Integrating Technology, Driving Growth

TechTalk

GALAXY
Integrating Technology | Driving Growth

SPEED UP

GALAXY OFFICE AUTOMATION PVT. LTD.

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"CELEBRATING SUCCESS."

Galaxy has been honored with the prestigious **"Top ISG Partner for Storage Solutions " Award by Lenovo.** This recognition reflects our commitment to delivering the best possible solutions for our clients and solidifies our position as a trusted partner in the industry.

Galaxy has been recognized by **CRN Excellence Awards** 2023 in the **'Enterprise Security' category.** The journey so far has been exhilarating, and this award only motivates us to scale new heights in enterprise security.

MD SPEAKS

Anoop Pai Dhungat
Chairman & Managing Director

Dear Readers,

Last month we opened a new centre in Thane for providing remote managed services to our customers. This is equipped with state of the art tools and let by an expert group of people for providing best in class services to our clients. I would like to thank all our stakeholders including clients, vendors and the Galaxy team for encouraging and supporting us through this initiative as you have done in the past. This centre will provide all kinds of services for managing your IT infrastructure anywhere - on the cloud, on premise or hybrid. Please reach out to know how we can help you with maximum uptime of your IT resources through this offering of ours.

Over the last month, many countries saw a lot of devastation by "natural causes" like floods, landslides and extreme heat in places not experiencing such. Calling these as natural causes, is akin to burying one's head in the sand. It is clear by now, that bad planning of infrastructure and unrestricted carbon pollution are the prime causes of such devastation. And these are definitely not "natural causes". It is high time, that each one of us understands the impact of our actions on the environment and become conscious and do our bit to literally save this planet. At Galaxy, we have undertaken a number of initiatives to reduce our cabon footprint - planting trees, maximum use of renewable energy, minimising travel are a few of them. I urge all of you to spend just a few minutes a day to analyse and reflect on the impact on the environment that your actions of the day have caused.

Happy Reading

Building the bank of tomorrow

With the advent of disruptive technologies such as artificial intelligence, block chain, and data analytics, banks across the world are embracing a new era of innovation to enhance their services and improve customer experiences. These innovations are empowering banks to provide personalized, efficient, reliable, and secure financial solutions to their customers.

The future of banking lies in continued digital transformation. As technology continues to advance and customer expectations evolve, banks are recognizing the need to adapt their operations to stay competitive in the digital age.

Here are some key trends and aspects shaping the future of banking:

Artificial Intelligence (AI) and Chatbots
AI is being integrated into banking systems to improve customer experiences and operational efficiency. Chatbots are being used to handle customer queries, provide personalized recommendations, and automate routine tasks, thereby freeing up human agents to focus on more complex issues.

Data Analytics
Banks are leveraging big data and analytics to gain insights into customer behaviour, identify patterns, and make data-driven decisions. This helps in offering personalized products and services, managing risks, and preventing fraud.

Open Banking
Open banking initiatives are being implemented in many countries, allowing customers to share their financial data securely with authorized third-party providers. This enables the development of innovative financial applications and services, fostering competition and enhancing customer choice.

Blockchain and Cryptocurrencies
Blockchain technology is finding applications in banking, primarily in areas such as cross-border payments, identity verification, and smart contracts. Cryptocurrencies, such as Bitcoin, are also gaining recognition, and some banks are exploring their integration into their services.

Enhanced Security Measures
As digital threats continue to evolve, banks are prioritizing cybersecurity measures to protect customer data and transactions. Advanced authentication methods, biometrics, and encryption techniques are being employed to enhance security.

Automation and Robotics
Robotic Process Automation (RPA) is being used to automate manual and repetitive tasks in banking operations, improving efficiency and reducing costs. Robots are also being employed in customer service interactions and back-office functions.

Personalized Customer Experience
Banks are increasingly focused on delivering personalized experiences tailored to individual customer needs. This involves leveraging customer data, AI, and machine learning to offer customized product recommendations, targeted marketing campaigns, and proactive financial advice.

Fintech Collaboration
Banks are collaborating with fintech startups and technology companies to drive innovation and leverage their expertise in areas such as payments, lending, wealth management, and customer experience. These partnerships enable banks to stay agile and accelerate their digital transformation efforts.

Regulatory Challenges
As the banking landscape becomes increasingly digital, regulators are adapting to ensure consumer protection, data privacy, and the stability of the financial system. Banks need to navigate evolving regulatory frameworks and compliance requirements while embracing digital innovation.

Agile and Customer-Centric Approach
Digital transformation in banking necessitates a shift towards an agile and customer-centric mindset. Banks are embracing agile methodologies to deliver products and services faster, respond to changing customer needs, and foster a culture of innovation within their organizations.

The future of banking in digital transformation is centered around delivering seamless, personalized, and secure experiences to customers through the integration of advanced technologies and strategic partnerships. By embracing these trends, banks can enhance their competitiveness, improve operational efficiency, and better serve their customers in the digital era.

https://tinyurl.com/34wtpfdj

Load Balancing: Enhancing Efficiency in Modern IT Infrastructures

As strain increases on a website or business application, eventually, a single server cannot support the full workload. To meet demand, organizations spread the workload over multiple servers. Called "load balancing," this practice prevents a single server from becoming overworked, which could cause it to slow down, drop requests, and even crash.

Load balancing lets you evenly distribute network traffic to prevent failure caused by overloading a particular resource. This strategy improves the performance and availability of applications, websites, databases, and other computing resources. It also helps process user requests quickly and accurately.

From a user perspective, load balancing acts as an invisible facilitator that sits between a client and a group of servers, ensuring connection requests don't get lost. Without load balancing, applications, websites, databases, and online services would likely fail when demand gets too high. A single high-traffic website may field hundreds or thousands of user requests at the same time. It needs multiple servers to accurately populate webpages with the requested information, including text, photos, video, and audio streaming.

Load balancing acts as a "traffic cop," bringing order to a potentially chaotic situation. In certain environments, such as applications and virtual infrastructures, load balancing also performs health checks to ensure availability and prevent issues that can cause downtime. Load balancing can even provide centralized security across the group of servers that is easier to manage.

Load balancing performs these critical tasks:

- Manages traffic spikes and prevents spikes on a single server
- Minimizes user request response time
- Ensures performance and reliability of computing resources, both physical and virtual
- Adds redundancy and resilience to computing environments

Benefits of load balancing

If your organization runs high-traffic websites and applications or databases that receive a lot of queries, load balancing delivers multiple benefits by optimizing resource use, data delivery, and response time. In high-traffic environments, load balancing is what makes user requests go smoothly and accurately. They spare users the frustration of wrangling with unresponsive applications and resources.

Load balancing also plays a key role in preventing downtime and simplifying security, reducing the likelihood of lost productivity and lost profits for your organization.

Other benefits of load balancing include the following:

Flexibility:

Besides directing traffic to maximize efficiency, load balancing delivers the flexibility to add and remove servers as demand dictates. It also makes it possible to perform server maintenance without causing disruption for users since traffic gets rerouted to other servers during maintenance.

Scalability:

As the use of an application or website increases, the boost in traffic can hinder its performance if not managed properly. With load balancing, you gain the ability to add a physical or virtual server to accommodate demand without causing a service disruption. As new servers come online, the load balancer recognizes them and seamlessly includes them in the process. This approach is preferable to moving a website from an overloaded server to a new one, which often requires some amount of downtime.

Redundancy:

In distributing traffic over a group of servers, load balancing provides built-in redundancy. If a server fails, you can automatically reroute the load to working servers to minimize the impact on users.

Application load balancing

Application load balancing performs the functions of classic load balancers by distributing user requests across multiple targets. But unlike traditional load balancers, which work only with IP addresses, application load balancers focus on content, taking into account URLs cookies and HTTP header content to determine which target to send each user request.

To implement application load balancing, developers code "listeners" into the application that to react to specific events, such as user requests. Listeners route the requests to different targets based on the content of each request (e.g, general requests to view the application, a request to load specific pieces of the application, etc.).

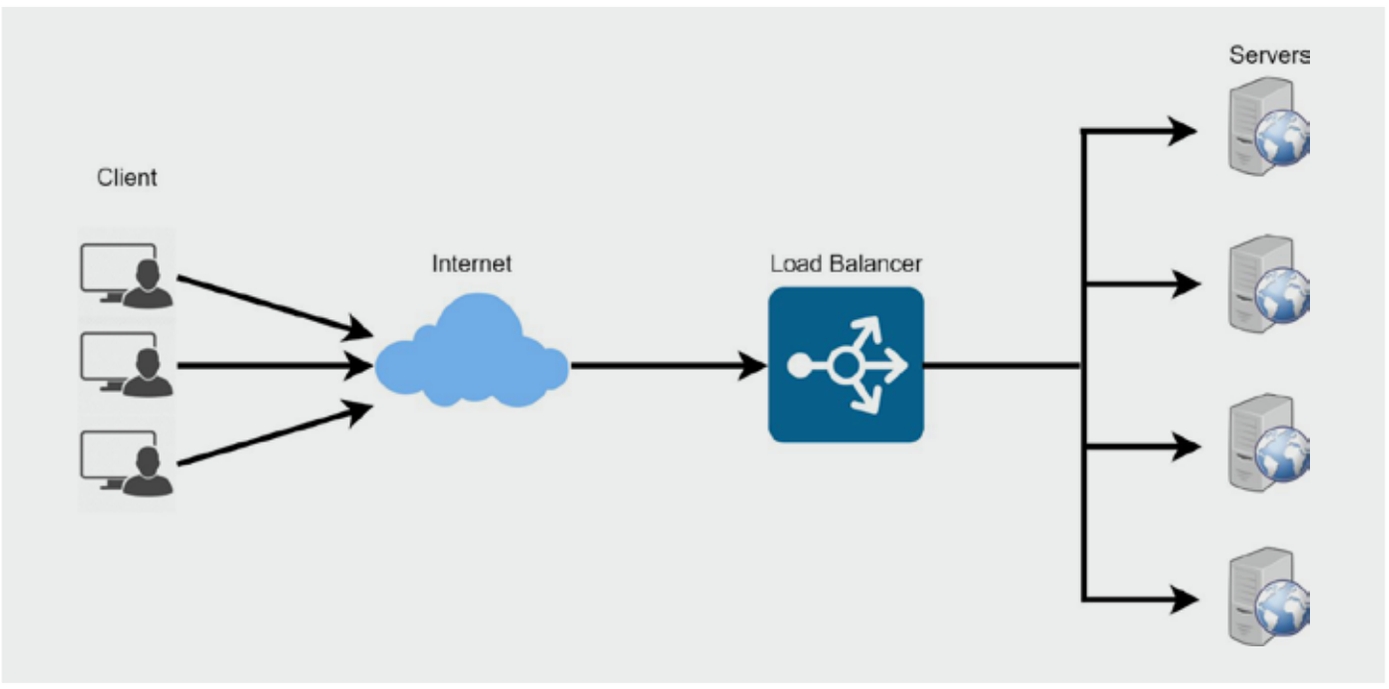
Application load balancers also perform health checks by periodically checking on each target to make sure it is not experiencing any issues. Based on the results, load balancers route traffic to healthy targets to ensure the user request is fulfilled instead of getting bogged down by an unhealthy target.

Load balancing in the cloud

Balancing cloud workloads is just as important as balancing loads in any other context. The objective ultimately is high availability and performance. The better the workloads perform as a result of even traffic distribution, the less likely the environment is to suffer an outage.

Cloud-based load balancers are usually offered in a pay-as-you-go, as-a-service model that supports high levels of elasticity and flexibility. They offer a number of functions and benefits, such as health checks and control over who can access which resources. This depends on the vendor and the environment in which you use them. Cloud load balancers may use one or more algorithms—supporting methods such as round robin, weighted round robin, and least connections—to optimize traffic distribution and resource performance.

Galaxy helps in Load balancing to distribute incoming network traffic across a group of backend servers. To talk to our experts, email us at **marketing@goapl.com**



https://www.ibm.com/topics/load-balancing

Active Directory (AD) Security

Active Directory security is essential for organizations to protect sensitive data, prevent unauthorized access, comply with regulations, mitigate insider and external threats, and ensure the continuity and integrity of their IT operations.

Active Directory (AD) security is crucial for organizations for several reasons:

Centralized Identity and Access Management: Active Directory serves as a central repository for managing user accounts, groups, and access permissions across an organization's network. Securing AD ensures that only authorized individuals have access to resources, protecting sensitive data and preventing unauthorized access.

User Authentication and Authorization: Active Directory provides authentication services, verifying the identities of users attempting to access network resources. By implementing robust security measures in AD, organizations can ensure that only legitimate users are granted access to sensitive data and systems.

Protection against Insider Threats: Insider threats, which involve malicious or negligent actions by employees or insiders with access to an organization's resources, are a significant concern. Active Directory security measures, such as strict access controls, user account management, and auditing, help mitigate the risk of insider threats and unauthorized activities.

Compliance and Regulatory Requirements: Many industries and organizations must adhere to specific compliance regulations, such as the General Data Protection Regulation (GDPR), Health Insurance Portability and Accountability Act (HIPAA), or Payment Card Industry Data Security Standard (PCI DSS). Active Directory security plays a vital role in meeting these requirements by enforcing access controls, auditing, and data protection measures.

Protection against External Threats: Active Directory is a prime target for attackers seeking to gain unauthorized access to an organization's network. Securing AD helps defend against external threats, such as hacking attempts, password cracking, or phishing attacks, which could compromise user accounts, sensitive data, or the entire network infrastructure.

Data Confidentiality and Integrity: Active Directory security measures, such as encryption, secure authentication protocols, and secure network communication, help ensure the confidentiality and integrity of data stored within AD. By safeguarding user credentials and sensitive information, organizations can protect against data breaches and unauthorized modifications.

Business Continuity and Disaster Recovery: Active Directory is critical for the functioning of an organization's IT infrastructure. Securing AD includes implementing backup and disaster recovery strategies to ensure the availability and rapid restoration of AD services in the event of system failures, natural disasters, or cyber incidents.

Securing Active Directory: Disrupting the Pervasive Attacks Against Active Directory and Identities. Securing Active Directory and the identity infrastructure is critical for preventing privilege escalation, lateral movement, and attacker persistence. As we look deeper into recent high-movements one thing becomes crystal clear: An attacker's ability to impact the identity infrastructure is central to cybersecurity.

Securing user Account: Once an attacker gains a foothold in an organization, they can't move any farther without access to a privileged user account. They'll immediately seek out high-level privileges in order to gain access to the information they want in an organization. With privileges, an attacker can create dormant accounts, giving them backdoor access so that even if they are discovered they can return to the environment unnoticed. An attacker can even erase their forensic footprints as they move laterally through an organization's network.

Galaxy as an IT solutions provider strives to maintain and help the end customers to enhance their security compliance with Active Directory Security. To talk to our experts, email us at **marketing@goapl.com**

Tech News

India SaaS rev will be over $50 billion by '30

The Indian SaaS (software-as-a-service) ecosystem could generate between $50 billion and $70 billion in revenue and $500 billion in enterprise value by 2030, says a report by SaaSBoomi and McKinsey.

SaaSBoomi is a community of SaaS founders and product builders that is working to help one another and shape the SaaS ecosystem. Despite the difficult global market conditions, the Indian SaaS market continues to show resilience with its sphere of influence in education, healthcare, fleet management, ridesharing, and agriculture.

The Indian SaaS ecosystem is expected to create 100 unicorns, 50 centaurs and over 5 lakh jobs by 2030, the report says. The homegrown SaaS market is estimated to have grown to $7 billion last year, from $2.6 billion in 2020. India is home to 3,500 SaaS startups and 20 unicorns

“SaaS is 'digital Make in India' as 90% of the companies are catering to global customers. We have grown from 40 SaaS firms in 2015 to 3,500 companies today. We used to witness horizontal applications, but there are now vertical SaaS players in areas like healthcare, genAI,” said Manav Garg, founder of Eka and governing council member in SaasBoomi. The global SaaS market is seen to have grown at a 38% CAGR to $420 billion in the last two years. The report said the global SaaS revenue is expected to touch $1.3-$1.6 trillion by 2030, representing a growth of 15%-18%.

https://tinyurl.com/yck6zykd

India AI, Meta India sign pact to spur innovation in AI, emerging tech

India AI and Meta India signed a pact to foster collaboration in the field of AI and emerging technologies, making Meta's open-source AI models available for use by the Indian ecosystem, according to an official release.

India AI is an Independent Business Unit under Digital India Corporation.

The MoU aims to establish a framework for collaboration and cooperation between India AI and Meta in the field of artificial intelligence (AI) and emerging technologies, including making Meta's open-source AI models available for use by the Indian ecosystem.

"India AI and Meta have entered into a collaboration aimed at advancing research and development in AI and emerging technologies, seeking breakthroughs in AI technology and its applications," the release said.

India AI and Meta share a common goal of raising awareness about the new-age technologies' potential benefits and risks among various stakeholders, including policymakers, businesses, civil society and the general public.

Nick Clegg, President, Global Affairs, Meta, said the company's open approach to AI innovation is complementary to India's leadership on digital issues.

"Giving businesses, startups and researchers access to these technologies can open up a world of social and economic opportunities. 'India AI' is an exciting programme and with close collaboration between government and industry, we can strengthen India's digital leadership and help to ensure AI tools are built for India's unique needs," he said.

https://tinyurl.com/4e7d6kp9

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