



AIOPS EXCHANGE INAUGURAL MEETING REPORT

May 2019



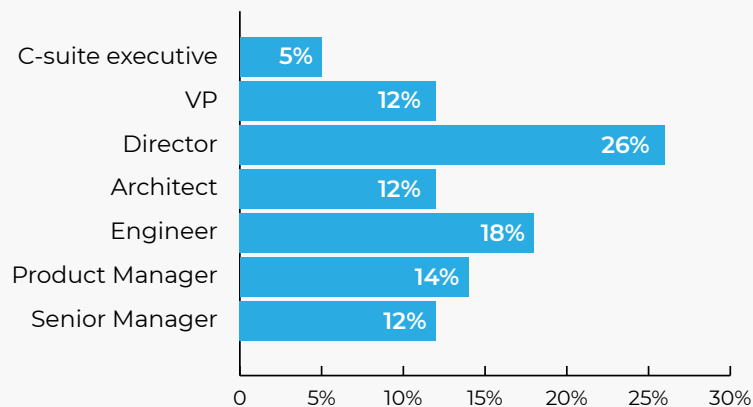
AIOps Exchange: Poll Results & Roundtable Summaries

AIOps Exchange is a not-for-profit private forum committed to the open exchange of ideas, trends, and best practices defining the future of AIOps.

Its inaugural meeting was held on May 15, 2019 in San Francisco. Audience participants comprised nearly 100 IT executives representing large enterprise organizations as well as IT industry analysts and academics. Industries that were represented include financial services, transportation, technology, education, and healthcare. The day's agenda was a combination of keynote addresses, audience polling, and interactive roundtable discussions on a variety of AIOps topics.

This meeting report presents the key findings of both the participant survey and roundtable discussions.

PARTICIPANT DEMOGRAPHICS



- **44%** executives (director level or higher)
- **Nearly 60%** in a technical role
- **84%** claimed an active role in determining the future of AIOps at their organization
- **68%** had active AIOps projects underway
- **91%** have adopted DevOps on at least one or more teams

Source: AIOps Exchange Survey, 2019

Roundtable Discussions

Two sets of roundtable discussions were held, spanning a range of topics about digital transformation and operational challenges facing AIOps leaders. Participants were actively encouraged to share their personal experience and insights on the application of AIOps in their own organizations, with each discussion guided by a peer-to-peer moderator. At the May 15th meeting, roundtable leaders included fellow AIOps Exchange participants from American Airlines, American Express, Change Healthcare, Dimension Data, DirecTV, Fannie Mae, GoDaddy, and KeyBank.

AIOps Exchange Roundtable Topics

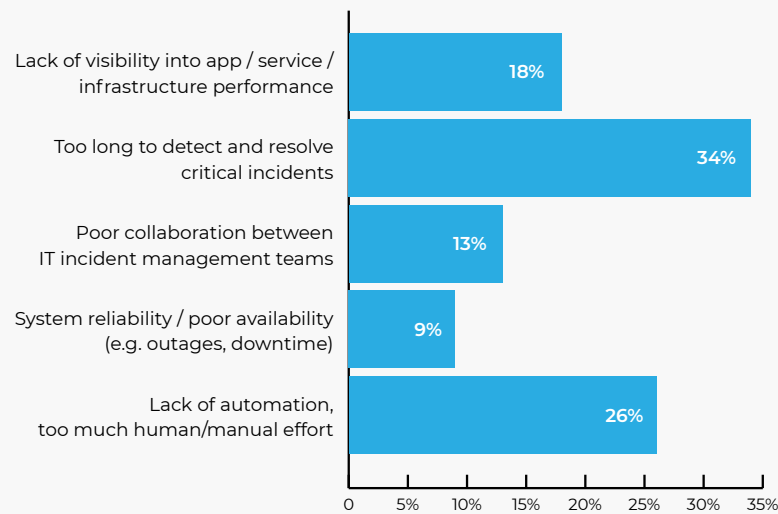
- Using AIOps Technology to Unify Monitoring Capabilities
- Re-skilling an IT Ops Team for AIOps Technology Use
- Using AIOps Technology in Conjunction with CMDBs
- Quantifying the Value Delivered by AIOps
- How to Successfully Roll Out AIOps to IT Ops Teams
- Role of AIOps with DevOps
- Role of AIOps in a Cloud-based Infrastructure
- Can AIOps Accelerate the Convergence of SecOps, DevOps and ITOps?

Using AIOps Technology to Unify Monitoring Capabilities

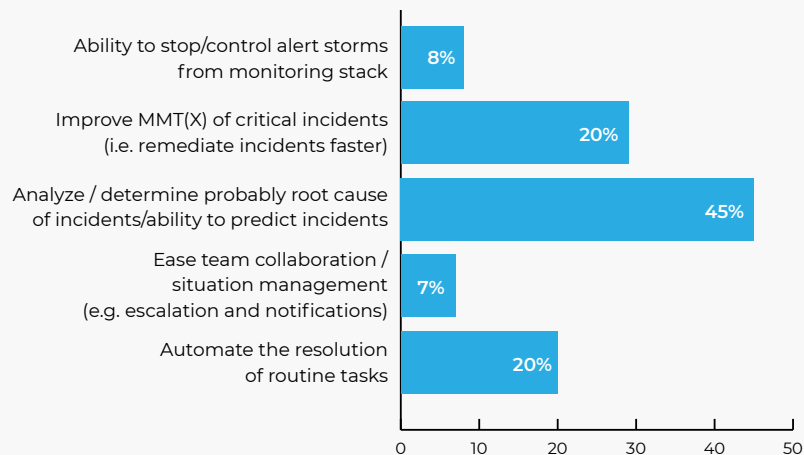
Unified monitoring provides a “single source of truth” that presents all IT Operations data and analytics in a unified interface. This ultimate goal of IT monitoring provides a consolidated view of disparate systems, showing the full end-to-end stack and a visual relationship map. AIOps uses telemetry data to build causal relationships between system elements and context for predicting and resolving IT service issues.

AIOps Exchange's participant survey revealed that, when it comes to IT monitoring regimes, most organizations still have plenty of room for improvement. Enterprises continue to struggle with monitoring portfolios. In the survey, participants cited their top three monitoring problems (in order of importance): too many disparate, siloed tools; lack of coverage of their entire IT environment; and an overreliance on rules-based solutions.

BARRIERS TO IMPROVING SERVICE ASSURANCE



TOP CONCERNS WITH SIGNIFICANT DOWNTIME



Source: AIOps Exchange Survey, 2019



Given these realities, the roundtable reported the following key findings:

- **Obstructions** include people, politics and data quality – particularly accuracy of data in the Configuration Management Database (CMDB). A large enterprise has many siloed groups using different data sources. This obstruction requires a layer of abstraction for a common schema used by AIOps.
- **Use cases** may include Manager of Manager (MOM) capabilities; breaking down organizational silos; modernizing the toolset to address proactive, predictive and reactive scenarios; reducing Mean Time to Detect (MTTD); remediation; and root cause and problem management.

Finally, it's clear that those IT leaders charged with overseeing monitoring hold decision-making power. Among AIOps Exchange participants, 49% indicated in our survey that monitoring drove their decision to deploy AIOps.

Re-skilling an IT Ops Team for AIOps Technology Use

A popular theme in the media is how AI will obviate the need for human workers and cause mass unemployment. With the automation provided by AIOps, some IT Ops professionals are not immune from potential job displacement. This roundtable focused on strategies for re-skilling an IT Ops team to help them apply their talents toward higher-level tasks.

Key findings included:

- **Define a Strategy** in the organization, from the top-down. The strategy must be open and transparent, convey the value of AIOps to the business, and explain the benefits of AIOps to each team member.
- **Set an AIOps advancement track** that covers areas essential for successful adoption. New job roles may include data scientist, scripting and automation, or workflow and collaborative specialists. Organizations will need to re-negotiate with service providers for new skill sets to actively participate in the AIOps program.
- **Identify adoption champions** to cover defined AIOps roles, including a mix of new hires, existing staff, and service providers.
- **Empower middle management** for deeper involvement in the AIOps program. Keep the focus on metrics to measure the progress of efficiency gains and provide incentives for service providers that are aligned with these new metrics.

Using AIOps Technology in Conjunction with CMDBs

A Configuration Management Database (CMDB) is a warehouse of information about an organization's hardware and software assets. CMDB data is critical for helping AIOps to understand the relationships between assets, including upstream and downstream dependencies, for effective diagnosis of issues and remediation. Configuration Management is also critical to DevOps adoption, as the comprehensive organization it provides is key to rapid continuous integration and delivery. While this roundtable specifically focused on CMDBs for

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AIOps, the topic was also mentioned in other roundtables as well. In fact, the AIOps Exchange participant survey revealed Configuration Management as the third most cited discipline positively impacted by AIOps, after only Event Management and Incident Management.

Key roundtable discussion findings include:

- **Accuracy** of the CMDB is paramount. If its data is bad or inaccurate, the AIOps solution will present inaccurate information in clustered situation reports.
- **Enriching CMDB data** is a best practice that makes it easier to accurately cluster and manage IT service situations with AIOps. This process should include augmentation of the CMDB with automated discovery for current status of assets.
- **Application Performance Monitoring (APM)** should be used to map an organization's asset topology for AIOps analytics.

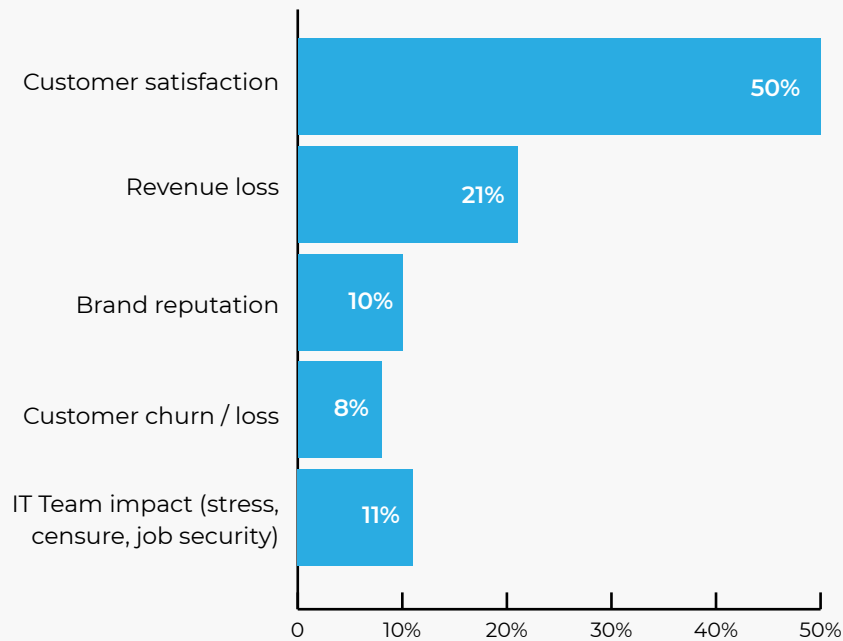
Quantifying the Value Delivered by AIOps

Specifying the value of AIOps is a gating factor, required before most organizations will green light its adoption. The three primary questions to determine its total economic impact are familiar: How much will it cost? How much will it save? How much will it improve revenue?

Key findings of this roundtable discussion include:

- **Identify** the organization's current state of capabilities, and compare those to desired outcomes in order to determine what must be measured.
- **Specify** quantifiable and qualified benefits and costs for AIOps. Metrics may include Mean Time to Repair (MTTR), noise reduction, availability, Service Level Agreement penalties, Mean Time Between Failure (MTBF) and incident rate. Harder to measure metrics are engineer productivity improvements, what lower value work has shifted to higher value work, and job happiness.
- **Factor** the new mindset for AIOps, its changes to the culture, and flexibility – including the value of future investment compared to the original investment.

BENEFITS FROM AUTOMATION



Source: AIOps Exchange Survey, 2019

- **Translate** metrics into Key Performance Indicators (KPIs) that are easy to understand by multiple audiences in the organization (e.g. finance vs. engineering vs. the CIO) and how those KPIs map to actual customer outcomes.

How to Successfully Roll Out AIOps to IT Ops Teams


The significant question of how to successfully complete an AIOps rollout was discussed. This lively roundtable spawned a variety of tips, tricks and advice that unfortunately do not easily translate into a 1-2-3 step process. Nevertheless, the following insights were offered by AIOps Exchange participants who had made the journey:

- **Justify AIOps adoption** by providing proof of value and return on investment. This big picture approach goes well beyond the typical Proof Of Concept readout.

- **Identify why AIOps is beneficial** with clear, documented, and approved use cases as well as solution requirements to guide vendor proposals. This includes provisions for building the desired end-state plan.
- **Deployment approaches may vary** because AIOps is not “one size fits all”. Choosing a phased approach as opposed to a big launch project depends on company culture and key success factors.
- **CMDB is not mandatory** for AIOps, but automation and remediation will not be fully possible without one.
- **Processes to operationalize AIOps** for service management and automation must be clearly documented to identify where changes are made. Processes must include a strong review to incorporate needed changes and maximize the potential of AIOps.
- **Change management** is an absolute key success factor for incorporating AIOps. Elements include defining a change management plan; providing different, adapted, specialized and customized training; defining an adoption plan; identifying silos to break down and integrate into the AIOps program; and gaining support and buy-in from senior management for resolution of issues during implementation and adoption.
- **Vendor demonstrations** are necessary for all the tools to be integrated, plus obtaining their commitment to help in the AIOps deployment.
- **Integration of all tools** right from the beginning of the rollout process will help any deployment approach with adoption as well as help minimize procedural issues.

The Role of AIOps with DevOps

DevOps is a major priority for organizations that need to rapidly publish new or revised code and introduce new features in both business and consumer applications. Successful app execution touches a vast array of enterprise IT assets, so actions taken by coders have profound impact on service performance. Among AIOps Exchange participants, the influence of DevOps on the purchase process is growing. 28% of survey respondents indicated that DevOps drove their decision to deploy AIOps.



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Key findings of this roundtable include:

- **The nature of DevOps is ephemeral.** In the cloud-based world of containers and microservices, data volumes require AIOps to bring actionable data into one place, guiding DevOps teams to effectively identify root causes and remediate coding issues.
- **A culture shift for DevOps** occurs with AIOps, because coders have never experienced the degree of exposure to flaws in their apps so early in the process.
- **Transitions from on-premise to cloud** using AIOps often reveal that developers are continuing to use old techniques, instead of achieving new efficiencies. One example is bringing resources up and tearing them down, instead of using long-running but idle virtual machines, services, etc.
- **Security issues** can be handled more effectively in a DevOps way with AIOps, but security staffers must be empowered to push back on app owners for mitigating incidents.
- **Key to DevOps success** is for teams to take ownership of their own problems, not allowing them to shift issues to another team, which only results in their actions being separated from the consequences. By working together, AIOps can provide DevOps with tools and visibility to maintain responsibility for their components.

The Role of AIOps in a Cloud-based Infrastructure

Cloud-first initiatives are driving many organizations to use AIOps for greater visibility. This roundtable explored how visibility is manifested, particularly in hybrid environments using public and private clouds.

Key findings:

- **Cloud visibility** is mostly provided by agents and the focus is more on applications than infrastructure.
- **Cloud provider-based monitoring** usually furnishes alerts, which are typically analyzed with third party or open source machine learning (ML) apps for capacity management and forecasting.
- **AIOps addresses the capacity issue** by gathering time series data, and then building ML models that aggregate and correlate the data.
- **For ephemeral compute**, alerts with AIOps must contain the right information about the state of the system at the time of the event or alert. To predict or prevent these short-lived events, tracking must occur before you can predict with thresholds and ML baseline models.
- **Distributed hybrid environments** provide different schemas that represent similar things. AI and ML work better and complexity is reduced when structured data is processed in one format.

Can AIOps Accelerate the Convergence of SecOps, DevOps and IT Ops?

The premise of this roundtable discussion was the feasibility of applying AIOps algorithms to the functional requirements of SecOps and DevOps.

Key findings include:

- **Feasibility exists** for repurposing AIOps algorithms to security, but the problems of IT Operations and security are very different, and security issues may be more complex.
- **Response times differ**, because IT Ops response must be immediate while SecOps must be careful about shutting down an operation too quickly. Security incidents have different ramifications: more people are typically involved, and discovering the extent of damage can require much more time than ITOps.
- **Convergence has a better chance politically** if an organization has already “de-siloed” SecOps, DevOps and IT Ops with collaborative leadership and workflows.



www.aiops-exchange.org

AIOps Exchange is a private, not for profit forum where IT industry thought leaders, influencers and C-level executives come together to share insights on the best use of artificial intelligence in enterprise IT Operations.

Our invitation-only events are committed to the open exchange of ideas on trending topics such as digital transformation, service assurance and business agility. No product pitches. No salespeople. No press. AIOps Exchange participants are defining the future of AIOps while helping each other to scale and accelerate business growth. For more information or to apply to attend please visit www.aiops-exchange.org.