make new hires to support business expansion and growth.

Mobile App Security

Organizations must take steps to ensure mobile applications don't create security and privacy risks.

It's all about the apps. Mobile devices such as tablets and smartphones have fundamentally changed business processes over the past few years by providing unprecedented connectivity and driving new levels of productivity, efficiency and job satisfaction. What makes these devices powerful business tools rather than just fun electronic toys is the ever-expanding ecosystem of mobile applications.

Billions of purpose-built apps are downloaded each year, allowing users to access real-time business data, automate key processes and gain powerful insights. Equally important, organizations have greatly expanded efforts to create mobile versions of all the enterprise apps they've been using for years.

However, the growth of mobile apps is matched with an inevitable rise in security issues.

Attackers are increasingly seeking — and finding — vulnerabilities in mobile apps that can expose both business and personal data to risk. According to Gartner analysts, 75 percent of mobile apps fail the most basic of security tests.

"Most enterprises are inexperienced in mobile application security," said Dionisio Zumerle, principal research analyst at Gartner. "Even when application security testing is undertaken, it is often done casually by developers who are mostly concerned with the functionality of applications, not their security."

Mobile Malware Increasing

Other studies seem to support Gartner's findings. A recent report from Alcatel-Lucent's Motive Security Labs division says that malware infections in mobile devices increased by 25 percent in 2014. The firm estimates that 16 million mobile devices worldwide have been infected.

The report claims mobile malware is increasing in sophistication, with more robust command and control protocols. Six of the top 20 mobile threats in 2014 were mobile spyware apps designed to track a device's location, monitor incoming and outgoing calls and text messages, monitor emails and track the victim's Web browsing.

Malware growth continues to be aided by the fact that the vast majority of mobile device owners do not take proper device security precautions. The Motive Security Labs survey found that 65 percent of subscribers expect their service provider to protect both their mobile and home devices.

"With malware attacks on devices steadily rising with consumer ultra-broadband usage, the impact on customer experience becomes a primary concern for service providers," said Patrick Tan, General Manager of Network Intelligence at Alcatel-Lucent. "As a result, we're seeing more operators take a proactive approach to this problem by providing services that alert subscribers to malware on their devices along with self-help instructions for removing it."

Proactive Testing is Key

Still, businesses can't afford to depend solely upon software vendors and service providers for the security of their mobile computing environment. Gartner says it is imperative that organizations develop their own methods and technologies for mobile application security testing and risk assurance.

Gartner expects existing static application security testing (SAST) and dynamic application security testing (DAST) vendors will modify and

adjust these technologies to address mobile application cases and meet mobile application security testing challenges. Although SAST and DAST have been used for the past six to eight years and have become reasonably mature, mobile testing is a new space, even for these technologies.

In addition to SAST and DAST, a new type of test — behavioral analysis — is emerging for mobile applications. The testing technology monitors a running application to detect malicious or risky behavior in the background. For example, this test would raise a red flag if an active audio player accesses a user's contact list or geolocation and initiates data transmission to some external IP address.

Testing the Server Layer

Testing the client layer — the code and graphical user interface — of the mobile application that runs on the mobile device is not enough. The server layer should be tested as well. Mobile clients communicate with servers to access an enterprise's applications and databases. Failure to protect a server creates the potential for highly damaging database breaches. Code and user interfaces of these server-side applications should therefore be tested with SAST and DAST technologies.

Gartner predicts that through 2017, 75 percent of mobile security breaches will be the result of application misconfigurations rather than deeply technical attacks on mobile devices. A classic example of miscon-figuration is the misuse of personal cloud service through apps residing on smartphones and tablets. When used to convey enterprise data, these apps lead to data leaks that typically go undiscovered.

"Today, more than 90 percent of enterprises use third-party commercial applications for their mobile BYOD strategies, and this is where current major application security testing efforts should be applied," said Zumerle. "App stores are filled with applications that mostly prove their advertised usefulness. Nevertheless, enterprises and individuals should not use them without paying attention to their security. They should download and use only those applications that have successfully passed security tests conducted by specialized application security testing vendors."

Server Countdown

**End of support looming
for Windows Server 2003.**

Tick tock. Time is running out on organizations that have not yet moved to upgrade from Windows Server 2003. On July 14, Microsoft will cease all support for what was once the most popular server operating system, a workhorse for most of the world's computer networks for more than a decade.

In fact, the total installed base of Windows Server 2003 remains substantial. Although Microsoft has issued multiple updates of the flagship server OS over the years, Windows Server 2003 still accounts for 39 percent of the Windows Server installed base. Microsoft reports that, globally, there remain 24 million instances (half physical, half virtual) of Windows Server 2003 running on 12 million physical servers. North America accounts for more than 9 million of those instances.

At this point, the large installed base represents a significant risk. Microsoft says there were 21 critical updates for Windows Server 2003 in 2014, and 37 in 2013, which strongly indicates that problems will continue to appear on the platform. Once Microsoft stops issuing new security patches or updates, servers running the unsupported OS will be highly vulnerable to attacks that could expose valuable systems and data.

Feds Issue Warning

The Department of Homeland Security considered the risk great enough to issue an alert in November, warning that IT departments running unsupported server software will face elevated cybersecurity risks and hardware compatibility issues. Additionally, key business applications may become unsupported and organizations could find themselves in violation of legal and regulatory obligations.

"With the end of support date nearing, we are strongly urging customers who currently run Windows Server 2003 and have not yet begun migration planning to do so immediately," said Frazer Scott, Director of Marketing & Operations for Microsoft New Zealand. "We are concerned by a recent Gartner report that points out that business leaders may not be aware of the risks they would face if Windows

Server 2003 systems are not migrated in time, leaving IT leaders at fault for the incomplete disclosure if problems later arise."

As with the end of support for Windows XP last year, organizations have been slow to give up on a product that has worked so well for so long. However, IT demands have changed dramatically since Windows Server 2003 was introduced. The IT infrastructure in those days still revolved around networks of desktop computers. Today's servers are expected to run a wide range of mobile, analytic and collaboration workloads. What's more, Windows Server 2003 is a 32-bit OS, whereas newer operating systems run 64-bit environments.

Challenges and Opportunities

As such, organizations should move quickly to make the upgrade, not only to avoid business risk but to improve their ability to take advantage of the latest IT technologies.

For example, upgrading to a newer version of the Microsoft OS such as Windows Server 2008 or Windows Server 2012 gives organizations the opportunity to work with a system that was designed for virtualization from the ground up. Industry experts say any organization running more than a few servers should be virtualizing their workloads. That's difficult to achieve with Windows Server 2003, which was great for setting up specific physical server roles but much less effective for creating virtual machines.

Migration efforts can also create a better understanding of the organization's overall application portfolio. In many organizations, individual departments and end-users have procured and installed applications through informal channels. Although such apps are undocumented by the IT department, they may have become critical to everyday business processes over time. The migration process provides an opportunity to discover and document these applications and make solid decisions about which apps can be retired, replaced or upgraded.

Plan of Attack

IT solutions provider Softchoice recommends a four-part approach for organizations still running Windows Server 2003:

• **Discover:** Take account of how much Windows Server 2003 is in your IT environment, what hardware it's running on, how old it is, and how much of it is virtualized.

• **Understand:** Determine what processes are running on the each of the servers and what dependences they have.

• **Plan:** Once you have a full view of the environment, evaluate your options, and roadmap your migration or upgrade plan. Are you simplify going to upgrade the hardware and software, are you going to move workloads to the cloud, will you implement a hybrid IT solution?

Cloud Migration Worth Consideration

At a time when IT departments are being challenged to reduce the cost and footprint of infrastructure and maintenance, some organizations see the impending end of support for Windows Server 2003 as an opportunity to migrate workloads to the cloud.

In a recent survey of Fortune 1000 companies conducted by application migration developer AppZero, 75 percent of respondents said they wish to, or are considering, moving to the cloud as part of their Windows Server 2003 migration efforts.

Cloud migration is a potential way to avoid the long-term capital costs of upgrading on-premises server platforms. Most organizations will find that the older servers used to host Windows Server 2003 won't be compatible with the newer versions of Windows Server, which require 64-bit CPUs. In addition to cost considerations, cloud platforms can provide improved flexibility and scalability while still delivering the ability to develop, test and host line-of-business applications.

Among public cloud platforms, Microsoft Azure, Citrix CloudPlatform and Amazon Web Services are the most likely avenues for cloud migration from Windows Server 2003. Microsoft Azure is particularly attractive to organizations looking to continue to authenticate users against on-premises Active Directory via integration with Microsoft Azure Active Directory. It also offers continued support for some Windows Server 2003 applications.

"Many Windows Server 2003 applications still in use are Web-based applications. Microsoft has developed a migration suite to simplify conversion of these applications to be run on the Azure platform," said Andre de Beer, Microsoft Cloud Solutions Architect. "Customers upgrading from Windows Server 2003 to Microsoft Azure also ensure compliance."

• **Test:** Begin the migration from Windows Server 2003 and test repeatedly during the process to ensure systems are running and to guarantee uptime of mission-critical programs.

"With less than a year to go until Microsoft pulls the Server 2003 plug, now is the time for businesses to start their migration," said Softchoice executive David Brisbois. "IT management should evaluate their entire technology environments — from hardware and application workloads to the data living on their servers — to figure out the most strategic way forward, be it an on-premises, hybrid or total cloud setup."

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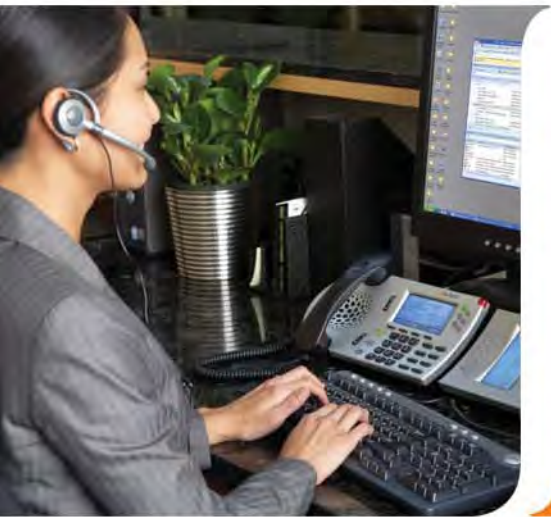
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