White paper

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Forrester: 6 Key Insights You Need Before Deploying AIOps

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Forrester Senior Infrastructure and Operations Analyst Rich Lane shares his insights on the rapidly evolving world of AIOps and the importance of leveraging these technologies to dramatically accelerate problem resolution and optimize application performance in hybrid IT environment.

1. Key Barriers to AIOps Adoption

One of the biggest issues with AIOps adoption is the underlying expectation of how AI is going to solve IT problems. Typically, investments in AIOps platforms have been justified on the basis of their ability to decrease mean time to problem resolution and the resulting cost reduction. It is difficult to convince your IT leaders or CIOs that every penny you spend will bring immediate value. Most IT Ops teams also don't know where to start and this is a challenge for getting started but also a challenge for showing some immediate success. There are also cultural obstacles in most organizations — the basic resistance to change. This isn't specific to AIOps but certainly affects it. We need a structural change in the culture of IT.

2. The Primary Approaches to AIOps

One option is consolidating your monitoring approach by reducing the number of disparate and duplicative tools deployed throughout your environment. By unifying operational silos, you can more effectively track dynamic dependencies across infrastructure, which drastically improves service assurance. In this scenario, AIOps is mining a unified set of data to produce precise insights. The second option, if the legacy monitoring model can't be replaced, is for IT Ops to use solutions that act as overlays on top of the existing tools. In this scenario, AIOps helps you make sense of the siloed data.

3. Advantages of Multiple Data Types

The success of AIOps or any other automation method relies on the quality of the data. But AIOps tools by themselves are not service-centric and have no concept of real-time models. They are not designed to tell the user how issues within a given system may affect IT services or applications. The additional data types (beyond events) provide context that overlay AIOps tools just don't have. Feeding topology data to the machine learning algorithms greatly increases the precision of insights. When you can combine the probabilistic AIOps event correlations with root-cause analysis from definitive service-dependency models, it eliminates guesswork when investigating IT incidents. This gives you full visibility into IT service relationships and dependencies.

4. On Prem. vs. Cloud

Given the continuous increase in the amount of data being generated/collected, with the exception of very small deployments, it's getting more difficult to do this on premises. The progressive nature of deployment maturity and evolving use cases requires a readiness to ingest a variety of data sources. There is simply a ton of throughput, processing and storage required, so IT organizations need to weigh the costs and benefits of doing this on premises or in the cloud. Another consideration is whether a cloud deployment gives you more access to machine learning capabilities that you don't have on premises.

5. Where APM Fits with AIOps

Unified monitoring platforms continue to move monitoring functionality up the stack, providing lightweight application monitoring for the 90% of apps not being monitored by heavyweight APM tools. This means, if you go with the unified monitoring approach, you're joining APM and AIOps capabilities into the same platform. Similarly, the more heavyweight APM tools are building in AIOps capabilities specific to the applications. In both of these scenarios, AIOps complements APM tools.

6. Using AIOps to Prevent Outages

Stand-alone AIOps, at its core, is pattern matching. For the algorithms to learn, they must observe issues/outages. A major challenge to putting machine learning and AI approaches to work on monitoring and observability is that there is not a corpus of data with which you can train algorithms to identify problems. The symptoms of problems are often unique to that particular problem. The applications having the problems are unique to the company building them. So without the context of other data types (i.e., unified monitoring) it is too early to rely solely on AIOps tools to predict and prevent outages.

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Summary

Traditional ITOM tools were not designed to handle the demands of complex hybrid IT environments, let alone the environments of the future. AIOps technology offers real promise for taming these modern environments. But there are some well-known pitfalls you can avoid. Start by choosing the right approach and setting expectations properly. Identify ways to provide AIOps tools as much context as possible. Understand the best ways to merge AIOps with other tools in your environment, like APM tools. Some careful planning can make AIOps a difference-maker in optimizing your IT services and applications.

Virtana Service Observability

Virtana works with the world's largest organizations to ensure their IT services and applications are always on. As the leader in software-defined IT operations, Virtana uniquely collects all types of machine data to build real-time IT service models that train machine learning algorithms to predict and eliminate outages in hybrid IT environments, dramatically reducing downtime and IT spend.

Virtana Service Observability is the first SaaS-based intelligent IT operations management platform that streams and normalizes all machine data, uniquely enabling the emergence of context for preventing service disruptions in complex modern IT environments. Virtana Service Observability builds the most granular and intelligent infrastructure relationship models possible at any scale and proactively provides unparalleled holistic health and deep performance insights to optimize any IT environment.

Technology vendors have taken many different approaches over the years to help prevent IT service outages and improve overall IT performance. These approaches include infrastructure monitoring, AIOps, APM, log analytics and more. Some approaches collect performance data from systems directly, some rely on logs, some rely on events, and others rely on data sent from agents. Virtana Service Observability is the unique platform that combines all of these approaches.

Virtana Service Observability empowers IT operations with indispensable capabilities.

Immediate Root-Cause Analysis

- Use real-time modeling to gain awareness of end-to-end infrastructure-related risks
- Isolate problems immediately to improve MTTR and eliminate service outage losses
- Gain total visibility of overall IT service health with intelligent dashboards and reports
- Collaborate across teams to coordinate investig tion and problem-solving

Prevention of IT Disruptions

- Leverage high-cardinality data to ensure continuous reliability of ephemeral systems
- Leverage AI and machine learning for predictive analytics
- Evolve from availability and performance to capacity and optimization
- Eliminate risk associated with digital transformation

Optimized Application Performance

- View performance and anomalies across all on-premises and cloud infrastructures
- Get AIOps insights to predict service health and performance issues
- Apply consistent monitoring policies across all cloud and on-premises systems
- Deliver management as a service for DevOps teams

Intelligent Automation

- Share key data and insights with other ITOM tools to automate a rapid resolution
- Future-proof your monitoring platform to run at any scale and accelerate digital transformation
- Enable agile IT while eliminating employee fatigue by reducing alerts by 99.9975%

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