

networking

FIXED & WIRELESS NETWORKS FOR ENTERPRISE USERS

SuperMUC goes live

Europe's most powerful computer is unveiled in Germany
News, p2 ➔



Wish you were here?

Luxury hotelier ditches the servers and delivers better service
Cloudworking, p9 ➔



Keeping business running

Are business continuity and disaster recovery solutions foolproof?
Feature, p10-13 ➔



Time to switch

The latest network switches to help exchange video, data, and more
Off-the-shelf, p15 ➔



£526m broadband projects stall as Europe waits for BDUK

by Ian Grant

The European Commission (EC) is waiting for more information from the Department of Culture, Media and Sport so it can establish the legality of state aid under the BDUK procurement framework for next generation broadband access (NGA)

The delay is holding up projects worth more than £526m for the sake of £86m in taxpayers' funds held by BDUK, the government's broadband project arm. The Welsh broadband project alone represents about £425m. Its progress depends on clearance from the EC's DG Competition to use state aid to help fund the project. "We are in close dialogue with the UK government on this matter. We currently expect more details on the progress in the early autumn," says a Welsh Assembly Government (WAG) spokesman.

But DG Competition says that there has not been any undue delay and says it was first notified in January. "So far, the duration of this investigation is not particularly unusual," says a spokesman. "We are working hard to reach a quick decision, but we need further information from the UK authorities before our assessment can be completed."

The WAG spokesman denies this would hold up the Welsh rollout: "It was really important for both the Welsh Government and BT to make progress on delivering against our commitments for Wales. That is why we have completed our agreement with BT, and preparatory and mobilisation work has already started to ensure that we waste no time in getting fully started once the European Commission

approvals are formally in place."

So far, all of the parties involved have declined to comment on the reasons for the slow progress. However, it is believed that DG Competition is worried that the BDUK process designed by consultants from KPMG and Pinsent Mason at a cost of almost £3m led to just two suppliers qualifying – BT and Fujitsu Telecom.

There is also a difference between the speed targets BDUK is setting and those of the Digital Agenda. This favours BT's plans to use slower technology via FTTC with copper to the premises, rather than FTTP which is also an option.

The EC may also be concerned that all the NGA contracts awarded so far have gone to BT. Cumbria, which is expected to announce its plans soon, rejected initial offers from BT and Fujitsu. Fujitsu subsequently pulled out of the bid.

Many of the non-BT network operators ('altnets') are now discussing how to work together to bid against BT for NGA business in the counties. These contracts contain at least £425m in UK taxpayers' money, and there is £600m more from budgets for cities, the BBC's digital switch-over fund, and rural wireless.

Hervé Dupuy, deputy head of the broadband unit at the EC's new Connect directorate, says the setting up of BDUK to oversee the allocation of taxpayer



Culture secretary Jeremy Hunt: may miss the Digital Agenda target.

money to broadband projects had "attracted a lot of attention in Brussels" as a potential model for EU member states. He says proposed new state aid guidelines add a lot of detail to previous ones. These sharpen deliverable targets for contracts that receive state aid.

While the UK's broadband plans are on track to meet Europe's Digital Agenda targets, the delays mean it may miss deadlines. This was the view that emerged at a recent London seminar on state aid run by the Independent Networks Co-operative Association. ■

"I need a solution that keeps an eye on my network."

PAESSLER
The network monitoring company

Paessler AG leads the industry in providing the most powerful, affordable and easy-to-use network monitoring and testing solutions.

www.paessler.com



Register today for a chance to:

Win a **FREE** network analysis and consultation!

See more details on page 4.

Exclusive to
networking
readers

CBN bags O2 London Wi-Fi deal

O2 has turned to microwave for backhauling traffic from its new Wi-Fi network in the London boroughs of Kensington and Chelsea and Westminster (News, January 2012). It is using seven Cambridge Broadband Networks' (CBN) VectaStar point-to-multipoint nodes to provide data throughput of up to 2Gbps.

The nodes collect traffic via 28MHz and 5GHz microwave from a wireless mesh network formed by more than 100 Ruckus access points mounted on street furniture such as lamp posts. They then transfer the data via Ethernet cable to a hub in central London for onwards transmission by fibre. O2 will use a Ruckus/Cisco BSS/OSS

system to manage traffic.

CBN account director Kevin Oemering claims VectaStar technology allows O2 to backhaul mobile traffic from multiple small cell networks to a single aggregation point. "This fundamental change in backhaul network architecture delivers cost and efficiency benefits, particularly for next generation mobile," he says.

O2's London Wi-Fi network covers Exhibition Road, High Street Kensington, Parliament Square, Trafalgar Square, Oxford Street, Regent Street, Leicester Square and Piccadilly. It is free but users will face advertising which O2 says will appear on the welcome page only. ■

Going virtual with Lanway

Students at Rotherham College of Arts and Technology can now take advantage of more mobile and flexible learning after a virtualisation project completed by Lanway.

The IT solutions provider's specialist education team installed and configured a *VMWare VDI* solution at the college which has more than 14,000 students. They can now access the college network, educational applications, and the internet from both fixed and mobile devices, remotely and outside college hours. Lanway adds that the virtual desktop also supports high definition video and graphics, giving students a "dynamic and creative learning experience".

The VDI implementation supports 400 machines and is scalable, therefore enabling the rest of the college estate to smoothly follow suit. Lanway says Rotherham has immediately reduced energy consumption as fewer servers are required to support the new desktop, and that it will achieve large cost savings on future installations.

In a separate deal, Lanway has also provided virtualised infrastructure and multi-site managed services to North Country Leisure (NCL), a charitable trust which manages leisure, sports, and training facilities across Northumberland and Cumbria.

The firm designed and installed NCL's system, and will also offer support services as part of a five-year deal. It will work across the organisation's 12 sites to monitor and manage the IT infrastructure. It adds that potential network problems will be identified and prevented, with issues resolved remotely from its Lancashire HQ. ■

Most powerful supercomputer in Europe unveiled in Germany



A SuperMUC simulated image of LRZ's new supercomputer. It's claimed that the SuperMUC will be able to deliver over three petaflops of computing power.

What's said to be Europe's most powerful supercomputer has been unveiled in Germany. The *SuperMUC* uses *SUSE Linux Enterprise Server* and is said to be the world's fourth-fastest supercomputer. It was officially inaugurated in July by IBM during a ceremony celebrating the 50th anniversary of the Leibniz-Rechenzentrum (LRZ – Leibniz Supercomputing Centre) of the Bavarian Academy of Sciences in Garching.

The *SuperMUC* will be used to solve difficult scientific questions in physics and fluid dynamics. It is equipped with more than 155,000 processor cores which are claimed to deliver an aggregate peak performance of more than three petaflops

of computing power.

LRZ says the new system is much more efficient than its predecessor as it is able to take advantage of 'frequency scaling' – a Linux kernel function delivered with *SUSE Linux Enterprise* which allows applications to run at their optimal operating point.

The *SuperMUC* is based on IBM's *System X iDataPlex*. One of its special features is warm-water cooling technology which, according to IBM, was inspired by the human circulatory system. It claims that this results in 40 per cent less energy usage than traditional air-cooled machines. The system also allows energy to be captured and re-used to heat the LRZ's buildings. ■

Janet will ride Surf in £4.1m network deal

Bristol-based Surf Telecoms has won a three-year deal, initially worth £4.1m, to provide communications services to Janet, the UK's research and educational network.

Using 400km of fibre stretching from Cornwall to Gloucestershire, Janet delivers a 10Gb core network infrastructure and high bandwidth connections to all of the 10 higher education institutions, three research organisations, and 41 further education colleges in south-west England.

Surf will support Janet's growing demand for communications traffic by providing a secure and resilient infrastructure for

research and educational organisations such as University College Falmouth as well as the much larger university campuses in Bath and Bristol. The firm says it has delivered the 55 connections needed for all the region's institutions and will enable them to exploit the benefits cloud computing and other high bandwidth applications.

Steve Blew, Surf Telecoms' commercial manager, says: "Our network service to Janet is supported by a new state-of-the-art communications infrastructure with the functionality and flexibility to handle high bandwidth traffic required by educational institutions

across the region, and the connections for onward integration to other parts of the Janet network as well as other national and international telecommunications networks."

Having expanded its services from its installed base in south-west England and Wales, Surf says it now offers a range of telecoms services throughout the UK. They range from 2Mb leased lines to 10Gb optical wavelengths, dark fibre, and secure colocation and site sharing facilities.

The Janet backbone consists of more than 5,000km of dedicated optical fibre and has a global community of 18 million users. ■

MOBILE MARK®
www.mobilemark.com

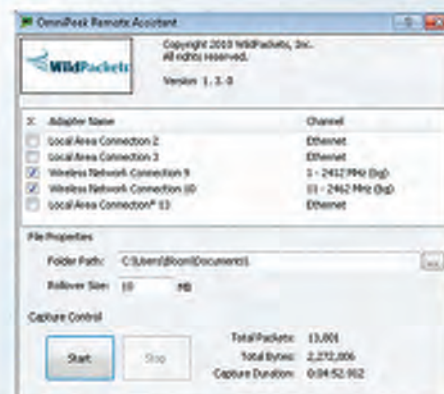


- Multiband Antennas
- Low Profile, Embedded & Covert Designs
- Infrastructure Solutions
- High Performance Communications Antennas
- Innovative Engineering
- Rugged IP Rated Designs
- Multiple Mounting Options

Anglesey Business Park, Hednesford, Staffordshire, WS12 1NR, UK
Tel: 44 1543 878343 Fax: 44 1543 871714
e-mail: enquiries@mobilemarkeurope.co.uk www.mobilemark.com

WildPackets®

For your Global Distributed Troubleshooting requirements
With OmniPeek Remote Assistant, IT help desk staff can:



Reduce mean-time-to-resolution (MTTR)

Eliminate the need to send staff out to the customer site to reproduce problems

http://www.wildpackets.com/products/omnipeek_remote_assistant

The TimeLine network recorder brings capture and visibility of network traffic on highly utilized networks to a whole new level

http://www.wildpackets.com/products/timeline_network_recorder



Local or Distributed, WildPackets has the solutions for the help desk.

Contact: Riaz Khan, riaz.khan@wildpackets.com
or visit our website: <http://www.wildpackets.com/>



Simoco PMR proved more reliable – and therefore safer for staff – than cellular in severe weather.

Simoco in £5m upgrade to Western Power PMR network

Private mobile radio (PMR) specialist Simoco has completed a £5m upgrade for Western Power Distribution (WPD), providing voice and data links in 26,000 square kilometres of Wales, the South West, and the Midlands. The upgrade has enhanced voice and data communications between staff and key network equipment, ensuring optimum service for WPD's 2.4 million customers, says the firm.

Simoco's system provides coverage in some of the UK's most diverse terrain. It includes densely populated cities such as Bristol and Cardiff, and rural and coastal areas such as Dartmoor, the Brecon Beacons, Cornwall, and Gower Peninsula.

The firm installed 372 Xfin blade servers at 103 sites for 1,600 mobile users. The Xfin system delivers voice and data communications over an IP

backbone that links 60 dispatchers in 10 locations. It integrates telephony, and data and voice recording in a GE Network Solutions ENMAC real-time control room management system through a turnkey solution.

Since its installation at WPD in 2008, PMR is said to have proved more reliable than cellular systems that also operate in the area, according to Kevan Scott, manager of WPD's sister firm, Surf Telecoms.

"Particularly during storm conditions, where our engineers are working hard to restore power on the electricity network, the Xfin system has continued to provide reliable and critical communications to ensure the safety of our staff. This vindicates our decision to invest long term in PMR over cellular services which are frequently affected by storms."

Talend gives Oxfordshire voters a clearer picture of council spending

Oxfordshire County Council has selected Talend, a specialist in open source data management, to provide voters with greater insight into its £845m annual budget.

The government's drive to be more transparent with public spending is forcing councils to seek better ways to extract information, especially financial transactions over £500, which local authorities have to publish monthly.

The council chose *Talend Enterprise Data Integration* because its software "connectors" allow it to access, transform and integrate data in real-time or batch, including from within the council's SAP financial management system, says ICT deployment manager Anne Kearsley.

"Talend allows us to extract our financial data and collate it into one easy to use report. We no longer need to search through our millions of rows of data or struggle with encryption. Talend allows us to easily locate the exact data, manage the exceptions, and publish our expenditure reports."

Kearsley notes other benefits such as the ability to move data regularly and reliably from legacy systems for reporting and financial management. "We're now looking to expand our relationship with Talend across some of our other departments. With this we hope to further increase our ability to manage large amounts of data in a more efficient manner, enabling us to reduce costs and save time," she says.

Infoblox

Network Automation
— Being ahead of the IT curve!

- Mobile devices, virtualization, cloud computing, and IPv6 migration present unprecedented and dangerous vulnerabilities to networks.
- Replace error-prone manual methods with automation for provisioning and managing today's dynamic networks securely, reliably, and cost-effectively.
- Infoblox is a global leader in automated network control solutions, helping to keep organisations around the world ahead of the IT curve for fifteen years and counting.

www.infoblox.com



ON THE NETWORK

Ian Grant, deputy editor

Lords in eleventh hour bid for a truly Digital Britain

A scathing report from the House of Lords communications committee on the government's 'strategy-free' broadband approach has exposed a divide between the national interest and the narrow profit interests of the incumbent telco BT.

Both large and small firms have welcomed the report, in particular the recognition that businesses as well as retail consumers need competitive access to "future proof" networks. But market research firm Ovum was quick to call the lords' recommendations "pie in the sky", and BT staffers were as quick to quote this on social networking forums.

The report calls for customers to have access to a range of networking products, include dark fibre, from a number of sources including fibred-up community 'hubs'. They would pay for all this on a

competitive 'get what you pay for' basis. This is anathema to BT which has fought to retain its monopoly in the last mile as well as its monopoly on supra-1Gbps networks outside London.

The Federation of Communication Services says the UK has seen the needs of business overlooked in a "baffling rush" to get 2Mbps into every home, but with no real thought of guaranteeing competition or choice of provider.

The government now has two months to respond. BT must hope pressure on county councils to spend the earmarked £530m on long-delayed broadband plans will see the report ignored rather than cause further delay. This would be a mistake and the consequences will last decades and entrench the incumbent's hegemony, say the lords.

EDITORIAL:

Editorial director: Rahiel Nasir
rahieln@kadiumpublishing.com

Deputy editor: Ian Grant
iang@kadiumpublishing.com

Designer: Alan McClenaghan
alanm@kadiumpublishing.com

ADVERTISING:

Assistant advertising manager:
Paul Summers
pauls@kadiumpublishing.com

Production: Suzanne Thomas
suzannet@kadiumpublishing.com

Publishing director:

Kathy Moynihan
kathym@kadiumpublishing.com

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

Annual subscription: £80 (UK); £95
(Europe), £100 (USA and the rest of the
world) airmail. Cost per single copy is
£8.25.

Printed in England by Williams Press.
© 2012. All rights reserved.

The contents of the magazine may not be reproduced in part or whole, or stored in electronic form, without the prior written consent of the publishers. The views expressed in this magazine are not necessarily those shared by the editor or the publishers.



ABC audited circulation:
19,753
1 Jul 2010 –
30 Jun 2011



All the benefits of Wireshark,
without the limitations

**Protocol analysis & troubleshooting for
GigE & 10Gig networks**

riverbed Cascade Pilot

- Analysis of multi-terabyte capture files with multi-level drill down and triggering
- Integrated analysis of data from multiple distributed sources
- Intuitive, user-friendly GUI.

riverbed Cascade Shark

- Appliance-based analysis of GigE/10Gig
- Continuous line rate capture and indexing.

info@phoenixdatacom.com | 01296 397 711 | www.phoenixdatacom.com



Scan the QR code
with your smartphone
to find out more



IN BRIEF

Reading wins 02 Future Fund

02 has announced the winners of its *Future Fund* competition (*News*, May 2012). In April, it invited local authority ICT teams to submit ideas that use digital innovation to drive improvements for staff, citizens, and communities. From the 40 councils that entered, Reading was awarded the top prize of £125,000 for its 'from handset to mindset' project which demonstrated a way to help address the 'Not in Education, Employment or Training' issue across West Berkshire. Merthyr Tydfil and Vale of Glamorgan took the second prize of £75,000 with their joint bid to develop an 'e-community' project designed to encourage local economic growth. Luton picked up the £50,000 award with an idea designed to redefine the council's services. ■

NextiraOne awarded multiple PSN frameworks

NextiraOne has been awarded frameworks in multiple lots under the Government Procurement Service's new PSN Services Framework. The network integrator says it will now be able to provide public sector organisations services for communications, CCTV and physical security monitoring, conferencing, and LAN. The PSN Framework will initially be in place for two years with two one-year extension options available. ■

OCS outsources to eLINIA

OCS Group, said to be one of the world's largest privately-owned facilities services companies, has completed the first phase of a five-year IT infrastructure outsourcing deal with managed services specialist eLINIA. OCS' IT infrastructure has now been moved from its old headquarters in Crawley to eLINIA's 'green' data centre in Slough – 70 per cent of eLINIA's UK data centres are powered by renewable biomass energy sources. The second phase involves the adoption of OCS' IT estate into managed services provided by eLINIA. The final phase will see OCS and eLINIA consolidate and drive efficiencies to provide "long-lasting" financial and operational benefits. ■

Ark gives TalkTalk Business £100m safe haven from DC price war

TalkTalk Business, one of the UK's largest carriers for voice and data traffic, has become the anchor tenant at Ark Continuity's new purpose-built £100m data centre in Corsham, Hampshire. A former nuclear bunker for Westminster officials, the site is on a nexus for communications and energy networks, making it ideal for TalkTalk Business, according to CEO Charles Bligh.

Due to undergo phase two of a planned £800m, one-million square foot development, the facility has a 110MW power supply already installed via duplicated links to the national grid. It is served with dark fibre by Geo, Vtesse Networks, and Cable & Wireless Worldwide to provide alternate routing. BT has said it will also soon be running fibre to the village.

TalkTalk Business has spent £600m build-



Engineers inspect TalkTalk Business' racks at Ark Continuity's new Corsham data centre.

ing a national network that now covers 89 per cent of the population via 2,000 unbundled exchanges. It has around 180,000 businesses taking its increasingly digital, Ethernet-based voice and data services.

Bligh is now looking for more clients and hopes the new DC will help. But he's discouraging pure co-location business as this would be a "waste of this facility". Instead, he's aiming for those looking for enhanced voice and data services.

One attraction could be the data centre's very low energy consumption. Thanks largely to free (adiabatic) cooling, the DC runs at a PUE of 1.25 at 20 per cent loading, and at 1.1 fully loaded at 760kW. The average UK DC runs with a PUE of 2.0. "We will also be saving 4,000 tonnes of CO2 a year when fully loaded," claims Steve Webb, Ark's COO.

The DC houses a mixture of network equipment, including Cisco and Juniper, to allow TalkTalk Business to replicate a client's in-house system. ■

Huawei helps hunt Higgs boson

Huawei's cloud storage system has passed the performance test of the European Organisation for Nuclear Research (CERN), where researchers will use it to explore scores of petabytes of data generated in the hunt for the fundamental building blocks of the universe.

The CERN data centre, the Worldwide LHC Computing Grid Tier-0, is at the heart of a global computing resource that provides storage and analysis of more than 20PB of Large Hadron Collider (LHC) data per year. Massive increases in data storage demand prompted CERN to review its

requirements. It set up CERN openlab, which houses the Huawei cloud, to develop advanced IT systems for LHC scientists.

Delivered in early 2012, the cloud system has shown 'excellent' data writing and reading performance, with horizontal scalability. The system also provides self-healing intelligent maintenance, which significantly reduces maintenance costs, and effectively enhances the system's availability and reliability, says Huawei.

The scalability of the storage system is said to be important for CERN as the laboratory faces ever-increasing demands



The Huawei cloud storage system will provide researchers worldwide with fast access to petabytes of data from collisions generated in CERN's Large Hadron collider.

from physicists. Huawei is using the CERN installation to test new storage techniques and architectures in the processing of high energy physics data from the LHC experiments. ■

UK to set up database to fight sub-standard cable

The Approved Cables Initiative (ACI) has welcomed government and trading standards plans to set up a central database to fight imports of substandard cable.

The plans unveiled by consumer affairs minister Norman Lamb will allow best practices and intelligence on imports to be shared from the UK's biggest container port at Felixstowe to other points of entry to the UK. It is part of work already developed by Suffolk County Council.

Lamb was speaking at the Consumer Affairs and Trading Standards Conference and Exhibition in June, where the ACI

spoke to trading standards officers about the defective cable "flooding" into the UK. He said the Business Innovation and Skills department is working with the European product safety forum PROSAFE on an interface that will enable access to services on the Trading Standards Institute's TS-interlink online platform.

The ACI has started a two-year programme to raise MPs' awareness of the dangers posed by sub-standard or misleading labelling of cables. Previously, ACI spokesman Peter Smeeth warned that without appropriate legislation and the

proper funds to support enforcement, the problems of dangerous and sub-standard cable will not go away. (*News*, June 2012).

"The ACI uncovers issues with defective cable products, often imported, on a weekly basis," says Smeeth. "Perpetrators need to understand that they will face stiff penalties for breaking the law."

He adds that two years ago, more than 20 million metres of faulty cable had to be recalled. "There remains a large proportion of this cable unaccounted for in the UK. The ACI is keen to help trading standards and has volunteered to do so." ■

PRTG Network Monitor

Why Network Monitoring?

Continuous monitoring enables you to find problems and resolve them before they escalate and become business critical.

Monitoring...

- avoids performance bottlenecks and breakdowns
- delivers better quality of service proactively
- reduces costs since you know your network and buy only what is needed
- increases your company profits by minimising downtime
- provides peace of mind: no notifications mean that everything is running fine

150,000 sysadmins are using Paessler's PRTG Network Monitor to make their networks faster, more responsive, and more reliable.

Get an idea how to optimise your network and read our white paper:

www.paessler.com/choosing-the-right-solution

PAESSLER the network monitoring company

cooperation with **TRUST** by AVIDIA

Register today for **networking** and

Win a FREE network analysis and consultation!

Enter the prize draw now by registering at:

www.networkingplus.co.uk

All Networking+ readers are eligible to enter the draw for a network analysis and consultation with a Paessler network monitoring expert. To enter the Paessler draw, complete the registration form online at www.networkingplus.co.uk ensuring that you tick the Paessler offer box. Please note this is restricted to UK-based readers aged 18 years or above who register or re-register to receive Networking+ before 17.09.2012.



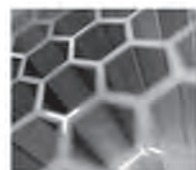
Ark Continuity specialises in the design, build and operation of high integrity data centres, developed to deliver optimum security and availability with the highest levels of sustainability. Our agile infrastructures respond to any business or technical requirement needed, meaning we can offer one of the lowest total cost of operations in our class, from the ground up.

The latest phase of Ark Continuity's development at Spring Park is a data centre of modular construction that uses scalable designs and a smart supply chain to enable the rapid delivery of Best In Class data centre solutions. Ark seeks to industrialise the data centre market, eliminating errors and costs associated with one off; custom built solutions preferring the inherent quality, improved performance and economies of a mass produced, manufactured solution.

To discover more visit www.arkcontinuity.co.uk, call 0845 389 3355 or email info@arkcontinuity.co.uk



SPRING PARK P1



SECURITY | AVAILABILITY | SUSTAINABILITY | AGILITY

Ark Continuity Limited
Hartham Park, Corsham
Wiltshire SN13 0RP

t: +44 (0) 845 389 3355
f: +44 (0) 845 389 3356
info@arkcontinuity.co.uk
www.arkcontinuity.co.uk



Manchester academies pool their resources to improve IT security

Three Manchester academies are to have their internet security services overhauled by Bolton-based IT solutions specialist Imerja. The city's Health Academy, Enterprise Academy, and Co-operative Academy have signed three-year contracts that will begin in the coming months.

The academies have pooled purchasing power and knowledge, forming a consortium to inform each other of the best products, software and systems. The partnership aims to reduce IT costs, while providing high security and integrity levels.

Imerja will deliver services such as anti-virus software, spam protection, and web filtering in an effort to safeguard pupils, staff, and data from online threats. The firm says the offerings are "deliberately granular" to allow for expansion or modification.

It adds that the solutions are designed to be flexible and user-friendly, enabling IT administrators or teachers to tailor settings to suit the specific needs of the academy, right down to the requirements for a individual class if necessary. There

will also be a team of Imerja engineers on hand 24 hours a day, to identify and address high-level IT issues.

"With the current financial pressures, it is often a challenge to balance security with cost for many public institutions," says Imerja MD Ian Jackson. "Our work with these academies will help them improve and safeguard their IT infrastructure, while crucially saving them money. These partnerships will allow them to retain control of day-to-day security management, backed with our support." ■



Imerja MD Ian Jackson says the solutions will allow the academies to balance security with cost.

UK's first train station to benefit from IP-based surveillance



Reading train station is said to be one of the busiest in the UK outside of London with 14 million passengers travelling through it each year.

Reading train station is set to become the first in the UK to benefit from IP-based, high definition CCTV. The station is said to be one of the busiest stations in the UK outside of London, with more than 14m passengers travelling through it annually.

It will use 230 Axis cameras, mostly HD, for the deployment which is due for completion by next April. During trials, Network Rail found that by using cameras rated at just two megapixels it was able to capture far wider coverage of the station.

"Axis cameras are also extremely easy to install which, in a station, is a real plus-point as cameras can be relocated very quickly and easily if the need arises," says Raul Marquez, a senior project engineer for Network Rail.

The CCTV system is integrated into Reading's Station Data Network (SDN) which is dedicated to telecoms operations and also handles other functions such as the Customer Information System,

intercoms and help points, and security, but excludes PCs and rail information.

He goes on to explain that the SDN comprises 19 nodes using Cisco's 2960 switches connected to two 4507 core switches. "There are two 1GB fibre connections from each node using different paths for resilience. The core switches are connected to each other using 10GB links. Node switches also provide power to the cameras using PoE," says Marquez.

The CCTV system is managed using NICE software and their video recordings will also be stored using the vendor's 300TB 9240 NVR arrays.

In the near future, the whole station is expected to use the *Station Management System (SMS)* that is currently under development. Marquez says that as well as enabling the monitoring all cameras and displays, the SMS will also monitor the system alarms of all equipment connected to the data network. ■

Lanode

Network solutions
you can depend on

Lanode, a specialist provider of networking, transmission and data communication solutions has released a family of Encryption Devices known as CipherPilot. Ensuring data integrity and confidentiality, CipherPilot may be deployed in a wide variety of network scenarios. It supports wire-speed encryption of ATM, SDH, Ethernet and Fibre Channel protocols with speeds up to 10 Gbps. These encryption devices comply with FIPS 140-2 L3 and CC EAL3, and offer the highest commercially available encryption grade.

Although encryption devices have a rather complex task to address, CipherPilots are easy to integrate into existing network topologies. Their influence on network performance is as low as technically possible. Encryption is carried out without overhead, without extra data buffering and without any changes to the network devices and protocols. The CipherPilot encryption devices offer real time 256 bit AES hardware encryption at wire speeds of up to 10Gbit/s for all standard transmission protocols. They introduce very low latency and do not create any overhead that would reduce throughput. Units available include the:

- CipherPilot 200 for speeds up to 100Mbps
- CipherPilot 300 for speeds up to 2.5Gbps
- CipherPilot 400 for speeds up to 10Gbps



Lanode have also released a range of manufacturer independent Optical Monitoring equipment including an Optical Power Meter, Spectrum Analyzer with an Optical Tap Coupler module, a Fibre Monitor and a Line Protection unit to monitor the optical power levels of two separate fibre optic cables.

For further information contact Lanode on +44 (0) 1276 677220

Belfast Health and Care Trust unifies comms for 17,000 staff



The trust is using around 400 Polycom telepresence systems and has 20 video collaboration suites.

One of the UK's largest health trusts is deploying a multi-vendor solution to unify video, voice, and data communications for 17,000 staff.

Belfast Health and Social Care Trust provides integrated health and social care services to 340,000 people in Belfast and Northern Ireland through a network of six organisations. It will use BT networking technology, *Microsoft Lync*, and Polycom's video and voice solutions to enhance the delivery of those services and is also aiming for cost reductions as it spends around £3 million every day.

The new standards-based, interoperable unified communications (UC) platform will give more than 10,000 healthcare workers access to *Microsoft Lync* so they can communicate via video, voice, instant

messaging, and telepresence. The hardware includes Polycom's AV communications equipment which was part of the bigger UC solution provided by BT. The telco won the tender with a two-phased strategy that aims to deliver IP telephony and a suite of UC and collaboration capabilities within 18 months, says Polycom.

The deployment will use thousands of the firm's IP phones and wireless handsets for on-site mobile staff across more than 100 locations. Paul Duffy, co-director of IT and telecommunications at Belfast Health and Social Care Trust, claims that one of the many benefits of the new system is that it enables faster and greater staff interaction. "Before, you would have had to wait maybe a week just to get people in their diary to attend a meeting," he says. ■

Powerful. Reliable. Scalable.

Introducing the new IBM System x3500 M4 Express server.



Succeeding in today's competitive environment takes substantial amounts of innovation and growth. The new IBM System x3500 M4 Express server with the latest Intel® Xeon® processor E5-2600 series helps you achieve both. It features up to 80% more processing power¹, four times more memory², 33% higher storage capacity³ and higher networking bandwidth⁴ for your infrastructure solutions. Furthermore, with industry-leading reliability⁵ and the valuable expertise of IBM Business Partners, you can build an IT infrastructure that can help accelerate your business growth.

The new IBM System x servers enable solutions to help you achieve a better future, faster.



IBM System x3500 M4 Express

£1,249 (incl. VAT)

OR £35/MONTH OVER 36 MONTHS*

PN: 7383E2G

Intel® Xeon® E5-2603 1.8GHz processor

4GB RDIMM memory

Multiburner

RAID 5 disk controller

IBM System x3650 M4 Express

£1,499 (incl. VAT)

OR £42/MONTH OVER 36 MONTHS*

PN: 7915E1G

Intel® Xeon® E5-2603 1.8GHz processor

4GB RDIMM memory

RAID disk controller

Multiburner

550 Watt Hot Swap power supply

IBM System Storage DS3524 Express

£3,704 (incl. VAT)

OR £103/MONTH OVER 36 MONTHS*

PN: 7944KAG

External disk storage with 6Gb/s Serial Attached SCSI (SAS) interface technology

Scalable up to 48TB with 500GB NL-SAS 2.5" drives

Support for 96 drives with combination of EXP3512 or EXP3524 expansion enclosures

Field upgradeable with FC or iSCSI host interface cards

Self encrypting drive options available for secure data at rest
DS3512 also available with 3.5" drive support

Read the white paper

See what leading IT industry analysts say about the performance of the new IBM System x servers.



Visit: ibm.com/systems/uk/express1

Contact the IBM Team to help you connect to the right IBM Business Partner.

0800 028 6282

or Search **x3500M4**



¹ TBR Report - "IBM System x® x86 servers: Meeting the demands of today's enterprises by combining value and support," January 2012.

² Source: Intel® Performance comparison using SPECint*_rate_base2006 benchmark. Baseline score of 267 on prior generation 2S Intel® Xeon® processor X5690 (3.46GHz, 6-core, 12MB L3, 6.4 GT/s, 130W) based platform published at www.spec.org as of 6 Sept 2011. Estimated new score of 486 on 2S Intel® Xeon® processor E5-2690 (2.90GHz, 8-core, 20MB L3, 8.0 GT/s, 135W) is based on Intel® internal measured estimates as of 6 Sept 2011 using two Intel® Xeon® processor E5-2690, Turbo Enabled, EIST Enabled, Hyper-Threading Enabled, 64GB memory (8x8GB DDR3-1600), Red Hat® Enterprise Linux Server 6.1 beta for x86_64, Intel® Compiler 12.1.

³ x3500 M4 supports up to 768GB of memory using 32GB LRDIMMs in its 24 memory slots. Previous generation x3500 M3 supports up to 192GB of memory.

⁴ Ships with 4 1Gb Ethernet ports standard and supports integrated slot-less 10Gb Ethernet with Virtual Fabric. Previous generation server includes two 1Gb Ethernet slots and requires use of a PCI Express slot to support 10Gb Ethernet.

⁵ x3500 M4 supports up to 32 internal 2.5" HDD. Previous generation x3500 M3 supports up to twenty four 2.5" HDD.

* Quarterly price quoted is based on IBM's 0% System x Solution Finance offering (FIMV lease). Terms & Conditions Apply. Offering availability subject to credit approval; for more details and full Terms and Conditions please visit: <http://www.ibm.com/financing/uk/lifecycle/acquire/solutionfinancing.html>.

Rates and offerings are subject to change, extension or withdrawal without notice. Prices include VAT at a rate of 20%.

IBM hardware products are manufactured from new parts or new and serviceable used parts. Regardless, our warranty terms apply. For a copy of applicable product warranties, visit http://www.ibm.com/servers/support/machine_warranties. IBM makes no representation or warranty regarding third-party products or services. IBM, the IBM logo, System Storage and System x are registered trademarks of International Business Machines Corporation registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. For a current list of IBM trademarks, see www.ibm.com/legal/copytrade.shtml. Intel, the Intel logo, Xeon and Xeon Inside are trademarks of Intel Corporation in the U.S. and other countries. All prices and savings estimates are subject to change without notice, may vary according to configuration, are based upon IBM's estimated retail selling prices as of 01/04/2012 and may not include storage, hard drive, operating system or other features. Reseller prices and savings to end users may vary. Products are subject to availability. This document was developed for offerings in the United Kingdom. IBM may not offer the products, features, or services discussed in this document in other countries. Contact your IBM representative or IBM Business Partner for the most current pricing in your geographic area. ©2012 IBM Corporation. All rights reserved.

FIBRE TECHNOLOGIES LTD

t +44 (0) 1344 752 222
f +44 (0) 1344 751 155

www.fibre.co.uk
www.ftlsecuresolutions.co.uk

FTL House, 29 Wellington Business Park, Crowthorne, Berkshire, RG45 6LS

FTL NETWORKING SOLUTIONS

FTL PROFESSIONAL SERVICES

Design
Installation
Commissioning
Support
Maintenance



Access Multiplexers



Copper to Copper Converters



Copper to Fibre Converters



Fibre to Fibre Converters



Optical Multiplexers



Test and Measurement



Networking IP



Wireless Solutions



Data Centre Solutions



Components and Consumables



Training and Services



Access Security



FTL SECURE SOLUTIONS



Fire Systems



Accessories



Card Solutions



Integrated Security Management Systems



Readers



Stairwells and Stairs



CCTV



Biometrics



Controllers



Monitoring Systems



Networked



Services

Cloud no-go for one in four

Despite countless reports forecasting the rise of cloud computing, now it seems that almost one in four companies will not adopt the platform.

According to new research from Robert Half Technology (RHT), 23 per cent of CIOs and IT directors across the UK say that they have no plans to migrate IT systems to the cloud. And whilst previous surveys have indicated that small companies are leading the charge, RHT's research says that 38 per cent of them are less likely to move to the cloud compared to medium (eight per cent) and large (12 per cent) firms.

The biggest barrier continues to be security with 46 per cent of respondents saying that this was their most serious worry. Continuity of service, data integrity, speed of service, and costs are also cited as key concerns.

A quarter of businesses were also against moving to the cloud because of their lack of knowledge in-house. This figure soared to 44 per cent within London-based companies, but fell to 21 per cent for small businesses and 27 per cent for medium businesses.

"It's surprising that so many heads of IT appear to have not embraced the value of cloud technology, although this may be partly due to a lack of understanding of the benefits and how it can be applied to their organisation," says Neil Hedges, senior manager, RHT. "Many companies without the requisite talent in-house are turning to IT contractors and project professionals to help educate their teams on how to adopt the cloud, mitigate against security risks and improve service delivery."

RHT's survey was conducted by an independent research firm and included responses from 100 CIOs and IT directors from across the UK.

The great myth about security

Document management and retrieval specialist Simplexo is warning that those who place documents into cloud-based storage servers or collaboration solutions are potentially putting their data at risk – despite the belief that it will be safe and secure.

While organisations consistently cite security as their number one reason for avoiding the cloud (see above), Simplexo CTO Simon Bain says that corporate Britain is seeing a dramatic increase in the use of *Box Net*, *Dropbox*, *Google Drive*, *Huddle*, *Jungle Disk*, etc, thanks to the rise of employee adoption.

"Corporate users need to look more closely at how they are using these services, particularly syncing, which is a really important part of a cloud storage

offering – in other words having all of your files available from anywhere. But do users realise that in a lot of cases their files are physically downloaded to their devices? If you lose a device, or leave it unattended, all of your files are accessible to a third party," says Bain.

He goes on to say that in the rush to have documents available everywhere, corporate and data security has been marginalised, often for ease of use for the end user and simplicity of providing the service.

"There are certain guidelines that I think need to be adhered to before we all start throwing our hard disks away and placing everything in to the hands of others," says Bain. "Banks go to great lengths to make sure that we are secure during our online banking sessions. So why go and drop your bank statement into an online box?"

Replacing servers improves service at hotel group

Consultancy firm Cloudreach is helping Kempinski Hotels to move from traditional on-site IT, to public cloud-based storage and computing with Amazon Web Services. The new set-up aims to enable the company – which was created in 1897 and is said to be Europe's oldest luxury hotel group – to reduce costs and maximise staff productivity.

Kempinski currently operates 73 five-star hotels in 31 countries. Previously, it relied on 140 servers located and managed at its Geneva HQ for its corporate and shared applications. By moving to a hosted infrastructure, Cloudreach says that Kempinski will achieve a lower total cost of ownership, and employees will be able to focus on core business activities by driving efficiencies from the applications rather than purely administering them.

Following a review of the group's current IT set-up, Cloudreach says that it advised on a phased approach (factoring in PCI compliance). It created a 'business case' that outlined how Kempinski would benefit from moving to the cloud and demonstrating measurable ROI.

"Cloud is clearly becoming a realistic option for businesses," says Pontus Noren, Cloudreach director and co-founder. "However, many are anxious about the migration. By providing a business case for companies, Cloudreach aims to dispel concerns – firstly so the migration process is recommended and clearly articulated to those directly involved in the project, but also so the IT department has the ammunition it requires to gain support in the boardroom and help communicate why moving to the cloud makes business sense."

Some of Kempinski's suppliers are now looking at sharing the hotelier's virtual cloud or creating their own virtual cloud to offer an SaaS solution.



VIEW FROM THE TOP

Paul Cook, Head of sales and marketing, Oncore IT

Getting cloud right means choosing the right partner for your needs

Many decision-makers face real confusion working out their best way forward in the cloud given grandiose supplier claims about reducing capex, streamlining opex, and so on.

So how do you choose the right partner, given that you're handing over to a third party the management of IT systems critical to the functioning of your business?

A key concept is to have a clear definition of what your implementation partner is actually committing to. You need to be convinced they can deliver: a secure and reliable environment to support your IT requirements; the latest technology from best-of-breed vendors to ensure high performance and availability; 24x7 access to the proposed new environment from anywhere using various devices; 24x7 support; a comprehensive, robust network infrastructure; and all delivered in a simple, scalable and cost-effective manner. If not, then terminate the sales process – you're just not going to get anything useful.

'Partner' is something of an over-used term in the computing market, yet the core of the idea is actually extremely important. The technology supplier acts in the client's interests by providing resources and services that are tightly integrated with the latter's needs, based on in-depth understanding of the specifics of its business. But as the cloud becomes the latest 'gold

rush,' too many contenders offer the opposite – inflexible, 'standard' solutions that fail to deliver to client expectations.

The simple fact is that every business is unique and its IT must underpin its core business activities. Any technology solution needs to offer a way to increase capacity or add capability without wholesale new IT infrastructure, expensive training, or lots of additional costs.

In the cloud context, any such offering has to include an infrastructure and a network platform which offers fault-tolerant IT services accessible at any time from any location. Other things you should look for include security, integration, customisation, and bread-and-butter services such as online data backup, 24x7 network monitoring and support, complete disaster recovery, detailed reporting, account management, and guaranteed SLAs.

Cloud is only a useful idea if it denotes the kind of bespoke, practical computing services that you are already familiar with. It should be delivered by a supplier with technical competence who sees itself as your partner, happy to adapt to your needs, and who has no 'religious' commitment to 'the cloud,' but sees it as another tool in its toolbox. And that supplier has to be honest enough to curb your cloud enthusiasm if it's not what you need in your business right now.

The Piano Bar Terrace at Kempinski's Lake Geneva hotel. Despite its remote location, the hotel now shares a cloud infrastructure with more than 70 five-star hotels in 31 countries around the world. © 2012 KEMPINSKI



New Product Catalogue

Available from the following Distributors:

- GMS PLC
- NBA Communications Centre
- cablelines
- BOWNET
- Wadsworth

or contact us at sales@htdata.co.uk

COMING SOON!

September 2012

HellermannTyton

HellermannTyton Data Ltd
Cornwell Business Park,
Salhouse Road, Brackmills
Northampton NN4 7EX

Tel: +44(0)1604 701420 Web: www.htdata.co.uk

Systems failures and data loss can be gut-rending, especially if you fail to prepare for them. And while it doesn't take a genius to plan for the worst, you'd be a dummy not to.



Pic: © BMW

Recent systems failures reveal just how fragile and vulnerable corporate IT systems are. The bad news is that they are likely to get worse. IAN GRANT finds out how to avoid network disasters and keep businesses up and running.

According to MI5, Britain faces an “industrial scale” threat to the integrity and confidentiality of its knowhow, critical infrastructures, and competitive position from state-sponsored and criminal cyber gangs. For example, attacks on UK companies have already cost one listed London firm £800m, and MI5 is investigating “cyber compromises” in more than a dozen other firms.

Through the Centre for the Protection of National Infrastructure (CPNI), the intelligence service is working with organisations that are considered to be of high economic value and are potential targets of hostile state cyber activity.

The government's latest assessment says cybercrime is one of the four main threats to national security. MI5 head Jonathan Evans is clearly concerned about the dangers that hackers and malware writers such as the Stuxnet and Flame authors present. However, he says all companies face these risks, and that the cost of a breach will increase as the

‘internet of things’ becomes a reality.

This is not the first time Evans has spoken of the threat posed by cybercrime. By giving the graphic example above, he is clearly trying to inject some urgency into a complacent or distracted managerial class. After all, a more immediate threat to a business may be the unwillingness of its bank to lend it the working capital it needs to meet payrolls, settle bills, or even to expand into new markets.

Network managers have little or no responsibility for such generic business risks. What they are responsible for is keeping the company's systems on and its data safe. Several recent incidents show this may not be easy – just ask BlackBerry maker Research in Motion, Nationwide, O2, and Royal Bank of Scotland (which owns NatWest and Ulster Bank), all of which have suffered embarrassing and costly IT system failures in recent months. Such firms are big, sophisticated users. They would have had, and practiced, disaster recovery plans. It may be that the

plans worked and minimised the damage. Or it may be that the respective combination of factors overwhelmed the ability of the risk assessors to conceive and quantify the risks posed. Or perhaps they had considered the odds too long to spend time and money on mitigating it. Not any more.

Disaster strikes! Now what?

What do you do after disaster strikes and you have to recover your data from broken or corrupted media? Phil Bridge, MD of data recovery expert Kroll Ontrack UK, says data recovery is beset by myths.

The first is that price equals value. Bridge warns that extra costs may be hidden or excluded in a low quotation. Worse, a ham-handed effort may make data permanently irrecoverable.

He says you should be able to get a free consultation with access to an actual data recovery engineer. “Ask them to give you

a list of all recoverable files before you buy, and get a price in writing based on how difficult the recovery is, what files can be recovered, and if spare parts are needed. Clean room work and spares should not be part of the final bill unless you've agreed it upfront. And there should be a post-recovery process to migrate your data back into the organisation.”

Bridge adds that few IT shops have the in-house skills, equipment, processes or experience to perform serious data recovery. Bringing in the experts may be the quickest and safest option.

Data can be recovered from almost every system, including losses due to logical errors, and even when it is encrypted. But you may have only one shot at it. And Bridge also points out that data protection rules still govern “lost data”. He recommends using data recovery specialists that hold SAS 70 Type II certification with a clean room that should be a secure ISO-5/ Class 100 environment, ideally cleared to handle very sensitive data. “It is essential

Failing to plan...

Most firms don't develop a business continuity plan until they've had to recover from an IT disaster. Then they are likely to waste money on needless stuff. So how do the professionals do it?

Tim Cox, technical services director for cloud-based managed services firm ControlCircle, says the first thing he looks at is the impact on the company's business. “If my NOC [network operations centre] goes down, I don't have a business. In a disaster the key things are to keep providing services to customers so that you don't lose them, to keep the cash coming in, and to pay the staff on time. Then people have to be able to speak to each other, so the phone system is the

second priority. Everything else, including email, comes third,” he says.

That analysis led to a decision to duplicate almost everything in the ControlCircle data centres down to power supplies and controllers, and to use an automated failover management system fed by real-time sensors.

Next was to protect the invoicing and accounts receivable systems, and the payroll. Some key suppliers can be paid manually so that continuity essentials such as the electricity and network aren't cut-off.

Cox believes the network manager's job is to inject “realism” into the overall business continuity plan by insisting that senior managers know the cost-benefit trade-offs, and that the plan emerges organically from their judgment and

decisions. “Taking backups is fine and everyone should do it, but after a disaster you may have to recover the data – and that's a different conversation. What data has priority? How fast do you need it? Where must it be? The answers all have cost implications and management must make conscious decisions about each.”

That's before they get into a data recycling policy. Cox admits that most CIOs, including himself, don't have a company policy in operation, despite encouragement from regulators. “Frankly, I don't have time to do the data analysis that will tell me what items to keep, for how long, and how to destroy it,” he says. The result is data bloat, extra storage costs, and possible confusion around version control when the data are restored.

Adding cloud services to the equation

changes the risk profile. The two main risks are connectivity and storage, says Cox. Solving the first means you can get to your data, and the second enables you to recover them. “Knowing exactly how your cloud provider's estate is built is key to recovering your data in an emergency – and it's the biggest single question you can ask.” ■

Tim Cox, technical services director of ControlCircle, believes the network manager's job is to inject realism into the business continuity plan



Only our IT physical infrastructure is as dynamic as your business needs.



Andy Koostra
Systems Manager
Consolidated Utility District

"The ability to monitor everything from the Web allows us to catch small problems before they become a big concern."



Brian R. York – Director
Wireless National Practice
Insight

"This solution ensures a single integrated power and cooling management system."



Mike Mallett – Director of
technical operations
Saint Luke's Health System

"APC by Schneider Electric InRow™ cooling architecture... is our design standard going forward."

Protect any IT equipment or deployment with our adaptable APC by Schneider Electric InfraStruxure solutions.

A solution for every IT configuration

Protect your IT system uptime easily wherever your IT is deployed with APC™ by Schneider Electric™ InfraStruxure™ solutions. Our simple, adaptable, and manageable all-in-one physical infrastructure is designed as an easy-to-deploy system to allow for flexible management and physical IT deployment and, by extension, system uptime.

Customers have adapted the solution to all IT configurations — from out-of-the-way network closets to server rooms to data centres. Power protection, cooling, rack systems, and remote management are part of the total architecture for highest availability at all times. With our InfraStruxure solutions working to stave off physical threats, you can focus on more pressing concerns such as network threats, IT hardware failure, and switch hang-ups. When you deploy our solution, it's as if you're getting another IT person to ensure that your IT space or data centres will still be at your command when you need it. What's more, our life-cycle services enable optimal operations.

Business-wise, Future-driven.™



Download for your **FREE** "Practical Options for Deploying IT Equipment in Small Server Rooms and Branch Offices" White Paper and register to **WIN** an iPad 2!

Visit www.apc.com/promo Key Code **22156p** • Call **08 45 080 5034** • Fax **0118 903 7840**

InfraStruxure

Integrated InfraStruxure solutions includes everything for your IT physical infrastructure deployment: backup power and power distribution, cooling, enclosures, and management software. Adaptable solutions scale from the smallest IT spaces up to multi-megawatt data centres.

Mission-critical IT infrastructure without the complexity

- > **Simple**
Solution guides and out-of-the-box installation make deployment easy
- > **Manageable**
Remote monitoring, management, and reporting simplify IT operations; energy management cuts costs
- > **Adaptable**
With standardised designs for all types of applications, our solutions can be adapted to fit any IT need at any time for business-minded flexibility

APC™

by Schneider Electric

that the chosen recovery provider can recover encrypted data and return it in an encrypted form," he advises.

Hardware problems are the most common form of IT disaster, and despite well-proven backup regimes, 75 per cent of European organisations believe they might not recover fully from a disaster. EMC surveyed 1,750 firms across the continent and found that 54 per cent lost data or suffered system downtime in the past 12 months. The biggest economic impact is on staff productivity, with an average of two lost days per incident. Some 28 per cent lost money directly from IT disasters, said the research.

According to the survey, the three most common causes of data loss and downtime are hardware failure (61 per cent), power failure (42 per cent), and data corruption (35 per cent). Natural causes contributed

only seven per cent of systems downtime or data loss, and insiders only eight per cent.

Worryingly, EMC also found that firms often wait until a disaster before beefing-up their plans. Regardless of the cause, 44 per cent of organisations reviewed and changed their procedures in response to an incident, and 27 per cent spent more on backup and recovery after a disaster.

In addition, the survey said that 40 per cent of companies still use tape, which costs on average £74,000 a year to transport, store, test, and replace. One in 10 firms asked an employee to store company backup tapes at home.

Insider threat

The primary aim of a business continuity plan is to ensure that the business can continue to operate as a going concern in

the event of an outage. A disaster recovery plan aims to get the business up and running again as soon as possible after an incident. Each requires tailoring to the unique circumstances of the business and risk appetites of the directors. As one source says (only half-jokingly), "not all disasters are IT, but adding IT can screw it up really quickly".

Perhaps the biggest threat companies face is the range of choices they have. Unless the business objectives and priorities are crystal clear, and top management are disciplined in enforcing correct behaviours, things can quickly get too complicated to control.

Cyber-Ark, which protects passwords for privileged staff such as network administrators, says all equipment ships with default passwords that allow suppliers and developers as well as staff full access to

code and control systems. In a large organisation these can run to hundreds of thousands of such passwords. Anyone gaining access to "super user" privileges via these passwords can potentially run riot in a firm's IT systems. Cyber-Ark founder and CEO Udi Mokady says: "The situation is exacerbated by the amount of outsourcing and managed services that companies are using now."

Protecting privileged passwords helps with the insider threat. Systems, files and records can and should be locked against casual or accidental intrusions from the inside, and the systems themselves will usually set up an audit trail. Chief security officers and network managers can also use log management systems to track incidents in both finer and more comprehensive detail.

Mokady says that although the insider threat is real and very often the most damaging if it occurs, the external threat is pervasive, on-going, increasingly sophisticated and targeted at identified staff members. An attack aimed at high value staff – an event known as 'whalephishing' – very often exploits social behaviour to compromise firstly the individual, through blackmail or bribery, and then the company.

Education about the threat posed by whalephishing is the best deterrent, but companies should also protect themselves in depth. Some of the CPNI's many recommendations are: using firewalls; keeping anti-virus software up to date; setting parameters on normal traffic flows and act on exceptional traffic on public-facing network ports; creating 'air gaps' between sensitive internal systems (including factory control systems) and public access networks; limiting data access on a 'need to know' basis; using a credentialed access control system alongside an intrusion detection system; using VPNs for remote access; prohibiting users from storing data locally (or encrypt it before it leaves the firewall; and crucially, acting on the information the exception reports provide.

Data loss costs

According to data recovery specialist EVault, data losses cost UK businesses an estimated £300m last year. It recently conducted a survey of 250 UK IT managers which revealed that six per cent do not have a backup strategy.

EVault's EMEA marketing director Aad Dekkers says: "This is startling given that a third of businesses surveyed, which typically manage two to seven terabytes of data, suffered a data loss in the past year. The results show that in 2011 alone, data loss cost businesses on average 3.53 per cent of revenue."

The situation appears even worse in the health sector, where pressure for electronic patient records is rising. In June, a Sussex health trust received a record £325,000 fine from the Information Commissioner's Office after used disk drives containing confidential patient data which were scheduled for destruction were instead sold on eBay. A recent study by medical data management specialist BridgeHead Software found that two-thirds of respondents in a global survey of health sector IT managers said their data volumes had increased, but only a quarter had "robust, tried-and-tested" disaster recovery plans in place. Disaster recovery was respondents' top IT investment priority for the second year in a row.

Neil MacGowan, technical director for predictive analytics software specialist Netuitive, says companies are


SANGFOR
www.sangfor.co.uk


selcoms
SIMPLE COMMUNICATIONS

Tel: 0845 331 6169



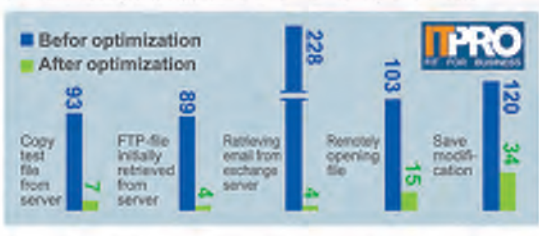
Local Efficiency in a Widely Distributed Business World

Business methods are changing constantly and companies that are successful have to change with them. Business is increasingly reliant on data and mobile workers as well as those at remote offices all need access to the same data and they all require information instantly. And the software they process is changing, with 'cloud' services over the internet and applications such as video conferencing reducing travel and accommodation costs but using more IT resources.

They all add to the pressure on networks and, whether you're a truly global operation or simply have a few locations that need to communicate with each other, it's an issue you need to address. Many organisations with multiple locations have a central server for all software applications and data, with branches connected to it over a wide area network (WAN). Wherever they are located, all workers expect a reasonable level of service and that can lead to problems if the network doesn't perform as it's expected to do.

cutting out completely the amount of data that was previously transmitted unnecessarily. Data that is sent is reduced further by compression.

The result is that traffic over the WAN is anything up to 95% less than previously and applications run ten to fifty times faster.



Operation	Before optimization	After optimization
Copy test file from server	93	7
FTP file initially retrieved from server	89	4
Retrieving email from exchange server	228	4
Remotely opening file	103	15
Save modification	120	34

Solving Poor Productivity and Customer Service Problems

A poorly performing WAN can lead to a low level of productivity at branches and increased complaints as users are forced to wait while the central server processes their requests. Worse still, it can cause poor customer service and loss of business as well as general frustration and low morale.

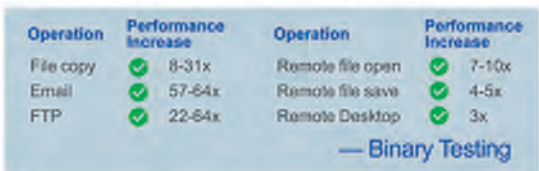
The general solution to the problem is often to increase bandwidth, which is always expensive, sometimes not practical and frequently doesn't produce the required improvement in performance. Any improvements that do result are often short-lived as traffic increases and quickly swallows up the increased capacity.

A better and much more cost-effective solution is WAN optimisation from Sangfor, which makes far more effective use of the network infrastructure you already have. There are no expensive on-going bandwidth leasing fees, simply a one-off cost that typically provides a return on investment in less than one year.

WAN optimisation works by reducing the amount of data that travels over the network, freeing up capacity and making the whole operation more efficient. All data transmitted is cached, enabling any data already sent to be identified and not sent again.

Immediate Improvements

One of the best features of Sangfor's WAN optimisation is that it is truly plug and play so that significant performance improvement is gained as soon as you connect the equipment. It all just happens and no intervention is necessary. Once it's up and running, however, you will receive performance reports and can make changes to settings that will enable you to prioritise specific applications and users to obtain optimum performance.



Operation	Performance Increase	Operation	Performance Increase
File copy	8-31x	Remote file open	7-10x
Email	57-84x	Remote file save	4-5x
FTP	22-84x	Remote Desktop	3x

— Binary Testing

Efficiency is further improved through software that optimises transmission mechanisms, accelerates application protocols and monitors and controls bandwidth. And mobile users don't miss out because Sangfor provides a software client that is loaded on mobile devices to provide local WAN optimisation services.

If you have even one remote office or have mobile workers that need to access central data and application software, Sangfor's WAN optimisation products may be the answer to your performance problems. It's a much more cost-effective, long-lasting and dependable solution than increasing bandwidth, resulting in users that are happy with the service they receive and are more productive as a result.

Unit 4, Woolley Barns, Wantage, OXON, OX12 8TA United Kingdom | sales@selcoms.com | www.selcoms.com

now having to tackle data volumes and system complexities that have grown far beyond the capabilities of the software tools that are commonly used to capture, manage and analyse them. "As businesses continue to deploy more agents to monitor real-time performance at business, application and infrastructure levels, they're confronted with a deluge of data that is becoming impossible to correlate and interpret," he says. "One of our own enterprise customers recently reported that it monitored and correlated a billion infrastructure and application data points and business metrics daily. Not every company faces that, but I do speak regularly to businesses that predict 10-fold increases in their data within three years."

MacGowan goes on to warn that IT managers just can't keep mission-critical applications and services running with conventional dashboards and tools that only alert them to problems once performance is already falling apart.

The Plan

How do you therefore develop a bullet-proof business continuity and disaster recovery policy? Probably the greatest threat to such a plan is the growing complexity of networking and IT. Outsourcing, managed services, BYOD (bring your own device), and cloud computing all add to a firm's options for processing information. But they also raise the complexity of doing so. So the first priority is to make visible this complexity and the dependencies.

ITC Global Security has just launched a cloud-based modular and scalable network performance management tool called *NetSure360*. It offers real-time assessment of thousands of devices, dozens of outsourced service providers, and multiple network and security systems to simplify management and monitoring. CEO Tom Millar explains that the tool's dashboards provide administrators and management with a clearer and more effective overview of the network and the threats facing it. "By allowing IT management to react instantly to changes in the network they can guarantee the performance, security and reliability of mission critical applications across the entire enterprise."

IT services specialist Sovereign Business Integration says firms have to give priority to the IT systems that are crucial to productivity. These could be email and internet access, access to the financial systems, or data storage and retrieval, depending on the business. "A business continuity and disaster recovery plan is not merely mirroring the entire current system," says its CEO Richard Barker. "Prioritising the specific IT systems critical to business productivity, and understanding how fast you need to get them running again is the basis for an effective plan."

EVault's Dekkers adds that firms can save money by prioritising their systems and data, adding that "prevention is more cost effective than cure". Firms need to step back to evaluate which data are most important, be realistic about recovery point and recovery time objectives, and formulate a backup strategy that reflects the priorities.

Network managers have a wide choice of media and locations in which to store data and backups. Tape, while cheap and reliable, is less cost-effective against disk storage. "One of our customers saved over 5,000 man-hours per year by switching to disk," says Dekkers. He adds that at least one tape collection firm he knew of said

"Prioritising IT systems and understanding how fast you need to get them running again is the basis for an effective plan."

Richard Barker,
CEO,
Sovereign Business Integration

tape collection was classed as 'non-essential' while the Olympics were on.

Dekkers believes the steady erosion of cost per gigabyte of disk storage and network bandwidth costs has been crucial to the use of disk. His view is that remote disk backup via NAS is now economically viable for most businesses.



Marcie Terman, business development director at recovery and continuity specialist DataFort, says firms should understand the difference between replication and archiving. "Replication

does provide excellent protection for most threats that target the organisation's primary location. But replication is not selective; it not only mirrors data and systems. It also replicates any malicious damage, deletions, or changes that a hacker makes to the network."

Terman also notes that actual incidents will probably affect several systems at once, so testing one in isolation will not offer an accurate measure of overall performance or recovery speed. "As many have discovered, making testing realistic is as much of a challenge as getting top execs to set aside time and resources to make the tests in the first place," she says.

As South African golfer Gary Player used to say, the harder he practiced, the luckier he got. The middle of a disaster is not the time to find out how lucky you really are. ■

**STARTS AT
£1,185**

Analyse Bandwidth Usage

SOLARWINDS NETFLOW TRAFFIC ANALYZER

- Identify Who & What are using Bandwidth
- Highlight IP Addresses of Top Talkers
- Find Bandwidth Hogs Now!

For more information and free trials,
www.solarwinds.co.uk

e-skills study shows demand for IT staff is at a record high

IT employment over the next eight years is forecast to grow at almost twice the national average, according to e-skills UK.

In its latest *Technology Insights* research report, the skills council for business and IT says that a record 129,000 new recruits a year are needed to fill IT and telecoms posts in the UK. It found that the biggest levels of employment growth are in high skill areas like software professionals,



e-skills CEO Karen Price says that the research shows how important ICT is to UK competitiveness and economic growth.

ICT managers, and IT strategy and planning professionals.

The report says that the number of advertised vacancies has also recovered dramatically from a low point of 82,000 per quarter in 2009 to more than 116,000 per quarter in 2011. Development, design and support roles

are those most advertised, and the most common technical skills requirements are SQL, C, C#, .NET and Java.

"With IT employment set to grow at such a pace, it is vital that we continue to invest in the skills of those working in technology, and create new routes for young people to enter exciting and challenging careers in the industry," says e-skills UK CEO Karen Price.

Warning of skills gap as Government proposes new ICT curriculum

The Department of Education announced last month that it will scrap the current programmes of ICT study in schools from September 2012. Ministers confirmed that the subject will remain compulsory

for all pupils, but those schools wishing to deliver more demanding IT provision should now have the freedom to do so.

The move has been broadly welcomed by the industry. Stephen Ball, Hitachi Data Systems' regional VP for UK and Ireland, believes a more innovative approach to teaching IT has long been needed as education standards in this area, compared to others, have stalled.

"The current curriculum, which revolves around *Microsoft Office*, has done more to teach people basic office skills than it has to encourage a career in technology," he says. "For one of the most exciting global industries (which is growing and in need of talented youngsters) we should all be aiming to do much more than teach the basics."

The Government has said it will also consider the implications for teacher training in the subject. It will now work in partnership with industry experts, IT organisations, and the teaching profession to develop new statutory programmes of study for September 2014.

However, Ball warns that this will leave a big gap: "What will schools do until it is introduced? Will those currently in school be failed by our government in terms of ICT? The absence of any formal training will certainly prompt a skills gap."

NEW COURSES

Online Training Assessment Centre – Society of Broadband Professionals

SCTE, The Society for Broadband Professionals, has launched a new online training assessment centre to enable its membership of engineers to complete their training more rapidly and to further their careers with fully accredited SCTE qualifications.

SCTE offers a range of professional development options, from comprehensive training courses (installation technicians, service technicians, and network technicians) and individual course books (home study or instructor-led). www.thescte.eu

Understanding Telecommunications – Providers of Telecoms Training

Providers of Telecommunications Training (PTT) reckons its *Level 3 Award in Understanding Telecommunications* is unique in providing a telecoms qualification without the need to attend a training centre.

The programme is designed for those joining the sector with a technical role, and is endorsed by nationally accredited qualification awarding body, EDI. It consists of a combination of interactive courses, tutor support, and assessment all delivered online. PTT says it provides a core element studied by everyone and a choice of one of three specialisations: mobile communications, telephony, and data communications. Successful students are awarded a certificate by EDI. www.telecomsqualification.com

Win a two-day training programme – Informa Telecoms Academy

The Informa Telecoms Academy is offering readers the chance to win training programmes worth €1,475.

The academy's Faculty of Technology and Engineering courses are designed to develop knowledge and competencies for engineers and technical managers, through to non-technical audiences. It offers variety of subjects such as: Telecoms Foundation Programmes; LTE; WiMAX Forum Certified Training Series; 2G and 3G Mobile Applications, Content, Media and Service Control; IP in Telecoms; and Engineering Boot Camps www.telecomsacademy.com




UK's No.1 IEC Connection

Part of the Olson Electronics Range of PDU with IEC60320 C13 and C19 connectors. 16A and 32A rated versions available with meters, fuses, circuit breakers and clips



RM/C19/6/F/32



COM12+4/16



COM12+4/R/32



C19/9004/C20 + CLIPS



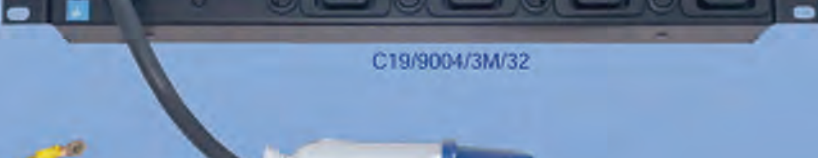
COM10+4/R/FN



PM1101 + INLET CLIP



6A/11/R/C20 INLET + CLIPS



C19/9004/3M/32






Manufactured in the UK

24 HOUR DELIVERY SERVICE

OLSON ELECTRONICS LIMITED
OLSON HOUSE, 400 HONEYPOUT LANE, STANMORE, MIDDLESEX HA7 1JY
TEL: 020 8905 7273 FAX: 020 8952 1232
e-mail: sales@olson.co.uk web site: <http://www.olson.co.uk>

CALL OUR SALES HOTLINE

020 8905 7273

off-the-shelf: switches

On a switch hunt?

With PoE+ capability and IPv6 compatibility, some of the latest network switches offer great versatility and flexibility

1. Brocade has made what it describes as "significant" software advancements to its *ServerIron ADX Series* of cloud-optimised application delivery switches. *ADX v12.4* now includes the *OpenScript* engine which is said to be an open platform for innovation, with the ability to intelligently predict the effect of a script on the network.

Built on PERL, *OpenScript* offers the programming framework for network operators to develop customised traffic management capabilities. Brocade reckons its *OpenScript Performance Estimator* provides the unique ability to estimate the performance impact of custom scripts before implementing them in live production environments.

The firm adds that *v12.4* doubles the IPv6 performance of previous *ADX* switches and delivers consistent services across IPv4 and IPv6.

The switches are also said to enable a "seamless transition" to IPv6 while preserving IPv4 assets through standards-based IPv4-to-IPv6 translation technology.

Coupled with its *Application Resource Broker 2.0*, Brocade also claims that *ADX* simplifies the management of application resources within globally distributed data centres by automating on-demand resource provisioning of VMs within heterogeneous virtual environments.



2. Harting now has three models in its *Fast Track Switching* range of Ethernet-based switches aimed at industrial automation applications.

The configurable unmanaged *FTS 3100s-A* optimally combines fast track switching functionality with extremely simple operation, according to the vendor. It says that the switch can be set up with a free software tool which allows the speed, duplex settings and mirroring to be defined per port. The existing PROFINET, Ethernet/IP and Modbus/TCP profiles can also be selected.

It's claimed that the *FTS 3100s-A* recognises these automation profiles and accelerates them in cut-through mode, allowing them to overtake non-automation protocols.

Two versions of the switches are available: one with ten ports executed as RJ45, and one with eight RJ45 ports and two SFP slots for sliding into SFP modules in order to connect

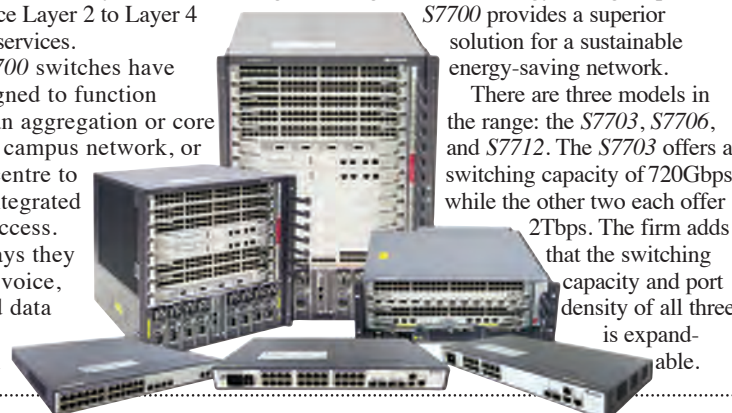
optical cables. Harting says that each device features the PROFINET I/O stack and LLDP so that it can also be planned as PROFINET Conformance Class B devices using *Step7* software. All other switch functionalities can be set up in parallel via the web.

In addition, Ethernet/IP applications are optimally supported with IGMP snooping and DHCP Option 82. The *FTS* switches also support functions such as VLANs, RSTP for redundant topologies, 802.1x as a security mechanism, and all common management functions.



3. Huawei has unveiled a new line-up of enterprise class switches which include the *S7700 Series*. They're based on the company's multi-layer switching technology which is designed to provide what's claimed to be "intelligent" service optimisation methods such as MPLS VPN, traffic analysis, comprehensive QoS policies, controllable multicast, load balancing, and security, in addition to high-performance Layer 2 to Layer 4 switching services.

The *S7700* switches have been designed to function either as an aggregation or core node on a campus network, or in a data centre to provide integrated wireless access. Huawei says they also offer voice, video, and data services which can



help enterprises build an integrated cost-effective end-to-end network.

The line-up is based on a new hardware platform which, according to the firm, adopts a left-to-rear ventilation channel to achieve better energy efficiency. It says that key components work in redundancy mode to minimise risks of system breakdown and service interruption. Huawei claims that by using innovative energy-saving chips, the

S7700 provides a superior solution for a sustainable energy-saving network.

There are three models in the range: the *S7703*, *S7706*, and *S7712*. The *S7703* offers a switching capacity of 720Gbps, while the other two each offer 2Tbps. The firm adds that the switching capacity and port density of all three is expandable.

4. The EX8200 is line-up of modular Ethernet switches from **Juniper Networks**. The range is said to offer a high-performance, highly available platform for use in high-density 10GbE data centres, campus aggregations, and core networks.

The switches are available with two chassis options: the *EX8208* and *EX8216*. Each Ethernet solution offers support for future scalability to 6.2Tbps, providing a built-in migration path to 100GbE deployments. They also support the firm's *Virtual Chassis* technology which enables up to eight interconnected switches to operate as a single, logical device.

Juniper says the *EX8208* (right) has eight dedicated slots in a 14 rack-unit chassis, delivering up to 320Gbps per slot and wire-rate forwarding performance of 960 million packets per second for packets of any size.

The *EX8216* includes 16 dedicated line-card slots in a 21 rack chassis and features a switch fabric that delivers 1.92 billion packets per second forwarding.

Both switches use the same line cards, which offer a variety of 10/100/1000BASE-T, 100BASE-FX/1000BASE-X and 10GbE interfaces. Fully configured, Juniper says a single *EX8208* can support 384GbE or 64 10GbE ports at wire speed, or 320 10GbE ports in shared bandwidth applications. A fully configured *EX8216* can support twice that number.



5. Organisations requiring intelligence at the network edge could check out **Netgear's** 12- and 24-port *ProSafe Gigabit L2+* managed switches which feature PoE+ connectivity.

The range includes four models – the *GSM5212P*, *GSM7212F*, *GSM7212P* and *GSM7224P*. Netgear says they can be used to power mobility, VoIP, and surveillance by attaching wireless access points, IP telephony equipment, and IP video cameras.

The vendor reckons it has come up with a number of industry firsts with its *ProSafe* range. For example, the *GSM7212F* (pictured) is said to be the first distribution switch with 12-port fibre and PoE+ capability.

It also reckons that with prices starting at under \$1,000, the range

includes the world's most affordable 12-port gigabit Ethernet switch with PoE pass-through capability (the *GSM5212P*).

In addition, Netgear claims the *ProSafes* feature the first selectable mini-USB console interface which it says is a built-in alternative to legacy serial ports and cables.

Other features include: automatic IP phone recognition and VLANs with QoS configuration via LLDP-MED; optimised real-time video streaming support through IGMP filtering, querier and multicast VLAN registration; Layer 2+ support (including 16K MAC and 64 routing interfaces); and support for SNMP management software.



The new Vigor 3900



- Five-WAN load-balancing & failover
- High performance 1Gb/s firewall
- 500 VPN Tunnels (SSL & IPSec)
- IPv4 & IPv6 Dual-stack

Vigor 2850 Series
The Ultimate xDSL Router

- Ideal for HQ, branch or teleworker
- ADSL2+, VDSL, Ethernet and cable
- Load-Balancing & Failover
- IPv4 and IPv6 Dual-Stack
- 3G (Cellular) modem support
- Robust firewall & content filtering
- Secure VPN & WiFi connectivity
- QoS, VLANs and multi-subnets

IPv6

IPv6 is the new protocol for the Internet and eventually we'll all need to be using it. Learn all about it and how it will affect you in our new book. Download it for free using discount code **NPL525** from www.draytek.co.uk/ipv6 (UK Only).

DrayTek
www.draytek.co.uk



BUILT FOR
THE HUMAN
NETWORK



WE DIDN'T REFINE THE SERVER. WE REDEFINED IT.

When we decided to enter the server market, we did it in the only way we knew how: by completely transforming it. Which is why we designed our servers as part of a system unified from the ground up, with no silos or complexity—leading to better efficiency and productivity. We call it the Cisco Unified Computing System™, and it's engineered to deliver far greater simplicity, automation, speed and scale. Benefits that have led to a lot of happy customers (11,000 to date), and some pretty impressive statistics as well: an 80% increase in administrator productivity, 90% reduction in deployment times, 40% improvement in application performance and 30% lower infrastructure costs. Cisco UCS. Engineered for productivity. Ready for whatever the future dishes out. And built by the only company in the world that could. **Learn more at cisco.co.uk/servers.**

Cisco UCS is powered by the Intel® Xeon® processor.