

# networking

FIXED & WIRELESS NETWORKS FOR ENTERPRISE USERS

## A great match

Cisco and O2 enable wireless connectivity for Manchester City News, p2⇨



## In pole position

Network solutions for the leisure industry

Real World Networks, p9⇨



## Data centre technology

Demand for data centres is rising. But how will the networks keep up?

Feature, pp10-13⇨



## Cable management

Solutions to help stop cable installations looking like a bowl of spaghetti

Off-the-shelf, p14⇨



# TNP to build dedicated high-speed network in Blackpool

by Rahiel Nasir

A pioneering partnership between Blackpool Council and Lancaster-based IT consultants and ISP, The Networking People (TNP), will enable up to six north west local authorities to benefit from a compliant, secure, high-capacity broadband network independent from national telecoms companies. It's claimed that around 100 schools, libraries, business sites and public buildings will be aggregated across the network in Blackpool alone.

Under a £3.2m, five-year managed services contract, TNP says it will take advantage of a range of technologies which will make "significant savings" for the council over the term. It will use LLU, private fibre infrastructure, microwave radio as well as existing council assets. The firm will design and build a council-

owned WAN to reduce its reliance on revenue budgets, thus releasing money for other key services.

TNP says the infrastructure will adhere to the relevant principles of a PSN, delivering resilient and secure connectivity to Blackpool and the surrounding regions. It is assisting the council to comply with the PSN technical interoperability requirements together with the GCSX, PCI DSS and ISO: 27001 standards.

"As a regional, independent business, not only are we able to offer the council asset ownership of the network, but we can provide cost savings by integrating existing infrastructure and dramatically reduce operating costs," claims TNP director Chris Wade. "Vital services will operate across this network – from schools to public health



Tony Doyle, Blackpool Council's head of ICT Services (third from left), says TNP's solution is an enabler for "huge efficiencies" that can be channelled into other key areas. Also pictured from left to right: Paul Astle (TNP); Robin Williams (TNP); Scott Daniels (TNP); Ian Risdale (Blackpool Council); Cllr Chris Maughan (Blackpool Council); Chris Wade (TNP); and Tony Marsden (TNP).

services – and our resilient solution provides the highest levels of connectivity to ensure these are maintained 24/7."

In line with central government's 'Digital by Default' agenda, which promotes the need to enhance public internet services, local libraries and leisure centres will be able to offer high-speed Wi-Fi to the general public. TNP says schools will be offered the best-price connectivity in the region, as well as migration to the latest cloud-based services such as Google Apps and Microsoft 365. Web-based phone systems will also be installed, "virtually eliminating" phone bills for the schools and the council, according to the firm.

The network will be rolled out over the next six months with TNP continuing to develop and manage the service over the next five years. The framework will allow

for at least six other Lancashire councils to collaborate and join the network at any time.

Tony Doyle, head of ICT services at Blackpool Council, says TNP will not just be a connectivity supplier, but will complement and support the council's in-house team. "TNP's solution will modernise how the council delivers services to the public; it is an enabler for huge efficiencies we can channel into other key areas," he adds.

According to councillor Chris Maughan, cabinet member for technology, the partnership is allowing Blackpool to make significant savings at a time when the cost of telecoms is going up. He adds that the network will remain completely under the council's control and will be able to grow and adapt as needed.

■ Bolton and Wigan WANs are 'PSN-ready' thanks to Agilisys and Updata – news, p2

## Visibility of IT departments no better than "foggy day in London"

In its recently published 2013 Global IT Impact Survey, Cisco has revealed that while the majority of IT professionals are confident in their ability to respond to the needs of the business, almost a third still equated the visibility of their department into their company's business initiatives to a "foggy day in London".

When asked about how business leaders viewed the role of IT department in their organisations, 36 per cent of the IT professionals surveyed said "innovator" was the best description given. Thirty four per cent claimed "orchestrator" was the most appropriate description, 15 per cent chose "firefighter," seven per cent said "ghost," and another seven per cent selected "fortune teller."

While IT-business alignment is improving, the survey said that IT is not always involved when the decisions are made. Eighty-nine per cent of IT leaders said that they collaborated with business managers at least on a monthly basis, but 38 per cent said they are brought into the planning and deployment process late.

Among its other major findings, Cisco's study said that applications and user expectations are becoming more complex: 71 per cent of respondents reported that IT is deploying more applications today compared to a year ago. It also found that IT is increasingly recognised as enabling the business – 78 per cent stated the network is more critical for delivering applications than it was at this time last year. ■



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# Man City first Premier League team to offer high density Wi-Fi

Cisco is deploying its *Connected Stadium* Wi-Fi system at Manchester City's Etihad Stadium. The vendor reckons that the platform will transform the 47,000 seat venue into the Premier League's "most technologically fan-friendly" stadium.

*Connected Stadium* will deliver high-speed wireless internet access to thousands of mobile devices. Cisco says the intelligent high-density Wi-Fi network, which will be delivered by O2, will be available in and around the stadium footprint.

City also plans to offer *StadiumVision*

*Mobile* in the near future. Cisco claims the application can deliver live video and event information to fans' devices with minimal delay, and can offer multiple channels of unique content. For example, these could include replays, alternate angle views, and a dynamic data channel for stats, trivia contests, multi-player games, etc.

As part of its relationship with O2, the stadium will also be equipped with technology that improves connectivity, virtually eliminating the frustration of not getting reception on match-days. ■



The 47,000 capacity Etihad Stadium will become the first in the Premier League to install Cisco's wireless technology, joining the likes of Real Madrid's Santiago Bernabeu and the Brooklyn Nets Barclays Centre in New York.

## ForeScout NACs monitor and manage 40,000 devices for Sussex HIS

Sussex HIS, the largest health informatics service in the UK, is using ForeScout's network access control (NAC) platform to deliver endpoint compliance and real-time access to 40,000 devices across 500 sites.

Sussex HIS supports 11 NHS member organisations connected to the local Community of Interest Network (COIN). ForeScout's *CounterACT* has replaced its ageing intrusion prevention system which was said to be a reactive defence platform "fraught with false notifications".

The new NACs provide the organisation with visibility of all IP devices and users on

its network, and the ability for deeper inspection to highlight issues and potentially unwanted applications on those devices.

Peter Ward, senior client devices engineer for IT services at Sussex HIS, explains that in a healthcare environment it is crucial for all devices to be accurately monitored. "If the organisation inadvertently identifies an A&E patient monitoring system incorrectly as a rogue device and subsequently blocks it, that is potentially life threatening."

Ward adds that due to the vast size of the Sussex COIN, there was no way his team could monitor what devices were connecting




**ForeScout's John Hagerty claims that one of the main strengths of CounterACT is its flexibility and efficiency of deployment.**

in real-time, let alone classify, segment and assess the endpoints in an efficient and appropriate manner.

John Hagerty, ForeScout's EMEA sales director, says one of the main strengths of

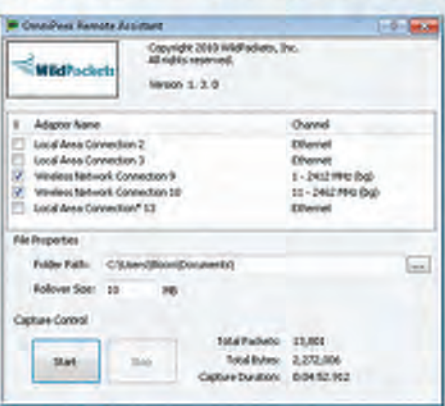
*CounterACT* is its flexibility and efficiency of deployment. "By negating the need to place appliances in the data path, implementation costs are reduced, routing reconfiguration is unnecessary, and additional points of failure are not introduced."

Sussex HIS centrally manages seven physical *CounterACT* appliances located at five strategic nodes around the COIN. Hagerty says that since the platform could be deployed without requiring agents and set to 'monitor-only' mode, the system was rolled out very quickly within two weeks and without disrupting user operation. ■



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## Wigan and Bolton Councils to develop 'PSN-ready' WAN

Agilisys and Udata are to set up a 'PSN-ready' WAN to connect Bolton and Wigan Councils, Wigan and Leigh Housing, and Wigan Leisure and Culture Trust.

The network is being delivered as part of a seven year, £47m ICT services contract awarded to Agilisys in January. Under the partnership, Agilisys will be responsible for the LAN environment while Udata will maintain the core infrastructure and commission/decommission new sites.

Agilisys says that from the outset, the network will be the backbone for shared email, firewall, content filtering and *Microsoft SharePoint*.

A single integrated VoIP system will also be deployed, replacing multiple fixed lines and multiple IP telephony systems across the councils. All sites will move to SIP early on in the deployment. The single VoIP

service will enable free calls between partner locations as well as consolidating multiple hardware platforms to a shared, virtualised system. It will connect an initial 260 partner sites, with the service also being made available to Wigan schools.

A major part of the solution is replacing the current multiple network providers supplying WAN services and legacy circuits, with a single, partner wide network. Agilisys says that as well as offering robust business continuity, this will also benefit all end users by providing a single service desk.

Steve Morgan, partnership director at Agilisys, says: "The network provided is flexible and scalable. Future plans include moving to a Virtual Desktop Environment and this new network will provide robust connectivity to our data centre, further helping to reduce costs." ■

## ManageEngine transforms law firm

Commercial law firm Bond Pearce LLP is using a network traffic monitoring tool from ManageEngine to underpin the virtualisation of its server estate and migration to unified communications (UC).

*NetFlow Analyzer* is supporting the virtualisation of Bond Pearce's entire server estate, a move that is said to have reduced its number of physical servers from 100 down to 20, and cut maintenance costs by 80 per cent. The analyser takes care of monitoring load balancing across the firm's VMWare stack to ensure that applications and systems are using all of the available virtual network interfaces.

ManageEngine is also helping Bond Pearce monitor its *Microsoft Lync* UC platform. This was initially only available to partners but has now been rolled out to all 600 staff. Mike Godsave, Bond Pearce's infrastructure analyst, says *NetFlow Analyzer* enables the IT team to monitor voice and video, and prioritise these over other network traffic such as backup.

Bond Pearce has offices in Bristol, Plymouth, Southampton, London and Aberdeen. It is currently in the middle of a merger, and ManageEngine says its system will play a key role as the two networks from the companies are integrated. ■



# Housing group and utilities firm deploy MDNX's carrier integrator WAN

Bracknell-based MDNX, said to be the UK's largest independent managed network services provider, has deployed new WANs for Your Housing Group and Wales and

West Utilities as part of two separate deals. Social housing provider Your Housing Group (YHG) has more than 32,000 homes, and was formed last year following the

merger of Harvest Housing and Arena Housing. The new group needed to upgrade its WAN to support increased bandwidth requirements, new applications such as VoIP, and accommodate 1,200 employees.

It has switched the majority of its offices to a data network put in place by MDNX across 60 sites in north-west England, Staffordshire and Yorkshire. It was one of the first to be procured using the PSN connectivity framework agreement.

Using its carrier integrator model, MDNX is consolidating connectivity via its core network from TalkTalk Business, BT, Virgin Media and Exponential-e. It says this creates a solution that is able to scale as new technology emerges without YHG having to be "tied down to a single provider".

In a separate deal, MDNX will also update Wales and West Utilities' (WWU) network using a similar model. The integrated WAN will deliver connectivity across 22 offices and 1,500 telemetry sites across Wales and south-west England offering speeds of up to 100Mbps.

WWU's existing network was based on a combination of MPLS and private circuits for data connectivity between all of its manned sites, and ISDN circuits and PBX services throughout both manned offices and telemetry sites. As part of the deal, MDNX will also provide fixed line connectivity to the telemetry sites which connect back to WWU's regional offices. It's estimated the new WAN will lead to annual cost savings of 20 per cent for WWU.



## THE WORLD ACCORDING TO...

Leon Ward, director of product management, Sourcefire

### Network security: it's to think outside the sandbox

The idea behind 'sandboxing' is that you limit the impact malware can have by isolating an unknown or untrusted file, constraining it to run in a tightly controlled environment, and watching it for suspect or malicious behaviour.

But cyber attackers are making it their job to understand security technologies, how they work, where they are deployed and how to exploit their weaknesses.

The attack chain illustrates how relying on a sandbox-only anti-malware solution can create a false sense of security.

Attackers start with surveillance malware to get a full picture of your environment. This encompasses the extended network that also includes endpoints, mobile devices, virtual desktops, data centres, as well as the security technologies deployed.

Attackers then create targeted, context-aware malware. They validate that the malware works as intended by recreating your environment and successfully evading the security tools you have in place. Finally, the attackers navigate through your extended network, evading detection and moving laterally until reaching their target.

The Verizon 2012 Data Breach Investigations Report found that in over half of the incidents investigated it took months – sometimes even years – for a breach to be discovered. That's more than ample time for the attacker to accomplish the

mission, remove evidence, and establish a beachhead for subsequent attacks.

Detection will always be important, but these technologies only scan files once at an initial point in time to determine if they are malicious. Thwarting attacks is also about mitigating the impact once an attacker gets in. You need to take a proactive stance to understand the scope of the damage, contain the event, remediate it and bring operations back to normal.

Technologies that also enable continuous analysis and retrospective security are now essential to defeat malware.

Continuous analysis uses Big Data to constantly gather and analyse files that have moved across the wire and into the network. Should a file pass through that was thought to be safe but later demonstrates malicious behaviour, you can automatically be alerted to take action.

Retrospective security uses this real-time intelligence to determine the extent of the damage, contain it and remediate the malware. Compromises that would have gone undetected for weeks or months can be identified, scoped, contained and cleaned up rapidly.

When it comes to defending our networks today, it's clear that 'silver bullet' solutions don't exist. As each day goes by, we read about another successful breach. Attackers are thinking outside of the sandbox – so must we.

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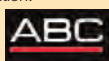
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Your Housing Group has more than 32,000 homes across northern England. Following a merger, it needed to upgrade its WAN to accommodate 1,200 employees and support new applications such as VoIP.

## Service desk support automated at University of Cambridge

The Clinical School Computing Service (CSCS) at the University of Cambridge has chosen LANDesk's Service Desk 7.5 in an effort to deliver a better customer experience and greater transparency across IT operations. The platform will support CSCS' 2,000 users from 80 customer groups affiliated to the university.

CSCS had been using three software applications to manage its service desk – one to log incidents and service requests, another to record assets, and a third to record users and billing information. Key data had to be manually copied each month between the applications to facilitate monthly billing, and the reports were then manually run, printed and posted to customers.

LANDesk says that as the applications were not easily customisable, any changes to functionality required not only in-depth knowledge of the individual systems but also appropriate programming skills.

"As one of the largest providers of IT services at the university, we have thousands of customers relying on us to support them and their devices quickly and accurately," says Mihaela Damian, CSCS project manager. "With our dated, disparate systems, we just weren't able to keep up with the number of incidents or complexity of issues, which caused frustrations."

With LANDesk, Damian says that CSCS now has a fully integrated, automated solution it can trust. "Our teams have more time to focus on customer support rather than back-end problems, and we're at ease knowing we have a reliable service desk that's able to keep up with our business," she says.

CSCS plans to further automate its service desk processes and implement a comprehensive customer-oriented self-service solution to provide a more transparent and effective IT service.



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## Ofcom to trial white space technology

Ofcom says it will be the first in Europe to trial 'white space' technology, the gaps in the radio frequencies that were previously used by analogue TV signal. The spectrum can be harnessed for a variety of applications. For example, it could be deployed for offloading wireless data in urban areas, machine-to-machine platforms, or to provide cost-effective wireless services in rural areas. BT, the BBC and Microsoft are said to be among the companies interested in using the technology. Ofcom is now inviting the industry to participate in a pilot which is due to start in the autumn. A nationwide rollout of networks that take advantage of white space could reportedly take place during 2014. ■

## Camden launches free public Wi-Fi

Camden Council is working with Arqiva to provide a wireless network where residents, businesses and visitors will be able to access 30 minutes of free Wi-Fi every day using registered devices. The service will be rolled out across the borough from 1 June 2013 to the end of 2014, covering areas which will have the highest demand first. South Camden will be targeted in phase one while the remaining phases will cover Camden Town and Kentish Town. Arqiva will use various wireless technologies including Wi-Fi and 3G/4G/small cells. Cllr Theo Blackwell, cabinet member for finance, says the aim is to make the borough one of the "most connected" places in the country. ■

## IMIS and BCS agree immediate merger

Following an overwhelming majority vote from its membership, the Institute for the Management of Information Systems has ratified its decision to merge with BCS, The Chartered Institute for IT, with immediate effect. The two organisations will now work jointly to further maintain standards and enhance the reputation of the profession so that it is recognised alongside the more traditional professions of law, engineering, medicine, etc. They also aim to bring a stronger united voice to policy decisions that affect the future development of the IT industry within the international community, and to deliver a wider range of services to their combined membership base. ■

# Wireless injection at Kingston Hospital boosts clinical productivity

Telindus, the UK ICT arm of the Belgacom Group, has completed a major LAN upgrade/extension and new WLAN implementation at Kingston Hospital NHS Trust.

The campus-wide network will support the enhanced functionality of the trust's *Cerner Millennium Care Record System*, enabling secure bedside records management together with real-time e-prescribing and patient administration.

The WLAN features around 660 wireless access points. Telindus says the network's design will enable the future roll out of real-time location services. These can be used to

locate a device connected to the network and pinpoint it with an accuracy down to three metres, anywhere within the campus.

One of the key components of the wireless system is the Cisco *Identity Services Engine (ISE)* authentication platform. This gives the IT team the capability to carry out detailed profiling of corporate, individual (BYOD), and guest/visitor devices, whilst still retaining the required levels of security needed in a hospital environment.

John Osbourn, network services manager at Kingston Hospital, says: "We are also no longer tied to the *Windows* operating

system, as the *ISE* provides us with a vendor agnostic platform to support mobile devices from any manufacturer."

He adds that in the coming months, the trust will be using around 300 *iPads* to help clinicians provide medicines management and documentation at patient bedsides. "We are also deploying *Android* devices on all wards for 'Friends and Family' experience surveys. In addition, wireless VoIP has been successfully tested across the site, with seamless integration into the trust's existing hybrid telephone system," says Osbourn. ■

## 2,000 schools to tap into London Grid for Learning

2,000 schools are set to benefit from a new Wi-Fi service and VoIP technology, thanks to the success of a PSN project designed and delivered by the London Grid for Learning (LGfL).

In 2011, LGfL launched the 'LondonPSN' in partnership with Virgin Media Business. Its first priority was the roll out of high-speed connectivity, making better internet services available to more than a million students in the capital. LGfL has now begun offering highly secure Wi-Fi and VoIP over the same core network.

Schools can simply purchase the required number of wireless access points they need and share the technology that is centrally hosted in LGfL's core network.

It's claimed that this means they can run a managed wireless service at a fraction of the price of a standalone service. By installing VoIP, schools will also reduce their ongoing



LGfL claims to provide a "comprehensive and ever expanding" portfolio of unique online resources.



telephony spend and benefit from free calls to other school sites on the system. LGfL says the new services will underpin the ability of schools to take full advantage of new e-learning tools like tablets, interactive whiteboards and educational podcasts.

The LondonPSN is reportedly capable of saving schools around £100m each year. All

33 councils in the capital collectively own and share in the governance of the LGfL which provides a comprehensive and ever expanding portfolio of unique learning resources. These have been created in partnership with organisations such as the Royal Collection Trust, the Museum of London and Imperial College. ■

## Cognito helps TfL boost workforce productivity

Transport for London (TfL) is using a new mobile workforce management system to support more than 500 users in its bus operations and enforcement divisions.

Cognito designed and integrated the new platform which upgraded the mobile handheld systems used by field-based fare inspectors and infrastructure managers.

Working with specialist transport and timesheet management software providers, Cognito also provided an entire new back office system. According to the firm, this

allows managers to have full visibility of staff activity and performance. It says this adds an additional level of security to lone workers and ensures employees are paid in-line with hours worked, annual leave taken and any overtime.

For the bus operations division, Cognito says its new workforce management platform provides better visibility of assets and safety risks across the bus network, resulting in identifying and reporting hazards as well as initiating quicker repairs

and maintenance. The division is now looking at using the system to assist in providing passengers with improved real-time information in the event of road closures, events or unplanned incidents.

Within the enforcement division, Cognito's solution has helped eliminate paperwork, improving the process of recording fare evading passenger details.

TfL is now exploring the roll out of the solution for the London Underground as a future project. ■



Organisations are typically migrating to the cloud to gain competitive advantages around performance, agility and flexibility. **In fact, more than 90 per cent of all organisations are at least discussing cloud** - up from 75 per cent a year ago - according to a survey released in January 2013 by Symantec.

CIOs and other IT decision makers must carefully consider their choice of cloud providers, and actively determine which providers will deliver a quality experience that justifies their long-term trust and investment.

**In part this means accepting that all clouds are not built equal.**

It also requires acknowledging that cloud is no longer a 'new' model but now a crucial part of an organisations IT infrastructure.

As such it must firstly be critically assessed, and importantly reassessed and not excused in the event of failures. It must also meet the needs of the business, and where necessary integrate seamlessly with on-site applications, or other hosted services. Cloud can no longer sit alone as a development environment, and applications be manipulated to fit it. Cloud must work for you.

Additionally as organisations invest more of their IT spend on managed, private and hybrid clouds, no provider should have a 'get out of jail free card' for cloud when it comes to downtime, slowdowns, identity thefts, data loss, and other failures - or be allowed to offload the blame of poor performance onto the end users.

**Pulsant believes that taking control and asking more informed questions at the selection process is the best place for businesses to start.**

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<sup>2</sup> Based on IDC white paper "The Economics of Virtualization: Moving Toward an Application-Based Cost Model," Michelle Bailey, November 2009, <http://www.vmware.com/files/pdf/Virtualization-application-based-cost-model-WP-EN.pdf>

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# Security still a turn off for IT decision makers

Fears about security in the cloud continue to hamper uptake of the technology according to new research by global web hosting company PEER 1 Hosting. It found that concerns about security threats is preventing 92 per cent of IT decision makers from adopting the cloud.

PEER 1's survey of 120 IT professionals reveals a number of worries expressed by IT professionals when weighing up the cost of the cloud. While flexibility encourages 89 per cent of decision makers to make a purchase, and 71 per cent consider scalability as a key

benefit to their business, only one in five respondents trusted the cloud enough to make a full transition. Seventy eight per cent prefer a hybrid cloud solution.

"The security risks presented by the cloud are the same as those associated with using *Gmail*, *Facebook* or *Dropbox*," says Dominic Monkhouse, MD EMEA and SVP customer experience at PEER 1. "Yet people still store even their most personal details in these public domains. The industry needs to do more to communicate the fact that enterprise cloud solutions use even more stringent security protocols than consumer software."

Nearly half the respondents (42 per cent) say they're put off by the cost of migrating to the cloud, while only 12.5 per cent believe it offers a solution to the capex/opex debate.

PEER 1 carried out its survey at *Cloud Expo* earlier this year, and says the results highlight a high demand for simplified, cost-effective business cloud services. ■

**Weighing up the cloud: PEER 1 surveyed 120 IT professionals to find out what their considerations were when assessing the pros and cons of the cloud.**



## Self-healing cloud technology receives \$1m investment

HybridCluster says that it is now ready to launch its "breakthrough technology to help cloud and hosting service providers avoid failures and slowing business."

*HybridCluster 2.0* is an integrated suite of storage, replication and web clustering software. Bristol-based HybridCluster claims it gives service providers the ability to create cost-effective, high-availability hosting and email infrastructure.

The platform is said to offer a number of unique features. These can include on-demand auto-scaling to provide and charge for scalability in response to spikes in traffic, and 'time machine' capability to allow hosting company customers to roll back to the last good version of files.

Another key aspect is self-healing. This offers automatic recovery when hardware,

software, networks or even an entire region fails – and in less than a minute from a backup made less than a minute ago, according to HybridCluster.

At the end of April, the firm announced that it had completed a \$1m fundraising programme with investments from high profile industry figures. They include Jason Seats (former VP of engineering of Rackspace), Anil Hasjee (former head of corporate development at Google EMEA), and Toivo Annus (former head of engineering at Skype).

Luke Marsden, HybridCluster CEO and founder, says: "With this investment in the company we are now able to launch *HybridCluster 2.0* and compete effectively in the hosting market across Europe and North America." ■

## VIEW FROM THE TOP

Joe Dignan, chief public sector analyst, Ovum

### Government to champion public cloud with its latest G-Cloud



With the third iteration of *G-Cloud* about to go live, the government has finally agreed on a "public cloud first" policy. This is something that the government's *G-Cloud* team has championed, and there is a mass of data that would work perfectly well in a public cloud model. So from now on, public sector CIOs (particularly those in central government) will have to justify why they do not adopt this model.

The *G-Cloud* team should be applauded for progressing from a standing start to achieving £18.2m in sales by running two on-boarding exercises (*Gi* and *Gii*) over a six-month period. Some early issues have been addressed with increased ease of application and due diligence, and there is a greater diversity of services and solutions on offer.

There are 462 suppliers, of which 75 per cent are SMEs offering 3,185 services through four lots. However, the majority of contracts that have gone through have been for consultancy. Given the nature of the framework, it is perhaps understandable that the early focus has been on consultancy for cloud adoption.

But *G-Cloud* will need to be seen as the government's primary procurement engine across the various themes, and not just as a consultancy framework ghetto.

Although *Giii* is not yet live, several service providers and suppliers have already announced their inclusion on the framework. But the *G-Cloud* team has still not managed to snare the two biggest cloud providers: Amazon Web Services (AWS) and Google. While both companies have cited the US Patriot Act as a reason for not engaging, that hasn't stopped Microsoft and Salesforce from signing up.

One possible reason for their reluctance is that the contracts that are currently going through *G-Cloud* are not yet of a large enough scale to attract their attention. It has also been suggested that the biggest difficulty is the need to sign up to offering an unchanging product for two years. Companies such as AWS pride themselves on the continuous development of their products, with new functionality being added all the time. It will be interesting to see if the new "public cloud first" policy changes their position.

## UK consumers 'far from ready' for buying software in the cloud

UK consumers are not yet ready to buy their desktop software from the cloud, and most prefer to purchase software in a physical format, claims Corel.

The firm, which is best known for its graphics software packages as well as brands such as *Roxio* and *WinZip*, recently questioned 2,006 consumers about their software buying habits.

It found that 37.7 per cent of respondents would rather buy software from a retail outlet and 25.2 per cent preferred to buy software online but in a physical format. Just 1.8 per cent said they would rather rent/lease/subscribe to the software by paying a monthly or annual fee, whilst 28 per cent preferred to download software direct to their PC from the internet.

"One day, a majority of people will use the cloud to rent or lease their software, but the research clearly shows that we are far from ready for that at the moment," says Amanda Bedborough, executive VP for



**Corel's Amanda Bedborough says whilst businesses are comfortable with using the cloud to purchase software, consumers still want a choice.**

global sales at Corel. "Whilst many businesses are comfortable with using the cloud to purchase their software, consumers still want the choice as to how they buy software and do not want to be forced to rent software before they feel ready."

When asked what would prevent them from renting or leasing software from the cloud, just over three quarters said the main reason was not wanting to commit to an on-going payment.

Almost half of the respondents (46.6 per cent) admitted that when software firms spoke about 'the cloud', they didn't fully understand what it means. ■



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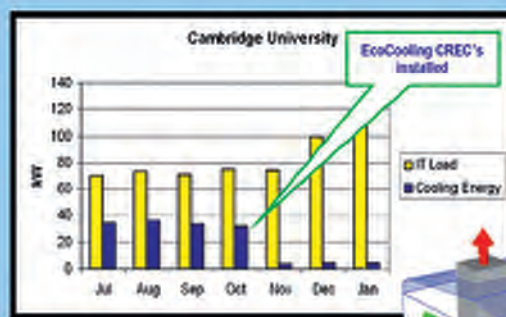


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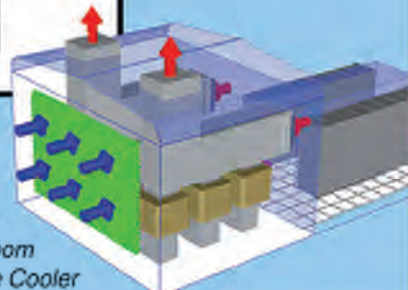
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# Networks at your leisure

**The right network infrastructure will help to keep clients and customers both connected and content at entertainment and sports venues.**

## Cat on the grid and wins pole position at Silverstone

When the rights to host the British Grand Prix for seventeen years were awarded to Silverstone at the start of 2009, it triggered a wave of investment to ensure the quality of the circuit's facilities matched its status at the forefront of global motor sport.

Central to this is the new Silverstone Wing (pictured below). This comprises 41 garages along the pit lane, race control, a media centre, new podium, corporate hospitality and VIP spectator areas, as well as conference and exhibition facilities.

The development of the pit and paddock area gave Silverstone's owners the chance to design and specify a network infrastructure to meet the specific needs of the demanding environment in which it operates. But this presented two key issues, as IT manager Kevin O'Brien explains:

"We need to have a highly flexible network, capable of being quickly configured to support the changing use of the space, depending on the event, whilst handling large peaks in numbers of users.

"We also need a robust, reliable network – although 100,000 spectators will be at the track to watch a Grand Prix, millions more will be following the race worldwide. The public perception of the major events we stage is gained through the media, who in turn rely on our network to send and receive information, reports and images to the wider world. As such, the network really is a mission-critical component of our operation."

Silverstone hosts around 30 events a year including major national races. Whilst a large national event may require network access for 2,000 users and 100 media, over a Grand Prix weekend the network has to be capable of delivering reliable services to in excess of 4,000 users and 600 media personnel simultaneously.

Working with ICS, its long-term infrastructure partner, Silverstone engineers flood wired a 1,600 point Cat 6 copper network on a grid layout, complemented with 35 Wi-Fi access points. ICS completed the project using HellermannTyton *Global Category 6* panels, *LSOH* cable and *Gigaband* outlets.

"The fixed network is the core of our infrastructure," says O'Brien. "Whilst wireless gives us the flexibility to meet many of our users' requirements, the Cat 6 wired network gives us the capacity and confidence to deliver ultra reliable services including VoIP. It also ensures the building infrastructure will support future demands as yet unplanned, such as IPTV."

Further plans for the site include a manufacturer test centre, business park, hotels and a new university campus.



## Wireless Arrays at Ally Pally

Alexandra Palace in North London has been the centre of music, sport and events for more than 130 years. Built as the 'People's Palace' in 1873, the iconic venue sits in 196 acres of parkland and offers 10,873 square metres of event space.

Prior to summer 2012, Alexandra Palace had no permanent wireless network infrastructure in place as Wi-Fi was only provided on a case-by-case installation. However, after the successful deployment of a Xirrus temporary Wi-Fi system during the 2012 Dutch Olympic team's *Holland Heineken House* hospitality event, it decided to retain and extend the wireless network. The venue has now deployed 100 *Xirrus Wireless Arrays* across its entire event space to support high bandwidth for up to 11,000 concurrent users.

As a Grade II listed building, Alexandra Palace needed a solution that not only provided flawless performance in a challenging architectural environment but could be installed in adherence with strict guidelines. With its experience of installations in historic buildings, Xirrus ensured its *Arrays* were in accord with the venue's aesthetics, and claims they caused minimal disruption and required less infrastructure than other vendors.

IT consultancy Technica worked with Alexandra Palace on the initial Xirrus implementation and permanent rollout. Technica owner Jason Ozin says they had looked at wireless in the past for Alexandra Palace, but its complex design and layout had caused connectivity issues. He says the *Xirrus Arrays* solved the problem.

"The Palace was the only venue during the Olympic Games that didn't experience wireless issues thanks to Xirrus' robust solution. Its unique design means you can cover high densities of bandwidth-hungry users, across vast areas. It also gave us the right level of flexibility and manageability."

*Xirrus Management Software* is used to configure the *Arrays* remotely. Ozin says this allows Technica's team to see exactly who is using the network and how, and helps address any issues in real-time.

"The Xirrus wireless network is unique as it gives us real granularity dependent on location, meaning we can offer visitors, exhibitors and production teams tailored Wi-Fi access all from the same *Arrays*."

Emma Dagnes, commercial director at Alexandra Palace, believes that having the ability to provide clients with a reliable wireless service will ensure the venue continues to attract world-class events and exhibitions. "Our clients will be able to promote their services and take advantage of additional revenue generating opportunities such as branded Wi-Fi portals linking directly to their websites."

## Cisco helps users keep fit

West Sussex-based Instyle Fitness sells exercise machines which feature screens and software that allow users to choose legendary race circuits from around the world, as well as fantasy routes.

When Duncan Lawson took ownership of the firm in 2001, he knew he couldn't compete against established equipment sellers. His goal was to use technology to help with preventative healthcare, and wanted his business to offer something different. He also understood the fitness world needed an innovative product that would motivate and inspire people.

"Around 30 per cent of the population has been a gym member at some time, but the dropout rate is very high. The industry scores very poorly in new innovations with gyms offering very similar packages."

With the help of Cisco, Instyle Fitness now uses technology to offer users the excitement found in multiplayer online games with the opportunity to get fit. Cisco says the solution was simple to install and maintain, and offers numerous benefits.

For example, users can choose a variety of courses where the machine's resistance correlates with visual images. Wireless technology enables them to race against

real people, even in other countries, or against a 'ghost rider' which replays their best performance or sets a pace according to predetermined fitness goals.

The system records and stores personal information and results on remote servers that can be accessed over the internet, enabling users to chart their progress.

Cisco says the use of softphones and Bluetooth headsets can be added for hands-free coaching, or for racers to chat with one another. Future plans are to adapt the equipment so that the energy generated by user workouts powers the routers.

"The fitness industry does not deal with the social and mental aspects of exercise," says Lawson. "There is lots of equipment in gyms but no motivation. You need to be motivated; and the secret of our technology is that it engages customers both socially and mentally."



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# Corridors of power

PHOTO: DIGITAL REALTY

The demand for data centres continues to rise in the UK. RAHIEL NASIR finds out what's driving the growth and whether the technology supporting the networks can keep up.

London is the most popular location for establishing a new data centre (DC) according to Digital Realty's recently published annual study of Europe's data centre market. That's perhaps good news as the same research found that the continent's demand for DCs is highest amongst UK businesses. A separate survey carried out by CBRE Global Corporate Services also confirms this. It revealed that the demand for DC space in London is continuing to grow, rising 22.5 per cent last year despite the stagnant economy.

According to its figures on the colocation and hosting market, the Data Centre Alliance (DCA) says UK DCs currently offer 1.7 million square metres of technical space of which 800,000 sq m is available.

"We've seen some regionalisation due to the attractiveness of sites typically where once heavy industry flourished," says DCA executive director Simon Campbell-Whyte. "For example, the M25 orbital region now represents around 40 per cent of the total available space versus 50 per cent in 2010."

But he goes on to point out that availability of space does not always mean suitability of space. "There's no reason to suggest that a 4kW rack won't become legacy soon (if it hasn't already become so). Interestingly, figures from the DCD Intelligence Census 2013 indicate that total in-house white space fell from 3.3 million square metres in 2011, probably due to facility consolidation particularly in finance and public administration. Outsourced/colo went up by 50,000 sq m – only partly offsetting the reduction in in-house."

So what's driving that expansion? Digital Realty says the top three reasons given in its survey were: security; disaster recovery; and power issues (i.e. the supply/reliability of power, and maintaining efficiency).

"Customers expect security, reliability and flexibility in terms of being able to scale the available bandwidth, on demand deployment of new connections, and bespoke services," says Omer Wilson, Digital Realty's marketing director for Europe. "But these customer demands present difficulties. Traditionally, these factors limited the distance between primary and backup facilities to

approximately 80km, as beyond this latency times became impractical. The need to be able to respond quickly to customer demand has seen the introduction of technologies including ROADM networks and interconnected facilities."

Wilson reckons the use of ROADM – Reconfigurable Optical Add Drop Multiplexers – means DC operators can rapidly deliver new connections at low costs as well as providing virtually unlimited bandwidth.

So where are these new connections coming from? Campbell-Whyte says the major factor is, and continues to be, the growth in mobile devices. "There are now far more mobile internet devices and users than fixed PCs plus laptops and this, together with the increasing use of video by consumers using Facebook, YouTube and the like, is also seriously driving up the quantity of data through networks."

He goes on to cite recent figures published by Cisco which showed that average monthly internet traffic was one million terabytes in 2012. This year it is expected to be two million TB, and will grow to 3.8 million TB in 2014.

"Of course, data centre traffic is greater than just internet traffic and this is

forecast by Cisco to hit 4.1 exabytes in 2014 and 6.6 exabytes by 2016. Which means that networking technology is probably going to struggle to keep up with demand," says Campbell-Whyte.

Cisco itself believes that today's DC networks must be able to support a highly mobile workforce, proliferation of devices, data-driven business models, and be capable of seamlessly incorporating cloud applications and services. Barrie Blackwell, the firm's data centre and virtualisation manager, says that DCs are measured by their ability to provide timely, reliable, cost-efficient data and application delivery to users globally, as well as to respond quickly to ever-changing business needs.

## Is copper looking tarnished in fibre's light?

According to Blackwell, one of the biggest impacts on the data centre network has been the convergence of traditional Ethernet networking and FC (Fibre Channel) storage networking into a single 'Unified Fabric'.

"This has allowed organisations to drive out huge amounts of cost from their

data centres, achieved by reducing the number of physical switches and server adaptors, reducing cabling by as much as 80 per cent, power and cooling by 60 per cent, and significantly reduced deployment times."

Bryn Jones, European data centres sales director for CommScope, agrees. With increasing pressures on DC networks, he says there's now a "heavy bias" in favour of using fibre and direct attached twinaxial cables instead of the more traditional mix of copper and fibre infrastructure.

"The increasing deployment of fibre cabling standards has had profound effects on the architecture and design of data centres. While existing copper cables are restricted to supporting the 10GigE standard, the introduction of fibre cabling allows companies to be more flexible when increasing their bandwidth. Fibre cables are better placed to meet the higher bandwidth demands of the developing 40GigE and 100GigE standards."

However, Jones points out that as fibre cabling becomes more widely used, provisions to ensure that the DC operates at an optimum level are made more complicated due to increases in connectivity, power, weight, airflow and thermal mapping. In order to offset such complications he expects to see an increasing move towards the newly defined Category 8 standard (see *Next generation cabling for data centres, p16*) and greater use of data centre infrastructure management (DCIM) tools.

So is copper on its way out? the DCA's Campbell-Whyte is not so sure: "It looks entirely possible that 40Gbps over copper will become viable in the data centre in the next couple of years. After that it will probably be fibre-only for 100Gbps and above. But on many occasions before when we've all said it's the end for copper-based networking, it's come fighting back. So I'd say the jury's still out on that one."

For Campbell-Whyte, virtualisation has been one of the biggest drivers of demand for DCs and is therefore influencing the way their networks are built. He explains that the technology causes the Ethernet or Infiniband traffic from, say a dozen virtual

*The Daisy Group says that previously it only had to consider what rack, server and bandwidth it was going to supply to customers. Now it builds its services with shared platforms in mind.*





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**B. Frustrated**



**C. Overwhelmed**



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## Next generation cabling for data centres

Datwyler's new *CU 8203 4P* (pictured right) is claimed to be the first compact cable which complies fully with the anticipated requirements of the IEC's Category 8.2 draft standard.

The IEC is currently developing the new international standards for Cat 8 copper cable and balanced cabling systems for 40Gbps (IEC 46C/976/NP and ISO/IEC TR 11801-99-1). Datwyler says that just a few years ago, the proposed standards for symmetrical Cat 8 data cables were being discussed for structured premises cabling and with a maximum limiting frequency of 1.2GHz. But it says the international standardisation bodies now foresee the sole use for Cat 8 in data centres with a

maximum limiting frequency of 2GHz. The company explains that ISO/IEC TR 11801-99-1 defines a point-to-point connection between active devices at a maximum distance of 30 metres. This comprises 26 metres of installation cable and two metres of patch cable on either side. Datwyler says that such a connection can replace expensive fibre optic and twinax cabling in data centres.

Although the new standards are still at the draft stage, the firm claims its *CU 8203 4P* compact S/FTP AWG23 cable complies fully with the expected requirements. With regard to attenuation (NEXT, PS-NEXT), Datwyler says the cable provides "a large amount of spare



capacity" at the limit values discussed and defined. It adds that other new developments with S/FTP and F/FTP, as well as the appropriate patch cables (flex cable), will follow.

In the meantime, Datwyler points out that the precise parameters for Cat 8 channel specifications will be drawn up over the next few months. It says that many issues are still unresolved, particularly in relation to future connection technology and the transmission method. ■

servers, to be concentrated through a single physical machine's network interface. This has rapidly enforced the take-up of 10Gbps and is already forcing 40Gbps in some 'Big Data' crunching data centres.

"There continues to be a two technology race, with Infiniband and top-of-rack switching being there first with the higher speeds, and then Ethernet with its more complex electronics winning on the price/volume curve coming a year or two later and then becoming the standard," says Campbell-Whyte.

ServerSpace describes virtualisation as a "major evolution" in networking technology. "10 Gig Ethernet has decreased dramatically in price and is set to become the standard network access port for data centres," says its MD, Tim Pat Dufficy. "Network virtualisation goes hand-in-hand with server virtualisation, meaning that more networking will actually be done in software rather than via physical pieces of equipment such as switches."

## Forecast remains cloudy

When virtualisation is mentioned, its technology soul mate 'the cloud' is usually not far behind.

Neil Barnett, product manager for cloud and hosting at Daisy Group, says the push of cloud in all its variants has "blurred the lines" between solutions. As a result, the job of capacity planning has moved onto the managed services provider and its facilities.

"I believe the industry has reached a milestone where the majority of its deployments are now virtual. As more customers migrate to next generation solutions, networks must be altered to enhance the way they are managed internally. Where we once only had to consider what rack, server and bandwidth we were going to supply our customers, we must now build our offering with shared platforms in mind.

"The more businesses that consume cloud, the more confidence is restored in outsourcing more than just power, cooling and connectivity – although



**"Data centre traffic is greater than just internet traffic and this is forecast by Cisco to hit 4.1 exabytes in 2014 and 6.6 exabytes by 2016. Which means that networking technology is probably going to struggle to keep up with demand."**

Simon Campbell-Whyte,  
Executive director,  
Data Centre Alliance



# Pulsant

## Critically Assessing Cloud

### Understanding business priorities is key to cloud success

As cloud becomes an increasingly strategic tool within the organisation, more emphasis will be placed on defining the business case for cloud – to justify its value and how this can be offset against potential risks.

**Pulsant believes that, with advance preparation, businesses can shape safer, more agile and efficient clouds that will enable them to meet their business goals – safely and securely.**

**Working with over 3,000 clients, Pulsant has identified the following strategic priorities for businesses looking to outsource elements of their data provision and how cloud infrastructure can be used to contribute to their realisation:**

#### Encouraging Growth

Unlike physical servers that have a storage limit, cloud's virtualised platform is 'elastic' and can be scaled up as your business grows. It removes the constraints of having to add and configure new hardware to accommodate major projects, new applications or expanding digital presence. Look for a platform that offers true flexibility, and one that can meet your capacity and performance needs now and in the future. Ensure the provider is not tied to the current technology deployed, and that they have the means to evolve as technology and service needs change.

#### Reducing Cost

With cloud you only pay for what you use, and as the service is built on virtualised platforms using the latest server technology and highly capacity efficient storage, it can reduce power consumption and operational costs by as much as 40 per cent compared to a like for like physical platform. If cost is key in the decision, ensure you have absolute clarity in what you are comparing, and what you are getting in terms of capacity, expandability, and service.

#### Improving Service

Cloud's flexibility lets you respond faster to the changing digital requirements of your business. Using cloud means you don't have to constantly monitor and manage your servers, allowing you to focus your own IT resources on customer facing activities that improve service.

#### Environment Concerns

Often up to 40-50 per cent more efficient than traditional server solutions, virtualised platforms can reduce power consumption dramatically. Make sure your cloud provider has an environmental policy and is committed to renewable energy sources.

#### Managing Risk

There has been much debate about cloud resilience, particularly from large-scale commodity-based public cloud providers. However, if properly managed and supported, cloud offers more resilience than traditional systems. If a server fails, then the load automatically switches to other servers in the cloud to keep your applications live. Ensure the provider you choose provides the appropriate level of service guarantees, and you understand how their platform deals with failures, and recovery.

#### Governance Requirements

For businesses working in tightly regulated environments cloud solutions need to be properly assessed in terms of compliance, security and data location. Private cloud facilities are available that provide the flexibility and cost advantages of a virtual platform but in a controlled environment that is specific to that client. Dedicated cloud is capable of delivering PCI compliant platforms for e-commerce. In addition, some cloud providers including Pulsant ensure data provenance to help users conform to European data legislation, consider where your data will be stored, and any impact that may have, whether legal or not your customers may need to know.

**By understanding how and why you want to migrate to cloud, you can more accurately select a provider that will support you in achieving your operational and strategic priorities.**

**This is an extract from a Pulsant white paper called 'Taking Control of Your Cloud' – to secure a copy of the complete white paper email Paul Hughes, Head of Marketing, at [paul.hughes@pulsant.com](mailto:paul.hughes@pulsant.com)**

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consuming cloud is much more than outsourcing; it is offloading a major part of the responsibility for any technology product or solution."

Digital Realty supports this view and says that the growth in cloud adoption has really highlighted the need for interconnected DCs, as well as the importance of closer working relationships between carriers, data centre operators and service providers. It adds that fibre optics and network connectivity are now key issues in DC developments, as providers aim to meet the evolving needs of their customers. "A range of connectivity options is therefore now a key consideration for those selecting a data centre site," says Wilson.

But not everyone wholeheartedly agrees that cloud is having a major influence on DC networks. For instance, Campbell-Whyte says that 'cloud' is really pushing the requirement for the number or size of commercial and private DCs (i.e. processing power and storage). And while this in turn increases the quantity of networking equipment needed, it's not "massively pushing the envelope" in terms of what that networking equipment needs to do.

Liam Enticknap, a network engineer with PEER 1 Hosting, also believes that a DC network is not about the cloud or virtualisation requirements: "It's about the delivery of a platform that is sustainable for your customers' demand. It's about minimising how many places you can manage your network from, such as having virtual-chassis technology to limit the tracking and management of devices in your network.

"Cloud is a platform that is really suitable when you have a need to scale your costs or resources up and down. It has a lot to offer but has to be a cheap platform and rich in features – however, with more features, there is an increased risk."

Enticknap maintains that there is still a lot to be said for outsourcing hardware requirements as a business. "The decision between hosting or cloud services is a tough choice but as a network operations engineer providing both platforms, [I see] a lot more benefit to having solid, static content on a set of servers than a virtualised cloud that can fluctuate.

"In my experiences of delivering new networks for both data centre rollouts and virtualisation/cloud platforms, I see much more benefit around customised solutions for a business through server hosting rather than virtualisation and cloud."

He goes on to say that understanding the business' failover requirements versus their cost will spearhead future network evolution. So what of the future?

## Internal IT departments will cease to exist

In the immediate future, Digital Realty sees DC networks developing to improve interconnectivity between sites. The company has already started this with its triangulation project in the London area and elsewhere in its international markets.

"By developing fibre links between our periphery facilities around London, we have substantially increased the number of connections and coverage back to central London from each site," explains Wilson.

Digital Realty plans to extend this to all its European facilities, and believes that by creating a reliable suburban network of interconnected facilities, DC providers can make it viable for organisations to take advantage of the rental cost savings outside of the city centre.

Wilson adds that the global volume of data is set to increase at much the same rate as it is now, and this means DC operators need to be prepared. They will also have to factor in the growth in the use of cloud, virtualisation and unified communications technologies that is being predicted by numerous analysts.

However, the DCA doesn't necessarily see it that way. It reckons power efficiency more than 'cloud' is likely to drive the future growth of big data centres. Campbell-Whyte points out that conventional legacy facilities tend to be spread widely across an organisation and can use two or three times the amount of power needed to actually drive the IT equipment in order to take the heat away and run ancillary services.

"On the other hand, modern data centres can reduce that power

requirement to as little as 20-40 per cent on top of the IT equipment – so they are incredibly more power efficient and environmentally friendly," he says.

"Since the marketing people have got hold of the word 'cloud' it no longer has any technical meaning and is simply used to mean 'the data processing is off-site'. So with that all-embracing new definition it is inevitable that most of these new high-efficiency data centres are going to be considered as 'cloud'."

Nonetheless, experts such as Cisco's Blackwell believe that ITaaS and cloud services will continue to grow as part of data centre networks, with some customers opting for private, some owning as little IT assets as possible and using public services, and others taking a hybrid approach. He also says that open technologies such as software defined

networking will play a large part in the evolution of DC networks in the near future. (See next month's SDN feature.)

CommScope's Jones highlights IT outsourcing as a growing trend that will continue to drive a future shift towards hosted data centres. He reckons these are becoming increasingly popular due to the multiple cost savings the infrastructure can provide. For instance, enterprises can avoid a significant portion of initial capex and instead pay only for ongoing expenses such as power costs.

ServerSpace's Dufficy takes this even further: "In 10 years' time, internal IT departments will no longer exist unless where absolutely necessary for security reasons. This means that business IT functions will move to cloud providers and this will drive an ever-increasing demand for data centre space and networks. ■



## Take two cables into/out of the building?

A popular TV advert once posed the question 'Why take two bottles into the shower when only one will do?' It was a sentiment that summed up perfectly the frustration and inconvenience of having to use both a bottle of shampoo and a bottle of conditioner when visiting the gym. It seems overkill if a single product were available that could fulfill both functions. The same question can be asked of multi-purpose cable; Why use separate cables for indoor and outdoor use if one high-quality, high-performance cable were suitable for both environments? It makes perfect sense. However the cable would need to deal with the demands of the harsh outdoor environment with ease, while not seeming to be 'overdressed' for the indoor environment.

**FREEDM™ Dry MPC Cable** achieves this and more. Robust enough to handle the rigours of outdoor installation and use, yet flexible and unobtrusive enough for indoor use, FREEDM features Corning ClearCurve® Multimode bend-insensitive fibre as standard, allowing the cable to be used for even the tightest bends – something you would never expect of cable suitable for outdoor use. The cable is also only marginally thicker than cables suitable only for indoor use, again, something you'd never expect of a cable that can be used outdoors.

From an installation point of view, FREEDM eliminates the need to terminate and re-provision at the building threshold, a task that would add extra complication, time and expense to the job in hand. As the name suggests, FREEDM Dry MPC Cable uses no messy gel. Instead it uses waterblocking yarn made from hydrophilic material, coupled with an enhanced buffer

tube design. So no more mess during splicing and a much quicker and cleaner installation. Up to 20 minutes can be saved per installation of a 12-fibre fan-out, and with no gunk to clog up your cleaver, there's no need to waste an hour later on cleaning it with harsh cleaning chemicals. With no gel, splicing is made more accurate and reliable, resulting in consistent, low-loss, high performance cable termination.

As well as replacing gel with waterblocking yarns, the buffer tube has been reinvented using flexible polypropylene designed to prevent kinking during installation. When combined with the flexibility of ClearCurve Multimode bend-insensitive fibre inside, this makes FREEDM suitable for almost every use, including site-to-site, between different floors, and for use in confined conditions.

Perfect for campus use, outdoor audio-visual installations and any situation where networking needs to move from outdoors to indoors, FREEDM really is the universal cable of choice.

Field-proven over five years of deployments in North America, FREEDM easily surpasses IEC 60794-1-2-F5 (waterblocking).

So let's look at this again. FREEDM doesn't kink, features highly flexible ClearCurve® Multimode bend-insensitive fibre as standard, is waterproof yet doesn't use messy gel, and can be used both outdoors and in. Is there anything it can't do...

...apart from condition your hair?



[www.corning.com/cablesystems/en/drympc](http://www.corning.com/cablesystems/en/drympc)

CORNING



## off-the-shelf: cable management

## Hold the spaghetti

**Cable installations looking like a bowl of spaghetti? Here are some solutions that could help you munch through the mayhem and get them sorted.**

**Brand-Rex's 10GPlus PCB Patch Panel Set** has been developed in response to the increasing use of 10 Gigabit Ethernet within the data centre. It comprises a half U shielded patch panel, a 1U shielded patch panel, and a consolidation point module (CPM).

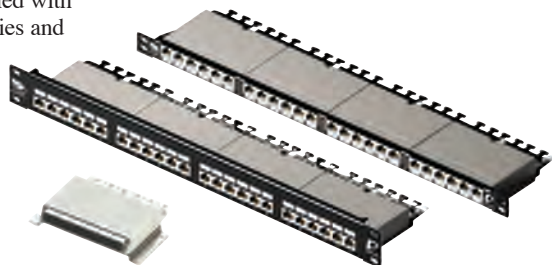
Supporting 24 ports and delivering what the firm claims is "true Cat 6A/Class EA performance", the half U panel is said to be ideal for applications where space is at a premium and a high-density solution with maximum airflow is required. It features four shielded modular units each comprising six ports, and an easy to remove cover that allows the modules to be removed from the panel when required.

Like the half U version, the **10GPlus PCB 1U patch panel** is supplied with cable ties, mounting accessories and short form installation instructions. Both have plug and play modules that can be interchanged and separated from the panel.

Although the panels can be pre-terminated off-site, Brand-Rex says they also offer a conventional

termination method and are fitted with LSA punch down blocks as standard. All ports are identified numerically for both TIA 568 A and B wiring applications, and have an additional writable surface for ease of port numbering.

The CPM comprises six RJ45 ports and can be supplied as a low profile standalone unit or with mounting brackets for secure fixing under floors or walls. Its cover can be easily removed to gain access to the LSA insulation displacement connectors and screen clamps for termination. Brand-Rex adds that the module base and cover are made from a metallised plastic which offers a lightweight construction and "excellent" screening characteristics.



The **4U Distribution Chassis** is designed for use with **HellermannTyton's RapidNet** pre-terminated system where high-density patching is required together with superior patch cord management. It enables patch cords to be hidden from view and, with its top quality design and finish, enhances the visual presentation of a high performance data centre, according to the company.

From standard density 384 fibre LC connections to high density 2,304 fibre MTP connections in each 4U of rack space, HellermannTyton says that a range of different density requirements is catered for, no matter the location. It can also accommodate 96 UTP copper ports.

The chassis has several features designed to aid the deployment of **RapidNet** within it. HellermannTyton says that front cable management across the horizontal space means patch leads are well supported before entering the vertical cable managers of the rack or cabinet. It says combining the patching area with the front cable management into a single self-contained



1U of space saves valuable room within the enclosures. This in turn allows for higher density patching, or for installing more equipment within the same space.

The front of the panel has a hinged door that prevents accidental damage to patch leads whilst maintaining tidiness.

Rear access is facilitated with eight cable entry points capable of taking compression glands, and eight anchoring points giving strain relief directly to the cables. A rear hinged door also helps to keep the trunk cables area neat and prevents accidental snagging.

**Upsite Technologies** has introduced the **KoldLok 6" Round** to its range of grommets. While these are designed to improve airflow, many system integrators use them as cable management aids, according to Upsite's UK-based EMEA distributor **EDP Europe**.

**KoldLok** grommets are used to seal the openings in data centre or server room raised floors where cables are passed through, and help improve cooling efficiency by preventing cool air escaping through the cable opening. EDP Europe says this means the cool air can only come out through the floor grilles (where it is supposed to be delivered), and makes the cooling system more efficient which can lead to cost savings.

The **KoldLok 6" Round** uses the same **Hybrid Brush Technology (HBT)** that was introduced by Upsite Technologies in its



**4" Round grommet.** EDP says the technology is combined with a supporting thermoplastic membrane for "superior" sealing quality and "exceptional" airflow management.

The **6" Round** features a usable cable area of 22.55 square inch (573mm), and has been designed to accommodate large cable bundles and commando-style PDU plugs. Its split design allows the product to be installed and removed without disturbing cables, and is said to be ideal for data centres.

Upsite adds that the product is quick to install and is a "very effective tool for managing critical airflow areas".

Copper and optical cabling infrastructure provider **Excel Networking Solutions** has launched the **Excel 2 Post Frames** for the mounting of patch panels and network equipment in an open frame.

Excel, which is part of Mayflex, says the frames are available in three profile depths, 80mm, 160mm and 420mm, and in a choice of 42U or 48U. They are manufactured from steel, with the construction made up of double and triple bend steel sections for enhanced rigidity and strength. Excel says they are delivered as a flat pack and are



quick and easy to assemble.

The **Excel 2 Post Frames** also include a choice of two widths of vertical cable management which is supplied singularly and may be shared between frames in a row or doubled up as required.

The company adds that these latest products complement its existing cabinet portfolio, and provide an option where businesses have a secure communications room and need to fit more equipment within the space.

**Siemon** has expanded its cabling system options with the introduction of angled patch panels as part of its **HD** series. Available in both 24- and 48-port versions, and in Cat 5e and Cat 6, the new angled panels are said to offer higher density with easy installation features.

Designed for use where patch cables are managed within the vertical channel, the new panels feature the same rear cable management and electrical performance as Siemon's range of flat **HD** style series.

The firm says the angled **HD5** panels exceed Cat 5e specifications with component and channel performance to 160MHz, while the **HD6** versions exceed Cat 6 specifications for all pair combinations up to 250MHz.

The **HD5** use S110 termination modules

that are compatible with Siemon's multi-pair impact tool which, it's claimed, significantly reduces installation time. The **HD6** use S310 termination modules with pyramid wire entry that separates paired and bonded-paired conductors when lacing cables for fast, easy installation.

Siemon adds that the panels are offered in both standard and contractor bulk packaging and can be easily mounted in EIA standard 19-inch racks or cabinets. They feature a write-on area for panel and port identification on both the front and rear, as well as a front surface uninterrupted by screw heads for what's described as a "clean, professional appearance".



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## Urgent need for cyber security experts

The UK's urgent need for cyber security experts continues to dominate the IT education agenda with two new initiatives announced this month.

e-skills UK has teamed-up with leading employers to develop what it says is the first nationally available, degree-level apprenticeships in cyber security. According to the organisation, only seven per cent of information security professionals are under the age of 29, highlighting a real need to attract more young talent into the industry.

The apprenticeships will offer young people the opportunity to start their career and earn a salary while working towards globally recognised qualifications. They're being developed by a group of employers which include Atos, BT, Cassidian, CREST, IBM and QinetiQ, with the first apprentices starting later this year.

Karen Price, e-skills UK CEO, says: "These new apprenticeships will help tackle the skills shortage faced by this sector, including attracting more women, who are currently under-represented."

The initiative is supported by the UK Commission for Employment and Skills.

In separate news, Royal Holloway, University of London and Oxford University are to develop research centres in a bid to train high level cyber security experts. They will be funded with £7.5m in government and research council grants.

The centres will be opened in the autumn and hope to boost understanding of the increasingly sophisticated and collaborative nature of today's hackers, whilst working to equip businesses with the intelligence and means to implement the best defences.



**Karen Price, e-skills UK CEO, says the new apprenticeships will help tackle the cyber security skills shortage, as well as attract more women.**

## BCS launches CPD tool

BCS, The Chartered Institute for IT, has launched a new personal mobile recording tool to help IT professionals track their continuing professional development.

It has been developed to help individuals identify, record and review their CPD activities, and can be used by any IT professional with additional features for those who are BCS members.

In a recent survey, the institute found that employees rather than employers are now responsible for CPD. "There is a shift taking place which is putting the responsibility for development on to individuals rather than on employers," says David Evans, director of membership.

He goes on to say that IT professionals should be encouraged to focus more on needs and outcomes, recognising what they already do, and reflecting on what makes a difference.

"CPD shouldn't be a narrow range of activities such as attending a course, but it should include a much wider sphere of any activity that develops competencies and capabilities. The important factor is the output or effect; how the activity has benefited you, and how the collection of activities has resulted in your enhanced capabilities and competencies."

## NEW COURSES

### *Managing Security Tests – Digital Assurance*

This one day course is aimed at senior IT and security personnel. It will equip those who have a responsibility for security tests with the knowledge and understanding necessary to gain the most effective use from externally sourced security testing.

The course explains the rationale for security testing, how to identify applicable service providers and vendors, and how to effectively deal with the output of security assessments and tests. Attendees will learn how to leverage maximum benefit from security investments while minimising risk.

It can be hosted at Digital Assurance's central London offices or on premises. [www.digitalassurance.com](http://www.digitalassurance.com)

### *Risk Management – IT Governance*

IT Governance says its certified *Risk Management* course is the first in the UK to deliver the comprehensive practical knowledge required to plan and implement an effective ISO27005 information security management system (ISMS).

The three-day classroom course features real-life case studies and provides the extensive use of *vsRisk* software. Successful candidates will be awarded the *Certified ISMS Risk Management* qualification issued by the International Board for IT Governance Qualifications. [www.itgovernance.co.uk](http://www.itgovernance.co.uk)

### *Hands-on Visio Training for IT Professionals – Square Mile Systems*



The next dates for Square Mile System's revised *Visio for IT Professionals* course are 18-19 June and 9-10 July in London.

Delegates will get free advanced *Visio* utilities to help speed up data centre floorplans, rack and network diagrams, and ITIL service/application maps.

Those who wish to use *Visio* diagrams as dashboards of their IT infrastructure will also get a free Visual Basic code to easily highlight capacity, configuration and status differences. 08700 340 770









### *London Summer Security training event – SANS*


SANS has added a new London date to its security training calendar. *SANS London Summer* takes place from 9-16 July at the Marriott Hotel, Kensington and gives security professionals the opportunity to attend four of SANS most popular six-day courses as well as the two-day *Securing The Human* course. [www.sans.org](http://www.sans.org)



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