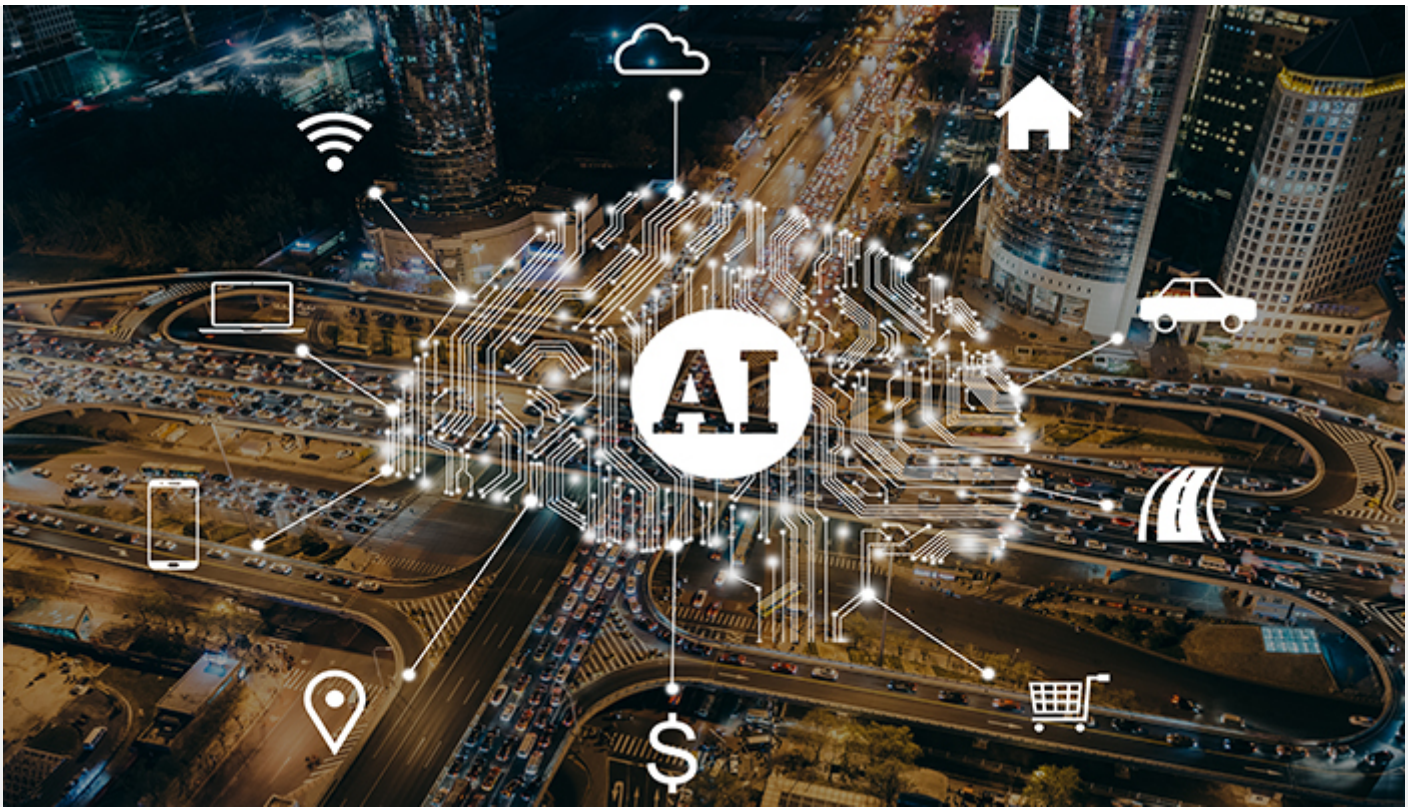
AIOPS: FROM THEORY TO PRACTICE



If you've been in IT for a while, you've seen some technologies come and go, without delivering any material impact. Have you ever wondered if AIOps is one of them? Well there's good news. Organizations are achieving very significant benefits from AIOps today.

In this post, we will look at the challenges driving the need for AIOps, what some analysts have to say, and some key use cases that offer opportunities for harnessing its benefits.

Too much data: Operations teams can't keep up

Today, business success is contingent on the optimized performance and continued innovation of IT-powered services. At the same time, the IT landscape continues to experience agile, fast-paced innovation and change.

With the proliferation of DevOps, the importance of real-time monitoring and observability is critical to the success of today's accelerated development cycles. Combined with the rapid adoption of dynamic, cloud-native applications, data volumes have exploded, leaving Operations teams unable to process and manage this exponential growth. Therefore, the struggle to optimize service levels while enabling innovation continues to grow both more critical and more difficult.

> *According to Gartner, IT infrastructure and applications generate two to three times more data volumes every year.*

To compound matters, tool sprawl has been hampering efficiency and productivity across many organizations. On average, Operations teams are using 11 different monitoring tools, which causes overlapping capabilities, promotes overspending, and higher maintenance costs. Additionally, IT teams face the following issues:

- Event noise drowns out real issues, reducing efficiency and increasing MTTR
- Problems go undetected until users and customers encounter problems
- It takes too long to resolve issues, putting SLA compliance at risk
- Struggling to keep pace, IT teams are ill-equipped to support innovation and instead must devote highly-skilled resources on non-strategic tasks, such as maintenance

The Promise of AIOps

To address the pressing and proliferating challenges outlined above, many organizations are looking to adopt artificial intelligence for IT Operations, or AIOps. AIOps equips Operations with a combination of machine learning, analytics, anomaly detection, and automation to realize enhanced efficiencies, cost savings, and speed across their organizations. With AIOps, teams can find and fix problems faster, and even gain the predictive insights they need to prevent issues from occurring in the first place.

Given the enormous potential of AIOps, the topic continues to gain increasing coverage by media and analysts. For example, in a recent report, IDC analysts predicted that by the end of next year, 70% of CIOs will aggressively apply AIOps to cut costs, improve IT agility, and accelerate innovation.

Near-term Strategies

Organizations will be well served by taking a phased approach to adopting AIOps. By starting with focused use cases, teams can begin to start seeing significant benefits and position themselves to maximize the potential of AIOps in the long term.

The reality is that leading Operations teams have started to deploy AIOps capabilities, and they're seeing significant benefits. Here are some examples of key use cases:

- **Anomaly detection**: There are two kinds of anomaly detection techniques: univariate and multivariate. Univariate anomaly detection looks for anomalies in individual metrics, while multivariate anomaly detection learns a single model for multiple metrics. Both are very useful from an AIOps standpoint because they identify unusual behaviors. These unusual behaviors could be indicators of problems leading to upcoming performance and availability impacts, allowing proactive, preventative corrective action to be taken.
- **Event noise reduction:**In today's increasingly complex, dynamic, and interrelated environments, far too many teams are being overwhelmed by massive volumes of events. This leads to inefficiency and excessive risk of critical alerts being missed. With an AIOps approach, Operations teams can apply machine learning to historical and real-time data to identify patterns and suppress events that fall within bands of normalcy. This enables significant reductions in event noise, which helps ensure that critical alarms are addressed quickly and effectively.
- **Predictive alerting:** Many IT operations teams are struggling to get out of firefighting mode. Too often, they find out about issues after users do, and are forced to scramble to address problems after the fact. This means service levels and staff productivity suffer. AIOps offers the

ability to apply advanced analytics to historical and real-time performance metrics, and to establish behavioral patterns that help identify anomalies and generate predictive alerts. With these capabilities, teams can start to remediate issues before services are affected.
- **Automated remediation, incident, and change management:** In today's fast-changing environments, highly manual, time consuming, and error-prone tasks represent an increasing liability. The real value of an AIOps strategy comes in being able to take automated action based on the rich insights delivered by machine learning and analytics. With automated remediation workflows and integration with the service desk for incident and change management, IT operations teams can significantly reduce Mean Time To Resolution (MTTR) and fully leverage the value of advanced analytics. Further, they're able to offload a lot of repetitive administrative tasks from skilled IT resources, allowing those staff members to focus on more high-value efforts.

To balance the need to support business innovation with the challenge of increased data volumes and complexity, Operations teams are increasingly turning to AIOps technologies and approaches.

The potential of AIOps is enormous. The time to move is now.

To learn more about AIOps and how it can help your organization, be sure to listen to the BMC "AIOPs in Action: BMC Helix Monitor" webinar.