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2nd Quarter 2013

Network Control in the Cloud

Demands Visibility, Control & Speed

Open Projects
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MSPs and Cloud Services Converge:
Intermedia's Acquisition of Telanetix

Healthcare IT and the Cloud

Performance Management **in the Cloud:**
Challenges & Solutions

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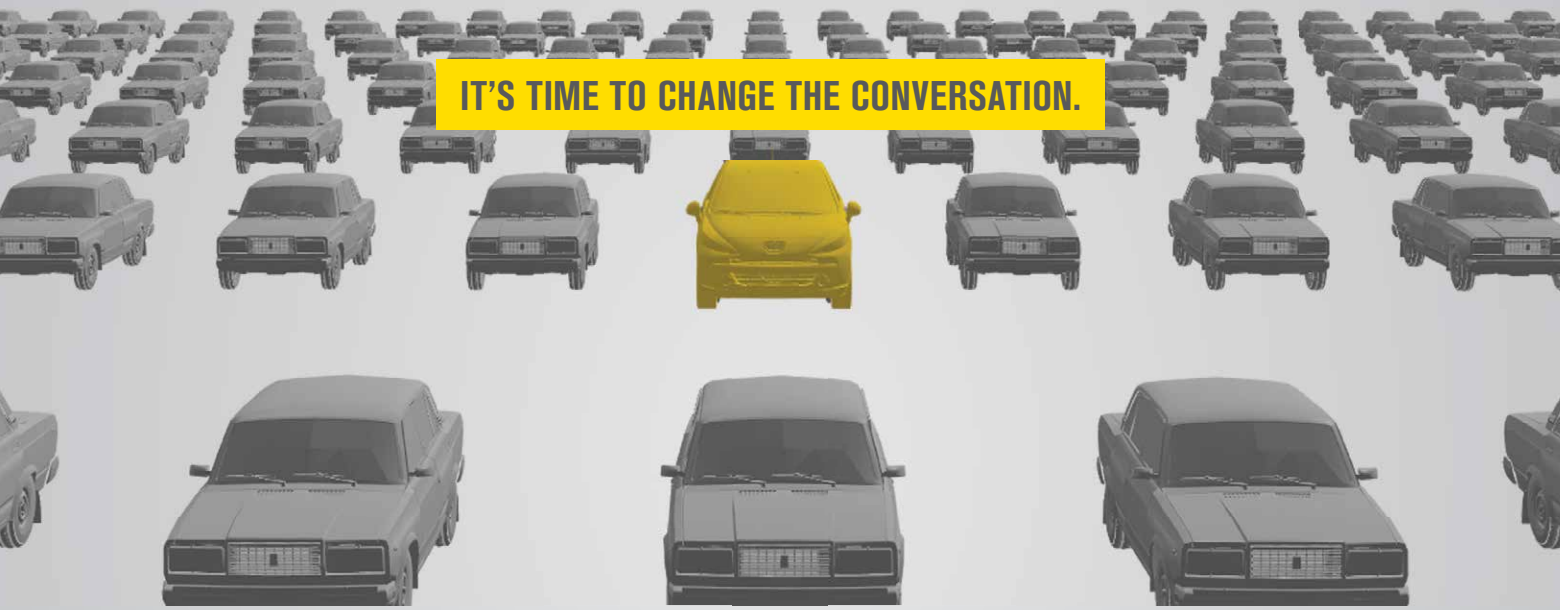

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by Erin E. Harrison

Cloud is Here to Stay

A lot has been said about cloud computing over the past few years – good, bad, indifferent and in between. From misunderstandings about what cloud is to inaccurate predictions and being classified "gibberish" by a tech icon, plenty has been said about cloud.

Among the comments lies a 2012 Citrix survey that revealed many Americans remain "foggy" about what the cloud really is and how it works. When asked what "the cloud" is, a majority responded it's either an actual cloud (specifically a "fluffy white thing"), the sky or something related to the weather. (Taken literally, of course, this definition is accurate.) But it's clear that cloud computing and its implications are still not fully understood – by laymen as well as certain tech titans.

I recently came across a Forbes article which was essentially a compilation of some of the most memorable quotes about cloud, like this one: "Ultimately, the cloud is the latest example of Schumpeterian creative destruction: creating wealth for those who exploit it; and leading to the demise of those that don't," – a decidedly insightful quote attributed to Joe Weinman, senior VP at Telx and author of "Cloudonomics: The Business Value of Cloud Computing."

And who can forget Larry Ellison's 2008 rant, mocking cloud, branding it as "gibberish" and "insane"?

"The interesting thing about cloud computing is that we've redefined cloud computing to include everything that we already do. I can't think of anything that isn't cloud computing with all of these announcements," Ellison said. "The computer industry is the only industry that is more fashion-driven than women's fashion. Maybe I'm an idiot, but I have no idea what anyone is talking about. What is it? It's complete gibberish. It's insane. When is this idiocy going to stop?"

Fast forward more than four years later, and Ellison is obviously still eating his words. Oracle is of course competing with bigger players like SAP AG and Microsoft, as well as a growing number of startups for share of the cloud software market. Clearly, Ellison and Oracle have since changed their tune about cloud, as the Silicon Valley company continues to invest heavily in cloud, expanding services and embarking on a spree of cloud acquisitions since 2009.

As for the practicality of cloud in business, in other notable quotations I leave you with this comment by Gartner analyst Daryl Plummer: "Line-of-business leaders everywhere are bypassing IT departments to get applications from the cloud (also known as software as a service, or SaaS) and paying for them like they would a magazine subscription. And when the service is no longer required, they can cancel that subscription with no equipment left unused in the corner."

Whether you are a cloud service provider, an IT manager considering cloud-based services for your business, or somewhere in between, it's clear cloud gives us a lot to talk about – and that cloud is here to stay.

by Rich Tehrani

Metaswitch Asks: Are You Ready to be a Software Telco?

Virtualization has made the IT world much more efficient and cloud technology allows applications to scale up and down at will in a far more cost-effective manner while requiring little to no CAPEX. There is hardly an industry that hasn't been affected as software and hardware vendors have worked together to make sure they are ready for this new world where a single server can run multiple instances of an application on servers which are flung far around the globe. Even the PBX-world has gotten into the game with many vendors – especially those doing business with Fortune-class companies supporting virtualized software communications servers.

In a recent conversation with Steve Gleave and Carol Daniels of Metaswitch at Mobile World Congress 2013, I learned the company is taking the move to virtualization seriously and their recent product launch of 19 months ago – the SBC, which was developed to run in a such an environment. The benefits of this evolution are obvious: Carriers will be able to utilize the same virtualized technology they use in their data centers in their networks and purchase in a far more flexible way. Moreover, their services will run on bare-metal servers and will scale far more rapidly. This means they can take advantage of public clouds, virtual private clouds, private clouds and hybrid clouds – all the amazing choices a typical enterprise has today. Security, cost and CAPEX vs. OPEX decisions will likely drive their decisions – again, just like an enterprise or data center decision-maker.

One other crucial benefit of this move is there will be more choice for carriers looking to deploy solutions from the more innovative companies in the market. Typically these are the players who do the most interesting things but they quite often run out of money before carriers deploy their solutions and subsequently they go under.

The large-scale euthanizing of innovative telco suppliers (and many of the events they attended as a side-effect) has created a cycle of uncertainty where carriers want to be sure their solution partners are going to be around for the long-haul. Moreover, they want them to be there to scale rapidly and service what they sell. In the world of hardware this means a new vendor has to have very deep pockets to be able to sell to large carriers.

What has become common in the market is for CSPs to wait for the larger players to emulate what the smaller guys are doing and just buy from the company they are used to doing business with.

The point is, now hardware players will become software companies which means the bar for purchase from a large telco while still high, has dropped down quite a bit. This time though the chicken-and-egg problem may finally have eroded allowing current carriers to be far more flexible in the new services they offer and upstart carriers can rapidly scale and compete with incumbents without having to purchase massive amounts of central office equipment to get started.

Metaswitch once owned a separate company called Data Connection, which was very strong in developing and selling low-level protocol software stacks and related solutions. The two companies merged some years back into the parent company. Gleave emphasized, "We have software experience." He continued with a bit more confidence, "Writing for multicore and hypervisor environments are skills we believe we have as well."

Expect the Metaswitch you know as the application server, gateway and SBC company to still do all these things but in software, running in virtualized environments on bare-metal servers. Their goal is to sell these solutions to you in order to turn your hardware telco into a software telco.

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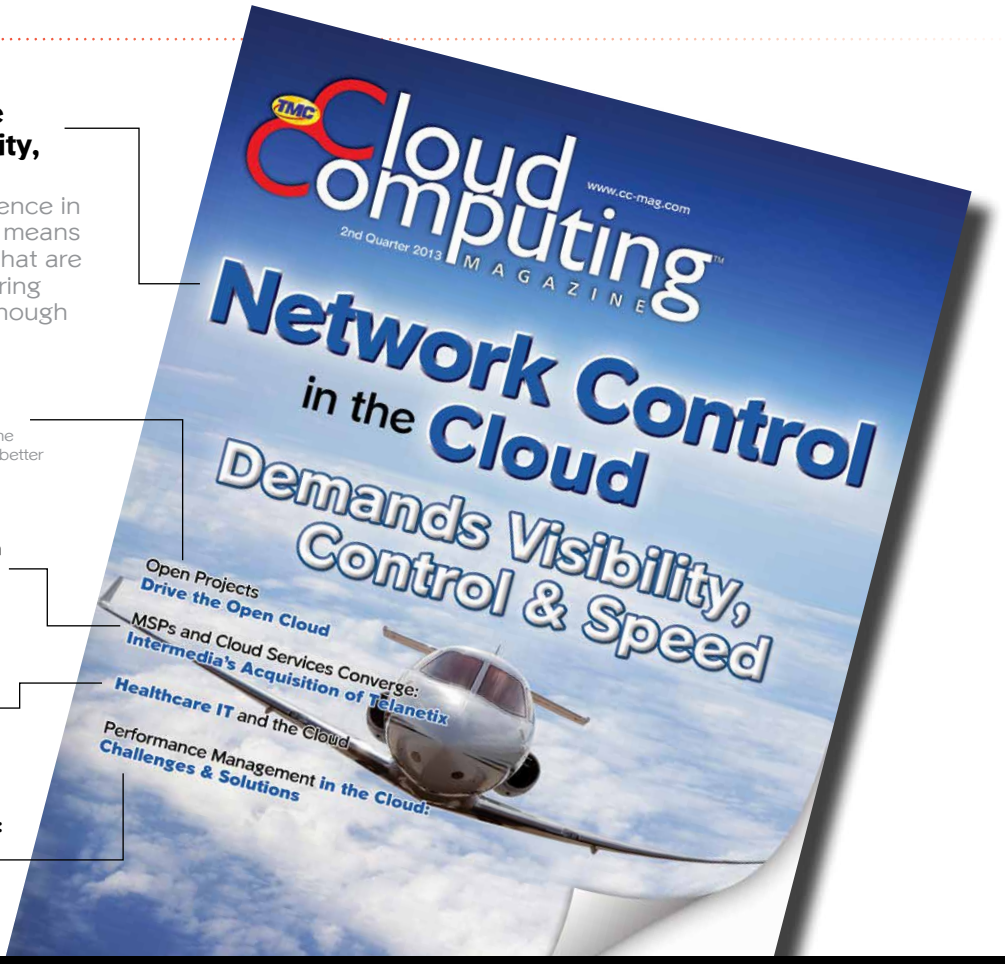

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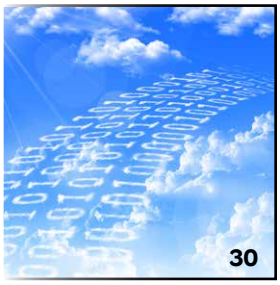

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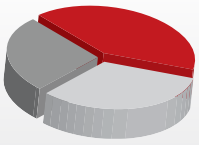

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OnApp Secures Over $20 Million in Funding

Cloud management software startup OnApp has closed a new round of funding, bringing total investments to more than $20 million. The funding will be used to help OnApp roll out a new line of products and services in 2013, as well as expand into new global markets.

The London-based company provides a platform that supports public cloud services for over 500 service providers across 39 countries, making it the most widely deployed cloud management platform globally, company officials said. Existing investor, LDC, a U.K.-based private equity firm, led the funding round.

Why We Should Watch: OnApp was launched in 2010 on the premise of building a "turnkey" platform to help service providers create profitable cloud services, according to Ditlev Bredahl, CEO of OnApp. The company's customers run some of the fastest growing cloud service businesses with an average annual growth rate of over 80 percent.

http://tmcnet.com/59229.1

Red Hat Integrates Manage IQ's Enterprise Cloud Management Platform

As part of its strategy to expand its cloud portfolio, Red Hat, which provides open hybrid cloud management solutions from infrastructure consolidation and security to network-attached storage, recently acquired ManageIQ, an enterprise cloud management and automation solutions company.

In line with the company's strategy, Red Hat just has begun work to integrate ManageIQ's enterprise cloud management and automation technologies with Red Hat CloudForms hybrid Infrastructure-as-a-Service (IaaS) solution and the open Red Hat Enterprise Virtualization management solution.

Why We Should Watch: The acquisition complements Red Hat not only in terms of products, but also in terms of customer acquisition. Both Red Hat and ManageIQ share many joint customers; in fact the majority of ManageIQ's customers are also Red Hat customers. Both companies were working together even before they decided on the acquisition. They analyzed the cost benefits of leveraging Red Hat Enterprise Linux environment with Red Hat Enterprise Virtualization, as well as considering OpenStack options for open cloud implementations.

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IMS Health Acquires SaaS Provider Appature

In an effort to expand its commercial services capabilities for life sciences and healthcare organizations, IMS Health has acquired Appature, a Software-as-a-Service (SaaS) company based in Seattle.

Appature offers clients a patented cloud-based relationship-marketing platform designed to address the complexities of today's multi-stakeholder healthcare environment, and to enable the measurement and optimization of relationship marketing programs across channels.

Why We Should Watch: IMS plans to blend its healthcare information, analytics and managed services with Appature's platform for customer data integration, campaign management and marketing analytics. Company officials said this combination will give healthcare clients the ability to deliver integrated customer experiences and assess end-to-end marketing campaign performance, enabling them to optimize their marketing strategies and promotional spend to drive more effective engagements.

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Appcore Secures $6 Million Series B Funding Round

Appcore, a cloud computing automation platform provider, announced the closing of a $6 million Series B funding round. This Series B funding included private investors as well as existing investor Telephone Acquisition Company, with DH Capital acting as the exclusive advisor to Appcore.

Why We Should Watch: To date, Appcore has raised $11 million in total financing. The company plans to use the proceeds of this funding to continue global expansion of its local cloud deployments, as well as continued development of Appcore's software defined cloud and software defined data center offerings.

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SwiftStack Closes $6.1 Million in Series A Funding

SwiftStack has raised $6.1 million in a Series A round of funding. The round, led by Mayfield Fund with additional participation from Storm Ventures and UMC Capital, brings the company's total financing to $7.6 million (including $1.5 million in seed funding).

Why We Should Watch: SwiftStack's storage system is designed to help organizations with considerable amounts of data simplify operations to reduce overall operational costs. The company will use the investment to support growth of the sales team, expand operations and advance development of its next generation, software-defined storage (SDS) solution.

http://tmcnet.com/59232.1

Catchpoint Secures $3.2 Million in Series A Funding

Catchpoint Systems, Inc., a provider of web and infrastructure monitoring solutions, has closed a $3.2 million series A financing round. Led by Battery Ventures, the financing will be used to accelerate the company's growth and product development.

Why We Should Watch: First launching its product in 2010, Catchpoint ran 2.9 billion tests for more than 100 customers in 2012 and boasts consistent revenue growth – doubling year-over-year revenue last year.

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888VoIP Distributing Success

by Jason Alley, Interactive Intelligence

The Cloud: **The Great Equalizer** for the Small Contact Center

What to Consider and How to Move Forward

It's been the reality for some time. Mid-size to large contact centers have had more mature, innovative cloud offerings steered in their direction. Small centers with 50 agents or fewer, however, have had to settle for less functionality, reliability and security from less proven contact center providers. Interestingly, a majority of today's contact centers have fewer than 50 agents, and they often have the same core requirements as their larger counterparts. Thus, the small center market has been significantly underserved in the cloud.

Good news. This is changing. Market leaders are now offering powerful, simple and cost-effective cloud solutions designed specifically for small contact centers. And not surprisingly, these offerings are inherently more mature and scalable. Small centers no longer have to settle. They now have access to the same cloud platforms as the big boys. The cloud is the great equalizer.

Accordingly, many small centers are asking, "Is now the right time to move to the cloud?" Exploring this is imperative.

> Market leaders are now offering powerful, simple and cost-effective cloud solutions designed specifically for small contact centers.

While not for everyone, many are finding the answer to be, "Yes." But such a move is not something to take lightly. It's important to do your homework first. So, where to start?

Qualify the Cloud for Your Small Center

Corporate strategy usually drives technology decisions in the contact center. The cloud may help address pressing strategic imperatives. Begin asking some basic qualifying questions to see.

- Is providing exceptional customer service a priority, and will it differentiate our business?
- Has the customer experience suffered due to a lack of resources, expertise, and/or budget?
- How can we offer the same level of service as large contact centers without the same IT army?
- Is there a need to deploy new capabilities more rapidly?
- Can we accomplish more by outsourcing the job of keeping systems up-to-date and running?

If you determine that the cloud does make sense for your small center, you'll want to begin dialogue with cloud contact center providers. The list is extremely long (likely over 100 providers worldwide), so it's important to quickly narrow the field.

What to Look for in a Small Center Cloud Solution

Start thinking about the kind of solution and provider you want to bring on to help enhance the customer experience. Explore the following.

- Level of maturity – are the technology and provider proven?
- Breadth of functionality – what applications are supported?
- Simplicity – how simple will it be to turn-up and manage?
- Risk level – what kind of risk reduction measures are available?
- Scalability – how scalable is the solution in terms of agents and functionality?

Important Next Steps

Once you've qualified the cloud and been educated on viable options, build the business case and see if providers will let you test drive solutions. This is easy to do and can really help in the evaluation process.

The cloud has become the great equalizer and may indeed help your small center play big and turn customer service into a competitive weapon. It's definitely worth exploring.

Jason Alley is solutions marketing manager at Interactive Intelligence.

by John Abraham, Shango

UCaaS: **Recognizing Favorable Shifts** and Their Implications for **Service Providers**

It's undeniable that the unified-communications-as-a-service (UCaaS) space is kicking into high gear. Recently, this segment has been the subject of deep analysis and reports have confirmed high growth rates over the next several years. In fact, UCaaS subscriber numbers are expected to grow 16-fold over the next five years, and UCaaS revenues are expected to grow almost as quickly, according to Synergy Research Group.

Interestingly enough, just last year the UCaaS offerings were being viewed by many as an inconsistent and fragmented market, and not yet suitable for distributed enterprises. Today however it has taken root, and has many large enterprise companies intrigued by the functionality and benefits of cloud-based hosted architecture, which could overtake many customer-owned unified communications (UC) solutions.

Last year, the UCaaS market did not have identified market "leaders," meaning companies that were recognized as having a completeness of vision, combined with the ability to execute. However, according to the latest Gartner Magic Quadrant Report for the UCaaS segment, there are now four such companies: West, 8x8, Thinking Phones, and ShoreTel.

Certainly, what a difference a year makes. UCaaS segment services today include integrated voice over IP (VoIP), messaging, conferencing, and presence technologies. In a UCaaS environment, the provider owns, manages and hosts the UC infrastructure. Although until just recently, it didn't seem that they were ready to serve large enterprises for two reasons: either providers were seen as lacking a full suite of integrated UC functionality, or they simply could not scale their services to meet the needs of large enterprise customers. By contrast, the market leaders identified by Gartner have developed their own UC technologies, and have been delivering complete UCaaS solutions for more than a year.

It is common for UCaaS providers to spend years building out integrated suites of UC applications and to partner with other organizations to enable complete service packages to different customer segments. These sizable providers surely enable cost advantages, and have established themselves within key distribution channels and customer segments. However, demand for unified communications is growing, which means that even emerging entrants into the UCaaS market which must rely on third-party licensed UC technologies can be competitive through their own service sourcing strategies and offerings.

After all, underlying UC technologies – whether licensed or self-developed – is just one component of enabling a service bundle or offering from a UCaaS provider. Therefore, service providers that compare potential capital vs. ongoing cost advantages of owning a self-developed UC platform may find it more cost efficient to forgo development due to software development and support costs, as well as the common difficulty in determining ROI from those investments.

A second opportunity for small and emerging UCaaS providers is to focus on niche markets rather than large enterprise targets. Because the enterprise UCaaS market is still very nascent around key business areas such as customer segments, distribution channels, product SLAs, features, and interoperability, it creates an opportunity for focused and disciplined service providers to leverage specific prospect needs in order to build new, small and serviceable customer bases.

It's also very important that emerging UCaaS providers differentiate their service offerings and provide maximum value to the customers they are serving. Competition in the UCaaS space is unique given that it's very likely for traditional Tier 1 telcos to compete with large software companies for the same business. Also, a service bundled by a provider in the Northeast that is focused on an enterprise in the legal industry, for example, may need to look vastly different than one focused on SMBs in the Midwest.

Targeted offerings and succinct capabilities are two key components that enterprise customers seek in UCaaS service providers, and it's not uncommon for them to be on their second or third iteration of service provider because of it. Since end customers are becoming much more educated on UCaaS offerings and potential pitfalls, they are also now looking for best-of-breed type solutions, rather than traditional best-of-suite type offerings.

In the end, however, whether it's a market leader or emerging UCaaS provider, the opportunity for unified communications is on the rise to benefit all. In fact, the vast majority of growth opportunity for UCaaS during the next two to three years is anticipated to come from new market segments, and a recent Atlantic-ACM survey of service providers shows 85 percent expect new market segments to provide positive revenue growth for them.

Many service providers are embracing this shift by beginning to view other providers that may have differing services and hosted applications as potential partners rather than competitors. In fact, the next big paradigm shift may be led by providers that engage in strategic or wholesale partnerships that enable them to customize and create best-in-class type service mash-ups, regardless of whether they are offering all services on their own infrastructure, or pulling through a third-party partners' services via APIs.

Ultimately, UCaaS providers are looking to meet growing demands from enterprise customers seeking the ease of a single-source vendor, and a seamless service acquisition and delivery process. After all, their customers, like themselves, seek to maximize returns in their own businesses by engaging service offerings that enable them to free up capital expenses and compete favorably in their unique industries.

John Abraham is SVP at Shango, which operates an open, common service orchestration platform for unified communications. To learn more about Shango visit www.shango.com.

by Peter Radizeski, RAD-INFO, Inc.

Are Service Providers Hedging Their Bets?

Every hardware vendor is "going cloud." Digium just launched Switchvox Cloud, its version of Asterisk Hosted IP-PBX. Let's not forget that Cbeyond offered an Asterisk in the cloud service via its Aretta purchase before rolling out a Broadsoft Hosted PBX offering. Shoretel acquired M5. Mitel has a hosted service. VARs are using Cisco HCS. Microsoft Lync is big in the Fortune 50 crowd.

Then we have Dell, which is taking itself private in order to transition from a hardware vendor to a cloud services company. Obviously, this transition isn't easy for any company. Ask Microsoft partners or Mitel.

Transitioning to cloud is not as easy as slapping gear in a data center, calling it cloud and you are off and running. Well, you are running – chasing revenue as fast as you can. As I learned from speaking with Sonian, building for cloud delivery is very different that moving it to a data center or virtualizing it. However, it will be a few years before the market grasps that yet.

It is as much about a culture shift as it is a revenue model shift from CAPEX to OPEX. I think most people do not understand this.

Selling hardware is easier than selling an intangible service – for the salesperson. There is bias from buyers and the sellers that owning the hardware is a better solution (even when it isn't. I deal with it every day.)

Hosted PBX isn't for everyone. Therein lies the rub. Every provider thinks that everyone should be using hosted PBX. Why? Certainly, single location small businesses can still utilize a premise key system. Cloud services are most impactful for a distributed, mobile or virtual workforce. Or the company has to be making the shift to cloud – building out a data center, virtualizing servers, deploying MPLS, migrating to EMR or some other big step toward a cloud IT infrastructure.

Everything is shifting to cloud. Companies are lured by the monthly recurring revenue and the declining hardware sales. I can't tell if they are hedging their bets or they think everyone will be leasing a car over buying one soon.

Peter Radizeski is a telecom consultant and the owner of RAD-INFO, Inc.

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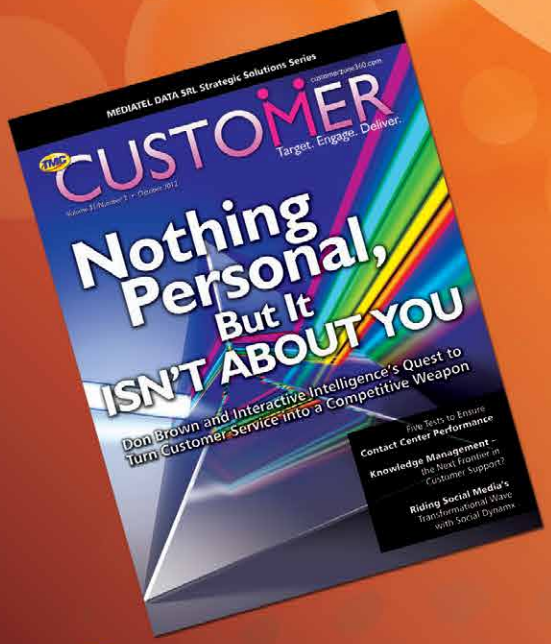

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by Wim De Wispelaere, Amplidata

The **New World** of Hyper-Scale Unstructured **Data**

The world has become awash in rich media, and it's driving a different kind of Big Data set of business requirements to keep it safe, secure, uncorrupted and accessible for years.

Every day consumers create and view images and video from a wide variety of origins, whether self-created or shared online from friends or professional sources. Resolutions are increasing rapidly, with high-definition formats and even 3D becoming the norm. Individual photo image files have grown rapidly from hundreds of kilobytes to tens of megabytes.

Such rich media represents a unique and rapidly proliferating type of Big Data best characterized as "Big Unstructured Data." Usually the term Big Data refers to analytics performed on relative small structured data files. In contrast, Big Unstructured Data refers to massive size files as typified by HD video and other video files that are each hundreds of gigabytes. In media and entertainment (M&E) specifically, the advent of High-Frame Rate (HFR) movies, at 48 frames per second, and soon in 60 frames per second and even higher, easily will be generating tens of terabytes of digital file content per hour.

Aside from rich media, a massive amount of Big Unstructured Data is also generated in healthcare, oil and gas, government, scientific applications and cloud services. The trend here goes beyond long term archiving of this content for legal and compliance reasons, but also for monetizing and unlocking the value of the content.

Traditional enterprise storage arrays or tape were never designed for the scale of the data that now must be stored. Managing systems with tens to hundreds of thousands of disk drives becomes very different from managing a few hundred disk drives. The challenge here is to create unbreakable storage for the world's largest portals, social networks, online applications, enterprise and scientific repositories at this scale.

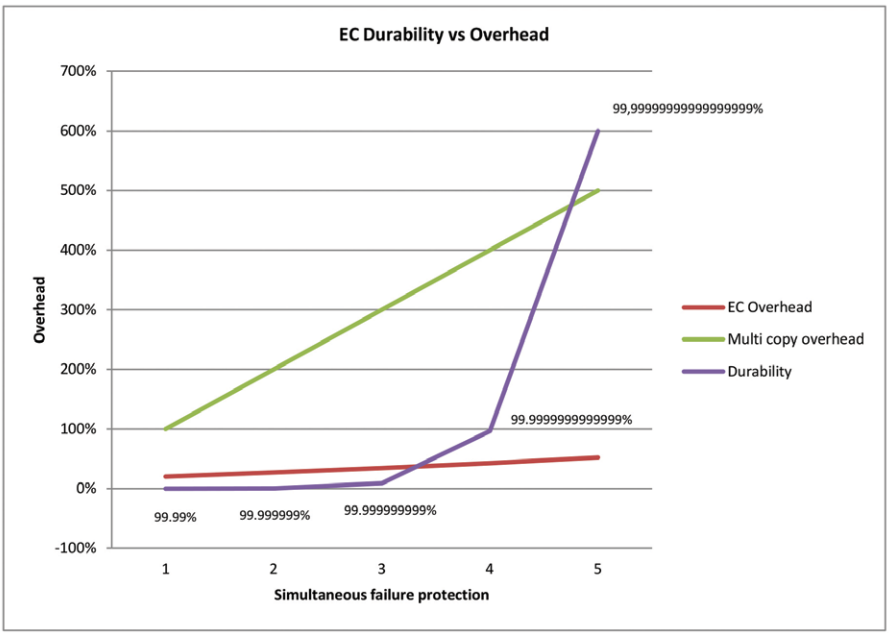
Disk-based object storage systems with erasure code data protection address this problem. Rather than designing for localized application storage, bounded by a few users and isolated to a single corporation – these are systems designed for Internet scale storage. They share fundamental properties that make them suitable for these new deployments:

- Systems can scale seamlessly, without interruption, from tens of petabytes to exabytes and billions to trillions of files.
- Extremely high levels of storage durability, to not only protect this precious data against the loss, but also to assure the integrity of the data.
- Performance that is matched to big data access patterns and increase to match system capacity.
- A true comprehensive reduction in cost of ownership, not just entry price but affordable overall ownership costs, including administration and environmental costs.
- Organic scaling over newer generations of platform components, with automated data migration to keep systems running for decades while underlying hardware changes occur.
- Distributed access across geographically disparate locations.

Content owners are starting to reap the value of their historical media assets to offset the cost of storage for their Big Unstructured Data. For example, the Monteux Jazz Festival is monetizing its 45 years of concert videos by converting them form the analog tape vault to a high-durable disk based archive. Rather than collecting dust as they did in the last 45 years, they can now deliver the videos "live" via streaming to a series of jazz cafes.

With the requirement of enterprises, research institutes and government organizations to retain their unstructured data online to repurpose and monetize it, the Big Unstructured Data problem extends well beyond the storage of media content. Organizations should thoughtfully consider the scalability, performance and durability demands placed by their unstructured data needs, and whether it's time for a sea change in their underlying storage architectures in order to turn it from challenge into opportunity.

Wim De Wispelaere is chief technology officer and founder of Amplidata.



Object storage systems with erasure coding protect against up to 5 simultaneous failures and beyond with less overhead than storing multiple copies. As a result the chance of data loss is reduced to less than one in 1,000,000,000,000,000 – that's fifteen nines (99.99999999999999%) of data durability.

by Randy Bias, Cloudscaling

Open Projects Drive the Open Cloud

We've talked a lot in this space about how open clouds are driving business model transformation. But one thing we've not talked much about is the collection of open source projects that comprise the open cloud.

A Basic Definition

Open source software is licensed via an open source license, examples of which include Apache, GPL, GNU and MIT licenses. The copyright holder is usually a foundation established for the purpose, and licenses generally cover rights to study, change and distribute the software at no charge and for most any purpose. The code is developed in an open, collaborative manner by volunteer developers and by commercial entities interested in leveraging the software for use in their own products.

Open source is more than software. There also are open source projects for hardware and data center design. We'll take a greatly simplified look at three open source software projects and, even more briefly, three open source hardware and design projects that form the foundation of the leading open clouds. (Obvious omissions like Linux were passed over because they are not, strictly speaking, cloud projects.)

Three Infrastructure-as-a-Service Projects

Three major open source software projects offer options for companies wanting to build infrastructure as a service clouds. Eucalyptus, CloudStack and OpenStack each offer differing degrees of scalability, API compatibility with public clouds like Amazon Web Services and the ability to run on commodity hardware.

Eucalyptus was the first to the IaaS party, launching in 2008. Born from a university project funded by the NSF to develop programming languages and runtimes for large-scale grid computing applications, the project has grown to add a substantial feature set and a sizeable user base. Eucalyptus Systems is the corporate sponsor, and the software is licensed via the GPLv3 license.

Eucalyptus deployments are chiefly private clouds and, to a lesser extent, hybrid clouds leveraging the AWS API set. The workloads that run on Eucalyptus-based clouds tend to be legacy enterprise workloads, and the goal of most deployments has chiefly been server consolidation using existing hardware assets.

CloudStack came along next, with a 2010 initial release. It was developed by Cloud.com, which was acquired by Citrix in 2011, and the software is licensed under the Apache license. CloudStack moved in a different direction than Eucalyptus, adding features that improved scaling, high availability and support for a wider selection of hypervisors. Citrix is the project's corporate sponsor.

OpenStack is the youngest of the three open IaaS projects. The project was launched in 2010, with its first stable release, Essex, in 2012. The code is licensed under the Apache license. Core OpenStack projects include Nova compute, Swift object storage, Cinder block storage, Quantum networking and Horizon dashboard. About 7,000 individual members from 850 companies participate in the project. OpenStack is designed to provide standards in cloud architecture to drive greater interoperability. Rackspace was the original corporate sponsor, but the project is now owned by the OpenStack Foundation and funded by an array of corporate sponsors.

The choice of IaaS software – Eucalyptus, CloudStack or OpenStack – should be driven chiefly by your intended use case. If server consolidation and virtualization with a measure of automation running legacy workloads is your goal, Eucalyptus and CloudStack are both good choices. If you want to support new, dynamic workloads designed to provision and manage their own resources in an architecture that looks more like AWS, then OpenStack is the strongest contender.

Open Hardware, Open Networking and Open Datacenter Design

The same principles that make open source software a winning proposition for cloud – collaboration, agility, community, economics – also make open source hardware, networking and datacenter design projects work.

Open Compute is a project launched by Facebook in 2011 to open source the design of commodity servers. The project now embraces storage and datacenter design as well. Similar to OpenStack, the goal is to drive interoperability through standardization.

OpenFlow is a software-defined networking project managed by the Open Networking Foundation. It improves network efficiency and performance by giving a remote controller the ability to modify the behavior of network devices through a "forwarding instruction set."

The Open Data Center Alliance was formed in 2010 by a group of large enterprises and Intel to build open reference standards for datacenter designs that are efficient and simple compared to the heterogeneous design approaches that prevail in enterprise datacenters worldwide.

In summary, without open source, there is no open cloud. And the more you know about each of the key projects, the better prepared you'll be to design a cloud strategy that ideally suits your organization's objectives.

Randy Bias is the chief technology officer of Cloudscaling.

(Disclosure: Cloudscaling builds its product, Open Cloud System, on OpenStack.)

by Matt Wallach, Veeva Systems

Multitenant or Single?
That is the Question

In the famous Shakespeare soliloquy, Hamlet challenges: "To be, or not to be: that is the question." IT teams are likewise pondering – "private cloud or public cloud?" But that is not the right question.

Deep in the recesses of corporate server rooms everywhere, administrators debate the merits of public cloud computing solutions versus private or even hybrid cloud computing solutions. Security, control, and access – these are all issues being tossed into the dispute. But public versus private is ultimately the wrong query. Rather, IT should be asking 'multitenant or single tenant?' That is the question.

Whether users access software through a private cloud or through the corporate server network on-premise, it's still traditional, single-tenant client/server software (with traditional client/server limitations). It's simply not true cloud software – at least not in terms of the highly coveted benefits (scalability, flexibility, cost-efficiency) associated with cloud technologies. Cloud computing benefits are only realized when the software is built on a multitenant platform.

Consider Microsoft's SharePoint solution – a business collaboration software application often packaged as a "private" cloud solution. It's actually not cloud at all. SharePoint is simply a single tenant application that is hosted "privately" by Microsoft or one of their many partners. That's not cloud computing; it's just cleverly worded hype that allows SharePoint to cry wolf…er, rather, cloud.

Now let's turn to Oracle. In 2011, the company was named the No. 1 "cloud washer," a term that refers to companies whose cloud products are mostly old technology with the word cloud tacked on to the name. InformationWeek's Charles Babcock called Oracle's Exalogic Elastic Cloud "an old-fashioned appliance that's been renamed 'a cloud in a box.'" Oracle was also one of the first to hype a "hybrid" cloud – again, wily marketing to conceal the fact that their software is not multitenant and therefore not true cloud.

When people say "private cloud" (also called internal or corporate cloud), they are really just using a marketing term for a proprietary computing architecture that provides hosted services across multiple software applications for a single company. Advances in virtualization and distributed computing have allowed corporate network and datacenter administrators to effectively become service providers that meet the needs of their "customers" within the corporation. Companies that use the "private cloud" moniker are trying to appeal to customers that need or think they need more control over their data, but this is deceiving. Whether public or private, a system is always only as secure as its host. And, because there are limits to a private cloud, companies do not get all of lauded benefits of cloud computing that the so-called public cloud with its massive economies of scale delivers. Simply put, it's not cloud computing. It's just moving the zip code of the servers.

On the other hand, when people use the term "public cloud," it refers to service provider that makes resources such as applications and storage available to the general public via the Internet. Think eBay, Amazon, Gmail, Dropbox, and Yahoo! Mail. These massive engines offer world-class security mechanisms because they must and they can – along with world-class performance across the board.

Indeed, it's no wonder that cloud confusion is growing. There are now many different definitions of cloud computing, splintering the technology into sub-categories like public and private cloud. But this is just muddying the water…purposefully so. These are just terms technology providers used to disguise their software's cloudlessness and refocus attention on differing shades of network openness (i.e., is my data stored inside or outside of my corporate firewall?).

There is only one characteristic that enables companies to reach full cloud potential: multitenancy.

What is Multitenancy?

Multitenancy is the architectural model that allows vendors to serve all their customers from a single, shared instance of the application. In other words, only one version of an application is deployed to all customers who share a single, common infrastructure and code base that is centrally maintained. No one customer has access to another's data and each can configure their own instance of the application to meet their specific needs via metadata-driven configuration.

In contrast to hosted single-tenant applications that are often described as private cloud offerings, multitenant applications all share the same physical instance and version of an application. Individual deployments of the application occupy virtual partitions rather than separate physical stacks of hardware and software. These partitions store the metadata that defines each organization's business rules, fields used, custom objects, and interfaces to other systems. In addition to an application's metadata, these virtual partitions can also store custom code, ensuring that any potential problems with that particular code will not affect other customers, and preventing bad code associated with one object from affecting any other aspects of an individual customer's application. This approach makes it possible for administrators to customize and change an application as often as needed using simple point-and-click tools. And the host can update all customers' systems at once, in minutes.

Multitenancy is the magic that makes cloud computing truly special, a disruptive technology. This is how true cloud computing software providers can offer products that are better, faster and cheaper than the traditional alternatives. It's also why cloud software is higher quality – if there is a bug identified, it can be fixed once and deployed instantly to all customers before most of them have even experienced it. A cloud built on a multitenant architecture enables the vendor to manage applications for many companies and users to share. This is the key – many to many vs. single to many.

Multitenant or single? That is the only question that matters. Only software with a multitenant architecture can be rightfully called cloud, and it's this characteristic that makes today's cloud software providers more efficient, more customer focused and more innovative. The fact that a cloud is public or private is not a factor in the quality of the software at all – it's an apples-to-oranges comparison. Call it private cloud. Call it hybrid cloud. Call it anything but multitenant and you aren't talking about the cloud.

Matt Wallach is chief strategy officer and co-founder of Veeva Systems.

by Lori MacVittie, F5 Networks

Shared Infrastructure, Shared Options

Deciding whether to invest in a cloud offering or not on the surface seems to be a simple financial exercise. The ability of the provider to share the cost of what would otherwise likely be expensive infrastructure across many customer benefits everyone with lower costs. And it's not just the capital investment that's shared, it's the ongoing operating expenses associated with maintenance that gets shared, too. But sharing network infrastructure means sharing network infrastructure everything – including configuration options that may or may not be appropriate for your application, and the risk that goes along with it.

On Christmas Eve last year there was an incident inside Amazon that ended up impacting a fairly small percentage of its infrastructure. Unfortunately, the cloud is shared infrastructure which means the impact was felt by a much wider audience. In a nutshell, the loss of infrastructure state data for ELB caused improper configuration of some load balancers which in turn resulted in degraded performance and errors for customer applications using those load balancers.

The incident illustrates well the potential negative impact of shared infrastructure. In this case the problem wasn't the sharing of load balancers, as one might think, but the sharing of the state management infrastructure (i.e. the database in which load balancer state was stored).

Whether it is a router, or a switch or a database full of state or configuration data, shared infrastructure necessarily generates shared risk. If three customers share a switch or a physical server and there is a failure, all three customers will be impacted. This is the subtle difference between multi-tenancy and fault isolation. The former does not guarantee the latter, and the latter is somewhat incompatible with the former.

In the cloud, however, infrastructure is necessarily shared at some level, and its underlying configuration with respect to performance and fault tolerance is rarely under the control of the customer. Such configuration options and architecture may be wholly unsuited to a particular customer's risk tolerance and business requirements. But the lure of cloud and its economic incentives is hard to resist. To take advantage of the benefits while addressing the risks of sharing infrastructure may require a more traditional architectural approach.

Addressing Risk without Giving up the Benefits of Cloud

Before deciding to migrate an application to the cloud and into a shared infrastructure environment it is vital to examine its existing environment, particularly its supporting infrastructure.

Consider carefully the entire delivery chain – from router to firewall to load balancer to security solutions all the way back to the database. For each piece of infrastructure, determine the impact to the availability and performance of the application. Are policies in place at any point in the chain that, if removed, may negatively impact the security posture or performance profile of the application? Can these policies be duplicated in the cloud on the shared infrastructure services offered?

In many cases, the answer to that last question is likely no. Any policy that may involve tweaking or tuning of parameters in the network stack are not likely available for shared infrastructure services. That's because, well, they're shared and one application's improvement may be another application's impairment. If such tuning is required it may be necessary to eschew the cloud service and instead deploy a more dedicated – but still cloud deployed – option that can be isolated to serving just your application.

> Whether it is a router, or a switch or a database full of state or configuration data, shared infrastructure necessarily generates shared risk.

Similarly it may not be possible to tighten security to satisfy business or operational requirements. For example, locking down access to specific ports on a shared firewall may not be possible because other applications require them. Such responsibility may need to be moved closer to the application – if not within it.

There are a growing number of options in cloud environments that include both shared services and more traditional "dedicated" service options. It is vital to maintaining security and performance requirements of applications moving to the cloud to understand what options are shared and on what infrastructure and how that aligns with existing policies that support the delivery of the application in question. Key options and services critical to the successful deployment and delivery of that application may require alternative deployment architectures to ensure that the shared risk of shared infrastructure does not negate the shared savings and benefits.

Lori MacVittie is senior technical marketing manager at F5 Networks.

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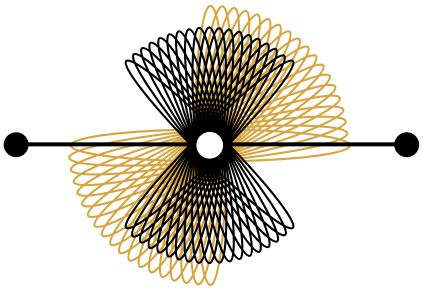

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Cloud-based or On-premise

by Len Whitten, SunGard Availability Services

Critical Data and the Secure Cloud

For a rapidly growing roster of companies with critical data, migrating to the cloud has moved from an idea to reality. But while cloud services promise rich economic benefits, scalability and flexibility, they also can trigger significant risks for companies highly concerned about security, data protection, reliability and availability.

Primarily, breaches of cloud data could prove devastating and costly, with any breaches sparking downtime. Still, for increased security, you may want to consider the cloud. While this goes against conventional wisdom, there are reasons it makes sense. One, partnering with a vendor with a dedicated data center and one that follows a holistic approach to serving customers can alleviate security concerns. Why? Because of the single-minded obsessiveness that these vendors must bring to bear.

Indeed, a third-party data center with SSAE16 Type II certification will meet and probably exceed security of centers without this certification. Any cloud environment should be within this very secure type of data center (certified by a third party to meet this internationally recognized third-party assurance audit designed for service organizations).

Two, companies that employ the cloud on their own don't always have the dedicated expertise to evaluate all of their security and data protection needs. One company, for example, had a growing business and wanted to employ the cloud. But its data center, with a decent-sized server farm, was housed in a converted office space, with cardboard boxes cluttering the space, and a haphazard approach to IT management. Neither system nor access was truly secure, reliable, or available. A data center with operations already tailored to monitoring and managing services for customers can leverage those well-honed skills to enhance cloud offerings.

Safety in the Cloud

Third, data can be protected by taking the proper steps. Although "security of my data" is frequently listed at the top of cloud concern surveys, it's untrue that data just floats in the cloud where anybody can see it. What is true is that some cloud engagements can provide higher security than others, including do-it-yourself projects. The key is to find the vendor that demonstrates this. No inherent reason exists that automatically makes cloud-based data less secure than data not in the cloud.

If you partner with a data protection vendor, you can count on physical security – a fully protected secure data center – and a multi-element security system in the cloud that isolates and safeguards your important company data with firewalls and threat management. Data protection is tightened by adding layers of detection and security.

What about protection from savvy cybercriminals? A data-protection vendor responsible for safeguarding many customers in the cloud actually can typically thwart cybercrooks better than organizations can manage on their own because expertise can be pooled and leveraged for maximum scale.

An experienced threat manager with security expertise and architects in place can greatly reduce the probability of cyberattacks occurring in the first place. (Remember, however, that 100 percent protection from a breach can never be guaranteed.) When a managed database-services provider with its sophisticated detection systems and defenses is monitoring customers, the cloud operations center can spot and address a perceived problem quickly because of the overall larger dedicated base that must be protected.

The IT staff also constantly tests all layers of protection, ensuring that systems are up to date, that all needed patches have been made, and that all housekeeping chores are taken care of. This protects cloud implementations from snooping by other customers within the same environment. Hypervisors prohibit such cross-virtual machine (VM) traffic.

Cost, of course, is a concern that invariably emerges. Usually, cost comes down to how much risk exists and how much you're willing to spend. Any company using a reputable services provider will get some level of security. But there are multiple variables to consider, including the number of firewalls needed, tighter rules, and degrees of alarm systems.

It often becomes a matter of basic security with additional options. Companies with critical data often consider more sophisticated security systems because of the particular sectors they're in and the sensitivity of their data, or because regulators require a certain level of protection.

Companies with critical data (and really, what company does not have critical data?) that are considering moving to the cloud must adopt a mindset that a cloud environment can actually provide more security. They must demand that their potential providers prove this. This mindset can help you select a provider that can truly enable a secure, reliable, and available production environment for your specific needs.

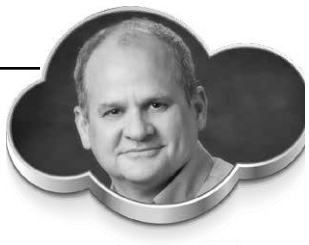
Getting started is easy to do. Simply ask yourself several key questions, such as:

- Can I scale up (and down) easily?
- Can my provider clearly demonstrate a high degree of security for my data?
- Can the implementation display a level of availability and reliability consistent with my needs and budget?
- Can my provider add services on top of what I've got, but that I don't want to handle myself?
- Can my data be protected and reliably backed up?

Some of these questions aren't specific to the cloud. But you should address all of them if you're moving in that direction.

Len Whitten is director of cloud services product management at SunGard Availability Services.

by Vic Nyman, BlueStripe Software



The Year of the Hybrid Cloud for the Enterprise

Hybrid cloud is the trend that unlocks public cloud adoption for the really big IT spenders: enterprise IT. Specifically, the big iron organizations are combining the flexibility and power of public cloud platforms for customer facing front-end systems while relying on the enterprise class transaction processing of their existing data centers. They are exploiting the best of both worlds – positioning hybrid cloud for significant growth in 2013.

The challenge for enterprise-scale companies is in making hybrid cloud as reliable and as manageable as their time-tested data center systems. To achieve the increased flexibility and cost savings that cloud deployments offer, application management and cloud service vendors are stepping up to provide increased visibility into cloud-based application performance. As IT operations teams realize this shift in management capabilities, they will quickly move to deploy applications in hybrid cloud environments.

Cloud adoption is growing rapidly. As one example, Amazon Web Services (AWS) is projected to produce revenues of $3.8 billion in 2013, and many other large vendors now offer similar services. Much of that growth has been driven by small and mid-sized businesses, while enterprise participation has been limited to test environments and small "rogue deployments" not managed by the IT operations team. Officially sanctioned movement toward the use of public application services at large companies has been slower.

A recent BlueStripe survey showed that enterprise companies are considering hybrid and public cloud options, but aren't rushing in. Only a small fraction have moved mission-critical applications to cloud-based environments. The survey showed that while 65 percent of companies are considering cloud deployments for critical applications, only 3 percent have completed cloud application deployments, and just 7 percent have committed to cloud deployments in 2013.

Data security and application performance visibility are two key concerns driving this hesitation. Fortunately, hybrid cloud can now provide significant benefits in those areas while providing a flexible cost effective environment. That's why this is the breakout year for hybrid cloud deployments.

Maximizing Strengths While Minimizing Risks

Hybrid cloud environments leverage the strengths of cloud deployments, while minimizing the risks by retaining control of back-end systems in the data center. Concerns with applications in the cloud focus on three things: attaining flexible scalability, securing back-end data, and managing application performance. A properly architected hybrid cloud deployment makes it possible to achieve all three.

With hybrid cloud, IT teams can deploy applications faster, adjust capacity in real time, and consolidate servers for significant cost savings – all while keeping control over secure proprietary data. The remaining issue is the potential loss of application and transaction management visibility.

Complete Transaction Visibility

To properly deal with any performance or availability issue, IT operations teams need complete transaction visibility, both in and out of the cloud environment. Conventional wisdom says that the requirement for visibility is dependent on the deployment. Public cloud demands less visibility. Managed systems in the data center require more. Hybrid clouds, though, turn that notion on its head, requiring complete visibility across all pieces of the application environment.

The visibility gap created by the separation of application functionality from platform specification must be crossed to properly manage applications in a cloud environment. This can only be achieved by monitoring end-to-end transaction performance across the entire application – both in the data center and in the cloud:

Application performance management (APM) tools are evolving to provide this complete visibility for end-to-end transaction visibility in hybrid cloud environments. Now that the third cloud deployment issue can be met, enterprise companies can now take advantage of the benefits that small and mid-sized companies already enjoy with cloud deployments.

What Does that Mean for IT Operations?

First of all, IT operations teams will now be able to confidently say "yes" when thinking about using public cloud services to deploy a new application. Using (now) established best practices, they can design systems that provide highly scalable front-end delivery with the control and security of the data center.

The feeder of this confidence is the newfound ability to monitor transactions end-to-end across the entire hybrid environment – the data center and the public application services. Ultimately, that means fewer problems, faster problem resolution, and happier customers. After all, that's what this all supposed to deliver anyway. So "cheers" to 2013 – The Year of the Hybrid Cloud.

Vic Nyman is the co-founder and COO of BlueStripe Software.

by Erin E. Harrison

Network Control in the Cloud Demands Visibility, Control & Speed

Visibility is Key to Assuring Application SLAs in the Cloud

More and more businesses – both small and medium-sized businesses (SMBs) and large enterprises alike – are migrating business-critical applications to the cloud in the hopes of achieving lower costs and greater efficiency.

But as new complexities disrupt business and IT, maintaining predictable business operations and a reliable user experience is a significant challenge; the typical enterprise network lacks the visibility, control and bandwidth required to rapidly migrate application workloads into the cloud, prioritize all types of Internet traffic and protect the quality of the user experience for strategic cloud-based applications.

Delivering an "always-on" experience in today's complex IT environment means understanding the applications that are critical to the business and assuring their SLAs, while being nimble enough to shift gears at any given time. A change in thinking is required to ensure successful cloud migration, according to Brendan Reid, vice president of product marketing at Exinda, a provider of WAN optimization and Network Control solutions.

Exinda, based in Boston, Mass., focuses on midmarket enterprises – which the same segment leading the cloud-migration charge, says Reid.

"Application migration to the cloud introduces another level of variability to the network and is a prime example of the predominant networking trend impacting companies," Reid explains. "The network is becoming more and more complex – the problems network managers dealt with five years ago were singular in nature and could be addressed by adding bandwidth. That's all changed because of cloud."

When it comes to migrating applications to the cloud, the major concerns are loss of visibility into performance and loss of control, according to Jim Rapoza, an analyst with the Aberdeen Group.

"When your key applications and servers are running in the cloud, they are obviously no longer on your network. This makes it much harder to do end-to-end monitoring and optimization in the traditional ways," Rapoza explains.

Among the biggest network factors that companies need to consider when migrating to the cloud are service-level agreements (SLAs) and whether the new network scenario will support a company's application-level SLAs.

"It all comes down to application SLAs – that is all anyone cares about. To enforce or adjust SLAs based on tiers of criticality – where the most strategic applications get the highest priority – is a key factor," says Reid.

When cloud is introduced as another variable, coupled with the increasing bring your own device (BYOD) scenario, the equation becomes more complex as more employees using applications consume them over the public internet which means the network team now has to deliver the same application SLA amidst very different network conditions.

"The situation is further complicated by recreational internet usage, such as employees using YouTube and Facebook, or streaming sports highlights, while at work. So while work applications like CRM have gotten more complex, at the same time you also have employees that are using that same network connection for recreational use. But it gets even more challenging in the social enterprise, they could also be using YouTube for a marketing campaign, so it's critical that the whole picture is taken into consideration," Reid explains. "Five years ago, content was king, today context is king."

Among the biggest issues for companies that have migrated part or all of their applications to the cloud is a slow return on investment, which is driven by a lack of visibility into the network and adequate application user experience testing before moving applications into the cloud.

"Customers tell us that migration to cloud isn't yet providing the promised returns that they thought it would. The reason is the inability or lack of preparation upfront by companies before they migrate their applications to the cloud," says Reid. "Companies are moving into the cloud under the premise that they are going to get some kind of cost savings, but in reality, they are underprepared."

The majority of companies enter into a cloud migration project believing they will immediately reap measurable cost savings.

We saw the same thing in phase 1 server virtualization as well as BYOD adoption, according to Reid.

"But like these other initiatives, customers frequently call us part way through a project as they begin to realize they were not really prepared from a variety of perspectives," explains Reid. "We see it time and time again. For example midmarket customers speak about challenges of migrating applications to the cloud and still delivering their internal SLAs, in particular for, disaster recovery, CRM and unified communications. The resounding feedback is they were not adequately ensuring a reliable and predictable user experience on the public Internet. Preparation is understanding the impact on the network before migrating to the cloud and adjusting SLAs or adding network bandwidth policies before problems arise."

He notes three typical challenges:

- Challenge 1: The customer didn't adequately assess the network's readiness to support critical applications over the public internet. For example, one day their CRM or email was premise-based and operating on a predictable network, and the next day it was fully dependent on the public internet for user experience.

- Challenge 2: A byproduct of the previous point is SLAs – more and more companies try to deliver internal SLAs to the company around critical applications but end up not being able to meet the same level of consistency from the cloud as on premise.

"We hear from companies that the necessary SLA adjustments are often not made – consider the same example where you had an SLA that said your CRM would be up X percent of the time, take X minutes to resolve a problem and provide X milliseconds response time to the user. Now you're running CRM from the cloud, which means it's competing with Facebook and YouTube and everything else for bandwidth – if you don't adjust your SLA or put new tools in place to assure them, you end up not meeting them," Reid says.

Challenge 3 involves moving applications to the cloud and the way it changes how help desk services are delivered. "You're now reliant on a third party in the SLA equation in terms of application delivery and problem resolution – it complicates things greatly and needs to be considered more than it is," Reid adds.

WAN Optimization

Traditional WAN optimization solutions are, as the name says, designed for the WAN, Rapoza explains.

"They do a great job making sure that traffic and applications on the WAN are running well," he says. "But once an application or server is in the cloud and no longer on the WAN, those traditional optimization systems are now dealing with a significant portion of critical traffic that they have no visibility or control over."

"Once an application or server is in the cloud and no longer on the WAN, those traditional optimization systems are now dealing with a significant portion of critical traffic that they have no visibility or control over."

– Brendan Reid, vice president of product marketing at Exinda

Traditional WAN op solutions are multi-sided solutions, Reid says, with many businesses using a two-appliance solution – one in the branch, one in the data center. But that doesn't always work with cloud.

"You put one appliance in the data center and one appliance in the branch office so they can make traffic in both directions move faster," Reid explains. "But when you move into the cloud scenario (e.g., Salesforce.com), that configuration isn't possible anymore because Salesforce.com is not going to let you put a WAN optimization appliance in their data center. So what do you do? Your choice is to not optimize that traffic and hope for the best, or use a company like Exinda who also offers a 'one-sided' or 'asymmetric' solution, which means you put one appli-

ance in your branch and nothing in the cloud. That one intelligent appliance understands how to prioritize and optimize web traffic without needing that second appliance."

WAN optimization is about compressing bits or making bits move faster, but businesses need to take more intelligent approach to migrating applications to the cloud, Reid says.

"The more real-time applications are in place, the more applications are competing for resources. There has to be a differentiation between cloud application control versus WAN optimization, and thinking more in terms of context versus content," he says.

A WAN optimization solution is inherently a two-sided equation. "In the cloud scenario, you can't do that. You now have a toolkit problem to deal with. Exinda puts in place single-sided solutions to control incoming traffic from the internet and to provide that control and policy bandwidth allocation," Reid explains.

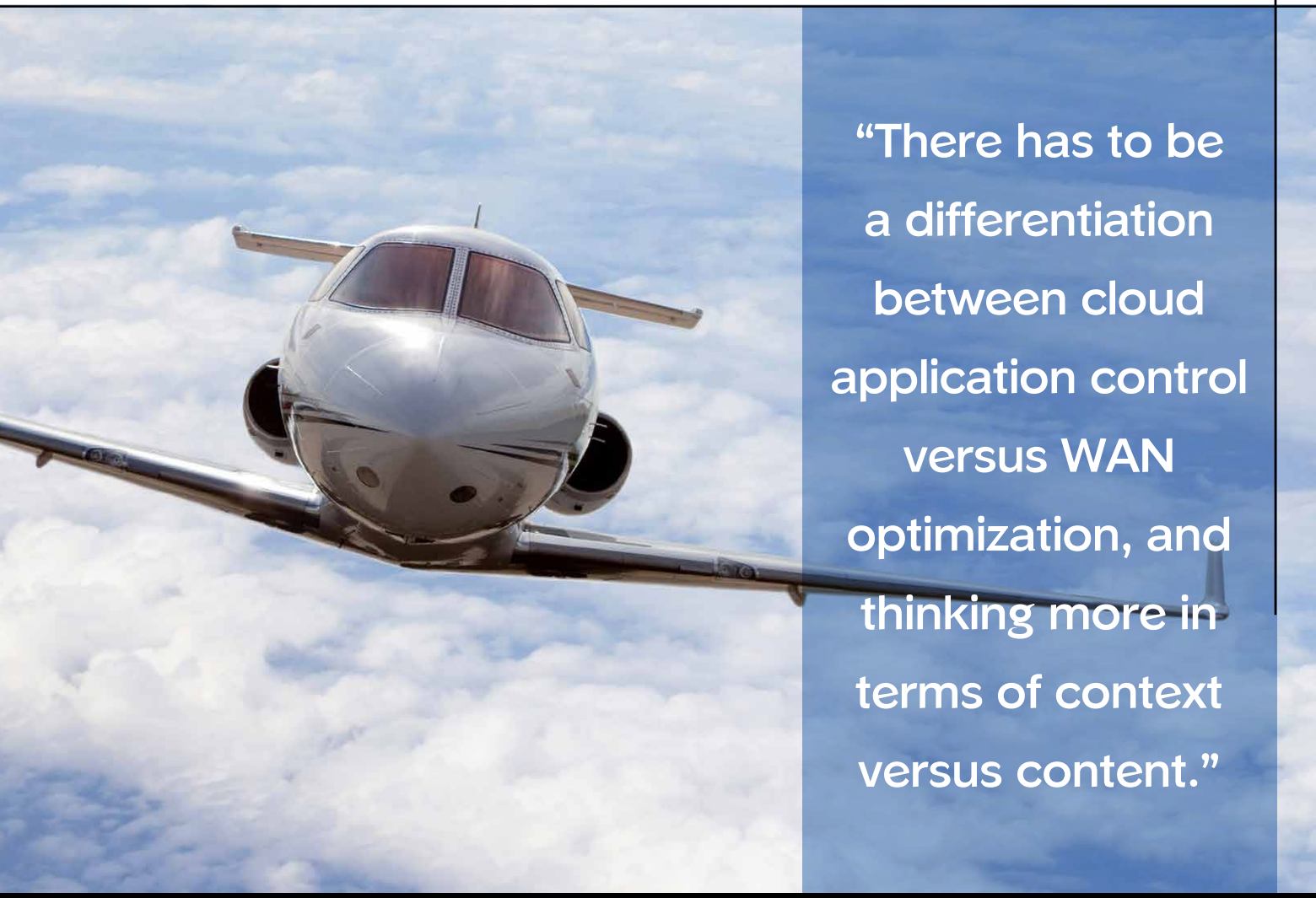
Exinda's focus on SLA assurance is critical to the success of its customers spanning many industries and countries:

- 6 million students worldwide rely on the Exinda Learning Network
- 11,000 branch offices collaborate on the Exinda Branch Network
- 8 of the top 10 hotel brands run on the Exinda Hospitality Network
- Over 300 services firms deliver on the Exinda Services Network
- Governments in 31 countries depend on the Exinda Public Service Network

"We provide a level of intelligence to allow companies to assess the impact cloud will have on the network," says Reid. For example, when looking at CRM on premise versus in the cloud, Exinda helps companies understand and assess the network impact by assessing readiness from a network perspective.

"The company carries this out by helping its customers set up bandwidth-allocation policies to allow bandwidth to be available based on a tier system, to ensure the ones most important to them always get the same bandwidth," Reid says. "We offer a level of visibility and reporting that allows customers to get very granular."

Loss of visibility and control can continue to plague businesses that have not adequately prepared their cloud strategy to incor-



"There has to be a differentiation between cloud application control versus WAN optimization, and thinking more in terms of context versus content."

porate not just the volume of network traffic, but also the type of traffic it's handling.

"One of the problems customers speak about is differentiating types of network traffic," Reid says. "Without a rich level of visibility, you are not able to distinguish between the internet applications you want to guarantee and those you want to constrain or control."

The Exinda Network Control Suite is designed for medium-sized enterprises functioning in today's rapidly evolving network landscape, which includes private and public clouds; virtualization and consolidation; converged networks for voice, video and data; and a mobile workforce that uses multiple devices to access strategic business applications.

In a classic server and application deployment, businesses can fully monitor and optimize these systems since they are running in the data center and completely on the company network, Rapoza explains.

"Once they have migrated, they now have a major blind spot once the service leaves the company network and goes to the cloud," he says.

User Experience

The key metric when it comes to the entire application and network infrastructure lies in the user experience, says Rapoza.

"Everything else is secondary. Even when someone calls IT and says 'the network is slow,' they don't really mean that the network is slow. What they mean is that the application they are using is slow and giving them a bad user experience," he explains. "In the end, all of an IT department's performance dashboards can be happily showing green dials that say everything is fine, but if users are having a bad experience, those dashboards don't mean a thing."

In a recent survey, CIOs reported that they were five times more likely to report the user experience was more important than throughput.

"All of these new variables are increasing the complexity of the network," adds Reid. "In a client-server environment, which is a single variable – you have a bit-centric problem. Now we have a business-centric problem. The variables are much more complex and you therefore cannot solve it with a single-variable solution, you have to address a multi-problem user set."

Cloud is one of these variables making these issues that much more complex. When considering a cloud strategy, organizations need to be able to guarantee a number of things, Reid says:

1) Who is the user?

2) What type of user is it? A guest, an employee, an executive?

3) What application is being used?

4) How strategic is that application?

5) What else is going on in the network at this time?

"In the end, all of an IT department's performance dashboards can be happily showing green dials that say everything is fine, but if users are having a bad experience, those dashboards don't mean a thing."

Taking a Multi-Faceted Approach

While many WAN optimization vendors tend to focus on throughput and reducing the amount of data running on a network, Exinda focuses on one fundamental problem set: application SLAs and structure.

"Whether you are running applications across a WAN or you are consuming apps from the cloud, the one thing that never changes is you have to assure application SLAs," Reid says. "So focusing on SLAs and not just throughput, you are in a much better position to handle this multi-faceted network environment."

Exinda helps with SLA applications by managing and maintaining them throughout the migration process.

"We are taking a more realistic approach to what companies' application environments actually look like today," Reid adds. "To be able to do that, you have to have a focus on technology and policy, and understand the context by which the applications are being used. You can then set policies so customers can allocate bandwidth to the apps that are important to them."

Without visibility, an enterprise doesn't really know what is happening with their applications and performance, Rapoza adds.

"Businesses really need as close to end-to-end visibility as is possible," he says. "In the end, if you can't see every part of the application system, odds are that key problems will be happening in the areas where your enterprise doesn't have visibility."

Feature STORY

by Erin E. Harrison

MSPs and Cloud Services **Converge Through Intermedia's** Acquisition of Telanetix

A $55 million acquisition set to close this summer symbolizes a major step in closing the gap between the managed service provider (MSP) and cloud services spaces. In late January, third-party Microsoft Exchange hosting provider Intermedia entered into a definitive merger agreement to acquire MSP and cloud-based communications solutions provider Telanetix, which is doing business as AccessLine.

When the deal is made final, Intermedia, which is already the world's largest third-party hosted Exchange provider, will become one of the largest U.S. providers of cloud voice and hosted PBX services for SMBs. The acquisition is one of the latest examples of an MSP and cloud player merging their offerings, narrowing the gap between the two growing segments to create a carefully and fully managed cloud services experience.

As small and mid-sized businesses (SMBs) are increasingly searching for reliable cloud communications solutions that are scalable, adaptable and well-priced to help them grow, the combined company aims to meet SMBs' existing and future cloud voice and other services requirements, according to Intermedia President Michael Gold.

"Additionally, AccessLine's management team comes to us with deep telecom experience that will be heavily leveraged to grow the business. By enabling Intermedia's core positioning as a provider of tightly integrated cloud services for SMBs, this deal reduces risk to our plan and, more importantly, to customers and partners," explains Gold.

The acquisition will also help the Mountain View, Calif.-company further execute its "Office in the Cloud" vision of offering an integrated suite of cloud services to SMBs and the channels that serve them, says Gold.

"This also benefits our customers through an expanded product, improvements in the quality and reliability of services, expansion of their VoIP products and the addition of distribution channels to choose from," he says. "The acquisition also brings in a seasoned team with significant experience running a large and scalable hosted PBX, SIP trunking, and individual phone services operations."

When the acquisition is completed in July, Gold expects to retain AccessLine's entire team, and plans to announce any organizational changes when the transaction closes this summer. He says a "significant factor" behind Intermedia's decision to move forward with the acquisition was retaining AccessLine's team. AccessLine's CEO, Doug Johnson, and the AccessLine team are expected to remain with the company, according to Gold.

"The transaction is designed to help grow the business of the combined company and with growth come opportunities for employees of the combined company. Since the two companies offer complementary capabilities, have assets with minimal overlap, and reflect a strong cultural fit, we expect the integration to be smooth," says Gold.

Looking ahea, Intermedia expects to see continued evolution of the channel this year, in line with many important advancements in technology.

"Key Microsoft offerings, including Windows 8, Exchange, SharePoint, Lync and Office 2013 will serve as significant drivers for upgrade-based sales, as well as reconsideration of existing underlying technologies, such as on-premise versus cloud," predicts Gold.

There will also be a continued increase in the move to tablets and smartphones, which changes the model for channels, which will essentially drive the adoption of synchronization technologies like ActiveSync, file synching, BES, along with cloud storage.

"The move to tablets and smartphones will also drive a significantly greater convergence between the traditional data-centric IT channel and telco-based channel partners," Gold explains. "We believe that considerably higher consumer acceptance of public clouds will occur due to marketing efforts by Microsoft and Google, eventually leading to various forms of cloud services becoming the first choice of technology platforms in the channel. We also expect an upswing in demand for other hosted services including hosted VoIP/PBX and cloud servers resulting from this transformation."

Much like the channel, business models are expected to evolve as well, Gold adds, and there will likely be more flexibility in billing terms in addition to the more standard cloud model of monthly payments.

"Intermedia will continue to develop, support and serve our customers with high quality cloud communications solutions. We will continue to invest and expand in the Hosted PBX service and our capabilities in this business," Gold summarizes. "In addition, we will further execute on our Office in the Cloud vision of offering an integrated suite of cloud services to SMBs and the channels that serve them."

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Feature STORY

by Erin E. Harrison

BC/DR Strategies **and the Cloud**

The consequences of high-profile cyber attacks and natural disasters we hear about typically involve large companies like Amazon or Google – yet small businesses face the same escalated cyber attacks and increased frequency and scope of natural disasters as enterprises.

The aftermath of Superstorm Sandy – which pummeled its way through the Northeast last fall, leaving millions without power, cable and phones for days on end – left IT decision makers and other executives seriously considering their business continuity/disaster recovery (BC/DR) strategies. Since disaster recovery is more about preparation than recovery, a BC/DR strategy, even for small businesses that do not have a dedicated IT staff, is critical.

First, it's important to differentiate between business continuity planning, which is focused on supporting business processes and services; and IT Disaster Recovery planning (DR), which focuses on IT service continuity.

"Hurricane Sandy was a big wake-up call for everyone, especially for those organizations on the east coast. As a result, many organizations are looking at their level of preparedness, both from a business as well as IT continuity perspective," according to Alberto Jimenez, principal at Datalink.

Cloud-based DR is an option for consideration and is popular for many reasons, he explains.

"First and foremost, it is viewed as being cost effective and relatively easy to implement. The real benefits of DR in the cloud, depend greatly on the individual needs of each organization, and on the type of cloud (public, private, hybrid)," says Jimenez. "In general, however, the benefits of cloud-based DR often includes rapid provisioning, faster recovery, lower data loss and scalability."

The cloud is an obvious solution for BC/DR strategies due to its geographically diverse nature and is becoming increasingly popular because costs are low, specialized skills and equipment are "built in" to the solution, and DR testing, customization and performance are all included, according to Ron Offer, CEO of managed service provider Integrity Virtual IT.

"The only issues that restricted cloud BC/DR in the past were cost and availability of bandwidth at the primary business site, neither of which remain an issue in today's market," says Offer.

It seems like overnight the so-called Recovery as a Service marketplace has created hundreds of technology vendors, solution providers and options for the small to medium-sized business (SMB) market, which makes selecting the right provider a difficult undertaking.

"Enterprises lean on mature procurement teams to identify and manage vendors that best fit their needs. SMBs, for the most part, rely on a more tactical buying practice, based on relationships. A good tactical approach is to look for providers that can prove their capabilities. So, ask for references," advises Jimenez. "In addition, organizations should also be able to 'try before they buy.' Select an application and run a proof of concept (POC) to get a good feel for how easy or difficult is going to be to provision and use these type of solutions.

That said, before running a POC, IT leaders need to take a step back and clearly determine their needs for availability and continuity, as well as a host of other things. Keep in mind that most DR as a Service (DRaaS) solutions are supported via public cloud environments. This may raise some security and/or compliance concerns.

The Path to BC/DR for SMBs

Enterprise solutions, which were once only available to the Fortune 500 market through two to three solution providers, are now available to the masses. Today, more CFOs from all sized organizations are choosing cloud-based BC/DR solutions to protect business critical applications such as ERP, CRM, payroll and e-mail, while historically, BC/DR solutions have been designed for large enterprises.

"In the past, it has mainly been larger enterprises adopting cloud-based BC/DR solutions," explains Offer. "However, Zerto Virtual Replication has made it feasible for the SMB market by reducing the three-year TCO from a minimum of $1 million to 2 million to $250,000 to $450,000."

Most organization are already using some type of cloud-based solution for non-strategic functions like email, CRM, payroll, etc., Jimenez adds.

"Organization that were early adopters of cloud-based DR already have mature capabilities – they understand their business needs, as well as their link to IT services; and they've developed and validated their BC and DR capabilities," he explains.

"For organizations that are still developing their IT continuity capabilities, they often take one of two paths. The paths include DRaaS for non-business critical systems or internal, cloud-based DR for business critical systems. Regardless of the path, it is important to validate what can run in the cloud."

When it comes to IT service continuity or DR, some companies are looking to lower the cost of DR, while others care more about lowering their recovery times, and yet others want to build scalable solutions, according to Jimenez.

"For organizations that do their homework, understand their needs, define realistic objectives and design the right cloud-based solutions, they are more likely to see the benefits," he explains. "However, for those organization that are taking shortcuts, cloud-based DR solutions may not deliver much value, and what's even worst, may create a false sense of security."

In the case of Integrity Virtual IT customers, they were able to shift operations from Virginia to Chicago to avoid risk from Sandy.

"It worked flawlessly and shifted back to the primary site after the event. They were operational through the storm, while many of their competitors both larger and smaller were incapacitated," says Offer.

BC/DR Best Practices

The key to implementing a solid BC/DR plan is to start by understanding the organization's business needs and strategy, and priorities – then align these needs with IT services, and look for solutions that best fit these requirements, including both internal and external cloud-based solutions.

"Each of them have significant value as well as risk drivers. When evaluating DRaaS services; make sure to understand the terms of implementation, testing and use at time of need," says Jimenez. "Many of these services are offered on 'first come, first serve' basis. Also, make sure to understand SLAs, as well as vendor security and compliance capabilities.

Like any other IT transformation efforts, implementation of cloud-based IT service continuity is not without risks. Some key considerations include, technical feasibility, change management and performance concerns. In addition, organizational culture is a big consideration.

"That said, cloud-based solutions offer great possibilities for improving continuity capabilities and generating more value than their cost," Jimenez adds. "The best way to learn is by doing, so look for opportunities to experiment and try before you buy. Start small and build from your learning."

Choosing the Right BC/DR Provider

IT personnel should take many factors into consideration when making their decision, including:

- **RTO/RPO requirements**
- **Cost of the solution**
- **Handoff point of DR solution stack (storage layer, server layer, virtual layer, OS layer, backend database layer or application layer)**
- **Data center tier level (man traps, early smoke detector technology, on grid/off grid synchronization technology, substation redundancy, fiber ring redundancy, hurricane resistance, flooding resistance, etc.)**
- **Geographic diversity**
- **Replication flexibility and capability**

Feature STORY

by Erin E. Harrison

Performance Management in the Cloud: Challenges & Solutions

In today's complex networking environment, IT operations teams spend the vast majority of their time trying to locate relevant information, or sifting through vast amount of unusable data when they look for network problems. This job is made more complex when the network is distributed among in-house, remote and cloud infrastructure – it's like following a moving target.

As technology changes continue to accelerate, service providers are seeking new ways to manage more complex, high-bandwidth, IP-based data services. A consistent challenge for IT managers and administrators is to proactively monitor performance across the cloud, identify threats and decrease any impact on the end customers. Simply moving your applications, or part of your applications in a hybrid cloud setting doesn't mean you move the responsibility to manage those applications, explains Vic Nyman, COO and co-founder of BlueStripe Software.

"You still have to manage service levels and solve application performance issues. IT operations teams must always monitor their applications and be prepared to determine the cause of performance or availability issues," Nyman says. "Gathering performance data across a dynamic real-time cloud environment is one place where transaction monitoring tools have a big edge over conventional server and application tools, which tend to be blocked by cloud systems."

According to Frost & Sullivan's definition, the network performance management market consists of solutions to manage, monitor, resolve faults and control changes on the network infrastructure. These solutions are designed to track network traffic gathering information for the needs of statistics collection as well as measuring and optimizing performance for network elements.

There are several kinds of network performance tools available on the market today. For example, conventional network and server monitoring tools focus on resources – including available CPU, memory, bandwidth, etc. – as opposed to service levels. "This can lead to situations where all performance lights are green, but customers are experiencing problems. Conversely, just measuring end-user response times without an understanding of where user transactions go in the data center leaves a large management gap, too," Nyman explains.

BYOD and SLAs

The Bring Your Own Device (BYOD) trend presents yet another cloud-related hurdle for organizations. The rapid proliferation of consumer mobile devices is changing the traditional IT environment in enterprises, as 90 percent of enterprises have already deployed mobile devices, with smartphones being most widely deployed, according to a recent survey by Gartner.

"BYOD adds new requirements to every single application. Those extra requirements create additional complexity and opportunities on top of the already complex mission critical applications. It's application complexity that creates performance management roadblocks for IT operations teams," says Nyman.

Performance monitoring tools alone do not allow businesses to better meet SLAs and provide continuous operation of services. The primary function of an ideal performance management system is to optimize the use of the network and applications so as to provide a consistent and predictable level of service.

For SLA improvements, tools must understand how components (either in the data center or in the cloud) impact user transactions," Nyman explains.

Taking an End-to-End Approach

Another challenge around network performance monitoring is that many IT managers lack confidence in their own processes to find network performance problems before end users report issues.

In fact, a recent BlueStripe Software survey showed a disconnect between goals and the processes designed to achieve those goals. More than 80 percent of enterprise-scale companies never solve a quarter of their application problems. "This seems shocking at first, but with today's ultra-complex applications, it's understandable," explains Nyman. "There's really no way for IT operations managers and team members to understand all the dependencies between servers, processes, applications, and back-end systems. The platform-focused approach most management tools take don't alleviate that concern, adding an additional requirement of platform expertise just to use the tool."

That's why end-to-end transaction monitoring tools are so critical to IT operations teams today, adds Nyman. With massively complex and dynamic architectures, it's the only way for IT managers to see how any given server or system is impacting end users.

For service providers and other businesses, there are several benefits of working with a network performance vendor. With so much of today's business success tied directly to IT systems, having an effective service level management solution is critical to maintaining business processes, keeping customers happy, and achieving revenue goals.

"I know that as far as BlueStripe is concerned, we provide more than just the tools to monitor transactions. We also bring broad expertise," says Nyman. "What looks like a new problem – say, for example, a failure in messaging system integration or chronic slowdowns in Websphere MQ – to you is probably something that we deal with every day. In that way, not only can we help you achieve best in class monitoring systems, we can help you quickly eliminate common issues – that's especially important with the complex systems in play today."

CLOUD Q&A

by Erik Linask

Cloud Computing is More Reality than Hype

Despite the hype, media attention and adoption patterns to date, the cloud is still a relatively new technology with many questions still to be answered. Nevertheless, the concept of moving sensitive business information and applications into an off-premises environment managed by a third party is profoundly changing how businesses think about, purchase, and manage technology. That change has led technology leaders to invest in new strategies, both in their internal operational environments, as well how they approach their customers, with many of the leading technology vendors leading the charge.

ITEXPO Miami 2013 recently hosted a "Battle for the Cloud" superpanel, including some of the biggest names in technology today, discussing the future of cloud computing and how it will impact the future of businesses. HP's representative on the panel, Director of Product Marketing Kiran Bellare, spoke with Cloud Computing to discuss how the growth of cloud computing and other tech trends are changing the way businesses operate. Read the full exchange below:

EL: What is the most significant technology trend impacting the way businesses conduct operations today?

KB: Businesses increasingly need to accelerate the time to test, deploy and scale online applications. Globally distributed teams are also driving a need for increased collaboration and new, innovative applications. The ability to access these applications from mobile and tablet devices is now essential. All of these trends are driving increased usage of the public cloud.

EL: How is cloud computing changing the way you operate your business?

KB: Moving production workloads to the public cloud and supporting the rapid deployment of new applications on an open source foundation has required us to build a new, much more agile and responsive organization.

EL: Have security concerns around cloud computing been effectively addressed by the market, or is security still impediment to adoption?

KB: I don't think the cloud is necessarily any less secure than traditional hosting, although there are unique areas that need to be addressed. Well-known security compliance standards and monitoring tools apply to the cloud, but due diligence should include a cloud provider's proactive and reactive security plan. Security in the cloud should remain a priority, but does not need to be an impediment to adoption.

EL: How has the unprecedented growth of social media changed the way you manage your customers?

KB: Social media has required us to have a more matrix-oriented approach to interacting with customers anytime, anywhere. More individuals across every job function are now more directly engaged with customers and potential customers to answer questions and incorporate feedback.

EL: Keeping in mind that BYOD is now pervasive and no longer a phenomenon, will BYOD heavily influence your business in 2013 (whether from a security, policy or device or app management perspective) or have we moved beyond BYOD?

KB: I believe the industry has moved beyond BYOD as a policy decision given that it is now a de facto requirement for organizations rather than an option, but it will remain an ongoing concern with respect to security and app management.

EL: BYOS – Bring Your Own Storage (or rather, Bring Your Own Cloud-based Storage) – and dealing with it may, in fact, now be the new major issue most enterprises and solutions providers need to deal with. Is your company prepared to deal with it, either at the carrier level or through independent vendors?

KB: Yes, HP has network and security management systems that can address BYOS as well as enterprise oriented partner solutions that can serve as alternatives to consumer cloud storage.

EL: Unified Communications and VoIP have moved beyond the early adopter phase into the mainstream. What significant issues still remain that businesses must contend with as they determine when and how to migrate to IP-based communications?

KB: Like any business critical application, security, uptime and quality of service will be key factors.

EL: Will 2013 be the year the laptop dies? Why or why not?

KB: Of course not. A well-designed laptop will continue to offer the best balance of performance, productivity and mobility for the widest range of applications. More people will own a laptop, tablet and smartphone device and choose which one to use based on where and how they wish to access their work and entertainment.

by Erin E. Harrison

Healthcare IT Leaders **and the Cloud:** Cautious Yet Optimistic

As healthcare IT leaders move forward with digitizing their electronic records, cloud computing is increasingly being considered a viable option for many provider organizations. There are clear business benefits of moving to the cloud, including the opportunity to reduce upfront capital expenditures, scale up or down based on business needs, improve service with SLA guarantees, and support workforce collaboration and mobility.

But issues around privacy, compliance regulations and security are still being addressed, giving some healthcare organizations reason to pause when they hear the words "cloud computing."

Yet, the global healthcare cloud computing market is witnessing a surge in the adoption of technology and cloud computing, which is forecast to reach $5.41 billion by 2017, according to a Markets and Markets report. The market is currently dominated by software as a service (SaaS) providers such as Carestream Health, Inc. and GE Healthcare.

Despite trepidation among many healthcare organizations, cloud computing is estimated by analysts to serve as a boon to the healthcare industry and the market is witnessing increased adoption because the benefits outweigh the perceived risks.

For example, EarthLink is seeing more healthcare organizations adopt cloud-based services, with increased demand in particular for services including cloud infrastructure hosting, backup and recovery and virtual desktop service/desktop as a service, according to Vishal Sharma, vice president of IT services for EarthLink

"We are seeing the adoption of cloud-based services by healthcare organization on the rise as these services provide tremendous cost benefits, agility, access to latest technology innovation, stringent security and better service levels," says Sharma. "In most cases, EarthLink can provide better resiliency and uptime than a healthcare organization's internal IT department simply because of economies of scale, the availability of the latest technologies and the ability to make applications available 'as a service' model."

For instance, the Autism Society of North Carolina Services has deployed an MPLS network, voice services and NEC voice equipment and cloud hosting from an EarthLink Business customized IT services solution.

"The cloud has definitely changed the way that we are doing business; it has really brought us full circle from the old mainframe days. It's changed business very recently for us when we've gone to an Exchange server and being able to access our data remotely is a much more efficient use of time; security and safety is also better," says Tracey Sheriff, CEO of Autism Society of North Carolina Services.

HIPPA (Health Insurance Portability and Accessibility Act) compliance is changing the way healthcare organizations such as the Autism Society do business, making sure they are not only compliant to avoid fines but also to keep individuals' private health information protected.

Federal and state laws and industry regulations require strict controls on what kind of data can be stored, who can access it and where it can be stored. While HIPAA has increased the complexity of compliance issues in the cloud, healthcare organizations can reap many benefits from cloud-based services as long as they choose the right provider.

"We have to realize that cloud computing is platform where we can build solutions and services which can be made compliant to these kind of regulations," explains Sharma. "The cloud being not secure is more of a perception issue and is prevalent across all industry verticals. All the challenges around confidentiality of patient information, compliance and interoperability can be overcome by doing proper due-diligence by selecting the right technologies and cloud service provider that offers a high degree of security and compliance."

> The global healthcare cloud computing market is predicted to reach $5.41 billion by 2017.

While the cloud is making inroads with healthcare organizations, other healthcare IT leaders are taking a cautious approach.

"Like most healthcare customers, we are intrigued by it, but we haven't moved anything to the public cloud yet," says Scott MacLean, deputy CIO of Partners Healthcare in Boston.

Partners has one major cloud-based application in revenue cycle management that is hosted at the vendor site (Siemens Healthcare, Malvern, Pa.), which he describes as a private, corporate hosting arrangement; as well as software-as-a-service applications, with appropriate business associate agreements, at the departmental level.

Over the next 12 to18 months, Sharma expects to see adoption rising as healthcare organizations start seeing the benefits of using cloud services especially around collaboration, faster access to patient information, data security and mobility through use of mobile devices. He summarizes: "We have no doubt that healthcare applications backed up by cloud infrastructure will provide better service to their patients, providers and customers."

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Changing Channels

While meeting with a number of vendors recently at the Channel Partners event in Las Vegas, it quickly became evident that one topic outweighed all others in terms of conversation density – the cloud.

For some time, there has been debate over exactly how to define "The Cloud." There's This-as-a-Service, That-as-a-Service, Something-Else-as-a-Service, Can-We-Deliver-This-as-a-Service? Each has a different purpose and is actually more different than similar – the similarity is they are all delivered from somewhere else (a.k.a., the cloud).

"The question used to be, 'What is cloud?' but that has evolved into, 'How can it help me? What can I do with it?" explains Paul Hoffman, senior director, Cloud & Technology Solutions, at Ingram Micro.

Indeed, it's critical to ask the right questions and, now that the market is asking the right questions about cloud, that model is becoming a significant opportunity for providers of various types, and it will help increase effective cloud adoption – as opposed to a cloud buffet model where companies try as many different services as they can, throw some away, and go back for more from others. In many ways, it's not unlike the UC phenomenon – as soon as everyone (the media world included) stopped trying to achieve a common definition for UC, looking instead at the business benefits, adoption started to increase.

The cloud market has now reached a point where businesses understand they need to have a cloud strategy in place – they just aren't sure what it should be, so they are approaching their VARs and integrators to help them decide. What it means is vendors have to understand not only the cloud, but also become intimately familiar with their customers' businesses, in order to be able to appropriately guide them on a path to success.

For the reseller community, this presents an opportunity to build a recurring revenue stream by adding cloud services to their existing offers. For telecom VARs, it's an easy change but, for IT VARs, it is much more of a struggle, as they have built their businesses on an initial upfront cost model and have to adapt to a recurring model, including getting reps to understand it's long-term positive impact on their paychecks.

If that happens, cloud can become a great equalizer that allows the entire channel community to build upon it and compete on service quality – as it should be. So far, Ingram Micro has increased its cloud capabilities, now offering somewhere in the neighborhood of 150 products from more than 50 vendors. The secret, though, is understanding how to combine them into an integrated offering.

"It's about elevating the conversation," says Hoffman. "It's not about one thing/service; it's about combining and integrating and creating more stickiness."

Cbeyond's Zane Long agrees that bundled offerings are the way to succeed in a cloud marketplace. Cbeyond, in fact, has combined its cloud services with its fiber offering, creating a "buy the cloud, get the bandwidth" deal, which has met with positive feedback from channel partners, who see tremendous value in the integrated services approach. For Cbeyond, it is also now able to differentiate its offers from both its cloud-only competitors and its bandwidth-only competitors, theoretically driving its market share up.

Long says, though, much in agreement with Hoffman, the competition is really in the channel manager mindshare market, who is suddenly faced with a more complicated sales process than previously, which is why he adds that the channel program must be simple and easy to understand, if you expect partners to buy in.

The fact is that the SMB market as a whole is struggling to wrap its arms around the new world of IT and BYOD, distracting it from its customers and their needs. Cloud is their opportunity to divest themselves of much of the IT challenge and reinvest efforts on their core businesses – likely even increasing operational efficiency in the process.

Earthlink Business is singing a similar tune, looking to become more involved in its customers' challenges and developing products address their pain points. It originally acquired its TechCare business to support its own operations, but because of its high quality hands-on approach, quickly realized its value as a managed service. Earthlink's J.R. Cook agrees that partners often face challenges with the volume of services available today, but notes: "It's our motto to teach them and give them the support they need. We want to create a one-stop shop for the virtualized business."

There's no doubt the channel is changing and moving to the cloud. The question is which vendors are willing to spend the extra time developing a comprehensive new cloud program with its partners to ensure success. Those that don't will find themselves thinking (as Jimmy Buffett sings in "Changing Channels"), "Strange how they all behave like it's another world."

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