

TechTalk



GALAXY OFFICE AUTOMATION PVT. LTD.

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Galaxy Crosses INR 4 Billion in 2018-19 Revenues

Since 1987, when Galaxy Office Automation Pvt. Ltd was established, we have been helping enterprises with their journey on digital transformation. Today, we offer a range of cloud, data center, server, storage, virtualization, cyber security, IoT, networking, Enterprise mobility, Robotic Process Automation and end- point solutions across the length and breadth of several key enterprise verticals.

FY 2018-19 has been a continuation of a string of strong performances by Galaxy. We continue to grow thanks to our delivering excellence in sectors like Banking and Financial Services, Education, Manufacturing, Automobile and Information Technology. Our strong technical skills and partnerships with companies such as Dell EMC, Lenovo, VMWare, Sophos, Checkpoint, Cisco, HP and IBM enable us to bring the best solutions to our customers.

We are proud to announce that we have clocked revenues exceeding INR 4 billion in the 2018-19.

This year, our focus will be to strengthen our existing portfolio of offerings and adding new ones like Artificial Intelligence based chatbots and security applications. We continue to remain committed to help organizations attain their business objectives by delivering measurable and outcome-based IT solutions and services.



MD Speaks

Dear Readers,

I would like to thank all our customers, supply chain, employees and all other stakeholders for the great revenue numbers returned by Galaxy in the just ended fiscal year. It is our constant endeavour to keep our customers delighted and our revenue and growth figures indicate that we are on the right track.

During the course of the year, Galaxy was recognised and received accolades from a number of principals in varied technologies. A few notable ones were Dell-EMC for Storage and Hyper-Converged solutions, VMWare for end user computing, Lenovo for end points and Sophos for cyber security. We were also recognised by the media and received awards from IDG, CRN and SME Channels. A high point was an international award by Canals for our revenue growth. These would never have been possible without the support of all of you. However, the biggest accolades and awards for us are our happy customers.

It is our commitment to continue to invest in building the skills required to innovate and bring the best solutions to solve our customers' business problems.

Happy Reading



Anoop Pai Dhungat
Chairman & MD



Future Is Now



THE BOTS ARE COMING



The BOTS are coming!

Don't panic, we do not intend to replace human workforce.

- Increased Productivity & Efficiency
- Improved Customer Experience
- Cost Effective

Led by humans, BOTS will transform the way people in your organization work.

Digital technology is the latest buzz in the market... what if we at Galaxy, go one step further and say "if we could provide Digital Employees" for your organization.

Don't panic, we do not intend to replace human workforce – instead we want to create an eco-system wherein digital employees could work as a helping hand to human employees.

Surprised? How can this be possible? What are the processes/tasks that Digital Employees can perform? So here it goes - any tasks/process that is repetitive in nature, has a sequence/workflow associated with it and is high in volume, can be completely automated using software bots or like we call – Digital employees. This could form as eligibility criteria for any tasks/process

Sounds good, but why should I use Digital Employees? This is a genuine question and answer is? Digital Employees can perform almost any task – at a fraction of the cost, at much faster rates with almost zero error rate – needless to say all how this could boost business.

Next obvious question is how can we create these Digital Employees (Bots)? Is this a complex process? Can a business user do it without being dependent on IT Team?

The answer is YES. The platform which we provide is very user friendly and has most of the features in drag and drop manner. All the business user has to do - is apply this drag and drop feature as per the business logic. An example to further clarify – sales user can create a Digital Employee (bot) which could do following activity

- Login to CRM application
- Read an excel file that contains data on leads (say 50 records daily)
- Insert excel file leads into CRM application one by one
- Extract a report from CRM application of all leads entered
- Send an of extracted email to senior manager

Imagine the above use case for field sales in banks - wherein on an average the Sales team size is 2000+ and all

the sales resources must do this activity on daily basis and that too manually. Digital Employee can remove these manual/repetitive tasks/process and save lot of productive hours for these Sales Representatives. All of this, without involving the IT Team.

This was just one use case – you could consider any task/process (basis eligibility criteria defined earlier) in the organization and create a Digital Employee to perform those processes. Thus, we provide a platform which creates Digital Employees. The common terminology used in industry to define this platform is Robotic Process Automation i.e. RPA

I hope you are able to co-relate these three terms now i.e. Digital Employee – Bots – RPA.

RPA has wide range of usage and is industry independent i.e it can be used in Banking, Insurance, Pharma, Telecom, Retail etc. Also, within as industry RPA can be applied to any teams such HR, Sales, Accounts, Operations, Support etc

How to start with RPA? At first, you can identify all processes across multiple teams which could be considered for RPA. Do a feasibility check with Galaxy to qualify the process for RPA and then start off with project This would be useful for organization which is large and has a team which can dedicatedly work with multiple teams to evaluate processes for RPA. Alternatively, for smaller and midsize organization, Galaxy would recommend to start small i.e. identify one or two process and start off with the project. Once the usage of RPA is familiar, other teams would gradually understand the benefits of RPA and other processes could be taken up. Interestingly, this methodology was also used by one large international bank wherein started off with small number of process with 10 bots in the environment and gradually over a period of year they reached upto 2500 bots in the environment.

Article by:

Robin George Iype

Sales Specialist - Mobility

Galaxy Office automation Pvt Ltd

Technology Focus



MULTI-CLOUD DEPLOYMENT PLANNING

COST OPTIMIZATION

HETEROGENEOUS ARCHITECTURE

MULTI-CLOUD DEPLOYMENT

FLEXIBLE & AGILE

IMPROVE DISASTER RECOVERY

“Multi-cloud strategy is a key to Digital Transformation aimed at Modernizing Processes”

Deploying a multi-cloud strategy can lead to substantial benefits, while avoiding vendor lock-in. Here's how you can do it right. For a growing number of enterprises, a migration to the cloud is not a simple matter of deploying an application or two onto Amazon Web Services, Microsoft Azure, or some other hosted service. It's a multi-cloud strategy that's a key part of a digital transformation aimed at modernizing processes.

Benefits of Deploying a multi-cloud.

1. Using multiple cloud computing services such as infrastructure-as-a-service (IaaS), platform-as-a-service (PaaS), and software-as-a-service (SaaS) in a single heterogeneous architecture offers the ability to reduce dependency on any single vendor.
2. It can also improve disaster recovery and data-loss resilience, make it easier to exploit pricing programs and consumption/loyalty promotions, help companies comply with data sovereignty and geopolitical barriers, and enable organizations to deliver the best available infrastructure, platform, and software services.
3. Cost optimization is a huge benefit. It's not so much that you are spending less by going multi-cloud, but rather you can manage risk far better.
4. Flexible & Agile: Having multiple clouds “makes you more flexible and agile, allows for the adoption of best-of-breed technologies, and provides far better disaster recovery. One has the flexibility to run certain applications in a private environment, and others in a public environment, while keeping everything connected. Cloud service providers have the right skill sets to make this all happen so that customers don't have to maintain this expertise in house.”

Like any other major IT initiative, ensuring an effective multi-cloud strategy involves having the right people and tools in place, and taking the necessary steps to keep the effort aligned with business goals. A multi-cloud

deployment adds complexities that require organizations to develop a deep understanding of the services they're buying and to perform due diligence before plunging ahead. Due diligence includes planning. Use a cloud adoption framework to provide a governing process for identifying applications, selecting cloud providers, and managing the ongoing operational tasks associated with public cloud services, educate all staff on the cloud adoption framework and the details of using selected CSPs' [cloud service providers] architecture, services, and tools available to assist in the deployment. Moving to a multi-cloud environment might present risks that were not present in current applications and systems, check for new risks and identify any new security controls needed to mitigate these risks, Use CSP-provided tools to check for proper and secure usage of services. A company's infrastructure should be treated as source code and change control procedures should be enforced. Procedures will need to address differences in CSPs' implementations. Decommissioning of services is also part of due diligence. The most important part of any application or system to the organization is the data stored and processed within. Therefore, it is critical to understand how the data can be extracted from one CSP and moved to another. When relying on multiple cloud services to deliver business applications to customers and internal users, having strong integration between services is vital. Put the right APIs [applications programming interfaces] in place so that systems can work together to create a seamless user experience, with no lags or delays in service

Manage access and protect data:

Using multiple cloud services, including a mix of public and private clouds, presents a host of security challenges. A key to ensuring strong security is identifying and authenticating users. Use multifactor authentication across the multiple CSPs to reduce the risk of credential compromise.

Organizations should also assign user access rights. That includes creating a collection of roles to fill both shared and user-specific responsibilities across the multiple clouds, Companies will need to investigate the differences in how role-based access control could be implemented with selected CSPs. Another good practice is to create and enforce resource access policies. CSPs offer various types of storage services, such as virtual disks and content delivery services. Each of these might have unique access policies that must be assigned to protect the data they store. Protecting data from unauthorized access is vital. This can be achieved by encrypting data at rest to protect it from disclosure due to unauthorized access across all CSPs. Companies need to properly manage the associated encryption keys to ensure effective encryption and the ability to operate across CSPs. It's also important to ensure that each CSP's data backup and recovery process meets your organization's needs, Companies might need to augment CSPs' processes with additional backup and recovery. Keep an eye on cost: One of the biggest selling points of the cloud is that it can help organizations reduce costs through more efficient use of computing resources. Services are paid for on an on-demand basis, and the cost of buying and maintaining numerous servers is eliminated.

Nevertheless, in a multi-cloud environment it's easy to lose track of costs that can then get out of control. Carefully consider the cost of managing multi-cloud environments, including human capital costs associated with maintaining multi-cloud competencies and expertise, as well as costs associated with administrative control, integration, performance design, and the sometimes-difficult task of isolating and mitigating issues and defects.

However, leveraging service provider-specific capabilities can lead to Vendor Lock -in, so consider the value and commitment of these choices. Not all applications and compute needs are created equally, and as such, it's not possible to pick a single cloud platform or strategy that meets all your needs. In general, a multi-cloud strategy provides flexibility and leverage. Having multiple [providers] enables you to not be locked into any one, gives you the benefit of innovation and price negotiation. "To fully realize the benefits of multi-cloud, such as workload portability, you must consider your architecture. For example, deploying applications via containers allows for portability.

Article by:
Mukesh Choithani
AVP Data Center
Galaxy Office automation Pvt Ltd



Special Focus



5G
IS NOT HYPE,
ARE YOU
READY FOR IT?



The race to 5G is on and new developments are being reported on a daily basis. According to the global wireless trade group GSMA by 2025, 1.2 billion people are set to have access to 5G networks. In a 5G world, you will also be able to increase demands on cloud computing. It will deliver a shot of adrenaline to existing digital transformation efforts, inspiring and supporting new possibilities and making technology

even more accessible to everyone. It will accelerate network performance, while increasing capability to create, store and analyze data. The application of technology is what decides its utility. While 5G networks will bring blazing fast data connections, its application will have huge implications on connected devices across various industries and functions, some of which include:



Connected vehicles: Connected vehicles are those that are capable of communicating, not only with other cars but with the other technologies around. When you're talking about multi-tonne

machines transporting people at high speed, fail-proof connectivity is key. With 5G, the potential is so dramatic that the speed at which connected cars will be able to communicate will not only eliminate safety concerns but also reduce traffic.



Manufacturing and logistics:

How we make and distribute the products that we consume is another facet that is set to change. 5G will see IoT devices spreading throughout production systems

and supply chains, from the factory floor to roads and from retail stores to a deep ocean oil rig. Sensors embedded in manufacturing equipment will detect subtle changes in conditions that increase the chance of equipment failures, enabling predictive maintenance and improving business resilience and safety. Wireless robots will automate repetitive tasks reducing human intervention and redundancy of labour while also increasing the efficiency of processes. It will be easier to know where goods are and what condition they're in, thereby, reducing losses.



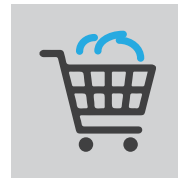
Health: The healthcare industry has been traditionally slow to embrace new technology. That said, there are a number of applications being created that offer options that bridge the doctor-patient

gap by allowing people access to a variety of services at a substantially lower cost and in a matter of minutes. In the days to come we'll see more widespread use of health-focused applications, especially those that can't afford to fail – like tools to assist in remote robotic surgery, where any error or latency could cause serious injury or even death. The opportunity to increase preventative healthcare measures and enable more remote monitoring, diagnosis and treatment, using 5G will be thrust upon the industry.



Smart cities: The government of India undertook the Smart City Mission to cover 100 cities in a span of five years (2015-2020). We're not just talking about buses and street lights that can

communicate, interpret and adapt to the world around them. Even the roads will become digitised. Water and power grids will be embedded with sensors that make them more efficient. From our mobile phones, to our homes and the cities we live in, the world is making steady progress in its march towards smart, and India will not be left behind. Liveability, convenience and environmental benefits, all forecast a growth in the smart cityscape as 5G enables data-driven, real-time adaptability.



Retail: Retailers are looking at the potential to enable a completely different in-store experience, providing recommendations and pricing that adapts to specific interests and tastes. 5G

technology is one of the pillars that is transforming retail into a 'phygital' experience. Connected AR/VR devices that combine the personalized experience of the past with the savvy customers of the future to deliver a richer customer experience.

Each of these uses requires quite different types of connectivity. Qualcomm recently reported that its first 5G modem, Snapdragon X50, supports speeds up to five gigabits per second which is 257+ times faster than the average speed of the fastest LTE network. Its faster speed, higher bandwidth, ultra-low latency and reduced power requirements make it ideal for a variety of technologies including real-time applications, pervasive IoT and high-speed data to battery-powered devices like virtual reality headsets. Rather than the traditional public network that does its best to service the needs of various users, network splicing on 5G architecture will enable more intelligent connectivity tailored for specific industrial uses.

Preparing for the impact

Fifth-generation (5G) telecommunication services, which can create an economic impact of \$1 trillion in India by 2035, are expected to be launched in the country by 2020. India can accelerate the 5G dividend and potentially also become an innovator in 5G applications by embracing it as the inevitable future, in the present. 5G is also likely to strengthen the suite of enterprise services for telcos by providing a more agile and efficient network with the ability to meet various demand and on-demand requirements through network slicing, virtualization, software-defined networking, mobile edge computing and cloud. Existing networks are struggling to keep up with the technology demands of today, let alone tomorrow. Installing 5G on current networks would be like putting the latest Formula One tyres on a 15-year-old family car.

A software-defined, cloud-centric platform is a necessity in a 5G world, when the sheer number of applications and devices on the network will explode. It allows administrators to focus policies directly at the network edge, where IoT applications reside; it will allow them to manage the complexity and ensure business continuity. Even with 5G's advanced capabilities, monitoring the performance of applications is vital to realising value. In fact, it's even more important as more applications mean more ways for something to go wrong.

Visibility is key to delivering great app performance. Is it the app or the network? Is it user error? By providing the visibili-



ty into every corner of the network and the flexibility to scale resources in minutes, instead of months, these cloud-based platforms become proactive and responsive, as well as resilient. Taking full advantage of the data being collected will support rapid investigation and resolution of issues.

While the introduction of 5G may well be one of the most significant technological advancements of this decade, making the most of applications, devices and data also requires a change in your network infrastructure. Is yours ready?

Source: <http://www.voicendata.com/5g-not-hype-ready/>

Tech News



Google announced Stadia, a new cloud-based gaming platform. It's a major move for Google into the video game business, which is increasingly building toward streaming as a solution. Stadia is not a dedicated console or set-top box. The platform will be accessible over the internet on a variety of platforms: browsers, computers, TVs, and mobile devices. In an onstage demonstration of Stadia, Google showed someone playing a game on a Chromebook, then playing it on a phone, then immediately playing it on PC, picking up where the game left off in real time. Stadia can stream games in 60 fps, with HDR and 4K resolution. In the future, Stadia will achieve resolutions up to 8K and frame rates up to 120 fps. Google showed AAA games like Ubisoft's Assassin's Creed Odyssey and id Software Doom Eternal running on Stadia. Google will have a hardware component, however: the Stadia Controller. It's a traditional

looking gamepad, with dual analog joysticks, four face buttons, and shoulder buttons. The controller will connect to the cloud via wi-fi, and includes a "share" button to connect to YouTube and a Google Assistant button. Stadia will be powered by Google's worldwide data centers, which live in more than 200 countries and territories, streamed over hundreds of millions of miles of fiber optic cable. The company will give developers access to its data centers to bring games to Stadia. The players will be able to access and play Stadia games, like Assassin's Creed Odyssey, within seconds. A YouTube video of Odyssey featuring a "Play" button that would offer near-instant access to the game.

Google CEO Sundar Pichai announced the new platform at the Game Developers Conference, saying that Google want to build a gaming platform for everyone, and break down barriers to access for high-end games.

Source: <https://www.polygon.com/2019/3/19/18272856/google-stadia-gdc-2019-announcement>