



**AIOps:** DIRECT  
ROUTE TO  
SELF-HEALING IT



CIOs are choosing AI for more automation to deal with unavoidable complexity and achieve operational efficiency. AIOps, with Intelligent automation, dramatically improves operational efficiency and enables IT to implement self-healing capabilities.

Gartner reports that most enterprise CEOs, are well on their way to implementing and maturing their digital transformation initiatives. Most CIOs find themselves still spending 70 percent of their budget and staff just keeping things up and running, according to a Deloitte survey. Gartner estimates that number to be closer to 85 percent. Many businesses report multiple transformation initiatives. IT has gained a prominent seat at the innovation and strategy table but are dealing with talent gaps.

**Talent Gaps:** Operating environments have become increasingly complex and change rapidly. Today's infrastructure is heavily virtualized and spread across hybrid environments in the cloud and multiple data centers. Edge devices along with the data they generate grow exponentially. Gartner estimates that data volumes generated by IT infrastructure and applications are increasing two to three-fold each year. The demand for skilled and experienced IT staff for data analytics, data management, IoT, mobile, cloud native development and cybersecurity continues to exceed supply. For IT to keep pace with the innovation and transformation of the businesses they support, organizations look to more automation and AI to free up resources for new projects.

**Business as usual:** In spite of these challenges, IT is still expected to rapidly resolve incidents, respond to requests and improve performance without adding staff members to teams that are already stretched to the breaking point. CIOs can increase productivity and improve efficiencies across operations by adopting AIOps solutions. Even more compelling is the win when organizations can pair closed loop automation with AIOps to get one step closer to self-healing IT.

# THE ROADMAP TO SELF-HEALING WITH AIOps



**Self-healing is defined as the ability to proactively monitor and identify a potential variance from its standard parameters, validate it with a high degree of confidence and implement corrective actions or workarounds to resume operations and performance without human involvement or intervention.**

A wide-scope AIOps platform integrated with automated intelligence and embedded within IT operations service management can move IT much closer to a self-healing operating environment.

Let's review each of the functions required for self-healing and what AIOps can deliver against these functions. Each function has value and that value compounds as self-healing capabilities mature. Each function can be viewed as a milestone on the journey to self-healing: Proactive monitoring, anomaly detection, root cause discovery, and automated closed-loop automation.

**Destination Self Healing - Turn by turn directions start here!**





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## 1st Milestone: Proactive Monitoring Across the Infrastructure, Application and Business Process

Self-healing requires the ability to ingest data from multiple sources, support advanced analytics, and map incidents or business transactions to their applications and the infrastructure that supports these applications. And, all of this must be done in real-time to effectively manage mission-critical processes.

According to Gartner, the number of disparate infrastructure tools required to manage workloads limits the ability to conduct discovery, monitor performance and obtain key insights. Gartner suggests a need for cohesive management for the technology assets supporting business workloads.

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Digital Enterprise Journal research suggests that 70% of enterprises use more than six monitoring tools and 41% have 10 or more. Domain specific monitoring tools make it very difficult

to understand performance impacts across a business process and result in longer mean time to repair and potentially lost revenue and dissatisfied customers.

Implementing an AIOps solution, performance can be monitored and addressed across service-delivery layers from the infrastructure through the application and provide real time operational visibility of end-to-end processes. With AIOps, the IT teams can leverage artificial intelligence and machine learning to analyze and contextualize large volumes of systems data from multiple sources to provide a single pane of glass into the health of the entire infrastructure supporting a business process.

### Proactive monitoring across a business process results in:

- Faster identification of root cause
- Shorter resolution time
- Improved staff productivity
- New insights that can improve overall service delivery and customer experience



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## 2nd Milestone: Anomaly Detection and Root Cause Discovery

IT operations is bombarded with an overwhelming influx of false positive alarms that drain productivity and delay response time to react to real problems. This is exacerbated with virtualization and cloud-based workloads where the lack of direct visibility into network components make it more difficult to detect problems and determine which services and customers are being affected.

When choosing an AIOps platform insist on statistical methods, dependency mapping, predictive analytics and machine learning to detect relationships across entities, detect patterns, and uncover meaningful anomalies. Operational teams use these to uncover problems and detect future performance issues. For example, dimensional analysis uses machine learning, the association of attributes-to-events across a given time-series to identify potentially impacted entities.

If the root cause of a problem is not addressed and resolved, the problem resurfaces. Repeatedly chasing and fixing symptoms puts a burden on resources. Frequently, the true problem is located outside the visibility and control of the support staff attempting resolution. Restricted visibility extends incident cycle time and increases the number of service tickets.

AIOps brings AI and machine learning to operations, incorporates predictive analytics into the diagnostic process and integrates visualization tools to accelerate diagnosis of root cause.

### Combine proactive monitoring, anomaly detection and root cause to achieve:

- Reductions in avoidable service incidents and performance issues by pinpointing problems and enabling proactive resolution.
- Improvement in staff productivity by reducing false positives by 80% or more and raising accurate operational alarms.
- Improvement in overall service and business process performance.



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### 3rd Milestone: Closed-loop Automated Action - Self-Healing

The goal for operations is to avoid performance issues by automating response. Automated closed loop response makes more effective use of highly skilled staff and accelerates response, prevents performance degradation and circumvents downtime. Self-healing response is transformational providing exponential savings in IT operating costs.

Based on the nature of the identified risk, the analytics can trigger corrective automation by executing a simple script, engaging the business process-management systems or simply direct repair by maintenance technicians. Here are some examples of automated responses with and without human intervention:

#### Automated response with human intervention

- By monitoring and analyzing events in real time and aggregating correlated anomalies/alarms into meaningful service incidents, qualified service incidents are delivered to the appropriate response team for corrective action.
- Response teams are presented with the methods for resolution by correlating real time events with historic events and the service knowledge base.

#### Automated response without intervention

- Devices monitored in real-time and device failure detected: Validation of failure confirmed, and action taken based on logical rules and intelligence derived from prior events. Device is reset and a notification of failure provided.
- Monitor utilization of network bandwidth and when threshold is exceeded over a period increase bandwidth then reset when utilization returns to a normal state.

#### Closed loop automated action and self-healing delivers transformational change.

- Improves uptime and overall service or process performance
- Solves incidents before they impact business activities
- Avoids customer experience or service/production disruption
- Dramatically reduces service costs

# VIA BY VITRIA, THE AIOps PLATFORM EXPEDITES RESOLUTION

VIA is a wide-scope AIOps platform with the scale, flexibility, and speed needed to help IT operations to increase effectiveness, efficiency and move to closed-loop automated response – the roadmap to self-healing.

Unlike other AIOps platforms, VIA excels at handling multiple types and sources of data at scale and in real-time. It provides the analytic capabilities to support multi-layer correlation and resolution from the infrastructure to the application and service layer. IT operations depends on the productivity of cross functional teams and VIA provides full-stack visibility, actionable insights, and real-time active response to achieve transformational change.



VIA, Vitria's AIOps platform offers an agile, fast and simplified approach to AIOps and closed-loop automated action. VIA's AIOps platform and low code environment deliver business value 10x faster than alternatives.

To reduce the number of false positives and the resulting time absorbed in their evaluations, VIA leverages a combination of advanced anomaly detection and machine learning to deliver a single intelligent alert. VIA also integrates with downstream systems to eliminate redundancy by interrogating downstream systems to check for existing alerts on the same population base.

Through improved visualization tools, machine learning, alarm correlation, and predictive analytics, VIA accelerates the determination of root cause and prioritizes actions to minimize impact.

## With the VIA AIOps Platform:

- Baselines are generated on-demand for immediate visual representation of anomalies.
- Shared characteristics of any group of events can be analyzed to determine what the events have in common.
- At-a-glance insight gained into key performance indicators (KPIs) and process exceptions highlighted.
- Processes can be managed and visualized end-to-end in real time by correlating process data that resides in underlying applications, databases, and log files.
- Citizen developers are enabled with a low code environment using an extensible library of reusable drag and drop building blocks.
- Asset life can be extended with reliable predictive maintenance.

Implementing the VIA AIOps platform increases efficiency, lowers cost, and improves the customer experience through higher availability and better performing applications and infrastructure. At Vitria, we believe we can make self-healing a reality by bringing the power of artificial intelligence and machine learning to IT operations.

For more information on AIOps, Vitria, and the VIA AIOps platform, visit our website at [vitria.com](https://vitria.com) or [contact us](#) for a VIA demonstration.





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## ABOUT VITRIA

**Move from Data To Actions.** Learn how VIA, Vitria's wide-scope AIOps platform, enables closed-loop automation across all layers of service delivery to improve customer experience and optimize operations. Ingest, analyze and act on realtime data and gather and correlate new sources with VIA's low-code toolkit and pluggable analytics framework. Arrive safely at your destination with VIA navigating the way.