

# TechTalk



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## Galaxy & Lenovo Conduct a Joint Event - “Building Agile IT Strategy with Enterprise Cloud”



Galaxy recently conducted an event “Building Agile IT Strategy with Enterprise Cloud”. This was organized in partnership with Lenovo, on August 24<sup>th</sup> at the Grand Hyatt in Mumbai.

The session commenced with a welcome note by Aditya Sakhavalkar from Galaxy’s marketing team. This was followed by a session on Lenovo products and services, by Mr. Shivasankar [National Head – Enterprise Sales] from Lenovo. Some important topics covered included Lenovo’s **Think System** and **Think Agile** product lines, their server and storage products and services, HCI Solution and Switches, as well as Lenovo’s partnership with Nutanix, VMWare and Microsoft for Hypervisor in an HCI

solution. Shiva spoke about the recent trends such as Hybrid Cloud due to which, customers can manage their workload partly on cloud and rest on-premises. He shared a few case studies where TCO was brought under control by the customer, by implementing Lenovo’s HX Series with Nutanix.

We had close to 50 attendees from across various verticals such as BFSI, Manufacturing, IT-ITeS, and received positive and highly encouraging feedback from the audience. We also conducted a brief quiz session towards the end, where many attendees won some exciting awards! We hereby thank Lenovo’s Enterprise team, Galaxy’s Data Center team, as well as our attendees for their whole-hearted participation at this event!

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## M.D. Speaks



“Dear Readers,

*As I am writing this piece, both the US Dollar and the fuel prices are hitting new highs. The time is ripe for a move to alternate energy sources, especially in the transportation sector. The Government of India is doing its part by providing a 60% subsidy to cities to procure e-vehicles either as outright purchase or on supply-operate basis. However, the real difference will be visible only when private users make this shift. Electric and Fuel Cell vehicles are still too expensive compared to the traditional petrol or diesel-based ones. Also, a mass scrapping of all the vehicles in use does not seem to be a viable alternative. In this light, a recent test flight of a 72-seater aircraft by Spice Jet from Dehradun to Delhi holds special significance. This flight was powered by 450 litres of biojet fuel extracted from the seeds of the Jatropha plant. Jatropha based biodiesel has been in the news since August 2003 where DaimlerChrysler initiated the biodiesel project in partnership with the Council for Scientific and Industrial Research (CSIR), India and Hohenheim*

*University, Germany. The project involved using only Jatropha based biodiesel to power a Mercedes C Class car for 5000km all over India. Whether it was the strong crude oil lobby or it was some other reason that it took 15 years for Jatropha to make a comeback, is a matter of conjecture. Nonetheless, I surely hope that this and other such biofuel experiments take a commercial turn sooner than later. With the fuel prices being where they are, any success in such initiatives will greatly benefit India in fuel self-sufficiency and a favorable balance of payments.*

*Last month, Kerala experienced unprecedented floods that caused widespread devastation of life and property. My sympathies and prayers are with those of you who may be personally affected, or even have loved ones who were affected by this catastrophe. I am sure that with the resilience with which Indians are made, we shall bounce back even stronger.*

Happy reading.”

*M.D. Rangat*

# The Future is Now

## New Flexible Displays Promise a Future that is Full of Foldable Phones and Smart Hats

“Bend me, Shape me”, say smartphones of the future.

Have you ever fancied a phone that you could wrap around your wrist, or build into your clothes?

At IFA 2018, Chinese company Royole has shown off its range of fully-flexible displays, including panels built into a ski jacket – and a top hat. A bendy screen is just one of the components necessary to make a foldable phone or smart coat, and Royole makes a range of flexible sensors, circuits and other electronic systems to make these products possible.



### Shape of the future

“While curved displays have been the talk of the tech world this summer, Royole has developed and is now mass-producing the next generation of fully flexible displays,” said Dr Bill Liu, founder and CEO of Royole.

Our engineers are currently working with over 220 partners worldwide to change the way people interact with technology in their personal environments.”

Royole might not be a household name outside China, but with flexible devices like Samsung's long-awaited foldable phone on the horizon, its tech could soon be in high demand.

## This New Blood Test Can Figure Out the Time Inside Your Cells

Your body has a clock with circadian rhythms that drive physical processes both big and small and can influence everything from how well we think to how—and when—we gain weight.



Researchers are keen to understand more about how this clock works. But it's difficult to measure different people's clocks. The conventional way of doing it requires numerous blood samples, taken over a number of hours, to measure changes in melatonin. “It's expensive and burdensome for the patient,” says Northwestern University computational biologist Rosemary Braun. But understanding a particular person's specific internal time allows for things like more effective drug delivery because the human body works differently at different times of day.

Braun is the first author on a new paper outlining a process that takes just two blood samples and then uses an algorithm called TimeSignature to figure out what time it is inside the body. The process is the most straightforward test yet developed, and the most generalizable. To create this test, researchers trained the algorithm to look for chemical evidence of about 40 specific genes in the blood samples. They picked those 40 by analyzing a much larger dataset and finding the ones that express at specific times. According to the research, the algorithm works regardless of whether the patient is sick or well. That's significant because gene expression—the way your genes activate, prompting the production of chemicals and helping your body to function—is changed by things as simple as how much sleep you get.

Part of the reason this method works is that it looks beyond the (relatively) well-understood macroscopic processes like sleeping and waking that can be attributed to the body's clock, says Braun. The clock “also controls biological processes right down to the cellular level,” she says. Between 40 and 50 percent of our genes respond to a person's body clock. “Knowing that so many genes were responsive to the circadian clock gave us the idea of looking for gene activity patterns in the blood that might correlate with what time of day it is,” Braun says. Gene activity in the blood shows up as chemicals.

They measured for about 20,000 different genes, she says, “and then we trained a computer to learn which genes were the most predictive of time and how to combine those markers in order to get a very accurate assessment of physiological time.”

# Technology Focus

## The Value of Unified Endpoint Management

Given the diversity of devices people can use for work, IT needs to look at how it can unify device security



Ever since the advent of client-server computing in the 1980s, there has been a need for IT teams to manage user endpoints. The task started to become more complicated with advent of notebook PCs and easy remote internet access in 1990s and then with then the arrival of smart mobile devices in the last few decades, including wearable devices. There has also been an explosion of non-user devices with the roll-out of internet of things (IoT) applications; sensors, probes, cameras, and so on. And, of course, traditional devices such as file servers and printers have not disappeared. The volume issues associated with endpoint management are exacerbated by the ability to virtualize many devices where their physical location does not matter. For users, diversity means flexibility: the same applications and data could be accessed from any device anywhere. For IT teams, life has become more complicated: more devices, diverse operating software, increased security threats and, to cap it all, multiple management tools. What they needed was a single console to manage all endpoints. So how far has the IT industry come in delivering what has become known as unified endpoint management (UEM)?

### Before UEM: Too many acronyms

The very first tools were mainly developed to manage PCs; retrospectively, some people have called these client management tools (CMT). These churned out golden images of corporate-defined Windows desktops, ensured they were patched, vulnerability-free and maintained inventories of hardware and software. The need to manage mobile phones led to a new and distinct set of tools for mobile device management (MDM). In the early days, these were as much about telecoms expense management addressing contracts, airtime services, subscriber identity modules (SIMs) and payments, as the devices themselves. As mobile phones evolved into smartphones, new challenges arose: bring-your-own-device (BYOD), user-owned equipment being used to access corporate resources, and the abundance of new software that users could download directly from app stores. UEM aims to reduce the cost and complexity of endpoint management by providing a single console, automating many management tasks and, with such holistic oversight, improving security. The features of any given supplier's UEM tools will vary, but some basics must be there.

We look at how desktop IT is changing. Does it make sense to move the desktop to the cloud? We look at DaaS and VDI. These include device discovery and inventory, asset management, remote provisioning and configuration, and lifecycle. Software licences and their distribution need managing. On user devices, this includes productivity apps such as email, calendars, contact management, document editors and social media, which must be used appropriately and securely. The number of operating systems has increased markedly beyond Windows. Android and Apple's iOS dominate on smartphones; Linux, Chrome OS and Mac OS are used on larger form devices, and new operating systems have emerged to support IoT roll-outs such as QNX, Tizen, Android Things and Windows 10 IoT. Support for BYOD must safeguard corporate data, ensuring business and personal apps are segregated on the same device. Apps can also be white-listed (allowed), blacklisted (banned) or grey-listed (suspect) and app wrapping can modify the way apps work. This must extend to the use of cloud services accessed by users, such as file storage and sharing. This can be done using containerization to separate corporate and personal use, controlling the flow of business data to and from devices, providing data analytics for insights into user behavior. Encryption of stored data must be enforced as and where necessary. Other security features should include basic anti-malware, secure web browsing and URL filtering, remote locking and/or wiping of compromised devices, GPS tracking and location-based policy controls, detecting when devices have been jail-broken, and identity and access controls such as user authentication.

### Market Convergence on UEMs

Most suppliers that claim to be in the UEM space come from one of the pre-existing disciplines CMT, endpoint security or MDM/EMM. Most suppliers deliver UEM as on premise software, cloud-based or a hybrid mix of the two. The way this is done will vary and different suppliers will be stronger in one delivery mechanism or another depending on their background. The direction of travel is from on-premise to cloud, although certain sectors, such as financial services, still prefer to keep things in-house. Those with a CMT background include Microsoft, which now offers heterogeneous UEM via its System Center Configuration Manager (ConfigMgr) and Microsoft Enterprise Mobility and Security (EMS), which includes its Intune cloud service. Citrix has its XenMobile console for UEM and in 2017 announced a partnership with Microsoft aimed at Intune customers. Quest (now no longer part of Dell) has a UEM business unit including its KACE assets with UEM offerings via integrating KACE Cloud MDM with the KACE Systems Management Appliance (SMA). ManageEngine launched Desktop Central in 2005 and in 2012 Mobile Device Management. It says it has had a single UEM console since 2015. As ever, IBM touts the cognitive capabilities provided by its Watson technology for its MaaS360 UEM offering. Ivanti has built a UEM based around its LANDesk and HEAT assets. From the MDM/EMM side, MobileIron is one of the leading providers still operating independently from the pack that emerged about a decade ago and now offers UEM. VMware's Workspace ONE UEM is based on its 2014 acquisition of AirWatch. Good Technology was acquired by BlackBerry as it struggled to find a place following the rise of Apple and Android-based iPhones. Canada-based SOTI has staked a UEM claim with its new SOTI ONE platform. Other players include Matrix42 UEM based on its 2014 acquisition of Silverback, Beijing-based NationSky's NQSky.

Galaxy Office Automation Pvt. Ltd. plays a leading role in providing unified endpoint management solutions to customers across the industry spectrum.

# Technology Focus

## What is Software Defined WAN [SD-WAN]?

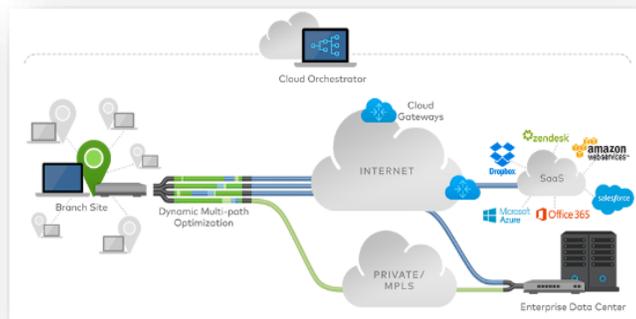
Software-Defined Wide Area Network is the method of leveraging benefits of cloud, the bandwidth of broadband and existing enterprise-wide network infra to more efficiently and cost effectively transmit media and quickly access cloud applications from every location in the network.

SD-WAN dynamically utilizes multiple available connections (MPLS, broadband, LTE) to find the optimal delivery path for traffic across the entire network, shaping the bandwidth as needed to eliminate jitter and dropped data packets, thereby delivering an optimal user experience regardless of location. The more sophisticated solutions will first attempt to dynamically steer traffic to the best available link and if the available links show any transmission issues, they will immediately apply on-demand remediation to the link to ensure performance of the high priority applications.

Traditionally, enterprises utilized dedicated and private, but bandwidth constrained, and expensive MPLS networks for communications between branch offices, to/from headquarter locations, and to access applications and data housed in data centers. Broadband was only considered acceptable as a back-up due to unreliable performance and security concerns. Then cloud applications (such as SalesForce, Office365, WebEx, etc.) entered the picture and as enterprises moved to utilizing these on a day-to-day basis, MPLS alone was inadequate from an architecture or bandwidth perspective, especially for cloud and real-time applications.

Enterprises needed a method of allowing each enterprise location to quickly, with business grade performance, and continuous uptime, access 1) every other location in the network; 2) data center-located applications and data; 3) all cloud applications. SD-WAN is no longer a buzzword, but a proven technology to deliver the scalability, affordability, and flexibility that enterprises require to support today's evolving technological landscape. Market research giants Gartner and IDC both concede that the technology has reached beyond an early adopter phase and will soon gain wide-scale adoption over the next few years.

Benefits of SD-WAN include network agility, ease of development, central management and control as well as cost reduction.



## Tech News

### Dell EMC Rolls Out New Converged Data Protection Appliance in 2U Platform

Dell EMC announced its newest Integrated Data Protection Appliance (IDPA), the Dell EMC IDPA DP4400, providing simple and powerful converged data protection to help mid-size organizations transform IT while combatting data sprawl and complexity.



Comprehensive data protection has been a challenge for mid-size organizations. Enterprise-class products come with higher cost and complexity, while lower cost products that have traditionally targeted these organizations sacrifice performance, efficiency and application support. Dell EMC built the IDPA DP4400 from the ground up as a simple, yet powerful, solution for mid-size organizations—featuring enterprise-class capabilities for backup, deduplication, replication and recovery. IDPA DP4400 also offers built-in cloud readiness features with disaster recovery and long-term data retention to the cloud. “For years, mid-size organizations haven’t quite had a comprehensive data protection solution that was sized and priced right for them,” said Beth Phalen, President, Data Protection, Dell EMC. “With the IDPA DP4400 there are no compromises. We’re delivering a converged data

protection solution that’s as simple to use as it is powerful—with support for the largest application ecosystem and expansion to the cloud. The IDPA DP4400 offers the right level of modern features and capabilities for mid-size data centers at the lowest cost to protect.” The IDPA DP4400 is a converged data protection appliance in a dense 2U platform powered by Dell EMC PowerEdge 14th generation servers. Key features include:

- Customer-installable and easy-to-use HTML5 user interface: Makes IDPA DP4400 ideal for deployment and management in mid-sized organizations and ROBO locations.
- Grows in place with no downtime: A single 24TB appliance can grow in place to 96TB with a license key and no additional hardware to purchase.
- Protect more data with 55:1 average deduplication: IDPA DP4400 can protect approximately 5PB of usable data capacity. And, with native Cloud Tier for long-term retention, the total protected usable capacity increases to 14.4 PB.

# Tech News

## Cisco Enters Artificial Intelligence Business with New GPU-Powered Servers

Cisco has unveiled the UCS C480 ML M5 Rack Server, the company's first purpose-built offering for the burgeoning AI/machine learning market.



The ML server is a 4U box powered by two Intel Xeon-SP CPUs and up to eight NVIDIA V100 GPUs. As such, it is essentially a machine learning-optimized variant of the UCS C480 M5 Rack Server, which offers six (lesser) GPUs and is primarily aimed at analytics, VDI and database processing. Thanks to the V100 GPUs and their integrated Tensor Cores, the ML server offers a peak petaflop of deep learning performance for either training or inferencing. Those V100s are NVIDIA's latest and greatest, sporting 32 GB of HBM2 stacked memory and NVLink 2.0.

The ML server has plenty of place to put data, with up to 3 TB of main memory, 24 SAS/SATA SSDs and hard disk drives, and 6 NVMe drives. Network connectivity is provided by 4 PCIe 3.0 slots for 100G virtual interface cards (VICs), as well as integrated dual 10-Gbps Ethernet.

It might seem like Cisco is a little late to the artificial intelligence game, but the company points out that only about four percent of CIOs say they currently have AI projects in production – that according to a 2018 Gartner report. If so, that's good news for Cisco, which, according to IDC is the fifth biggest server-maker in the world and thus is in position to capture a decent share of the commercial AI/machine learning market.

"Over the next few years, apps powered by artificial intelligence and machine learning will become mainstream in the enterprise. While this will solve many complex business issues, it will also create new challenges for IT," said Roland Acra, SVP and GM for Cisco's Data Center Business Group. "Today's powerful addition to the Cisco UCS lineup will power AI initiatives across a wide range of industries. Our early-access customers in the financial sector are exploring ways to improve fraud detection and enhance algorithmic trading. Meanwhile in healthcare, they're interested in better insights and diagnostics, improving medical image classification, and speeding drug discovery and research."

The UCS C480 ML M5 Rack Server will be available through the company's channel partners, starting in the fourth quarter of 2018.

# Special Focus

## Dell EMC Storage Dominates HPE, NetApp in Market Share

Dell EMC's storage charge is paying off as the infrastructure giant has widened its worldwide market share gap over Hewlett Packard Enterprise and NetApp in the second quarter of 2018, according to new data from IDC.



For the second quarter of 2018, Dell captured 19.1 percent of the global storage market share, up from 18.3 percent year over year, according to IDC. Dell generated US\$2.52 billion in enterprise storage sales in the quarter, representing a nearly 27 revenue increase compared to the same quarter one year ago. HPE's worldwide storage market share dropped from 20.6 percent in second quarter 2017 to 17.3 percent share. The vendor's storage sales slightly increased from US\$2.25 billion to US\$2.28 billion, representing a 2 percent increase year over year. NetApp captured 6.3 percent of the global market share in the second quarter 2018, down from 6.4 percent share in the same quarter last year. Although NetApp's market share slightly fell, the company increased storage revenue from US\$695 million to US\$832 million year over year.

Dell partners said their storage numbers are increasing this year for several reasons, including better synergies between the legacy Dell and legacy EMC sales teams and channel incentives to replace competitor solutions. On Thursday, Dell Technologies reported that storage sales for its second fiscal quarter 2019 increased 13 percent year over year to US\$4.2 billion. "We've made a lot of changes in our primary storage business over the past year. The product line is far more competitive today," said Jeff Clarke, vice chairman, products and operations at Dell, during the company's second fiscal quarter earnings call. "Demand was up in file-based arrays, high-end storage and data protection offerings. Our focus remains on driving velocity in the midrange as this is a key area of growth in the array segment."

According to IDC, total worldwide enterprise storage sales increased 21 percent year over year to US\$13.2 billion during the second quarter. Total capacity shipments were up 70 percent year over year to 111.8 exabytes.



## About Galaxy

- ✚ One of the most respected Information Technology integrator of the best of breed products and solutions for Enterprise Computing, Storage, Networking, Security, Automation, Application Delivery, ERP and Business Intelligence.
- ✚ An ISO 9001:2015 organization, founded in 1987.
- ✚ Committed team of over 250 skilled professionals.
- ✚ PAN India presence.
- ✚ Trusted IT services provider to more than a 1000 companies.
- ✚ Experienced consultants certified on a wide spectrum of technologies.
- ✚ The Galaxy Technology Innovation Centre, a state-of-the-art integrated hardware and software laboratory, allows customers a hands-on look at the latest storage, backup, security, application delivery and virtualization technologies.
- ✚ Customer list includes many of India's leading corporations, banks and government agencies.
- ✚ Four business units collaborate to provide a full spectrum of services and ensure smooth projects. Together, they provide our customers with truly end to end professional IT Services.

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### VISION

*"To become the most preferred technology solution partner by listening to our customers, anticipating their needs and providing reliability, flexibility, responsiveness and innovative products and services. Achieving market leadership and operating excellence in every segment of our company."*

### MISSION

*"Total customer satisfaction; through innovative insights, quality service and excellence in technology deployment."*

### VALUE PROPOSITION

*"With our strategic partners we leverage each other's' capabilities to deliver reliable and integrated solutions to the customer. Our consultative sales approach, execution capabilities and commitments helps our customers meet a wide range of end-to-end technology needs while remaining focused on their core businesses."*