

# VERTEKS CONNECTION



volume 13 number 1



## Focused Expertise

*Kids Central relies on Verteks for IT monitoring, management and support, and access to a full team of technology experts.*

Smaller organizations rely on technology as much as their larger counterparts but typically don't have in-house expertise across the full spectrum of IT disciplines. In fact, it often falls to one or two individuals to handle everything from end-user support to network troubleshooting to major implementation projects.

That was the dilemma facing Kids Central, a nonprofit organization that coordinates a community-based system of care for abused, neglected and abandoned children, and provides a wide range of services for expectant mothers, babies, children and young adults. Serving Citrus, Hernando, Lake, Marion and Sumter counties in Central

Florida, Kids Central has 130 employees plus a network of agency partners that provide quality child welfare services.

Steve Lovely, Director of IT for Kids Central, is responsible for maintaining the organization's IT environment and supporting up to 350 end-users with help from two in-house technicians. Behind the scenes, Verteks Voice & Data Networks provides around-the-clock monitoring and management along with access to experienced engineers.

"When you work in IT, people tend to think that you're an expert in everything, but you only know what you know," Lovely said. "It costs a lot of money to hire a network expert and a server expert and an expert in Microsoft Exchange. Verteks has all that talent and expertise in-house so it makes sense to have them take care of all of those things for us.

"It has worked out very well and we've been very happy with them."

### Sound Advice

Ocala-based Verteks has been providing IT solutions and services to organizations throughout Central and North Florida since 1996. While

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Verteks has the skills and capacity to serve the needs of large enterprises, the company is also a source of focused expertise for smaller businesses, nonprofits and government agencies. Verteks can serve as an organization's "virtual IT department" or work in partnership with in-house IT staff.

"They make it so simple," said Lovely. "It's just more cost-effective and less of a headache to use Verteks rather than hiring IT staff. And they're always there. If I have a problem on the weekend, I can call the Verteks help desk and the on-call person will take care of it."

"Verteks also recommends products that might be beneficial to us as our needs grow. For instance, when we decided to put in a new firewall I called them up and asked, 'What do you think?' They're very good about steering me in the right direction."

Kids Central had been outsourcing its firewall services to a telecom provider, and was frustrated by the lack of control over the solution. Verteks recommended WatchGuard, which provides enterprise-class security in an easy-to-manage appliance.

"With the outsourced firewall, I couldn't even log into my own equipment, and trying to get a change made was a hassle," Lovely said. "The WatchGuard firewall has worked very well. I can log in and make changes, and Verteks is there to assist if something happens."

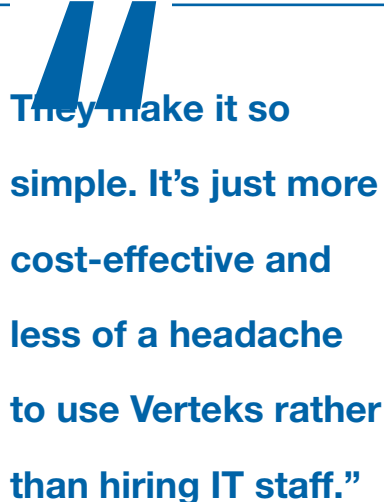
## Improving Operations

Verteks also recommended the Datto disaster recovery solution. With Datto, Kids Central's data is automatically backed up every four hours to an on-premises appliance then synced to the cloud every night.

"You don't lose data," said Lovely. "One time we got hit with ransomware [malware that locks all the files on infected systems]. We stopped it quickly,

and Datto restored our data right to the server. We only lost maybe an hour's worth of time."

In addition to security and disaster recovery, Verteks has helped Kids Central optimize its data center environment. The organization had a number of servers — each of them running a single application — in a small room that lacked the features of a real data center. The Verteks team worked with Lovely to implement virtualization technology so that one server could run multiple



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applications. Verteks also coordinated space for the equipment in a local hardened data center.

"We're down to three servers that run somewhere in the neighborhood of 20 virtual machines," Lovely said. "It's nice because we're not spending money on equipment that's barely doing anything. And if a server is running five different virtual machines we can balance the load."

"We've now moved our servers into a hardened data center, which is a big win for us because we don't have to worry about a fire or some other disaster. One of the great things about Verteks is that they're aware of what

goes on in the local IT industry. I come from South Florida so it's nice to have that resource."

## Flexible Solution

Lovely says he also appreciates Verteks' flexible approach in designing a customized managed services solution. Kids Central's in-house help desk staff provide end-user support, relying on Verteks to monitor the PCs and automatically push out software patches and updates.

"It's called Verteks One Care Monitoring. We have that on all our machines now," said Lovely.

Verteks also manages all of Kids Central's servers, and provides highly responsive support should an issue arise. In addition, Kids Central has a dedicated account manager who comes onsite once a week — or more frequently if needed.

"Every Thursday we have a Verteks engineer here verifying backups and taking care of whatever needs to be done," Lovely said. "But it isn't as if Thursday is our only day. We can call anytime and they immediately get on it."

"Last week alone we had their guy out here three times. We were cutting over to a new building and had some problems with our wireless. Verteks made sure an engineer was here to troubleshoot any issues."

Smaller organizations like Kids Central have mission-critical IT needs, but typically don't have a fully staffed IT department to handle ongoing maintenance, management and support. By partnering with Verteks, Kids Central has ready access to skilled engineers who keep the organization's IT environment in tiptop shape.

"Most of our work done is out in the field with children, and with our agency partners," said Lovely. "It just makes sense to outsource IT work to Verteks."

### Few Prepared for Looming Regulations

A set of wide-ranging data security and governance regulations are scheduled to go into effect in May 2018, but a new Dell survey finds that few organizations know anything about the rules and most have no plans for achieving compliance.

The Dell survey of 821 international IT and business professionals found that 97 percent have not yet begun preparations for the European Union's General Data Protection Regulation (GDPR), which requires greater oversight of where and how sensitive data is stored, accessed and transferred. This includes personal, credit card, banking and health information. While GDPR is designed to protect European Union (EU) citizens, the rules will extend globally to the U.S. and any other countries that conduct business in the region or with any EU organizations.

### R&D Spending Shifts to Software, Services

By 2020, companies will have shifted the majority of their research and development (R&D) spending away from product-based offerings to software and services, according to the 2016 Global Innovation 1000 Study from Strategy&, PwC's strategy consulting business.

The need to stay competitive is the top reason cited by companies who reported this shift in R&D budgets. The study found that companies reporting faster revenue growth relative to key competitors allocated 25 percent more of their R&D budgets to software offerings than companies that reported slower revenue growth.

The average allocation of R&D spending for software and services increased from 54 percent to 59 percent between 2010 and 2015. Over that same period, global spending on software offerings increased by 65 percent from \$86 billion to \$142 billion.

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# Looking Ahead

*Cloud, mobile and analytics remain among the top strategic technologies for 2017.*

**P**rognostication season has begun in earnest, with consultants, analysts and futurists attempting to identify technologies likely to gain traction in the coming months. Augmented reality, autonomous vehicles and robotics are among the trendy picks.

For most businesses, however, the compelling technologies for 2017 are likely to seem more familiar. Initiatives surrounding cloud, mobile and analytics will remain high priorities during the ongoing shift in business processes known as “digital transformation.”

“Digital transformation is not just a technology trend, it is at the center of business strategies across all industry segments and markets,” said Robert Parker, group vice president at IDC. “Digital transformation represents a critical opportunity for companies to redefine their customers’ experience, achieve new levels of enterprise productivity and create competitive advantage.”

Cloud, mobile and analytics are powering this transformation, changing both the way we work and the workplace itself. Data, services and applications can now be delivered almost anywhere on the planet via a growing array of devices. Industry leaders say a continued focus on these technologies will bring new opportunities for innovation, process improvement and customer engagement.

## Cloud

The cloud is the foundation for business agility. As a consumption-based and service-driven computing model, it eliminates the need to build infrastructure to support new ideas and initiatives. The cloud is more than an infrastructure alternative, however. Organizations are increasingly turning to cloud providers for application, management and security services.

Most analysts expect continued migration to public cloud platforms as organizations seek the flexibility to match services with a range of requirements. To achieve this flexibility, 451 Research anticipates the rise of a “cloud-tasking” philosophy. Rather than working with a single cloud provider for all requirements, cloud-tasking involves engaging with multiple service providers for individual functions.

A big shift is coming from the enterprise. Until recently, large organizations with data centers, big budgets and complex applications typically considered the cloud as useful only in special cases for convenience or cost-savings purposes. Now they increasingly see the cloud as a viable place to run core business applications.

A report by Cisco finds that more than four-fifths of all data center traffic — 83 percent — will be based in the cloud within the next three years. 451 Research predicts that more than one-third of IT budgets will be spent on cloud in 2017.

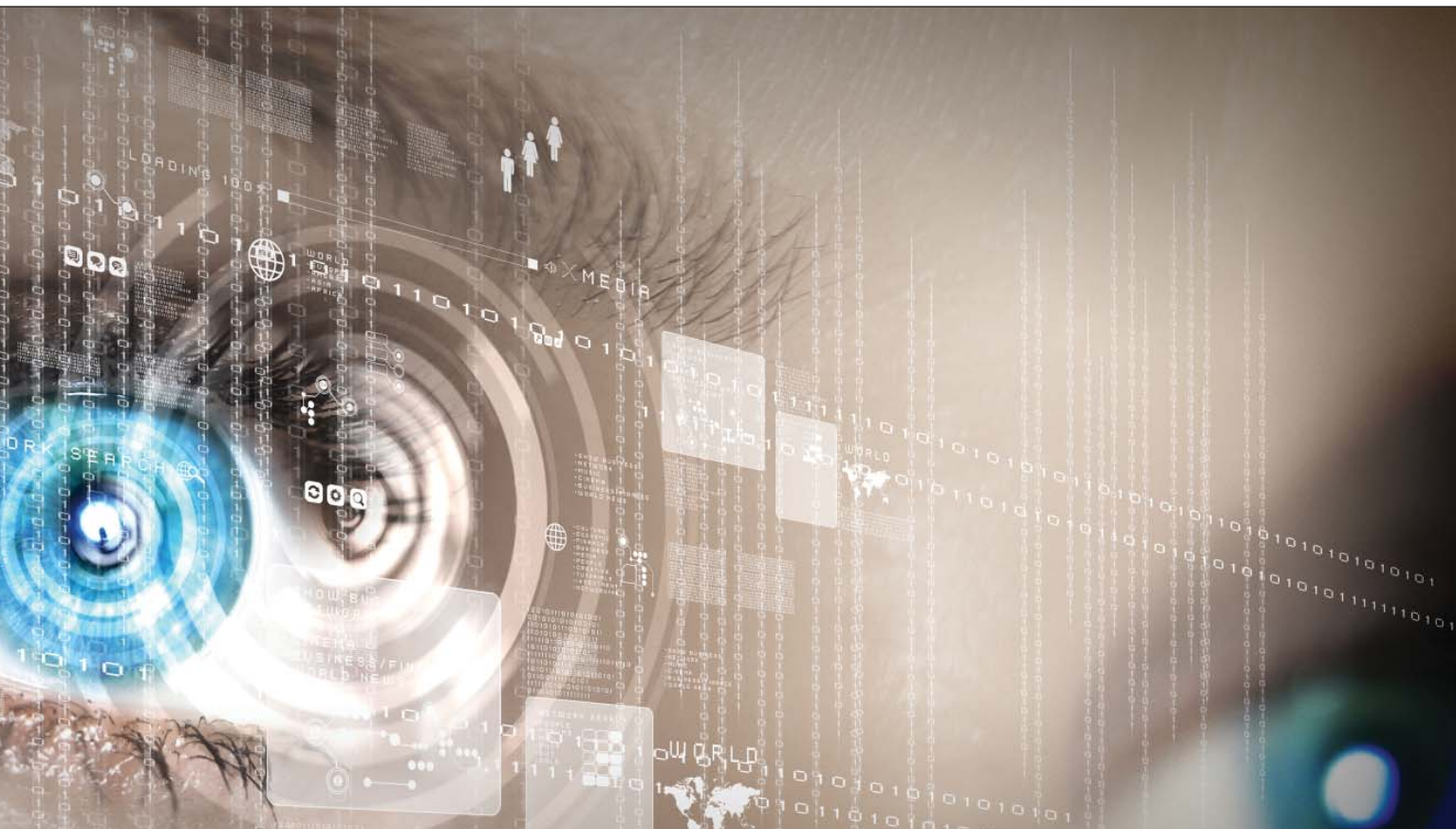


“Cloud computing is the agent of digital disruption, and we can see that there are significant benefits to be had by businesses that pursue both digital transformation and cloud strategies in tandem,” said Alex Hilton, CEO of the Cloud Industry Forum. “Cloud services, which effectively offer unlimited and dynamic IT resources, form the foundation of digital transformation and can facilitate rapid business change.”

## Mobile

From a practical standpoint, digital transformation only occurs with the effective convergence of mobile and cloud. The massive compute and storage capabilities of the cloud enable anywhere/anytime access to data, applications and services from a continually enhanced array of mobile devices.

Mobile applications represent the intersection of these two technologies. By enabling us to share and sync data in real time with multiple users across many different devices, mobile apps have become integral to business oper-



ations. Research and Markets predicts the global market for mobile apps will increase from \$12.2 billion in 2017 to nearly \$24.0 billion in 2021 at a compound annual growth rate of 14.4 percent.

Moving beyond an outward focus on downloadable apps, organizations are greatly expanding efforts to create mobile versions of all the enterprise apps they've been using for years. In a recent Adobe survey, respondents said app development efforts are being driven by the need to connect with customers and stakeholders, equip employees with good information and increase productivity.

However, some analysts say organizations must take a new look at how they develop mobile apps. Oracle estimates that 87 percent of enterprises update or release new mobile apps every six months or less. The need to address constantly shifting user requirements requires a continuous delivery process.

As such, Forrester Research anticipates a radical change in app devel-

opment philosophy in 2017. The firm predicts that organizations will increasingly move away from coding applications to composing them with reusable APIs that can be mixed and matched "like Lego bricks."

## Analytics

The rise of the Internet of Things (IoT) is delivering on the expected data growth and is driving a surge in data analytics initiatives. IoT makes it possible to examine specific patterns that deliver specific business outcomes, and this has to increasingly be done in real time. This will drive a healthier investment, and faster return in big data projects.

In a recent global survey, the Economist Intelligence Unit found that a majority of executives across various industries rank big data and analytics as the key to their digital transformation efforts. Fifty-eight percent said they plan to invest heavily in big data and analytics technologies in 2017, compared to 36 percent for mobile computing and 29 percent for cloud-based applications.

Hubert Yoshida, chief technology officer of Hitachi Data Systems, says he expects organizations to expand their use of in-memory databases and streaming analytics platforms to provide real-time analysis of developing trends. He says real-time analytics will be connected with Hadoop analytics for further analysis, and results will be stored in an object store for the possibility of future analysis. Analytic tools such as Pentaho will combine structured and unstructured data from different sources to provide a 360-degree view for analysis.

"The highly disruptive digital juggernauts teach us that the ability to wield data effectively is extremely valuable," said Yoshida. "Many of these businesses are fundamentally data-driven with a simple interface and insightful business logic. Traditional enterprises realize now that they have not used their valuable data as effectively as they might have."

# New Threats Emerging



*Experts warn of increasingly targeted attacks that leave fewer clues.*

Emerging malware platforms that are functionally disposable, highly targeted and stripped of any of the typical clues that would normally indicate a computer intrusion will create new problems for IT security in the coming months, experts say.

So-called “ephemeral infections” are designed to be deployed in highly sensitive environments by attackers keen to avoid arousing suspicion or discovery, according to Kaspersky Lab’s threat predictions for 2017. The cybersecurity firm says these infections use tiny but malicious PowerShell scripts that are stored in memory or in the registry. They perform reconnaissance, collect sensitive information, and then disappear without a trace when the infected computer is rebooted.

Kaspersky says another particularly insidious threat gaining steam is “bespoke malware.” Unlike most classes of malware that are designed for wide distribution, this is a custom-designed threat in which ev-

ery feature was altered for a specific target. A notable example of a bespoke malware is the ProjectSauron platform, which was detected in 2015 after spying on government and corporate computers for five years. It used an executable file that claimed to be a Windows password filter. The executable would start up whenever a user logged on or entered a password. Unlike typical malware, it appeared differently on different systems/networks.

Because of this customization, there are none of the telltale signs — known as Indicators of Compromise (IOCs) — that would point to non-human behavior. Without common IOCs such as suspicious file and registry changes, network traffic spikes or unusual account activity, these threats are nearly impossible to discover using traditional methods.

Kaspersky Lab says ephemeral infections and bespoke malware highlight the need for proactive and sophisticated heuristics in advanced anti-malware solutions. The firm also advocates the increased use

of the open-source YARA tool to scan networks and uncover malware patterns. YARA provides a robust language for identifying and classifying malware, making it easier to reverse engineer malicious code.

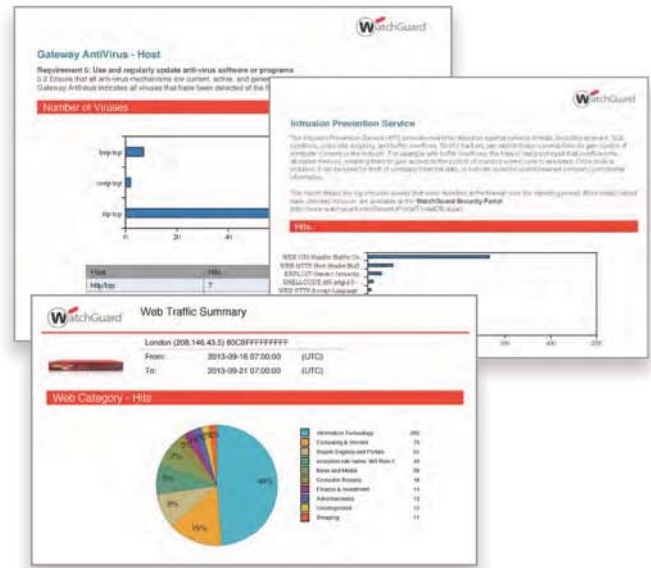
“These are dramatic developments, but defenders will not be left helpless,” said Juan Andrés Guerrero-Saade, Senior Security Expert, Global Research and Analysis Team. “We believe that it is time to push for the wider adoption of good YARA rules. These will allow researchers to scan far and wide across an enterprise, inspect and identify traits in binaries at rest, and scan memory for fragments of known attacks. Ephemeral infections highlight the need for proactive and sophisticated heuristics in advanced anti-malware solutions.”

Other emerging threats identified by Kaspersky Lab include:

- Growing vulnerability to cyber-sabotage: Critical infrastructure and manufacturing systems that are connected to the Internet, often with little or no protection, will be increasingly targeted.
- Mobile espionage: Attacks on mobile platforms will rise as attackers exploit the fact that the security industry has been denied full access to mobile operating systems for forensic analysis.
- Commoditized financial attacks: Expect a rise in attacks such as the 2016 SWIFT interbank messaging heists, in which attackers used commoditized malware available for sale in underground forums or through as-a-service schemes.
- Compromised payment systems: As payment systems become increasingly popular and common, they will attract greater interest from cyber criminals.
- The breakdown of “trust” in ransomware schemes: Ransomware is still on the rise, but there are signs that victims are becoming less likely to trust that attackers will unlock their data upon payment. This could be a turning point in the effectiveness of ransomware.
- IoT device integrity: As the Internet of Things grows, manufacturers continue to pump out unsecured devices that cause wide-scale problems. Vigilante hackers may take matters into their own hands and disable as many devices as possible.
- False flags: As cyberattacks come to play a greater role in international relations, attackers will use misinformation and misdirection to make it appear that a different entity, group or nation carried out the operation.
- The rise of information warfare: The dumping of hacked information for aggressive purposes became pronounced during the U.S. election cycle. In “vigilante hacks,” attackers will hack and dump data, allegedly for the greater good. However, some attackers will try to influence public opinion by manipulating or selectively disclosing information.



# Are you seeing the Big Picture?



WatchGuard Dimension™ is a cloud-ready network security visibility solution that comes standard with WatchGuard’s flagship Unified Threat Management and Next Generation Firewall platform. It provides a suite of big data visibility and reporting tools that instantly identify and distill key network security threats, issues and trends, accelerating the ability to set meaningful security policies across the network.

WatchGuard Dimension helps you spot patterns and make better decisions with network activity presented visually, in real-time, in intuitive and interactive dashboards and reports. The elegant visualizations make it easy to identify potential threats, monitor Internet usage and to gain critical insights about related traffic trends.

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