VIA AIOps

IT OPERATIONS -

THE BUSINESS ENABLER

THE CHANGING ROLE OF IT OPERATIONS

As business becomes more digital, availability and performance become more visible.

The number of service outages are increasing. The standard "cost" of an outage was typically quantified by tracking IT costs. Today the "cost" of an outage is determined by business revenues lost because a service was not available.

34% **Uptime Institute's 2019 Global Survey: 34% of organizations that experienced an IT service outage or severe service degradation in the last year and half had also previously reported an outage or severe service degradation in the last three years.**

$5.6m **Digital Enterprise Journal found that outages impacting revenue cost a business on average $5.6 million dollars.**

No matter how you measure, IT is highly motivated to maintain service levels and avoid incidents that disrupt the business and have a negative impact on the customer experience. Unfortunately, hybrid infrastructures and the growing number of applications and explosion of data are making this level of service more difficult to achieve.

Today, businesses rely on IT to keep infrastructure - network and applications - available and performing.

MANAGING COMPLEXITY - THE IT OPS CHALLENGE

Most organizations are running cloud environments in addition to their on-premise data center operation. To manage the complexity, IT has been adopting more technology. Recent research conducted by the Digital Enterprise Journal indicated that 70% of operations teams use more than six tools for performance monitoring and additional tools to manage a hybrid environment - where there are workloads running on Amazon, Azure, Google or fit for purpose clouds.

Traditional, domain specific monitoring tools can't ingest all the data, process all the data and track performance issues that cross domains. This places a burden on engineers to manually analyze and correlate data across domains to uncover the root cause. Given the time constraints and the volume of data, this typically results in extended downtimes and frustrating business interruptions. Consider the impact of DevOps- enabling rapid release of applications and application enhancements - imposing an additional burden on Operations.

> *The complexity and scale of modern data centers, coupled with the rapid speed of change in IT environments, is becoming too great for humans to effectively manage.*
>
> - Uptime Institute, 2019

BUSINESSES DEPEND ON IT OPERATIONS

Today, the volume, velocity and variety of data requires more than human intelligence to automate the detection and remediation of problems and the correction of capacity shortfalls before they impact the business. Ideally, IT needs to adopt technology and develop processes that enable prediction and prevention of incidents most likely to impact the business. **The facts are overwhelming - enhanced visibility and advanced analytics aided by machine learning enables IT to automate**. Automation reduces downtime, improves staff productivity and increases IT effectiveness.

IT Automation enables business growth and profitability. So, where do you start - what do you need?

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WHEN THE BUSINESS TURNS TO IT OPERATIONS - IT OPERATIONS TURNS TO AIOps

IT operations teams are now bombarded with thousands of notifications and incidents reported from a multitude of devices and monitored systems. Lots of data everywhere creates a problem that AIOps can solve. Cross domain correlation of data is key to achieving uptime goals. To be a business enabler, IT Operations needs new solutions and AIOps is one to consider.

What do we know about AIOps?

- First, AIOps provides **high speed ingestion** of streaming or batch data from diverse data sources at scale.
- Second, AIOps employs **machine learning** (ML) and advanced analytics to perform important tasks in less time. Tasks include performance analysis, anomaly detection, event correlation and analysis, and IT service management.
- Third, by integrating ML and artificial intelligence AIOps will **automate normal operation workflows** including infrastructure and application monitoring processes.
- Fourth, AIOps provides **powerful visualizations** that operations would use to pinpoint issues and take corrective actions.
- Finally, AIOps is critical for organizations considering a **self-healing model** for IT. In this context, self- healing means taking remedial action without human intervention.

IT Operations using AIOps is better positioned to enable new business initiatives and improve the customer experience.

WHERE TO START

1 Evaluate and select AIOPs for your business needs

AIOps applications align to specific use cases and enables automation across all layers of service delivery to improve the customer experience and optimize operations. Key capabilities to look for in selecting AIOps applications include:

Data scope - Ingest streaming data and historical data from a wide variety of sources.

Visualization - Holistic view of services; correlating data across silos.

AI and Machine Learning – Use analytics to separate noise from signals indicating a service impacting problem. Trusting automation requires ability to see and understand the analysis. Ability to see in plain language the impact of analysis on prescribed automation.

Ease of integration – Includes ingesting data and pushing prescription and results to incident management system – or selected system of action.

2 Start small to build organizational confidence

Select your use cases carefully. Measure and demonstrate the capabilities of the platform. Selection of early use cases should be used to win over reluctant staff and build in-house champions for extending the platform. The key is to start small and demonstrate success, capturing knowledge and then iterating.

3 Be a champion for change - support the breakdown of technology silos

AIOps tears down organizational silos and leads to faster mean time to resolution (MTTR), greater availability and performance, and more proactive response - ultimately resolving business issues. But executive change agents are needed to support and reinforce the cultural change that breaks down these silos.

By applying AI and ML, organizations can now get insight into how activities at any point in the technology stack (at the infrastructure, network or application layers) affect availability and performance.

In a recent Vitria podcast, Tiran Dagan, Cognizant Chief Digital Officer for Media and Communications explains

"...It's one thing to point out that there is an alarm on one part of the network infrastructure that needs to be fixed. It's another to anticipate problems in the network and understand the impact the problem will have on revenue generating operations to properly plan and prioritize the proactive action."

Adding Additional Use Cases

It's critical to add additional use cases on an ongoing and consistent basis leveraging in-house champions for use case recommendations.

Begin tackling performance issues that impact a wider scope end-to-end business process. This moves IT operations from a cost center to a strategic partner within the business.

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VIA AIOPS: IMPROVING THE CUSTOMER AND SERVICE EXPERIENCE

VIA AIOps increases efficiency and operational effectiveness while lowering costs. VIA provides insight to alerts that impact the customer with service oriented, analytics as a service architecture.

VIA provides **ecosystem observability** – taking application performance, network and infrastructure alerts and correlating them to provide a holistic view of the service. VIA excels at handling multiple types and sources of data at scale and in real-time time. It provides the **explanatory AI** to support multi-layer correlation and automation of response and remediation across the service levels.

Automation is key to operational effectiveness. Operations teams are more likely to trust automation when they see in plain language how alerts are analyzed and understand the outcomes of applying automation. VIA sends prescriptive responses to your remediation platform of record.

The VIA AIOps platform transforms operations from a cost center to a business enabler. Here's how!

- ***Real Time operational visibility*** of end-to-end processes.
- ***Proactive problem prevention*** through predictive analytics, machine learning and artificial intelligence.
- ***Automatic restorative response*** where feasible and enables rapid intervention through notification where automation is not yet effective.
- ***More effective predictive maintenance*** that extends asset life, improves operational efficiency, and prevents downtime.
- ***End-to-end service incident management*** support.

VIA brings the power of artificial intelligence and machine learning to address the complex issues that impact cross functional services. VIA provides **experience assurance**, enabling businesses to know and act on problems *before* customers report service interruption.

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All businesses benefit when IT Operations adopts AIOps to automate workflows and processes.

The following table summarizes how Operations for a large Communications Service Provider enabled the business.

SITUATION	SOLUTION	OUTCOMES
Network performance degradation One section of the Broadcaster's network supporting Video on Demand began to fail. Devices began to receive authentication errors and video streams were taking longer to load.	VIA identified the Content Delivery Network (CDN) problem 45 minutes before the customers started reporting the issue. The Network Operation Center (NOC) was notified within minutes after the problem first manifested itself. Interactive Voice Response call deflection was instantiated for the affected service and region to inform the customers of the issue and reduce the load on the call center.	• Identified previously unknown CDN resiliency issues. • Notified NOC well before the customers noticed. • Instantiated IVR call deflection to notify customers and reduce the call center load. • Cut in half the time to detect the problem and initiate action.
Change impact analysis Manual processes used to gather data on populations of subscribers that were impacted by the installation of new fiber optics to reduce node size. Impacting tens of thousands of subscribers, the process was arduous and error prone. Additionally, the delay between when the change occurred and when the reports could be generated was unacceptable.	VIA quickly creates and analyzes dynamic populations and rapidly and accurately identifies how service delivery and subscriber-driven changes impact the subscribers' experience. This enables rapid proactive action to be taken to address problem areas.	• Monitoring of affected populations' subscriber's experiences in real-time. • Alerted appropriate staff to degradations in the subscribers' experience. • Identification and avoidance of nearly 250,000 avoidable truck rolls in the first year.
Accelerating time to revenue A service provider's objective was to reduce time to revenue by accelerating and optimizing the customer onboarding process and the quote-to-bill process for both end-user clients, as well as wholesalers.	Subscription based VIA to: • Ingest and synthesis data across multiple sources and monitor internal processes in real time. • Synthesize and automate manual workflows and processes. • Autonomously detect anomalies and create incidents. • Find nuanced problems and contextualized insights to continuously improve performance.	• Optimized three mission critical internal systems for provisioning, quoting, and billing to accelerate time to value and improved their customers' experience. • Initiates action when anomalies are detected. • Reduced operational costs. • Reduced missed orders by 12% and shortened the quote-to-bill cycle by an average of 3 days.

For more information on AIOps, Vitria, and the VIA AIOps for Improved Customer Experience, visit our website at **www.vitria.com/AIOps** or **contact us** for a VIA demonstration.

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DISCOVER MORE AT **vitria.com**

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ABOUT VITRIA

Move from Analyzing Data to Automating Actions. Learn how VIA AIOps enables reliable automation across all layers of service delivery to improve the customer experience and optimize operations. VIA AIOps provides total *ecosystem observability and explanatory AI* to increase confidence in automation. Automation minimizes the number of incidents that impact service by correlating data across operational silos. Using VIA AIOps, you can offer your external customers experience assurance – know and act on problems *before* your customers report service interruption.

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