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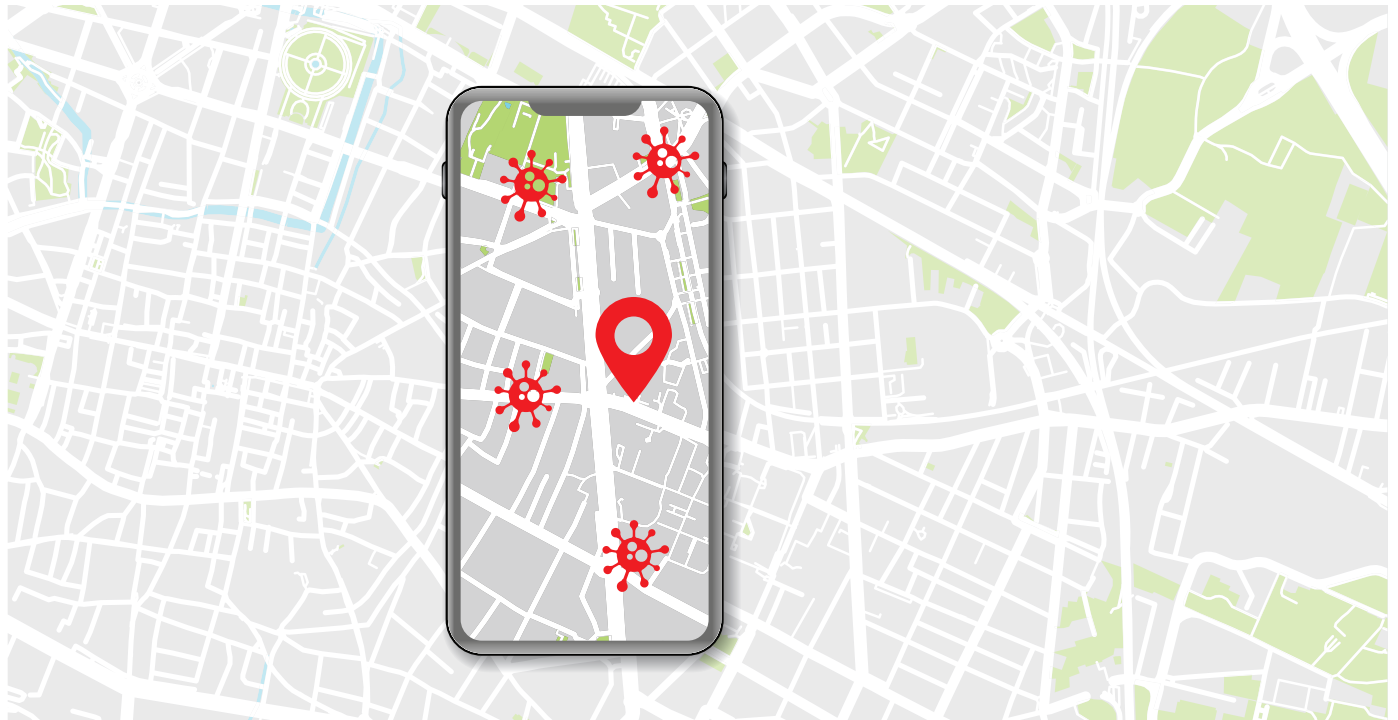
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'NHS app could leave firms exposed to phishing threat', warn experts



UK security and privacy experts have expressed concerns about the national approach to developing the NHS Track and Trace app, because it could lead to enterprises seeing their data exploited.

The smartphone app, which alerts people if they have come into contact with an individual who has reported coronavirus symptoms, has been trialled on the Isle of Wight and is integral to the government's "test, track and trace" strategy as the country eases out of lockdown.

However, the new app has been beset by privacy issues and developers are being questioned on areas such as data protection and security, because of the complexity of the technology.

Russ Ernst, EVP, products and technology at Blancco, a provider of data erasure and mobile device diagnostics software, said the NHS and other contact tracing apps should raise some concerns for enterprises. "First, there is a large amount of personally identifiable information

(PII) being processed by these apps and potentially transmitted through mobile devices — not only the information of the user of a specific device but anyone that has been in close proximity with that user or device," he told *Networking+*. "Secondly, the data collected by contact tracing apps is being saved centrally instead of leaving it on the mobile device itself. This means there is much more information that enterprises and federal agencies will have to be mindful of as they are collecting and analysing this information. This is going to require a different level of responsibility and compliance and therefore impact their data collection mechanisms and data retention policies."

Ernst added that it is likely more individuals will request their "right of access" or "right to erasure" under the GDPR through this process but also after the pandemic clears.

"This crisis has also led to a general concern, for both enterprises and consumers,

about the security of all the data that is being collected through these contact tracing apps," he continued. "The heightened awareness about the amount of PII that is being collected through these apps, not only for an individual but everyone that individual has been in contact with over a certain period of time, has led to an increase in cyberattacks including phishing scams."

Mollie MacDougall, threat intelligence manager at Cofense, a cybersecurity firm specialising in phishing prevention, also told *Networking+* that the pandemic "sadly presents a new wave of opportunity, as evidenced by the explosion of coronavirus-themed phishing attacks over the last three months. "This example is particularly malicious and abhorrent, given that it plays on the NHS' new contact-tracing app, which could potentially be rolled out to a huge percentage of the UK," she said.

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Security experts issue warning over NHS Track and Trace app

Continued from page 1

"This example of SMS phishing will almost certainly be the tip of the iceberg for threat actors abusing the contact tracing app narrative for malicious intent, and the targeting of enterprises and individuals using this theme will likely increase."

MacDougall said that in early May, Cofense found phishing emails aimed at business, claiming that a colleague had passed away or fallen ill as a result of coronavirus, aiming to harvest users' passwords and personal information through a malicious attachment. "This is one of several themes related to the pandemic," she added. "Threat actors are willing to go to any psychological length to attract their victims, but it is important to exercise the utmost caution and restraint in the face of emotionally jarring emails or text messages. Be aware of the fact that phishing scams are abundant, and if something about a message seems off, remember that it very likely is."

Health secretary Matt Hancock said the app would be available nationwide in May, before the date was moved back to June.

NHSX, the unit responsible for setting national policy and developing best practice for, data sharing and transparency, said the data will not be stored longer than 28 days and will be deleted after the app's use is finished and the pandemic is over. ■

'Over half of digital transformation projects being delayed' – report

UK enterprises are struggling to bring their digital transformation vision to fruition, due to a factor referred to as the "hesitancy gap", according to a new report.

Global Data Centers, a division of NTT, said a quarter of IT teams' time is "wasted" laying the groundwork for digital transformation projects – costing businesses an average of £2m a year.

Many businesses are employing emerging technologies such as AI, IoT and SDN, but half also claim these projects are "always" or "regularly" delayed.

According to the report, cloud is also proving more of a hindrance than a help in the context of wider digital transformation.

It found that two thirds of businesses are "heavily reliant" on multi-cloud services, which adds additional integration challenges. One third of respondents said this additional challenge posed a major barrier to transformation.

"The complexity of connecting a mix of cloud services and other technologies together, adds a significant challenge to overcome before transformation projects can turn into a reality," said John Eland, CSO at Global Data Centers. "Adding further strain, there's the risk that even just a proof of concept could have a negative impact on live production systems, leading to service failures that result in reputational or revenue damage. This is understandably causing enterprises concern, resulting in many projects falling



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behind and innovation to stagnate."

Addressing these concerns, the survey showed that UK enterprises estimate they could shave an average of nine months off digital transformation projects, if they didn't have to spend time building a partner ecosystem and cloud infrastructure and implementing connectivity. A further 94% of enterprises say their digital transformation

projects could be 'supercharged' if they could test new concepts in a full-scale, production-ready environment, using a multitude of cloud services, partners and connections – without the hassle of pulling everything together by themselves.

NTT is in the process of opening a new London data centre, which will be ready for operation this summer. ■

Virgin Media Business and 8x8 partner up in new cloud deal

Virgin Media Business has partnered with integrated cloud communications platform 8x8 to extend its voice and unified comms portfolio.

The telecom giant will now be able providing public sector, enterprise and SME customers with a host of new cloud-based and fully-integrated communications tools from 8x8 covering voice, video, chat and contact centre solutions.

Virgin will also be able to tap into the rapidly growing cloud communications market and provide clients with a single-platform solution. 8x8 said its technology stack offers a whole host of features, "without the challenges that on-premises equipment often presents, enabling staff to collaborate faster and work smarter wherever they are".

By moving to cloud based communica-

tions services, businesses should be able to reduce capital expenditure and move towards a future-proof communications platform designed to scale with their business.

"We are thrilled to be working with a leading UK partner like Virgin Media Business," said John DeLozier, senior vice president and global channel chief at 8x8. "This strategic partnership will enable us to help thousands of private and public sector businesses communicate more effectively with cloud-based technology. We're looking forward to helping Virgin Media Business expand further into the cloud space in the coming months."

Under the terms of the deal, Virgin will work together to configure and rollout integrated cloud services and provide 24/7 support for customers. ■



Virgin will also be able to tap into the rapidly growing cloud communications market and provide clients with a single-platform solution

UK electricity administrator Elexon hit by cyberattack

Britain's energy system fell victim to a cyberattack targeting the IT infrastructure used to run the electricity market.

The system's administrator, Elexon, confirmed that it was affected by a cyberattack Thursday, May 14th but that the key systems used to govern the electricity market were unaffected.

National Grid is investigating whether the attack could affect the part of its business tasked with keeping the lights on.

A spokesman for the energy system operator said electricity supplies had not been affected, and there were "robust cybersecurity measures in place" to make sure the UK continues to receive reliable electricity.

"We're aware of a cyber intrusion on Elexon's internal IT systems. We're investigating the matter and any potential impact on our own IT networks," he said.

Overseeing the payments in the energy market that exists between UK power station operators and the companies that provide the electricity supply to consumers and businesses alike, Elexon plays a vital role in ensuring the lights really do stay on across the country. It does this by not only monitoring electricity generation and matching it to National Grid demand but ensuring that correct payments

are made to those generating the juice. According to The Telegraph, which broke the news of the cyberattack, that amounts to £1.7bn of transactions every year. The combination of high-value transactions with being a core part of the energy supply market makes companies such as Elexon a prime target for cybercriminals and nation-state hackers alike.

There has been a lot of global nervousness around energy market security recently, with US president Donald Trump declaring foreign cybersecurity threats to his country's electricity system a national emergency in an executive order signed in May.

The attack emerged days after the UK's National Cyber Security Centre (NCSC) identified an increasing number of "malicious cyber actors" which are exploiting the coronavirus pandemic for their own objectives.

In the same week, two companies involved in building emergency coronavirus hospitals said they were hit by cyberattacks in the month of May.

Interserve, which helped build Birmingham's NHS Nightingale hospital and BAM Construct, delivered hospitals in Yorkshire and the Humber, both reported cyberattacks.

National Grid had made no further comment as *Networking+* went to press. ■

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UK universities suffer 'almost a week' of downtime

The UK's top universities experience nearly a week of unplanned downtime a year on average, according to new research.

A report, published by cloud data software company Veeam, found that of the 65 universities who provided information on their history of unplanned outages, there was a total of 1,099 outages in the last twelve months.

On average, that's 17.5 per organisation each year – or 1.5 per month. The average length of time for these outages was nine hours and 27 minutes, with the longest period being three days.

When it came to disaster recovery, universities almost universally acknowledge their responsibility for storing and processing data (97%), with the vast majority already investing in cloud computing (96%) and digital backups (88%). More encouragingly, only 15% manage their data backups in house. The majority (68%) choose to use a supplier – demonstrating that, in terms of disaster recovery at least, universities are following the recommended industry best practice.

Testing and processes also proved interesting reading – while universities do have data backup and protection technologies in place, many fail to formalise their processes or conduct testing on a regular basis. Just 12% of universities produce a formal data capacity planning report. Of those,

a mere 3% update it on an ongoing basis. This means the vast majority of universities risk being unaware of their infrastructure reaching its limit or no longer being fit for purpose. Universities are not just struggling with formalising their processes, but also regularly testing and updating the processes they do have.

The research was based on responses to a Freedom of Information (FOI) request issued to the Times Top 100 UK Universities. ■

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NCT rolls out latest cloud mobile system for engineers

Nottingham City Transport (NCT) is deploying the latest mobile technology across its engineering operations as part of the roll out of a new cloud-hosted system from Freeway Fleet Systems.

Engineering staff are being equipped with rugged tablet devices that synchronise in real time with a central Freeway system for managing the maintenance of over 300 buses.

The tablets will be used to replace virtually all paperwork and will be utilised by everyone from technicians to electrical specialists and cleaners.

NCT said it required a system to transform what was largely a paper-based operation and – in addition to mobile paperless working – the company also specified a cloud-based system.

“For NCT the move from paper to digital working is expected to provide improved compliance and audit-trail as well as significant gains in productivity,” said Gary Mason, engineering director, Nottingham City Transport. “Real time visibility of defects will improve vehicle turnaround times. And beyond the efficiencies of more rapid vehicle turnaround the project has also identified significant cost reductions; printing alone has been costing us £25,000 annually.”

NCT is undertaking a phased roll out of Freeway with the first phase now complete, following the introduction of the workshop management software and live connected tablets. The next phase involves the integration of pre-service inspection reports provided by drivers using a Tranzaura app. ■



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Nutanix adds to disaster recovery capabilities

Data centre company Nutanix has added more advanced disaster recovery capabilities to its hyperconverged infrastructure software and AHV hypervisor to help companies better protect their most important applications.

The updates, which include a new advanced automation capability for recovering apps and their data, are designed to help businesses ensure continuity of business operations should disaster strike.

Nutanix said that strong recovery policies are no longer something that are just “nice to have,” but rather essential requirements for many companies. However, existing disaster recovery solutions can be extremely complex and difficult to implement, and they demand on-going maintenance, the company said. The idea with the new capabilities in Nutanix HCI and AHV is to reduce this complexity.

“Maintaining continuous business oper-

ations is a high priority for all types of companies and organisations,” said Greg Smith, vice president of product marketing at Nutanix. “However, most businesses rely on custom, handcrafted disaster recovery implementations to guard against systemwide IT failures. Nutanix now natively delivers automated, easy-to-deploy disaster recovery solutions built to deliver applications that must always be available.”

Nutanix also highlighted its “unmatched near sync disaster recovery” capability, which supports asynchronous replication with a Recovery Point Objective of just 20 seconds, a three-times improvement on its existing technology. RPO, a measurement of the maximum tolerable amount of data to lose, is used to measure how much time can occur between the most recent data backup and a disaster without causing serious damage to business operations. ■



Nutanix said that strong recovery policies are no longer something that are just “nice to have,” but rather essential requirements for many companies

Irish data centre carbon emissions to ‘level off’ by 2025 – report

Data centre CO2 “will level off” at about 2.2% of Ireland’s total emissions by 2025, according to the new Q1 2020 report from industry group Host in Ireland and Bitpower.

This increase is expected to slow further as the transition to renewable electricity generation accelerates in order to meet the targets in the government’s Climate Action Plan.

Furthermore, the report used data provided by the Sustainable Energy Authority of Ireland (SEAI), the Irish Wind Energy Association (IWEA), the Environmental Protection Agency (EPA) and EirGrid.

It also takes into account the SEAI historical data showing the CO2 per unit of electricity has almost halved over the past 15 years and the impact that has on CO2 attributable to data centres in Ireland in the future.

“From Netflix to Zoom to home schooling, data centres are creating and maintaining the new normal amidst a global pandemic,” said Garry Connolly, president and founder of Host in Ireland. “With this added purpose comes added responsibility both to global citizens and towards the decarbonisation of Ireland’s electricity supply. The growth of the Irish data centre industry will go hand-in-hand with the development of green electricity to meet power availability demands.”

Connolly added that wind generation “is virtually an untapped resource of green electricity” within Ireland’s borders and coastline and provides limitless opportunities for both Ireland and the industry.

The Q1 2020 report also explored the effect of Covid-19 on data centre development activities and found a 10-15% impact on data centre investment projects.

Demands remain strong and will result in €200m spend being delayed due to the pandemic, according to the company. Host in Ireland still anticipates an additional €6.7bn in investment in the industry by 2025.

The report provides an analysis of the impact of data centres on Ireland’s carbon emissions historically and looks ahead to the next five years. ■

Covid-19: banks ramp up tech recruitment

The number of new tech roles in banks has increased 46% in the last three years – making traditional banks the most prominent recruiter for tech professionals.

To date, a third of overall job vacancies within banks is now tech related – jumping from less than a quarter (23%) three years ago.

The findings come from a new report from global recruiter Robert Walters and market analysis experts Vacancy Soft – which highlights the impact of COVID-19

on the banking sector – Fintech: Challenger to Competitor.

“Lockdown and social distancing measures mean that banks have had no choice but to scale back their retail operations, instead pushing customers towards digital platforms,” said Tom Chambers, senior manager – technology at Robert Walters. “With the most at risk to COVID-19 also being the ones who traditionally were the most reliant on

counter services, the societal challenge will be to help the elderly use banking services online – where their motivation is that they simply don’t have a choice. “Assuming they successfully make this switch, retail banking as we know it will be changed – or in some instances disappear – forever.”

Robert Walters analysts also predicted online banking penetration to reach 90% by the end of 2020, driven predominantly by the pandemic. ■

Extreme offers unlimited data

Cloud-driven networking firm Extreme Networks has claimed to be the first to offer “unlimited data” to its cloud customers.

Beginning July 1, all new ExtremeCloud IQ Pilot subscribers will have access to unlimited data for the lifetime of their subscriptions. Existing ExtremeCloud IQ subscribers will be upgraded to unlimited data in this calendar year.

Nabil Bukhari, chief Product and engineering officer, Extreme Networks said

“make no mistake – data is king in our customer experience economy” and that adage is even more relevant on the road to a post-Covid-19 world. “The ability to collect, analyse and act on unlimited data provides significant advantage to organisations looking to capture mind and wallet share through better services and experiences,” Bukhari added. “Our AI- and ML-driven 4th generation cloud processes more than six petabytes of data and bil-

ions of management events each day. All of this data gives us the ability to provide better insights to our ExtremeCloud IQ Pilot subscribers, and they in turn can use this information to increase agility and advance business outcomes.”

Among other things, enterprises will be able to use the unlimited data to gain access to historical data to inform future planning via a single, centralised management tool. ■

Centrica and AVK partner in delivery of data centre energy solutions

AVK, the largest supplier of data centre and financial sector critical power solutions in the UK and Ireland, is to co-develop solutions for the data centre market utilising gas engine power generation systems and other energy technologies.

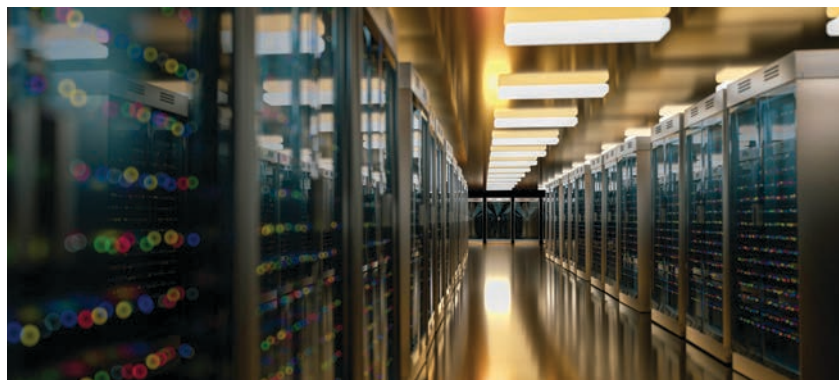
The collaboration agreement with gas generation specialist Centrica Business Solutions commits both companies to co-develop a suite of secure power offerings that deliver a more sustainable energy pathway for data centres without any

compromise to on-site resilience.

In order to combat the shortage of grid capacity available to data centres, and to overcome changing environmental legislation around the use of diesel generation, both companies said they will join forces to deploy gas back up and prime power solutions into the data centre market across the UK and Europe.

“We have been actively seeking a partner to help us develop our capability in prime power and gas back-up generation,” said Ben Pritchard, sales director for AVK. “Centrica has extensive experience with gas engines and the nuances of the energy markets and represents the ideal partner with which to develop a compelling market offering.”

Centrica Business Solutions sales director, Ian Hopkins, added: “AVK has a really strong reputation in the data centre market for delivering high quality back up power solutions. They will provide significant expertise in key areas that will help us to deliver a differentiated joint offering to the data centre market.” ■



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Rolls-Royce chooses Iotics technology

Rolls-Royce business unit Power Systems has selected Iotics' technology to enable digital solutions with asset-focused digital twins. It will be used to deliver the luxury car-maker the capability to unlock over 200 data sources, brokering interactions to create digital twins of their in-field assets and receive real-time event insights across

customer, supplier and partner boundaries. "Iotics' technology is helping us realise our vision of placing our customers at the heart of everything we do, exploiting digital twin technology to deliver the best service and to enable our customers' businesses," said chief IT digital officer of Rolls-Royce Power Systems Jürgen Winterholler.

Trinity Data Centres acquires ODC

Trinity Data Centres has acquired the Optimum Data Centres business (ODC) and is the new multi-tenant data centre operator for the former ODC site in Hayes, now named Trinity London. Trinity DC has taken on all of the ODC staff to ensure a seamless transition. Trinity DC is providing significant investment to Trinity London through a multi-stage refurbishment plan in order to facilitate additional clients. "We are delighted about the Trinity DC acquisition," said Simon Titterton, colocation services director. "Trinity DC's refurbishment plans for the Hayes site are really exciting and the team is looking forward to enabling the Trinity London data centre to realise its full potential."

Veego quantifies home internet issues

Veego Software, said it has identified trends in the problems that people are facing during the coronavirus-driven upsurge in home internet usage. Using data drawn from European countries and Israel, Veego Labs compared user-experience trends from just before these countries entered into wide-scale lockdowns with usage data garnered through the middle of April. The company noted a surge in user-experience problems such as unacceptable lags in freezing of screens during video f. The main reasons behind these problems include network congestion and latency higher than 100 milliseconds, especially noticeable by users of low-latency applications.

Cyber tech company signs 'Covi-Pass' deal

International Digital Health Technology firm Circle Pass Enterprises (CPE) has inked a deal with VST Enterprises, the British company founded by tech entrepreneur Louis-James Davis, to integrate its VCode and VPlatform technologies into the Covi-Pass Digital health passport. CPE is to start shipping orders from next week for the first phased release of 50m Covi-Pass Digital Health Passports to both the private sector and governments in over 15 countries. The Covi-Pass Digital Health Passport works on an intelligent colour mapping system (green, amber, red) to authenticate and validate a COVID-19 test providing test history and relevant health information. This allows for accurate data metrics to assess those who have tested positive and negative and the location only of their testing.



A £10.5m full fibre network to power Aberdeenshire

SSE Enterprise Telecoms has been awarded a £10.5m full fibre project by Aberdeenshire Council, spanning up to 200km, with the aim of improving the delivery of public services to the community and boosting economic activity and quality of life in the area. This latest collaboration is a continuation of a 20-year-strong partnership between the two parties and the project comes under the

banner of the Aberdeen City Region Deal (ACRD). It is part of a funding allocation designed to improve the region's digital infrastructure, key to the long-term future of the local economy. Funding from the Aberdeen City Region Deal provides the opportunity to create a sustainable digital infrastructure from which the region can transform into a world-class digital area.

At the core is the need to deliver ultrafast connectivity and to use this to: deliver excellent public services; grow existing businesses; attract further investment; create new businesses; support mobility; protect the environment; and enhance the area's attractiveness as a place to live and work. The 18-month project is being delivered by SSE Enterprise Telecoms.

Report: 'admins responsible for environmentally friendly practice'

Research conducted by Paessler AG, the IT monitoring specialist, has revealed that energy efficiency, sustainability and environmental concerns are high on the agenda for IT professionals in the UK. It found that 70% of respondents agreed that it is IT's responsibility to ensure their organisation is sustainable and environmentally friendly, ranking ahead of the c-suite (52%). When asked about the biggest challenge they will face in the next decade, four in 10 (43%) of IT admins in the UK selected energy efficiency, significantly higher than the global average of 27%. In light of this revelation, IT staff were asked how their organisation would be equipped to improve energy efficiency. In response, four in 10 (44%) are only using the required hardware and over



a third (36%) of IT staff say they are making use of smart building technology. While it is positive to see this kind of technology being included in the technology mix, worryingly, nearly a third (32%) of respondents aren't thinking about how they address this challenge at all. This figure goes up even higher (37%) when looking at global responses.

NHS Covid app delayed until June

Government plans to introduce coronavirus tracing have been hit by fresh uncertainty as it emerged that the NHS mobile tracking app will not be ready until June. Downing Street pledged that the tracing programme would begin at the start of the next month, meaning it will be under way without the app that has been developed by NHSX and tested on the Isle of Wight. The announcement came after professor Dame Angela McLean, the nation's deputy chief scientific adviser, said an effective track-and-trace system was needed to re-open schools in the next few weeks. Prime minister Boris Johnson's spokesman declined to state why the mid-May target — set by health secretary Hancock — had been missed.

UK begins fresh Huawei review

The UK government said it has begun conducting a new review into the impact of allowing Huawei telecoms equipment to be used in British 5G networks. In January this year, the UK resisted US pressure to ban Huawei from contributing to 5G. However, the National Cyber Security Centre (NCSC) involvement comes after the US brought fresh sanctions against the Chinese company, citing security fears. "The security and resilience of our networks is of paramount importance," told news outlets. "Following the US announcement of additional sanctions against Huawei, the NCSC is looking carefully at any impact they could have to the UK's networks."

Word on the web...

Bernd Hoogkamp from Telia Carrier gives his view on getting the most from cloud services...

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Security trends to have on your radar

Barber Brinkman from Western Digital explains six of the best trends out there right now

Smart security is moving beyond the static surveillance we're accustomed to, to real-time video analytics - thanks to new capabilities enabled by artificial intelligence (AI). AI and smart video promise to extract greater insights from security video. As more of these always-on systems are rolled out, edge computing will play an important role in capturing, collecting, and analysing higher resolution data and there are some key trends you can expect to see as a result of this evolution.

Beyond the security camera

Security technology systems have focused on streaming video from a fixed security camera to some central location where it is either being observed in real-time or recorded for future reference. However, we are seeing an evolution of smart cameras through the emergence of artificial intelligence.

Cameras are no longer static lenses, they're being tasked to do more - pattern matching and focusing on specific zones or movements.

Ones that used to catch shoplifters after the fact can now identify shoplifting in real-time and can even be used to analyse shopper habits. These insights can help to inform the decisions behind more enjoyable and profitable shopping experiences.

However, to carry out the above, smart security cameras require intelligence and storage within the device itself in order to analyse video rich data from body cams through to Internet of Things (IoT) devices, in real-time.

Edge computing and smart security

As public cloud adoption grew, organisations saw the platform as a centralised location for big data. Recently there's been opposition to that trend. Instead we're seeing data processed at the edge, rather than in the cloud - latency is behind this change.

Latency is an important consideration when trying to carry out real-time pattern recognition. It's very difficult for cameras to process 4K surveillance video recorded 24/7 if it has to return to a centralised data centre hundreds of miles away. This analysis needs to happen quickly in order to be applicable to dynamic situations, such as public safety. By storing relevant data at the edge, AI inferencing can happen much faster. Doing so can lead to safer communities, more effective operations, and smarter infrastructure.

Smart surveillance in the factory

Thanks to the rise in IoT technology, factory elements are all inter-connected and often work in unison. From the design stage, to the assembly line - AI & IoT is central to the smart factory. And that means smart surveillance, too.

This requires a high-definition, 360 smart surveillance that can monitor all activity. In addition to the obvious security uses, smart cameras can be deployed to help

analyse the efficiency of warehouse processes and the functioning of the production line. But these extra technological demands require a large amount of data to operate 24/7 and storage of this footage is of paramount importance.

UHD and storage

AI-enabled applications and capabilities, such as pattern recognition, depend on high-definition resolutions such as 4K - also known as Ultra High Definition (UHD). This detailed data has a major impact on storage - both the capacity and speeds at which it needs to be written, and the network, compared to HD.

In addition to having four times the number of pixels as HD video, 4K video supports 8, 10, and 12 bits per channel that translate to 24-, 30- or 36-bit colour depth per pixel. A similar pattern holds for HD - more colour using 24 bits or less colour using 10 or 12 bits in colour depth per pixel. Altogether, there is up to a 5.7x increase in bits generated by 4K vs. 1080 pixel video. Larger video files place new demands on data infrastructure for both production and surveillance. Which means investing in data infrastructure becomes a key consideration when looking into smart security.

Always-on connectivity

Most smart security solutions need to operate 24/7, regardless of their environment. Yet, on occasion, the underlying hardware and software systems fail. Therefore, it's important to establish a failover process to ensure continued operation or restoration of data, including traffic control, to sensors, to camera feeds and more.

Imagine a hospital with dozens or even over a hundred cameras connected to a centralised recorder via IP. If the ethernet goes down, no video can be captured. Such an event could pose a serious threat to the safety and security of hospital patients and staff. For this reason, microSD™ cards are used in cameras to enable continuous recording. Software tools - powered by AI - can then "patch" missing data streams with the content captured on the card to ensure the video stream can be viewed chronologically with no content gaps.

Sophisticated device analytics

Self-monitoring is a critical tool in enabling better uptime, proactive support and efficiency for many systems. Whether in smart factories or enterprise settings, an entire system can fail due to one component malfunctioning, such as a broken fan causing a hard drive's temperature to increase. By designing an intelligent platform to track device health, systems can be built to work proactively. With this in mind, companies need to look at investing in hard drives that can monitor a variety of parameters, to help administrators take immediate action before reliability is compromised.

The traditional, fixed-place security camera has been a reliable servant but it has its shortfalls. Smart security today is about utilising AI and edge computing, to deliver an always-on, high-resolution security provision that can keep people safe 24/7. Companies just need to make sure they have the requisite storage capabilities to enable this.

Barber Brinkman, senior business development manager, EMEA smart video at Western Digital



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Making the adjustment to remote working, the new normal?

Jeppe Dalberg-Larsen, president, EPOS

The beginning of 2020 has been unconventional. Macro-level events have taken the world by storm, from climate change disasters to global public health crisis impacting countries worldwide. These events have had far reaching consequences, impacting economies, politics and the workplace. Is this the 'new normal'? If so, organisations need to seriously consider making provisions for employees to work remotely as standard.

According to the Suburban Economic Study, as the growth of flexible working in smaller towns and suburban areas increases worldwide, by 2029, 'outer city' office spaces will reduce carbon emissions by the equivalent of 1,280 transatlantic flights between London and New York each year. This equates to 2.56 million metric tons of CO2 being prevented from entering the atmosphere annually, just by working nearer to home.

Meanwhile, international public health emergencies can sometimes act as the impetus needed for the global workforce to examine some of the longest-held aspects of workplace culture – working in a physical office. Recently, many businesses have been encouraging employees to work from home to help safeguard business continuity. Long term, this can provide us with an opportunity to examine how we organize work and bring our policies in line with the solutions available.

This year videoconferencing and remote working have exploded, according to Kentik, a global provider of network analytics, videoconferencing traffic in North America and Asia has doubled since the start of the year. An unintended consequence of the preventative measure during a crisis is that what feels like a temporary response can become permanent, and for good reason.

Flexible working policies give workers more control over when, where, and how they work, research from the ACAS council has also shown that business performance is not negatively impacted. Instead, flexible working policies tend to lead to improved staff retention, job satisfaction, and individual output. While flexible working practices have become more commonplace it has never been mandatory or enforced by state or employer, until now. The flexible working experience has also changed significantly thanks to the development of new technologies and platform tools.

Home workers often manage their time to leverage the time of day when they feel most productive, and they don't necessarily suffer as many interruptions as they would in a busy office. According to research from EPOS' Understanding Sound Experiences Report, almost half of decision makers cite saving time compared to travel for meetings as one of the major benefits of virtual conferencing. Beyond this, technology plays a vital role in enabling effective communication with remote workers. Poor technology and/or infrastructure for remote working is oftentimes cited as the biggest barrier to its success. In fact, according to EPOS 69% of end-user are additional time on work to make up for poor sound quality.

It is vital for business decision makers and HR leaders to ensure that companies are investing in the right infrastructure and technologies to enable and empower their workforce. Or risk being immobilised by employees unable to do their jobs remotely. Some 83% of business decision makers agree that good audio equipment is vital to an employees' concentration and efficiency.

Cloud-based tools, employee-facing technologies, audio/video conferencing

solutions and instant messaging groups are increasingly relied upon in today's workplaces. The sudden impetus of a large-scale remote working experiment will test what's working and what isn't. It will be important for business leaders to recognize improvement areas and to take action. Whether this is by increasing utilization and improving the effectiveness of remote-working tools and technologies, best practices or ideal use cases. The gap is certainly closing on employees who haven't harnessed technology solutions with macro events

also influencing technophobe colleagues to embrace digital solutions, already 70% of end users are already using collaboration tools to drive efficiencies and connect with clients and teams. Of the tools there are also clear winners with Skype for Business being the most used collaboration tool, closely followed by Microsoft Teams.

The standard response for most businesses reacting to a public health crisis is to follow the guidance set out by government officials which generally has meant reducing non-essential travel, inducing self-quarantine measures and

regularly communicating state health advice. The current climate has forced enterprises to reconsider the way they do business and deploy modern policies that work for security, business continuity and for their employees.

Following this crisis, it won't be a surprise if we see a permanent shift in the way we work. It is likely that the introduction of flexible working measures, infrastructure and technology investments will serve as a catalyst to bring about lasting change to how businesses manage their employees and how people choose to work.

VPN vs VDI – What Should You Choose?

Parallels Insights

While the ability to remotely access an internal network has been around for decades, people have increasingly been working from home due to the COVID-19 crisis. Many organizations are using Virtual Private Networks (VPN) to provide employees with access to their digital workspaces. However, as VPN is posing a global data security risk to businesses, IT departments may want to re-think their strategy when it comes to providing remote access. Read more to check out our thoughts on VPN vs VDI.

VPN isn't an optimal solution when providing remote access to employees as it simply doesn't have the degree of granular control needed to properly monitor and restrict users on a company's network. Cyberattacks are becoming more sophisticated and frequent and organizations using VPN may be exposed to compliance and regulatory risks.

Why a VPN solution is becoming outdated

With times changing continuously in the tech world, more and more workloads are moving to the cloud and a VPN solution is becoming outdated. Services are no longer just located in your office or data center, but a hybrid combination of on-premises and public cloud services. Leveraging cloud-based solutions means that your company can centrally control access to applications while reinforcing security.

By switching to a Virtual Desktop Infrastructure (VDI) solution, you can enable employees to work from home on any device of their choice, while still keeping data safe. As long as users have an Internet connection, they can log in to their corporate virtual desktop and access all their work files and applications securely, with the latest encryption protocols.

An advantage for VDI in the VPN vs VDI debate is that optimized bandwidth connections aren't needed, as the data doesn't download to the endpoint. Leveraging VDI decreases concern about encrypting the hard drive of the endpoint if the device is lost or stolen (something that is still needed for a secure VPN).

When using a VPN, good end-user hardware is required since the processing is done on the client machine. However, with VDI, the processing is done in the datacenter – therefore employees using old machines can still easily access their virtual workspaces.

While VPN is a useful solution for organizations that distribute laptops to their mobile workforce so employees can access their work applications easily, it's a different story when employees have to use VPN on their home devices. For example, if an

employee has a Mac but needs to access business-critical Windows applications, additional software needs to be purchased.

VDI advantages:

- Provides centralized management of data.
- Seamless access to work files and applications with the latest encryption protocols.
- No need for optimized bandwidth connections.
- VDI processing is server-based, powerful end-user hardware not required.
- Ability to use different devices, including tablets and smartphones.
- Access Windows applications on other operating systems such as Mac and Linux.

VPN limitations:

- Limited granular control to monitor and restrict user access
- Corporate data not centralized and harder to manage
- Large bandwidth connection needed
- Good end-user hardware required for client-side processing
- Can't access Windows apps on other operating systems

VPN vs VDI – Spend less time troubleshooting with VDI

With VDI, IT departments spend less time troubleshooting problems. As data is centralized, it's straightforward to support end-users. VDI's centralized format allows IT to easily patch, update, or configure all the virtual desktops in a system, optimizing performance for the end-user. It's also possible to shadow a device to help figure out issues.

When having to install new OS updates and applications, a golden image is used in VDI. Changes installed on a single desktop are replicated to all virtual desktops in the pool, ensuring all users are always running the same exact version of the software. IT teams can first test customized applications on the server before rolling them out to everyone. Instead, with VPN, machines have to be set up individually and are therefore harder to manage.

When comparing VPN vs VDI, while both VPN and virtual desktops can be secured, virtual desktops have the least amount of risk as they secure data all the way through the endpoint and provide IT admins with a faster and easier way to patch known vulnerabilities. With VDI, IT can set policies to restrict user access – establishing the right level of secure access for every user.

As VPN servers act as a gateway to a company's internal network, any breach would prevent remote employees from doing their jobs. While it's possible for



Paul Fisher,
Technical
Consultant,
Parallels

malware to infect a virtual desktop operating system, at the end of each user session, the virtual desktop can be rolled back to a clean state, thereby eradicating the infection.

VDI has "built-in" security since all applications and data are on servers in the office or the cloud. As VDI endpoints can't store corporate data, IT doesn't have to worry about them as a security threat. If employees access personal cloud storage or email services on their corporate devices, for instance, any breaches of those systems can't affect the corporate data on the user's virtual desktop because the data isn't local. Virus scanning is also centralized.

The security VDI offers extends IT control by restricting user actions, for example, when using the clipboard. Organizations can avoid any unwanted data leakage from published applications by disabling copy and paste on the clipboard, reducing the risk that sensitive data (such as credit card details) can be stolen.

How can Parallels Remote Application Server (RAS) help?

While organizations may choose to implement VPN to provide remote access to business applications, along with lower costs and easier setup, Parallels RAS is a VDI solution that addresses all these issues, along with the other great benefits of VDI.

As an affordable all-in-one VDI solution, Parallels RAS allows users to securely access virtual workspaces from anywhere, on any device, anytime. Parallels RAS centralizes management of the IT infrastructure, streamlines multi-cloud deployments, enhances data security, and improves process automation.

If you've been contemplating whether to use VPN vs VDI as a remote working solution, why don't you give Parallels RAS a try by downloading our free 30-day trial? That way, you can check out all the security, and other benefits, for yourself!

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BYOD: is it worth it?

BYOD is now a very common concept in the world of work, but are there benefits for all concerned? Robert Shepherd finds out what they might be and who benefits most

No doubt you have heard that “the traditional workplace is quickly becoming a thing of the past”, or words to that effect, more times than you care to mention. It’s a hackneyed and trite expression that became everyday language when people first started working remotely, courtesy of Wi-Fi, dongles and other necessary technology.

However, that generally relates to where we carry out our daily job functions, not how. By that I mean the equipment we use to ply our trade.

According to Wikipedia, the initialism that is BYOD (bring your own device, a play on bring your own booze) entered common parlance in 2009 courtesy of Intel, when it clocked “an increasing tendency among its employees to bring their own smartphones, tablets and laptop computers to work and connect them to the corporate network”.

Well, even if you aren’t au fait with the concept, the chances are you’re doing it anyway. Think about it - once you leave the office - remember that time? - you scan and respond to work emails as you fight to get a seat on the train or find some other way to successfully navigate standing next to someone’s odious armpit. However, that’s more out of necessity as we don’t all take office equipment home to carry on working,

because it upsets the work/life balance.

So, why would an employee use their own equipment when they can use someone else’s?

Now, imagine you don’t need to use work equipment at all and everything you need to do your job and organise your social life is doable via one or two devices - your own.

First of all, there’s convenience.

Employees can carry one phone in their pockets and don’t have to worry about taking care of two devices at the same time.

Then there is efficiency - employees have no learning curve for new equipment because they already understand how to use their own electronic devices. Instead, they can jump in on day one for immediate productivity.

Or it might be down to pure preference. If Peter likes iPhones and Sally likes Androids, both can happily use their preferred device they don’t have to learn how to use new ones. For Will Liu, managing director at TP-Link UK says for organisations, a BYOD policy means that employees are able to use the devices they are most comfortable with to best achieve their job to the highest levels. “Devices like phones are a very personal choice and as the line between home and work life blurs with the mass adoption of instant messaging apps, this one device in particular spans both realms,” adds Liu.

“BYOD also enables employees to be more

flexible about where and when they work.”

He adds that as SaaS continues to grow in importance, cloud applications like Google Docs, Microsoft 365 and Box enable employees to make extremely good use of the time between meetings or even travelling on public transport.

Then, of course, there’s the C-word. It can be a huge expense for any company to update equipment, but employees are often more motivated to pay to replace their personal phone or laptop with the

latest available device.

“From operation costs to better technology, BYOD has a number of benefits for companies,” says Paul Fisher, technical consultant at cross-platform solutions specialist Parallels. “A few examples of where cost savings can be found include hardware (these costs, all or partially are transferred to the employee). Also, IT departments have less training and support to provide as employees are familiar with their own devices. As an

“Devices like phones are a very personal choice and as the line between home and work life blurs with the mass adoption of instant messaging apps, this one device in particular spans both realms.”

*Will Liu,
managing director,
TP-Link UK*



example, Forbes magazine suggested that a company with 500 employees could result in over \$1.5m in savings per year."

Savings are one thing, but there are still other issues to overcome, such as complex IT support and overall compatibility.

Anyone who uses a computer and is a company employee will know how key the relationship is with IT departments. The more political and sycophantic office worker will flatter their IT staff in order to get help first when things go wrong. However, IT managers need to keep a close eye on employees and the devices they bring in to work in order to make sure the business is protected and that the employee isn't violating any compliance issues. How does that work, then?

Ken Galvin, senior product manager at software company Quest, says the process of setting up these devices to work in a corporate environment can put far too much pressure on IT teams, where their time is better utilised for digital transformation and more important IT projects. "From a device management perspective, with BYOD it can also be difficult to track access, have full visibility over the network, and maintain compliance and data integrity – all of which can lead to substantial longer-term challenges," he continues. "For all parts of the business to benefit from BYOD, IT teams need to be investing in proper mobile device management and making it as easy as possible for individuals to set up their own devices securely through self-service portals. This means that the company's IT is kept running efficiently and already-stretched IT administrators can focus on innovative projects."

For Fisher, "one of the big advantages of BYOD" is that support and administration can be reduced. "This is because there is very little management, if any, required of the user-devices as they do not belong to the organisation and because all the desktops are not centrally contained in the datacentre management of these, making things considerably easier," he continues. "With a remote application server-delivery BYOD solution, like Parallels RAS, template management means you only need to update the OS and applications in one place."

As far as Liu is concerned, "yes, version control can be an issue" where employees are using their own devices. "Ensuring that all devices have the latest versions of operating systems and software updates are deployed in a timely manner are important for the overall security of your network."

Fisher adds that BYOD solutions will have clients available for all the major operating systems that the devices will run. "If you use remote application delivery and VDI as your BYOD solution, users can connect from any device that has an internet browser, so yes that includes devices such as Microsoft Xboxes," he says.

There are other pluses, according to Thorsten Kurpjuhn, European market development manager at Zyxel. "Employee devices are typically newer than corporate devices, meaning that they are often more compatible with cutting-edge systems," he says.

Indeed, Kurpjuhn opines that as employees increasingly desire more flexible work arrangements, forward-thinking businesses must embrace technology to maintain and drive employee engagement and satisfaction. "For example, bringing your own device (BYOD) policies suit both personal and business needs," he says. "BYOD is a growing trend within the workplace – instead of working on a company-owned computer in the office, an employee can use their personal devices, such as a laptop, tablet or smartphone. While BYOD is mainly used for remote working, personal devices are slowly replacing equipment in the company's



An enterprise will be delighted to not have to fork out for new IT kit where it can avoid it, but would not like having to foot the bill for repairs or an upgrade to a device worth far more than they already have in stock

traditional offices and improving employee experience. According to a recent Trend Micro survey, 80% of companies saw an increase in worker productivity with the implementation of BYOD programs."

It's a growing market for sure and Fisher points to a report by Forbes which highlights just how big BYOD is now. It found that The BYOD market is on course to hit almost \$367bn by 2022, up from just \$30bn in 2014 (BetaNews).

What's more, a study conducted by computer giant Dell found that 61% of Gen Y and 50% of 30+ workers believe the tech tools they use in their personal lives are more effective and productive than those used in their work life. It also reported that 60% use a smartphone for work purposes while 31% desire one. Other reports pertaining to the subject matter found that companies favouring BYOD make an annual saving of \$350 per year, per employee (Cisco).

In addition, using portable devices for work tasks saves employees 58 minutes per day while increasing productivity by 34% (Frost & Sullivan).

However, like most things, there are cons and BYOD appears to be no different. The security aspect is a given and has been covered to death, but Fisher says there are other negatives both employer and employee need to consider.

"Whilst the benefits of BYOD are strong, organisations must be aware of the risk BYOD places on a company's infrastructure," he adds. "As a result of implementing a BYOD policy, organisations will have a more complex system with a range of devices working a range of operating systems...therefore, it is vital that companies are cautious in the approach to implementing a BYOD strategy."

Then there's issue of what happens to the data. Not stolen or hacked data per se, but after a contract has been terminated or when an employee leaves the company, it may be necessary to remove the company's private information from the employee's device, which could prove to be difficult. A plan should be in place to prevent the potential misuse of information.

Now, it's back to cost, but from another angle – wear and tear and who pays for it.

"BOYD is about giving employees the choice," says Fisher. "Some employees would much rather use their own device, perhaps because they are Mac users, whereas others may not even have their own device and therefore need to be issued with a corporate device. Other companies offer a contribution towards the device which still reduces company costs and gives the employee their preferred device, everyone is happy. The onus on repairing would really be down to the individual company and their policy or terms and conditions. This might also depend on the arrangement if it's truly the employee's own device in use or if there has been any employer contribution."

Liu argues: "On the downside (for

employees), when they start using their own devices in the workplace they are responsible for their own upkeep and maintenance." Does TP-Link have a BYOD policy in place?

"At TP-Link, we've taken the view that the business will provide employees with the tools they need to do their job, if they have any additional needs the business will provide the equipment for any reasonable adjustments that might be required," says Liu. "As an organisation we would prefer to take care of the equipment that enables our teams to do their jobs without the distraction of having to specify and choose their own equipment. It also enables our technical support team to solve issues faster as the whole business is standardised on the same platforms."

What about Parallels? "We have a lot of remote workers and while we do have corporate issued devices we are able to use our own devices when we wish," says Fisher.

For Kurpjuhn, a clear set of rules, guidelines and policies for BYOD must be in place to ensure responsible use within the workplace. He says a BYOD policy should include a list of permitted devices, protocols, information on password protection and secure connection methods, liability terms and a section which incorporates violation of policy. "It's also important to outline the security tools, such as antivirus software, which an employee must have installed on their devices," he adds. "There are a number of simple steps that these organisations can take/or ask employees to carry out to reduce the cyber risks associated with remote connectivity."

He said they include conducting an IT audit before enacting BYOD to consider new risks and concerns that personal devices would pose to the corporate systems, implementing BYOD policies and identifying personal devices accessing the network for reference.

Kurpjuhn highlights other key

requirements, too. "Limit each employee's access to the network to be possible only from a set of approved devices, install mobile device management technology, require two-factor authentication for mobile access, require immediate notification from employees for lost or stolen devices and use device locator and remote wiping services," he says.

Still, the BYOD model has already had a positive impact on the workplace, says Kurpjuhn, who cites Cisco as having reported 69% of IT decision-makers favour BYOD as a positive addition to any workplace policy because it saves workers time.

There's certainly no one-size-fits-all approach to BYOD. An employee will most likely be happier using his or her own hi-tech equipment, but will be equally unhappy with a repair bill. An enterprise will be delighted to not have to fork out for new IT kit where it can avoid it, but would not like having to foot the bill for repairs or an upgrade to a device worth far more than they already have in stock.

With that in mind, it's wise not to make the decision based purely on the convenience and cost factors. Think about how a BYOD policy will have an impact on your business and think about what your employees want. Look to the future and make decisions about how to handle the devices when an employee leaves your organisation.

Nevertheless, it seems more likely that companies will commission Bring Your Own Device programs to augment, rather than overhaul, their traditional way of working. The best of both worlds, in other words, will be the order of the day.

The truth is, BYOD will always divide opinion. While some employees would prefer to separate their work and private lives entirely, and are repelled by the notion of using a personal device in the office, others warmly embrace the removal of such barriers. ■

GDPR findings

Research conducted by IT support company ILUX has revealed "some eye-opening revelations" that business owners should consider around GDPR, now that their workers are being forced to work from home. The study, conducted with the consent of 2,000 home working Brits, revealed that one in 10 believed that their expected working practices imposed by their employer are not GDPR compliant. With over 20million people working from home, that equates to two million potential fines for businesses should a breach occur.

Furthermore, 13% of the workforce surveyed admitted that they are using their own home technology for work. Accessing data on a potentially unsecured computer system, via a home network and even printing documents at home, could all lead to a data breach. This could be the catalyst for employees concerns over GDPR

compliance and a sign, after over two months of lockdown, that business owners should be checking in with their employees on important issues like compliance.

"Whilst, as business owners, we may be busy, stressed and frankly trying to keep our heads above water, it is not a time to be complacent," said James Tilbury, managing director at ILUX. "Asking employees to work from home and then not providing the right computer systems and security measures is a recipe for disaster. The last thing any business needs, especially at the time of an impending recession, is to lose valuable data, be the target of a cyber-attack or phishing and be hit with a hefty fine for breaching GDPR guidelines."

GDPR was brought in to strengthen data protection for individuals across the EU, all UK companies that process personal data must comply or risk significant financial penalties. ■

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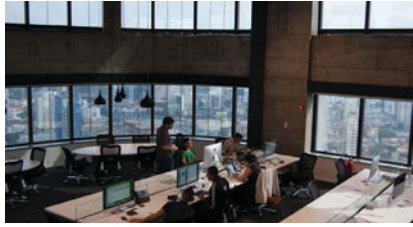
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Pulse Secure helps Hogarth Worldwide to improve secure access

Hogarth Worldwide is a creative production business headquartered in London with established production hubs in New York, Dubai, Hong Kong, Singapore, Shanghai, Mexico City, Buenos Aires, Cape Town and Bucharest. Founded in 2008 and majority-owned by WPP Group, it provides marketing production and adaptation services for some of the world's most recognisable brands and global multinationals. Its integrated production workflow and media asset management technologies bring all-media production under a common workflow to generate tangible savings for clients.

The company's IT department looks after over 4000 users, across 50 sites connected to 5 data centre locations. Hogarth is known for its technology. This technology has three primary functions: the automation of processes that don't need human input; the online approval of assets; and the global management and delivery of marketing assets. The company has a 100 strong development team and develops all of its own systems in-house. The cloud-based technology it has developed is used to deliver its service around the globe, engaging with clients wherever they are, and delivering assets to clients and media-owners in any country in the world.

Security is a critical part of this service and Hogarth manages its own multi-layered secure access platform. Having grown rapidly over the last decade, the company had reached capacity on its legacy Juniper VPN solution that was also heading towards end of support. With the need to upgrade fast approaching, Hogarth decided to both refresh its secure access platforms to meet greater demand and gain access to more advanced capabilities. The company also decided to deploy a network access control (NAC) solution to strengthen and enforce roles-based access and endpoint security policy for network user, guest and IoT devices.

"We initially created a shortlist of vendors from the Gartner magic quadrant and starting examining a few options," says Peter Smith, Global Network Architect at Hogarth. "Our key criteria was a VPN and NAC platform that was easy to deploy and manage, with strong compatibility across a wide range of devices, plus the ability to adapt. Pulse Secure was able to meet these requirements."

The combined solution is deployed as part of a Zero Trust approach to security allowing Hogarth to ensure its distributed workforce is authenticated, authorized and secure when accessing applications and resources across its own data center and cloud-based resources. The solution is integrated into its Ruckus based Wi-Fi network, Radius authentication server and multi-factor authentication which runs in Azure. The data from all these systems is passed to a SIEM to allow the IT department to detect any issues and automate threat response to mitigate malware, rogue devices, unauthorized access and data leakage risks.



Plutora improves software delivery for O2/ Telefónica UK

O2 prides itself on continually innovating new mobile products and has championed customer experience. However, its IT infrastructure experienced a number of challenges which could slow down the planned improvements.

The UK IT test environment management group supports a large number of internal teams. They were faced with over 30,000 emails and remedy requests relating to non-production environments.

In the case of unplanned outages (i.e. failures in non-production systems or applications) it could take several days to work through the various architectures to understand where the root cause of a test system outage originated. Furthermore, it drew heavily upon many different support teams which had to be coordinated using manual lists. Ultimately, IT testers were often unable to carry out their testing projects whilst issues with the test environments were being investigated.

O2 and NTT DATA selected Plutora because it is an independent, dedicated, test environment management platform that could be rolled out across the business.

The focus of the O2 IT test team is to support the IT environments, including physical hardware and application upgrades that support their customers during their test lifecycles. This spans simulation of buying a new mobile phone to services that support their provisioning such as operations and billing upgrades.

In phase one, O2 and its QA test partner, NTT DATA ran a pilot and was satisfied that the tool contained all mission-critical processes to ensure that when any service exits the test phase it can be fully integrated into production with minimal risk.

After four months, phase two of the implementation extended a roll out to 60 test environments including support of the company's compliance with the European Union GDPR data compliance regulation which came into force in 2018.

Many IT testing problems that the company experienced in the past have disappeared due to the hard work of O2's IT environment management team with quality test partner, NTT DATA and Plutora.



Pulsant supports Witherslack Group with private cloud

The Witherslack Group is a provider of specialist education and care for children and young people with social, emotional and mental health needs, communication difficulties, ADHD and complex learning needs.

It was seeking an efficient, safe and streamlined way of hosting data across all its sites. This was driven by poor performance of its existing platform and the fact that several schools experienced server issues and downtime, which impacted on operations.

Witherslack Group had specific security and compliance requirements around the data it held. In addition to education records, individual schools and care homes are also responsible for storing medical information. Pulsant worked with the Witherslack Group's IT team to refine the project's requirements and find a solution that met the need for resilience, performance and availability.

The Pulsant team designed, developed and implemented a private cloud solution for Witherslack and the relationship has flourished ever since.

"Pulsant is very solutions focused, finding ways to help us overcome our IT challenges, while offering excellent levels of consultancy, from the account management team, to the technical team," explains Stephen Hall, IT director at Witherslack Group.

Based on these requirements, Pulsant delivered a hosted private cloud platform for the education group that enables the organisation to manage and support all IT needs from a centralised location. In addition, with an installed wide-area network (WAN), individual sites have better access to the data they need. This is especially important given that some sites, such as the children's homes, run 24 hours a day.

The relationship between Witherslack Group and Pulsant is ongoing, with the cloud provider assisting in an overall hardware refresh, as well as continuing to deliver support and provide expert consultancy.

This is especially relevant in an evolving education environment where traditional teaching methods have changed in the last few years and new solutions have had to be implemented to adjust to the shifting demands. A case in point is the recent rise in the use of video in education. Witherslack Group worked with Pulsant to ensure it had the right infrastructure in place to support video streaming and the solutions to support these operational changes.

"As a centralised IT team, we deal with over 45 sites in the group and our needs are constantly evolving," concludes Hall.



EPOS upgrade success for Costa Coffee Stores from WRS Systems

Upgrading EPOS solutions can often be a testing time, but necessary for any retail or hospitality business that looks to benefit from advances in technology and strides to enhance customer experience. The effectiveness of planning for success was recently demonstrated across 259 Costa Coffee stores by EPOS solutions company WRS Systems, working closely with delivery partner Celestra.

The requirement from Costa was to undertake the upgrade of existing terminals to new Oxhoo Indigo units running software from Datasym UK. Importantly all new terminals had to be implemented and old terminals decommissioned without any disruption to trading. Added to this, the whole project had to be completed within a reduced timeframe, at some of Costa's busiest stores and in the run-up to the important festive trading period. The outcome was summed up by Phil Scully, Group CIO at Costa who commented: "Great job, thank you so much to everyone involved. Great team effort in a short timescale and very well executed. This will make a massive difference to our stores."

WRS Systems is recognised as the sole EPOS provider to Costa Coffee, supporting over 4,000 terminals across the Costa estate. The project was led by WRS Systems IT director Chris Jackson and Richard Hawkins, implementation manager with support from WRS Systems operations and logistics teams.

The approach adopted by WRS Systems pre-planned all stages, including equipment testing and 'hot staging' at the companies dedicated facilities on the Isle of Wight. This enabled systems imaging and advanced system set-up, including store specific configuration to be completed prior to equipment being delivered to the 259 stores covered under the upgrade programme.

Importantly, the team from WRS Systems worked closely and in full collaboration with Costa and Celestra throughout the project and supported installation in the field remotely, through their professional technical and support service teams.

This approach ensured the delivery teams from Celestra and WRS Systems could complete installation of each new terminal at each store in as little as 5-minutes.

Constructive digital twin technology

Ali Nicholl from Iotics explains how digital twins can deliver benefits to the construction industry

Having to work in complex and fluid environments, along with fractured supply chains and prolific regulation has traditionally meant the construction industry has lagged behind in productivity levels compared with some other sectors.

To improve, increased digitalisation of activities and production must increase. Although there have been more recent improvements in digital adoption, the emerging technology of the digital twins could provide an important breakthrough and introduce new capabilities to overcome the challenges.

But what is a digital twin? Simply, it is a virtual version of a thing, location, product or service. Anything can have a digital twin, which creates a two-way link between the physical and virtual world. They work by interrelating data and controls across an entire eco-system, collected via sensors, platforms and databases and allowing the data to interoperate.

Unlike BIM (Building Information Management) tools, which are visual reporting tools and at best, constructs for simulation and emulation, the power of digital twins comes not from what they can show us, but how they can securely and meaningfully interact with each other. It is a semantically defined virtual counterpart to anything across organisations and supply chains, enabling enhanced monitoring, prognostics, new services and solutions.

Pairing physical and virtual versions enables the analysis of data from conception to its use and monitoring. It can then be passed from real-life situations to the twin, which interacts with multiple different sources and contextual data such as the weather and other environmental information; meaning data can be gathered about the real-time status and working conditions of a site, project, building, material, piece of machinery, service and even a person.

For construction, linking a virtual building to its real-world counterpart can show site workers how it is performing in real time. Another example is connecting the behaviour of people wanting to use the lifts in an office or apartment block, showing demand at different times of day, varying weather and rates of building occupancy. All this would enable facilities management teams to improve efficiency and minimise downtime.

This information can be used by architects, engineers and consultants for enhancing the designs of future buildings both indoors

and out and enables managers to make investment decisions from real, actionable data. It also enables better understanding of the impact of any changes in improving the management of assets over time.

Connecting twins of different buildings and their construction sites, along with associated layers of infrastructure, gives the industry the means to create 'smart cities,' because designers and town planners can interrelate event-driven data to gain insights into an actual 'living' city. Examples include the impact of a new building on traffic flow or water and power supplies, which can be simulated to gauge how to progress with town planning. Then, measures to help combat the effects of climate change, for instance, can be implemented.

Digital twins also have the potential to prevent serious accidents and reduce risks. This is done by monitoring assets to avoid potential failures, automate tasks and maximise returns from resources, which can be done by automatic resource allocation. There is also waste tracking, allowing for a leaner approach, saving money as well as time.

Tracking people on hazardous sites can prevent inappropriate behaviour, the use of unsafe materials and unnecessary human activity in dangerous zones. It can also be used to develop early notification and alarm systems, alerting workers and other staff to any dangers and even keeping digital records of personnel and their locations. This information could be used by rescue teams in a case of emergency or accident.

The benefits of this are obvious: decreasing the volume of life-threatening scenarios would make the work environment more appealing for new employees and help work quality improve.

It also means staff could be freed from tedious monitoring and management tasks, directly impacting the project or business, increasing overall productivity and the bottom line. The bringing together of previously unrelated data can help people working in construction learn lessons and uncover opportunities within a virtual environment, which can then translate into the real world.

An example is BAM Nuttall teaming up with Iotics and researchers at Cranfield University to develop an AI-based, computer vision system. The 'Learning Camera' employs a standard webcam, integrated with an IoT framework of smart sensors to collect real-time environmental data such as wind speed and weather conditions, combined with contextual information including location, date and time. All this data is fed into a cloud-based system to create digital twins.

Colin Evison, head of innovation at BAM Nuttall, says: "Overall, lessons are learned and opportunities are uncovered within the virtual environment that can be applied to the physical world and used to transform a business. This is an opportunity to explore how we can make construction projects smarter by the adoption and development of technology solutions which have not been traditionally available before."



For construction, linking a virtual building to its real-world counterpart can show site workers how it is performing in real time

baramundi Introduces New IIoT Manufacturing Edition, Adds Cloud-Based UEM Monitoring in baramundi Management System 2020

bMS Manufacturing Edition manages complex networked production endpoints; Argus Cockpit shows onsite or remote IT teams through any browser real-time UEM system status

baramundi Software today introduced baramundi Management Suite (bMS) Release 2020, expanding secure unified endpoint management (UEM) capabilities with a new Manufacturing Edition for IIoT networked production endpoints. bMS 2020 also adds the cloud-based Argus Cockpit for onsite or remote IT staff to monitor patch management, software deployments, and other routine tasks from any location without the need for VPN connections on one or multiple networks.

bMS Manufacturing Edition (ME), Argus Cockpit and other bMS 2020 improvements took into account requests and feedback from the community of more than 3,000 baramundi UEM customers worldwide.

bMS Manufacturing Edition and Android Dedicated Devices Support

bMS ME is a new version of bMS designed specifically for managing and securing networked production environments. It automates the processes of inventory and vulnerability assessment for Industrial PCs and controllers as well as Android based, dedicated devices and Windows-based industrial control systems.

The first implementation of bMS ME includes the new IC Inventory module for automated discovery, mapping and management of widely used Siemens SIMATIC S7 series industrial control devices. Users also can customize SIMATIC device profiles by adding configuration, location or name data. Device management tasks can be defined and executed manually, at specific times, or at regular maintenance intervals. Siemens SIMATIC S7 support adds to existing bMS support for Beckhoff control systems, other industrial PCs and controllers.

bMS ME also offers support for Android Enterprise: Dedicated Devices to improve the security and performance of Android based mobile devices used as handheld scanners in logistics, or tablets for retail sales product demonstrations and configuration. Devices can be restricted to specific authorized apps for efficient and consistent use by multiple employees. Dedicated Devices support is available in the baramundi Mobile Device Management

Premium module which already is widely used by business users to manage company- and user-owned Android devices.

Cloud-Based Argus Cockpit and Other Remote Endpoint Management Features

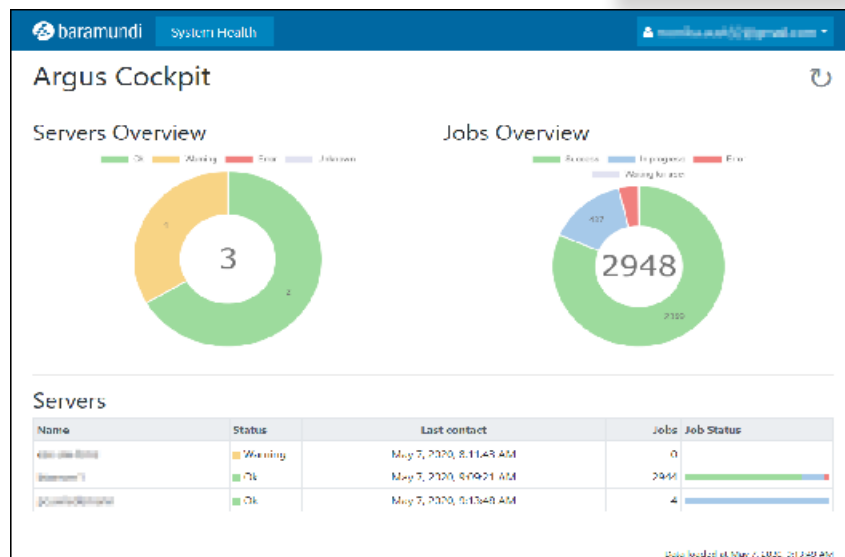
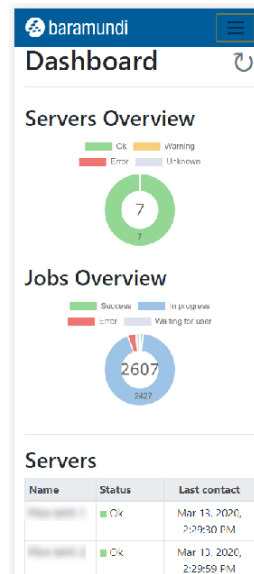
Named for the multi-eyed, all-seeing god of Greek mythology, Argus Cockpit features multitasking and lets onsite or remote IT teams view the real-time status of vulnerability scanning, OS and app installation, remote system imaging, and other bMS jobs via any desktop or mobile browser. It enables secure system monitoring by IT staff in any location without requiring VPN connections to company servers.

Other innovations in bMS 2020 that improve remote endpoint management include expanded capabilities for software cost control in the baramundi License Management Module. The new module makes it easier and faster to import software inventory, license and contract data from external sources, especially after companies acquired and deployed new software to equip hundreds of work-from-home users at the start of pandemic lockdowns.

bMS 2020 also includes enhanced views of endpoint status in Windows Security Center, secure enrollment of Windows endpoints

outside the company network, and an improved interface for the user self-service software Kiosk.

bMS 2020 is available immediately during the pandemic with no cost or obligation, or as part of baramundi's regular 30-day free bMS trial offer after the pandemic.



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Data backup and recovery: technologies ‘Tiger King’ producer Rick Kirkham wishes he’d had

W. Curtis Preston, Chief Technical Evangelist, Druva

As is the case with true crime documentaries and reality TV, even the most seemingly leftfield series can glue us to our screens. This was no different in the case of ‘Tiger King’, Netflix’s latest sensation set in the world of private big cat zoos in America. Full of larger-than-life characters, the series focuses on the many twists and turns of Joe Exotic, a self-proclaimed *Tiger King* and all-around flamboyant character. Warning to anyone who hasn’t seen the show yet – we’re about to delve into spoilers.

In a key twist, Rick Kirkham, a reality TV producer witnesses hours of his footage go up in flames, ruining his ambitions of capturing Joe’s bizarre escapades. This moment might come as a shock to viewers, but likely brings back old nightmares to anyone who has worked in IT or with critical business data. Whilst this documentary doesn’t teach us much in the way of character, it certainly serves a vital reminder about the importance of basic data backup across several locations.

Indeed, there is no better time to be backing up data safely, owing to a proliferation in affordable cloud-based services. While using the cloud was previously inaccessible to smaller businesses and entrepreneurs, services are now able to utilise numerous affordable and scalable data management solutions. Given the rapid growth of data across industries and an increase in cyber threats, cloud backup and protection is critical in supporting businesses with hassle-free and automatic services, allowing them to focus the rest of their time on the needs of the business.

Why data management is harder than ever

There is no doubt that businesses and companies are facing ever increasing challenges in managing their data. It has become an incredibly complex environment, owing to the quickly evolving nature of the data landscape and overwhelming turn towards working remotely. Similarly, the proliferation of IoT devices has resulted in the rise of the concept of “small data sprawl” – that there is now data being created and stored in more places than ever before, and the necessity of systems to help humans distinguish the important data from the noise, so each can be treated differently. With the rise of remote working – and small data sprawl on the rise – businesses need to adapt now to ensure that this data is protected and secure. Otherwise, they could be unpleasantly surprised like Rick Kirkham.

Easy solutions for difficult problems

While insufficient data backup can lead to some truly difficult problems, the solutions at hand are anything else but difficult. A good starting point for this is to adopt a cloud-centric protection solution. Today’s modern applications that your company might already be using (such as Slack, Microsoft Office365, G Suite and Salesforce) rely on cloud components and cloud storage. This makes cloud-centric backup solutions perfect for protecting applications in their entirety.

Many cloud providers function across several regions, making compliance with local data privacy and governance laws much easier. Furthermore, cloud flexibility has the added bonus of running operations, including recreating environments from a point in time for AI reproduction or disaster

recovery, and identifying strange patterns cropping up in the backup data to detect potential risk of cyber-attacks.

Nevertheless, businesses equally need to consider adopting SaaS tools to support the improvement of data protection. While it is understandable that this may seem an inefficient use of one’s time, SaaS providers can further improve your business by offering services and creating a centralised network around the cloud and regulations. By utilising the know-how of SaaS experts, businesses can efficiently

and safely manage their data and protect it from potential cybercrime and physical damage, be it fire or anything else.

Companies are at a greater risk than they used to be of cyber-attacks, simply because there is more data available – and across more devices. SaaS tools are vital in automating several otherwise complex processes, freeing up the hands of both the business and employee. Looking ahead, it’s safe to say privacy and security will only become more crucial as small data sprawl accelerates...

While most businesses are likely not at risk of potential arson attacks and bizarre characters from the world of big cat zoos, now is a good time to double-down on protecting your valuable data. Given the overwhelming turn towards remote working and reliance on potentially vulnerable online platforms, businesses must consider developing a more well-rounded and universal data protection strategy, which will help them avoid potential difficulties, be it fire drill from a cyberattack or a literal fire.

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Cooling and power tips – the basics

Robert Staines, data centre management specialist

Over the past two decades I have been involved in the design, fit out and ongoing maintenance of data centres and special equipment rooms all over the UK. Some of these spaces have been small and of course some extremely large.

The main concern for pretty much most of these rooms was how they were going to be cooled and how much power can be used. Some rooms needed nothing more than a small air conditioning with no redundancy and some required full redundancy should any of the installed units fail as well as full-sized power distribution units (PDUs)

When you hear the term “free air cooling” you would think this option would cost you the least - that may be the case in the longer term - but only if the room is set up correctly and standards for loading the room with IT kit adhered to. When you hear the term 16/32 amp, do not think this is the power you can use per outlet, this is normally the maximum that can be used

before that circuit breaker activates.

Now, for a lot of companies, they do not have a specialist team who solely look after managing these rooms. Hopefully, they'll take care of placing kit in the right or should I say most efficient position within the racks, which in simple terms can be as straight forward as the kit that consumes the most power and gives off the most heat being placed closest to the air cooling units.

There are plenty of cooling units on the market and you would be unwise to just install a system without understanding how it works, how it's maintained and approximate life span of the chosen installation. That's because everything has a service life, meaning how long will parts be available for, how easy is it to carry out maintenance and can repairs be done without impacting the kit in the room.

As the current trend is leaning more towards managed data centres and cloud infrastructures, it is important to fully understand the environment that you may

be acquiring. It's crucial that if you have critical kit that needs cooling you must have some sort of monitoring tool to notify you once the temperature starts to move outside of the safe operating temperature of the lowest tolerant kit in the room. In general, servers can normally run a lot hotter than network kit (unless it is the main backbone switch).

Things I would recommend you look out for when it comes to cooling are as follows:

- If a water-cooled system is in use, check that there is a leak detection system in place and pipes monitored by area so any potential leaks can be identified quickly and resolved.
- You will need at least three of the same rating to have N+1 redundancy (for example, should any one of the three units fail, the remaining two units can support the space being cooled).
- Maintenance can be done without causing major disruption to the room (some data centres keep the cooling units in a

separate room to minimise this).

- Do not exceed the recommended cooling rating for the space you are using, should things go wrong it only takes a few minutes before the temperature really starts rising at a rapid rate.
- Remove any kit that is not required as it is a waste of energy having kit powered on that is no longer in use.
- How much power are you allowed to install in your allocated rack space (up to 7kw can be installed in a 47u x 700m rack space using contained cooling systems. This figure is approximately 4kw for a standard hot/cold aisle cooling system where the air is either pushed through a raised floor or using wall mounted units (wall mounted units are normally used for smaller rooms only).

I've deliberately NOT used too much jargon as these are just my high level thoughts, there is a lot more to cooling and power and they are both interlinked.

PRODUCTS

MIVOLT has launched two specialist fluids to improve cooling efficiency, allowing for more efficient data centres, it says.

A dielectric fluid, which can be used to immersion cool data centre servers, MIVOLT is non-conductive and “can come into direct contact with electrical components resulting in more effective heat removal”. What's more, MIVOLT says the innovation is also biodegradable and manufactured without fluorine. Immersion cooling can improve power usage

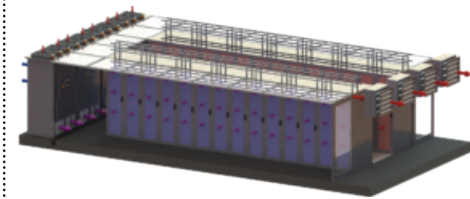
efficiency by more than 20% and can also reduce the physical space required for data centres and their equipment.

Furthermore, immersion cooling significantly reduces the need for other types of cooling such as air conditioning, as well as the need to locate data centres in cooler climates. Locating data centres closer to consumption will be key to improving latency to support trends such as remote communications and artificial intelligence. mivoltcooling.com



EcoCooling has an internal and external product range – let's start with the former. Described as “compact and flexible solutions, the ECT range of coolers is designed to be installed internally. Multiple configuration options allow for air to be supplied either directly, through ductwork or raised floors. There is a single box unit including the control system, supply fan, cooling system and dampers.

What's more, there's also a “sophisticated” leak detection and alarm system incorporated. In addition, ECT units can be



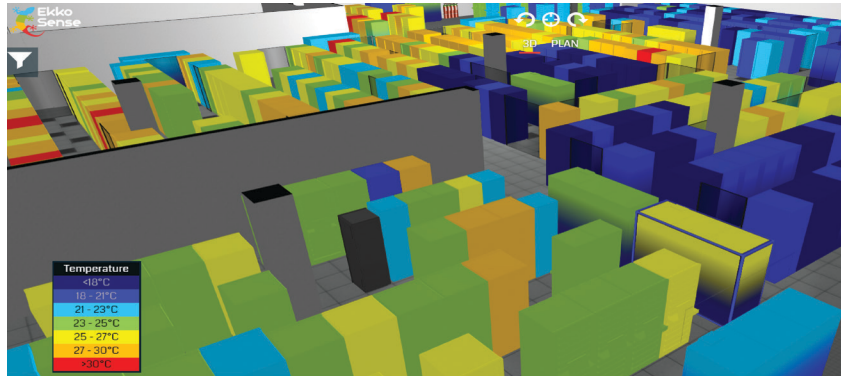
Cooling Advisor from **EkkoSense** is embedded into the company's EkkoSoft Critical 3D visualisation and analytics software. Apparently, it's the data centre

industry's first advisory capability that's built right into the heart of a thermal optimisation solution. What's more, it works 24x7 to provide data centre operations

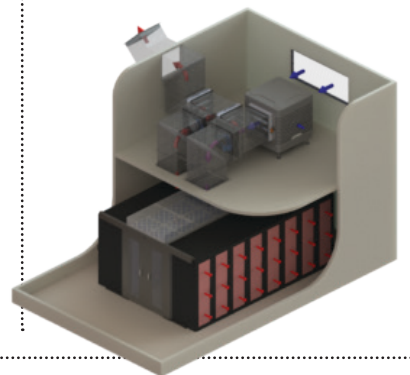
team with focused cooling performance recommendations and advisory actions.

Cooling Advisor “takes advantage of EkkoSense's PhD-level optimisation expertise to present data centre operations teams with clear advice” that, when actioned, can unlock data centre cooling energy savings of 10%+.

The solution uses the real-time data gathered by sensors from across the data centre and features powerful self-optimising tools that deliver both data centre cooling energy savings as well as the ongoing monitoring of thermal risk. These highlight cooling unit performance and provide insightful analysis and trends – for example by uncovering critical cooling zones of influence using AI-based analytics. ekkosense.com



fitted with a humidification option to avoid low relative humidity non-compliance. Now for the external coolers, which can be installed externally or inside a plant room. The standard unit is down-flow, however, top and side discharge configurations are available. Units can also be placed externally or in a plant room. Modular units mean expansion is cost-effective. Controlled by central touch-screen CREC control system. Units can be stacked for larger air flow requirements. ecocooling.co.uk



Airdale says its precision cooling system has been developed to meet the increasing demand for ultra-efficient, large capacity precision cooling systems that deliver extremely

quiet and accurate climate control for critical data centre applications.

With chilled water (CW), direct expansion (DX) and dual cool variants, the 11-233kW “is a versatile option to suit most precision cooling applications”.

The company says so-called “applied cutting edge technology enables SmartCool to quietly and precisely control room temperature, humidity and air quality to ensure efficient, reliable”, 24/7 operation of sensitive systems in data

centres and other critical applications.

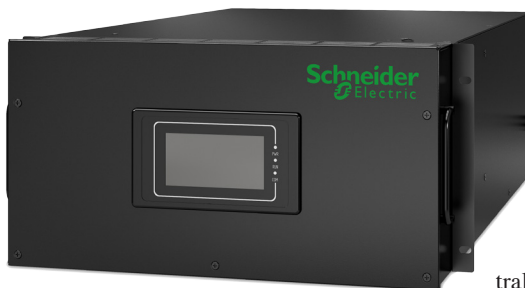
SmartCool CW is said to deliver up to 30% more cooling kW/m² when compared with competitor units, keeping footprint to a minimum to free up premium IT space.

One last thing: apparently, “matching a SmartCool free-cooling model with an Airedale International dedicated free-cooling chiller can help avoid full mechanical cooling for up to 98% of the year, helping data centre facilities deliver best-in-class PUEs”. Nice upselling there. airedale.com



Schneider Electric brings to market its first rack mounted data centre cooling solution, known as the Uniflair Rack Mounted Cooling 3.5kW, DX solution. It addresses, Schneider says, the escalating demand for rack-based cooling for micro data centres and edge computing where space can be at a premium.

The company says it frees up valuable IT floor space by placing the cooling at the bottom of any IT rack.



The solution can be integrated into EcoStruxure, enabling the global visibility of performance and status supported with a 24x7 service bureau using the next generation data centre management (DCIM) software, EcoStruxure IT Expert, and EcoStruxure Asset Advisor. “Simply put, our new vendor-neutral, rack mounted cooling solution

is right-sized for edge micro data centres and provides the right answer for cooling today's critical edge technology,” says Maurizio Frizziero, director of cooling, Schneider Electric. “It offers more cooling in less space and simplifies management and maintenance, making it ideal for industries like retail, finance, health care, light manufacturing, and education.”

Schneider Electric's rack mounted cooling solution is available worldwide. se.com



“ Please meet...

Richard Jeffares, group chief technology officer, Glide, tells Networking+ about his life and inspirations

Who did you want to be when you were growing up?

Buzz Aldrin the astronaut who first walked on the moon with Neil Armstrong, because when you were 5 years old he had the coolest name. Many years later I eventually met Buzz at a Silicon Valley conference where he told me that the “moon was a pretty quiet place”.

What was your first job after leaving school?

I worked at Telstra Business Faults (Corporate & Government division) during my University years in Australia, assuming both full-time employment plus full-time study. It was a baptism of fire being exposed to the sharp-end of operational product such as Frame Relay, ATM/SDH, ISDN Pri & Bri, and industry leading PBX's like the Nortel Meridian, Ericsson MD110 and Siemens HiPass.

When was your big career break?

This was definitely getting transferred to Asia from Munich by Siemens AG, where our team collaborated with NEC on the world's first UMTS 3G deployments at DoCoMo in Tokyo and Hutchison (was Orange then) in Hong Kong. My team also architected and launched the first “operational” Openwave WAP gateway during this period getting the head start on BT Genie (Cellnet, Starhub & Smartone), AT&T, T-Mobile and Telstra teams. Many industry pundits agree this was the catalyst for Hutchison to invest heavily in 3G thereafter, so the rest is now history.

What is the best thing about your job?

Helping enable the UK digital railway which is going to be both fibre & 5G, empowering our next generation to consume super-fast broadband that is an essential learning enabler.

What is the hardest thing about your job?

Managing the integration of multiple companies post acquisition. This is typically the most difficult aspect of a CxO role as new stakeholders join and founders depart. Because these days the technology evolution is quite easy to employ when compared to the old days, when our sector had quite primitive testing and staging tools.

What has been your career low?

Definitely when Motorola Iridium went Chapter 11 in 1998, because the market sentiment tanked about 6 weeks later and ICO Global Communications did the same, being the consortium led by investors Inmarsat and global Tier1 carriers.

What has been your career high?

Definitely making my first “mobile 3G video call” in 2001 using our NEC/Siemens handset, whilst standing in the pouring rain near the Yokohama test tower whilst waving to one of our engineers who was drive testing around the Tokyo Dome. For the youngsters reading this, I am talking years before Apple iChat and Skype video was launched over “fixed” broadband etc..

Who has been your biggest inspiration?

Dr Lawrence Roberts who was a trusted mentor and friend who led the project team at DARPA, that essentially created the modern internet and was still inventing until the day he died in late 2018.

What do you want to do when you retire?

Learn how to play guitar properly, finish learning a number of languages, plus trek to the South and North Poles and probably restore old historic cars.

What is the best business lesson you have learned?

To always ask difficult questions of your mentors/advisors, because they have been on this earth longer and always have something interesting to say.

What would you say has been the best technological advancement in your lifetime?

From my standpoint, it has been pivoting fixed internet into the mobile-internet ecosystem, that has enabled pervasive learning in far reaching rural communities that were

previously disconnected. But I acknowledge that many of my Silicon Valley friends would immediately evangelise the advent of GPU deep learning and subsequent A.I. is the one. Either way, both are societal game changers!

If you had to work in a different industry, what would it be?

Definitely within the neuroscience and medial domain, because I am both saddened and fascinated by the Alzheimer's disease which has directly impacted many of my elderly family members over the years in both Southern and Northern hemispheres.

Which competitor do you most admire and why?

I actually admire these OECD examples as country-level competitors, because in internet broadband terms, these two countries being the Japanese and Korean policy makers (firstly) and engineers (subsequently), still remain the global Tech industry flag bearers. Because each nation implements and builds sustainable scalable internet infrastructure for giant populations with a long term (not <5 year ROI horizon) focus on the wider GDP growth opportunity and macro-societal benefits enabled by “genuinely fast” gigabit (or more!) broadband.

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