

# networking

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# Government to spend £4bn on improving NHS IT and networks

by Rahiel Nasir

The Department of Health has launched a review to improve the use of IT in the NHS, and achieve a paper-free health and care system by 2020.

The review, entitled 'Making IT work: harnessing the power of health IT to improve care in England', will look at places where information technology has worked, as well as areas that need improving. It will also include electronic health records.

Health secretary Jeremy Hunt originally announced the review in 2015. It has now been launched by the National Advisory Group on Health Information Technology in England which will report back to government in June.

The group is chaired by Professor Bob Wachter, author of 'The Digital Doctor' and interim chairman of the University

of California's Department of Medicine. He was voted as the 'Most Influential Physician-Executive in the United States' by *Modern Healthcare* magazine last year.

In launching the review in early February, Wachter said: "The NHS is one of the world's largest health and healthcare systems, and one of its largest employers. It's essential that information technology across the NHS works well and can perform the tasks needed to deliver high quality, safe and efficient care."

Members of the National Advisory Group on Health Information Technology in England include medical and academic experts as well as patient representatives from England, Scotland, Denmark and the US. No specialist IT or technology firms are named as group members.

**Industry experts warn that the NHS can only become truly digital if it has the right network infrastructure in place.**



According to reports, the Government has set aside more than £4bn for areas such as electronic records and online appointments, prescriptions and consultations.

Speaking to the BBC, Hunt said the funding will enable everyone to gain access to their electronic health records. These will be shared between health professionals, meaning patients will no longer have to repeat their medical histories during consultations with different clinics and hospitals.

The BBC reported that patients with long-term conditions will also be able to

upload and send real-time data to doctors and nurses. By 2020, it is hoped that 25 per cent of such patients will be able to monitor their health remotely.

Some of the initiatives earmarked for the £4bn funding include: £1.8bn to create a paper-free NHS and ditching obsolete technology such as fax machines; £1bn on cyber security and data consent; and around £400m to develop online services such as a new NHS website, apps, and the provision of free Wi-Fi in all NHS buildings in England.

*(Continued on page 2)*

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## The role of the CIO: evolve or die?

Chief information officers need to demonstrate the impact of IT on the bottom line or else risk getting booted out of the boardroom, according to research by Insight UK.

The hardware, software and services provider says this may not be easy for traditional CIOs who will have to evolve in order to maintain their roles in the corporate decision-making process.

Last July, Insight surveyed 200 CIOs and senior directors from UK organisations across multiple sectors who employed 100 to 1,000+ people. It found that while the CIO's responsibility has traditionally been about technology efficiency, this has transformed over the last five years into focusing on security, cost-effective spending and innovation.

Just over half of the directors polled questioned the CIO's role below the rest

of the senior management team, and 44 per cent felt CIOs are less important than they were two years ago. Nearly a quarter (22 per cent) of directors believe the majority of the technology budget should sit with the board.

Insight CIO Mike Guggemos says there's a real need for organisations, particularly leadership teams, to ensure they are united. He reckons the study gives a clear message to CIOs to act now and educate the wider business, or risk losing their roles in the boardroom.

"CIOs play a vital role in the organisation, driving forward an era where businesses approach technology in a profound new way. Although this was reflected in the statistics, they are failing to showcase their value to the boardroom. Those who learn this language will continue to succeed, and play a vital role in the organisations of tomorrow." ■



# Businesses have their work cut out to ensure GDPR compliance

Only one in five companies are confident that they will comply with the upcoming EU General Data Protection Regulation (GDPR).

According to the findings of a YouGov study commissioned by cloud access security broker Netskope, only 21 per cent of the IT professionals surveyed in more than 500 medium and large businesses felt sure they would comply with new regulations. This includes the GDPR which is set to be finalised in Spring 2016 and enforced from 2018 (*see News, Jan 2016*).

A further 21 per cent assumed that their cloud providers would handle compliance obligations on their behalf. Netskope warns that the wording of the GDPR explicitly states that this would not be the case.

Under the GDPR, organisations must ensure that personal data are processed in line with the regulation. This means that in order to comply, they must take organisational and technical measures that go beyond traditional security approaches that are aimed at confidentiality, integrity and availability of the data.

Netskope adds that cloud apps pose a particular challenge to GDPR compliance because they often create unstructured data which are typically much harder for organisations to manage because of how they are created and stored.

*Netskope says data stored and shared on mobile devices are outside an organisation's direct control, and therefore pose a serious risk to GDPR compliance.*



In its *Cloud Report* published last autumn, the firm found that the average number of cloud apps in use per enterprise in the EMEA region was 608 – a 26 per cent rise from the previous report. Furthermore, 89.8 per cent of those apps were not enterprise-ready, lacking key functionalities such as security, audit, certification, etc.

Eduard Meelhuysen, Netskope's EMEA VP, reckons businesses now have their work cut out to ensure compliance in time for the EU's deadline. He says the key is to start preparations as soon as possible: "As a starting point for GDPR compliance, organisations need to conduct an audit to ensure they understand what cloud apps are in use – both sanctioned and unsanctioned – and what data are in those cloud apps." ■

# Government says "no consensus" about FTTP as future technology

Broadband provider Hyperoptic has reacted angrily to a recent government statement which said there was "no consensus" on extending the use of FTTP to meet future demands.

In mid-January, the government published its response to the EU consultation on the needs for internet speed and quality beyond 2020. It acknowledged that fibre was a crucial backbone technology underpinning fixed, mobile and Wi-Fi networks, and that mobile operators will increasingly require access to fibre infrastructure to make the best use of finite spectrum resources.

But it went on to say that while some responses to the Government's Digital Communications Infrastructure Strategy suggested that this necessitates the extension of FTTP to meet future demands, there was no consensus on this point.

The statement added that demand, particularly for residential users, could be met by alternative technology solutions such as G.Fast, cable and satcoms.

Steve Holford, VP of products for Hyperoptic, believes it is "nonsensical" for the government to say there is no consensus on extending FTTP. "The current FTTC



*Hyperoptic's Stephen Holford says some of the FTTP alternatives suggested by the government have limitations.*

infrastructure is incredibly limiting in a number of respects; from significantly slower upload speeds, to peak-time slowdowns and distance attenuation.

"Similarly, once G.fast technology leaves the lab, it is subject to a number of similar issues; the bandwidth is still limited, so the performance isn't reliable, and there is also the requirement to add more street cabinets to already crowded streets."

Holford reckons the future of broadband is FTTP, as evidenced by the number of countries investing in their nationwide fibre programmes. "The UK Government should be encouraging and supporting FTTP, so that its citizens can enjoy a broadband service that is future-proofed for generations to come." ■

# Virtus and Jisc joins forces to drive forward education and research

The UK's first national shared data centre for research and education organisations is now home to 15 institutions following the arrival of three more tenants. They include the University of the Arts London, the Institute of Cancer Research, and GÉANT, the pan-European data network for the research and education community.

The shared centre was originally set-up by Infinity SDC at its flagship site in Slough in September 2014 (*also see News, Sep 2015*). This was part of a five-year framework agreement with

Jisc, the education sector's not-for-profit organisation for digital service and solutions. Jisc also provides Janet, the UK's national research and education network.

Late last year, Infinity sold its Slough data centre business to Virtus Data Centres which now runs the site as LONDON4. The facility is directly connected to the core of the Janet network. Virtus says this allows researchers to take advantage of fast and secure connectivity between data storage and high-performance computing facilities, both nationally and globally. ■

# Review of IT spending in the NHS

(Continued from page 1)

The latter was first announced at the end of 2015 but a timescale for it has yet to be set. Some industry experts have warned that without universal connectivity across all NHS buildings, the benefits of any new applications and digitised records cannot be fully realised.

Phil Sorsky, VP of wireless at network infrastructure specialist CommScope, said the NHS can only become a truly digital organisation if health professionals and patients can connect instantly to access data and book services online. "That's why it's vital that all NHS buildings are properly equipped with technology to ensure consistency of connectivity, whether that's in the waiting room or the accident and emergency department."

He added that while the investment in Wi-Fi was welcome, it is also critical for healthcare staff to have access to cellular coverage in hospitals so that, where safe to do so, they can connect with staff and resolve issues in real-time and without delay.

In the meantime, Lancashire Care NHS Foundation Trust has gained a headstart with the introduction of a high-capacity

wireless network. Patients, visitors and 7,000 staff members can now access free Wi-Fi connectivity across the trust's 400 sites.

Mark Johnson, associate director of performance and informatics at Lancashire Care NHS Foundation Trust, says the previous guest Wi-Fi solution was difficult and costly to manage and maintain.

"The solution we now have offers significant benefit to our patients, their relatives and our staff, whilst allowing our IM&T service to focus on providing services to enhance our care provision."

The new system was installed by Lancaster-based TNP (The Networking People). Working with its partner Blackpool Council (*also see News, May 2013*), TNP built the secure and high-capacity network using existing infrastructure rather than overlaying an additional wireless platform.

The firm says all of the system hardware is located within the trust's data centres, giving it the reassurance that no data is at risk on external or hosted servers located off-site. TNP adds that the Wi-Fi service is easy-to-use, enabling access either via social media logins or a text message, thus allowing for an accurate audit trail. ■



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# Cisco aims to offer complete IoT solution with Jasper acquisition

Cisco plans to buy Jasper Technologies. Under the terms of the agreement, it will pay \$1.4bn in cash and assumed equity awards, plus additional retention-based incentives.

Jasper is known for its cloud-based service platform that can help enterprises and service providers launch, manage and monetise IoT services on a global scale. The California-based firm says it works with 27 service provider groups globally, and names Amazon, Ford, G4S, JCDecaux and Starbucks among its 3,500 enterprise customers it has worldwide.

According to Jasper, it can connect any device over cellular networks, and connectivity of IoT services can then be managed through its SaaS platform. Cisco says the proposed acquisition will mean it can offer a complete IoT service solution that is interoperable across devices, and works with IoT service providers, application developers, and an ecosystem of partners.

The vendor adds that it will continue to build upon the Jasper IoT service platform and add new services such as enterprise Wi-Fi, security for connected devices, and advanced analytics to better manage device usage.



**Jasper CEO Jahangir Mohammed believes all enterprises need integrated solutions that give them complete visibility and control over their connected services.**

Jasper CEO Jahangir Mohammed believes that by coming together, the two companies will help mobile operators and enterprises accelerate their IoT success.

“Enterprises in every industry need integrated solutions that give them complete visibility and control over their connected services, while also being simple to implement, manage and scale,” he said.

The deal is expected to close in the third quarter of the 2016 fiscal year, subject to customary closing conditions. Mohammed will stay with the merged firm and run a new IoT software business unit under Rowan Trollope, SVP and GM of Cisco’s IoT and collaboration technology group. ■

# Netwise chooses central London location for second data centre



The new facility has 6,000ft<sup>2</sup> of technical space across two data halls, and features separate dual A+B power feeds to each rack.

Netwise Hosting has launched a new London data centre. The 11,000ft<sup>2</sup> facility in Bermondsey is less than a mile from London Bridge and is of a modular design to enable easy expansion as demand increases.

Its claimed the facility’s 1.12 PUE rating is one of the lowest in Europe. Netwise says this is largely due to the deployment of an innovative evaporative cooling system from EcoCooling.

The centre itself features 6,000ft<sup>2</sup> of technical space across two data halls, each in a five pod configuration. There are separate dual A+B power feeds to each rack, five 220kVa diesel generators in an N+1 configuration with 48-hour on-site fuel supply, and N+N and N+1 UPS system options with failover runtime exceeding 10 minutes.

This is the second data centre designed and built entirely by Netwise’s in-house



## THE WORLD ACCORDING TO...

Dave Allen, SVP and general counsel, Dyn

### Privacy Shield should mean greater legal certainty about EU-US data

Months after the ground-breaking decisions by the European Court of Justice to invalidate the US Safe Harbour, representatives from both sides of the Atlantic have now agreed the ‘Privacy Shield’ to govern the transfer of data between jurisdictions.

Of course, the devil will be in the details. But this regulatory development is a move toward greater legal certainty regarding the flow of data between the US and Europe. During this era of emerging and unsettled geographic restrictions on cross-border data flows, the ruling shines a light on the need for enterprises to have visibility into actual routing paths of their data.

Since revelations about data collection practices by US government agencies, many countries have imposed geographic restrictions on where data can go. For example, Russia requires all personal data about its citizens to be stored and processed on servers physically in its own country.

Some internet companies have already begun to address these challenges at the data residency level, looking at fixed locations where data is stored, constructing in-region data centres, and using localised cloud and content delivery services.

But this only solves part of the problem. Understanding the actual paths and cross-bordering is, in many ways, a much more complex and important issue for businesses to get to grips with.

Take for example a German company with a data centre in Frankfurt and end-users across Germany. It limits its internet traffic to a local tier 1 network and therefore fully expects its internet traffic to remain in the confines of Germany.

However, upon analysing traffic patterns in real time, that company would be disappointed to find out that around 20 per cent of its traffic actually exits the borders before coming back to reach its users.

This is vitally important information for businesses to be aware of. How can they be in a position to comply with the domestic laws that reside in specific geographic boundaries without it?

Therefore, addressing the problems posed in light of this new framework solely from a data residence perspective is incomplete at best, and can lead to a false sense of confidence that regulations are being adequately complied with. Access to traffic patterns in real time, along with geolocation information, provides business a much more complete solution.

#### EDITORIAL:

**Editorial director:** Rahiel Nasir  
rahiehn@kadiumpublishing.com  
**Designer:** Alan McClenaghan  
alanm@kadiumpublishing.com  
**Contributors:** Dave Allen, James Hayes

#### ADVERTISING & PRODUCTION:

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

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hosting team. The first facility, based in Sutton in Surrey, was decommissioned in March 2014 due to rapid expansion.

Although the London site was officially launched on 25 February, it has been servicing Netwise’s existing customer base along with some key new anchor tenants since 2015. The company says it wanted to delay the public launch in order to ‘bed in’ the new facility under real-world conditions.

MD Matthew Butt says: “We were fortunate enough to be able to soft-open this facility [last] May at around 10 per cent capacity before we even began marketing it properly, which is a position most new data centres do not find themselves in.

“This meant that we could really take our time on the finishing touches, without the need to rush into a launch plan driven solely by the need to increase revenue.” ■

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## Imation sells IronKey assets and technology

Imation has sold the USB technology and assets of its IronKey brand to Kingston Digital. The firm, which is the flash memory affiliate of Kingston Technology, says the acquisition provides customers with a "more comprehensive" portfolio of products and services. In addition to the Kingston deal, encryption services specialist DataLocker has purchased the IronKey *Enterprise Management Services* platform which provides centralised management to encrypted USB drives. DataLocker previously acquired the *SafeConsole* management system from BlockMaster, the solution that Kingston uses on its current management-ready encrypted USB flash drives. ■

## TES is top of the class for education comms

Leyland-based TES Wireless Communications Solutions has won a tender to supply secure comms technology to the North Western Universities Purchasing Consortium. Under the agreement, it will provide radio infrastructure, two-way handsets and accessories to universities across the UK. "As we've provided infrastructure and equipment to schools and colleges already, we felt well placed to deliver into universities," said TES MD Keith Edwards. "We've formulated specific offers for universities that we think offer really good value, but after discussing it with our team, most of whom have kids in education, we've decided that we'll extend the offer to schools and colleges." ■

## Convergence buys Networks First

Convergence Group has acquired privately owned IT managed services and network support business Networks First. Both companies are headquartered in the West Midlands and serve the channel partner community. It's claimed the combined organisation now boasts a comprehensive portfolio of managed network services, network security expertise, multi-vendor network support, engineering, and project services for LANs and WANs. Convergence Group MD Neal Harrison said: "Our partners and customers will benefit from more choice and have a simpler way of meeting all of their network connectivity needs in one place." ■

# Comtek unveils decommissioning service for unwanted networking kit

Comtek is launching a new end-to-end decommissioning service for networking equipment aimed at enterprises, ISPs and telecoms operators.

The company, which specialises in providing aftermarket services for the telecoms industry, says it will remanufacture unwanted legacy equipment and sell it back to market utilising its broad global customer base. Refurbished kit will be offered with an additional 12 month warranty. As part of the programme, Comtek will pass on a percentage of the revenue to the customer decommissioning the equipment.

Based in Deeside, North Wales, the firm says it has specifically built a state-of-the-art, highly secure 60,000ft<sup>2</sup> warehouse to support the new service. It adds that this

is on top of the £30m it has invested in creating what it claims is some of the most "technically advanced" test and repair centres across the world.

Comtek reckons it not only has the capacity to repair legacy equipment back to full working order, but also has buyers looking to purchase the remanufactured hardware thanks to its global customer base which includes the largest international carriers and telcos.

"Equipment which sits idle on the network represents a lost opportunity for businesses," says Comtek Group CEO Akar Sheibani. "This service allows our customers to keep their networks leaner, to source rare and much-needed equipment, as well as to generate a revenue stream." ■



Comtek says it's able to repair and service equipment that has long been out of production, including the complete range of Nortel products such as the DMS 100 switching equipment shown here.

## Converged infrastructure spending forecast to rise

Upcoming refresh projects will drive enterprise investments in servers and converged infrastructure in 2016, according to 451 Research.

In its *Voice of the Enterprise: Servers and Converged Infrastructure* study, the market watcher surveyed more than 780 businesses in Europe and North America. Sixty per cent said they planned to increase spending on servers this year, and 79 per cent plan to spend more on converged infrastructure.

451 Research says investments in hyperconverged infrastructure will be particularly strong as 86 per cent aim to

increase spending here, while more than 32 per cent are planning a major server and storage refresh project.

The firm expects Cisco to gain the most with 70 per cent of its customers looking to increase spending allocations on its server portfolio. HP, IBM and Oracle are predicted to lose as more of their customers are aiming to cut rather than increase spending on their products.

451 Research adds that budgets are strong for the majority of converged infrastructure vendors. EMC's newly formed converged platforms division

(formerly VCE) leads in budget increases: 78 per cent of the vendor's customers plan to spend more on its products in 2016 with 32 per cent in the 'above \$2m' bracket.

"We see a sea change in the industry with Dell's acquisition of EMC/VCE, and Nutanix filing for IPO," says senior analyst Nikolay Yamakawa. "These shifts are putting a spotlight on converged infrastructure and providing IT buyers with more options."

According to 451 Research, most converged infrastructure vendors get into enterprise environments through a technology refresh project, especially servers. ■

## BT reorganises and creates new enterprise division

With its acquisition of EE now complete, BT has announced a new organisational structure that will take effect from April.

The company will run six lines of business: two will focus on enterprises and the public sector (one in the UK and Ireland and one globally); two will provide wholesale services to other industry players; and two will serve consumers.

The new enterprise arm combines BT Business with EE's business division and those parts of BT Global Services that are UK focused. It will be led by Graham Sutherland as CEO, and aims to serve businesses of all sizes as well as the public sector in the UK and Ireland.

Luis Alvarez will continue as CEO of Global Services which will serve the communications needs of multinationals and financial services organisations based in the UK and across the world. It will also focus on serving major public sector customers outside the UK.



The new enterprise arm will be led by Graham Sutherland. It combines the business divisions of BT and EE, as well as parts of BT Global Services.

BT's wholesale and ventures division will be expanded to include EE's MVNO arm as well as some specialist businesses.

EE itself will focus largely on the consumer market, retaining its brand, network and retail outlets. It will also continue to deliver the Emergency Services Network contract (*News*, Jan 2016). Marc Allera is EE's CEO.

The six divisions will be supported by BT Technology, Service and Operations (TSO) which is currently responsible for core networks, IT platforms and global R&D. A new IT and mobile business unit within TSO will be led by EE's Fotis Karonis.

Openreach remains unaffected by the reorganisation. ■



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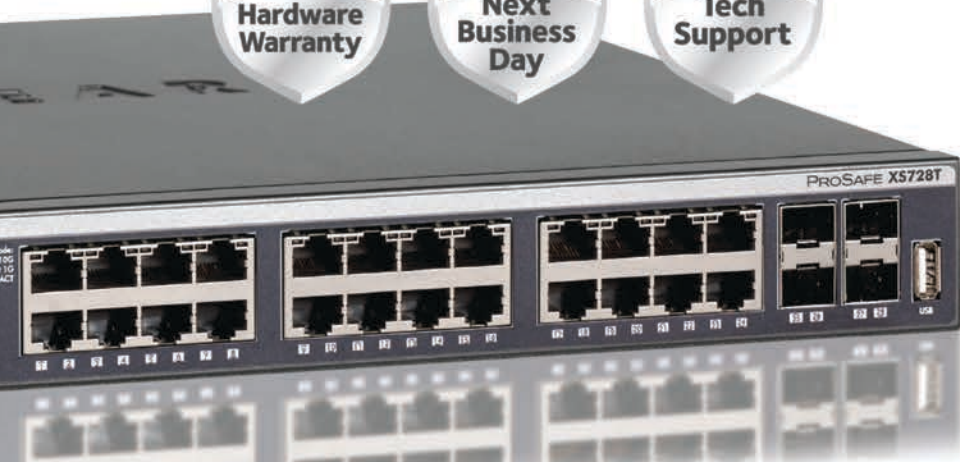
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Costain developed the Electronic Service Delivery for Abnormal Loads service for Highways England.

## NaviSite helps keeps a look out for abnormal loads on English roads

Costain has selected NaviSite Europe's hybrid cloud hosting services to support the rollout of its Electronic Service Delivery for Abnormal Loads (ESDAL) application for Highways England.

Complex UK legislation requires highways authorities, structure owners and the police to be notified of any vehicles and their loads exceeding standard dimensions. Following a request from HE, civil engineering specialist Costain developed the ESDAL application to automate this process.

NaviSite was then chosen to provide a secure and scalable hosting solution for the service. Using a hybrid cloud model,

ESDAL is now available as a free service to local councils, government departments and private companies through a dedicated website run by Highways England.

Graham Stacey, Costain's highways technology director, says: "The new cloud-based platform will enable us to further develop the ESDAL solution and take advantage of new and emerging technologies."

NaviSite Europe is a wholly owned subsidiary of Massachusetts-based cloud hosting and managed services provider NaviSite Inc. At the end of 2011, it was acquired by Time Warner Cable in a deal valued at around \$230m. ■

## Pulsant and Peppermint develop unique legal sector cloud solution

A unique enterprise cloud solution designed specifically to service the needs of the legal and dispute market has been launched as part of a new strategic partnership between Pulsant and Peppermint Technology.

Peppermint is a legal and dispute management technology provider. Its legal service platform is built on *Microsoft CRM Dynamics* and is said to be supplied to more than 5,000 users. The firm has awarded Pulsant a multi-year contract to host the *Peppermint Shared Cloud* platform and provide a range of private cloud solutions dedicated to individual firms.

Peppermint CEO Arlene Adams believes a shared cloud environment gives many firms access to a level of service and technology they otherwise could not afford.

"By selecting Pulsant as our technology partner, we are able to offer our clients a range of hosting solutions tailored to their size,

budget and business requirements," she says. "Our industry is quickly embracing cloud technology because increasingly law firms want to focus on the law and leave IT to the specialists."

Pulsant business development manager Tom Brand says the two companies worked closely together on the development of reference architecture that aims to set a "new benchmark" in cloud computing for the legal and dispute market. He says: "We designed a robust architected platform that enables the growth, scalability and reliability that is expected for a business-critical, 24/7 operation."

Pulsant owns and operates a network of 10 UK-based data centres. It offers a combination of services to more than 3,000 companies across a range of industries, including heavily regulated markets such as financial services, legal and government. ■

## OGL cuts storage costs in a flash

OGL Computer is now offering desktop-as-a-service (DaaS) backed by a software-defined storage platform from Atlantis Computing.

The Midlands-based IT services company has been providing hosted email, backup and IaaS to its customers across the UK. The next step was to develop a DaaS offering, but it needed a high-performing, multi-tenant VDI solution to support demand.

Initially, the firm planned to use a SAN running on SSDs but found the price tag too high, as solutions architect Mark Slater explains: "We estimated that the cost of 1,500 Atlantis licences was 34 per cent less than the cost of purchasing an SSD-based SAN for up to 1,500 desktops. Also, the SAN would have required additional rack space and power, as well as two to three hours of technical support per week."

With Atlantis' help, OGL now has 20 hosts each serving 80 desktops and supported by an all-flash storage array. The vendor claims the firm is able to



OGL solutions architect Mark Slater says an SSD-based SAN system would have cost too much time and money.

deliver a resilient service to its customers because all single points of failure have now been eliminated.

Atlantis adds that its software has allowed OGL to deliver 200 IOPS per desktop, with less than one millisecond of latency. It says this is more than double the performance of a typical desktop PC, and a ten-fold improvement over SSD.

Furthermore, the company says its lower cost software-defined storage platform has enabled OGL to set more competitive subscription rates for its DaaS offering. ■

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## ITS data backup platform helps keep the lights on at Lyco

Lighting company Lyco has implemented a DRaaS solution from managed services provider IT Specialists (ITS).

Rapid expansion, increasing stock and product lines, and a growing customer base have all contributed to a huge growth in business data for Lyco over the past 20 years. As a result, it needed a new recovery and security solution that allowed storage of its increasing amount of data, both onsite and offsite, as well as reduced recovery times.

ITS' *BlackCloud* solution has given Lyco a fully managed private cloud that enables it to replicate data to a secure alternate offsite location. It also offers security through encryption during transit and while in storage.

ITS says offsite data storage provides the ability to vault data so there is no need to use any external storage devices or to remove these from site as an additional backup method. It also offers Lyco a fully managed service that automatically restores data and monitoring for round-the-clock support.

The firm has also deployed *BlackVault*, ITS' onsite disaster recovery platform.



The lighting specialist is using disaster recovery as a service to help with the vaulting and archiving of data.

It's claimed this gives Lyco quick and easy access to servers as necessary from any location using a secure internet connection.

Matt Kingswood, head of ITS, says: "By securely locating data across multiple sites using our *BlackCloud* and *BlackVault* solutions, we not only enabled the lighting retailer's business to continue running regardless of external circumstances, we have also reduced data recovery time from less than eight hours to less than one." ■



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# Keeping the juice flowing

Maintaining an always-on supply of electricity and water is a full-time job for the big utility companies. Here's how their IT systems are playing a mission-critical role.

## United Utilities keeps on pumping after going Critical

United Utilities required a turnkey project solution for its reservoir pumping station which is located on a moor outside Oldham. Given the very challenging environment, what it needed was a robust and reliable solution that included a comprehensive UPS system, enclosure and thermal management, as well as civil works.

A key requirement for the solution provider was the ability to specify, supply, install and then maintain the complete system over several years with minimal site disturbance.

Critical Power Supplies (CPS) proposed a comprehensive fixed-price package which delivered a managed solution within the required timeframe, together with comprehensive turnkey project management. This ensured that all the equipment went on to site quickly and professionally, including craning of the enclosure, electrical

installation, distribution switchgear and theft management protection.

The deployment featured Riello's *Multi-Sentry* UPS with extended runtime, associated switchgear, cabling, commissioning, and fast response maintenance contracts.

CPS says the UPS provides a high reliability solution within an external maintenance bypass switch – in the event of the device needing maintenance, the load could still be powered without interruption. The UPS was provided with a comprehensive three-year warranty as standard.

According to Critical Power Solutions, the whole project was managed throughout with meetings and key stages being successfully passed first time.

It adds that the turnkey solution gave "complete reassurance" to United Utilities that no matter the weather or power emergency, its site could still remain operational around the clock.

As well as in-life equipment management, CPS is also responsible for end of life decommissioning and disposal/recycling management.



## Network monitor helps deliver low carbon electricity

As a growing number of customers start to use low carbon technologies such as electric cars and heat pumps, power distribution companies such as Western Power Distribution (WPD) are expecting to see increased demands for electricity during peak periods.

WPD is responsible for electricity distribution in the Midlands, south west England, and South Wales. It serves more than 7.8 million customers across an area spanning 55,500 square kilometres, and employs more than 6,000 staff.

To assess the impact of low carbon technologies on its network and help it prepare for the future, WPD devised *Project FALCON*, an extensive trial in the Milton Keynes area which ran from January 2012 to September 2015.

The project entailed installing equipment, creating commercial frameworks, and operating the techniques used on a live electricity distribution network. A simulation tool was then used to calculate the likely load increases and determine constraints on the network over time, and then modelled the results of applying those techniques to the year 2050.

A WiMAX network was used to return the engineering data from the field to WPD's control facility for collection and analysis. To ensure that the project ran as smoothly as possible, the *Project FALCON* team decided to invest in a robust monitoring system for the radio network.

The ideal solution would be one that could be set up quickly and effectively, was cost effective and worked seamlessly with WPD's existing tools. Another key consideration was ease of use – the team didn't want to invest in software that required extensive prior knowledge.

After extensive research, it settled on Paessler's *PRTG Network Monitor*. Barrie Stephens, special projects manager at WPD, says: "*PRTG* was quick to install and configure, and the price was very competitive. We evaluated the tool using the trial license and were really impressed by its flexibility, its range of features including overview and maps, and the ease of adding new sensors."

In a practical sense, *PRTG* was used to determine system health both during the installation and rollout of the project, as well as to monitor day-to-day critical operations of the field area network.

*Project FALCON* was the first-of-its-kind in the UK and required a new prototype system based on WiMAX. This meant that the outcomes and means of monitoring system health were completely new. According to Paessler, *PRTG* provided the most effective way to keep an eye on this.

"With a pioneering project such as this, there is even more need to know exactly what is happening across all areas of the network at any given time," says Stephens. "In many cases, there was little frame of reference for the tasks that we were undertaking, it was uncharted territory, and so having a robust and flexible network monitoring system in place was paramount."

WPD is now considering further telecoms projects in the future which will likely expand on and exploit the network and systems deployed by *Project FALCON*. Paessler say this will enable the company to draw on more of *PRTG*'s "rich functionality".

## Excel structured cabling empowers Npower

Npower is one of the UK's 'Big Six' energy providers and is said to be the country's second-largest gas supplier. It serves more than five million customers with gas and/or electricity, and employs nearly 1,400 staff.

The company is based in Birmingham at the prestigious Aqueous Business Centre, and when it needed a structured cabling system, it called in North Voice and Data (NVD).

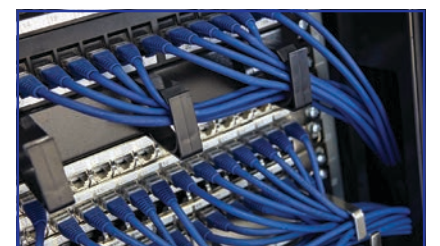
The Aqueous building is said to have an eye-catching design, so it was essential that NVD did not cause any damage to it. It also had to complete the installation within a very tight deadline and ensure employees could continue to come into work without any downtime.

In order to give the level of high-speed, fully integrated communications that Npower requires for its sales and customer services departments, the network design required the best possible structured cabling system. This had to meet the company's current as well as future needs.

To achieve this, NVD undertook a full site survey and assessment to understand the nature of Npower's business, growth strategy and IT requirements. It was then able to develop a tailor made system that met the energy company's needs and could stand the test of time.

Both NCD and Npower agreed to use Excel's range of structured cabling products. Ann Rivera, Npower's support services manager, says: "The option to implement Excel cabling from North Voice and Data meant we could have a quality infrastructure with Gigabit technology. The comprehensive Mayflex warranty guaranteed a reliable solution."

Low smoke zero halogen enhanced Cat 5 cable with an optical fibre and multi-pair voice backbone was installed through three floors. The network comprised 1,400 floor-mounted voice and data outlets. The floor boxes housed four voice and four data outlets that are patched to the central communications room on the ground floor.





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Andrew Wilkinson, UK Managing Director, Socomec comments; "We are excited that our partnership with Networks Centre will enable us to deliver our industry-leading solutions to an even wider audience. Networks Centre has an impressive track record in terms of supporting customers in the selection and delivery of the right system for their application."



James Reid, Sale Director said: "The new partnership with Socomec ensures we offer complete infrastructure solutions for data centres and critical enterprise. Socomec UPS systems are designed to offer customers energy and cost saving benefits."

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# Perception Versus Reality

## The DCIM Conundrum

Fix It Again Tony. As a child, this was how the FIAT acronym was joked about.

This was a time when buying a FIAT was akin to investing in scrap metal with the additional prospect of wondering if the thing would start on a wet day or if you would open the door to find the foot wells in 6 inches of water.

And consider the household favourite mouthwash Listerine, which in 1976 was forced by the US Federal Trade Commission (FTC) to advertise that their previous claims were false:

“Contrary to prior advertising, Listerine will not help prevent colds or sore throats or lessen their severity.”

Ouch!

Listerine survived and became a stronger brand. FIAT still struggles to shake its reputation despite JD Power considering the FIAT500 as good as the rest of the market.

The point being, once a dog gets a name, whether positive or negative, it's hard to shake that name and perception, even when the reality has long since passed.

### False prophets

What does this have to do with the efficient management of control of data centres?

Well, DCIM is a relatively new space with many vendors (since 2015 quite a few less) dabbling in the area. Some, with less than perfect offerings, and many with promises of perfection.

**WHEN EVERYONE  
IS THINKING ALIKE,  
THEN SOMEBODY  
ISN'T THINKING**

It's fair to say that during the shake up period of sorting the men from the boys, some tarnishing has been done to the DCIM concept, and all vendors have got a lick of that brush, deserved or not.

### Inertia is an obstacle

In our experience, two areas where we see a reluctance to invest in DCIM are in the areas of **Complexity and length of time to deploy** and **Resources and Skill to utilise the tool to maximum effect.**

Perceptions are typically based in some reality; however these are, for many vendor offerings, past realities. Many vendors solutions have now matured to a level where we believe one of the biggest inhibitors to adoption is not the reality of current offerings, but the inertia of aged perceptions.

### Changing Perceptions with Meaningful Actions

Recognising that changing perceptions cannot be done quickly or with one action alone, at Emerson we have put our money (and reputation) where our mouth is, by creating a **Quick Start DCIM** packaged offering which is **Low Cost, Low Risk and Fast.**

We do this to break the perception with a concrete offering which we are accountable to delivering for our customers.

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**But what about the Resource and Skills issue?**

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**“(Emerson’s) Trellis, distinguished by architecture that was designed from the ground up ... has improved Trellis’ performance, implementation speed and user interfaces.”**

*Gartner, Magic Quadrant for Data Center Infrastructure Management Tools, October 2015*

**“Emerson has ... emerged as one of the leading DCIM solutions on the market today”**

*IDC MarketScape: Worldwide Data Center Infrastructure Management (DCIM) 2015 Vendor Analysis*

For those data centre professionals, who are keen to make their data centres more agile and efficient to be the engine of their organisations growth through IT, we believe there is no more compelling time to invest in DCIM as a fundamental tool to achieve this.

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**Simon Blake,**  
DCIM Evangelist,  
Emerson Network Power

Talk to us at Data Centre World, April 12th/13th, Excel, London





When assessing data centre power usage levels, experts say you need to go beyond the servers and look at all IT and network devices including cabling.

PHOTO COURTESY ROCKLEY PHOTONICS. MIKE DOTTA/SHUTTERSTOCK.COM

## With power usage becoming ever more of an issue, JAMES HAYES looks at how the data centre industry is coming to terms with defining energy efficiency.

Despite the data centre industry's best efforts to remind the eco-geeks that there is more to data centre (DC) power usage than just the networked computing, debates around the greening of facilities continue to be biased toward the servers and networking technology.

The IT crowd have borne the brunt of adverse sentiment about the data centre's public reputation for having unfeasibly swollen carbon footprints, even though a DC's energy consumption is shared between a range of utility systems, from computing, cooling and CRAC units, to lighting, alarms and premises security.

To their credit, deep-pocketed and big name online brands such as Google and Amazon have pointedly sought to design, locate and build new facilities with the eco-efficiency of all data centre systems, both IT and non-IT, as driving paramount attainments. This drive has also highlighted the potential for applying new science to getting electricity consumption (and bills) scaled responsibly to expansion.

2016 is already proving to be something of a vintage year for ultra-green data centres, with Amazon, Apple, and Facebook each announcing new such facilities over the last few weeks.

Of course, these wealthy top-tier players have the financial wherewithal to prioritise the green ambitions (and R&D may surely be entitled to borrow from marketing budgets here), while other independent new-build facilities have also had their green credentials commended.

But there remain many DCs out there which have not had the efficiency of their power usage recently scrutinised, nor have proper plans for operations to be calibrated to minimise environmental impact. It is possible that some of these 'ungreen' centres could be running critical applications for some of the

world's most-esteemed businesses or prestigious government agencies.

### Green de-prioritisation

Recent research commissioned by The Green Grid found that while most organisations face mounting pressures to improve the efficiency of their data centres, 43 per cent of those surveyed admit to having 'no energy efficiency objectives in place'.

Furthermore, these respondents said that while better opex management might be within scope of their DC goals, it was prompted by financial planning objectives rather than a commitment to making IT estates shades greener.

Green Grid EMEA spokesperson Roel Castelein said: "The research found that the top challenges and opportunities at the board level were all to do with reducing and predicting costs, rather than on 'green' or resource-efficient objectives."

He went on to note that this is likely driven by customer requirements in an acutely competitive marketplace requiring enhanced flexibility and 'always on' functionality –



all despite common declarations toward corporate social responsibility strategies.

The US Natural Resources Defence Council has identified other reasons why ongoing greening efforts may have slipped down data centre agendas. It highlights the fact that growth in the multi-tenanted DC market segment is creating facilities where the diverse ownership and management of server estates operating inside them means that commonly applied and/or holistic energy efficiency programmes are made difficult to implement.

So even after some 10 years of asking, the question of whether established data centres can be made greener has to restart from the recognition that there may be significant numbers of established facilities operating in the US and UK (no-one knows precisely how many) that are not designed to be resource efficient, and cannot easily be modified to become in line with latest energy efficiency models.

What's more, for new DCs, the pace of growth is such that energy management (and other green upkeep factors) are often secondary considerations to maintaining operations and meeting escalating customer demands. After all the debates around government legislation, voluntary codes of conduct, EU guidelines and self-regulation, it seems that the sector still has some

**"PUE only measures the efficiency of a data centre facility – it says nothing about improvements in IT energy efficiency."**

Andrew Donoghue,  
European research manager,  
451 Research

way to go before baseline energy control targets are standard industry conforms.

Yet shades of green may be set to reappear on the multicoloured spectrum of data centre issues. These are prompted in part by headline-grabbing events. For example, last December's United Nations Climate Change Conference (COP 21) aims at encouraging energy consumers to switch to renewable supply sources, away from fossil-fuel-based electricity generation; and in the UK, government plans to reform carbon reduction reporting and taxation regimes for businesses, announced last September, also hold the promise to bring the green data centre question back into legislative focus.

So at a more local and immediate level, what are some of the challenges data centre practitioners face when seeking to create more energy-efficient facilities?

### Redundancy clauses

One area where green aspirations rub up against the *realpolitik* of data centre operations is in server provisioning. Pursuing a balance between ensuring that the required processing and memory resources are fully available, and not having servers under-loaded while they idle through the kilowatts, continues to challenge DC planners and managers.

Predictive analysis might help inform foreknowledge of resource shortfalls, but when shove comes to push, commercially-oriented data centre specifiers, for example, are bound to err on the side of surplus capacity. Although some benchmarks have been set and met with regard to the greening of DCs, vast amounts of IT resources at such facilities are under-utilised due to over-provisioning.

This means that rather than running two under-utilised servers, the workload could be combined to run both on one



server, according to Stuart Higgins, technical evangelist at Sumerian. He says: "McKinsey & Company analysed energy use by data centres and found that on average they were using only six-to-12 per cent of the electricity consumed powering their servers to perform computations. The rest was used essentially to keep servers idling and ready in case of a surge in activity that could slow or crash operations."

This phenomenon is commonly excused as a matter of redundancy – it's better to over-provision in the first install rather than add new servers incrementally later on, and so forth.

There's also the issue of covering for server failure rates which, according to anecdotal evidence, seems to be an abiding problem for some DCs. But here, managers have to deal with other factors at play around this issue.

One is where server over-provisioning (i.e. over-consumption) has come about because customer demand has not met levels that were anticipated back when a data centre was specified and kitted-out. According to Higgins, the problem partly lies in the fact that a 'standard' server configuration is used, rather than one that is optimised for the workload type.

### Past it or power dressing?

For years, debates around data centre greenness in terms of energy usage efficiency have been couched in the context of the PUE (power usage effectiveness) metric. 'Redundant redundancy' is yet another factor that complicates PUE calculations.

Sometimes referred to as a 'standard measure', PUE remains something of a

*de facto* benchmark for some quarters of the industry, and although there are other power usage/power efficiency models in the market, its status continues to divide opinion in the profession.

PUE can be gauged and interpreted from multiple directions. In terms of applying it to a data centre's green quotient, it's sometimes overlooked that PUE is a measure of how effectively power is *used* – not how much power is *consumed*.

Some industry insiders have argued that the intricacies of holistic data centre greening will not be resolved fully until the thorny issues around PUE are fundamentally reconsidered – or even abandoned altogether. For others, PUE has validity because it is a moving target that can be pursued but not attained.

Many data centre operators market PUE as a badge of honour which at least flags-up

the fact that, as responsible service providers, they are cognisant of the need to practice energy management awareness.

Kevin Read, GIO senior delivery centre manager at Capgemini, believes PUE is a simple calculation and can provide a good metric – if used correctly. He points out that you need to understand its limits: "The key rule is never mix IT power load with non-IT power load."

Other data centre experts, such as MigSolv CEO Alex Rabbetts, remain implacably sceptical about PUE's actual worth. He suggests that the problem with PUE is that it was never intended to be used as a data centre 'comparison tool'.

He agrees that there are many factors that affect PUE, not least of which is where it is actually measured: "As one part of the metric is 'Total Facility Power', then it really should include total facility power and not exclude the building management system, monitoring tools, or security systems."

Rabbetts adds that other factors, such as location, building construction, time of measurement, outside temperature and many others, will also affect PUE.

But above all, he reckons the metric's worth is compromised by the fact that it's been "stolen" by the marketing department as a selling tool. "It is so widely abused [by the industry] that it no longer has any value. Throwing away PUE would be good for the industry – and good for the customer."

Andrew Donoghue, European research manager at 451 Research, is likely to agree here. "[PUE] only measures the efficiency of a data centre facility – it says nothing about improvements in IT energy efficiency. In fact, improvements in IT energy efficiency can sometimes result in a worse PUE number."

He continues by saying that the industry has been waiting a long time for a single "useful work" metric to emerge, and cites initiatives from the BCS (DC-FVER) and Future Facilities (ACE metric) as contenders of interest.

Yet Sumerian's Higgins believes that there's life in PUE yet: "To track and measure any sort of improvement, an effective measure is needed. PUE, in this regard, allows comparison of progress, and supports informed decision-making."

While for now PUE may be an influential metric, Keysource MD Mike West believes there is still much to be done in terms of



**"DCIM has been fantastic for a few software developers and other firms to create a new market for them to sell into, but it isn't actually very clever."**

Alex Rabbetts,  
CEO,  
MigSolv



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maximising utilisation of available capacity and reducing absolute power demand.

He points out that much of the data centre heat management efficiency improvements in recent years have been achieved using evaporative cooling systems. This, says West, shifts the econo-  
m from power consumption to water consumption, and future technological advances may find it easier to reduce the usage of water rather than power.

### "No need" for DCIM

Data Centre Infrastructure Management (DCIM) platforms from vendors such as Emerson Network Power, Nlyte, Schneider Electric, and others, give data centre engineers a range of controls over both the computing and network components, as well as over service delivery and quality assurance, including green gauging elements. These platforms can also contain visualisation tools which enable environmental readings to be depicted graphically in real-time, so that operations teams can adjust and recalibrate accordingly.

However, the use of these tools is elective, and there could be many large data centres chugging away where only the minimum levels of tool-based management is in effect.

The positive news here, according to John Curran, VP at Avocent/Emerson Network Power, is that as DCIM solutions are more widely utilised, more data centres will be managed toward greener performance targets – even if those controls should have been deployed years ago. "Those tasked with the design and operations of a data centre are increasingly turning to DCIM tools to better understand the

goals, measure performance against those goals, and make changes to improve the performance over time," he says.

However, others see DCIM as an interim approach, and that more profoundly transformative infrastructure management technology has yet to arrive. "DCIM has been fantastic for a few software developers and other firms to create a new market for them to sell into, but it isn't actually very clever," claims Rabbetts.

He predicts that artificial intelligence is the technology that will change the way in which data centre infrastructures are managed and perform: "Data centres using AI for management will automatically balance cooling against load and alert if a piece of plant is about to fail or needs maintenance. It will also report on its own efficiency and configure itself without the need for someone to add each element of the infrastructure to a database."

As a result, Rabbetts says there will be "absolutely no need" for DCIM because the AI will do everything, as opposed to existing software solutions which still require data centre managers to intervene.

### Green light

As noted above, when assessing a data centre's green eco-credibility, distinctions should be made between how effectively its power is used, alongside how much is used. And again, power usage levels are too often measured at the point of highest density consumption (usually servers), whereas opportunities for green gains might be identified in many other systems around the facility, including networking infrastructure and devices such as routers, switches, and the cabling that connects them.

### Greenest data centre contenders

2011	PEER 1 Hosting, Portsmouth (described by PEER 1 at time as the UK's "greenest" data centre). Claimed PUE: 1.1.
	Next Generation Data (NGD), Newport. Claimed PUE: 1.0.
2013	Highbridge Properties DC2, Cobalt Campus, North Tyneside. Claimed PUE: 1.12.
	UKFast MaNOC, Manchester. Claimed PUE: 1.3.
2014	AOC Group, Queensway Park, Glenrothes. Claimed PUE: 'under' 1.15.
2015	Rackspace, Crawley, West Sussex. Claimed PUE: 1.15.

*Claims and counter-claims about who owns some of the UK's greenest data centres – by PUE rating – have become part of data centre industry lore. Here are a few notable contenders to have emerged in recent years.*

According to Rockley Photonics CEO Dr Andrew Rickman, future demands made by an ever-more interconnected world will cause data centre designers to reconsider how they tackle issues of scaling infrastructure. He believes this will enable them to better align the limitations of complementary metal-oxide-semiconductor (CMOS) IC processing with fibre optic technology's potential performance gains, energy efficiencies, and ecological advantages (glass rather than copper cable). For Rickman, "re-inventing" the data centre network is necessary for future green gain. "Bandwidth is scaling at such a fast rate that data centre operators are actively deploying single-mode fibre infrastructure to future-proof the networking infrastructure for future network equipment upgrades.

"This contributes to the 'greenness' of the data centre by saving the ripping and stripping of generational infrastructure links associated with other transmission media, and enables higher bandwidth capabilities over fewer cables by means of wavelength division multiplexing."

Rickman continues by saying that it has been suggested that all-optical switching solutions could reduce the energy requirement per bit by multiple orders of magnitude. While he admits all-optical packet switching is still some way from becoming a commercial reality, he says the right combination of CMOS and photonics in switching has the potential to reduce networking power and cost by a factor of ten.

Meanwhile, for data centre managers seeking less technologically-demanding solutions for making their facilities greener, MigSolv's Rabbetts has the following simple advice: don't allow cardboard and packaging into the data centre.

"Nearly every data centre I have visited in 30 years has had cardboard and other rubbish in it. Cardboard and packaging creates dust. Dust is a fire hazard and it blocks fans. Fans have to work harder, meaning they draw on more power, which creates more heat, which means the air-con works harder, which requires more power and therefore more CO2. Remove the cardboard and you improve the data centre energy efficiency immediately." ■



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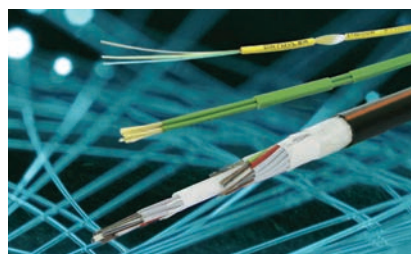
off-the-shelf: cables & accessories

# Don't get tied in knots

We take a look at some of the latest cables and cabling accessories that could help solve your wired worries.

**Datwyler** has upgraded its fibre optic cables and says they now feature improved fibres, smaller bending radii, enhanced attenuation properties, and higher transmission quality. The firm has switched to using two new single-mode fibres: G.652.D (BLO, or bend losses optimised) and ITU-T G.657.A2. Datwyler's indoor fibre optic cables – which previously incorporated bend-optimised single-mode ITU-T G.657.A1 – will now be supplied with bend-optimised G.652.D as standard or optionally with bend-optimised ITU-T G.657.A2. It's claimed the latter has been tried and tested in FTTx networks and data centres, with users benefitting from a low bending radius of 10 to 7.5mm for added operational safety. The vendor has also replaced the G.657.A1 fibre in its universal and outdoor cables. In addition to ITU-T G.652.D, these are also now available with G.652.D.

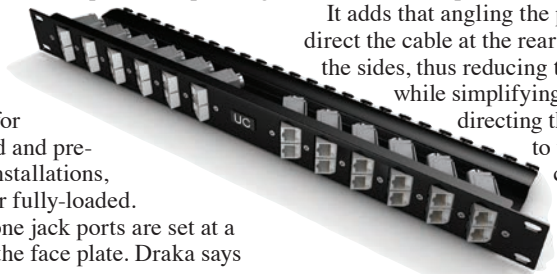
According to Datwyler, BLO fibre offers improved attenuation properties. As a result, users no longer have to allow for additional attenuation losses when connecting fibres of different mode field diameters. As an example, the firm says BLO fibre can mean an improved attenuation rate of  $\leq 0.21\text{dB/km}$  @ 1550nm (installed). The firm adds that the cable retains the essential advantages of the previous fibres, namely the comparatively large mode field diameter of G.652.D and the low bending losses of G.657.A1.



**Draka** has launched a flat 24-port patch panel with angled keystone jack ports. It says the *Flat Angled Patch Panel* offers "superior" cable management and easy patch lead distribution for use in high-density environments such as data centres.

The company says the angled ports enable its standard tool-free Cat 6a keystone jack to be used for "swift and simple" installation. Draka reckons this is in contrast to some other patch panels which require special, angled keystone jacks.

Each full-unit (1U) patch panel is made up of two banks of 12 ports, one pointing left the other right. The panels are modular and can be used for both standard and pre-terminated installations, either part- or fully-loaded. The keystone jack ports are set at a 30° angle to the face plate. Draka says



this increases the available space between the front of the panel and cabinet doors. It adds that angling the ports also helps direct the cable at the rear of the panel to the sides, thus reducing the bend angle while simplifying installation by directing the patch leads to the equipment cabinet's side-located cable containment system.

**Huber+Suhner** (H+S) has completed its cable portfolio for offshore applications with the addition of the *RADOX MFH-S* range. It says the cables are suitable for installation on ships and on oil and gas platforms, and claims they have special features which make them unique. Unlike rival products, H+S reckons its cables can transmit both signals and energy. Through cross-sections of up to 6mm<sup>2</sup> and more than 70 design versions, the vendor says it covers a wide range of applications, from data transmission in control systems, to cabinets and energy transmission in lighting systems or engines. The company claims its *MFH-S* cables are up to three times thinner and therefore much lighter than the competition. In addition, they are approved for use in temperatures from -50 to +90 °C, although H+S adds that they have also proven to function correctly for 20,000 hours in temperatures of up to 120°C.

resistance, as well as a very small bend radius. H+S says a motion test in its assessment centre confirmed the flexibility and resistance of the cables after more than a million bending cycles. As a result, it says the entire *MFH-S* range can also be used in moving applications such as in cranes or drilling rigs, for example. Other features include a robust design, including flame-retardancy and compliance with fire safety requirements according to IEC and EN 45545. In addition, the *RADOX Marine CAT5e 2x* (2 x 0.5mm<sup>2</sup>) and *CAT5e 4x* (2 x 0.5mm<sup>2</sup>) have the same sheath material as the *RADOX MFH-S*. As a result, they are also resistant to oil, mud and heat.



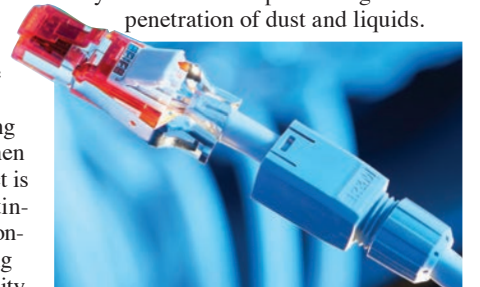
The cables are also said to feature particularly high abrasion and vibration resistance. **Luso Electronics** has introduced right angle and vertical mount RJ45 connectors with integrated magnetics from specialist components maker Elec & Eltek (E&E). Its new series of compact, low-cost and high-quality Magnetic Integrated Connectors (MICs) come in PoE and PoE+ versions delivering Fast Ethernet (10/100) and GbE capability.

Available in single port (1 x 1), 8-port (2 x 4), and 12-port (2 x 6) configurations and with LED options, the RJ45 shielded connectors integrate magnetics, resistors and capacitors to provide signal integrity and protect PHY chips. Luso says the jacks can be used in a variety of telecom equipment applications. Being UL certified and employing all plastic materials rated to UL94V-0, it says the "cost-effective" connectors are particularly aimed at offering convenience to users in the security and surveillance markets. For instance, the firm says a typical application for PoE is CCTV cameras. By utilising the LAN, it claims PoE-enabled cameras can be deployed on ceilings, corridors, lobbies and outdoor areas at significantly lower cost than solutions requiring a separate power source.



**R&M's** range of field-mountable RJ45 connectors now includes what's billed as a "high-performance" *FM45* Cat6A model. Used for the flexible installation of Class EA channels in accordance with the ISO/IEC 11801 standard, the company says the new connector meets all the requirements for demanding network operation with 10GbE. R&M says the *FM45* is mounted without the use of tools. It adds that shielded and unshielded stranded and solid cable with diameters of up to 8mm can be wired in just a few easy steps. Firstly, the installer inserts the copper cable's eight conductors into the wire guide in line with the coloured label, and cuts off the excess length with side cutting pliers. The company points out that stripping of conductors is no longer needed – when pressing the wiring cover closed, contact is made by means of IDCs. It claims the tin-coated IDCs guarantee gas-tight, vibration-resistant and corrosion-protected wiring with tensile strength and long-term stability.

R&M says its IDCs show transmission values that are four times better than the requirements stipulated in the IEC 60352-4 standard. It adds that contact resistance is ten times lower than with piercing contacting. Termination of the connector is completed with the housing being pushed over the wire guide and fixed using a box nut. R&M says the basic version of the *FM45* complies with the requirements of the IP20 protection index and the shielded version with all requirements of IP67. In the case of the IP67 type, it says a round sleeve protects against penetration of dust and liquids.



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## Trusting IT with your dirty little secrets

Many IT professionals have revealed that they're being called in to help get their colleagues out of 'awkward' situations at the office, according to a survey conducted by AlienVault.

In a poll of more than 600 IT pros, 77 per cent said they had seen and kept secret potentially embarrassing information relating to the use of company-owned IT resources by workmates and executives.

AlienVault says its study highlights that very high levels of responsibility are being placed on IT pros. Javvad Malik, the company's security advocate, says they are the ones we trust with our secrets at work: "If you click on a link that you shouldn't have, or download a potentially dangerous file, then they are the people you'll call."

"Some IT pros also have access to emails and data that has been quarantined due to its sensitive content. This gives them a clear vantage point into your private affairs, so it's very important that you trust them."

Thirty-six per cent of survey respondents also reported that they were 'happy' or 'very happy' at work. AlienVault reckons this could be because trust between employees is often cited as an important part of staff engagement that helps to create a sense of happiness and loyalty within the workplace.



**AlienVault security advocate Javvad Malik says the IT pro often has a "clear vantage point" into your private affairs at work.**

## How to build a modern data centre

A new book aims to provide practical advice on how to use new technologies such as hyperconvergence, software-defined data centres and the cloud to meet the business challenges facing today's IT organisations.

*Building a Modern Data Center: Principles and Strategies of Design* is written by a former CIO and virtualisation experts Scott D. Lowe, David M. Davis and James Green in partnership with Atlantis Computing.

Incorporating research data from more than 1,200 IT pros from 53 countries, the 260-page book also traces the evolution of enterprise data centres, from legacy islands of data through virtualisation and cloud, to the rise of software-defined centres.

According to Scott D. Lowe, co-author and also co-founder of ActualTech Media, the IT department of the future is becoming much more tightly integrated

and highly generalised. "With increasing demands on IT and with dwindling budgets, the IT teams that can adapt quickly and establish themselves as people who can pivot to the needs of the business will be in the highest demand."

The book concludes with insights and predictions about how the latest trends will impact data centres over the coming years. It can be downloaded as a PDF from Atlantis Computing, and is also available in e-reader and print versions from Amazon.

## NEW COURSES

### ITIL Practitioner – AXELOS

AXELOS has added a new *Practitioner* qualification to ITIL. It says this will provide the skills needed to successfully adapt ITIL to improve service management capabilities in line with business goals.

*ITIL Practitioner* is the next step after *ITIL Foundation*, and is for professionals who have already learned the basics of IT service management and its business value.

According to AXELOS the new qualification puts the factual knowledge of *ITIL Foundation* into a more practical context, and gives individuals greater confidence in their ability to participate in and contribute to an IT service management initiative.

A new publication, *ITIL Practitioner Guidance*, covers the skills and practical application of knowledge, and is available online from AXELOS, the TSO (The Stationery Office), and Amazon.

While self-study is allowed, the company strongly recommends students to attend an accredited training course run by its global partner network. [www.axelos.com/itil-practitioner-launch](http://www.axelos.com/itil-practitioner-launch)

### Data Centre Power Professional – DCPro Development

This classroom-based course discusses the importance of data centre power consumption to business, government and society in general, whilst trying to meet sustainability targets in a low energy future.

It identifies the basics of voltage, current and power factors in three-phase circuits, and looks at industry standards, codes and guides. Delegates will also learn about the competing models for power redundancy architecture, concurrent maintainability and fault tolerance, as well as learn to differentiate between AC and HVDC power.

DCD says the course is suitable for anyone involved in the management or operation of an existing facility, or in the development of a new project. It will host the next session in the UK in London on 4 April. <http://tinyurl.com/gquf79e>



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