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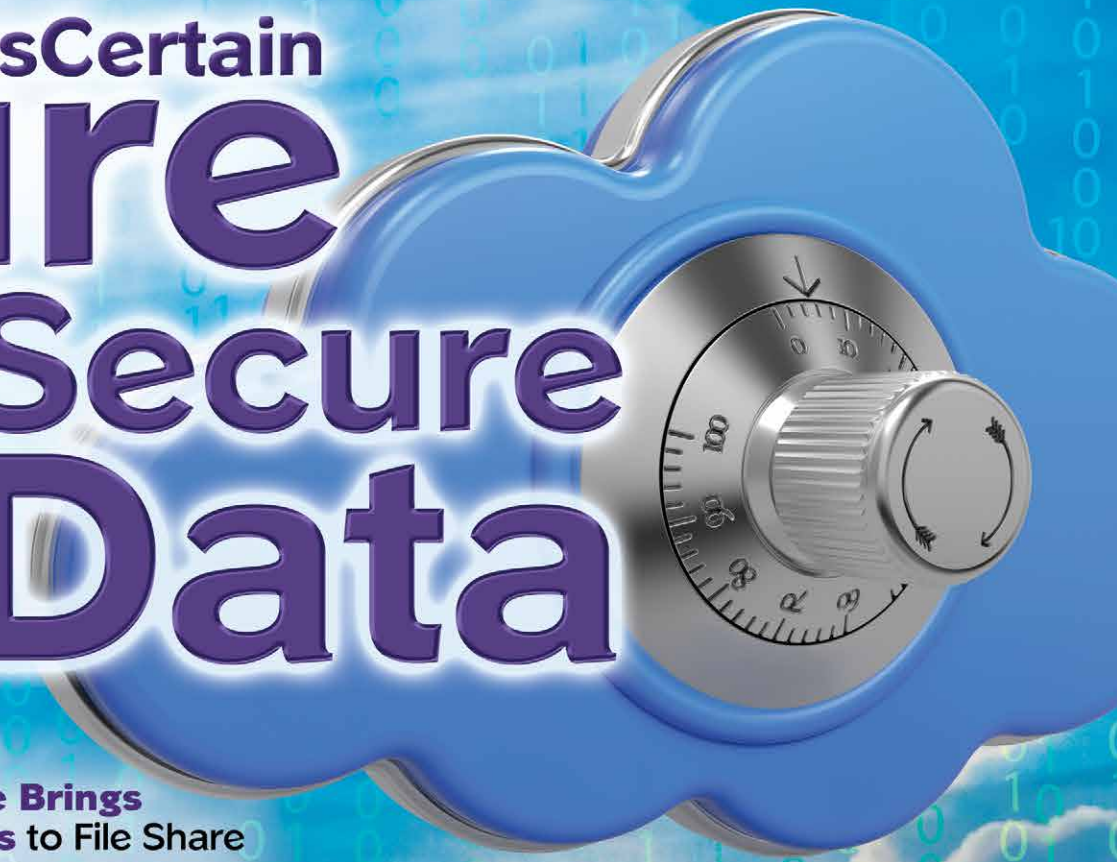


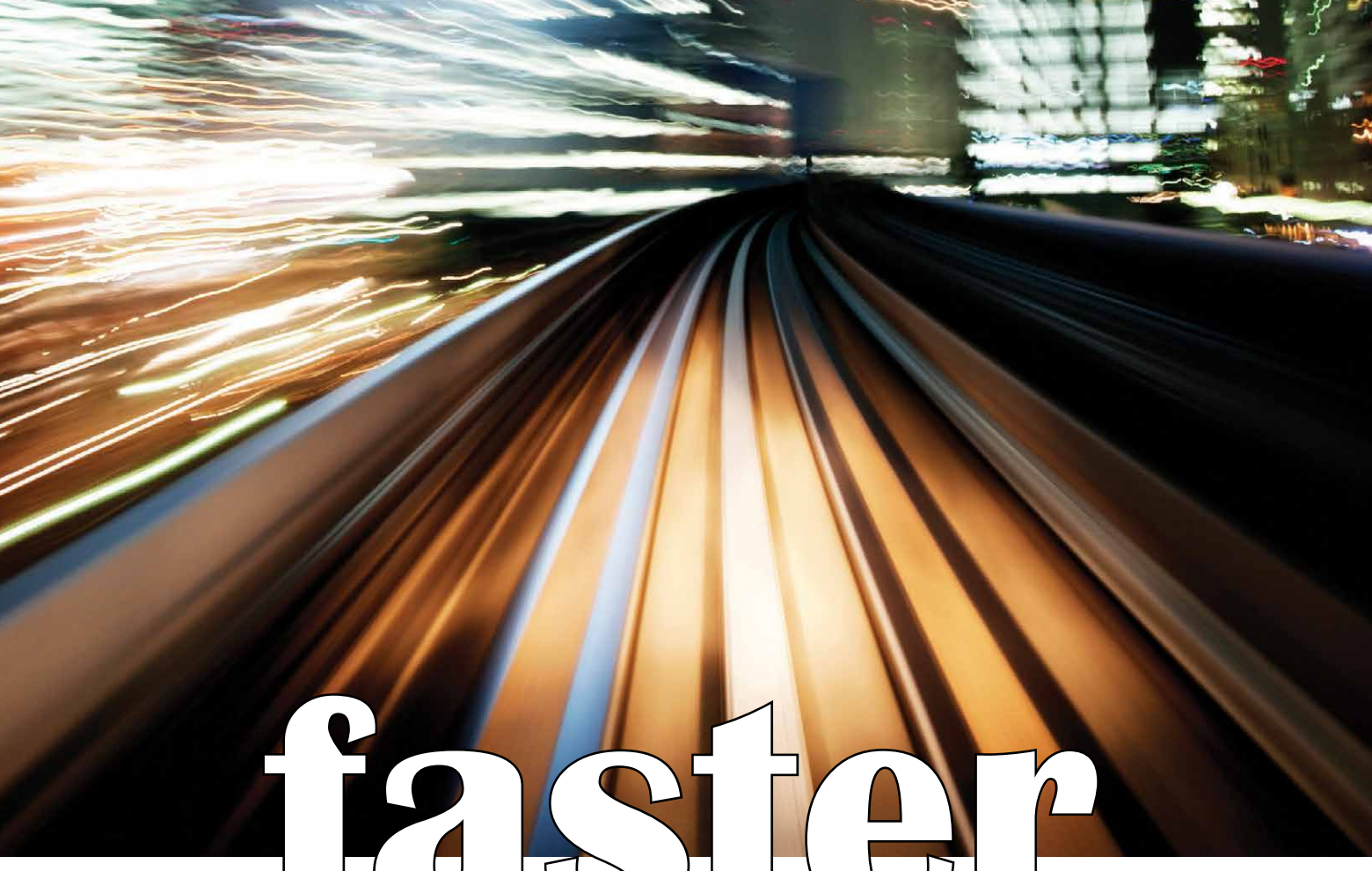
Review: **CertainSafe Brings Enterprise Features** to File Share

PanTerra Networks Leads the Next Wave of **Unified Cloud Services**

MSPs Take Charge of the Cloud

Cloud Storage Pricing: **It's Open Warfare**

See Page 20-21



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by Doug Barney

Two Sides of Cloud Security

In the early days of cloud services, IT largely shunned this new approach. Deep down IT pros worried about losing their jobs, but the reason they gave was usually security problems – true or not. If they couldn't see the servers holding all this data, how do they know it's safe?

Years later cloud providers are the true security experts – they have the money and the staff to safeguard your precious information, and their reputations and business depends on doing just that.

I'd argue that, in general the cloud is more secure than your own shop. Think of how IT shops are staffed. Only the largest shops have dedicated security staffers, and true defense-in-depth infrastructure. Contrast that with large service providers who have robust security teams and the best tools money can buy.

Now surveys are starting to say what I've been saying. Most recent case in point is a Microsoft survey which first reflected the same old complaints.

Cloud Security Hot

Gartner is one many research houses tracking this area and it says security in the cloud will almost double to from $2.13 billion in 2013 to hit $4.13 billion in 2017.

Managed Security is particularly active. Infonetics Research focuses on the overall managed security market, which will exceed $9 billion by 2017, this according to the 'Cloud and CPE Managed Security Services' report.

And this market is poised to grow over the next five years a rather stunning 45 percent.

> 64 percent of those surveyed worry about cloud security and 45 percent fret that they will lose control over their data. Meanwhile 42 percent don't trust the cloud for reliability.

SMBs who haven't moved to the cloud cite security as the biggest concern. In fact, 64 percent of those surveyed worry about cloud security and 45 percent fret that they will lose control over their data. Meanwhile 42 percent don't trust the cloud for reliability.

Talk to shops that made the cloud move and you get the opposite result. That's what Microsoft did, and its result say that SMBs that use the cloud find a lift in privacy, reliability and security.

Of those that used the cloud, 94 percent found improved security through more current anti-virus and spam controls, and in general having more up-to-date systems.

Here's the Rub

The only area where I see the cloud as less secure is government surveillance. These providers are sitting ducks for the NSA. Fortunately the NSA isn't trying to steal data to use against corporations, or infect your computers. They just want a little looksee, which though not great isn't nearly as bad as what the criminals can do. And I still think cyber criminals have an easier time breaking into your shop than they do Amazon AWS.

Tell me where I'm right or wrong at dbarney@redmondmag.com.

by Rich Tehrani

NSA Boosts Global Cloud

Technology is an area where the US is a hands-down winner. We have limited competition considering how much of an edge incumbent companies have, and how fast tech refresh cycles are today.

This, however, was the case before the Edward Snowden revelations which have scared the global tech community enough that local cloud growth in many countries has accelerated. This is especially the case as the Information Technology & Innovation Foundation in August said the leaks could cause U.S. cloud providers to lose 10 percent to 20 percent of the foreign market to overseas competitors -- or up to $35 billion in potential sales through 2016

This explains why Amazon will deliver AWS in China this year and it will have to compete with the new Wo-Cloud brand from China Unicom, what they bill as a full service OpenStack solution. One wonders if nationalism will cause Amazon to lose lots of business to the home team. Additionally, Microsoft and IBM are expanding their offerings in the China cloud market.

In Europe things are dicier as European Parliament is recommending that Europe suspend the Safe Harbor agreement with the U.S. that allows American cloud firms to handle the data of EU citizens. Moreover, Estonian president Hendrik Ilves recently said about the NSA revelations, "This shows that Europe has to do its own thing, its own cloud, its own services, here at a European level, and it is especially important for small countries to do that on a European level, because otherwise the economies of scale will leave us behind" Speaking of Europe, in late December by the European Commission (EC) of the launch of eight contractual Public Private Partnerships (cPPPs) of strategic importance for European industry as part of the EC's Horizon 2020 initiative.

The partnerships will leverage more than €6 billion (US $8.2 billion) of investments to be allocated through calls for proposals under Horizon 2020, the new EU program for research and innovation. One of the areas will be HPC or a super-powerful cloud which will likely help European tech companies take on US cloud leaders.

At the very least, U.S. cloud providers will have to accelerate their build-out of local clouds on various continents, and perhaps even country by country, which certainly won't help profitability.

Of course, in addition to worrying more about cloud geography one has to expect a tremendous increase in interest for cloud security solutions. In fact Gartner says the cloud-based security market will move from $2.1 billion in 2013 all the way to $3.1 billion in 2015.

Infonetics Research looked at cloud security services and saw even more to like. It sees the market growing at a 10.8 percent CAGR all the way till 2015 when it hits $9.2 billion.

2014 will be a good year for local data center builders and equipment providers as cloud companies scramble to build clouds all over the world. From a profitability standpoint, Snowden's NSA revelations have accelerated a trend which is not really a positive for US cloud companies. The only possible plus is this move will help new local entrants who may force the large players to become better in order to compete.

PanTerra Looks to combine UC and Cloud in one solution

PanTerra Networks, the leading provider of unified cloud services for mid-market enterprises, plans to shake up the industry with the announcement of SmartBox, the world's first file sharing service with built-in unified communications. SmartBox will bring the ability to store, share and sync data to its established UC offering by providing a single platform that delivers higher availability, securely controlled sharing, an online workspace and the ability to rapidly collaborate with others. The company believes its converged solution can save its customer 70 percent on OPEX.

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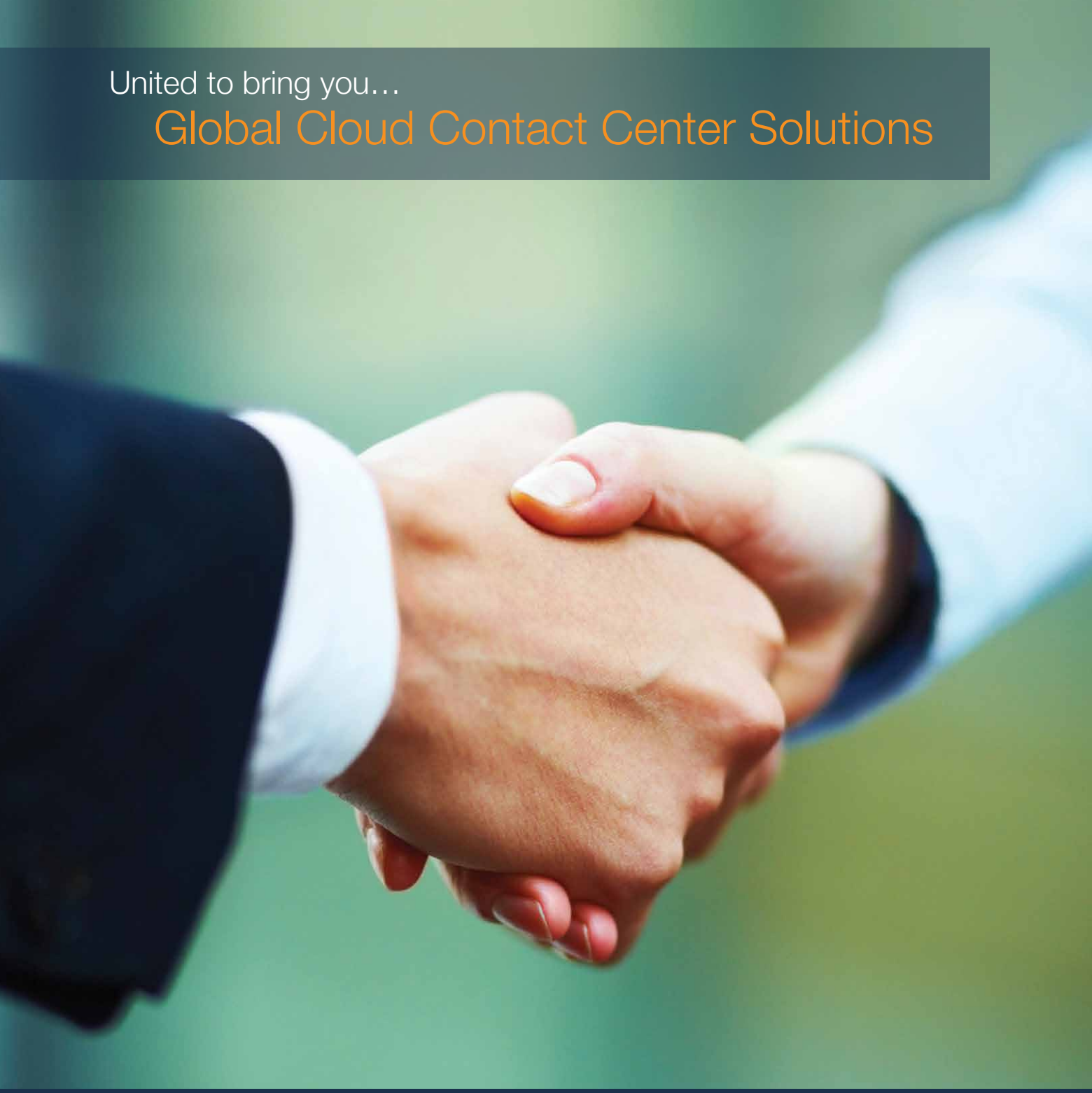

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On the Cover

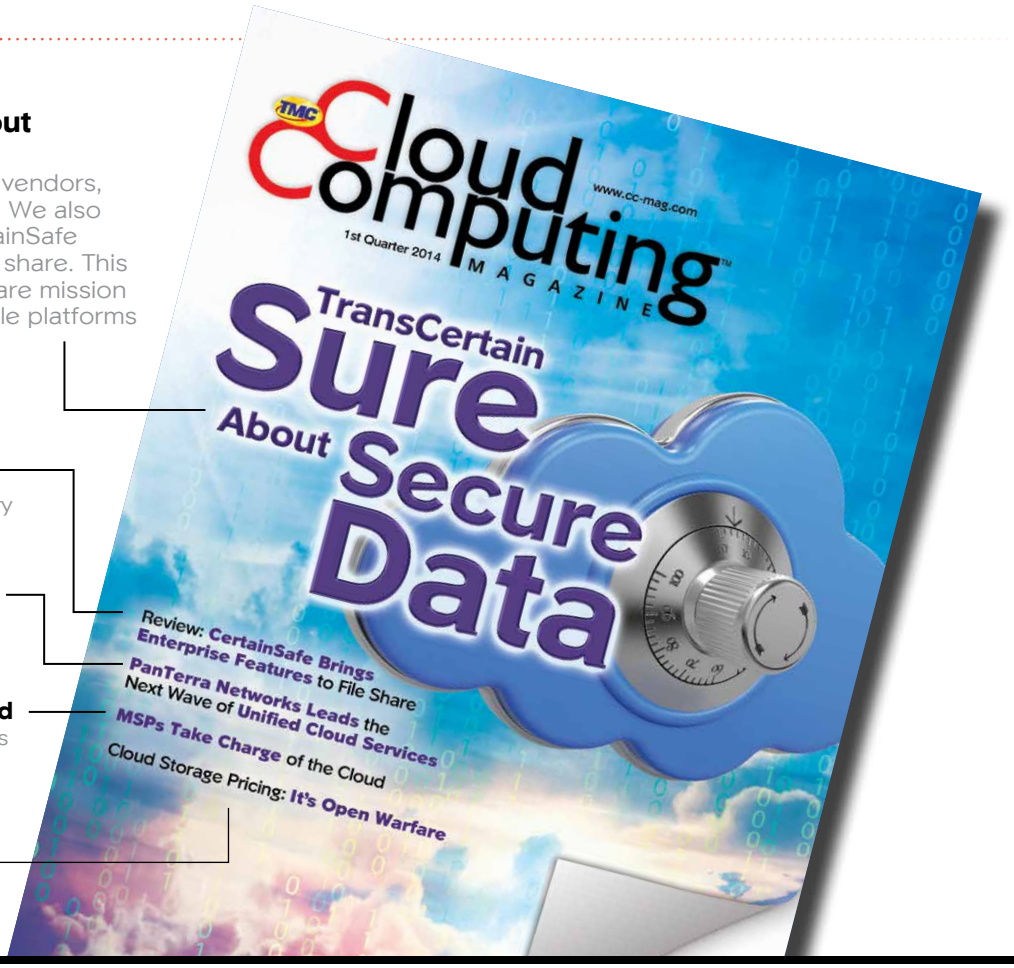
24 TransCertain Sure About Secure Data
There are thousands of security vendors, but none quite like TransCertain. We also review how the company's CertainSafe brings enterprise features to file share. This tool enables organizations to share mission critical information across multiple platforms at a very high level of security

25 Review: CertainSafe Brings Enterprise Features to File Share
TransCertain's CertainSafe enables organizations to share mission critical information across multiple platforms at a very high level of security.

36 Panterra Networks Leads the Next Wave of Unified Cloud Services
Panterra promises to bring true cloud benefits to enterprises.

34 MSPs Take Charge of the Cloud
When you want serious applications, MSPs are increasingly the place to go.

28 Cloud Storage Pricing: It's Open Warfare
Cloud providers pitch backup technology and low, low prices.



Inside Contents

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Egnyte Blasts off with $29.5 Million Round

File storage and sync company Egnyte hopes its most recent round of funding is the just the spark it needs. The company landed $29.5 million, making its total funding close to $60 million.

The company plans to triple the number of workers doing R&D in Europe, and start new offices in Chicago, Florida and New York.

"This new funding will help fuel our global expansion plans, which include a move to our new 30,000 square-foot U.S. headquarters, as well as the opening of a U.K. office early next year," said Egnyte CEO and Founder Vineet Jain.

Egnyte claims to support the sharing of more than1 billion files a day. The private company, now 6 years old, already had funding from Google Ventures, Kleiner Perkins Caufield & Byers, Floodgate Fund, and Polaris Venture Partners.

CloudFlare Sparks Investor Interest

In a Series C round, CloudFlare snagged an impressive $50 million. That means the company has raised more than $70 million in total. CloudFlare is all about protecting Web sites from hackers and at the same time optimizing performance to keep visitors happy and coming back.

Dell Aims $300 Million at Cloud Startups

After decades of success, Dell should have no shortage of cash, and so it is Dell Ventures has a Strategic Innovation fund that now has $300 million work with. The company is aiming the cash at mobile computing, data center technology and storage.

"Dell Ventures is a strategic investment arm of Dell Inc. Using Dell Computers' evolving strategic needs to guide its investment focus, Dell Ventures finances private later-stage technology companies in the following sectors: servers, storage, and related I/O technologies, network infrastructure and management, enterprise software, and security and services. It is a long-term investor," the company explained.

Its latest investment was in security firm Invincea, where Dell was part of a $16 million round. Dell also has a $60 million Fluid Data Storage Fund.

Healthcare Concern Nabs $14 million

ClearDATA specializes in healthcare cloud services, and has $14 million more to play with thanks to a Series B round led by Excel Venture Management, Merck Global Health Innovation Fund and Excel Venture Management.

ClearDATA, as one might expect, focuses largely on helping its some 300,000 healthcare clients comply with HIPAA. Cloud providers serving the health care industry can be held just as responsible as their clients for meeting compliance regulations. This is especially true of storage and backup which should have strong encryption and tough safeguards, such as access control.

Another hot topic for the company is big data.

"The IT demands on healthcare organizations are greater than ever – and they will continue to grow as big data and analytics take hold in the industry," said Darin Brannan, CEO of ClearDATA. "Our investors recognize the escalating need for hosting and services in the cloud that can help these organizations reduce IT costs while improving productivity, reliability, security, regulatory compliance, business continuity and agility," he added.

VR Goggles Worth $75 Million?

Oculus VR has caught the eye of Netscape founder Marc Andreessen whose venture fund just kicked $75 million into the company.

Oculus VR makes virtual reality goggles, and while this may seem like a pure video game play; these technologies have a way of tricking down into our productivity machines.

With Google Glass and wearable computers all the rage, Andreessen may have his eyes a prize far bigger than the consumer market.

Tutor in the Cloud Firm Accepts Cash

WyzAnt, which helps students and tutors connect, has long shunned investment, but just recently accepted an offer it couldn't refuse – a $21.5 million round of initial capital.

The investors likely saw value in WyzAnt's group of over one million students served by a half million tutors.

The round was driven by Accel Partners.

XIOLINK Now Part of Cosentry

XIOLINK late last year was sold to Cosentry, but the MSP wanted to do due diligence on all the details, and so has hired DH Capital to advise it. Investment banker DH is a good pick as it focuses on SaaS, private cloud, colocation, managed infrastructure and managed hosting.

Cosentry is a Midwest service provider which grew greatly having swallowed up the nearly 15 year-old XIOLINK. "DH Capital's hard work and advice was crucial in completing this transaction. We recognized the importance of partnering with an investment banking team that truly knows the sector," said Brad Pittenger, Co-founder and CEO of XIOLINK. Cosentry serves the Midwest with data centers that total 48,000 square feet.

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by Drew Walsh, Shango

Exploring Cloud-based Automation for Ordering Over-the-Top IP Services

The explosion of IP has changed the playing field for traditional carriers and operators, particularly in light of the increasing variety of devices and applications driving demand in the unified communications market. I speak with communications service providers throughout the industry, and regularly hear about the effects of these changes, particularly for over-the-top (OTT) service providers. Internet telephony services providers (ITSPs) and wholesale aggregators, for example, are seeking ways to more easily source, as well as unify and integrate, their product offerings in order to more nimbly serve their own customer expectations for a new generation of apps and services.

My daily conversations with these emerging VoIP service providers and customers also reveal that the traditionally slow, manual 'swivel-chair' processes involved in procuring and provisioning VoIP services are very labor-intensive. Standard processes for acquiring, activating, tracking and managing inventory such as phone numbers and related features need remedying, especially given their potentially detrimental effect on new and existing revenue channels.

With the potential of SaaS or cloud-based sourcing and fulfillment process automation for telecom supply chain integration, many OTT service providers are moving beyond traditional methods and typical infrastructure complexities. With the promise of increased operational efficiency and growth across revenue channels, the cloud is enabling ITSPs and wholesale aggregators to source off-net services from their carrier vendors more quickly and even on-demand.

With pieces of the product puzzle residing on different carrier or operator networks, leveraging services from vendors to bring a product to market could take these OTT players months to do otherwise. These realities affect not only sales and customer relationship management, but are also taxing on internal operations when variables like cost, resources and even development work are brought into the mix.

Using conventional standards for inventory ordering and tracking, OTT players can spend hours or even days just trying to find or move inventory around while contending with various B/OSS and activation systems; not to mention accounting for a vendor's inventory acquisition processes or portals. It is not uncommon for provisioning errors to be compounded; often resulting in phone numbers inadvertently recorded multiple times in spreadsheets or internal CRM systems, billing systems and switch platforms.

When considering methods for automating inventory sourcing, some ITSPs have taken steps towards building or outsourcing the development of in-house solutions, projects which are expensive and time-consuming. These projects typically result in Web-based platforms that integrate internal information systems and general Web tools, such as e-mail or fee-based file sharing sites used to move inventory and orders around.

However, these homegrown solutions often cannot easily scale or integrate with trading partner infrastructure or fulfill specific integration or functionality specifications without significant capital and operational resources set aside for large system integrations. These methods require not only a great deal of resources, but also thorough consideration of other variables that can affect scalability and growth potential over time.

Development projects require internal systems to have protocols for every new vendor or customer relationship—which require new agreements, processes, features, and services to be enabled. There is also the possibility that new APIs would need to be developed or augmented in order to tap into various networks on-demand; in the case of legacy carriers, the technology may not even be available. In addition, depending on the industry knowledge of outside development teams, compliance-related issues may be an issue.

After deployment, system enhancements would need to account for the combination of access, assets, and applications from multiple carrier vendors that are part of the OTT product supply chain. Having to update custom-built solutions in order to orchestrate automation processes across pricing, activation and porting processes built on a point-to-point OSS platform can often constrain long term growth.

Therein lie the underlying challenges of in-house IP service order management and tracking systems. While investing in certain systems and technologies can improve activation and provisioning intervals in-house, without ubiquitous unification and automation of the communications supply chain as it grows, users are left to augment their systems as they expand operational capabilities, supply relationships and product offerings.

Using a cloud-based supply chain integration solution, ITSPs and wholesale aggregators can bypass large, traditional, and holistic OSS deployments and overcome home-grown system constraints. The inherently available simultaneous workflows and common APIs of a cloud-based solution can handle all necessary orchestration, activation and service fulfillment, bonding selected services and features to a number, hosted seat, or OTT application in a centralized location. As a result, these new OTT players can improve the integrity of their products and present best-of-breed apps and services out across their channels far more seamlessly.

Drew Walsh is an account manager at Shango, a community marketplace enabling automated supply chain integration for buying and selling IP-enabled services. To learn more about Shango, visit www.shango.com.

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ATLANTA • GEORGIA

by Francis Ferguson, tw telecom and Prayson Pate, Overture Networks

Simplifying Private Cloud Delivery: **IP VPNs and Private** Cloud Connection

It's All About IP

In the last issue of *Cloud Computing* magazine, we talked about Private Cloud Connect, which provides a standardized Layer 2 connection using Carrier Ethernet EVPL to connect an Enterprise to a Cloud Provider. With this basic connection in place there is another aspect that needs standardization: the IP layer. A successful model must account for the fact that while the Private Cloud service is being delivered over Carrier Ethernet at Layer 2, the cloud service transport is IP at Layer 3. As a result, IP routes or subnets need to be coordinated between the Enterprise and the Cloud Provider. The candidate approaches for coordination of routing information include:

- Static routes
- RIPv2
- OSPF
- IS-IS
- BGP

The preferred protocol for this is external BGP (E-BGP). The Customer Edge (CE) and the Cloud Provider's Virtual Customer Edge (V CE) use E BGP to exchange routing information on a per EVC/Cloud Provider basis.

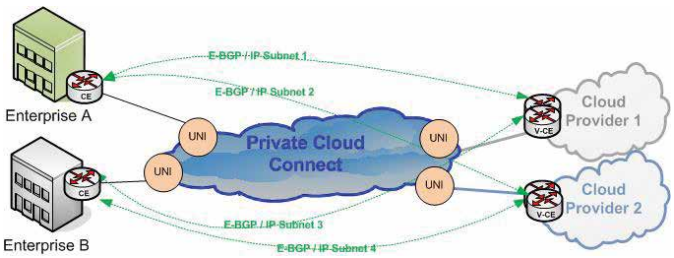

Figure1: BGP Peering

E-BGP is a standard part of Layer 3 or IPVPNs, which are widely deployed across Enterprises to interconnect branch, data center and head offices. The next figure shows a scenario where the Private Cloud Connect and IPVPN services are handled in parallel.

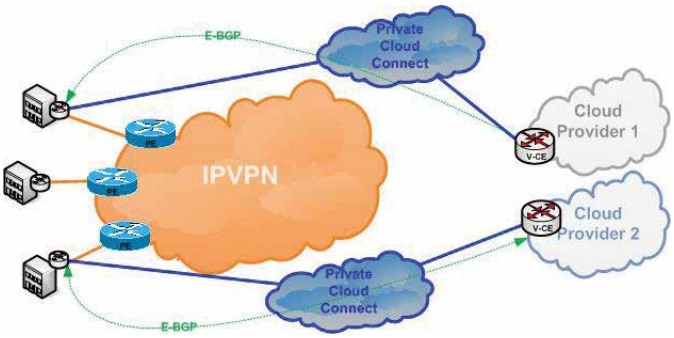

Figure2: Parallel IPVPN and Private Cloud Access

An extension of the parallel model is to extend reachability of the IPVPN into the Cloud Provider, as shown in Figure 3. This combination allows all sites on the IPVPN to securely access resources from the Cloud Provider. Integrating cloud services and IPVPNs is therefore a key requirement Service Providers.

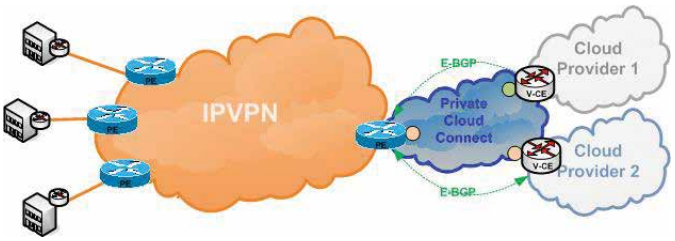

Figure 3: Combined IPVPN and Private Cloud Access

The Private Cloud Connect model delivers a VLAN based handoff which aligns with option A of the IPVPN Inter provider model. It again standardizes on the Private Cloud Connect model with an E BGP routing overlay between the Provider Edge (PE) and the Cloud Provider's V CE.

What about Class of Service (COS)?

The fundamental use of CoS is to ensure that business-critical applications get prioritized over non-critical applications during times of congestion. Some Enterprises and or Cloud Providers may not need a CoS enabled Private Cloud Connect. The public internet is a best effort network today and it works quite well as long as the appropriate bandwidth is available. However, when CoS is needed, the content owner (Enterprise/Cloud Provider) can best assess what applications should be prioritized over others. Once traffic is classified into the appropriate service classes, then the network can provide the proper treatment.

When using a CoS enabled service, both the CE and V CE routers must shape the traffic towards the UNI or E NNI to adhere to the contracted service bandwidth, and mark it (802.1p) accordingly. The Service Provider will use ingress policing to enforce contracted service bandwidth, so the goal is to have the CE and V CE intelligently drop traffic based on priority rather than have the Service Provider do it.

The goal of the Service Provider is to meet or exceed the SLA associated with the Private Cloud Connect service. When enabled, CoS can provide additional visibility and control to enhance the performance of the applications running in the cloud. The Service Provider can offer CoS-enabled EVC based either on Layer 3 DSCP or Layer 2 802.1p.

With the non CoS aware EVC based model, all traffic within an EVC is treated the same as it traverses the Service Provider network, under the assumption that the traffic was already scheduled and shaped by the CE/V CE router. The Service Provider may offer individual EVCs to have different aggregated CoS treatment (Low, Medium or High) that will drive different SLAs around packet delivery, delay and jitter. With this approach the Service Provider is not looking and acting on the 802.1p packet header, nor is it changing or reordering the packets as they traverse the network.

The second approach is a CoS enabled service. With this approach it is still recommended that the CE and V CE router traffic shape traffic towards the UNI/E NNI. However, the Service Provider network will classify traffic based on the 802.1p. With a CoS enabled service, the Service Provider can differentiate traffic into service classes, police the individual service classes and provide different SLAs for each of the service classes. During times of congestion the Service Provider will intelligently drop traffic based on the service class. This approach allows for greater visibility and control of traffic across the Service Provider network. In this application standardizing on 802.1p marking/classification will reduce the overall complexity.

Another design issue for Private Cloud Connect is the alignment between the Enterprise, Service Provider and Cloud Provider around policing and traffic shaping on Layer 2 Ethernet packets (with or without VLAN headers) versus Layer 3 IP packets. In a CoS enabled network it is extremely important to ensure that traffic is intelligently dropped. Without this alignment it is very easy to have improperly dropped traffic due to micro bursting of application data.

The Benefits of Automation and Apps

Once the Private Cloud Connect model has been simplified and standardized, it becomes possible to apply automation to give the end user a self service model. The next figure shows a Private Cloud Connect service that has been enhanced with a "Cloud App Store".

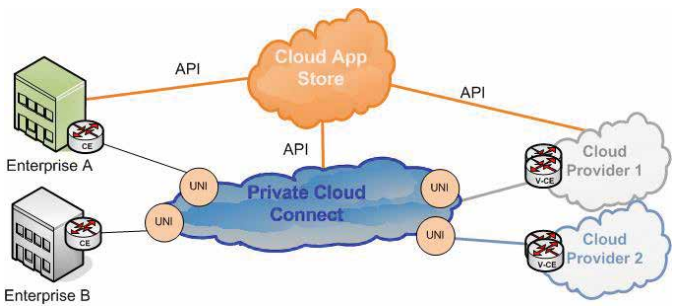

Figure 4: Private Cloud Connect and Cloud App Store

The goal of is to automate the creation and modification of the Private Cloud Connect and the cloud services such that the Service Provider and Cloud Provider can deliver a simple, dynamic, flexible cloud ecosystem to the Enterprise.

As shown in Figure 4, the "Cloud App Store" provides a centralized self service portal that can be used to gather the required service attributes. These attributes are then communicated via the appropriate standard APIs and schema to instantiate or change the end to end service across both the Service Provider and Cloud Provider.

This model also enables the possibility of cloud based services far beyond what is available today. Options include:

- Managed router/firewall in the Service Provider
- Layer 3 VPN to the Cloud
- High performance mission critical applications

So, What Do We Do Next?

In order to achieve the goal of more efficient delivery of dynamic private cloud services, the industry must work together to change how cloud services are delivered. Some requirements:

- Service Providers and Cloud Providers need more peering points in data centers.
- Equipment providers must provide open APIs to support dynamic interaction between cloud and network services.
- Everyone must work together to solve the problem of how to manage the connection to ensure quality of experience. This will require the network to have a new level of application awareness, which is a problem that hasn't yet been solved.

If we can meet these requirements then the benefits are compelling:

- Operators can implement valuable and dynamic services that are controllable by users.
- Operational models are simplified, reducing costs and errors.
- Deployments are accelerated due to automation.
- Better network performance and SLAs are possible.

There is a lot of work to do. However, the benefits to the users and suppliers of cloud and network services are huge.

About the Authors

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by Mike Byrnes, AFORE Director of Marketing

Encryption as a Service – Removing Barriers to Cloud Adoption

While virtually all organizations from small businesses to large enterprises to government departments see cloud as a critical element of their IT strategy, the reality is that for many years to come, applications and computing will be actually distributed on a hybrid cloud architecture. The hybrid cloud is a heterogeneous environment that includes both the private cloud (virtualized enterprise datacenter) and a variety of public clouds that customers will change out or add to the mix as needs evolve and faster, cheaper, better and speciality-focused providers emerge.

Regardless of the cloud deployment model, all predictions assert that cloud is the next generation computing paradigm. But, if this is true, what's holding things up? Why aren't more critical workloads running in the public cloud? Is it possible there's a storm brewing in the cloud?

Security and the cloud

While this radical IT transformation to the cloud takes off, several wrenches are thrown into the works, including cyber surveillance, concerns about data remanence, strengthened regulatory compliance laws, shared multi-tenant infrastructure and advanced cyber-attack vectors. As organizations look to take advantage of the cloud, recent headline news expose the real-world risk of intellectual property theft, customer PII disclosure, compliance fines and insider data leaks. In a model where organizations are seemingly giving up some of their IT control, the questions from the boardroom start. Who is looking at our data? Are we still in compliance? What if we want to change providers? How well are we protected against data lost and theft? While some of these issues are more perception than reality – the bottom line is that moving critical enterprise workloads to the cloud requires careful planning. These issues are all driving the need for a new class of security designed for the hybrid cloud – one that is easy to deploy, scales on demand, is adaptable, requires minimal specialized IT training and ensures business agility is not impacted by burdening users with cumbersome tasks.

Encryption as a Service

Encryption is not a new technology and is broadly deployed on the Internet for securing connections for activities including online banking, shopping and even accessing e-mail accounts. Encryption of enterprise data however, is less commonly deployed and has traditionally been reserved for "elite" organizations with highly skilled IT staff, big budgets, targeted use cases and implementations that place the burden of deciding when and what to encrypt on the end user. But with the advent of virtualization, computing technologies and transformation in how security is deployed, next-generation data encryption solutions optimized for the cloud have emerged which offer Encryption as-a-Service (Eaas), providing any type of organization with a simple way to secure their sensitive cloud data. Encrypting data in the cloud can address a broad range of concerns by protecting data from peeping eyes and data theft as well as providing a pragmatic way to destroy your data when you leave a cloud provider.

EaaS use cases are quite numerous but some examples include securing hosted virtual desktops and associated user data, securing content repositories such as Microsoft SharePoint, protecting the integrity of boot volume images, encrypting critical workgroup files, folders or even securing entire application stacks in very sensitive work environments. In all cases, EaaS is an elegant and effective solution to segregate and protect data in a multi-tenant cloud architecture.

While there are different technical approaches, EaaS typically involves the cloud service provider deploying a virtual storage encryption appliance that logically resides between the customer's application/workload and cloud providers physical storage array. Provisioning /deployment is easy as customers simply need to mount the storage encryption appliance as the target storage location using standard interfaces such as NFS, CIFS & iSCSI. Encryption key control is a critical element of a cloud data security strategy as the key manager ultimately determines who has access to encrypted data. Best-practices extend key control to the customer and require enterprise-side software to define and manage security policies. More mature EaaS offerings will provide the ability for the customer to extend data encryption to secure workloads in other parts of their cloud including the private data center or even other public cloud instances. As a result, the customer has a single security management plane across their entire hybrid cloud.

EaaS offers cloud customers a simple data security solution that solves some of the top concerns with moving enterprise workloads to the cloud - all available without up-front CAPEX expenditures. In essence, by instilling trust and removing barriers, EaaS becomes a cloud-enabler. For cloud service providers, EaaS enables new value-added services to be offered on top of existing as-a-Service offerings driving new revenue streams and providing competitive differentiation from other service providers in a crowded marketplace.

Different strokes for different folks

While cloud service providers will be eager to offer turnkey EaaS as an attractive add-on to their suite of Everything-as-a-Service (XaaS) offerings, many organizations are becoming increasingly comfortable deploying their applications within the public cloud and often find this the best approach to meet their business needs. IaaS offerings from providers such as Amazon AWS and Microsoft Azure offer highly automated cloud computing deployment models and management tools that dramatically reduce complexity and ease the provisioning, management and even payment effort for customers. Deploying a data security solution is as straightforward as deploying any other IaaS software.

Whether your cloud strategy involves simply backing-up enterprise data to an offsite service provider or is as elaborate as building a multi-tenant hybrid cloud that includes a mix of private data center and multiple public clouds to support a heterogeneous group of internal departments, data encryption designed specifically for virtualized environments offers a simple and effective approach to securing sensitive data.

Mike Byrnes serves as AFORE Director of Marketing with 20 years' experience in technology product marketing with a focus on internet security and business communication systems.

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by Peter Radizeski, RAD-INFO, Inc.

Are You Ready for the Question?

You are going to get the question. Are you ready for it?

The question will be: What about the privacy of my data? What kind of security/encryption/privacy/protection will I get for data I store with that cloud provider?

At the Wearable Tech Conference, Adidas was asked where the data from its MICOACH smart run wristwatch is stored? Who has access to that data? How long is it stored? Then what happens to it?

The new HIPAA/HITECH rules require vendors to supply compliance documents. How HIPAA compliant are you if the NSA is reading your data?

Obviously, the privacy and protection of a private cloud will be different than a public cloud, but even a private cloud outsourced to a vendor will put up a firewall between your data and the police authorities who want to view that data.

The question of data integrity used to be about how well the data is stored and backed up. Now data integrity is about privacy and security protection. You will need to have answers to these questions.

Likely, you will need a compliance document from the vendor. It would be the first thing that I would ask for when selling SaaS. Even in IaaS and PaaS systems, the prospect will still likely want (or need) a privacy or compliance document.

We see carriers like Netwolves and EarthLink packaging up compliance like PCI and HIPAA. Soon vendors will need to package up privacy. For those selling globally, Europe has more stringent data privacy concerns and laws than the US. Be aware of them. Ask your vendors for documentation about these (very real) concerns.

As we have seen in the last few years with compliance – GLBA, SOX, HIPAA, PCI – companies will be asking for clarification or written policies about data protection. It will be sooner for global customers as well as for publicly traded companies. The best way to be ready is to start asking these questions yourselves now. Be the customer advocate in this arena.

Peter Radizeski, president of RAD-INFO INC, a telecom go-to-market consulting firm

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by Jason Alley, Interactive Intelligence

A Vison of the Cloud from a Visionary CEO

"In our industry, if you're not bold you're obsolete." Interactive Intelligence CEO Don Brown makes that claim in a new Movers & Shakers video from Frost & Sullivan. In his appearance on camera, he talks about how the cloud is poised to reshape the customer experience boldly — and he's right.

"People's modes for social interaction are very different today, which has changed their customer service expectations," Don says. "The cloud is playing a vital role in this change because it enables companies to offer customers new communications options more easily, such as Web chat, text messaging, and video."

This is multichannel, courtesy of the cloud. Especially for companies whose outmoded on-premises systems still limit them and their customers to one-dimensional service channels.

The cloud will provide access to an increasing amount of intelligent and predictive information. Companies can use this information and other "intuitive new tools from the cloud to create a customer service experience that today they can only dream of."

Justin Santos is a senior consultant for The Customer Experience Company says this:

"What we are seeing is that cloud computing mixed with cheaper devices, better connectivity, and a more socially engaged market, is driving changes in behavior and increasing the power of disruptive innovations. Where this is a physical product or a service such as a financial product, you can go from needs awareness to fulfillment via your smartphone and the cloud almost instantly. Your customers expect to be able to do the same thing. They don't care how hard it is for you because, if you don't meet their expectations, your competitor is only one click away.

As relevant as the cloud has become to the customer experience already, its relevance is still growing. Expectations from customers are changing continually and faster than ever, and delivering what customers expect won't always be possible using traditional communications methods. Nor will it always be viable financially.

> Multichannel options will be the norm. Remote agents will become more commonplace, all over the world. Big data and analytics won't just drive changes in customer behavior, they'll redefine it.

Viewing the cloud of the future as our CEO does, it will be more nimble, powerful and functional in what it can do, and in what businesses can do to service their customers. Multichannel options will be the norm. Remote agents will become more commonplace, all over the world. Big data and analytics won't just drive changes in customer behavior, they'll redefine it. Mobile apps will be more intelligent, and "live." And inventive cloud resources like Salesforce will be even more inventive.

Cost-wise, cloud innovations will continue to become more affordable by way of their fixed costs and packaged offerings, and businesses of all kinds will buy them from companies who specialize in developing and maintaining such innovations. Call it economy of scale. Or as Don says in the Frost & Sullivan video, the value of the cloud will continue to come in many forms. "Combined with the benefit of offloading IT staff from the daily grind of things like server updates so they can focus on projects that directly impact the customer experience, the cloud is by far the most impactful technology trend today."

For the customer experience of the future, the cloud will interweave the consumer and all of their devices with your contact center, subject matter experts, remote agents and workers, business partners, suppliers, and business systems more tightly than ever.

Jason Alley is solutions marketing manager at Interactive Intelligence.

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by Lori MacVittie, F5 Networks

Cloudy SDN

SDN enables what cloud providers have in the data center. Or does it? Where does SDN end and cloud begin?

Even though Cloud is older, technologically, than SDN, there still remains many misconceptions regarding what, exactly, a cloud comprises. Cloud is, at its core, about the abstraction of resources that can be provisioned and managed programmatically. Whether we're talking IaaS or PaaS or even SaaS, Cloud requires the use of software-defined techniques to achieve the agility and cost-savings attributed to it.

SDN - Software Defined Networking - has at its core similar tenets. It is software-defined, using APIs to programmatically provision and manage abstracted network resources. The separation of control plane from data plane is an abstraction, turning the network fabric into a programmatically controlled set of resources that enables agility and, through operationalization, cost-savings.

The relationship between cloud and SDN is, well, cloudy primarily because of the focus on the use of SDN architectures to dynamically manage traffic. Poor network conditions such as congestion or connection faults can be remediated through what may sometimes be referred to as self-healing networks. But this capability is only realized because of the abstraction inherent in SDN architectures, and the ability to automate modifications to the forwarding tables used by switching and routing infrastructure - whether software on commoditized servers or traditional, purpose-built hardware. The automation, the operationalization if you will, of the network is achieved via a common, abstracted and programmatic interface: an API.

If you consider what you need to build out a cloud environment, you'll recognize that you'll need to abstract the network, the application service network, the compute, and the storage. Each of these sets of resources must be able to be automatically provisioned and managed via some sort of common programmatic interface. There are a variety of ways in which you can abstract the network, one of which might be the use of SDN technologies. To enable cloud computing, you have to be able to dynamically provision the network, a task at which SDN is eminently suitable. That is, after all, what's happening under the hood when a forwarding information base is updated on a switch. A network service - routing or switching - is being provisioned. Key is that this provisioning occurs programmatically, via an API, as that means you can orchestrate the provisioning of network resources and services as part of the overall process.

Cloud providers, obviously, have already achieved this level of automation and programmatic control. Consider what's happening under the covers when you provision a virtual machine in a cloud environment. There are IP addresses that must be assigned, routing and switching tables that must be updated, and firewall rules that must be put into place. That's all happening via software. There's no bank of operators on the other end that manually execute these processes. It happens via software, via APIs. One of the enabling technologies can certainly be called SDN, as it fits the basic definition of what an SDN is: programmatic control over abstracted network resources. Separation of control from data planes.

Whether they've done so using commoditized or commercial products is irrelevant because the components from which the network services are derived are abstracted and integrated into a larger automation and orchestration framework that ultimately creates what we, on the outside, would call a "cloud". The same is true at other layers of the data center stack. Application services - load balancing, acceleration and optimization, and application security - must also be abstracted and managed programmatically. Virtual machine management enables programmatic control over abstracted compute resources. Every layer of the data center stack is abstracted and programmatically controlled, enabling an automated provisioning and management system to orchestrate the data center.

What About OpenStack?

Where do technologies like OpenStack fit into the picture? OpenStack and other cloud management platforms enable a software-defined environment. That is, they enable through programmatic interfaces the ability to automate and orchestrate the provisioning and management of data center resources. Some might refer to the resulting environment as the Software-Defined Data Center (SDDC) due to the use of software to provision, configure and manage data center resources.

SDN can fit quite well into such environments. Most enterprise-class network elements already provide a programmatic interface (API) through which they can be managed and controlled. This API enables integration with cloud management frameworks like OpenStack either directly or via a more localized controller (the SDN controller, if so enabled). It is the cloud management platform that pulls together the various data center components - from storage to compute, from application services to network services - and provides the means to manage them all holistically via software.

It's important to not get caught up in current tendencies to focus only on the run-time aspects of SDN. While SDN is certainly capable of adjusting the network in real-time to mitigate a variety of network-related issues that may impede performance or availability, it is not the only capability SDN enables. It is also well-suited to enabling the programmatic provisioning and management necessary to implement a cloud computing environment.

Lori MacVittie is senior technical marketing manager at F5 Networks.

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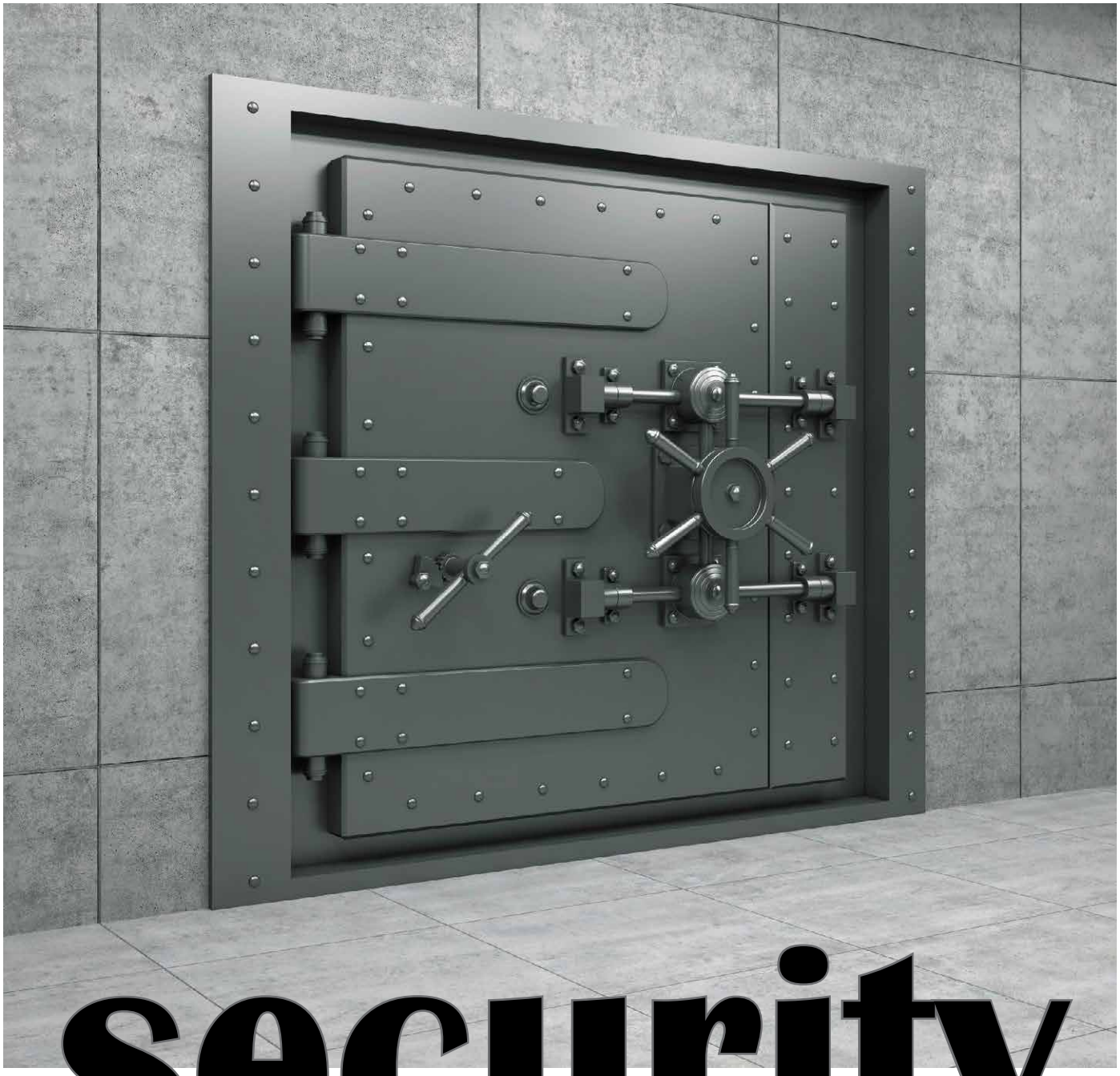

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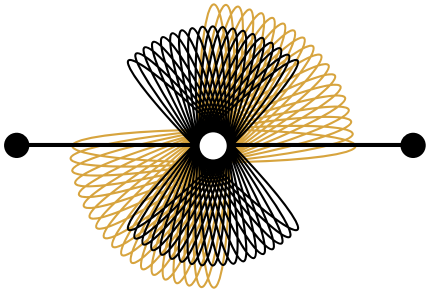

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Cloud or On-premises

by Doug Barney

TransCertain Sure About Secure Data

There are thousands of security vendors, but none quite like TransCertain. The company's flagship product is CertainSafe, now on version 2. CertainSafe is really a vault for your data in the cloud, offering secure Web access. Details on this tool can be found in Tom Keating's review which follows on the next page.

The PCI Level 1 DSS certified compliant tool is particularly suited for those industries that fall under compliance regulations such as the financial and health care sectors. The company is also going after legal and professional markets. Pricing is based on usage and data volumes.

Company founders have an extensive background in credit card payment processing, and had clients looking to add this level of security to other data types such as customer data.

TransCertain was founded not just to secure all this data, but make it easily and safely available.

Today the company offers what it calls its "Security – Storage - Accessibility -Systems -as-a-Service platform which utilizes highly advanced, proprietary, MicroTokenization and MicroEncryption to protect and safeguard personal, corporate, private and other sensitive information and data," the company explained.

The company is looking to expand its channel base by developing strategic partnerships, recruiting VARs, and offering tools on a white label basis, said executive vice president Steven R. Russo. So what's in it for partners? "Our technology is not available anywhere else. Our integration capabilities are simple and easy. We bring a significant opportunity for them to address cyber security concerns of their existing client base, and allow them to profit from that relationship," Russo argued. "Our ability to provide a "complete solution" is what significantly differentiates us from the rest. From protecting data at rest, to protecting in while in transit, making it available, and putting data to task, including any form of payment processing if required, is a significant differentiator. We bring a significant opportunity for them to address cyber security concerns of their existing client base and allow them to profit from that relationship. Depending on the relationship we can potentially private label for them or their client."

TransCertain is also seeking technology partners such as fingerprint scanning companies, facial recognition vendors and electronic data key authentication providers, and in general "businesses that compliment what we have that can take advantage of their existing customer base to add value and revenue, providers of software that can build in data security onto the back end if a client decides to engage with their offering, and data centers looking to provide added security for small-medium-large companies that need help," Russo said.

The Road Ahead

The company isn't planning on sitting still, and is redoubling the marketing efforts behind products such as CertainSafe.

TransCertain's Russo

In fact, TransCertain just hired three marketing companies to help build its brand.

And it plans on reacting to changes in security threats.

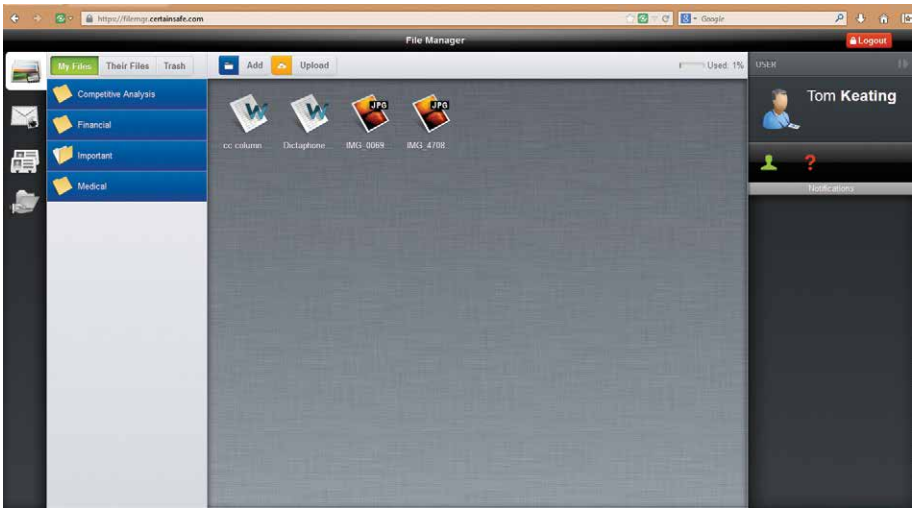
"Security threats are increasing daily. With state and rogue sponsored attacks from China and other nations, security on every level is a major issue. No entity public or private is immune from being attacked. Our platform removes these threats or certainly mathematically mitigates them from happening. By removing the sensitive data and replacing it with worthless tokens there is nothing of value to the hacker when they get into a system! We have made it mathematically improbable, (if not impossible) for a MASS DATA BREACH to occur. That is a huge piece of our platform. Additionally we only secure the sensitive parts of information so that helps dramatically maintain speed and efficiency of systems," Russo concluded.

by Tom Keating

CertainSafe Brings Enterprise Features to File Share

There is no shortage of cloud-based file sharing solutions on the market, such as Box, Dropbox, or Skydrive, which are very popular with consumers. However, businesses often require a higher level of security due to compliance regulations. Even if compliance isn't a concern, many businesses want stronger encryption levels for peace of mind, especially when you consider several high-profile hacks of supposedly secure cloud providers.

Figure 1. CertainSafe File Manager



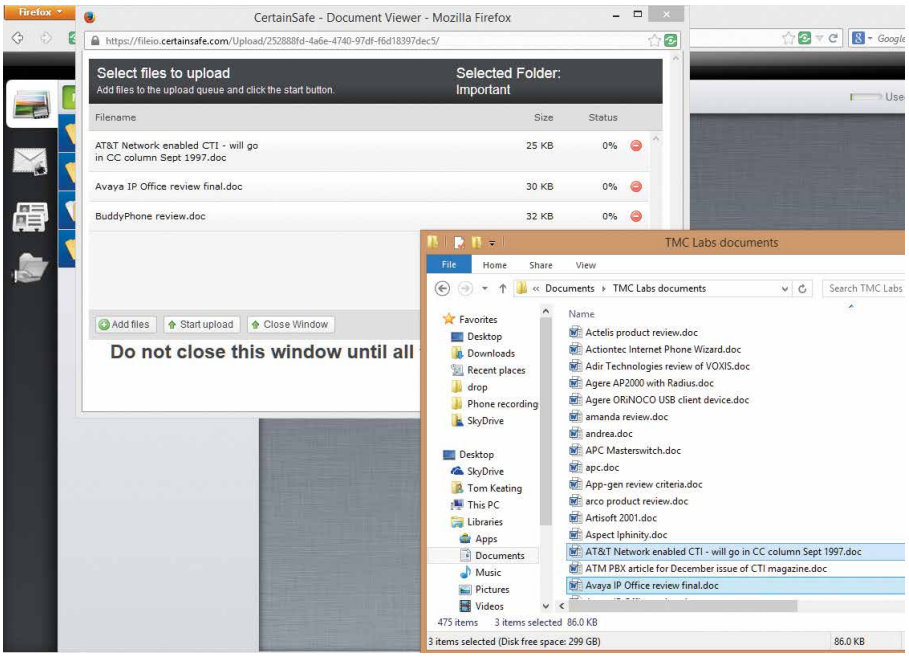
TransCertain's CertainSafe enables organizations to share mission critical information across multiple platforms at a very high level of security. CertainSafe sports PCI DSS Level 1, plus AES256-level encryption, with support of up to 1024-bit or any other custom algorithm that may be required. TMC Labs reviewed CertainSafe a recent issue of Cloud Computing, and it earned favorable marks. TransCertain has made a range of improvements in the now shipping version 2, so we thought it was worth a second look.

CertainSafe sports PCI DSS Level 1, plus AES256-level encryption, with support of up to 1024-bit or any other custom algorithm that may be required.

If you aren't familiar with CertainSafe, the platform is what TransCertain likes to call "the virtual safety deposit box". This is for your files where you need compliancy and or high levels of security such as medical records, financial data, or files requiring PCI compliance. You don't use this platform for mass storage backup of all your files, but instead you upload only your most sensitive files that you need to store and share.

When we first logged into CertainSafe as a new user, we were prompted to pick out own security questions and then we could set how often after we login that we're challenged. You can choose to be challenged, i.e. once per week, once a month, randomly, etc. Once logged in, you can create folders and then share the folder with other people, including people who are not currently CertainSafe users. Any CertainSafe user can share their folders and files with anyone -- though non-CertainSafe users only have "read" access. This is a non-editable secure view of the file and cannot be downloaded or printed. Dragging and dropping files from your file manager (i.e. Windows Explorer, Apple Finder) into CertainSafe is very easy. Leveraging HTML5, you can drop-and-drop multiple files at once in to

Figure 2. CertainSafe Document Viewer



your browser windows to upload your files. Surprisingly, although you can drag-and-drop files into the browser window, you cannot drag-and-drop files in one of CertainSafe's folders to another folder in order to move it. Fortunately it was simple enough to tap the file and be prompted for various file operations, including: view, delete, download, rename, move, comments, and audit logs.

Different icons represent the various file types such as documents or images to help you understand what the files are. (See Figure 1) There used to be icon view and list view in the prior version we reviewed, however, TransCertain removed list view in favor of icon view since it's more touch-friendly.

In the latest version they changed the upload to a new browser window (See Figure 2) so you can continue to use your primary CertainSafe window and keep on working. Meanwhile CertainSafe's UI was redesigned to be more touch-friendly with larger screen elements that are more easily selected with your finger. Also, a new feature they're working on is the ability to add a signature on touch displays using just your finger to your name. The document is still "locked" and not editable, but it enables digital signatures on touch screens.

A critical feature is that when sharing a folder you can set a data range, including the ability to share a folder in the future. You don't need to remember to "unshare" a folder at a later data, which is important for reporting, HIPAA compliance, and other compliancy issues. Other sharing options allow you to set whether users can download the file, view the "preview" rendered document only, and even enable users to upload back into this folder. You can receive e-mail notifications upon changes and for new items added. Audit logs built into the system add further legal standing and enable clients to track who changed what and when.

Conclusion

TMC Labs liked how CertainSafe brings ultra-high-level security while simultaneously not forcing users to jump through hoops to gain access. The Web-based interface was very intuitive and user-friendly and we liked that this newer version is more touch friendly. TMC Labs was very impressed with CertainSafe, and would not hesitate to recommend this solution to organizations looking for a highly secure cloud-based method of sharing information with high usability.

Tom Keating is CTO of TMC and Executive Technology Editor for TMC Labs.

CertainSafe's UI was redesigned to be more touch-friendly with larger screen elements that are more easily selected with your finger.

Ratings	Score
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Feature STORY

by Doug Barney

Cloud Storage Pricing: It's Open Warfare

One thing that has long been true of storage – it gets ever cheaper. Storage has its own version of Moore's Law. The other thing that's true is storage demands are ever increasing, often outstripping what IT can buy and install.

And here is the dirty little secret. The fact that storage hardware gets cheaper doesn't much matter to enterprises. The real cost is in management, which is usually a multiple of the storage itself.

These issues are feeding into some serious growth in cloud storage and backup. Service providers can take advantage of their economies of scale, and their ability to do backup cheaper than most enterprises can do themselves. At the same time the cloud removes a big IT management headache and can help insure that backups are properly and successfully done.

All this has every cloud provider and their brother vying for backup business. You know what that means – a good old fashioned price war.

This war is being fought on two fronts. Discounts are now deeper than ever, and at the same time new pricing approaches are coming to market.

Saying Goodbye to GB Pricing

Zenith Infotech was one of the first to dispense with per GB pricing. Instead Zenith has one price that applies to the offsite storage vault, with an ability to expand capacity when needed. Under the plan, service providers pay set monthly fees for their on-premises storage devices. They can then rent Zenith vaults and pay the same fee whether they replicate the on-premises data to one appliance or 25.

Asigra perhaps made the most noise with its recovery-based pricing; an approach it says is really catching on.

In the middle of 2013 Asigra announced its Asigra Recovery License Model (RLM). "The model is enabled by technology and follows what many experts agree is an evolving movement toward performance-based pricing that aligns with the value derived by the customer. With Asigra's approach, customers who recover less will pay less, and costs are capped so that recovery costs never exceed more than 25 percent of their data. The model provides stable and predictable pricing over time regardless of the amount of data backed up," the company said. The firm commissioned Winning Research to gauge the reactions of 161 IT pros.

While hardware prices continue to plummet, the growth of data has 90 percent of those surveyed expecting costs to rise over the next five years. And "84 percent of all respondents indicated they would be either "Likely" or "Very Likely" to switch to recovery-based pricing today, if it offered the same technical capabilities as their current software," the research found.

New Tussle Emerges Over Symantec Scraps

Symantec has one of the larger footprints in the cloud backup space, but announced last year that it would stop selling the service. Support runs out in January 2015.

This ushered in a mini-pricing skirmish as competitors rushed to lure Symantec partners with deep discounts.

Zetta.net is offer a 20 percent discount on yearly backup contracts. And Asigra is offering partners 60 percent off list price.

A Ready Market

Customers and providers are finding a growing market. According to Forrester Research, from 2010 to 2012, the amount of data backed up by enterprises grew 42 percent. At the same time the amount of file storage only rose 28 percent. Meanwhile the need to backup PCs nearly doubled in those two years. And the Dell'Oro Group says enterprise storage is growing at 50 percent a year. Meanwhile the Enterprise Strategy Group (ESG) says it is even more, say 60 percent.

According to MarketsandMarkets, the total cloud storage market is expected to reach $46.8 billion by 2018 with a CAGR of 40.2 percent.

In the midst of all this madness, IDC now says sales of external disks went down 3.5 percent this past quarter on a year over year basis. The worldwide annual market is $5.7 billion for the third quarter.

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by Rory J. Thompson

8 GFI Backup Questions

GFI's Andy Langsam

GFI provides managed backup through its GFI MAX Backup, which we reviewed in our last issue. *Cloud Computing* magazine's Doug Barney reached out to Andy Langsam, GFI EVP Sales and Operations to learn about the dynamics of the cloud backup market.

CC: Why is cloud backup taking off?

Langsam: Cloud is the next logical evolution of data protection. It appeals to customers who have been conditioned for years to send their backup tapes off-site. Using the cloud as an off-site destination for "electronic vaulting" can give them the same, or an even higher level of protection they were used to with legacy tape backup.

CC: Is the cloud safe for business data?

Langsam: Yes and no. First you need to realize that just like legacy backup products, all clouds are not created equal. Just because your data is in the cloud it doesn't mean it's safe. For your data to be truly safe in the cloud, you need to look for a solution that provides end-to-end encryption of your data. That means all data while in motion and while at rest. You also need to ensure that you, not the backup provider, are the one who is setting, controlling and storing your unique encryption keys. Improper management of encryption keys is the legacy equivalent of writing your password on the tape before you ship it off-site.

CC: What should one look for in a cloud backup provider?

Langsam: A successful track record of providing a solution to customers. A vendor with an understanding and focus on security. A vendor with the ability to scale to support large customers without impacting the small customer's performance. The ability to protect a wide range of platforms and applications with a single solution. The ability to perform backup and restore in a quick and efficient manner without significantly impacting my production environment. The ability to retain both local and cloud based copies of my backup data in compliance with your data retention and archiving requirements.

CC: Should I move all my backup to the cloud or keep a tier on-premises? Why?

Langsam: You already know what they say about keeping all of your eggs in one basket, and why would you choose a basket that you can't quickly get access too? Hybrid data protection with both a local and a cloud copy of your data gives you the best of both worlds. You are able to take advantage of the cloud should you have a total site loss and you are able to leverage the local tier for rapid recovery of single files or entire systems.

CC: How does the cloud backup tier offload IT?

Langsam: Using the cloud as a way to perform "electronic vaulting" can help an organization automate the data protection process. No longer do your IT admins have to identify, validate, duplicate, eject, label, and ship your tape media to an offsite vault. When it comes to recovery, there is no need to identify, request, wait, import and restore from those same tapes.

CC: Is speed an important factor in cloud backup?

Langsam: Speed is a factor with all backup, not just cloud. More importantly speed is often a factor during restore. Look for vendors that take advantage of WAN optimized features like data deduplication, compression, client side processing, hybrid data protection, bi-directional support, bandwidth throttling, etc.

CC: Why is deduplication an issue when backing up and restoring from the cloud?

Langsam: Deduplication is the "new compression", and is what truly makes disk-based and cloud-based data protection a reality for most customers. Deduplication reduces the cost of backup data stored on disk by allowing more point-in-time copies of the data to be stored in the smallest possible footprint. Deduplication also saves bandwidth and shrinks the backup windows by reducing the amount of data that needs to be transmitted during backup and restore to just the changed blocks or bytes instead of entire databases or files.

CC: What value do MSPs add in the backup and recovery space?

Langsam: MSPs can become an extension or a replacement to your IT organization that is committed to the success of your daily backup. This allows you to free up resources to focus on running you're your business instead of troubleshooting data protection.

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Feature STORY

by Doug Barney

Healthcare, HIPAA and the Cloud

If you are involved in health care either as a care provider or vendor who serves them, you have no choice but to embrace the cloud. After all, electronic medical records have been a mandate for some time. And the Health Insurance Portability and Accountability Act of 1996 (HIPAA) adds a whole other layer of complexity.

Not just that, but health care providers are operating in an increasingly competitive market.

There are also magnificent opportunities to use the cloud to advance the art, such as distance medicine, and big data analysis.

The elephant in the room is clearly HIPAA. In fact, there can be serious penalties for clients and their providers that fail to comply.

Storage is one of the biggest areas that demand HIPAA compliance. This is because patient data must be protected and secure – and all this must be documented.

The healthcare IT market is too big to ignore, despite the rigors of HIPAA. Last year total spend was $40 billion the U.S., and it's growing 23 percent a year.

Backup Compliance

Backup provider Intronis knows all about this, and helps MSPs sell HIPAA services as a premium. Intronis co-founder and current channel chief Neal Bradbury, sees HIPAA as a carrot and a stick. The carrot is HIPAA services can be sold at a premium, and lets MSPs branch into new markets.

The stick is if HIPAA standards are violated. Here both the customer and the MSP can be liable.

Bradbury has a bevy of cases, from small to relatively huge. Starting on the small side, a hospice in Idaho had a laptop stolen. The HIPAA fine was a cool 50 grand. In Phoenix a small medical practice used unsecure e-mail to transmit patient information, and ended up shelling out 100 grand for its mistake.

Those are the cheap ones. In Alaska the state health department lost one of their backup drives. That one cost $1.7 million. And a Boston doctor's stolen laptop cost $1.5 million. That's just one computer.

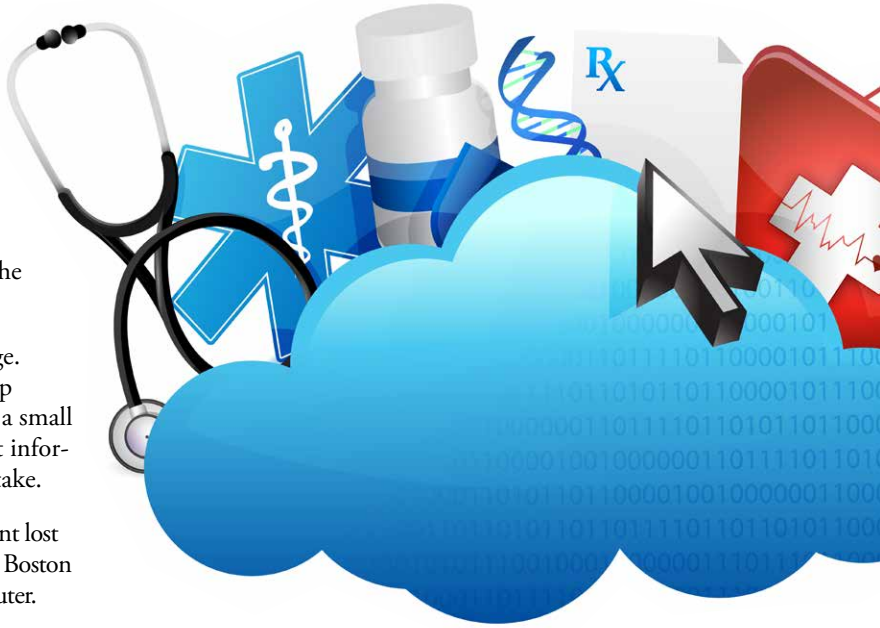
Under the HIPAA Omnibus Rule, service providers such as MSPs, as "Business Associates", can be liable for HIPAA violations.

A recent Intronis blog offers some advice. "MSPs and healthcare organizations need to work together to instill a long-term understanding of what it means to practice safe data usage in order to avoid fines and loss of industry standing," the blog said.

Ulistic, an MSP consultancy, is advising health care outfits to make sure their MSPs do HIPPAA right, that that MSPs hoping to serve this market make themselves compliant. "Is your managed services business adhering to the standards for HIPAA compliance?" Ulistic asks, and answers "If not, you need to be."

MSP Premium Plan

HIPAA mastery can let an MSP sell to bigger and bigger clients. "In general, the larger the health care organization, the more complex the solution requirements become. As solution providers migrate up the health care stack to large hospitals and university medical facilities, they discover the need for more specialized — and more lucrative — technology services such as laboratory bar-code printing and scanning applications, patient admissions, labeling and tracking systems, pharmacy management and POS technologies," Bradbury explained.



GFI Weighs In

GFI Max is also helping its MSPs sell premium HIPAA services through a HIPAA readiness pack which contains more than its share of advice, and ways to harden GFI tools to meet strict compliance regulations.

And GFI will sign a Business Associate Agreement (BAA) with any of its partner's customers where GFI takes responsibility for compliance.

"We recognize that MSPs that work with healthcare providers have specific needs that must be met in order to continue doing business under the regulations. Our HIPAA readiness pack, along with the GFI MAX platform, is designed to take the pain out of the process, providing them with the information and tools they need to fulfil their customers' requirements fully and effectively and allowing them to maintain their focus on the growth of their business and the satisfaction of their customers," said Dr. Alistair Forbes, General Manager of the GFI MAX business unit.

Fabian Oliva, an independent security and compliance analyst, was tapped by GFI to teach its partners about HIPAA. "The HIPAA Security Rule applies to all health plans, health care clearinghouses, and to any health care provider who transmits health care data in electronic form, otherwise referred to as a Covered Entity (CE). Further, HIPAA requires that any person or organization that conducts business with the Covered Entity that involves the specific usage or disclosure of individually identifiable health information, otherwise referred to as a Business Associate (BA), must also comply and adhere to HIPAA security requirements. In order to be considered a Business Associate, the work of an organization must deal directly with the use and or disclosure of protected health information. Examples of such include: outsourced billing providers, collections providers, transcriptionists and EMR providers among many others," said Oliva. "MSP's play a critical role towards helping to ensure that their customers maintain a secure and HIPAA compliant environment. Most importantly, they must ensure that their internal processes and procedures are in accordance with the HIPAA security requirements."

Electronic Medical Records

Electronic Medical Records (EMR) is another political hot potato. The promise has always been good – by automating and standardizing records, sharing information between doctors caring for a patient is eased. And the interactions with billing and insurance companies are made simpler. All this should, in theory, dramatically save money and improve care.

Health care automation proponents sometimes refer to the new world of medical automation as Health 2.0, a blanket term for Internet-enabled collaboration, new style record keeping and sharing, and other technologies. With Health 2.0, data is available to more folks, privacy laws permitting, and the information is interactive, allowing those that view it to mark it up or search for more detail.

Much of this information is aimed at helping patients learn about their issues, ask better questions and make better decisions. And, in theory, this should save doctors time as the patients already understand the basics of their illness or concerns.

Obama and the EMR Punching Bag

Critics of Obamacare, now in the process of rolling out, have found a new punching bag in EMR. Obamacare supporters argued that EMR would drastically increase efficiency and slash costs. In fact, EMR is a requirement of the Obama administration health care law.

Those critics now argue that EMR, by documenting and publishing patient appointment and service information, makes it easier for the providers to charge for each and every thing, thus driving up costs.

If true, this would offer an unusual way to justify investment in EMR and calculate the return on investment.

60,000 Members Can't be Wrong

Smart health care providers are lining up for cloud services. Amerinet, a healthcare solutions provider with some 60,000 members, is now offering members business continuity and disaster recovery services from Sungard Availability Services.

Amerinet offers several services to health care members, starting with group purchasing for alternate and acute care providers. It also provides performance tools "from supply chain management to data analytics and revenue enhancement – plus, improvements to technology, quality, patient safety and education," the company explained.

Under the deal, SunGard sells managed remote hosting and data recovery services to Amerinet members.

Business continuity is particularly important for acute care facilities where patients' lives are at risk daily. These facilities don't just need their medical equipment up and running, but the supporting clinical and business systems must be kept going as well, which where SunGard kicks in.

Protection of Electronic Health Records systems, a prominent item in the Obama health care program, is now vitally important.

It isn't just basic computer crashes and drive failures that threaten health care shops. Disasters are another concern. "Amerinet has repeatedly heard from our members the need for recovery services when disasters like Hurricane Sandy strike. In addition, with the increase of EHR implementations and the transition to cloud technology, the need for adoption of information technology security has escalated," said John Vinarsky, Vice President, Executive Resources, Office Solutions and Information Technology, Amerinet, Inc.

Feature STORY

by Doug Barney

MSPs Take Charge of of the Cloud

Managed Service Providers (MSPs) may not have the buzz of a FaceBook, Twitter or Google. But when you want serious applications, MSPs are increasingly the place to go.

The market is still a tad confused over just what makes an MSP different from a Cloud Service Provider (CSP).

The major distinction is that center word – management. Cloud services tend to be raw and the onus is still on IT to manage it all. What IT really wants, or at least what their bosses want, is for IT to become purely strategic and have outside providers do all the management grunt work.

The channel is seeing just this opening, and MSPs are redoubling their efforts, while at the same new companies are entering the space.

CompTIA is a non-profit organization serving the channel, and a big part of its service is fundamental research. In its recent Trends in Cloud Computing study, members are moving strongly into cloud services, with 6 in 10 saying they are implementing multiple cloud business models. And the same percentage of respondents now says their cloud businesses are mature. Even better, they tend to make more money on cloud services. This is the particular beauty of managed services -- where ongoing revenue is based on ongoing oversight.

Forrester Believes in Management

Forrester Research believes that partners aren't just critical to the successful deployment of SaaS products, but the management aspect is a real value-add.

The study, commissioned by commerce company Avangate, finds that now that the cloud is more mature and understood, IT is changing the way it buys. "More than one-quarter of firms are centralizing the procurement and management of SaaS cloud applications. Consequently, these firms are changing their sourcing strategy, looking to solution partners who can supply and centrally manage the entire end-to-end SaaS portfolio," Forrester said.

MSP follower Jon Tonti believes it would be a better world if MSPs ran most of IT. Tonti sees MSPs as more than ready to play an ever more important role. "In the relatively recent past, we have crossed the threshold where it is now "technically and economically feasible" for any organization to transfer all their technology needs to managed service providers (MSPs)," Tonti argues.

Tonti then wonders how it would be if MSP took over vast swaths of enterprise computing and reached out to MSP author and consultant Jon Parkinson of Parkwood Advisors for a few answers. Here is what Parkinson had to say.

"I did a consulting project for one of the big global tech firms looking at what the macroeconomic impact on the industry would be if the majority of what is currently on-premises IT were provided as managed services. How many people does it take to run global IT if it is provided the same way as a phone service or electricity – a managed service – by some number of peer service providers and you don't have all the people in-house you have today? What does the industry look like, how big does it have to be, and what skills do you have to have to make that work? The headline is that you only need about 40 percent as many people," Parkinson argued.

As IT moves to the cloud and managed services, it will take fewer and fewer admins to handle the same number of users. Parkinson used the need to support 100 users as his point of reference.

"Today it might take 30 because the 100 users are in 10 different companies, tomorrow it will take 10 because it doesn't matter where they are…basically you create a user-cloud, and yes, you have to build in privacy, security, and some multi-tenant type handling capabilities, but if you presume you can solve those problems, which we can or are close too, then you are a much more efficient user of human capital in technology, which is good because there isn't enough of it," he explained.

MSPs Must Mature to Keep Pace

It isn't just easy sailing for MSPs in the cloud. They must prove their worth if they want to move away from the drudgery and uncertainty of break/fix to providing ongoing rich services.

Here again, CompTIA has expertise and advice. And it sees its most advanced members already making the move.

"The best in class are branching out," said Jim Hamilton, vice president of member relations at CompTIA. "Services that are well established tend to have restricted margins and tend not to be as profitable," he explained. "But people who go out and develop new technology solutions tend to be more profitable."

In fact, Hamilton just didn't surmise this to be true. The organization did research and found that "the best-in-class companies invested twice as much in new services compared with the average MSP."

In its "Quick Start Guide to Managed Services" CompTIA offers advice on how MSPs can grow beyond break-fix where your revenue is dependent upon handling incidents and keeping things running rather than providing new value. One way to identify new opportunities is to listen to customers. "Use your IT help desk to spot trends. More than fixing customer problems, your IT help desk can be your direct connection into your customers' long-term business

Tier 3's Richard Seroter

planning—revealing their wants and needs through casual conversations with your support personnel," CompTIA argued. "Next, leverage your NOC (network operations center) to track performance, reliability, and scalability trends within your customer settings."

One CompTIA member is already living that advice.

"The origin of our offering is not from a product manager, it really comes from the customers themselves. To strengthen the dialog, EnabledSuccess launched a user group that meets several times a year via conference calls," said Rene Theberge, national sales manager at EnabledSuccess Inc., an Ottawa MSP.

Survey Shows Growth

Everyone who researches the MSP space is predicting massive growth. MarketsandMarkets thinks sales will essentially double from $142 billion in 2013 to $256 billion in 2018.

And there is more and more services for IT to choose from. "Newer managed services that penetrate almost all the industry domains, along with aggressive pricing in services, are being offered. This results in an increase in the overall revenues of the managed services market. It is observed that there is an increase in outsourcing of wireless, communications, mobility and other value added services, such as content and e-commerce facilities. With increasing technological advancements and the cost challenges associated with having the IT services in-house, the future seems optimistic enough for application services providers and managed services providers."

The researchers believe that managed services and lower the cost of providing IT 30-40 percent.

INSIGHT Research thinks it knows why MSPs are so hot. Two main factors are driving MSPs growth. First, there is the worldwide recession which is just now easing in some quarters. At the same time, there is a more and more pressing need to implement advanced technologies to drive competitive advantage.

The Internet is also driving the need for services, as there are constantly new technologies and techniques to master. "A large percentage of business activity now depends on the Internet for everything from electronic commerce to intranet applications to customer service," said Fran Caulfield, research director for INSIGHT. "These data applications are driving exponential traffic growth onto corporate networks, while increasing their complexity. Managed services allow corporations to handle this growth, while outsourcing the most complicated elements to the skilled service provider. Service providers also win, as they grow beyond basic transport services, increase margins and reduce churn."

Finally, managed services are the key to keeping enterprises competitive in lean staffing times.

"With the global and the US economy stagnant, and businesses not hiring, enterprise IT departments must still find a way to deploy those new applications. With limited IT staffing, the enterprise can focus on the developing the corporate application, while outsourcing the network design, installation, and management to a provider who has the "state of the art" tools and skills to do it right," the report said. "New cloud-based applications can be deployed in weeks, allowing the enterprise to rapidly respond to their customer's evolving needs."

Tier 3 is a data center services company that helps its partners succeed in the cloud. Richard Seroter, senior product manager who also happens to be a Microsoft MVP, trainer and autho,r has five pieces of advice for those looking to offer clients a top cloud experience.

For Seroter the question of cloud has already been answered, so "it's no "if" but "when"".

Seroter sees three basic approaches. The first is used by those who don't believe, as Seroter does, that the cloud question truly has been answered. These are the folks that "ignore the cloud and wait to see how the market changes". This obviously isn't optimum because you aren't taking any advantage of the new paradigm. Also not optimum is to "go all in and plan for an entire IT/business transformation".

The next bet is to "sample the cloud and look to satisfy strategic needs", Seroter believes.

So how do I do cloud right?

Step 1. "Form a "tiger team" to achieve quick wins and pursue IT-as-a-Service", Seroter believes.

This team starts with an executive sponsor, and includes business analysis, security and application architecture, and network engineering.

Step 2. Find a good provider. Here you want to look at application services, availability, compliance, disaster recovery, management, performance, pricing and SLAs, among others.

Step 3. "Find, partner with, learn from, and collaborate with shadow IT," Seroter suggests. Key application advances that can come from this collaboration includes better productivity solutions, improved line of business tools, and better sharing of data, analysis and storage.

Step 4. Seroter also suggests that you learn and apply best practices, including making sure the entire structure is secure, and that you design apps specifically for the cloud. Also, choose the services that best fit, and take full advantage of automation.

Step 5. Finally in keeping with the idea of "sample the cloud and look to satisfy strategic needs", look carefully at what apps make most sense to migrate.

Feature STORY

by Tom Keating

PanTerra Networks Leads the Next Wave of Unified Cloud Services

The rise of the cloud has been exciting and beneficial so far, but the next wave of cloud promises to bring even greater benefits to businesses, says Arthur Chang, president and CEO of PanTerra Networks.

Cloud services are taking a somewhat similar track as desktop productivity software did years ago, says Chang. As you may recall, with desktop software, first we saw a lot of separate, specialized solutions from various vendors, such as WordPerfect and the Lotus 1-2-3 spreadsheet. Then, a certain software company came along and introduced Microsoft Office; that integrated many of those applications, which had previously been sold as separate solutions, into a seamless suite.

Likewise, most cloud service providers started out delivering single services, Chang says, who notes that's common for emerging markets. But now we're beginning to move into the next phase of the cloud, which like the desktop software space before it, is starting to seamlessly integrate more functionality into unified solutions.

Cloud 2.0 and unified cloud services, are the terms Chang uses to describe this second iteration of the cloud.

"I think you're seeing the beginning of this Cloud 2.0 evolution occurring now," says Chang.

Bringing together multiple services into integrated solutions benefits end users because it translates into lower total cost of ownership, and can allow for a higher level of productivity, says Chang. It also enables service providers to deliver consistent service attributes like quality of service, support, and security across a gamut of applications – such as communications, collaboration, file sharing and storage – being delivered to end users, he says.

Users pay overhead every time they implement a service with a separate cloud service provider, he explains, so when they use three separate services from three different cloud service providers, they pay that overhead three times. If a customer was moving its file server, communications, and collaboration into the cloud, to do so separately might cost $15 to $20 per month, $40 per month, and $50 per month, respectively, he says. Unified cloud services, Chang says, typically cost 60 to 70 percent less.

PanTerra is already bringing such savings, productivity and quality gains to mid-market enterprise customers via its WorldSmart services.

"We are one of the leading innovators of delivering unified cloud services," says Chang. "That's been our vision from day one. We do that by being both a technology provider and a service provider, which allows us to innovate and bring that innovation to our customers with very high service attributes."

In referring to PanTerra as a platform provider, Chang is pointing out that the company built the platform on which its service runs in-house and from the ground up. That is a key differentiator for PanTerra vs. the competition, which typically relies on the platforms of companies like Cisco and Microsoft, he says. PanTerra designed its platform to be multiservice, highly scaleable, and carrier agnostic. This platform also adds value for PanTerra and its customers because it gives them a higher level of control.

"That has resonated with our customers and is an advantage for them," says Chang. "When you are in control of your own technology you can deliver much more consistent reliability, QoS, etc. When you resell other peoples' technology, there are bound to be issues with bugs, new revisions, etc., and when these things happen, the most you can do is file a trouble ticket. If it's your own technology, however, you can contact engineers and developers and can respond more quickly. Our way keeps that supply chain as short as possible."

WorldSmart is a proven solution, as thousands of companies are already benefitting from its virtual PBX, which includes find me/follow me capabilities; full call center functionality, including features such as supervisory mode and customer call back; a unified messaging suite, which addresses digital fax, e-mail, and secure IM; and collaboration services like HD-quality audio, shared desktop, videoconferencing, and web meeting. All of the above can be accessed from any browser via any IP connection anywhere in the world.

While WorldSmart is already a very feature-rich solution, PanTerra continues to build onto its functionality.

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For example, in December PanTerra announced the release of new administration tools that improve WorldSmart's scale and security. This new addition simplifies management functions by adding the ability to define administrative roles and privileges and to configure centralized management, distributed management or a hybrid of both. That allows enterprises to tailor the solution to their existing IT infrastructure.

"PanTerra's Admin 5.0 cut our administrative overhead considerably on our most recent multi-location customer migration off of legacy equipment," says Bill Sutherland, president and CEO of Sutherland Networks. "The marriage of secure unified administrative access for all WorldSmart services, and more specifically the improved group and mobile administration and intuitive import function, reduced many man-hours off the system cutover."

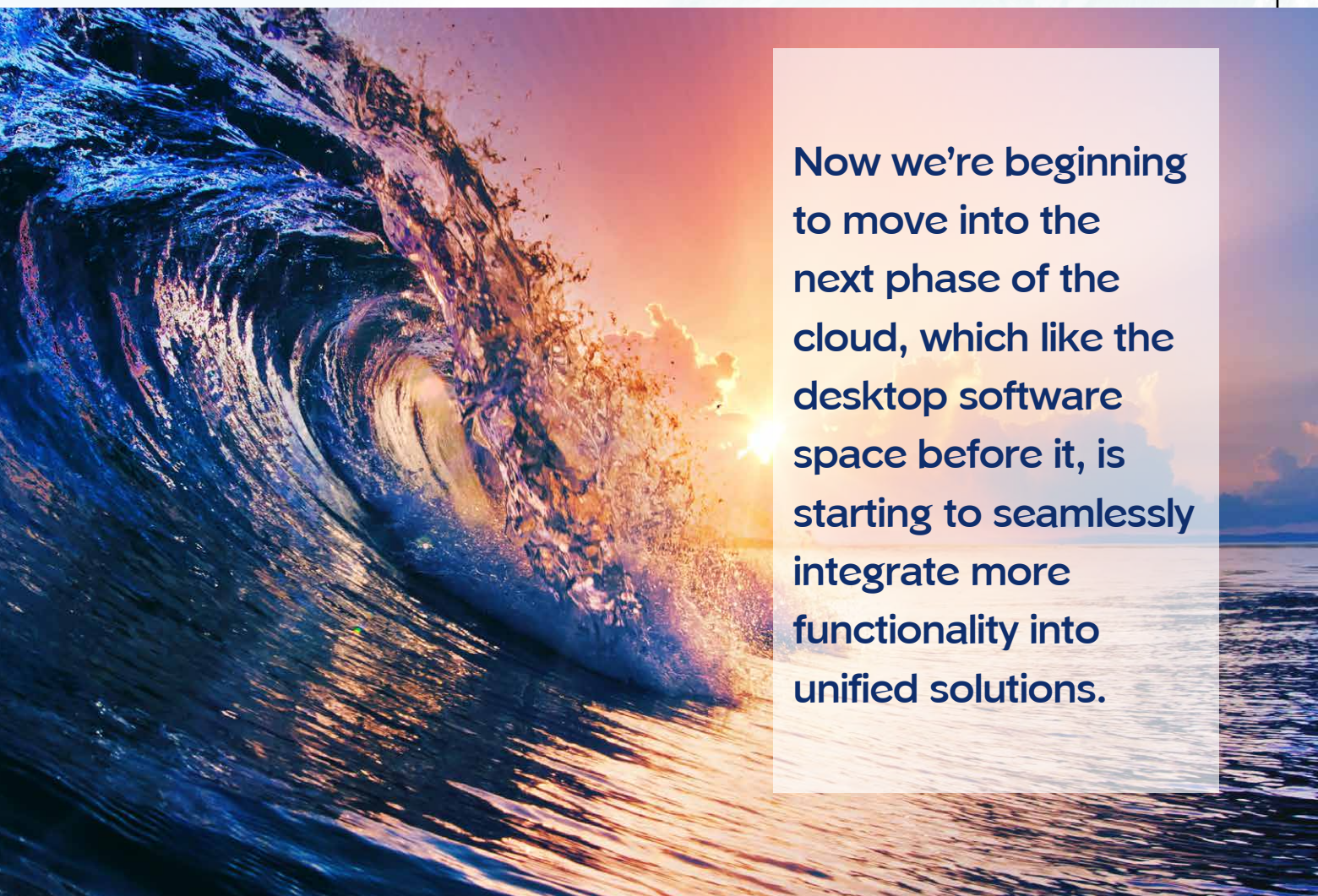
And in November, PanTerra came out with Mobile UCC, which extends its unified cloud communications capabilities to mobile users of Android and iOS devices using 3G, 4G and Wi-Fi networks. Mobile UCC employs full multi-phase authentication and encryption for security, and push technology to reduce battery drain.

Mobile UCC is available as a free download to all WorldSmart seats with desktop UCC functionality.

"Mobile UCC has been an invaluable tool for me over the last few months while both on the road and after business hours to remain connected to my co-workers and customers," says Chris Hewitt, vice president of sales for Exemplify, a PanTerra master agent. "All my business and phone contacts are integrated so I can conduct communications with colleagues and customers from a single secure app. And the support for calling over Wi-Fi has saved my cell minutes."

Chang says to expect PanTerra to offer additional new WorldSmart-related products and functionality in the near future.

"We have built a very solid base on our UC service, and we see that unifying the ability to share content, to store content, and to sync content is a natural progression to help enterprises achieve maximum productivity, minimize cost, and reduce sales friction which prevents their customers from closing a deal."



Now we're beginning to move into the next phase of the cloud, which like the desktop software space before it, is starting to seamlessly integrate more functionality into unified solutions.

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By Graham Williams

Making the Move to SIP Telephony

The days of using plain old telephone service (POTS) in business communications are fading fast. Increasingly, SMBs are turning to SIP (Session Initiation Protocol) telephony to cut costs, simplify administration, unify communications and accommodate a more mobile workforce. If you've been considering the switch, there are plenty of reasons why now is a good time.

Widespread acceptance and adoption

Not that long ago, SIP was considered a new technology fraught with interoperability and functionality issues. The tide has turned though. According to a survey by Eastern Management Group, SIP is so pervasive today that when a business acquires a new telephone system, it typically supports SIP. IT managers say that interoperability challenges are practically nonexistent and that 99.9% of the time it just works.

Cost savings

The cost (and hassle) of managing a phone system and separate service provider, especially across multiple locations, shouldn't be underestimated. There are individual billing and infrastructure/operational costs to oversee for each office. If those offices happen to be in different states or countries, the costs can really compound. With SIP, calls are made over an IP connection and are therefore significantly cheaper.

There's also the cost of the equipment to consider. On-premise systems have their benefits, but it's worth considering a hosted solution when budget is a primary factor. By outsourcing the infrastructure, businesses save on equipment, maintenance and management. As your business grows, there's no need to ante up for additional hardware either. Instead, you can simply have your service provider add more lines.

Anywhere-access, any time

Industry surveys report that three in five SMBs now have employees who work outside the office. They also suggest that, as a result, those businesses are more likely to see revenues rise—compared to the companies with employees working in the confines of an office. As the teleworking trend continues to gain ground, SIP becomes a more attractive option.

Add the need to connect branch sites and remote offices, and the case for SIP is even stronger. For businesses with multiple locations, SIP can make staying in touch a whole lot easier. Employees can reach each other by dialing extensions, even if they're oceans apart. There's no need to remember phone numbers or incur long-distance usage charges.

The buzz around the Cloud

It seems like everyone and everything is moving to the Cloud these days. Indeed, a 2012 Microsoft survey of more than 13,000 SMBs worldwide showed that the number of the world's smallest companies using at least one paid Cloud service would triple in the next three years. Additionally, a survey by the Cisco Internet Business Solutions Group reported that the SMB Cloud services U.S. market size is estimated to grow to $51 billion by 2015.

As Cloud communications become practically mainstream, they're making more sense for SMB telephony. Small businesses can take advantage of enterprise-level features hosted in the Cloud without the cost, expertise or headaches associated with managing the equipment in-house.

Hardware: what to consider

With all of these factors coalescing, there's an increasing demand for compatible hardware—in this case, the SIP endpoint or phone. As the world's leading manufacturer of corded and cordless phones, SIP endpoints are in VTech's sweet spot. They're the newest addition to our portfolio of SMB solutions, and they offer key features that will benefit any business wanting to unify its communications, including:

- Compatibility with leading, hosted and open-source PBX platforms
- Feature-rich desksets and cordless options
- Dual Ethernet ports and support for Power over Ethernet (PoE), which cut down on wiring and cabling costs
- Auto-provisioning for easy, cost-effective installation across locations
- Support for up to five SIP service accounts
- Large backlit displays, simple navigation pads for scrolling through menus, programmable feature keys and easy-to-read buttons that make the phones easy to learn and use
- Shared call appearances (SCA), which display incoming calls on multiple phones, simultaneously
- Busy lamp fields (BLF) that let you see the status of other extensions in your office—even at remote locations
- Life-like sound quality with HD Audio and G.722 wideband codec support
- Standard, two-year warranties

Of course, the extent of your system's call handling capabilities will depend on your SIP service provider and phone system platform.

Whether you've outgrown your traditional analog or digital phone system or are starting from scratch, SIP telephony is a great way to contain costs, improve collaboration and leverage your existing technology.

Graham Williams is Vice President of SMB Sales for VTech (smbphones.vtech.com). He has worked in the technology sector for 19 years, including nine years in the telephony/unified communications space. His resume comprises significant experience managing channel partners, enterprise partners, service providers (e.g., Verizon) and global alliance partners (e.g., IBM).

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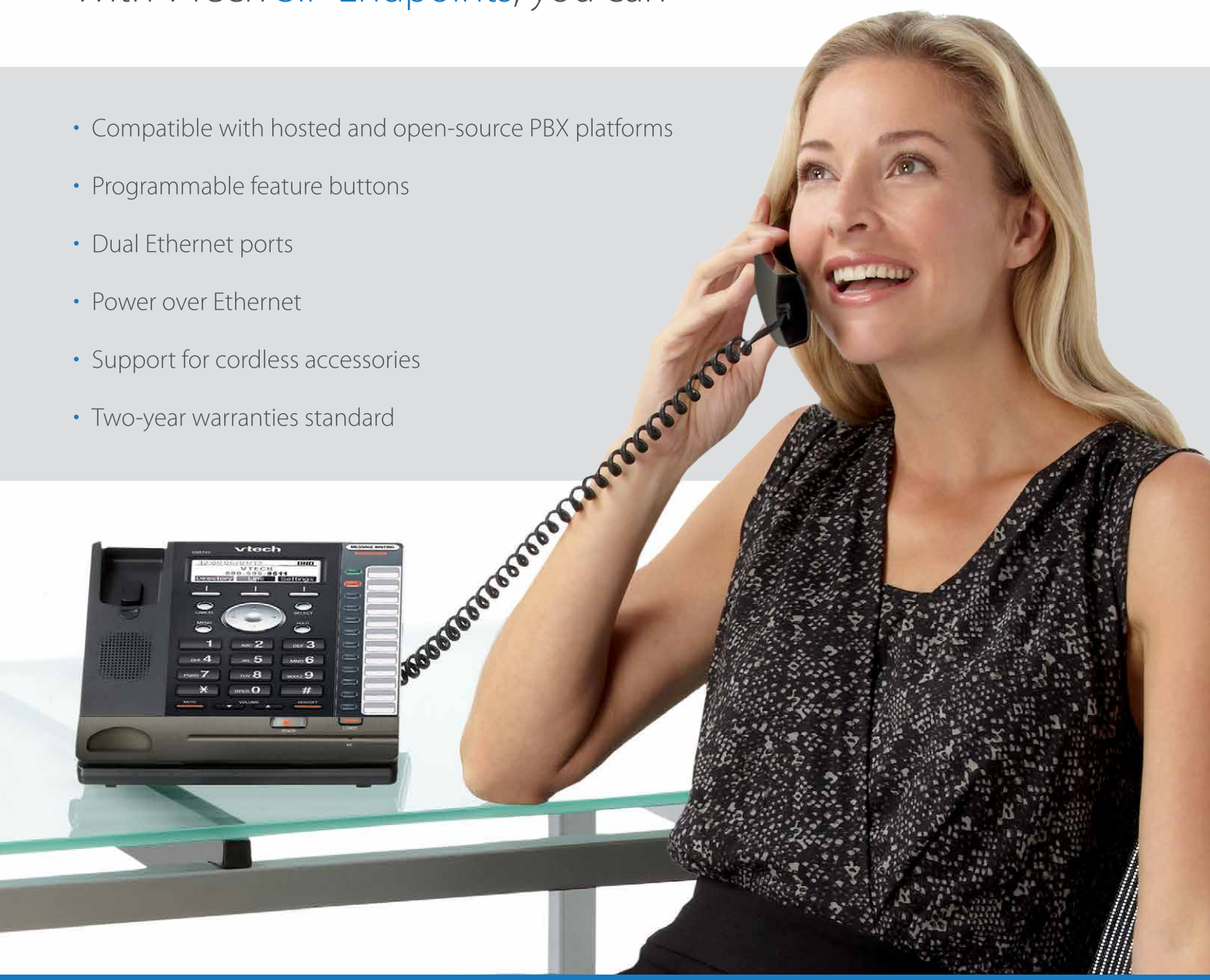

smbphones.vtech.com

by Erik Linask

Making the Connected Home Smart

One of the growing trends evident at this year's CES – indeed, one that has been building momentum generally – is the home automation or connected home market. Indeed, the market may be reaching a critical juncture, judging by the acquisition of Nest by Google.

Cees Links, founder and CEO of GreenPeak Technologies would likely agree this is progress toward smart homes – a term he much prefers over connected home, noting that our homes have long been connected, but they have hardly become smarter as a result – despite the ZigBee chip in the Nest remaining dormant thus far. So, until the entire home becomes connected internally, that external capability has limited value.

As a manufacturer of ultra-low-power silicon for the purpose of enabling communication and control between wireless devices, and competitor to the likes of TI, Atmel, Freescale and others, GreenPeak certainly would benefit from an increase in ZigBee market penetration. While it be the most recognized chipmaker, Links says its quality and cost combination are second to none, and one of the reasons it takes only orders of a million chips or more.

Is there merit to his claim? His client list boasts names like Comcast, DirecTV, Cisco, Sony, Philips, Arris, Samsung, NTT, Time Warner Cable, and many more. The cableco relationships are significant because, as Links points out, the set-top box is rapidly becoming hub of home automation and connectivity and will likely serve as the gateway to the smart home. Most recently, GreenPeak signed a deal with Bosch, announcing certification of its chips for Bosch motion sensors. Currently, the deal doesn't extend to other Bosch lines, but Links is confident this is only the beginning.

There's little doubt ZigBee will be the wireless technology of choice, given its low power consumption and NLOS technology that is ideal for smart home applications. In fact, Links says many devices with GreenPeak chips never need a battery replacement. When you consider the number of devices that will eventually be "connected," that's quite a savings in time and sanity, not to mention cost. Come to think of it, it's not unlike swapping out all your light bulbs for LEDs – which, at long last, the federal government has mandated in the US.

The point Links makes is really that devices aren't all that smart on their own, but require each other to become smart – along with intelligence garnered from each device and analyzed and leveraged as a cloud-based resource. When entire home systems – entertainment, lighting, cooling and heating, safety and security – are all not only network-connected, but also on a single management system, the intelligence is able to be leveraged to for an enhanced lifestyle.

When you are able to combine the intelligence from all of these systems, almost any scenario becomes a reality, because the system is able to "understand" individual and group habits based on data collected from each of these sensors, which it then translates into action items – turning on the TV when Lefty tees off, turning the security system on when it recognizes everyone has left the home, adjusting lighting systems to environmental factors such as cloud or sun.

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Links believes we will realize true smart homes in the next 4-6 years, when the Internet of Things comes to fully exist.

One challenge thus far is cost. Not only are smart products priced significantly above their non-connected counterparts, but when it comes to connected lighting, for instance, a homeowner who has installed LEDs throughout the home already is much less likely to be willing to absorb the cost of then switching to smart lighting. And obviously, there are soon-to-be-connected items with much longer buying cycles that will take years to be replaced (refrigerators and other appliances).

That said, the real key will be education. In order for smart technology to become ubiquitous, consumers will have to be made aware, and their purchasing will have to be made easy – as will the connectivity. Despite its inherent advantages, if ZigBee isn't as easy to use as WiFi, it will fail. Based on what Links says, it's a no brainer.

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