Visions of Quality

Verteks Consulting helps Ocala Eye improve the health of its IT infrastructure with comprehensive managed services and network and phone system upgrades.

Quality patient care is the goal of every healthcare provider, but the reality is that many highly trained and specialized caregivers can spend much of their time doing administrative tasks rather than delivering care. The network infrastructure required to support electronic health records and other key applications must operate at optimum efficiency to ensure that doctors, nurses and administrators aren't hindered by operational obstructions.

When Don Cushing became Chief Executive Officer of Ocala Eye two and a half years ago, he was determined to ensure the practice's team of medical professionals would not be impeded by network issues. He began searching for a technology partner to streamline, stabilize and secure the group's IT infrastructure.

Verteks Consulting fit the bill.

"Some of our doctors can see 60 patients in a day, but they can only do that if everything is up and running," said Cushing. "The real essence of IT for us is that we need all systems to function effectively so that we can properly leverage our team of very smart, highly educated, skilled people to give quality care and service to as many patients as needed.

"We asked Verteks to come in, evaluate the network and make a series of recommendations. Working with the Verteks people, my IT team got a little sharper and, together, they put together a terrific system. It took us about a year to get there, but as of July we have had a year with no downtime."

No Room for Failure

Cushing says the significance of network uptime can't be overstated.

Visions of Quality

Ocala Eye is the premier ophthalmology and laser eye surgery practice in North Central Florida, with a staff of 10 board-certified ophthalmologists trained in every major subspecialty of ophthalmic care. The network connects five locations and 155 employees over a 25-mile radius.

"Our IT system is really the central nervous system for the business," said Cushing. "All of our financial recordkeeping comes out of IT, our entire billing system depends on software, and we've been on electronic health records for about 10 years.

"Literally nobody in this organization can work without access to our data."

Ocala Eye has never experienced a business-threatening network issue, in part because its previous IT staff had built a fairly sophisticated infrastructure. However, the company became vulnerable when two key engineers left the company.

"There's as much art as science in designing a network," said Cushing. "Network engineers build stuff they know and understand, but not necessarily to a common set of standards. The guys who were here were really smart, but they did it their way — which worked really well as long as they were here to maintain it."

Network Upgrades

To provide Ocala Eye with a bit of technology insurance, Verteks engineers evaluated the network, mapped the topology and suggested modifications to ensure best practices and quality of service. Verteks also provided guidance on a threat protection program that includes the use of virtual LANs to segregate different areas of the network and to improve mobile security.

Verteks President Don Gulling also guided Cushing to another significant upgrade opportunity. Gulling was aware that the city of Ocala had recently begun offering private businesses the opportunity to lease excess capacity in the city's fiber optic network. It would be practically impossible for a smaller business such as Ocala Eye to build such a state-of-the-art network, which the city uses for phone, Internet, emergency communications, traffic control and other critical services.

"We switched over to that about six months ago, and it is saving us about $12,000 a month in network costs," said Cushing. "That only happened because of Don's suggestion and a lot of prodding on his part."

Improved Communications

Additionally, Verteks upgraded Ocala Eye's aging phone system. Verteks recommended, configured and implemented a ShoreTel Unified Communications solution that is easy to use, delivers advanced functionality and cuts costs. Staff members love the functionality of the system, particularly the Communicator software. With ShoreTel Communicator's built-in tools, end-users can make a call at the touch of a button and easily turn it into a multimedia collaboration session. The software also integrates with Microsoft Outlook for a one-click collaboration experience.

"I've done a few computer system and phone system implementations and this is the smoothest one that I've ever done — I was barely involved in it," said Cushing. "The Verteks people came in, they trained everybody, we turned it on, and I've heard nothing but rave reviews from everybody. The communication across the whole organization has improved.

"I think Verteks would say we're a pretty demanding customer, but their guys were just stellar at putting this in. They listen to the customer. They understand the call center business."

After working with Ocala Eye's IT staff on all those upgrades, Verteks was also enlisted to provide ongoing maintenance and comprehensive support. Verteks monitors Ocala Eye's systems and handles all of the updates and other routine maintenance tasks. Cushing values Verteks' ability to respond rapidly when an issue arises, either through remote or on-site remediation.

"I have to say, I was really surprised to find a company of Verteks' sophistication here in Ocala," said Cushing. "It's not just the technical expertise — which I think is superb — or the quality of their people, but it's the way the company is managed. Don operates the company from a values perspective. He's a Gulf War veteran, and he brings some of that military accountability to bear. I would give them an A+."

> "I think Verteks would say we're a pretty demanding customer, but their guys were just stellar at putting this in. They listen to the customer. They understand the call center business."

News Briefs

EHR Market Growth Slow but Steady

Despite slower-than-expected growth, the global market for electronic health records (EHR) is estimated to reach $22.3 billion by the end of 2015, with the North American market projected to account for 47 percent ($10.1 billion), according to research by Accenture.

The global management consulting firm says the EHR market is projected to grow 5.5 percent annually through 2015 — a dip from roughly 9 percent growth during 2010. Driven by consolidation and the federal Meaningful Use guidelines, the U.S. is expected to remain the largest EHR market in the Americas and globally, with a projected annual growth rate of 7.1 percent and total revenues of $9.3 billion by the end of 2015.

"Although the market is growing, the ability of health-care leaders to achieve sustained outcomes and proven returns on their investments pose a significant challenge to the adoption of electronic health records," said Kaveh Safavi, global managing director of Accenture Health.

Software Bloat Straining Infrastructure

A tangled web of applications within international organizations is getting more and more complex, putting strain on the IT department and stunting digital transformation, according to a new study from consulting firm Capgemini.

Some 48 percent of 1,116 CIOs and senior IT executives said their companies have more applications than required to run the business. Nearly three-quarters (73 percent) believe that at least one-fifth of their current applications share similar functionality and should be consolidated, and 57 percent believe that at least one-fifth of their applications should be retired or replaced.

This isn't just an IT problem, it's a business problem. As organizations implement new cloud, mobility and big data solutions, they often lack the bandwidth to gain full competitive advantage from these technologies because of the bloated applications landscape.
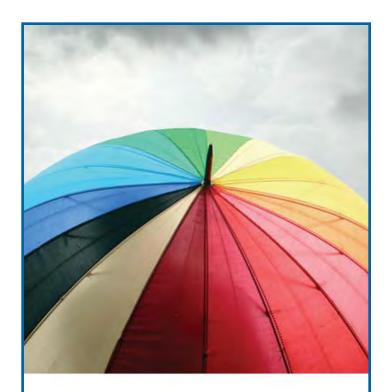
Next-Gen Firewalls

Application awareness and other smart features change the game for network security.

Using a traditional firewall against modern security threats is like playing professional football in the 21st century with an old leather helmet from the 1930s. It may provide some very basic protection, but it isn't strong enough to prevent serious or even permanent damage.

Traditional firewalls provide security by inspecting and controlling traffic according to specific ports, protocols and IP addresses. That was effective when most network threats involved hackers scanning for open ports on network firewalls to attack. Today's threats are far more stealthy and sophisticated.

Many modern cyber threats are designed to piggyback on legitimate application-layer network traffic, which allows their malicious payloads to bypass stateful packet inspection mechanisms. More than viruses and spyware, modern security threats include zero-day exploits, advanced malware and stealth bots that are smart enough to not only disable secu-

rity protections and steal data, but hide in the network while awaiting further instructions.

Just like football gear, however, firewalls have evolved. Next-generation firewalls (NGFW) offer a much more robust line of defense.

Understanding Apps

Along with traditional firewall capabilities such as packet filtering, network address translation and URL blocking, NGFW integrate many more robust features. These include intrusion prevention, Secure Socket Layer (SSL) and Secure Shell (SSH) inspection, deep-packet inspection and reputation-based malware detection.

However, the key distinction is that an NGFW is application-aware, meaning it can distinguish one application from another and enforce granular security policies at the application layer. With the ability to understand details of web application traffic, the NGFW can make smarter blocking decisions

based upon very specific criteria. That is a critical capability, considering that security experts estimate that 80 percent of attacks today happen at the application layer.

"Big security news stories are a daily event as the threats facing enterprises are getting more pervasive and sophisticated," said Jeff Wilson, principal security analyst with Infonetics Research. "Organizations need to implement protections against advanced application-layer threats throughout their networks – not just at the edge."

The change in business environment due to the Bring Your Own Device (BYOD) model, cloud-based services and wireless communication has also created new threat vectors. Employees today expect to gain network access with their mobile devices and use cloud-based solutions to work with company data. According to a recent Network World study, 48 percent of respondents said that supporting increasing numbers of mobile devices is their organizations' top security challenge.

Although mobile devices connect to the Internet from outside the corporate firewall, it is possible to backhaul remote and mobile traffic to a corporate site for NGFW inspection. Even without taking this step, organizations gain some essential security measures for the mobile/cloud environment. For instance, an NGFW decrypts and removes hidden threats from mobile traffic tunneled over SSL VPNs before they enter the network. NGFW appliances can also be configured to limit general access to cloud file transfer applications.

Be Prepared

An NGFW is sometimes confused with a unified threat management (UTM) system, which combines various security functions — firewalls, antimalware software, intrusion protection, content filtering, reporting and more — in a single security appliance. Truly comprehensive network security can be achieved when employing both of these complementary systems.

When choosing an NGFW, organizations must evaluate the architecture, performance impact and manageability. Whether choosing a hardware- or software-based solution, it is important to understand how the product is engineered and how it will be integrated with existing infrastructure.

The additional features and options offered by an NGFW could eliminate the need for some individual security devices, which could reduce operational expenses. However, those additional features also require very specific policies and rules, so the best NGFW is one that is intuitive and easy to configure, implement and maintain. Simple, centralized management is critical.

Next-generation firewalls are the logical evolution in network security and access control. Organizations that have not already done so should make plans to migrate to NGFW technology. It's the best way to avoid the risk of game-changing security threats due to substandard protection.

COUNTING COSTS

Consider many metrics when evaluating TCO of unified communications systems.

The modern workforce has a multitude of business communication and collaboration tools at its disposal, but many of these key tools still tend to exist independently of each other. IP-based unified communications (UC) systems unite telephony, email, voicemail, messaging, mobility, conferencing and more into a single, coherent communications solution.

Although UC systems have been around for nearly 10 years, adoption rates have never really met expectations. A 2013 survey by the IT education company Webtorials found that only 21 percent of companies had fully adopted unified communications.

Sticker shock has been one obstacle to UC adoption. As with any shift to new technology, there are significant upfront costs involved in the move to an IP-based communication infrastructure. Whether organizations are making their first move into Voice over IP (VoIP) or upgrading to a fully integrated UC platform, the shift often involves considerable hardware and software purchases.

However, organizations must be careful that their focus on price does not make them blind to value. In a

benchmarking study of the total cost of ownership (TCO) for unified communications, Aberdeen Group analysts found that buyers typically place too much emphasis on upfront cost when evaluating UC systems and vendors.

The Big Picture

While procurement and implementation costs certainly need to factor into the equation, this approach fails to take into account potential long-term operational, maintenance and network savings that can easily offset upfront costs. Aberdeen recommends a more thorough analysis of TCO metrics to establish a clear cost structure.

"Total cost of ownership represents a holistic measure of the complete financial impact associated with the unified communications purchase decision and should be the most important issue for any IT financial stakeholder purchasing a new system," said Hyoun Park, Aberdeen research analyst. "To uphold corporate fiscal and governance responsibilities, decision-makers must fully examine all significant upfront and recurring costs to identify the UC solution offering the greatest value throughout the entire lifespan of the solution."

Even if the goal is to simply reduce communications costs, organizations must consider all factors that impact TCO. To build an accurate TCO calculation, it's important to look beyond the sales proposal in order to balance the short-term costs with long-term operational savings.

Factors to Consider

The 2013 Nemertes Research benchmarking study of IP telephony TCO separates cost data into three categories:

- **Capital:** Includes servers and other data center hardware, software licenses, and desk phones or other endpoint devices.

- **Implementation:** Includes internal staff time and third-party systems integrators and consultants.

- **Operational:** Includes staff time, training and certification plus maintenance contracts and third-party support.

The Nemertes study suggests that product and implementation costs are generally known and fairly consistent, while operational costs can vary significantly from vendor to vendor. Buyers need to evaluate real-world data related to implementation and operations to calculate TCO. For example, a hybrid system with inexpensive digital phones might reduce upfront costs but could wind up limiting access to the full range of UC solutions and benefits.

Even basic UC systems should provide voicemail, email, unified messaging, and web and audio conferencing as components. However, organizations must consider if they are willing to incur higher upfront costs to gain access to emerging components may well be mission-critical in the near future. These elements include a robust mobile client, enterprise-grade videoconferencing, document-based collaboration and social media integration.

Complexity is another important TCO consideration. Mobility, collaboration and videoconferencing applications have greater network overhead than apps such as email and instant messaging. The increased network engineering and monitoring requirements result in increased TCO.

Network readiness also must be evaluated. Implementing VoIP may require upgrades to improve bandwidth and server resources. A poor network design could negate many of the benefits an organization expects to realize from UC.

The Value Proposition

While a host of factors can impact the cost of a UC deployment, organizations must also have a good understanding of the potential value. Long-distance savings has always been one of the chief selling points of IP communications, and while that can be significant in some organizations, it isn't the only way VoIP and UC deliver value. An IP-based system with centralized call control can also reduce trunking, maintenance and staffing costs.

Improvements in processes and productivity may be harder to quantify but are significant nonetheless. A recent survey sponsored by Sonus Networks attempted to identify those savings. Technology decision-makers at 267 large enterprise organizations responded that a fully functional UC infrastructure could improve productivity of selected tasks by 23 percent. By recovering 1.21 hours per employee per day, the average savings is roughly $13,000 per year per knowledge worker employee.

"Our communication modes have been discrete for too long, and the opportunity to bring them together to drive personal productivity is immense," said Wes Durow, Sonus marketing VP.

Businesses today require multiple communications technologies to operate effectively. VoIP-based unified communications systems can integrate, coordinate and manage those technologies for maximum benefit. With so much at stake, those considering a UC system should avoid the temptation to make a decision based solely on upfront costs. By looking at the big picture and analyzing long-term operational costs, organizations will be able to calculate TCO and make the smartest possible decision.