

networking

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Cabinet Office bemoans lack of women in cyber security sector

The UK Cabinet Office said women are still under-represented in the cyber security sector despite a “record number of schoolgirls making digital waves”.

In an address at the Women in Security Network conference June 18th, minister for the Cabinet Office David Lidington said that more needed to be done to create opportunities for females in the cyber security space.

“There remains a severe lack of diversity in the cyber industry,” he said. “Cyber security is among the most important aspects of our national defence today, so we need talent from every part of society enriching our workforces. Women have been pioneers in security and technology and we want to see this reflected in the cyber security sector too.”

The Center for Cyber Safety and

Education Report in 2017 revealed that women comprised only 8% of the UK cyber security profession and 11% of the global workforce. However, an online competition held this year by the National Cyber Security Centre (NCSC), as part of the CyberFirst initiative, saw close to 12,000 girls aged 12-13 years take part. Since it launched in 2016, more than 24,000 female students have taken part in the competition.

Furthermore, the Cabinet Office noted that promising youngsters from all over the UK have been enrolling on cyber security courses throughout 2019 and some have secured apprenticeships and bursaries via the CyberFirst programme.

In addition to engaging with future cyber prospective cyber professionals, the NCSC has created an online learning tool to enable workers to gain the skills they

require to guard themselves from potential cyber attacks. ‘Stay Safe Online: Top Tips for Staff’ targets SMEs, charities and the voluntary sector. It also shares awareness

with users on how cyber-attacks occur, where vulnerabilities are present and how to defend against cyber events.

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The Cabinet Office in Westminster, London, UK

UK retailers struggle with customer service and IT balance

UK retailers are struggling to balance various customer demands with their own fundamental tech and IT security needs.

According to a survey of 150 retail professionals conducted by SD-WAN edge application and security services firm Cybera, retailers are well aware of the need to positively differentiate themselves, with 83% of respondents in the survey citing that delivering an enhanced in-store customer experience is very important. The key to addressing all these new challenges is additional applications and services, the majority of which will rely on secure, stable, and scalable network technology. However, nearly one quarter (23%) of the respondents said they have not introduced additional services to their stores in the past 12 months.

The survey, carried out in May at Retail Expo 2019, also found that the primary inhibitors included cost, followed by IT security concerns and a belief that their network would not support additional applications.

“Organisations and consumers continue to be affected by various data breaches

that threaten to expose valuable private and financial information,” Hubert da Costa, vice president and general manager EMEA at Cybera, told *Networking+*. “Distributed enterprises with hundreds of small footprint locations, like convenience stores and other retail outlets, are particularly vulnerable. But the future of retail belongs to the retailer that offers an enhanced and differentiated customer experience.”

Da Costa added that technology and services that support and enforce well-planned business and security policies will play a major role in not only helping to protect companies and consumers from the risk of data breaches – “but will also enable them to deliver break-through apps and services quickly and easily that address customer experience demands”.

In addition, many enterprises said that the ever-evolving regulatory landscape, including GDPR, PCI, as well as the upcoming PSD2, was an added distraction. Some 47% said they were concerned about new regulatory demands and admitted it was time to review their technology and processes. ■

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Cyber security lacking women

Continued from page 1

Lidington added the new training tools would help any user gain the ability to boost the cyber resilience of UK enterprises.

NCSC engagement director Clare Gardiner said everybody has a part to play "in making the UK the safest place" to live and work online. "Employees are vital in helping keep their organisations' networks safe and need to be aware of how to protect themselves," added Gardiner. "Our recent Cyber Survey discovered that 25% of organisations don't see cyber security as a top priority and we hope this tool will empower staff to start conversations around best practice."

Meanwhile, specialised security company NTT has partnered with Global Digital Women (GDW) to launch the inaugural Women in Cybersecurity Awards as part of an initiative to recognise and inspire talented female professionals and newcomers in the cybersecurity industry across Europe. ■



Minister for the Cabinet Office, David Lidington, said that "Women have been pioneers in security and technology and we want to see this reflected in the cyber security sector too."

Riverbed and Versa sign OEM deal to boost UK enterprise offering

Riverbed is expanding its software-defined wide-area network (SD-WAN) capabilities courtesy of an original equipment manufacturing (OEM) partnership with software firm Versa Networks.

The arrangement will see Riverbed offer the Versa SD-WAN technology alongside its SteelConnect platform. Riverbed describes this as expanding its SD-WAN portfolio into the enterprise space using Versa's secure cloud IP software platform.

Paul Higley, vice president, northern Europe at Riverbed Technology told *Networking+* that with this partnership, Riverbed's UK-based private and public sector customers and partners "will benefit from the most complete enterprise SD-WAN solution" with integrated advanced enterprise-class technology.

"This is all supported by a world class professional services organisation, as we look to help businesses across the globe transform their networks to compete and win in the digital era," he said. "The exciting



Riverbed Technology headquarters in San Francisco, California, USA PHOTO: RIVERBED

partnership with Versa Networks expands the scope and market addressability of our offering, as we continue to provide our

customers with best in class SD-WAN solutions and push the boundaries of next generation connectivity." ■

FTSE 250 firms have 'non-existent' defences

Most FTSE 250 Index companies leave an average of 35 servers and devices exposed to the open internet, while 231 have "weak or non-existent" phishing defences, according to research by US

cyber security specialist Rapid7.

The report also revealed that many of the companies indicated how many and which cloud service providers they use in their DNS metadata. It found that 114 organisations use between two and seven cloud service providers.

Elsewhere, 19% of the FTSE 250+ organisations are not enforcing SSL/TLS security, while the study also found that while all industry sectors within the FTSE 250 had at least one organisation with a malware infection, administrative and professional organisations showed monthly signs of "regular compromise".

Incidents ranged from company resources being co-opted into denial-of-service (DoS) amplification attacks to signs of EternalBlue-based campaigns similar to WannaCry and NotPetya.

The findings from this report come from Rapid7's Project Sonar, which scans the internet for exposed systems and devices across a wide array of services, like web servers, mail servers, file servers, database servers and network equipment.

Bob Rudis, chief data scientist at Rapid7 told *Networking+* that the outcomes of the research behind the company's FTSE 250 ICER identify many areas in need of improvement.

"A key takeaway for individuals responsible for architecting, deploying and securing an organisation's networks/data centre is to use your indispensable domain knowledge," he said. "That combined with strategic investments in

solutions that provide visibility into what traffic is coming out of your organisation can help identify malicious or anomalous traffic as soon as possible."

Rudis added that there is currently a great deal of focus on "threat intelligence" but the "network intelligence" embedded within these teams may be even more valuable. "In each ICER we've captured malicious and misconfigured traffic hitting our unadvertised honeypots from companies in every industry across each regional index," he said. "Network managers and engineers can and should be crucial allies of the security team and are in the best position to enable robust observation along with rapid detection and response."

The three-month long study included respondents from a number of sectors, including financial services, healthcare, manufacturing and utilities. ■



The report found that 19% of the FTSE 250+ organisations are not enforcing SSL/TLS security

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UKCloud and Moogsoft team up to enable AI

UKCloud has extended its relationship with artificial intelligence for IT operations (AIOps) provider Moogsoft by integrating its platform and making it available to all UK public sector organisations.

The cloud specialist said the availability of the platform would help drive intelligent operations in a multi-cloud environment.

UKCloud added that it has already benefited from the implementation of Moogsoft's AIOps solutions, which enabled the company's engineers to work faster and smarter. It said that the Moogsoft AIOps gives context and correlates alerts from disparate monitoring systems, providing a much quicker time to resolution by exposing the root cause of an issue.

"Moogsoft has transformed two key areas for us as a business," says UKCloud chief operating officer Karsten Smet. "Firstly, we are able to proactively understand alerts, which may have a future impact on our infrastructure as Moogsoft intelligently correlates data from the various monitoring systems we implement across our stack. We can quickly understand when a situation is changing or may cause service impact moving forward.

"Secondly, we've been able to consolidate from multiple monitoring screens down to a single pane of glass."

Smet said, as a result, UKCloud's NOC engineers no longer have to manually correlate between disparate alerts on different systems. ■

Kerlink and Tata announce partnership

IoT specialist Kerlink and Tata Communications Transformation Services (TCTS) have joined forces to promote the LoRaWAN network deployments globally.

The two companies said they will demonstrate to cities, large multinationals start-up IoT connectivity providers how LoRa technology is one of the most responsive and reliable protocols for IoT connectivity.

They plan to offer easily installed and managed networks that include the full range of smart-city applications for lighting, parking, building, energy and refuse management, as well smart agriculture, metering, and safety and security applications.

"Despite the rapid growth of IoT, many companies and cities are still searching for a private IoT network solution that can be customized for their specific goals and deployed and managed easily," said Madhusudhan Mysore, executive chairman and chief executive officer at Tata Communications Transformation Services. "TCTS and Kerlink will focus on this market and demonstrate – based on extensive telecom experience, multiple IoT use cases in critical applications, and a proven record of deployments around the world – that LoRaWAN technology is the ideal private-network solution for these groups." ■

SysGroup buys Bristol managed services business for £1.45m

Cloud hosting firm SysGroup has acquired Bristol B2B managed services firm Hub Network Services (HNS) in a £1.45m deal.

The agreement will see the latter's network infrastructure, supply agreements and industry reputation complement SysGroup's existing managed IT and cloud hosting offerings in the enlarged business.

In its last trading year, Hub delivered revenues and pre-tax profits of £1.84m and £220,000, respectively, with revenue increasing 45% since 2016.

"I am thrilled to have made our second

acquisition of the year and look forward to working with the HNS team in due course," said Adam Binks, chief executive officer at SysGroup. "The acquisition of HNS further complements our existing managed services, enabling us to offer our customer base an even wider range of enterprise-grade managed connectivity services alongside our existing managed IT services portfolio. "As SysGroup continues to grow, we're excited by the prospects that lie ahead on our journey to become the leading provider of managed IT services to businesses in the UK and

the addition of the HNS team to the group is a big step forward on that journey."

Established in 1997, HNS provides connectivity and co-location services to approximately 120 customers on both a direct and indirect basis. Its clients typically contract for 36-month periods.

AIM-listed SysGroup, which also has offices in London, Telford and Coventry, told investors that HNS' existing management would remain with the group for three months to ensure a smooth transition with regards to the handover of day-to-day operations. ■

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North Wales gets £7m for broadband upgrade

North Wales has been given a £7m cash injection from the UK government to bring ultrafast broadband connectivity to its public sector organisations.

The funding, which has been approved by the Department for Digital, Culture, Media and Sport (DCMS) under the government's new digital programme, will be used to transition hospitals, GP surgeries, libraries from copper-based services to full-fibre optic provision under the Local Full Fibre Network (LFFN) programme.

"We're building a Britain that's fit for the future and our plans for a national full fibre broadband network underpin our modern industrial strategy," said UK minister for digital and the creative industries Margot James. "This £7m boost for gigabit speeds in Northern Wales will benefit homes and businesses in rural areas and I congratulate the North Wales Economic Ambition Board (NWEAB) in its successful bid."

The LFFN scheme was set up to help provide ultrafast broadband connectivity to important public buildings and businesses, with the hope that it results in broadband providers creating more connections to local businesses and homes. It has been taken forward by the NWEAB, a collaborative group of six local authorities, leaders in the private sector, colleges and universities.

NWEAB chair and Gwynedd council leader Dyfrig Siencyn said businesses depend on the group to deliver high quality public services and having connectivity "is essential to that", whether it is in schools, libraries or in health centres.

"We have to keep pace with what technology can offer our communities and not be left behind other regions who recognise the value of full fibre broadband," added Siencyn. ■



UK minister for digital and the creative industries Margot James said: "This £7m boost for gigabit speeds in Northern Wales will benefit homes and businesses in rural areas"

UK enterprises are challenged with security basics - Panaseer report

The Security leaders' peer report, based on a survey of 200 enterprise security leaders by Censuswide, has revealed concerns about visibility and access to trusted data leaving organisations open to attack.

It found that 89% of security leaders at large enterprises admitted to struggling with visibility and insight into trusted data. Meanwhile, nearly a third (31%) were concerned that a lack of visibility would impact their ability to adhere to regulations.

The report further found that complex and fragmented IT environments have compounded the visibility challenges for security teams. It said these issues "are being exacerbated" by the sheer number of security tools in use. "On average, enterprise security teams are grappling to manage an average of 57.1 discreet security tools," the report said. "Over a quarter of respondents (26.5%) claimed to be running 76+ security tools across their organisation."

Panaseer said the survey results indicated that "as well as obfuscating visibility", the security tools were not necessarily helping to make organisations safer. When asked about the key drivers for new security initiatives and tools, 55% are being driven by external factors, such as regulations, while 32% said it was down to internal factors, such as board driven initiatives.

However, when asked how effective the current security tools were, 70.5% of security leaders admitted that they do not evaluate a security tool based on its impact on reducing cyber risk.

"Ultimately we are buying tools and not switching them on, because we lack visibility across security controls and technical assets," said Nik Whitfield, chief executive



The report found that 89% of security leaders at large enterprises admitted to struggling with visibility and insight into trusted data

officer, Panaseer. "Buying more tools does not equate to enhanced security. Ironically in many cases they impair visibility and cause bigger headaches as they often integrate poorly, have overlapping functionality and gaps in coverage."

The report said that in order to help overcome these visibility issues and satisfy requests for information from internal and external parties, security leaders are having to direct their staff to spend an inordinate amount of time compiling manual reports, across their large number of discreet tools. This has resulted in security teams now spending over a third of their time (36%) manually producing reports.

It found that the biggest task is formatting and presenting data (38.46%), followed by

moving data (34.62%) across spreadsheets.

A massive 70% of security teams said they use manually compiled data for reporting to the board, while 57% claimed they send manual reports to regulators and 50% said that they shared manually collated reports with auditors.

"Manual reporting creates a huge overhead for the business. It also means that during a cyber skills shortage, we have specialist staff wasted doing very basic work," said Whitfield. "Manual reports are so prone to error, as they can only give a single snapshot in time and are then out of date almost immediately. Automation is an opportunity to enable greater speed, error reduction and crucially enhanced visibility." ■

Riello UPS secures prestigious accreditation

Riello UPS, the manufacturer of uninterruptible power supplies and standby power systems, has obtained the much-coveted ISO 27001 certification, which "proves the power protection company's commitment to data security best practice". Awarded following the successful completion of an independent audit, ISO 27001 is the only internationally-recognised standard for information security management.

In order to secure the certification, Riello UPS had to prove it has the necessary policies, procedures and controls in place

to protect and safely manage its data in all forms, both online and offline.

Furthermore, achieving ISO 27001 also demonstrates compliance with important directives such as GDPR and NIS (network and information systems) regulations.

"ISO 27001 is the gold standard for information security and our team have worked tirelessly to ensure we've achieved certification," said Riello UPS general manager Leo Craig. "The independent assessor even praised us for our preparedness, saying it was one of the best audits he'd ever undertaken."

He added the accreditation provided extra assurance to customers that Riello UPS has got all the necessary processes in place to protect data from any harmful attacks or breaches.

"Whether it's adopting internationally-recognised best practice like our numerous ISO accreditations, introducing industry-leading offers such as our extended 5-year warranty as standard on all UPS up to 3 kVA, or ensuring we have the country's largest stockholding of UPS, everything we do is focused on going the extra mile for our customers," Craig said. ■

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Oxford gets £150m cash injection for AI research

The University of Oxford has received a £150m donation from the US private equity billionaire Stephen Schwarzman to fund humanities research and tackle looming social issues linked to artificial intelligence (AI).

The Stephen A. Schwarzman Centre for the Humanities will unite all of Oxford's humanities programmes under one roof — including English, history, linguistics, philosophy and theology and religion. It will also house a new Institute for Ethics in AI, which will focus on studying the ethical implications of artificial intelligence and other new technology. The institute is expected to open by 2024.

Thought to be the largest single gift to a British university, the UK government described the donation as a “globally significant” investment in Britain. It also comes at a critical time for universities as they face uncertainty over research funding because of Brexit.

Schwarzman, who has advised a raft of Republican presidents over the years, including Donald Trump, is the chief executive



Thought to be the largest single gift to a British university, the UK government described the donation to Oxford (pictured) as a “globally significant” investment in Britain

of the private equity firm Blackstone. His lavish lifestyle as a Wall Street financier has attracted criticism in the past, but more recently he has turned into a major donor

to education and a philanthropist.

He said he was initially attracted to the idea after being approached by Louise Richardson, Oxford's vice-chancellor, as

well as by his memories of visiting Oxford as a teenager in 1963. However, he said he also saw the bigger picture.

“But the second thing was the excellence of the areas that this project is involved with, and the fit between what Oxford is doing and the values that they have been part of developing for western civilisation and the need to apply those core values to this rapidly growing area of technology,” Schwarzman added.

Some economists and commentators have warned the expansion of artificial intelligence could have a negative impact on society — including the loss of jobs due to automation — in what is sometimes called the “fourth industrial revolution”.

Academics have also aired concerns about the potential for malicious use in cyber warfare and the subverting of democracy.

Schwarzman's donation to Oxford follows a £279m gift he made to the Massachusetts Institute of Technology (MIT) in the US to establish a centre for computing and artificial intelligence. ■

SSE Telecoms signs new strategic deal with Cityfibre

Business connectivity provider SSE Telecoms and fibre optic network business Cityfibre have signed a new strategic partnership, which extends their existing relationship by allowing both sides to exploit each other's networks and services.

SSE currently operates a 12,000km+ long fibre optic and ethernet network across the UK, while Cityfibre's dark fibre and FTTP broadband services are present in over 50 towns and cities. The company is also rolling out a new 1Gbps FTTH ISP network to reach five million homes by 2025.

Under the terms of the deal, Cityfibre will be joining the ranks of SSE's edge plus providers for high capacity ethernet services (up to 1Gbps, with 10Gbps via bespoke solutions) and their related LIVEQUOTE price comparison tool.

“As enterprises evaluate the way they invest in network solutions and suppliers, our partnership with CityFibre offers a unique opportunity for network managers to expand their network reach, delivering the high-capacity Ethernet services in a more seamless way thanks to our portal, LIVEQUOTE,” Colin Sempill, chief executive at SSE Enterprise Telecoms, told Networking+. “This will ultimately result in freeing up more time to innovating and delivering exceptional customer experience.

“To support this, we're on a mission to improve the way businesses purchase network services and bringing on CityFibre as a strategic edge plus partner means more choice for customers selecting a service provider. Ethernet service providers will benefit from this partnership with access to CityFibre's diverse metro networks across 15 UK cities, including Leeds, Sheffield, Edinburgh and Glasgow. Suppliers now have more ethernet service choice outside of the larger incumbents.”

An additional nine cities are set to be added to the list before the end of 2019. ■

Cambridge tech start-up nets £5m for expansion

Technology start-up UltraSoC has raised £5m in an equity funding round so it can expand into the safety and security space.

The firm will use the funds to grow its worldwide operations to address emerging opportunities in the cyber security, high-reliability and safety-critical systems markets. It will also recruit hardware and software engineers at its headquarters in Cambridge and design centre in Bristol.

UltraSoc secured the funds after eCAPITAL and Seraphim Capital joined previous investors Indaco Venture Partners, Octopus Ventures, Oxford Capital, Techgate

and businessman Guillaume d'Eyssautier.

Willi Mannheims, managing partner at eCAPITAL and James Bruegger, managing partner and investment director, Seraphim Capital will join the UltraSoC board as investor director and observer respectively.

“Developers are struggling to cope with the need for trusted solutions for cyber security and functional safety,” said UltraSoC Chairman, Alberto Sangiovanni-Vincentelli. “UltraSoC is uniquely able to provide such features at the fundamental hardware level. eCAPITAL and Seraphim add sector-specific focus and expertise in cyber security and in the

aerospace ecosystem, where functional safety and reliability are paramount. I'm delighted to have secured their support alongside our existing major investors who have recommitted in this latest funding round.”

The company's chief executive officer Rupert Baines added that some customers and investors are now recognising the strategic potential for UltraSoc's technology in implementing functional safety and cyber security features.

“This funding round will enable us to grasp that opportunity, which I believe we are uniquely equipped to address,” he said. ■

Cannon Technologies now leasing its modular data centre range

Cannon Technologies, the international manufacturer and supplier of turnkey data centre solutions, has taken the unusual step of introducing a “pay as you go” model by leasing its Globe Trotter transportable modular data centre range.

With a minimum lease period of one year, enterprises can now hire items from this range for their short or medium-term needs. It will also allow enterprises a temporary solution during a period where facilities need to be moved from one location to another. Alternatively, this service can also be used by companies that are looking for an improvement to

a current set-up but need time to commit to a permanent solution.

Furthermore, the move means organisations can use their budgets efficiently while their technical needs are met.

“This unique data centre leasing offering is the latest addition to our extensive modular data centre product and service portfolio, and one that will be invaluable to those looking for a flexible and cost-effective solution to their capacity needs,” said Matthew Goulding, managing director of Cannon Technologies.

“The Globe Trotter range offers the



With a minimum lease period of one year, enterprises can now hire items from Cannon's Globe Trotter range for their short or medium-term needs

most resilient transportable modular data centre options available today and is proven to provide unrivalled levels of performance, scalability and functionality, in all kinds of environments.” ■

Orange Business Services and Cisco take on SD-LAN

Orange Business Services (OBS) and Cisco have built on their joint SD-WAN co-innovation programme by coming together again to take on SD-LAN.

The pair will tailor software-defined local area network (SD-LAN) in Orange's Open Labs program. Using a mix of physical and virtual resources, Open Labs addresses customers' business challenges and use cases by using network automation, analytics and security.

The French telecom giant said that by helping customers with their SD-WAN

deployments, 80% of the enterprises that took part in Open Labs for an SD-WAN proof of concept then signed up to SD-WAN pilots with OBS.

“From speaking to businesses in the UK, we're hearing about the many ways they want to innovate in an increasingly connected world,” Richard Kitney — hybrid connectivity specialist at OBS told *Networking+*. There's a growing number of devices connected to LANs and fixed and wireless IP data traffic is growing rapidly. We have seen significant take up in our Software Defined Wide Area

Network (SD-WAN) offerings, and this same functionality can be delivered in the Local Area Network (SD-LAN). This means ubiquitous visibility and control and business policy based networking across the whole environment”

Kitney added that the partnership was helping to create a co-innovation approach that will help businesses “to unlock the power of new network technology so that they will no longer be held back by the cost” and complexity that they might currently be experiencing. ■



VIEW FROM THE TOP...

Critical communications and the outsourced responsibility myth, by Nicolas Hauswald, CEO of ETELM

Why outsource elements of your enterprise technology?

It's a question that many organisations and network managers specifically are continuously grappling with. The drivers that business leaders rightly cite include the need to draw on expertise and experience that is unavailable in-house, the desire to streamline management and therefore reduce costs and complexity, and the wish to free up internal resource to focus on strategy and innovation.

Nevertheless, it is important to remember that outsourcing elements of a technology infrastructure does not automatically absolve an organisation from responsibility for managing that infrastructure.

Consider communications technology. When an organisation has outsourced elements of communications infrastructure – or even the entire infrastructure – it still remains the ultimate port of call for customers, partners or other key stakeholders if something goes wrong – and that means that they need to retain some element of accountability.

Preparing for all occasions

We're already familiar with this concept when it comes to other aspects of infrastructure in the UK. Organisations such as hospitals, for example, have long had emergency backup power generators in place, so that if a massive failure should hit their mains electricity supplier, they can still ensure the delivery of enough power

to manage their lifesaving equipment and processes. This isn't about a refusal to trust the mains suppliers – it is about having a sensible insurance policy in place should the worst happen. Hospitals rightly recognise that their electricity supply is a truly mission-critical part of their infrastructure – after all, a power cut affecting a ventilator could genuinely be a matter of life or death.

The same model, then, should apply to other mission-critical aspects of organisations' technology infrastructure – such as critical communications.

Which are mission-critical?

It is easy to imagine that 'mission-critical' only applies in a few select communications contexts, such as public safety and emergency services, who run their own private communication systems precisely because they are so dependent on them.

But the reality is that for the vast majority of network managers, a problem with their communications infrastructure could have a dramatic impact on operations, revenue and reputation. Consider, for example, the UK's airports which rely on fast, effective lines of communication between safety and security personnel. If those lines of communication fail, even for a short period, hundreds or thousands of flights could be postponed or cancelled. The knock-on effect in terms of disruption, lost income and reputational damage could be enormous.

Consider, also, any organisation with a remote or mobile workforce, from industrial and utilities firms sending field

service operatives out to carry repairs and maintenance, to transport organisations with fleets of vehicles to manage. All such organisations need clear lines of communication between those moving workforces and their central management. Lives might not be at risk if those lines of communication fail – but the life of the business might be.

Public mobile operators' role

Mission-critical communications, then, are more common than you might think. And so too are cases of organisations outsourcing elements of their communications infrastructures to third parties.

For example, more and more organisations are choosing to use cellular networks to underpin their communications. The best example of this in the UK is the Emergency Services Network (ESN) project, which will replace the existing Airwave TETRA network used by the emergency services with a 4G network delivered by EE.

As other commercial rollouts of cellular networks gather pace and we enter the LTE era, there are powerful motivations for network managers to use LTE for their core communications, even if this isn't a specially designed network, as is the case with ESN, and instead simply relies on public cellular networks. Such networks promise faster speeds, lower latency and greater data capacity than ever before – perfect for data-rich applications and rapid exchange of information.

These benefits are undoubtedly real

and should be embraced by organisations across multiple sectors – but they come with a caveat. Should the mobile cellular provider in question suffer an outage or service failure or be required to switch off the network in an emergency situation such as a terrorist incident then that downtime will be passed on to organisations relying on said network for their communications. And if those communications are truly mission-critical, then the consequences could be severe. Think of the airport example outlined above, where the airline has used an LTE network from a public mobile provider to underpin the communications between security staff. Airlines cannot simply blame its communications provider in the case of that provider experiencing a service outage – it has to handle a massive fallout.

Managing the risk

This is why network managers for critical communications system always need to retain an element of private network ownership, even if outsourced providers are used for the core infrastructure. Day-to-day responsibility for critical communications can be outsourced to great effect, generating all of the benefits outlined at the beginning of this article – but ultimate accountability has to remain in-house.

In practice, this means a hybrid approach to mission-critical communications networks, where next-generation LTE networks are integrated with in-house technology.

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ON THE NETWORK...

Unified communications as a service brings a competitive edge, by *Richard Buxton, head of collaboration at Node4*

How UCaaS is becoming the key driver for agile businesses around the world

The business landscape is constantly being shaped and moulded by new technologies and services. It's probably safe to say that the '9 to 5', desk-and-telephone-bound office of years gone by has all but disappeared, replaced by more flexible working hours, shared information and remote working practices.

The latter has largely been driven by the advent of cloud technology, which delivers solutions and services that are accessible, efficient and price competitive. A good example of this is Unified Communications

as a Service (UCaaS), which delivers unified communications (UC) such as voice, messaging, video conferencing, file sharing and collaboration via a cloud model from a single application or platform, enabling people to interact quickly in multiple ways. The fact that UCaaS facilitates collaboration in this way, allowing users to be more productive and efficient when they're not in the office, means it automatically supports a more agile business approach. So much so that Gartner predicts there will be a steady increase in Unified Communications spending, and the industry has seen that the migration from on-premises UC solutions to a cloud first model, i.e. UCaaS, is well underway.

For businesses that depend on UC and are keen to adopt an agile business way of working, UCaaS may well be the answer.

Driving collaboration and productivity

UCaaS solutions are an extremely efficient way to encourage collaboration and support employee productivity. They're light on capital expenditure, and have the flexibility and scalability to add or remove users as required. Choosing a hosted UCaaS solution means that you gain access to the latest functionality, have to deal with less internal business admin, have a guaranteed service level agreement (SLA), and a level of expertise

offered that can be hard to achieve internally, particularly for smaller businesses.

Added benefits include being able to:

- Connect any device and collaborate across one service
- Allow employees to securely file share and connect easily, wherever they are
- Identify call capacity trends, and plan and allocate resources efficiently
- Control cost spikes, detect inefficiencies and manage calls better
- Report and analyse on call data, across multiple departments and branches
- Ensure compliance with extended storage needs



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With so many UCaaS providers and solutions available though, and with issues such as cloud integration, security, compliance and support to consider, how do you start comparing UCaaS providers and decide which solutions are worth the investment?

What to consider when comparing UCaaS providers

When it comes to comparing UCaaS providers, start with what you know best – your business. Establish targets and expectations that are practical and achievable in the short, medium, and longer terms. It might seem obvious, but planning against targets will help you to accurately and consistently measure the impact of your strategy, and will allow you to look for third party solutions that align with your business' needs and budget.

Keep these key considerations in mind:

1. A list of UCaaS applications offered. What are your UCaaS functionality requirements? Does the provider meet or exceed these with its offering?
2. The cost to subscribe. Cost will always be a key factor in any outsourcing decision-making. Does the provider only offer the required functionality at a premium cost? Whereabouts do you choose to compromise?
3. SLA terms. When you're relying on a third-party provider to deliver business-critical functionality, solid SLAs are essential to ensure that uptime and performance meet your business' requirements.
4. Network access requirements. How much access to your network does the provider need in order to implement and support its UCaaS solution? How does this impact on your business' security and compliance posture?
5. Track record and evidence of happy customers. What do the provider's existing customers say about the services they receive? Are they satisfied with their UCaaS solutions, and more broadly working and communicating on a regular basis with the provider itself?

Supporting a connected and agile workforce

Unified Communications has come a long way since the first IP-based networks were built more than 20 years ago - in the UK alone around two million businesses have adopted either hosted voice or UC, and it's predicted that by 2020, 50% of businesses will have taken on hosted solutions.

UC has ushered in the era of the 'connected employee', bringing a more agile, flexible, working culture to many businesses. Investing in the right UCaaS solution will help ensure that your business embraces and drives this 'new normal' into the next generation of UC and collaboration, for the benefit of both your employees and business bottom line.

Home sweet home: laying the foundations for a hi-tech future

Construction businesses and caravan park welcome IT upgrades

Re-Boot: old construction firm gets modern makeover



Henry Boot's presence in the construction sector dates back to 1886, making it one of the most established firms in the business.

Over the last few years, its IT set-up went from primarily focusing on support back-office tasks to becoming the platform for the company's entire operations. That's a tall order for a group that employs around 500 people and is split into six primary businesses.

As such, Henry Boot became reliant on having access to highly available IT systems, along with the ability to rapidly restore data and operations after an incident. However, the company didn't move with the times. Its slow and dated technology infrastructure meant any outage could have crippled its operations.

It gets worse. Data backups were taking up to 20 hours to complete and the solutions required high levels of maintenance.

The 133-year-old business had to get modern...and fast.

In came Arcserve, a provider of data protection, replication and recovery solutions for enterprise and mid-market businesses.

During an initial trial period, Henry Boot deployed a 16 terabyte 8300 Arcserve Appliance to each of its two head offices, protecting 145 terabytes of raw data. This was deduplicated at a rate of 81% down to just 28 terabytes and replicated between key sites to provide additional protection.

A successful trial saw the supplementary purchase of two 80 terabyte 8400 Arcserve Appliances to facilitate the protection of additional workloads including Office 365.

Three to four incremental backups are now taken throughout the day, while a full overnight backup takes just two hours instead of 20. Furthermore, Arcserve's instant VM feature provides access to critical servers in less than five minutes from recovery points housed on the appliance datastore.

"With two Arcserve appliances on different sites, we can ensure continuity if any systems go down. In fact, the recent additional purchases enabled an appliance for our London office to ensure that our disaster recovery plan is completely failsafe," explained Daniel Dracup, Henry Boot's IT project systems manager.

Henry Boot's IT team can now take a more strategic, long-term approach to data management. For example, the company now has different tiers of server according to business criticality and new requirements such as GDPR compliance can now be more easily addressed.

Walled off: builder cements deal to keep its data safe

Now the UK's biggest housebuilder, the story of Barratt Developments began in 1953.

Sir Lawrie Barratt, then a young

accountant, could not afford to buy the house he wanted so he designed and helped to build one himself, including digging the footings and mixing the concrete.

With four bedrooms, it cost £1,750 and the experience prompted him to go into commercial house building in 1958. Sir Lawrie died in December 2012, aged 85.

Barratt Developments now builds nearly 17,600 homes a year (2018) – ranging from one-bedroom flats to houses with six bedrooms – and has more than 6,000 employees.

With the introduction of the GDPR (General Data Protection Regulation) by the EU, Barratt Developments sought a product that would ensure compliance.

The company's group IT director, Gareth Braithwaite, said: "It was clear that our manual efforts to achieve GDPR compliance were not only resource-intensive, but also susceptible to spreadsheet error."

Following a demonstration, Barratt chose the GDPR product by SureCloud, a UK firm founded in 2006, which is delivered from the company's cloud-based GRC (governance, risk and compliance) platform.

Braithwaite said: "This allows us the single point of control that we require to enable efficient and effective management of our GDPR obligations."

"Previously we used several systems in addition to spreadsheets, with duplicate information across all of them. We wanted to collate this into a single platform for greater efficiency, which we've now been able to achieve."

Following this, Barratt added three more applications from SureCloud to simplify its compliance obligations: the Information Security Management System (ISMS) Suite; Third-Party Risk Management; and Audit Management. They are also accessed from SureCloud's cloud-based platform.

ISMS Suite is said to enable Barratt to strengthen its security policies and procedures, while Third-Party Risk Management is designed to assess data security risks across Barratt's key third party data partners. And Audit Management is said to allow Barratt to plan, manage and track its audit requirements and obligations.



Happy glampers

Southfield Farm Caravan Park in Somerset decided it was time to embrace 'glamping'. In order to do this, the site opened an entirely new pitch area called The Pavilion. Comprising of 48 luxury pitches, the plan was to offer campers electric and piped gas, individually metered water and – most importantly – free Wi-Fi.

To achieve the latter the farm needed a company that could design and deploy a wireless network that could deal with the Wi-Fi challenges synonymous with a holiday park.

Wi-Fi has become a staple provision alongside water and energy in every industry, but arguably none more so than the hospitality

sector. People at leisure expect reliable wireless connectivity—anywhere, anytime.

Southfield Farm had a history of low bandwidth, which was often the cause of a poor Wi-Fi experience. As a result, it was imperative that any upgrade would provide enough bandwidth to cope with the high volume of traffic at the caravan park.

Integrator Affinity Networks needed to address the high level of RF interference the park experienced from not only the farm's own guests, but the other nearby parks.

2.4GHz and 5GHz ranges in the area were over-saturated, resulting in high levels of interference. Combined with the constant RF noise and interference from the guests themselves, the result was poor coverage, dropped connections and minuscule data rates.

Affinity sought out its trusted partner and distributor Purdicom, because the right product for the right solution was key. Purdicom started by supplying three high end Ruckus T300 access points to begin tackling the immense interference issue.

The Ruckus T300 series of 802.11ac access points provide consistent, reliable Wi-Fi in even the busiest of venues to extend range, improve throughput, and deliver solid performance. The series also uses patented Ruckus technologies such as BeamFlex+

support to direct Wi-Fi signal towards devices and ChannelFly to find less congested Wi-Fi channels with dynamic RF channel selection.

To further compensate for the busy channel frequencies, 200M of OS2 loose tube fibre was laid in 63mm ducting to deliver 1Gbps connectivity to the access points. The Ruckus APs can deliver speeds of 860MB on 5Ghz and 300MB on 2.4, so high quality back-haul is important.

Last but by no means least, Affinity deployed a dedicated 100MB/100MB leased line, which features a fully managed firewall with SNMP and NetFlow monitoring to ensure optimum performance of all available bandwidth.

The park has since re-opened to the public and the improved connectivity is conspicuous.

"Now got better internet access – not a bad price if you stay for a week," writes one happy camper.



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MADE TO CONNECT

SD-WAN: where do you start?

With around 60 SD-WAN providers all competing in the same space, Robert Shepherd asks the industry how an enterprise is supposed to choose between them

SD-WAN is a topic that's been gaining momentum for some time now, especially as industry experts and adopters become more attuned to its benefits. However, for the sake of the enterprises that need it but don't know what it is – as well as for the SD-WAN luddites out there – a definition of this alternative approach to network connectivity follows.

An acronym for software-defined networking in a wide area network, SD-WAN simplifies the management and operation of a WAN by decoupling the networking hardware from its control mechanism.

However, Anthony Senter, chief executive officer at SDWAN Solutions says that although SD-WAN might appear to be a new concept to many, the technology has been around for a lot longer than one might think.

"Talari is credited with developing the first SD-WAN type devices in 2008 – and in 2015 Silver Peak released its first

EdgeConnect device, the first SD-WAN to include WAN optimisation as a built-in feature," he says. "Around the same time Velocloud was starting to make its name and product heard."

The general consensus is that there are approximately 60 different SD-WAN providers in a crowded field, but Senter warns that a mere handful of vendors offer "top rated" solutions, while far too many are SD-WAN in name only.

"The SD-WAN market is destined to be worth billions of dollars by 2020, so that's why everyone wants a piece of the action," he adds.

While that may be true, in the 11 years or so that SD-WAN has been around – some claim it has been around even longer – take up by enterprises has been relatively slow. Why is that?

"I blame the confusion caused by sub-standard solutions being promoted as SD-WAN," says Senter. "With so

much conflicting information and a limited SD-WAN knowledge themselves, SD-WAN could seem like a daunting project. Customers are also used to the problems and delays around MPLS and are still thinking MPLS while talking about SD-WAN. More often than not,

customers still remember their MPLS installation nightmare, a catalogue of errors and way over delivery timescales, some taking up to two years to roll-out. Silver Peak rolled out 189 SD-WAN sites for Nuffield Health in just four months."

However, he warns that before

enterprises even start to entertain a beauty parade of SD-WAN providers, it's important that they know why one is needed in the first place.

"Think Toys R Us and Debenhams," says Senter. "Traditional networks are no longer fit for purpose as customers move

their applications to not just one cloud, but multi-cloud. Not having internet breakout at every site increases solution costs and overheads."

Like in any industry, partnering with another business requires a lot of faith, trust and an ability to step out of your comfort

zone. With that in mind, you have to carry out your research because it appears that if you choose the wrong company, it could cost you in more ways than one.

"A security breach will be biggest concern for hosted content," says lead analyst Sam Barker at Juniper Research.

"If the content is of a sensitive nature, then clients must consider the most secure platform."

For Jan Hein Bakkers, research director European enterprise communications and collaboration at market intelligence firm IDC: "The biggest risk is buying



PHOTO: SDWAN SOLUTIONS

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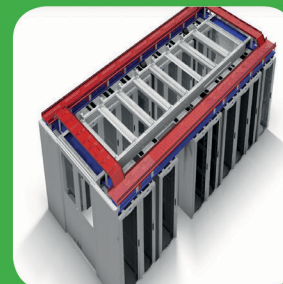
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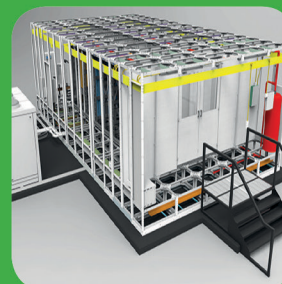
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Silver Peak's EdgeConnect device was the first SD-WAN to include WAN optimisation as a built-in feature

technology which, when you consider the fast-moving landscape of technology, may be problematic," says Sacke. "There can be a danger in purchasing based on a 'brand approach' without fully thinking through the 'best fit' of the technology to your organisational requirements. On the other hand, the 'as a service' model

a solution that does not deliver what a company expects. This can be caused by the performance, the expectations or a mix of both. Ensuring a common understanding and alignment of these with a prospective provider upfront will minimise this risk."

However, Nick Sacke, head of IoT and products at managed solutions provider Comms365 says buying into certain technology brands may mean being tied into a partnership for many years and so there could be a much wider contractual problem going forward.

"There is a danger that you may be locked in to a particular vendor



"Traditional networks are no longer fit for purpose as customers move their applications to not just one cloud, but multi-cloud."

*Anthony Senter,
chief executive officer,
SDWAN Solutions*

gives you the flexibility to potentially migrate between providers on shorter-term contracts; hence it's growing attraction as an option."

Sacke says it's important that enterprises "don't go looking for SD-WAN as a 'banner ad' technology" that will solve all network problems, apply it everywhere and expect the network to run itself – "many hours of work lie ahead to get it right".

He adds that companies must consider the challenge landscape for the business first and then see if SD-WAN is a fit for all the estate, or part of it (many new networks rolling out are hybrids). "Find a provider who is able to blend different technologies, including SD-WAN in order to achieve your required outcome, or you could be in for an expensive period in time and cash investment and then have to do the same exercise again," he concludes.

Joe Dilsaver, managing director at value added reseller (VAR) Aztex Solutions agrees and says due diligence is key because there is "a lot of hype in the market right now" as the market matures from early adopters to more mainstream offerings.

"There are numerous VARs and manufacturers offering a plethora of solutions which seek to address this market," Dilsaver says. "The market is in a state of flux with new products, services, prices and offerings being released on a regular basis. I have personally found that the best offerings offer both capex and opex options whilst delivering a flexible and scalable approach."

Barker says that a high level of flexibility in a platform's functionality is critical. "We have continued to see services migrate to the cloud over the past few years; ensuring that users are able to swiftly make changes to the network and release new functionality is essential when considering enterprise

"Platforms must offer high levels of security for their clients as it is likely that some content stored over a cloud-based solution will be of a sensitive nature."

*Sam Barker,
lead analyst,
Juniper Research*



users," he adds. "Additionally, platforms must offer high levels of security for their clients as it is likely that some content stored over a cloud-based solution will be of a sensitive nature."

Paul Griffiths, senior director, cloud infrastructure business unit, EMEA & APJ at Riverbed Technology, says as far as SD-WAN providers go, the enterprise's criteria should be broken down into three key considerations: will the solution enable simple, centralised management? how does it facilitate remote deployment? and what services are integrated for app and end-user experience?

"If you're considering a software-defined network it will be because you want to reduce complexity, so ensure your SD-WAN provider delivers this," he says. "Ask whether the solution offers one console for management of not just SD-WAN, but all the network services required to deliver app performance. Establish whether you will have a single source of truth and insights into end-to-end application and network performance, as well as end-user experience."

Griffiths adds that it is important not to overlook the value of a solution that allows you to issue plain-language

instructions, based on real-world business parameters, rather than getting bogged down with network constraints, addresses and arcane commands.

"An effective SD-WAN solution will enable anyone, regardless of skill level, to connect a branch location to the network just by plugging in power and data cables, with all configuration performed remotely, he continues. "If this isn't offered by the provider you're considering, then look elsewhere. Finally, several solutions will integrate critical network services, like end-to-end visibility, application acceleration, security, and path steering. Using a single vendor for multiple network services in this way will dramatically reduce complexity, making it a key evaluation criterion."

Of course, signing up for a new service not only requires making the right choice, but there's also the question of cost. If you don't understand SD-WAN 100%, how do you know what you should be paying and just what is value for money?

"What is critical is that organisations choose a model that is aligned with their in-house resource and expertise levels, as well as capex/opex preferences."

*Jan Hein Bakkers,
European enterprise communications
and collaboration research director,
IDC*



PHOTO: SDWAN SOLUTIONS



Michelle Arney, senior director product marketing at Cybera says SD-WAN implementation at the edge needs to remain price-sensitive and cognisant of the fact that small footprint businesses typically have little to no onsite IT staff. “Most SD-WAN ROI models look at replacing MPLS with broadband, but many distributed enterprises switched to broadband years ago so that model doesn’t make sense,” she adds. “The key to SD-WAN Edge by an MSP is the value of the managed service, not just the technology.”

Dilsaver says the “foremost identifier” is establishing a robust ROI. “As an example: what comms links do you have and how much do they cost?” he adds. “How can a SD-WAN solution allow you to reduce these costs? I had a client who deployed MPLS leased lines to each of its branch offices to ensure QOS and security. We were able to replace said comms infrastructure with broadband and deliver the same QOS and security with a Velocloud based solution which ultimately drove down costs to the point that the solution paid for itself in no time.”

He adds that an agreeable pricing model should ensure enterprises can scale in a manner that is relatively free of tie-in and offers no hidden costs. “Concepts such as licensing requirements for high availability appliances as well as vendors with both capex and opex models need to be strongly considered,” he says. “Scalability and cost

should be linear in nature with no nasty surprises based on the arbitrary constructs that some vendors implement.”

Senter says an enterprise should believe it is getting value for money if the solution delivers every function expected of it. “If it offers more bandwidth, is resilient, can be controlled from a single point, offers visibility right down to the application level, takes up less staff time, reduces downtime, is flexible, is designed for cloud application performance and might be similar cost to your existing network, or might be cheaper,” he adds.

“Regardless, if the SD-WAN network delivers all of the above then there’s no question that it is value for money. If some of the benefits above are missing then the value decreases. Customers have to consider both hard and soft costs associated with their network. A network’s real cost is not just connections and routers.”

A term that will undoubtedly come up in negotiations is “fully managed services”, but what should that include? In other words, what should you get for your money?

As far as Dilsaver is concerned, a fully managed service should incorporate “anything and everything” that the client requires. “An effective service compliments the customer’s inherent abilities and acumen and backfills any holes which are apparent,” he says. “Some customers are highly proficient with systems but lack experience with networking. Others are generally great at first- and second-line support for users

but require assistance with third line and complex technical issues that may arise. I have never seen two identical requirements in my 20 years within the industry. This is why effective managed services offerings must be modular in approach and span numerous disciplines. The proficiencies of the managed services

partner and the client’s organization must be intertwined in a symbiotic fashion. That is a partnership made to last.”

A veritable smörgåsbord of models is out there and so one thing is for sure – there’s something for everyone.

“There are different deployment models, ranging from do-it-yourself to fully managed services. “One model is not necessarily better than the other,” says Bakkers. “What is critical is that organisations choose a model that is aligned with their in-house resource and expertise levels, as well as capex/opex preferences.”

Kristian Thyregod, vice president and general manager of EMEA at Silver Peak says it’s important that enterprises explore a range of deployment options when considering an SD-WAN, including deployment model flexibility.

“While some enterprises will opt for a DIY deployment model where their IT organisation designs, deploys and manages its own SD-WAN, others, perhaps with limited IT resources, will opt for a managed SD-WAN service approach where they turn to an MSP (managed service provider) for a turnkey deployment,” he says. “When considering a managed SD-WAN service, enterprises should require the MSP to select an underlying SD-WAN vendor with the advanced capabilities outlined above to fully realise the benefits of cost savings from efficient use of low-cost internet and wireless links, centralised control and management, network agility and speed to deployment of new sites, as well as optimised cloud connectivity.”

At the end of the day, selecting the right partner is critical – so the message to enterprises is simple: just be clear about what you want. ■



“Ask whether the solution offers one console for management of not just SD-WAN, but all the network services required to deliver app performance.”

*Paul Griffiths,
senior director, cloud infrastructure
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Power to protect

Mike Elms of Centiel UK presents his Top Tips to buying a UPS, and we take a look at a selection of new products



In an always-on world, we depend on being connected round the clock with immediate access to information and with zero downtime. We want a system that never fails.

Reliability is often considered the key attribute when purchasing a UPS. Yet a system can be reliable over a period of time, but still fail on a particular occasion with far-reaching consequences. Therefore, availability must be your No. 1 priority.

In recent years, modular systems have introduced a significant step-change in the industry. When properly configured, they are designed to maximise load availability and system efficiency simultaneously.

This is because modular systems have a single frame, containing a number of power modules which run together and share the load equally. If one fails it automatically isolates itself from the system and the remaining modules continue to support the critical load, preserving system availability.

Furthermore, with decentralised architecture there is no single point of failure, contributing to the highest level of availability. In addition with hot swappability the load also remains protected even when any individual module is being replaced.

Another consideration is total cost of ownership (TCO).

Purchasing poor quality or inferior

designed products can rapidly drive up overall investment costs. Batteries and other components may need to be replaced within a short time – think fans, capacitors etc. Efficiency and lower TCO are inextricably linked. Look for a UPS with the highest online efficiency; as well as reducing energy costs they are environmentally friendly.

Purchasing directly from a manufacturer also cuts out the middle man, reducing cost and providing the peace of mind of full factory support and servicing, plus that all important factory warranty.

Consider also Li-ion. Unlike lead acid, Li-ion batteries are happy running at a temperature of high 20/low 30 degrees centigrade. Similarly, most IT systems work at >25 degrees C and the UPS technology itself can work well up to 40 degrees C. By contrast, an industry standard estimate is that for every 10 degrees above 20 C the operating life of a lead-acid (VRLA) battery is halved.

Switching to Li-ion could mean significant savings on running costs and a reduced carbon footprint. However, not all UPS are Li-ion ready. Technology needs to be compatible to “talk” to the Li-ion battery monitoring system.

Remember that no matter how sturdy and state-of-the-art, your UPS equipment can't always be relied on to look after itself! So do have a planned maintenance programme for ongoing, reliable operation and safe upkeep.

Mike Elms, managing director, Centiel UK

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It is a common myth that using batteries as the interim energy store to bridge the gap between mains failure and engine start somehow adds to the reliability of the overall system. That was true some years ago when engine starting was far less reliable and when modern data centres did not exist.

Fast forward now to the days of virtual redundancy, unmanned facilities and more complex shutdown procedures and the focus needs to be not on the duration of the interim ride-through available but on the dependability of the ride-through. That's become even more important as an increasing focus on cost has driven layers of margin out of the typical data centre design. Today, battery failure

and unpredictability is no longer an option that can be overcome by long duration autonomy and excessive redundancy.

Reports show that the most common cause for power outage in a data centre can be directly attributed to faults in batteries. For diesel generators it is just 3% and a considerable number of outages within this 3% can also be attributed to battery problems. It is self-evident that eliminating batteries will improve the reliability of a data centre.

Modern diesel engine generators are as reliable as modern car engines when it comes to starting. Even multiple parallel sets will reliably start up, synchronize and accept full load within a period less than 15 seconds. The Piller Powerbridge™ & CPM will give at least a 30% headroom above this*, thereby allowing a delay in diesel start if preferred. By delaying the diesel start, more than 98% of all mains disturbances can be comfortably handled internal to the UPS and when a call to engine is required, you can be certain that sufficient capacity exists in the Powerbridge™ energy store.

That's more than can be said for many battery installations. Piller has over 7000 flywheels in operation, most of which are linked to diesel generators. We have the knowledge and experience to ensure a perfect partnership between engine and UPS, to provide a more reliable, dependable and available system each time and every time.

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New from **CertaUPS** is a range of Li-ion UPS models. Available as a 1U, 1000VA and a 2U 1000VA to 3000VA, they are said to be ideal for server racks where space is at a premium.

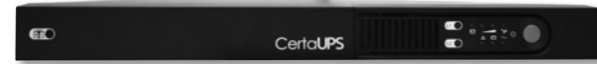
The company says they provide complete resilience for sensitive loads and benefit from a hot swappable battery design so that engineering work can be carried out without powering off.

Taking up less space than conventional UPS products, CertaUPS says that when comparing like for like on battery runtime, its new models offer three times the energy density and double the expected design

life compared to traditional VRLA (Valve Regulated Lead Acid) batteries.

They include operational features such as programmable outlets, allocating less essential load to the critical load in an external mains outage.

CertaUPS says that although Li-ion has a higher initial cost, when considering the long-term total cost of ownership, the new products tick all the boxes from design to reliability. They are smaller, lighter, offer longer life, improved power density and require much less maintenance.



Sitting at 380mm deep, the new space-saving **Sentinel Rack** (SER) from **Riello UPS** is said to be an ideal solution to upgrade power in server rooms with legacy 600mm racks.

Available in 1500VA and 3000VA versions, the Sentinel Rack is a rack-mounted version of the Riello's Sentinel Pro product, which the company says is already a best-seller with IT resellers and network admins.

It is a single-phase UPS designed to deliver high levels of availability and protection for servers, data processing IT systems and telecoms networks.



Riello says it offers user-friendly plug and play installation and delivers a power factor of 0.9 and high overload capacity of up to 150 per cent. It comes with a choice of operating modes including Smart Active, Frequency Converter or Eco that either reduce power consumption or enhance UPS system performance.

For installations requiring several hours of extended runtime, the SER 3000 ER model has its own 6A battery charger and extra battery packs.

The Sentinel Rack series is included in Riello UPS's extended five-year warranty on all units up to and including 3 kVA.

Lower-power users now have the choice of a 10 kW UPS from **ABB** which features what the company calls double conversion.

Designed for single-phase applications, the **PowerValue 11T G2** first converts incoming AC to DC from which the output AC is then synthesized. This, it says, isolates the output voltage waveform from any disturbance in the input AC, guaranteeing clean power.

ABB says the new tower-only model has an efficiency of up to 95 per cent plus further gains by adjusting to match the load. Suggested uses are for server rooms,

advertising displays, turnstiles, lab equipment, transport signalling systems, ATMs and vending machines.

Up to three units can be connected in parallel for redundancy or for power delivery of up to 30 kW and up to four optional external battery modules (EBMs) can supplement inbuilt batteries to extend runtime to a claimed two hours plus.



The **PowerWave 9250DPA** UPS is said to have the lowest cost of ownership in its class and deliver energy efficiency in true online mode across a wide range of loads

Kohler Uninterruptible Power says that, thanks to three-level interleaved technology, the UPS achieves an efficiency of more than 97 per cent in a wide operating range when the load is between 25 and 75 per cent.



The company says that with Xtra VFI mode, the UPS automatically adjusts the number of active modules according to load requirements. Modules not

needed are switched to standby and activate if the load increases or the mains fails.

Up to six 250kW frames and up to 30 modules can be paralleled for 1.5MW of power. And it says that ring-bus communication ensures there is no single point of failure.

Kohler says that Decentralised Parallel Architecture (DPA) means each UPS module contains the hardware and software required for full system operation. They share no common components leading to high availability.

Maintenance is said to be fast and secure – it can take as little as 10 minutes to extract a module, replace a consumable part and be back online. There is a graphical display to view system status, commands and measurements.

Designed mainly for desktop IT systems, an enhanced version of the Protect A range of line-interactive step wave UPS models has been introduced by **AEG Power Solutions**.

The company says Protect A is easy to install and gives power protection as well as several minutes of runtime in case of a mains power failure, depending on load.

AEG says the new model now provides higher power density with output of up to 1.6 kVA and a more compact housing than its predecessor.

It says that one of the most important new features for users are fast charging USB ports on the front panel, there for any standard electronic charging needs.

In addition to the higher power rating, Protect A is said to now deliver a higher charging current which enables a four-hour charge to 90 per cent (for nominal input voltage) – a reduction in charge time of 50 per cent. It also has APFC (Active Power Factor Correction) for better energy utilization and to reduce the capacity of the UPS required to protect the equipment.

The upgrade includes a front panel LCD display which is supported by intuitive icon-indicated software to show the status of the UPS.





THE WORLD ACCORDING TO...

Davin Hanlon, networking product manager at Puppet

How DevOps can help enterprise network managers

Network managers in enterprise businesses are faced with a daily grind of repetitive, but vital, tasks. Working with racks of devices including routers, firewalls and switches that must all be managed, configured and maintained is a hard graft, particularly as they are often managed manually or via an over-arching controller. As it is unlikely that all the devices would have been purchased from the same technology vendor, especially when it comes to commodity devices that need replacing every few years, achieving consistency over device management, configuration

and maintenance is especially difficult.

Whenever humans are responsible for management and maintenance tasks, there is the possibility of manual errors and drift over time. When settings change without sufficient governance oversight, sometimes due to human error, it's known by some in the industry as being 'cowboyed'. There can be a significant impact on a business from this – loss in agility as network management teams as slow to meet business requirements; an inability to service business needs, and the risk of security breaches.

In the world of DevOps, automation tools are used to address these challenges. This is because in the DevOps space, you first define a configuration in code and then tell the

automation tools to manage the set up thereafter – reducing the possibility of human-error. Using the same principles, this approach and tools can be used to set up networking devices so that updates happen automatically, ensuring that any drift is remediated as soon as possible, and that devices remain in compliance according to the configuration as defined in code.

An example of a simple automation use-case for networking devices is ensuring that all NTP and SysLog settings are consistent across devices. Network automation tools can be used to ensure settings are kept consistent across devices regardless of device type and vendor. Using built-in templates, administrators can report when devices are drifting,

what settings changed - who changed them - and if there is a variation, an alert can be sent to the network manager or the pre-set parameters automatically reset. In addition, automation tools have the strength of the open source community behind them meaning they are well tested and benefit from rapid updates. In network management, a DevOps-style automation approach can result in achieving consistency across whole estate plus agility, security and future-proofing. It also means slow, repetitive 'soul-crushing' work is removed from the person.

Network managers who struggle under the weight of manual configurations should take a look at DevOps automation tools.

Facebook to create 500 jobs

Facebook is set to create 500 new IT and tech jobs in London by the end of 2019 as it opens a new engineering centre in Soho.

The social media giant said it would employ over 3,000 people across its three sites in the capital by the end of the year, with around 100 of the new roles in artificial intelligence.

Many of the employees will be charged with detecting and removing malicious content, fake accounts and other harmful behaviour.

"Safety is our top priority at Facebook and over the last two years we've substantially increased our investment in this area," said Nicola Mendelsohn, Facebook's vice president for Europe, the Middle East and Africa. "These hundreds of new jobs demonstrate not only our commitment to the UK but also our determination to do everything we can to keep Facebook safe and secure."

The news comes weeks after Facebook-owned messaging service WhatsApp chose London as the home for its new payments hub, for which it is looking to recruit 100 members of staff.

Apple is currently building its new London headquarters at Battersea Power Station, while Google has begun work on a £1 billion campus in King's Cross.

Amazon launches two-year cloud qualification

Career Colleges Trust and Amazon Web Services (AWS) have announced a new two-year cloud qualification programme – the first time it has been made available outside the US.

Launching in 2020, AWS Educate is a pre-university qualification that will prepare students for entry-level jobs in cloud architecture and data science.

"Having worked with AWS over the past three years, we together identified the need for high quality cloud-based training," said Bev Jones, chief executive officer of the Career Colleges Trust. "We are delighted to now be rolling out this exciting and much needed qualification across both our own Digital Career Colleges – and much wider into other universities and colleges – across the UK."

The new programme will debut in Barking and Dagenham College, one of the trust's digital careers colleges. It will then be rolled out to FE colleges and universities across the UK.

Ken Eisner, head of AWS Educate for Amazon Web Services, added: "Building a cloud-ready workforce is an urgent challenge and an unprecedented opportunity."

Credits from the qualification can also be used towards a bachelor's degree.



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