

# TechTalk

Galaxy achieves VMware's

## 7 Master Services Competencies

The Master Services Competencies (MSC) are VMware Partner enablement designations designed to identify the very best support for customers.

Achieving an MSC requires a partner like Galaxy to have a number of people within the company with advanced and specialized certifications in specific VMware solutions and to have experience with a broad variety of use cases for those solutions. Partners are also required to provide customer references to VMware.

The MSCs thus serve as a powerful validation of Galaxy's depth of expertise and experience with VMware solutions. For more information, contact us at [marketing@goapl.com](mailto:marketing@goapl.com)



**Anoop Pai Dhungat**  
Chairman & Managing Director

Dear Readers,

*Of late, the major news is of mass layoffs at the technology majors in the USA. Moreover, since these companies have employees situated all over the world, the impact has been felt everywhere. In fact, more than the news of the layoffs themselves, the manner in which the layoff were allegedly communicated was highly distressing. The main problem was that these very companies went on a hiring binge during the pandemic when lockdowns sparked a tech buying spree to support remote work and e-commerce, and now they face revenue declines. The salaries offered during this binge were pretty much unsustainable and something had to give. Some reduced salaries, others laid off people. I hope the right lessons have been learnt by all concerned!*

*As ChatGPT is breaking new grounds by passing exams from law and business schools and even medical licenses, there is talk about Artificial Intelligence based products actually replacing skilled humans like lawyers, doctors, software engineers and business managers. In it's current avatar this does not seem likely, but who knows what the future holds? Till such time, ChatGPT should be used a tool to improve the efficiency and accuracy of one's tasks.*

Stay safe and happy reading.



# Future Is Now

## What could the school of 2050 look like?

First, we had blackboards and chalk. Then whiteboards and dry-wipe pens. Overhead projectors and acetate. Now we have interactive whiteboards. From hefty cathode-ray televisions that were wheeled between classrooms, to flatscreen do-it-all screens, the classroom environment has kept pace with new technologies. So too will the classroom of the future. We've come a long way since the 90s. And soon, we'll be in the 50s. Here are a few ways that the school of 2050 may look different.

### The classroom environment

On entering the classroom, biometric scanning will allow students to check in, streamlining the hustle-and-bustle of registration. Teachers will be able to collate attendance data automatically, populate perfect attendance records and more easily track patterns of tardiness.

For the school of the future, there will be no need to wrestle with heavy curtains or dust-covered blinds; we'll have smart glass. Windows that can automatically adjust their tint to compensate for external brightness, protecting both our eyes and screens.

As summer temperatures continue to rise – the general trend for 2050 being warmer, drier summers as well as warmer, wetter winters – air-conditioned classrooms will become the norm. But they will be cleaner, more efficient, and sustainable, with built-in air purifiers to remove toxins and dust from the air.

By 2050, 3D printers will have become a standard appliance, both in the home and at school. As a learning aid, they will have become essential, allowing teachers more flexibility to explain difficult concepts.

### Augmented reality and AI

Adaptive learning systems driven by artificial Intelligence (AI) will have become systems integrated into the school environment by 2050. Personalised learning experiences will take into account learning styles and create adaptive assessments that adjust in real-time based on performance. AI may also be used to analyse pupils' work, even so far as predicting future performance, helping teachers understand which students need more guidance on a particular concept before they fall behind.

Students will be able to get immediate feedback, with suggested areas for improvement and more personalised tutoring, tailoring to a student's strengths and weaknesses. This isn't a new concept, Intelligent Tutoring Systems (ITS) have been proposed for decades, but AI will make it considerably easier.

### The internet, accessibility and remote learning

The use of Internet of Things technology will be widespread, with more devices and appliances connected to the internet, enabling greater automation and control over the school environment. Outside the classroom, for example, you might encounter robot cleaners tidying the halls while lessons are in session.

With a few exceptions, homework assignments will mostly be online. From downloading the assignment at the end of the lesson, to submitting it remotely (as many do now), students will be able to view their coursework, see the percentage completed, and track overall assessments.

Instant notifications will alert pupils to deadline extensions, feedback, and grades. Parents and teachers will be able to track progress, addressing issues as and when they arise.

### Learning in the metaverse

And of course, with the internet comes social media. And by 2050, the Metaverse – a shared immersive virtual space, where we can be free of our bodies, inhabiting our own digital avatars – will be well established.

But as more personal information is shared online, and we spend more time in the Metaverse, there will be a greater emphasis on protecting a user's security and privacy. We may even see cyber security modules being incorporated into some subjects.

Of course, schools aren't solely for educational development; they're for social and emotional development, too. In that respect, it's unlikely the metaverse will completely replace the real-world setting. Instead, it will supplement it to allow access to global educational resources and facilitate interactions with exchange students from other schools.



<https://bit.ly/3wOYM0u>



# Technology Focus

## What Is Edge Computing?

Edge computing is a distributed computing framework that brings enterprise applications closer to data sources such as IoT devices or local edge servers. This proximity to data at its source can deliver strong business benefits, including faster insights, improved response times and better bandwidth availability.

Gartner estimates that by 2025, 75% of data will be processed outside the traditional data center or cloud.

### Why Edge Computing?

The explosive growth and increasing computing power of IoT devices has resulted in unprecedented volumes of data. And data volumes will continue to grow as 5G networks increase the number of connected mobile devices.

In the past, the promise of cloud and AI was to automate and speed innovation by driving actionable insight from data. But the unprecedented scale and complexity of data that's created by connected devices has outpaced network and infrastructure capabilities.

Sending all that device-generated data to a centralized data center or to the cloud causes bandwidth and latency issues. Edge computing offers a more efficient alternative; data is processed and analysed closer to the point where it's created. Because data does not traverse over a network to a cloud or data center to be processed, latency is significantly reduced. Edge computing — and mobile edge computing on 5G networks — enables faster and more comprehensive data analysis, creating the opportunity for deeper insights, faster response times and improved customer experiences.

### Devices at the edge: Harnessing the potential

From connected vehicles to intelligent bots on the factory floor, the amount of data from devices being generated in our world is higher than ever before, yet most of this IoT data is not exploited or used at all. For example, a McKinsey & Company study found that an offshore oil rig generates data from 30,000 sensors — but less than one percent of that data is currently used to make decisions.

Edge computing harnesses growing in-device computing capability to provide deep insights and predictive analysis in near-real time. This increased analytics capability in edge devices can power innovation to improve quality and enhance value. It also raises important strategic questions:

How do you manage the deployment of workloads that perform these types of actions in the presence of increased compute capacity? How can you use the embedded intelligence in devices to influence operational processes for your employees, your customers and your business more responsively? In order to extract the most value from all those devices, significant volumes of computation must move to the edge.

### Your journey to edge computing: Things to consider

Edge computing helps you unlock the potential of the vast untapped data that's created by connected devices. You can uncover new business opportunities, increase operational efficiency and provide faster, more reliable and consistent experiences for your customers. The best edge computing models can help you accelerate performance by analyzing data locally. A well-considered approach to edge computing can keep workloads up-to-date according to predefined policies, can help maintain privacy, and will adhere to data residency laws and regulations.

But this process is not without its challenges. An effective edge computing model should address network security risks, management complexities, and the limitations of latency and bandwidth. A viable model should help you:

- ▶ Manage your workloads across all clouds and on any number of devices
- ▶ Deploy applications to all edge locations reliably and seamlessly
- ▶ Maintain openness and flexibility to adopt to evolving needs
- ▶ Operate more securely and with confidence



<https://ibm.co/3Y2vvv2>



## Special Focus

### Cisco introduces flexible cloud security for your users on and off the network

“Simplify, streamline, and scale your security with Cisco Umbrella”

Cisco Umbrella offers flexible, cloud-delivered security. It combines multiple security functions into one solution, so you can extend data protection to devices, remote users, and distributed locations anywhere. Umbrella is the easiest way to effectively protect your users everywhere in minutes.

#### Cisco Umbrella's security functions

##### DNS-layer security

Umbrella's DNS-layer security provides the fastest, easiest way to improve your security. It helps improve security visibility, detect compromised systems, and protect your users on and off the network by stopping threats over any port or protocol before they reach your network or endpoints.

##### Secure web gateway

Umbrella's secure web gateway logs and inspects web traffic for full visibility, URL and application controls, and protection against malware. Use IPsec tunnels, PAC files, or proxy chaining to forward traffic to our cloud-based proxy to enforce acceptable use policies and block advanced threats.

##### Firewall

Umbrella's firewall logs all activity and blocks unwanted traffic using IP, port, and protocol rules. To forward traffic, simply configure an IPsec tunnel from any network device. As new tunnels are created, policies are automatically applied for easy setup and consistent enforcement everywhere.

##### Cloud access security broker

Umbrella exposes shadow IT by providing the ability to detect and report on cloud applications in use across your organization. For discovered apps, view details on the risk level and block or control usage to better manage cloud adoption and reduce risk.

##### Interactive threat intelligence

Our unique view of the internet gives us unprecedented insight into malicious domains, IPs, and URLs. Available via a console and API, Umbrella Investigate provides real-time context on malware, phishing, botnets, trojans and other threats enabling faster incident investigation and response.

##### Integration with SD-WAN

The Umbrella and Cisco SD-WAN integration deploys easily across your network for powerful cloud security and protection against internet threats. Our integrated approach secures cloud access and efficiently protects your branch users, connected devices, and app usage from all direct internet access breakouts.

##### Cisco cloud security service advantages

###### Unmatched intelligence

Powered by Cisco Talos, one of the world's largest commercial threat teams, Umbrella blocks malicious activity earlier, before it reaches your network or endpoints. Umbrella also uses statistical and machine learning models to uncover new attacks staged on the internet.

###### Reliable infrastructure

Highly resilient cloud infrastructure with 100% business uptime since inception in 2006. With carrier-neutral data centers globally, Umbrella delivers superior speed by peering with over 1,000 of the world's top internet service providers.

###### Easy API integration

Umbrella offers APIs to more easily deploy and share intelligence and security event details with your security systems and workflows. Get more out of your existing investments and speed up incident response.

###### Performance

Umbrella improves performance to SaaS apps by up to 33% and improves plus highly predictable performance. An independent testing firm evaluated global traffic going through Umbrella compared with direct to internet with no security, testing access to popular SaaS apps across 25 cities. In addition to Umbrella (with security protection) performing better than direct to internet, Umbrella also achieved higher performance consistency, a key factor in user satisfaction.



# Special Focus

## SASE's new approach to security

Distributed employees and digital business transformation have accelerated. Gone are the days of entire workforces commuting into large corporate offices. And, today, the data center is the cloud, and the security perimeter is the cloud edge.

The modern workplace demands a new approach. Organizations can simplify, secure, and scale with Secure Access Service Edge (SASE). SASE is a flexible architecture built specifically for hybrid workplaces, distributed networks, and companies with remote workers. A SASE solution provides networking and security capabilities in the cloud, offering businesses the ability to seamlessly scale up or down to a growing workforce, no matter where it is located.

## Stop threats before they reach your network or endpoints

### Block malware without latency

Umbrella is a cloud security service built into the foundation of the internet. By enforcing security at the DNS and IP layers, Umbrella blocks requests to malware, ransomware, phishing, and botnets before a connection is even

established — stopping threats over any port or protocol before they reach your network or endpoints.

### Improve visibility

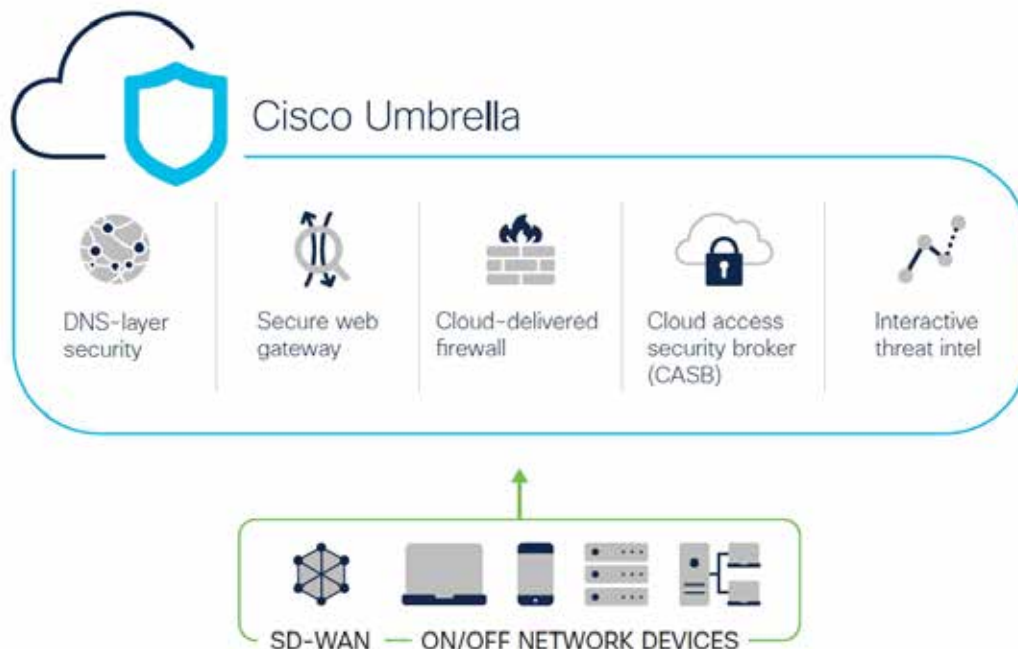
Most companies leave their DNS resolution up to their ISP. But as more organizations adopt direct internet connections and users bypass the VPN, this leads to a DNS-blind spot. DNS requests precede the IP connection, which enables DNS resolvers to log requested domains regardless of the connection's protocol or port.

### Manage and control cloud apps

Umbrella provides visibility into sanctioned and unsanctioned cloud services in use across the enterprise, so you can uncover new services being used, see who is using them, identify potential risk, and block specific applications easily.

### Simplify security management

Umbrella is the fastest and easiest way to protect users across your organization in minutes, and reduces the number of infections and alerts you see from other security products by stopping threats at the earliest point. With no hardware to install and no software to manually update, ongoing management is simple.



Don't let networking and security complexity delay your journey! Galaxy can help your organization extend a consistent solution. To talk to our experts, email us at [marketing@goapl.com](mailto:marketing@goapl.com)



## Government to use AI-based matchmaking to connect startups with investors and mentors

As we have just commemorated the National Startup Day on January 16, there is a lot that the startup economy can look forward to.

In order to support startups in their fundraising journey, the government is building a data-driven artificial intelligence (AI) enabled matchmaking platform called 'Investor Connect' which will help Indian startups access various fundraising avenues in India and worldwide.

The Department for Promotion of Industry and Internal Trade (DPIIT) has been working very closely with the team at Small Industries Development Bank of India (SIDBI) to build this platform which will be operational soon, said Rajan Anandan, MD, Sequoia Capital India at an event announcing National Startup Awards 2022.

Even though there is more than Rs 15,000 cr government funding available, barely 15% of it gets accessed by startups today. Plus there is the Fund of Funds for Startups that was started with an initial corpus of Rs 10,000 cr.

"Many entrepreneurs still struggle to raise a seed funding of even 5 cr, while there's no dearth of funds for startups in India. In 2022, despite the funding winters, India has managed to get over \$24 billion in funding. But the sad truth is that only a tiny fraction (less than 2%) of the startup funding in India goes to seed funding.

"The platform will make it much simpler for you to choose the right set of investors, if you provide a description of the type of business you're trying to build, the industry it will operate in, the size of the company, and the amount of funds you want to raise. You will be able to get in touch with them with just one click.

The recently announced MAARG portal, the National Mentorship Platform by Startup India will also make use of this AI-based matchmaking feature to help startups find the right mentors and seek advice and support for scaling their businesses and resolving challenging business problems.

<https://bit.ly/3l1wq05>

## 85% of organizations attacked by ransomware at least once in the last 12 months

As per 2023 report data backup budgets will continue to rise to align with the increasing importance of consistency and reliability for hybrid cloud data protection and as organizations continue their fight against ransomware.

According to the Veeam Data Protection Trends 2023 survey, businesses are confronted with more complex hybrid IT environments and are increasing budgets to combat cyberattacks and keep up as production environments diversify across various clouds. As a result, IT executives believe they are not adequately protected.

This year, organizations' top priority is to improve backup reliability and success, followed by ensuring that Infrastructure as a Service (IaaS) and Software as a Service (SaaS) protection is equitable to the protection they rely on for datacentre centric workloads.

"IT leaders are facing a dual challenge. They are building and supporting increasingly complex hybrid environments, while the volume and sophistication of Product Strategy at Veeam. He adds, "This is a major concern as leaders think through how they mitigate and recover business operations from any type of disruption. Legacy backup approaches won't address modern workloads - from IaaS and SaaS to containers - and result in an unreliable and slow recovery for the business when it's needed most.

This is what's focusing the minds of IT leaders as they consider their cyber resiliency plan. They need Modern Data Protection."

Highlights of the Veeam Data Protection Trends Report 2023:

- ▶ Modern Data Protection is needed to keep businesses running
- ▶ Data protection budgets are increasing
- ▶ Despite the awareness and increase in preparedness, ransomware is winning
- ▶ Ransomware is the biggest hindrance to Digital Transformation
- ▶ Container-centric workloads are growing in popularity

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