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4th Quarter 2013

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by Doug Barney

Why MSPs Matter

Everybody knows how much the cloud matters. But what matters more and more are Managed Service Providers (MSPs). After all MSPs just represent a higher level of cloud services, one that adds management to the mix, offloading even more work from IT.

That's why some estimates have it that 75 percent of companies already use some form of managed service.

Management is the key to all this, and drives a tighter relationship between MSPs and their IT clients.

Nemertes Research recognizes this and says so in its 'Shift to "Enterprise Technology" Relies Upon Vendor Partners for Managed, Cloud Services' report inked by founder Robin Gareiss. MSPs fundamentally change how IT is done. They enable companies to move from IT to being Enterprise Technology (ET) focused.

"Not only does this shift change the way business leaders view IT, it also alters the organizational structure of IT itself. In the ET world, the technology team becomes more strategic, and as a result, it relies more heavily on trusted partners to handle tactical functions—and in some cases, assist in strategic direction of the company," Gareiss argues. "Managed and cloud services are playing an increasingly important role in enterprise organizations, with the network itself serving as the foundation for effective and strategic ET policy."

Stratalux is an MSP and it lives firsthand what Nemertes theorizes about. Instead of using the term ET, Stratalux prefers CloudOps, and believes this is the model enterprises should move towards. While the cloud relieves IT of many mundane duties, migration and management are still labor intensive. But done right, the cloud lets IT focus on CloudOps, and here IT is far more strategic.

"IT's role will change from one which configures and manages infrastructure, to one that develops infrastructure, enabling services such as Infrastructure-as-Code, Continuous Integration/Continuous Deployment, and self-healing infrastructures all of which fall under the broader "DevOps" movement," Stratalux believes.

MSPs Growing Stronger Everyday

The value of MSPs is being revealed through some pretty impressive growth. MSP sales will grow from $142 billion this year to $256 billion by 2018 – nearly double, according to research house MarketsandMarkets. This demand is all driven by the need for IT efficiency.

"Organizations implementing managed services have reported almost 50-60 percent increase in the operational efficiency of their outsourced processes," the research house says.

Those numbers are backed by INSIGHT Research in its "Managed Services in an IP World: Global Opportunities for Wireless and Wired Networks, 2013-2017" report.

INSIGHT sees the market growing at a CAGR of 11.3 percent a year worldwide, moving from $137 billion in 2012 to $235 billion in 2017.

Reactions and story pitches both readily received at dbarney@tmcnet.com.

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by Rich Tehrani

2013: Year of the Cloud Consumer

It would seem 2013 marked a cloud milestone in terms of competition, acceptance and consumer value. More importantly, this year, even the skeptics seemed to give in. There are lots of reasons why this is an exemplary year in regards to cloud adoption and competition. Here are many of them.

Carrier equipment companies onboard

Recently TMC hosted an event in Santa Clara, CA titled Software Telco Congress and it was unanimous among the hardware vendors in the room that they would migrate as much of their hardware solutions to software as possible. We are talking major companies like Cisco, Alcatel-Lucent and GENBAND, and representatives from the carriers such as Orange and others were eager for this transformation to take place.

There are perhaps no more important and sensitive systems than those that get installed in a central office of a carrier. Even the idea of taking bespoke hardware and replacing it with COTS servers would have been unthinkable until recently.

Part of the reason for the move in-part is a new movement called Network Functions Virtualization, or NFV. This, and competition from OTT companies like WhatsApp and Skype, is forcing carriers to look for alternative ways to allow customers to communicate. They have no choice but to leverage cloud-like infrastructure to ensure their costs are in-line with the rest of the players they compete with.

Wearable Tech big data

Wearable technology may just be the next big thing in tech, and the amount of information being thrown off by a myriad of devices from motion monitors to video cameras is massive. This data needs to live somewhere and by definition there isn't much storage capacity on something you wear. Enter the cloud which will absolutely be filled with live-stream videos of consumers and a ton of other health and fitness data.

Google Compute Engine

Google too made a big splash in the market recently with its Compute Engine which has per-minute billing as opposed to Amazon's hourly alternative. With 15 VM sizes to choose from in four categories many customers will be satisfied -- but AWS has even more in reserved instance and spot-market VMs. In addition, Amazon offers a variety of OS options – not just Linux. Moreover, Amazon has as many categories of partners, 22, as Google has partners. Basically Google has a lot of catching up to do, but they obviously have a strong brand name and enough resources and tech know-how that Amazon should be concerned.

NSA Scandal has had mixed effects

Depending on your perspective, the NSA revelations of surveillance are a big or small deal. A recent survey of CIOs shows they fully expected the government to be monitoring data and telecommunications, and as a result many aren't being dissuaded from using the cloud at all. Then again many foreign nations are at least publicly raising red flags, and there is talk of increasing nationalization of tech initiatives going forward. There are estimates of billions of dollars which will be lost by US tech companies as a result of Snowden's leaks, but it is unknown if this will be good for the cloud as new international competitors will emerge more easily, or bad because companies in some countries won't trust anyone with their data.

Funding

Recently Box received $100M in funding at a $2B valuation, while Dropbox has a valuation perhaps north of $8B. I am loathe to bet the future of any industry based on investor euphoria but still, you have to admit as a whole, there is a lot of momentum in the cloud right now and investors and tech veterans are betting big that the cloud will be the future.

Thanks for reading and Happy Holidays and New Year!

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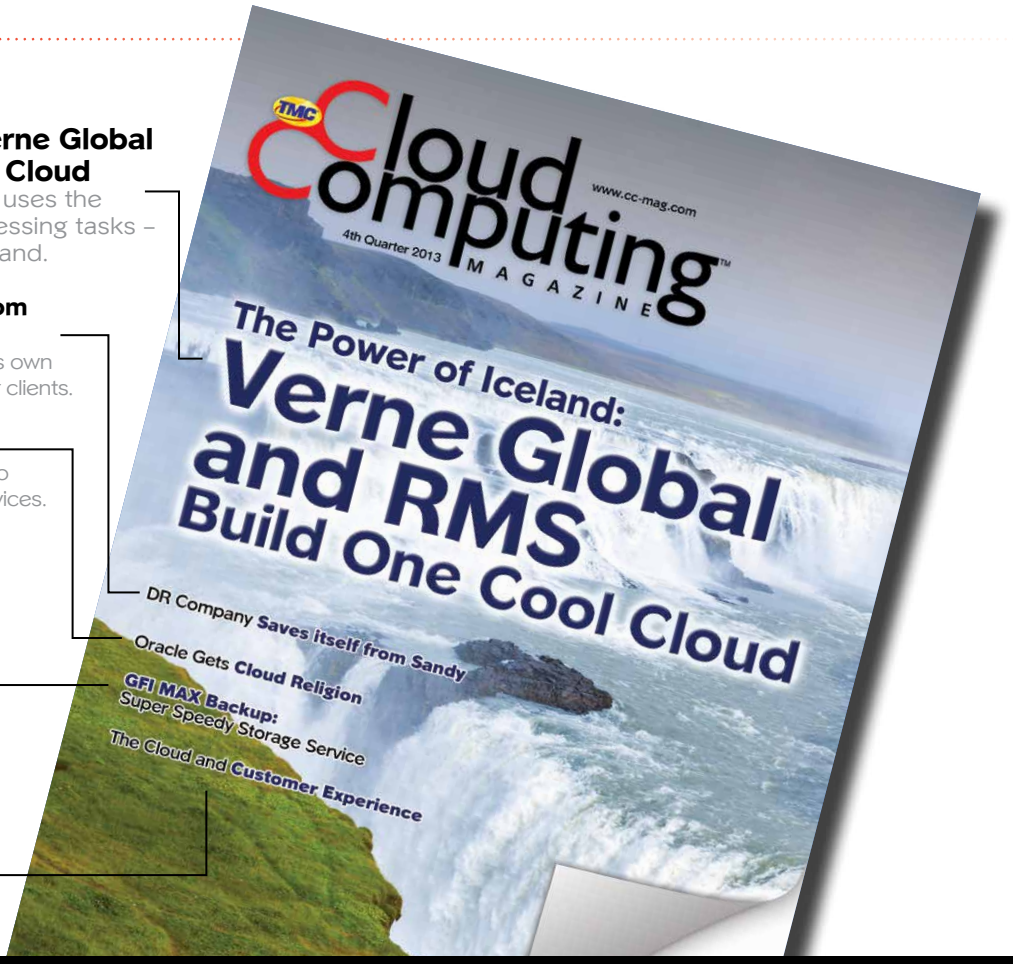

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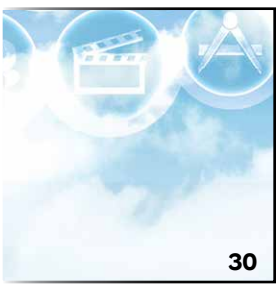

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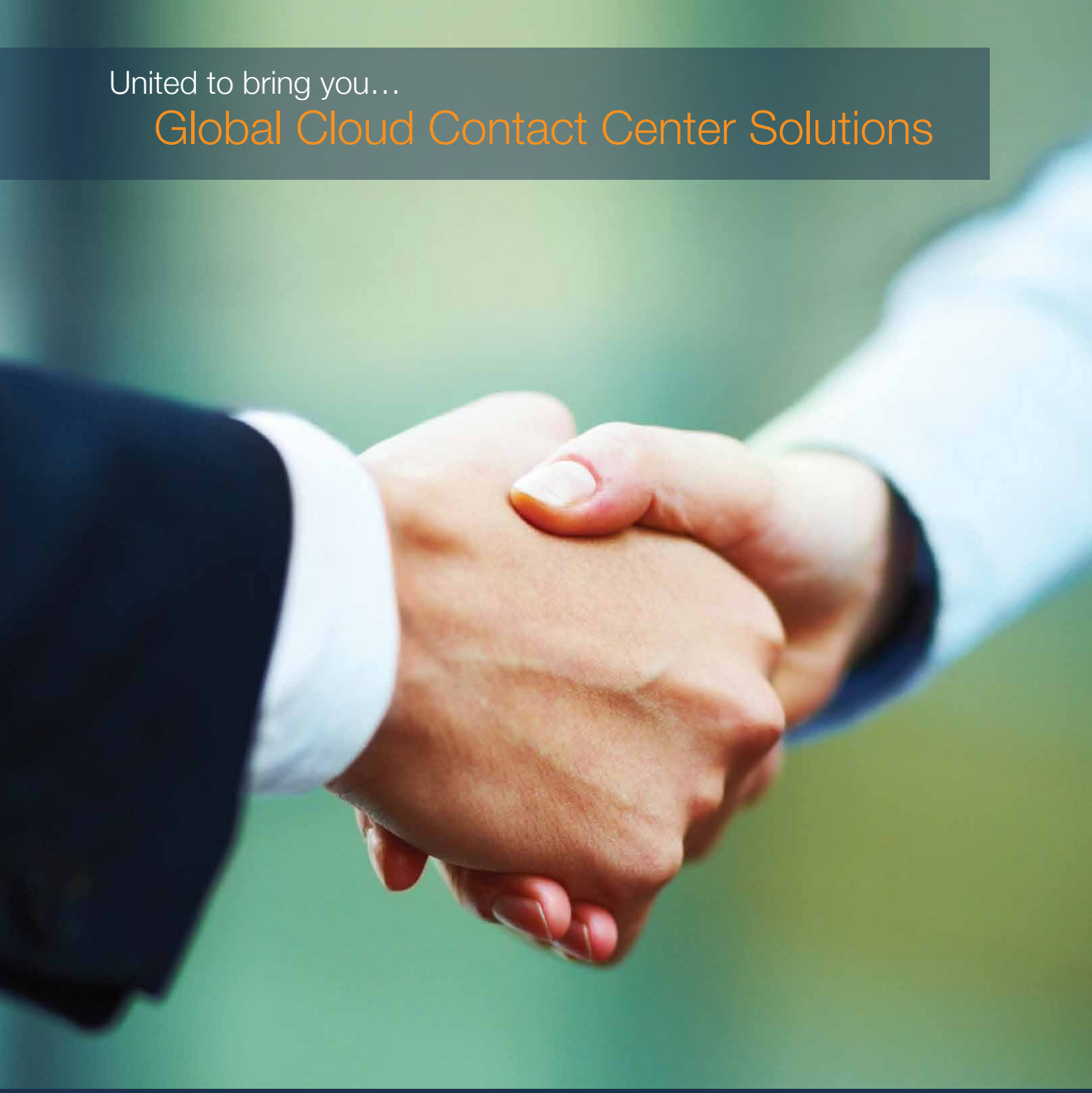

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RingCentral Calls up IPO

RingCentral, which provides telephony in the cloud, has gone public, selling 7,500,000 shares at $13 apiece. The plan was to bring in over $97 million.

Things went far better than that as shares actually opened at over $17 and then closed at over $18 by the end of the first day of trading, a nice 40 percent increase from the expected opening price.

Loggly Nabs $10.5 from Cisco, Others

Cloud log management vendor Loggly just got a fresh cash infusion to the tune of $10.5 million from Cisco and Data Collective Venture Capital, as well as previous investors Trinity Ventures, True Ventures and Matrix Partners. Loggly now totals $20.9 million in overall venture funding.

Loggly is on a roll, with its business quintupling over the last year.

NewVoiceMedia Snags $35 Million

Contact centers in the cloud are proving their worth, and NewVoiceMedia is testament to that with $35 million in freshly raised capital.

The company's online contact centers services don't require a rip and replace, but instead work with existing telephony infrastructure. "Call centers can be expensive to maintain and difficult to scale. NewVoiceMedia's service helps companies set up cloud contact centers, which cost less than traditional systems and have no specific hardware requirements," the company said. "In addition to greater flexibility and cost-efficiency, NewVoiceMedia gives businesses better visibility into their operations. It offers a suite of tools for monitoring calls and performance data and for driving sales and marketing campaigns."

This round was led by Bessemer Venture Partners. Partner Alex Ferrara said the contact center infrastructure and applications market is worth between $4 billion and $10 billion – and growing. "We expect to see a 20 million contact center seat market globally and upwards of 30 percent cloud penetration in the next five years, and we think that NewVoiceMedia will lead the charge," Ferrara said.

The company has raised over $61 billion overall.

US Intelligence Makes Wise Cloud Investments

The U.S. intelligence community has an investment arm called In-Q-Tel, and this group just invested in two cloud software development companies.

Socrata is focused on data harvesting, taking raw information from multiple sources and making it more useful, then displaying it through dashboards, visualizations, even applications and APIs.

The tools are focused on making government information more available and accessible for citizens.

The other investment is AppThwack which creates automation tools to test mobile devices and applications. "Due to the wide adoption of apps, both for external and internal use, along with increasingly popular internal app markets and [BYOD] policies, there's a great need to test and vet apps within the enterprise," said Jay Emmanuel, senior VP of IQT's mobility practice. "AppThwack's technology provides an excellent user interface and easy-to-read reports, making it easier to quickly identify problems before deploying mobile applications."

Cloud Benefits Outfit Raises $131 Million in IPO

Benefitfocus, Inc., which offers benefits software in the cloud, recently completed an IPO that pulled in $131 million.

The company will use the cash to build new products and services.

New Name and Fresh Cash for Cloud Star

The former Cloud Star Corp. has been renamed Cloud Security Corp. and shortly after its new branding reached an agreement to sell $2 million in common stock to Kodiak Capital Group, LLC.

"Cloud Security Corporation more accurately reflects the sector our company operates in. This name change is an exciting step forward in our expanding business model," said Safa Movassaghi, President and CEO of Cloud Security Corporation.

The company has two main tools. Cloud Security Enterprise is a service portfolio that offers computer and network security and as well as information security where data is scanned to insure it hasn't been compromised.

The MyComputerKey can access remote machines securely. The USB device can offer this access either to another machine or cloud environment.

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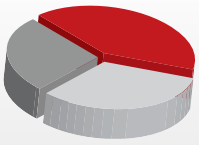

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by Jason Alley, Interactive Intelligence

How Cloud "Solutions" **Put You on TOP** of the **Customer Experience Game**

In this age of cloud, today's leading solution providers are helping customers transform the customer experience. However, those considering moving their contact center to the cloud should know there is an important distinction between cloud providers… and cloud solution providers.

Many cloud providers stop at selling general benefits of the cloud: increased flexibility, faster deployment time, lower initial capital investment and reduced IT requirements. These are all great and legit, but aren't we past that? The cloud is here to stay and brings with it some real advantages. Sold!

Today's leading solution providers take it a step further… They take the time to truly understand your business and prescribe and administer specific solutions that enhance the customer experience. They apply learnings from thousands of deployments and tap into expertise resident in organizations filled with folks recognized as industry authorities in their respective disciplines. The result? You get access to industry leading technologies, organizations (people) and processes that help you get the most out of your investment and delight your customers.

Technology

Most cloud providers have basic ACD, IVR and Unified Communications functionality. However, comprehensive solution providers offer a much broader set of functionality with the latest applications, tools and capabilities built right into the core platform – things such as real-time speech analytics, multichannel routing and recording (voice, e-mail, chat, and social media), mobility, automatic speech recognition, business process automation, and the like. They offer flexibility in how technology is deployed and the ability to integrate with existing systems and to customize applications. From a functionality standpoint, true solution providers allow you to do everything in the cloud you're used to on-premises, sometimes more.

While this level of functionality and flexibility is critical, solution providers' secret sauce is the ability to prescribe best practices for configuring, deploying and administering technology. This is based on many years of experience helping others solve similar problems and achieve similar goals. You aren't starting from scratch. That brings us to what really separates regular providers from true solution providers – organization (people) and process.

Organization (People)

Solution providers bring the best people to the job. The best sales engineers, the best consultants, the best implementers, the best trainers, the best services teams, the best support engineers, the best technical operations teams, the best network engineers, the best security and compliance professionals, the best developers – the best contact center experts. Delivering contact center technology and services is their single focus, day in and day out, and that's not new. These are the people who will join your team. Take time to get to know them. They are what you are truly investing in when moving to the cloud and will have a major impact on your ability to enhance the customer experience.

> Solution providers bring the best people to the job

Process

Solution providers ensure their people follow best practices and processes for managing all aspects of the solution lifecycle – deployment, support, application upgrades/updates, change management, keeping dependent platforms and networks up-to-date and operational, keeping the environment secure, etc. For example, best practices are prescribed for defining, designing and implementing call flows, routing routines, IVR menus, business and service processes (mapping), etc. You get the point. These proven, time-tested processes are critical to enhancing the customer experience.

There are few times a company has the opportunity to make fundamental changes to their contact center. Your move to the cloud could present the perfect opportunity to do just that. Look for a cloud solution provider that brings the best technology, organization (people) and processes to your team so you can be on TOP of your customer experience game.

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Jason Alley is solutions marketing manager at Interactive Intelligence.


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by Peter Radizeski, RAD-INFO, Inc.

Cash is King, but it's Not Everything

Cloud storage provider Nirvanix recently closed up shop, forcing partners and clients to scramble. In fact, customers had just weeks to move their data to another provider.

What happened? They ran out of cash. Cloud services providers like Nirvanix need cash because with one customer or a hundred -- the data center, the leases and payroll expenses all have to be met.

In the startup community in Tampa Bay, many say the biggest hurdle is investment capital. Actually, the big hurdle is cash. It seems more than a few think the only way to get cash is from an investor. Even if you get investment capital, you still have to sell to prove your business model and to provide cash flow. Not everyone is an instant Twilio, Facebook or Twitter success story.

It has been said that setting price is a challenge for businesses. When there are a number of providers in your space, like in hosted VoIP or cloud storage, it would appear that the market has already set the price for you. What do you do if the market set price is not very profitable for your business?

Worse, what do you do if you if you don't know what it costs to run your business, such as the cost of sales and goods and the cost of customer acquisition? What if your churn is so high that even a profitable price can't make up for the turnover, since most customers aren't profitable for at least six months and often many times longer? These factors can wreak havoc on your cash flow and your financial planning.

Cloud services have a lot of CAPEX spending in the beginning on hardware, data centers, bandwidth and gear. Ongoing costs for power, ping and pipe must all be paid -- but security isn't a one and done checkbox either. You've got to pay for this as well.

Meanwhile software development, APIs, and integration are professional services, and these expenses are not always factored into price or install costs.

Certainly Cash is King. Cloud providers need cash for start-up, development, and to get the sales machine going. After that, price plays a significant part in not only sales, but in cash flow.

I think we will see more cloud services providers go broke. There are too many of them; not enough good marketing; not enough cash flow; and too many big players like Amazon eating at their lunch.

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

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by Jiten Patil, Persistent Systems Limited

The Current State of Cloud Adoption

While cloud computing continues to gain steam -- with relatively all major IT vendors on board -- now is a good time to examine the current state of cloud adoption. This may help us all validate assumptions or change course and plan ahead.

If we were to create a snapshot of the current state of cloud adoption across the different ambits where cloud computing is creating significant markets and delivering value -- it would look like this:

Leadership Pipeline – With the worldwide public cloud services market estimated to be at $131 billion in 2013; established and new cloud players are making this a highly competitive market with dependable offerings that enterprises can bet their business on. The cloud market continues to be led by pioneers such as Amazon and Salesforce.com while Microsoft, VMware, Google and IBM (along with SoftLayer) continue to make positive gains in market share. Oracle, SAP, HP, Rackspace, Terremark, NetSuite, etc. are emerging as serious contenders.

Leverage Strategy - From being seen as a technology enabler earlier on, cloud computing is now being extolled for bringing reach, speed and flexibility to businesses. Most technology-enabled and/or technology-driven businesses are either already investing or plan to make serious investments in cloud computing.

Enterprise Scenario - Cloud-managed business applications, field force connectivity and enablement of enterprise processes are becoming a priority for enterprises. Cloud is also being considered as an integral part of the business continuity strategy and such use cases are causing a great disruption to traditional IT enterprises.

ISVs Scenario - We see an enhanced trend with ISVs incorporating cloud/SaaS-based offerings in their portfolios in order to remain competitive. On the one hand, ISVs are re-architecting existing applications for the cloud, while other groups are focused on building entirely new, cloud-only offerings in order to accelerate time to market. Internet apps, user/content-centric apps, Web services, collaboration, communication and management apps are the major beneficiaries.

Public Cloud Acceptance - According to a recent estimate by Gartner, the public cloud services market is expected to grow 62 percent by 2015, indicating increased spending on cloud services. Public cloud giants such as Amazon Web Services continue to make significant advancements into core areas like government, financial and public security through various cloud engagements like GovCloud, FinQloud and the recently announced CIA contract.

Other Cloud Models - Hybrid clouds are becoming increasingly strategic as enterprises express their comfort level with this model. Enterprise applications, such as those that demand low latency or deal with sensitive information, are running in private clouds (close to the users) while other Internet-facing applications are being run on public clouds. Technology vendors such as IBM, HP and VMware are bringing attention to many converged IT solutions that are scalable, highly available and are more easily managed than traditional systems.

SaaS - According to a recent PWC report, subscription revenue (including SaaS) is set to grow at a 17.5 percent compounded annual rate, reaching 24 percent of total software revenue by 2016. SaaS services such as CRM, support, human capital management, and office productivity have become firmly entrenched across businesses from small to large. With players such as Salesforce.com and Microsoft Azure, ISVs are counting on an added productivity boost to develop and manage their SaaS offerings. Gartner predicts that 77 percent of companies plan to increase their spending on SaaS in the next two years.

Open Source - Cloud technologies such as OpenStack and Apache CloudStack continue to develop a solid fan base and promise to offer an equal technology realm across different industry segments to create a level playing field. The open source PaaS framework Cloud Foundry with its recently revised strategy has started creating an ecosystem that promises to significantly impact the PaaS roadmap for organizations.

Innovation Possibilities - Cloud computing is becoming the must-have for businesses to fuel faster innovation – delivering real competitive advantage. Cloud-based technology naturally propels and has the potential to promote trends like a mobile-first service strategy, Big Data-based delivery of business insights as a service, and machine-to-machine auto-collaboration systems that are capable of delivering greater and safer human life experiences.

Cloud computing adoption has gained significant traction as new technology developments continue to present better, faster and easier ways to harness its potential and as more enterprises continue to explore and push the capabilities of cloud computing. There are a number of ways to measure and evaluate cloud adoption across different cloud contexts. What is your state of cloud adoption – how far are you along? Share your thoughts and comments by writing Jitendra_Patil@Persistent.Co.In

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

Simplifying **Private Cloud** Delivery

One aspect of successful technologies is they are easy for customers to understand. There may be supporting complexity, but it is hidden from the end user. Today, public cloud services are popular not only because they are inexpensive and efficient, but because they are easy to buy and use. Private cloud services (those reached directly by carrier Ethernet E Line services) need to adopt the dynamic and easy nature of public cloud services. However, this means that delivery of private cloud services needs to be standardized, simplified and automated.

Everybody loves choices, options and features. The most popular TVs and smartphones have the most features. How many of these do we actually use?

With flexibility comes complexity, but with standardization comes simplicity. In particular, simplification can enable automation. In short, to simplify the delivery of private cloud services we need to remove some of the complexity due to configuration options.

Today, delivery of a private cloud service means that an enterprise, a service provider and a cloud provider must agree on a dizzying number of options and parameters to establish a service. These choices include:

- The creation of a UNI for the Enterprise
- Definition of the VLAN tags used for the service
- Determination of the Class of Service (CoS) model
- Agreement on the IP addressing model and subnets

These choices complicate the ordering, slow down deployments and may chase away potential buyers.

An example of today's private cloud delivery is shown in Figure 1, which shows two enterprises connecting to a pair of cloud providers. The connections are delivered over a carrier Ethernet network using Ethernet Virtual Private Line (EVPL) services.

- Enterprise A connects to
  - o Cloud provider 1 using CE VLAN 101 and IP subnet 1
  - o Cloud provider 2 using CE VLAN 102 and IP subnet 2
- Enterprise B connects to
  - o Cloud provider 1 using CE VLAN 101 and IP subnet 3
  - o Cloud provider 2 using CE VLAN 102 and IP subnet 4

All of the above items have to be coordinated between the enterprise and the cloud provider. In addition, each cloud provider requires one UNI per Enterprise, and the routing model needs to be coordinated, typically using BGP. This model is simple and straightforward, but it is highly static, lacking the efficiencies to scale to address the needs of the cloud provider.

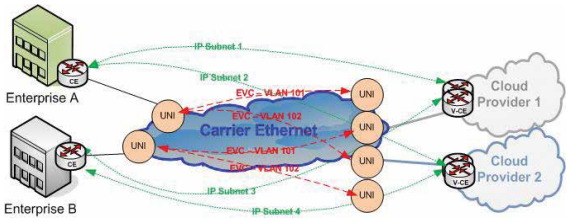


Figure 1: Today's Private Cloud Connect

Keep it Simple, Stupid

The next step is to scale and simplify the delivery of private cloud services to the cloud provider. The service provider acts as an intermediary to simplify the coordination activities. The details of the handoff can be hidden from the enterprise and the cloud provider. An example is shown in Figure 2.

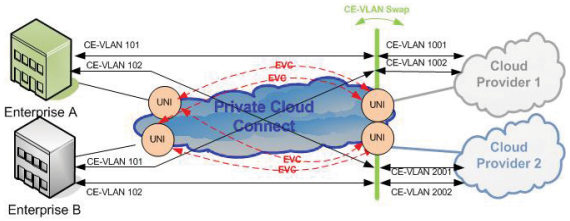
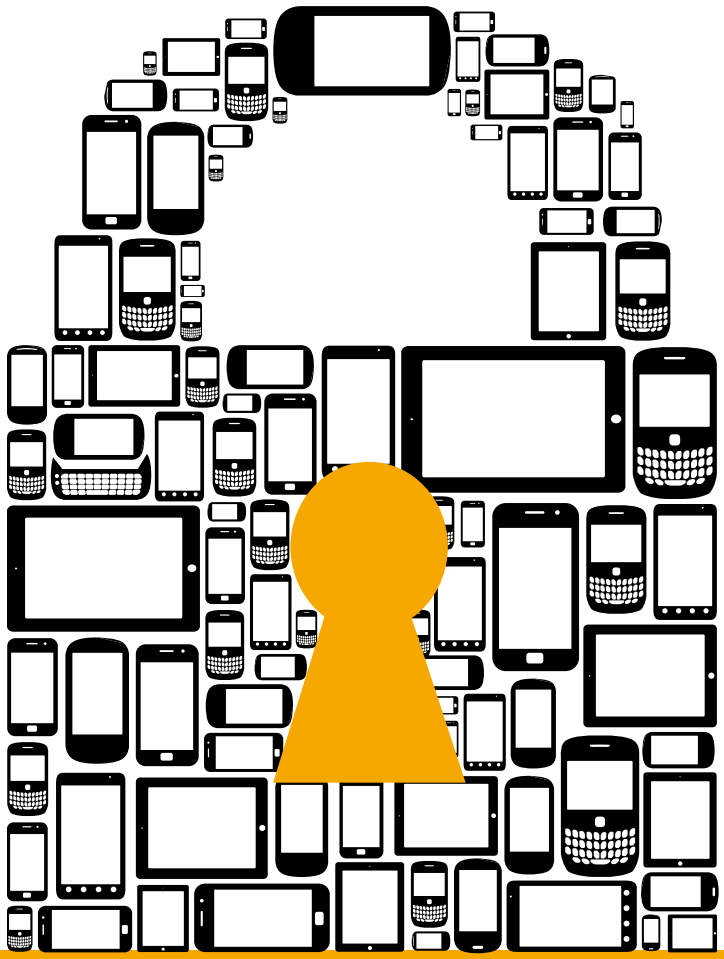


Figure 2: Enhanced Private Cloud Connect

With the Private Cloud Connect, the service provider is supplying a Carrier Ethernet EVPL E-Line with a VLAN swap at the cloud provider UNI to decouple the CE-VLANs at each end of the EVC (or in MEF terms "CE-VLAN Preserve" set to no). As a result, an enterprise could access more than one cloud provider, and the cloud provider could serve multiple customers on a single multiplexed UNI interface. The benefits of this approach include:

- It allows an enterprise to standardize on a CE VLAN scheme facing the UNI e.g. 101, 102, etc.
- It allows each cloud provider to have a separate CE VLAN scheme on the UNI.
- The service provider takes care of CE VLAN normalization between the enterprise and cloud provider.
- The CoS is standardized using 802.1 (rather than DSCP).
- Service policing per EVC performed by the service provider.

This is all just a private cloud starting point. Your own research and future Cloud Computing Magazine articles can help fill in the blanks.



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by Steve Pate, HighCloud Security

What You Should Know
About IaaS Security

According to Gartner and other researchers, Infrastructure as a Service (IaaS) is the fastest growing segment of the public cloud market. There are many reasons: reduced cost, faster scalability, and easier elasticity, to name a few. But before you entrust your data to a cloud service provider (CSP), there are some key security factors you must consider to ensure your data stays safe in the cloud.

> The most obvious difference when you move to a public cloud is that your data is no longer under your direct control.

Data Outside Your Firewall

The most obvious difference when you move to a public cloud is that your data is no longer under your direct control. Make sure you clearly understand your service provider's contract – especially when it comes to security. Many CSP contracts are notably light on security promises. There are many ways to augment what they don't provide, but you need to know the holes before you can patch them.

Virtualized Environments Need Different Security

While most organizations understand the basic requirements for securing physical servers, it's important to realize that many security tools and technologies don't work the same in a virtual server environment. Virtual machines are mobile: your CSP may move them around to optimize performance or availability. Traditional security techniques like whole disk encryption will not work in this dynamic environment. Further, virtual machines include unique files used to maintain snapshot and suspend functions, which can also contain sensitive data. Make sure you or your CSP have a way to secure sensitive or regulated data that might exist in these files.

Misconfiguration

We are human, and humans make mistakes. As we recently learned from Amazon, a simple misunderstanding of configuration settings can lead to the exposure of BILLIONS of files. Build your cloud security model in layers, so that you have the best protection against breaches, as well as simple mistakes from users or IT staff.

Administrator Access

It's become quite clear that the US government has broad reach into CSP networks. Implementing strong encryption before you send data to a CSP (where you keep the encryption keys) can help prevent access to your data from network administrators, or others with access to the CSP network.

Decommissioning

What happens to your data when you want to change your service provider? When you spin up a VM in a public cloud, your CSP will immediately replicate your data for availability and disaster recovery, leaving a trail throughout the network. Today, there are no standards for data eradication, though many CSPs do have policies to reduce the possibility of data access when they repair or recycle disks. Encrypting this data can help ensure that these footprints are unrecognizable in the event that you want to stop service or change providers.

Regulatory Compliance

If your organization is regulated by privacy mandates for healthcare or the payment card industry, you have unique obligations when considering IaaS. The Payment Card Industry (PCI) Standards Council released a supplement to the latest Data Security Standard (DSS), highlighting the vulnerabilities in virtualized environments, and providing some guidance for those seeking the cloud.

Similarly, the most recent HIPAA Omnibus rule significantly expands the scope of compliance to include business associates (like cloud service providers) who provide downstream services to those who handle personally identifiable health data (PHI). Many CSPs are working to achieve HIPAA validation so they can partner more effectively with HIPAA governed organizations, so you may want to do some research if this impacts you.

Multi-tenancy

Even if you use a virtual private cloud at your CSP, it's likely that you're sharing physical servers – as well as back end storage -- with other tenants. This reduces compartmentalization, and increases the chances that if someone gets in (or is already inside), they can potentially gain access to your data.

Loss of Visibility

In your datacenter, you most likely have tools for network and event monitoring and analysis that are an important part of your security portfolio. When you transition applications and data to a CSP, you lose some of this visibility, as you no longer 'own' the network infrastructure. While innovative CSPs are finding ways to improve this reporting, you need to find other tools to give you comfort that your data is safe, even without the regular reporting feedback to prove it.

Steve Pate is Co-Founder and CTO of HighCloud Security.

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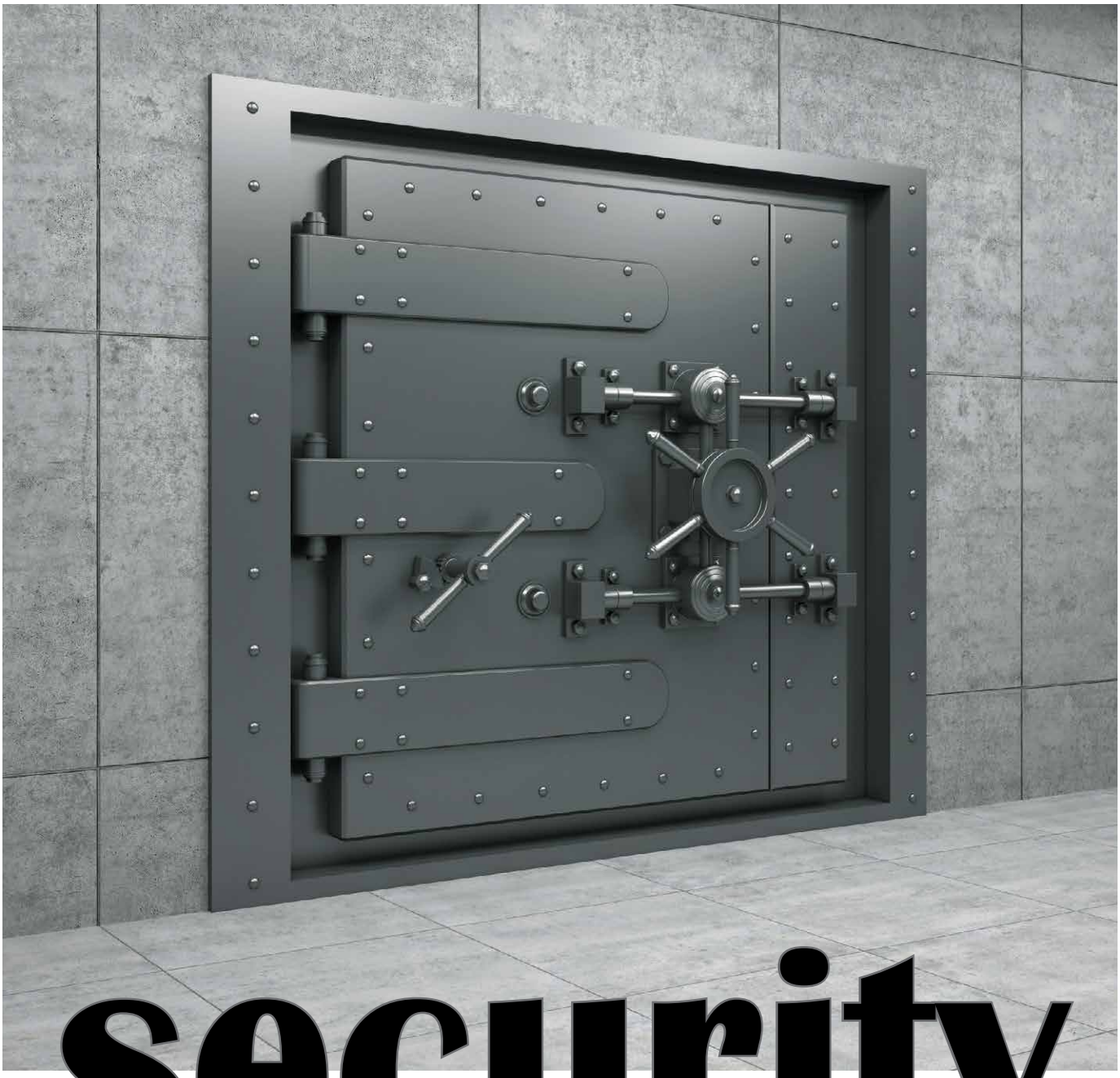

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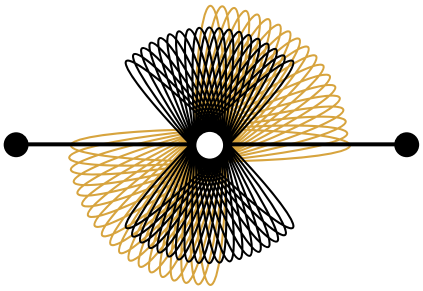

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Cloud-based or On-premises

by Erik Linask

The Power of Iceland: Verne Global and RMS Build One Cool Cloud

Cloud computing, undoubtedly the latest great trend in technology, is quickly becoming a mainstream alternative to traditional on-premises computing options. One of the key factors is its value in allowing businesses to focus on their core competencies, while allowing true IT experts to manage the infrastructure that drives those businesses.

The ability to move computing resources and data from physical to virtual servers, means workloads become independent of any specific hardware and resources can be moved and scaled up or down as needed between virtual servers.

"Infrastructure no longer is a barrier to scale," says Neela Jacques, executive director of the Open Daylight Project (previously Sr. Cloud Strategist at VMware). "It turns the traditional constraint on its head."

Still, despite the gains made in performance and security among public cloud providers and the popularity of public clouds, like Amazon's EC2, the majority of mission critical cloud projects are taking place in private or hybrid cloud environments, because they allow businesses to manage their cloud networks and understand exactly what to expect in terms of latency and speed.

"It's about time compression – helping businesses make better decisions more quickly," explains Ed Laczynski, senior vide president, cloud strategy and architecture for Datapipe. "That value alone is extremely compelling."

The RMS Story

Born out of a Stanford University project in 1988, RMS is a catastrophic risk modeling vendor, developing risk models for the largest businesses in the insurance industry based on exposure to multiple risk factors, including natural disasters, terror threats, and other catastrophic events. Its risk models give insurers, reinsurers, and the financial industry visibility into risk analyses, allowing them to make intelligent business decisions.

Now, the idea of insuring items and people is almost three-and-a-half centuries old, dating back to the Great Fire of London. Even then, the unpredictable nature of catastrophic events posed a challenge when quantifying cost of catastrophic risk. Since then, while the latest technology has advanced modeling capabilities, the complexity of modeling has also increased as insurers became more aware of different factors having an impact on risk models.

"Modeling has become much more sophisticated," notes Dr. Robert Muir-Wood, chief research officer at RMS. "For instance, storm surge is very complex. We embarked on huge project in 2009-10 to understand storm surge risk and modeling, which entails understanding, for instance, the hurricane, but also patterns a few days ahead of landfall."

In order to run – and re-run – complex risk models based on changing weather patterns and geopolitical circumstances, RMS requires massive computing resources. In fact, RMS had 500 cores running for nine months in its data center in order to run all the models needed to create an analysis for hurricane risk. The benefit was having events like Hurricane Sandy in existing simulation models when it hit, despite the tremendous resource drain required to run the analyses.

Growth for any compute-intensive business is a challenge due to the significant data center investments that are required. In RMS' case, as models become more complex, the firm must run more models, intensifying compute requirements.

"Consider the number of potential catastrophic events, and then the potential number of people and businesses affected – there are a tremendous number of risk models that must be run," Muir-Wood says. "Today's models are not simply the culmination of history; things have changed."

That means existing models must be re-run based on the latest data and new models should be more sophisticated to allow clients to be more nimble and accurate in assessing risk. Climate change, for instance, presents such a need. It is a major challenge for the insurance industry, as predicting risk based on unknown climate change makes it difficult to assess the price of risk today.

The understanding that, in order to sustain a successful business, RMS would have to make a significant investment in infrastructure, caused it to re-evaluate its model and, eventually, started it on its journey to the cloud. Cloud computing, it felt, represented its best opportunity to deliver its modeling services in an elastic and highly scalable model to accommodate risk models that would only continue to grow in complexity and compute requirements.

Bobby Soni, Chief Platform and Services Officer at RMS, explains the great value in cloud computing is only possible because consumers of digital services don't care where the servers are physically located, or where the processing takes place.

"They only care about the experience of using their services, Soni pointed out during a launch event in Reykjavik, Iceland. "They don't want to see where the data center is – it could be in Timbuktu, for all they care. That is only possible if you can stand behind the security and reliability and SLA that is required for business-critical applications."

Verne Global and the Iceland Factor

The decision to "go cloud" is one thing. For RMS, however, it gets more complicated, as it would choose to build its own private cloud, rather than leverage popular public clouds like Amazon or Rackspace. The decision was taken largely based upon Soni's theory that security and reliability and trust are paramount to customer satisfaction, and public clouds have too many "what ifs." The risk wasn't worth it for a company that knows risk inside and out.

The decision then became where to build its RMS Cloud environment. Domestic locations abound, as well as alternatives in the EU, but for a business with key customers across the globe, the ideal location would be a site that would be able to serve both the US and European data center markets with equally low latency.

Enter Verne Global, which had built its data center in a former NATO command center just outside the Icelandic capital city of Reykjavik. Certainly security would seemingly not be an issue, considering NATO had used the site as a missile storage facility during the Cold War. But, beyond the inherent security of a former military facility, Iceland holds natural advantages held by few other locations, noted Lisa Rhodes, Verne Global's vice president of marketing and sales.

Foremost is its 100 percent renewable energy sources, between its hydroelectric and geothermal plants. While visitors to the volcanic island are treated to exotic views of magnificent waterfalls and geysers, and can spend time in geothermal springs, these plants are busy powering the island with highly cost-effective energy, with no dependence upon fossil fuels (it has diesel backup, if needed).

With power accounting for as much as 40 percent of data center operating costs, according to Verne Global CEO Jeff Monroe, and perhaps even more with high density compute applications, like RMS' modeling, not only was the cheap power a key consideration, but equally important was the free air cooling thanks to a cool and windy climate that dominates Iceland, with averages temperatures topping 50 degrees Fahrenheit only in July and August (and even then, only by a few degrees).

Verne Global's facility sports massive slats in its walls, resembling very large window blinds, which are opened to allow the flow of cool air into the data center's external cavity. The cool air is then pumped into the data center via a series of ducts to counter the heat generated by rows of servers. The truth is, other than that, the facility looks and behaves like a data center (as it should), with cabling and racks of servers and firewalls in abundance.

Factor in a technologically proficient workforce and connectivity to both North America and Europe thanks to multi-redundant, multi-

(L to R) Paris Georgallis, Bobby Soni, and Dr. Robert Muir-Wood in Reykjavik detailing the process of building RMS(one) with Verne Global.

Terabit cable systems that were upgraded in 2009, and Iceland quickly emerged as the logical home for RMS Cloud.

"Carbon neutral is a big component," notes Monroe. "But, the other part is it is the ultimate energy hedge for businesses, especially those running high-density compute applications."

Iceland's Minister of Industry Ragnheiður Elín Árnadóttir agrees, noting the vital role the data center industry plays in the evolution of a technology-focused global economy. She noted that Iceland has been focusing on power-intensive business for some time, having built an impressive aluminum smelting industry, and sees its energy resources as a tremendous asset for future growth of its data center market.

"Verne Global's success story is an inspiration and gives us hope for more good news in this important sector in Iceland," she says. "The data center industry will be growing fast and, being dependent upon energy, it is valuable to be able to reduce the carbon footprint for the industry as a whole."

RMS Cloud and RMS(one)

Naturally, RMS did its own risk modeling before committing to Verne Global's facility. After all, the facility sits in the shadows of Iceland's famed active volcanoes – recall the massive ash cloud that grounded flights across Europe in 2010 when the ice-cap covered Eyjafjallajokull erupted. But, once the risk assessment proved favorable, its plans to build RMS Cloud, its first data center outside its own facilities, were set in motion.

RMS called on many of the industry's top brands to build out its private cloud, several of which were present at its media tour of the facility in September, including Datapipe, VMware, EMC, and local integrator Advania – in addition to its Intel-based compute platform from Cisco and firewalls from Palo Alto Networks.

The result is a massive infrastructure, completed in less than four months, boasting 5,000 cores, burstable to 30,000 cores – almost unimaginable scale, according to Paris Georgallis, vice president of platform operations at RMS.

"It would be an understatement to say if we didn't have great partners, we wouldn't have been able to [complete the project] in the amount of time we have done it, to get two production centers up and running, in California and Iceland," he posits. "RMS Cloud is not a generic public cloud; it is a purpose-built cloud to do one thing and one thing only – deliver results and predictable performance that allow us to write and meet SLAs."

RMS Cloud now provides the underpinning infrastructure for RMS(one), the company's real-time exposure and risk management environment. An industry first, RMS(one) takes the technology out of the hands of RMS' customers and allows them to run risk models in a secure environment, allowing them to focus on their core business rather than having to manage and maintain RMS technology in their own facilities.

With the ability to run a one million-location scenario in under three minutes, RMS(one) delivers risk analyses orders of magnitude faster than what had been previously possible, with the ability to re-run models as needed. With the total number of locations expected to come online eclipsing one million, RMS has reinvented a market it had already dominated. But, its plans for RMS(one) include more than simply delivering sub-minute response for its customers' risk assessments. RMS plans to make its models available as a resource library for others in the market as well, becoming the cornerstone of the global risk modeling market.

None of it would be possible without the massive power of cloud computing, which provides the scalability to deliver compute and storage resources for what may well end up being the entire risk modeling community worldwide. Eventually, that scalability could lead RMS to extend RMS(one) beyond the insurance industry, possibly to the real estate market, government entities, or others that require powerful risk analysis.

"We believe this is truly an ecosystem," concludes Soni. "RMS develops models, but there are many others that do as well, and we are providing the ecosystem that can host all these models in one place. It's kind of like an app store model, where clients and competitors can write applications on the platform for all to use."

While RMS Cloud offers many process efficiencies that benefit both RMS and its customers, the real value of its migration is a complete business transformation thanks to RMS(one), not only for RMS, but its entire industry, which has now been reinvented by a forward-looking team that wasn't content resting on the laurels of its success to date. With its partners at Verne Global and Datapipe, RMS and its customers, which are not IT companies, are able to embrace IT while focusing on their core businesses.

As for the Iceland data center market, Rhodes doesn't know if there will be a gold rush on Iceland or not, but the location is certainly becoming part of an increasing number of conversations, much more so than in the past. RMS has done its homework, and it looks like its own risk assessment is about to pay off in spades.

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Feature STORY

by Rory J. Thompson

Learning – and Profiting – from 'Superstorm Sandy'

It was just a year ago that a huge portion of the Eastern U.S. got slammed by what has since been dubbed "Superstorm Sandy," a hurricane of such epic proportions that weathercasters and businesses alike will be talking about it for generations to come.

Yet while many experienced tragedy and loss from the devastation, others savvy enough to plan for it actually got a chance to prove their worth and came out of it battered and bruised, but even stronger for having survived it. One such company is "Backup My Info!" better known as "BUMI" (pronounced "BOOM-ee").

Led by CEO Jennifer Walzer, the 10-year-old company does just what its name implies: backs up data for companies that need to have ready access to their critical information should a crisis strike. BUMI was indeed put to the test in late October 2012.

"We had built this whole solution, BCR (BUMI Cloud Recovery), specifically for our clients to use in a disaster," Walzer said. "We tell them, 'We can back up your servers and you can then recover those servers in one of our data centers so you can continue working, no matter what happens.'" So when Superstorm Sandy hit, BUMI was ready to deliver.

But the story started way before the storm was even a blip on anyone's radar. Each day, BUMI engineers monitor their clients' backup logs to make sure critical data is being backed up properly and in a timely fashion. This allows BUMI to proactively manage client backup and restore processes, if and when they are needed.

"We don't just rely on automatic monitoring," Walzer said. "We promise our clients 'white glove treatment,' and that's what we deliver."

Walzer emphasizes that what BCR delivers is not meant to be a solution to replace real-time replication.

"Some companies cannot be down more than five minutes," she said. "This is more for organizations that are OK with being down for some time. It all depends on the speed you want; the faster you need to get your business back up and running, the more it costs."

Serendipitous Meeting

As Sandy started gathering size and strength, Walzer was away from her New York office, in Boston at an Entrepreneurs Conference. A colleague of hers is a tech guy who owns a company that does weather forecasting for commercial shipping companies.

"He leaned over to me and said, 'This is going to be way worse than anyone suspects,'" Walzer recalled. "That's when I sprung into action."

Walzer called her New York team and told them to begin implementing the disaster recovery procedures they had practiced so many times before. BUMI's corporate office housed their file server and e-mail server, and was right in the storm's path. With the storm coming, they knew they would have to provide the high level of customer service their customers were used to with no interruption in communication.

"We've always recommended that our clients do disaster recovery drills twice a year. We want them to run through a full drill to show them how long it takes to recover data, and also to familiarize them with the process and see any quirks that might arise," Walzer said.

But this was no drill. BUMI proactively notified customers of the impending storm and encouraged them to run preemptive backups of their data so that if the worse should come to pass, they'd be covered.

And covered they were.

"It was just like we drilled," Walzer recalled. "On Saturday night we began proactively restoring our corporate servers to our Toronto-based data center using the BCR solution. Our Technology Manager, Dan Jacobson, sent out a notice to the entire staff: 'OK, we're up and running in Toronto, so everyone follow the DR procedures.' By Sunday morning we were set. Even though our physical office suffered extensive damage, our data (and our clients' data) was safely protected in our data centers in Canada. Our BCR solution allowed us to run our business remotely for nearly three months."

The storm hit Sunday night into Monday. Afterwards, Walzer lost eight days of power at her home in New Jersey. "My e-mail and instant messaging still worked for a while. Then the lights flickered, and the power went out," she said.

Things weren't much better at the company's NYC headquarters in lower Manhattan.

BUMI's Six Core Values

BUMI's mission is simple: It protects corporate data continuity in a personalized way. The company's six core values are at the heart of the company and describe how it supports its clients:

ALL ABOUT THE TEAM

From its hiring practices, to internal procedures, to taking care of clients –BUMI ensures all team members have the support they need. By taking care of its team, the company believes it can more efficiently take care of clients.

BE DILIGENT

BUMI is diligent about the details because it's not just about backing up client data, it's about being sure clients can recover quickly and successfully from data loss.

BRING IT ON!

The BUMI team members thrive on new challenges and projects. The company is always embarking upon new projects, researching new technologies, and learning new ways to better themselves and improving upon the services they offer.

CELEBRATE

Whether it's a new client, a finished project, an anniversary, a birthday, or even a productive week, BUMI takes the time to celebrate and recognize its accomplishments and milestones.

ENJOY YOURSELF!

At BUMI, the team enjoys themselves while working hard at the same time. Team members maintain a proper work-life balance so they can maintain the highest level of performance and service offered to clients.

OBSESSIVE CUSTOMER SERVICE

BUMI doesn't just provide good customer service. Its team is obsessed with making a client's BUMI experience wonderful. The relationship doesn't end with the sale.

"I got a notice from building management," Walzer said. "There was 35 feet of seawater in the building, including the basement, sub-basement, and parts of the main lobby. We eventually started getting updates from management. In the first week of November they said, 'You can go into the building by appointment to get your stuff and see your office.' The building overall smelled of rot and mildew, but our space on the sixth floor was fine."

There was similar good news for BUMI's clients. Because of the team's proactive movements, every client's data was safe and recoverable. And even though the BUMI team was displaced and working all over the tri-state region, the company never lost a day of work.

"Right after the storm, we had a supplier FedEx everyone VoIP (Voice over IP) phones," Walzer said. "We incurred the full cost in buying that equipment, because we found out too late we had no flood insurance on the building. At six floors up, who'd think we'd need it?"

What would happen if you lost all your company's critical data? Don't wait for a record-breaking hurricane to find out.

Help Just In Time

Forstar Resources, Ltd. is a consulting and staffing company that specializes in the IT industry. Its clients include major Wall Street financial firms and a host of Fortune 500 companies. President Jamie Blitz says his company had been a client of BUMI for nearly six years before the storm hit.

"I had met BUMI's Jennifer Walzer at some networking events and told her I was tired of collecting so many backup tapes," Blitz recalled. "Being a true networker, she explained how seamless and effortless their services were. It was exactly what I was looking for; to know we had all our data secure no matter what would occur."

So Forstar signed on with BUMI, but didn't realize how invaluable the service would be until the storm hit.

"We actually lost power in our office for over a week, and were not even allowed into our space, effectively shutting us down for that entire period," Blitz said. But the investment with BUMI paid off.

"They were great," he said. "Their team had reached out to me prior to the storm to make sure we had the latest backups and to test them. Once power was lost they reached out to me to see if we needed any assistance, or if we wanted to restore any data onto temporary servers until we got power back and were able to get back into our office. Once there, they followed up again to make sure we were still in good shape."

Still, it wasn't all easy sailing for BUMI. While taking care of clients, they faced their own storm challenges.

"Being physically away from each other for so long is really tough," Walzer said. "You need to focus on your team. One thing we did intentionally was to meet every Wednesday night in a different part of New York City, as we realized how lonely everyone was working from home. It reinforced one of our six core values." [See sidebar]

And while such an experience might have adversely affected another company, the opposite was true for BUMI.

"Everyone involved was a rock star," Walzer recalled. "I missed not seeing their faces every day. We realized that camaraderie and teamwork really counts for a lot. They made the best of it, and we all got so much closer from this experience as a group.

In retrospect, Walzer realizes how "lucky" she and her team are because of the storm.

"Because we were prepared, everyone was able to keep working," she said. "We forged new relationships with colleagues in the same industry, and identified places where we can help each other in the future. I wouldn't wish another storm like this on anyone, but it's nice to know we survived…and can do so again if need be."

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Yealink easy VoIP

by Doug Barney

One-time Skeptic **Oracle Now 100% Serious** about Cloud

Oracle has come a long way in five years. It was at a shareholder meeting in 2008 when Oracle CEO Larry Ellison let loose as he often does, this time not attacking a rival, but lambasting the whole notion of the cloud.

"It's ludicrous that cloud computing is going to take over the world. But they get very excited about it. It's this big echo chamber," he said, calling the cloud "the Webvan of computing."

The critique had much to do with how the term was being tossed about. "The interesting thing about cloud computing is that we've redefined cloud computing to include everything that we already do. 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?" Ellison asked.

Not a fan of the term, Ellison is always a fan of a good market, and felt he had no choice but to wrap his head, and his company's engineering and marketing might around this thing called the cloud. "We'll make cloud computing announcements because, if orange is the new pink, we'll make orange blouses," he said.

It is five years later, and now Oracle uses the word cloud proudly and makes announcements liberally. And like all major technology vendors, Oracle boasts a relatively vast cloud portfolio.

The Oracle Cloud Play

Although Ellison was just five years ago pooh-poohing the cloud, the company itself claims to have been in the cloud for over a decade, and in those early days even "pioneered the concept of accessing applications on demand".

And so even when Larry Ellison was dissing the cloud, Oracle had plenty of cloud offerings. Today it has a magnitude more.

One major service line is simply called Oracle Cloud, an integrated portfolio of services. This cloud already comes equipped SaaS apps that include Customer Experience, Enterprise Resource Management, and Human Capital Management. These apps all include mobile, social and business intelligence functions.

These tools can be installed in-house, as part of a private cloud, and public clouds such through the Oracle Cloud itself.

So far there are some 9 million Oracle Cloud users representing some 19 billion transactions.

Additions to Oracle Cloud, made just recently, are in the areas of Application, Platform, and Infrastructure Services.

The 10 new services are, Oracle says:

Compute Cloud: This core Cloud platform is elastic, and made to support a variety of workloads. Oracle says this cloud includes monitoring, a fully secure.

Object Storage Cloud: The purpose-built cloud is designed for unstructured data, which is most often best stored as objects.

Database Cloud: As a database vendor, you would expect Oracle to offer DBMS services in the cloud. This offering lets DBAs control dedicated database instances and runs all Oracle DBMS apps.

Java Cloud: After inheriting Java from Sun Microsystems, Oracle has a duty to support the hardware platform, which it does through Oracle WebLogic Server clusters.

Business Intelligence Cloud: This BI cloud includes dashboards for easy analysis, supports mobile access, and "provides self-service data loading, modeling, analysis, and application administration capabilities in the cloud without the assistance of IT," Oracle said.

Documents Cloud: This self-service supports collaboration and file sharing, and includes desktop and mobile data sync. Oracle says it can also integrate with your cloud and on-premises applications.

Mobile Cloud: The mobile cloud market is red hot, with much of the action surrounding support for Bring Your Own Device (BYOD). Oracle promises to "simplify enterprise mobile connectivity, enabling enterprises to build any application, for any device connected to any data source with enterprise-grade security."

Database Backup Cloud: There are myriad cloud backup tools, but Oracle's is designed to protect Oracle Databases in the Oracle Cloud.

Billing and Revenue Management Cloud: Cloud based billing to protect recurring revenue.

Cloud Marketplace: Online store to promote the Oracle cloud ecosystem.

Meanwhile, partners can hook up through the Oracle PartnerNetwork (OPN) Cloud programs.

Seeing the Oracle Cloud Portfolio

The Oracle Cloud is a broad-based set of services. But Ellison and crew have far more than that.

The biggest beast, as you might expect, is the database. Here Oracle has adapted its latest highly-scalable database to the rigors of the cloud. The new DBMS is named Oracle Database 12c, with the little 'c' of course standing for the big cloud.

A big part of the cloud story is multi-tenancy so one instance can serve multiple client organizations, or internally a private cloud handle many departments and groups.

Analysts are lining up to applaud. Just keep in mind here that large vendors such as Oracle are likewise huge consumers of analysts' services, so you wouldn't exactly expect Oracle to receive a beating from researchers' hands.

IDC analyst Carl W. Olofson likes what he sees in the new DBMS. In fact, Olofson believes Oracle solved some major problems. "Trying to realize the cloud objectives of multi-tenancy, elastic scalability, and resource virtualization at the OS level, though a hypervisor, is highly problematic for databases because they optimize their operation based on fixed resources and, when unaware that some resources are shared, will tend to behave badly. Thus the RDBMS core needs to be involved in delivering cloud characteristics," Olofson argued.

Oracle's answer was to add plugability to its database. "Users can manage databases as portable entities that can be assigned to container databases on specific servers, and then moved around at will, without changing application code. Users can tune the management of those pluggable databases at the container level. This enables a single physical database instance to manage multiple pluggable databases, each of which could represent a discrete tenant," Olofson said. One can see how this approach adds value to the cloud, private cloud and on-premises distributed database environments. And this is the very basis of multi-tenancy value. "The combination of operational isolation, and the fact that no pluggable database user can see the other databases, enables Oracle Database to satisfy the requirements of multi-tenancy. The fact that databases can be moved around at will means that servers are, in effect, virtualized. And so multi-tenancy and elements of physical resource virtualization and elastic scalability are delivered where they make the most sense — at the database level," IDC argues.

Oracle isn't, of course, alone in all this. All its rivals are trying to do much the same thing by adding richer cloud and in-memory abilities. Not just that, but startups and other new vendors are likewise taking aim.

Gartner, meanwhile, has taken particular interest in the Oracle Exalogic Elastic Cloud. This computer processing platform aimed at supporting clouds runs Oracle Solaris OS and Oracle Linux. It also comes equipped with Infiniband for networking and has storage. The Elastic Cloud software runs on top of all this gear.

Gartner talked to customers about their experience. "Oracle Exalogic clients report notable performance, scalability and manageability benefits when running Oracle WebLogic Server workloads on the product instead of on clusters of discrete servers. One user noted a performance improvement of up to 50 percent," Gartner discovered. "In the first month of Oracle Exalogic production deployment, another user ran 100 million more transactions than with the old configuration. Still another user consolidated over 100 Java Virtual Machines (JVMs) running a JBoss application on multiple servers into 16 JVMs running WebLogic Server on one four-node Oracle Exalogic platform."

Minor Buying Spree

A large company such as Oracle, especially with all its acquisitions including Siebel and Sun Microsystems, should be expected to have a broad portfolio, and these days most all software portfolios are heading to the cloud, if they haven't made it there already.

While Oracle has a ton of cloud goodies, it can't match the intensity of Google, Amazon, Facebook or even rival Salesforce.com, founded by former Oracle exec Marc Benioff.

Playing a bit of catch up, most recent deals have been aimed right at the cloud. Last year Oracle acquired DataRaker, which does analytics in the cloud. Late this winter Oracle bought Nimbula which focused on private clouds.

Most recently the database giant scooped up BigMachines which provides what is called configure price and quote (CPQ). What this means is that BigMachines helps manage complex customer orders and pricing and automating the overall sales ordering process. Some see this as a bit of a stab back at rival Salesforce.com, and there is clearly history between these firms that would support that assertion.

Other Cloud Genera

Oracle has existing cloud tools as it simultaneously continues to migrate on-premises tools to the more shareable platform. Here are few things the Redwood City company has in hand:

- Oracle Supply Management Cloud

- Oracle Human Capital Management Cloud, a cloud tool that services the entire employee lifecycle.

- The Customer Experience Cloud which lets clients track and control customer interactions, be they through mobile, a call center, social media, direct sales, or right there in the store.

- The Oracle Enterprise Performance Management Cloud aimed and planning and finance executives.

- Finally Oracle has cloud tools aimed a supply chain management and enterprise resource planning (ERP).

Product
REVIEW

GFI MAX Backup:
Speed is the Essence

Hosted backup has not only relieved IT personnel from dealing with backup tapes, cleaning tapes, managing offsite tapes, checking backup logs, but it has also opened up a huge revenue opportunity for MSPs looking to resell online backup solutions. Many small and some medium-size companies with limited or no internal IT resources don't want to deal with the hassle of popping tapes in and out, running cleaning jobs, assigning Mary to take over tape duties when John is on vacation, remembering to return offsite tape backup tapes, etc. Thus, companies are more than glad to use the power of the Internet to have a simple, easy-to-use backup solution that eliminates many of these problems and gives peace of mind should disaster strike.

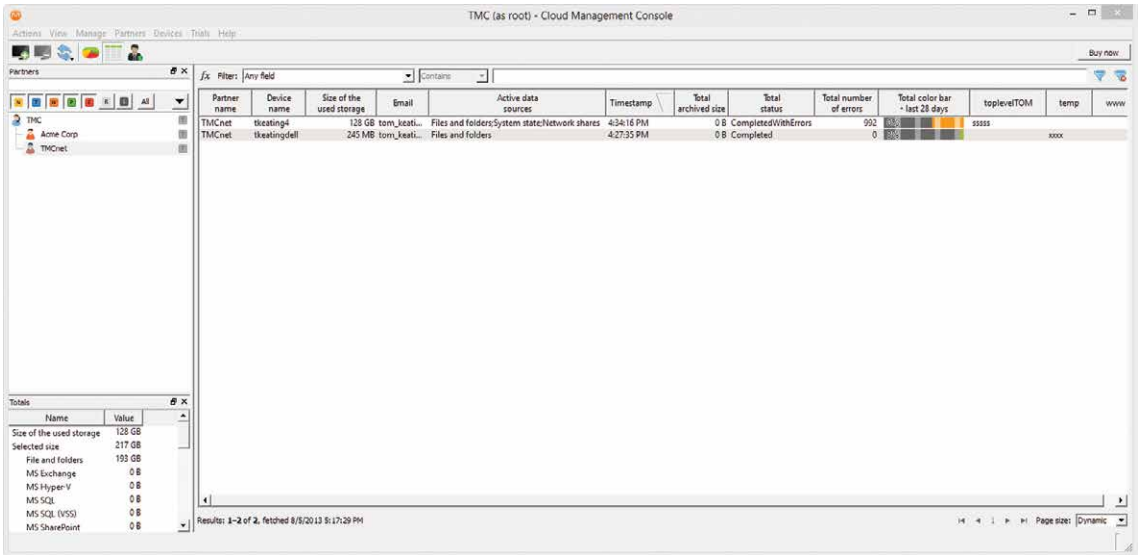
GFI MAX Backup is an online cloud backup "brandable" solution designed with MSPs in mind. GFI MAX Backup is priced for MSPs so you can build margins and sell a managed backup service. It supports secure 128-bit, 256-bit all the way up to ultra-secure military-grade 448-bit Blowfish encryption. GFI offers what they call "LocalSpeedVault" which allows you to backup your files to local storage, whether it's the local computer or a network file share resource. The benefit of this is faster restores or if Internet connectivity is lost, you still have the ability to recover from the LocalSpeedVault. GFI markets this feature as Disk-to-Disk-to-Cloud (D2D2C), a 'hybrid' approach that has the dual benefit of speed (local cache) and full disaster protection (cloud).

We took their 30-day trial for a test drive and right away noticed how easy it was to get started, add computers and network shares to back up, and how the well-designed Cloud Management Console made it very easy to manage multiple client companies, each with their own list of computers being backed up.

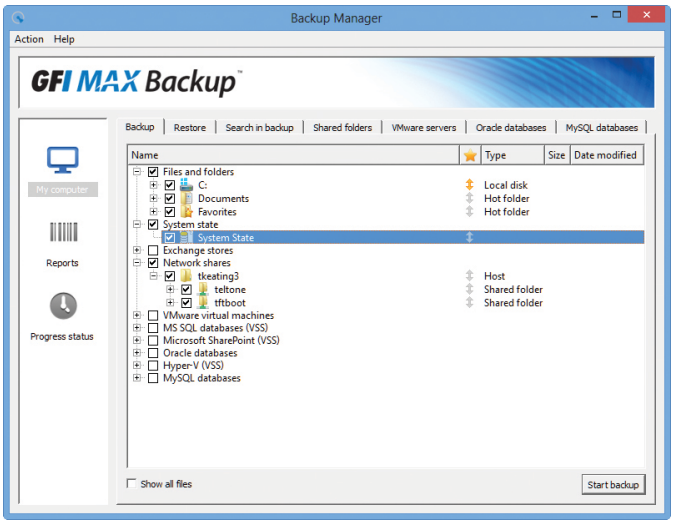
Installing the GFI MAX Backup solution consists of two parts if you are the MSP (or IT technician) and just one part if you are the end-user or the MSP's client. The first part of the software suite, which is installed by MSPs and is used to manage the backups is the Cloud Management Console (CMC), which uses 17.1MB On Windows 8. From here you add devices, which are given unique passwords and unique URLs to be given to users to install the backup agent.

The second part of the backup client software is the backup agent called Backup Manager (BM). From Backup Manager you can control the backup selections, restore files, set file exclusions, etc. Installing BM consisted of going to a unique dynamically generated URL to download the software. During installation you can choose the encryption desired and it has some default exclusion rules that you can uncheck if desired (videos, music, Windows backup files).

The Backup Manager (BM) software is available on Windows, Linux and OSX. It also supports Microsoft Exchange, SharePoint, Oracle applications, Microsoft SQL, MySQL, and even works across virtualized environments including VMware



Cloud Management Console

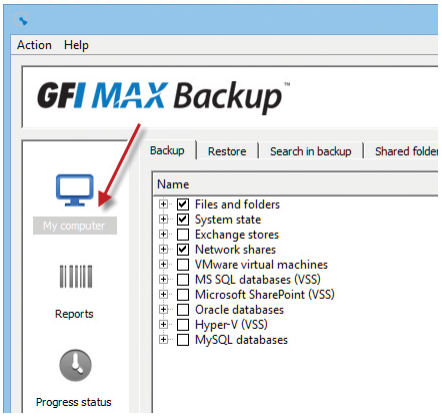


Backup Manager user interface

and Hyper-V. On Windows 8, Backup Manager takes up just 42.6MB of RAM.

The user interfaces for both BM and CMC were very clean and easy to navigate without referring to any documentation for the basic functionality. Selecting files/directories to backup, adding network shares to backup, and choosing files to restore was so simple in the UI, any user could do it on a self-service basis, without MSP intervention. Further, you can fully brand the user interface with your own fonts, colors, images, banners, control style, etc.

MSPs will like how they can easily manage their partners and users with an easy to navigate tree structure. From CMC you can right-click a device and select launch Backup Manager, which gives MSPs remote access to change file selections and other backup criteria associated with that device. I had a minor issue where my PC had both Backup Manager installed and running locally and Cloud Management Console, so when I attempted to launch Backup Manager for another device it was connecting to my local Backup Manager and showing my PC's backup criteria. To solve this we simply had to exit Backup Manager from the System Tray and then right-click the remote device again and re-launch BM. We'd like to see BM add the device name to the user interface, instead of just always saying "My Computer" even when it's a remote computer (see red arrow). This way there is no confusion as to which computer device is being administered. Also, it would be nice that regardless if BM is running or not, if launching BM for a specific device it overrides the current BM session. We'd imagine if administering or initially configuring hundreds of devices, it could get tedious exiting BM each time before connecting to a new device.



Backup

We liked that we were able to add custom fields within Cloud Management Console and certainly MSPs that need to track certain info about their clients will like this feature. We noticed that if we added a custom field when viewing a customer that this custom field was specific to only this customer. Unfortunately, after adding this "local" custom field, we weren't able to add it to the list of viewable columns since it wasn't showing up. Also, we were unable to edit a device associated with this customer and add information to this newly created custom field since it was nowhere to be found.

On a hunch, we clicked the top level TMC account and then added a custom field again. This time the custom field appeared as a choice when customizing the columns to be displayed and when editing a device. We were able to add data to the field and it was displayed correctly. Adding a custom field to the top level appears to be a global field and is viewable on all customers.

Our guess is that local custom fields is a feature GFI is still working on since this is an early version of the product we're testing. Generally speaking, global fields are more useful and if you start building local fields specific to certain customers it can be a management nightmare remembering which customers have a certain custom field and which ones don't. So local fields functionality is more of a "nice to have" but not really necessary.

Backup

We ran a test backup on a couple of PCs and were pretty impressed with the performance. We setup the e-mail notification to e-mail us daily reports, but you can also set it for a specific day. A toast icon pops up in the lower-right corner indicating the number of errors as shown on the right. You can easily view which files are erroring out and fix the problem. In the case of the 992 errors depicted in the toast icon, we had some Access Denied messages due to some file permissions that needed to be changed.

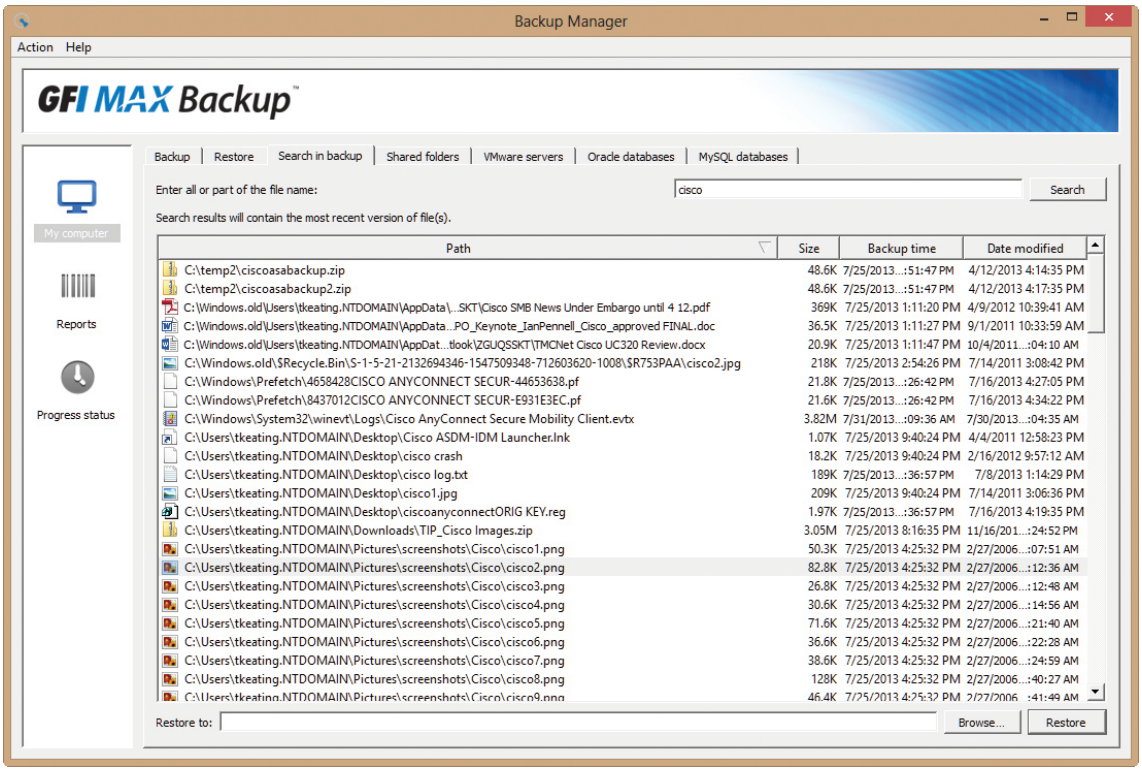
Backups are stored for 28 days. That is long, but we wished it was a full 31 days just from a management perspective, since then you can tell your users they have a full month of "safety" vs. 3 days short of a full month.

The backup selections not only support selection inheritance at the local file system level, but also at the Network shares level. Thus, I was able to select/check Network shares at the root level just once and then when I added a new network share in the Shared folders tab screen it was automatically selected in Network shares, thereby saving a step.

Restore

Restoring a file was very easy to do and as previously mentioned, users can do it themselves without MSP or IT staff intervention. You can choose to manually navigate the directory structure to locate the file(s) you need to restore or you can use the nifty 'Search in backup' feature which allows you to enter all or part of a filename. Here's a search for all files containing 'cisco':

Considering it had to search thousands of files, it returned results pretty quickly. From the search results you can restore a file.



Search in Backup feature

You can't Ctrl or Shift select multiple files to restore, but generally speaking if you are doing a search you are only looking to restore a single file. By default it restores to the original location and gives you the option to overwrite or skip if the file exists. Importantly, you can change the restore location.

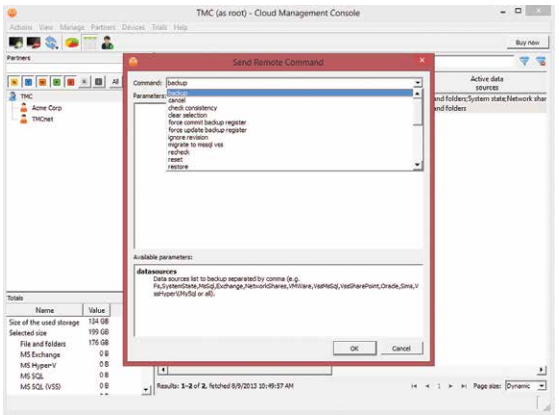
Speed! Speed! Speed! - Mickey Goldmill, Rocky Balboa's trainer

GFI MAX Backup restores are lightning fast. According to GFI, during a restore if the files are already in the original location only the changed blocks are sent and restored from the backup and restore speeds are boosted to more than 5GB per minute. We tested this by modifying a 2GB Access file and then restoring it from backup. It took just 29s to restore the 2GB file! We opened the file and our change/edits were gone, proving that it only transmitted the changed portion of the file and not the entire 2GB file. Importantly, it also set the file modified date back to its original file modified date. On a related note, data is compressed to 70 percent of actual size to reduce bandwidth consumption and improve performance.

From the CMC you can remotely launch the Backup Manager agent software installed on computer devices simply by right-clicking on the device and choosing to launch Backup Manager. End-users can launch Backup Manager and uncheck 'Allow Remote Connections', which would block the IT staff or MSP from managing the device. Fortunately, the software allows you to add a password to block launching the BM GUI using a SOAP call. They also plan on adding the ability to set a password via their Remote Commands feature. Instead of blocking the launching of BM entirely, we'd like to see a feature that limits users to only restoring files. This way they still can do self-service file restores, but not mess up the backup file selections or other critical settings.

Remote Commands

Besides using the user friendly Backup Manager to manage a remote computer, you can also control remote computers by using remote commands, some of which include backup, cancel running backup, restore, set logging level, set bandwidth, set scheduling, uninstall, and much more. Issuing remote commands, once you get the hang of the syntax, is much faster than launching BM for each computer device.



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Product
REVIEW

Restoration Details

Importantly, TMC Labs asked GFI, "Do you offer shipping of a hard drive for faster restores? It might take weeks to restore say 1TB of data – even on a fast pipe."

GFI's Johan Jongsma, CTO stated:

"Yes, we do offer the service of shipping drives with the encrypted data to speed up the restores.

However, we have different techniques to restore a server that crashed or was stolen by either shipping a disk or else using our priority system. We can set backup/restore priorities and there are three levels. The result is that when a disaster strikes, the company will be get the files with the highest priority back first and lower priority files later.

For example: 1TB server with 100GB Exchange, 50 GB system files (Windows, Applications) and 20 GB actual files (Accounting, correspondence). The remaining 800 GB will probably consist of files that are also very important to the company (otherwise they would not be in the backup), but are most likely not necessary to be online and available within hours of the major system crash (they are directly accessible through the virtual drive however).

With this technology, the affected system will be up and running long before the disk has arrived via courier. The restore will be completely finished after all the files have been downloaded, which could take significant time. But the company that suffered a disaster incident is already up and running within in a day. Access will only be slower than usual to the other files."

Features:

- Operating Systems: Windows 32/64, Mac OS X, Linux 32/64.
- Supports Microsoft Exchange, SharePoint, Oracle applications, SQL, MySQL
- Works across virtualized environments – VMware and Hyper-V
- Virtualization backup (VMware & Hyper-V) - live backups at disk level, enabling restore of entire servers in minutes
- 128-bit AES, 256-bit AES, ultra-secure military-grade 448-bit Blowfish encryption
- True Delta Technology for super-fast back up
- Built by MSPs and designed from the start just for MSPs.
- Tiered/discounted pricing for MSPs based on storage usage
- Quickly check the backup status of all customer systems
- Open API allowing integration with other 3rd party systems, such as ticketing and PSA systems
- Deep integration with Autotask
- Infinitely scalable
- Self-service restores - no IT intervention
- HIPAA compliance-ready software
- Data is compressed to 70 percent of actual size

Pricing

GFI doesn't reveal their pricing and explains, "We don't do this for the simple reason that your margins would be revealed to your customers - and we don't think that's something you really want."

That said, they offer a 30 day trial "and we'll talk you through the exact details of how the simple pricing structure works - and you get the advantage of getting a look at the GFI MAX Backup platform so you can see how easy it is to use." Thus, they'll disclose the pricing to MSPs that are serious about using GFI and have gone through the step of trying the trial.

Ratings	Score
Installation	★★★★★
Documentation	★★★½☆
Features	★★★★★
Usability	★★★★★
Performance	★★★★★
Overall	★★★★★

Conclusion

There are a dizzying array of cloud-based backup solutions, including Dropbox, Backblaze, Mozy, and Carbonite, but all of these are designed with one or just a few PCs in mind and aren't designed for MSPs. GFI MAX Backup is well suited to MSPs that need centralized administration and reporting on dozens or hundreds of clients and hundreds of computers. The user interface is well thought out and designed, and for the most part didn't require referring to any documentation. That said, they do have extensive documentation online, though some of it seemed incomplete. TMC Labs was very impressed with the performance in backing up and restoring files. GFI MAX Backup is well positioned to take the MSP backup market by storm and TMC Labs would highly recommend it.

Tom Keating is vice president, CTO and executive technology editor/SEO director of TMC.

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by Erik Linask

Between Amazon and Private Cloud

What is the cloud? Well, that's been the million-dollar question for years, with vendor after vendor creating a unique definition for cloud, naturally motivated by their own products. Generally speaking, the cloud" is touted for its flexibility, scalability, mobility, and cost-effectiveness – all features business require as they seek to build and expand. Today, we've at least come to some agreement regarding three service models of cloud – SaaS, PaaS, and IaaS. It's progress.

What's interesting about the three service models is the variance in flexibility and customization between each – of course, with that flexibility also comes a level of expertise and IT commitment, so the realization of the myth that minimizing IT involvement is proportional to the flexibility businesses require from their cloud solutions. That's not necessarily bad; rather, it's recognition that there are multiple alternatives, each appropriate for a different audience – isn't abundant choice what's driven the tech space?

Because it provides the greatest flexibility, Infrastructure as a Service has become an increasingly interesting play, growing nearly 80 percent to more than $3 billion in revenue last year. Frost & Sullivan predicts the IaaS market will enjoy 60 percent CAGR through 2016.

Essentially, IaaS is a scenario where virtual servers and storage (i.e., compute resources, storage, and networking) are used by businesses on an on-demand basis, but reside in service providers' data centers. Customers are able to provision their rented infrastructure as needed and deploy their own platforms and applications in their cloud environment, or it can very easily lead to PaaS and SaaS relationships as well.

The American IaaS market is dominated by Amazon, with Rackspace securely in second place and Verizon Terremark in third (based on Frost's data). But there are challenges with public IaaS, according to Cloud Sigma's CEO and co-founder Robert Jenkins, with whom I recently had a chance to talk about the market.

Specifically, he notes that, while businesses gain elasticity, they don't always have the same strategic networking capabilities as you would in a private cloud environment or in an on-premises data center.

So, he set off to build Cloud Sigma's public cloud as a mirror image of the capabilities of private cloud environments.

"The limitations stem from vendor limitations," he says. "We built our own cloud stack where customers can run any x86 OS out of the box, unmodified, which means anything they can do in a rack, they can do in Cloud Sigma."

The idea is to provide flexible and scalable compute platform for any business with significant computing needs and sophisticated requirements – the kind of business that Amazon doesn't seem to be getting. Customers fall mainly into two categories thus far; the first is the self-service user with relatively modest requirements running Web services or R&D and test scenarios. These users typically set up their own computing and Cloud Sigma has little interaction with them – it's the growth of devops in the cloud.

The second group is the corporate user, which needs more interaction and handholding through the process but, as this customer group sees success through Cloud Sigma deployments, they end up giving Jenkins' group more and more business and migrating more and more to the cloud.

Cloud Sigma provides a full virtualization platform, so there is complete separation between users – always a key concern in multi-tenancy scenarios.

"We don't see inside the virtual machines, we don't see what the customers are running – this offers privacy like they don't get with other clouds," says Jenkins. "We give them end to end private to deliver the security they need."

So, on the one hand, the public IaaS model seems to add yet another level of complexity to what's already available in the cloud market but, for enterprises that need to real power of a cloud infrastructure, but do not have the resources to build a private cloud, this is the next best option.

The financial and medical sectors have already discovered the benefits Cloud Sigma offers and, as Jenkins notes, his customers are using Cloud Sigma's cloud infrastructure for running business critical applications, not just as a sandbox.

IaaS isn't for anyone, any many businesses will be able to get what they need from Amazon, but for those that need even more flexibility and security, public IaaS is a great alternative for private cloud and traditional on-premises solutions.

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