



# VIA AIOps Unique Strengths

## Achieving a New Operating Model for Operations

### WHAT DIFFERENTIATES VIA AIOps FROM OTHER SOLUTIONS?

Unlike other solutions, VIA AIOps delivers **end-to-end service assurance** across service domains and optimizes **both fault and performance management** in cloud and traditional environments with rapid implementation **using out-of-the-box algorithms**.

### What is VIA AIOps by Vitria?

VIA AIOps is an end-to-end service assurance application. VIA delivers full stack observability and sustained service assurance optimization to reduce cost and improve the customers' experience. It operates across service layers to accelerate the time to detect, triage, and resolve service-impacting events. AI, machine learning and advanced analytics improve the fault, performance and change management processes by reducing noise, detecting anomalies earlier, uncovering the root cause and prescribing actions automatically.



VIA is a non-disruptive value multiplier to existing monitoring tools and processes by integrating with, and correlating across, already deployed systems. Built for horizontal scaling, VIA AIOps reliably supports mission critical operations that require massive data capabilities

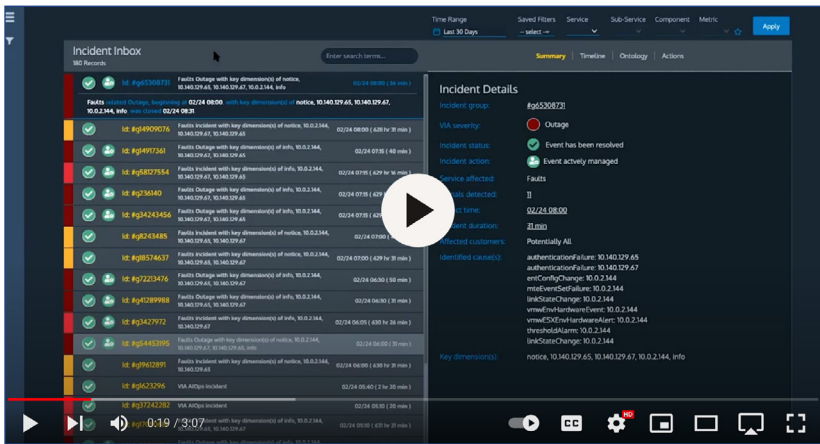
This 3 minute overview video of VIA AIOps highlights the power of VIA in delivering end-to-end service assurance.

# What differentiates VIA AIOps from other solutions?

## Fault and Performance Management in a single application

End-to-end Service Assurance has typically been managed and operated in silos or independently across the service delivery stacks of compute/store, network and application. These independent practices constrain operational productivity and the overall service assurance process. Independent operational teams are often chasing symptoms within their silo when the root cause of the problem lies outside their visibility and control. Multiple operations support teams may be addressing the same or different symptoms but all of them attributable to the same root cause. Addressing these service issues is slow and extremely labor intensive.

VIA AIOps optimizes fault and performance management processes across the technology stack. VIA leverages AI, machine learning and advanced analytics to identify faults, performance, and customer experience issues faster and determines root cause from key symptoms.



See VIA in Action to understand how VIA improves Operational efficiency.

This short video demonstrates how VIA serves up incidents with all the relevant information required by the operations team to act. With VIA, you get fault and performance management using a single pane of glass with explanatory AI provided to drill down into the details as required.

## What are VIA's unique capabilities to deliver end-to-end service assurance?

- Ingestion of metrics, events, logs, and traces
- Faults, events, and time-series data enriched with reference data on inventory, topology, and service dependencies
- Monitoring within and across technology layers, applications, and service domains
- Automatic generation of baselines for every metric and dimension combination using unsupervised machine learning
- Stochastic modeling that enables more effective noise reduction
- Affinity analysis to correlate signals within and across service layers
- Ontology discovery that provides deeper and richer meta data for root cause analysis
- Ability to correlate issues directly to the customers' experience and prioritize actions based on impact

VIA's highly differentiated anomaly detection leverages a unique combination of AI, ML, stochastic modeling, and affinity analysis to reduce noise and accelerate the mean time to issue resolution. Let's dive deeper to see how VIA operates in the background to deliver highly effective results and greater efficiency to your operations team.

VIA AIOps automatically determines the correct algorithm to use on streaming data to generate baselines and better detect anomalies. Unsupervised machine learning generates baselines for every metric and dimension combination.



## Baselines

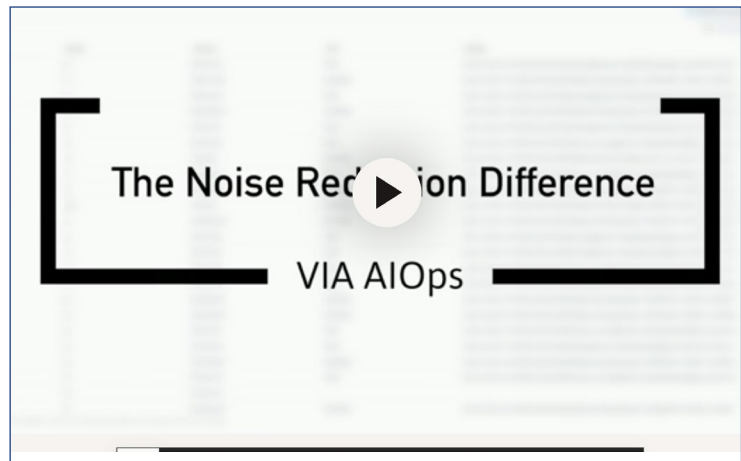
Baselines are created as data is ingested and then continuously updated and improved over time with more data. Detecting signals based on deviations from learned baselines provides more robust alerting. The use of machine-learned baselines versus simple thresholds allows VIA to reduce noise and detect anomalous behavior occurring during both low usages and peak periods.

These baselines enable VIA to reduce noise efficiently and identify anomalies faster.

## Affinity Analysis

VIA goes beyond deduplication to reduce noise using baselining, anomaly detection, affinity analysis, and stochastic modeling. Most fault and performance management systems correlate anomalous signals occurring during the same time period. But most do not analyze, and correlate based on the similarity of system components and dimension values or features. VIA AIOps goes further by also correlating signals based on an affinity score between anomalous signals, based on statistically rigorous similarity measures.

"The Noise Reduction Difference" video illustrates how VIA clearly differs from the competition and enables service engineers to focus only on those signals that should be treated as incidents and pursued for further action.

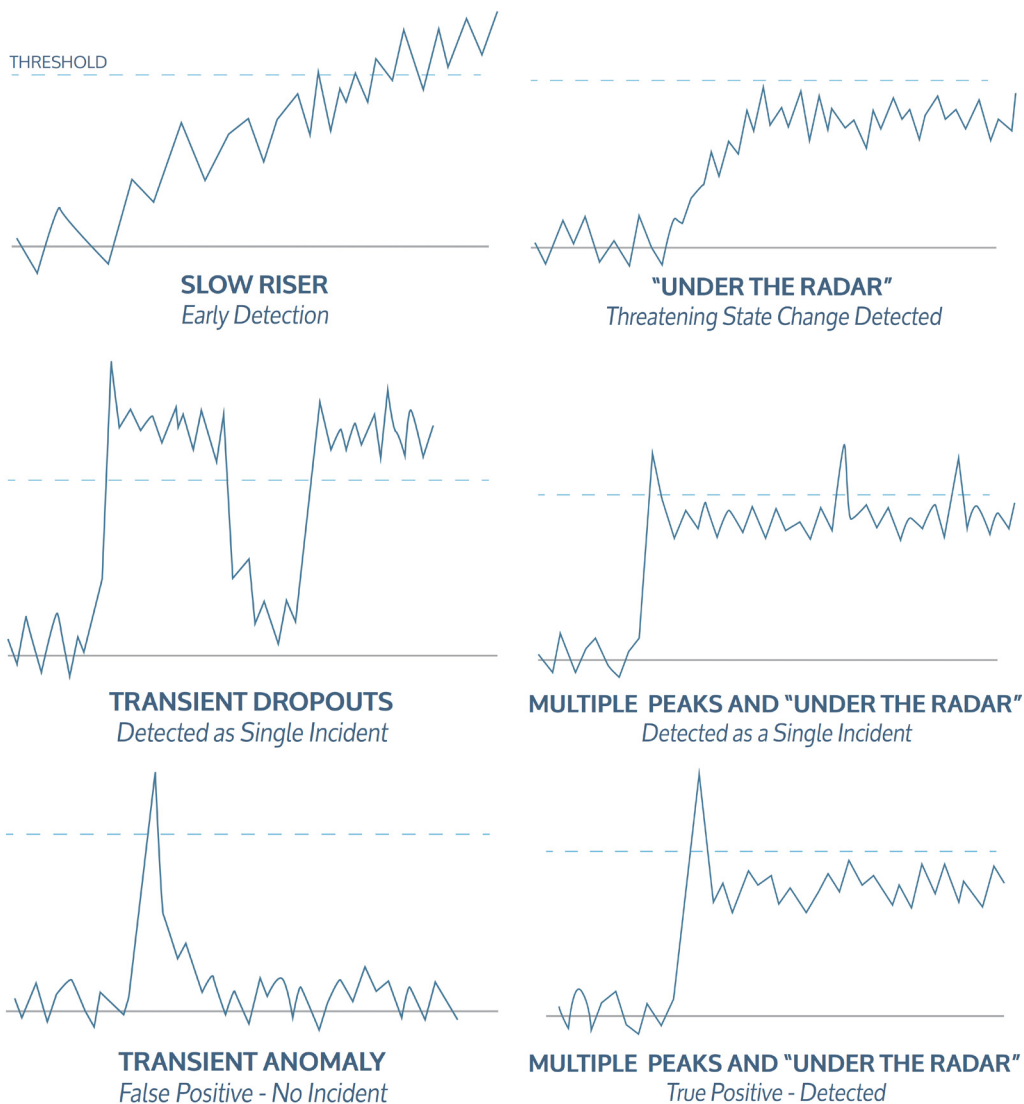


Affinity analysis combined with temporal correlation also helps to determine if anomalies are related and if they should be combined or treated separately. In addition, affinity analysis enhances the diagnostics used to determine root cause.

## Stochastic Models

Anomalous signals from data streams being monitored are often transient, resulting from temporary usage spikes or statistical noise. These transient anomalies do not necessarily indicate a persistent problem. The ability to identify anomalies that are both significant and non-transient enables operations teams to focus on those problems that truly need fixes, and hence improves operational efficiency.

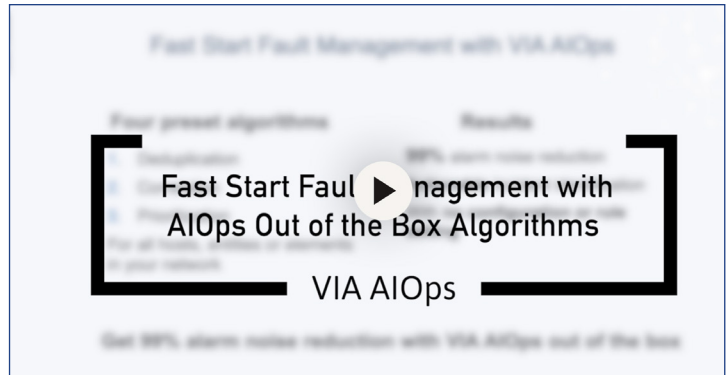
Stochastic models excel at separating signal from noise. These models can continuously monitor and evaluate suspicious changes in behavior of every metric, event, and entity. Stochastic models correctly detect the patterns those other techniques typically misclassify, identify late, or miss altogether. Here are some examples of behavioural changes that are caught early using our modeling techniques.



VIA AIOps uses stochastic models to separate the noise from persistent problems and catch issues that other anomaly detection methods miss.

## Rapid implementation: VIA delivers 99% alarm noise reduction on day one

Leveraging out-of-the-box algorithms, you quickly gain the advantages of VIA's deduplication, alarm noise reduction, and incident prioritization for all hosts, entities, or services in your operating environment. Artificial Intelligence and machine learning embedded within VIA's out of the box algorithms are explainable, extensible, and easy to use.



On day one, each client can improve fault management performance with no configuration required by the end user and achieve 99% alarm noise reduction with VIA.

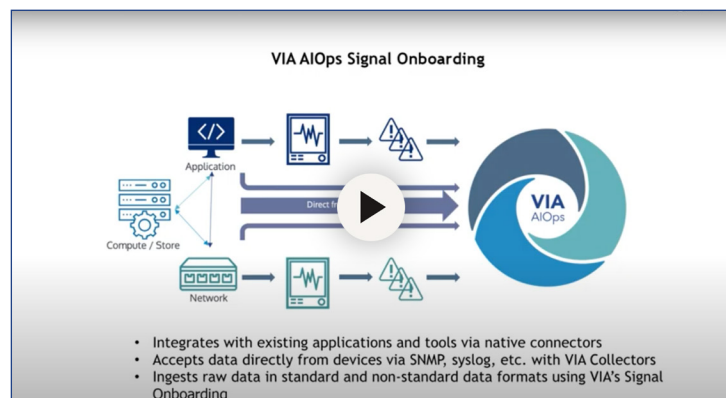
## New data sets can be added and a system model built in less than 60 minutes without the need to write code.

VIA AIOps ingests and enriches streaming data from devices, the network, and applications in real-time. It ingests data from existing application and tools via native connectors or directly from devices with VIA Connectors. With VIA, raw data can be onboarded in standard and non-standard data formats.

The signal onboarding process builds data models automatically with dimensions and data types. It creates KPIs and metrics from the data as needed such as parsing, continuous counters, applying math functions, or by deriving new metrics from the combination multiple data streams.

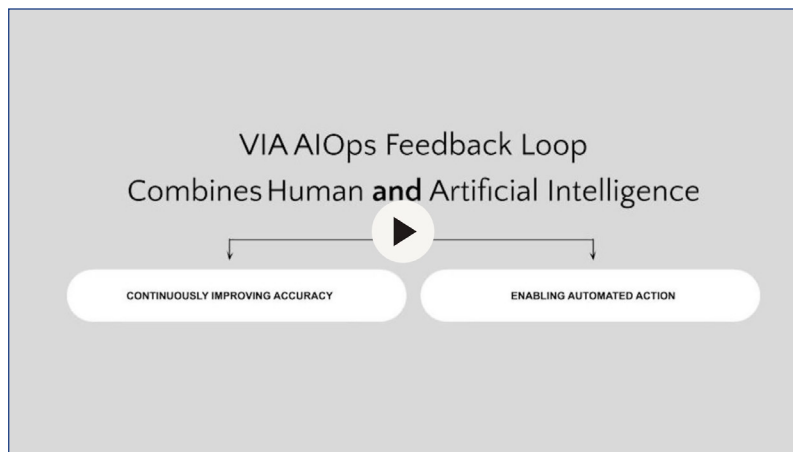
This simplifies and speeds the processing of data preparation, ingestion, and enrichment. It eliminates the manual process steps required to cleanse, structure, and develop code for data construction. It allows data to be ingested without having to fit a specific data model or data specification.

The Signal Onboarding video takes you through each step of the data onboarding process and how quickly VIA builds data models without the need to write code.



## VIA accelerates the enablement of automated actions with a feedback loop and digital fingerprinting

VIA's feedback loop combines human and artificial intelligence to continuously improve accuracy of AI models and support the enablement of automated actions. VIA provides information on each incident it discovers - such as the probable root cause, key symptoms, impacted populations, duration, and severity. Users can provide feedback and context. The system uses this information for relevance ranking and training the algorithm for greater accuracy. In addition, this information over time can be used to determine if automated action should be implemented based on the consistency of the response needed to respond to the incident.

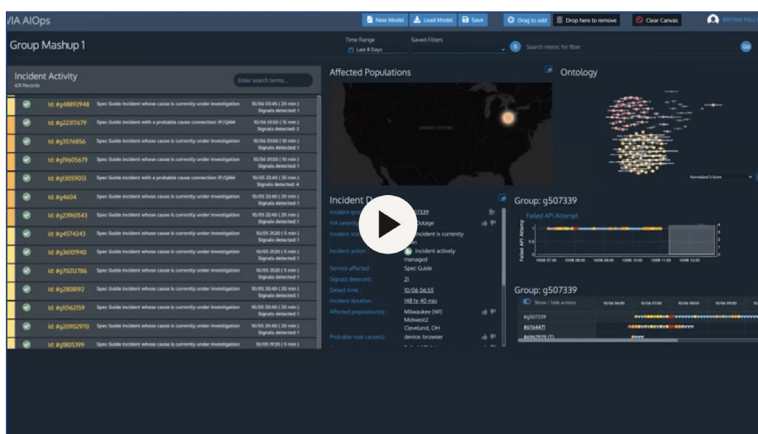


Digital fingerprinting accelerates decision making on the next actions to take to address incidents. Engineers can review the actions taken on similar incidents and determine if they should take the same action.

Combining human and artificial intelligence accelerates response and drives improved operational performance.

## Custom dashboards can be created in minutes for every persona

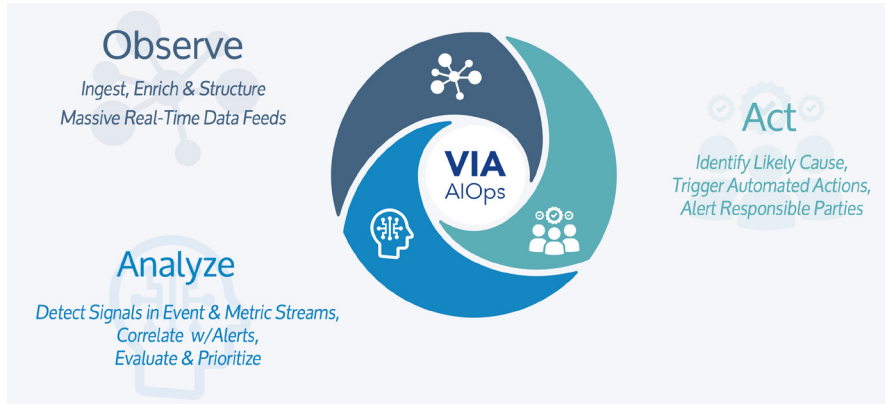
To further maximize operational productivity, dashboards can be created for all users from executives who need a high level view of service performance to the service reliability engineers who need to take actions on the service performance issues identified.



This video demonstrates how easily custom dashboards can be created.

# VIA AIOps: Effective Performance Management

VIA AIOps improves the customer experience and reduces cost. A next generation AIOps application, VIA delivers automated analysis and enables rapid remediation of events across all service layers. From noise to action, VIA operates through the entire event pipeline from observation, to analysis and action to not only reduce the time to diagnose the issues but to resolve them faster with automation.



## VIA AIOps Use Cases

VIA AIOps lowers cost and accelerates resolution by reducing the noise and the human intervention required to resolve service performance and customer-impacting events.

**Service Performance Management:** Detects events, analyzes for probable route cause, defines severity of impact and the customer populations affected.

**Change Management and DevOps Support:** Monitors for and detects customer experience and service impacts caused by attribute changes introduced by the enterprise or an end-user subscriber (i.e., changes in subscribers' mobile devices or operating systems).

**Fault Management:** Reduces noise, delivers automated detection, analysis, and prescription of the next best action for service incidents across the technology stack and between application domains.



[Learn more about VIA AIOps.](#)

## About VIA AIOps

VIA AIOps is a next generation AIOps application that enables intelligent 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. VIA AIOps delivers noise reduction, correlation, and intelligent automation across operational silos to enhance customer experience and reduce operational cost by enabling more rapid issue detection, mitigation and resolution.

