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WHITE PAPER

By Loom Systems -Inelligent Analytic Platform

AIOps Definition & Why you need it

At the Gartner Data Center, Infrastructure, & Operations Management Conference in Las Vegas, Nevada, last December, the talk on every CIO's lips was "AIOps." While acronyms come and go, usually a marketer's invention to create buzz, AIOps looks like it will have staying power, AIOps looks like it will have staying power, reflecting as the Digital Enterprise Journal1 put it, "the perfect storm of market pressures and technologies" that are "driving entire organizations to change how they operate and become digital businesses."

Alongside AIOps were the concepts of "IT Operations," "Digital Transformation," and, as Garter put it above, the "digital business." IT leaders are increasingly taking a wider view of the IT landscape and understanding that a new vocabulary is needed to address rapidly accelerating trends. Businesses are either digital, or not, revamping their IT operations, or not, and moving towards digital transformation, or not, suggesting that IT leaders have a lot at stake in addressing the full adoption of new, algorithmic technologies that will bring their businesses competitive, or else fall drastically behind.

As they put it, "the road to digital business runs through IT Operations, but IT operations need to be modernized to enable digital transformation." With "62% of organizations are reporting that lack of IT resources is the main obstacle for digital transformation" and "only 19% of organizations include modernizing IT Operations in their digital transformation strategy," it won't be easy. In this white paper, we will show that AIOps is here to stay and the different ways that IT leaders can move towards a digital transformation strategy.

Just what is AIOps?

AIOps stands for algorithmic IT operations and refers to solutions that use artificial intelligence and machine learning to automate tasks and processes. But AIOps in and of itself is neither a solution, nor a philosophy. It's an overarching framework for how to address increasing performance demands and IT complexity with the development of new and powerful technologies that have the potential to transform IT Operations and digital businesses at large.

How is AIOps different?

AIOps is closely related to both ITOA (IT Operational Analytics) and ITOM (IT Operations Management), but evolved into much more with the introduction of algorithmic solutions. ITOA is centered around collecting and analyzing data from several operational sources. While ITOA is limited in its ability to address IT environments of growing complexity,

AIOps lets you conduct real-time analysis of the entire production environment, detecting and addressing issues simultaneously. The key word here is algorithmic: utilizing different algorithms, AIOps analyzes data, performance and activity at once and gives IT operations - and the digital business at large - continuous insight. The benefits are three-fold:

- AIOps helps teams make better informed decisions by giving them data-driven recommendations based on both real-time - and historical - data
- AIOps gives teams access to automated behavior prediction based on an analysis of infrastructure, applications, and users, letting them know in advance issues that might affect both availability and performance
- AIOps lets teams conduct root cause analysis by identifying and correlating issues across bigger swaths of data

AIOps also takes ITOM one giant leap forward, allowing IT Operations Management to scale to new heights by addressing data at an unprecedented rate, changing how the entire IT Operations department is

managerial overhead as AIOps takes a larger role in IT Operations everywhere.

What are the advantages of AIOps?

Digital transformation leaders told DEJ that the advantages of AIOps were definitive and would allow them to claim a real competitive advantage (61%), make IT more strategic (57%), enable seamless deployments of new technology (38%), and reduce the cost of running & maintaining enterprise technology (53%). But perhaps more powerful are the risks to not adopting AIOps in the digital business:

- 43% reported that their competitive position deteriorated due to performance IT issues
- $72,000 was lost per minute on service outages
- 48% or organizations spent more than 60 minutes repairing performance issues per incident

Who does AIOps serve?

A separate Gartner study found that the goals of IT Operations professionals and Digital Transformation leaders - including CIOs and CDOs - were aligned. While Gartner's study was restricted to global enterprises - and reported that about half of all global enterprises will be actively using AIOps by 2020 compared to less than 10% today - the truth is that thanks to the rapidly declining costs of AIOps service providers, all businesses large and small that are seeking to become digital businesses would benefit from AIOps. AIOps is already on the rise, but we predict it will be much faster than what even Gartner expects.

The key areas for IT Operations to be effective

To get the most value, IT Operations and digital Transformation Leaders need to implement AIOps across the whole organization. A report by DEJ found 14 different areas that organizations should focus on to make IT Operations effective in the digital economy and build true AIOps departments.

1. The context of monitoring data

It is not enough that IT leaders monitor data - the data has to be formulated in a way that gives IT Operations departments real insights into the system. While 82% of organizations reported that the amount of IT performance data collected over the past 12 months increased, only 38% of them reported significant improvements in their ITOM. AIOps can help organizations ensure that their data is more actionable and relevant.

2. Hybrid and agile infrastructures monitoring

As we reported in our White Paper, "How to get your ROI out of your log management tools," the number of tools organizations are using is multiplying - but without any increase in effectiveness, or ROI. In fact, 52% of organizations reported that the approach of using different tool sets for monitoring their environments was ineffective. AIOps can help organizations build the agile, dynamic, and hybrid infrastructures needed for digital transformation without any deterioration in the performance of their existing IT services.

3. Advanced analytics and data management

Data management is central to IT Operations in a digital economy and AIOps can help organizations to deploy the predictive analytics, forecasting, and

optimization that will facilitate digital transformation. DEJ's research showed that advanced analytics for IT monitoring will not only be the #1 growth area of 2017, but also a technology class that will have the strongest impact on key performance indicators in 2016.

4. Machine learning

Machine learning, as enabled by AIOps, gives IT operations scale, speed, and intelligence and has become a key ingredient for successfully managing modern IT Operations. Simply put, it is not humanly possible to process the growing amount of data running through IT Operations without machine learning. Departments have reported a 39% average increase in resources available for growth and innovation after deploying machine learning-based solution. Machine learning is simply a foundational part of AIOps.

5. Correlation

AIOps will give IT Operations the ability to create powerful correlations across data and will counter recent trends of aggressive tool adoption and the concomitant challenge of correlation. 41% of organizations reported that they are using 10 or more tools for IT performance monitoring. AIOps is one solution to the need for a common language between technologies that were never designed to work together.

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6.Business impact/competitive advantage

AIOps will provide organizations with greater visibility into their systems and the value they are creating, giving them an additional dimension to BI efforts. If AIOps is able to improve the business decision making process of IT and digital transformation leaders, digital businesses will have an obvious competitive advantage. So far, 47% of IT Operations leaders are looking into getting more visibility into the business value they've delivered.

7. Microservices monitoring

AIOps provides an opportunity to deploy a more comprehensive approach to the demands of monitoring microservices. According to DEJ, 46% of organizations reported that their existing IT monitoring tools are not as effective when monitoring microservices. Rather than take a "trial and error" approach with legacy tools that could spur a number of business-centric issues, IT Operations leaders should look to deploy microservices infrastructures inside the context of an AIOps approach.

8. Alerting and notifications

All IT teams know that managing IT alerts is a huge headache. With 55% of enterprises looking to improve the accuracy, timeliness, and relevance of IT monitoring - and 39% looking to deploy more contextual capabilities - AIOps will give IT teams a big

opportunity to cut through the noise.

9. New technology readiness

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10. Automation

Referring not only to the automation of repeatable tasks, but also to increasing parts of the knowledge work done by IT professionals, automation is the name of the game when it comes to effective IT monitoring. There's been a whopping 71% increase in the number of IT leaders who are interested in automation capabilities for monitoring since 2011 - and already 57% of organizations are deploying automation capabilities to reduce the cost of IT operations.

11. Full visibility

It goes without saying that IT Operations need to monitor everything. Unfortunately, blind spots exist: 65% of IT leaders reported 5 or more blind spots across their IT service delivery chain and 82% pointed to an inability to monitor all of their data as the reason for it. AIOps offers an avenue for digital businesses to process, store, and analyze terabytes to petabytes of data - and see every events, not just the ones they predict will be the most critical.

12. Optimization

Optimization is all about balancing resources against utilization. Now, with IT leaders reporting that 44% of the IT monitoring capabilities they're paying for goes unused, optimization is a widespread challenge. To that end, 65% are looking to deploy "what if" analyses of infrastructure utilization versus performance impact. AIOps may be an opportunity to really spearhead the optimization of IT monitoring tools.

13. Streaming, real-time data and speed of access

It's not enough to monitor data, organizations need to get live insights from their real-time data streams. 37% of IT leaders said they felt an increase in the need for real-time IT monitoring - and 41% of IT leaders said it was the main criteria for evaluating IT monitoring solutions. IT leaders want insights now, now, now - and AIOps can deliver.

14. Network performance

Despite only marginal improvements in performance, networks are increasingly being perceived as a strategic asset by IT leaders. With that wide a gap in place, organizations are having to rethink how they approach the management of network performance, and 46% of IT leaders are looking specifically to extract more data for business and operational purposes. If AIOps can enhance network performance, it will be a boon to IT leaders and the digital business at large.

Conclusion

According to DEJ, AIOps, when properly implemented, can help IT Operation and Digital Transformation Leaders do all of the following:

1. **Enable the fast deployments of new technologies**
2. **Get end-to-end visibility into infrastructure and applications**
3. **Improve visibility into business value**
4. **Improve alerting and resolution processes**
5. **Reduce time spent on repeatable tasks**
6. **Implement service-centric approach for IT monitoring**

As the complexity of IT departments increase and their performance demands rise, AIOps solutions are increasingly needed to manage - and optimize - IT operations. Challenged by insurmountable noise, AIOps gives IT teams the chance to get out in front by enabling root cause and predictive analytics. Already top performing organizations have differentiated themselves through their adoption of AIOps, showing that they are:

- **86% more likely to have full visibility of their IT infrastructure**
- **2.6x more likely to be deploying machine learning**
- **1.7x more likely to analyze streaming and real-time data**
- **2.8x more likely to improve mean time to resolution**

Is your organization on its way towards digital transformation?

About Loom Systems

Loom Systems is a leading AIOps platform used for real-time detection and resolution for any type of application. DevOps & IT professionals use Loom to analyze both log and unstructured machine data for immediate visibility into the IT environments. Loom generates insights from raw data with zero configuration or maintenance of the IT stack. Loom is available as a SaaS and on-premises solution.

At Loom Systems, we're building a platform to understand, reason and learn about constantly evolving IT environments and operational complexity. We're building cognitive intelligence and expertise into a new set of tools that analyze logs, metrics and machine-generated data – just like DevOps and Application Managers do every day – but with unprecedented speed and scale! Loom accelerates detection & resolution, and helps reduce the cost and complexity of dealing with operational analytics.

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