THE NETWORK INFRASTRUCTURE E-M

IS GAINING CERTIFICATIONS, QUALIFICA AND ACCREDITATIONS REALLY WORTH

Prevention is better than cur

HOW CUSTOMER REQUIREMENTS ARE DRIVING CHANGE IN DATA CENTRE SECURITY AND ACCESS CONTROL

Sizing it up

DOES THE GROWTH OF EDGE DATA CENTRES MARK THE BEGINNING OF THE END FOR HYPERSCALE FACILITIES?



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The views and comments expressed by contributors to this publication are not necessarily shared by the publisher. Every effort is made to ensure the accuracy of published information. © 2023 Chalk Hill Media Given the vital role network infrastructure technology plays in all aspects of our lives, there is still no legal requirement for those carrying out this work to prove their capabilities. That said, there are now various certifications, qualifications and accreditations available so they can prove their level of knowledge.

With a wide variety of courses to choose from, the sheer number can appear overwhelming. Most blend theoretical study and practical exercises and have certainly raised the bar in terms of improving levels of competency. Attending these courses often requires a significant outlay in terms of time and money and, therefore, individuals and their employers need to be certain that there will be a return on their investments. So in order to ascertain the tangible benefits and advantages that certifications, qualifications and accreditations provide, Inside_Networks has assembled a panel of experts to give us their advice on what to look out for.

As digital transformation continues there is increasing need for compute power at the edge. It continues to be a massive industry talking point and Richard Clifford of Keysource explains why he thinks edge data centres will become more prevalent, while Nick Ewing of EfficiencyIT examines the ways that virtual reality (VR) is changing the game for modular data centres.

We also have a special feature dedicated to security and access control, comprising two excellent articles. In the first, Ashish Moondra of Chatsworth Products (CPI) looks at how to enhance data centre efficiency and security with predictive power modelling. Ashish is followed by Greg Thompson of Vantage Data Centers, who examines how customer requirements are driving change in data centre security and access control.

It's been great fun putting together a review of the Inside_Networks 2023 Charity Golf Day, which raised £11,000 for Macmillan Cancer Support. I'd like to once again say a massive thank you to all those who participated, sponsored and provided raffle prizes. We'll be doing it all over again in 2024.

With lots more besides, I hope you enjoy this issue of Inside_Networks and if you'd like to comment on any of these subjects, or anything else, I'd be delighted to hear from you.

Rob Shepherd

Editor





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MADE TO CONNECT







Half of EMEA IT leaders doubt their digital infrastructure is prepared to accommodate AI technology

42 per cent of IT leaders surveyed globally believe their existing IT infrastructure is not prepared for the demands of artificial intelligence (AI) technology, according to the Equinix 2023 Global Tech Trends

Survey. The survey, which examined IT leaders' responses to AI advances in their organisations, comes after a year of AI breakthroughs that saw the technology rapidly deployed.

'Tech leaders are expediting AI's integration into their organisations, and it is increasingly becoming a critical capability to enable intelligent and autonomous systems that power a modern

business,' said Kaladhar Voruganti, senior technologist at Equinix. 'Those who fail to maximise its use could fall behind.'

85 per cent of the 2,900 IT decision makers polled worldwide are seeking to benefit from AI and are already using, or planning to use it, across key functions. EMEA organisations are most likely to be using AI, or planning to do so, in IT operations (82 per cent), followed by cybersecurity (79 per cent) and customer experience (75 per cent). IT leaders in EMEA had the most uncertainty about the ability of their infrastructure to accommodate the needs of AI (49 per cent), compared to leaders in Asia-Pacific (44 per cent) and the Americas (32 per cent).

'Successful development of accurate Al models depends upon secure and high speed access to both internal and external data sources that can be spread across multiple clouds and data brokers,' added Voruganti. 'For example, as enterprises embark on creating their own private generative AI solutions, they may want to process their data at a private and secure location with high speed access to external data sources and AI models.

He added, 'We are entering an era where more data is being generated at the edge. Hence, Al processing has to move to the edge for performance, privacy and cost reasons. To create scalable Al solutions, businesses must consider whether their IT frameworks can accommodate the required data ingestion, sharing, storage and processing of massive and diverse data sets, while keeping sustainability in mind.'

Bruce Owen, Equinix UK managing director, stated, 'The survey emphasises the need for improved infrastructure and skills related to AI, particularly in the EMEA region. It is concerning that IT leaders in this region express discomfort with their infrastructure and team's ability in accommodating AI.'

He concluded, 'These findings highlight the pressing need for developing and retaining skilled professionals in the industry. At Equinix, we are committed to addressing these challenges head on. We believe that by prioritising education, collaboration and diversity, we can actively contribute to overcoming the talent shortage and drive positive change in the tech sector. For example, we have recently launched our recent partnership with Newbury College, where we will welcome 14 apprentices, with a notable 30-40 per cent representation of women. We aim to make a lasting community impact and shape the future of the industry.



More than half of IT departments saddled with burden of compliance

Nearly four in five organisations are more concerned about compliance than they

were five years ago, with the burden falling on the IT department in 57 per cent of businesses, according to a survey from Hornetsecurity. 69 per cent of respondents said that compliance has a 'moderate' to 'extreme' impact on their IT

department's operations, and 13 per cent said they couldn't confirm that they were compliant with required controls.

The findings revealed that despite this widespread concern, 37.5 per cent of organisations don't have a dedicated compliance officer, and one in eight have

Daniel Hofmann

been penalised for non-compliance with regulations. Just one fifth of respondents

said they use an automated system for compliance, with 40 per cent relying on manual processes.

Hornetsecurity CEO, Daniel Hofmann, said, 'This should be a wakeup call for businesses. The fact that more than

half of companies are hindering the day to day work of IT departments through lack of compliance staff and policies is a huge concern. It confirms our suspicion that there's a widespread need for easy to use, effective compliance management solutions.

EPI launches scholarship programme to bridge the data centre skills gap

EPI has created the EPI Data Center Futurist Scholarship program, which aims

to provide aspiring professionals with the resources they need to acquire the knowledge and skills necessary for success in the data centre industry. By empowering motivated individuals with a strong foundation in data centre management principles, EPI seeks to bridge the skills gap and nurture a new



generation of competent and forward thinking data centre experts.

In addition to initial investment, EPI is actively seeking sponsors to contribute

additional funds to expand the scholarship program. By joining forces with likeminded

organisations and individuals, EPI aims to create a sustainable and impactful program that will empower individuals from diverse backgrounds.

'We are thrilled to launch the EPI Data Center Futurist Scholarship program and our \$1m investment shows we are serious about giving back to the community and doing what we can to bridge the skills gap in the data centre industry,' said Edward van Leent,

chairman and CEO at EPI. 'It will play an important role in shaping the future of the data centre industry by empowering a new generation of skilled professionals.'

NEWS

UN responds to need for global AI watchdog

Generative artificial intelligence (Al) technology that can spin authoritative prose from text prompts has captivated generative AI are deafening and they are loudest from the developers who designed it,' Guterres told reporters. 'We must take

the public since ChatGPT launched and became the fastest growing app of all time. Al has also become a focus of concern over its ability to create deepfake pictures and other misinformation.

UN secretary-general, Antonio Guterres, has given his backing to a proposal by leading AI executives for the creation of an international AI watchdog body like the International Atomic



those warnings seriously.'

He has announced plans to start work by the end of the year on a high level AI advisory body to regularly review AI governance arrangements and offer recommendations on how they can align with human rights, the rule of law and common good. Guterres said such a model could be 'very interesting' but noted that 'only member states can create it, not the

Energy Agency (IAEA). 'Alarm bells over

Secretariat of the United Nations'.

UK government injects £54m into the development of trustworthy Al

The UK government has announced a £54m investment to support the UK's artificial intelligence (AI) and data science workforce and develop trustworthy and

secure AI. The investment is set to support universities in their work to develop cutting edge AI technology, as £31m of the funding will be used to back research at the University of Southampton, bringing together the expertise of academia, business and the wider public.

The funding sets out to support the new Geospatial Strategy, which hopes to drive growth through emerging technology such as AI, satellite imaging and real time data. It will also accelerate new research



Sridhar lyengar, managing director at Zoho Europe, commented, 'The

development of trustworthy AI is critical to its success. It is great to see the UK making an investment to create a safe and ethical playing field for AI, bringing together expertise across academia, business and the wider public to drive this forward. As the debate around the future of this emerging and fast moving technology continues, this collaboration can help to ensure best practice in

providing guidance and regulation that sees AI applied to aid ethical and secure adoption, and which can help the UK continue its ambition to take the lead in these industry developments.'

Only nine per cent of global organisations avoid network outages in an average quarter

Fewer than one in 10 chief information officers (CIOs) have avoided a network

outage, according to new research by Opengear. This finding is among new research by Opengear of both CIOs and network engineers globally. The scale and frequency of network outages is revealed by 91 per cent of CIOs stating that they experience downtime at least once a quarter.



Survey statistics reveal that network downtime has a significant financial impact for businesses. Figures show that in the UK for each minute of disruption 23 per cent of organisations lose between \pounds 2,001 and \pounds 4,000. As an average, this figure equates to \pounds 2,213 for every minute of downtime. Due to continued network outages and

rising economic pressures, 64 per cent of CIOs now say it's harder to meet customer expectations, a concern also reflected by 62 per cent of network engineers in the UK.

Gary Marks, president at Opengear, said, 'It's perhaps unsurprising that CIOs are allocating more investment to network resiliency to ensure that

downtime doesn't occur. The key is where this investment is being targeted. From critical first day deployments and everyday maintenance to worst day scenarios such as network outages, organisations need always on access to their critical resources to ensure business continuity.

NEWS IN BRIEF

Juniper Research has found that enterprise spend on private networks will near \$10bn globally by 2028 – rising from \$1bn in 2023. The company has also found that global retail spend over chatbots is forecast to reach \$12bn in 2023, growing to \$72bn by 2028. Increasing by 470 per cent over five years, much of this growth will be driven by the emergence of cost effective open language models in regions such as North America and Europe.

Lenovo ISG has reached record annual artificial intelligence (AI) infrastructure revenue of over \$2bn and unveiled the next phase of its growth strategy, with an additional \$1bn investment over three years to accelerate AI deployment.

Julia Adamson, managing director for education and public benefit at BCS, The Chartered Institute for IT, has been awarded an MBE in the King's Birthday Honours List for services to education.

Analysis of Google search data has revealed that online searches for AI or artificial intelligence, are at the highest point in history. The findings by digital-adoption.com reveal that 2023 has been a breakout year for AI, as search volume in the term has more than doubled from 17 million in January 2023 to 42 million in May. In comparison, there were 7.9 million searches in January 2022.

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MAILBOX

Make the green conr

Hi Rob

Reliable connectivity is something that we have all come to expect – but how do we guarantee that this is produced in a sustainable way? To start, rather than working as individual companies, service providers should implement common practice initiatives through which established operators can aid others in reducing their emissions targets.

Because there is so much pressure on individual companies to meet targets set

by customers and regulators, operators may feel like they are in a bubble, without collaboration across the industry. However, if we are to reach an overall net zero, the entire sector must cooperate for the best possible results.

Because networks aren't something that we normally see or physically interact with, the infrastructure involved is often easy to overlook. However, our internet connections rely on routers, switches, hubs, repeaters, gateways, bridges and modems – all of which are manufactured in facilities across the globe and need energy in order to work. As internet providers look to

constantly improve their network service, they must focus on how they can produce the best possible service sustainably.

To optimise their sustainability strategy, network operators should look to the basic cloud principles and utilise passive infrastructure when looking to upgrade or expand their network. This means that rather than demolishing and rebuilding an unused site, it is used for new projects.

Passive infrastructure is an optimal choice rather than the rip and replace model, as it reduces emissions from the production of materials and the building process. As service providers look to install a 5G network, this is particularly important as it reduces unnecessary waste. To rollout



an effective network upgrade, various aspects of the infrastructure must also be reformed. If we are to carry out these processes sustainably, green practices must be central to our actions from the planning stage until completion.

nection

Similarly, another principle that should be taken on is extending product life, which ultimately leads to unused products going to landfill and, as a result, fewer new products being produced unnecessarily. When maintenance is required, engineers should look to repair and replace parts rather than substitute the whole device. When manufacturing new products, sustainability and longevity should be central to the design of each device. As



well as working with today's technologies, manufacturers should look to future proof their technologies to be compatible with future innovations.

Among the most mature operators, artificial intelligence (Al) and automation are being used to ensure that networks are functioning in the most efficient manner possible. These tools can be used to fix faults within the network before they cause disruption and require manual

intervention.

If certain aspects of the network are not being used, operators can use AI to switch them off and ensure optimal performance. AI technologies can also be used to analyse the network to ensure that it is working efficiently. As these tools can be used to assist engineers by resolving network issues automatically, this can reduce unnecessary manual maintenance, which in itself produces emissions.

As metro networks alone are being upgraded, operators should continue to look at ways to effectively invest in the planet and its future. This may seem like moving away from profitability but, in reality, this could not be less accurate.

As end users and other companies are now looking to measure their indirect emissions, sustainability in service providers makes them a more attractive option for customers. Moreover, ensuring the longevity of products means that there is a better return on investment for devices that don't need replacing. Equally, the use of passive infrastructure limits the need for expensive and complex building processes, which are often not cost effective. Reducing inefficiencies in the network can also lead to better profits for network operators, as they reduce unnecessary energy expenditure.

Jai Thattil

Juniper Networks

Editor's comment

While ensuring high levels of sustainability across all network infrastructure projects should be high priority, I was particularly pleased to read Jai's comments about extending product lifecycles. Although often under the radar, all too often products are designed with built in obsolescence, contributing to massive amounts of e-waste.

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Live and learn

Being able to demonstrate skills and knowledge is more vital than ever and there are numerous certifications, qualifications and accreditations available. Inside_Networks has assembled a panel of industry experts to examine what tangible benefits and advantages they offer holders, their employers and customers

Experience alone is no longer enough to convince customers that an individual has the necessary skills and expertise to design, specify and install network infrastructures for enterprises and data centres. Although there is no legal requirement for those carrying out this work to prove their capabilities, the wealth of certifications, qualifications and accreditations now available can confirm a holder's knowledge and reassure customers that those in possession of them are fully capable of doing the job they are being paid for.

Most courses blend theoretical study

and practical exercises and have certainly raised the bar in terms of improving levels of competency. That said, attending these courses often requires a significant outlay in terms of time and money and, therefore, individuals and their employers need to be certain that there will be a return on their investments.

In order to ascertain the tangible benefits and advantages that certifications, qualifications and accreditations provide, Inside_Networks has assembled a panel of experts to give us their advice on what to look out for.

WHAT BENEFITS DO THE CERTIFICATIONS, QUALIFICATIONS AND ACCREDITATIONS CURRENTLY AVAILABLE TO DATA CENTRE AND ENTERPRISE NETWORK INFRASTRUCTURE PROFESSIONALS OFFER? ARE THE DIFFERENT TYPES OF DESIGNATIONS PROPERLY VALUED AND UNDERSTOOD BY EMPLOYERS AND END USERS, AND DO SOME INDIVIDUALS SIMPLY INDULGE IN 'BADGE COLLECTING' TO ENHANCE THEIR STANDING WITHIN THE INDUSTRY?

QUESTION TIME

CHRIS FRAZER PRINCIPAL CONSULTANT AT LAYER ZERO SERVICES

I've always been in favour of training and qualifications. Having undertaken an apprenticeship and, much later, obtaining BICSI RCDD accreditation, I understand the importance. work can be undertaken by people without the necessary skills, which can't be right for the buyers of the service.

Encouraging and promoting the training that is already available is hugely important.

As a relatively new industry, there were no historical apprenticeships or training to draw on. Consequently, organisations such as **BICSI**, CNet Training and the Fibreoptic Industry Association (FIA) developed their own courses, alongside those provided by structured cabling and network equipment manufacturers.

This initial lack of established and recognised training

18

meant that people or businesses could provide an IT related service without any recognised qualifications for employers to check or reference. Compare that with the electrical industry using NICEIC, or the gas industry using Corgi registration. It's even a struggle to find anything on Checkatrade relating to elements of the IT industry!

But qualifications do now exist from recognised bodies such as City & Guilds. CNet Training, in particular, is making great strides with its training and apprenticeship programmes in the UK and this is to be particularly applauded.

Our industry must be considered in-line with the importance that IT now has in most people's lives. Without recognised training and qualifications, it's just a free for all and Buyers must be made more aware of what certifications, qualifications and accreditations already exist and industry employers must be asking for these from potential employees. This will help to promote certifications, qualifications and accreditations to a wider audience.

l encourage further and more formal training to improve the value of certifications, qualifications

and accreditations, and elicit greater understanding by employers, end users and the industry as a whole. Training benefits employers, end users and those taking the training – this is fundamental to developing our industry.

Some may choose to 'badge collect' qualifications, but I don't see that as an issue. Why would more knowledge ever be a problem?

SOME MAY CHOOSE TO "BADGE COLLECT" QUALIFICATIONS, BUT I DON'T SEE THAT AS AN ISSUE. WHY WOULD MORE KNOWLEDGE EVER BE A PROBLEM?'





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QUESTION TIME

MATTHEW HAWKINS DIRECTOR OF SALES AT CNET TRAINING

The official certifications and qualifications available to digital infrastructure professionals, that are delivered by well established, respected and recognised

providers, offer an array of benefits at individual, organisational and industry level.

For individuals, holding internationally recognised qualifications and certifications offers valuable credibility and confidence, and an overall improvement in quality and validity of work. It also gives a clear differentiator when looking for career progression.

At organisational level,

it enables companies to identify and action ongoing improvements through continual assessment and comparability. This positive effect also filters down to consumers, contributing to confidence in the provider and the quality of their work. Internationally recognised qualifications and certifications benefit each and every stakeholder, promoting the digital infrastructure industry as having a culture and commitment to quality, and helping to maintain the reliability that is so crucial within mission critical data centre facilities.

The distinction between qualifications, certifications and accreditations is not widely understood – qualifications can only be awarded by approved and verified educational centres, and they are valid for life. Certifications are a commitment to lifelong learning and often require renewing, usually every three years, to ensure the individual's knowledge and skills remain aligned with industry changes. Accreditations are generally provided by organisations that accredit shorter courses to demonstrate knowledge gain with non-



renewable certificates. In any industry, you will find people who are constantly gaining new qualifications, certifications and accreditations. Whether they are working on genuine progression or simply 'badge collecting' can only really be determined on a case by case basis.

These factors shouldn't detract from the value that officially qualified

and certified individuals bring to the digital infrastructure industry. In a sector that has grown so quickly, and is relied on so heavily by so many, holding recognised qualifications and certifications is invaluable, both to verify individuals' skills, and to ensure we continue to help shape the future of the industry in the most positive way we can by populating it with highly capable and competent individuals.

'IN A SECTOR THAT HAS GROWN SO QUICKLY, AND IS RELIED ON SO HEAVILY BY SO MANY, HOLDING RECOGNISED QUALIFICATIONS AND CERTIFICATIONS IS INVALUABLE, BOTH TO VERIFY INDIVIDUALS' SKILLS, AND TO ENSURE WE CONTINUE TO HELP SHAPE THE FUTURE OF THE INDUSTRY.'

KATHRYN AVES MANAGING DIRECTOR AT BLUEPOINT TECHNOLOGIES

Certifications are a huge advantage for installers who have been issued them by a manufacturer. It demonstrates knowledge employees is a huge competitive advantage. Most end users will have some understanding of industry standards and

of that product or tool and, perhaps more importantly, allows installers to offer a manufacturer's warranty and access direct support.

Qualifications from reputable bodies are valuable as they provide industry professionals with knowledge of specific topics, demonstrating a commitment to continued learning to



stay up to date with evolving technologies. It also shows a dedication to continuing professional development (CPD), which when gained in conjunction with practical field experience is a real benefit for the individual, their employer and, ultimately, the end user.

Similarly, accreditations are a validation of an individual's knowledge, experience and career to date. They signal to a potential employer or end user that an individual is competent, qualified and adheres to industry standards.

Most conscientious employers will understand and value the importance of various designations. For example, if Bluepoint Technologies takes on an apprentice, we will help them attain the correct qualifications and credentials for their role. Likewise, if we hire a technician, we look for certain qualifications, combined with extensive practical experience. Having high calibre, well trained, experienced designations if they are awarded by a recognised training establishment. However, there will always be price driven end users who may overlook an installer's lack of certifications or qualifications in favour of lower costs. It's guite common that problems arise and a lack of certifications, and therefore warranties. can be costly for end users who choose to

compromise on quality standards.

To the final part of the question, I see 'badge collecting' as only a positive thing. It means someone is committed to learning and has passed relevant courses that will enhance their knowledge. Badges should always be from a reputable establishment and should be acquired to support practical field experience.

'MOST END USERS WILL HAVE SOME UNDERSTANDING OF INDUSTRY STANDARDS AND DESIGNATIONS IF THEY ARE AWARDED BY A RECOGNISED TRAINING ESTABLISHMENT. HOWEVER, THERE WILL ALWAYS BE PRICE DRIVEN END USERS WHO MAY OVERLOOK AN INSTALLER'S LACK OF CERTIFICATIONS OR QUALIFICATIONS IN FAVOUR OF LOWER COSTS.'

QUESTION TIME

ANDY HIRST MANAGING DIRECTOR CRITICAL INFRASTRUCTURES AT SUDLOWS

I'm a big believer in the importance of professional development and the promotion of it within Sudlows. I believe that any type of continual development,

qualification or certification can only be a positive for individuals and organisations and, ultimately, for the industry. The driver – whether it is 'badge collecting' or a genuine hunger for knowledge – should not really matter, as individuals are gaining knowledge.

I do, however, believe that the effort, late nights and lost weekends invested to achieve some of these qualifications are not always recognised. Certifications,

qualifications and accreditations are sometimes taken for granted and not recognised for the extent to which they extend an individual's experience and knowledge.

It has always been a frustration of mine that although there are reputable data centre courses, there needs to be more technically challenging courses available, and these should maybe even be mandatory before engineers can work in a mission critical environment. Why is this a concern? In theory a newly qualified electrician, on their first day out of their apprenticeship, could turn up to and work on a 10MW plus facility. Obviously, no company in their right mind would permit it, but their newly achieved qualifications would, in theory, allow this.

So what courses are available to upskill a newly qualified engineer to work on a



facility this size? Again, not really any. They would be relying on experienced engineers to teach them in order to eventually enable them to do this work.

> When I talk to college and university students studying mechanical and electrical (M&E) degrees, not many of them, or their lecturers, realise the extent of the leap from traditional M&E to mission critical engineering. I am trying to work with a couple of universities and colleges to highlight this and even try and introduce some of the skills required into the curriculum.

All professional

development is good but, unfortunately, our industry lacks deeper and more technical qualifications. This is remarkable considering the criticality and size of some of these mission critical facilities and their impact on lives, the environment and/or the economy. Facilities ranging from a few KWs through to 100s of MWs and the size of multiple football pitches are what newly qualified electricians are letting themselves in for!

'CERTIFICATIONS, QUALIFICATIONS AND ACCREDITATIONS ARE SOMETIMES TAKEN FOR GRANTED AND NOT RECOGNISED FOR THE EXTENT TO WHICH THEY EXTEND AN INDIVIDUAL'S EXPERIENCE AND KNOWLEDGE.'

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QUESTION TIME

NICK EDWARDS PRODUCT MARKETING MANAGER AT HELLERMANNTYTON

The certifications, qualifications and accreditations that are available offer a realistic path for progression and acquisition

of up to date industry knowledge. They offer several benefits such as:

Industry recognition

Authenticating an individual's expertise, indicating they have met the necessary standards along with acquiring the right skills in their respective area.



individuals to advance into niche roles. Although certification offers several benefits, I do not believe that all

> designations are equally valued and understood by employers, customers or end users. There is a large imbalance between what may be respected nationally and internationally, where others will only be appreciated in specific sectors or regions within the industry. Employers will naturally value accreditations that are supported by a reputable organisation, have a thorough

Professionalism

Earning an accreditation illustrates dedication to professional development. It reflects an individual's commitment to staying up to date with the latest industry <u>standards</u>, trends and best practices.

Credibility

Qualifications provide assurance that the professional has the essential skills to manage or operate complex systems or projects.

Career progression

Qualifications can help increase an individual's value to their employer, creating a pathway for career progression. It also helps employers to seek out individuals with the right training when recruiting for specific roles within the industry.

• Concentrated expertise

Many of the qualifications available in the data centre and enterprise sectors are based on specific and specialised areas or skills. This creates opportunities for examination process, and cover up to date industry topics. Continuing professional development (CPD) courses should always be verified and endorsed by an independent third-party CPD organisation.

As with most industries, there will be an element of badge collecting, which has the impact of devaluing accreditations. However, I would like to think that this is minimal. Badge collecting ultimately has no advantage and qualifications alone are not enough to prove competence.

Employers want to see a good mixture of qualifications, experience and track record. More importantly, training that stipulates CPD and staying up to date with industry advancements to maintain validity of said qualifications is an effective way to keep accreditations valuable and filter out badge collecting.

'EARNING AN ACCREDITATION ILLUSTRATES DEDICATION TO PROFESSIONAL DEVELOPMENT.'

TREVOR KLEINERT MANAGING DIRECTOR AT KLEINERT CONSULTING SERVICES

As someone who has a long history of obtaining industry certifications and accreditations, I feel the question of what benefits these accomplishment<u>s offer</u> to undertake a thorough assessment of a prospective learning organisation to weed out basic and non-in depth content courses. In others words, do your homework on

data centre and enterprise infrastructure professionals is valid and fair.

The key to obtaining extensive knowledge and understanding of data related topics is to choose a course that covers an array of related subjects pertaining to all aspects of data centre design, build and



what is on offer – this will lead to a better learning experience and end result.

Unfortunately, there are courses on offer that make it easy to gain a certification or accreditation. Some students will look for these to try to enhance their standing in the market. The more in depth courses with an exam mean that a student must know the topic and understand it

operation. The benefits of doing so are an in depth understanding of the topic and its applications.

Personally, I feel an end of course exam is the best way to test the learner's knowledge gained throughout the course. In addition, a high pass should be required to acquire the certification or accreditation.

The designations that are available, and their worth, is not fully understood by employees and end users to the degree they need to be – at no fault of their own. Many companies market their courses to the ICT world, however, without an explanation to a prospective student of the full content of the course, the differences between different types of designations can be missed.

It is advisable for prospective students

completely. These types of courses deter badge collectors.

The simply advice is to do your research and go with a reputable company to earn a respected certification or accreditation.

'IT IS ADVISABLE FOR PROSPECTIVE STUDENTS TO UNDERTAKE A THOROUGH ASSESSMENT OF A PROSPECTIVE LEARNING ORGANISATION TO WEED OUT BASIC AND NON-IN DEPTH CONTENT COURSES. IN OTHERS WORDS, DO YOUR HOMEWORK ON WHAT IS ON OFFER – THIS WILL LEAD TO A BETTER LEARNING EXPERIENCE AND END RESULT.'

A close call

Richard Clifford of Keysource explains why he thinks edge data centres will become more prevalent and in the future the industry will move away from hyperscale facilities

The spiralling cost of energy and issues with the UK power supply have put the data centre sector in the spotlight again – but this time for all the wrong reasons. The term 'vampire data centres' has rapidly gained traction alongside accusations that we are 'sucking the grid dry' and 'causing housebuilders to face a decade long wait to start new developments'.

FACING FACTS

There is no getting away from it – in broad terms data centres do use a considerable amount of power and are estimated to be responsible for up to three per cent of global electricity consumption today, and projected to touch up to four per cent by 2030. The average hyperscale facility consumes 20-50MW annually – theoretically enough electricity to power up to 37,000 homes.

Yet the demand for computing power and digital services is growing fast. In the last decade, global internet traffic increased tenfold and data centre energy use is likely to increase accordingly by 2030. So, what is the answer?

THE HEAT IS ON

As well as using considerable amounts of power, data centres also generate a lot of heat that can be reused in a number of ways. Probably the most beneficial is for district or community heating, which is all about taking energy released as heat from a range of energy sources including data centres, putting it into a system of highly insulated pipes, and delivering a supply of low carbon heat using heat pumps to homes, businesses and public buildings.

In places like Denmark and Norway this is commonplace, with the energy source often coming from waste handling facilities where they burn trash to generate heat, whilst in Iceland the heat is harnessed from its volcanoes - enough for the whole population. There is no doubt that heat reuse applications in the UK lag behind other parts of the world and just over two per cent of **UK** homes are currently connected to a district network.

PROOF READING

There have been some initiatives that provide a proof of concept. A great example is the work Keysource has been doing with Deep Green to enable heat generated by a data centre to be used at a public swimming pool in Devon. In simple terms computers are put inside a white box, which is surrounded by oil to capture the heat. It is enough to heat the pool to about 30°C 60 per cent of the time, saving Exmouth Leisure Centre thousands of pounds.

This approach utilises small pockets of 'spare' and already allocated grid capacity to deliver edge and high performance computing capabilities within the fabric of society. The energy recapture model saves at least 63 per cent on energy requirements to heat the pool. In exchange, the pools provide space, power and connectivity to support the deployment. Albeit on a small scale, this example shows how the heat generated by a data centre can benefit the local community. So, if we agree that district heating and/or any form of heat reuse a good thing and that it needs a reliable heat source that data centres can provide and need to do so, what is holding us back?

LOCATION, LOCATION, LOCATION

Whilst some data centres are repurposing the heat they generate, often they are not in an ideal location for this type of approach, as they are generally isolated or in a vast industrial estate. Yet this could change. I believe that the increasing demand for fast data and the limitation of power availability will mean that edge data centres will become more prevalent and in the future the

'Data centres need to be viewed as a key utility, responsible for the smooth running of hospitals, satellites, the military, national security cars and games consoles to name just a few - all of which are reliant on data. And, the closer the data centre the better the latency for these services?

industry will move away from hyperscale data centres - not least because there is not the power to support them. In essence, rapidly growing industry energy requirements and the need to lower carbon footprints represent existential threats to existing data centre business models and so change must happen.

NEXT GENERATION EDGE

Edge is a classic term that can mean anything from a computer under the desk to a hyperedge 100MW site and anything in between. So, what if next generation edge involved these data centres being integrated into local community where they would be perfectly situated to reuse the

heat they generate for good? Moving forward, this approach also addresses the grid limitations and energy requirements that are significantly limiting opportunities to develop new data centre capacity.

So, what needs to change? First up we need some education. Companies will need to think differently about their compute and break it up into more manageable chunks. They should be open to the obvious benefits of spreading the

demand for power out and reducing carbon.

ROLE PLAY

Also, in the past, planning officers have been naïve and lacked an understanding of data centres, tending to treat them like warehouses. Now we will be expecting them to understand their importance to new towns and any lifecycle refurbishment of local areas and the role they will play. They will need to overcome the preconception that data centres are huge, ugly eyesores – after all a 200kW data centre would be the size of a single story club house.

> Data centres need to be viewed as a key utility, responsible for the smooth running of hospitals, satellites, the military, national security cars and games consoles to name just a few all of which are reliant on data. And. the closer the data centre the better the latency for these services. GIVING

GIVING BACK

Finally, we could take this a step further and store some of this heat in hydrogen fuel cells and export the excess power to help the reinforcement of the national grid. Data centres would then become part of the national critical infrastructure – a utility and a positive contributor to the community, helping to support the transition to net zero over the coming decades. The possibilities are plentiful.



RICHARD CLIFFORD

Richard Clifford is director of solutions at Keysource. He has extensive experience in delivering critical environments – from design to operation. Championing innovation, Clifford is instrumental in driving value for Keysource's clients, evidenced by some of their most pioneering and award winning projects and solutions.

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Comtec is now Netceed, in partnership with one of Europe's premier cabinet

manufacturers, is proud to offer the Micro Data Center solution from Lande.

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for high quality of service combined with low latency for their users. Edge computing supports rapid deployment

and



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Finally, EDGE8 Port Breakout modules and EDGE Mesh Modules help to deliver greater density, save costs and lower expenditure for network deployments, while

scalability, and is a key driver in enabling future technologies for data centre operators. That's why Corning supports protecting your investment for the future. To find out more **CLICK HERE**. www.corning.com

AFL

In today's hyperconnected world, companies need a way to scale and analyse data faster, cheaper and better. The only

way to do that is to move out of the cloud and on to the edge of the network, where most of the future data will be generated.

Edge computing has the potential to unleash a variety

of advanced use cases, resulting in new user experiences and new business opportunities. However, the edge is not in one place, it is a continuum. AFL offers a broad portfolio of optical fibre

Proximity Data Centres

Proximity Data Centres provides a trusted UK network of regional edge colocation data centres that meets individual customer requirements – from specific regional data centre services to multi-site rollouts. Currently there are 10 facilities strategically located to conurbations

and cities in the North, North West, Midlands, Thames Valley, South West and South Wales.

These high capacity, scalable and extremely resilient Tier 3 facilities enable enterprise



businesses, content delivery networks (CDNs), cloud and immersive technology providers to maximise competitive advantage through reduced latency and data transit costs, enhanced operational infrastructure solutions to help you configure the perfect solution for your specific edge environment.

Founded in 1984, AFL is an international manufacturer providing end to end solutions to the energy, service provider, enterprise, hyperscale and industrial markets, alongside several emerging markets. AFL

is dedicated to bringing our customers quality solutions, as well as delivering superior value.

CLICK HERE to learn more. www.aflglobal.com

efficiency, and more responsive customer service. To reinforce this commitment, Proximity is rolling out a network of regional internet exchanges located at each of its data centres.

Full on-site support, transition and onboarding is provided, along with server

migration services and a straightforward contract with a single set of service level agreements covering one or multiple sites. ISO 9001, ISO 14001 and ISO 27001 compliant, all of Proximity's data centre grid electricity

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For more information call 03300 250138 or to visit the website **CLICK HERE.** www.proximitydatacentres.com

BSO

BSO boasts an extensive network infrastructure, comprising over 240+ points of presence (PoPs) across 33

markets, with over 50+ cloud on-ramps. Our network is seamlessly integrated with major cloud providers, ensuring robust connectivity. Additionally, we connect to over 75 on-net



internet and 30 stock exchanges, offering complete access to global markets.

We have invested substantially in optimising our Tokyo to London route. As a result, we are thrilled to offer unparalleled latencies between these two critical financial hubs. This achievement establishes a groundbreaking pathway connecting London, Tokyo and New York, providing

> seamless connectivity for foreign exchange markets with the lowest possible latency.

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and Tokyo to Singapore, we invite you to contact us today.

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USystems

The many years of innovation and experience that USystems has accumulated in producing cutting edge solutions for data centres has been channelled into developing the most effective and efficient aisle containment systems currently available.

Thermodynamically advanced, cost and energy efficient, our solutions incorporate horizontal (flat roof) and vertical solutions spanning hot aisle or cold aisle options – all of which improve cooling efficiencies specific to your data centre requirements. Each style of containment can be designed around multiple height cabinets without affecting thermal performance.

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Companies providing data centre services as their core business must deliver maximum uptime and quick scalability to offer room for growth

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Solutions from HUBER+SUHNER are designed to optimise data centres for four different market segments: colocation, telecoms, broadcasting and enterprise.



Structured cabling Efficient and scalable fibre management systems



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More than meets th

Nick Ewing of EfficiencyIT examines the ways that virtual reality (VR) is changing the game for modular data centres

Data centres have become an essential resource in the digital transition, propelling technological transformation in almost every location and accelerating the adoption of technologies such as cloud, generative artificial intelligence (AI) and machine learning on a global scale. To do so effectively, however, engineering firms and systems integrators must deal with a host of complex issues. They include fulfilling the demand for rapid deployment times, enhancing data security, ensuring application reliability, and prioritising efficiency and sustainability at every single step of the lifecycle.

DEEPER DIVE

A growing number of organisations are discovering that conventional approaches to data centre design and build lack the speed and agility needed to overcome these challenges. Instead, they're turning to bespoke and scalable modular data centres – many of which can now be designed with the help of both digital twin and VR technologies.

Today's pace of innovation is so fast that data centres have had to evolve to stay ahead of customer expectations. On the one hand, rack, power and server densities are increasing at a dramatic rate – especially where high performance computing (HPC) and AI are concerned. On the other, resilience, agility and efficiency remain key priorities.

Data centre operators are, therefore, looking for new ways to not only design and



build data centres, but quickly add capacity to existing infrastructure – especially where space has become a key concern. Embracing newer approaches to design and build, such as prefabricated data centres, has offered a host of benefits, including the ability to build-out in smaller, modular increments – whether that be on premises or at the edge.

NEED FOR SPEED

Fulfilling faster deployment times is

e eye

another huge challenge for the industry, and shorter lead times are driven by a range of factors including the growth of cloud



computing and digital transformation. The emergence of edge computing and 5G networks has created new demands for data centres closer to end users and devices, reducing latency and improving performance for both business critical and consumer applications.

One of the remaining hurdles for data centres, however, is maximising efficiency and sustainability. According to a report by JLL, data centres accounted for about one per cent of global electricity consumption in 2020, and this figure is expected to rise to three per cent by 2025. Operators have, therefore, had to find new ways to reduce their energy consumption and carbon footprint – all while maintaining performance and reliability.

Some of the solutions might include improving cooling systems, optimising server utilisation, adopting machine learning capabilities and data centre infrastructure management (DCIM) tools to monitor and manage energy usage and, where possible, procuring renewable energy sources. Many organisations are also turning to modular data centres in order to satisfy this complex and often fluid set of requirements in a pre-integrated and predictable manner. Unlike traditional builds, they can be swiftly designed, specified and customised to meet the needs of any organisation.

BUILDING BLOCKS OF SUCCESS

A modular approach can yield significant benefits for end users and can often be built and installed faster and more cost effectively than conventional systems by utilising standardised components and processes. Depending on the design, they can also consume less energy and, due to their pre-tested nature, require less maintenance, which lowers operational expenses.

Taking a modular approach allows the system to be better customised and configured according to the application specific requirements of each project. From a location standpoint prefabricated systems can be quickly deployed in a host of different environments and, if necessary, be relocated as needed, without disrupting 'A modular approach can yield significant benefits for end users and can often be built and installed faster and more cost effectively than conventional systems by utilising standardised components and processes.'

existing operations.

For many organisations, however, modular data centres can provide higher levels of reliability, availability, security and scalability than traditional facilities – primarily because they're designed with greater redundancy and resiliency in mind. Importantly, they can offer a reduced environmental impact by being intentionally designed to use less resources or generate less waste. So, by being smart with design, component selection and integration, end users can make the

most of their budget and resources in an environmentally sustainable way.

EACH TO THEIR OWN

One of the biggest strengths of prefabricated modular data centres is also one of the biggest barriers to adoption - the ability to create a truly unique and customised solution. In the past, committing Now, however, times have changed, and end users can interact with their data centre while it's still on the drawing board – using VR to model different scenarios, amend design components and alter specifications to meet the demands of their application specific environment. This can enable customers to visualise and optimise the configuration of power cooling and IT components to create a data centre better suited to the needs of their organisation.

Digital twin technology, meanwhile, is fast being used to test and validate data



to a bespoke data centre build involved high levels of customer trust and with little more than spec sheets, drawings, testimonials and promises to go on, the customer needed to have faith that their one of a kind data centre would satisfy their requirements both now and in the future. centre performance and reliability in a zero risk virtual environment. For example, a digital twin can simulate the effects of temperature, humidity, vibration, power outage, fire, flood, cyberattack and human error all before a single brick has been laid. Engineers can then evaluate the behaviour and response of the facility while it is under stress and identify potential risks and failures. This potent mix of VR and digital twin technology can significantly reduce the time and cost of testing and validating a modular data centre while it is still in the design and build phase – an approach which also improves quality and efficiency.

LOOK TO THE FUTURE

What should we expect from an advanced modular data centre? For a start, those considered best in class are completely customisable and can be deployed within demanding timescales – sometimes in as little as 12 weeks.

Modular solutions will also take many forms and meet the specific demands of the customer. They can include dedicated power modules that incorporate

> uninterruptible power supplies (UPS), back-up generators, low voltage power equipment and switchgear. Depending on the application requirements, fully customisable all in one modules can quickly be created, containing integrated racks, UPS and the customer's choice of air or liquid cooling, alongside advanced physical security features and management software.

For those that need to be deployed into hostile environments, ruggedised and highly secure units are another option. These types of solutions are used in government,

defence and life sciences applications, and can typically feature a host of security options including radio frequency shielding to prevent cross device interference and unauthorised interception of electronic communications, acoustic mitigation to reduce noise, and sensitive compartmented information facilities (SCIF) compliance – giving personnel a secure space to process classified material.

RIGHT FIRST TIME

The beauty of modular data centres is that all these requirements can be incorporated quickly and with ease to satisfy even the most demanding customer's wish list. Thanks to VR and digital twins, engineering organisations can now ensure the final product is fit for purpose before it's even left the drawing board.



NICK EWING

Nick Ewing is managing director at EfficiencyIT. With over 20 years in the critical infrastructure industry, he is a specialist in data centre, consultancy and engineering, providing services across the spectrum of design, build and modernisation. His passion for combining highly efficient technologies with innovative engineering have helped EfficiencyIT to create data centres for some of the world's most renowned businesses.

Loughborough University drives data centre efficiency and reliability with Schneider Electric and on365

Schneider Electric has delivered a new data centre modernisation project for Loughborough University alongside on365. The project saw Schneider Electric and cooling efficiencies, and greater visibility of its distributed IT assets, Loughborough worked with on365 and Schneider Electric to undertake a major modernisation

on365 install new energy efficient technologies including an EcoStruxure cooling solution, Galaxy VS uninterruptible power supply (UPS) and EcoStruxure IT software, enabling the university to harness the power of resilient IT infrastructure, data



project at its Haslegrave and Holywell Park data centres. The project saw on365 modernise the Haslegrave facility by replacing an outdated raised floor and deploying an EcoStruxure row data centre solution.

This has significantly improved the overall structure, enabling an efficient data centre design.

analytics and digital services to support new breakthroughs in sporting research.

To overcome a series of data centre challenges including requirements for a complete redesign, modernisation of legacy cooling systems and improved Further improvements in resilience and efficiency were also achieved by replacing legacy UPSs with Schneider Electric's Galaxy VS UPS with lithium-ion batteries, which offers up to 99 per cent energy efficiency.

Host-IT announces first customer at newly opened Birmingham data centre

Host-IT has announced Proweb as the first customer for its Birmingham based colocation data centre. Host-IT's latest site is now providing back-up and disaster recovery support for Proweb's main IT

stack, which is located at its Nottingham headquarters.

This follows Proweb completing a technology refresh earlier this year that included a review of its current and future colocation



with dual connectivity. A further benefit is a significant reduction in colocation, connectivity and power costs compared to its previous colocation provider.

Host-IT's new facility is strategically

located at Proximity Data Centres' secure ISO 27001, Tier 3 central Birmingham campus, close to the major optical fibre networks traversing the UK and various regional fibre providers. There is

requirements. The company now has easy access to a fully secure 24x7 data centre

currently 6MW of IT power available to site with the potential to increase this to 12MW.

IBM to build its first European quantum data centre to serve expanding ecosystem

IBM has announced plans to open its first Europe based quantum data centre to facilitate access to cutting edge quantum serve as IBM Quantum's European cloud region for users to provision services at the data centre for their quantum computing

computing for companies, research institutions and government agencies. The data centre is expected to be operational in 2024, with multiple IBM quantum computing systems, each



research and exploratory activity. The facility is being designed to help clients continue to manage their European data regulation requirements, including processing all job data within European Union

with utility scale quantum processors.

The data centre will be located at IBM's facility in Ehningen, Germany, and will

(EU) borders. The facility will be IBM's second quantum data centre and quantum cloud region, after its New York facility.

Secure IT Environments designs and installs micro data centre for Barnet Hospital

Secure IT Environments has completed a project for Barnet Hospital - designing, supplying and installing one of its custom 42U Micro Data Centre 3 facilities at the hospital's intensive care



the cabinet is secure against access or damage by the general public, and will provide a new level of reliability over the previous data centre. The micro data centre took three days to install and involved the movement

unit (ICU). The new edge micro data centre provides critical network services and communications for the operational side of the ICU, and includes passive air conditioning for up to a 12kW load.

Designed to a high security specification,

of equipment between old and new cabinets, structured cabling of the new cabinet, power supply installation and testing. Secure IT Environments will also be providing maintenance for the cooling system in the new data centre.

Wellstar Health System enhances patient care with Siemon

Wellstar Health System faced challenges with the reliability and scalability of its on-

premises data centres. To enhance security, compliance and reliability, it decided to migrate its workloads to two colocation data centres owned by Quality Technology Services (QTS). These



carrier neutral data centres provided the necessary control, visibility and regulatory compliance required for managing electronic medical records and supporting emerging technologies.

Siemon products played a crucial role in Wellstar's data centre migration. It initially used Siemon's standard density optical fibre enclosures for cable management, identification and accessibility. As the need for high speed servers increased, Wellstar deployed Siemon's high density plug and play fibre system, which supported its requirement for more fibre ports in a limited space. When Siemon introduced the LightVerse Pro high density fibre optic

system, Wellstar chose to upgrade, as it allowed it to accommodate even more fibres within its existing leased space efficiently.

Additionally, Wellstar implemented Siemon's Category 6A Z-MAX copper cabling system

with SkinnyPatch modular cords for its high density patching areas, providing superior performance, improved airflow and increased flexibility. Throughout the project, Siemon's Data Center Design Services and customer support played a vital role in ensuring smooth implementation and meeting Wellstar's evolving healthcare needs. Siemon's comprehensive solutions and expertise allowed Wellstar to enhance its connectivity, comply with healthcare regulations and deliver effective outcomes for patient care.

PROJECTS & CONTRACTS IN BRIEF

Colt Technology Services has expanded its US capabilities with the connection of a new data centre and subsea cable landing station – NJFX – in New Jersey to its Colt IQ Network. The new transatlantic route gives businesses greater choice, security and flexibility as they seamlessly connect economic and commercial hubs in Europe and the US across Colt's digital infrastructure.

DigiCert will be providing digital trust services to the European Production Giganet (EuProGigant) project.

BT Group's Digital Unit is accelerating its cloud transformation with the successful completion of an assessment conducted by ProjectiveGroup, covering all key aspects of managing data for increased value and reduced risk. The assessment was based on the EDM Council's Cloud Data Management Capabilities (CDMC) Framework – a comprehensive set of industry standard guidelines, standards and best practices for organisations to move their data into cloud, multi-cloud and hybrid cloud ecosystems.

Make smarter decisions faster with intelligent power distribution.

In today's hyperconnected world, power demands in the data centre have become more complex and rack power density continues to rise. Now, more than ever, data centre managers must look for power management solutions that enable the highest levels of efficiency, availability and manageability, while also enhancing security. Chatsworth Products' (CPI) intelligent eConnect[®] Power Distribution Units (PDUs) are the answer.

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Better safe than sorry

Greg Thompson of Vantage Data Centers examines how customer requirements are driving change in data centre security and access control

While customers remain responsible for securing their own data and network infrastructures, data centre operators now have a larger than ever role to play in security and access control. The rapid convergence of physical and cybersecurity threat, combined with new developments and trends in artificial intelligence (AI) and advancements in security equipment, are driving new requirements and higher expectations among data centre customers.

DOUBLE TROUBLE

The twin threats of physical and cyber related ingress have increased exponentially in the past few years and need to be viewed holistically. As indicated by Verizon's 2022 Data Breach Investigations Report, ransomware has continued its upward trend with an almost 13 per cent increase – a rise as big as the past five years combined. Furthermore, 82 per cent of breaches involved the human element, whether using stolen credentials, phishing, misuse or simply an error.

More than ever, customers need to feel totally confident that data centre operators are providing robust, leading edge security and access control solutions. At a minimum, physical security should take a multiple layered approach, starting with high grade perimeter fencing, motion sensors, obstructions such as anti-ram bollards, as well as trained security personnel, CCTV recording and thorough access control procedures for personnel and visitors including visitor management systems, access badges, biometric dual authentication and video monitoring.



FITNESS FIRST

Increasingly, fit for purpose firewall and intrusion detection software needs to be implemented. Consider, for example, the systems that keep a data centre operating – from heating, ventilation and air conditioning to water supply and electricity – and which are all connected. These can be controlled and managed with a building management system (BMS) and other automation tools – even remotely – opening the door for malicious actors to compromise a data centre. This could cause physical damage to the data centre or expedite a distributed denial of service (DDoS) or ransomware attack.

Moreover, the use of cloud services presents significant challenges demanding stronger access control policies and



procedures, such as multi-factor authentication and role based access control to protect against unauthorised access. The rise of insider threats is also a growing access control concern, aided by the proliferation of connected internet of things (IoT) and mobile devices.

KEEP IT REAL

Data centre employees, contractors and other insiders with access to sensitive data including biometrics can pose a significant risk to both customer organisations and operators. Ensuring that only authorised individuals can access these devices and the data they contain is essential.

In addition to traditional access control measures, such as passwords and biometrics, data centres must look to implement more advanced security measures including behavioural analytics. This is where AI powered real time security systems based on natural language processing (NLP) offer considerable scope for the prevention and detection of threat. ChatGPT, for example, could prove to be a game changer with the ability to analyse vast amounts of data to identify potential threats almost instantaneously.

POLICIES AND PROCEDURES

To combat the new security challenges, data centres should consider stronger identity access management (IAM) systems to manage user identities and control access across multiple platforms and applications. Least privilege access control policies are crucial in securing an environment. These policies restrict access to only necessary resources based on the user's role and responsibilities, therefore reducing the attack surface.

Equally, with increased risk of insider threats, data centre operators must implement robust access control policies including the principle of least privilege, which limits access to only the necessary resources for a job role. Training and awareness programmes can also be 'With increased risk of insider threats, data centre operators must implement robust access control policies including the principle of least privilege, which limits access to only the necessary resources for a job role.'



with a global third-party security company can ensure consistency and accountability in the security across the

portfolio. They will train their staff across the globe in the same way and hold them to the same standards. A service level agreement (SLA) will ensure that the service provided by the company and their representatives will meet established

effective in reducing the risk of insider threats by educating employees on the consequences and the importance of cybersecurity.

SUPPORT STRUCTURE

Apart from the peace of mind of having the perquisite access control measures and security policies in place (physical and digital), for many enterprise and hyperscale organisations the advantages of working with a data centre provider is speed, capacity and scalability – including the ability to quickly support requirements in new markets. They must feel confident that their partner will have, and be able to deliver, the same strict security policies and procedure across their entire portfolio, therefore enabling scalability and consistency in their security infrastructure.

Key to this is the quality of an operator's own physical security force. So too is the level of workforce redundancy. Partnering metrics and be consistent.

CLEAR AND PRESENT

Part of gaining customer confidence in a data centre's security regime is also down to compliance and transparency. Proof of meeting international ISO management standards and others such as SOC 1 Type 2, SOC 2 Type 2, SOC 3, PCI-DSS, HIPPA, PIPEDA will go a long way in building customer trust in a facility's security and availability controls,



as will a willingness to undergo customer specific compliance requirements.

Customers should also be able to get access to security information at will and know about any security incidents that have occurred. Too many data centre providers still treat security incidents as a 'closed shop' and don't necessarily report them to their customers. If there is a security incident all the companies leasing space in the data centre should have the right to know about it. An online portal, for example, with access to real time security information is best practice. It will allow customers to pull security data such as who was in their space, what did they access, as well as any security incidents that may have occurred.



With securing their data and ensuring strong access control a top priority for data centre customers. there is an increased focus on any data centre operators' ability to provide advanced physical and cybersecurity measures. These must comprise reliable yet easy to use security equipment, along with redundancy in their security solutions and workforce, and transparency in their security operations. To stay ahead of the evolving security landscape, data centre providers must

embrace emerging intrusion detection and access technologies and be prepared to continually adapt to meet the changing needs and requirements of their customers.



GREG THOMPSON

Greg Thompson serves as vice president physical security and cybersecurity at Vantage Data Centers. He has more than 15 years of experience in building and maintaining safe and secure environments. Prior to Vantage, Thompson supervised and directed industrial, physical and information security measures for more than 400 employees at General Dynamics Corporate. While at the Federal Bureau of Investigation (FBI), he directed security initiatives and strategies for various business units ensuring security measures align with and support objectives.

Austin Hughes

Improve rack level security with Austin Hughes' InfraSolution S-700 Dual Security SmartCard and NumPad for two factor authentication to verify user identification. connecting to InfraPower W3 version intelligent rack power distribution units (PDUs) with temperature and humidity sensors, the controller can also provide

It has a rigid and durable alloy swing handle for maintaining reliable physical security, combined with a sophisticated control panel with 2.8-inch



touchscreen with keypad function.

The built-in smartcard sensor is compatible with MiFARE or Proximity smartcards, while LED colour modes on the smartcard handle indicate the lock status – for example, locked, authorised unlock and unauthorised rack access. By local monitoring on amp plus temperature and humidity.

The InfraSolution S-700 provides a solution that can be used to upgrade a myriad of third-party racks to a reliable access control

system. Supplied with free software (ISU-01), clients can change the admin/user passcodes and assign smartcards with up to 50 user smartcard authentications per control panel.

To find out more CLICK HERE. www.austin-hughes.com

Mayflex

The Mayflex Technology Suite, or M-Tech, has been designed with three distinct areas – Excel racks and cabling, Excel FTTX, and security and access control.

The Excel focus area consists of five Environ racks. Within the racks there is a display of the Excel copper and optical fibre products, together with complementary products such as the Aura AV solution. A few intentional fault interlinks between



Fluke Networks testers. Meanwhile, the Excel FTTX solution has a large diagram to show the topology of the FTTX deployments, together with sample products.

The security and access control area has a dedicated pod for each key vendor. Each pod displays a selection of their latest products, so that customers can see for themselves how the products work and, in the case of the cameras, the quality of the images.

If you would like to visit M-Tech call 0121 326 7557 or

the racks have even been set-up to demonstrate the prowess of AEM and

speak to your Mayflex account manager. www.mayflex.com

Legrand

Legrand's Nexpand is flexible, sturdy and secure for housing data centre devices. It provides the scalability and future proof architecture needed to support the rise in digital transitions, internet of things (IoT) connectivity, 5G services, edge computing and artificial intelligence (AI) applications. The Nexpand platform is built on four fundamental values:

• Secure. Nexpand provides the highest level of security by interfacing with the most secure electronic door locking platforms.

• Smart. The cabinet's interior is made to be adjusted in three dimensions, with a

completely modular roof. This intelligent design provides more space and flexibility for managing top of rack infrastructure.

• Solid. The design offers lightweight, solid doors in a frame that easily bears the IT equipment load, with a fully integrated locking and cabling system that is unique to the marketplace.

• Sustainable. The cabinet is designed to ensure optimal airflow management, resulting in a best in class, energy efficient solution.

To find our more CLICK HERE. www.legrand.us

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Staying ahead of th

Ashish Moondra of Chatsworth Products (CPI) looks at how to enhance data centre efficiency and security with predictive power modelling

In the quest for improved energy efficiency and sustainability, data centres are increasingly focusing on intelligent technologies to monitor, manage and predict power usage. The integration of intelligent power distribution units (PDUs), long-lasting uninterruptible power supply (UPS) battery back-up and robust data centre infrastructure management (DCIM) software offers a holistic solution that minimises downtime, aids in budget forecasting and ensures the availability of skilled personnel.

TAKING ADVANTAGE

To fully leverage these benefits, it is crucial for businesses to grasp the concept of predictive power modelling and its implications. This article aims to provide a comprehensive understanding of predictive power modelling, emphasising its significance in enhancing data centre performance, capacity planning, resource optimisation and security.

Predictive power modelling leverages power and environmental data obtained from intelligent power devices within the data centre's power chain, such as intelligent rack PDUs, remote power panels and UPS systems. By analysing and interpreting this information, it enables the optimisation of data centres, network rooms and edge compute sites, leading to improved availability, efficiency, capacity planning and resource utilisation. Moreover, it enables data centre managers and network operators to make informed decisions that not only impact the present



e curve

but also pave the way for a more proactive and efficient future.



A COHESIVE ECOSYSTEM

To establish a successful predictive power modelling system, it is crucial to ensure the seamless integration and collaboration of various components. Each element within the ecosystem should possess the following characteristics – usability, manageability, integrability and high security.

Usability

Intelligent power devices should be designed with user friendly interfaces, intuitive controls and comprehensive monitoring capabilities. This empowers data centre personnel to access real time information and make data driven decisions effortlessly.

Manageability

Centralised management platforms play a vital role in overseeing and controlling intelligent power devices. These platforms should offer features such as remote monitoring, configuration management and proactive notifications to simplify operations and troubleshooting processes.

Integrability

To maximise the benefits of predictive power modelling, it is essential for intelligent power devices to seamlessly integrate with other data centre infrastructure components. This integration allows for a comprehensive view of the entire facility, enabling holistic optimisation and coordination of power, space and cooling resources.

High security

With the increasing significance of data security, intelligent power devices should

'Intelligent power devices contribute to the overall security posture of a data centre. By integrating with existing access control systems, intelligent PDUs can restrict physical access to critical infrastructure, ensuring only authorised personnel can interact with power devices. Furthermore, comprehensive logging and audit trails help track and investigate any suspicious activities.'



prioritise robust security measures. This includes encryption of data transmission, role based access control and support for industry standard security protocols. By ensuring the integrity and confidentiality of power related data, potential vulnerabilities and risks can be mitigated effectively.

MODEL BEHAVIOUR

Implementing predictive power modelling brings numerous benefits to data centre operations.

• Enhanced efficiency and availability

By leveraging real time power and environmental data, data centres can proactively identify and rectify potential issues before they lead to downtime. Predictive analytics enable predictive maintenance, ensuring optimal performance and higher availability.

• Improved capacity planning Accurate forecasting of power usage and capacity requirements allows data centre managers to optimise space, power and cooling resources. By understanding future demands, organisations can make informed decisions regarding infrastructure expansion, preventing costly overprovisioning or underutilisation.

Resource optimisation

Predictive power modelling enables granular visibility into power consumption, identifying areas of inefficiency and enabling targeted optimisations. Through load balancing, workload consolidation and intelligent provisioning, data centres can maximise resource utilisation, while minimising wastage.

• Enhanced security and access control

Intelligent power devices contribute to the overall security posture of a data centre. By integrating with existing access control systems,

> intelligent PDUs can restrict physical access to critical infrastructure, ensuring only authorised personnel can interact with power devices. Furthermore, comprehensive logging and audit trails help track and investigate any suspicious activities.

JUST THE BEGINNING

Predictive power modelling offers data centre operators and network managers

a comprehensive approach to optimise efficiency, availability and security. By harnessing the power of intelligent power devices and leveraging predictive analytics, data centres can make proactive decisions, enhance capacity planning, and optimise resource utilisation. The integration of these technologies into a cohesive ecosystem enables organisations to stay one step ahead and shape a more efficient and secure future for their data centres. With the continuous advancement of intelligent and emerging technologies, the potential for further innovation in predictive power modelling is vast, promising even greater efficiency gains and security enhancements for data centres worldwide.



ASHISH MOONDRA

Ashish Moondra is director of strategic alliances and electronics and software product manager at CPI. He has over 25 years of experience developing, managing and selling rack power distribution, UPS, energy storage and DCIM solutions. Moondra has previously worked with American Power Conversion, Emerson Network Power and Active Power, and has been an expert speaker at various data centre forums.

Simon Jesenko joins Iceotope as CFO

Simon

Jesenko

Iceotope Technologies has appointed Simon Jesenko as chief financial officer (CFO). Recognised for his track record in successfully scaling fast growing international small to medium sized

ground for corporate growth. He joins us at a time when the market is turning to liquid cooling to solve a wide range of challenges. These challenges include increasing processor output and efficiency, delivering

enterprises (SMEs), Jesenko joins the company from Senseye, where he oversaw the company's acquisition and successful integration into Siemens.



'Simon is an accomplished CFO with an impressive track record of preparing the

greater data centre space optimisation and reducing the energy inefficiencies associated with air cooling to achieve greater data centre sustainability. Simon has a clear understanding of how to optimise

corporate structures and empower improved financial performance.'

SICEOTOPE

Mayflex welcomes Richard Fair to its FTTX team

Mayflex has appointed Richard Fair as its FTTX business development manager. He

joins Mayflex from Netceed, where he was the FTTX sales and business development manager and, prior to that, worked in various sales and business development roles.

Lauren Holroyd, director of sales for FTTX at Mayflex, commented, 'We are delighted to welcome Richard to the team. We've



spent a lot of time researching and working with our customers to develop a range of FTTX products that provides the durability,

performance and flexibility that's required. Having knowledgeable and capable team

> members is the additional piece of the jigsaw puzzle to ensure that we provide our customers with the very best advice and service and support.'

Fair added, 'I'm very much looking forward to selling and supporting such a comprehensive range of products and services. I particularly like the fact that Mayflex is so committed to

sustainability and its environmental impact, and that the products are delivered in 100 per cent plastic free packaging?

organisation's

operational

capabilities.

Takayo

Takamuro,

managing director

chief executive of

and European

Telehouse Europe powers its operational and customer experience with series of senior appointments

Telehouse International Corporation of Europe has strengthened its operational and customer experience excellence with a restructuring of its operations department of the board, including the setting of the global vision and strategy, delivering of the agreed strategy, overseeing the company's entire operations and optimising the

including two new members to the board of directors.

Mark Pestridge has been promoted to the role of executive vice president and general manager, with the responsibility of informing and supporting the work of the board, including



leading the organisation's strategies and overseeing the operations of the business globally. Joining Pestridge as senior vice president and leader of technical services is Paul Lewis. He also takes on responsibility for informing and supporting the work

Telehouse Europe, commented, 'We're undergoing a transformation that will help us achieve greater operational and customer experience excellence.

We continuously strive to drive our interconnection strategy forward and into new areas, with all the newly appointed senior members supporting the business to achieve this goal.'

CHANNEL UPDATE IN BRIEF

Linda Kallas has taken charge of Teleste's strategy work as the company's new senior vice president group strategy.

Core to Cloud has appointed Laurence Bentley as head of cybersecurity, as the company launches a program of new services as part of its strategic transition to a fully managed service provider.

Abacus Group has appointed Jesse Sanders as chief financial officer (CFO) to help fuel the company's continued rapid expansion.

James Ferguson has joined Equipped as its commercial director.

STX Next has announced the appointment of Markus Tautz as DACH managing director. Tautz is already driving the company's growth in the region through the onboarding of Squirro.

May the course be with you

Once again the world-renowned Hanbury Manor PGA Championship Course played host to the Inside_Networks Charity Golf Day to raise funds for Macmillan Cancer Support

It was a beautiful morning as players assembled at Hanbury Manor PGA Championship Course for the Inside_ Networks 2023 Charity Golf Day, and we were once again blessed with sunshine. By the end of a fun-filled, entertaining and laughter packed day, which included a three course dinner, prize giving, auction and charity raffle, the Inside_Networks 2023 Charity Golf Day had raised £11,000 for Macmillan Cancer Support.

With main sponsorship provided by LMG, Netceed, Excel Networking Solutions, Mills, Onnec, Lynchpin Media and CNet Training, 34 teams and 136 people turned out to make this year's event the best ever and provide a welcome opportunity for all areas of the industry and take part in some good natured competition.

The tightly fought Team Competition saw Team Corning emerge victorious, closely followed by Team Anixter as runners-up and Team RWL Advanced Solutions in third place. The day's Best Individual accolade went to Steve Parker of Team Curran IT 1, while winner of the Nearest the Pin competition was Andrew Davis of Team Corning.

This year it was the turn of Luke Higham of Team Joyce Solutions to take the Longest Drive title. Meanwhile, PGA golf professional and director of golf for ACE Golf Challenge, Ady Wheatcroft, demonstrated a range of amazing trick shots and hosted a trick shot Beat The Pro competition on the Par 3 11th. There were 18 winners and Richard Brewster of Team Fluke Networks was drawn out of the hat as victor.

The traditional Inside_Networks Charity Golf Day prize of a golfing gnome is normally awarded to the individual with the lowest score. However, this year it was given to lan Huffam of Team Commscope for his 'remarkable' tee shot with Ady Wheatcroft, which he was delighted to find had been captured on video!

The generosity of sponsors and participants alike was phenomenal and the donated auction prizes saw some fierce bidding. The traditional game of heads and tails provided a moment of collective participation and the winner, in a move that



Team Curran IT 1 are dressed for success

'Another excellent Inside_Networks Charity Golf Day supporting Macmillan Cancer Support. We thoroughly enjoyed it and were very pleased that the singles winner came from Team Curran! We'll see you next year.' Ed Wilson - Curran IT



encapsulates the spirit of the day, donated his cash prize back to Macmillan Cancer Support.

'The Inside_Networks Charity Golf Day is a highlight of the industry calendar but this year was exceptional – both in terms of the number of teams participating and the amount of money raised for Macmillan Cancer Support,' said Rob Shepherd, editor of Inside_Networks. 'I'm incredibly proud of our industry for showing such generosity and I would like to extend my thanks to all the players, sponsors and organisers for making the event such a success.'

Andrew Stevens, one of the event organisers and CEO at CNet Training, added, 'A huge thank you to everyone who has supported the event again this year and contributed to the £100,000 plus total amount we have raised over 18 years – what a great achievement! Special thanks to Rob Shepherd and Mark Cumberworth for organising the day and arranging the sunshine. It's great that the event's popularity continues – don't forget to book early for next year.'

Liam DeRoe of Macmillan Cancer Support was in attendance and stated, 'It was a pleasure to attend another Inside_Networks Charity Golf Day at Hanbury Manor. As always, it was excellently organised and very well supported by the network infrastructure sector. The amount raised on the day will make a major impact on what we can do for people living with cancer, make their lives as normal as possible and assist them and their families emotionally, financially and practically in helping them cope with their illness.'

Plans are already underway for the Inside_Networks 2024 Charity Golf Day. Those interested in taking part are advised to register early, as places are limited. To enter a team or get more information about various sponsorship opportunities that are available **CLICK HERE** to email Mark Cumberworth of Slice Golf and Events or call 07769 696976.





'As always the Inside_Networks Charity Golf Day was a fantastic event. It is good to see competitors from all sides of the industry putting rivalries aside to support a fantastic cause. Thanks to Andrew, Mark and Rob for putting on another excellent event and I am looking forward to next year's already.' **Steve Melay – Netceed**



Team CNet Training 1 take a well-earned break

'The Inside_Networks Charity Golf Day is fantastic event at a great venue, with amazing people. The icing on the cake is that is raises a lot of money for Macmillan Cancer Support. See you again next year.' **Stuart Pinnick – Webro** 'Played Hanbury Manor for the first time and could not have enjoyed it more. It's a fantastic course with some real challenges – some beautiful holes with undulating fairways make it a great experience and all for a magnificent organisation like Macmillan Cancer Support. An amazing day all round!' **Geoff Day – Fluke Networks** 'The day was very well run. The venue was impressive and very old – like the faces and names of the people attending! Great to see so many friends all helping to raise funds for Macmillan Cancer Support.'

Paul Hewitt – Molex Connected Enterprise Solutions



'An honour to take part in such a day – amazing course, fantastic company and a great way to raise funds for Macmillan Cancer Support. To have so many colleagues from all sectors all from the same industry all striving for the same outcome makes the event a joy to be part of. Well done all involved.'

Kathryn Aves - Bluepoint Technologies

A big thanks to all the event sponsors:









'Once again, the Inside_Networks Charity Golf Day was a fantastically run event, which I thoroughly enjoyed being part of. Macmillan Cancer Support is at its heart, raising money for a cause that will have touched us all at some point. Looking forward to next year!' **Mike Thompson – Edmundson Electrical**



The scene is set for dinner and prizegiving

'As ever, it was a well attended and well organised event. Being able to check out other teams' live scores on the app based scoring system certainly added an extra competitive dimension to the day but, most importantly, a lot of money was raised for an excellent cause, which is sadly too close to home for many of us.' **Sam Sloan – Networks Centre**

'A great day, as always. It was well organised, blessed with fantastic weather and supported a very important charity.' Mark Bonner – CommScope









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Your one click guide to the very best industry events, webinars, electronic literature, white papers, blogs and videos

UPS Interacting With The Electric Grid Can Do More For Data Centres is a white paper from Eaton. CLICK HERE to download a copy.

Five Basic Considerations To Prevent Server Attack Good is a blog from Chatsworth Products (CPI). CLICK HERE to read it.

NTT has published its 2023 Edge Advantage Report, which found that more than 80 per cent of organisations expect their dependency on third-party edge services to grow over the next two years. CLICK HERE to download a copy.

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A Sustainable Future With Optical Fiber is a white paper from Corning. CLICK HERE to download a copy.

s For

42% Of IT Leaders Told To Keep Data Breaches Confidential is the title of a report by Atlas VPN. CLICK HERE to read it.



Recommended Inventory For Data Center Scope 3 GHG Emissions Reporting is white paper from Schneider Electric. CLICK HERE to download a copy.

> The Growth In Data And The Role Of Data Centres Within A Sustainable Environment is a white paper from Kao Data. CLICK HERE to download a copy.

Spirent Communications

Spirent Communications' new over the air (OTA) performance monitoring solution is designed to bring the network edge

into the complete end to end test and monitoring landscape. The Spirent Mobile Test Platform (MTP) is a simple to deploy small form factor solution that provides extensive edge service monitoring



and full remote management.

Supporting an unrooted, commercially available handheld device and four SIMs in one functional box, the Spirent MTP features an innovative patent pending management technology that enables unprecedented remote monitoring of the customer experience – whatever the chosen location. The first device of its kind, the Spirent MTP also provides operators

> with previously unseen central control of test devices at the edge, including software updates and even device hardware reboots.

Customers can now deploy and assure new 5G services with the confidence that they will be able to quickly detect

and isolate faults anywhere in the network before end customers detect a problem. This will be critical to delivering new 5G services to both consumer and enterprise customers.

For more information CLICK HERE. www.spirent.com

Panduit

The new FlexCore Optical Distribution Frame (ODF) from Panduit is a versatile front access cabling system that offers the necessary protection for critical network

connections. The current transition in physical layer design results in much higher density optical fibre aggregation points that need to be managed across the data centre – often involving tens of thousands of fibres.



Managing more optical fibres is essential and it is imperative to optimise data centre floorspace. The FlexCore ODF offers three modular blocks – a 600mm wide frame, 150mm wide vertical cable manager and 300mm vertical cable manager and can reduce cabinet floor space by 50 per cent. Multiple factors determine the value

> an ODF solution and although high fibre (port) density is important, close attention must be given to other factors. The starting point when measuring the value of an ODF is the 'PASS' test. FlexCore ODF delivers on all those requirements with its unrivalled manageability,

scalability, fibre circuit protection and security features.

For more information CLICK HERE. www.panduit.com

Trend Networks

The VDV II Basic, Plus and Pro copper cable verifiers from Trend Networks are now Bluetooth enabled to support enhanced test reporting with the Trend AnyWARE Cloud app and test management system. The new verifiers enable users to quickly,

easily and accurately create and manage test reports.

The new VDV II models can store test results on a user's phone in real time. It's as simple as

creating a job folder in the app, connecting the tester to a cable and then sending the test results. Once these are in the app, users can then tap 'upload' to transfer the results to the online Trend AnyWARE Cloud test management system in seconds.

HellermannTyton

HellermannTyton's world leading RapidNet is the perfect pre-terminated solution for the data centre. RapidNet tackles many of

the issues faced where data centre infrastructure is concerned, offering reduced installation times, high performance, high capacity solutions and the flexibility of choice across both copper and optical fibre systems.

RapidNet can

reduce installation times by up to 85 per cent, ensuring data centre space can be ready for use or resale quickly, and giving the data centre manager a faster Here, test results can be organised and professional PDF reports exported.

Using the Trend AnyWARE Cloud app, installers can also add photos to test results to give project managers more accurate documentation that proves

> the job has been completed correctly. With faster access to test data, businesses can be confident that there are no errors in an installation before a technician leaves the

site. This helps reduce the cost of call backs further down the line.

Order the new VDV II Series now from Trend Networks' distributors or direct from the online shop by CLICKING HERE. www.trend-networks.com

investment to revenue stream. It also offers performance and capacity in both copper and fibre formats, with a wide choice for

> the end user. Using the RapidNet MTP VHD solution, it is possible to achieve up to 576 fibres in 1U of rack space, meeting the capacity demanded by today's data centres.

RapidNet is available in an 8 Fibre option, which is designed to future proof a data centre and play a key role in migrating from

10 Gigabit Ethernet to 40/100 Gigabit Ethernet and beyond. To find out more **CLICK HERE.**

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Cutting edge

Justin Day of Cloud Gateway explains how to effectively manage your networks

Strong and resilient connectivity is the backbone of effective communications. It dictates how we work, how quickly we can get things done and how well we are able to collaborate. But with the number of disparate workforces growing and a rise in cloud platforms and applications, it's important that organisations have the right foundations in place to support their digital ambitions.

DIGITAL WATCH

According to recent research by Foundry, 93 per cent of organisations have adopted, or have plans to adopt, a digital first business strategy and this changes the way networks are managed. For organisations looking to effectively connect their employees, customers and devices, it can be difficult to know what changes can deliver the most value.

The UK Digital Strategy provides good guidance and identifies essential areas of action that can help government and businesses alike to support sustained digital growth. The strategy highlights the importance of having a robust digital infrastructure, unlocking



the power of data, a pro-innovation regulatory framework and a secure digital environment. This framework can be used to help individual organisations manage their networks and smoothly transition to the cloud.

It helps if you think about each area of the strategy as a leg of a table. If one leg isn't equal to the other, then the whole table will lose balance. Similarly, if you modify your network infrastructure, you'll also need to alter the processes and people surrounding them to gain the most out of the new technology and harness data driven insights. It's easy for organisations to implement new technologies, but they are only ever going to be as effective as the processes utilising them, the people handling them and the quality of data that can be extracted and analysed.

STRONG FOUNDATIONS

The right IT infrastructure can be transformative in increasing agility and efficiency, helping organisations 'Better digital infrastructure can enab advances in technology and data anal enhance collaboration.'

to utilise new tools and modernised infrastructures that keep them agile and competitive. But without reliable and scalable solutions, organisations can find it difficult to keep pace with the changes they're experiencing. The reliability of your infrastructure is everything and investing in flexible networks is a must. Any kind of digital transformation relies on network flexibility, performance and availability.

With approaches like secure access service edge (SASE) that deliver unified networking and security capabilities, organisations can implement hybrid and multicloud strategies that give them the ability to select the application, technology or provider that best fits their requirements, all through a single, cloud native managed service. This eliminates the



costs and time associated with unnecessary network complexity and the management of multiple vendors. It also gives organisations greater flexibility to scale up and down with their requirements, without

le organisations to fully utilise ysis to grow productivity and

having to worry about redesigning their infrastructure. A SASE approach also provides greater control and visibility of the network and a way to consolidate and strengthen security across the IT estate. Consistent policy can be applied to data traffic from all sources and destinations – from fixed sites to virtual hosting and to the data centre.

SKILLS AND TALENT

Having the right people is a top priority and so is making the most of the skills they have. The management of physical assets can be costly and admin intensive for IT teams – it often requires a significant amount of time and expertise to maintain legacy infrastructure and security devices, not to mention the vulnerabilities that come with them. This is usually at the expense of the company and a significant time cost to employees who need their help.

Minimising network complexity means reducing the workload for internal IT teams, so they can reinvest their time elsewhere. SASE provides IT teams with a more holistic approach to cybersecurity, so they can monitor what's going on, enforce security utilities and manage things like custom access policies. When successfully implemented, a SASE approach allows organisations to apply for secure access no matter where their users, workloads, devices or applications are located – making it easier for them to connect and secure all their users and resources in their digital environment.

MINIMISING COMPLEXITY

If organisations don't implement strong processes it becomes difficult for people to follow them and get the most value from the technology. One of the key benefits of SASE is that its architecture supports the integration of disparate technologies into a single cloud native environment.

With the shift to remote working and distributed workforces, organisations need to access data and applications in new and often more complex ways. For IT teams, this calls for greater visibility of the users` accessing the network and the applications they are using. By combining software defined wide area networking (SD-WAN) capabilities with several network security functions such as firewall as a service (FWaaS) and secure web gateways (SWG), a SASE approach enables employees to securely connect to internal resources from anywhere and gives organisations better control over the traffic and data that enters and leaves their network. This provides IT teams with a simpler operational model that frees up the time spent on admin.

HARNESSING INSIGHTS

Better digital infrastructure can enable organisations to fully utilise advances in technology and data analysis to grow productivity and enhance collaboration. Digital business transformation demands greater agility and scalability alongside reduced complexity and improved security.

IT infrastructures bolstered with SASE enable organisations to transition away from their legacy data systems with the confidence and security they need. Not only does this simplify ongoing maintenance but the convergence of the network and security helps to streamline 68

complicated processes. This gives IT teams the power to easily connect to resources, wherever they are located. This makes much more efficient to access applications and data, and protect distributed workforces and data residing in the cloud.

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MEETING OBJECTIVES

SASE is as much about an approach to IT and transformation as it is the technologies that underpin it. The holistic nature of the framework is arguably its key strength. It is the foundation upon which organisations can harness the full power and potential of digital, data and technology. Ultimately, this is where we can deliver great efficiencies and support organisational objectives and agility.



JUSTIN DAY

Justin Day is CEO and co-founder at Cloud Gateway. He has over 20 years' experience in IT, working almost exclusively in networks and security, and has extensive knowledge in cloud computing, the delivery of complex IT programmes and has assisted in overhauling network architectures to deliver significant benefits. He has worked in both the private and public sectors, spanning the technology, telecommunications, finance and insurance industries.

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