



SERVICE OPERATIONS - THE BUSINESS ENABLER

SERVICE OPERATIONS - DELIVERING VALUE TO THE BUSINESS

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

New cloud services are increasing in numbers and the remote workforce phenomenon, caused by the pandemic, is having an adverse effect on service outages. Typically, the cost of an outage was quantified by referencing IT costs. Today, the “cost” of an outage is quantified by business impact. How much revenue was lost because a service wasn’t available? What was the impact on customer churn?



Uptime Institute’s 2020 survey reports bigger, more frequent outages that are more painful to business. Greater visibility needed for mission-critical workloads in the public clouds. The datacenter staffing crisis is worsening.



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

Service Operations is highly motivated to maintain service levels and avoid incidents having a negative impact on the customers’ service experiences. Increasing numbers of monitors and isolated functional silos are making desirable service levels more difficult to achieve.

Service Operations is performing a critical role. Service Operations requires an AIOps solution - operations enabled by AI.

MANAGING COMPLEXITY

Recent research conducted by the Digital Enterprise Journal indicated that 70% of operations teams use more than a dozen tools for monitoring enterprise systems and additional tools if there's a hybrid environment.

Traditional, domain specific monitoring tools ingest a portion of the data, but overworked engineers are left to correlate data between functional silos looking for a root cause. Given the time constraints and the volume of data, this typically results in extended downtimes and unhappy users. Consider the impact of DevOps. Rapid release of applications and services create a change management nightmare - more unexplained failures and unplanned interruptions.

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

BUSINESS GROWTH AND PROFITABILITY DEMANDS AUTOMATION

Today, the volume, velocity and variety of data requires more than human intelligence to automate the detection and resolution of service impacting issues. Effective organizations are adopting technology and changing workflows that enable prediction and prevention of incidents most likely to impact service. **The facts are overwhelming - observability, explainable AI enables automation.**

Automation enables business growth and profitability. How do you start?

EFFECTIVE AND EFFICIENT SERVICE OPERATIONS REQUIRES AIOPS

Functional operations teams, in management silos, are bombarded with thousands of alarms reported from a multitude of devices and monitored systems. Lots of data everywhere creates a problem when root cause analysis and accelerated incident response is the desired outcome. How does implementing AIOps create value for Service Operations and the business?

What do we know about AIOps? Not all solutions are equal, but ideally what should you expect from an AIOps solution?

- First, AIOps must provide **high speed ingestion** of streaming or batch data from diverse data sources at scale.
- Second, AIOps should employ **machine learning** (ML) and advanced analytics to perform important tasks in less time. Tasks include anomaly detection, event correlation and analysis, and IT service management.
- Third, by integrating ML and artificial intelligence AIOps should **automate normal operation workflows** – moving the workflow from noise to action and closing the loop and enabling incident resolution.
- Fourth, AIOps provides **detection and correlation** to reduce the noise and then evaluate severity and impact.
- Finally, AIOps enriches incidents by focusing on the cause, **prescribing a fix** or action to a fix agent and, in some cases, perform remedial or notification action.

WHERE TO START

1 Evaluate and select AIOps for your business needs

AIOps applications align to specific business and 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.

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

Explainable 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 Enrich Incidents to Evaluate Severity and Impact - Includes incident declaration and causation required for reliable incident prescriptions.

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 of resources, 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.

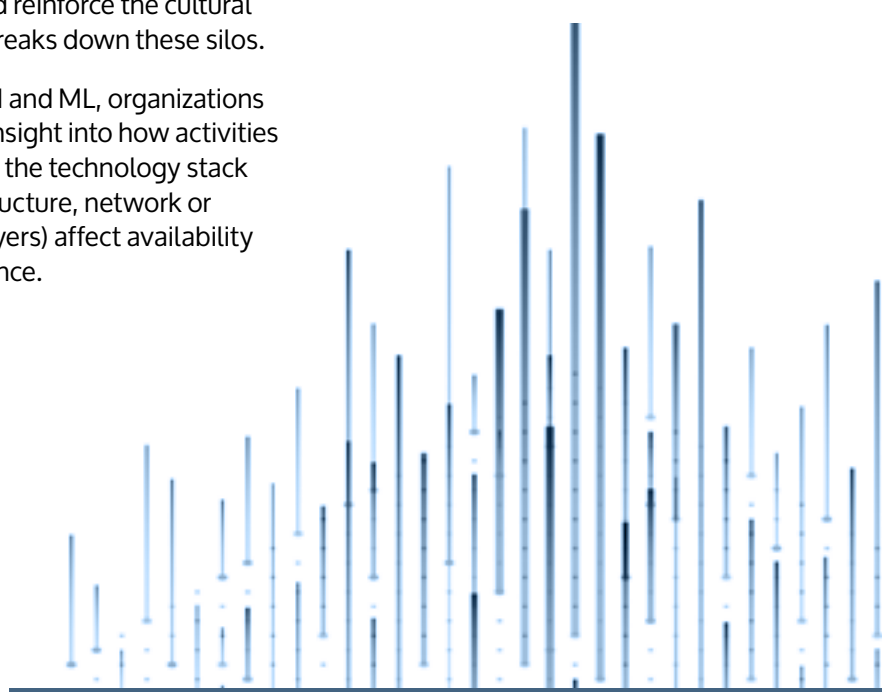
By applying AI and ML, organizations can now get insight into how activities at any point in the technology stack (at the infrastructure, network or application layers) affect availability and performance.

4 Add 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.

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."



VIA AIOps: IMPROVING THE CUSTOMER AND SERVICE EXPERIENCE

VIA AIOps is a next generation AIOps application providing automated analysis and remediation of customer impacting incidents across all layers of service delivery. VIA AIOps improves the customer experience and optimizes operations.

VIA AIOps enables Operations to trust automated root cause analysis and remediation by providing total ecosystem observability and explanatory AI. VIA AIOps not only enhances the customer experience, but it also reduces operational costs by providing noise reduction, correlation, and intelligent automation across operational silos.

Automation is essential to improving the customer experience. More organization are choosing VIA AIOps to automate response and resolution. VIA AIOps improves operational efficiency, enables rapid response to anomalies and issues impacting the availability of applications and services most critical to the customer experience. VIA AIOps can be deployed in days from the cloud, on premises or in a hybrid operating environment.

VIA AIOps is built on three key processes: observe, analyze, and act.

Observe: VIA not only ingests a wide variety of data sources, but relying on ecosystem observability is able to enrich and structure massive real-time data feeds.

Analyze: VIA detects anomalies in metric streams, correlates anomalies and alerts and then evaluates and prioritizes them.

Act: VIA relies on root cause and root issue analysis and prescribes likely fixes to likely fix agents or next best action. VIA performs remedial or notification action and closes the loop by providing incident feedback.

VIA AIOps is built on an open core foundation which scales to billions of analyzed data points. VIA's observability and real time analytics contextualize and correlate ingested data. VIA AIOps reliably discovers root cause and analyzes the how and why of system behavior to enable active response. Because VIA is able to contextualize problems to identify customer impact and based on causation is able to provide prescriptions – actions most likely to resolve the issue and providing visibility across the operations workflow.

All businesses benefit when Service 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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ABOUT VITRIA

Move from Analyzing Data to Automating Actions. Learn how VIA AIOps enables reliable automation across all layers of service delivery hierarchy to improve the customer experience and optimize operations. VIA AIOps provides total ecosystem observability and explainable 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 by knowing and acting on problems before your customers report service interruption.