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From the Editor

Welcome to another issue of Cloud Hosting magazine, as we approach our first birthday at the start of 2015. Despite the fact that this title has been in existence for less than a year, the sector has moved along remarkably quickly since we launched. The cloud seems to have caught the imagination of the general, non-IT literate, public (if there even is such a thing any more) in a way that very few technologies have managed in the past. The only other example I can think of is mobile, and specifically smartphones and tablets. And despite the huge differences in the platforms, the interfaces, the necessary investments, they actually have more in common than we might initially assume.

One key similarity is that neither technology requires the potential user to have a deep understanding of how it works. The processes, infrastructure and systems behind a cloud-based solution and a smartphone are not just transparent to the end user, they're practically irrelevant. While IT professionals have often got excited about a specific technology, it's been very rare for us to be able to translate that excitement when we get home and communicate with our friends and family. But with cloud (and mobile) we don't need to evangelise: the benefits are obvious, the user interface is blindingly straightforward and intuitive. Non-tech people are using these systems every day without giving it a second thought.

There are lessons here to be learnt across the IT industry, I suspect. And as user expectations are increasingly driven by the ease of use of their phone or tablet, enterprise IT will have to follow. Those companies who are already applying an 'app-style' front-end to existing systems might not always be getting it right, but at least they're moving in the right direction. The difficulties may arise later when those pioneers attempt to reconcile their new approach with the overall business and IT strategy of their organisation: so-called 'Shadow IT' is not going away any time soon.

CIO's need to make sure they are responding adequately to the demands of the business if they are not to be undermined at some future point by a plethora of departmental or even individual IT systems that work perfectly well, but are not governed by the corporate information guidelines and processes that have been defined by the business.

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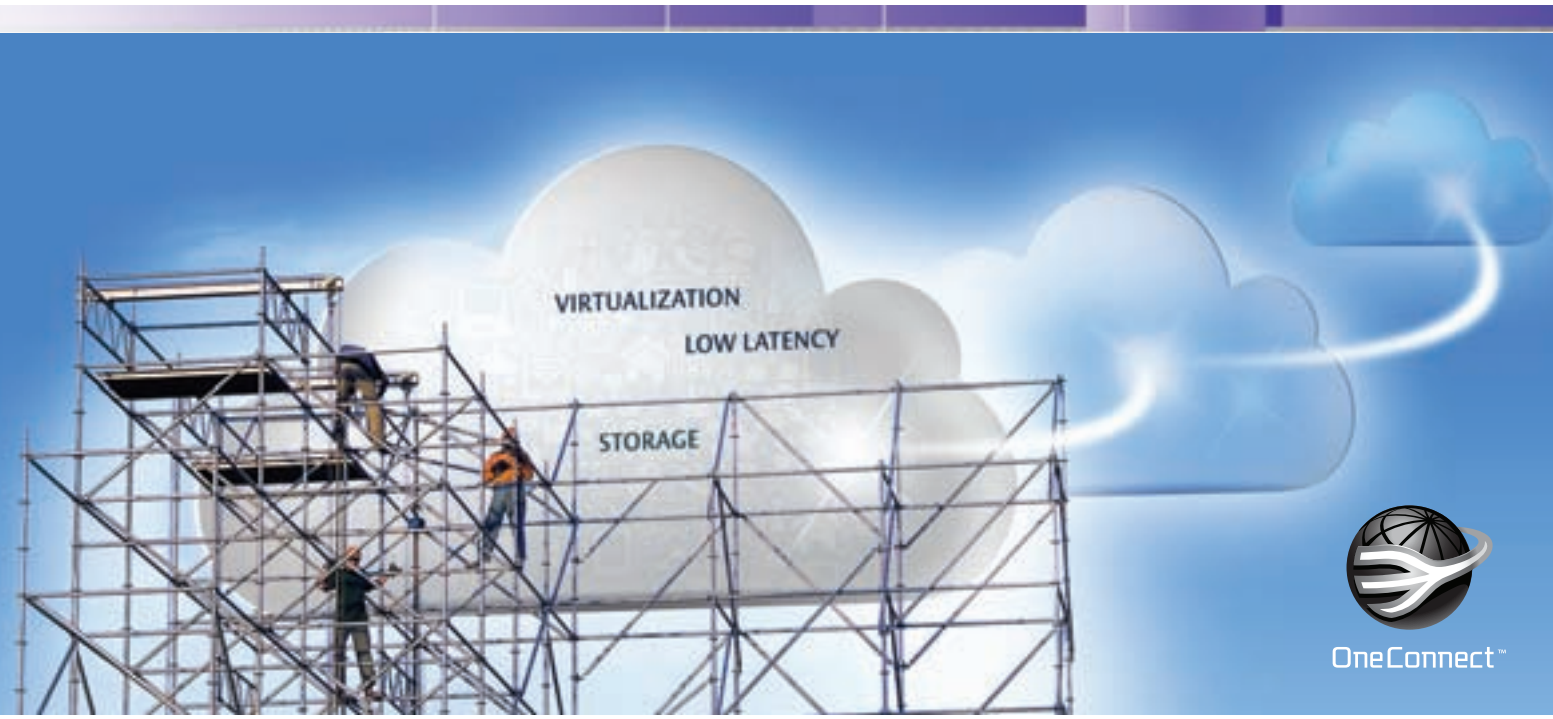

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NEW DIMENSION FOR MCP

A range of Data Dimension's specialist cloud services are now available through the G-Cloud 5 Framework. Overseen by the Crown Commercial Service (CCS), the G-Cloud 5 Framework is a government initiative designed to open up the cloud-based IT tender process to more organisations, to increase vendor choice and adoption of flexible cloud services within public sector bodies. Ultimately, it aims to drive efficiencies and cost savings within these bodies by creating a more competitive marketplace offering pay-as-you-go commodity services.

Dimension Data's network integration and specialist cloud services (SCS) will be available through the CloudStore, an online catalogue of cloud computing commodity and support services that can be procured through the Framework. Dimension Data's services featured in the catalogue include:

- Unified Communications and Voice in the Cloud
- Security Consultancy and Support
- Network Integration
- Microsoft Consultancy Services
- Data Centre Services
- Data Centre Power and Cooling Assessment
- Cloud and Technology Consultancy and Support
- Public Cloud
- Private Cloud

Through its public and private cloud offerings, provided through its UK Managed Cloud Platform (MCP), Dimension Data will offer low-latency access to secure, reliable, enterprise-class public, private, and hosted private cloud services. By purchasing their services on a pay-as-you-go basis, public sector bodies will also be able to easily scale their use of the service according to the changing needs of a business and its users. This also means that they can accelerate time to market with new products and services, all the while keeping costs down.
www.dimensiondata.com

TWO ADDITIONAL UK CLOUD NODES FOR NAVISITE

NaviSite Europe Limited have launched two new NaviCloud Director nodes, located in Woking and Redhill, UK. NaviCloud Director is an Infrastructure-as-a-Service (IaaS) platform that leverages VMWare vCloud Director 5.1, and is designed to provide businesses a flexible and versatile self-service platform well suited for cloud-based production applications. NaviSite provides customer access to VMware APIs and developer community. Customers also have the option of accessing the native vCloud Director user interface or can manage their cloud environment via the NaviSite designed AppCenter portal.

The UK Cloud Industry Forum (CIF) recently reported that by the end of 2015, around 80 per cent of UK organisations will run some kind of hybrid IT environment, combining in-house and cloud delivered technologies. NaviCloud Director lets customers connect it to existing physical or virtual environments using the VMware API connectors, enabling clients to move workloads offsite, create business continuity environments or use NaviSite as dynamic "burst" capacity during seasonal peaks.

"With the two NaviCloud Director cloud nodes, our customers can now spin up cloud instances using their software and tear them down when they're done, without any manual intervention," said Sean McAvan, managing director, NaviSite Europe Ltd. And we can provide effective disaster recovery within UK boundaries, which is important for industries which require data to remain resident in either the UK or European Union. As the NaviCloud Director nodes are both within the UK, NaviSite has the capacity to offer compute resources with minimal latency, which means we can support applications that need near-synchronous replication."
www.navisite.co.uk

IOMART GROUP SELECTS ARBOR FOR DDOS PROTECTION

Iomart Group has selected the Arbor Peakflow SP platform to protect its infrastructure from distributed denial of service attacks that are the primary threat to the availability of their services. "Everything we've built at iomart, from our world-class infrastructure to our dedicated 24x7 support team, starts with the availability of our services. DDoS has become a primary threat to availability, especially within an infrastructure environment like ours where multiple enterprise customers exist side-by-side. That's why we've chosen to be proactive and deploy the world's leading DDoS mitigation technology from Arbor Networks," said iomart Chief Executive Angus MacSween.

"The Cloud Hosting market is a highly competitive one, and businesses have many options. iomart has been able to distinguish itself because of its combination of world-class infrastructure, service and support. Many organisations wait until they've been taken offline to get serious about DDoS protection. Not iomart. They're moving proactively to secure their own infrastructure and offer their customers availability protection as part of their core services. With a commitment to quality like that, it's no wonder that their customers are so satisfied with their services," said Arbor Networks President Matthew Moynahan.

The Peakflow SP platform includes two main components, Peakflow SP and the Peakflow Threat Management System. Peakflow SP combines network-wide anomaly detection and traffic engineering with TMS's carrier-class threat management, which automatically detects and surgically removes only attack traffic, while maintaining other business traffic. With the ability to mitigate only the attack traffic, customer-facing services remain available while providers actively mitigate attacks. The platform powers many of the world's leading cloud-based DDoS managed security services.
www.arbornetworks.com

FASTHOSTS DEBUTS NEW CLOUD SERVER PLATFORM

Fasthosts has launched an entirely new Cloud platform. Built using the latest Microsoft System Centre 2012 R2, Microsoft Storage Spaces and Dell technology, it allows customers to design their own Cloud Server according to their changing business requirements.

Simon Yeoman, Fasthosts' General Manager said "Our talented technical teams joined forces with Microsoft and Dell to deliver a Cloud platform on the latest technology. We've made a multi-million pound investment to bring this industry-leading server range to market and are excited by the results."

Priced from £11.99pm (+VAT), users can configure their own desired spec based upon their requirements with the easy-to-use sliders, or can choose one of three recommended common configurations: Web Hosting Cloud, Developer Cloud or Productivity Cloud. Using Microsoft System Centre 2012, Fasthosts Cloud Servers adapt dynamically and can be reconfigured at any time easily without ever losing data or functionality.

Lee Harrison, Fasthosts Infrastructure Architect, added, "Microsoft's Storage Spaces in Windows Server 2012 R2, running on Dell hardware, provides a virtualised storage platform that has the performance, resilience and stability to underpin a truly high-end Cloud solution. By incorporating this storage technology into our latest Cloud design, Fasthosts' customers have the benefit of cutting edge performance and resiliency at an attractive price."

www.fasthosts.co.uk/cloud-servers

INTEROUTE EXPANDS OFFERING WITH VTESSE ACQUISITION

Interoute Communications Ltd, owner operator of Europe's largest cloud services platform, has acquired the UK Vtesse group. Already serving business in Europe, USA and Asia the move will bring Interoute's multi-award winning cloud service, Interoute VDC, and its Enterprise Unified ICT portfolio of advanced Computing, Connectivity and Unified Communications solutions to businesses across the UK.

Gareth Williams, Interoute CEO commented "When you look at the options for European businesses wanting to take advantage of flexible, scalable cloud infrastructure, they are often limited to the public cloud providers who think Europe can be served by one European data centre location connected by the public internet. With this acquisition Interoute is adding its twelfth Data Centre in Europe and over 7000km of UK network to its 60,000km pan-European global Cloud services platform. This provides a highly resilient, secure low latency Cloud platform that businesses everywhere can benefit from."

The Vtesse network is one of the largest national networks in the UK, connecting 55 Data Centres and 48 major towns and cities in England, Scotland and Wales. The company provides metropolitan and Wide Area Network (WAN) solutions to some of the largest companies in the world both directly and via leading global system integrators, such as IBM, ARUP, Redstone and Logicalis. Its enterprise customers including Lloyds TSB, Poundland, Friends Provident, Invesco, DEFRA and the AA, will now have access to Interoute's advanced Unified ICT portfolio of services.

The Vtesse Tierthree Data Centre, situated 25 minutes from central London, with 2,700m2 space, capable of accommodating 877 racks at 5Kw each via a 5Mw power supply, is an ideal site for colocation, disaster recovery back-up for Interoute's London City data centres.

www.interoute.com

CLOUD ACCELERATED

CTERA Networks has launched its new global channel partner program to support managed service provider (MSP), Value Added Reseller (VAR), and distributor partners with comprehensive resources and programs to accelerate the capture of cloud storage opportunities.

The CTERA Cloud Accelerator Channel Program enables partners to rapidly capitalise upon an overwhelming opportunity for cloud-enabled business transformation at a time when businesses are re-architecting their IT strategy. The program will focus specifically on accelerating the uptake of CTERA's award-winning cloud storage gateways and secure file sharing and endpoint backup solutions across business customers small and large.

The newly announced program is designed to strengthen partner relationships, matching CTERA's award-winning cloud storage technology with partner development tools. CTERA's new reseller dashboard provides a comprehensive toolkit to increase sales effectiveness and manage partner business in real-time. New features include:

- CTERA Cloud Accelerator channel partners now have access to a content-rich partner portal that offers marketing resources, training and sales tools
- CTERA's Cloud Accelerator partner portal serves as a complete business management dashboard where partners can access a simple online resource to register and protect opportunities, access sales leads and request marketing development funds.

In support of CTERA's expanded focus on partner enablement, CTERA has increased its channel team 100% in the past six months to support a worldwide surge in new partner and customer demand.

www.ctera.com

When the cloud breaks

All data centres have outages, says Roger Keenan MD of City Lifeline: the important thing for users is to understand what plans they have in place for when the inevitable happens

It's a well known fact that technical things go wrong. So what should businesses think about to ensure reliable and consistent operations with an added layer of complexity? The first step is recognising that things will go wrong. Whether operations are in an in-house data centre, an external commercial colocation data centre, or in a hybrid cloud arrangement, with workload split between in-house and cloud, the principles are the same.

CLOUD ISN'T NEW

No matter what marketing would have us believe, cloud is not a new concept. It is simply remote hosting of some or all of the workload in a data centre, and is not dissimilar in principle to 1960's timesharing services. The difference between 1964 and 2014 is the speed and data capacity of fibre optic cables, which open up a whole host of new possibilities to business owners. But the principle remains the same as do the principles of resilient design.

As some or all of the workload can be hosted remotely, the most critical new consideration is the communication between the user and data centres where cloud operations take place.

SECURING THE RIGHT DATA PARTNER

It is important that businesses choose a high quality data centre, with strong data communications and cloud experience to help minimise risks. Any data centre which says it has never had an outage of any sort is either too new to have a track record or is not training its sales staff to be honest. Even major players with more money to spend than most businesses can dream of, such as Google, Facebook and Amazon have experienced very public data centre outages in the last five years.

Most recently in June this year, Microsoft Office's 50 million users in the US experienced a nationwide two day outage. Operations managers and architects need to ask the right questions to find out the truth and work through the concepts of automatic fail-overs or manual switching in the event of something going wrong. Ultimately, it comes down to choosing a data centre that you trust.

MOVING THE RIGHT WORKLOAD

Choosing the right workload to move to the cloud is also important, especially in the early days when in-house IT staff have less experience of cloud operations. In general, workload which has infrequent, small transactions which are not latency-critical works well in cloud. A CRM system is a good example, where a submission of a visit report or the retrieval of a customer phone number is infrequent, small, and not time critical. On the other hand, voice telephony, which is a continuous stream of time critical data, is not a good application to move to cloud, except for specialist suppliers who know how to do this and will be located in carrier-rich, carrier-neutral data centres to get the connectivity and diversity they need.

In resilient or safety critical design, every element must be considered, and there is one key question which must be asked - "what will happen if this element fails?" The design can then be changed so operations will continue without interruption. If that is not possible, then a plan has to be put in place to deal with the effects of a failure that cannot be mitigated.

TESTING IS KEY

Continuous testing is essential, as is reconsidering the effects of each potential failure anew each time the system design or architecture is changed. So is rehearsal and practice of both automatic fail-overs and manual procedures to deal with failures. At least once a year, every likely failure should be forced to happen, so that its effect on the overall system operation can be checked. This is one of the main principles of ensuring reliable, continuous operations, and is the same whether a business is operating an in-house data centre or a remotely hosted operation in a data centre in a cloud environment.

More info: www.city-lifeline.co.uk

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Are we losing the battle for security in the cloud?

More than 40% of corporate data stored in the cloud is not managed by corporate IT functions, according to a new research study. Cloud Hosting magazine investigates the implications

A majority of IT organisations are kept in the dark when it comes to protecting corporate data in the cloud, putting confidential and sensitive information at risk. This is just one of the findings of a recent Ponemon Institute study commissioned by SafeNet, Inc. The study, titled "The Challenges of Cloud Information Governance: A Global Data Security Study," surveyed more than 1,800 IT and IT security professionals worldwide.

Among the key findings, the research indicates that while organisations are increasingly using cloud computing resources, IT staff are having trouble controlling the management and security of data in the cloud. The survey found that only 38 per cent of organisations have clearly defined roles and accountability for safeguarding confidential or sensitive information in the cloud. Adding to the confusion, 44 per cent of corporate data stored in cloud environments is not managed or controlled by the IT department. And more than two-thirds of respondents say it is more difficult to protect sensitive data in the cloud using conventional security practices.

"The findings reveal that global organisations are struggling to secure data in the cloud due to the lack of critical governance and security practices in place," said Dr. Larry Ponemon, chairman and founder of the Ponemon Institute. "To create a more secure cloud environment, organisations can begin with simple steps such as including IT security in establishing security policies and procedures; increasing visibility into the use of cloud applications, platforms, and infrastructure; and protecting data with encryption and stronger access controls, such as multi-factor authentication."

AS CLOUD POPULARITY GROWS, SO DOES RISK

Nearly three-quarters (71 per cent) of IT professionals confirmed that cloud computing is very important today, and more than three quarters (78 per cent) believe it will be over the next two years. The respondents also estimate that 33 per cent of their organisations' total IT and data processing requirements are met with cloud resources today, and that is expected to increase to an average of 41 per cent within two years.

However, the majority of respondents (70 per cent) agree that it is more complex to manage privacy and data protection regulations in a cloud environment, and they also agree that the types of corporate data stored in the cloud, such as emails, and consumer, customer, and payment

information, are the types of data most at risk.

SHADOW IT AND THE NEED FOR ACCOUNTABILITY

On average, half of all cloud services are deployed by departments other than corporate IT, and an average of 44 per cent of corporate data stored in the cloud environment is not managed or controlled by the IT department. As a result, only 19 per cent of respondents are very confident that they know about all cloud computing applications, platforms, or infrastructure services in use in their organisations today.

Along with this lack of control over the sourcing of cloud services, views on who is actually accountable for cloud data security are mixed. Thirty five per cent of respondents say it is a shared responsibility between the cloud user and the cloud provider while 33 per cent say it is the responsibility of the cloud user and 32 per cent say it is the responsibility of the cloud provider.

ALTERNATIVES TO CONVENTIONAL SECURITY MEASURES

More than two-thirds (71 per cent) of respondents say it is more difficult to protect sensitive data in the cloud using conventional security practices, and nearly half (48 per cent) say it's more difficult to control or restrict end-user access to cloud data. As a result, more than one-third (34 per cent) of IT professionals surveyed say their organisations already have a policy in place that requires the use of security safeguards such as encryption as a condition for using certain cloud computing resources. Seventy-one per cent of respondents say the ability to encrypt or tokenise sensitive or confidential data is important, and 79 per cent say it will become more important over the next two years.

In terms of what companies are actually doing to secure data in the cloud, 43 per cent of respondents say their organisation is using private data network connectivity. Nearly two-fifths, or 39 per cent, of respondents say their organisations use encryption, tokenisation or other cryptographic tools to protect data in the cloud. Thirty-three per cent say they don't know what security solutions they use and 29 per cent say they use premium security services provided by their cloud provider.

Respondents also noted that the management of their encryption keys is important to securing data in the cloud, given the increasing number of key management and encryption platforms their companies use. Fifty-four percent of respondents say their organisation controls the encryption keys when data is stored in the cloud. However, 45 per cent say they store their encryption keys in the software where they store their data while 27 per cent say they store their keys in more secure environments such as hardware devices.

Regarding access to data in the cloud, 68 per cent of respondents also say that the management of user identities is more difficult in the cloud, and 62 per cent of respondents say their organisations have third parties accessing the cloud. Nearly half (46 per cent) say their company uses multi-factor authentication to secure third-party access to data in the cloud environment. About the same percentage (48 per cent) of respondents say their organisations use multi-factor authentication for employees' access to the cloud.

"While the cloud has revolutionised the way IT is delivered, many IT organisations are finding it difficult to keep up with demand for these services and the security implications that are created when critical data is stored in the cloud," said Tsion Gonen, chief strategy officer, SafeNet. "And as we've seen in 2014 with a raft of record-breaking data breaches, organisations are attacked frequently from different angles. In order to mitigate risk, there needs to be focused coordination and new approaches to securing data in the cloud, and IT needs to be at the centre of this migration."
More info: www.safenet-inc.com

KEY RECOMMENDATIONS FOR DATA SECURITY IN THE CLOUD

- The role of IT organisations is changing and they need to adapt to the new realities of Cloud IT by educating employees on security, setting comprehensive policies for data governance and compliance, creating guidelines for the sourcing of cloud services, and establishing rules for what data can and cannot be stored in the cloud.

- IT organisations can accomplish their mission to protect corporate data while being an enabler of "Shadow IT" by implementing data security measures such as "encryption-as-a-service" that allow them to manage the protection data in the cloud in a centralised fashion as their internal organisations source cloud-based services as needed.

- As companies store more data in the cloud and utilise more cloud-based services for their employees, IT organisations need to place greater emphasis on stronger user access controls with multi-factor authentication. This is even more important for companies that give third-parties and vendors to access their data in cloud. Multi-factor authentication solutions can be managed centrally to provide more secure access to all applications and data whether in the cloud or on-premises.

Improving the speed of business

Software defined networking is the new buzzword in the data centre industry. But what are the technology and business benefits it can deliver and should you be looking at this technology now? Jean Turgeon, head of networking and chief technologist at Avaya outlines what CIOs should know about the impact of this technology on the data centre

Leaps in the use of social media coupled with the omnipresence of mobile technology mean that we are all consuming more and more bandwidth, using numerous applications and storing ever increasing amounts of data on our devices and in the cloud. Today's employees work from a host of different locations, on a range of different devices, creating an always accessible culture that - as all CIOs and IT Directors are (often painfully) aware - puts the data centre at the heart of most organisations' IT operations. Consequently, businesses need to ensure that their data centres are robust, yet able to support new services, quickly. This is where Software Defined Networking (SDN) comes in.

THE BASICS

The main goal of SDN is to reduce the complexity, eliminate propriety solutions, allow the fast deployment of business critical applications and establish quick and easy adds, moves and changes. SDN works in the network infrastructure to separate the part of the network responsible for routing traffic from the part that actually carries the traffic. This means the data that is being carried is separate to the control traffic, ensuring that the infrastructure is more dynamic. As such it should give data centre managers far greater control and simplify technology management. SDN should respond to changing business speeds, while also providing the efficiencies and the security requirements that a modern enterprise needs. So far so technical, but what does this actually mean from a business perspective?

AUTOMATION

Automation-related time, cost and accuracy

"Business in the 21st century moves at a much faster pace than ever before. Reflecting this, the data centre also needs to be more nimble and able to provide services more quickly. SDN has the potential to play a key role in delivering this speed, thanks to the automation it provides based upon a centralised view and not a list of interfaces: changes can be made in near real-time across the network as a whole."

efficiencies are by far the biggest benefits that SDN is predicted to deliver to the data centre. The applications running on any data centre server are subject to access or policy controls. Typically, every router and switch on a network has software pre-installed that controls what it does. For example, the CEO might have access to everything, but the receptionist may only have access to documents that do not contain any financial information. In a traditional data centre, each element of these policies needs to be manually configured on each router and switch.

SDN automation is likely to allow data centre managers to deploy a 'configure once, roll-out across all locations approach' with changes made via a centralised management console - saving time and costs and improving accuracy. However the real benefit should come with the deployment of new applications. The configuration is applied to the network and not just the interfaces, so any changes are also applied at the network level. SDN promises to provide the CIO with the capability to deploy applications much more quickly than conventional mechanisms, whilst retaining total control.

CLOUD-READY

Cloud adoption, by businesses of all sizes, shows no signs of abating. SDN could offer considerable benefits to data centres supporting public cloud apps by using in-built intelligence in the routing layer of the data centre to choose the optimal configuration. Typically, data centres hosting applications within a public cloud environment have to manually provision the required resources, often resulting in configuration errors and delays. SDN should eliminate this provisioning, reducing cost, saving time and improving the accuracy of network changes.

THE NEED FOR SPEED

Business in the 21st century moves at a much faster pace than ever before. Reflecting this, the data centre also needs to be more nimble and able to provide services more quickly. SDN has the potential to play a key role in delivering this speed, thanks to the automation it provides based upon a centralised view and not a list of interfaces: changes can be made in near real-time across the network as a whole. Services can be automatically provisioned and if issues do occur, SDN technology should intelligently and instantly re-route the services much more quickly than an engineer could.

While the network needs to be as agile as the business it supports, recent research from Avaya reveals that, because of the time network changes take, companies wait almost a month (27 days) before they are able to make a significant improvement to a business system. At an average of 10 changes a year, businesses can wait up to nine months for improvements that can help their company grow, increase employee and sales productivity and improve business analysis. Bottom line, network complexity affects margins and decreases the ability of IT to provide the company with a competitive edge. By reducing complexity, SDN promises to dramatically reduce the network waiting game, helping to speed up and improve business performance.

A NEW WAY OF THINKING

However, perhaps the biggest benefit of SDN for both networks and data centres, will be a fresh mindset. Since SDN separates the control function from the rest of the data centre, the technology enables higher level management of the data centre environment, allowing a more holistic view of the data centre. This should give data centre managers the opportunity to think in a completely different way about their data centre.

Recently I had a new kitchen installed. When I was planning it with my wife I assumed that the sink would be in the corner, because that is where the plumbing comes into the room. However, my wife wanted the sink in an island in the middle of the kitchen because there it would be equidistant between the fridge and the stove. While I defined my request by previous parameters and constraints, my wife defined her request by use and

flexibility. Similarly in an SDN environment, data centre managers should no longer be constrained by the plumbing and instead can concentrate on the services the data centre delivers. With SDN, software is expected to simply become a toolset and the data centre manager can move to focus on solving business problems, not overlaying a software vision on top of them.

THE ROLE OF THE CIO

Today, SDN is still in its infancy with very few businesses currently running fully SDN-enabled data centres, but this is changing rapidly. Most data centres already deploy some elements of SDN, for example almost all modern enterprise-class switches deploy SDN technology, while fabric-enabled next generation networking solutions already deliver many of the expected benefits of SDN. According to IDC the SDN market will be worth more than $3.7bn within two years.

Many data centre managers want to move towards greater SDN enablement but are unsure of where to start, and are therefore often reticent when it comes to discussing migration with their CIOs. I would urge CIOs and IT Directors who want to take advantage of the increased agility and reduced costs that SDN promises, to raise the topic with their data centre teams. Together they can start building the business case for the technology now.

Planning now can help CIOs understand their business goals and map their path to achieving them. With the network an essential means to achieving your business strategy, an evolutionary approach is almost certainly the best way forward. Today is the time to start comparing current costs with the efficiencies you would gain from a software-defined model and demonstrating the compelling benefits of the SDN approach.

More info: www.avaya.com/uk

6 KEY QUESTIONS CIOS SHOULD ASK THEIR DATA CENTRE MANAGERS

1. "Do you know what our business strategy is?" To be able to deliver the applications and infrastructure for the business, the CIO needs to fully understand the business strategy - if you do not, you are more likely to become a business 'blocker' than an enabler. You then need to ensure that the data centre manager understands this strategy too.

2. "How much time does your team currently spend updating the network configuration?" Hand in hand with this question goes, "How long does it take to provide new services?" and "What percentage of errors and service issues have been due to mis-configuration in the past year?" There is likely to be considerable cost associated with manual firewall configurations, router updates etc., this will form a basis of your business case.

3. "What is your current performance: cost: power ratio?" "How might this change with greater SDN deployment?" Power vs. performance vs. cost is becoming a key industry measure for SDN and should therefore be part your business case.

4. "What are the key network management tools you propose to use?" Integrated network management tools remain essential for diagnosing the causes of network problems - unfortunately they often seem to be overlooked!

5. "How interoperable is your SDN vision?" A solution where SDN is fully integrated into the physical network fabric provided by a single, proprietary-standards vendor, is unlikely to offer the same long-term benefits and flexibility as an interoperable solution. Using open standards-based products provides an easy-to-deploy, flexible solution that will work with any physical network infrastructure.

6. "How is your SDN deployment going to impact the design of the data centre?" If your data centre team can convince you that they are building the best data centre combination of servers, storage and networks, then your work in creating the business case will be greatly reduced.

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G-ing up local government

Why is the G-Cloud framework struggling to take off with local government users? Databarracks' Peter Groucutt examines the issues

The G-Cloud framework was introduced to provide the public sector with access to innovative cloud offerings from smaller, more entrepreneurial businesses. Traditionally, the market was dominated by large SIs but G-Cloud has begun to level the playing field for SMEs. Public sector organisations have so far spent more than £217m procuring IT services through the government's G-Cloud portal. Central to this growth has been G-Cloud's ability to listen to feedback from suppliers and public sector departments, and make improvements where necessary.

But not all public sector functions are embracing G-Cloud. Research has revealed that less than 1 per cent of local councils in England procured IT services through the online CloudStore between 2012-13. With central government readily embracing the framework, why is there an apparent resistance from local government?

The simple fact is that not enough is being done to raise awareness and educate local government departments about the benefits. Tony Singleton, head of Government Digital Service (GDS), recently announced his intentions to do more to promote the framework to the wider public sector. In light of this, there are four key messages that need to be communicated:

COST SAVINGS

IT procurement in the public sector has

"Public sector organisations have so far spent more than £217m procuring IT services through the government's G-Cloud portal. Central to this growth has been G-Cloud's ability to listen to feedback from suppliers and public sector departments, and make improvements where necessary. But not all public sector functions are embracing G-Cloud. Research has revealed that less than 1 per cent of local councils in England procured IT services through the online CloudStore between 2012-13. "

traditionally been very inefficient. Long and difficult tender processes have pushed buyers towards selecting a single provider for as many IT services as possible, leading to generalist suppliers rather than specialists.

Such all-encompassing contracts are often very expensive. The Digital Marketplace (which replaces the CloudStore this year), makes it easy to pick up individual services from different suppliers without the fuss of large tenders. As a result, costs are far lower.

G-Cloud has actually been criticised for not offering lengthy enough contracts - something that surely indicates how entrenched the idea of giant IT contracts is within the public sector.

FLEXIBILITY

Even within your contract period, the flexibility of cloud services means you don't have to pay for more than you need.

When planning storage traditionally, buyers had to think: "By month 36, I will need 'x' terabytes" and that was how much they would buy. Now they can sign up for a specific period, but if in month 1 you have 1TB of storage, that is how much you pay for. In month 12 you might have 100TB, but you won't have to pay for that unless you need it. This is the flexibility of cloud computing pricing models - now brought to the public sector by G-Cloud.

CHOICE

The Digital Marketplace allows managers to compare prices and services, create a shortlist and filter based on pricing models and support levels.

In the past, sector-specific accreditations required to provide services to the public sector could be off-putting for smaller suppliers. Only the largest firms could afford the time and resources to be accredited by each individual department.

Now suppliers can self-assert their services based on recommendations from G-Cloud on appropriate frameworks, such as ISO 27001, SSAE 16 and the Cloud Security Alliance Cloud Controls Matrix. Customers can then decide which frameworks are important to them when choosing a provider, using guidance from G-Cloud on the cloud security principles.

SECURITY

Local government departments inherently hold a lot of highly sensitive data and the thought of handing this data over to a third party that is going to 'put it in the cloud' remains a big concern. In the private sector, businesses have already realised that most cloud service providers use data centres whose security levels are far superior to any on-premise facility.

The recent flattening of the classification of Government data to: "Official", "Secret" and "Top Secret" helps simplify what systems and data are appropriate to move to cloud services.

The G-Cloud framework has seen success amongst central government, and the next challenge is to drive adoption amongst local government departments. In order for this to happen, it's imperative to provide clear education surrounding the flexibility, cost efficiencies and security benefits. Once this has been achieved we will be able to say that G-Cloud is reaching its true potential.

More info: www.databarracks.com

Where next for ERP?

Conflicting research reports suggest that ERP, while critical to business performance, is not delivering in ways that user organisations require in an increasingly cloud-oriented market. Cloud Hosting magazine investigates

Mid-market businesses in Europe have reported savings of more than 25 per cent when they deploy cloud over on-premise solutions, with one in five reporting reductions of 50 per cent. Nearly nine out of ten (87 per cent) mid-market organisations are now using cloud solutions, according to a study commissioned by The Sage Group. The recent rate of cloud adoption has been rapid, with four out of five organisations introducing the new services model to their business in the past two years.

However, despite its growing popularity, cloud is not yet ubiquitous - with ERP lagging behind other services. Currently just 20 per cent are using a cloud-based ERP solution but Sage's study suggests this is set to change. 60 per cent of those who do not yet have Cloud ERP are keen to adopt it, while 55 per cent want to roll out cloud ERP with mobile functionality.

"It is fair to say that the public sector's view of enterprise resource planning (ERP) is one of a platform supporting a set of tightly knitted solutions that tends to be customised to suit individual enterprise needs, in turn requiring a complex array of maintenance and licensing agreements," commented Chris Pennell, Lead Analyst, Public Sector, Ovum. "But the disruptive forces of cloud provide buyers with a chance to reconsider this preconception. Vendors must now puzzle over how buyers can carry on consuming best-of-breed services that allow for customisation while satisfying their increasing demand for flexibility that cloud-based services purport to bring".

THE RIGHT TIME

According to Sage's study the driving factors for migrating ERP solutions to the cloud include cost reduction (50 per cent), becoming more efficient (40 per cent), gaining a strategic advantage (32 per cent) and growth (31 per cent), while the main barriers to adoption were cited as security and privacy concerns (57 per cent), internal barriers such as lack of understanding (23 per cent) and price (20%).

"We're clearly at a point of inflection for ERP and businesses are telling us that it's the right time to move to the cloud," said Christophe Letellier, CEO at Sage Mid-Market Europe. "Two years ago, businesses were wary of cloud. But as more have embraced cloud for a range of services, the benefits are clear - choice, scalability and flexibility. For many, the push to invest in the cloud is driven by three

main priorities: reducing costs, increasing competitiveness and efficiency. Sage's mission is to support small to mid-sized businesses' journey to the cloud, giving them the confidence and opportunity to succeed."

With this in mind, Sage launched its Sage ERP X3 Online solution in August of this year. As a cloud solution, Sage ERP X3 Online is aimed at businesses who, say the company, "value the ease of deployment, accessibility, simple management and low cost of ownership of an online service, without compromising the functionality and scalability of Sage ERP X3 version 7".

ADAPT OR DIE?

Meanwhile another recent research report makes the dramatic claim that "ERP software must adapt or die as an estimated 143,200 UK businesses - 60% of those using the systems - are less than satisfied with it, demanding extra mobility, device freedom and social collaboration for competitive advantage." These findings come from Redshift and Epicor.

80% of the 1,500 business professionals surveyed globally by Epicor say their ERP system is critical to business performance and 60% have invested in the software in the past two years. However, over half rate their current ERP as just "adequate" or "basic", with the number in the UK dissatisfied with ERP nearly 10% higher than the average.

The UK also shows the lowest incidences of 'current ERP investment' at just 5% of organisations, compared to a global average of 11% and investment peaks four times more frequent than the UK in China, and three times more in Sweden and Germany.

However, not all ERP software functions are viewed the same. In the UK, financial accounting, maintenance and HR were the functions most commonly thought of as 'basic', while operational planning and business intelligence were those most frequently considered 'state of the art.'

THE MOBILE ENTERPRISE

According to Epicor's research, ERP mobility is essential, especially for responding more quickly to customer questions and enquiries, and the UK is currently one of the most mobile of ERP users: 70% of UK employees can access ERP on the move compared to an average of 58% globally and lows of 36% in Finland and 45% in Germany.

The UK also has the top need for 'ERP home working' with 64% specifically wanting home based access compared to lows of 43% in Sweden and 48% in Germany - perhaps indicating the nation's attitude to the new flexible working rights. It is perhaps surprising then, that only 61% of UK users rate accessing ERP information out of the office as important, compared to a high of 89% in China.

Device and infrastructure choice is critical with smart phones and tablets being desired forms of ERP access most likely to increase in the future, while the requirement for office and paper based access is declining. Despite this stated desire, today as many as 75% of respondents worldwide do not access ERP from their smart phone or personal device.

According to Epicor, to support these expanding mobility and device requirements most future ERP systems are likely to be app focused, cloud based or vendor hosted, with only 1 in 5 being purely on-premises in the future.

THE SOCIAL NETWORK

Social collaboration is also vital to future ERP performance, with 91% of UK respondents seeing it as "helpful" and 52% viewing it as "important" to future business performance. Users would like ERP to include social media tools for a variety of reasons but the most common of these is to improve communication with customers, for 49%.

"It's concerning that while the vast majority of organisations place high importance on ERP many are underwhelmed by the performance of their current systems," says Steve Winder, regional vice president for Epicor in the UK and Ireland. "ERP has been a vital strategic business platform that has helped thousands of organisations to adapt and respond to changing business demands for nearly 25 years, but its seems now is the time for ERP to adapt to survive as users demand greater performance from the system or risk being outflanked by their competitors."

Our concluding thoughts come again from Chris Pennell at Ovum: "It is easy to miss (or ignore) changes to the enterprise technology road map when you have significant recurring revenue streams derived from a wide-ranging installed customer base. However, even the companies that have profited most from the "old" model must now acknowledge that the disaggregating impact of "as a service" and cloud platforms are starting to change consumption patterns in a meaningful way. ERP vendors such as SAP have therefore had to adapt. Their challenge is in how to take the installed base with them without cannibalising existing revenue streams." **Ch**

THE CLOUD TRAIL BLAZERS: LEAGUE TABLE OF EUROPEAN CLOUD ERP USAGE

33% Spain

32% Netherlands

23% France

20% UK

20% Portugal

18% Poland

16% Romania

12% Germany

6% Belgium

(Source: Epicor/Redshift)

In good spirits

One of the biggest wine and spirit companies in the world, Pernod Ricard has been able to streamline its approach to cloud backup and disaster recovery throughout its EMEA operations

Pernod Ricard is the world co-leader of the wines and spirits industry.

Although it can trace its roots back to the 18th century, the company was created in 1975 in France through the link-up of two French anise-based spirits companies. Pernod Ricard has rapidly expanded over the past decade by acquiring companies like Allied Domecq and V&S Group which owns the Absolut Vodka brand, to build a large portfolio of international and local brands. It operates through affiliates in 80 countries and employs over 17,000 people. Driven by an entrepreneurial approach, Pernod Ricard continues to expand into new markets by remaining focused on value creation, innovation and a strong sense of ethics. This Pernod Ricard spirit is conveyed by their tagline 'Créateurs de Convivialité.'

THE STREAMLINING CHALLENGE

Pernod Ricard operates in 42 markets across Europe, the Middle East & Africa. In each of these markets Pernod Ricard has a network of I.T. systems incorporating email, ERP, CRM and Business Intelligence. The raw data contained within this network of systems is critical to the operation of Pernod Ricard in EMEA and therefore the way that it is protected is a vital component of the company's business strategy.

For many years the Pernod Ricard operation in EMEA had a disjointed approach to backing up its data. Each market worked as a separate entity and had control over its own individual network. As a result there were a variety of different Backup and Disaster Recovery solutions in place. Pernod Ricard EMEA decided it was time to adopt a more streamlined and strategic approach.

Backup Technology (BTL), an iomart company, has a well-established Cloud Backup solution and reputation in the market place. It also has a substantial enterprise customer base. As a result Pernod Ricard chose BTL to carry out this major project to optimise all its backups

throughout the region as well as provide a remote Disaster Recovery service. Entitled the 'Pernod Ricard EMEA Backup and Disaster Recovery Project,' it involved BTL implementing the Asigra Cloud Backup solution, an industry-leading software platform for online data backup, and transforming what had been an ad hoc approach into a single highly effective backup solution, whilst also establishing a Disaster Recovery solution with defined Recovery Time and Recovery Point objectives.

Once BTL was awarded the contract the roll-out to Pernod Ricard's EMEA sites began. The first two locations chosen were the United Kingdom and Germany. Both countries had immediate requirements for an online solution because of their larger data sizes and server numbers. They were also important because they would provide a good 'proof of concept' reference point for other Pernod Ricard offices in the region. The initial implementations proved a great success and further roll-outs soon began across EMEA. As a result of each location having different existing backup providers and solutions, BTL carried out the installations on-site as Pernod Ricard's different contracts with its suppliers came to an end in each market. BTL ensured that the new solution was in place prior to the termination of those contracts, so Pernod Ricard was always protected.

A LAYERED SOLUTION

BTL's solution provides many different layers of service to meet the requirements of each Pernod Ricard EMEA office. By implementing Asigra, BTL was able to provide a quickly deployable Cloud Backup product offering local backup for LAN speed recovery of data; offsite backup for secure long term protection, with long backup history; as well as a complimentary Virtual Disaster Recovery Service. All backup monitoring is performed through BTL's own web portal, so all Pernod Ricard EMEA IT staff have full visibility of their backups, 24/7, from anywhere in the world. This combined solution provides a regimented backup and DR process across Pernod Ricard's EMEA region.

"End-to-end data protection remains a focus for larger enterprises seeking to reduce the risk and complexity of backup throughout diverse IT environments," said Eran Farajun, Executive Vice President of Asigra. "Asigra Cloud Backup provides an all-in-one platform to accomplish this with centralised data recovery for physical, virtual, cloud and mobile computing platforms. The assurance in knowing that data on every device and across every network can be recovered provides peace of mind that only this kind of solution can deliver."

By providing a centralised and consistent backup and DR strategy and solution BTL has helped Pernod Ricard EMEA to substantially improve its ability to ensure all its business critical data is quickly and securely protected and stored offsite. BTL currently protects in excess of 350 TB of data for Pernod Ricard and offers Virtual DR services to each market, essentially securing in excess of 200 servers across Pernod Ricard EMEA. The BTL offering has become a one-stop-shop for Pernod Ricard EMEA in terms of backup and DR, allowing the IT staff to concentrate on the day-to-day running of the networks, knowing that BTL, through a combination of the Managed Service and Monitoring Portal, has their data protected and can be called at any time to assist with any level of data recovery.

Simon Bennett, Information Systems Director for Pernod Ricard EMEA, says, "Having rolled out the BTL backup and disaster recovery solution, I now know that the critical systems and business data across the region are protected and there is a recovery solution which is tested each year. That's a great weight off my mind and allows me to focus on enhancing the sales and marketing systems which is where the key business opportunities lie."

BUILDING CONFIDENCE

The Pernod Ricard EMEA Backup and Disaster Recovery Project by BTL is a five year roll-out. Targets for each year have been met, with 75% of Pernod Ricard's EMEA offices set to be using the solution by the end of 2014. Many challenges have been presented across all levels of delivery, but this has not hindered the success or speed of roll-out. Examples of these challenges have varied from poor internet connection speeds in some locations; delivery of hardware through customs; and Operating System language barriers, e.g. French and Russian being utilised on Windows servers. By working closely with the Pernod Ricard EMEA I.T. team and senior management, BTL has recovered the servers in DR situations and tests and used its expertise to ensure that the roll-outs for each region have gone smoothly. The relationship between Pernod Ricard and BTL and has given confidence to offices throughout the Pernod Ricard EMEA organisation in Europe to implement the new

"In a decentralised business with 42 markets across EMEA, each with relatively small systems and data sizes, the key challenge for us was to find a solution and integrator which could scale effectively across this landscape. The BTL solution was a perfect technical fit and the professional and proactive way the BTL team managed the on-boarding of new markets meant I could rely on them as if they were part of my internal team."

Backup and DR solution without hesitation.

Simon Bennett explains, "In a decentralised business with 42 markets across EMEA, each with relatively small systems and data sizes, the key challenge for us was to find a solution and integrator which could scale effectively across this landscape. The BTL solution was a perfect technical fit and the professional and proactive way the BTL team managed the on-boarding of new markets meant I could rely on them as if they were part of my internal team. As well as managing the technical implementation our BTL Account Manager, Kris Price, played a big part in the project management and after agreeing with him which markets to focus on he did the rest."

Pernod Ricard has had to invoke the DR solution a couple of times in a 'live' situation which has proven highly successful. Recovery of individual files, databases and emails happens on a regular basis. This not only quantifies the success but also illustrates how the combination of a number of technologies has led to a substantial improvement in organisational excellence and quality of service. Further development of the solution is already underway by BTL to help improve recovery speeds and also give Pernod Ricard the ability to invoke a local DR option should an office only lose a couple of servers rather than its entire site or network.

DR THAT WORKS

BTL developed its Virtual Disaster Recovery product six years ago as a complimentary service to its Asigra Public Cloud Backup offering. At any time, as the backups for each site run to schedule regularly, Pernod Ricard EMEA can invoke a DR. This means in the event of a disaster the company's staff can connect in remotely via BTL's UK based data centres and carry on working. As an extra service level, BTL will have already tested the Virtual Disaster Recovery for each Pernod Ricard site. So, in the event of the DR, the process is documented and each Pernod Ricard site has an established and realistic Recovery Time Objective and Recovery Point Objective and is reassured that the recovery will be successful. During the testing period each Pernod Ricard I.T. engineer logs on to their hosted network to check each server is running correctly and they will establish methods of connectivity for all staff required to work in a DR scenario.

Rob Mackle, Sales & Service Director for BTL, says, "We are proud to have been chosen by Pernod Ricard EMEA and are delighted that the Cloud Backup and DR project we've implemented has proven to be such a success. Pernod Ricard's primary goal of centralising its backup and DR strategy across EMEA has been achieved, with each site more than ready to come on board. The teams in the individual locations have been a pleasure to work with - every office has been friendly and accommodating to our engineers on site. Throughout the project we have been mindful of Pernod Ricard's reputation as a respected global brand and have ensured that everything we have done has matched up to that high quality approach."

CRITICAL IMPACT

The result is that Pernod Ricard has transformed its entire approach to Backup and DR into a simple and easy-to-manage solution. BTL has worked with Pernod Ricard EMEA to enable the drinks giant to put in place a centralised strategy which gives it greater confidence about managing its critical data.

BTL now provides consistent Cloud Backup for Pernod Ricard offices across EMEA from Russia and Ukraine to Germany, Switzerland, Turkey and the UK. The Asigra software's ability to run incremental forever backups has meant that remote sites in places like Kazakhstan and Morocco can backup data quickly and efficiently to BTL's secure data vaults in the UK. By moving to this type of solution, Pernod Ricard EMEA can now ensure all company data in each territory is stored offsite in secure, resilient and compliant data centres.

Simon Bennett of Pernod Ricard EMEA concludes, "Overall the project has been a great success. The solution is excellent and BTL are a pleasure to work with."

More info: www.backup-technology.com

Are you being served?

Too many cloud service providers are 'stuck in the SLA' at the expense of their users' actual requirements, argues Paul Marland, Director of Account Management, Claranet

Service Level Agreements (SLAs) are part of a contract that defines a formal level of service between the provider and end user. In the context of the cloud service provider, most SLAs are centred on defining the level of availability and uptime that the customer can expect to receive, specifying the compensation in place if this service level is not met. Here, uptime and availability are seen as the most important principle in the contract and are often the core metrics against which services are evaluated.

So far, so good. But as with all best-laid plans, life intervenes. Service, more specifically, good service, is not black and white; its definition is changeable and subject to circumstance. Service requirements are unique to each business and will change over the course of a contract; as the business evolves, so too must the SLA. And although agreeing to an expected level of availability is obviously fundamental to any cloud service, SLAs need to look beyond this scope and include performance objectives that are meaningful to the customer with respect to their changing business needs.

Currently, the vast majority of SLAs are unable to get to the heart of what's important to customers or - at the very least - fall short of guaranteeing what's really needed and expected. As businesses have come to rely more heavily on third parties to deliver their IT, and as solutions have become more complex, 'good service' can't simply be reduced to five nines of service availability.

For example, that a service provider is meeting the levels of availability stipulated by their SLA will be of little solace to the CEO or FD that can't access their emails fast enough, or the online retailer is missing out on sales because of slow page loading times. These performance-based issues have proven to be something of a bugbear for the service provider industry, and have remained a grey area for some time now - they fall beyond the remit of the traditional SLA but remain key to the overall customer experience.

If the service provider industry wants to create more value for their end users, which is what the overall goal should be, they must look beyond simple measures of uptime and availability to measures that are meaningful to end users and contract against them. These measures, or Service Level Objectives (SLOs), address issues that cloud providers have historically resisted making meaningful contractual commitments on; service performance, data back-up arrangements, encryption specifications, and incident response/resolution and data transfer times. All are vitally important to the running of a business, but all-too-often neglected by the SLA.

The problem is that standard SLAs do not reflect the true dynamic nature of the relationship that now prevails between customer and cloud provider. The best providers understand this and are able to assess and contract their services specifically in the context of their customers.

It's important to remember that it's the end user's actual experience that counts and SLAs need to reflect this. If end users have a

situation where their SLA is being met and exceeded by their provider, but are still not seeing the levels of service that their business requires, it is often a sign that the SLA is too generic and objectives have not been set that reflect the specific performance needs of the end user.

Ultimately, an SLA is a good baseline contractual agreement but, as the relationship evolves, so too must the level of 'measurable' engagement to suit the performance and optimisation criteria of each customer. CSPs need to look at those things that are actually meaningful to businesses when constructing their contracts - in essence, bringing customer service into the SLA.

More info: www.claranet.co.uk

The new cost of doing business

Despite the much-heralded benefits, there are a number of unexpected potential obstacles for businesses moving towards public cloud-based IaaS platforms, argues Lilac Schoenbeck, VP of Product Management & Marketing, iland

Today cloud, in the form of Infrastructure as a Service (IaaS), is portrayed as a rapid path towards innovation. Companies believe that cloud enables them to lift the barriers of time and instantly grow their IT footprints in support of constantly evolving business requirements. To a great extent, this can be true.

However, the reality is that IT continues to struggle to effectively manage their new cloud services, causing them to fail to realise the benefits they expected. Successful operation of the cloud requires an entirely new set of skills and tools which many IT teams lack.

First, it's important to look at the biggest issues. As with any newer technology, adopters expect challenges. However, with cloud, many users are actually caught off guard. In fact, according to a global survey we recently commissioned with analyst firm EMA, there are six key areas where customers discovered unanticipated obstacles during their experience with public cloud IaaS providers.

Among the survey pool of 400 IT professionals, the most common problem experienced in the U.S. was a lack of support, while performance and downtime topped EMEA and APAC lists respectively. Along with management of cloud services, scalability and pricing were also cited as big challenges associated with cloud. However, despite these obstacles, most companies have persisted in their adoption and it is clear from the survey responses that the perceived benefits not only outweigh the risks, but also point to a need for agility and speed within the customer's business that simply cannot be achieved otherwise. It is crucial, therefore, that organisations persevere with the adoption of cloud - because without it, keeping pace with the innovation needed to remain competitive is extremely difficult.

The key to success is in selecting the right vendor that can provide the optimum level of support to make the cost of doing business in the cloud much more palatable. From the

"The key to success is in selecting the right vendor that can provide the optimum level of support to make the cost of doing business in the cloud much more palatable. From our survey responses, the main benefits of cloud adoption are seen to be business agility, application scalability and lower costs."

survey responses, the main benefits of cloud adoption are seen to be business agility, application scalability and lower costs:

- Faster deployment of new workloads (48 percent): Business leaders are under pressure to quickly and flexibly adapt to industry trends, and IT is poised to play a new key role in the effort. The ability to quickly deploy new workloads enables IT to experiment, test and fully deploy technologies that not only solve problems, but drive business initiatives.

- Faster scaling of existing workloads (47 percent): It may well be the case that business agility is more a master of scale than delivering new services. When customer demand for a product or service rapidly escalates, cloud customers can easily scale to ensure that the additional user load does not impact application performance and availability. With the right provider, cloud services mitigate business challenges with almost unlimited scalability.

- Capital Expense (47 percent) and Operational Expense (45 percent) savings: Most IT organisations still remain, to some degree, under budgetary constraints. Cloud services offer an alternative to purchasing and supporting on premise servers, potentially delivering CAPEX and/or OPEX savings.

As well as identifying the key advantages and the unexpected challenges of cloud, the survey found that most of the companies surveyed also have a high level of self-awareness in their approach to adoption. They were able to identify the areas where they need help in harnessing the potential of cloud. This is very encouraging, and again it's important that organisations keep these areas in mind when choosing a provider.

80 percent of respondents noted that they required some amount of professional services to get started which reflects an acknowledgement from IT organisations of the lack of global domain knowledge. Customers cited security/compliance (57 percent), integration with existing local data centre services (47 percent), and disaster recovery planning (45 percent) as the main areas where they required external support and expertise.

Many of the organisations surveyed also shared their views on some of the key aspects that make an accessible cloud platform:

1. Better management dashboard (52 percent): Most public clouds are built on the back of proprietary platforms, so they differ from on premise systems. That means public cloud management metrics, controls and functionality tend to be foreign to customers.

2. More flexible Virtual Machine scaling (47 percent) and Easier Resource Scalability (46 percent): Scalability, both at overall footprint and VM levels, is core to the promise of cloud. However, it is usually trickier to implement than companies would like, and many cloud providers do not ensure scaling without downtime.

3. Better VMware vSphere integration (45 percent): Related to the topic of management dashboards, most public clouds are not built on VMware, the dominant on-premise cloud and virtualisation platform. Therefore, integration with on premise systems presents an ongoing challenge.

4. More transparent pricing (43 percent): Pricing models are often complex, resulting in expensive surprises for many customers. Such surprises can negate the promise of cost benefits that prompted the move to cloud.

Other capabilities that organisations claimed they needed to make the public cloud more accessible included simpler on boarding (37 percent) and the certainty of the geographic location of their workloads (35 percent). Respondents were also nearly unanimous in their agreement that high quality phone-based support was critically important to them. These options are typically available with steep premiums, so it is important for customers to be aware of contract details.

So for the best chance of success, organisations should look for a provider that can meet all of these requirements. They need to take their time and select a provider that has built their offerings designed to address the challenges identified in this study. Believe me with so much choice out there, businesses can afford to be picky. Working with a provider that is able to offer a personalised approach to a company's specific challenges, excellent customer support and share its expertise will help to open up the benefits of the cloud and also help you to fully understand the new cost of doing business powered by cloud.
More info: www.iland.com

Good show

Cloud/colocation specialist Pulsant is 'supporting the arts' by providing an enterprise cloud platform to Edinburgh International Festival

The Edinburgh International Festival (EIF) has been connecting audiences and artists for over sixty years. Founded in 1947, the Festival grew out of the rubble of the Second World War with the aim of providing 'a platform for the flowering of the human spirit' by inviting the world's best artists and companies to perform, whatever their nationality. This belief in the power of the arts to nurture and transform lies at the heart of the Festival's mission today. The Festival is now an annual cultural event that lasts three weeks and transforms the city of Edinburgh into an inspired, frenetic hub of activity. One of the main tools used by attendees is the festival's website (www.eif.co.uk) that attracted 131,819 unique visitors in 2013 (and 184,941 overall).

The site provides information regarding the programme itself, as well as on the city, venues, accommodation and transport. In addition, the website provides the gateway to an online ticketing system and, as such, its availability is crucial to the success of the festival and satisfaction of audiences.

THE HOSTING CHALLENGE

Recognising the need for a partner to meet its hosting requirements, The EIF, a registered charity, identified Pulsant as that provider. "We have worked with Pulsant for almost seven years," explains Rob Knight, IT and Database Manager, EIF. "The team has supplied us with web hosting and other services throughout that time and has been instrumental in collaborating with us to develop solutions that meet the festival's changing needs."

Pulsant has been providing high quality IT infrastructure services to the mid-market since 1995. Over the last few years the company has grown steadily, both organically and through acquisition, and now owns 10 data centres in 6 different locations across the UK. As a result, Pulsant is now one of the country's largest providers of Colocation, Cloud, Managed Hosting, Managed Networks, and Managed Application services, with customers ranging from SMEs through to large private and public sector organisations.

When initially selecting a provider, EIF's main requirements were resilience, failover and capacity for the website. Knight went on to say: "We run a high profile event that attracts people from all over the world and as a result, they have a lot of expectations. This is especially evident when we launch our programme and when tickets go on sale."

Over the years, the website has evolved from a brochure-type information site into a fully interactive eCommerce offering that enables visitors to plan their trip, select performances and explore the festival in more depth. The website also facilitates ticket sales by directing visitors to an externally hosted ticketing site.

"This year and moving forward, the ticket buying process will be smoother with the addition of a print-at-home facility for visitors. Not only can they discover broader and deeper information on shows and events by visiting the website, but they will also be able to quickly and easily book through the site. We even anticipate that at some point more tickets will be sold online than through physical ticketing offices. Throughout this entire process, EIF as an organisation has undergone a massive shift from internet access being a tool to it being absolutely business critical."

In 2013, the company upgraded its ticketing system and, because of the way that the previous ticketing system linked to the website, it was necessary to redevelop and redesign the website. Both the new site and ticketing system were required to work together to deliver online sales, as well as to bring an enhanced experience to users by addressing the changing digital landscape and performing well on mobile devices. The new website therefore needed an infrastructure to support it.

Pulsant engaged with the EIF team, as well as the design agency that built the website, to develop a solution fit for purpose that would deliver the improved performance required. This included proposing an architecture that incorporated hardware-based load balancing, caching, application servers and database servers. This was all facilitated through a move from private cloud to Pulsant's more comprehensive enterprise cloud solution. Enterprise cloud offers more flexibility and improved performance by changing the architecture and adding more resource to the platform.

Rob Knight commented: "Pulsant was incredibly helpful in planning and specifying the platform, discussing our needs and matching them to the solution, in terms of hosting and connectivity, especially in meeting the demands of the ticketing system and the peaks experienced when tickets go on sale."

PERFECT PERFORMANCE DURING PEAK PERIODS

The Edinburgh International Festival website experiences three main peaks during the year - the first during the launch of its programme, the second when tickets are made available for purchase, and the third when the festival actually begins. With up to 50% of the event's tickets sold in the first six to eight weeks of release, the constant availability of the website is key, as is the connectivity Pulsant provides between the website and the externally hosted ticketing system. Pulsant's enterprise cloud ensures maximum uptime of the website, especially during high traffic periods. The website now has content that is more visible and attractive to visitors with a new media library that houses the festival's multimedia content - both for the current, as well as previous events.

"The website is fully responsive, able to resize and adapt to the full range of devices that audiences may be viewing it on," explains Rob Knight. "In the context of the festival, this is especially important as people move from show to show across the city, sometimes spending entire days on the move. Our digital presence is also much more integrated across channels, platforms and our offline communications."

PLANNING AHEAD

As the festival continues to grow, the needs of the audience will also change, and it is important for the organisation to have a platform that can easily cater for this expansion, as well as a knowledgeable team of support staff and solutions architects who understand the needs of the business.

"This year and moving forward, the ticket buying process will be smoother with the addition of a print-at-home facility for visitors," concluded Rob Knight. "Not only can they discover broader and deeper information on shows and events by visiting the website, but they will also be able to quickly and easily book through the site. We even anticipate that at some point more tickets will be sold online than through physical ticketing offices. Throughout this entire process, EIF as an organisation has undergone a massive shift from internet access being a tool to it being absolutely business critical. Pulsant has provided us with excellent support and consultation to really ensure that our current needs are met and our future needs are considered."

More info: www.pulsant.com

Cloud: the 60-year-old hot topic

Cloud may have taken a long time to become an overnight sensation, says Andrew Roughan of Infinity SDC; but the vision behind it should nonetheless offer a new perspective on the future of the data centre

For something that started in the 1950s, cloud computing might seem to be late to the buzzword party. In fact, that pervasive, omnipresent trend of today is technically more than 60 years old. In those days, time sharing allowed multiple terminals to share the physical access and CPU time on mainframes. But the vision for cloud was already there: in the 1950s, scientist Herb Grosch predicted that the world would operate on dumb terminals powered by about 15 large data centres.

Commercialised in the 1960s, cloud computing evolved through the early VPNs of the 1990s, virtualisation and the dotcom bubble that fuelled Amazon's rise to success, until the point in 2008 when Gartner remarked that cloud computing could "shape the relationship among consumers of IT services, those who use IT services and those who sell them." It later observed that businesses were "switching from company-owned hardware and software assets to per-use service-based models" so that the "projected shift to computing … will result in dramatic growth in IT products in some areas and significant reductions in other areas."

More recently, in October 2013, Gartner predicted that Cloud Computing would account for the bulk of new IT spend by 2016. Cloud is reaching its apex.

SPOILT FOR CHOICE

The length of time that cloud has taken to reach this point perhaps accounts for the confusion that continues to surround it. There's confusion about cloud technology, confusion over IT infrastructure development and now, with the illusion of unbounded capacity in the cloud, confusion about data centre options and their place in the IT strategy.

Public, private, hybrid, on premise, co-located - with so many options and approaches, many mid-sized enterprises are finding it difficult to understand the myriad data centre solutions on the market. Many companies have commenced their IT transformation journey, but the data centre typically continues to be viewed simply as real

"The goals for businesses moving to the cloud tend to be similar: whether private, public, or hybrid cloud, users seek to increase agility, boost flexibility, reduce time to implement, enable efficient international operations and reduce costs. This does not mean that all companies can be herded in the same direction; they won't take the same journey in the IT transformation and will have different needs."

estate. No longer can there be a single procurement approach. Multi-sourcing is here to stay.

The data centre must become more than that. At the heart of the transformation to the cloud, it needs to become more relevant to the enterprise in supporting the transition from basic virtualisation to its latest stage of evolution: software-defined data centres (SDDC). This means understanding both the enterprise IT revolution and the individual needs of each business.

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A CLOUD BY ANY OTHER NAME

Some industries are more accepting of cloud than others. At one end of the scale, the retail industry tends to be very comfortable with the concept and adoption of cloud and can articulate how it works and its benefits.

At the other, those driven by strict regulatory standards - charity-funded research organisations and legal in particular - are extremely cautious about cloud. A huge disconnect between the business and IT sides of these industries means that to them, cloud is public, out of their control and a security risk. That being the case, the mere use of the cloud word causes ripples even when looking to deploy private clouds. More palatable to the lawyers, partners and research leaders is terminology such as "utilising the benefits of automation and orchestration in an on-premises environment".

WILL YOUR DATA CENTRE FLEX LIKE YOUR IT?

Whichever path feels best suited to each business, it needs to be agile, able to burst and ultimately dynamic. As part of the journey to the cloud, CIOs have typically deployed virtualisation to increase the utilisation rates of their owned IT assets, while also outsourcing to "as-a-service" providers to reduce the overall size of the owned IT estate. However, the virtualisation journey can be unpredictable. At the start, companies expect an overall reduction in their owned IT assets but find it difficult to accurately predict by how much.

Whether in-house or outsourced there are data centre costs that require a level of capacity that is almost impossible to foresee and plan for. In addition to the planning, there are times when capacity needs to increase so that new IT can be deployed before older assets are retired. Often, and despite growth in data, the net IT assets shrink as a result of these changes. This can strand power and space capacity and create unrecoverable costs.

Seasonal or campaign-based peaks, such as retail holiday sales, midnight on New Year's Day for mobile operators and major charity events such as Children in Need create demand peaks. The data centre needs to have the provision to cope but should be flexible enough that the user isn't paying for that full capacity all the time unnecessarily.

NEXT: THE SOFTWARE-DEFINED DATA CENTRE

As businesses continue along the IT journey, milestones they reach include converged infrastructure, private cloud and software-defined data centres (SDDC). The owned IT assets will range from non-virtualised legacy IT, to virtualised private cloud IT and the management and support applications that provide the augmentation, management and security of the SDDC. However, unable to predict the power densities and resiliencies required for those IT assets, planners face having to over-cater for an unknown future.

This leaves the CIO with a specific issue to contend with - how to manage the data centre capacity to provide the right-sized private cloud environment at each stage of the IT journey. It is vital that CIOs consider the attributes they need from a data centre as they continue along their IT journey. One thing is clear - a new breed of flexible data centre must emerge to put the CIO back in the driving seat of the outsourced data centre. Ultimately, what these changes all provide the CIO with is high levels of flexibility and agility.

More info: infinitysdc.net

Planes, trains and automobiles

Government departments have more stringent requirements than most when it comes to security, scalability and accountability, as this story from the Department for Transport (DfT) illustrates

When the UK coalition government made a cabinet decision to reduce its costs across the board it impacted on every department in the public sector. The key factor for many was to be seen to be rationalising their public facing operations and showing it was genuinely possible to make significant cost savings without dilution of service, through resource sharing and the implementation of new technological solutions.

CRITICAL COST CUTTING

One such Government Department that has taken the opportunity to move to a more flexible solution for its corporate website and hosting to deliver tangible cost savings, has been the Department for Transport. The Department provides leadership across the transport sector, working with regional, local and private sector partners to deliver many of the services. Its remit covers aviation, rail, roads and shipping.

OPEN SOURCE IN THE CLOUD

Sioned James is Head of Digital Communications, "In common with every other Government Department we were tasked with cutting costs and increasing our online efficiency." She revealed, "Following an independent COI (Central Office of Information) review that DfT commissioned, a number of important areas were identified for cost saving, predominantly platform sharing and a single enterprise solution for the Department and its Agency websites." Sioned added, "We took the process a step further and decided to move our entire corporate web estate to open source software and adopt third party hosting incorporating the very latest developments in hybrid cloud technology. Having taken the initial step for the Department and Driving Standards Agency corporate information, we are now working with other Agencies in the next phase. We are obviously very aware of the ongoing single domain project and have kept central Government informed of the work we have been doing to ensure we are in line with the overarching strategy. This work puts us in a better position to respond to the central agenda and has enabled us to save money at the same time. "

Sioned said, "We carried out a competitive procurement exercise using an approved Government framework and we put out a tender document detailing our

"We have made savings by moving from a commercial enterprise solution to open source, but the most impressive saving has been through the implementation of the cloud based hosting platform, where we have achieved very significant savings of between 60 and 70% per month when compared to the previous hosting arrangements."

precise requirements. We had specified Cloud Hosting at the core of the system, as this would give us the potential to scale operations on demand and avoid the need to over provide dedicated server installations to accommodate potential traffic spikes. However, the move to cloud also necessitated a certain percentage of dedicated managed server installation to meet the specific security requirements laid down by the government for its websites. This mixture required a hybrid hosting solution that allowed both cloud and dedicated server based elements to work together seamlessly.

SEAMLESS INTEGRATION

The tender-winning solution was provided by Rackspace Hosting in partnership with Centerprise, a National Framework Agreement Accredited Supplier, based on new RackConnect technology which allowed seamless integration of cloud and dedicated server products in one easy to manage package. Centerprise worked very closely with Rackspace during the buying solutions tendering process. The combination of Centerprise's low-impact prime contracting model and Rackspace's cost effective and flexible approach to web hosting services proved to be the winner, enabling the DfT to enhance their service offering, decrease real costs, reduce complexity and meet the very specific objectives laid out in the current government ICT strategy whitepaper.

Centerprise has a 25-year track record of providing excellent service and value across the whole of the UK Public sector and has been working closely with leading edge companies like Rackspace Hosting to create highly compelling propositions.

Migrating to a new open source platform has freed the DfT from the annual cost of an enterprise software licence, while the Hybrid Hosting configuration including a cloud-based hosting environment, offers the extreme flexibility and cost efficiency of being able to scale resources up or down in response to peaks and troughs of website usage, thereby saving considerably when compared with a totally dedicated server installation.

The security of critical information and databases is maintained through firewalled, dedicated managed servers linked via Rackspace's hybrid hosting RackConnect Technology. Sioned added: "We have already moved the Driving Standards Agency onto the same platform and now have the option to do this with other DfT Agency content, including campaign and stand-alone websites, enabling us to make further savings."

SIGNIFICANT ONGOING COST REDUCTION

"The project has been very successful", explained Sioned, "We have made savings by moving from a commercial enterprise solution to open source, but the most impressive saving has been through the implementation of the cloud based hosting platform, where we have achieved very significant savings of between 60 and 70% per month when compared to the previous hosting arrangements. The key factor is that we have become more efficient and we now offer a more robust website with the ability to instantly scale up to meet high traffic demands. "

Philip Goodyear, DfT's Web hosting and Infrastructure Manager, was equally delighted with the new framework, "We have found that we are far more in control of what is happening to our websites and it is very reassuring to have such a capable support process." Philip revealed, "When we first embarked on the project we found we were faced with a very short lead time to get everything migrated and up and running. Fortunately, the Rackspace team were able to pull out all the stops and ensure we met a very tight launch schedule without mishap."

Sioned James summarised, "We have had to meet and deliver against some very tough financial constraints and we are pleased with the hosting solution where cloud and dedicated server installations are operated together to meet both security and rapid scalability criteria."
More info: www.racskpace.co.uk

Disruption ahead

In an increasingly cloud-centric world, resellers who are still focused on just 'selling boxes' will be left behind, as Sol-Tec Sales Director Lee Cox explains to Cloud Hosting magazine editor David Tyler

David Tyler: What would you say is the key element of the Sol-Tec proposition that makes you stand out in what is after all a very competitive market?

Lee Cox: I suppose you could say that Sol-Tec has always taken a slightly different approach to the market from most of the competition: we started out over 23 years ago, selling backup software - but even then we were conscious of selling a solution to a problem. When I joined the company just a couple of years later I brought a slightly different slant to the business because of my experience of the distribution channel. We went through a sustained period then - as a lot of resellers have done - of 'just' selling lots of kit. But again, we were always careful to ensure we were selling a bundle of value-add; a good example was that all of our PCs back then were being shipped with anti-theft options like tracking units. The thinking even then was: "Here's the box, but what can we put around that to make it different to what everybody else is offering?"

Over time customers began asking for support, so we built a support team, and as bigger clients also began to pick up on that we developed a consultancy business. That's developed now into a full-blown outsourced service desk offering. For many of our clients we are now effectively 'embedded into' their IT departments. We literally do everything for these businesses, looking after the servers, the network - in fact some clients don't have an IT department of their own. We also look after scheduled maintenance and manage their storage requirements, of course.

DT: The advent of the cloud has been a game-changer for the IT industry as a whole - how has Sol-Tec reacted?

LC: Very early on we started selling a hosted email service - this was before Office365, remember - as a way to stay cutting edge. These days we see Office365 as a good corporate model to follow, so a lot of our business at the moment is around supporting customers as they migrate toward the cloud. We've become experts in the technical side of those migration issues, whether users opt for a hybrid approach or go 'fully cloud'.

There is still a lot of doubt and uncertainty in customers' minds with products like Microsoft Azure and Office365. They are often unsure of how to get the most from these technologies, or how complementary platforms like SharePoint might impact on their business. We've made it our business to partner as strongly as we can with Microsoft so as to enhance our own expertise and at the same time be seen as a trusted partner.

DT: Is the idea for Sol-Tec to be 'jacks-of-all-trades' when it comes to selecting partners/vendors, or is it important to specialise?

LC: We've been very careful not to look like we're trying to follow a thousand different technology trends. Microsoft for instance is

"What's critical to our approach is the proof-of-concept, whether we're looking at cloud or a flash array deployment: we come in and look at what servers you have, help you establish what is (and isn't) 'cloud-practical', and try to design a package which will increase resilience, improve performance, and reduce costs over time."

key for us, as are partners like Pure Storage. They are genuinely disruptive in their approach, turning the traditional way of 'doing storage' on its head. And we believe that Microsoft is doing a similar thing - it's not something that is limited only to relatively small or new companies.

What MS is doing with the Azure platform in terms of manageability and ease of use represents a fantastic opportunity for us: it provides us with a route to help our customers move most if not all of their infrastructure to the cloud. It's not going to be right for everybody, obviously. Where performance is critical, for instance, users might want to keep some things on-site - and of course we still have expertise in that sort of business as well!

DT: Are you seeing specific customer requirements that are better suited to cloud than others, or is it a panacea?
LC: An obvious good example is Disaster Recovery: it's so much easier to manage using the Azure platform. Everything is in the same place, it's easy to copy an Azure server as many times as you like. You can design a failover platform with a few clicks in a matter of minutes.

We had a customer just last week who came to us asking about deploying a new SQL box: we had it up and ready to go in under twenty minutes. This flexibility is very attractive to our customers - if they decided tomorrow that actually they didn't need that server, they could switch it off and they'd stop paying for it. That model has a lot of appeal for our clients.

DT: What can you tell us about your client base? Do you tend toward a particular vertical or size of business?
LC: We have a real mix of customers, as you'd expect of a firm with our long pedigree: local government, airlines, construction companies, banks. And then we have some very niche customers, smaller firms who rely on their IT more than most - the kind of business where if their systems go down it could cost them a fortune.

Where we would previously have used software and hardware expertise to satisfy those client requirements, we're applying the same knowledge to new concepts now, around what we can do with Azure. We already understand how backup works, how a failover environment for Exchange works, and so on. At the simplest level, what Azure does for us is to put it all into a much better data centre, with greatly enhanced performance and resilience; this lets us enhance what we could already do. As an example, we're already migrating our own hosted backup offering into the cloud, and it's caused us very little disruption - although permission was given to move the data, day to day users were mostly unaware anything had changed.

DT: Is there still a need for an evangelical stance on the cloud or is the market accepting of the business benefits these days?
LC: There is still - sometimes - an initial reaction to the idea of the cloud that says 'Isn't this dangerous for my business? Where will my data be?' But once we have the conversation, and explain the kind of data centre you have, and the potential additional layers of security that quite possibly they don't currently have - and perhaps most importantly, how much money these cloud companies have spent - then most of them will start to relax.

It's not for everyone - some customers will categorically not put their data anywhere else than in their premises, of course. And that's fine by us: if they want to do that, let's talk about putting it on a Pure Storage platform. We can help them make it as fast as possible, as easy to deploy and manage as possible, and as reliable as possible. That's where a flash solution like Pure comes in - and still at a price that they would pay for traditional disk.

What's critical to our approach is the proof-of-concept, whether we're looking at cloud or a flash array deployment: we come in and look at what servers you have, help you establish what is (and isn't) "cloud-practical", and try to design a package which will increase resilience, improve performance, and reduce costs over time. With our proof-of-concept approach we'd put the solution in, prove the technology and demonstrate the cost benefits, all before the users actually start spending any money. The whole point of that POC is to try to establish what's right for the customer.
More info: www.sol-tec.com

Quick learners

Leading US university extends its distance learning reach into Europe

Founded in 1949 in the heart of San Diego, University of San Diego (USD) has grown to become a premier institution dedicated to providing academic excellence, Catholic intellectual and social traditions, and a top-notch liberal arts education for scholars of all faiths. USD is committed to the intellectual, spiritual, and overall development of its student body. The university has more than 8,000 students and more than 900 faculty members.

USD has recently streamlined the expansion of its international studies program to Madrid by replicating curriculum into VMware vCloud Air over a Silver Peak accelerated wide area network (WAN).

"The University of San Diego is consistently ranked among the top national doctoral universities for undergraduate study abroad participation," said Christopher Wessells, vice provost & CIO for the University of San Diego. "The large volume of global study abroad participants presents a basic challenge to offer faculty and students nearly identical experiences with core academic and administrative information systems, irrespective of global location. Consequently, the University Information Technology Services unit has identified a robust and flexible cloud solution that can address growing global data and systems requirements. This solution offers a rapid, affordable and highly secure way to migrate data overseas."

USD selected VMware vCloud Air to solve the challenge. VMware vCloud Air was chosen for its ability to seamlessly extend USD's VCE Vblock System and VMware vSphere infrastructure to Europe, which provided geographic proximity to the USD Madrid Centre. USD extended its footprint over 5,500 miles over the public Internet to vCloud Air's UK-based data centre. Long distance and varying quality levels of the Internet negatively impacted application performance and were a potential impediment to USD's plans. To accelerate connectivity to vCloud Air, USD turned to VMware vCloud Air partner, Silver Peak.

Silver Peak's Unity transformed USD's long-distance 10 megabit-per-second (Mbps) public Internet connection into a secure WAN fabric performing at up to 150 Mbps of effective throughput into and out of VMware vCloud Air in the UK.

Adding Silver Peak to the VMware vCloud Air and VCE Vblock System environment solves two major challenges for the University of San Diego:

- Initial Migration: Replicating the university's VCE Vblock System-based servers and Blackboard learning environment of approximately 500 virtual machines (VMs) with an average size of 50 gigabytes (GB) from San Diego to the vCloud Air UK data centre is reduced from 26.5 hours to one hour.

- Ongoing Content Updates and Remote Access: Regular updates of hundreds of Blackboard courses from San Diego to Europe have been accelerated by 20x, updating course content in a matter of seconds. Remote access from Madrid to the vCloud Air data centre for Blackboard and other content is also improved, with consistent performance and delivery of distance-learning content regardless of Internet conditions between Madrid and vCloud Air.

"With Silver Peak and VMware vCloud Air, the options for expanding our course content globally are limitless," said Mike Somerville, IT manager, systems support and chief cloud evangelist for the University of San Diego. "I can't even imagine what dedicated infrastructure and an MPLS network would cost us to connect our remote campus in Madrid. Once Silver Peak was enabled with vCloud Air, data was moving so fast that I wanted to keep moving files into the cloud. The performance improvement was unlike anything I've seen before."

More info: www.silver-peak.com

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