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FIXED & WIRELESS NETWORKS FOR ENTERPRISE USERS

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Cyber attackers now targeting industrial and freight systems

by James Hayes

Industrial control systems (ICSs) in factories and refineries are joining critical national infrastructure (CNI) as new targets for cyber criminals, security expert Eugene Kaspersky has warned. He believes online threats are now poised to direct their activities more at the industrial sector, as attacks on CNI globally have exposed how vulnerable connected field-level industrial equipment is.

Speaking in London recently, the Kaspersky Lab CEO said attacks on ICSs are growing, although the extent of the problem is unclear because targets are sometimes unaware that they have been hit, and incidents are not publicly disclosed.

Kaspersky reckons that the range of targets is widening to include sectors previously ignored by cyber crime, such as freight and inventory management: "Criminal gangs are hacking cargo control systems at ports to ensure that containers carrying drugs get clearance to enter freely, and Somali pirates know which containers on hijacked freighters are worth taking, because they hold the highest-value goods."

Last December, a hack on Ukrainian power plants caused outages to 80,000 consumers and showed how vulnerable older infrastructure is. "Some [plants] had to be brought back up manually by engineers on site," Kaspersky said. "Newer power systems are more sophisticated but have no manual override, so might take longer to restore to operation."

The motivations for the widening range of attacks include fraud, theft, extortion and ransomware. Kaspersky urged enterprise IT and industrial IT practitioners to make more effort to co-operate and share best practice.

Kaspersky Lab has also conducted field research at an unnamed private clinic to explore its security weaknesses. The company found vulnerabilities in medical devices that 'opened a door' for cyber criminals to access the personal data of patients, as well as their physical well-being. Kaspersky also discovered a vulnerability in a medical device application through which attackers could gain control access to the device itself. ■

Eugene Kaspersky (centre) said not enough is being done to defend ICSs against hack attacks.

Telcos partner to share security threat data in real-time

Four European telecoms operators have joined forces with a leading industry body in an initiative to formalise the exchange of cyber threat intelligence between their in-house security experts.

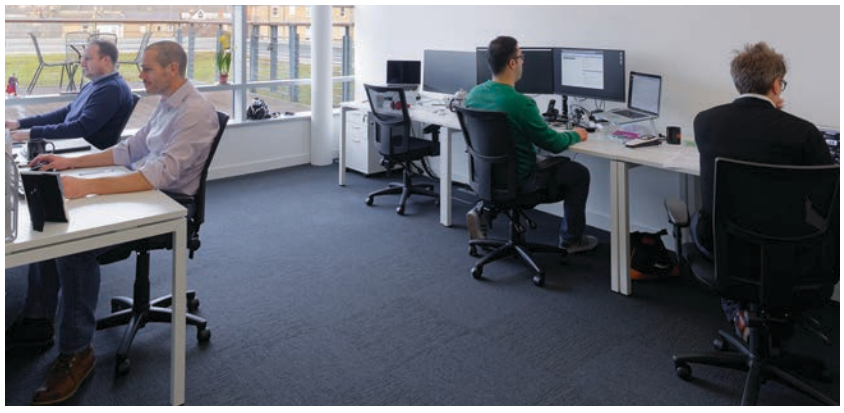
Brussels-based ETIS – The IT Association for Telecommunications – has joined forces with Proximus, KPN, Swisscom and A1 Telekom Austria to set up an automatic real-time cyber threat intelligence exchange platform.

With the help of Dutch innovation board TNO (Netherlands Organisation for Applied Scientific Research), the project aims to enhance the efficiency of the community, as well as the quality of the threat intelligence available. The project aims to involve more than 20 European telecommunications operators.

According to ETIS communications and programme director Fred Werner, telcos cannot now passively rely just on conventional defensive measures to stay safe.

"This project is set up by telcos for telcos, and the ETIS community provides the vital trust that is required to run a platform such as this. ETIS members value trusted partnerships, collaboration and proactive intelligence sharing far more than the latest off-the-shelf security products."

The new initiative has its origins in the European Union CERT-SOC Telco Network that was set up by ETIS three years ago, which comprised a community of cyber security specialists from its member operators across Europe. Work is now under way to expand the new environment with more telco participants such as TDC, Telenor and Deutsche Telekom also ready to commit to the new group. ■



According to the local council's principal economic development officer, 80 per cent of Maidstone Business Terrace occupants work within the technology sector.

Maidstone business hub clients are now well-connected

Booming Kent business centre Maidstone Business Terrace is getting access to a 1Gb broadband connection, following £250,000 worth of funding from regional authority Maidstone Council.

The town centre-based facility's clients will also be able to co-locate servers into data centres operated by the connection's locally-based services provider, Custodian Data Centres.

According to Karen Franek. Maidstone Council's principal economic development officer, the Business Terrace exemplifies a nationwide shift toward accommodating the workspace needs of newly-established small businesses looking for a happy-medium between rented office space or home-office working. She adds that unlimited, always-on, high-speed internet access is now a "absolute priority" for start-ups in search of hotdesk-style office space.

"It is all about connectivity. We could fill a room with orange boxes and rent it out as long as there was super-fast internet," Franek claims. "With as many as 80 per cent of Business Terrace occupants working within the technology sector, fast and reliable connectivity is powering the future of Kent's tech-based economy. Technology rules the modern world, and by ensuring the availability of 1Gb connectivity right at launch stage, Business Terrace is anticipating its growing needs."

Custodian Data Centres closed the Maidstone Business Terrace contract after beating rival quotes from sector competitors BT and Virgin Media. ■

Harrow's half-hour hotspots hit the streets

People out and about in Harrow, north-west London, can now get free Wi-Fi access in 50 locations around the borough. The new scheme gives users 30 minutes of free Wi-Fi per day per device, with an opportunity to buy more time on top. It also offers unlimited access to the council's website.

Wi-Fi transmitters have been installed at some of the borough's busiest locations by the council and its technology partner for the project, Arqiva. Areas covered by the new scheme include: Station Road, Shaftesbury Circle, Northolt Road shops, Rayners Lane, Sudbury Hill, Stanmore Broadway, along with Bridge Street in nearby Pinner.

"Harrow Council is delighted to be able to offer the people of Harrow convenient internet access when they're in our town centres and shopping areas," said the local authority's divisional director for commercial, contracts and procurement Terry Brewer. "Being better connected means being more in touch with what's going on, having greater access to services, and getting better consumer deals."

Speedy, always-on internet connections have now become an expectation for consumers, added Nicolas Ott, MD of telecoms and M2M at Arqiva: "We are seeing local councils stepping up their efforts to deliver local Wi-Fi services to provide value to their communities." ■

Blackpool's historic tramway gets a radio communications upgrade

Blackpool Transport has entered into a wide ranging contract to upgrade the vehicle radio communications systems operating across the seaside town's public transportation system, including its iconic Golden Mile trams.

Blackpool Transport carries 20 million passengers a year. Fifty per cent of that is during the summer season, and over the holiday season the company is said to cover 4.4 million passenger miles.

Blackpool's tramway dates back to 1885 but now feature modern Flexity 2 trams.

Its deal with Leyland-based TES Wireless Communications is for a managed service contract. This entails the provision, commission, and maintenance of a three-site *MPT1327* trunked radio system to provide an always-on connection between Blackpool Transport's bus and tram fleet drivers and its main control rooms.

The new system also provides a dispatcher system for both trams and buses, with each fleet providing potential fallback for the other. In addition, the contract includes a preventative maintenance agreement that provides annual recalibrations and repairs.

"Working with TES demonstrates Blackpool Transport's commitment to passengers and staff," said the company's service delivery director Bob Mason. "It helps ensure safe, punctual and enjoyable journeys."

TES Wireless Communications has provided communications capability to a number of metropolitan transport networks including London Underground, Manchester Metrolink and Metro do Porto.

The Blackpool tramway runs for 11 miles (18km) from Blackpool to Fleetwood, and dates back to 1885. It was the UK's last surviving first-generation tramway until it was replaced four years ago by modern *Flexity 2* trams. The traditional trams still provide a 'heritage service' over the summer, bank holiday weekends, and service tours during the town's illuminations. ■

Energy efficiency objectives require clearer definitions

New research from The Green Grid has found that despite nine in ten IT leaders acknowledging the importance of data centres in contributing to corporate social responsibility (CSR) achievement, nearly half of organisations do not actually define energy efficiency.

The Green Grid is a global consortium of companies, government agencies, educational institutions and individuals dedicated to advancing resource efficiency in IT and data centres. Last October, it surveyed 150 IT decision makers at end-user organisations, including firms who run their own data centres as well as colocation providers, from the UK, France and Germany.

According to Roel Castelein, the organisation's EMEA marketing chair, by not implementing clear definitions of what constitutes energy efficiency, many IT leaders are failing to tap into the contribution that data centres could provide to achieve these results. "This lack of definition also makes it difficult for organisations to measure and monitor how the data centres could be improved over time to become greener," he said.

The research also identified virtualisation as the most common energy efficient strategy, with 42 per cent of respondents adopting this method.

It said virtualisation has become a popular option for organisations recently, as they continue to benefit from the lower number of physical servers (especially those running for prolonged periods of time) and reducing the overall energy required to power and cool them. ■

Schneider says it latest prefabricated Smart Shelter Data Hall contain around 100 racks.

Prefab DC is designed for rapid expansion

A multi-module, prefabricated data centre solution that enables capacity to be added in 50-100+ rack increments, has been launched by Schneider Electric.

Its *Smart Shelter Data Hall* solutions are factory-assembled and tested with Schneider Electric's data centre racks, power, precision cooling, and integrated with *Struxureware Data Center Expert* DCIM software.

Schneider offers two base system designs for the *SmartShelter Data Hall:* one with indirect *Air Economiser* cooling, and another as a chilled water system. Both contain approximately 100 racks with a total power and cooling capacity of 500kW. Each specification can be customised to meet set project capacity and configuration requirements.

Andrew Bradner, Schneider's VP of prefabricated data centres, claims the new products are an "evolution" in modular data centre infrastructure. He expalins that the *SmartShelter Data Hall* allows larger customers to take advantage of the features of the firm's smaller prefab solutions with the added flexibility of a system designed for growth and rapid expansion. He adds: "The new products are suited for service providers, cloud operators, and large enterprises, where scalability, efficiency, and capital preservation are key business drivers."

Schneider Electric has also expanded its prefabricated *Power Skids* line to provide customers with a quick deployment of low-voltage switchboards, UPSs, and batteries in 1MW increments.

The new 1MW *Power Skids* have been designed to meet European IEC standards. They complement the vendor's 250kw and 500kW power modules to meet a range of prefabricated power solution sizes for any type of data centre or edge computing installations. ■

THE WORLD ACCORDING TO…

Chanaka Ekanayake, lead solutions architect, Insight UK

Flash in the pan? Solid state drives versus hard disk drives

The 'death' of tape backup has long been doing the rounds on various news sites. The proclamations that tape-based backup technologies are under threat from hard drives sparked a disk-based backup trend in the market that steadily usurped tape's territory. However, as things turned out, tape's complete demise has yet to materialise.

HDD is now finding itself under a similar threat from solid state and flash storage technologies. While flash storage has been around in varying flavours since the 1980s, it's more recent incarnations such as solid state drives (SSD) have caused its popularity to sour in many use cases.

Flash typically offers: extremely high transaction rates (IOPS) compared to mechanical HDDs; nanosecond seek times against the milliseconds of HDDs; much quieter operation than HDD technology; and is also more compact with a lower thermal footprint. It also uses around 50 per cent less power and is extremely reliable and robust.

But despite all its advantages, there remain two notable downsides with flash: high cost and low capacity. Flash will likely replace HDDs in all use cases where very high capacity is not required, such as that of consumer electronics. However, when considering enterprise use cases such as that of a data centre, flash does not offer the capacity needed and is unlikely to completely replace HDDs. Instead, it is more likely to be used alongside them.

In short, both technologies have their pros and cons and will do so for the foreseeable future. But this isn't to say that flash/SSD won't go on to dominate. In all likelihood it will, especially with its cost per TB continuing to fall. In truth though, as inexpensive as it is ever likely to get, it will probably remain at least a little costlier than HDD-based storage.

For the short to medium term at least, SSD and HDD will therefore both be winners and, as a consequence, so too will hybrids of the two.

Flash is undoubtedly set to capture more hearts, more minds, and more enterprise storage budget. But just as with tape, any reports of HDD's demise will be an exaggeration for some time to come, given its invincible capacity characteristics that are clear necessities for many.

EDITORIAL:
Editorial director: Rahiel Nasir
rahieln@kadiumpublishing.com
Designer: Alan McClenaghan
alanm@kadiumpublishing.com
Contributors: Chanaka Ekanayake, James Hayes

ADVERTISING & PRODUCTION:
Sales executive: Andy London
andrewl@kadiumpublishing.com
Production: Suzanne Thomas
suzannet@kadiumpublishing.com
Publishing director: Kathy Moynihan
kathym@kadiumpublishing.com

networking is published monthly by: Kadium Limited, Brassey House, New Zealand Avenue, Walton-on-Thames, Surrey, KT12 1QD, United Kingdom.
Tel: +44 (0) 1932 886 537
Fax: +44 (0) 1932 886 539
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KADIUM

Flower power gives 1960s icon 21st century communications

Jimi Hendrix lived in a London flat in Brook Street during the late 1960s.

The legacy of legendary guitarist Jimi Hendrix is being brought to life with some unlikely help from the Daisy Group.

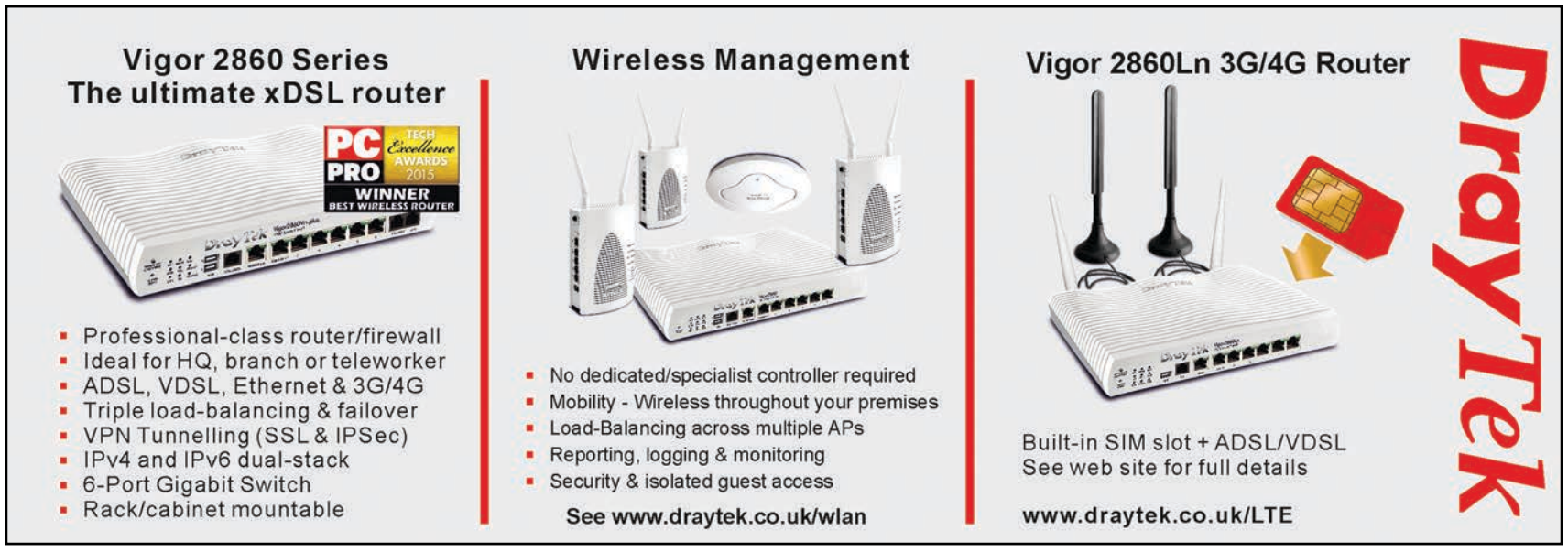
The ICT and managed services provider specialist claims it has revolutionised the technology in the London flat at 23 Brook Street which has now been restored to its original state when Hendrix lived there from July 1968 to March 1969. Together with 25 Brook Street next door – the home of German composer George Frideric Handel from 1723 to 1759 – the property has now been turned into a museum.

Staff at the attraction had previously been reliant on basic ADSL broadband for internet access and backup functionality, but slow speeds were hindering productivity. The on-site telephone system, which was more than 14 years old and relied on obsolete handsets, was only able to receive one call at a time and its features were limited.

The museum now benefits from a hosted VoIP solution provided by Daisy. In order to benefit fully from the cloud-based solution, it also upgraded the existing ADSL broadband connection to one capable of handling the increased bandwidth requirements.

Due to the museum's location and Grade I-listed building status, fibre broadband was unavailable. As a result, Daisy installed a dedicated managed internet connection which it says provides "guaranteed speeds and improved reliability".

The system also features an online portal to enable staff to configure and remove value-adding features at the click of a button. For example, Daisy says the 'disaster redirect' feature ensures that if any service was to go down or staff were unable to get into the office, calls could be redirected to assigned mobiles, enabling the museum to continue to function. ■



C4L and Selection Services renamed as CORTEX

Castle Street Investments and its new subsidiaries C4L and Selection Services have agreed to rebrand to CORTEX. The company's CEO Andy Ross explains the name restates a commitment to the delivery of data centre and network infrastructure services to the mid-market. The firm hopes that its proven track record of managing the delivery of transformational infrastructure projects through the two company acquisitions, along with newly embedded internal values such as clarity, accountability and pace, will set CORTEX apart as a leader in the integrated services market. ■

Mitel and Polycom to merge in cash and shares deal

Mitel and Polycom have entered into a merger agreement. Mitel will acquire all outstanding shares of Polycom common stock in a cash and stock transaction valued at around $1.96bn (£1.35bn). Under the deal, Polycom shareholders will be entitled to $3.12 and 1.31 Mitel common shares for each share of Polycom common stock, or $13.68 based on the closing price of a Mitel share on 13 April 2016. The transaction is expected to close in Q3/2016. The combined company will operate under the Mitel name. ■

Maintel consolidates market reach with Azzurri acquisition

Maintel Holdings is to acquire technology and managed communications provider Azzurri Communications. Maintel CEO Eddie Buxton said: "This acquisition will accelerate Maintel's shift into hosted cloud and data, ensuring it is positioned to take advantage of these growth areas of the unified communications market." Following confirmation of the merger, Maintel announced revenues for 2015 of £50.6m, rising from £41.9m in 2014. Buxton claimed the earnings boost reflected the successful integration of the company's previous acquisitions, Datapoint and Proximity Communications. ■

Brighton now on the gigabit map, while Openreach hits 25m installs

FTTP provider Hyperoptic has made the Brighton its thirteenth 'hyper-city'. As well as the build-out of a gigabit broadband infrastructure for the East Sussex seaside locale, the company has also activated gigabit services at the Sussex Heights development – at 102 metres, it's claimed to be the tallest residential building on the English south coast.

Hyperoptic says broadband connectivity will be available to Brighton residential and business customers before the end of 2016. The firm's services are already live across 12 other 'hyper-cities': Greater London, Cardiff, Bristol, Reading, Manchester, Leeds, Liverpool, Sheffield, Birmingham,

Brighton had been on Hyperoptic's radar for over a year, according to the firm's south east director, Philip Cooper.

Glasgow, Newcastle and Nottingham. Philip Cooper, Hyperoptic's director south east, says for digital communities to thrive, it is imperative that they have the infrastructure that will help their development. He adds that Brighton had been on the company's radar as its next hyper-city for over a year.

Elsewhere, BT Openreach has reported that its wholesale fibre network has passed the 25 million premises mark. The company said that since 2009, it has upgraded more than 4,700 telephone exchanges and installed tens of thousands of street cabinets across the UK.

Openreach estimates that its engineers have spent more than 10 million man-hours rolling out fibre, and adds that average broadband speeds in the UK have gone up from around 23Mbps in 2014 to almost 29Mbps in 2015 – an increase of 27 per cent.

"The job isn't finished, and we are working hard to get our coverage to 95 per cent and above, using a mix of G.fast technology and FTTP," said Openreach CEO Clive Selley. ■

KCOM opens cultural connection with Hull 2017

KCOM has been named as the first private sector organisation for the *Hull UK City of Culture 2017* year-long event. As the programme's 'Principal Communications Partner', the company will initially provide a 1Gb fibre broadband connection to the *Hull UKCoC* offices, and will later enable free Wi-Fi access for outdoor events throughout the year. Organisers say these are expected to attract more than 20,000 people.

Hull was announced as the winner of *UKCoC 2017* in 2013. The award is given every four years to a city that demonstrates municipal belief in the 'transformational power of culture'.

To deliver on this mandate, Hull City Council set up Hull UK City of Culture 2017 as an independent company and charitable trust, and its team is tasked with delivering 365 days of 'transformative cultural activity' throughout next year.

"KCOM intends to be active in this capacity by contributing its digital expertise in support of the cultural programme," said KCOM managing director Gary Young. "We will be working with the 2017 team to promote Hull as place where digital connectivity supports artistic expression along with the cultural economy."

Hull UKCoC 2017 chief executive Martin Green adds that high-speed broadband connectivity has the power to stimulate creativity and innovation in the fields of culture and the arts. "A great deal of art is now created, experienced and shared digitally, so KCOM's [involvement] will be an asset to the city and the cultural programme during 2017 and beyond." ■

Managing director Gary Young says KCOM will be working to connect Hull during its City of Culture 2017.

South West Trains extends free in-carriage Wi-Fi

Nomad Digital has installed passenger Wi-Fi systems across South West Trains' *Class 450* trains. Free connections are now available on more than half of all the operator's services, equating to 5,545 train services per week.

Nomad's networked train solution also allows rail operators the opportunity to add future applications such as IP CCTV services for passenger safety, journey-time information and updates, as well as Driver Advisory Systems which send alerts to drivers about live issues on the track.

In addition, the company says energy metering systems allow fleets to run more efficiently, reducing operational costs.

Nomad has now installed passenger Wi-Fi on 127 *Class 450* trains. This follows the work completed in 2014 to introduce free Wi-Fi to 45 *Class 444 Desiro* trains.

South West Trains MD Christian Roths claims more passengers are travelling on his company's trains than ever before.

He adds: "More than half a million journeys are made on our services every day. We are investing millions of pounds to provide extra carriages, improved facilities and better stations to improve journeys for passengers, and we're confident the continued expansion of our free Wi-Fi will be a further boost."

Nomad says its passenger Wi-Fi services are deployed on 75 per cent of all Wi-Fi enabled trains in the UK. With offices in Newcastle, London and Derby, the firm claims a 47 per cent market share of connected trains in the international rail sector. Last year, it had revenues of £42.7m, up 47 per cent year-on-year. ■

Delivering secure remote access with one URL

Remote access to corporate IT systems gives enterprises something extra – extra savings from lower real estate costs; extra productivity because users can continue working wherever they happen to be; even extra simplicity in the IT environment, if it is done in a strategic manner. But with remote access becoming more important to enterprise success, IT teams need to find a consistent model.

Previously, SSL VPNs were the tool of choice for securing remote access however with the rapid proliferation of mobile devices, the environment became even more complex and therefore the SSL VPNs were not enough. Device management at the edge was required.

With a unified secure remote access architecture, IT teams can now consolidate existing point solutions and continue to meet demand for remote access.

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MISCO A Systemax Business

Volta registers vote of confidence in CloudLX for latest London facility

Volta Data Centres will use Epsilon's *CloudLX* platform to offer connectivity services to customers of its carrier-neutral facility in central London. It will enable them to connect to multiple cloud service providers via a single virtual link.

CloudLX (the short name for Epsilon's *Cloud Link Exchange*) offers a solution for procuring, managing and monitoring cloud connectivity with direct access to *Amazon Web Services*, *Google Cloud Platform*, *Microsoft Azure*, along with other cloud service providers and internet exchanges around Europe and the rest of the world.

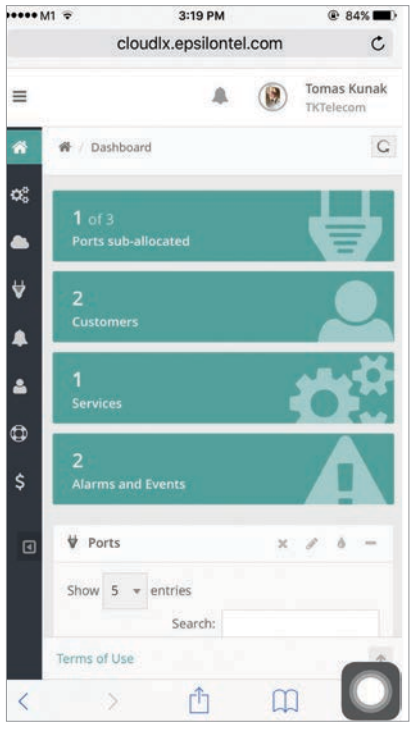
CloudLX enables Volta to immediately add cloud connectivity to its service offering, facilitating customers with both data centre and networking solutions.

Volta claims customers benefit from seamless connectivity to multiple cloud service providers through a single virtual connection, increasing cost and time efficiency, and removing the complexity of traditional network procurement.

It also offers a suite of cloud enablement solutions including on demand Ethernet, network analytics and monitoring, as well as global connectivity from data centres to enterprise locations globally.

"*CloudLX* matches a simple user interface with an extremely powerful set of networking tools," says Jonathan Arnold, managing director at Volta. "It enables Volta to support more of our customers needs and accelerate their access to cloud services."

Epsilon CEO Jerzy Szlosarek adds that the platform allows global networking to mirror the simplicity, agility and efficiency of the cloud. "It enables data centre operators to easily bolt on a connectivity solution for high-quality and highly scalable network services. [It] enables users to drive profitability with cloud connectivity and expand the reach and scope of their businesses. ■



Epsilon's CloudLX provides a cloud-delving management solution.

'Shadow IT' an ongoing concern, says survey

Lack of visibility into cloud usage due to escalating 'shadow IT' is an ongoing cause of security concerns for IT departments internationally, a survey of technology strategists has warned.

Almost 60 per cent of respondents surveyed in *Blue Skies Ahead? The State of Cloud Adoption* indicated that covert use of unauthorised department-sourced cloud services has a 'negative impact on their ability to keep cloud services secure'.

Despite IT departments' efforts to curtail 'shadow IT' activity, 52 per cent of the lines of businesses taking part in the survey still expect IT to secure their use of such services.

Cloud investment in other kinds of cyber security varied in priorities across different types of cloud deployment, the survey found, with the top defensive technologies applied by respondents being: email protection (43 per cent); web protection (41 per cent); anti-malware (38 per cent); firewall (37 per cent); encryption/key management (34 per cent); and data loss prevention (31 per cent).

Enterprises that had fewer cloud concerns claimed that in the next 16 months, 80 per cent of their IT budgets will be 'dedicated to cloud computing' in some form.

A majority – 81 per cent – of organisations polled also reckon that they are planning to invest in infrastructure-as-a-service, followed by security-as-a-service (79 per cent), platform-as-a-service (69 per cent), and software-as-a-service (60 per cent).

The survey, conducted by Vanson Bourne for Intel Security, interviewed 1,200 IT decision makers who influence their organisations' cloud security, and based in Australia, Brazil, Canada, France, Germany, Spain, the UK and the US. ■

Datto provides rock-solid backup service for Mandarin Stone

Mandarin Stone is using Datto's disaster recovery service and is already said to have saved £200,000 in lost business following a "melted server".

Based in Monmouthshire but with 10 regional showrooms in England and Wales, Mandarin Stone is said to be one of the UK's largest importers and stockists of natural stone, porcelain and ceramic tiles. It stores more than 3TB of data but its backup was stuck in the stone age. As a result, its managed service provider Module IT recommended Datto's service.

Around a year after first deploying the solution, Mandarin Stone staff came in one morning and found that the server was down. A faulty air conditioning unit – blasting hot air rather than cold – had resulted in a melted server, and nothing could be done to restart it.

Module IT responded by virtualising the company's entire server in the cloud, which meant that it was back to business as usual in just a couple of hours.

The entire business actually worked off Datto's virtualised server without any noticeable difference for ten days while Module IT tweaked and tuned the replacement server.

As well as saving time in terms of recovery, it's claimed the service also saved Mandarin Stone around £200,000 in lost revenue – a 95 per cent reduction.

US-based Datto says its "comprehensive" backup, recovery and business continuity solutions are used by thousands of managed service providers worldwide. The company adds that its 140+ PB private cloud and family of software and hardware devices provide total business data protection. ■

Association of British Insurers opts for cloud cover

The Association of British Insurers (ABI) has upgraded its voice communications management systems as part of a relocation to new headquarters at One America Square situated by Crosswall in central London.

The cloud-based voice solution incorporates *Skype for Business*, and allows employees based on-premises or remotely to voice-call, instant message, email, video chat, or participate in conferences, using a range of devices, including deskphones, smartphones, PCs, and tablets.

Supplied by business telephony specialist VIA, the *VIA Voice* system integrates with ABI's core standard applications like *Microsoft Dynamics* and *Office 365*. It also incorporates a call recording feature to ensure that the association complies with necessary data retention regulations.

The new system integrates with the ABI standard-issue Jabra *Evolve 65* headsets used by its personnel to stay connected when based at One America Square or working out of the office.

Deploying *VIA Voice* means that the association also has extended functionality across its meeting spaces, which range from a five-person 'huddle area' to a 100-seat conference room.

Association of British Insurers' new HQ based at One America Square, London

ABI CRM project and IT services manager Lawrence Withy said: "The VIA solution made the office move painless and problem-free, and allows [the ABI] workforce to stay continuously connected at all times"

Formed in 1985, the ABI has more than 250 members who represent over 90 per cent of the UK insurance market. It was previously headquartered at nearby Gresham Street. ■

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Turning not spots into hotspots

How network technology is solving the problem of connecting remote businesses and communities across the UK.

Satellite brings superfast connectivity to villages

Satellite Internet is a specialist ISP serving homes and businesses in rural and hard-to-reach parts of the UK and Ireland. It is involved in several local and national government broadband initiatives, including the *Superfast Satellite for Communities* project. This is a BDUK-funded market test pilot (MTP) project that uses satellite technologies from SES Techcom to deliver superfast connections via satellite to rural communities.

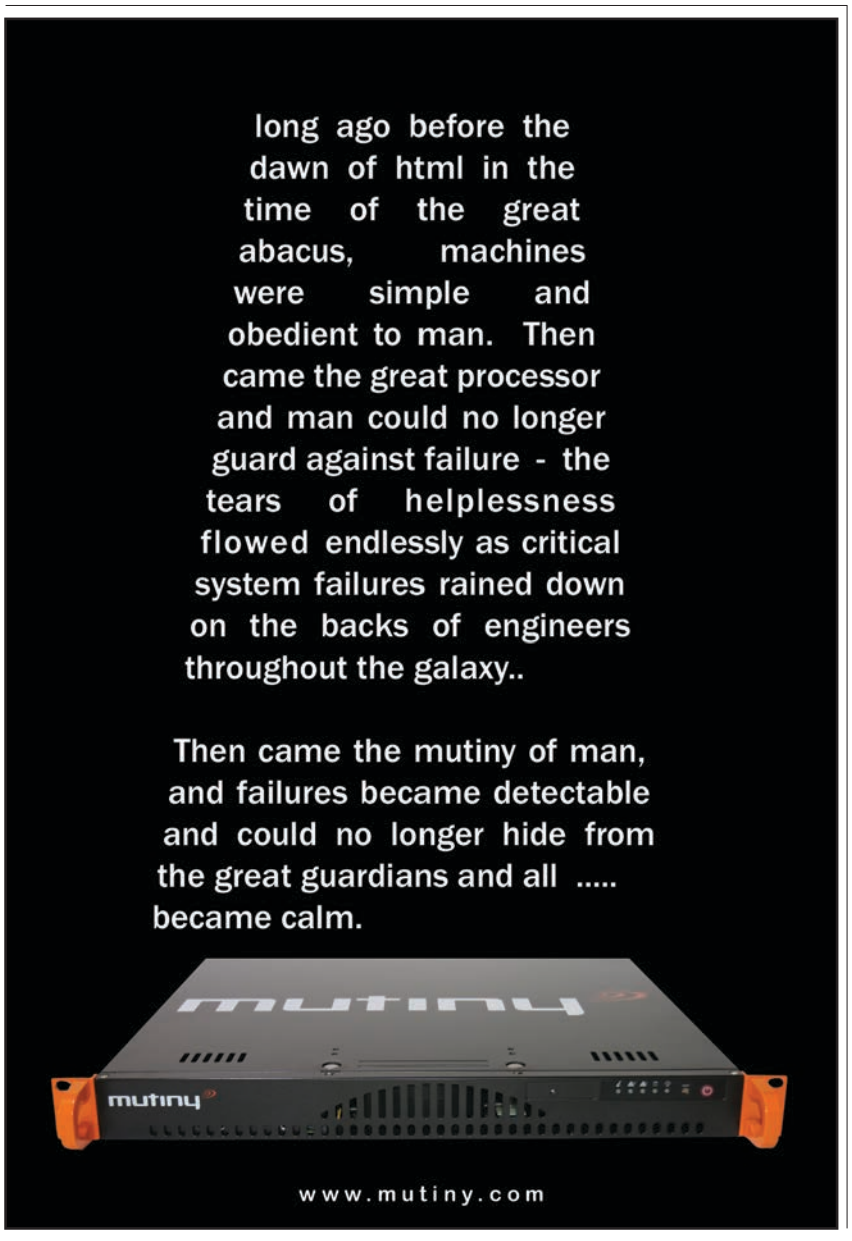
In April 2016, the company announced it had connected the third and final village selected to take part in the pilot by providing high-speed internet to Broomfield in North Somerset.

To connect Broomfield, Connecting Devon and Somerset (CDS is public-private partnership comprising six local authorities and BT) rapidly established it as eligible – 17 postcodes in the parish and surrounding area, around 160 homes and businesses, were receiving broadband speeds of below 2Mbps.

Final approval for the installation only came earlier this year in January. Despite this, Satellite Internet says it was able to install the complete network and bring residents online within just seven weeks. Working closely with CDS, the local parish council and the wider community, the company says it has provided all 24 properties in Broomfield with "substantially enhanced" broadband connectivity offering speeds of up to 25Mbps

Satellite Internet uses a satellite distribution node (SDN) and a Wi-Fi head-end installed at a central location (*shown left*). The broadband connection is then supplied to end-users via a fixed wireless access network, while properties that cannot be covered by wireless have an individual DTH (direct-to-home) dish installed.

"The effectiveness of the headend installation and supporting network is a clear example of the speed and flexibility with which satellite-based broadband technology can be deployed," says Satellite Internet business development director David Hennell. "This has created high-speed, reliable connectivity in an area where previously broadband speeds were very slow."



Building a WAN in the British Isles' most remote location

When Shetland Islands Council's Scottish-government-subsidised IT network came to an end in March 2014, it would have cost more than £1 million to renew. The organisation therefore urgently needed a cost-effective alternative that would provide faster and more reliable internet connections.

The Networking People (TNP) offers independent advice allowing large organisations to design, build and operate their own networks independently of the established telecoms companies. The Lancaster-based specialist focuses on offering its products and services – which includes its own carrier class ISP network – to local high-capacity internet users in government, education, medium-to-large enterprises and wholesale telecoms carriers.

TNP designed a hybrid solution that would use a combination of technologies. The company's plan was to install equipment on seven commercial masts to provide connectivity for 21 sites as part of a new WAN.

But there were challenges to overcome. Aside from the tight timescale due to the imminent ending of the council's incumbent IT network contract, working in the British Isles' most remote location and its unique weather conditions – with ground wind speeds in excess of 60mph – was not for the faint-hearted. In January and February 2014, just as TNP's engineers were installing equipment on 40-metre-high telecoms masts, Shetland was hit by the worst storms it had seen for 20 years.

Despite this, the installation was completed on time and to budget. TNP utilised existing assets and equipment, which it boosted by installing a high-speed backbone tied into a fibre network at strategic points. This was augmented by the design, procurement and installation of the latest microwave radio technology with power, cabinet and steelwork infrastructure. TNP said point-to-point equipment from Ceragon and point-to-multipoint kit from Proxim offered increased capacities and availability over other alternatives in this testing environment.

The network provides WAN connections throughout Shetland via the Shetland PSN and is depended upon by IT systems including telephony and video conferencing, internet access and public Wi-Fi, remote desktop support and a virtual learning environment. Shetland Islands Council now has connectivity across 60 sites, including schools, council offices, community groups and local charities. According to TNP, some areas have seen an almost tenfold increase in network speed.

The new network is projected to save the council up to £1.6 million. Furthermore, the council owns the network and all its assets, thus ensuring the self-sufficiency that is vital due to the islands' remote location.

Dairy farming in the cloud

The Graham family have been dairy farming since 1939 when they first moved to the farm at Bridge of Allan in Stirlingshire which is still the company's home. Back then they had 112 acres and 12 cows, but today Graham's The Family Dairy employs 500 people, generates almost £90 million in annual sales, and is one of Scotland's largest independent milk producers.

As a family business, the company believes in personal communications to build better relationships with staff, farmers and customers. So when Graham's wanted to improve how it communicated and collaborated across the business, its Glasgow-based IT partner IA Cubed recommended *Microsoft Office 365*.

The company now uses the cloud-based business productivity services to connect its increasingly dispersed business: it runs two processing facilities that receive 700,000 pints of milk daily from 90 farms; there are five distribution depots and offices in Bridge of Allan and Glasgow; every day, 160 drivers make 6,000 deliveries; and six account managers visit 40 customers.

MD Robert Graham said *Office 365* is a perfect match for the spontaneous, personal contact style that makes the family business work. "Our sales manager uses presence and instant messaging to connect with account managers on the road, so he's no longer frustrated by gaps in communications that could delay solving customer satisfaction issues."

Employees at the head office are now able to provide a faster service for customers who call with questions about deliveries. Office staff are not always aware of potential delays caused by bad weather in the north, or a mechanical issue with a delivery van, but now they can quickly track information by sending an IM to staff at the depots.

Furthermore, staff in outlying areas had been frustrated with poor internet bandwidth that slowed file uploads from the server at the office in Bridge of Allan. Most employees stored files on their hard drives or a memory stick, which led to versioning issues and risked data loss.

The *OneDrive* feature in the *365* platform means that they can now work anywhere and sync files on any device, which has resulted in a faster pace of business has picked up. Graham added that sales reps no longer physically deliver customer order information to sales managers as they can use tablets and smartphones managed by *Microsoft Intune* to work on the road, and upload data to the intranet.

Last year, IA Cubed launched a new *Azure*-based ERP solution for the company to share business intelligence and publish real-time data. Graham believes sharing information will bring the company closer together as a team.

Critical Steps in Edge Computing

Free eBook
"Critical Steps in Edge Computing"

THE SHARPEST EDGE

Edge computing isn't just a buzzCONCEPT. During 2016 it has the potential to impact business in numerous pragmatic and immediate ways. In fact many organisations are already **deploying edge strategies to deliver competitive advantage** – whether through accelerated data analytics or more responsive customer service.

Technology innovations are becoming the primary driver of business innovation - so IT leaders need to show they're adding value as the steward of these developments. Businesses must **keep pace with customer demand or die out.** And this is where edge computing can deliver. Edge will help redefine how a business can develop its services, deliver them to its customers and then efficiently manage its own operations. Change is coming.

UNDERSTANDING EDGE

Edge computing is the process of moving computing power **away from the core of the data centre** to the edges of the network, **closer to where customers are based** and digital interactions are taking place. This approach offers several key benefits:

- **Speed of delivery:** Edge computing reduces the need to transport information to a core data centre, which can lead to delays in data being received and processed
- **Availability:** By enabling computing resources at the edge, it is possible to keep these remote sites functioning irrespective of failings at the core
- **Storage:** Edge can allow critical data to be stored closer to the point of consumption, making more relevant data constantly available
- **Data analytics:** By placing analytics at the edge businesses can derive actionable insight faster, helping them to stay ahead of competitors and customer expectations

GETTING STARTED WITH EDGE

Edge computing brings with it both opportunity and challenge. IT leaders must act as a **consultant to the business**, managing the diverse expectations of the lines of business. It will be critical to understand the **types of data and transactions** that need to be accounted for, and the practicality, cost and commercial value of each deployment node.

If IT leaders are to truly own the edge computing strategy, they will have to address a number of complexities which sit both inside and beyond their traditional remit:

- **Data centre nodes:** Each edge node will require performance IT and networking equipment. This will vastly multiply the number of sites with enterprise-grade rack enclosures - each containing precision cooling, uninterruptible power, rack PDUs, and wiring management
- **Standardisation:** The massive increase in sites and devices will accentuate the pressure on IT teams. Standardisation - from the equipment procured to the processes followed, will help reduce this complexity
- **Security:** Getting your edge strategy right will involve robust, multi-layered security. IT teams not only need to detect security threats, they must also have the capability to seal off and protect the wider system, likely involving advance endpoint solutions
- **Corporate culture:** As with any major technology implementation, the technology itself is not the only factor that needs careful management. Organisations pursuing an edge strategy cannot forget the cultural changes that will be required to deploy it effectively

The delivery of an effective edge computing strategy isn't going to happen overnight. It will challenge IT professionals on many fronts, but with this risk comes an enormous reward as IT performs an increasingly pivotal role within the business.

Emerson Network Power helps organisations advance their edge computing strategy through intelligent convergence of infrastructure technologies. We can customise and provide standardised, easily scalable and reliable and infrastructure platform for any edge configuration. If you believe we can help you, contact us on contactus@emerson.com

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What's your experience of Edge Computing? Share with us your thoughts on our blog site: blog.emersonnetworkpower.com/

Simon Blake
Director, Marketing
Emerson Network Power

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Unifying UC

UC helps free workers from their desks and allows them to use their own devices for business. But according to Swyx, staff need to be made aware of the potential risks.

Unified communications has long promised to connect the business world. JAMES HAYES looks to see if changing technologies and practices are finally helping to fulfil the hype

Not everyone is convinced by the unified communications (UC) concept. One media pundit recently described it as a networking notion that has 'been around for 20 years and gone nowhere... despite incessant promotion by the tech industry'.However, the market for this 'going nowhere' technology is estimated to have been worth $26.5bn (£18.5bn) globally in 2015, and set to rise to $62bn by 2020 (BCC Research). And a 2015 study by Ovum and Dimension Data reckoned that some 78 per cent of IT decision makers indicated that they now have both a 'current strategic plan' and budget for some components of collaboration-based UC, which suggests that basic value-recognition is on the up.

Typically, UC deployment can be on-premises (in-house), cloud-based (sometimes called 'unified communication as a service' – UcaaS), or a hybrid combination of the two. BCC Research's *Unified Communication and Collaboration: Technologies and Global Markets* report, published last January, forecasts that the market for on-premises deployment should grow from $18.2bn in 2015 to $37.8bn in 2020, while adoption of cloud-based services should total nearly $18bn by 2020, up from $6.5bn in 2015. It predicts the fastest-growing category of deployment is hybrid: the value of this market totalled $1.8bn in 2015, and is set to reach $6.2bn by 2020.

If accurate, these look like healthy figures, with continued build-outs of enabling technologies (cloud, 4G, Wi-Fi), and the new penchant for coupling UC with enterprise collaboration tools, further contributing to UC's renewed popularity.

Yet suspicions persist that uptake revenues could be even higher if more enterprise strategists didn't find UC's broad remit difficult to pin down. Todd Carothers, executive VP of marketing and product at CounterPath, suggests shifting definitions of what precisely constitutes a 'UC solution' have, down the years, kept customers and vendors confused: "Historically, the term 'unified communications' has been very nebulous and poorly-defined – *any* communications tool in the enterprise would fall under the umbrella of UC. More recently, however, the definition, particularly to end-users, is becoming more stringent, and communications are finally becoming unified within a single experience."

Frank Barr, head of UC at Capita IT Enterprise Services, says previously organisations have set UC strategy as covering anything from implementing an office VoIP PBX, to delivering a collection of applications providing messaging and video.

He adds that projects have been tactical, and justified on notions of cost saving.

Rob Bamforth, principal analyst, business communications at Quocirca, supports this view: "At one time, UC looked more like 'unified plumbing' in that the focus was mostly about converging the network, and rationalisation, and a lot of emphasis was on the benefits of saving money by making calls [via] VoIP."

The definitions issue stems partly from the fact that 'unified communications' has been ascribed as a catch-all industry buzzword as much as a standard category of ICT. Just to paraphrase its Wikipedia entry, UC is described as (deep breath): integration of enterprise end-user communication services that are both real-time – (IM, presence info, mobile and IP voice), mobility features (extension mobility and single number reach), audio, web/video conferencing, fixed-mobile convergence, desktop sharing, data sharing (collaboration tools), call control, and speech recognition – and non-real-time, such as unified messaging (integrated voicemail, email, SMS, fax).

And that's just for starters. Little wonder that packaged to cover so many bases, UC might have left networking practitioners uneasy about what they would be buying-in to.

> **"The technology has gone through two game-changing transformations – cloud and virtualisation"**
>
> *James Arnold-Roberts, CEO, Genius Networks and G3 Comms*

"I don't think that the standard UC concept holds relevance for enterprise network managers and other ICT practitioners," says James Arnold-Roberts, CEO at Genius Networks and G3 Comms. "The technology has gone through two game-changing transformations – cloud and virtualisation – and now bears little resemblance to 'standard' solutions."

Alexander Seyf, partner at Sytel Reply, agrees. Because the term 'unified communications' seems all-embracing, he reckons many organisations don't understand the breadth of the technology, nor the benefits it can bring. This has often resulted in misguided approaches to UC, with many organisations adopting it as a way to unify legacy equipment, unify disparate teams, or just cut costs, without focusing on the strategic business benefits UC can deliver.

Operational challenges

So how should these strategic business benefits best be gained? According to Adrian Brooks, corporate solutions technologist at Avaya, with the current generation of UC solutions network managers now have to realise that they are, in effect, seeking to deploy real-time communications 'mechanisms'.

"It's not just straightforward deployment. Network managers need to understand which of these mechanisms should be prioritised on the network, as there are now so many.

"Users now have their own important applications. These will include voice,

video, instant messaging, collaboration tools, and engagement-based technologies. Each one is different, but each one ensures company productivity and has to be supported by the network team."

Capita's Barr also points out that with UC, network management strategies need to be agile in adoption, with a defined framework of service interconnection and security management architectures to maintain business robustness, and ensure completeness of experience.

"Network managers will always face the challenge of balancing complexity and cost, as well as forecasting user capacity requirements in an increasingly dynamic, flexible working world," says Barr. "Many WAN provider products available to them still use concepts that follow fixed circuit bandwidths. Let's [also] consider products that follow SDN technologies provisioned on demand – capacity provisioned 'just-in-time', and decommissioned immediately when surplus to requirements. Having the systems in place to authenticate, audit, and account for the SDN orchestrations will be key [for future deployments]."

When it comes to delivering UC globally, voice remains one of the biggest challenges, according to Arnold-Roberts. The issues are with SIP, the network protocol for delivering voice.

"The ability to find good quality SIP that actually works has been a long-running problem. Although it has been developed to a point where it became a reliable alternative to, say, ISDN, when it comes to voice, latency is a problem when networks are connecting globally. So making a call within the UK would be fine but calling international customers can be a big issue if you are not using reliable SIP local in that country."

So that's not good news for users who want to use UC to collaborate with overseas clients. But Arnold-Roberts goes on to say that the issue can be managed with intelligent routing across carriers selected for their latency performance. "UC has had to adapt – but it is arguable that networks have faced the bigger challenge."

Drivers for change

This use of collaboration tools to work with external partners as well as for internal interactions is a force for change in the development of UC deployment, says Chris Nunn, head of customer experience and collaboration at Dimension Data.

"Many organisations are highly distributed and employees need collaboration tools to interact with people outside the company. So they're more likely to turn to collaboration technology to support complex multinational operations."

Nunn believes they're also more reliant on collaboration tools to help them connect with a global base of customers. He says companies that Dimension Data has surveyed have stated that they support a highly-distributed set of customers and partners. "[For them], a collaboration strategy that extends beyond the enterprise to stakeholders around the world is essential."

The growing desire to implement collaboration-based work models for internal deployment is providing uplift to UC products equipped with collaboration-enabling features. Mark Lewis, EVP of communications and connectivity at Interoute, says this is because the benefits of enhanced collaboration are deemed to equate with individual productivity.

But at the same time, IT decision-makers are wary of building-out an extended and scalable system that succeeds in unifying enterprise communications requirements but is also onerous to manage. According to Lewis, the challenging questions ambitious IT leaders are generally asking are: "Where do we start? And can it genuinely all be integrated, piece by piece, without becoming the mother-of-all IT programmes with years to run, and vendor lock-in happening somewhere after six months?"

User buy-in key

End-user take-up is a critical determinant of any new UC deployment's success. That sounds obvious, but unlike other varieties of enterprise application, nowadays users are more likely to have their own preferences when it comes to voice and data options, and therefore may be inclined to stick to them rather than switch their to a new UC system.

"Employee expectation is higher than ever before when it comes to technology, and UC brings together a wide and diverse range of different modes," says Avaya's Brooks. "However, to make all these different communication streams workable, you still need a single inbox, which is what UC does. And therefore, modern UC – which incorporates so many more streams – is more relevant than ever to network managers."

The message is plain: a new, incoming UC system has to prove itself as providing features and services that are ahead of the incumbent applications it replaces. This is a challenge for network management function because very often such migrations are not a straightforward matter of migrating from like-to-like. An employee's personal preferences may be ingrained, and call for more effort on the part of IT in sorting out the migration of individual users, not just interest groups or workload-specific departments.

"Nowadays, people aren't interested in new technology just for the sake of it – they want something that makes life easier for them. So even the best UC solution on the market may be pointless if there is little user need for it," says Dean Manzoori, VP product management at Masergy. "So it's a case for the IT teams, and UC providers, to make sure employees find and understand the value of the solution.

"For instance, if you take a regular office worker, they may not immediately find the benefits of a new instant messaging client. But for a mobile worker who doesn't want to miss taking a call, UC with a mobile client apps is compelling. Knowledge workers tend to be among the early adopters, and then become key influencers to others in an organisation."

Because of this reality, Quocirca's Bamforth believes enterprises are mostly coming round to the fact that UC should be more centred on the individual rather than the technology. "The next step [can then be] more emphasis on the business process and group impact of UC. I like a definition of good communication I heard years ago: raising the level of mutual understanding – a shared value among participants."

The BYOD debate is a concomitant factor in the successful management of end-user UC acceptance. CounterPath's Carothers says users may want total device independence and don't want to be dictated to when it comes to using a specific device. "This can

prove particularly difficult for network managers in large organisations that want to keep foreign devices off their network for security reasons.

"Enterprise mobility management tools allow users to remain independent in what devices they choose to use, but protect the network at the same time."

He goes onto warn that 'BYOD' is segueing into 'BYOA' (bring your own app), thus creating a much riskier situation for UC security.

Maria Grant, product director at Intercity Technology, says that when UC meets BYOD, organisations typically experience a significant change in business process and work-life balance designed to improve user engagement. But she points out that buy-in from users for any newly rolled-out technology is crucial.

"BYOD is more likely to succeed because [an organisation is] allowing employees to keep familiarity that comes from a personal choice. Therefore, in theory, BYOD should improve the speed of UC implementation while reducing costs, and thus lead to the collaboration and productivity gains businesses are after."

Dimension Data adds to that by saying the challenges of BYOD have to be met as part of an overall mobility strategy, rather than regarded as a rogue phenomenon predisposed to impair efficiency rather than enhance it. Nunn says: "Ideally, BYOD should be part of an enterprise mobility model which treats device ownership status as just another parameter, [similar to] employee type, device type, mobile operating system, tariff plan, and remote access management."

UC futures

Boosted in part by the requirements of extended collaboration and beneficent BYOD, the market for UC products looks assured. And it seems the elusive 'standard' definition will remain in flux. Alexander Seyf at Sytel Reply argues that business requirements will always evolve, and the scope and definition of UC should change accordingly.

"Organisations that need employees to be always contactable – including those in disparate locations or regularly travelling – have opted for a single-number solution, delivered under the guise of fixed-mobile convergence – with varying success."

"Enterprise mobility management tools allow users to remain independent in what devices they choose to use but protect the network at the same time."

Todd Carothers, Executive VP for marketing and product, CounterPath

Other businesses have dispensed with hard-wired desktop phones for the entire workforce, and negotiated aggressive tariffs for mobile phones to replace them. So in Seyf's view, the cost of consolidation moves down the list of priorities going forward, and the nub of the UC value proposition, for now, is driven by the rise of more capable collaboration solutions.

"UC began as an internal IT system and has grown into a B2B collaboration tool," adds Jon Seddon, head of product at Outsourcery. "Within the UC industry, we are seeing ever-greater specialism, with custom applications and technologies being brought to bear. Examples include healthcare, where UC is being used to aid remote diagnosis, or in the legal sector, where it provides the same level of compliance for document review by using touch and video technologies."

For Quocirca, some bald patches on the fabric of the UC concept still need to be fixed before it delivers on its full potential. Bamforth says: "There's probably still a bit of a gap in some UC solutions in the connection to mobile, when for many, mobile is becoming the norm, and wearables will only push this further along. We almost need new metaphor to connect and make use of multi-modal communications paths between several people who might be using very different endpoints to join the same 'conversation'."

But no matter how compelling the UC application, the future focus should always be brought back to network capacity planning and provisioning.

While Capita's Barr believes UC represents the evolution of networking technologies, Avaya's Brooks reckons the first thing network managers must now always do is to make sure that sufficient capability and capacity is delivered to the application.

"For example, voice is far less tolerant to network degradation than video calls. It's vital that network managers and engineers ensure that each element of the UC application is delivered as a premium service – and stays unaffected by any other service.

"Whether it is video calls, HD conference calls, or whatever, network management needs to make sure that everything works together in that environment.

"In short, the core technological challenges of unified communications deployment are still the same today as they were 10 years ago – maintaining and relieving complex networks." ■

off-the-shelf: security hardware

Plugging the breaches

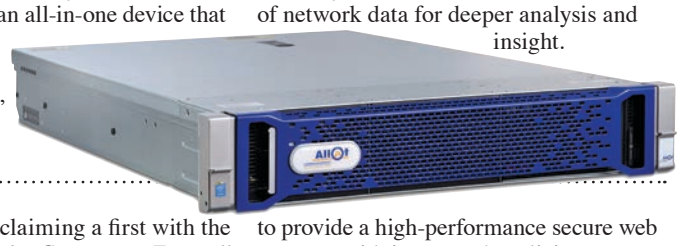
If you're serious about fighting the network blaggers and black hatters you'll need to deploy some serious firepower.

Allot Communications describes its *SG-9500* as a powerful service delivery platform that provides network visibility, security services, and the delivery of a "personalised broadband experience".

The compact, Intel-based appliance is designed especially for data centres, enterprise networks and ISPs. Allot claims it will enable them to roll out SECaaS (Security as a Service) as well as other revenue-generating services rapidly and cost-effectively.

The *SG-9500* is said to deliver high-density connectivity and high throughput, reaching up to 1Tbps of throughput in a cluster of appliances.

As a single point of integration for service delivery, Allot says the *SG-9500* offers enterprises an all-in-one device that provides network intelligence, application control, network security and web security.



The vendor says service providers will benefit from centralised management and integration of its security services which include: SECaaS for consumers and businesses; DDoS protection and anti-bot; URL filtering; and anti-spam. The platform also supports real-time traffic steering to third-party applications or virtualised services.

Additionally, Allot says the *SG-9500* maintains accurate layer 7 visibility and control of user application traffic across multiple platforms, even when asymmetric upstream and/or downstream IP flows are processed by different appliances.

The *SG-9500*'s also has features which enable users to gain greater network visibility and control, and the collection of network data for deeper analysis and insight.

A10 Networks is claiming a first with the launch of the *Thunder Convergent Firewall* which consolidates multiple converged security solutions in one package.

The standalone product has been designed to provide a high-performance secure web gateway with integrated explicit proxy, URL filtering and SSL insight. Security policy enforcement for client outbound HTTP/HTTPS traffic is also supported.

According to A10, enterprises will be able to use the *Thunder* to secure application traffic between sites, while global organisations will be able to utilise public networks to transport application traffic securely.

As a high-performance data centre firewall, the appliance offers integrated network DoS protection and server load balancing, providing a layer 4 stateful firewall and a layer 7 application-level gateway.

A10 says the *Thunder* offers efficiency with single pass SSL decryption and SSL inspection for multiple devices. It claims these "best-in-class" decryption capabilities enable security devices to process clear text traffic.

The firewall leverages the vendor's *Advanced Core Operating System (ACOS) Harmony* platform. This is designed to efficiently utilise multi-core processors and scale performance linearly with increasing CPU/processor density. As a result, A10 says the *Thunder* offers more than 150Gbps throughput and five million CPS in a single, rack-unit appliance.

Fortinet has teamed-up with Hewlett Packard Enterprise (HPE) for a new and integrated security bundle that aims to give enterprises improved visibility, analysis capabilities and control of security threats.

The new offering is said to deliver enhanced interoperability between Fortinet's *FortiGate* network security platform and HPE's *Security Logger* products.

FortiGate comprises one platform for end-to-end network security as well as a single operating system for all platforms and services. It includes a range of firewall appliances such as the *FortiGate 500D (pictured)*.

It's claimed that the integrated and scalable solutions from Fortinet and HPE provide enterprise customers with a broad view of the security threats on their network with deep analysis reporting.

For example, they say that bringing together the *FortiGate* firewall and HPE's log management software into one bundle will help users to seamlessly collect, store, identify, analyse and mitigate complex threats.

The bundle comes packaged with Fortinet's enterprise solutions such as round-the-clock support, next-generation firewall, web filtering and anti-spam.

Improved integration between the two companies' products is also said to provide customers with seamless security management so that they can address vulnerabilities as soon as they are detected. As a result, Fortinet says businesses benefit from less disruption due to security issues and reduced risk of exposure to threats.

According to **Pulse Secure**, the new generation of workers who are increasingly mobile and embracing the cloud has led some IT organisations to deploy disparate point products for security. In addition, enterprise networks have become borderless with employees using a diverse set of applications.

The firm reckons all these elements can create silos that make it difficult for IT departments to manage security. As a result it has upgraded three of its core secure access solutions that can be used with its purpose-built appliances such as the *PSA7000*.

Pulse Policy Secure 5.3 is designed to help IT administrators stay in control with centralised policy management across multi-vendor networks that enforce security through access points, firewalls and mobility management solutions. New integration with Palo Alto Networks firewall provides additional context-aware information including user identity and device security compliance.

Pulse Connect Secure 8.2 aims to give users the flexibility to deploy the "thick or thin" applications business needs from the cloud or data centre. It features enhanced support for HTML5 which, according to the vendor, makes it easier to deploy applications and support mobile workers connecting to corporate resources from a company-managed laptop or a personal mobile device.

Finally, *Pulse Workspace* offers workers access to corporate mobile apps and services without infringing on their privacy while maintaining corporate compliance.

The *Vigil 2.0* security appliance from **Savvius** (formerly WildPackets) combines intelligent packet capture with long-term storage, allowing users to accelerate breach incident response and resolution.

Citing studies from the Ponemon Institute, Savvius says malicious external attacks take on average up to 256 days to identify.

With its unique ability to efficiently store months of network traffic, the company claims *Vigil 2.0* is the only solution that enables network forensics as part of breach investigations that occurred so far in the past that traffic is no longer available with traditional solutions.

The company says its appliance can identify and store packet data five minutes prior to an incident and to continue until five minutes after. *Vigil* can intelligently store more than 50TB of packet level information at speeds of up to 3Gbps, including traffic to and from the nodes that triggered the alert.

Savvius adds that by discarding non-essential information, *Vigil* stores a smaller total amount of packet data, making long-term packet storage practical.

The appliance integrates with intrusion detection and prevention systems from the likes of Palo Alto Networks, HP ArcSight, Cisco Sourcefire, Cyberoam, and others, to capture packets associated with triggered security alerts or events.

IoT security operating in the "stone age"

The security of connected devices in the Internet of Things is equivalent to the "stone age", according to training specialist QA.

The company believes there are still many organisations that have yet to engage and understand what the IoT means for their environment. Furthermore, the drive to higher profit margins is causing security issues to be ignored.

"When it comes to securing the IoT, we're operating in the equivalent of the cyber security stone age," said Richard Beck, QA's head of cyber security. "The security and privacy implications around the growing connectivity of devices is well-documented – an ever increasing attack surface, ever more sophisticated cyber criminals, and users' acceptance that technology will permeate every aspect of their lives."

Among some of its recommendations, QA said offering a level of encrypted service for 'sensitive' information flow with authenticated access should be built in user interfaces. It also said regulators should at least suggest and eventually mandate minimum security controls.

QA continues to do its bit in the war against cyber crime. As well as offering a variety of cyber security training programmes, it has recently launched the Cyber Training Lab. Based in London, the £150,000 facility enables business teams and IT security staff to simulate and react to a real life threat in a secure physical environment.

A variety of off-the-shelf and tailored courses will be available at QA's Cyber Training Lab.

The 20-seat lab has been designed to facilitate practical hands-on learning for organisations sending teams to rehearse incident, conduct digital forensic investigations, create 'offensive defences', and undertake security operations as well as practice crisis media management.

BT on the hunt for more infosec experts

BT is looking for 900 people to work in its security business in the next 12 months. To meet the growing global demand for cyber security services and address the skills shortage in the sector, the company expects to recruit and train 170 graduates and apprentices as part of the intake.

As well as hiring from leading universities, BT says it takes part in a number of hackathon-style, 'war game' competitions to identify the best talent. Graduates and apprentices will undergo training at the company's security academy in a range of areas including physical security, penetration testing, threat intelligence, risk management, security operations and sales.

BT says it already employs more than 2,500 security professionals and has security operations centres around the world, with annual revenues growing at a "double-digit" rate. While the majority of the roles for the new recruits will be in the UK at its security operations centres in London, Sevenoaks and Cardiff, BT is also looking to hire security specialists across Europe, the Americas, the Middle East and Asia-Pacific.

Mark Hughes, president of BT security, said: "A number of high-profile security and data breaches have dominated the headlines in recent months, and this has led to a surge in interest from both consumers and IT departments wanting to know how best they can protect themselves in the digital world."

NEW COURSES

BCS Business Analysis certification programme - EXIN

Global exam institute EXIN has partnered with BCS, The British Computer Society, to expand its governance and security portfolio with a new certification programme.

EXIN says trends like cloud, mobile, Big Data, etc., have changed the way businesses operate and innovate. Its certification programme – which is already offered by BCS – is claimed to provide alignment between business needs and business change solutions, leading to "sharper decision making and improved processes".

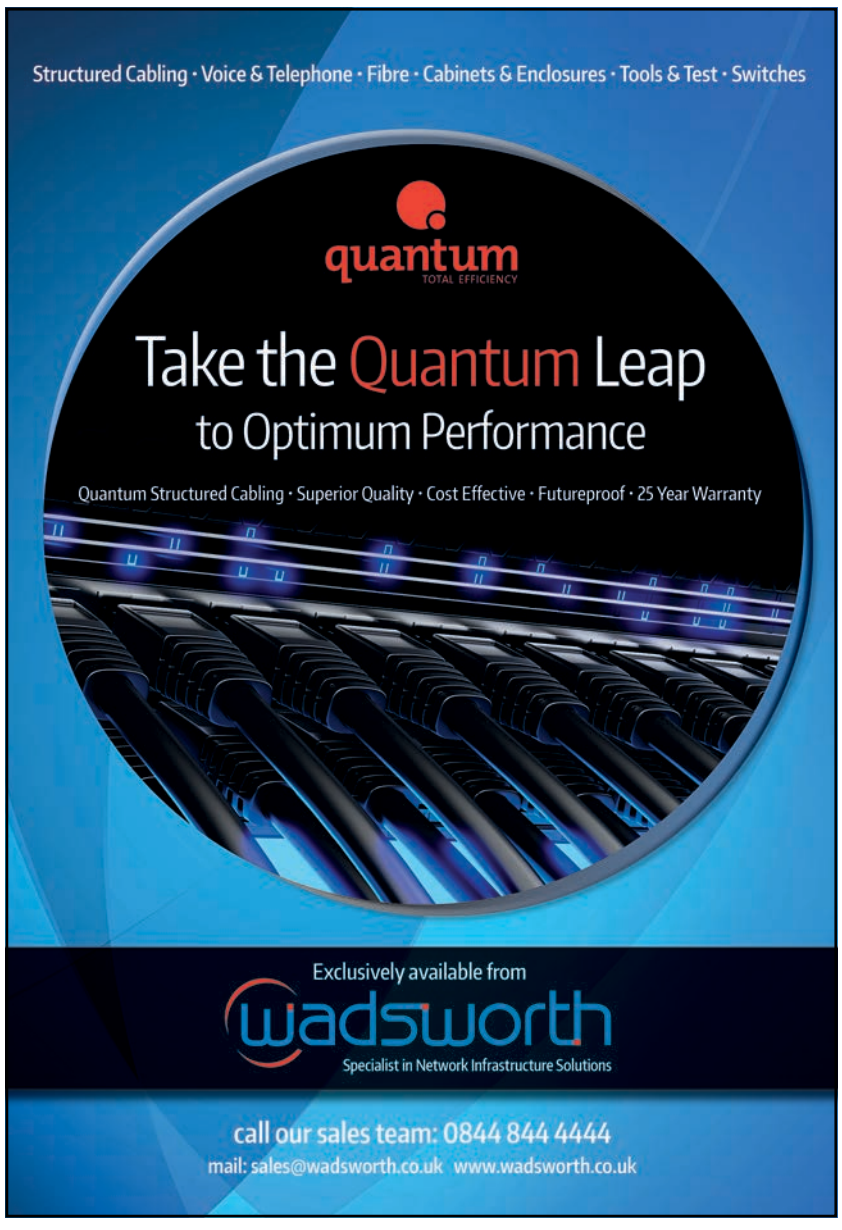
The first three foundation exams have already gone live and include *Business Analysis, Business Change* and *Commercial Awareness*. These will later be complemented by five practitioner exams. *www.exin.com*

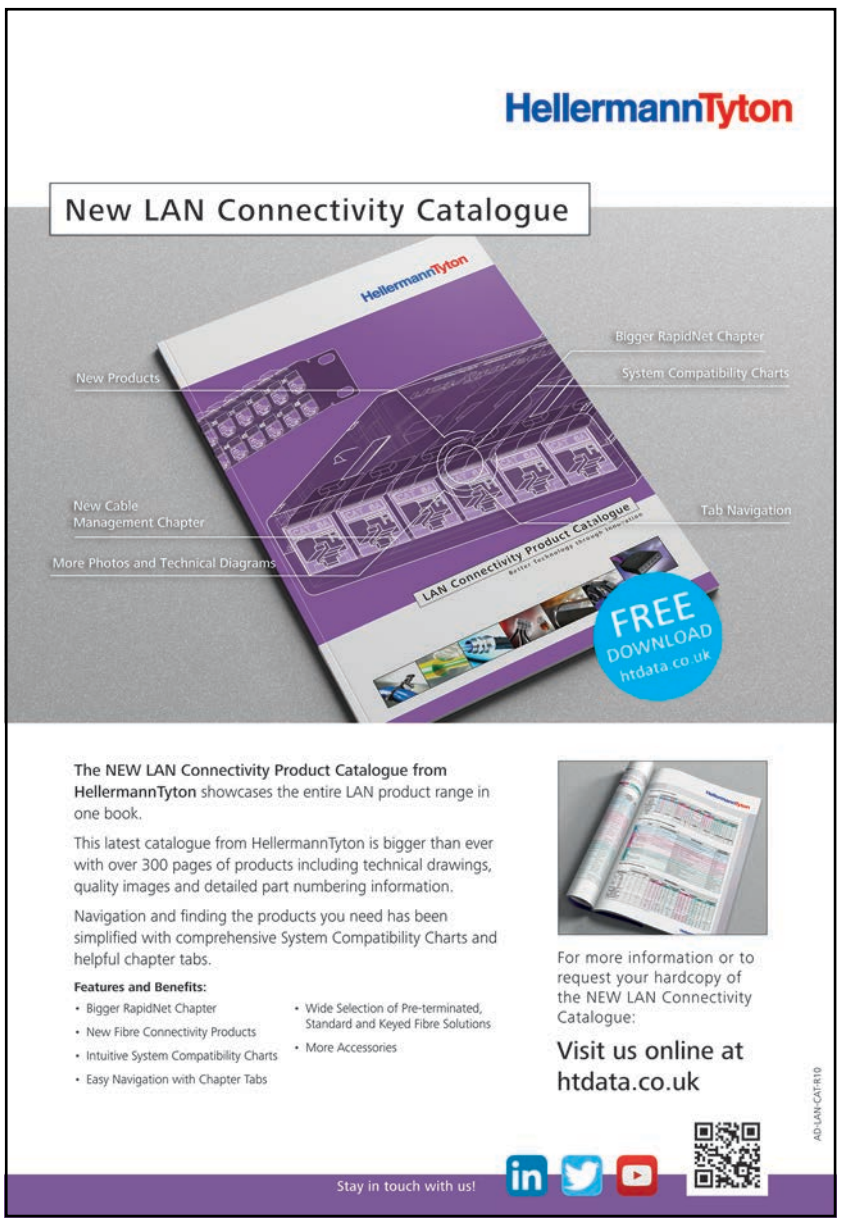
Microsoft Showcase Classroom – Tech Data

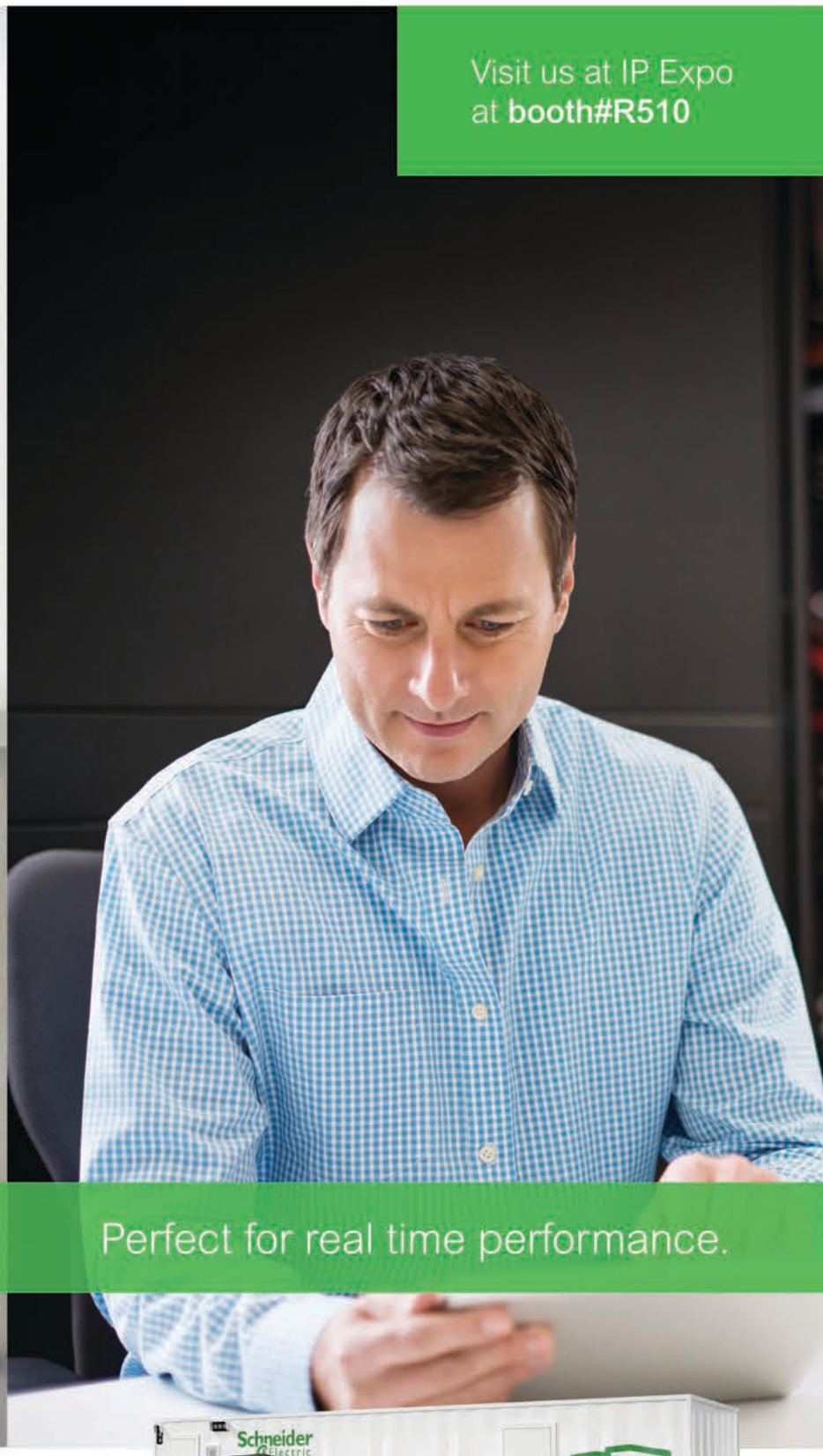
Tech Data is giving resellers the chance to revisit Microsoft's complete proposition for education before the major upgrade programmes set for the summer break.

All the presentations and workshops in the *Microsoft Showcase Classroom* will be run by highly-qualified teachers. Technologies and solutions explored will include the new *Surface Pro* devices and *Office 365*. Microsoft will also demonstrate how *Windows 10* provides a stable platform for the management of devices, apps and services in an educational setting.

Tech Data will host two London sessions at the Microsoft facility in Paddington on 18 May and 22 June. The *Showcase Classroom* will visit The Belfry in Sutton Coldfield on 25 May, and The Mere in Knutsford on 15 June. *http://microsoftattechdata.co.uk/events.html*







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