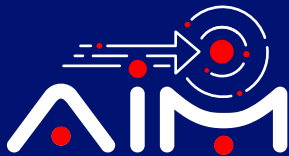




TECH TALK

Issue 159 September 2025

**Pioneering Tech
Leadership with a
Legacy of Excellence.**



Galaxy Office Automation Pvt. Ltd.

In collaboration with **AWS, Galaxy and Crayon** hosted an exclusive **Cloud Migration Experts Roundtable**, spotlighting cloud modernisation strategies in the evolving VMware landscape.

Attendees gained insights into how AWS and Crayon are **empowering enterprises to transition from VMware to cloud-native solutions** with enhanced performance, flexibility, and cost efficiency.

The session delivered **real-world experiences, expert discussions, and practical strategies** on assessing cloud readiness, optimising licensing, and modernising workloads securely and efficiently.



Foreword

Dear Readers,

We are entering a new phase of digital transformation that is defined by the convergence of three powerful technologies: cloud computing, artificial intelligence (AI), and edge computing. Though each has reshaped industries individually, together they are accelerating a wave of innovation that is smarter, faster, and more connected than ever before.

The cloud remains the backbone of digital transformation. It provides the scalability, flexibility, and global reach that modern enterprises require. Today's cloud platforms are intelligent, service-driven ecosystems that support advanced computing, automation, analytics, and innovation. The move towards hybrid and multi-cloud architectures gives businesses the ability to tailor their infrastructure, optimise costs, and stay resilient in an unpredictable world.

Layered on top of this backbone is artificial intelligence. AI is transforming how organisations make decisions, serve customers, and innovate. With the cloud providing the computational power and data infrastructure, AI can now be trained and deployed at scale across industries, thereby turning their data into a strategic advantage.

But what makes this moment truly powerful is how AI is moving beyond centralised environments and into the real world via edge computing. Edge computing is the third piece of this technology triangle. As devices proliferate and data volumes explode, organisations need to process information closer to where it is generated. This enables ultra-low latency, real-time responsiveness, and offline functionality, especially critical in sectors like healthcare, logistics, and manufacturing. When AI models run at the edge, powered by cloud infrastructure and trained on centralised data, we achieve real-time intelligence at the source without any lags or delays.

As AI becomes more capable, and as edge devices become more powerful, the cloud serves as the conductor by orchestrating data, models, and applications across the entire digital ecosystem.

At Galaxy, we see a future where this convergence will create a high impact for the modern enterprise. We are investing in capabilities that allow our customers to explore these technologies not as isolated tools, but as interconnected platforms for transformation. Do get in touch with our experts to learn how we can help your business specifically to benefit from this troika.

Happy reading!



Anoop Pai Dhungat
Chairman & Managing Director





Future is now!

The Final Frontier? How Humans Could Live Underwater in Ocean Stations

An advanced new research station is being developed to explore the potential for a human settlement under the ocean.

Whether it's to escape environmental collapse or to explore new, unknown territories, the drive to establish human colonies in places other than on Earth has been gaining momentum in recent years.

And while proposed bases on the Moon or Mars might get all the headlines, there's another equally hostile and largely unknown location a lot closer to home that explorers are looking towards the bottom of the ocean.

This is by no means a new idea. Starting with French oceanographer Jacques Cousteau in the 1960s, people have been building and spending limited amounts of time in underwater habitats for decades.

More recently, NASA has been sending people to the Aquarius Reef Base, a research facility on the

ocean floor just off the coast of Florida, since 2001. Located 20m (approx. 65ft) below the surface, scientists, engineers, and prospective astronauts typically spend 7-14 days in the module.

New technology is making the prospect of longer-duration stays underwater possible, though, and British company Deep is employing it to develop habitats specifically for that purpose. The tech may be up to the task, but the real question is, are we?

Above the atmosphere, below the sea

Humans are relatively weak. We don't do well without oxygen or sunlight, and we're not big fans of major changes in pressure. In other words, we're not necessarily the best candidates for life at the bottom of the sea.

That's not to say we're incapable of living in hostile environments.

Since the year 2000, astronauts have lived for extended periods aboard the International Space Station (ISS), a habitat assembled in conditions that are just as challenging as those we would experience underwater.

Various astronauts have clocked up over 300 consecutive days aboard the ISS, but cosmonaut Valeri Polyakov holds the record with the 437 days he spent aboard Russia's Mir space station between 1994 and 1995.

The thing is, astronauts who've spent long periods in space often arrive back on Earth with a variety of health concerns, including reduced bone density and muscle atrophy. But what about the prospects for people looking to live underwater?

The longest case study is Rudiger Koch, a German aerospace engineer who spent 120 days living in a capsule (the top of which is pictured below) submerged 11m (36ft) beneath the surface of the Caribbean Sea between 2024 and 2025.

[Read more →](#)



The Future Reimagined: **Generative AI at Center Stage**

Generative AI, sometimes called gen AI, is artificial intelligence (AI) that can create original content such as text, images, video, audio, or software code in response to a user's prompt or request.

Generative AI relies on sophisticated machine learning models called deep learning models and algorithms that simulate the learning and decision-making processes of the human brain. These models work by identifying and encoding the patterns and relationships in huge amounts of data and then using that information to understand users' natural language requests or questions and respond with relevant new content.

AI has been a hot technology topic for the past decade, but generative AI, and specifically the arrival of ChatGPT in 2022, has thrust AI into worldwide headlines and launched an unprecedented surge of AI innovation and adoption. Generative AI offers enormous productivity benefits for individuals and organisations, and while it also presents very real challenges and risks, businesses are forging ahead, exploring how the technology can improve their internal workflows and enrich their products and services. According to research by the management consulting firm McKinsey, one-third of organisations are already using generative AI regularly in at least one business function. Industry analyst Gartner projects more than 80% of organisations will have deployed generative AI applications or used generative AI application programming interfaces (APIs) by 2026.

How generative AI works

For the most part, generative AI operates in three phases:

- **Training**, to create a foundation model that can serve as the basis of multiple gen AI applications.
- **Tuning**, to tailor the foundation model to a specific gen AI application.
- **Generation, evaluation, and retuning** to assess the gen AI application's output and continually improve its quality and accuracy.

Training

Generative AI begins with a foundation model, a deep learning model that serves as the basis for multiple different types of generative AI applications. The most common foundation models today are large language models (LLMs), created for text generation applications, but there are also foundation models for image generation, video generation, and sound and music generation, as well as multimodal foundation models that can support several kinds of content generation.

To create a foundation model, practitioners train a deep learning algorithm on huge volumes of raw, unstructured, unlabelled data, e.g., terabytes of data culled from the internet or some other huge data source. During training, the algorithm performs and evaluates millions of 'fill in the blank' exercises, trying to predict the next element in a sequence, e.g., the next word in a sentence, the next element in an image, or the next command in a line of code, and continually adjusting itself to minimise the difference between its predictions and the actual data (or 'correct' result).

The result of this training is a neural network of parameters, encoded representations of the entities, patterns, and relationships in the data, that can generate content autonomously in response to inputs, or prompts.

This training process is compute-intensive, time-consuming, and expensive: it requires thousands of clustered graphics processing units (GPUs) and weeks of processing, all of which costs millions of dollars. Open-source foundation model projects, such as Meta's Llama-2, enable gen AI developers to avoid this step and its costs.



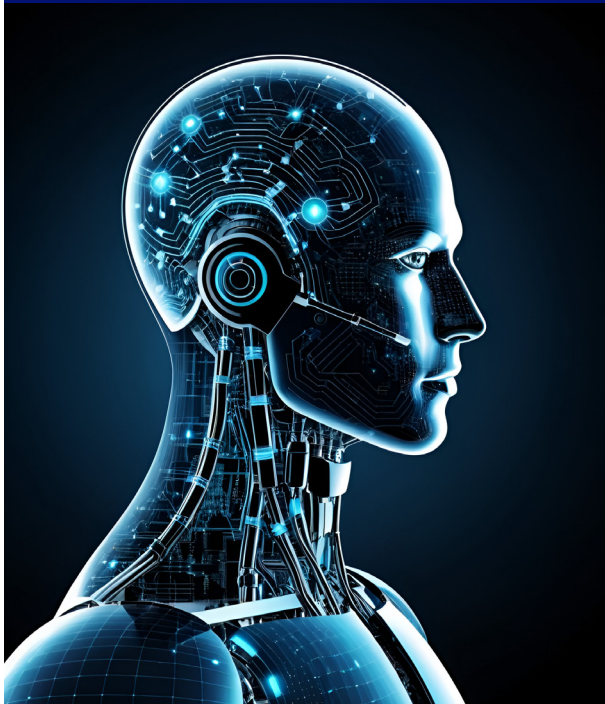
Tuning

Metaphorically speaking, a foundation model is a generalist: It knows a lot about a lot of types of content but often can't generate specific types of output with desired accuracy or fidelity. For that, the model must be tuned to a specific content generation task. This can be done in a variety of ways.

Read more →

Fine-tuning

Fine-tuning involves feeding the model labelled data specific to the content generation application questions or prompts the application is likely to receive and corresponding correct answers in the desired format. For example, if a development team is trying to create a customer service chatbot, it would create hundreds or thousands of documents containing labelled customer service questions and correct answers and then feed those documents to the model.



We at Galaxy lead the way in generative AI innovation—empowering enterprises to boost productivity, streamline workflows, and enhance customer experiences. From foundation model training and tuning to advanced solutions like Retrieval Augmented Generation (RAG), our expertise keeps your business ahead in the AI era.

To talk to our experts, email us at marketing@goapl.com.

CSPM: The Key to Securing Modern Cloud Environments

CSPM (Cloud Security Posture Management) is a security solution that helps organisations **continuously monitor, assess, and improve the security posture** of their cloud infrastructure (IaaS, PaaS, SaaS). It's especially critical in multi-cloud environments like AWS, Azure, GCP, etc.

Why CSPM is Needed

- **Misconfigurations** are the #1 cause of cloud breaches.
- Cloud environments are **dynamic and complex**, making manual checks impractical.
- Help stay **compliant** and **audit-ready**.
- Reduces **mean time to detect (MTTD)** and **respond (MTTR)** for cloud risks.

CSPM is part of the **Cloud Native Application Protection Platform (CNAPP)** that helps organisations **identify, prioritise, and remediate cloud misconfigurations, compliance violations, and security risks** across multi-cloud environments.

It offers **agentless, context-rich, and real-time** posture management for AWS, Azure, GCP, OCI, and Kubernetes environments.

Key Features of CSPM

Agentless Scanning: Deploys without agents; uses API-level access for full visibility across cloud environments.

Continuous Misconfiguration Detection: Detects insecure cloud settings (e.g., open ports, public buckets, overly permissive IAM).

Compliance & Audit Reporting: Built-in support for CIS, NIST, ISO 27001, PCI DSS, HIPAA, and more.

Toxic Combination Analysis: Correlates risks like exposed services, secrets, identity misconfiguration and real attack paths.

IAM & Network Path Analysis: Identifies excessive permissions, privilege escalations, and lateral movement paths.

Asset & Inventory Visibility: Auto-discovers all cloud assets, including containers, VMs, databases, and storage.

Shift-Left Security: Scans Infrastructure-as-Code (IaC) templates (Terraform, ARM, etc.) pre-deployment.

Remediation Guidance: Offers actionable insights and integrates with workflows (Jira, ServiceNow, etc.).

Real-Time Posture Updates: Cloud configurations are updated continuously for near-instant visibility.

Why Choose CSPM?

- Unified risk view: Combines CSPM with container/workload/data/identity analysis.
- Attack path mapping: Highlights exploitable combinations, not just isolated issues.
- Scalability: Suitable for large, complex, multi-cloud environments.
- Security for DevOps: Helps enforce security policies in CI/CD and IaC.

Multi-Cloud & Multi-Tenant Support

- Supports multiple CSPs (e.g., AWS, Azure, GCP) with:
 - Normalised asset schema
 - Unified policy engine
 - Segregated tenant views (MSSP, multi-BU)
- Often tagging or metadata-based segmentation for grouping and scoping.

CSPM is a security technology that continuously monitors cloud environments to identify and remediate misconfigurations, compliance risks, and security gaps. It helps organisations to maintain visibility, enforce best practices and ensure regulatory compliance across multi-cloud infrastructures.

To talk to our experts, email marketing@goapl.com.



Driving Into the Future: United Nude's Lo-Res Electric UFO Car

Imagine what the Lamborghini Countach would look like if it were designed for a 1970s video game. An angular collection of pixels, perhaps. Or the UN Lo-Res. The creator of this bizarre electric car, United Nude, says the Countach is the inspiration and the 70s games its aesthetic. And hence the world has a 'low-resolution Countach' designed by UN founder Rem D.

Koolhaas. Based on an abstract, low-resolution version of the Italian wedge supercar, the concept vehicle is one of four prototypes commissioned by the footwear company for promotional purposes. It was also put up for auction last year.

The Lo-Res does not have any doors or windows per se, but a canopy made of 12 tinted polycarbonate panels, which provides the occupants with a 360-degree view of the outside. It does have light bars at the front and rear, likely serving as head and tail lamps.

The Lo-Res uses a steel tube-frame chassis with black-finished metal covers for the wheels. It's propelled by a KDS 5 kW electric motor paired with a single-speed transmission that sends

power to the rear wheels. On the front, it gets disc brakes.

The canopy is remote-controlled and, when opened, reveals fixed tandem seats fashioned out of polished metal and covered in ribbed black upholstery. The cabin is intriguing, but the highlight has got to be the hexagonal steering wheel and the polished instrument panel containing two digital displays.

The concept car was listed for sale on Bring a Trailer in October 2021 at a starting bid of \$45,000 (approximately Rs 37.1 lakh). Sure, it is interesting to look at, and perhaps you'd like to place it in your garage if you already have six or seven functional cars and a stash of cash that has no other use in the household. It is pretty much an electric cart underneath a fancy clamshell.

[Read more →](#)



Nvidia Launches Jetson Thor Chip, a Powerful Robot Brain for Next-Gen AI Robots

Nvidia has launched Jetson Thor, a powerful new robotics computer that promises to act as the brain of the next generation of AI-powered robots. The chip, now generally available, delivers a major leap in performance compared to its predecessor, Jetson Orin, and is designed to run real-time robotic applications that require fast processing of data from multiple sensors. According to Nvidia, Jetson Thor provides 7.5 times more AI compute, 3.1 times greater CPU

performance, and double the memory of Jetson Orin. This means developers will be able to process high-speed sensor data and run advanced visual reasoning tasks directly on the device, a shift that could transform how robots perform in dynamic environments.

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