

# networking

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# Uptake of public sector network services accelerates

by Rahiel Nasir

The use of the new Network Services Framework for public sector users is growing, according to a recent marketplace review conducted by Innopsis.

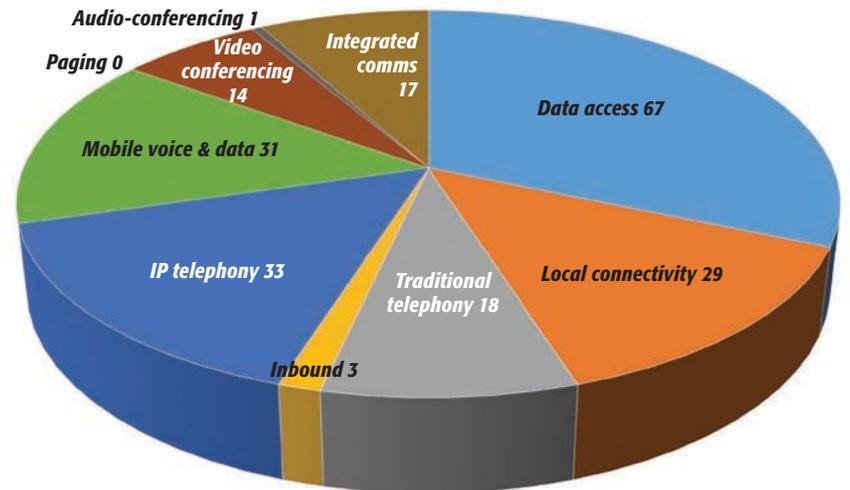
Consisting of ten lots of services and 59 suppliers – of which more than 30 per cent are SMEs – the RM1045 framework replaced the previous PSN Services and PSN Connectivity frameworks in August 2015. It is now used by the Crown Commercial Service (CCS) to provide the public sector with an approved route for procuring connectivity solutions.

Innopsis is the industry association for companies that promote information sharing for better public services. According to the latest information published by CCS, it says procurement activity under the new framework is

accelerating. The association believes it is now “reasonable to expect” an annualised rate in excess of 400 contract awards. In a previous review of the PSN Services and Connectivity Frameworks in March 2016, it said there were a total of 602 contract awards over a three-year period – an annualised equivalent of just 200.

Innopsis also reviewed the distribution of business across the different requirements of network services. This indicated a good spread across most of the lots, with data access, IP telephony, local connectivity and mobile all stimulating significant interest.

“This is a much healthier position than the PSN agreements, where some lots saw very high levels of activity whilst others were more or less unused,” says information director Kelvin Prescott.



The number of requests for proposals and information for network services issued by lot under the public sector's new TM1045 framework.

SOURCE: INNOPSIS/CROWN COMMERCIAL SERVICE

“There are a couple of lots that languish at the bottom of the RFP league table – notably paging which has yet to see a single tender, and audio-conferencing which has had just the one.”

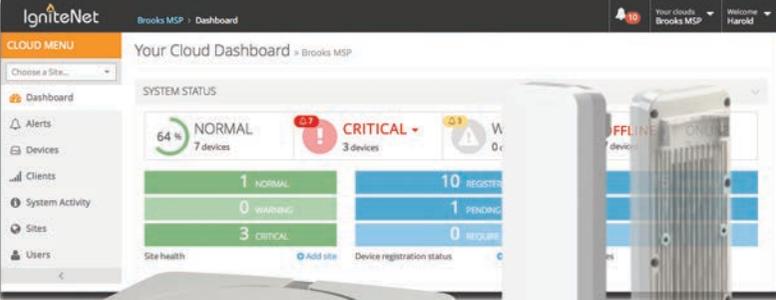
The association says a total of 214 requests for proposals (RFPs) have been

issued since last August, with the total due for submission in each month increasing consistently to reach 66 in March 2016. It predicts that March is likely to end up being the peak month as it represents the end of the financial year.

(Continued on page 2)



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## OVH paves the way to hyper convergence and hybrid cloud

OVH has launched what's claimed to be the first step in 'on demand software-defined data centres', a new generation of intelligent virtual data centres equipped with dedicated resources that are fully automated.

According to the France-based IT firm – which is claimed to be Europe's number one hosting provider – businesses want to decrease the time to deploy and configure their network security. The company has now integrated its *Dedicated Cloud* with VMware's *NSX* virtualisation platform.

OVH reckons this will enable infrastructure managers to deploy, in just a few clicks, all the necessary components needed to build their platforms. As well as including firewalls, load balancing, private networks, etc., the new platform will also allow them to define their security policies easily and directly via their VMware *vSphere* consoles.

The company plans to supplement the offer with additional virtualised elements such as SAN and management as-a-service.

In addition, it says the integration of VMware's *vRealize Operations* will simplify infrastructure management and maintenance. According to OVH, this will give network administrators a real-time view of what is happening on the infrastructure, as well as the ability to perform load or growth diagnostics and manage resource capacity.

The company goes on to claim that businesses can “completely rely” on its *Dedicated Cloud* to externalise all or part of their infrastructures in OVH data centres. It says optimal security is guaranteed as the platform is PCI-DSS, ISO 27001, SOC 1 and SOC 2 type 2 certified.

CDW and Riverbed launch 'Branch as a Service' – News, p6.

# Businesses need to take DNS attacks more seriously

In what's claimed to be the first survey on DNS security, EfficientIP has found that 25 per cent of businesses aren't implementing any kind of security software.

The DDI solutions specialist polled 1,000 senior security professionals from across a range of small, medium and large vertical enterprises in North America, Europe and Asia Pacific. Its study revealed that 74 per cent of chief security officers and network directors have been victims of DNS attacks. However, despite 79 per cent being aware of the risks associated with DNS, only 59 per cent were using any form of DNS security.

The survey also identified the top three DNS attacks that have the largest impact on an organisation. Top of the list are DDoS attacks – 22 per cent of the companies surveyed had been subject to DNS-based DDoS assaults in the last year.

Data exfiltration came next. Here, 12 per cent of organisations in North America and 39 per cent in Asia have had data infiltrated via DNS in the last year. Thirdly, almost 20 per cent of the firms surveyed had suffered an attack using DNS zero-day vulnerabilities in the last year.



In the UK, the study found that application downtime affected 35 per cent of businesses and was cited as the biggest effect of a DNS attack. A compromised website (23 per cent) and loss of business (17 per cent) were also reported as having major impacts.

EfficientIP points out that while firewalls can protect on a basic level, they're not designed to detect DNS tunneling attempts or deal with high bandwidth DDoS attacks (the majority of DDoS attacks are now more than 1Gbps). It adds that most enterprises still rely on the 'out-of-the-box' non-secure DNS servers offered by Microsoft or Linux.

"Companies and their IT departments still don't fully appreciate the risks from DNS-based attacks," says EfficientIP CEO David Williamson. "In just under two years, GDPR will come into effect and companies will be held responsible for all security breaches and could face major fines. It's crucial for all businesses to start taking DNS security seriously."

*New security software to help defend your data – p14.*

**EfficientIP CEO David Williamson says most enterprises still rely on 'out-of-the-box' non-secure DNS servers.**

## Public sector network uptake

(Continued from page 1)

Prescott says that at this stage it is not known how many of the requests for information and proposals will turn into actual contracts. "In addition, we don't know what the value of those contracts is, so we can't say for certain whether the total amount of spend is higher or lower."

The figures provided by the CCS do not include information about direct awards, whereby a customer has chosen to place a contract directly through the catalogue without undertaking a further competition. Innopsis says this is a key feature of RM1045 as it provides much greater flexibility for customers who know their requirements in advance and can evaluate and identify the best option directly.

However, Prescott says more information on direct awards would be welcome in order to give a complete picture of RM1045's adoption. "What is clear though is that it's already proving to be a success with customers," he concludes.



**Innopsis' information director Kelvin Prescott says the new framework is proving to be a success with the public sector.**

## Telepresence to help boost Scottish interest in STEM

Glasgow Science Centre will soon have a new network to enable students and teachers to seamlessly connect, communicate and collaborate with scientists from around the world. It will also allow visitors to join seminars as well as share experience and knowledge with global experts.

The project is a result of a partnership between Cisco and Lanarkshire-based communications specialist Provista UK. The latter will deploy a *Cisco Collaboration* platform to the centre and offer support to ensure its smooth running.

Glasgow Science Centre is an independent charity, and one of its primary objectives is to promote science, technology, engineering and maths (STEM) in Scotland. Its chief executive Dr. Stephen Breslin says: "We want to inspire young people to develop an interest in STEM subjects and enable them to pursue rewarding and exciting careers within the industry. This new programme element will help



**Comms specialist Provista will install and support Cisco's Collaboration system at Glasgow Science Centre.**

us bring these jobs to life in real time and demonstrate the many varied careers that are available to our young people."

Breslin adds that the new Cisco equipment will allow pupils at the centre to meet and engage with experts working in the STEM industry from anywhere in the world using telepresence technology. ■

## Underground workers never lose mobile signals thanks to R&S

The European Organisation for Nuclear Research (CERN) is using network testing technology from Rohde & Schwarz (R&S) to ensure its staff can get a mobile signal deep underground.

At an average depth of some 100 metres and covering an area of more than 50km of tunnels and caverns near Geneva, CERN operates the world's largest particle physics laboratory and the famous Large Hadron Collider. The circular tunnel system with a circumference of 27km is said to be one of Europe's most widespread underground areas with complete mobile network coverage.

R&S says network stability and reliability is crucial for ensuring mobile telephony and data services for the employees in these facilities. Comprising several surface radio base stations and 46 underground repeater sites, the custom designed network supports 2G/3G/4G technologies.

To monitor real-time service quality in line with SLAs, CERN is using R&S' *QualiPoc Remote Control* measurement system supplied by its local subsidiary, SwissQual. The company deployed 60, network-wide measurement probes to continuously measure multiple RF parameters. It runs sched-



**Sixty of R&S' measurement probes have been deployed across CERN's mobile network.**

uled QoS and QoE tests to verify SLAs and monitor communication services. Reporting to a central server, a fully featured backend application processes the data and provides a real-time overview of the network.

R&S claims its testing system guarantees that any mobile network problems at CERN are immediately detected and can be acted upon before QoS and QoE are affected.

Frédéric Chapron, CERN's head of communication services, adds: "Also, the smartphone-based network probe fulfils the stringent criteria regarding compactness, reliability and energy consumption. *QualiPoc Remote Control* can be fully remotely controlled, allowing remote configuration, data analysis and reporting." ■



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# London councils not monitoring IT energy

Many local authorities in the capital are not doing enough to reduce their PC energy use and costs, according to Streamwire.

In April, the IT services aggregator sent Freedom of Information requests to all 32 London Boroughs. It asked them a range of questions about the power consumption of their desktop computers, and whether they had clearly defined strategies in place to reduce IT energy consumption.

Of the 25 that responded, only seven were able to accurately calculate power consumption of their desktop computers, while 18 were not able to.

Streamwire COO and co-founder Kevin Timms says: "Beyond the fact that most councils do not even have the tools in place to understand current power consumption, energy efficiency appears to be a by-product of adopting new technology rather than by looking at it as an objective in its own right."

"A further concern is the number of responses that suggested that local authorities' strategies start and finish with asking their staff to switch their

**Streamwire's Kevin Timms says council IT energy strategies seem to begin and end with asking staff to switch-off their PCs at night.**



computers off at night. This is quite rudimentary and there are many ways that energy efficiency can be ramped up."

Timms says energy efficiency needs to focus around the employee and how they operate. He points out that IT is one of the keys to achieving better energy efficiency and should be a higher priority across local government.

"Energy efficiency should be a major plank in any IT strategy as it is a significant contributor to the cost of operations. It is also important that the government has its own house in order as it encourages all of us to use less energy and become more environmentally conscious." ■

# Weightless and ETSI partner to develop LPWAN standards

In a move widely acknowledged to bring much needed consolidation to the LP (Low Power) WAN market, the Weightless Special Interest Group and European Telecommunications Standard Institute (ETSI) are teaming-up to ensure that all those interested in ultra narrow-band (UNB) solutions are represented in a single forum.

The Weightless SIG is a global member-based organisation that aims to manage the development of wireless connectivity technology

**Telensa's PLANet smart streetlight solution is said to have a global footprint of more than a million lights.**

## THE WORLD ACCORDING TO...

Marty P. Kamden, chief marketing office, NordVPN

### What the IP Bill means for online security and privacy

The Investigatory Powers (IP) Bill has passed through the House of Commons. It now only has to go through the House of Lords in order to be signed into law, which could be as early as autumn.

Opening a door for government to access web browsing data and metadata would make everyone's online activity vulnerable as the open gap can be easily accessible to hackers, fraudsters, system dysfunctions, etc.

Through collection of metadata, a full profile of someone's online habits, preference patterns and personal details can be created. With so many stakeholders involved, the likelihood of mishandled data is quite high, as are the repercussions. If any of the companies (ISPs and telcos) or government agencies mishandle internet user information, the cyber security breach can become a huge and costly fiasco.

If the bill is signed into law, communications companies will be legally bound to help agencies access all mobile devices and computers. As a result, more users than

ever are searching for ways to strengthen their online privacy and protection.

Many become first-time subscribers to VPNs that offer a superior level of data encryption, going beyond the device's built-in protections which might soon be weakened even further.

Like many VPN service providers, NordVPN believes in online privacy and a free internet. We feel that instead of weakening online encryption, it should spread massively and be available to all online users not only through their tech devices but also through VPNs.

VPNs connect a user to the internet through an alternative path. They encrypt data through a secure tunnel, thus protecting any sensitive information about the user's location by hiding an IP address. The only information visible is that a user is connected to a VPN server and nothing more. All other information is encrypted by the VPN's protocol. This is handy when a user doesn't want their real IP traced back to them.

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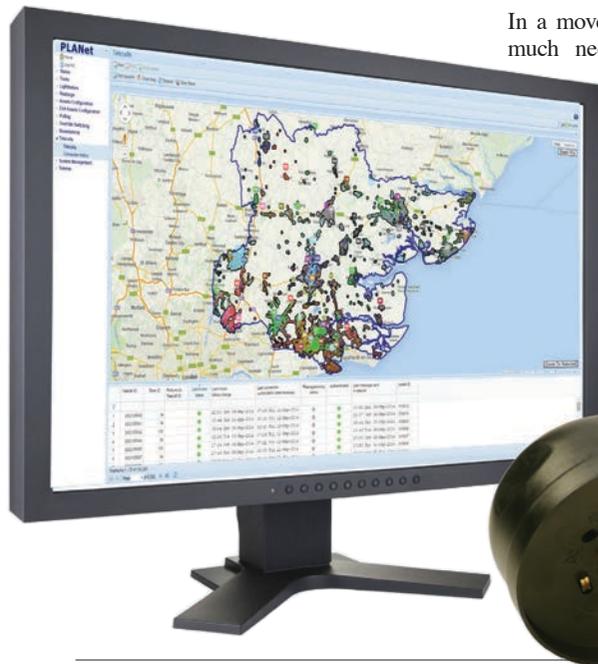
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specifically for machine communications in the Internet of Things. It will offer its *Weightless-N* standards activities into ETSI's Low Throughput Network (LTN) network initiative which will develop a UNB standard for LPWAN.

Weightless CEO Professor William Webb says: "In order to reduce fragmentation and enable critical mass in the marketplace, we are bringing these two initiatives together, immediately reducing fragmentation and providing a platform around which industry can coalesce."

The partners say they are the only organisations that have developed IoT

specific standards for unlicensed spectrum based on UNB technology. Weightless will focus on certification, ecosystem development, marketing and information dissemination, as well as other relevant activities to aid the widespread success of the ETSI standards.

The SIG has also appointed Telensa to its board. The Essex-based firm makes wireless smart city control applications that are based on its own two-way UNB technology which it has been progressing to a standard with ETSI for the past two years. ■

Who's responsible for running the IoT? Feature pp11-13.

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## Software-defined infrastructure

IBM has expanded its portfolio of software-defined infrastructure solutions with cognitive features. *IBM Spectrum Computing* is designed to make it easier for organisations to extract full value from data to accelerate performance-intensive analytics or machine learning. Citing estimates from IDC, IBM says the market for software-defined infrastructure – where the data centre is managed, provisioned and automated by software regardless of compute, storage or network components – will reach nearly \$51bn by 2019, growing at a rate of 23.8 per cent from 2014 to 2019. According to IDC, this makes it the fastest-growing segment of the infrastructure market. ■

## North Lanarkshire joins SWAN

North Lanarkshire Council has joined the Scottish Wide Area Network (SWAN), Scotland's public services network. The council comprises more than 150 educational and 200 corporate establishments, and caters to 340,000 residents including 49,000 pupils. The services it will use across the SWAN will utilise around 250 circuits and bandwidth capacity of up to 1Gbps. The network itself is being delivered through a framework agreement signed with Capita IT Enterprise Services in February 2014. Since then, Capita says more than 3,750 sites and almost 4,000 circuits have been connected, and a core network and operations centre has been built. ■

## CREST Certification for Rapid7

Rapid7 has been awarded CREST membership for the delivery of penetration testing services. The firm says its testing team performs "rigorous" assessments to demonstrate the security level of an organisation's key systems and infrastructure, including network, application, mobile, wireless, device and social engineering assessments. It adds that the process identifies and clearly documents the risks posed to an organisation from the perspective of a motivated and skilled attacker. CREST certification also indicates that Rapid7 has the appropriate policies, processes and procedures in place for conducting penetration testing and for the protection of client information. ■

# Storage management is now a bigger pain than performance

IT teams are now more pained by manageability than performance when it comes to data storage, according to Tintri.

As part of its 2016 *State of Storage* study of virtualised enterprises, the firm questioned 300 data centre professionals about their pains, priorities, opinions and concerns around the storage industry.

Forty-nine per cent of respondents identified manageability as their biggest concern – that's a jump of 10 percentage points compared to last year's survey when

performance and latency topped the list of pain points, says Tintri. More than a third also revealed that they still rely on antiquated spreadsheets to manage and map their VMs.

In addition, respondents noted that their virtual footprint continues to grow, with one in three indicating that 90 per cent of their applications are virtualised, and four in five saying they were at least 50 per cent virtualised. Half of those questioned oversee at least 500 VMs, and more than a quarter manage 1,000 or more.

Tintri CMO Yael Zheng says the results indicate that the storage landscape and its challenges continue to evolve, and IT professionals are increasingly concerned about the challenge of managing a complex, virtualised infrastructure.

He continues with a warning: "As virtualised and cloud environments expand to tens of thousands of VMs, the burden on IT to manage storage with reduced staffing, predict future growth, and maintain uptime will stretch resources to a breaking point." ■

## Workspace extends digital partnership with Excell

Excell Group has extended its existing partnership with Workspace Group by signing an eight-year IT managed service contract worth more than £60million.

Excell – which claims to be the UK's largest independent company to own its own network – says it will continue to invest in "significant upgrades" to connectivity in Workspace properties. This includes installing one of the UK's first 10G fibre connections and 1.3Gbps community Wi-Fi into a commercial multi-let building.

Workspace owns and manages some 70 properties across London, and is home to around 4,000 so-called 'NGCs' ('new and growing companies'). Its partnership with Excell aims to offer those businesses access to high-quality network speed, performance and security, as well as managed connectivity, cloud and communication services.



Around 4,000 new and growing companies are said to use Workspace's various sites in London.

Workspace says its extended partnership with Excell will enable it to offer customers quality bespoke packages that meet their individual needs, as well as technical support from the start.

The two companies say that they not only provide a building-wide Wi-Fi network, designed from the ground up to avoid wireless signal interference, but also ensure that each customer has the right product and

support for their business. Excell adds that a "comprehensive" security management system ensures the resilience of the network and aligns with each customer's own internal network security.

The company also claims that its partnership with Workspace uniquely offers customers flexible contracts that match the break clause in their Workspace lease, giving them the freedom to develop and grow. ■

## Unified comms becomes sweeter for Peppermint

Peppermint Technology has replaced its basic unified communications system with a fully hosted solution provided by VIA.

Peppermint is a specialist provider of legal software and has developed the unique *Legal Service Platform*. Built using *Microsoft Dynamics CRM* and *SharePoint*, the platform works as a single application and source of data for law firms. Earlier this year, the firm partnered with Pulsant to host the platform in the cloud (see *News*, Feb 2016).

Since 2010, Peppermint had been using a hosted *Microsoft Lync* system which had limited features. In a bid to update its internal processes, benefit from increased UC functionality, and to reduce potential



The new UC system allows staff to share information with their clients more effectively.

downtime, the firm decided to upgrade to *VIA Voice*, which includes the latest *Skype for Business*, at its headquarters in Nottingham. The new platform has a con-

ferencing facility and document-sharing feature, enabling staff to share information and relevant documentation with their clients more securely and effectively.

As a part of the new system, VIA has also installed its advanced call routing technology. It says this effectively directs incoming phone calls to the correct departments, increasing efficiency and enhancing the overall customer experience.

VIA adds that each of the team's 70 employees were "seamlessly" transferred during the upgrade with no downtime. Employees were provided with new numbers and also received training on how to maximise the use of the platform. ■

# IgniteNet

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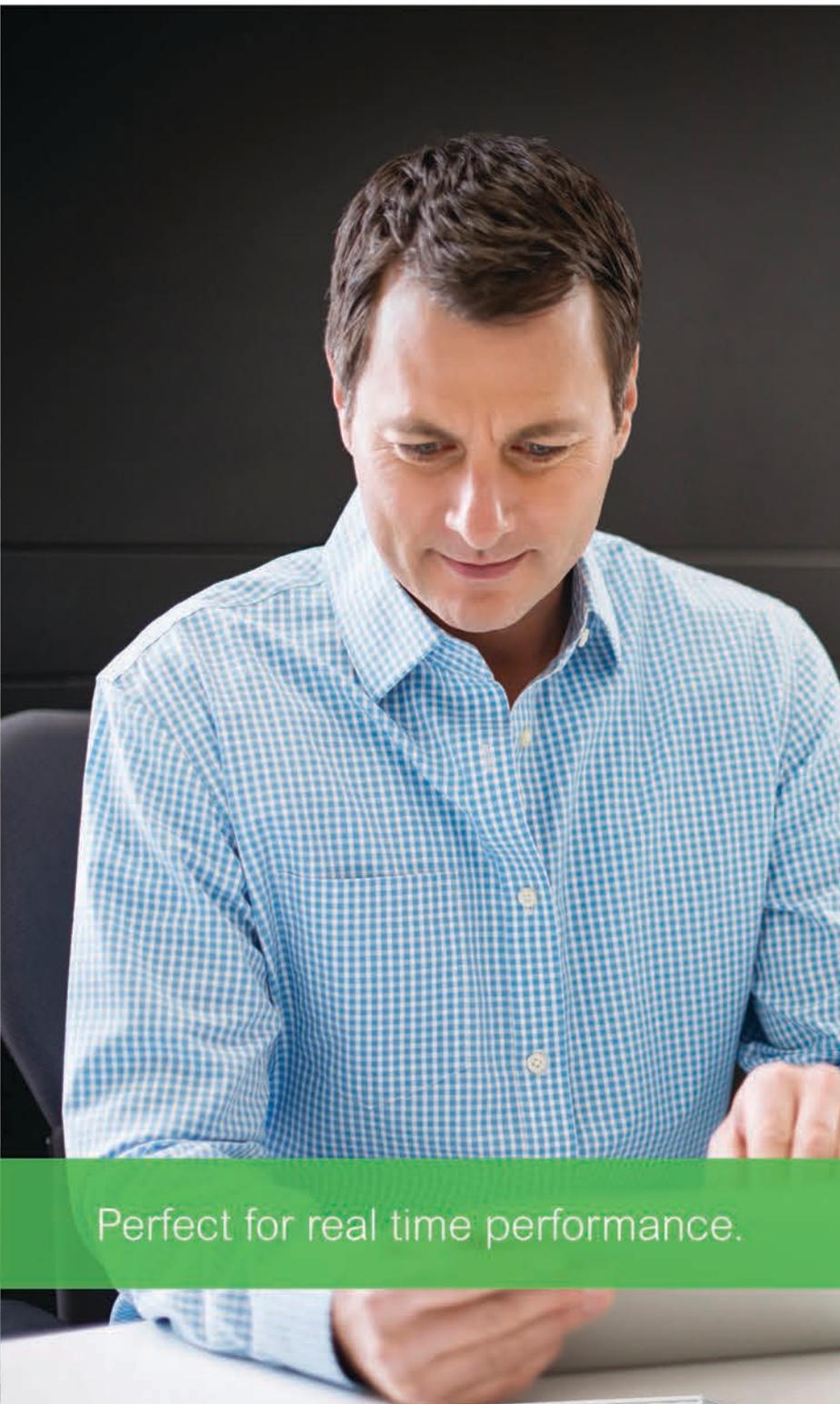


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SteelConnect includes a fully integrated range of components, including the S24 switch.

## CDW launches 'Branch as a Service'

London-based global IT service provider CDW is offering a new service that claims to relieve the burden of managing local infrastructure at remote locations.

The firm says *ServiceWorks Local* is suited to any organisation that has remote offices and geographically dispersed IT systems. By eliminating the need to purchase, maintain and backup servers in remote offices, CDW claims its service offers a cost-effective solution to implement across enterprise IT infrastructures.

*ServiceWorks Local* is offered through CDW UK as a managed service that can be tailored to host a number of VMs sized to suit from small to large remote offices.

It uses Riverbed's *SteelFusion* platform to create a software defined edge solution that aims to extend the power and security of centralised data centres out to remote office and branch locations.

Riverbed adds that *SteelFusion* includes intelligent storage delivery, virtualisation and WAN optimisation converged into one stateless appliance that replaces traditional infrastructure in remote locations.

"Combining [*SteelFusion*] with CDW

UK's data centres results in a software defined edge solution that is easy to deploy," says CDW CTO and international VP Andy Eccles. "Partnering with Riverbed has enabled us to remain ahead of the curve, bringing a unique 'Branch as a Service' offering to the UK market, which removes all the headaches associated with distributed computing."

■ Riverbed has launched a new software defined WAN platform. The company claims *SteelConnect* is the industry's first and only product to unify network connectivity and orchestration of application delivery across hybrid WANs, remote LANs and cloud networks such as *AWS* (available today) and *Microsoft Azure* (expected later this year).

*SteelConnect* includes a fully integrated line of secure WAN gateways, remote LAN switches and Wi-Fi APs, all managed centrally via a cloud console. Riverbed reckons the platform "dramatically" simplifies and streamlines the process of designing, deploying and managing distributed networks, enabling organisations to modernise their network architecture. ■



### VIEW FROM THE TOP

Ashwin Viswanath, head of product marketing, Talend

## The five phases of data integration on the journey to the cloud

**Phase 1: replicating SaaS apps to on-premise databases.** Companies in this developmental phase typically either need analytics on business-critical information in their SaaS apps, or they are sending SaaS data to a staging database to be picked up by other on-premises apps. To increase the scalability of existing infrastructure, it's best to move to a cloud-based data warehouse service within *AWS*, *Azure*, or *Google Cloud*.

**Phase 2: integrating SaaS apps with on-premises apps.** There isn't yet a widespread SaaS solution that can serve as a replacement for ERP systems such as *SAP R/3* and *Oracle EBS*. Businesses should first look to accomplish a few use cases well so their business can continue running, while benefiting from the agility of cloud.

**Phase 3: hybrid data warehousing in the cloud.** Databases or data warehouses on a cloud platform are geared toward supporting data warehouse workloads. As data grows, enterprises need a strategy to move data from on-premises warehouses to newer, Big Data-friendly cloud resources. They can start by trying to create a 'data lake' in the cloud with a cloud-based service like *AWS S3* or

*Microsoft Azure Blobs*.

**Phase 4: real-time analytics with streaming data.** In order to benefit commercially from real-time analytics, businesses need an infrastructure to help them achieve rapid data insight. IT leaders should first assess all their data sources to judge which must remain on-premises versus those that need to be moved to the cloud.

**Phase 5: machine learning.** This has the potential to make applications more powerful and responsive. However, businesses will need to leverage skilled developers who understand the potential machine learning offers to drive everything from enhancing customer experience to serving up hyper-personalised content.

In order for companies to reach phase 5, of course, they will need to have first achieved each of the previous phases. That's where we see a key role for iPaaS (integration platform-as-a-service). This can help businesses achieve the necessary integration, and even bring in native Spark processing capabilities to drive real-time analytics, allowing them to move through and successfully complete all the phases outlined above.

## Sierra helps Movimento move closer to "software-defined car"

Car manufacturers can now offer owners cloud-based embedded software maintenance and the latest capability upgrades over their vehicle's entire lifecycle, thanks to a partnership between the Movimento Group and Sierra Wireless.

US-based Movimento specialises in technologies such as vehicle re-flash services and innovations in over-the-air (OTA) software to help realise what it describes as the "software-defined car". The firm's customers in the automotive industry include Bosch, Continental, Ford, GM, Volvo, amongst others.

Under the new partnership, Movimento will integrate its OTA technology with Sierra Wireless' device-to-cloud solution to provide what's claimed to be the industry's

first commercially available cloud-based platform to maintain connected cars.

All vehicles have numerous software programs running on a network of electronic control units (ECUs) that need to be individually managed and maintained. Sierra and Movimento say their solution enables automotive OEMs to update software for all ECUs simultaneously over-the-air.

Movimento's software update client runs on the Linux-based *Legato* application framework that is embedded into Sierra's 4G automotive modules. Using the vendor's *AirVantage* cloud platform, it's claimed carmakers can "seamlessly" upgrade all vehicle software by simply logging into the dashboard over a secure network and selecting the appropriate update campaign. ■

## Customers value more than price when it comes to cloud services

The pricing of cloud services "doesn't matter", according to 451 Research's latest *Cloud Price Index (CPI)* report. It revealed that the lowest-cost service providers have not won greater market share as a result of their pricing strategy. Instead, customers value additional services, local hosting and support and partnering with a familiar brand.

451's *CPI* is made up of a basket of goods, specifying the services required to operate a typical web server application including compute, storage, databases and management. More than 50 cloud providers from the US, Europe and APAC were surveyed for the latest report. After correlating global pricing for the *CPI* basket of goods against market share data from its *Market Monitor and Forecast*, 451 came up with a 'Cloud Commodity Score' (CCS). This measures cloud price sensitivity in each

region – the higher the CCS, the bigger the impact price has on market share.

By virtue of its size and economies of scale, the US is the cheapest market for cloud. However, 451 analysts believe that its low CCS of 18 per cent demonstrates that there are still opportunities in the region.

In Europe, price has less impact on market share with a CCS of 12 per cent and customers paying on average three per cent more than the US. APAC's CCS of just four per cent indicates that price changes have minimal impact on market share.

Dr. Owen Rogers, research director of 451 Research's Digital Economics Unit, says: "Being cheap doesn't guarantee more revenue, and being expensive doesn't guarantee less. Cloud is a long way from being a commodity. In fact, the real drama is the race to the top rather than race to the bottom." ■



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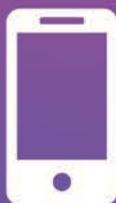


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# Avoiding a banking crisis

If time is money, then no financial institution can afford to have its network services go down.

## Cloud computing proves a safe bet for LCG

London Capital Group (LCG) specialises in online trading services and has now deployed an enterprise cloud solution from Nutanix to host its core financial services as part of a major investment and re-brand. The firm says this will support its aim to become the spread betting provider of choice for more than 70,000 clients, and reduce future operational costs as it expands globally.

LCG is using Nutanix's *Xtreme Computing Platform* to consolidate its computing, virtualisation and storage resources. The vendor claims that its single, highly scalable and turnkey appliance has given LCG a faster, simplified and more flexible replacement for its end-of-life IT infrastructure which previously relied on conventional server and SAN architecture.



According to Nutanix, all the installations were completed within two days. This included a "rapid" migration of all existing physical and virtual workloads to a VMware environment, while rack space has now been cut by 60 per cent.

The company adds that thanks to a "pay-as-you-grow" approach, LCG can scale its virtualisation environment and change its procurement and consumption model for IT as necessary. It reckons the group's IT team can cope with new workloads along with the peaks and troughs in demand across its data centres within the "tightest" time scales.

LCG CIO Blair Wright says: "The reduction in the complexity of installation and diverse skill set requirement we would have had with other vendors has been a major factor in keeping to our deadlines. We've managed with far less headcount than we thought, and haven't had to hire any specialist storage staff."

Nutanix adds that the ease of scalability and enhanced IT capability has far reaching benefits across the mix of financial solutions marketed by LCG. At their heart is *LCG Trader*, the company's online and mobile trading platform. Thanks to the enterprise cloud solution, it is now delivering faster and more reliable deal execution time – a key performance indicator of any spread betting business.

"While the world of spread betting



may be all about risk, the resilience and predictability that comes with deploying web-scale infrastructure that is 100 per cent software-defined offers some much-needed certainty that can be relied upon," says Paul Phillips, regional director, Nutanix.

## Diverse routes to financial hubs for global platform

London-based Fidessa provides 85 per cent of the world's major financial institutions with their trading and investment infrastructure, market data, and workflow technology. Transactions worth \$20 trillion are said to flow across the company's global network each year, and low latency connectivity that is stable and reliable are all therefore crucial.

As part of the regular evaluation of its existing network providers, Fidessa first engaged BSO Network Solutions in 2013 when searching for a supplier to deliver a totally diverse route between Singapore and Hong Kong that both regional and global customers could leverage.

Mark Bever, Fidessa's global head of data centres and procurement, says: "Singapore is a critical location for many of our customers. However, connecting such a complex region was always going to be challenging from a network perspective. We felt success would be dependent on finding a provider with the necessary specialist skills and knowledge of [the country]. Essentially, we needed a team to guide us through the region's particularities as well as source the appropriate connectivity."

Alongside cultural challenges, other considerations included technical requirements such as the need for new diverse switching technology and ultra-low latencies between locations.

To ease Fidessa's concerns, BSO designed a staggered sourcing and deployment framework. This involved the company utilising its established relationships in the region and extensive knowledge of global intra-region connectivity.

The Singapore-Hong Kong network included three stages. Firstly, BSO identified a suitable network link on its backbone with the necessary switching technology; secondly, it negotiated a commercially beneficial contract for Fidessa and its customers; and thirdly, it managed the service delivery and testing process to ensure a smooth transition that met the deadline. The network route was operational in just three months.

Following the success of the project, BSO worked with Fidessa to enhance its transatlantic connectivity with the addition of network routes and data centre services linking the key locations of London, New York and Chicago. BSO has also supported Fidessa's recent move to a new data centre location in Hong Kong, and has also added Tokyo to its route map.

## Progress helps Nationwide deal with data

The Nationwide Building Society is said to be the UK's second-largest provider of household savings and runs an analytics system which has more than 300 developers working on it.

Many departments across the organisation depend on the data the system produces to complete their daily tasks. For example, the fraud department uses it to analyse transactional data, looking for patterns that indicate fraud; the data modelling group uses it for predictive analytics; and marketing uses it for segmentation and trends analysis.

The system is critical to keeping Nationwide's business running smoothly and therefore has to be highly available. However, monitoring in 2013 showed that the growth of the company together with demands from regulators and management for more sophisticated and faster analysis could not be accommodated on the existing platform over the long term. The system had limits to its scalability, particularly in term of data throughput.

The firm decided that major changes were needed. These involved moving from *Windows* to *Unix*, and upgrading from *SAS version 9.2* to *SAS 9.4 Grid*. In fact, it was an almost completely new system, with new server hardware, security and file systems, and backup software. Additionally, user data were reorganised into standard file structures by department, and the software modified to work under *Unix* and address the new structures.

But well into the system build the team encountered issues, as Nationwide's head of transformation Paul Matthews explains: "We had problems connecting to our SQL data on *Windows* servers. And it was a complex link that presented tremendous technical issues. We needed standard, and most crucially, supported software to resolve the problem."

This is where Progress came in with its *DataDirect* software. Because SAS supplies a version of the *DataDirect* driver in its software, Nationwide contacted Progress to supply an up-to-date version of the driver along with a support agreement. Within days, the vendor provided Nationwide with trial drivers, and working closely with the building society and SAS technical experts, provided a hot fix.

Following a two-month test period, the *DataDirect* solution went live in July 2013. With the new system, average jobs are said to be running in 25 per cent of the time they used to, and there are significantly more sophisticated analytic tools, system monitors and controls available. "Overall, we are getting our month-end processes done in five days instead of ten," says Matthews.



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# More than just a traffic watcher



From smart city infrastructure such as CCTV cameras and streetlights, to vehicles and machinery owned by enterprise organisations, billions of devices will be connected to the Internet of Things in the next few years. But who will be responsible for managing, monitoring and keeping an eye on the network?

## As the Internet of Things gains momentum, the network manager will need to offer more than just traditional IT skills, as RAHIEL NASIR finds out.

Every business will soon be an Internet of Things business, according to Cisco Jasper. Theresa Bui, head of enterprise product marketing IoT cloud at the recently merged company, believes it's "inevitable", and points out that those who prioritise the development and delivery of value-added connected services will have the advantage.

That's where you come in. Industry insiders are warning that with the advent of IoT, network managers are required to adopt and learn an ever-growing number of new skills that go significantly beyond those that were required in the pre-IoT era.

For instance, Dava Baumann, VP of global marketing at wireless infrastructure specialist Rajant Corporation, says: "Gone are the days when IT managers' résumés were based on whether or not they passed their standard network administration certification class and when their primary responsibility was to ensure a high level of network reliability for their WAN, LAN, WLAN, etc. Today, network managers need to acquire specific training across a number of new skill sets that run the gamut, but are primarily founded on a deep understanding of device management, data and predictive analytics, and business processes."

So why is that? Surely Internet of Things is 'just another network' for the IT department to take care of? Few would agree with this. But what is clear is that IoT is about more than just connectivity and has evolved to more of a business type of network.

### The new fabric for business

Arqiva launched the UK's first nationwide IoT network three years ago (*see News, December 2014*). The communications infrastructure specialist says it is now

building two of the country's biggest end-to-end networks aimed at delivering smart water and smart energy solutions.

Ian Stewart, Arqiva's director of channel and proposition, IoT, believes that in an enterprise context the Internet of Things should be viewed as being at the very heart of digital transformation: "A smart system which is absolutely integral to the organisation, its business model and its core processes."

Cisco's Bui adds to this by saying that what's special about IoT is that it's not actually about the 'things' – it's about providing real-time services via those connected devices.

"More specifically, it's about transforming a business from selling discrete products and services to offering continuously and ubiquitously connected services that can enhance the customer experience. It's this automated connectivity that is opening up new business models and revenue streams for enterprises around the world."

Ericsson agrees. The Swedish company's name inevitably comes up whenever there is any talk about IoT – the oft quoted prediction of 50 billion devices connected to the internet originates from one of its *Mobility* reports published a few years ago. Since then, the firm has revised its forecasts. In a recently published mid-year *Mobility* report, Ericsson now reckons that by 2021 there will be 28 billion connected devices around the world of which 16 billion will be IoT devices.

Warren Chaisatien, the company's director of IoT marketing, says IoT will become a "new fabric" of how we live as consumers and how business is done around the world.

"What we're seeing today is that the culture of IoT has spread very quickly out into the boardroom of business decision-makers.

"So while the techie guys will play a key role in selecting the technology, the overall strategy and implementation is driven from the business angle. The internet took much longer to reach this status of being at the top of the business decision-maker's agenda. The agenda has now been balanced between being technology-driven and business-driven."

As a result, many of the experts we spoke to support the overall view that IT doesn't necessarily have sole responsibility for a corporation's IoT.

For instance, Paul Lipman, CEO of online security specialist BullGuard, says: "On the surface you would think that IoT is owned by the IT department. However, the real owners of IoT are far more likely to be within the business. The rationale is simple. Most

IoT equipment within the enterprise is designed to gather data, whether it's to control and manage machines, identify potential equipment, or gather data on customer actions. As a result, we're likely to see IoT actually owned by departments within the business who use the information generated by IoT devices."

As an example, Lipman says this could be a product development department that pushes out new features and functionality to customers on a regular basis, or a marketing department that uses IoT data to lock-in customers with personalised services and products. Of course, the IT department will underpin all this, and will be required to roll out devices and manage the network in order to provide the foundation.

Rajant's Baumann concurs: "At the end of the day, the IoT must be owned by IT and integrated throughout the enterprise. This is based on the idea that if IoT is properly integrated, organisations will be better positioned to leverage large amounts of data from which they can act upon and improve decision making.

**"What we're seeing today is that the culture of IoT has spread very quickly from the backroom of the tech department out into the boardroom of business decision-makers."**

Warren Chaisatien,  
Director of IoT marketing,  
Ericsson



“For example, if SCADA (supervisory control and data acquisition) data can move from a centralised function and integrate with other decentralised data points, the collective data and subsequent analysis of them will likely offer more intelligence and insight for operations. If the data cannot be integrated with other sources of data and acted upon, it’s just another standalone network with a data silo.”

## OT versus IT

So the real IT skills enterprises are looking for when it comes to IoT is arguably not *network* management but *data* management.

In Arqiva’s view, the network itself is only one component of IoT, along with the sensors embedded in devices and the software to extract and analyse the huge volumes of data that come out of them. And

even here you have to be careful, according to Stewart: “IoT is not all about moving large volumes of data in real-time. It’s more about getting the right data and doing the right thing with it. In reality, the value of the data from a smart system is about giving the context to a particular situation, which then enables the user to take the appropriate action or make the best decision.”

Cisco Jasper’s Bui says today’s conversations about IoT are being had within two different camps: OT (operational technology) and IT. She reckons the struggle is how they can blend their IoT efforts with the rest of the organisation’s IT environment.

“IoT ownership is still very much siloed, but as IoT goes mainstream we’re seeing IoT data highlight the need for these organisational challenges to be resolved. Many organisations are still adapting to this new paradigm.”

Bui reckons that in the next five years or so, the industry will see the creation of the role of a chief data officer to deal with these challenges. She says they will oversee the integration of IoT and IT systems to enable the entire organisation to access IoT data but leverage it for different purposes. “OT is already starting to use the same set of tools that IT is using and this means the entire company will be able to see the full picture and become aware of the impact of the connected services they are delivering.”

But in order to do that, those responsible for the IoT in an organisation will first need to shift away from a mindset that is product-oriented to one that is geared towards service. And that, says Bui, leads to the first challenge and skill that network managers will need: cloud proficiency. “Businesses need visibility and real-time control to manage connected services,

and ensure the best possible experience for their customers. SaaS models are ideal for these IoT businesses.”

Many vendors such as Ericsson consider scalability to be one of the top IoT challenges for network managers. “At one level they are connecting humans but of course going forward they are connecting a lot of things,” says Chaisatien. “So suddenly there will be massive growth in the number of devices that need to be connected.”

According to Bui, this is where automation becomes vital. She says that even if a company deploys a “modest” number of devices – say 100,000 – each one will still need mobile service management, real-time engagement, support diagnostics, billing, provisioning, etc. “To fully optimise performance and cost, an average device requires 100+ real-time actions per year. On a 100,000-unit deployment, that means 10 million actions every year. At that scale, manual processes are inefficient, costly and simply impractical. Automate every process possible to reduce response times and streamline operations.”

## How safe are your things?

While the network manager’s traditional duties of maintenance and management also apply to IoT, BullGuard’s Lipman says there will be greater emphasis on security: “With IoT, the network manager’s role could extend in a number of directions but one central aspect that will need to be taken on board is security.”

US-based managed network services provider KORE Wireless agrees. Its CTO Gavin Carter says that while many of the principles of running an IoT network are the same as running a conventional LAN or WAN, it’s all too easy for those involved to lose discipline and forego security concerns.

“The variety and availability of connected devices can create a false sense of maturity, particularly when it comes to security. So I would say the most important skill for the network manager is to focus on security.”

“Perhaps the most famous example of a lack of focus on security while driving an IoT strategy is US superstore Target where refrigerators were connected to the same network as the payment systems. Their desire to take advantage of the IoT outweighed pretty basic security considerations.”

Many commentators therefore believe IT departments therefore need a new level of competence as they secure not only human controlled devices on networks but also the massive number of ‘things’.

“Security is key because in the world of IoT every connected device is potentially a vulnerable point for your organisation to be exposed to,” warns Chaisatien. “The first thing that many organisations do with IoT is connect devices and things. But all that’s just a starting point. What do you do with the data to turn them into insight? And in many cases, if you go up the IoT value stack, the data goes up to the application level. So security has to work from the device level and to the network level, back into the cloud, data centre, and then in the software level in the application at the end.”

Lipman echoes all of this. He says the sprawling nature of IoT requires comprehensive management of the entire network right to the edge and the network entry point, as devices seek access and data transfer to core network components. But he says this won’t be straightforward. “For instance, at the traditional switch level, connected devices and sensors will be transmitting data on the network. But given the potential scale of IoT networks and the quantities of data that are being



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collected, sending data from devices straight to the data centre could have an impact on performance.

“Furthermore, simply monitoring and controlling the flow of data packets to and from IoT devices will not be enough to guarantee security. All devices right out to the entry point into core networks must be made smarter by network management and the switches on the network.”

Lipman goes on to point out that not every ‘smart’ IoT device is actually smart, and within the security context some are actually “decidedly dumb”. What he means is that security is rudimentary and easily breached with these devices, and that represents a threat to network security.

“As a result, there will be a great onus on network managers to ensure that software or firmware patching functionality is central to any IoT device. At the same time, they will need to also ensure that IoT devices have system resets and unique passwords, and that there are no back doors that can be exploited.”

### Powering the WAN

Arqiva’s Stewart points out that depending on the application, some traditional connectivity technologies may not be appropriate. He says that while GSM and Wi-Fi, for example, can handle higher bandwidth demands, much of the data generated from IoT doesn’t necessarily need high bandwidth computing power. This is where low-power wide area networks (LPWANs) come in.

France-based Actility provides a set of tools to deploy, manage, operate and monetise IoT and M2M networks based on LoRa (long range) WAN technology. According to Gabor Pop, the company’s

solutions marketing manager, network managers have to understand that deploying an LPWA network such as LoRa is “not that difficult”. He explains that usually a couple of base stations are enough to provide connectivity over a very long distance. And to enhance in-building connectivity, nano- or picocell gateways are available to provide coverage in areas where signal propagation is complicated. “A network server that can be installed on premise or in SaaS mode is then required to manage the network communications along with an OSS to manage device activation, security and RF issues. The required skills can be mastered in a couple of days.”

Pop says the main constraints for IoT are currently battery life and communication range. “Today, Wi-Fi is clearly enough for short range, high data rate and powered communication – but it consumes a lot of battery. 3G/4G is great for long range communication – but you still have to recharge your phone every night. Bluetooth Low Energy or Z-Wave are great for short range communication – but you need a local router/receiver.”

He reckons an IoT WAN technology such as LoRa provides the solution as it allows communication up to 15km with battery life of several years. “This means that you can get rid of any local gateway or repeater, and you can forget about your IoT devices as you don’t have to recharge them. Very much like in LTE, dedicated networks for LoRa allow for objects to communicate directly through public networks.”

Patented by Semtech and the LoRa Alliance, LoRaWAN is not the only specification developed for battery-operated IoT devices in LPWANs. Some of the other platforms include: Narrowband IoT (3GPP’s standard for cellular networks);



**“IoT is not all about moving large volumes of data in real-time. It’s more about getting the right data and doing the right thing with it.”**

*Ian Stewart,  
Director of channel and proposition, IoT,  
Arqiva*

NWave and Weightless; Sigfox (as used by Arqiva); and others. While various standards bodies, such as oneM2M, ETSI (see News, p2), et al, are working to develop a universally accepted interoperable standard for connecting IoT devices, this does not as yet exist.

Many of the vendors we spoke to did not seem overly concerned by this. They say the ‘fight for standards’ is typical with all new technologies such as IoT which is still in its nascent stages. Ericsson’s Chaisatien believes the pace of develop-

ment with IoT is fast and so the market will soon settle on standards.

In the meantime, he advises network managers to look for standardised technologies.

“Even Ericsson, which is a large ICT provider, cannot provide everything. We have to put bits and pieces together. So we have to partner at the device and chipset level with Intel and Qualcomm, for example, and those companies all use standardised technologies. The best advice for enterprises and decision-makers to follow is to look for the companies that have the most traction.”

From a technology point of view, the network is clearly an essential building IoT block. But like Chaisatien, Stewart believes the other critical success factor to unlocking IoT’s potential is understanding the whole ecosystem that surrounds it – the specialist sensor and device providers, the data analytics applications, the software platforms, etc.

“It is the role of the network manager to select and manage the right types of network to meet the needs of the organisation. However, if we take the full end-to-end view of the IoT, then that role will also go way beyond keeping the lights on.”

Stewart reiterates that network managers to think of IoT as a key enabler for the digital transformation of their organisations and business models. “It’s not the volume of the data coming out of the IoT. It’s what you do with it that counts. Use it to drive better customer insights or enhance the customer experience. Use it to improve core operational processes and inform decision-making. Use it to create new products or services, or improve existing ones. Take a wide-angled view.” ■

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# Lock up your data

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CyberArk has announced new cyber security capabilities for industrial control systems (ICS) as part of its *Privileged Account Security* platform. They include *Viewfinity* which has been developed to help prevent malware from entering ICS computers such as ‘Human-Machine Interfaces’ (HMIs) and other assets where significant damage can be done.

*Viewfinity* gives users the ability to control and whitelist applications as well as remove local administrator rights from HMIs. CyberArk says it “seamlessly” elevates privileges based on an organisation’s policy, as required by trusted (whitelisted) applications.

The *Privileged Account Security* system also includes *Privileged Session Manager v9.7*, *Privileged Threat Analytics v3.1* and *Discovery and Audit*.

*Privileged Session Manager v9.7* aims to enhance usability across Unix and Windows environments. CyberArk says it enables organisations to secure sessions between a remote user and the ICS targets, while allowing these sessions to be monitored and recorded. It also helps block the spread of desktop malware and mitigates the risk of credential theft.

*Privileged Threat Analytics v3.1* is said to learn typical patterns of activity and continuously monitors privileged user and account

behaviour. It can therefore identify and alert managers about any suspicious activity.

*Discovery and Audit* is designed to find privileged user and application accounts and credentials. CyberArk says the tool generates a full report of scanned assets that includes a list of accounts and associated credentials as well as account status related to the company’s security policy.

**ExtraHop** has introduced a new bundle for businesses to proactively prevent, detect and track malicious ransomware behaviour in real-time, helping protect vulnerable resources before they can be compromised.

The firm says its solution enables a positive and proactive security model, putting the power of pattern-based analysis and machine learning to work against malicious actors.

Unlike other security monitors, ExtraHop claims its system analyses and characterises all data in flight to provide “unmatched visibility” into east-west and north-south traffic to deliver the “richest” source of real-time security insights.

It says the solution can quickly detect anomalous behaviour that is typically associated with ransomware attacks such as lateral movement across systems or irregular storage read/write operations.



**NSFOCUS’ hybrid security system combines on-site hardware with a cloud deployed platform.**

The spread of malicious agents is prevented through customised alerting that is designed to notify incident response teams within minutes of an infection and provide clear guidance on the incident. The solution then remediates affected systems by forensically investigating the source of the attack down to the client machine and URI of the external malware host.

ExtraHop adds that its bundle now fills the gap left by security platforms that protect the perimeter, scan for attack signatures, or analyse log files. It believes these methods have proven to be ineffective at early detection and remediation.

**NSFOCUS** has unveiled a global cloud-deployed security platform. It says *NSFOCUS Cloud* provides customers with easy access to advanced security services, and offers comprehensive, end-to-end protection from a single source when used in combination with its on-premises equipment.

The initial offering, *Cloud DDoS Protection Solution*, has been developed to protect enterprises against large-scale, debilitating and costly cyber attacks. It is an extension of NSFOCUS’ on-premises DDoS mitigation and protection solutions which aim to provide customers with critical defence via a cloud security platform and the company’s distributed *Cloud Centres* in Virginia, California, London, Frankfurt and Singapore.

NSFOCUS says as well as safeguarding vital data against DDoS attacks, *Cloud DPS* will also reduce operating expenses and free up valuable IT security personnel, while its *Cloud Centres* will eliminate costly bandwidth charges.

The platform features 1.2TB of mitigation capacity, providing what’s said to be the ability to withstand the most extreme volumetric attacks that would otherwise saturate WAN bandwidth. It has direct access to popular cloud services such as Amazon, Azure and Dropbox, and promises seamless integration with any customer network and automatic hand-off with NSFOCUS on-premises DDoS defences.

According to the firm, while many companies have attack-mitigation technology in place, they’re still failing to understand how critical a hybrid security model can be. It points out that a broad-scale and sustained DDoS attack can strain the capacity of on-premises appliances and businesses cannot afford to rely solely on cloud-based solutions.

“The ideal approach is to implement a hybrid solution that ensures network availability and access to mission-critical business functions at all times,” states NSFOCUS.

**Radware** is claiming a number of industry firsts with the launch of its security services that continuously adapt to evolving threats and ongoing development of applications.

The firm says its new *Cloud Security Services* offer the only adaptive solution on the market to combine cloud DDoS, volumetric and application firewall attack protection into a configuration that is unique to the client’s needs.

The new suite of services automatically detects and mitigates a range of attack vectors, including DDoS, burst, complex volumetric, SSL-based, zero-day, SQL injections, and more. Radware claims it is the only cloud-based solution available today that can mitigate SSL-based attacks while maintaining user data confidentiality.

The company adds that it is also the first web security service that automatically and continuously adapts to evolving threats and protected assets. It does this by automatically generating protections for zero-day attacks within seconds through behavioural-based detection coupled with real-time signature creation.

It also automatically identifies, blacklists and blocks machines that are used for attacks regardless of the IP addresses they hide behind using IP-agnostic fingerprinting technology.

Radware says the fully managed 24/7 service for both on-premise and cloud-based deployments covers both WAF and DDoS protection. It offers more than 2TB of mitigation capacity, and dedicated scrubbing centres are used to segregate clean and DDoS attack traffic as part of a global cloud security network.

**Rapid7** has upgraded its vulnerability management solution. *Nexpose Now* is said to combine the power of advanced exposure analytics, dynamic data collection and remediation workflows. The company says users will now be able to see vulnerabilities at the moment of impact. They will be able to prioritise actions based on the risk to their business, have the ability to work directly with IT for remediation, and track progress.

*Nexpose* also integrates directly with existing workflow and patch management solutions such as ServiceNow, JIRA (Atlassian), Microsoft System Center Configuration Manager, and Microsoft Windows Server Update Services.

Through automated data collection and assessment, Rapid7 says the enhanced system eliminates the time wasted between scheduled scans and manual collection processes. Rather than waiting for a trigger event, it says *Nexpose* actively gathers and monitors exposure data from the endpoint to the cloud using agentless and agent-based techniques to alert security teams the moment a change in risk occurs.

The platform features *Liveboards* for users to take action and monitor the current state of exposure. That’s in contrast to traditional passive scanning solutions which, according to Rapid7, build static dashboards that may not provide meaningful or actionable information and are outdated the moment they publish.

The firm adds that *Nexpose Now* automatically translates the attacker and vulnerability knowledge it has gathered over decades into a proven analytics library. It believes this delivers on the promise of actionable intelligence without requiring the skills of a data scientist to interpret them.



## Radware Cloud WAF Service

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- 0-day web-attack protection
- IP-Agnostic attack protection with Device Fingerprinting



### Unmatched Web Security Protection

Web Application Attack Categories Covered

#### TCP Termination & Normalization

- HTTP Protocol attack (e.g. HRS)
- Path traversal
- Base 64 and encoded attacks
- JSON and XML attacks
- Login Protection
- Password cracking – Brute Force

#### Attack Signature and Rules

- Cross site scripting (XSS)
- Injections: SQL, LDAP
- OS commanding
- Server Side Includes (SSI)

#### LFI/RFI Protection

- Local File Inclusion
- Remote File Inclusion

#### Session Protection

- Cookie Poisoning
- Session Hijacking

#### Data Leak Prevention

- Credit card number (CCN)
- Social Security (SSN)
- Regular Expression

#### Access Control

- Predictable Resource Location
- Backdoor and debug resources
- File Upload attacks

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## IT pros reboot their prospects for retirement

Almost a quarter of IT professionals are now financially on track for the retirement they aspire to have, according to research from Aegon UK. The life insurance, pensions and asset management company said this is a significant rise from 16 per cent in April 2015, and is now almost double the UK average of 12 per cent.

Aegon's study sampled 218 IT professionals and revealed that nearly 105,000 more of them are on target for the retirement they want. According to the firm, this suggests that the pension freedoms and initiatives like workplace auto-enrolment for employees are having the Government's intended impact. Aegon found that 28 per cent of IT pros are saving more into their retirement pot as a direct result of the pension freedoms alone.

The company believes these are encouraging signs for pension savers in the IT sector who contribute on average £357 to their pension a month. That's £147 more than the average across all professions, and the third-highest contribution level of all professions in the survey (insurance and pension professionals contribute on average £592, while banking, financial management and accountancy workers contribute £443).

Aegon said IT pros have also become more realistic about the level of retirement income they expect. Average aspirations within the sector have fallen from £50,000 in April 2015 to £48,900.

However, the company points out that considering that the IT workers it surveyed earn an average salary of £48,000, it's perhaps unrealistic for them to expect £900 more a year in retirement. It said that to receive a retirement income of £50k, IT pros will need a pension fund of more than the £1m lifetime allowance that is allowed by the government. It would also be a "big challenge" based on their average monthly contributions.

## Data analyst sees opportunity for autistic employees

Joint research carried out by SAS and The Tech Partnership forecasts that by 2020 there will be around 56,000 job opportunities a year in the UK for 'Big Data' professionals. But the firm adds that organisations are struggling to find employees with the right skills to meet the growing demand.

SAS UK and Ireland has explored how to tap into the vast number of autistic people who are keen to work but struggle to get employers to recognise their potential. The company says autistic people offer strengths such as accuracy, a good eye for detail, tenacity, and the ability to see things in a different light, all of which can prove ideal for problem solving.

As part of a disability programme run last year, SAS UK offered work experience to interns on the autism spectrum at its headquarters in Marlow. The National Autistic Society's Employment Training and Consultancy Service worked with the company to provide training and suggested changes that could help autistic employees, such as adapting the interview process and providing written instructions.

Sue Warman, HR director for SAS UK and Ireland, says there is a real talent shortage in the analytics market which is becoming more acute as demand for

people with the right skills is rapidly increasing. She believes employers need to do a much better job in the recruitment process: "In the selection process, businesses tend to be overly focused on candidates having strong communication skills, who make good eye contact, present themselves confidently, and so on. In actual fact, for many roles these attributes should be considered a 'nice to have', and in recognising this, we open up our potential talent pool and opportunities for candidates with different profiles, including those on the autism spectrum."

In the autumn SAS plans to host a session in partnership with the National Autistic Society, inviting employers who are interested in learning more about how to attract and support autistic candidates and employees.

## NEW COURSES

### Deploying an Exchange 2013 Hybrid Environment – QA

This recently added four-day course to QA's 2016 schedule is for those who are interested in both learning and getting hands-on experience of deploying an Exchange hybrid configuration.

Over 14 lab-based modules, delegates will understand the requirements, benefits and functionality of such configurations. They will build their own Exchange on-premise environment, deploy Azure AD Connect for Directory Synchronization, migrate mailboxes, and much more.

Starting in August, QA is offering several sessions that are available across various locations across the UK, as well as via its 'Attend from Anywhere' online platform. <http://tinyurl.com/zstyyh5>.

### Amazon Web Services Business Essentials – Global Knowledge

This one-day course is aimed at IT decision-makers who want to understand the advantages of cloud computing and the fundamentals of Amazon Web Services, including its financial benefits. It will help delegates define their cloud strategy and introduces the AWS Cloud.

The programme covers security and compliance, cloud financials and the next steps towards migrating to the cloud. Attendees should have a working knowledge of IT infrastructure concepts, as well as familiarity with basic finance and IT security concepts.

The next session will be held on 12 August both virtually as well as physically at Global Knowledge's training centre in Old Broad Street, London. <http://tinyurl.com/hr2csgt>



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