

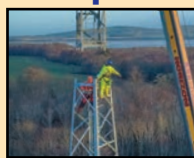
# networking

FIXED & WIRELESS NETWORKS FOR ENTERPRISE USERS

## Targeting mobile not spots

50 metre tower improves connectivity for Highland communities.

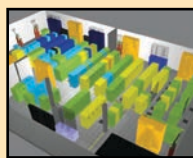
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Finding the right service provider for your needs.

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## Switched on

Whatever the size of the network, there's a switch to fit the job.

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# Swedish specialist brings 'DIY' fibre networks to UK councils

Swedish FTTH specialist VXFIBER has launched in the UK and claims its open access business model will provide a practical blueprint for local authorities to follow. Stoke-on-Trent City Council has already teamed-up with the firm in an effort to encourage competition among service providers whilst giving consumers wider choice.

Through a public-private collaboration, VXFIBER partners with local authorities to invest and install their own high-speed fibre assets, what it calls the "passive layer" of the network. The company then provides the "active layer" which comprises all the equipment and network management systems. The council can use this layer to monetise its fibre investment and, according to VXFIBER, is no longer

dependent upon established operators or ISPs to provide essential connectivity.

Finally, the firm partners with service providers who can offer various products and services directly to the subscriber via a self-provisioning web-based portal – the "retail layer".

VXFIBER executive chairman Mikael Sandberg says: "We're acutely aware of how underserved the UK is, with figures from Ofcom showing only three per cent of homes and businesses connected to full fibre. The slow pace at which high-speed fibre connectivity has been rolled out across the UK is alarming in comparison with mainland Europe – the country doesn't even appear in the latest rankings from the FTTH European Market Panorama."



As part of an initial project, Stoke's city council plans to extend fibre connectivity to the Ceramic Valley Enterprise Zone, a 140 hectare site that is being transformed into a tailor-made location to attract businesses.

In mid-March, it was announced that Stoke-on-Trent City Council is partnering with VXFIBER to support full fibre broadband connectivity for residents and businesses. Under the scheme, the council

will retain complete ownership of the municipal ring fibre network: it already owns the main ducts across the city and will utilise these to connect the network.

(continued on page 2)



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## Massive surge in highly paid data protection jobs as GDPR looms

The imminent overhaul of data protection rules has created a jobs boom for data protection officers (DPOs), according to online recruitment agency Indeed.

With just two months to go until the General Data Protection Regulation (GDPR) goes live, Indeed says it has tracked a 709 per cent surge in the number of vacancies for data protection officers since the rules were ratified nearly two years ago.

According to the company – which claims to run the world's largest job site – thousands of companies and public sector organisations are still racing to get compliant in time for when the GDPR comes into force on 25 May.

It says the nationwide recruitment drive has piqued the interest of jobseekers, with

figures also revealing that since April 2016, the number of candidates looking for data protection officer jobs has increased by 297 per cent.

DPOs typically train staff who are involved in data processing and carry out security audits to make sure personal data is being dealt with legally. The job requires knowledge of data protection law and practices, and because such professionals are in high demand, Indeed says the average salary is currently £47,483 – that's nearly double the average UK wage of £27,600.

GDPR gives individuals more say over what companies can do with their data. It also introduces tough fines for organisations that fail to comply with the new rules (also see GDPR feature, Dec 2017 issue). ■



## Local councils looking at 'DIY' fibre networks

(continued from page 1)

As part of an initial project, the authority plans to extend connectivity to the city's Ceramic Valley Enterprise Zone. This is a 140 hectare brownfield site that is being transformed into a tailor-made location to attract businesses. It is made up of seven key sites along the A500, and is so far said to have brought in more than 1,000 jobs.

According to the council's deputy leader Abi Brown, Stoke-on-Trent is in the top ten fastest growing economies outside of London and already have some of the fastest average 4G mobile download speeds in the country.

It is also developing an innovative district heat network to supply sustainable energy to business and residents. Last September, the council started the first phase of a project that will see it lay four kilometres of underground pipes around the University Quarter. When completed this year, businesses and households will have the potential to connect to the network and receive low maintenance, affordable heat, without the need for gas boilers in their properties.

"We're serious about becoming a sustainable, smart city," says Brown. "However, the traditional part copper-based broadband offering currently available simply isn't good enough to keep pace with the fast-changing connectivity demands of today's increasingly digital society and economy." ■

## Government-funded projects pave the way to make UK a 5G leader

The government has announced the winners of a £25m competition to pave the way for the rollout of 5G technology. The six testbed projects will receive between £2m and £5m in government grants as part of a total investment of £41m from private sector and other public sector funding.

The winners include 5G RuralFirst which is led by Cisco with the University of Strathclyde as lead partner. Based primarily on the Orkney Islands and in the farmlands of Shropshire and Somerset, the project will look at integrating spectrum sharing strategies for 5G; bringing connectivity to rural communities and enabling smart farming; and innovative methods of delivering broadcast radio

over 5G working with the BBC.

The 5G Smart Tourism testbed will focus on delivering enhanced visual experiences for tourists using AR and VR in major attractions in Bath and Bristol. Content and technology developments will be provided by the BBC and Aardman with support from the University of Bristol's Smart Internet Lab. It will demonstrate self-provision of 5G and Wi-Fi, mmWave backhaul, and will also address safety issues by providing emergency service capacity through network splicing.

The Worcestershire 5G Consortium will focus on ways to increase industrial productivity through preventative and assisted maintenance using robotics, Big

Data analytics and AR over 5G. It will also have a cyber security aspect, with QinetiQ providing assurances on the 'security by design' of 5G and IoT. It will be led by the Worcestershire Local Enterprise Partnership consortium.

Other winners include the Sensor City project that aims to reduce the digital divide in deprived communities across the Liverpool City Region; the AutoAir testbed for connected and autonomous vehicles which is led by Airspan Communications; and the 5G Rural Integrated Testbed which aims to ultimately make high-quality connectivity available across Cumbria, Northumberland, North Yorkshire, Lincolnshire, Invernesshire, Perthshire and Monmouthshire. ■

## GTT to acquire Interoute and add 72,000km of fibre

GTT Communications is proposing to acquire independent fibre and cloud networking platform provider Interoute for around €1.9bn (£1.6bn/\$2.3bn) in cash.

The combination will expand GTT's Tier 1 global IP network with Interoute's fibre European fibre footprint that is said to include more than 400 points of presence, spanning 24 metro areas and interconnecting 126 cities across 29 countries. It will also add 15 data centres, 17 virtual data centres and 51 colo facilities to GTT's portfolio, as well as more than 1,000 strategic enterprise and carrier clients, primarily headquartered

in Europe. The company says that the deal will also expand its SD-WAN capabilities.

GTT expects to complete the integration later this year. Company spokesperson Randy Slack says: "GTT will determine any proposed workforce changes post-transaction close, after consultation with Interoute management and employees, and in compliance with local legislation.

"Until the deal has completed, the Interoute management and board structures will remain unchanged. On completion, Interoute will become part of GTT. The company will be led by Rick Calder, GTT president and CEO, and his appointed executive team."

In separate news announced in mid-March, GEFCO Group will use Interoute as part of its aim to grow network capacity and quality of service.

Specialising in industrial and automotive logistics, France headquartered GEFCO's global presence spans 300 locations in major cities, rural and industrial areas.

Philippe Ellec, the group's head of IT operations and infrastructures, explains that the hybrid architecture of the company's previous network had become outdated and was prone to incidents. "As our demand for



**GEFCO Group needed a network to support its many operational sites which manage the daily departure and arrival of goods on trucks and trains.**

bandwidth grew, we had to start prioritising our traffic flows. Today, we rely on the network to inform our customers in real-time, we do more data analysis and use more collaborative tools. We needed one or more network partners to support us across all our European sites."

GEFCO chose to work with a combination of local best of breed providers and Interoute. Working with local operators, Interoute set up resilient MPLS links in 120 locations in 18 European countries, connected with its SDN core. ■

## First industry demo of two-way inter carrier SDN orchestration

Colt and Verizon say they have successfully showcased two-way inter carrier SDN orchestration for the first time.

At a demonstration held in London in mid-March, it's claimed both companies were able to make near-real-time bandwidth changes in each other's production networks. The firms say this is the first time two-way network orchestration between carrier production networks has been demonstrated anywhere in the world, and marks an important step in enabling real-time cross-carrier automation.

According to the two companies, next-generation infrastructure such as SDN is increasingly being viewed as key to helping organisations better manage network traffic, and improve business agility so that digital transformation can successfully support strategic business goals.

Mirko Voltolini, head of network on demand at Colt, says: "This showcase positively demonstrates the power of software defined networking and how

increased adoption is putting operators and customers in control of their networks and services. Previously, closed systems have made interoperability between service providers extremely difficult."

Verizon's EMEA head of product development Peter Konings adds that the demo was the first time anyone in the world has been able to flex network capacity in both directions across network boundaries.

"This will be a game changer for enterprise networking," he says. "Enterprise networking is in the midst of a revolution. Organisations today want intelligent, dynamic networks that respond automatically to their changing business needs."

Verizon and Colt are working with MEF (Metro Ethernet Forum) to advance the development of industry standards, in particular, inter-carrier business and operational Lifecycle Service Orchestration APIs, which will accelerate the availability of this flexibility from more partner networks. ■



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## 'Mobile not spots' targeted by WIG, O2 and Scottish Water

The rural Highland communities of Milton, Kildary and surrounding areas are to benefit from better mobile coverage and improved internet connectivity, thanks to a new telecoms tower.

Wireless Infrastructure Group (WIG) worked in partnership with O2 to build and operate the 50 metre tower at Milton. This was designed and built to a height that will enable an estimated three times the 4G signal range compared to traditional masts.

The tower is now providing 4G connectivity to customers in the region in addition to covering 15 miles along the A9. WIG says it has the capacity to offer access to all mobile network operators as well as other rural wireless networks, allowing them to provide voice and high-speed mobile data communications to local rural communities.

The new tower is located at a Scottish Water facility. It is part of a growing partnership between the utility firm and WIG that has already delivered 4G infrastructure to more than 150 Scottish communities.

Fergus Ewing, MSP and cabinet secretary for the Rural Economy and Connectivity, says that more than a dozen areas in Scotland with no access to 4G coverage have been



Wireless Infrastructure Group worked in partnership with O2 on a 50 metre tower that's designed to enable around three times the 4G signal range compared to a traditional mast.

identified in a £25m project to improve mobile connectivity. He believes investment in higher capacity mobile infrastructure is key to bringing digital services to the communities of the Highlands and Islands.

He adds: "WIG's investment in the new tower at Milton, along with others they are deploying across Scotland, is a great example of what can be achieved when the industry and public sector collaborates".

With a head office in Bellshill, Lanarkshire, and an operations centre in Solihull, WIG has ambitions to invest £1bn in UK digital infrastructure, targeting connectivity challenges in hard to reach areas through infrastructure solutions ranging from rural towers like Milton to fibre connected small cells in buildings and on city streets. ■

## Cloudian and Infinity create "limitlessly scalable" storage

Cloudian has acquired Milan-based software-defined file storage specialist Infinity Storage. The value of the deal has not been disclosed.

With Infinity's technology, Cloudian says it now offers customers integrated file and object-based storage solutions that consolidate all unstructured data types into a "limitlessly scalable" storage pool.

The firm reckons this results in simple storage management that reduces total cost of ownership by more than 70 per cent when compared with traditional multi-silo NAS systems.

The acquisition is the culmination of an existing relationship between Infinity and Cloudian. The companies previously worked together to launch the Cloudian HyperFile NAS controller which is designed to deliver enterprise-class file services from Cloudian HyperStore.

Cloudian CEO Michael Tso says: "This

acquisition further accelerates Cloudian's efforts to reduce IT workloads with self-protecting and easy-to-scale file systems that analysts agree are critical for next-generation storage management."

He adds that Infinity brings "deep" technology expertise to the table. Infinity Storage's founder, Caterina Falchi, is claimed to be an inventor of the WORM (write-once-read-many) file system that provides jukebox file management and transparent access to data within this protected environment. Falchi joins Cloudian as VP of file technologies.

Earlier in February, Cloudian separately announced a \$125m joint venture with Digital Alpha to accelerate adoption of its enterprise object storage systems. Digital Alpha will also support the development of a partnership between Cloudian and Cisco Systems, covering relevant data-centre architectures. ■

Cloudian and Infinity Storage previously worked together on the Cloudian HyperFile NAS controller seen here.



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## JASMIN to be twice as capable after upgrade

The UK's leading environmental science supercomputer is being upgraded to offer double the storage capacity.

JASMIN gives the European climate and Earth-system science communities the ability to access very large sets of environmental data, which are typically too big for them to download to their own computers. Its 1,700 registered users can then process these data sets very quickly which reduces the time it takes to test new ideas and get results from months or weeks to days or hours.

Dr. Victoria Bennett, head of RAL Space's Centre for Environmental Data Analysis which jointly manages JASMIN, says: "For example, the current Sentinel Earth observation satellites alone are producing 10TB of data every day and this will grow as more are launched as part of the EC's Copernicus programme. This upgrade will allow us to build on the successes we've already seen in enabling our users in the science community to efficiently process and analyse these massive datasets."

When JASMIN was brought online six years ago it only had 4.5PB of storage. Since then, it has been expanded and this latest upgrade will double the available storage to more than 44PB. It will also add around 40 per cent to the processing capability, with 11,500 cores on 600 nodes, similar to adding the power of several thousand high-end laptops.

The upgrade involves the integration of computing equipment from many




While conventional computers take months or weeks to crunch massive environmental science data sets, JASMIN's 1,700 registered users will be able to get results in just days or hours.

suppliers, a specialised new network, the development and deployment of new software, and the migration of petabytes of archived data from old hardware that is now in need of retirement.


The entire process will take many months, from the integration of the first new equipment in March until the last of the old storage is retired. Completion is expected by the end of 2018.

Jonathan Churchill, JASMIN systems architect and manager for the Science and Technology Facilities Council's (STFC) Scientific Computing Department, said: "the compute upgrade will provide not only much needed extra batch computing cores but also provide the deep, on-demand cloud computing capacity and flexibility that releases new analysis environments to our science communities." ■



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[www.htdata.co.uk/competences/pre-terminated](http://www.htdata.co.uk/competences/pre-terminated)





## Mobile and flexible workforce for RSPB

The Royal Society for the Protection of Birds (RSPB) has worked with the Pure Technology Group (PTG) to create a more flexible and mobile workforce. The result is a contract for endpoints (laptops and two-in-ones), peripherals, support and deployment over the next three years. RSPB staff and volunteers can share their workspace via the new devices across the UK, providing flexibility to transform from a traditional workspace and introduce a more collaborative and productive IT environment. During the planning process, PTG says all requirements were carefully analysed for environmental impact, which was hugely important for the RSPB. ■

## Virgin now on HSCN

Virgin Media Business (VMB) has gained Stage 2 compliance certification to the Health and Social Care Network (HSCN). The company claims its connectivity will allow healthcare workers to "seamlessly" share secure data across the sector in real-time. It adds that they will also benefit from flexible remote working tools such as *Business Anywhere* which will allow health and social care professionals to check and update patients' medical notes on-the-go using their mobile device. "Our *Connected Care* solutions have a proven history of success in the public sector and provide a solid foundation for reshaping the future of health and social care," claims Rob Orr, VMB's executive director for commercial marketing. HSCN is the new multi-vendor network that replaces N3 (see feature, Feb 2018 issue). ■

## Rowing ahead with data analytics

British Rowing has extended its partnership with SAS for a further three years. As the Official Analytics Partner, SAS says it will help transform data analytics across British Rowing and provide its software and expertise to develop a suite of real-time membership dashboards. These will be used by the organisation's senior management team to make insight-based decisions to help improve and promote the membership offer, and provide insights into British Rowing's education and training provision for clubs, coaches and rowers. In addition, SAS' data analytics will be used to review more than 65,000 competition records captured during the pilot phase of the organisation's new Competition Framework for ranking rowers. ■

# Small firms hit hardest by downtime

UK businesses lost almost 82 million hours to internet outages in 2017, according to research conducted by Beaming.

Earlier this year, the Hastings-based business ISP commissioned an independent survey of business leaders in 514 UK companies to identify the average amount of working time lost to internet outages.

It discovered that, on average, businesses suffered two major internet outages each during 2017 that prevented them from trading or accessing vital services online.

Although this was half the number experienced in 2016, Beaming says the total amount of productive time lost increased by four per cent year-on-year, mainly due to the severity of the outages and the amount of time it took to restore service.

In businesses with fewer than 10 people, restoration time rose from an average of eight hours in 2016 to 12 last year. For firms employing between 10 and 49 staff, the average outage duration increased from seven hours to more than 10 over the same period.

Beaming MD Sonia Blizzard believes

		Solo	Micro	Small	Medium	Large
		1 person	2-9 people	10-49 people	50-249 people	250+ people
Businesses suffering downtime	2017	33%	54%	57%	55%	68%
	2016	62%	73%	75%	83%	88%
Average outages per business	2017	1.4	2.1	1.9	2.1	3.1
	2016	2.8	3.9	3.7	3.7	4.6
Average downtime per business (hours)	2017	12.6	24.8	19.7	6.9	28.5
	2016	16.7	30.7	25.8	18.2	46.4
Average service recovery time	2017	9	11.8	10.4	3.3	9.2
	2016	6	7.9	7	4.9	10.1
Productive hours lost across population	2017	50,885,370	26,709,878	3,862,769	181,979	188,273
	2016	55,518,736	18,766,598	3,810,042	326,476	291,230

SOURCE: BEAMING & OPINIUM

that instead of getting better internet, many businesses are simply getting better at managing the impact of a poor service. She says: "Smaller businesses suffer the most from internet outages because they are more likely to rely on broadband services designed for household use. The SLAs on consumer packages tend to permit longer periods of downtime and don't provide

rapid access to technical experts that can address problems quickly."

Although Beaming's research shows that small firms still struggle with outages, they are also more prepared for them. Forty eight per cent of those surveyed said they focused on tasks that didn't need the internet during outages, while 22 per cent said they switched to alternative connections. ■

## Arrow combines tech for "powerful" hybrid platform

Arrow Electronics has launched a new platform that combines technologies from Microsoft and Riverbed to enable service providers to offer their end customers a globally orchestrated and optimised connection to cloud computing.

The new solution is focused on simply and securely connecting a company's infrastructure and branches to *Azure*, and will initially be available in the UK along with France, Germany, the Netherlands and Scandinavia. It leverages Riverbed's SD-WAN solution *SteelConnect*, as well

as the vendor's *SteelHead* for hybrid WAN optimisation and *SteelCentral Aternity* for end-user experience monitoring.

Arrow says this provides the channel community with "powerful" hybrid cloud architecture for modular, distributed applications from a single source. It claims that the smart combination of Microsoft and Riverbed's solutions offers a new level of visibility, network control and optimised performance of hosted applications.

The company adds that end customers benefit from easy access through an

automatic VPN connection, fast and secure application deployment, reduced bandwidth costs, easy configuration and full visibility of network activities.

"The future of the cloud is hybrid and dominated by software-as-a-service offerings," says Eric Nowak, president of Arrow ECS EMEA. "The better use of network resources and a full insight into application performance leads to higher efficiency and productivity. In addition, our partners benefit from a secure foundation to sell other solutions and services on top." ■

## "Branch in a Box" aims to simplify edge computing

StorMagic has developed an integrated micro data centre designed specifically for hyperconverged and edge computing environments.

According to the company, *Branch in a Box* is a cost-effective, integrated bundle comprising rack, power, servers, storage, networking and management software.

The system utilises key components from APC/Schneider Electric's data centre infrastructure portfolio including its physical enclosure, UPS, PDU, cooling, environmental monitoring and security and management software.

It also includes redundant hyperconverged appliances based on Dell/EMC

servers and switches, VMware *vSphere* or Microsoft *Hyper-V* hypervisors, and StorMagic's virtual SAN software.

All pre-integration between key components is delivered through UK distributor Exertis prior to shipping. Once on site, all hardware and software is ready-to-use, and is said to offer a simple, turnkey solution to consolidate and run mission-critical applications at remote and branch offices, retail outlets and SME data centres.

"StorMagic and APC by Schneider Electric's *Branch in a Box* is a great example of two companies coming together to solve a growing customer problem," says John Glendenning, SVP sales and business

development, StorMagic. "Organisations needing simple, low-cost IT solutions to run their businesses at the edge of the enterprise now have an option that requires minimal resource to deploy and manage, whilst significantly improving uptime." ■

The ready to use micro data centre features hardware from APC, Dell/EMC as well as hypervisors from VMware or Microsoft, and StorMagic's virtual SAN software.



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# Only four-in-ten councils have a cloud strategy

The demands of running legacy IT are holding back councils from putting in place new technology which can improve services and increase operational efficiency.

That's according to research conducted among local government IT teams by Eduserv, the not-for-profit technology partner for public and third sector organisations, and Socitm, the society for public sector IT leaders.

In their recently published joint report, *Local Government Cloud Adoption 2018*, the two organisations found that despite the majority of councils now using cloud, just 40 per cent have a cloud policy or strategy in place, while 72 per cent said they can use G-Cloud to procure IT.

Although 62 per cent now use cloud infrastructure, the study revealed that the rate of adoption is slow, increasing by just 10 per cent in the two years since Eduserv conducted its last study into cloud adoption.

At the same time, 81 per cent of councils said they are maintaining on-premise infrastructure, and a hybrid IT model which combines cloud and on-premise

**Eduserv CTO Andy Powell says councils have a "real hunger" to use the new applications and infrastructure that cloud offers.**



technology is most common in the sector with 64 per cent saying their organisation deploys IT in this way.

Eduserv CTO Andy Powell says: "Unfortunately, a legacy IT hangover caused by outstanding contractual obligations and the demands of maintaining or upgrading old systems so they remain fit for purpose, is slowing the rate at which councils can move forward.

"To better equip their organisations for a digital future it is clear that councils need to move quickly to formalise their approach to cloud IT, educate their organisations about the business outcomes that cloud can deliver, and shift focus from maintaining IT to partnering the business through that change." ■

## PoliceBox brings the cloud to mobile policing

Coeus Software has launched what's claimed to be the first secure, cloud-based workforce mobility platform for the police.

It describes *PoliceBox* as an all-purpose mobility platform that puts control in the hands of the police instead of third party software producers. Avon and Somerset Constabulary have already adopted the platform along with two other forces whose names have been withheld.

*PoliceBox* is built using *Microsoft Azure* and is delivered as a hybrid SaaS. Coeus says it can be installed in a few days and enables users to create their own processes, deploying them to mobile devices irrespective of the back-office systems they already have in place.

The company claims a simple desktop app, available for *Android*, *iOS* and *Windows*, builds processes quickly and easily without any coding. "Changes to



**Based on Microsoft Azure, the platform can be deployed on any mobile device irrespective of the back-office systems in place.**

processes which used to take months can be completed in hours," states the firm. "Forces can even share processes with other forces, saving time, boosting productivity and increasing collaboration."

*PoliceBox* integrates with Command and Control, Intelligence and Records Management Systems, as well as national systems such as Pentip and the Police National Computer. Coeus reckons this is done "seamlessly" using plug-in connectors.

The platform is also compliant with Home Office Digital Witness Statements standards and is designed to be Emergency Services Network (ESN) ready. It is available to customers outside of the Public Services Network, and is offered on a per-user-per-month subscription starting at £6. ■

## SaaS specialist Redstor introduces "unique" Archiving-as-a-Service

Redstor has come up with what it describes as a unique archiving service as part of its data management platform.

The SaaS specialist claims the new service gives organisations dealing with multiple terabytes of data the ability to free-up space on their costly primary storage by offloading rarely accessed data to the cloud. It reckons this offers "significant" savings, particularly to organisations dealing with 10TB or more of data.

The firm says the service "uniquely" allows access to data archived in the cloud as if it was still stored locally on primary storage. For the user, it's claimed that the performance and overall experience remain the same. Unlike

traditional archiving technologies, Redstor says its service uniquely ensures archived data is instantly available for any purpose, including compliance and regulatory requests.

The company adds that the platform uses its *InstantData* technology to give high-speed access to archived data so users can work on what they need straight away. It says there's no need to wait for the whole file to be retrieved as the bits of each file are prioritised as they are needed.

Redstor also says the service is automated and policy-driven, therefore minimising management time and effort, and enabling IT staff to focus on more strategic business initiatives. ■

## THE IOT CONNECTION

News & developments from the world of the Internet of Things. This month, we look at smart cities.

### Hollis and Mist partner to expand first self-Learning wireless network

Hollis Technology has teamed up with Mist, the US company that is said to have pioneered a self-learning wireless network using artificial intelligence.

Shropshire-based Hollis specialises in providing business support solutions to both public and private sector organisations throughout the UK. It will be responsible for supplying and supporting the full range of Mist AI-driven wireless platforms and Bluetooth Low Energy (BLE) location-based services to customers nationwide.

California-based Mist was founded in 2014 and is backed by investors that include Lightspeed Venture Partners, Norwest Venture Partners, GV (formerly Google Ventures) and Cisco Investments. The company has built what's said to be the first AI-driven wireless platform, designed specifically for the smart device era.

Mist says its learning WLAN makes Wi-Fi "predictable, reliable and measurable" by providing "unprecedented" visibility into the user experience, and by replacing time-consuming manual IT tasks with proactive automation.

In addition, the firm says it is the first vendor to bring enterprise-grade Wi-Fi, BLE and IoT together to deliver personalised, location-based wireless services without requiring battery-powered beacons. All operations are managed via the cloud.

Mike Anderson, VP of channel sales at Mist, says Hollis Technology will play an important role in building UK market share. He adds: "We are seeing enormous demand for next-generation wireless cloud solutions that ensure fast, reliable, predictable and measurable Wi-Fi and high value BLE location services."

Hollis technology sales director Simon Hollister believes that as well as providing his company with a competitive advantage, the addition of Mist to the portfolio will give customers cost-effective access to wireless networking that will deliver "significant productivity gains".

*Ubihub can be used to connect and power any PoE device for IoT applications.*



### First streetlight powered Gigabit switch

Ubiquia has developed what's claimed to be the industry's first streetlight-powered gigabit switch. According to the US-based IoT specialist, *Ubihub* is a next-generation gigabit switch that is compatible with the NEMA socket on more than 300 million streetlights globally. It is designed specifically for smart city network and IoT applications.

The switch has two PoE/PoE+ ports for connecting and powering any PoE device such as cameras and digital signage. It includes connections for fibre, Ethernet and broadband PLC backhaul, and is also backward compatible with Ubiquia's *Ubicell* IoT network router, public Wi-Fi and edge processing modules.

Company CEO Ian Aaron says: "Our customers want to leverage their existing streetlight infrastructure to easily connect cameras and third-party sensors, and provide gigabit speed backhaul communications for public Wi-Fi, surveillance and other high bandwidth applications."

In addition to *Ubihub*, Ubiquia has also announced its third-party sensor certification programme. It reckons this provides municipalities with the ability to easily deploy backhaul, commercial grade sensors and a comprehensive API set for data access.

Aaron says the programme will make deploying cameras, edge processing applications, sensors for air quality, weather, soil monitoring, a "truly plug and play" process for cities. *The latest network switches – Off-the-shelf, p14.*

## Sutton Winson overhauls IT infrastructure for maximum agility

Independent insurance broker and risk management provider Sutton Winson is completely overhauling its IT and telephony infrastructure with the help of Node4.

With roots going back more than 60 years, Sutton Winson is the main insurance broker of the privately-owned Sutton Group Holdings. With offices in Twickenham, Petersfield and Burgess Hill, it has clients based throughout the UK as well as overseas.

The move to overhaul the network was triggered by a decision to move away from two legacy broking systems. As the company reviewed alternative systems, its IT team took the opportunity to take a look at other areas that were in need of a refresh. They therefore decided to migrate the telephony system to the cloud and to perform a major

revamp of the IT infrastructure in order to ensure peak business performance.

Sutton Winson is already working with Node 4 on the implementation of the systems. The telephony network is already deployed and is expected to go live this year. The broker system is currently undergoing tests and staff will receive training so that the deployment goes live and becomes fully operational soon.

"A dynamic company like Sutton Winson, that needs to be able to expand rapidly, cannot afford to be slowed down by legacy systems and infrastructure," says Shane Dove, head of commercial sales at Node4. "With wholly-owned data centres, Node4 [can] offer companies like Sutton Winson an end-to-end solution along with high-calibre consultancy and a comprehensive IT service wrap. ■



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# Get on the right rack

What should you look for when choosing a data centre provider? These companies offer some solutions to your problems.

## Elite benefits by “power by the hour”

Founded 10 years ago in Portsmouth, Elite has more than 10,000 customers for its connectivity, data centre and voice services. They range from multinationals to small businesses and from charities to government agencies. Among its customers, Elite names Interflora, Qatar Airways, Heineken, Portsmouth City Council, Dogs Trust and Portsmouth Historic Dockyard, et al.

With growth came the need for a high-quality data centre partner to add to its network. Among Elite’s requirements were that the data centre had to be based in London with a highly resilient power network and a large range of network carriers so that it could confidently host customer data with no restrictions. In addition, the firm required competitive pricing and the ability to scale as its business increased.



The company chose Clerkenwell-based Volta which is a joint venture between funds managed by Apollo Global Real Estate (the real estate investment management arm of Apollo Global Management), and Glebe London.

Elite MD David Simmons says: “We chose Volta because we are highly impressed with the power resilience, which is a crucial part of our own service offering, to provide high uptime internet connectivity 365 days a year.”

Volta claims its power resilience is one of the most advanced in the UK, being located on two separate power rings on London’s upgraded 33kV network. As a result, the company reckons that its data centre, which is brand new, will always offer the power supply its customers need because there are two main grid stations and transformers on site.

According to Volta, all this allows it to be in control of its power supply and consequently provide Elite with a guarantee of 100 per cent power supply to its racks. The company adds that its “power by the hour” pricing – said to be a first in the industry – means customers pay only for the power they consume as opposed to rack space.

Furthermore, Volta says that because it’s facility is carrier neutral, Elite and its

customers have the freedom to negotiate directly with the carrier of their choice.

“Like us, Volta have made a significant investment in data centre infrastructure and has ample capacity to support our own business growth,” says Simmons. “All of this, along with their flexible pricing structure and the excellent customer service we’ve received, has reinforced our decision that we made the right choice.”



## Moving data closer to home

Based in the village of Albury near Guildford, Maratori was established just over 16 years ago to design websites. It quickly found a demand among its clients for web hosting and this required a lot of support.

At first, the company used a data centre in Maidenhead. Maratori director Rob Thomson says: “By moving over to the cloud the biggest risks to our business, such as having a hard disk fail, have been removed.”

However, Thomson determined that at a distance of 37 miles, Maidenhead was simply too far away.

He then came across David Barker, the founder and technical director of data centre company 4D. It was founded in 1999, originally as a domain registration and hosting business, but in 2007, Barker established the company’s first data centre, near West Byfleet in Surrey. This was followed by another in Maidstone and, in October 2016, 4D bought a BT data centre (pictured) in Crawley, West Sussex.

Transferring to 4D means that Maratori saves up to 25 minutes in travelling time. Thomson says although the business was relatively new to the market, moving to a better location was critical to its operations and decided that it was therefore worth it.

“One of the biggest challenges we’ve faced over the years as a business has been with the hardware,” he says. “It’s a tough call to make as there’s a lot of profit to be made in providing the hardware to customers as well as the hosting services, but it requires a substantial investment.”

Thomson says everything with the migration went perfectly. The team rolled out the servers needed very quickly, and although they came across a “very odd” network issue they were able to locate some obscure Ethernet card that was causing the problem and debugged it within a few hours. They also enabled Maratori to consolidate its rack equipment down from three full racks to just over one.

“We’re a small business, but from our clients’ perspective it’s important that we are within the London area,” says Thomson. “By working with 4D and utilising their services fully, I can provide that level of service to our clients

while being location independent myself and simply knowing that any hardware problems are just sorted.”

## Cool it: data centre deal saves thousands in energy costs

Matthew Riley founded Daisy Group seven years ago to target small- to medium-sized businesses which he felt were not best served by the incumbent telecoms companies.

Starting with a handful of staff, the company now has 4,000 employees and 600,000 customers of all sizes, including half of the UK’s high street retailers. And as well as telecoms, including mobile, it offers hosting, procurement – from printers to servers – and finance, among other services.

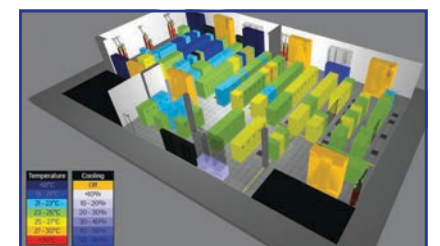
Based in Nelson, Lancashire, Daisy has 31 offices, including 14 data centres. It has recently signed a five-year deal for EkkoSense to manage the thermal performance of five of these data centres, in Aston, Farnborough, Hamilton, Romford and Wapping. And according to EkkoSense, Daisy has saved more 19 per cent in its cooling energy costs in the first few months.

EkkoSense claims to be unique in bringing together the latest wireless IoT-enabled sensor technology, 3D software visualisation and analytics capabilities, to create what it describes as the industry’s only monitoring solution that can track cooling in real-time.

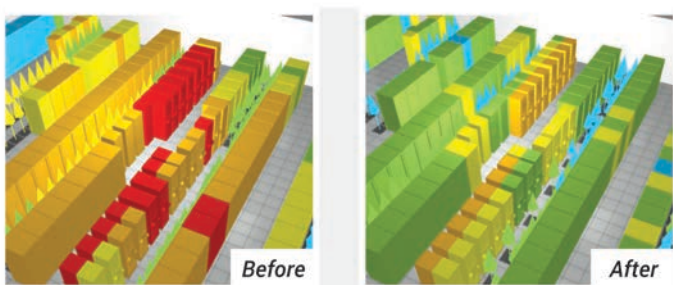
The vendor’s service includes IoT-enabled sensors, called *EkkoAir*, and its *EkkoSoft Critical 3.2* SaaS-enabled software for “room building” capabilities. According to EkkoSense, when combined with *EkkoSoft* thermal modelling, monitoring and visualisation software, *EkkoAir* provides data centre operators with an “intuitive, holistic 3D real-time view of cooling performance across their entire data centre estate”. It reckons this enables them to reduce thermal risk and save between 20 and 30 per cent of their overall data centre cooling costs.

For Daisy, the company first applied its *DCOP (Data Centre Optimisation)* service to reduce thermal risk, release capacity and save energy. This is then followed by ongoing services, including monthly thermal/cooling and ASHRAE compliance reports, supported by quarterly site visits. EkkoSense says this ensures that energy savings, risk management and future capacity requirements are being met and well managed.

Michael Sheridan, head of facilities at Daisy Group, says: “So far we have secured better than expected data centre cooling energy savings, with £115,000 already secured, and more to come as we continue to benefit from ongoing optimisation.”



## Are your data centres a thermal risk? Can you afford not to know?



- EkkoSense Data Centre Optimisation (DCOP) eliminates thermal risk. ROI <12 months.

Despite continued investment in cooling equipment, thermal issues still account for 1/3 of unplanned data centre outages. Why? Because simply adding more cooling isn’t enough. Data centres need to address both the poor management of airflow across racks, as well as the failure to reduce risk by not actively monitoring and reporting individual rack temperatures.

Across every engagement, EkkoSense’s DCOP team has successfully removed an organisation’s thermal data centre risks, dropped the costs of cooling and delivered a clear ROI - often under 12 months - on their investment in EkkoSense solutions and optimisation.

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# Getting the most from UC



After being largely overlooked for years, has video conferencing as a standalone application finally come of age? PHOTO: LOGITECH VIDEO COLLABORATION

**While the initial challenge about deploying unified communications revolved on getting the right tools in place, JAMES HAYES discovers that getting the workforce engaged with those tools is just one of the hurdles that now needs to be overcome.**

The unified communications (UC) solutions sector looks set to have a profitable future over the next few years, with analysts forecasting market values ranging from \$57bn (Global Market Insights, 2018) to \$143.49bn (Grand View Research, 2017).

Meanwhile, fervent competitive activity between UC platform vendors bears-out sustained investment in this technology by customers of all sizes and sectors.

Furthermore, unified communications seems to have shaken-off what could be called the 'UC paradox' that dogged it for years: expanding installed base without increased user adoption. Indications are that take-up among workforces has increased. This is perhaps a sign that digital startups and digitally-transformative companies are applying more strident policies toward requiring their workforces to demonstrably learn and use the communications tools provided, and not favoured alternatives and/or 'shadow UC'.

So, with growth assured and better utilisation on track, the larger UC

question shifts to whether enterprises are making the best use of their investments in these solutions.

## If you build it...

For some, UC adoption rates are an instructive tracker for enterprise video conferencing uptake. As a standalone

**"The challenge nowadays is probably more generational. Younger employees simply do not think of a group video interaction with five co-workers as a video conference – it's simply 'a call'."**

*Greg Zweig,  
Director of solutions marketing,  
Ribbon Communications*

application, video conferencing's fortunes waited year after year for the one in which it would 'finally come of age'. The tipping point argument here has sometimes been 'install it in rooms, and workers will use it'. But according to some observers, that mantra will be



superseded by the millennial behaviours of enterprise mobility.

Analyst Wainhouse Research points out that although many meeting rooms might now be equipped with audio- or video conferencing endpoints/ devices, in privacy-constrained open-plan offices, workgroup meetings are increasingly taking place in huddle rooms – unassigned or utility rooms that can only accommodate up to six attendees. Wainhouse Research estimates that while there are some two million group video conferencing rooms in use worldwide, there are additionally 30-50 million huddle rooms, of which only a tiny percentage are enabled with video conferencing endpoints/devices. This therefore represents a massive potential instalment base for UC video conferencing, and a way for enterprises to add extra value to their systems.

"Use of these smaller rooms is set to rise, and collaboration solutions are being developed specifically to accommodate this adoption uptake," says Ann Marie



Ginn, senior category manager at Logitech Video Collaboration. “Video is increasingly integrated into workflow communications, and we are seeing this trend across multiple platforms – Slack, Cisco Spark or Microsoft Skype for Business, are examples. Good news for legacy users, as it promises to make workaday collaboration more straightforward.”

However, as any seasoned network manager will tell, installation of video conferencing endpoints/devices to huddle rooms is one thing; building the backend capacity to support multiple simultaneous video conferences presents a challenge of a quite different order. Experience of degraded video conferencing across over-crowded and over-contended networks, while group decision deadlines loom, might cause users to revert to conventional audio conferencing, leaving video conferencing ROI decidedly unreturned.

“Video calling and video conferencing remains a major concern for network managers, especially in UCaaS deployments,” notes Mike Wilkinson, VP international at real-time communication services specialist Edgewater Networks. “The majority of UCaaS deployments size bandwidth requirements on the assumption that the vast majority of traffic is based on voice. In many cases, video traffic is restricted to ensure the quality of voice connections are not impaired.”

Steve Harris, EVP of IT distributor Nvias Unified Communications, believes that the reduction in costs for both meeting/huddle room hardware and cloud-based virtual meeting rooms (VMRs) is certainly driving video as a ubiquitous application. He says: “A clear industry move to open standards is making this possible, and cloud VMRs are becoming more agnostic to endpoints and looking to provide a consistent experience regardless.”

“For the network manager this presents a challenge on user adoption and education. Previously, this would have caused more quality-of-service-related networking issues, but the costs and availability of bandwidth now means this is not so much of an issue.”

According to Mark Russell, director of operations, UK & Ireland at Swyx, the challenge with UC video conferencing is that it requires substantial bandwidth to “look good and stay reliable”. He reckons that is why it will still be a long time before it is ubiquitous in every size of company.



**“There is a clear industry move to not isolate voice and video as separate applications.”**

Steve Harris,  
EVP,  
Nvias Unified Communications



**According to 3CX, a dream of cloud-based UC solutions is to avoid investments in technology that inevitably becomes outdated or requires complex and costly maintenance.**

But for Paul Clarke, UK manager at 3CX, it’s the other way round. He argues that increased demand for video conferencing makes it necessary to envisage an appropriate infrastructure that supports web meetings – but that does not mean organisations have to invest in conferencing hardware. For instance, Clarke reckons using WebRTC can make UC-based video conferencing browser-based and accessible via a simple click from any device that supports AV streaming. “This means the only real challenge for network managers is to ensure that there is enough bandwidth available for video conferencing without disruption to any other communication or operational processes – which any UC management tool worth its salt should support.”

Greg Zweig, director of solutions marketing at cloud-based real-time communications provider Ribbon Communications, agrees that network capacity upgrades (including security upgrades) are of higher importance to video conferencing uptake than in-premise endpoint availability.

Indeed, he challenges assumptions that video conferencing adoption is predicated on in-room endpoint/device availability and points out that many workplaces are going beyond that operational model.

“That threshold has long been met, as any iPhone/Android smartphone is now a capable video conferencing endpoint device,” says Zweig. The challenge nowadays is probably more generational. Younger employees simply do not think of a group video interaction with five co-workers as a video conference – it’s simply ‘a call.’”

Thus, he predicts that the “writing is on the wall” for old-model video conferencing technology as older generations of co-workers retire from the physical workplace and notions of fixed-point video conferencing are left to fade into the past.

### Cloud’s value proposition

For Logitech Video Collaboration, the key driver for UC value innovation is cloud. “Cloud now underpins everything,” says Ginn. “While smaller businesses have well-established collaboration platforms that have allowed them to pioneer modern-day working practices, [only recently have we seen] large enterprises comfortable with the reliability of cloud-based solutions.”

In fact, most enterprises are not procuring new UC hardware platforms, they are purchasing cloud-based UC services, suggests Ribbon’s Zweig. But he goes on to say that cloud users should not

sit back and let service providers make too many decisions for them: “As such, they have the option to buy *à la carte* services or choose packages designed for specific employee roles. Remember, not every employee is a ‘knowledge worker’. Tens of millions of users have roles that do not involve smartphones or PCs. A truck driver or hospital nurse probably won’t be more productive if they have their own video collaboration room.”

Zweig adds that UC providers need to provide the right tools for the right jobs. “One reason it’s so compelling to add Communications Platform-as-a-Service to UCaaS is because it’s possible to add the ‘right’ UC services to a business process, without burdening users with the cost and complexity of elements they do not need or value.”

Nvias’ Harris rejects the possibility that more modular cloud-based UC offerings could offer voice-less UC where customers want non-bundled voice services or feel that their voice comms need is waning. “There is a clear industry move to not isolate voice and video as separate applications. End users want access to video communications in meeting rooms and on their mobile devices as they use this extensively now in their personal lives with FaceTime and Skype, and see the benefits.”

### Cloud opex versus on-premise capex

Edgewater Networks’ Mike Wilkinson reckons UCaaS is booming. He says two years ago, a big UCaaS operator would have had between 50,000-100,000 seats, but that figure is now in the hundreds of thousands. “Even smaller operators are managing estates of between 30,000-60,000 seats. Such growth in scale creates pressures on service providers’ operations – especially in cases where there are large amounts of manual process. Service providers are [therefore] increasingly investing in intelligent network assurance and orchestration platforms to improve their efficiency and performance.”

Swyx’s Russell says there has certainly been an increase in the demand for opex solutions. He believes this has fuelled the increase in cloud-based UC deployments as senior managers are now reluctant to tie-up thousands of pounds in a phone system when they can rent it on a per-user basis from as little as £5 per-month.

But he continues by saying despite this, not all industries can use cloud. “They may be limited by insufficient connectivity or indeed [because they are] security-sensitive

organisations, like banks or health centres, that prefer to keep everything on-premise. However, even with highly-sensitive business areas, that sensitivity is giving way to the advantages of cloud.”

While there certainly is a preference in some environments for opex over capex where a like-for-like option exists, Zweig says it is not what he hears as the most important aspect of acquiring UCaaS. “Customers do not want to be tied to long-term infrastructure purchases that then become outmoded. Becoming saddled with maintenance contracts, data centre space and staff cycles to maintain a system that is under-utilised or ineffective, is now their biggest concern. Customers tell us that the ability to ‘elastically’ scale up or down is far more important. UCaaS gives them exponentially greater flexibility to react to business conditions and their teams’ needs.”

3CX’s Clarke is likely to support this view when he says that a dream of cloud-based UC solutions is to avoid investments in technology – especially hardware – that, inevitably, becomes outdated or requires complex, costly maintenance in the near future. “Even if moving to cloud UC demands a much larger initial investment than upgrading existing local ICT infrastructure would, there is still the potential for a rapid return-on-investment – for instance, by centralising procedures and cutting local maintenance costs.”

Harris says that even organisations who want to purchase an on-premise solution and who look for leased options will not be interested in owning that asset at the end of the lease term. He says companies now want a predictable and transparent monthly cost for the technology, regardless of how they deploy.”

### Will UCaaS see the netman off the premises?

Such budgetary expediencies are having a knock-on effect for network management professionals. “For [organisations] that do go cloud-based UC, the role of the network manager changes,” says Swyx’s Russell. “This often results in a smaller team to manage internally, but then with more emphasis on management of special relationships with external providers to ensure they fulfil all their SLAs. As they are now one step removed from actually managing the system themselves, they have less control – but also heightened responsibility to ensure that quality-of-service is maintained.”

Harris adds that the role of the on-premise network manager is becoming much more focused on user adoption and education: “Whereas the challenge before was making the system work and maintaining adds, moves and changes, it is now about facilitating end-user adoption and usage to realise an ROI. This is where today’s successful network managers spend their time.”

Such assurances will receive a mixed reception from network managers concerned that migration of core communications functionality to cloud means they might eventually have no networks left to manage. But Zweig insists they have “nothing to fear” from UCaaS. “Most IT departments are understaffed and struggle to provide the most important part of their mission – user support. They struggle also to manage security issues and a host of other critical matters. Network managers have plenty of tasks to consume their time, many of which drive greater business value than maintaining a legacy voicemail server.”

Another answer to the question of



whether enterprises make best use of their investment in UC solutions lies in the way their directorates work together, and how senior departmental managers liaise.

For instance, Russell says opportunities to derive value from UC that vector on the 'uptake + usage = productivity' equation depend on close proactive cooperation between the IT function and frontline business owners. At the outset of a UC implementation, he says network managers can identify pain points that individual departments are having, and suggest how UC can remedially address these. There also needs to be follow-up after the system has been operational for 12 months or so that all parties can measure the results. "For instance, if a sales manager has offered UC-enabled flexible working to a sales exec, what impact has this had? Has their productivity gone up? Have expense claims reduced because they are doing less travelling into the office?"

IT directors should also be in close consultation with finance directors so that they can calculate the long-term costs and returns of the cloud-based UC, or garner feedback from the customer service director to see if the new system has favourably affected service levels, Russell further suggests: "A holistic approach that involves gathering feedback from all the impacted parties [and stakeholders] will provide the 'big picture' of whether a project has been a success and if there is additional value that is still to be exploited".

### More adopters, more value

For Logitech's Ginn, UC value assessment is all about usage uptake. She says most platforms feature dashboards and analytics capabilities that enable you to track usage by individual. Project teams can then utilise the data to figure-out the dynamics of the business, and look at rollout and adoption plans accordingly.

Ginn also advises enterprises to regularly check user adoption so they can, for example, cater for training requirements. "Continuous adoption checking will ensure that organisations gain fullest value from their investment, and that it is being used in the correct way. Are there individuals or

teams that aren't using unified collaboration platforms? Why not? What can network managers and line managers working together do to guide unengaged personnel into the best behaviours? That's an important thought process to carry through."

In organisations where workforce take-up of provided UC tools remains inconsistent, Zweig also says that the way forward lies in using the tools themselves to analyse the extent of the challenges and provide the base data necessary to inform remedial actions.

"The ultimate purpose of a UC investment by an organisation is to make its workforce more collaborative, more productive, and give them 'anywhere access' to communications tools. Perception is reality. If employees don't use or can't use those services in that manner, employees don't feel they benefit. It has to be worthwhile to find out why."

### The future

Over the last 12 months, the UC solutions sector has seen its perennial share of come-and-go buzzword innovations, disruptive challengers, and market share jockeying.

According to 3CX's Clarke 'contextual communication' – delivering user-friendly services in a way that suits the individual's specific needs – is more important than ever, as it is essential for faster, ideally frictionless, sales and customer service.

But he goes on to say there are a host of other innovations that have driven UC further towards meeting its full potential. Zweig adds to this by saying 2018 will be further shaped by competitive forces as UC vendors compete to win a share of that \$100bn market. He says: "UC continues to evolve as increased competition forces providers to differentiate themselves. Whether you call

it 'contextual communications', 'embedded communications' or CPaaS, the interest is there, absolutely. As the expectations of end-customers (i.e., our customers' customers) and younger employees evolve, enterprise communications provision must keep pace."

Zweig expects UC to "aggressively" embrace AI in 2018 and 2019: "This includes chat bots for contact centre and helpdesk applications, as well as personal assistants – a sort of *Amazon Alexa* for the office."

Swyx's Russell agrees that the biggest talking points in UC have been around AI, and how it can be effectively integrated within blended UC. But like all true UC solutions though, he warns that AI will only be as good as the data that it has access to. As a result, there is a need for solutions to be able to interface and aggregate information from multiple sources inside and outside of the enterprise network. ■



## Yamaha YVC-1000MS Speakerphone

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**"What can network managers and line managers working together do to guide unengaged personnel into the best behaviours? That's an important thought process to carry through."**

Ann Marie Ginn,  
Senior category manager,  
Logitech Video Collaboration.



off-the-shelf: network switches

# Speedy switches

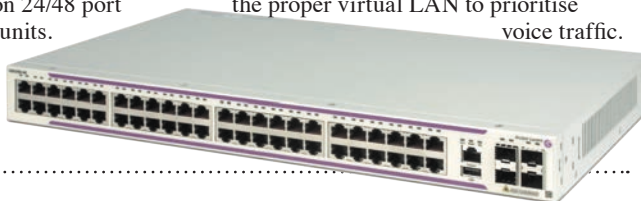
Big or small, there's a switch for most networks in this round-up of some of the latest models.

Designed for small businesses, **Alcatel-Lucent's OmniSwitch 6350 Stackable** range of fixed-configuration Gigabit Ethernet switches comprises 10-, 24- and 48-port, PoE and non-PoE designs.

All use the company's own operating system, said to make them easy to manage and secure. In addition, it says, running costs are lowered through lower power consumption and dynamic PoE allocation, which delivers only the power needed by the attached device.

The 10-port PoE and non-PoE models have two RJ-45/SFP combo port uplinks while the 24-port and 48-port, PoE and non-PoE variants include four fixed small form-factor pluggable (SFP) Gigabit uplink interfaces. Using fixed SFP ports, 5Gbps stacking is available on 24/48 port models for up to four units.

The two RJ-45/SFP combo ports on all 10-port models operate at 1Gbps and



have a half-rack rack form factor. The 24- and 48-port variants include four fixed SFP ports that operate at 1Gbps. All PoE and non-PoE models have a full-rack width, power-optimised, fixed-configuration chassis in a 1U form factor.

And, says the company, up to 48 ports of PoE connectivity are available for simplified IP phones, wireless and IP surveillance deployments over a single Ethernet cable.

Other features include native IPv4 and IPv6 support for routing, Access Control Lists (ACLs) and DHCP relay; IPv6 threat protection (DHCP snooping, router advertisement protection and source address filter protection) to guard against address spoofing attacks; and auto-quality of service that configures IP telephony devices into the proper virtual LAN to prioritise voice traffic.

Even medium-sized businesses may find that standard 1Gb Ethernet is no longer enough, says **AMG Systems**, as more devices rely on constant connectivity and speed.

It says that the **AMG9000** range of Commercial Layer 2+ 10Gb managed Ethernet switches (pictured) offer high performance and low latency 10GbE to businesses of all sizes. It also reckons that the increasing adoption of 10Gb copper and fibre NIC adapters by servers, storage vendors and others has made the price of a 10Gb more affordable.

The range includes models with eight-, 24- or 48-gigabit ports, with or without PoE support, and 1/10Gb SFP+ uplink ports with the option of aggregating the 10Gb ports as a trunk group to expand bandwidth.

AMG says that with full Layer 2+



Designed to meet the demands of the mobile, cloud and IoT age, **Aruba** has introduced its **8400** campus core and aggregation switch.

The company (which was bought by Hewlett Packard in 2015) claims the new device provides industry-leading line rate 10GbE/40GbE/100GbE port density, very low latency and scalability for support of full internet routes. Together with the 1U 8320, it is part of what Aruba calls its "mobile first" range of switches.

The 8400 is based on the new **ArubaOS-CX** software which is designed to automate and simplify many network tasks, improve fault tolerance and facilitate zero-service disruption during planned or unplanned events.

According to the vendor, the switch's key innovations are its micro-services style modular architecture, REST APIs, Python scripting capabilities, and the **Aruba Network Analytics Engine**. This, says the firm, allows easy monitoring of network, system application and security-related activities with simple rules-based

monitoring and automatic correlation of network activities. Aruba says the engine can instantly detect problems, analyse trends to quickly gain insight, and predict or avoid issues that often lead to scale, security and performance bottlenecks.

The company believes that with legacy switches, IT teams must not only troubleshoot problems after the fact but also apply cures with traditional tools such as CLI and SNMP which can be time-consuming and expensive. It claimed the 8400 can provide immediate resolution via its programmability and intelligent policy-based integration with network monitoring, performance and security management tools.



In a new range of Layer 3 managed Gigabit switches, **D-Link** now offers two PoE models that include the **DGS-3630-28PC** (pictured) with 20 PoE GE+, and the **DGS-3630-52PC** with 40 PoE GE+.

The company says that with their profile-based switch resource management feature, users can quickly allocate switch resources depending on the needs of different applications.

The **DGS-3630** is said to be an "ideal" core switch for SMB networks. D-Link says built-in 10 Gigabit uplink ports and stacking technology allow the switch to easily accommodate larger enterprise networks.

It adds that full Layer 3 protocol support, OAM features, and advanced QoS mean scalable and efficient network operation, administration and maintenance, even in "stressful" Ethernet infrastructures.

In terms of reliability, D-Link cites



**Lancom** has expanded its line-up with the release of three new models in its new **GS-2328** series. Each has 28 ports and can be configured and managed automatically via the company's cloud management platform through software-defined networking.

The **GS-2328** has 24 GbE and 4 SFP+ ports that support up to 10Gbps. With claimed data throughput of 128Gbps on the backplane, it is said to offer full performance even under maximum load.

The **GS-2328P** additionally offers PoE as well as PoE+ with an overall output of 370W. Lancom reckons this makes it ideal for the increasing number of high power PoE devices.

The vendor goes on to state that the **GS-2328F** is its first "fibre-optic switch". It has 20 SFP ports, four combo RJ45/SFP ports (TP/SFP) as well as 4



the hardware-based "solid dying gasp" feature in which the switch retains enough power to automatically send an alert message in the event of device failure. There's also built-in 6kV surge protection and an RJ-45 alarm port to control external sensors and alarms

Other features include DHCP auto-configuration and auto-image upgrading which can be used to configure and upgrade multiple switches automatically, and an auto surveillance VLAN function that enables the switches to prioritise surveillance traffic. Static routing, a full L3 routing protocol suite, multicast routing, and an MPLS supporting L2VPN and L3VPN are also listed as some of the switches' key highlights.

SFP+ ports for transmission rates of up to 10Gbps. Lancom claims it's capable of high-speed transmission over several kilometres, making it ideal for central distribution to other switches. It adds that bundling the uplink ports of the new models achieves speeds of up to 40 Gbps.

The switches are optionally managed using either the vendor's management tools or integrated into the **Lancom Management Cloud (LMC)**. With the latter, the company says users benefit from efficient switch management by SD-LAN which orchestrates the port profiles for each switch and automatically assigns the necessary network configuration.

**StarTech** has introduced four new managed GbE switches that have been made for harsh conditions. Each model in the **IES** range has eight RJ45 ports and is said to be suited to applications such as IP building surveillance, WLAN, building and home automation and IoT.

The **IES81GW** offers eight RJ45 ports while in the **IES81GPOEW**, four of the eight ports also feature PoE+ support. Two additional SPF connections are added in the **IES101G2SFPW** variant, while the **IES101GP2SFW** has PoE+ support on all eight RJ45 ports. All four include intelligent Layer 2 management capabilities.

StarTech says their rugged, compact design makes them perfect for harsh industrial environments and tight installation areas. It says that each one has an IP30 rating ensuring that it performs even under extreme temperatures (-40°C to 75°C) and conditions. They are wall-mountable and feature connection ports that are located on the front for quick and convenient access and to make it easy to connect and disconnect devices.

With support for 10/100/1000Mbps

transfer speeds, StarTech says the managed switches support full/half-duplex auto-negotiation, jumbo frames, and auto MDI/MDIX operation. That means devices can be connected quickly and easily, with little to no configuration required, says the firm.

To help prevent any unnecessary downtime, the switches have redundant 12-58V DC terminal block power inputs, which is said to ensure "seamless" operation in the event of power dips or failures. The range has a two-year warranty and StarTech offers free lifetime technical support.





## New university will focus on the tech of the future

Plans for a new technology university in Milton Keynes took a major step forward in March with the city council announcing that it has chosen Cranfield University as the lead higher education provider.

According to the Centre for Cities think-tank, Milton Keynes is the UK's largest city without a university. Plans for a new university, currently known as 'MK:U', that focuses on teaching the technology of the future world of work, have been in development since late last year.

Developed in partnership with business, the new university aims to deliver a distinctive STEM-focused undergraduate curriculum, and become a leader in areas including digital, cyber, automation, robotics and AI.

MK:U will offer accelerated two-year degree courses, intensive three-year degrees programmes with project placements, part-time/apprenticeship pathways, as well as short courses/continued professional development. It is estimated that around 5,000 students will eventually study at the new university, with the first cohort arriving in 2023.

Cranfield's educational, technological and industrial partners on MK:U include Grant Thornton, MK College, Microsoft and Tech Mahindra.

The next step is an 18-month feasibility study which will consider the planning, design and financing of the new university.

Milton Keynes Council leader Peter Marland says: "Through the MK Futures 2050 process, we identified how a university focused on technology could benefit our economy, especially coming alongside the development of the Cambridge-MK-Oxford corridor which also holds great promise. This will be the first university anywhere designed as a response to the challenges facing cities today and in the future."

## Gender gap: how India's IT sector beats the UK

The UK can learn lessons from India's IT sector when it comes to attracting more women into leadership positions, according to research by the Open University (OU).

In its *Gender, Skilled Migration and IT industry: a comparative study of India and the UK*, the OU considered why the IT sector in India, in contrast to many places including the UK, manages to attract such a high proportion of women in highly-skilled roles. It also gained insights from migrant women and men who move between the two countries and have experience of both cultures, to understand both the gender norms and the best practice in each country.

The study was based on a survey of 150 Indian IT sector companies and 270 individual Indian IT workers, both men and women, as well as interviews with eight women leaders from top industries in India.

It revealed that the Indian IT sector has achieved comparative advantage to other sectors by offering: career support; high status, reward and security; and visible equality policies that attract women. It said that it effectively recruits into the sector through targeted high-profile campaigns and campus recruitment – 50 per cent of the companies recruit directly through universities providing a safe pipeline from study to work.

The OU also found that the Indian IT sector enables career progression as 50 per cent of companies offer in-house leadership and management programmes. This has contributed to 30 per cent of companies doubling the proportion of senior women between 2012 and 2017. In addition, the OU says Indian firms invest in skills development to retain staff and maintain a competitive edge.

OU chancellor Martha Lane-Fox says: "We really need to put women at the heart of the technology sector so I applaud this important research which can help us understand why there is such a gender imbalance in the UK's IT industry."

Citing data from McKinsey's *Global Institute Report, 2016*, the researchers say narrowing the gender gap in high productivity sectors like IT will add £150bn to the UK GDP forecast for 2025.

## IN BRIEF...

■ BT is creating more than 1,300 apprenticeship and graduate jobs in various roles, including cyber security. As part of the recruitment process, the company will use virtual reality where participants will be asked to complete a series of *Crystal Maze* style tasks. BT says this will assess candidates' analytical skills, how they handle change, as well as their drive and enthusiasm to get tasks completed. The latest recruitment drive is in addition to Openreach's announcement earlier in March that it is looking to recruit 3,500 engineers.

■ A new book identifies how identities, credentials, passwords and exploits can be leveraged to escalate privileges during an attack and breach an environment. Written by BeyondTrust's CTO Morey Haber and COO Brad Hibbert, *Privileged Attack*

*Vectors: Building Effective Cyber-Defense Strategies to Protect Organisations* details the risks associated with poor privilege management, the techniques that hackers and insiders leverage, and the defensive measures that organisations must adopt.

■ Contractors skilled in *Azure* are among the hardest to source, according to Microsoft recruitment partner Curo Talent. The firm conducted research across 120 Microsoft partners in 2016, and found that 23 per cent had problems in this area. Curo says the issue has arisen because *Azure* is still a relatively new technology, and also because the cloud platform has now become a central pillar of the Microsoft stack and is therefore in high demand – citing reports, it says 80 per cent of Microsoft customers had embraced the cloud, and that 66 per cent of *Fortune 500* companies rely on *Azure* to operate.



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The risks of cyberattacks, ransomware, and industrial espionage is on the rise, while at the same time EU regulations for the protection of personal data will reach a new level with GDPR (General Data Protection Regulation) entering into force as from May 2018. Organisations and companies need to have reliable and secure storage in place in order to protect their sensitive information as well as the personal data of their customers.

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