

5 Ways AIOps Can Transform Your IT Operations

In the hybrid era, it's **simply not feasible** for humans to manage complex IT environments **without intelligent automation.**

Cloud computing and big data have led to larger fleets of servers, more storage systems, and more complicated networks than ever before.

But there are solutions.

The latest step in the evolution of IT operations is applying machine learning (ML) to manage workflows, infrastructure, and services with minimal human intervention. Here are five ways artificial intelligence for IT operations (AIOps) can help combat complexity and revolutionize how you manage your environment.



1. Real-Time Insights through Automated Data Ingestion

AIOps tools gather data sets from various source systems, including servers, networks, and apps. By capturing data in real or near-real time, AIOps can provide organizations with a whole host of benefits.

- **Dynamic streaming ingestion** empowers teams to address problems proactively
- **Retaining historical data** supports capacity planning and security incident investigation
- **Standardizing the aggregated data** by mapping data to a common structure helps organizations leverage advanced analytics more effectively

The outcome? Quicker responses to potential threats, which fosters a secure operational framework.



2. Informed Analysis with Enhanced Data Integration

Once the data is ingested, **AIOps integrates it from disparate sources to provide a cohesive view** of the IT environment. Data integration enables more informed root cause analysis by linking information from various systems.

USE CASE: An application might generate a series of metrics related to its performance and load, complemented by log messages detailing significant events in its processing. By aligning these metrics and logs by time into a unified dashboard, AIOps simplifies the process of identifying patterns and correlations.

This integration allows IT teams to observe how specific events impact application performance, revealing dependencies that may not be evident when data is viewed in isolation. The result is a more advanced capacity for application performance management (APM), as the consolidated view helps teams identify issues and make data-driven decisions to enhance the overall performance of their applications.



3. Contextual Awareness through Intelligent Event Correlation

Event correlation is the process of identifying related events that are instrumental in understanding the state of a system. Correlation aims to **connect the dots of significant events** from a massive stream of potentially relevant data.

USE CASE: An application may generate a series of metrics about performance and load on the applications, along with log messages describing significant events in application processing. By aligning metrics and logs by time into a common dashboard, AIOps makes it easier to find patterns of correlation between events and dependencies to better inform application performance management (APM) insights.

By correlating events, AIOps empowers teams to better understand their systems, contributing to a more stable IT environment.



4. Proactive Problem Detection and Streamlined Remediation

Leveraging machine learning allows AIOps to monitor the IT environment continuously, identifying anomalies and potential problems without waiting for human intervention. This proactive approach **enables immediate actions**, significantly reducing downtime and enhancing overall service reliability.

FOR EXAMPLE:

- **In the event of a failed load balancer**, the system can automatically add resources to the cluster for optimal performance
- **In scenarios involving security breaches**, AIOps can take critical actions like blocking network ports, terminating sessions, and patching vulnerabilities

By enabling timely remediation through automated workflows, AIOps improves response times and reduces the need for manual intervention. This shift frees up IT professionals to focus on strategic initiatives, not routine troubleshooting.



5. Intelligent Integration with Full-Stack Observability Solutions

System complexity, while a common issue, is a challenge of our own making.

It requires innovative solutions for effective resolution. Instead of relying on manual tasks and disparate tools that only provide surface-level visibility, focusing on [full-stack observability](#) allows organizations to gain deeper insights into the “why” behind system failures. The modern full-stack observability solution leverages AIOps to combat performance problems and streamline troubleshooting. With the help of AIOps, observability solutions empower teams to switch from reactive to proactive workflows, identifying potential service issues and diagnosing root causes before serious issues arise.



Entering a New Era of IT Management with AIOps

If you work with complex IT infrastructure, you’re already familiar with the challenges of delivering scalable services that run reliably amid constantly changing environments. The days of automating operations with hand-crafted scripts are gone. IT pros need a tool designed to **ingest large volumes of data, integrate multiple sources of data, correlate events across data sources, detect issues, and resolve problems** with drastically less human intervention than has traditionally been required.

That tool
is AIOps.