

TechTalk



GALAXY OFFICE AUTOMATION PVT. LTD.

Issue No. 100, October 2020

We are thrilled to have secured a spot in the Dell Technologies President's Circle!

This elite designation recognizes the champions of champions, the top partners across the world who continually defy gravity and who delivered outstanding results throughout the past financial year. This recognition spurs us on to constantly deliver the best we can for our customers and partners.

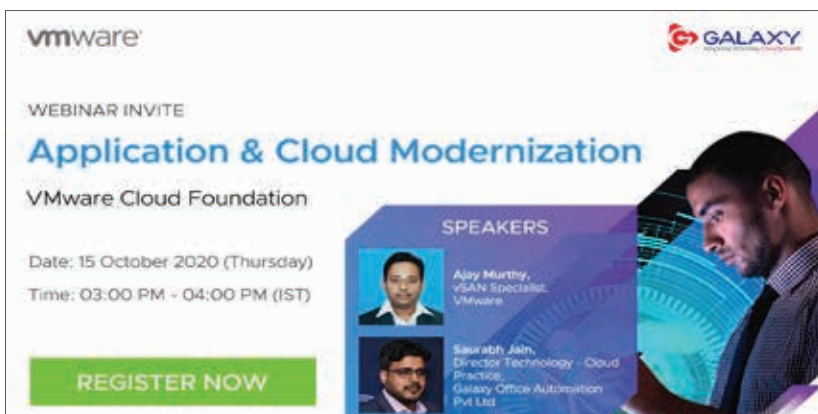


How do you get future ready?

Very soon, many IT Executives will have to contend with increasing pressure to drive a successful cloud strategy and remove operational silos between the data center and one or many public clouds. They will have to support developer-ready Kubernetes and proliferation of cloud native, container-based applications. To add, they will also have to add cloud-like capabilities to on-premises environments to support evolving demands for IT service delivery.

By adopting a cloud operating model that is on-demand, automated, scalable, service-oriented and policy driven, I&O leaders can address many of these forthcoming challenges.

Join the webinar to understand key decision considerations that might help you to manage the trade-offs of an evolving set of IT service delivery options.



Register Now:
<https://register.gotowebinar.com/register/6430651395155209227?source=VMware>



Anoop Pai Dhungat
Chairman & MD



Dear Readers,

With most major economies (the surprise exception being China) faced with GDP contractions between 9% to 24%, the business outlook surely must be grim. However, the stock markets around the world are suggesting otherwise. Could this be that the money provided for relief to various companies and individuals is actually being funnelled into the stock markets. Or is that that with very limited avenues of meeting ones expenses, a large number of people have entered with their personal investments? Both these scenarios are equally likely and dangerous as the bubble will have to burst sooner or later.

As the world is opening up, the number of cases are bound to increase. It is the management and control of such cases that will determine whether a second and third wave will hit. Of course in India, we are still struggling to contain the first wave with the number of infections in almost all states rising on a daily basis. As the lockdown restrictions are eased, I am seeing that people are throwing caution to the wind and ignoring even basic things like wearing masks, hand hygiene and avoidable social distancing. I can understand 'lockdown fatigue', but such indiscretions can completely set us back by the 5 months that we were in lockdown.

Business in certain sectors is picking up but it seems like it will take some time before we reach the activity levels that we had before the lockdown. For those of you who have still not gone completely digital, this is the best time to do so. Please reach out to us and our experts will guide you with the ideal roadmap for this journey.

Stay safe & happy reading



Future Is Now

A computer predicts your thoughts, creating images based on them

Researchers at the University of Helsinki have developed a technique in which a computer models visual perception by monitoring human brain signals. In a way, it is as if the computer tries to imagine what a human is thinking about. As a result of this imagining, the computer is able to produce entirely new information, such as fictional images that were never before seen.

The technique is based on a novel brain-computer interface. Previously, similar brain-computer interfaces have been able to perform one-way communication from brain to computer, such as spell individual letters or move a cursor.

As far as is known, the new study is the first where both the computer's presentation of the information and brain signals were modelled simultaneously using artificial intelligence methods. Images that matched the visual characteristics that participants were focusing on were generated through interaction between human brain responses and a generative neural network.

The study was published in the Scientific Reports journal in September. Scientific Reports is an online multidisciplinary, open-access journal from the publishers of Nature.

Neuroadaptive generative modelling

The researchers call this method neuroadaptive generative modelling. A total of 31 volunteers participated in a study that evaluated the effectiveness of the technique. Participants were shown hundreds of AI-generated images of diverse-looking people while their EEG was recorded.

The subjects were asked to concentrate on certain features, such as faces that looked old or were smiling. While looking at a rapidly presented series of face images, the EEGs of the subjects were fed to a neural network, which inferred whether any image was detected by the brain as matching what the subjects were looking for.

Based on this information, the neural network adapted its estimation as to what kind of faces people were thinking of. Finally, the images generated by the computer were evaluated by the participants and they nearly perfectly matched with the features the participants were thinking of. The accuracy of the experiment was 83 per cent.

"The technique combines natural human responses with the computer's ability to create new information. In the experiment, the participants were only asked to look at the computer-generated images. The computer, in turn, modelled the images displayed and the human reaction toward the images by using human brain responses. From this, the computer can create an entirely new image that matches the user's intention," says Tuukka Ruotsalo, Academy of Finland Research Fellow at the University of Helsinki, Finland and Associate Professor at the University of Copenhagen, Denmark.

Unconscious attitudes may be exposed

Generating images of the human face is only one example of the technique's potential uses. One practical benefit of the study may be that computers can augment human creativity.

"If you want to draw or illustrate something but are unable to do so, the computer may help you to achieve your goal. It could just observe the focus of attention and predict what you would like to create," Ruotsalo says. However, the researchers believe that the technique may be used to gain understanding of perception and the underlying processes in our mind.

"The technique does not recognise thoughts but rather responds to the associations we have with mental categories. Thus, while we are not able to find out the identity of a specific 'old person' a participant was thinking of, we may gain an understanding of what they associate with old age. We, therefore, believe it may provide a new way of gaining insight into social, cognitive and emotional processes," says Senior Researcher Michiel Spapé.

According to Spapé, this is also interesting from a psychological perspective.

"One person's idea of an elderly person may be very different from another's. We are currently uncovering whether our technique might expose unconscious associations, for example by looking if the computer always renders old people as, say, smiling men."



<https://bit.ly/3mX34wu>



Technology Focus

Areas to Focus on to Thrive in a Multi-Cloud World

Today, as we move towards a digitally mature world, it has become vitally important for organizations to adopt multi-cloud strategies. This is because multi-cloud environments have proved to be a game changer for organizations by helping them achieve greater efficiencies and enhance the performance of their virtual infrastructure – putting them a step ahead of the competition.

While a multi-cloud strategy lets you take advantage of best-of-breed IT solutions, it also comes with its own set of challenges. It has become imperative for organisations to identify these challenges to improve their business and technical outcomes. Here are four key areas which businesses must focus on to reap the benefits of their multi-cloud strategies.

Migration, Re-platforming and Re-factoring:

Protracted and costly professional services are required to fully take advantage of public clouds and that can lead to delays in innovation and cause uncertainty. Most businesses cannot afford downtime so sending multiple virtual machines up to public clouds, hooking them to a database, presenting the relevant data, testing the entire configuration, and only then flipping the switch to shift a production workload to the cloud creates a complex and time-consuming maze to navigate. These can largely be condensed down into a simple lift and shift motion by moving virtual machines and their underlying policies to public clouds. You won't have a full cloud-native app without re-platforming, but you can take advantage of public cloud features in much the same way. The best part, though, is these applications will be more portable between clouds.

Developer Methodologies and Skill Sets:

Agile methodologies and DevOps are the paths many organizations take, but this also means developers need to master skills that were traditionally the realm of IT Operations and Security personnel. In many cases, sidestepping "Ops" leads developers to return to IT operations needing help. Therefore, it's critical to develop a true "DevOps" practice where there is close collaboration between an organization's developers and

operational leads to ensure the long-term viability and stability of newly developed applications wherever they are hosted.

Day to Day Operations: Cloud simplifies and shifts a lot of IT operations responsibility to the vendor, but that doesn't mean you can take your eye off the ball. The simplicity of cloud development and perception of lower operational complexity has led to the development of more fragile operating environments that are still plagued by regular outages. Operations (Ops) discipline is critical because there isn't less to do - there is usually more, and it can be more nuanced than traditional architectures. Additionally, complexity increases greatly as more vendors come on-board. It can be difficult to evaluate costs and service levels across multiple environments as each one of them comes with their own tools.

Security and Regulatory Compliance:

With cloud comes a new operational paradigm. Built from the ground up to be open and accessible from anywhere in the world, cloud comes with an increased attack surface as well as added compliance requirements. Existing security approaches often are not portable to public clouds, which means organizations must implement new policies.

There is a much simpler path to multi-cloud, and that is through a consistent hybrid approach. The software-defined data centre, which is the virtualization of compute, network and storage, frees you from the underlying infrastructure, and, if it is a supported configuration by the cloud service providers you wish to use, it can radically change the multi-cloud equation.

Don't let multi-cloud complexity delay your cloud journey! Galaxy can help your organization extend a consistent solution set across private and public clouds. Our strong OEM partnerships help you create a lasting multi-cloud strategy that unifies environments and reduces risk across your clouds.

<https://bit.ly/3jfOXjJ>



Special Focus

Cloud Adoption and Associated Security challenges

Organisations across the globe are adopting Public Cloud Infrastructures with the objective of improving innovation, growth and customer experience.

However, the migration to the cloud brings challenges in the realm of network security, compliance and visibility. This has to be addressed by cloud management integrated solutions which need to be compatible and effective across the major public cloud infrastructures-as-a-service (IaaS) providers, which included AWS, Azure, and GCP.

Checkpoint's CloudGuard Dome9

CloudGuard Dome9 allows enterprises to easily manage the security and compliance of their public cloud environments at any scale across Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), and Kubernetes. CloudGuard visualizes and assesses security posture, detects misconfigurations, models and actively enforces gold standard policies, and protects against attacks and insider threats. Through enriched cloud security intelligence for cloud intrusion detection, CloudGuard ensures compliance with regulatory requirements and security best practices. Organizations use CloudGuard for faster and more effective cloud security operations, pain-free compliance and governance, and rugged DevOps practices.

Key Use Cases

Security Operations: Visualize assets, assess security posture, fix misconfigurations and threats, manage the cloud firewall, and enforce security from a single source of network authority.

Privileged Identity Protection: Protect against compromised credentials and identity theft using a cloud's native IAM capabilities to safeguard access to actions that can have a big impact.

Compliance and Governance: Manage the compliance lifecycle for standards such as PCI DSS, from automated data aggregation and assessment to remediation and reporting.

Cloud Security Intelligence: CloudGuard Log.ic is a cloudnative security intelligence technology that delivers cloud intrusion detection, network traffic

visualization and user activity analytics. Workload Protection: Seamlessly integrate protections and controls into your CI/CD tools, like CloudFormation and Terraform, and evaluate security posture pre-deployment - scaling across hundreds of thousands of cloud assets

Workload Protection: Seamlessly integrate protections and controls into your CI/CD tools, like CloudFormation and Terraform, and evaluate security posture pre-deployment - scaling across hundreds of thousands of cloud assets

Benefits

AGENTLESS, CLOUD-NATIVE ARCHITECTURE FOR TODAY'S CLOUD Dome9 uses the native security controls provided by public clouds to protect all cloud resources, including built-in services such as AWS RDS, GCP compute engine instances, and Azure LBs, meeting the needs of modern public clouds that agent-based solutions cannot address.

HIGH FIDELITY POSTURE MANAGEMENT Dome9 provides enriched vulnerability management findings to better identify, prioritize, and auto-remediate events based on public exposure - minimizing risk. Prevent critical cloud security misconfigurations and keep up with evolving posture management security and compliance best practices, including auto-remediation. Comply with regulatory and industry standards, such as HIPAA, CIS BENCHMARKS, NIST CSF/800-53, PCI-DSS, with the most contextual cloud security across, 70+ native cloud services.

FASTER TIME-TO-VALUE With no software to install and no agents to manage, organisations can secure their environment with Dome9 in under five minute and never have to worry about software updates and scaling problems. Dome9 integrates with your AWS accounts leveraging innovative cross-account trust policy to gather security information, rather than sharing keys and credentials.

REMEDiate IN PLACE – FIND IT, FIX IT Based on learned function context, CloudGuard provides dynamic protection along with automatic protection from the time of invocation. Dome9 detects, alerts, and stops application layer attacks such as the Serverless OWASP Top 10 and anomalous activity independent of the attack trigger.

PLATFORM INTEGRATIONS FOR ALERTING & FORENSICS Dome9 is not just a monitoring solution. In

addition to powerful visualization capabilities that allow you to review security posture in real-time to discover any vulnerabilities, compromised workloads, open ports or misconfigurations, Dome9 also allows administrators to take the necessary actions to rapidly mitigate risk through remediation from a single platform. No more

patchwork of tools needed for monitoring, remediation, or enforcement, thus bringing agility to the security and compliance life-cycle.

To talk to our experts or for a free consultation, please write to us at marketing@goapl.com



Tech News

Microsoft and Telstra to partner on cloud, IoT, and digital twins

Microsoft and Telstra have announced an extension of their long-standing partnership, with plans to jointly build cloud-based solutions on Azure while leveraging the Telstra Data Hub.

Specifically, this will see the pair leverage Internet of Things (IoT), edge computing, artificial intelligence, and digital twin capability to develop solutions in areas such as asset tracking, supply chain management, telematics, and smart spaces.

One of those projects will involve Telstra building a digital twin based on Azure across its own commercial buildings, which will be initially deployed at five buildings including the telco's flagship site at 242 Exhibition St in Melbourne.

Additionally, under the partnership, Telstra will leverage Azure as the cloud platform for the telco's ongoing internal digital transformation, involving transitioning from legacy and on-premise applications to cloud-based solutions.

The pair also plan to work together to develop solutions to advance their sustainability and climate commitments. Earlier this year, Microsoft announced its ambitious plans to be carbon negative by 2030, while Telstra has set a target of reducing its absolute emissions by 50% by the same time.

"We already have a longstanding relationship with Microsoft and have worked together in areas that are market-leading to create unique experiences for our customers... today's announcement with Microsoft formalises the several streams of work we are already collaborating on," Telstra CEO Andy Penn said.

"The global scale of Microsoft's platform, tools, and applications, together with Telstra's network solutions, reliability, and leadership, will drive new and unique solutions for Australia."

"Just because digital capabilities that are going to be built into a bank, into an energy company, into a

network operator, is going to mirror pretty much what a software company does," he said.

"It's not that that domain expertise goes away, it's just that domain expertise gets augmented by real digital capability, and that, I think, is what's driving the world's cogs of becoming digital. It's not just the tech industry."

"If you think about how the world has digitised for the last several decades, it's really been in services -- provision of services or the administration or in the back office of businesses.

"If you think about the physical world -- manufacturing, cities, buildings, mining, logistics -- the physical world hasn't really been digitised yet. So, how do you digitise the physical world? Well, what you do is put sensors into physical assets. Those sensors can draw information around that physical asset, which you can then capture and then understand," he said.

Penn added how 5G along with a combination of other capabilities would play a significant role in driving the ongoing adoption of new technologies.

"You've got 5G, which enables you to connect the sensors. You've got cloud to give you the compute capability to process all that data at scale, flexibly. And then you have artificial intelligence and machine learning, which is evolving to be able to take off all that information to turn it into insights ... so I think it'll be transformative over the next decade as we bring these technologies together."



<https://zd.net/345TeQp>

Dell builds tighter VMware integrations for cloud, app modernization

Dell announced updates to Dell Technologies Cloud, portfolio updates to better support VMware's Tanzu platform, and updates to its storage and data protection portfolio.

Dell Technologies on Tuesday rolled out a series of updates to its products and services deeply integrated with VMware, the software company within its portfolio that serves as the linchpin to Dell's cloud effort.

Specifically, Dell announced updates to Dell Technologies Cloud, portfolio updates to better support VMware's Tanzu platform for app modernization, as well as updates to its storage and data protection portfolio for VMware workloads. The announcements were timed to coincide with VMware's annual VMworld conference, which is virtual this year.

In the cloud realm, Dell on Tuesday announced the 4th generation of VMware Cloud on Dell EMC, which includes VMware's vSphere, vSAN and NSX, all running on Dell EMC's infrastructure. Based on customer feedback, the latest version puts a strong emphasis on regulation, compliance and certifications. It includes new ISO certifications, GDPR certifications, as well as industry-specific compliance needs.

Additionally, the service is now certified on VMware's Tanzu Kubernetes Grid, so customers can use the software on a turnkey manner to build and deploy Kubernetes-based applications on Tanzu on VMware Cloud on Dell EMC.

Dell is also introducing a new node type aimed at most data-intensive, high-performance workloads. It includes increased storage and memory capacity, as well as the ability to use NVMe storage. Customers are also getting the ability to segment resources, both virtual and physical, for workloads on a single rack.

Finally, Dell is integrating its service with VMware's HCX service, which provides the ability to move workloads between VMware environments on premise and in the cloud, without having to rearchitect applications.

In other cloud news, Dell announced that VMware Cloud Director is now integrated with and certified on the Dell Technologies Cloud Platform. The platform knits together Dell's data center and hybrid cloud technologies with public cloud providers such as Amazon Web Services and IBM Cloud. This should allow service providers to more quickly deliver multi-tenant environments.

As for application management, Dell is expanding its hyperconverged infrastructure (HCI) options for Tanzu, VMware's portfolio for building and managing modern applications.

The newest option is vSphere with Tanzu on VxRail, which Dell says is the fastest way to get started with Kubernetes workloads. It allows you to drop enterprise-grade Kubernetes into existing infrastructure, getting Tanzu in production quickly. It also allows customers to bring their own software - defined networking.

There's also a validated reference architecture option called Tanzu Architecture for VxRail, which is well-suited for customers who have technical experience already with Kubernetes and want the ability to build their own configurations. Finally, customers can choose the fully-integrated Dell Technology Cloud Platform, which Dell says is optimal for large-scale Kubernetes deployments. It's fully equipped with software-defined networking and a common management model for developers and IT administrators.

As part of the project, VMware is rearchitecting VMware Cloud Foundation to run on smart network interface cards (NICs) and thus offload CPUs, allowing for more performance for applications. The project leverages smart network interface cards (NICs) from a broad set of vendors. As part of the project, Dell in the next year plans to deliver integrated, fully automated solutions for its server and storage platforms.



<https://zd.net/3n2EDxN>

Galaxy is a Titanium partner of Dell Technologies and a VMware Managed Service Provider for Hybrid Cloud. To talk to our experts, email us at marketing@goapl.com

All product names, logos, brands, trademarks and registered trademarks are property of their respective owners.