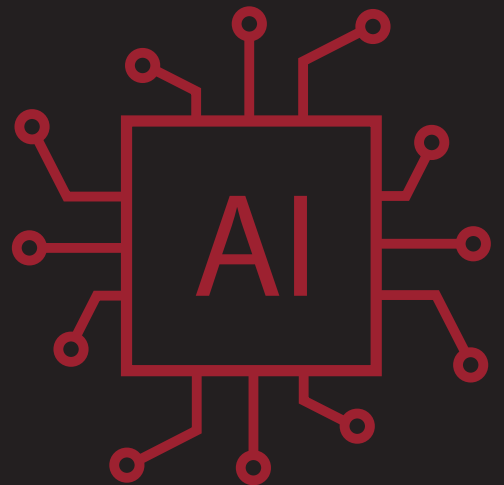


Red River

# THE VALUE OF AIOPS PART 1

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Getting Started



# The Value of AIOps

Organizations are on a quest to eliminate Information Technology (IT) operational “noise,” inefficiencies and the negative impact they can have on operating costs, performance, availability and digital modernization initiatives. The tangible difference-maker on this quest is AIOps.

AIOps automates complex decisions by analyzing data to predict future issues and dramatically speed up problem solving. The impact is far-reaching, enabling organizations to:

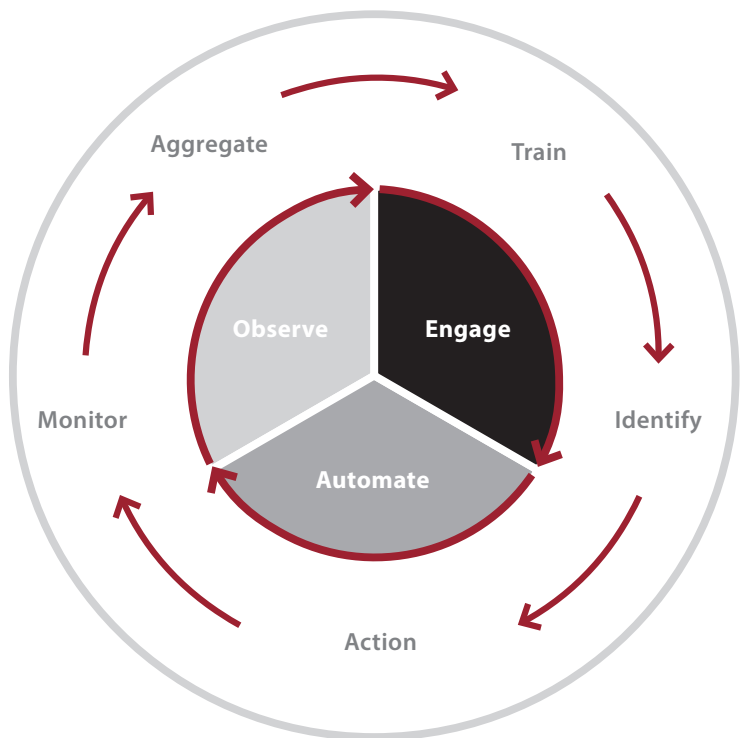
- **Predict and address** a capacity issue in their wireless network;
- **Automatically recover** from a performance issue in their compute platform;
- **Discover malware** in a system and remove it;
- **Drive resolutions** from expensive Tier 3 engineers to Tier 0 automation.

With AIOps this all can occur before the customer is ever impacted. This is the key to silencing the operational noise that burdens IT teams, as well as automatically generating alerts and communications to affected users and stakeholders with specific details.

In this first section of a two-part series, we will define what AIOps is, why now is the right time to implement and what the components are that make it up. In part two, we will provide common use cases and explore how IT vendors are leveraging and deploying tools that can help you in your environments.

## What is AIOps?

AI for IT Operations (AIOps) is a discipline that leverages concepts from AI, such as machine learning (ML), along with more traditional operation platforms to automate and optimize IT operations and processes. AIOps utilizes platforms to collect data, from a variety of sources, like application logs, structured and unstructured data such as alerts of events, configuration changes, incidents, performance metrics, network traffic flow and more. This data is then analyzed and contextualized using a combination of AI and traditional analysis to identify issues/anomalies and help predict problems. Once issues are clear, the AIOps platform can initiate automatic remediations - ranging from opening a ticket to executing a self-healing action.



## Why Deploy AIOps Now?



### THE NEED

Complex systems deployed in on-premise and multi-cloud environments across a dispersed and diversified customer base mean we must find more effective ways to manage and operate. Business dependencies require us to address systems and customer issues and outages faster and preferably prevent them from happening in the first place. Doing this requires a commitment to newer technology and ways of performing operations, namely AIOps.



### TOOLS AND TECHNOLOGY

In AIOps, acquiring and understanding all the data in complex systems revolves around standardizing telemetry data, which informs us about our systems. Doing this in a more standard way, utilizing open standards such as 'open telemetry', can provide your organization with an important advantage. It enables you to easily integrate better tools with important processes, leveraging ML and already trained models to drive operational efficiency. This is the type of maturity companies must pursue in order to reap the full benefits and maximize the return on investment of AIOps.

## Why Is It Relevant?

An AIOps platform is important in any operational environment to allow an organization to have relevant capabilities that perform the following:



### OBSERVE

In any enterprise system, there is always a large amount of disparate data being generated (logged) or maintained (configuration). This data must be sifted through to identify what is important and actionable and to see relevant patterns that might not be easily identified. The collection of this data is a core capability of an AIOps platform. Data collection and aggregation should include historical as well as real-time data processing. Data is then contextualized and consolidated, eliminating noise for next level analysis. Data that is processed and correlated to other data and business processes provides the opportunity to predict behavior and avoid potential incidents. Additionally, this will provide potential areas for improvement, which may save money and/or maintain compliance. This information also provides the ability to plan for the future through measurable trends based on actual data, not assumptions.



### ENGAGE

To provide relevant and timely operational support, data must be processed "in time" to be optimally effective. This near real-time processing is a key aspect of AIOps. Machine Learning (ML) is an essential part of AI, which allows for the systems to find patterns (learn) and identify potential actions based on a previously unseen set of data. Beyond timely analysis of the data, action based on that analysis should also occur in a timely manner, either through manual processes, or optimally, via automation. In order to be proactive in preventing potential "system impacting events," AI-based predictive systems are a key to success.



### AUTOMATE

Having and processing data is very important to an enabled AIOps platform. However, taking action based on that data is where AIOps truly shines. Action can take multiple forms, including opening a ticket, sending an alert or restarting a process. With a well-trained model and a documented playbook or script, you can automate actions the AI will perform on your behalf in order to mitigate an incident. This can be referred to as self-healing for the system. For example, an ML model indicates a processing node is in a "bad" state. Based on this, the AIOps platform will initiate and automate a process, which will take the node out of a resource pool and replace it with another processing node.

## How AIOps Supports Decision-Making

An AIOps platform provides enterprise CIOs with useful tools that support data-driven decisions. These are the tangible benefits to executive leaders:



### INCREASED VISIBILITY

AIOps platforms collect data from a variety of sources, giving IT teams a more holistic view of their IT environment. This can help them identify and troubleshoot not only problems, but also potential process enhancements to increase productivity or improve system performance and adherence to SLAs.



### ENHANCED ANALYSIS

AIOps platforms use enhanced methods to break down large amounts of data. This enables an in-depth analysis that is more powerful to the operation and identifies additional areas where a “cause” may not be immediately visible, such as in a root cause analysis. This can save IT teams a significant amount of time and effort.



### PROACTIVE REMEDIATION

AIOps platforms can use machine learning to predict problems or potential problems before they occur. This allows IT teams to take preventive and automated action to avoid outages or performance degradation. It can also identify where a process that is being followed can be improved and provide details for changes to make that improvement.



### IMPROVED COLLABORATION

AIOps platforms can help improve collaboration between IT teams by providing a single source for all IT data. This can help teams work more efficiently and effectively to resolve problems.

AIOps is an evolution of IT operations that is taking advantage of the improvements in trained AI/ML models. A successful AIOps deployment can positively impact system performance, cybersecurity and cost containment, and identify anomalous behaviors so leaders can address them before they affect customers. At Red River we can guide you through this evolution to effectively reduce the IT operational “noise” across your systems so you can focus your efforts on other essential business outcomes. The key to success is understanding your options and the optimal way to integrate AIOps within your existing environment.

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For more information on AIOps and to discuss your path forward, contact us at [info@redriver.com](mailto:info@redriver.com).



#### ABOUT RED RIVER

Red River brings together the ideal combination of talent, partners and products to disrupt the status quo in technology and drive success for business and government in ways previously unattainable. Red River serves organizations well beyond traditional technology integration, bringing more than 25 years of experience and mission-critical expertise in managed services, cybersecurity, modern infrastructure, collaboration and cloud solutions.

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