

networking

FIXED & WIRELESS NETWORKS FOR ENTERPRISE USERS

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Ninety per cent of local councils shunning G-Cloud framework

by Paul Liptrot

Most local councils are spending little or no money through the government's online catalogue of cloud services, says a new study.

Latest figures show that councils represented just six per cent of the sales of £904 million, well behind central government, at nearly 76 per cent, and other public sector bodies (17 per cent). And just 50 councils – out of the 418 in England, Scotland and Wales – accounted for 90 per cent of the local government spend.

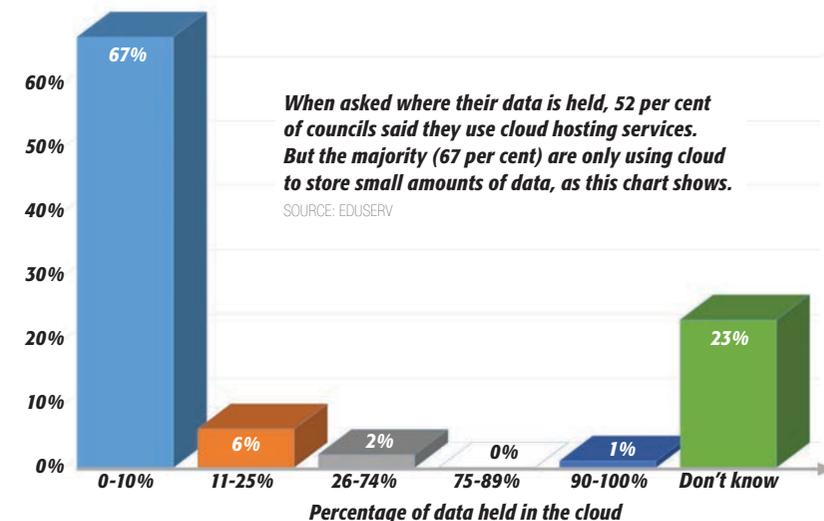
The research was carried out by Eduserv, a not-for-profit provider of IT services for the public sector, and published in a report called *Up In The Air: The State of Cloud Adoption in Local Government in 2016*. It reveals that half of all councils use the cloud, but not bought through G-Cloud. The other half

are wedded to in-house models which, says the report, may not support future operational changes.

Set up three years ago, G-Cloud is designed to make it easier, quicker and cheaper for public bodies to buy cloud services. At present, the online Digital Marketplace lists more than 2,700 suppliers offering 26,000 services.

The G-Cloud framework agreement is now in its eighth edition and buyers and sellers are now being consulted for the next iteration. It is run by the Government Digital Service (GDS) which is part of the Cabinet Office.

It says: "We've found that user guidance is an important area for us to look into. Some users are still not clear about how best to use the Digital



Marketplace to buy cloud technology. The current four categories [IaaS, PaaS, SaaS and Specialist Cloud Services] are not consistent with how users want to search for and buy cloud technology. We're looking at how we can redesign the categories in a way that puts the user first, and helps them to find the right supplier quickly."

A local government spokesman, who asked not to be named, gave other reasons for the limited take-up of G-Cloud. He points out that the service was originally developed by central government for its own use and for big projects, and adds that local councils do not have "tanks or nuclear powered submarines".

(Continued on page 2)

Data proficiency now "more important" than second language

Many business leaders in Europe consider data and analytics skills to be the most important capability for a potential new employee, according to research by Alteryx.

For its recently published *Business Grammar* report, the self-service analytics specialist surveyed more than 500 senior business decision makers across the UK, France, Germany, Denmark and the Netherlands.

It found that 59 per cent consider data and analytics to be one of the two most important skills for new employees, compared with only 28 per cent feeling the same way about multilingualism. France places the most importance on data and analytics, with 37 per cent citing it as the top skill for new hires.

Alteryx EMEA VP Stuart Wilson said: "Our research found that European

business leaders would be willing to offer a 36 per cent higher salary to someone who is data proficient over one who isn't."

Ninety-six per cent of those surveyed said that they currently use data and analytics to make or contribute to business decisions. In fact, data analytics is now considered so integral to business, that four out of five believe it should be a compulsory part of all MBA programmes. This opinion was particularly marked in the Netherlands and Germany, with 88 and 87 per cent, respectively, favouring this approach.

The study also revealed that only 15 per cent of all respondents leave data analysis to an IT or centralised business intelligence team, while 29 per cent reported that they are empowering business users with self-service analytics tools.

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Eduserv analyst Jos Creese says G-Cloud is sometimes regarded as a "Whitehall tool".

Majority of local authorities shunning G-Cloud

(Continued from page 1)

He added that instead of using G-Cloud, many councils use regional procurement organisations and shared services – such as that formed by Hammersmith and Fulham, Kensington and Chelsea, and Westminster councils. – or one of the big outsourcers.

Another factor was the Social Value Act which requires councils, when buying products and services, to take into account the effect on local employment and the environment.

Jos Creese, a principal analyst with Eduserv and former president of the BCS, adds: "Sometimes G-Cloud is seen as a Whitehall tool, with advocacy, priorities and the support offered around it reflecting this. Without being critical of G-Cloud, in the past there has been some truth in this.

"To flourish, G-Cloud must be seen as having universal benefit to the whole public sector, and be managed in that fashion." ■

TeleWare claims first with real-time end-to-end call through Azure

UK-based comms specialist TeleWare says it has been able to route, record and analyse a call in real-time through Microsoft's Azure cloud computing platform in a fully encrypted, compliant environment.

Confirmed by Microsoft as a world first, it's claimed the ground-breaking call demonstrates the feasibility of going 100 per cent onto the cloud.

According to TeleWare, it had been thought that attempting to use an entirely cloud-based system to route, record and analyse a call

would result in poor quality due to loss of data packets and latency. While previously this would have required physical servers and hardware, the firm claims it has been able to develop and enhance its solutions to achieve a seamless call that is of the same quality as one using physical equipment.

TeleWare adds that it carried out the call with one of its customers as opposed to a test environment, demonstrating that this is achievable without further enhancements to already deployed products.

"Many had advised that this wasn't possible as the cloud just 'wasn't ready for this yet' and we've certainly had to overcome some technical hurdles," says CTO Rob Corrigan. "However, our technology teams have all pulled together with one common goal and have achieved the 'impossible'."

TeleWare says its fixed-line recording product will be fully migrating onto the cloud, and that it also plans to migrate its MVNO product in the coming quarters. ■

Startupbootcamp looks to give the UK an IoT edge

Startupbootcamp IoT Connected Devices has been selected by Innovate UK to support the development of Internet of Things (IoT) solutions.

The accelerator programme will receive a portion of almost £1m in Department of Culture, Media and Sport investment allocated for this financial year as part of the government-funded IoTUK Programme. The investment aims to help companies develop early IoT market advantage, and bridge the gap between the creation of a hardware prototype and commercial viability.

Ten startup firms – working on IoT devices ranging from the connected home to smart manufacturing – have been selected to join Startupbootcamp's



Startups and mentors who will be involved in the programme which starts in London next month.

programme which begins in October. During the first year, each one will be given €15,000 in cash, office space in London connected to a full, fast prototyping lab, and access to a global network of IoT and hardware experts and investors.

At the end of the three-month acceleration period a public demo day will be held, with each of the ten startups pitching in front of investors.

"Government investment in the IoTUK programme is helping develop the next generation of technology which will power our economy and transform peoples' lives," said Matthew Hancock, minister for Culture and the Digital Economy. "This latest funding boost will help companies bring their fledgling [IoT] ideas to market and take advantage of emerging global opportunities." ■

Lack of women in cyber security means industry is missing out

CREST, the not-for-profit accreditation and certification body representing the infosec industry, is calling for more women to become cyber security professionals.

"Increasing the number of women in cyber security is not simply for diversity's sake, but for the sake of the industry," said CREST president Ian Glover.

The organisation has recently released a report outlining the conclusions from its 2016 Diversity Workshop. Citing data from ISC²'s latest Global Information Security Workforce Study, the report said that women in the infosec profession represent 10 per cent of those in the sector worldwide. That figure has remained unchanged from the 2013 study.

By comparison, 26 per cent of IT professionals globally are women (according to the American Association of University Women), as are nine per cent of engineering professionals in the UK (according to the Women's Engineering Society).

Part of CREST's workshop was to look at why diversity is an increasingly important issue. Glover said: "One of our attendees put it best, suggesting that by consistently taking people from the same

CREST president Ian Glover said increasing the number of women in the industry is not just for the sake of diversity.



backgrounds, we'll keep coming up with the same approaches and solutions."

Workshop attendees argued that women bring a different mindset and set of skills to the workplace, including attention to detail, analytical ability, and problem solving

In addition, they pointed out that a diverse workforce is more productive, and that research shows increased profitability in companies with more women, especially at senior level.

They also agreed that given the huge skills gap in the industry, it makes sense to double the recruitment pool of people that industry recruits from.

CREST is now looking at collaborating with existing industry initiatives and define an agreed set of actions to raise the number of women in the cyber security sector. ■

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The Shard has been fitted with two universal comms chambers that can be easily accessed to reduce the level of infrastructure works required during fit-out.

The Shard gets Platinum rating for connectivity

The Shard has been certified as one of the best buildings in the country for broadband and telecoms infrastructure after it was awarded a *Platinum* rating – the highest possible level – by international connectivity accreditor WiredScore.

It secured its rating by providing a wide variety of high-speed internet services, best-in-class levels of resiliency, and robust emergency backup services to protect against service disruption.

At 309.6 metres (1,016 feet), the 95-storey skyscraper is the UK's tallest building and the fourth-highest in Europe.

To future-proof against demands to accommodate new carriers, it has been fitted with two universal communications chambers that can be accessed by carriers to reduce the level of infrastructure civil works required during fit-out.

The Shard has seven ISP suppliers and offers dedicated business-grade fibre that can be used for symmetrical speeds of up to 100Gbps depending on the occupier's

requirements. 43,397 metres of Prysmian blown fibre architecture were installed during its construction which allows occupiers and their ISPs to install fibre via IT raisers to each floor.

The Shard's telecoms providers currently include BT, Colt, Cable & Wireless, Level 3, Verizon, Virgin Media, Vodafone and Zayo. Mobile comms are provided by dedicated in-building infrastructure that supports multiple operators. GSM, GPRS and 3G services can be extended from the tower's backbone to an occupier's floor providing high-quality coverage regardless of floor height or layout. Satellite, DAB and DTT services are also available.

WiredScore independently certifies buildings for providing leading-edge digital infrastructure. Other UK sites with its *Platinum* rating are mostly in London and include the BBC's new Broadcast Centre in White City, 122 Leadenhall St. (the 'Cheesegrater'), 20 Fenchurch St. (the 'Walkie-Talkie'), amongst others. ■

Secure BYOD supports medics

Northern Doctors Urgent Care (NDUC) has introduced a secure remote access solution to help teleworking clinicians deliver patient care more effectively.

Part of Newcastle-based Vocare Group, NDUC delivers urgent care and out-of-hours GP services to 1.5 million patients in north east England, and also manages the region's NHS 111 service in partnership with the local ambulance service.

With 3,300 staff, nine call centres and more than 40 additional sites, the organisation is supported by just a nine-strong IT department that manages its networking and critical applications.

NDUC has grown rapidly over the last few years after taking over a larger direct workload from the NHS. To help deal with budget and recruitment constraints, it has endeavoured to use IT to enable beneficial working options such as teleworking with remote access to key application and telephony to allow clinical staff to work effectively from anywhere in the country.

Vocare's network manager David Harrop says: "The number of remote users we have had to support has grown from under 10 to

over 200 over the last nine years, and this is likely to accelerate in the next few years."

The IT department previously delivered a limited access service using IPsec-based connectivity to a small fleet of company issued laptops. However, with the growing demands for access, Harrop and his team began a project to switch to a BYOD-based service and upgrade core IT infrastructure to meet the challenge.

Working with ANSecurity, they deployed a new solution that included Juniper *SRX Series* firewalls with Pulse Secure *Connect Secure*. The latter include endpoint integrity assessment technology as well as SSL VPN access with increased protection for BYOD users. Access control was further strengthened with RSA-based two-factor authentication.

NDUC also deployed a VoIP solution from Shoretel to allow assistance calls to be routed from the call centre teams to clinicians using just an internet connection.

"The end result is that we have a system in place now that makes it easier for us to connect our clinical staff with patients to deliver the highest quality care," says Harrop. ■



THE WORLD ACCORDING TO...

Simon Richards, MD, IGEL Technology UK & Ireland

How cutting the fat can help you gain freedom from the desktop

For many IT administrators the feeling of being shackled to the desktop will be familiar, involving an endless round of responding to helpdesk tickets, running security patches, rolling out upgrades, etc.

But a new desktop era is upon us in the form of the managed workspace which will help solve these day-to-day hassles. For those IT admins running thin client desktops, life has been more manageable for some time.

A study by the Fraunhofer Institute in Germany found that if an existing managed PC is converted into a thin client instead of replacing it with a new *Windows* PC, the total cost of ownership can be reduced by 47 per cent. With a notebook conversion, this figure is as high as 55 per cent. If fat clients are simply replaced by hardware thin clients, then savings of 35 per cent can be achieved over a three-year period.

But the reality for many businesses is that they have a mix of equipment or the workforce demands a range of different desktop devices. However, with some simple conversion and management software, many desktop PCs and laptops can now be converted to thin clients in minutes.

This creates the opportunity to manage the vast majority of desktops and mobile devices like a single estate. They can be centrally and remotely managed at the click of a mouse, and the latest software means that they can easily be integrated with enterprise solutions such as *IBM Tivoli* and *Microsoft SCCM*.

In addition, desktop security is instantly improved and the chance to move to a virtual or cloud infrastructure suddenly looks simpler and more cost effective because changing all the end-user devices has been removed. Can you feel those shackles falling away from your wrists?

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Virgin Media buys Arqiva's Wi-Fi

Arqiva has sold its Wi-Fi business to Virgin Media. The value of the transaction has not been disclosed. As part of the deal, Arqiva has signed an exclusive partnership to provide indoor connectivity solutions to Virgin's Wi-Fi customers. The two firms have also signed a long-term agreement to continue to deploy public Wi-Fi services in Arqiva's numerous street concessions. Arqiva claims to be the UK's largest provider of in-building neutral host solutions. It currently has 45 in-building systems installed in locations such as Canary Wharf and Excel London. The company adds that it remains focused on growing its distributed antenna systems and small cells lines of business, which contribute to its investment in 5G infrastructure for the UK. ■

Dell-EMC merger is now complete

Dell Technologies has now finalised its acquisition of EMC Corporation which was announced last year (*News, Nov 2015*). It says the merger creates a \$74bn technology company that also includes Boomi, Pivotal, RSA, SecureWorks, Virtustream and VMware. When the transaction closed on 7 September 2016, EMC shareholders received \$24.05 per share in cash in addition to tracking stock linked to a portion of EMC's economic interest in the VMware business. Based on the estimated number of EMC shares outstanding at close, EMC shareholders received 0.11146 shares of new tracking stock for each EMC share. ■

Aegis and Hyperscale partnership

Aegis Data has teamed up with Open Compute Project (OCP) provider Hyperscale IT in an effort to capitalise on demand for scalable compute resources. The OCP releases open source hardware that has been designed without legacy constraints, and aims to offer computing scalability for the lowest total cost. Under the agreement with Hyperscale IT, Aegis Data says it can access customised server racks which have the ability to support the higher power densities needed in HPC and hyperscale environments. Meanwhile, Hyperscale says its customers can now benefit from access to a facility that has the scalability and flexibility to support their needs and ultimately future-proof their business. ■

Pressure to complete projects mean IT pros give up holidays

IT specialists are the least likely to use all of their annual leave among all professionals, according to research by Robert Walters.

For its *Career Lifestyle Survey*, the specialist recruitment consultant polled more than 704 professionals from a range of disciplines across the UK.

It revealed that 44 per cent of those in the IT sector had not taken all of their allocated annual leave in the past year, compared to an average of 36 per cent among all professions.

With many businesses looking to overhaul their e-commerce systems, as well as an increased emphasis on cyber security, Robert Walters says IT pros from a range of specialisms have come under pressure to deliver large scale projects to tight deadlines.

Among those in the sector who did not take all of their annual leave, 54 per cent said that pressure to complete projects and meet deadlines had motivated their decision.

"In many cases, deadlines for IT projects, particularly those concerning cyber security, are considered business critical and therefore cannot be moved," says Ahsan Iqbal, associate director, Robert Walters. "It is in these cases where IT professionals will struggle to make full use of their annual leave entitlement."

However, given the high demand for their skills, Iqbal points out that IT specialists are in a strong position to negotiate with potential employers to ensure that they will be compensated for additional hours worked. "In the last year, IT professionals work-

Ahsan Iqbal, associate director at Robert Walters, says IT pros often struggle to make full use of their annual leave entitlements.



ing in cyber security have seen a particular spike in demand for their skills, driven by several data breaches at high profile companies in 2015. As a result, employers have been keen to bring these professionals on board to undertake large-scale overhauls of digital security systems." ■

Children's charity uses analytics to improve services

Barnardo's has selected Nexthink to provide greater insight into its IT infrastructure. By utilising analytics, the children's charity aims to accurately measure the end-user experience to improve the efficiency of incident management and service delivery.

With more than 900 services running nationwide, Barnardo's works with more than 240,000 children, young people and their families each year. It relies on 15,000 volunteers and 8,500 employees in more than 1,700 locations across the UK.

Barnardo's head of IT service management Mark Bassett says the organisation's IT estate is extensive and forms the backbone of the critical services it delivers. "We were looking for a solution to provide the visibility of our infrastructure from the end-user perspective that would enable the IT service desk to better diagnose issues and improve troubleshooting for greater end-user satisfaction."

As a result, it deployed the *Nexthink V6* platform. This is designed to proactively monitor the entire IT infrastructure and



Nexthink says its software provides real-time analytics and visualisation of IT infrastructure and service delivery across an organisation.

reports on important end-user related events, such as performance problems, failures, crashes and security issues.

The vendor adds that V6's real-time and historical record of the usage and performance of IT services from the end-user perspective provides Barnardo's with unique visualisations and actionable insight.

"Nexthink's IT analytics provide real-time reporting and intelligence to help the service desk and incident management teams take a more proactive approach that will save valuable time," says Steven Little, country manager Northern Europe, Nexthink. "This in turn will enable the charity to ensure the availability of services, campaigning and research expertise to transform the lives of the most vulnerable children." ■

Not for profit networking – Real World Networks, p8.

Updata to manage Gloucestershire NHS networks

Following a competitive tender, Updata Infrastructure has been awarded a five-year contract by Gloucestershire Hospitals NHS Foundation Trust (GHNHSFT) to supply and manage IT networks for healthcare organisations in the region.

GHNHSFT is one of the country's largest hospital trusts. It employs more than 7,000 staff and provides health care services to a population of more than 612,000 people.

Updata is part of Capita IT Enterprise Services and its new contract with the trust is managed by Countywide IT Service.

They will work together in an effort to provide greater flexibility, service transparency and value-for-money for GHNHSFT, while also improving service for staff.

Updata will manage a WAN and provide LAN infrastructure and services for a range of organisations covering 140 sites, including hospitals and GP surgeries. It will also install a VPN to enable remote working for staff.

As part of the contract, the company will also work with eight partner organisations, including Gloucestershire Care Services NHS Trust, Central Southern Commissioning

Support Unit, and the Gloucestershire Clinical Commissioning Group.

According to MD Béatrice Butsana-Sita, Updata understands the challenges faced by healthcare organisations across the country, including the need to reduce costs while maintaining service levels

She says: "Our work to install and manage networks for Gloucestershire Hospitals NHS Trust Foundation and their partner organisations will help them to meet those challenges, while enabling smarter ways of working for their staff." ■

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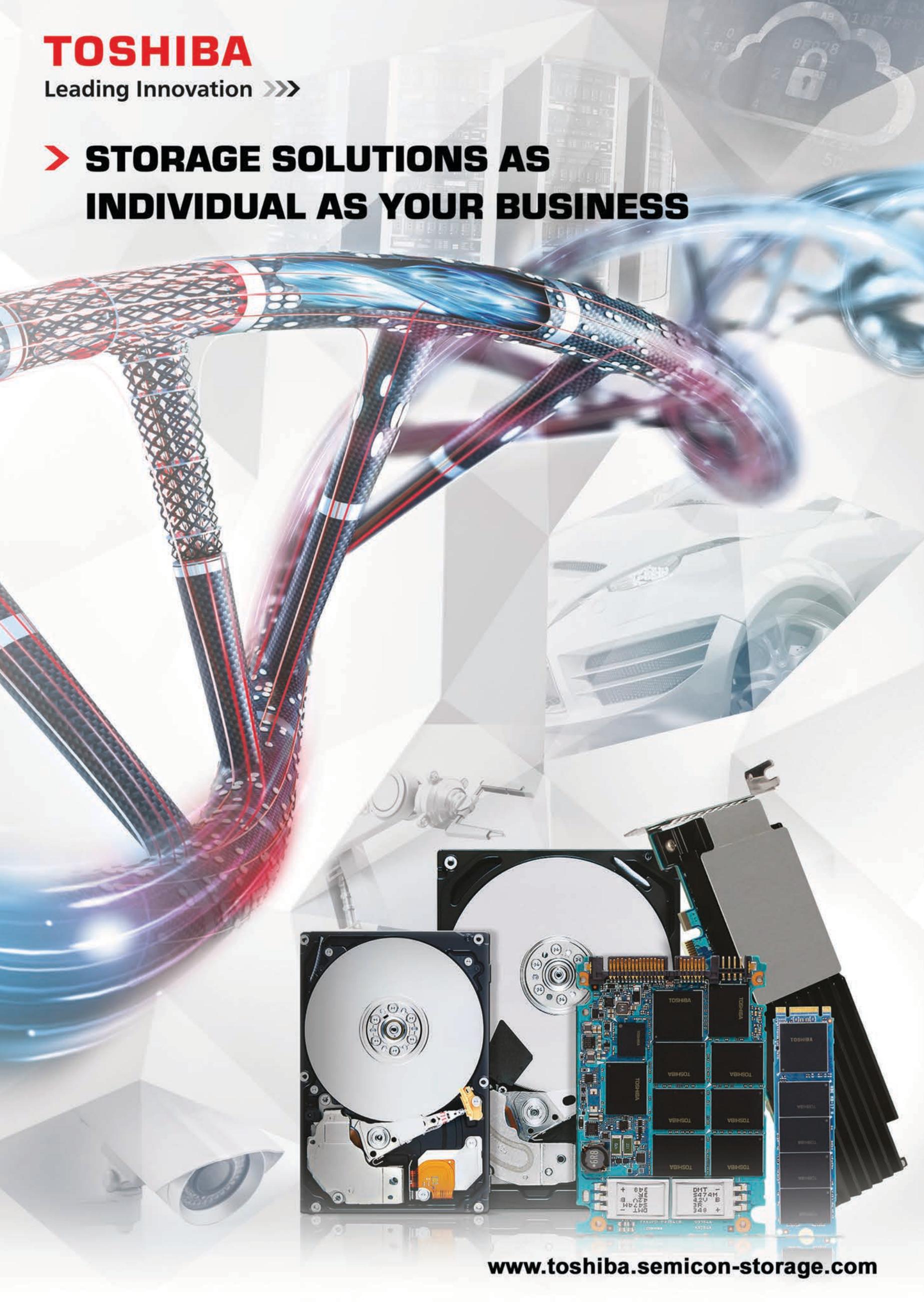
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Category	Average number of apps per enterprise	Percentage of apps not enterprise-ready
Marketing	75	98%
Collaboration	66	91%
Productivity	63	99%
Finance/Accounting	57	96%
Human resources	52	96%
CRM and SFA	37	94%
Social	29	92%
Social development	28	96%
IT/Application management	28	96%
Cloud storage	27	77%

Average cloud apps per enterprise by app category. Despite the growing popularity of productivity and collaboration apps like Slack, Netskope says the vast majority are still not enterprise-ready.

Over half of malware-infected files in cloud apps shared publicly

More than 43 per cent of malware found in enterprises cloud apps have delivered ransomware, and 56 per cent of infected files are shared publicly. That's according to the recently published *2016 Cloud Report* from Netskope.

According to the cloud security specialist, there are on average 26 pieces of malware found in cloud apps across a given organisation. Of the malware types detected, 43.7 per cent are common ransomware delivery vehicles, including Javascript exploits and droppers, *Microsoft Office* macros, and PDF exploits.

Netskope said these ransomware attacks are often initially delivered through phishing and email attacks. But within cloud environments, it warned that

infected and encrypted files can quickly spread to other users in what is known as the 'fan-out effect' which is caused by cloud app sync and share functionality.

The report's findings are based on aggregated and anonymised data from millions of users in hundreds of accounts in the global *Netskope Active Platform*.

It also revealed that, on average, enterprises have 824 cloud apps in use (up from 777 last quarter) but that 94.7 per cent of those apps are not "enterprise-ready". According to the Netskope Cloud Confidence Index, they lack key functionalities such as security, audit and certification, SLAs, legal, privacy, financial viability, and vulnerability remediation. ■



VIEW FROM THE TOP

Julian de Selincourt, sales & marketing director, Zcomax

Cloud-managed Wi-Fi makes sense for IT teams & bean counters alike

Today, businesses are using the cloud for everything – from individual apps, operating systems and infrastructure, up to XaaS (anything as a service). So it's not so surprising that you would want to manage your Wi-Fi in this way.

Cloud managed WLANs have been available for a few years, mainly aimed at the larger enterprises, but now even smaller businesses can take advantage. According to research from IDC, worldwide cloud-managed infrastructure and managed services revenue is growing fast and will reach \$2.5bn by 2018.

It makes sense as the business benefits, not just firmware updates, stack up. Some vendors are even making the traditional license-based model obsolete. Are you still paying per seat or device? If so, you might want to take a look at the savings possible.

Clearly, the major benefit of the cloud means you can manage your wireless APs remotely from anywhere – you don't have the hassle of a server going down internally and you don't need to put in any dedicated infrastructure. It's a boon for network engineers. Just make sure you choose a

Wi-Fi brand that is running servers around the world with built-in redundancy.

It's not surprising cloud Wi-Fi is popular with today's leaner IT teams, given the host of other benefits around saving time, automated provisioning and centralising management.

It's easy to monitor dozens of devices with little effort and low cost. Faster deployment is possible using plug 'n' play device adoption where devices provision themselves automatically. Some vendors offer a multi-level dashboard which is ideal for multiple customers and multiple sites. Live device statistics show, in real-time, how much people are downloading, and includes historical data and logging. Maintenance is much easier and quicker, especially for larger companies undertaking batch updates, using the same settings for multiple devices.

Overall, cloud-managed Wi-Fi offers a useful approach for today's beleaguered IT staff. And don't forget, for the bean counters among you, it makes good commercial sense too as the cloud helps shift spending from capex to opex.

No more IT firefighting for East Sussex Fire and Rescue

East Sussex Fire and Rescue Service (ESFRS) is migrating to a new private cloud platform in an effort to enable a more resilient and reliable IT infrastructure.

Under a seven-year contract worth around £8.3m, Telent Technology Services' *FlexiCloud* will support more than 900 users in ESFRS and the communities it serves. Telent also plans to manage the migration of legacy systems to a new *Microsoft Active Directory* and *Exchange* environment.

"Early in 2014 we recognised that we were no longer in a strong position to provide IT services ourselves," says Gary Fisher, chief fire officer, ESFRS. "Our strategic landscape was changing and we needed an IT service

that would underpin our organisation and allow us to aspire to new levels of business change and innovation."

By taking on the responsibilities of day-to-day IT and desktop support, Telent says it will enable ESFRS to instead focus on securing business improvement and value for money through its developing IT strategy.

In addition to the transformation project, the firm is also managing a programme to enable the fire service to become fully PSN compliant. This will allow ESFRS to connect to the new Emergency Services Network being provided by EE, amongst others (see *News*, Jan 2016), and be ready for further collaboration opportunities. ■

New era for Millennia as it replaces DR system with cloud platform

Yorkshire-based Millennia Computer Services has overhauled the disaster recovery (DR) capabilities of its data centre to support the mission-critical systems of its leisure and theatre ticketing customers.

Millennia is a cloud-enabled managed hosting provider that says it has simplified and transformed the data centre by building it on software-defined technologies.

With many of its customers handling terabytes of data and millions of transactions, the firm needed a robust DR solution to replace its existing server and SAN infrastructure where disparate systems had led to frequent incompatibility and reliability issues.

Millennia originally turned to a low-cost hyperconverged infrastructure vendor, but as company director John Thorpe explains: "The low-cost option simply wasn't robust

enough to cope with sensitive workloads such as SQL Server, as there was a risk of data corruption with maintenance often requiring downtime."

As a result, the firm replaced its entire system with the *Nutanix Enterprise Cloud Platform*. Thorpe says this offers a different way of measuring storage data reduction based on physical and raw rather than assumed capacity, resulting in better planning.

The easy scalability of Nutanix's modular building-block design has proven to be another major benefit. "When we land a big customer, all I have to do is size them and then see how many extra nodes we need within the cluster," says Thorpe. "Furthermore, adding more to the infrastructure never compromises performance, and we can price with a degree of certainty that we didn't have before." ■

Since using Nutanix's cloud platform, it's claimed Millennia has saved 83 per cent on its RAM overhead across its DR capabilities.



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CCTV in the cloud aids landlord and tenants

MHS Homes is the largest independent landlord in Kent, and has 8,500 properties and 270 staff. Based in Chatham, it was founded nearly 25 years ago when it took over Rochester's council housing.

Like many in the housing sector, MHS Homes uses CCTV and each of its 20 sites has 12-14 cameras. Matthew Eddy, the organisation's neighbourhood services manager, says: "At some locations we had cameras linked up so that we could see them from the office, but the system was slow and cumbersome. If something happened, we had to look back through all the footage to find it, so we were unlikely to do that unless we had a specific time for an incident.

"We sometimes found that when there had been an incident, the relevant camera was down. And even if the cameras were connected to our office, each one had

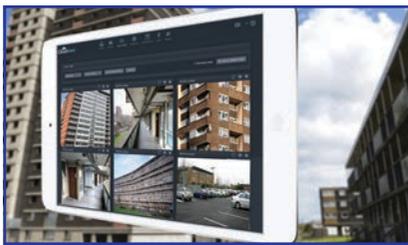
to be tested individually to see if it was working. That takes a long time."

MHS Homes is a member of the Connected Homes Consortium (CHC), formed in early 2015 by the Housing Associations' Charitable Trust (HACT). MHS agreed to a trial of an Internet of Things CCTV system from Cloudview, and it is now looking to introduce this to other sites, in particular four large tower blocks.

Eddy says: "All the equipment is currently in the lift monitor space in the roof, so if we need any footage, we have to use a specialist contractor to visit the site, climb down a ladder, burn a CD and deliver it to our offices. It would be so much cheaper and save so much time if we used the Cloudview system."

The system provides secure, cloud-based video surveillance by means of a network adapter which can be retro-fitted to existing analogue or digital CCTV cameras. It only records when there is movement and uses broadband or Wi-Fi to store footage in the cloud. This can then be viewed by authorised users from multiple locations on their smartphones, tablets or PCs, and downloaded to provide evidence to the police if required.

Security is provided through HTTPS/TLS and public key encryption. All footage is time stamped, and the system provides an automatic alert if there is a problem with a camera.



The system has also resulted in other benefits for MHS. It provides evidence of serious anti-social behaviour such as damage, fly tipping and graffiti, helps in checking maintenance of communal areas, and shows attendance by contractors whose services are required for safety compliance.



DECT ensures fast contact for staff and tenants

Ipswich-based Orwell Housing Association has 3,500 properties with 7,500 residents across 14 sites. It sought to upgrade its existing system for greater reliability and coverage, and to avoid any chance that residents and staff could not contact each other.

Jamie Hopkins, head of ICT for Orwell Housing, says: "We are constantly looking at ways to improve the facilities at our support and care housing schemes, and the *Warden Call* system which allows tenants to quickly contact a member of staff is a key requirement.

"Our existing system was starting to show its age in terms of reliability and features, and the growth of our extra care schemes over the years had led to coverage issues. Our concern was that there was a small chance that a call might not get through to the right person in a timely fashion."

Orwell already had a SIP-based cloud telephony system called *YourUCP* from Comms Supply, a long time supplier, and a *Warden Call* communication system.

Based on the need for better coverage, seamless call handover between cells and integration with both the *Warden* system and Orwell's SIP-based telephony platform, Comms Supply designed a new setup based on Gigaset's *pro Multicell* base stations and DECT handsets.

Each *pro N720IP Multicell* system is designed to support up to 100 DECT handsets, 30 parallel calls and, says the vendor, allows up to 30 base stations to be easily connected to extend coverage and number of users. The *N720IP* also supports both on-premise and cloud based telephone systems.

Karl Alderton, project manager for Comms Supply, says: "The highly configurable nature of the Gigaset *pro* devices meant that with just a short migration project, we were able to integrate the system with the *Warden Call* platform and all the features from our cloud PBX."

To date, Comms Supply has upgraded the phone systems at Orwell sites in Lowestoft, Woodbridge, Stowmarket and Loddon, as well as installing new systems in Felixstowe, Saxmundham and Kessingland, benefiting over 150 residents.

Hopkins says the new DECT system has offered great coverage and call quality, while the handsets have proven easy for staff to use. He adds: "Our plan is to upgrade the majority of our sites over the next few years."

Education charity saves with move to the cloud

Teach First, a charity working to tackle educational inequality in England and Wales, has 11 offices and 650 staff.

With the decision to move its London HQ from the South Bank to North Greenwich, it sought to replace the different conventional phone systems at each of its offices with a single UC platform that would support *Skype for Business*. And it had to integrate with Microsoft products, particularly as the charity is a dedicated user of *Office 365*.

Teach First discussed its needs with VIA, part of Smart Hosted Solutions, based in Nottingham, which suggested its cloud-based product, *VIA Voice*. The charity visited Redbridge College to see *VIA Voice* in use and, after a month-long trial at its Birmingham office, rolled out *VIA Voice* across all of its offices.

VIA director Alex Tebbs says: "Our management portal ensured we could phase the rollout and divert incoming calls temporarily whilst the new numbers were being sent out. This prevented any downtime during the installation process."

Now Teach First staff can stay in touch with a variety of devices, such as landlines, smartphones, PCs, and tablets. All users have dial in and out conferencing as well as DDI numbers, and Teach First has also implemented VIA's call routing to ensure callers are connected to the most suitable department.

According to the vendor, Teach First will save about £20,000 a year on direct costs, including service charges, maintaining equipment and call costs. And it says the charity will also make significant indirect savings due to efficiency gains through hot desking, the ability for staff to communicate better when working remotely, reduced travel, enhanced video conferencing, and greater overall workforce collaboration.

Employees were provided with Jabra *Evolve 65* headsets which offer both USB and Bluetooth connectivity. Meanwhile, Teach First also ordered 40 Polycom *Trio 8800s*, the certified *Skype for Business* conference phone, for its meeting rooms and open office areas.

Mark Sutton, IT director at Teach First, says: "We required a solution that would allow us to modernise our telephony infrastructure, whilst benefiting from a joined-up approach to communications.

"We have already noticed that employee communications have improved, especially between different offices. These efficiency gains will lead to both direct and indirect cost savings, allowing us to focus on our vision of a day when no child's educational success is limited by their socio-economic background."



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Is your future up in the air?

As UKFast points out, cloud means IT pros have to get used to network topology changing very quickly – but they also have to make rapid changes to their mindsets.

Running a data centre network that offers cloud enterprise services presents challenges that can only be overcome by those who possess a unique set of skills, as RAHIEL NASIR finds out.

If all the headlines are to be believed, the future for IT professionals lies in a handful of specialist areas where the industry reportedly faces the biggest skills shortage. As well as cyber security and 'Big Data', cloud computing is one of the topics that comes up regularly here.

So if you've cut your teeth on LANs and WANs, and now want to run a data centre network that delivers enterprise class cloud services, can you simply use the 'traditional' IT skills gained from your corporate experience? Many of the data centre operators and specialist vendors that we spoke to are in no doubt about the answer here.

"In short – no," says Matt Lovell, CTO of Pulsant. "Cloud exchanges provide the physical interconnection between data centre services and data centres but this is only part of the customer challenge. Many customers seek additional support in terms of forming logical connections between their services and the corresponding cloud service provider services over the physical cloud exchanges.

"In addition, configuring these across multiple geographic or service availability zones in automated failover and recovery topologies is essential for many customers to deliver a similar experience to existing solutions. There is also the need to monitor and manage disparate third-party networks, including wireless and mobile to ensure a consistent user experience."

Lawrence Jones, CEO of data centre operator UKFast, would agree here, and

points out that because clouds are so dense, you get a lot more networking into the same environment. "Previously, you would have had many physical switches and cables within your infrastructure; now there's the virtual switching layer which sits on top. This requires a different skill set than working solely with steel switches and cables. You still need those traditional skills in your team but now there's a new top layer of virtualisation which you need to understand so that the two can work together."

Like many, Jones points out that software defined networking (SDN) is a lot more prevalent now, and while this potentially simplifies the underlying network topology (because it's all handled through the software) at the same time it



adds another layer of complexity where different skills are needed.

Jim Fagan, head of cloud at Australian-based global telecom services operator Telstra, says IT managers need knowledge of SDN to achieve the automation that networking needs in order to "truly" enhance and realise the benefits of cloud.

He adds that capacity management is a completely different challenge when running a cloud network as you must have enough capacity to not only handle spikes in traffic, but also the ability to load balance the network as well.

Understanding and being able to deal with the need for scalability comes up time and again when asking the industry about the skills required for data centres IT manager that are responsible for cloud networks.

"In our experience, planning for growth and putting contingencies in place so the platform can scale as you need it too is critical," says Jones. "It's always better to over-deliver and have more capacity than you need, than to have to run the

"As if that's not a challenge enough, you also need to plan for something else that's hard to estimate: an unpredictable workload."

*Lawrence Jones MBE,
CEO,
UKFast*

infrastructure at full tilt. As if that's not a challenge enough, you also need to plan for something else that's hard to estimate: an unpredictable workload. Unlike traditional enterprise solutions – where you know where your database servers and your exchange servers are – cloud can be fairly chaotic simply because you're provisioning the resources and people can use it for whatever they want."

Jones goes on to say that in cloud environments you tend to see a lot more east-to-west traffic because there's a huge amount of back-end processing happening. Furthermore, he points out that applications and jobs tend to be rolled out a lot faster in the cloud as virtual environments can be spun up in seconds, placing yet greater demands on resources.

"Cloud pros have to get used to network topology changing very quickly," says Jones. "As customers provision new resources to their solution they need to ensure that the underlying network is suited to any changes. Because of this, we're seeing a shift from traditional leaf and spine topologies towards a mesh network topology, giving providers a lot more flexibility in terms of east/west traffic because everything links to everything else within the network."

According to Jones, all this makes the system a lot more adaptable, but of course it requires the skilled staff to reconfigure and manage the networks accordingly.

Jason Dover, director of product line management at load balancing specialist KEMP Technologies, believes data centre

cloud architects need to have the ability to map out the longer-term way that different components in a heterogeneous environment will operate as utilisation scales. He reckons this requires a new mindset that assumes more dynamic change for deployed elements.

"As an example, on-demand connectivity may need to be established and quickly destroyed for intermittent peak usage bursts."

Dover goes on to say that an understanding of a cloud operating model, and how the technology being leveraged maps back to business processes, is just as critical as a deep understanding of the WAN connectivity options available and how to architect an IaaS for both high availability and virtual site resiliency.

Schneider Electric also reckons that mindsets need to be changed. Steven Carlini, the company's senior director of data centre solutions, IT division, says: "Current thinking on availability focuses on individual sites; future thinking must consider entire hybrid architecture of on premise access to the centralised cloud sites. Skills sets that need to be developed include defining and deploying physical infrastructure (power and cooling) monitoring systems for the remote or branch locations, and understanding which sites are in need of attention or service."

Michael South, product manager cloud connectivity with Colt Technology Services, is unlikely to disagree here. He says enterprises tend to have some newer "born in the cloud" apps that are typically easy to migrate to the cloud. But he points that most customers also have a legacy to manage, which is less straightforward to manage in a cloud configuration.

"So this is where hybrid solutions come in, linking customer on-site facilities with publicly-hosted capacity via private networking. This delivers the security, performance and reliability which their applications need. It permits the enterprise to manage all their applications in an optimum way. From the network management side this requires a new set of skills, and not just technical. It's an entirely different business model."



"Over the last 12 months, the focus of maximising service availability has required an equivalent if not greater focus on network availability and performance management."

Matt Lovell,
CTO,
Pulsant

Equinix offers further explanation here. The US-based company operates over 145 colocation facilities around the world, and says it more than doubled its capacity in Europe with the acquisition of TelecityGroup's 40+ data centres as part of a \$3.8bn deal that was finalised in January. Its UK portfolio includes 12 sites in London and Manchester.

Theo van Anel, Equinix's, senior manager, field development marketing, says that with the adoption of cloud-based services there is a shift from capex- to opex-based solutions which impacts the total cost of ownership and overall business case.

"Basically, the business case depends on the actual traffic/cloud utilisation," says Anel. "As the amount of data varies, the amount of traffic and cloud utilisation will also vary. This results in a

cost aspect which is difficult to accurately predict. Hence, constant monitoring is required to adjust the solution in an effort to minimise monthly recurring costs."

From mindsets to toolsets

So when creating and running a cloud network, what should the data centre network manager look for? And what are the pitfalls to avoid?

van Anel warns data centre managers against adopting cloud-based services without reassessing their existing network topography. "Without rethinking and probably redesigning the network architecture towards an interconnection oriented architecture, they face challenges of decreased customer experience and satisfaction as well as steeply increased monthly recurring costs."

For Pulsant's Lovell, the challenges are understanding how disparate networks converge to enable connections between services and data streams. But a further dimension for network managers is protecting these services from malicious or disruptive activity.

"Over the last 12 months, the focus of maximising service availability has required an equivalent if not greater focus on network availability and performance management in comparison to more traditional mechanical and electrical services."

Lovell says network visualisation tools, which dynamically enable support teams to build application centric outcome views of customer solutions, are key. He points out that as services mature and change over time, the tools can dynamically adapt to capture, record and process the changes to ensure a constantly monitored outcome.

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Cloud exchanges provide the physical interconnection between data centre services and data centres, but according to Pulsant this is only part of the customer challenge.



“Documenting live data flows and network connections, with visibility of overall and incremental performance in different parts of networks, is also critical to assist in performance diagnostics and troubleshooting as well as connection optimisation.”

Schneider Electric’s Carlini also believes that when it comes to the mission critical connectivity of remote/branch locations, network availability is the top issue to overcome.

“The cloud services are in very robust data centres that have built in redundancy from a hardware and application perspective. However, on many occasions, the network access closets are not treated with the same attention, and suffer from lack of redundancy, run time and the necessary cooling.”

Like Lovell, Carlini says monitoring the network becomes more crucial in a data centre cloud environment. He adds that many IT managers actually have the skills to do this – they just need the right tools.

“It’s more important than ever to deploy remote monitoring software with physical security functionality in data centres and network closets connecting to the cloud. If there are many sites, this data can be rolled up into a dashboard.

“There are also data pools being created from many vendors including Schneider. The data collected is sent to cloud pools where it can be used to automate service dispatch. This data can also be put into a larger pool. Analytics can be run to look for trends opportunities to improve performance and prevent issues that could impact availability.”

KEMP’s Dover concurs here. He believes assessment and visibility tools are by far the most critical to provide insight into the readiness of an application to be delivered as a cloud service, or whether a network is properly architected to handle an increased number of services.

“Without the ability to simulate and make an educated estimation of the quality of experience that end customers will have when consuming services, customer satisfaction and SLAs are likely to suffer.”

He also says that if adopting public cloud into the strategy, maintaining visibility as services and applications span across the data centre firewall is also important, since network architecture by its very design is different in these environments to support multi-tenancy.

‘One throat to choke’?

Is the data centre manager more at risk of being the ‘single throat to choke’ in a cloud/outsourced services environment? Does the buck stop with them when it comes to all network problems?

“If properly skilled and with appropriate network planning, the risk for a data centre manager should actually be lowered when managing a cloud services environment,” says Telstra’s Fagan. “Cloud is actually designed to fail, meaning that with proper architecture there should be built-in redundancy to the entire solution, including the network. I would argue this is more resilient than relying on a single point of failure even if it is ‘carrier grade.’”

What has clearly emerged over the last few years is that in order to succeed and even remain relevant today, IT pros should be more business savvy and play a wider role within their organisations. There is therefore an increased need for them to understand business targets and aims.

“IT used to be siloed but in the cloud/ multi-cloud environment this needs to have an integrated approach,” says Equinix’s van An del. “IT needs to support the business objectives in order to stay competitive.”

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Therefore, as opposed to being more at risk, KEMP advises 'traditional' data centre managers to establish cross-functional collaboration across silos, working more closely with newly emerging groups in enterprise IT such as digital performance management and critical lines of business.

"By adopting this approach, each group is able to contribute more effectively and take shared responsibility," says Dover. "In much the way as an enterprise adopting public cloud services inherently takes a shared risk between themselves and the cloud service provider, the only way for success within the enterprise is similar thinking and execution model across business units. Key named champions in IT and the business should drive this."

If anything, the cloud adds more levels of complexity so there are various different areas in which individuals take responsibility. As Jones is keen to point out, it's a team effort at UKFast and one person never takes the fall. "Ultimately, responsibility for our eCloud lies with the CTO, but responsibility is also devolved across all areas of our networks, infrastructure and service provision."

It's a similar situation at Pulsant. Lovell says there is a need for significant expansion in skills and resources in data centre teams to enable a data centre manager to cover all aspects of cloud exchange networks — especially given the competencies and areas of expertise involved, with the primary focus of most data centre managers being operational integrity and efficiencies, as well as maintaining security operations.

"While the leadership and process governance will be led clearly and effectively by data centre managers to achieve the customer outcome of service availability, this will require investment and expansion of team skills and resources."

Richard McMahon, head of support and infrastructure at iomart, agrees: "The cloud is meant to be easy but delivering it and managing a network for thousands of servers is not. We've invested millions in our people and network to deliver enterprise cloud services as easily as possible, but we've done it by defining roles and responsibilities."

For McMahon, the data centre manager should be the person concentrating on "keeping the lights on", making sure the cooling is working, and driving the

facility's overall efficiency. But he adds that iomart has multiple data centres and a private network, so it has to keep roles and responsibilities separate.

"Networks at data centre scale are massively complex creatures and should fall under an operations or infrastructure manager. There has to be a clear separation of skills and responsibility, especially when network skills are so hard to come by. The network might run in the data centre but it's an entirely different proposition."

McMahon goes on to state that there are nowhere near enough skilled individuals who truly understand how things operate under the covers. "The DevOps approach doesn't fix it either — who is going to troubleshoot the underlying infrastructure when the API doesn't work? Every vendor has a different way of delivering on the scalable

network requirement that has its own limits and challenges. Engineers with these skills are really hard to find."

And perhaps the ultimate challenge that needs to be overcome is to maintain the suitably skilled resources needed to manage increasing complexity when it comes to data centre and cloud networks.

As Lovell explains, service providers such as Pulsant are increasingly investing in skills development and additional networking expertise to complement existing data centre support teams to deliver customer requirements.

However, the areas of expertise incorporate a variety of key specialisms, such as: network and application security; network performance management and optimisation; SDN; and centralised policy management. And all that's on top of competencies and expertise in specific

networking standards to interconnect application interfaces between different service provider solutions and standards.

Many commentators, such as van Andel, therefore believe that IT pros will have to gain cloud service provider knowledge in addition to networking and security knowledge. They say hardware specific expertise/certification is becoming less important as the ability to partner is now gaining greater significance.

As Telstra's Fagan concludes: "Understanding these challenges and how to mitigate them becomes the essential knowledge base. However, the greatest tool a data centre manager can have today is intellectual curiosity and a willingness to learn. Cloud services has created a new paradigm in data centre operations and data centre managers must embrace this change to successfully adapt." ■



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"The greatest tool a data centre manager can have today is intellectual curiosity and a willingness to learn."

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Highlight (formerly netEvidence) has extended its network monitoring service to cover Wi-Fi. The new monitoring and reporting capability within the *Highlight* cloud-based service is said to enable organisations to gain a single, clear and fast picture of their wireless infrastructures.

The service's *Wi-Fi Real Time View* feature is said to show the actual activity and performance across a Wi-Fi environment including signal strength and capacity, plus the number of users competing for bandwidth and activities being undertaken.

Highlight says this is integrated with the platform's ability to monitor and report on all the other technologies an organisation relies on 24x7 covering the digital landscape, irrespective of whether they are provided internally or externally.

Cisco and Aruba wireless controllers are currently supported with further manufacturers such as Meraki to be added in the near future.

Highlight says many customers have been using separate engineering-based tools to watch over Wi-Fi services. It believes these are often too convoluted for busy managers to gain a quick and clear view of what is happening. The firm claims *Highlight* delivers all essential data within a lucid,

graphical format, as well as offering information for further analysis.



Ideal Networks promises faster troubleshooting thanks to its upgraded *LanXPLORER Pro* handheld device. And test reports, in PDF or CSV formats, can now be shared by using a mobile app.

The company says the device connects

directly to a specific point rather than scanning an entire network. Ideal says it can therefore quickly verify status and connectivity, and then monitor the total network bandwidth to identify devices which may be reducing performance.

In addition, new *NETMAP* and *NETVERIFY* functions can perform full network scans to find and display all active devices by IP address, MAC address as well as host name. These results are then saved and compared with future *NETMAPs* to easily identify any changes.

With the newly designed Wi-Fi interface, it's claimed the *LanXPLORER Pro* can connect and troubleshoot a network anywhere. It can also perform a Wi-Fi site survey that displays the access point ID, signal strength, channel and encryption status of a network, identifying any causes of connection issues.

For VoIP calls that fail to connect or have issues with poor quality, the device is said to measure signalling processes

and QoS in real time using SIP, and provides metrics for troubleshooting.

Users can now choose between two diagnostic modes, both of which, says Ideal, find and solve issues faster, including faults that cannot be found with standard management software.



KEMP Technologies has introduced *KEMP360*, designed to help users simplify and streamline application delivery management across all hosting platforms, from the data centre and private cloud to IaaS, PaaS, hybrid and public clouds, including *Microsoft Azure*, *AWS* and *VMware*.

KEMP360 aims to offer a single point for application infrastructure control, monitoring and diagnosis, along with centralised management across KEMP's entire range of ADC technologies such as the *LM800* (pictured). The vendor adds that it also drives operational efficiencies through increased visibility and reduced management overheads.

The application delivery framework comprises two elements. Firstly, *KEMP360 Central* is said to simplify day-to-day application delivery across multiple load balancers and hosting platforms from different vendors, through centralised service management, log collection and administration. It's

claimed this reduces operational costs and improves application uptime.

Secondly, *KEMP360 Vision* is a proactive 24x7 monitoring and alert service that mitigates the impact of application delivery performance issues. It provides real-time visibility of events and workload availability, along with rapid remediation and consolidated reporting across all application workloads.

KEMP says that by using real-time visualisation of the application delivery environment to diagnose issues, IT organisations can quickly fix problems and automate routine administration tasks.



Schneider Electric has enhanced its DCIM suite with the launch of *StruxureWare Data Center Operation v8.0*.

The new release includes features that enable a higher level of asset visibility for key data centre stakeholders, including tenants in colocation environments, and across both IT and facilities. This, says Schneider, allows management of data centres across multiple domains for an "ideal balance" of high availability and peak efficiency throughout the entire data centre life cycle.

Other new features include a web client to allow user visibility into data centre assets, power usage and power capacity via any modern web browser

There is also a tenant portal which, says the company, provides tenants with an overview of their hosted data centre solution, including insight into

the rooms, cages and racks, reserved capacity, measured power and rack temperature.

Tenants also have access to a KPI dashboard. This enables them to view their assets without direct access to the collocator's local network. The coloprovider can enable/disable the tenant portal access for each individual client and decide what information is shared.



SolarWinds has added two new features to its *Network Performance Monitor (NPM)*. The firm claims that one of them, *NetPath*, makes *NPM 12* the only network monitoring software that visually maps hybrid network paths alongside on-premises data.

In complex hybrid IT environments, SolarWinds says network administrators need the ability to view the performance details of and pinpoint bottlenecks on all the networks connecting critical services and applications, whether they be on-premises or in the cloud.

The company says *NetPath* means that users of cloud-based applications can identify the exact location of a performance issue — whether on the internal LAN, with a WAN provider or on the cloud application vendor's own network — and see how to solve the problem.

The second new feature, *Network Insight*, is said to provide depth by enabling comprehensive monitoring of load balancing environments, giving users deeper network intelligence, including dynamic and visual insight into the performance of applications and service delivery.

Network Insight provides a graphical display of relationships and component status, as well as visualisation of component details in a single console.



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Skills shortage delays new tech trends, says survey report

A lack of skills and understanding could be holding back the implementation of new technological trends, says a new report.

Trends vs. Technologies, from Capita Technology Solutions in partnership with Cisco, includes a survey of IT professionals across multiple industries. It reveals a strong disconnect between nine key trends and the ability of businesses to implement the technology to realise those trends. The trends are: Big Data, digital workplace, artificial intelligence, Internet of Things, wearable tech, robotics, cloud-based solutions, 3D printers and virtual reality.

Among the key findings is the lack of a link between the apparent relevance of a trend compared with the number of decision makers who say their industry has the skills to implement it.

For example, while 70 per cent of IT decision makers said the Internet of Things (IoT) was relevant to their business, almost three quarters (71 per cent) said they did not have the skills to identify the opportunities for growth it offered, while 80 per cent said they did not have the skills to capitalise on the data received from IoT. Just 30 per cent said it was being implemented.

Similarly, nine out of 10 businesses said Big Data was relevant to them, but it was being implemented in fewer than four in 10 (39 per cent). Sixty four per cent did not have the skills to recognise how they could use Big Data in their business.

The most prevalent barrier to implementation of IoT was the perceived risk of security breaches, data governance and overcoming problems created by adapting legacy IT systems. This was also the top barrier to the implementation of Big Data, along with data governance issues and cost.

Here come the girls as campaign hits target

Next Tech Girls has hit its target of placing 100 year 10 girls into work experience programmes this year. The initiative aims to inspire 5,000 more females to pursue careers in technology by 2020 – at present, just 17 per cent of the sector's workforce are women.

More than 100 students from across London who are currently taking ICT or Computing at GCSE level have been offered a glimpse of the careers the sector offers through successful placements at companies including Virgin Money, Hive, Aberdeen Asset Management, Softwire, VE Interactive, and Telefónica's startup accelerator, Wayra.

The project is supported by working groups and bodies including TechUK, Tech London Advocates and the Greater London Authority. Steve Brown, programme manager and director of recruitment company Empiric which launched the campaign, says interest from clients looking to host students has been greater than expected.

He adds: "The talent shortages that the tech and digital sectors are currently facing are intrinsically linked with female under-representation, and we are not alone in seeking a solution to this challenge. Less than a year after



Empiric director Steve Brown says the talent shortages in the tech and digital sectors are "intrinsically linked" with female under-representation.

inception, Next Tech Girls has already proved that there is a real appetite to tap into fresh young talent pools – the only piece missing from the jigsaw was a facilitator. We're already working on Next Tech Girls 2017, and are well on target to secure 5,000 placements by 2020."

NEW COURSES

ISO/IEC 27017 for cloud computing – BSI
BSI has introduced certification and training to support the use of its *ISO/*

IEC 27017 Information technology – security techniques – code of practice for information security controls.

The organisation says the rapid uptake of cloud computing had brought a challenge to its earlier *ISO/IEC 27000* code of practice because it mostly dealt with security within one organisation, yet cloud computing involves the user and provider.

ISO/IEC 27017 looks at the roles and IT responsibilities of both the cloud service customer and the cloud service provider when it comes to delivering security controls. Its benefits are said to include greater reassurance that data is well protected, increased competitive advantage by demonstrating robust controls are in place, and help in reducing the possibility of a breach which could mean regulatory fines and reputational damage.
www.shop.bsigroup.com

Linux Security Fundamentals (LFS216) – Linux Foundation

This online self-paced course is intended for those involved with security at all levels, and is part of the foundation's aim to help secure the internet and other Linux and open source software and IT infrastructure. It uses virtual appliances to demonstrate 'what happens when' rather than relying on typing exercises to configure complex servers.

LFS216 starts with an overview of computer security and touches on how security affects everyone in the chain of development, implementation, administration, and end use.

Topics covered include: threats and risk assessment; auditing and detection; application security; kernel vulnerabilities; local system security; network security; denial of service; and firewalling and packet filtering. www.linuxfoundation.org






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