

# networking

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# Hackers target public Wi-Fi to steal corporate data

by Ian Grant

Corporate road warriors have been advised to always use VPNs if they connect to public Wi-Fi hotspots, and ideally stick to using their home routers to connect to the internet. The warning comes after experts at specialist security research firm Team Cymru reported finding more than 300,000 compromised office/home Wi-Fi routers around the world.

Team Cymru says attackers are altering the DNS configuration on these devices in order to redirect their victim's DNS requests. They subsequently replace the intended answers with IP addresses and domains which they control, effectively conducting a man-in-the-middle attack.

According to Team Cymru, the compromised routers include models from D-Link, Micronet, Tenda, and TP-Link.

The rising use of BYOD for work and remote access to corporate data via public hotspots has prompted cyber criminals to attack routers. Troels Oerting, the head of Europol's cyber crime division, told the BBC he had seen an increase in the misuse of Wi-Fi to steal sensitive personal data. The attacks on SoHo routers suggest businesses are targets too.

Fon claims to be the world's largest public access Wi-Fi network. It has deployed more than 12 million hotspots globally and works mainly in association with incumbent telcos such as BT.

While neither company was prepared to confirm or deny if any of its routers had been compromised, Fon spokesman Adolfo Arias told *Networking+*: "Fon is a very secure way to access the internet

because all users are identifiable and registered. Technically, the public and private signals are separated to be able to identify any misuse of the network. In this way, Fon is able to stop any of such malicious actions when detected."

Barbara Nelson, CTO of iPass which has 2.2 million public Wi-Fi hotspots in 130 territories, says she is unaware of any hacked hotspots or user sessions on her company's network. "We recommend that hotspot customers use a VPN to protect their data traffic. Our *Open Mobile for Windows* client can automatically launch a VPN. On smartphones or tablets, the user can configure the VPN to be launched on public networks."

Nelson explains that iPass protects the user during the login process, ensuring that the credentials are passed only over a secure connection. "Once the user has logged in and is connected to the internet, we do not directly protect the data as we do not sit in the data path. That's why we recommend that users use a VPN to protect



**Public Wi-Fi spaces are becoming hangouts for hackers - industry experts recommend the use of a VPN when you're online with your latte.**

their data, or make sure they send information over the HTTPS channel only. Some cloud-based apps allow you to configure your profile so that you only use HTTPS rather than HTTP to reach the application." ■

*Does the UK have the skills to stay one step ahead of the hackers? Cyber security feature, pp10-13.*

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## Hyperoptic turns Bristol, Cardiff and Reading into “hyperfast” cities

Hyperoptic's FTTP gigabit broadband service is now available to commercial and residential developments in Bristol, Cardiff and Reading. These are the first deployments for the firm outside London, and represent its initial round of ‘hypercities’ which aim to make true hyperfast broadband internet infrastructure available to the marketplace for the first time.

Hyperoptic says it chose the sites as they are among the UK's “most thriving” urban centres, and have high consumer demand and population densities. The fibre provider plans to make its hyperfast service available in a number of additional cities in the months ahead. At the same time, it is continuing its expansion across London where it says it will soon reach more than 35,000 homes in 150 developments with a target of half a million homes by 2018.

More recently, Hyperoptic announced that East Village, the former Olympic

village in Stratford, had been installed with its gigabit fibre broadband infrastructure, giving residents access to the UK's fastest broadband speeds.

Hyperoptic describes itself as a “pioneer” in FTTH. In 2011, it claimed to have become the first ISP to deliver a 1,000Mbps symmetrical residential broadband service in the UK. It says this speed remains “68 times faster” than Ofcom's current national average, and 10 times the speed of its nearest competitor.

Hyperoptic adds that, unlike rival offerings, its hyperfast broadband technology provides “unimpeded” fibre speeds directly to premises. “Other so-called ‘superfast fibre’ services are generally hybrids, relying on existing infrastructure and dated copper cables to make up at least part of the line. [This results] in drastically reduced internet speeds and unpredictable performance,” states the firm. ■

# Online council services fail to keep up with mobile users

Councils are failing to give ratepayers a decent service when they access online local services via mobile devices, according to Socitm (Society of Information Technology Management).

In March, Socitm published its *Better Connected* report which revealed a sharp drop in the number of councils getting high marks for their web presence. It said this was mainly due to the poor experience provided when customers used their smartphones or tablets to access council data or transact with them. Socitm reported that 31 councils (eight per cent) won the top four-star grade. The number of four-star sites dropped from 39 in 2013 to 31, and three-star sites from 165 to 157.

"Only 31 per cent of sites achieved the *Better Connected* standard for mobile access, despite the fact that nearly a third of visits to council websites are now made from mobile devices," said Socitm.

The number of councils that passed the society's separate accessibility assessment almost halved from 194 (44 per cent) to 105 (26 per cent). "Much of that is also explained by the less accessible mobile experience," it said.

Feedback from Socitm's website performance service shows that public satisfaction with the user experience from council websites dropped by 12 per cent during 2013. Of the 14 top tasks tested, 'Apply for a copy birth certificate' came out best with 87 per cent of sites achieving the standard. This was followed by 'Apply for a primary school place' (75 per cent). ■

Poorly performing tasks included: 'Find out about football pitch' (17 per cent); 'Report fly-tipping' (28 per cent); and 'Find out about care homes for elderly relative' (33 per cent).

Socitm said that while searches had improved, there was a "significant deterioration" in accessibility for disabled people. Also, a quarter of councils with an answerphone message for out-of-hours enquiries failed to refer callers to the website. "This indicates significant lack of corporate commitment to self-service by these councils," says the society.

It added that efforts by local authorities for digital engagement is patchy but improving. Use of online customer accounts is 32 per cent, email alerts 36 per cent, and there were social media links on 88 per cent of home pages. Forty councils (10 per cent) are rated good overall.

*Better Connected* found 69 apps compared with 36 last year, up 92 per cent. "This does not include council promotion of third-party service apps, which were most frequently found for cashless parking, food hygiene ratings, taking payments, swimming timetables and library catalogues."

This is the first year that website performance on mobile devices has been fully tested for the *Better Connected* study. Socitm said on average, results from tasks on mobiles were half as good as those on PCs. It said that this indicates councils are currently finding it difficult to match the quality of experience on the desktop with that on mobiles. ■

# Satellite-based VPN launch for UK business

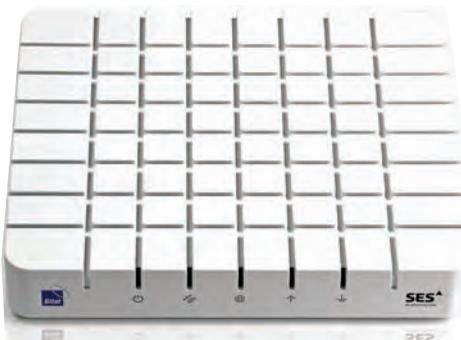
OneAccess and The Auriga Network have launched an enterprise-class satellite VPN service. For the first time, UK businesses can now establish a subscription-based, high-speed, fully encrypted VPN via Eutelsat's next-generation KA-SAT satellite.

The managed service will enable organisations with sites beyond the range of terrestrial networks to take advantage of KA-SAT's high throughput transmission speeds. It is said to provide download/upload speeds of up to 20Mbps/6Mbps, and enable the delivery of a variety of traffic acceleration, IP routing, and IP-VPN secure transport services. The service is available to UK customers via Eutelsat partner and Auriga reseller, Europasat.

OneAccess and Eutelsat have developed a router which they say uses KA-SAT's capabilities to deliver "DSL-like satellite VPN services to the enterprise market at DSL-like prices". Auriga's service leverages this technology to manage the consolidation, encryption and routing of data passing from the customer's terrestrial private network across the satellite VPN.

The companies also claim that the new service significantly lowers the typical cost of deployment for a solution of this kind.

Until now, they say that an enterprise satellite VPN solution has required the use of a dedicated IP access concentrator to manage the data encryption specified by VPN standards. In contrast, the OneAccess and Auriga service manages the encryption for multiple satellite links via a small number of concentrators housed in a single London-based telehouse. It's claimed this model dramatically reduces both the



**Business users in remote parts of the UK can now rent low-cost satellite broadband equipment from ISP Satellite Internet.**

capital expenditure required to provision a new satellite VPN as well as the costs needed to maintain the system.

■ London-based ISP Satellite Internet says it has launched a low cost scheme for renting satellite broadband equipment.

For a two-year minimum contract at £12.50 a month, businesses and homes in rural and hard-to-reach parts of the UK and Ireland get a dish, transceiver and satellite modem linked by a 30m RF cable, as well as the Ethernet cable to connect to a computer or router. Installation and activation costs are extra.

Satellite Internet says its offers 20Mbps download speeds with subscription packages available from around £10 per month. Its network is backed by SES Broadband Services and can be used anywhere in the UK as long as the user can have a dish installed to their property with a clear view of the southern sky. ■

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# England wins the lion's share of fresh broadband funding

England will get the bulk of the £250m the government has released to expand "superfast broadband" coverage and fill in not-spots. The split is: England £184.34m, Scotland £20.99m, Wales £12.11m, and Northern Ireland £7.24m.

The money will be matched by county councils, and will supplement the government's existing £530m programme which is also match-funded. It will be used to roll out high-speed broadband to areas thought to be uneconomic, roughly one-third of the population. All in, taxpayers are contributing more than £1.9bn, mostly to improve BT's network – the 46 contracts awarded so far have all gone to the incumbent telco.

Parliament's Public Accounts Committee (PAC) has been highly sceptical of the value for money offered by the present contracts. It called for BT to be refused any of the latest money until it produced evidence of value.

A PAC meeting in January heard that BDUK, the government quango tasked with overseeing the rollout, had recovered about one-third of the money BT allegedly over-invoiced on early contracts. BT said it would extend coverage using any money thus recovered.

The government is hoping to ensure 95 per cent of homes have access to a high-speed broadband service by 2017. This is two years later than originally planned, but now includes five per cent more homes.



**Communications minister Ed Vaizey says that a good broadband connection has become an essential facility for businesses in the UK.**

In related news, independent network builder Gigaclear has installed a 1Gbps fibre network in Kingston Business Park, Oxfordshire. The new infrastructure, commissioned and paid for by tenants, improves on the existing copper network. BT is widely believed to be ignoring business parks for fear of hurting its leased-line revenues (see News, Jul/Aug 2013).

Communications minister Ed Vaizey says: "Having seen Gigaclear's systems elsewhere, I know just how fast and effective they are. A good broadband connection has become an essential facility for businesses in the UK, and businesses at Kingston Business Park could not have better connections than this."

Richard Lee, senior surveyor for Dexter Brown, managing agents for the park, says that since installing the Gigaclear network, properties were "more marketable and appealing" to tenants who are attracted by the high broadband speeds. He adds that the network has helped to retain existing tenants and attract new ones. ■

# Newcastle to become one of the UK's first superconnected cities

Newcastle has unveiled plans to become one of the country's first superconnected cities. *Go Digital Newcastle*, a government initiative delivered by the local council, will see 97 per cent of the city given access to superfast fibre broadband by 2015, a Cloud Innovation Centre, and free Wi-Fi in the city centre as well as on the Metro.

Newcastle is one of 22 cities where small businesses, charities and social enterprises can apply for vouchers worth up to £3,000 to get connected to high-speed/high grade broadband with one of nearly 200 registered suppliers (see *News*, Nov 2013). They will also be able to benefit from a free business support programme offering digital master classes and workshops, delivered by BE Group.

BT has been awarded the contract to deploy fibre broadband across Newcastle. It is replacing copper with FTTC in streets across the city, promising to deliver speeds of up to 80Mbps and with most businesses and homes able to access 30Mbps or higher. It's claimed that the network will be open to all communications providers on an equal wholesale basis in order to create a highly competitive market for consumers.

Around £9m of public money is being put into *Go Digital Newcastle*. The



**Chi Onwurah, MP for Newcastle Upon Tyne Central, says good connections are now a "necessity rather than a luxury". The local council adds that superfast broadband will help turn "local heroes into superheroes".**

funding includes £1.89m from BT, £970,000 from the local council, and £970,000 from the Broadband Delivery UK Local/Rural Broadband Programme.

The Government's *Superconnected Cities* programme will cover the voucher scheme, Wi-Fi in the city centre and Metro, as well as the Cloud Innovation Centre. The enterprise support scheme will be backed by the DCMS/European Regional Development Fund and the council. ■

## Record 2013 sales of Ethernet switches point to rise of SDN

Ethernet switch vendors enjoyed a bumper year in 2013, racking up an estimated \$22bn in sales, according to market researcher Dell'Oro Group. It says that a record number of vendors exceeded \$400m in sales. They include: Cisco, Dell, Extreme Networks (including Enterasys Networks), Hewlett-Packard, Huawei and Juniper Networks.

The report covers vendor revenues, average selling prices, and port/unit shipments by speed, including Fast Ethernet, Gigabit Ethernet and 10/40/100GbE, for Layers 2-3, both managed and unmanaged.

Dell Oro says "white box" sales outperformed the overall market, albeit from a smaller base. Alan Weckel, the company's VP for Ethernet switch

research, says white box switching continued to gain momentum in 2013, especially among major cloud providers: "[Their] insatiable demand for network equipment and strong growth in enterprise data centres contributed to the majority of the revenue increase we saw in the Ethernet switch market."

He adds that shipments to enterprise customers also outpaced the overall market, leaving many vendors in this segment with record sales.

Weckel expects the impact of the cloud and the emergence of Chinese vendors to weigh heavily on the market and individual vendor performance throughout the year. "Nevertheless, we anticipate overall market growth will continue in 2014."

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## THE WORLD ACCORDING TO...

Alessandro Porro, VP of international sales, Ipswich

### How the Internet of Things is set to transform care for the elderly

Imagine retirement homes supported by an intelligent infrastructure which saw residents' pill boxes advising them when it was time for them to take their tablets so none are missed. Or how about sensors capable of detecting changes in tissue a few hours before the onset of a heart attack, under-mattress devices that can analyse the quality of sleep, or Google lenses to measure glucose levels for diabetics?

These are all developments taking place in the rapidly evolving Internet of Things (IoT) – the concept of previously passive objects becoming smarter through connection to the internet. According to an IDATE study conducted last September, the world will have 80 billion connected objects by 2020, compared to the 15 billion today.

The health sector is one area that can greatly benefit from this trend, and it could prove to be an essential part of the future of care and retirement homes. But applications of the technology, as detailed above, cannot be implemented without careful planning. Discussion on a wide range of issues such as confidentiality, reliability, security and IT infrastructure, would be just the beginning to turn the vision into reality.

As with any network, the more devices that are connected, the more data there is to gather and store on the LAN or WAN. In retirement homes, this information will need to be centrally processed as well as

being directly related to the relevant caregiver. Robust networks capable of handling multiple connections and high volumes of data whilst maintaining security will have to be implemented – otherwise the increasing data volumes might rapidly paralyse the devices running from it, potentially compromising the running of the care home and, more importantly, endangering residents.

Furthermore, interoperability is essential for 'smart' devices to communicate with the network. They must use the same wireless bandwidth and adhere to the same security standards, otherwise costly 'workarounds' will need to be purchased.

For the IoT to become a reality the function of IT management must become more prominent. For example, retirement homes will need to hire a systems administrator to install, setup and monitor all connected equipment, and to ensure security. Powerful tools and comprehensive monitoring will need to be deployed to manage the network on a daily basis, and to respond quickly in case of failure.

Indeed, it won't be long before the network administrator is an essential function across many sectors outside 'traditional' IT, becoming the lynchpin for a huge range of connected objects that will soon become, like our smartphones, indispensable.

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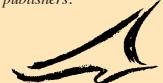
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Dell'Oro's finding points to the growing use of software defined networking (SDN) as big cloud, hosting and enterprise users try to maximise their value for money by virtualising their networks. White boxes use generic, off-the-shelf commodity switches and routers within the forwarding

plane of an SDN. They allow organisations to pick and choose the elements they need, from the OS to controllers for forwarding and routing tables. In an SDN environment, the apps running on top of the controller provide the higher level orchestration and programmability of the network. ■

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## LIGHTNOW interconnects busy data centres

SSE Telecoms has launched *LIGHTNOW*, a high-capacity, ultra-resilient optical networking service to provide connectivity between 21 of the busiest data centres in the London area. The new service promises to give organisations rapidly provisioned, in one week, 10Gb optical wavelengths between data centres and with sub 1ms latency. It offers customers flexible contract durations starting at three months, a zero set-up charge option, in-life circuit moves between any of the on-net data centres, and 24/7 support. *LIGHTNOW* is a key component of 'Project Edge' which will see SSE expand its network to 13,700km, reaching 200,000 central business district postcodes. ■

## North Lincs gets new voice links

Sinclair Voicenet will supply and install new voice recording systems at two separate sites for North Lincolnshire Council. They will be deployed to record calls to the CCTV centre where an assisted living platform monitors telecare services throughout the borough, as well as to the council's IT support centre. The new systems will be installed in a virtual environment enabling recordings to be captured from analogue, digital and IP extensions at the two locations whilst sharing the council's existing data network infrastructure. Sinclair is also providing secure, centralised data storage, enabling the council to store the voice recordings. ■

## Centile and Snom join forces to offer unified comms services

IP handset maker Snom Technology has teamed up with unified communications specialist Centile Telecom Applications to deliver business-class UC services to operators and services providers in the UK. Centile has integrated Snom's handsets with its *Istra* platform. It claims this gives operators and service providers the tools they need to quickly develop, deploy, and monetise new services over existing networks, for the broadest range of user devices. The integrated platform offers features such as n-party conferencing, boss/secretary, call park/pickup, presence, chat, and voice call continuity. ■

# Plymouth University eliminates downtime with network monitoring

Plymouth University is using network monitoring and management software from Comtact for real-time detection, diagnosis and resolution of network performance.

Plymouth has around 30,000 students, and one of its aims is to become an 'edgeless' digital university. Its approach is to use technology to help enhance teaching, learning, research, innovation and service provision. The university therefore needed to safeguard its infrastructure and meet the growing demands for 24x7 network connectivity.

It has now implemented Comtact's *Aurora* proactive monitoring and remediation service to secure the infrastructure, and can benefit from optimal network performance and reliability. Using software from SolarWinds, Comtact says *Aurora* eliminates downtime,



**Plymouth University has around 30,000 students, and aims to use technology to help enhance its service provision.**

and simplifies detection, diagnosis, and resolution of network issues before outages occur. Following the initial deployment, it says that the university now has an efficiently configured monitoring

platform with a bespoke management dashboard, accessed via a secure web portal available round the clock. Comtact adds that this easy-to-use solution provides Plymouth with visibility of performance data, utilisation statistics and device availability.

Adrian Hollister, head of strategy and architecture at Plymouth University, says: "As Plymouth continues to grow and supports a plethora of edgeless initiatives, the demands on our network and all of the components that reside within our IT environment increase.

"*Aurora* has afforded us quicker response times, reducing the noise of verbose alerts, cutting resolution time and saving lost revenue and avoided user frustration." ■

## "Musical chairs" predicted for network vendors

The expected consolidation of network operators in Europe and elsewhere could be matched by mergers and acquisitions among network equipment suppliers, according to Cisco CEO John Chambers.

Speaking to journalists at the recent Mobile World Congress, Chambers said the rumoured marriage of Nokia Solutions and Networks (NSN) and Juniper Networks could be the first of many in the sector.

"You are going to see a combination of companies occurring," said Chambers, predicting a series of "musical chairs" as vendors seek to gain critical mass,

intellectual property, and skilled staff to cope with the accelerating move to all-IP networks and virtualised networking.

NSN CEO Rajiv Suri earlier declined to confirm whether a deal with Juniper was likely. "We have a partnership with Juniper and we will look at ways to expand that. I'm not opposed to M&A, but we don't have to do a deal for the sake of a deal."

Chambers said Cisco has proved its ability to hold market share. "Now people are going to play our game," he said. He suggested that only players with broad product sets would survive, and that the

market for box movers, standalone players and "white box" manufacturers was getting tougher. However, this view is contradicted by the record results for Ethernet switch vendors reported by market researcher Dell'Oro (see News, p3).

Cisco and Juniper, the market leaders in high-end carrier and enterprise IP-based networking, have most to lose from the growing interest in software defined networking (SDN). This is based on commodity off-the-shelf servers where network functions are provided by software rather than proprietary hardware. ■

## C4L signs up new partners to boost connectivity

February proved to be a busy month for C4L, the Bournemouth-based colocation and connectivity specialist, as it announced new partnership deals with Virtus Data Centres (VDC), BC Technologies, and SMB Network Solutions.

VDC has signed up to C4L's Partner Network in an effort to gain all the connected benefits of the company's global portfolio of services. Virtus' Enfield data centre is now a tributary to C4L's recently launched *coreTX* network (see News, Nov 2013).

C4L says that having VDC as a network partner extends its colo footprint, and will "hugely benefit" customers. "This shared

partnership means together we can offer industry-leading collaborative services," claims C4L CEO Simon Mewett.

Staines and Glasgow-based IT support company BC Technologies has also become a network partner, and hopes to increase future business using a private virtualisation platform. This will allow it to offer remote managed services to assist its customers in the financial, legal, architectural and medical sectors. BC will leverage C4L's colocation and cloud infrastructure to enable clients to use highly secure platforms without the risk of exposing sensitive data through regular storage connections.

Meanwhile, SMB Network Solutions has teamed-up with C4L to become an associate business partner. The agreement combines C4L's SIP trunk infrastructure with SMB's telephony hardware to offer enterprises an IP telephony platform.

C4L says its infrastructure offers completely private, secure and reliable connectivity. It claims to guarantee significant improvement and ease of access for businesses upgrading from traditional and costly copper to its SIP trunks. SMB will enable end users to access the network by providing the required hardware to make it operational. ■

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<sup>1</sup>As of May 7, 2013. See [http://www\(tpc.org/1791](http://www(tpc.org/1791)

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## VIEW FROM THE TOP

Carmen Carey, managing director, ControlCircle

### Evolution not revolution: moving to the cloud with incubation

As CIOs begin to construct plans for widespread migration and deployment of enterprise applications within the cloud, the concept of incubation has been thrown into the spotlight.

Incubation within the cloud is a process used to separate or 'incubate' new solutions on a limited scale. This means problems can be identified on a small-scale basis, so that innovations can be created, developed and tested, before being used for widespread applications in the cloud.

It's a concept that will appeal to many IT organisations that want to embrace the cloud, but are struggling with the basics of the platform in its entirety. This is often the case because day-to-day teams do not treat cloud technology and processes as unique, and don't see the cloud for what it is: an entirely new era in IT.

Companies that have been successful in implementing wide-scale enterprise cloud applications have recognised the need, not only for new development approaches, but also for changes in behaviour within the whole of the IT organisation. This leads to the creation of an entirely separate incubating IT function.

What does this mean? It leads to developers working alongside support personnel to create new business processes, and a move away from a classic ITIL support

model towards one that focuses on devops. Ultimately, it means an incubation-based IT function that runs alongside your existing team without hampering it.

Incubation capabilities enable organisations to move to the cloud with confidence, having proven the technology as well as the next-generation IT processes. Thanks to the proof of concept environment made possible by incubation, organisations are able to identify bugs and other areas of concern, before large applications are rolled out for wide-scale deployment within the cloud.

Incubation is a step in the evolution of the way applications are developed, infrastructure is consumed, business solutions are subsequently operated, and how these are maintained and supported in lifecycle. Every way of 'doing' in a classic IT organisation is different when it comes to the behaviour of the cloud – especially when taking full advantage of what's on offer.

Moving forward, this allows companies to increasingly address more business problems and find solutions using the same methodology. By using incubation within the cloud, organisations will be able to embrace the technology more easily. They will be able to morph with confidence – from a classic IT base with private infrastructure and applications, to a much more agile and cloud-focused IT business.

# HP and NEC partner for open standards SDN

HP and NEC Corporation will work together to use open standards to develop software-defined networking (SDN) solutions for enterprises.

The two companies have been strategic alliance partners since 1995. NEC says its large-scale, mission-critical enterprise IT systems were developed using HP-UX, HP's Unix-based operating system.

Building upon their collaboration on enterprise servers, HP and NEC will now work together on developing network infrastructure solutions. They aim to deliver the equipment and open standards-based SDN solutions required in what NEC calls the "New Style of IT" that is being driven by industry trends such as social media, mobile, cloud and Big Data.

In addition, the two firms are working with industry-standards organisations as part of their commitment to a standards-based SDN solution. HP and NEC plans to build an ecosystem of vendors providing



**Bethany Mayer, SVP and GM for HP Networking, says her firm has the "most widely deployed" SDN-enabled infrastructure.**

business and network applications using products that have open standards to implement SDN, which in turn allows for dynamic control of the network.

The partners believe open standards are essential for future network infrastructure. With virtualisation and automation technology becoming more important to the network, NEC has started work to port its *Virtual Tenant Network (VTN)* application to interoperate with HP's SDN controller. NEC says this will extend the benefits of the VTN to customers with existing HP Networking-based infrastructure. ■

## Cloud collaboration allows NHS Trust to go paperless

Board meetings at South Tyneside NHS Trust are now completely paperless. Thanks to Huddle, the cloud content collaboration service, executives can review all relevant documentation on their tablets, and can securely access their board packs from their homes or remote office sites nationwide. The move is said to have reduced the trust's paper usage by 100 reams a month.

With board members dispersed across South Tyneside, and many of them without a desk within the trust's premises, staff were faced with the challenge of creating, collaborating on, and sharing board packs every month. Often 600 pages long, sections of these packs were regularly sent back and forth via email during the creation process for feedback and approval.

Martin Alexander, the trust's director of information services, says: "Email is a poor collaboration tool when it comes to version control and security. When you send an attachment to 20 people, no one knows which version is final or what has changed."

In addition, administration staff would spend significant amounts of time printing and putting together all of the relevant information for each board member. These packs were then picked up from the trust by members or sent out via recorded delivery.

The trust decided that it would create paperless board meetings and provide access to documentation from sites outside the corporate network. iPads were issued to all board members, and the trust then chose to use secure cloud services provided by Huddle which has a UK data centre and is pan-government accredited at IL2.

A Huddle workspace is now created for each meeting. All content associated with a particular meeting can be stored in one central place and administered by a specific secretary. Should legacy board papers need to be revisited, members can access the relevant workspace rather than going through five or six filing cabinets of legacy paperwork, as everything is now stored in Huddle's secure cloud. ■

## Virtustream to provide fully managed IaaS platform

Virtustream will provide Sapphire Systems with fully managed IaaS capabilities for its *SAP Business One OnDemand* environments worldwide. The partnership aims to enable Sapphire, a global provider of financial accounting and business management solutions, to offer a consistently high quality hosting service to its international customers.

The IaaS platform uses *xStream*, Virtustream's cloud management software which is underpinned by micro-VM (*μVMTM*) technology. Sapphire plans to leverage this to deliver enterprise-ready, secure cloud environments for mission critical and production applications such as *SAP Business One*.

Sapphire Systems MD Ian Caswell

says: "As a globally accredited IaaS provider that works so closely with SAP, Virtustream will enable us to provide a range of support services to our customers around the world and allow them to focus on adding value to their business."

Virtustream claims that its managed IaaS capabilities, coupled with the experience it has in dealing with ERP software performance, gives Sapphire the ability to manage complex, production-critical applications for clients without impacting business performance.

It adds that the assured application-level SLAs it can guarantee for performance and availability will enable organisations to run production applications in the cloud without disrupting their daily activities. ■

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## Banking on unified communications

Kcom has designed and implemented a complete unified communications solution for Lloyds TSB Corporate Markets. The solution was sought when the bank made a crucial move to consolidate its corporate-focused businesses, led by the opening of a new state-of-the-art head office (*pictured below*) in Gresham Street, London.

In late 2005, the relationship banking, structured finance, debt capital markets and risk management businesses for Lloyds' corporate customers were merged. In July 2006, this single and united business was re-launched as 'Lloyds TSB Corporate Markets'. During the integration of the underlying 14 business units, several major challenges were

uncovered. There were several old buildings with limited communications within and between them, as well as no access to a common customer database. A decision was made to create a single front office where the bank's clients could be accessed. New headquarters were found in the City of London to house more than 1,100 staff, including 200 traders.

From the signing of the lease at the new Gresham Street headquarters, the management team had one year to get the premises fully operational. With 300 people on the site it was a complex coordination exercise.

Kcom had already proven to be a valuable partner for Lloyds, delivering successful projects at its Monument Street office and contingency centre. Using Cisco products, the company was selected to provide the LAN at the new site together with an IPT system for all the staff. Kcom also deployed a *Cisco Aironet* wireless network, voice messaging, and a 30-seat contact centre. In addition, a three-year reactive break/fix support contract is in place and will ensure that the network runs smoothly.

It's claimed that Lloyds TSB Corporate Markets now has a world-class facility using the latest technology to provide a converged voice and data network.



Colin Everett, head of IT strategy and architecture at Lloyds TSB Corporate Markets, says: "The working environment is vastly improved and we are starting to reap the rewards. We can now walk around and talk to the sales teams. There is a new cafe with built-in wireless access, providing a great environment for meeting, talking and planning. With traders and bankers working long days, it is paramount that they have the most conducive working environment. Productivity will increase as a result."

## Making disaster recovery a necessary priority

Accountancy and tax advice firm Booth Ainsworth LLP is responsible for the payroll of more than 600 businesses and 8,000 employees across the northwest. The Stockport-based organisation is a BACS Approved Bureau and must therefore meet the payment organisation's strict compliance requirements to be able to pay clients' employees directly. Comprehensive disaster recovery (DR) criteria must be met to achieve this status. But the firm wanted to take this a step further, and decided to upgrade its DR systems and support, putting high-performing IT at the forefront of its priorities.

Gary Cook, partner and head of professional practices at Booth Ainsworth, says: "There are so many horror stories of organisations that don't understand the importance of business continuity and disaster recovery, but we see this as an extension of our due diligence to our customers."

Working with JMC IT, its long-standing partner, the firm deployed live replication technology at its DR site. A radio link and broadband backup were installed, providing Booth Ainsworth with resilient access to the internet should there be any failure to its primary connection. Data is backed up overnight and mirrored in two separate, secure data centres, protecting vital information against any potential disasters.

In addition, JMC's support team (*pictured below*) is providing an increased level of active system monitoring and IT support to ensure that Booth Ainsworth's systems offer sustained high performance. This proactive approach to support means that any IT issues can be resolved, often well before they impact on the business. "We have amazingly little downtime on our systems, which is very important to a business where time is money," says Cook. "If we do encounter any problems, JMC gets us back to normal, usually within as little as 15-20 minutes."



## WorkPlaceLive helps to "revolutionise" financial services company

Hurst Financial is a privately owned independent financial adviser practice based in Salisbury. It has a team of six advisers and two admin staff, and until 2012 the firm managed its own IT system which comprised a server, eight workstations, an intranet with a database, plus several bespoke software packages.

The system's remote access capability was slightly cumbersome so Hurst's advisors couldn't work from home or their clients' offices. The company also relied on two backup servers for data storage, and when one of these failed, the company decided to upgrade its IT and looked for an alternative solution.

Most of the IT companies Hurst spoke to simply recommended the purchase of new PCs, servers and software packages – a cost of around £35k. Not only was this outlay prohibitive, it didn't make sense to move to a more expensive version of the current system, particularly without remote access capability.

Hurst then looked into cloud computing options and approached WorkPlaceLive, a division of Horizon Computer Solutions, which offered hosted desktop solutions at affordable prices. Chairman Mike Hurst says: "We realised that a hosted desktop solution would provide the capability and flexibility we required."

Hurst opted for WorkPlaceLive's hosted desktop solution to solve its IT issues and gain robust remote access. Crucially, the system integrated with Hurst's intranet which had been tailor-made for the firm. WorkPlaceLive's solution also integrated with business-critical software that is used by the company's advisers to measure risk. Financial Services Authority regulations obliges all IFAs to have such systems in place, so it was vital for the advisers to have access to this software.

"WorkPlaceLive reassured us that all our software, databases and data would work through its hosted desktop solution," says Hurst. "The migration was seamless and as soon as we had signed contracts, the company transferred all our data across and tested it. Five days later, the new system was up and running."

WorkPlaceLive says its system has "revolutionised" Hurst's business, changing the way advisors work and saving the firm considerable money as it didn't have to invest in any new PCs. All the IT administration, software licensing updates and security are now taken care of by WorkPlaceLive which also hosts the company's data in its highly secure UK data centre, as well as providing DR services and dedicated helpdesk support.



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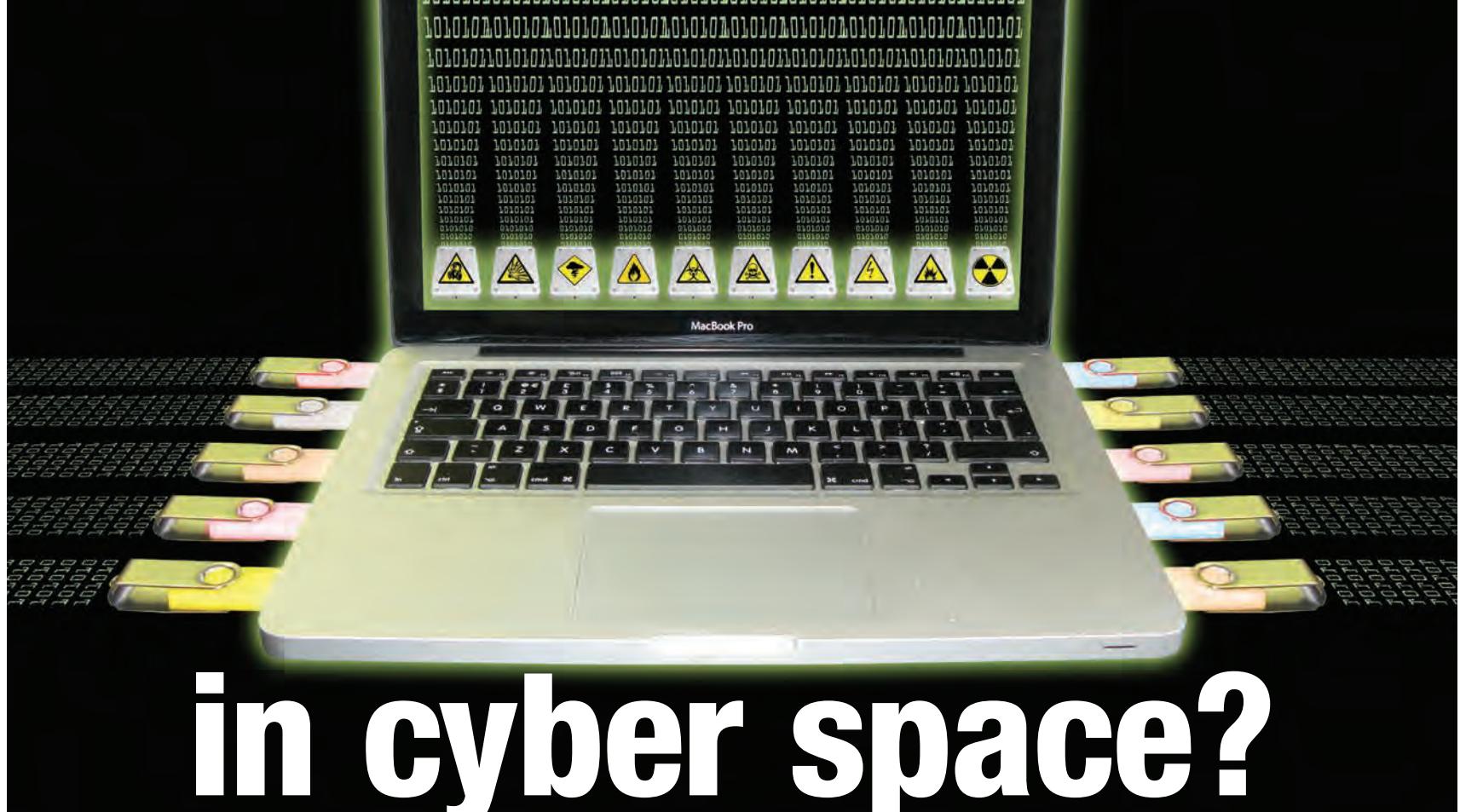
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# Will we ever be safe



## in cyber space?

**Why is the UK suffering from a skills shortage when it comes to the expertise needed to fight cyber crime? RAHIEL NASIR finds out and looks at what's being done about it.**

Even as this article was being written, news emerged of yet another big name organisation that had suffered a massive IT security breach. This time it was supermarket chain Morrisons which said that payroll data for around 100,000 of its employees (most of its workforce) had been stolen and posted online. It's suspected that the attack could be an inside job and the work of a lone hacktivist or disgruntled employee. But regardless of who the perpetrator is and what their motive was, one thing is for sure: this certainly won't be the last cyber attack we'll ever see.

Make no mistake, the growing problem of cyber crime threatens all of us and perhaps even the very fabric of society. More worryingly, Britain seems ill-equipped to fight it. Over the last few years, loud alarm bells have been sounding from government, industry and many others, warning about the UK's skills shortage in cyber security experts, not just today but also for the future. So how did things get so bad?

### False sense of security

Like many of the experts we spoke to, Suzanne Fribbins, risk specialist with the British Standards Institute, points out that IT networking has undergone a dramatic change over the last few years. "Ten years ago, most people did not have a mobile phone with internet access, tablets were not widely used, Facebook was in its infancy, and no one had even considered the concept of cloud computing. All of these things have changed the way we connect with the business network and

also the way we communicate. There are fairly recent statistics suggesting that 90 per cent of the world's data has been generated over the past two years alone [SINTEF research: *Big Data – For Better or Worse*], and there has been an acceleration of devices with ever-increasing functionality. With the constant technological evolution, the threat landscape has changed, leaving things that were once secure now no longer secure. Not surprisingly, it is a challenge to keep ahead of the range of increasingly sophisticated threats."

Matt Middleton-Leal, regional director for UK and Ireland at CyberArk, supports this view, adding that the speed of change and sophistication of the attackers has caught organisations by surprise. "The fact of the matter is that too many still rely on traditional defences to protect their most valuable assets from attack. Businesses should assume that it is a question of when rather than if they will be targeted, and with this in mind, turn their attention to locking down all access to highly sensitive information and applications."

Last year, the Institution of Engineering and Technology (IET) carried out a survey of 250 SMEs to gain insight into current cyber trends. Of the 250 firms questioned, only 14 per cent said cyber security threats were the highest priority and believed that they already had sufficient skills and resources in place to manage the threat.

It therefore seems as if businesses seem either lackadaisical about their cyber defences or are quite literally labouring under a false sense of security. According to Bill Walker, technical director and

cyber security expert with IT training specialist QA, the real issue is that many organisations don't recognise they have a cyber security problem that needs to be solved. "This often manifests itself in the statement 'no one would want to gain access to our systems or data – we don't have anything valuable'. Virtually every organisation has some intellectual property that could be valuable if stolen, or it could be compromised if such information got into the wrong hands."

Thus, if organisations don't think they have a problem with their security, they're unlikely to actively recruit staff who specialise in cyber crime. Arguably, that's probably one of the biggest reasons we now have a skills gap.

James Lyne, SANS Institute instructor and EMEA director, points out that another challenge is the relatively immature structure and 'professionalisation' in the industry. Many skilled people are either not truly recognised, or those who have great potential end up in other lines of work. "There are systematic problems that lead to this which are slowly being addressed, but not quickly enough," he says.

BCS, The Chartered Institute for IT, agrees here. It adds that whilst a major component of cyber security is information assurance (IA) – an area which has seen much investment in training and education over the last two decades – not enough had been done in the universities to have common cyber security modules. Nor were there adequate schemes to ensure that cyber/IA professionals were recognised for their skills. e-skills UK highlights yet more concerns

In April 2013, it published its *Career Analysis into Cyber Security: New and Evolving Occupations* study. Project director Nigel Payne says this revealed several worrying trends: "Firstly, the cyber security workforce is an aging one, with only seven per cent of professionals currently under 29. Secondly, there is a distinct lack of diversity, with just 10 per cent of those holding technical roles in the sector being women. Finally, it showed that the opportunities to enter the sector from general IT or non-IT roles have diminished over the last decade. Employers today are recruiting from the same small pool of seasoned professionals, which will limit growth and innovation in the sector in the long term."

Some security experts are warning that the UK is facing a gap of about 15 years where there will continue to be a significant skills crisis. Citing a 2013 National Audit Office report, Raj Samani, McAfee's EMEA CTO, says that the number of people training for a career in cyber security has not kept pace with the growth of the internet. "I recently experienced this first hand. I was asked to present at a university and was introduced to someone from a very prestigious firm who was telling me that they had 150 open vacancies for cyber security professionals. This is an organisation that is a household name, and one that is more than capable of paying competitive salaries. That experience really brought home the nature of the shortage. Incidentally, another attendee at the event was a small vendor that had over 11 positions open for in excess of six months."



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## Securing the future

So what's the answer? David Garfield, MD of cyber security at BAE Systems Applied Intelligence, doesn't necessarily agree that organisations have been apathetic. He says there is now a greater awareness on boards that cyber security is a corporate risk, but adds that the key challenge for them is identifying what to do to address it. "There is a communications disconnect between the executives and the non-executives, and the IT departments and the CIOs, because they all speak in different languages."

CyberArk's Middleton-Leal concurs. He says security is no longer just the concern of IT teams and that strategies need to be incorporated into broader corporate initiatives: "CEOs should be educated in non-technical terms to understand what is at stake and what is required. [They can then] allocate

the appropriate and necessary investment to proactive security measures in order to keep pace with the current threat level."

Security vendor Lancope advises organisations to treat security as a business continuity problem. "They are not in the business to catch crooks, they are leveraging IT to enable the growth of the business," says CTO Tim Keanini. "Incident response for instance should not be an IT security thing; it is a business continuity issue that spans cross departmental coordination. Legal, PR, external law enforcement – all of these roles are important when you get hacked and a certain readiness is not optional, it is required."

He goes on to point out that while everyone needn't be a security expert, the success of any large complex system lies in the coordination and communication of multiple disciplines all working in

harmony towards a goal (even if that goal may be horizontal in nature).

While all that could help address what CyberArk said was the "current threat level", what about the future of cyber security given today's skills shortages? Clearly, dealing with the cyber threat needs a concerted effort by all concerned. The SANS Institute's Lyne says: "We need to simultaneously work to encourage and recognise the talented individuals that already exist (through internships, training and competitions or challenges) and also develop new talent.

"Alongside longer term initiatives like embedding better IT skills development and security in to our curriculums at all ages, we also need to act now and take advantage of those who have casually developed an interest, or who have studied but can't find the right entrance to the industry."

e-Skills UK recommends a combination of things. Firstly, Payne says the teaching and careers advice young people receive in schools must showcase the opportunities available in cyber security in an "exciting and inspiring" way. Secondly, there should be the provision of new entry routes into the sector which give professionals the skills cyber security employers are looking for. "Finally, we must make it easier for both employers and individuals to find relevant, high-quality training. This will help general IT professionals enter the profession, and give both them and current security practitioners a clear progression route."

e-Skills is playing a big part in helping to make all this a reality. In mid-March, the government announced that schoolchildren as young as 11 will get cyber security lessons as part of plans outlined in the *Cyber Security Skills: Business Perspectives and Government's Next Steps* report. e-Skills will be involved in delivering a number of projects. These include: Key Stage 3 learning materials and training for teachers (delivered in partnership with Naace, the ICT in education association); employer-led cyber security higher and advanced level apprenticeship schemes; and a cyber security internship programme to enable students gain the work experience demanded by employers.

There will also be support, through the Higher Education Academy, for universities that develop innovative proposals to improve cyber security teaching. For example, incorporating professional qualifications into degrees, getting businesses involved in course design, as well as embedding cyber security into software engineering and computing degrees.

Other initiatives that e-Skills has been involved with include the employer-backed Cyber Academy that was launched in 2012. As part of this, it developed a computing curriculum programme with input from BP, BT, CREST, Fujitsu, PwC and QinetiQ which includes content on cyber security for Key Stage 4 pupils. This has already been taken up by more than 360 schools, and similar resources for Key Stage 5 will be available from this September.

It is also working with the industry to offer paid internships from summer 2014, supporting cyber security apprenticeships with employers such as Atos, BT, Cassidian (now known as Airbus Defence and Space), CREST, IBM and QinetiQ, and developing employer-backed degrees.

## The vendor response

CyberArk believes that while perimeter-based protection plays an important role as a first line of defence, it is simply not up to the job when faced with highly advanced and targeted attacks. Instead, it advocates a layered approach to security. "We help to educate organisations around the threat posed by unmanaged privileged access, allowing them to manage and monitor all privileged access in real-time, with the option to intervene if necessary" says Middleton-Leal. "This not only eases the auditing process, but also crucially defends the heart of the enterprise against the threat from within as well as from external attackers looking for a 'window of opportunity'."

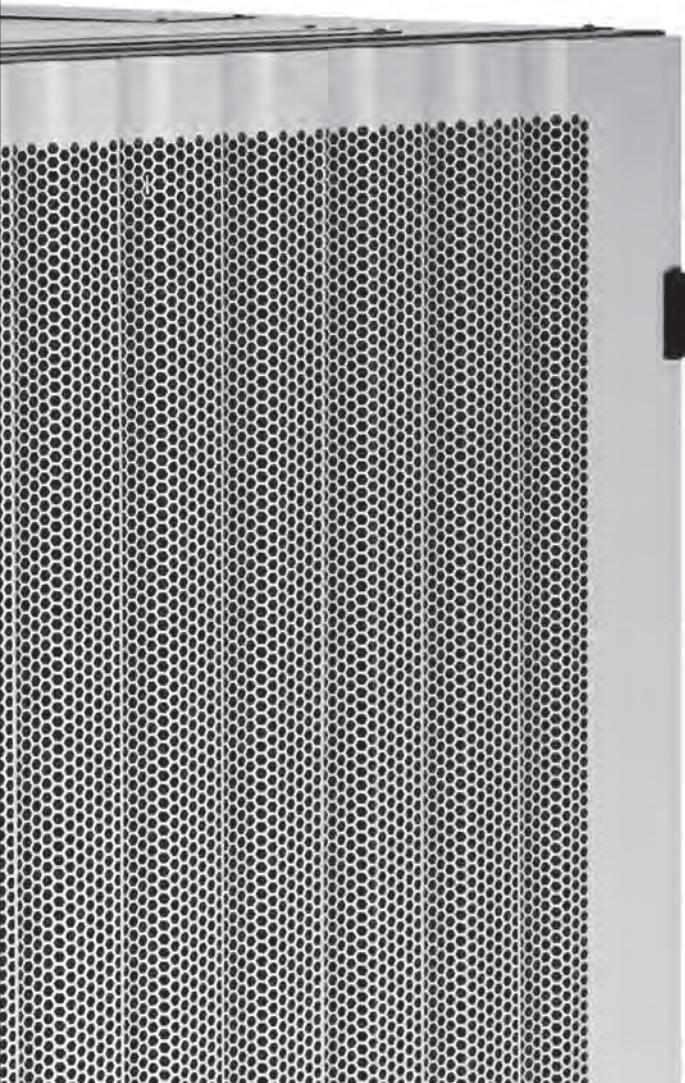
McAfee has been working with Queen's University Belfast to offer internships for MSc students, and has also been providing input into the course content to ensure the skills taught are those sought by industry.

In addition, in 2013 it signed a five-year collaborative partnership with The Bletchley Park Trust and will sponsor an international Cyber Security Exhibition and Computer Learning Zone that features workshops to

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engage, inspire and educate visitors about the ever-evolving cyber threat.

"Just as cyber criminals innovate, so do the good guys – and not only in terms of technology," says Samani. "Also, as an industry we are working closer in terms of standards and information sharing. This extends to collaboration across the public and private sectors, such as the Cyber-security Information Sharing Partnership (CISP) which was launched to help government and industry share information and intelligence on cyber security threats."

CISP is expanding and aims to double its membership to 500 by the end of 2014. This is a "significant and positive" development for staying ahead in the fight against cyber crime, according to BAE Systems Applied Intelligence. "Traditionally, governments and industry have taken a largely sectoral approach," says Garfield. "Where the CISP is unique is that it exploits the commonalities between different sectors to share knowledge and raise threat intelligence maturity. Consequently, it allows a wider range of companies to benefit from the cyber knowledge it shares.

"Information sharing with industry is a key priority for UK government. Now the activity has been catalysed, it will be vital that it gains critical mass in terms of scale and is seen as a core element of a holistic cyber response that offers an appropriate level of protection for UK companies."

Applied Intelligence is contributing here by using behavioural analytics to look not just at what is happening today but to piece together activities over time that, when joined up, look dubious. "We are looking for suspicious behaviours because attackers are constantly changing their approach," says Garfield. "While the technology is vital, we also need a human mind to understand what is happening."

## Can the 'good guys' win?

Of course, the same technologies and intelligence being leveraged by the 'good guys' is also largely available to the cyber thieves. And while they also share the same scarcity of expert resources as the industry does, Lancope says it is becoming easier for them to find talent. "Advanced criminals knew that leveraging IT for their business was important for growth and some would therefore recruit young hackers



**"With the constant technological evolution, the threat landscape has changed, leaving things that were once secure now no longer secure."**

Suzanne Fribbins,  
Risk specialist,  
British Standards Institute

for this activity," says Keanini. "Now things are much different. Today, with expert hackers selling their capabilities on the dark markets, any criminal with some cryptocurrency in hand can buy the capabilities they need to enter the cyber crime market place. They can piece together exploits, watering hole websites, DDoS attacks, custom malware, evasion techniques, until they get it just right. Heck, they can just buy the credentials for some executive and not even trigger any security events at all."

So what chance do we have? QA reckons that at the end of the day, infosec experts will probably always be one step behind the hackers. While the cyber criminals are constantly innovating in the ways that they go about their business, security companies and professionals are often just reacting to the latest method that they discover. "After all, a virus scanner can only react to a

known signature, so a zero-day attack can compromise these until an emergency update is released," says Walker.

He adds that the amount of effort you put into securing systems and data has to be looked at in the context of what you are protecting yourself against – i.e. it needs to be proportional. "You lock your door when you leave home and no doubt ensure all the windows are closed. So why don't you put in armoured doors and have bars on all your windows? Because you have done a risk assessment (although you never probably realised this as such) and have applied a proportionate response.

"So when you find a spate of threats in your area you step up your security appropriately, and in some parts of the world you would want steel doors and bars on the windows and a gated community. The same goes with your systems. Know what you

have, know the likelihood of loss, know the consequences of a loss, and know what to do if it happens. When you explain to the board, shareholders, customers and partners that you had not prepared for the major cyber attack you have just had, it's probably time to clear your desk and collect your P45 on the way out."

So essentially it's all about due diligence, best practices, being proactive, and engaging and educating all parties. Ultimately, it's also all about protecting UK plc's bottom line, according to Universities and Science Minister David Willetts. Speaking in March, he said countries that can manage cyber security risks will have a clear competitive advantage: "By ensuring cyber security is integral to education at all ages, we will help equip the UK with the professional and technical skills we need for long-term economic growth." ■

## Putting the Cisco advantage into practise with PRTG Network Monitor

Cisco firewalls, routers and switches are central elements in many networks, so they need to provide maximum reliability and availability. Ensuring that the devices are performing as expected and that the network is running smoothly requires continuous monitoring. Not only network traffic but also numerous other details about the state of the device (e.g. CPU load, available memory, power supply, temperature, etc.) can be supplied.

PRTG Network Monitor by network specialist Paessler offers a number of dedicated features for analysing data made available by Cisco devices.



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PRTG  
NETWORK  
MONITOR

### Analysing the data

#### Monitor network traffic via NetFlow

NetFlow (version 5, 9, IPFIX) provides very detailed information about network traffic. PRTG focuses on the data analysis that is crucial for most administrators: Top Talkers, Top Connections and Top Protocols. The data is processed and forms the basis for alerts and alarms. In addition, the results are presented in graphs which give the administrator a quick overview of the data traffic on the network.

PRTG also includes custom NetFlow sensors that can be individually configured to provide the exact values that are important to the respective user. In addition, PRTG can pull data via jFlow, sFlow, and packet sniffing.

#### Monitor network traffic via SNMP

Many Cisco devices do not support NetFlow but they still need to be monitored to determine the device status and network traffic, in order to get an overview of the entire network. SNMP is supported by switches and routers as well as servers, software, printers and even some coffee machines.

Since SNMP delivers significantly less detail than NetFlow, SNMP also generates less load on the network. Enabling SNMP on devices that also support NetFlow may be an interesting option. Similar to flow, SNMP data is generated and processed by the device. If PRTG's preconfigured sensors are not detailed enough, specific queries can be

defined for each device, using so-called MIB files. The administrator can then set thresholds for alerts and alarms and define relations and dependencies to other sensors.

#### Ensure telephone call quality via IP SLA

Cisco devices that support IP SLA measure the quality of streamed data such as VoIP or video transmissions using different protocols.

PRTG can read the IP SLA data, create graphs and notify where appropriate. For more detailed queries or non IP SLA-enabled devices, PRTG offers QoS and CBQoS sensors.

### How to work with the data

#### Alert and alarm

Individually definable thresholds are used to send notifications and alarms via e-mail, text message, SNMP Trap, etc. This way, the administrator can rest assured that all Cisco devices are working properly, the call quality is excellent and the data is flowing as expected.

#### Visualise and publish

The data is presented in graphs that provide a comprehensive overview of the network environment, such as the availability of data connections, the status of the monitored devices or the quality of IP telephony. In addition, individual data values can be viewed in tabular form for more in-depth analysis.

The software also provides several options for publishing the monitoring results in management reports, live HTML maps or scheduled e-mail reports.

#### More than Cisco: the whole IT infrastructure at a glance

PRTG comes with features and sensors for monitoring virtual environments, applications, databases, storage systems, e-mail traffic, websites and much more. In combination with the comprehensive monitoring of Cisco devices PRTG offers a monitoring solution that quickly and clearly provides administrators the tools they need to maintain the network and to guard against unexpected surprises.

Please contact Paessler for more information on

**PAESSLER**  
the network monitoring company  
sales@paessler.com  
www.paessler.co.uk/prtg



## off-the-shelf: security

# Threat detectors

**Some of the latest security systems and platforms to help you safeguard your network and IT assets.**

**AlienVault** has launched its first *Unified Security Management (USM)* virtual appliance. The platform is described as a collection of the “best” open source tools for asset discovery, threat detection, vulnerability assessment, behavioural monitoring and security intelligence.

The firm claims the new product reduces complexity, making it easy for a company of any size to gain immediate security capabilities in “just a few quick steps” via an easy-to-use management console. It adds that by offering both physical and virtual appliances, *USM* gives companies the flexibility to choose which unified security management solution is best for their environment.

The *USM*’s key features include compatibility with VMware *ESXi* and Proxmox virtual environments. It is said to offer a simpler host-based intrusion detection system (HIDS) for distributed environments, as well as enhanced and

centralised HIDS administration via a web-based user interface. The platform also enables continuous vulnerability monitoring which, according to AlienVault, increases vulnerability detection accuracy and avoids network disruption.

The company is offering a free trial of *USM* via its website. It is also including free customer support and maintenance, as well as a subscription to *AlienVault Labs Threat Intelligence* for the first year.



**Cisco** has added the *Advanced Malware Protection (AMP)* system – originally developed by Sourcefire which it now owns – into its content security product portfolio.

*AMP* is said to utilise the “vast” cloud security intelligence networks of both

Cisco and Sourcefire. Instead of relying on malware signatures – which can take weeks or months to create for each new malware sample – Cisco says *AMP* uses a combination of features to identify and stop threats. For instance, *File Reputation*

analyses file payloads inline as they traverse the network. It aims to provide users with the insights required to automatically block malicious files and apply administrator-defined policies using the existing *Cisco Web or Email Security* user interface and similar frameworks.

*File Sandboxing* is said to use a highly secure sandbox environment to analyse and understand the true behaviour of unknown files on the network. This allows *AMP* to glean more granular behaviour-based information about the file, and combine that with detailed human and machine



analysis to identify a threat.

Cisco reckons *File Retrospection* solves the problem of malicious files that have passed through perimeter defences but are subsequently deemed a threat. It provides continuous analysis, using real-time updates from *AMP*’s cloud-based network to stay abreast of changing threat levels.

*AMP* is available as a standalone unit or as an integrated feature in the *FirePOWER* products originally developed by Sourcefire.

technologies – *Unbound* and *NSD* from NLNet Labs. *Unbound* is a validating, recursive, and caching DNS resolver designed for high performance. *NSD* is an authoritative only, high performance name server offering a more robust environment for defending against a DoS attack. EfficientIP says that separating the authoritative and recursive elements of the name server engine significantly reduces the risk of corruption.

“Having an active DNS engine, plus at least one alternative ready for use, significantly reduces the risk of attack, while reducing management complexity for administrators,” states the firm.



*EfficientIP* reckons it’s come up with a “breakthrough” solution with what’s said to be the industry’s first hybrid DNS engine to protect online services. It says that the *SOLIDServer Hybrid DNS Engine (HDE)* now gives organisations the ability to “out-maneuvre” DoS attacks.

According to EfficientIP, while most DNS servers run a single engine (such as ISC’s *BIND*), the *HDE* combines three engines that are all managed in one appliance. It believes this approach provides greater protection as it eliminates a single point of failure following security alerts, creates a complex security footprint, and enables DNS engines to be switched to allow for patching while another DNS engine takes over to protect service availability.

The *HDE* incorporates the *BIND* name server software and two other DNS tech-

traffic equalling 720 million concurrent TCP sessions at 24 million sessions per second.

*Ixia* says that with complex applications and virtualisation on the rise, data centre operators will need to validate their infrastructure to ensure it will perform and remain secure under peak loads without over-stressing resources. The firm claims it has the solution in *PerfectStorm*.

Said to be the only system to offer modular scalability, *PerfectStorm* achieves near terabit levels of mixed application and malicious traffic to securely test all elements of a complex data centre.

It features a single 11U chassis, and has been designed to enable comprehensive data centre validation by seamlessly unifying Ixia’s *IxLoad* and *BreakingPoint* software applications into a single system. The firm says that this enables it to deliver “unprecedented” data centre testing performance with almost a terabit of



centre weaknesses. It supports the latest connectivity options with 8 x 10Gbps and 2 x 40Gbps interfaces per blade.

In addition, Ixia reckons *PerfectStorm* is the highest performance density solution currently available, delivering what typically requires more than 25ft of rack space in an 11U form factor.

**Tufin Technologies** has extended its analytic and orchestration capabilities “deeper and wider across the network” with the release of a new version of the *Tufin Orchestration Suite*.

The suite consists of three products: *SecureTrack* enables IT to centrally manage, track and analyse security policies for all network security devices including host-based and next-generation firewalls, routers, switches and load balancers.

*SecureChange* automates network security change processes and proactively analyses risks before changes are made. Tufin says this increases accuracy and enforces compliance policies across all network security devices.

*SecureApp* allows users to manage the network connectivity and security needs of their applications by orchestrating all application-related network changes from deployment through decommissioning.

*Tufin Orchestration Suite*, version R14-1 features a number of key enhancements.

For example, *Unified Security Policy*, now enables users to map out and manage their desired network security architecture. Tufin says that in-depth data about zone-to-zone traffic and policy restrictions improves change management. Centralised alerting on all policy violations by level of criticality, with instant drill-down analysis for rapid remediation, provides more in-depth and actionable network monitoring.

While *SecureApp* can already monitor app connectivity and tell users when, where and why a connection is broken, it now also provides ‘one click’ repair. This can “dramatically reduce” connectivity-related downtime, according to Tufin.



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# BT to create new apprentice and graduate jobs

BT will create more than a thousand new apprenticeship and graduate jobs in a major recruitment boost for UK youngsters.

The company aims to take on 300 top science, technology and business graduates from across the UK. Around 730 apprenticeships will also be offered to school and college leavers in the areas of IT support, software design, engineering, finance and logistics.

Many of them will be based at BT's research campus at Adastral Park near Ipswich in Suffolk. They will be able to work on a range of cutting-edge projects, including the future of wireless technology and broadcasting, Big Data and the Internet of Things, as well as help pioneer new developments in high-speed fibre networks. Other posts available around the country include training as Openreach engineers, and in finance, customer service and business development roles.

BT has also pledged to provide up to 1,500 vocational training and work experience placements for unemployed 18-24 year-olds over the next 18 months. As part of *Movement to Work* – the employer-led initiative backed by the government and the Prince's Trust – the firm will offer placements of four to seven weeks, and link this into its future recruitment plans where possible.

BT has also created a new digital media technology apprenticeship scheme that will provide new recruits with experience and skills in web development, digital networks, digital TV and digital media distribution.

## Spiceworks 'revolutionises' the IT job search

Spiceworks has introduced a series of resources which it says will help both IT professionals to further their careers and recruiters to find candidates with specific technology expertise.

The company – which describes itself as “the professional network for IT” – claims its new online profiles section enables members to share their expertise more effectively by helping them highlight the skills and technologies they use to do their job. Spiceworks says the profiles go beyond the traditional CV by allowing users to share their expertise as they work on projects, the products and services they've used, and their community contributions. They can add photos, videos, budget and geographic information, as well as tag more than 40,000 catalogued IT products to bring their experiences to life.

Recruiters looking for qualified IT professionals can now post available positions to reach millions of members.



Spiceworks says its member profiles (right) go beyond the traditional CV (left). Users can add images, video and geographic information, as well as tag more than 40,000 catalogued products to bring their work experiences to life.

Spiceworks says its job board currently includes hundreds of available positions, ranging from helpdesk support technician to CIO. The company adds that with its member profiles and projects section, recruiters can now provide hiring managers with access to an IT professional's portfolio of work, helping them understand the types of projects they've completed and the products and services they're familiar with.

## NEW COURSES

### *Educational Network Tapping Application - Open Networking Foundation*

The Open Networking Foundation has launched *ONF SampleTap*, an open-source network tapping app which aims to provide an educational resource for programmers. The ONF says it selected network tapping

as this is “broadly understood and easily deployable”. Its says the app will allow users to get experience with *OpenFlow* without changing how they actually do the switching and routing, since tapping doesn't use *OpenFlow* for forwarding.

*ONF SampleTap* is based on *OpenFlow 1.0* and runs on an OpenDaylight controller. ONF says its portable design makes it straightforward to port to other network operating systems and support later versions of *OpenFlow*. The foundation adds that the app is not meant to serve as a commercial tapping product as these will be offered by a number of member companies such as Cisco, HP, IBM, amongst others.

*ONF SampleTap* app uses the Apache 2.0 open source licence, and will reside in the ONF GitHub repository along with a forthcoming installation guide. [www.opennetworking.org](http://www.opennetworking.org)

### *Industrial Control Systems/SCADA Security Essentials – SANS Institute*

The SANS Institute's *ICS410: ICS/SCADA Security Essentials* course is dedicated to equipping security professionals and control system engineers with the cyber security skills needed to defend critical national infrastructure (CNI).

The five-day course will provide sessions on defending networks and devices against attack, complemented by an understanding of protecting CNI. The programme will also help delegates prepare for the new *Global Industrial Cyber Security Professional (GICSP)* certification exam.

*SANS ICS410: Industrial Control Systems/SCADA Security Essentials* will be held from 12-16 May at the Kensington Close Hotel, London. Those who register and pay before 1 April can qualify for discounted rates. [www.sans.org/info/152932](http://www.sans.org/info/152932)

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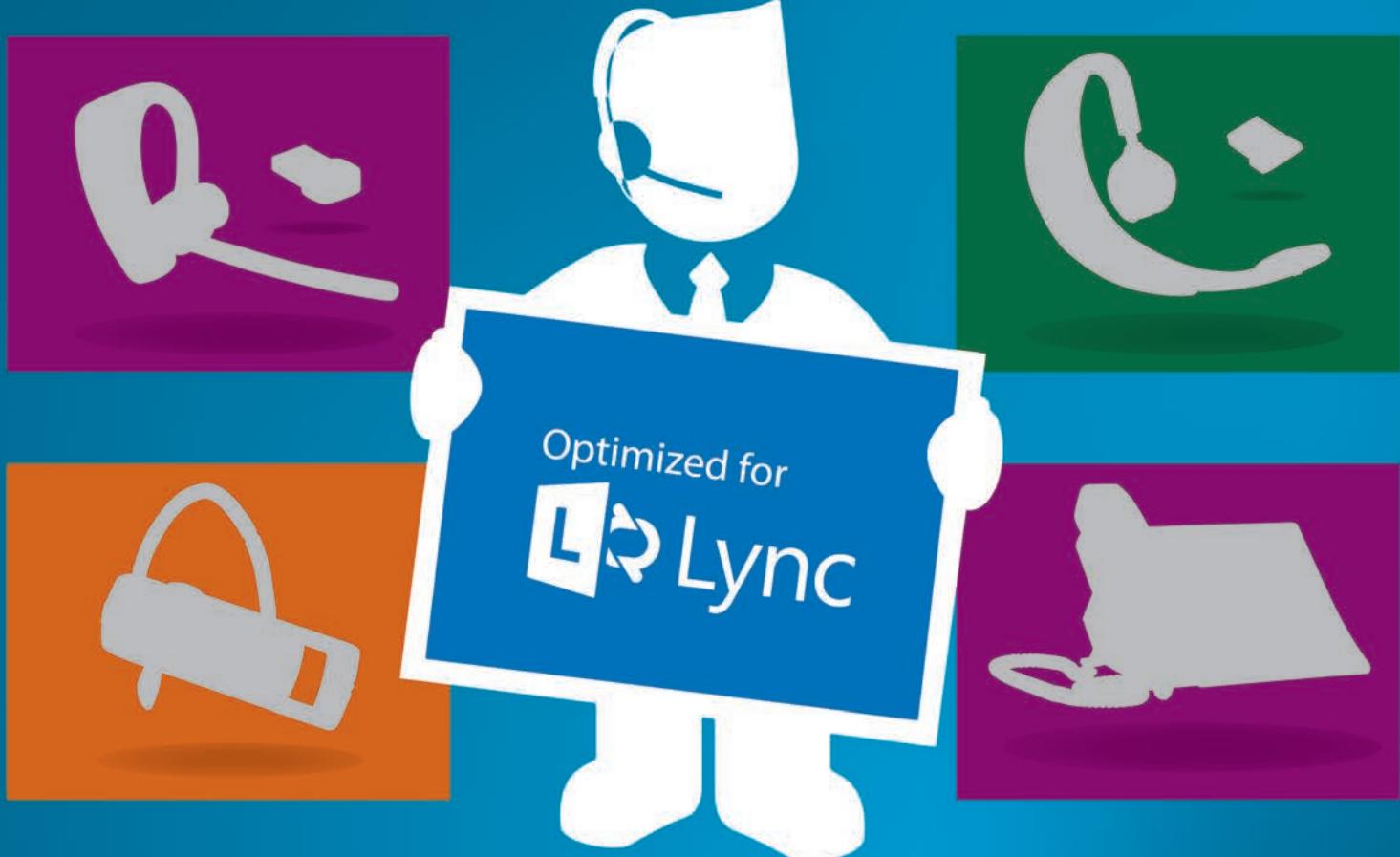
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