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AWS set to spend £1.8bn on UK data centres



Amazon Web Services (AWS) will spend close to £2bn in the UK over next two years on data centre infrastructure, skills and renewable energy.

The US giant said it will "spend more than £1.8 billion in the next two years building and operating data centres in the UK in order to meet the growing needs of our customers and to help strengthen the UK's digital infrastructure".

A subsidiary of Amazon providing ondemand cloud computing platforms and APIs to enterprises, AWS opened its London operations in 2016 and said this latest investment will more than double its investment in the region since that initial launch.

"Over the last five years, we have been committed to investing in the UK to create the conditions for organisations in all industries to become global leaders in their use of technology," said AWS. "In 2018, we added a third AZ (availability zones) to our London Region, allowing customers to architect highly scalable, fault-tolerant applications."

AWS pointed out that it has also established edge locations across the UK which are connected to the AWS Region through the AWS network backbone, providing secure, low latency and high throughput network connectivity to organisations across the country.

"We are proud of the contributions we are making to the UK economy," added Darren Hardman, vice president and general manager of AWS UK and Ireland. "Looking ahead, we know that the UK remains full of opportunity and we continue to be excited by the potential to continue supporting our customers, partners, and citizens across the UK over the years to come."

AWS cited Public First research that estimated that AWS is generating £8.7bn in economic value for businesses across the country. This is apparently the equivalent of 0.4 % of the UK's GDP, more value than the Premier League or the music industry.

Most of the £1.8bn investment will be spent on infrastructure, but much will also be spent on renewable energy, as well as skills and training.

The company added that it has committed to investing hundreds of millions of pounds to provide free cloud computing skills training for 29 million people by 2025 – in more than 200 countries including the UK.

To make this possible, the company has launched a raft of learning and skills programmes in UK, such as AWS Academy, AWS Educate, and AWS re/Start.

In terms of its green credentials, AWS said it remains committed to running its business in the most efficient and sustainable way possible.

The company said it is the largest corporate purchaser of renewable energy in the world.

In October 2021, Amazon's first UK renewable energy project on the Kintyre Peninsula in Scotland became operational and started delivering renewable energy to the grid.

AWS said it purchases 100% of the power output from this wind farm, which is the first of five new, large-scale renewable energy projects in the UK enabled by Amazon. Moreover, it was all built without public subsidy.

Combined, these projects will provide a total capacity of 545MW of clean energy, supporting both the UK and Scotland in meeting their 2030 renewable energy targets.

Last year, Amazon unveiled its largest renewable energy project in the UK to date: the Moray West Wind Farm located off the coast of Scotland.



Severn Trent Water introduces IoT smart metering system to cut costs and CO2 footprint

Severn Trent Water has started a £20m IoT (internet of things) rollout of smart water meters across Coventry, with a planned total of 157,000 installations by the end of March 2025.

The aim is to gain real-time information of both customer water use to make sure billing is always as accurate as possible, as well as helping to curb the problem of water leaks across its physical network. The timeline for the project aligns with a cycle in the UK water sector called AMP, or asset management period, a five-year agreement between water companies and the industry regulator on pricing and investment commitments.

The project is also part of Severn

Trent Water's already announced £566m 'Green Recovery' program, which also involves the replacement of lead pipes in 25,000 businesses and homes, as well as other measures.

The company, which provides water services to 3.7 million properties within the Midlands, has also commissioned large-scale, carrier-grade new LoRaWAN (long range wide area) communications network to support the IoT application.

"In practice, the system will encompass meter units at the boundary of a customer property which will connect to the data communications network, transmitting data as a daily payload from the meter to the network,'

said Anthony Hickinbottom, green recovery project lead, Severn Trent This data will then be ingested Water. ' into Severn Trent Water systems to analyse water usage within our network so planners will have a true picture of how much water it puts into the network to service customers, who are a mixture of households and business and public sector users. A key deliverable will be a new level of detail of how much actually makes it to its proper, paidfor destination.'

Vendors providing the equipment for the project are UK-based smart city infrastructure provider Connexin and a specialist smart meter manufacturer, US supplier Itron.



Okta hack: businesses on high alert

alert after the cybersecurity company they rely on to provide access to their networks may have been affected by a cyberattack on the company.

US-based Okta said the "worst case" was 366 of its clients had been affected and their "data may have been viewed or acted upon" - its shares fell 9% on the news. The company has more than 15,000 clients - from big companies, including FedEx, to smaller organisations, such as Thanet District Council, in Kent.

South American ransomware group Lapsus^{\$} is understood to be behind the attack.

The group has previously claimed to have broken into some high-profile companies, including Microsoft. In a blog post, the software giant said Lapsus\$ had gained only limited access, after compromising a single account, but no customer code or data was involved.

Okta initially said the attack, in January, involved a third-party contractor, a "sub-processor", and "the matter was investigated and contained". to the right technology to ensure

'There is no evidence of ongoing maximum protection.

British organisations are on high malicious activity beyond the activity detected in January," it said. However, as concern mounted, Okta published series of updated blog posts а providing more detail.

Andrea Babbs, UK general manager at cybersecurity firm, Vipre, said "an important take away from the Okta hack that has recently been announced" is that no organisation is immune. "Any business, however big or small, is a target for a cyberattack; whether the cyber criminals are specifically targeting the company, its customers and/or suppliers," she told Networking+. "In order to become more resilient against these ongoing attacks, a layered approach is the only approach businesses should be taking. No single layer delivers all the results organisations need to stay secure, hence the need for multiple layers of detection. The best systems are built around a partnership between humans and technology."

Babbs further added that a cyberaware culture with continuous training is essential, as is having access

NCSC and CPNI offer security guidance to data centre operators and users

Data centre operators will for the first time have access to tailor-made advice on how to keep the UK's online assets secure, after two security agencies launched new guidance for on risk management strategies that suit organisations' individual needs.

The new guidance from the National Cyber Security Centre (NCSC) - a part of GCHO – and the Centre for the Protection of National Infrastructure (CPNI)helps users and operators of data centres understand and mitigate potential security vulnerabilities.

Data is one of the UK's most valuable assets, and it underpins almost all facets of modern life. However, this can make data centres an attractive target for threat actors, both physically and in cyberspace.

The new guidance sets out a holistic security strategy which encourages owners and users to consider how:

location and ownership of a data centre can affect who has access

to sensitive information or affect strategic operating decisions

- · cyber threat actors continuously evolve their methodology breach defences
- strong physical security can mitigate covert and forceful entry to data assets
- · employees are critical to an effective security culture

"Operators and users of data centres have a clear responsibility to protect the data that they hold and process - failing to do this poses a massive financial, reputational and, in some cases, national security risk," said NCSC technical director, Ian Levy. "Owning these responsibilities means understanding the array of methods that malicious actors could use to compromise a data centre both physically and digitally."

Levy added he urges operators and users of data centres "to consult this joint guidance and adopt the holistic security strategy it recommends".

Pulsant acquires Amito

Data centre business Pulsant has acquired fellow UK operator Amito, in a deal that includes Amito's 15,000 sq ft (1,400 sqm), 800 rack data centre in Reading which provides 2.9MW of capacity.

The deal is Pulsant's second acquisition in recent months, having bought a 1MW, 6,950 sq ft (645 sq m) data centre in Manchester from M247.

"The southeast is a strategically important location for our clients and will continue to drive much of the UK's economic activity," said Rob Coupland, chief executive officer (CEO), Pulsant. "With Amito's well-established presence, we can continue to build the UK's Edge computing platform and bolster our scale and capacity in the region, this will become increasingly important as businesses embrace edge computing and demand increases."

Pulsant already has 11 regional data centres in the UK, including sites in

Milton Keynes, Croydon, Newcastle, Edinburgh, and Reading. The company was acquired by Antin Infrastructure Partners from Oak Hill Capital and Scottish Equity Partners last year.

Ed Butler, CEO at Amito, added:"We are excited about Pulsant's strategic Amito's established and plans. extensive infrastructure provides а strong foundation for the company to expand its Edge computing platform across the southeast whilst delivering the best connectivity and cloud-based services to clients."

The terms of the deal were not disclosed. Amito was created in 2018 by the merger of Everest Data Centres, Crosspoint Colocation, and iCloudhosting. As well as its own Reading facility, the company offers colocation from 20 locations across the UK. Last year it raised £38.7m (\$53.5m) from Harwood Private Equity to fund expansion plans.



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Hammers and Acronis sign cyber protection deal

West Ham United Football Club has selected Acronis as its official cyber protection Partner.

The Premier League club will utilise Acronis Cyber Protect, which has been described as an "innovative machine intelligence (MI) enhanced cyber security solution that helps prevent cyberattacks and reduces downtime.

Furthermore, this technology combines automation and integration, ensuring the prevention, detection, response, recovery, and analysis needed to safeguard all areas of the business. Acronis also said its solution provides the safety, accessibility, privacy, authenticity, and security services required to protect the modern-day elite sports teams.

"Protecting our data, which includes that

of our supporters, is of the highest priority for us and Acronis is the perfect partner to help us do so," said Nathan Thompson, chief commercial officer, West Ham United.

"Acronis are the industry benchmark of quality and security and are a company we are looking forward to working very closely with over the coming seasons."

Ronan McCurtin, Acronis vice president of sales Europe, Israel and Turkey added: "At the highest level of competition, data is a critical asset in football."

Ingram Micro, a global distributor of technology products and services, will serve as Acronis' #CyberFit Partner in line with the Acronis #TeamUp program for services providers and cloud distributors.



Wales gets £11.5m full-fibre broadband boost

More than 600 public services across north and south Wales can now access greater internet speeds as a result of a £11.5m UK government levelling-up fund.

The Department for Digital, Culture, Media and Sport said it has connected full-fibre broadband to 620 sites across Wales as part of Westminster's agenda to level up public services.

The rollout is the largest public sector broadband project in Wales and it is hoped commercial broadband providers will be incentivised to upgrade surrounding homes and businesses using the government-funded gigabit network - a cheaper and quicker alternative than starting from the beginning.

Local services including hospitals, police stations, libraries, and care homes can now access internet speeds of more than one gigabit (1,000 megabits) per second.

A total of 166 public sites were connected in the Cardiff Capital Region. Elsewhere, Pembrokeshire saw 68 public sites connected, while in north Wales full-fibre was rolled out to 311 public buildings in areas like Betws-y-Coed, Rhyl and Llandudno.

Sharad Sharma, vice president head of networks at IT service and consulting company NTT Data UK, said "it's great to see the public sector receiving the benefits of full fibre broadband" as part of the UK government's levelling up strategy. "Vital services in Wales will now benefit from faster connectivity, enabling better patient care in hospitals, faster response times from emergency services workers and more reliable services in libraries and other public spaces," Sharma added. "As adoption of full fibre broadband and 5G continues to grow, it's vital that no one is left behind. In the wake of the Covid-19 pandemic and the shift towards more remote and online services, we can no longer afford to have public services relying on inefficient and ineffective broadband."





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Glide connects Proximity Edge 8 to dark fibre ring

Glide Group has connected its dark "The availability of diverse dark fibre fibre infrastructure with Proximity Data Centres' newly acquired Birmingham edge colocation site.

Spanning the entire city, Glide's 30km fibre ring will provide Proximity's Edge 8 facility access to low latency, highly responsive applications and services.

The dark fibre connection also provides an additional network route into Edge 8, allowing carriers and service providers to offer their own dark fibre and managed 'lit' connectivity solutions across the region.

'Almost half of UK firms suffered multiple breaches through vulnerable applications'

Checkmarx released the UK findings of its report AppSec: The View from Security and Software Development Experts, in which it found that 45% of organisations have suffered at least two security breaches as a direct result of a vulnerable application. Alongside this, the report discovered over a third (34%) of UK organisations who had experienced a security breach relating to an application in the year preceding the survey have

laid off employees seen as bearing responsibility. Respondents of the survey, which was commissioned to spotlight the biggest security challenges that application security (AppSec) managers and software developers are facing in today's threat landscape, also noted those who often bear the most responsibility for the security of applications as software developers (39%), and application security managers (32%).

connectivity is vital to ensuring our

edge colocation customers' data and

applications are always seamlessly and

securely available to the users that require

them," said John Hall, managing director

colocation, Proximity Data Centres

Ferry firm Wightlink suffers cyberattack

UK ferry operator Wightlink said it has been hit by a "highly sophisticated" cyberattack that may have compromised personal data belonging to "a small number of customers and staff". The attack, which happened in February, affected certain back-office IT systems but not its ferry services, booking system, or website, the company added. Law enforcement and the UK's Information

Commissioner's Office (ICO) have been notified along with potential breach victims, the company added. Wightlink operates three routes running between Hampshire in southeast England and the Isle of Wight, an island off the south coast. As soon as the incident was discovered, Wightlink said it engaged third-party cybersecurity experts to investigate and assess the situation

Four in five UK companies 'unable to scale' digital transformation plans

Many UK businesses are in danger of half (49%) of the firms surveyed, these suffering stunted growth due to a lack of investment in core IT connectivity systems, according to a new report. Internet access and business connectivity provider Neos Networks found that four in every five UK firms are unable to scale plans to their fullest potential with current connectivity arrangements. Just 20% of UK businesses state they are currently able to undertake digital transformation plans.

This comes as 84% of enterprises state their digital transformation plans have accelerated due to Covid-19. For almost

Kao Data expands Harlow campus

Kao Data, the specialist developer and operator of data centres for enterprise, cloud, HPC and AI, has expanded its Harlow data centre campus, with construction now underway on its second 10MW facility. Following the recent investment from Infratil Limited, and the launch of its Slough data centre in February, the new facility, named KLON-02, will offer up to 10MW of capacity and provide an energy efficient home for almost 1,800 racks of IT equipment across 3,400m2 of technical space and via four technology suites. Once fully operational, the facility will be NVIDIA DGX-Ready data centre certified and OCP-Ready.

plans have been accelerated by a year or more. Neos gathered results from 247 medium-to-large UK organisations and data, cloud and network infrastructure service providers.



Word on the web...

Good data: the foundation of useful AI

By Gary Allemann, managing director, **Master Data Management**

To read this and other opinions from industry luminaries, visit www.networkingplus.co.uk

Neos delivers new dark fibre network for Jisc across NI

Networks, a UK business Neos connectivity provider, has been chosen to supply a new dark fibre network in Northern Ireland by Jisc - supplier of a digital network and supporting services for the UK's tertiary education and research sector. The network will aid educational and research establishments by providing high-capacity fibre connectivity, capable of achieving speeds up to 100Gbps, between Jisc resources and data centres in the UK, Northern Ireland and key partner networks in Dublin. The contract was awarded to Neos following a competitive tender and represents another phase in the ongoing overhaul of Jisc's Janet Network across 15 UK regions.

Seagate and **EVS** introduce 'innovative' storage services

Seagate and EVS have joined forces to provide mass-capacity mobile storage and data transfer services for media entertainment businesses. and The collaboration is centered around Seagate Lyve Mobile edge storage and data transfer service and EVS' live production and replays solution LiveCeption Signature. Use of the EVS solution supports live shows addressing fast turnaround constraints while transporting multicamera content and metadata through the Lyve Mobile offering to the intended landing destination - be it site, archive or post-production."Adding Lyve Mobile to EVS live production solutions addresses evolving industry needs and empowers businesses with the latest innovative storage technologies," said Melyssa Banda, Seagate vice president for Lyve Mobile Solutions.





The benefits of a modular approach

By Danel Turk, global segment leader for data centres, ABB

These prefabricated products – which include eHouses and skids – are built off-site and factory tested before being delivered to site as an integrated solution which can then be installed and commissioned quickly and efficiently. Modular electrification solutions are flexible and scalable, and incorporate standard blocks of power which can be repeated to allow for future expansion.

While the designs are standardised to a point, every site has different requirements so variables such as utility voltage, the total size of the data centre, and the optimal design for cooling based on the local climate are all incorporated into the final prefabricated product.

But it's not just speed of deployment where modular power solutions can benefit operators.

On the face of it, the cost of purchasing a prefabricated, integrated solution may not look like it offers cost efficiencies compared to the cost of buying all the separate components and assembling them on-site. However, there are many areas where a modular solution delivers cost savings. For example, the money saved on shipping costs when you buy one prefabricated product, rather than scores of component items.

Cost efficiencies can also be found in labour cost savings for the consultation and engineering time required to design and install a power solution, as this is all done by the manufacturer.

Another cost efficiency is that modular, integrated solutions are factory tested, so the likelihood of issues onsite are minimised, helping to keep the data centre build on schedule and avoiding costly overruns.

It's well documented that the industry is facing a skills gap, in terms of access to specialist contractors and trades. Modular solutions can help tackle these issues in three ways.

Firstly, buying a prefabricated solution is very resource efficient from an operational point of view as it requires one project manager dealing with one vendor, one location for factory acceptance testing and one point of contact throughout the process.

Secondly, the product can be preengineered to spec by the manufacturer, eliminating the need for a data centre operator to engage a consultant. Any issues that arise during the factory witness testing will be fixed before the module is shipped, reducing the need for specialist engineers to debug and troubleshoot problems on-site.

One of the great things about modular solutions is that the components are from one manufacturer. The elements are naturally built to work in harmony, which isn't always the case when mix and matching products from different vendors.

Another advantage of having the component elements supplied and put together by one manufacturer is that the engineers building and testing the skid are familiar with the equipment and how it interfaces and integrates. Modular solutions are built and tested in a controlled environment, and this makes sure the finished product is reliable and of a consistent design and quality.

Modular solutions are essentially power 'building blocks' and they make scalability very easy for operators who are looking to expand their capacity in stages, rather

than building one big facility and then finding customers to lease it – which requires a lot of investment up front.

By using modular power solutions and adding to them in phases, the data centre simply adds more modules when they are ready to expand their capacity, confident that the modules are optimised to work together. This kind of scalability allows data centres to grow sustainably with future demand while simplifying the specification and installation process.

There are sustainability benefits to using prefabricated or modular power

solutions too. Prefabricated products are optimised to operate at the maximum efficiency, which saves energy and carbon emissions in the day-to-day running of the data centre.

In addition, the streamlined process of specifying and installing a prefabricated power product also generates less emissions as there is less heavy equipment required, fewer people travelling to the site and the new data centre building itself can be mounted on concrete pillars instead of a pad, which saves on concrete (concrete is very energy intensive to produce). With so many benefits to data centre operators, we believe that 2022 will certainly see a continuation of the modular construction wave. We will see new data centre capacity being deployed faster and ready to generate income in as little as nine months (half the current build time of traditional data centres), giving the sector greater agility to meet rising demand.

Prefabricated solutions are ticking the boxes for data centres, and the simplified execution, faster deployment and mitigated risk they deliver will surely become the new normal going forward.



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SASE demands zero trust at the data level Go beyond zero trust



ecure Access Service Edge (SASE) is becoming increasingly adopted in both commercial enterprise and government organisations. A SASE strategy aims to unify an enterprise's security across multi-cloud environments, teleworking setups, and datasharing networks. Therefore, in a complex technology ecosystem, enterprises can benefit from a more sustainable and unified approach that consolidates vendors and ensures new software and systems provide the necessary integrations and support. With this, one of the key benefits of SASE is in bringing of Zero Trust cloud security and network functions including identity management - into a common framework.

However, whether it's in your current strategic plan or on your long-term roadmap, there are several considerations that are essential to implementing an effective SASE 'as a service' strategy.

First and foremost, adopting a data-centric approach is a more sustainable and flexible strategy than a purely network focused one. While Gartner has put the focus on Zero Trust Network Access you should go beyond this to ZTDA — Zero Trust Data Access. Taking a data-centric approach to Zero Trust is the most granular and effective way to ensure your data remains protected, regardless of what network it lives on, and even after it's been shared with an external third party. Both inside and outside your organisation, data can safely travel through cloud environments and even compromised locations while remaining secure.

Building policies that focus on the data will equip your organisation to get the greatest value from a SASE framework. Only then can we convincingly say we have moved beyond a perimeter-based approach. This is because enterprise risk changes, and usually increases, as data moves. That movement creates risk because there is more assurance that the protection and access intent is accurately applied and equally enforced where that data travels.

A SASE implementation, built on a true ZTDA pillar, solves this problem because the data itself describes the burden of proof required to gain access, ensuring the system it finds itself in isn't the weakest link.

Identity management

Bear in mind too that SASE is tightly integrated with identity management. Therefore, it's vital that endpoints (whether human or machine) prove that they are who they say they are. However, legacy, role-based access control is simply not flexible enough to meet the needs of modern organisations.

After all, data access needs change, and basing access on roles alone is likely to give individuals access to more data than they realistically need - often resulting in access

that extends well beyond the intended period and purpose. By using attribute-based access control (ABAC), an enterprise can be far more granular and accurate in ensuring that the right people have the right access to the right data, at the right time.

For ABAC to be effective though, your organisation needs to complete an assessment of what kinds of sensitive information you manage and share. This process can take time, especially for a large enterprise. But this shouldn't prevent adopting ABAC protections for new data being created or shared. This will help you deploy essential data protection, such as encryption, to safeguard those most sensitive assets. Bearing in mind that change is inevitable, ensure that your ABAC-tagged data remains under your control, whether it's in motion or at rest, and whether it's shared internally or externally. A strong SASE strategy, combined with selecting vendors that deeply integrate those principles, including ZTDA, will give your teams flexibility and control without introducing hurdles or roadblocks.

Finally, don't attempt to choose between taking a Zero Trust or SASE route. You can and should have both: Zero Trust is a strategy that strengthens data protection while SASE is the overall security framework that should be approached with a Zero Trust mindset. This should guide your data security decisions, and a data-centric approach is the most granular and effective way to ensure your data remains protected regardless of what network it lives on - even after it's been shared with an external third party. By assessing the scope of sensitive data your enterprise manages and ensuring it's properly secured will allow you to confidently handle vital assets in an increasingly challenging threat landscape.

"Only then can we convincingly say we have moved beyond a perimeterbased approach. This is because enterprise risk changes, and usually increases, as data moves. That movement creates risks because there is no assurance that the protection and access intent is accurately applied and equally enforced where the data travels"

Switchshop Announced as UKI Partner of the Year 2021 by Aruba

ruba, a Hewlett Packard Enterprise company, recognises the achievements of its leading EMEA channel partner and distributors at their annual awards ceremony, selecting Switchshop as their UKI favourite for 2021.

The ceremony was of course, held online but that didn't stop the excitement as Michael Curry accepted the award on his team's behalf, adding to their growing silverware collection.

The award recognises Switchshop as the top reseller of Aruba products and solutions including Aruba Central, Aruba's powerful cloud networking solution which uses Alpowered insights to manage and optimise networks from a single dashboard.

"We are incredibly proud to have been recognised by a global market leader such as Aruba. It's a testament not just to our close partnership, but also a great recognition of our people and the great work they do for our customers". Michael Curry, Director – Switchshop.

Customer first, customer last

With Switchshop boasting some of the best engineers in the country, they can offer a reassuring 24/7 technical and consultative approach to customers, ensuring new customers for Aruba across a wide range of industry verticals such as higher education, local government and health trusts.



Capitalising on Switchshop's 20 years of experience serving thousands of businesses, the future is bright for this platinum partnership as they continue to forge new relationships and win more new business like those over the last year in Education, Local Government and the NHS. Migration to an Aruba-powered network will allows these customers to embrace digital acceleration, to become more efficient, leaving inferior legacy networks in the past.

"Switchshop have had a phenomenal year as a platinum partner of Aruba and their impressive growth, new customer wins and expert team are just some of the reasons they were awarded this prestigious accolade. We can't wait to see what 2022 brings for the Aruba and Switchshop partnership – congratulations to the whole team!" Helen Speak, Channel Director UKI – Aruba.

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Cloud storage: stacking the odds in your favour

Rob Smith, CTO, Creative ITC

Businesses increasingly recognise the benefits cloud migration brings, enabling quick access to scalable storage and escaping the burdens of running their own data centre and costly upgrades.

The explosion of cloud has seen public, private, hybrid and multi cloud storage options emerge, with numerous providers vying for market share. Whether you're considering costs, service from your current provider or looking to ease the burden of cloud management on your in-house team, reviewing the ever-evolving storage landscape is likely to reveal a better, more cost-effective solution that meets your capacity, performance and security needs.

To help you steer the right course for your organisation, here are three important factors to consider when planning a migration to the cloud.

1. Look (carefully) before you leap

Public cloud giants Google, Amazon and Microsoft have made it quick and simple to purchase cloud storage at attractive entry prices. However, it pays to scrutinise the fine print. These hyperscalers have been blasted by Gartner for their aggressive pricing to lure in customers, technical complexity, platform resilience concerns and postsales dissatisfaction.

Many businesses have found the attractive headline prices are a fraction of what they end up paying. It's common to face additional charges for ancillaries like IP addresses, failovers and backup.

Unhealthy instances, unattached persistent volumes and unused static IP addresses can all be money sinks too. Also, beware of attractive discounts when you commit over a fixed term. These can offer significant potential savings – but only if you use the prebooked capacity.

Calculate TCO of your cloud storage before you choose. Although private cloud starting costs can seem high, it may prove more cost-effective over the long-term. Seek out a specialist provider offering a managed storage solution right-sized for your needs, with transparent pricing and expertise to optimize performance. Choose wisely and you'll avoid costly mistakes get good, honest advice, save on resourcing and make the most of the storage you're paying for.

2. Review resources honestly

A crucial decision is whether to manage your own storage or use an MSP. While it's easy to adopt cloud storage, unlocking its full benefits isn't straightforward. Some data and workloads may need to be retained onsite, but on-premise and cloud platforms don't always work well together. Stretched IT teams still have to manage everything themselves, facing problems overseeing multiple platforms, lack of skilled resources to optimize performance and growing security threats.

3. Fail to prepare, prepare to fail

The most common pitfall organisations fall into is under-estimating the time required to manage cloud migration. Too many businesses end up forced into a rushed lift and shift of their data and workloads to a new storage platform; this carries any legacy issues from on-premise infrastructure to the cloud.

Allow sufficient time to design and implement a storage strategy tailored to

your business needs and budget. Start by conducting a proper assessment of your apps and data to determine whether your storage needs redesigning before migration. Decide which data and workloads you intend to keep onsite and which are best suited to go into the cloud. There may be some information that doesn't need to be retained, which simplifies challenges like GDPR compliance.

Calculate how much capacity you need. Right-sizing takes skill and experience,

but done properly, will result in the most cost-effective solution.

A collaborative approach will de-risk your migration further. As well as IT senior management, work with DevOps and enlist support from business unit and application owners to build understanding of how your business uses data and how it should be classified, accessed and stored, with premium performance only applied where necessary. Involve finance early on. Their help in

understanding the true cost of various storage models will save time and money in the long run.

A successful, pain-free migration to cloud storage rquires more than luck. So, stack the odds in your favour. Allow sufficient time and involve the right expertise to choose the right long-term cloud strategy and de-risk your migration, ensuring you reap the full return of cloud investment for your organisation.



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Are smart cities smart for businesses?

Smart cities are popping up the length and breadth of the country to help us with our dayto-day lives. But why should businesses care? Robert Shepherd asks some smart people some smart questions

smart city in modern parlance means something different to different people. The concept of a smart city is often perceived in popular culture as how things will look in the future. Robots doing our shopping, drones delivering our goods, unrecognisable cities where buildings reach high into the clouds, flying cars navigating their way through almost virtual motorways. Some might even highlight social classes and inequality; the elite residing at the very top, and the rest left on the ground and living in the past. You could argue the latter is already true in some ways, but now isn't the time to get political. Getting back to the futuristic examples, let's just say. one person's Blade Runner is another's Back to the Future 2.

The reality isn't quite as sexy, as Nigel Thorpe, technical director at security system supplier SecureAge, explains. "The idea of a smart city is that the quality of life is improved, city functions are optimised, and economic growth is promoted," he says. "This is all achieved by applying technology to data. A simple example would be to pool data about car parking

so that the city visitor can be directed to the nearest car park with spaces, rather than touring the streets trying to find somewhere to stop. Aims also include more efficient heating and lighting, and even improving waste disposal.'

For Shahzad Nadeem, head of smart cities at tech consultancy Plextek, a smart city has an eco-system of hardware and software factors that create an intelligent and automated network. "This network can ensure that everyday necessities are delivered to residents, for example, transport, health services and supply chains,"he says."Utilising IoT technologies can create greater efficiencies and reduce costs of running infrastructure. There are inherent dangers associated with 'trusting' technology - this is a human emotional concern, but also a security concern and when investing in smart city infrastructure it is key to make sure your security doesn't let down the whole network."

So, now that we know how and why the general public can and does benefit, but does the same apply to businesses?

Before we even go there, Mike Best, VAR channel account manager - UK & Ireland at Cambium Networks, says that Nigel Thorpe, SecureAge

while the tech experts know, or at least deployed is. It enables service providers have a very good idea, what smart cities are, we need an even clearer definition and that it must come from the lawmakers and powers that be. "The biggest challenge for governments and local authorities is to define what a smart city is and what should be integrated into a city to make it 'smart'," he says. "Although, smart cities are not new, the technology being

"A simple example would be to pool data about car parking so that the city visitor can be directed to the nearest car park with spaces, rather than touring the streets trying to find somewhere to stop"

to greatly enhance the experience of service users and allows local authorities to reduce operational costs."

Karen Burns, co-founder and CEO of Fyma, an urban analytics startup, invokes an esteemed Danish architect and urban design consultant who reorientated city design.

"A smart city for me is one that uses Jan





Gehl's principles well, understands them and plans for its people and their activities through placemaking, from work and leisure to transport," she says. "A smart city is an adaptive one: to climate change, population fluctuation, pandemics and demographics changes."

In fact, Burns argues that it might "be easier to define one [a smart city] by what it is NOT - and that is a city full of tech for tech's sake". She continues: "I recently saw a tender for a 'pedestrian safe main street' in a small town of a European country where the municipality was procuring a 1km stretch of road to be covered with multiple sensor-based street crossings that would blink and sound an alarm to pedestrians wanting to cross it in cases where a car was coming .As well as the immense light and noise pollution, how is such a solution safe? Instead, placemaking and physical changes to the road and street furniture would be much better - and safer - solutions."

Back to the business question: why



"As well as the immense light and noise pollution, how is such a solution safe? Instead, placemaking and physical changes to the road and street furniture would be much better - and safer solutions." "As major contributors to global GDP, smart cities across the globe are running programmes to digitise their infrastructure and improve processes, with targets to improve healthcare, mobility, safety and security, and general economic output"

Nick Sacke, Comms365

should enterprises care?

"Smart cities are about introducing new services that respond effectively to the needs of city residents," says Michael Castle, product marketing manager at Antenova. "These services can optimise utilisation of the infrastructure and resources within a city. The results of implementing smart city services are a more productive environment for businesses. As an example, fitting parking sensors across a smart city enables drivers to find a parking spot quickly, so they are more productive."

Nick Sacke, head of IoT solutions, Comms365 argues that there are significant challenges facing enterprises and the cities that host them; rising energy costs, climate change targets, sustainability of resources, increased inflation, migratory movements of citizens – and more.

"As major contributors to global GDP, smart cities across the globe are running programmes to digitise their infrastructure and improve processes, with targets to improve healthcare, mobility, safety and security, and general economic output," he says. "Enterprises can gain direct benefit from tapping into the substantial digital data that is being generated by smart city programmes and work in partnership with the city to innovate and deliver new solutions and services to benefit citizens and become more competitive. Several smart cities have now become incubators for a new generation of tech-enabled startups that are partnering with established enterprises to deliver highly innovative solutions to city challenges.'

Sacke says examples of these new partnerships can be seen in the provision of healthcare and assisted living, air quality

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"Enterprises, therefore, need smart cities and their investment in digital infrastructure, models and processes to fuel their own growth, increase competitive advantage and to take advantage of new opportunities afforded by partnerships with SMEs in the smart city programmes," Sacke adds. "All parties seem to benefit."

Furthermore, Burns says enterprises need to sell to large customers - cities are the biggest human 'hives' in existence. "When these cities are smart they are also not just good places to live in, but smart procurers of technology - on a massive scale," she adds. "This is mutually beneficial - only enterprises can cater to such a massive need and really deliver, whilst huge infrastructure, communications etc. projects need enterprise-scaler solutions."

Of course, when it comes to company networks and the role of IT bosses, it's about data.

"Data is shared between all aspects of the municipality so that services, resources and decisions are all based upon up-to-date information," says Thorpe. "From an organisational point of view, access to live data provides the



"Although, smart cities are not new, the technology being deployed is" "The more the systems of the city are operated by sensors, networks, connections, switches and central IT-systems, the more technically complex and 'smart' the cities are"

Aare Reintam, CybExer Technologies

opportunity to deliver services to where, and when they are needed. This is a much more efficient approach than relying on outdated or predicted data."

However, Thorpe says that while data is the key, it is also the Achilles' heel. "We are already seeing the sometimes devastating results of data attacks through ransomware," he continues. "Where access to data is disrupted, organisations' operations are severely curtailed. Data is subject to theft, scrambling or even destruction, while systems can be blocked using denial of service attacks. The smart city relies on data sharing, and therefore data movement across a 'supply chain'. And an attack that starts at a single point in the supply chain can impact the entire infrastructure."

Sadly, Thorpe points out that "we must assume" that any network or infrastructure will be attacked and will be penetrated. "This means that every point in the supply chain must prevent all unknown processes from executing, so blocking any malware in the system," he says. "And data should all be always encrypted so that it is useless to a cybercriminal."

It was only going to be a matter of time until security entered the debate. After all, smart cities rely on connected devices and applications – doesn't that raise privacy and security of data concerns?

"AI needs to be built in a way that does not infringe on either," says Burns. "Municipalities and real estate developers should always do proper due diligence on their suppliers, check whether they have internal policies in place, trained staff and record their activities properly and that these are followed through. Regulators can't be shy of placing hefty fines on companies that infringe on PII (e.g. Clearview AI); however, more is needed to safeguard our public space and cities from mass surveillance - and smart cities can take a lead on this by setting an example and being very strict on who they work with."

Chris Dyke, sales director UK & Ireland, Allied Telesis, a company that creates networks for campus, branch and IoT solutions, says ICT infrastructure design for smart cities must itself be smart. "It is important to add intelligence to this network and to provide security as well as scalability, robustness, and flexibility," he adds. "This can be done with several design network concepts, including: automatic security threat isolation and remediation, automated and simplified networks and robustness and scalability."

Another concern levelled at smart cities is that for them to function in the desired way, they need 24x7 connectivity and power supply. That might seem obvious, because almost everything we use in life has to be turned on for it to function. But if one of the end games is to reduce power consumption and give us greener living, isn't that counterproductive?

"We are all connected 24/7 - why shouldn't cities be?" says Burns. "Modern solutions can be built in a way that conserve energy (e.g. cameras that only switch on as movement is detected to conserve energy and processing



"The results of implementing smart city services are a more productive environment for businesses"

Michael Castle, Antenova

power, and sensors have very low power requirements). Some things should be switched on 24/7 even if it is wasteful - for example, streetlights that switch on based on movement are not safe for (particularly female) pedestrians as they don't allow you to see beyond a certain threshold, and so a solution that is built to conserve energy creates a hazard elsewhere."

Castle uses the example of a parking sensor network as the base stations for a wireless sensor network are powered



Mike Best, Cambium Networks



from the mains. "The remote sensors are battery powered," he says. They are designed to have a long battery life, so that the batteries are replaced after several years. For safety critical applications, a backup power supply is needed. However, parking is not safety critical, if there is a power cut, it would be expected that the system does not operate."

"Ultimately, the technology embedded within smart city environments generates vast amounts of data," Best concludes. "This is due to a myriad of IoT devices collecting, monitoring, and analysing data. From this, smart city operators are able to enhance the efficiency of city operations and services. This enables stakeholders and service providers

"We once viewed a smart city as a major global capital spearheading futuristic technology but now it's here, becoming a reality, the societal impacts boundless, what makes a city really 'smart'?"

Ben Pocock, Connexin

to monitor operations and available resources for their service users."

So, where are all these smart cities, then? "According to the government, the UK cities that have implemented smart city projects include Belfast, Birmingham, Bristol, Hull, Manchester, Milton Keynes, Glasgow, London and Peterborough," says Dyke.

However, Best warns that the uptake of smart cities across the UK has generally been slow and lags behind many other western European countries. "It is fair to say, however, that more recently, the smart city market is benefiting from significant investment from governments, local authorities, the private sector, and service users," he concludes. "Increasingly, these organisations are realising that they must work together to bring smart city initiatives to life."

Nevertheless, there are those who believe there are more smart cities and smart city projects around than the ones that grab the headlines. For example, Aare Reintam, chief operations officer (COO) at security firm CybExer Technologies, opines that most cities nowadays are smart in one way or another. "The more the systems of the city are operated by sensors, networks, connections, switches and central IT-systems, the more technically complex and 'smart' the cities are," he says. "Since cities are artificial environments, they rely on many technical systems in their operations to keep the traffic, water, sewage systems, lighting, flood notification systems, etc., operational. All these systems are connected and use some kind of overthe-air or wired connections to control the mechanical, computer-controlled devices. Disruptions in operations of such systems can cause huge problems to the population, financial loss or even loss of life."

Another key player is smart city specialist Connexin, which helped the city of Hull become a programmable

"It is important to add intelligence to this network and to provide security as well as scalability, robustness, and flexibility"

Chris Dyke, Allied Telesis

city and move from outdated siloed service driven technologies to a central platform. The company has also done a lot of work in the fellow Yorkshire city that is Sheffield.

However, if you thought the definition of a smart city was decided on at the start of this feature, the company's IoT product specialist Ben Pocock has news for you. "The term 'smart city' is an ever-evolving concept," he says. "We once viewed a smart city as a major global capital spearheading futuristic technology but now it's here, becoming a reality, the societal impacts boundless, what makes a city really 'smart'?" Over to you.



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Factories of the future: why IoT matters so much for industry

By Sandeep Raithatha, head of strategy & 5G IoT at Virgin Media 02 Business

When we look at lot use cases for UK enterprises in 2022 and beyond, the manufacturing sector has emerged as one of the clear front runners

Things (IoT), 'smart cities' and 'smart homes' tend to dominate much of the discussion. But it's in industry - particularly manufacturing - where we're seeing some of the biggest on-the-ground benefits.

Research estimates that the productivity gains of 5G-enabled manufacturing could equal £2.6 billion - with faster, low-latency networks to connect up multiple IoT devices that can help make production more efficient, more accurate, safer and more secure. In short, connected factories are set to become the UK's loT trail blazers. But how?

Understanding productivity in a complex environment

Ultimately, introducing IoT (backed by the right level of connectivity) can unlock the potential for even more innovation in industry. Using connected, smart sensors and cameras, manufacturers can gather large amounts of data from their existing machinery - and then apply AI (artificial intelligence) technology and algorithms to monitor the production process and 'learn' how it works.

In this sense, in a factory setting - where equipment is expensive, downtime is costly and production is high-value – IoT offers the

exactly how machinery is running, and to make improvements where necessary. It can also allow manufacturers to get ahead of potential faults. This predictive maintenance is one of the major benefits offered by connected factories.

Predictive maintenance sees manufacturers combine data captured by IoT sensors on machinery with AI learning to understand exactly at what point a given part needs maintaining or replacing even before it breaks. One example is using highly-accurate sensors to monitor the sharpness of blades used on the production line, and identifying in advance when they are becoming blunt enough to impact on product quality.

Anticipating faults before they happen removes the need to halt production for reactive fixes, and avoids unnecessary works on machinery that doesn't need it. It means manufacturers can cut costs from outages and still maintain their mission-critical equipment.

A live view of factory assets

The production environment is busy and fast-paced, and not knowing where a key component is can lead to a costly shutdown.



hen it comes to the Internet of chance to be more precise: to understand Managing dispersed operations spread out over a large site area has traditionally meant sending teams of people out to find and maintain equipment, which can be time- and labour-intensive. One value-add IoT offers for industry is knowing where important assets are at any given time.

Fitting IoT sensors (connected by a 5G or 4G private mobile network) to machinery or components - like individual pallets means manufacturers can track their location in real time, in some cases down to

the nearest centimetre. Automating for better health & safety

Using IoT in industrial applications can also help remove some of the risk for the people involved. This is because it opens the door to smart tech that can take on difficult tasks. Take British Sugar, for example. As part of its major 'factories of the future' upgrade, the company has introduced a 4G private mobile network - connecting multiple IoT devices, and enabling them to introduce future innovations like artificial intelligence (AI), automated production lines, robotics and drones.

The new private network has been designed to be future-ready and easily upgradable to 5G where necessary, as British Sugar looks to introduce more complex processes that will benefit from the higher speeds and lower latency of 5G. This includes connected drones that can cover a large area and can monitor tall structures such as silos and lime kilns remotely and safely.

Using IoT to carry out high-risk tasks has a clear health and safety benefit for manufacturers. It also means they can enable processes to run and self-optimise without human intervention - using technology to create new ways of working. Another example of this is using IoT cameras to monitor compliance for anyone working with machinery, reducing risk for people on the factory floor.



Cutting waste to cut carbon

As we've seen, introducing IoT into industry operations paves the way for tech that can monitor and track how things are running, and even predict maintenance and potential downtime in advance. This, in turn can reduce disruption, cut down on wastage and therefore deliver energy savings helping avoid unnecessary emissions from the production process.

As British industry strives to reduce its carbon footprint and contribute to a greener future, understanding and monitoring operations helps make sure factories are running as efficiently as possible.

Industry 4.0

Investing in IoT will be an important part of the manufacturing sector's digital transformation. It will take us one step closer to Industry 4.0, and will also help British manufacturing keep pace with the rest of the world. Whether it's smart production lines, connected machinery or health & safety drones - it's time to switch on the factories of the future.

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PRODUCTS

Top tips on test and measurement - testing LAN at cabling level

Robert Luijten, field marketing manager at Fluke EMEA

can be conducted from verification to that are part of the link. continuity functions of ensuring wires are marginal pass is right on the edge of the Number 2 - Set the Reference The most connected to the proper termination points. standards and is likely to cause problems in Qualification determines if the network is the future. It could be caused by the cabling the reference the tester is zeroing out the doing what it should and can give indicators connection having a manufacturing defect, to help troubleshoot issues. By contrast, or installation error such as the cabling being Cords, that are being used to connect the when new cabling is installed, certification is untwisted too much at connection during used and is a much more in-depth analysis. It installation. Either way, it is always better to set incorrectly, the tester can record all sorts of involves comparing the performance of each resolve the issue at installation as call backs link against industry standards like ANSI/TIA- are undesirable and expensive. 568 and IEC/ISO 11801. A cabling standard is Number 4 – Test the integrity of shielded defined to support one or more applications like cabling. As network speeds increase it 1000BASE-T (gigabit) and 10GBASE-T.

on all links means cabling manufacturers is not connected and grounded at both ends of will issue a warranty statement. This is vitally important to the end user because the warranty 20dB loss in electromagnetic immunity (EMI). for cabling can be valid for period of up to 20-25 years. It is also important to the installer it to become non-compliant. In a data centre because it means that invoices can be issued, and payment can be made.

cabling are extremely common and cabling resistance of wires in a pair is not balanced. PoE (OTDR) to test a link can help to identify locate manufacturers will specify which standards operation is at risk when it's at max load and need to be met to qualify for warranty, standards poor contacts will degrade over time. for fibre testing vary by manufacturer typically because as bandwidth capabilities accelerate, ultra-low loss components get deployed of PoE devices is rapidly growing. It makes that requires tighter loss budgets than those specified in the published standards.

Top tips for Copper – twisted pair copper certification

called "permanent link" the fixed part of the that is necessary to make them work. network that extends from the patch panel to Number 6-Generate a report that consolidates an outlet. It typically includes a patch panel, LAN all the measurement data. A report will an effective basic tool for checking continuity. cabling and an outlet

(PLA) which provides the only way to perform trigger the payment of the installer's invoice. a true test of the jacks that are part of the link You don't want your connection to the tester to **Top Tips for Fibre pair certification** influence the cable test result, PLAs eliminate the effects of the test equipment cord cable. Number 1 - Everything needs to be clean As PLAs offer "centred" Near End Crosstalk (NEXT) the dirt will be invisible to the naked eye, always data and documents all the good work. 7

qualification and at the highest level, Number 3 - Do not accept a marginal pass. to make accurate measurements. It is worth certification. Verification checks the basic Indicated by an asterisk * on the tester, a

becomes more and more likely that shielded Through certification a report with a PASS cabling is being used. If the shielded cabling the link it can cause degradation of up to 10which can impact "alien cross talk" and cause environment this fault can be critical.

Number 5 – Test Resistance Unbalance when Whilst industry standards for copper Power over Ethernet (PoE) will be used. If the

Given all the advantages of the convergence between IT and OT networks, the deployment is marginal or out of spec, an OTDR can help to information from HVAC Systems, Security Systems, IP Lighting, etc., all IP-based and this especially powerful in the SmartBuilding environment. As a result, installation technicians will need to test if the cabling can handle the required power and when devices get connected Number 1 - The primary job is to test the so- to the network if Switches can deliver the power

demonstrate good workmanship, act as a key A tool like Fiberlert can detect any active fibre Number 2 – Use a permanent link adapter enabler for issuing warranty statement, and

here are three grades of testing that characteristics enabling a true test of the jacks inspect fibre end-faces using a camera. The ports of test instruments must also be clean remembering to clean these as well.

> important job after cleaning. In setting connections, typically called Test Reference links-under-test to the tester. If a reference is erroneous results, including negative losses, Driven by the deployment of ultra-low loss components, cable manufacturers require the reference to be set multiple times per day. Any time a negative loss result is recorded on the tester, the reference must be set again.

Number 3. Use high quality Test Reference Cords (TRC) with Encircled Flux (EF) launch conditioning. These high quality TRCs guarantee that the light used to test the fibre cabling will be precisely injected into the fibre allowing the technician to work with precision.

Number 4 – Analysing link loss in detail By using an Optical Time-Domain Reflectometer and eliminate unnecessary bottlenecks in links that are otherwise compliant. For example, there could be a component within the link that visualise what the link looks like.

In data centres and increasingly in enterprises where many things are linked together, an OTDR can help troubleshoot where the issue is occurring. It's also possible to use OTDR for loss testing, in such cases it is important to test bidirectionally, and an average must be calculated. Number 5 – Quick verification For moves, adds and changes, a visual fault locator (VFL) outputs a red light visibly run through the fibre and is signals. If many transceivers are being used, good tool for checking if a transceiver works.

Number 6 – Generate a report just as with copper twisted pair cabling certification, the final tip is always to generate a report that consolidates all the measurement

The Chauxin CA7028 Arnoux is described as "a professional cabling tester and fault identifier on data and voice networks and installed links". This piece of kit is designed to test LAN cables and cabling of any description - twisted pair, multi-pair,

RJ45, RJ11, coaxial and sheathed Equipped with a comprehensive range of functions, it is useful for communications engineers and technicians, telecommunications teams looking to find faults on LAN Networks. The Wire Mapper is also a useful tool for IT managers and administrators when locating faults or upgrading an existing network. The Chauvin CA7028 comes supplied with 2 RJ45 leads, remote identifier 1 and a carry case. test-meter.co.uk

The Amprobe LAN-1 Cable Tester is designed for testing opens, shorts and miswired cable installations. It is designed to work with various data cables and connectors. This cable tester provides a quick go / no-go LED display of the wiring and connection of item



under test. You can either step through the test cable wiring one at a time or have the unit automatically pulse through the pin-outs and display the results. farnell.com



Series copper test solution enables testing requirements. The difference i digital circuit breaker finder, which the testing and certification of twisted pair between being profitable or not is just i manufacturer says is "a high quality and the unit. uk.rs-online.com cabling for up to 40 Gigabit Ethernet a few percentage points. The DSX i easy to use device ideal for quick and easy deployments and will handle any certifies copper cabling, complies with cabling system whether it is a Cat 5e, 6, all standards including Level VI/2G 6A, 8 or Class FA and I/II. Certifying accuracy, making jobs easier to manage, a cable is one part of a process that and getting to system acceptance faster. starts with system design and ends It's not just for the expert technicians with system acceptance. The faster and project managers. Individuals of LED indicator and audible alarm when that process goes, the more profitable various skill levels can improve the the correct circuit breaker is identified. you'll be. Unfortunately, there are a lot set-up, operation, test reporting, and This professional RS PRO unit is an ideal of things that slow the process down - simultaneously manage diverse projects. setting up the tester incorrectly, testing *fluke.com* to the wrong limits, waiting for skilled technicians to analyze and troubleshoot failures, misinterpretation of results, and producing test reports that customers cannot understand. As part of the Versiv cabling certification product family, the DSX CableAnalyzer Series provides accurate, error-free certification. In the installation business there are multiple

The LA-1011 LAN Cable Tester can maximum reading and data hold functions check the continuity of eight-port LAN and operation is carried out using a simple cables that have four pairs of copper dial and push button interface. wires as well as the ground wire. The status of each wire is given on the leads, cables, a BN adaptor, 9V battery, analogue display at the top of the meter two AAA batteries and a carry case as and makes sure that the user can pick well as a remote probe. *test-meter.co.uk* up any punching down errors on newly installed cables or systems that have developed faults. There is a remote terminator that has an LED display and it is capable of measuring continuity up to 300m away.

There are various test and measuremen multimeter functions on the LA-1011 LAN Cable Tester including AC/DC voltage measurement (600V), AC/DC current (200mA), resistance measurement $(20M\Omega)$ and a continuity and diode testing function. Measurements are accurate and it has an autoranging function that maximises the reading resolution.

The digital screen on the LA-1011 LAN Cable Tester shows readings in multimeter mode and will display the fault type in LAN testing mode whilst the remote probe and pin-out indicator will show which cable has a problem. There are

Rittal – The System. Faster – better – everywhere. Looking for the right solution for your network or server application? Then look no further. **POWER DISTRIBUTION ENCLOSURES CLIMATE CONTROL IT INFRASTRUCTURE** FRIEDHELM LOH GROUP

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This product comes supplied with test



I Fluke says the DSX CableAnalyzer teams, varying media types and multiple I Introducing the RS PRO RS CT-240A power off function after three minutes of identification of the correct circuit breaker or fuse, especially when protecting an electrical circuit". The device consists of a transmitter that is plugged into the mains power and a receiver that has a device for circuit breaker finding at home. in industrial and electrical applications. The device consists of a transmitter which is plugged into the mains power supply and a receiver which is able to pick up the signal transmitted to find the circuit breaker. Furthermore, when a circuit breaker is identified, the receiver unit sounds an audible beep and an LED light flashes. This solution is powered by a 9V battery (included) and offers an auto-

> I This piece of kit is designed for the UniPRO MGig1 separates them comprehensive turn-up testing, into three easy to manage independent monitoring and troubleshooting of fixed processes". Trend sums it up rather line, mobile, microwave and wireless modestly: "The most cost-effective carrier ethernet links. **Trend Networks** RFC2544/Y.1564 tester in the market. (formerly Ideal Networks) also says the *trend-networks.com* Unipro MGIG1 series allows enterprise users to monitor the actual bandwidth and performance compared to the agreed service levels from the service provider. It can also be used to stress test and monitor the performance of LAN backbone links. Enterprise users of this solution, according to Trend, include managers of public utility, industrial, transportation, health care, education and financial networks. The group also features LAN installation and maintenance personnel as well as system integrators. Now, let's take a look at the product features. Users can, apparently, reduce configuration time with independent set-up parameters (devices, services and tests). What's more, Trend claims that "unlike a typical ethernet transmission tester, where the configuration of target devices, services and type of tests are mixed together.

inactivity to help with better battery life of









Please meet...

Bernard Montel, EMEA technical director and security strategist, Tenable

1. What was your big career break?

I remember exactly - it was when I joined RSA as a Sales Engineer in the 2000s. Before, I was a consultant working for customers in France in the Identity and Access Management domain. And suddenly I'd joined a cyber security vendor working as an engineer supporting the sales team. I had the feeling of jumping into a high-speed train, and it was super exciting. I discovered how cybersecurity (named IT security at that time) was truly fascinating.

2. Who was your hero when you were growing up?

John Lennon. I was a big fan of the Beatles (all four of them). But more than just the quality of their music — it was rich, punchy and sophisticated. That said, John Lennon was a true icon. Funny and ironic, musically great, but also engaged in human causes.

3. If you had to work in a different industry, which one would you choose?

The music industry. Playing guitar and bass, I perform sometimes on stage and it's always a great experience. I do this purely for non-profit organisations and occasions — It's not really an "industry" in the true sense, but is a domain that I'm personally engaged in.

4. Where would you live if money was no object?

In a country house near the sea and mountains. I'm unequivocally a country man, and I love both mountains and sea. Whenever I want to recharge I drive to a country house. Once practical again I plan to go further and do some hiking in the Alps or relaxing close to the sea.

5. Which law would you most like to change?

The death penalty where it is still practiced. In those countries where it has been abolished, including France where I'm based, it has been a major step forward. I'd like to see similar progress elsewhere until it's confined to history everywhere.

6. The Beatles or the Rolling Stones?

Definitively the Beatles. They revolutionised music, they were energetic, funny, powerful and inventive. When they played together, a real alchemy was palpable. They inspired me immensely. John Lennon, of course, but also Paul McCartney were arguably the best rock and pop songwriters, and that remains true today. Paul McCartney is always optimistic, and always renewing himself. I've been lucky enough to see him four times on stage, he is an idol.

7. What's the strangest question you've ever been asked?

Someone asked me once, while on a plane, "what if the wings come off? Do you think the plane can still fly?" I was a bit like.... "what?"

8. If you could dine with any famous person, past or present, who would you choose?

Steve Jobs, who has inspired me immensely in my career. He's a visionary man, with a huge sense of communication. Passionate about new technologies and he really changed the world. In a different way, he's close to John Lennon's mind-set. He once came to Paris, and I was lucky enough to get some tickets for one of his Keynotes. He was inspirational, and I still remember it like it was yesterday. He captured the attention. He was sharp and inspiring.

9. What's the greatest technological advancement in your lifetime?

The iPhone. Internet in a Phone as they are tightly linked together. This was the technical "revolution" of my lifetime.

When I was young I was a big fan of Star Trek, and I was fascinated by the little pocket phone they used to communicate, by just opening it and talking. That was science-fiction.

Communicating with everyone in the world, and even today seeing them through a little portable device from our pocket, I'm still impressed by that. Like the little boy I was, watching Kirk and Spock.

10. What's the one possession you can't live without?

My first reaction would be: a house for my family as a "possession", this is the most important thing for me. If the question was more an "object", then something to play music or hear it. I always have music in my head. All the important moments of my life have been punctuated by music. Every memory has its song.



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