



The Road to
**Intelligent
Infrastructure**

It's all about being Smart,
Agile & Proactive



A New Revolution is here

The impact of COVID-19 has forced many around the world to rethink our daily lives and reconsider how the business around the globe will operate. The Pandemic has given birth to a new revolution.

The impact of COVID-19



IT Strategy will be revisited

- DR & BCP Plans will be questioned
- Time to train the machines
- IT spending will be viewed through a new lens



Future of customer engagements

- Meet customer experience demand in the age of 'Social distancing'
- Practice flexible production capacity model
- Collaborate without boundaries



New operational challenges have emerged

- Manage surge in Cyber-attacks & Phishing
- Data Access policy will be reviewed
- Time to remove Digital Dirt from Data centers
- Limited support from manned operations



The Future of Work

- Remote work will become the new Normal
- New strategies to enable employees to
 - work together from anywhere
 - work independently

This is about more than just technology-driven change; it is an opportunity to help everyone, including leaders, policy-makers and people from all income groups and nations, to harness converging technologies in order to create an inclusive, human centered future.

The revolution is here to stay where



Remote Work
will be
'The New Normal'



Leadership will be
'The New Management'



Technology will be
'The New Connector'



Learnability will be
'The New Benchmark'



Culture will be
'The New Goal'



Innovation
will
'Flourish'

Real Success is
sustaining the
Crisis

Finally, Digital
Strategy will mean
a lot more

Service Objective

IT Infrastructure services are no longer considered cost centers or just support functions in organizations. Businesses have realized the importance of IT infrastructure and services with modern day needs for 24*7 quality uptime of the internet, e-commerce, ERP systems, internet banking, mobile applications, social media and more. Small, mid and large cap organizations have largely capitalized on new technologies for ease of business, to stay ahead of the competition, reduce operating costs & increase wallet share.

Globally there is a significant shift towards quality of user experience in an increasingly consumer-driven market; and Artificial Intelligence (AI) based platforms and solutions are driving this. AI-enabled infrastructure platforms & services play a significant role in driving exceptional user experience, and are increasingly recognized as being part of the customer experience value chain.

At GAVS, we have restructured the traditional service delivery model with a SMART MACHINE FIRST approach. An approach with heavy emphasis on placing AI & Automation enabled SMART Machines at the frontline of IT Operations, in order to reduce operating costs, promote error-free operations, reduce time to serve, and proactively manage simmering issues. The AI-enabled solutions along with decades of experience in Managed Infrastructure Services ensure implementation of best practices, and an agile infrastructure with increased availability, that is quick to respond to business needs.



The Road Ahead

Outlook & Trends



AI will become mainstream

By 2023, 40% of I&O teams will use AI-augmented automation in large enterprises, resulting in higher IT productivity with greater agility and scalability.

40%



Intelligent Automation will become inevitable

73% of large enterprises have included intelligent automation as a key theme for infrastructure services management, as part of their broader IT services adoption strategy.

73%



Networks will be software-defined

Through 2022, fewer than 10% of enterprises will decommission an existing production data center network. - Gartner

10%



AI Ops will compliment monitoring tools

Large enterprises will exclusively use AI Ops and digital experience monitoring tools. This will rise from 5% in 2018 to 30% in 2023.

30%



AI will get integrated into DevOps

AI and Machine Learning will speed up DevOps Quality Analysis. Infrastructure automation will get smarter, with a lot of AI and ML.



Cloud based AI will find more traction

By 2023, cloud-based AI will increase 5X from 2019, making AI one of the top cloud services.

5X



Over 40% organizations will plan to deploy AI solutions by end of 2020

Leading organizations expect to double the number of Artificial Intelligence (AI) projects in place, within the next year.

- Gartner 2020 CIO Agenda Survey

40%

The Road to Intelligent Infrastructure

Over the years, GAVS has invested a huge amount of resources and time in developing various patented AI Machine Learning algorithms, Predictive Analytics, Auto-Discovery modules, Agent & Agentless Application Monitoring tools, Network Sniffers, Process Automation & Remediation tools, DevOps & Infrastructure Orchestration tools, to name a few. GAVS has brought forth these SMART tools and AI technology, by also leveraging leading AI vendor competencies, and OEM sources, and delivered them with our Managed Service offerings to provide best-in-class Infrastructure Services, powered by AI.

Our AI-driven SMART MACHINES bridge the gap between humans & machines, and deliver an infrastructure which is INTELLIGENT enough to make informed decisions on its own; and is also easy and flexible to operate. The core of our AI-enabled Infrastructure Services is our **Zero Incident Framework™** (ZIF) platform, which is built on the foundation of AI, ML, Cognitive Computing, Automation and Predictive Analytics.

Smart Machine led Service Delivery Framework

GAVS provides SMART MACHINE enabled
Infrastructure Services to our customers through



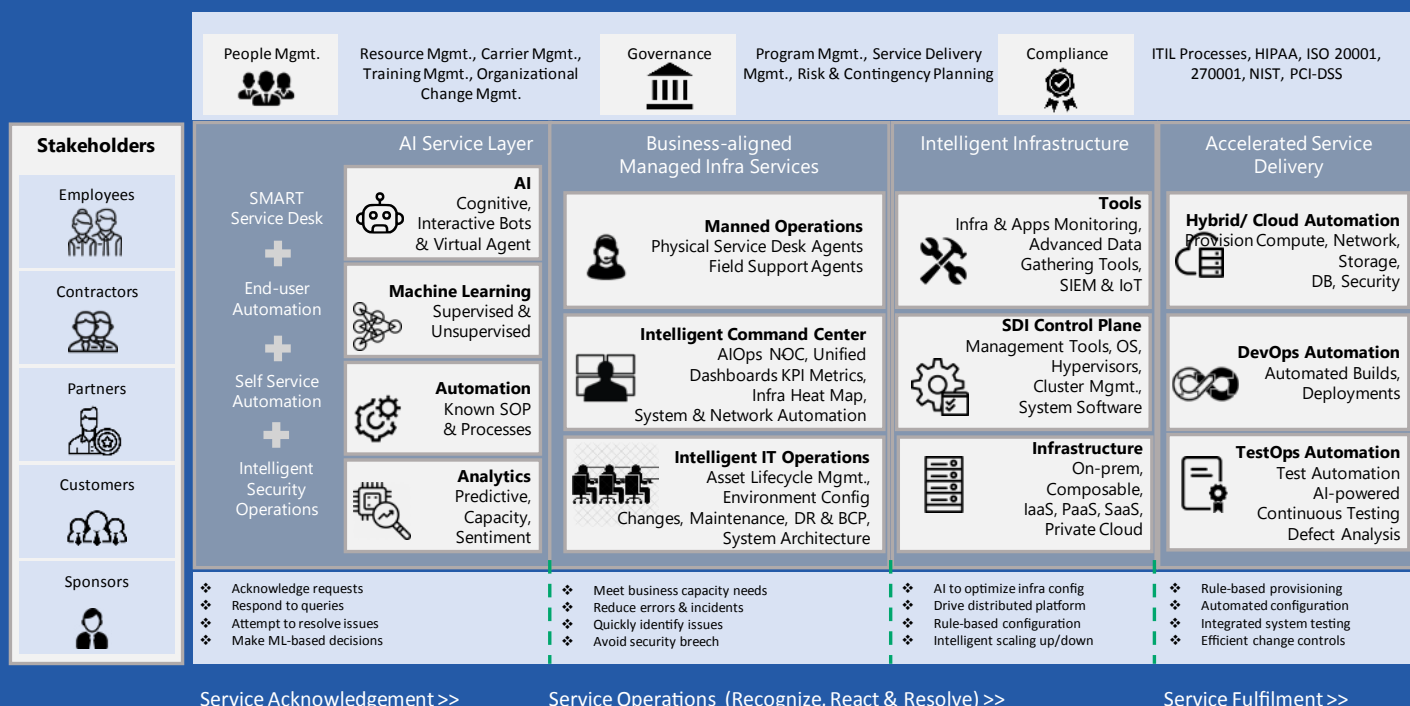
Managed Infrastructure Services

As part of our large managed infrastructure service offerings, GAVS is committed to transforming IT services, by leveraging our AI-led service offerings to reduce cost of operations, to align IT services to business metrics, to protect and secure the infrastructure and ensure that it is flexible enough to respond quickly to business demands.



Digital Solution Partnership

We work closely with the customer's IT, to understand current operations, strategies, challenges, and provide AI-led infrastructure solutions through a consulting approach. GAVS also provides Data Center Consolidation, DR, Rationalization, Virtualization & Cloud Migration Services.

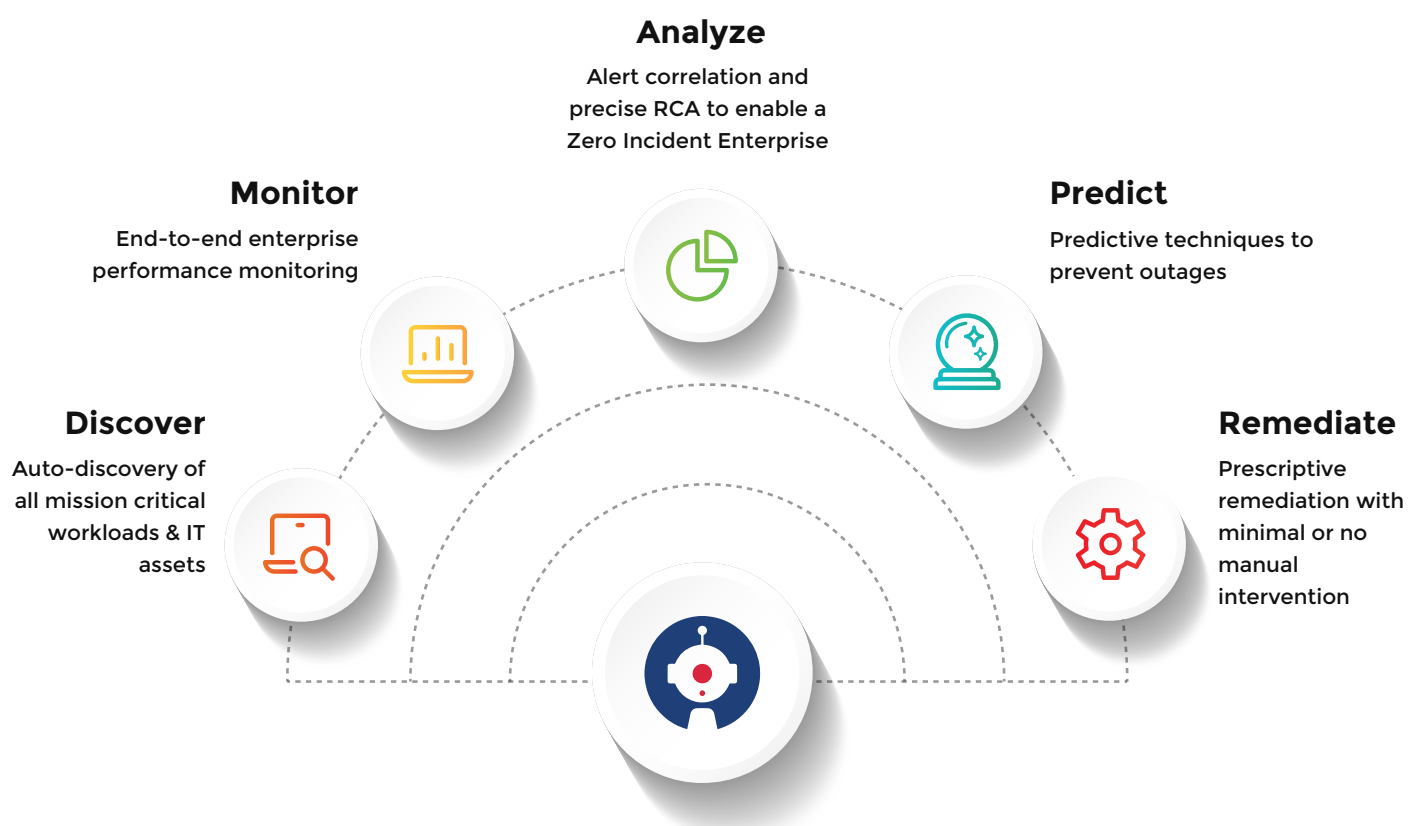


Frictionless IT Operations

Business models are tapping into technology innovations, to ensure risk free operations, to stay ahead of peer competition, and to win customer mindshare. IT leaders are shifting focus from just “keeping the lights on”, to “Frictionless IT” - an infrastructure which is flexible and helps accomplish desired outcomes in a timely, cost-effective, streamlined way.

At GAVS, we help our customers embark on the journey to “Frictionless IT” through excellence in transformation of People and Processes, through redefinition of IT strategies, by reassigning staff roles & responsibilities, streamlining processes, revamping aging systems, reevaluating IT tools, exploring options for migrating services & workloads to the cloud, revisiting partner ecosystems, reevaluating new supplies and constantly exploring alternate solutions and technologies to better overcome business challenges.

Using our AI First approach, we have developed **ZERO INCIDENT FRAMEWORK™** – an AIOps solution which is adaptive, self-learning & self-correcting, to address some of the challenges that traditional IT infrastructure services fail to address adequately. The platform is developed with AI, Automation and Analytics as the three key ingredients, and focuses on user experience, service agility and resilience of operations. Our AIOps platform easily integrates with leading Infrastructure & Application Monitoring tools, right out of the box. Additionally, the solution also powers its own Application Monitoring.



Our AIOps platform is closely tied to business metrics and our AI services are contextualized to real time business scenarios, and driven by predictive/prescriptive analytics, proactive resolution to certain uses cases, elimination of defects by leveraging advanced analytics & ML.

Enterprise-wide Automation

As a seasoned Managed Service provider, GAVS incubates the 'Machine First' culture. This approach has given us enormous success in the way we operate, and the impact is multifold - Improved Agility, Responsiveness, Speed, Productivity and Efficiency. Customers are realizing that the benefits of Automation go beyond just Cost Reduction to fostering highly improved Standardizations, Skillset Optimizations, Continuous Delivery, Maintenance and Change Management.

In our journey towards enabling Agile Infrastructures, we have developed in-house solutions for AI-led IT operations while leveraging time-tested, best of breed open source automation platforms, resulting in powerful out-of-the box solutions requiring minimum customization. We have developed 500+ templates for the typical mundane tasks in an enterprise, and can develop new templates quickly, as needed. These tools, frameworks and templates allow us to manage complex environments easily, to gain visibility into your operations, and to integrate new technologies and processes more effectively.



Service Desk
Automation



Backup
Monitoring



Cloud
Configuration



NOC
Automation



Network Device
Orchestration



Container
Deployments



Security
Patching



Infrastructure
Delivery



DevOps
Automation



Server & Storage
Provisioning



Compliance
Management



**Software Quality
& Test Automation**

**A fully Automated Enterprise
can experience the following
benefits**

75%



less time to deliver
infrastructure
changes

68%



more productive
IT infrastructure
management
teams

53%



reduction
in unplanned
downtime

135%



more
applications
deployed per
year

30%



faster delivery of
cloud workloads

IT Service Desk Transformation begins with **User Experience**

In the new world of digital business, companies who deliver differentiating customer/user experiences by capitalizing on technology enhancements have a clear competitive advantage.

The New-Age Service Desk will deliver



Agility in Service to Customer

quick responses and accurate solutions



Customer Analytics

customer journey analytics, emotion detection & sentiment analytics



Omni-Channel Experience

choice of accessing Service Desk from anywhere, and from any device



Improved IT Staff Productivity

automation of mundane tasks, freeing bandwidth to focus on creating business value



Shift from being Reactive to Proactive

effective problem management, continuous monitoring, and predictive analytics



Better Risk Management

greater interoperability between systems and reduction in user complaints

By 2021,

15%

of all customer service interactions will be completely handled by AI. - Gartner

By 2019,

30%

of service desk support activities will be freed up by leveraging AI & ML. - Gartner

Through 2028,

User Experience

will undergo a significant shift in how users perceive the digital world and how they interact with it. - Gartner

Through 2020,

99%

of AI initiatives in ITSM will fail due to lack of an established knowledge management foundation. - Gartner

GAVS' New Age Service Desk Solution has enabled a global PR firm to increase overall ticket resolution rate by 30%, provide rich user experience through social media integration, significantly enhance automation and improve turnaround time

AI-led Digital Service Desk

The number of support calls and support tickets get overwhelming when there is a change in internal or external environmental conditions. This happens during planned changes like system and process upgrades, and unplanned disasters like pandemics caused by virus outbreaks. Nevertheless, long hold and service times can get frustrating for end-users. Organizations need to quickly shift gears and look for ways to enable omni-channel user interactions, that can handle huge support volumes consistently and instantaneously, without any errors.

GAVS' Competencies: A complete digital transformation solution for IT Service Desk which focuses on improving productivity and collaboration, on delivering self-service, and offering an exceptional user experience. Our solutions use AI-based Voice Assistants & Chat Bots as the first line of response while handling service desk calls. This eliminates the need for L0 and L1 support agents. All mundane tasks are automated, through which enterprises can save nearly 40% of manual effort, leading to significant costs savings. The AI tools seamlessly integrate with existing ITSM, CMDB, KMDB & Social Media Platforms and use proprietary metrics for User Sentiment Analytics



GAVS' Voice Bot as the first point of contact

Tireless | Omni-channel User Experience | Quick Service | Handles multiple calls simultaneously



GAVS' Chat Bot as an alternative first point of contact

Tireless | Quick Service | Answers FAQ | Enables Self-service | Broadcasts messages



Social Media Integrated Service Desk

Highly useful for Mobile & Home users | Easy to reach Service Desk



Real-time Service Desk Metrics

User Experience Index | Agent Scorecard | Intuitive Dashboard | SLA Performance Counters



Automation of Repetitive Tasks

Reduced Service Time (MTTR) | Frees up agent bandwidth | Left-shift



Virtual Supervisor

Initial Triageing | Prioritization | Auto re-routing of tickets to the right support group

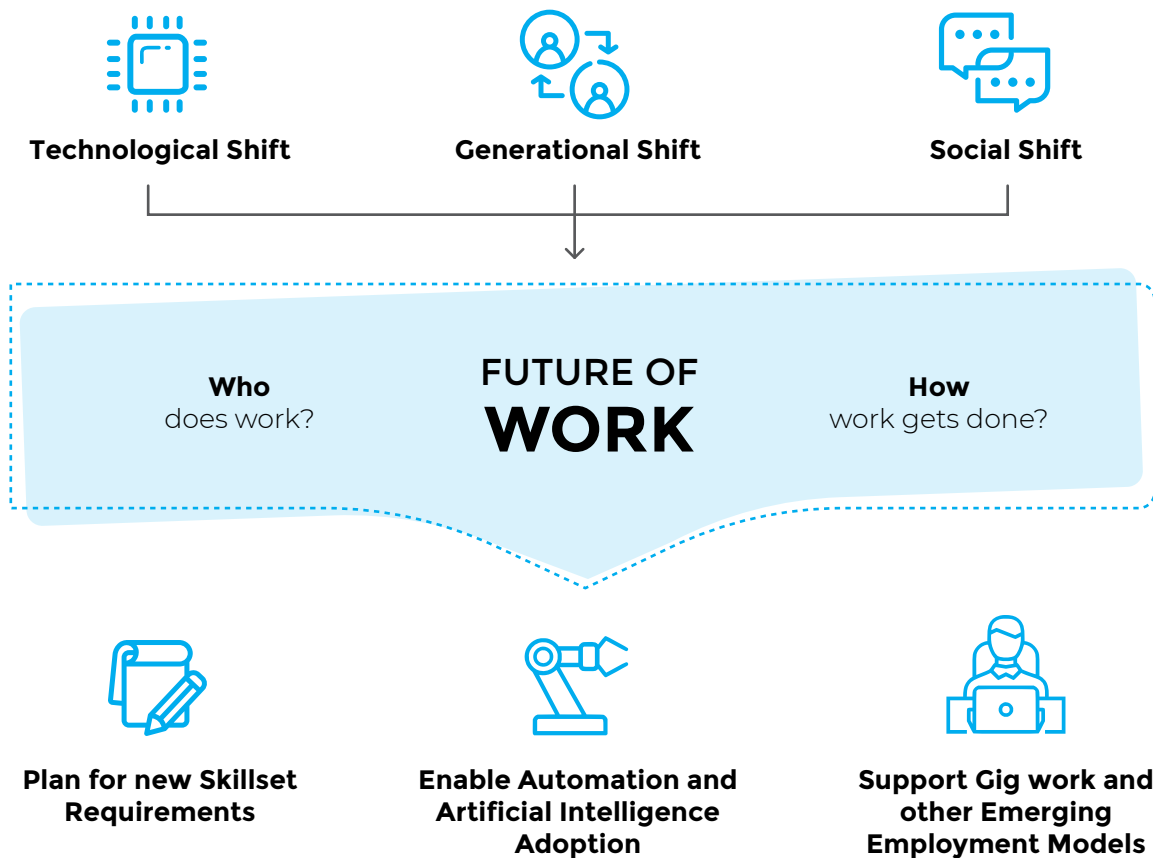
World's largest PR firm has reduced nearly 40% of its ticket volume and realized 10% YoY cost benefit using GAVS' AI-led Service Desk Platform

A fully Automated Enterprise will experience these benefits:

40 to 60% Tickets automated	>75% of Tickets Auto-triaged	>4.5/5 CSAT Rating	15% to 25% Incident Reduction using our AIOps Platform
>98% of SLA Response Time	>80% First Contact Resolution	~10% YoY Cost Reduction	

The Future of Work Decoded

Gartner.



By 2023,

49 Million

Users will be adopting VDI solutions
– Gartner

By 2023,

30%

of IT organizations will extend BYOD policies with “Bring Your Own Enhancement” (BYOE) to address augmented humans in the workforce.

Almost

100%

Of GAVS offshore IT employees were able to deliver work without any disruption during the COVID-19 situation with help of our in-house VDI solution

Through 2023,

50%

of organizations will support/ plan to support employee-owned devices – IDC

GAVS has successfully transformed traditional office spaces into future-ready workplaces using GAVS' zDesk – An end-to-end VDI solution. In less than a year, we have successfully deployed 5000+ VDI instances with ~40% increase in user productivity. zDesk is a true Zero Layer Architecture, Single License, Single Install & Single Interface solution, that does not depend on external virtualization components or add-ons.

Mobile First Work experience

Creating an awesome employee experience is gaining increasing traction among the millennial workforce, and infrastructure technologies are required to provide platforms and services to enable them to work in new and innovative ways, to deliver business innovation, reduce cycle time and improve user productivity.

Transform your workplace by enabling access to apps and data from any device, any location, any time through our zDesk Virtual Desktop Infrastructure (VDI) solution, based on Zero Layer Architecture, Single License, Single Install and Single Interface design. zDesk is a single vendor solution – we take the complete responsibility in building & delivering the VDI solution. The solution includes Architecture, Hardware Design, Procurement, Optional Hosting, Customizing the zDesk VDI software package, Integration with Business Applications, and Support



Lower Cost of Ownership

GAVS zDesk replaces expensive Hypervisor, Broker and Management technologies



Best user experience

Flawless computing and application delivery through Accelerated RAM, Storage & Automated Cluster Management



Simplicity

Full Infrastructure stack from Hypervisor to End Point delivered by a single vendor, and managed through a single pane of glass



Optimized Infrastructure

Full-function VDI stack deployable in any x86 compatible hardware, and tightly integrated in a single fabric



Best TCO guaranteed as compared to other VSI/ VDI Technology vendors. Also enables reuse of existing hardware



Greater Cost Savings through centralized support, lowered utility bills, simplified software licensing, desktop refresh initiatives



Secure & Compliant VDI Access

Compliance to HIPAA, HITECH and NIST standards & Multi-factor authentication



Workplace Productivity

Anytime, anywhere & any device access. Promotes "Bring your own device"



90%

Savings on utility bills

40%

Savings on desktop investment

70%

Reduced incidents

70%

Faster deployment

100%

Secured endpoints

80%

Savings on support costs

40%

Higher productivity

80%

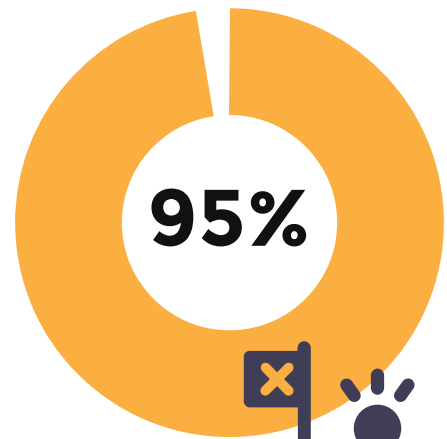
Reduced time to Repair



By 2020,

100%

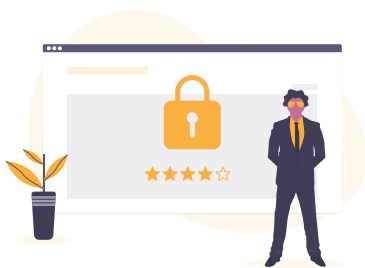
of large enterprises will be asked to their board of directors on cyber security and technology risk at least annually up from 40% today.



Gartner predicts that, through 2020,

95%

of cloud security failures will be the customer's fault.



By 2022,

Cybersecurity

ratings will become as important as credit ratings when assessing the risk of business relationships.

Gartner.

Over

100 Million

spam emails are blocked by Google everyday using ML



In 2020,

Phishing

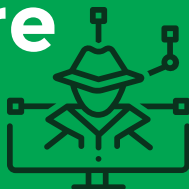
will remain one of the most popular methods of attack by cybercriminals. ML can be effectively used to overcome this



In 2020,

Ransomware

will continue to be a top cybersecurity threat. AI can be potentially used to secure this



Post COVID

The Crisis

has given birth to implement "Security process automation" & "leverage AI with packaged security products to enhance security defense" - Gartner



GAVS is currently protecting 60K endpoints, 10K mobile devices, 8K events, monitored on a daily basis through our managed security services. We have largely been using Automation for Cloud security, and Level-1 SOC teams. We have successfully deployed AI-based cyber defence solutions, IAM & PAM solutions for large banks in ME, and healthcare consortiums in the US

Intelligent Security Operations

Over the years, the number of Cyber Security threats, Hacking incidents and Data Breaches have been increasing exponentially. They are also becoming increasingly complex to deal with, despite the offensive and defensive strategies used by SOC teams. With the industry facing a real shortage of Cyber Security professionals, and the growth of complicated hacking techniques, such as obfuscation, polymorphism, and others, it is becoming a formidable challenge to identify and protect from malicious attacks.

To tackle the situation, advanced threat analysis algorithms and threat mitigation must be devised, apart from upgrading system immunity. Currently AI in Cybersecurity is seen as a double-edged sword, due to its evolving maturity. As part of Managed Service contracts, GAVS Cybersecurity Center of Excellence (CoE) is closely working with a broad range of AI-led Cybersecurity vendors, experimenting with their products, evaluating their threat mitigation & response postures with simulated use cases, and challenging them.

GAVS offers a vast variety of information security services including Managed Detection and Response (MDR), Cloud Workload protection, Dev SecOps among others. With our continuous efforts to make SMART Machines first, we are developing use cases and proof of concepts for automated incident detection and response. We are also exploring and offering semi-AI led cyber threat defense to our managed security services customers. Few of our practices include



AI to drive down noise

AI provides instant insights to help fight through the noise of thousands of daily alerts, drastically reducing response times



ML for Malware

Exploring Machine Learning algorithms to compliment anti-malware solutions, and circumvent threats posted by malware



AI to detect & respond to Known Cyber Attacks

Faster response to stealthy attacks that can fly under the radar, and better driven through SOP driven Automation



Advanced Analytics

to improve human analysis, operationalize Security Intelligence & Autonomous identification of threats

AI & Automation can help you streamline daily operations, as well as to integrate security into processes, applications, and infrastructure from the start. In fact, full deployment of Security, AI and Automation can have the following benefits

90% Fewer recovery hrs from security incidents	25% Increased efficiency in IT security teams	99.9% Accuracy in 'spot and stop malware attacks'	95% Reduction in the average cost of a security breach
69% Increased speed in analysing threats	64% Accelerated containment of infected endpoints	60% Identification of application security vulnerabilities	50% Faster breach detection

AI-driven Cybersecurity Systems can generate One Million Malware Samples a day. Surely, an impossible task for any Security professional

The rise in Digital means a rise in Agile Networks

As enterprises launch more digital projects, the demand for agile and programmable networks rises

Key drivers for Network Automation



Improved Agility and Responsiveness

Saves time and enables rapid deployment and scaling of network resources



Enhanced Security & Compliance

Helps in policy enforcement, audit and compliance reports



Lowered Maintenance and Service Costs

Quick deployment of wide-scale image updates, mass configuration changes, optimized WAN loads to save costs



Digital Enablement

Enables the move to hybrid cloud, IoT deployments, Big data analytics



Prevention of Network Outages

Leverages AIOps technique to proactively assess network loads and triggers automated processes to switch networks



Simplification of the Network

Manages virtual switch and virtual context environments to support new cloud computing, SDN, and virtual network deployments

By 2023,

100%

of data center networking operational activities will be automated, which is twice the number in 2019. - Gartner

By 2022,

25%

of data center switch hardware failures will be proactively avoided, due to predictive analytics. - Gartner

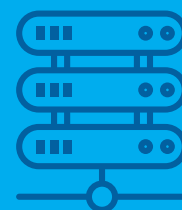
25%

of enterprises have adopted INFRASTRUCTURE AS CODE OR DEVOPS AUTOMATION TOOLS, and consider it essential to their network automation strategy. - Itential

TOP AUTOMATION USE CASES

Data Center Networks

- Automating deployment of Network Fabric
- Network OS Management (OS, Patches, upgrades)
- Network Service Orchestration
- Simple reports and network diagrams



Enterprise Network (LAN, WAN etc)

- Configuration consistency checks
- Automating Network Services
- Network state verification/ Analysis
- Automating IPv6 deployments



GAVS has successfully replaced legacy & aging Network Gears with a cost-effective SD WAN solution for a non-profit organization having 100+remote sites. The organization has experienced 25 to 30% cost effectiveness and increased uptime

Network Agility

There is a huge amount of data being communicated within & outside corporate walls. With the additions of WFH initiatives, wearable technologies, IoT, Cloud Apps and BYOD devices, the traffic has nearly doubled compared to last year's usage. We are living in an era where meetings happen on the fly, and Cloud Applications and Resources need to be constantly available 24x7. As network density increases, the complexities of an enterprise's security posture have also increased. Organizations must shift gears to move away from traditional methods of NOCs.

Speed is not a concern anymore - 5G will be here soon - but optimizing usage, decreasing latency, and improving reliability are what organizations must focus on. An Intelligent Network is what you need, since manual and traditional methods of operating NOCs and managing network workloads will escalate your operating costs, degrade performance and increase the odds of network outages.

GAVS has done significant work in the area of Managed Network services, from Design, Engineering, Procurement and up to Implementation and Support, including the emerging SD-WAN. GAVS is a vendor-neutral service provider and has tested out-of-the-box tools from various leading vendors. Most of these tools do not have full-spectrum capabilities to spot issues and perform quick RCA. A significant amount of time is spent by network professionals in investigation of failures, network performance degradation and identifying the relationships between applications, other network devices. GAVS' Intelligent Network solution combines the best of vendor ecosystem tools, methodologies, and GAVS own Autonomous Network Tools. These help in creating an Intelligent Network for the future and help in Network Planning, Deployment, Bandwidth Optimization, Maintenance, Service Provisioning, and Security Protection.

Our solution are driven by



GAVS Network Topology Mapper

Automatically discovers and outlines the network topology and produces comprehensive, easy-to-view network diagrams



Network Analytics & Prediction

AI-enabled ZIF Platform easily integrates with almost all popular network monitoring tools. The data from these tools are fed into our AI Event Correlation and Prediction Engines to provide a unified view. Also, it reduces noise, expedites RCA, provides precious insights to predict potential failures and for capacity planning



GAVS Agentless Network Sniffer

We also use our own patented Agentless Networks sniffers and advanced telemetry system to gather more system generated and human generated data



Intent-based Network

Captures business intent and uses analytics, machine learning, and automation to align the network continuously and dynamically to changing business needs



Full-stack Network Automation

Automates network resource and service management. Eliminates human errors and helps network team agility

GAVS has embedded AIOps and Automation solutions in all NOC projects, resulting in huge savings in cost, effort & time. Has also helped us realize error-free network operations and faster ways to identify and resolve issues

Hybrid, Multi-Cloud Infrastructure

will become the Standard

All workloads and business requirements cannot be the same. Hybrid Infra caters to unique needs, legacy apps, and diversification needs

Key Benefits of Multi-Cloud Hybrid Infrastructure



Flexibility

Wide range of services



Customizable

Choice of best-of-breed capabilities



Competitive Pricing

Optimum IT expenditure



Multiple Geo Availability

Improves QoS & Hardware diversity



Enhanced Economy

Helps avoid keeping all workloads in one basket



Reduced Data loss & Downtime

Eliminates single point of failure

By 2022,

90%

of enterprises that purchase public cloud IaaS, will do so from an integrated IaaS and Platform-as-a-Service (PaaS) vendor. - Gartner

By 2020,

41%

of enterprise workloads will be run on public cloud platforms. Another 20% will be private-cloud-based. - Forbes

Through 2022,

28%

growth in enterprise IT spending for cloud-based offerings will be faster than growth in traditional (non-cloud) IT offerings

By 2021, over

75%

of midsize and large organizations will have adopted a multicloud and/or hybrid IT strategy

GAVS has helped one of the largest manufacturers in the world to seamlessly migrate 200 plus legacy applications from on-prem to cloud, using our hybrid cloud orchestration platform

Environment as a Service

The rate of adoption of Hybrid Cloud Strategy is growing largely because of the additional security and compliance it offers. Cost savings from on-premise IT Investments, Disaster Recovery, Data Storage/Archival, Application Development, and Testing are areas where organizations are opting to use the cloud to complement their on-premise systems.

One Click Infrastructure Deployment

Blueprint based stateful orchestration platform allows Dev & Ops teams to deploy portable topology to any target! Just choose to deploy to AWS, Azure, OpenStack or physical machines

One Click Application Deployment

Deploy your applications on the selected cloud using our single click deploy feature, or upgrade existing deployments

User Friendly Topology Design

Design portable topologies/blueprints using a simple drag & drop editor

This results in deploying apps faster, managing systems more efficiently, and reducing complexity. GAVS offers a flexible Environment-as-a-Service (EaaS) delivery platform to orchestrate, automate, control and optimize infrastructure and workloads, in on-premises and multi-cloud environments, with clear focus on bringing agility to services

Public/Private Infrastructure Management

Provide self-service on pre-configured infrastructure resources (cloud, bare metal, already running services) with a comprehensive system of access & rights management

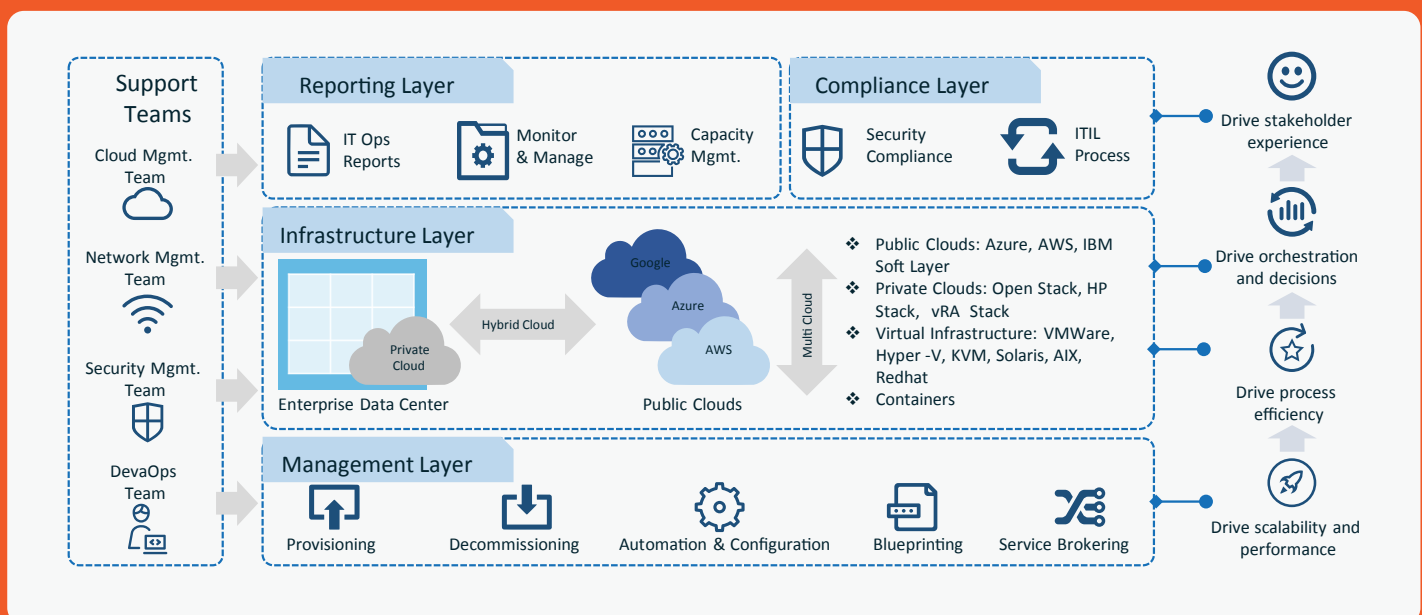
Self-Service Component

Allow your IT teams to access IT resources directly with fine-grained access & rights management

Open and Extensible

Add your own DevOps components, add support for your own custom cloud, or leverage APIs. Integrate with any of your favorite ITSM or management tools of your choice

GAVS Cloud Management Framework



DevOps

is becoming the
standard way
of working
for businesses

DevOps is being increasingly adopted, due to the high complexity in the modern day IT landscape, caused mainly by the diversity in software and hardware systems.

The future of DevOps



Value Stream Management

DevOps will continue to improve and be hyper-focused on value streams, value stream management and product-centricity



Greater Agility

The build, test, and deploy components of DevOps will become top priority in 2020



Microservices will fuel DevOps

2020 will find that Microservices and DevOps, when teamed up together, offer greater agility and operational efficiency for the enterprise



AI in DevOps

AI and machine learning will speed up DevOps Quality Analysis. Infrastructure automation will get smarter, with more AI and ML



Value vs Speed

A lot of organizations have ventured into the Agile and DevOps paths, to improve their delivery speed



DevOps turns to Software Intelligence

We will see many DevOps teams applying software intelligence capabilities, and integrating them into DevOps toolchains for regular comprehensive structural checks

By 2023,

40%

of professional workers will orchestrate their business application experiences and capabilities, like they do their music streaming experience

A steep

63%

improvement in quality of software development, in organizations that have adopted DevOps practices in their SDLC lifecycle

By 2023,

40%

Of DevOps teams will utilize AIOps capabilities - Gartner

Almost

10%

Y-o-Y increased adoption of DevOps practices among industries. This rose to 17% in 2018 as from 10% in 2017, and is on an accelerated pace for 2020 and beyond

GAVS' solution improved Time to Market ratio by 3:1; reduced IT Spend by 45%; and increased System Scalability by 70%, for a large Managed Care Consortium

DevOps Automation

Faster Time to Market is the need of the hour for most enterprises, and technology is expected to fuel that, leveraging lean principles, new age innovative solutions and rapid product releases. DevOps is one such approach based on lean and agile principles, that emphasizes constant communication between business stakeholders, software developers, operations and quality assurance departments. The DevOps solution aims to deliver products/services in continuous iterations, that would enable businesses to seize market opportunities quickly.

GAVS' Services offer comprehensive tools and guidance that you would need to implement an effective DevOps discipline. The solutions and frameworks are based on performing gap analysis, defining processes and tools, implementing Continuous Integration Continuous Delivery (CI/CD), Continuous Testing and Environment Provisioning.

Continuous Integration /Deployment (CI/CD)

This enhanced DevOps process requires maximum automation of all steps of the development process. From user story gathering to Continuous Development, Continuous Build, Continuous Deployment and Continuous Monitoring.

GAVS DevOps Platform (GDP)

A cloud-based platform for continuous development, testing, and releasing of code that can be provisioned on the click of a button. GDP is a blueprint for DevOps/Continuous Delivery concepts, principles and best technical practices.

DevOps CI/CD Automation Tool (zlrrus)

Homegrown opensource based DevOps platform responsible for Automated Provisioning, Configuration & Release

ZIF - AIOps Monitoring

Intrusive Proactive Application and Infrastructure Monitoring Platform

GTOps Test Automation tool

Automated scripts generation, automated tests & reports

Analyze and Predict

Central dashboard with predictive analytics, RCA & centralized issue resolution

With more automation, more DevOps benefits will be delivered. GDP & Zlrrus platforms use Jira, Confluence, Chef, Git, Selenium Grid, Elasticsearch, OWASP ZAP, Logstash, Jenkins, Kibana, Gerrit, Docker, Cucumber, Ansible, SonarQube, Sensu and SoapUI for CI/CD . Many other tools can also be used in GDP, for ex; Puppet, Terraform, PaaS.

Primary Features

- Continuous & comprehensive code quality inspection at multiple stages
- CI tightly integrated with the release pipeline
- Code coverage metric tracking
- Automated builds
- Automated deployments

Extended Features

- Maximum reuse of existing tools
- Automated provisioning across multiple, hybrid environments
- Automated configuration
- Completely automated release cycle using zlrrus
- Unified dashboard to monitor & control entire release cycle

Businesses must
**accelerate
the shift**
to comprehensive
continuous software
testing in order to remain
competitive

In the new world of digital business, companies who deliver differentiating customer/user experiences through software have the clear competitive advantage.

Software Testing Trends to look out for, in 2020 and beyond



Test Automation to ramp up quality for Agile & DevOps processes



User Experience to take a leap with usability testing



AI & ML in Testing to go mainstream



Demand for Cyber Security Testing on the rise



Performance Testing to shift towards Performance Engineering



Quality of data to be verified before testing is initiated for Big Data

Autonomous Testing

Ability to create test cases and execute them without human intervention. AI & ML are the technologies being used to make this a reality.

DevTestOps

Aims to ensure that changes in the system will be deployed in production not only without delays, but also without any compromise on quality.

Multi-Experience Testing

Testing should focus on user experience, UX design. Testing should cover multiple development platforms such as chat, voice, augmented reality and wearable experiences, in support of the digital business.

AI & ML

2020 will see organizations adopting such tools to improve the quality and reliability of test automation

GAVS has helped one of the largest publishers in the world to realize faster Time To Market, with rigorous Test Automation. The benefits are: optimization of test and release cycles by 40%, time on regression testing reduced by 80%, Time-to-Market shortened by 30%

TestOps - Testing Transformation

The size and complexity of software applications are increasing like never before. Enterprises are looking for faster release cycle and defect free quality software, to accelerate time to market. Continuous Testing is the process of repetitive testing of a product through execution of automated tests, starting from build creation to system testing and finally to product release.

GAVS has a strong presence in the Software Quality Assurance (SQA) space, certifying & authorizing applications developed by several third-party organizations & customers. GAVS' portfolio in this space encompasses manual testing, performance testing, test automation, security testing, and QA consultancy.

GAVS has a fine-grained approach for test automation, standardized over time, based on its past experiences in providing test automation in alignment with our clients' business principles – 'defect free applications at all times'. GAVS' approach to addressing client requirements is through a robust Center of Excellence (CoE) comprising of standard & reusable nuggets, driven and managed by a team of nearly 200 FTEs specialized in functional, automation and performance testing.

GAVS' GTOps testing services include End-to-end test automation practices, which are intended to integrate QA into existing fast-paced Dev and Ops processes, to create continuity while maintaining faster development cycles. GTOps is one platform for all Test Automation projects. GTOps also uses Test Vault - Re-usable assets / accelerators for test planning & approach, automation test approach & templates/ guidelines to drive productivity.

Primary Features

- Unit test cases for applications
- Integrate with JUnit and Ant as applicable
- Integrate unit testing with Bamboo
- Service level test automation
- Test Reports: code analysis report, code coverage report, automation test report etc.

Extended Features

- Code reusability
- Auto generation of test scripts as the code grows
- Technology agnostic unified automation
- Parallel execution on multiple machines
- Schedule jobs & report generation

AI-powered Continuous Testing

GAVS leverages its partner ecosystem, and some of its best practices to drive AI-powered Continuous Testing initiative

- Generate test cases based on user behavior
- Recognize changed controls more efficiently than a human, and with constant updates to its algorithms, even the slightest changes can be caught
- Check the quality of the app on various parameters such as performance, stability and security, within a short time period
- Defect Analysis: The AI engine is trained to use past learnings to get through the standard defect analysis process

Summary

Real success lies in sustaining the crisis and adapting as needed

Covid-19 will profoundly change the way businesses are run, and fundamentally alter management practices. Businesses need to realize that continuing their traditional ways of operations will push them several steps behind their competition.

GAVS believes that '**Digital Transformation**' is a journey, and is a continuous process that cannot be confined to a fixed time period. It is a combination of change in technologies used, and acceptance & adoption, where organization culture and management practices play a significant role. With nearly a 2-decade experience in managed infrastructure services, GAVS has delivered a significant number of transformation projects, including complex data center migrations, virtualization and cloud engineering.

GAVS realized the importance of the Digital Journey, and kick-started this decade with huge in-house investments in 'AI, Automation and Analytics' and has seen both successes and failures while adopting them.

FAIL FAST is the new age mantra for our engineers and data scientists working in R&D. With the strategic adoption of the MACHINE FIRST approach, GAVS has also recognized the excellence of third-party vendors in their respective spaces. GAVS Technologies acknowledged their competencies, tested their know-hows rigorously through common industry use cases, and inducted them into our DIGITAL TRANSFORMATION SERVICE OFFERINGS partnerships, to help customers sustain the crisis through best-of-breed technologies and tools.

GAVS is not just another product vendor who has emerged out of the COVID situation. GAVS' solutions and services are time-tested and backed by years of experimentation in R&D, technical expertise and delivery experience. GAVS is a place where engineering and services go hand in hand.

We are **FLEXIBLE**. We are **NIMBLE** in our approach, and would like to be the true DIGITAL PARTNER of choice for our customers.

Innovation @ GAVS



Dedicated team of 100+ FTE involved in R&D in developing:

- Intelligent & Evolving AIOps Platform through re-architecture and ability to handle massive data volumes
- Automation Use Cases
- Predictive ML Algorithms
- Agentless Monitoring Solution
- Agentless Network Sniffers
- AI-aided Voice Assistant
- Cloud Orchestration Platforms
- Virtual Desktop Infrastructure
- Blockchain Solutions

8 Patents for Innovation

- AI & ML Algorithms, Blockchain



Awards and Recognitions



- ★ The American Business Awards Stevie Winner, in 2019 and 2020
- ★ 2020 BIG Innovation Award by the Business Intelligence Group
- ★ 2 Awards at Digital Enterprise Awards & B2B Marketing Awards 2019
- ★ Best Futuristic BT Solution Award at GEC Awards 2019, Dubai
- ★ Recognized by Leading IT Analysts & Magazines: Gartner, Everest and Market & Markets

About ZIF

ZIF (Zero Incident Framework™), is an award-winning AIOps platform for IT Operations. ZIF delivers business outcomes by leveraging unsupervised pattern-based machine learning algorithms. Infrastructure and application telemetry data are aggregated, correlated, and potential failures are predicted. To enable faster resolution and better user experience, ZIF deploys intelligent bots for proactive remediation. Developed by GAVS Technologies (www.gavstech.com), ZIF is available as an on-premise and SAAS solution.

www.gavstech.com

www.zif.ai

