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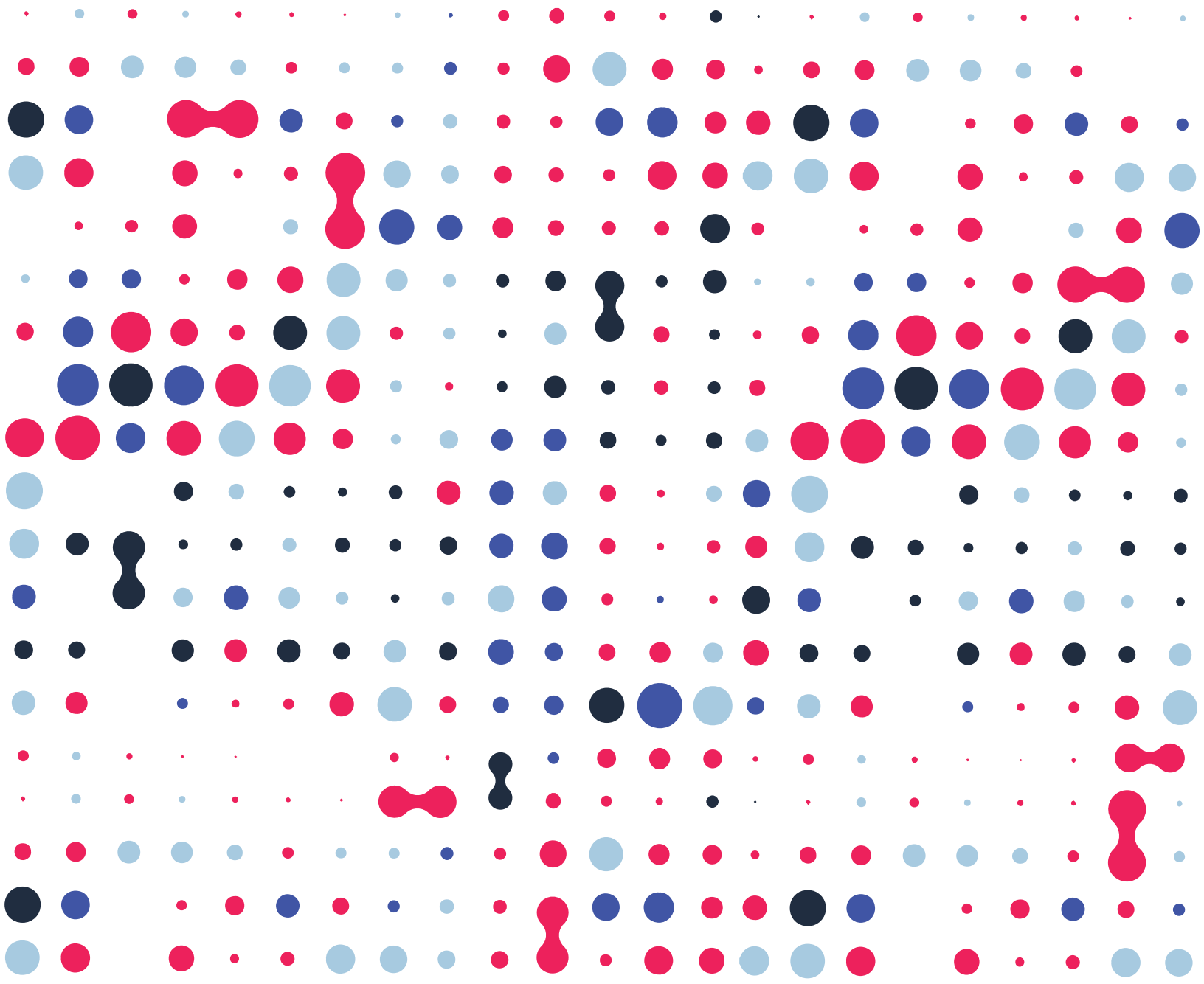
Moogsoft

Observability for DevOps and SREs

Observability Needs AI

The reality for most businesses today is that the customer experience is a digital experience. This puts DevOps pros and site reliability engineering (SRE) teams in the spotlight, because they're in charge of creating and maintaining these business-critical digital services, and must ensure that they're always available. Downtime drives customers away.

It's a major challenge. To continuously and quickly deliver digital services that boost business, these teams must embrace innovations, such as cloud computing, containers, and microservices. Along with their benefits, these technologies create operational complexity and constant change. As a result, DevOps pros and SRE teams spend too much time troubleshooting operations, which hampers their ability to release new and improved digital services. When this happens, competitors speed right by.

To understand, monitor and manage the complexity of these dynamic environments, developers are disseminating information through their code so the services are more observable. This typically begins with steadily more rich and structured logs, precision traces, and emitted metrics, a practice more formally known as observability.

To build continuous service assurance into their continuous integration and delivery (CI/CD) cycle, they need to observe and track normal behaviors, and analyze the deeper internals of a service — logs, traces and metrics — without unwanted manual intervention and static rules. This yields the

key bits of information needed to assemble all the pieces of the puzzle.

Traditional application- and infrastructure-monitoring tools based on manual user-defined thresholds no longer cut it in today's CI/CD software pipelines. These tools unify observability data on a dashboard but put the onus on you to interpret it and derive your own insights. Their fundamental flaw is that they don't surface incidents or identify root causes.

DevOps pros and SREs need an integrated AI-driven offering that helps them identify anomalies from metrics and correlate them in real-time with other events, traces and logs from the entire application stack. That way, they can detect critical incidents early and prevent outages throughout the CI/CD cycle.

That's what Moogsoft delivers. Built on the industry-leading Moogsoft AIOps platform, Moogsoft is a cloud-native observability offering designed from the ground up for DevOps pros and SRE teams. It features intelligent noise-reduction, alert correlation and native observability capabilities, including metrics collection and anomaly detection. Moogsoft also offers out-of-the-box workflows and integrations with notification and alerting tools, helping these teams resolve incidents faster and deliver continuous assurance for their critical digital services.
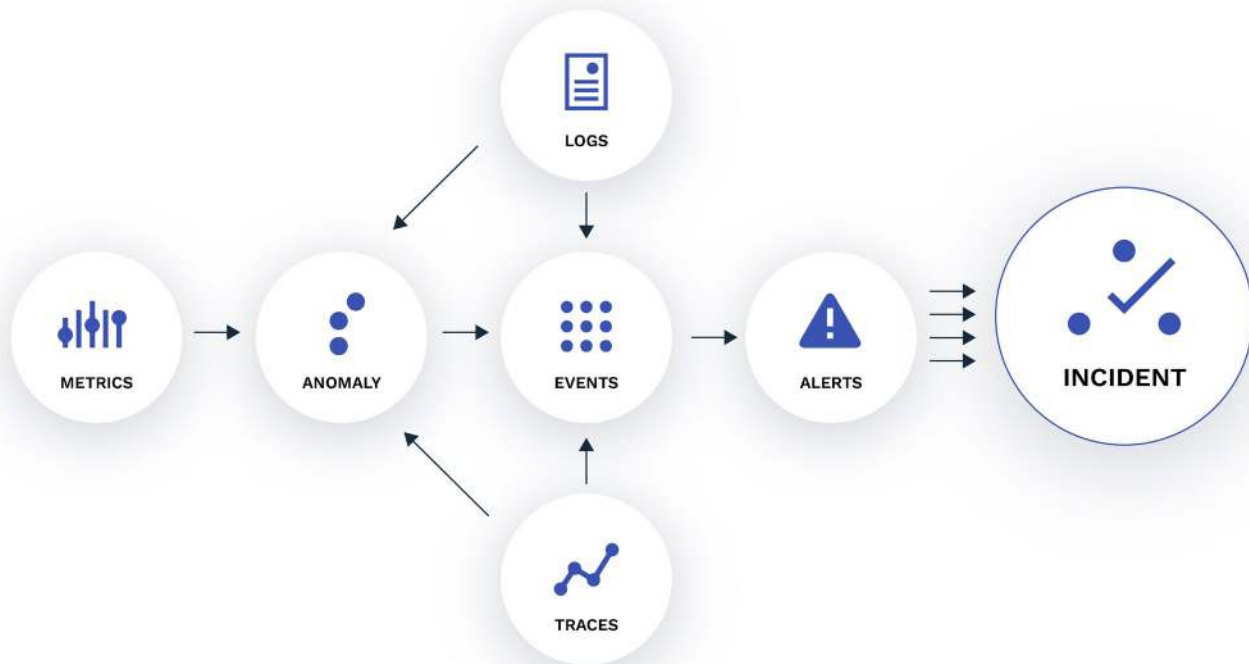
Moogsoft: The Cloud-Native Observability Solution for DevOps and SREs

Moogsoft is the only offering that democratizes AIOps while including native monitoring and observability capabilities. With self provisioning and self servicing, Moogsoft allows DevOps pros and SREs to keep their CI/CD software pipelines humming, detect application performance problems, and honor customer SLAs and SLOs.

Here are key highlights that make Moogsoft the observability solution of choice for DevOps practitioners and SRE teams.

Born in the Cloud

It all starts with a cloud-native architecture, which DevOps pros and SRE teams prefer and find most familiar. Thanks to its software-as-a-service (SaaS) deployment, Moogsoft is easy to deploy, simple to integrate, and delivers immediate value with a comprehensive set of AI and observability features.

DevOps Friendly

Moogsoft has out-of-the-box support for many common DevOps tools and data sources, including AWS Cloudwatch, DataDog, PagerDuty, Kubernetes and Prometheus. It's been designed so it's very easy for DevOps pros and SRE teams with a variety of

monitoring tools to push data such as metrics and events into Moogsoft using industry-standard and easy to use APIs. Moogsoft can also send notifications to tools such as Slack, JIRA and PagerDuty. In this manner, Moogsoft makes it possible to handle sudden and constant changes without impacting the speed and agility of the CI/ CD cycle.

Comprehensive Functionality

Moogsoft's comprehensive feature set fits the needs of DevOps pros and SREs, while being powered by the same platform and patented AI and machine learning algorithms

of Moogsoft's industry-leading AIOps platform, which is trusted by more than 140 customers.

Annual Subscription Pricing

Moogsoft is sold as an annual subscription. Affordable packages allow organizations to start small and expand their scope as needed. All subscriptions include 24x7 support and full product updates.

How Does it Work?

With Moogsoft, DevOps and SRE teams can finally gain insight into and streamline the management of their events and metrics, putting an end to alert overload and lengthy outages. Powered by Moogsoft's patented AI and machine learning algorithms, Moogsoft provides full visibility over potentially serious incidents, and helps teams promptly and proactively address them.

This is how it does it.

Data Ingestion and Normalization

Using both its deployable Collector and simple APIs, Moogsoft ingests and normalizes metrics, traces, log events, changes and alerts from monitoring tools, such as AWS Cloudwatch and Prometheus, and from systems such as Linux servers and Kubernetes clusters, across the entire IT stack, regardless how siloed it is. This gives DevOps pros and SRE teams complete observability across their production environment — on premises and in the clouds. Moogsoft also normalizes this data. In addition, to speed up data collection and anomaly-detection, and to reduce bandwidth costs, Moogsoft conducts real-time analysis at the source, where digital services data is generated.

Data Enrichment

Moogsoft surfaces incidents, enriched with contextual information and visual charts, providing a single, comprehensive view into the infrastructure and applications. This context creates situational awareness helping DevOps pros and SRE teams understand interdependencies and relationships so that

they may resolve incidents quickly.

Without using external intelligence feeds, Moogsoft enriches incidents by parsing the data for keywords and other information to populate other fields, or by combining values in fields to equate to a value in another field.

Noise Reduction and Anomaly Detection

Moogsoft analyzes anomalies and events to quickly and continuously filter out all the irrelevant operational data it ingests. That's how it reduces event noise and minimizes incident volumes with a scale and precision that are beyond the scope of the legacy process of deduplication, and that are far more relevant to modern DevOps and agile techniques.

In addition, by applying statistical calculations and noise-reduction algorithms directly to the metrics data, Moogsoft acts as a true observability solution that can monitor metrics and detect anomalies using learned adaptive thresholds, in combination with correlation across other event types.

Alert Correlation

Moogsoft correlates alerts into meaningful and actionable incidents. This allows DevOps pros and SRE teams to see patterns across the systems that make up technology stacks so they can ensure applications and microservices are at peak performance.

Moogsoft's correlation algorithms analyze alerts to identify clusters of similarity across service-affecting incidents, problems, or changes. The result of this correlation and aggregation is a massive reduction in the
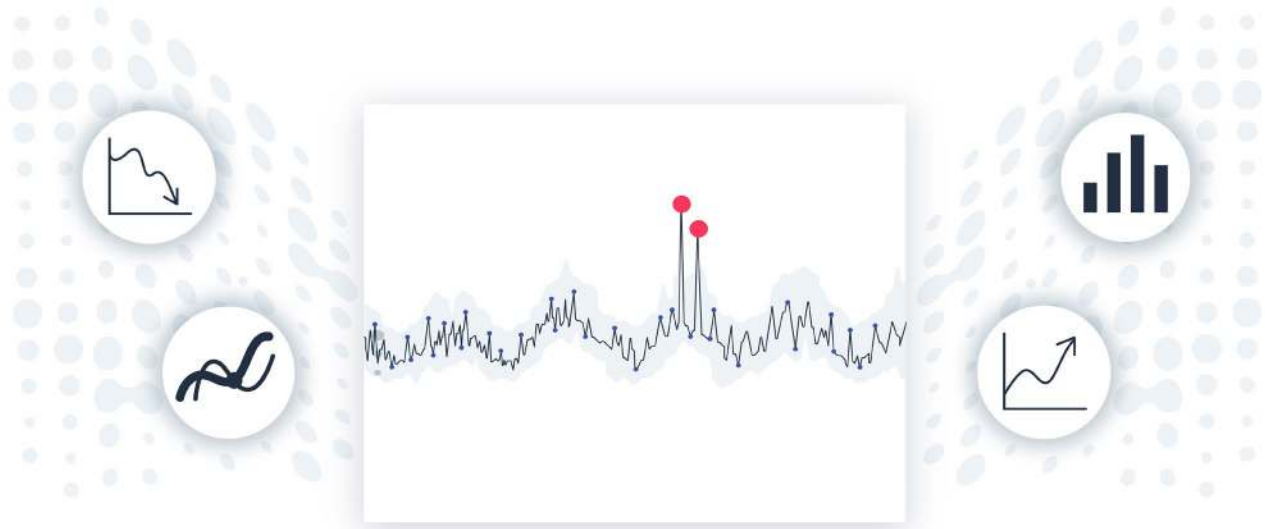
number of alerts or notifications bombarding IT operations, network operations centers, and DevOps pros.

This also significantly reduces the number of tickets received by DevOps pros and SRE teams, and simultaneously teaches the algorithms to improve accuracy in guiding faster remediation, especially for recurring incidents.

Root Cause Identification

Moogsoft's causality algorithms identify changes in critical nodes in physical or logical topologies to assess and understand the impacts of alerts. They also help DevOps pros and SRE teams to understand which events have the highest probability to be the root cause, guiding teams to the best starting point for troubleshooting and remediation.

With Moogsoft's root cause analysis, DevOps pros and SRE teams can determine where to begin troubleshooting and diagnosis

immediately upon opening an incident, helping them resolve incidents faster and more efficiently.

Collaboration and Resolution

Moogsoft facilitates collaboration for resolving incidents via generic mechanisms for posting incidents to and collaborating in third-party products, such as PagerDuty, Slack, and other notification and escalation tools.

Moogsoft offers a powerful graphical view through metrics and charts showing the progression of an incident. Moogsoft uses the time-series metrics data plotted out on the graphs to visually see each anomaly and subsequent alert on their own individual chart or within a combined view.

With its collaboration features, Moogsoft streamlines, accelerates and automates the incident resolution workflow.
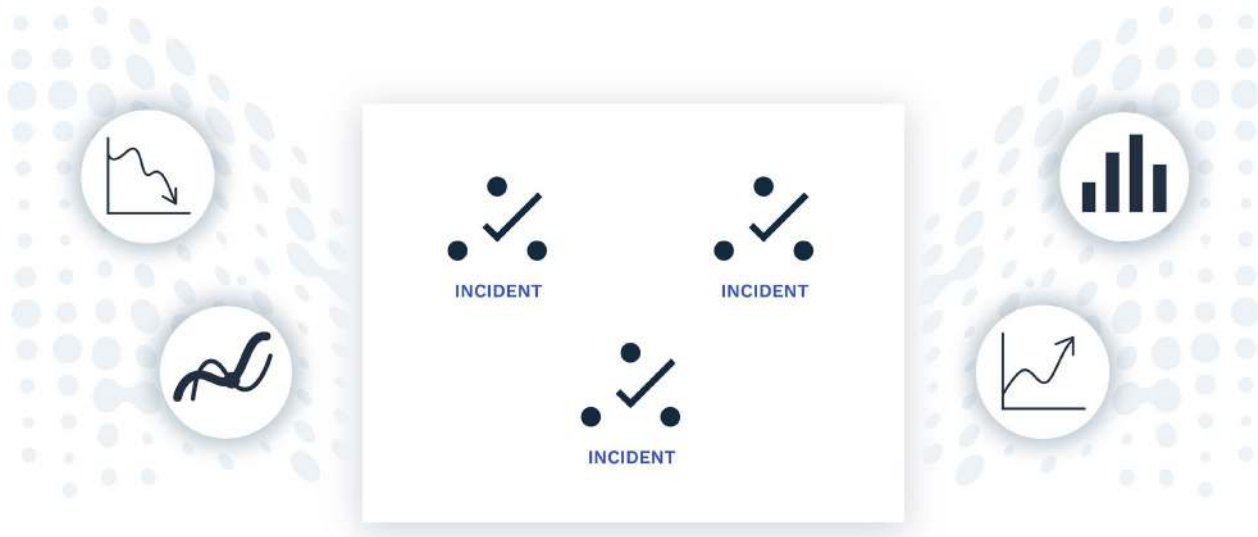
Use Cases

Moogsoft has been designed for DevOps pros and SRE teams, whether they work in a cloud-first small and medium enterprise or whether they're a team within a large enterprise. As a business grows, it can add Moogsoft licenses for different teams or different applications. Here's a sampling of use cases where Moogsoft can help DevOps pros and SRE teams better manage alerts, events, metrics, prevent outages, and provide continuous assurance for their digital services.

Alert Overload

SREs and DevOps pros need to connect the dots quickly and precisely, but the number of alerts has become so large that it's impossible to review and investigate them all. If the teams are overwhelmed by monitoring noise, they'll be unable to pinpoint critical anomalies and identify their root causes until it's too late: They'll find out when customers

start complaining about application latency, or about a full blown outage. Moogsoft was built from the ground up to address this problem. It provides metrics observability and detects anomalies using adaptive threshold monitoring; applies powerful, patented algorithms to filter out IT event noise; and correlates only relevant alerts, grouping them into unique incidents with all relevant data.

Managing Digital Transformation

DevOps and SRE professionals are personally involved in the digital transformation of their organizations — strengthening their online presence, enabling frictionless digital transactions, implementing autonomous communications, and deploying many more initiatives changing the way they operate.

Digital transformations often entail major shifts in technology, such as migrating from legacy mainframe and distributed systems to container-based and service-oriented

architectures, or moving from on-premises to virtualized public and private cloud architectures.

With these transformations come a deluge of data and an increased complexity from ever-changing IT environments. Moogsoft helps teams make effective use of the data. No longer must teams suffer from alert fatigue and confusion when determining what broke and how to fix it. Moogsoft uses data to concisely inform teams on how to ensure the uptime and availability of the company's online presence and digital footprint.

Enhancing Collaboration and Productivity

By simplifying and automating workflows to enhance collaboration and productivity, Moogsoft eliminates alert fatigue, increases visibility, and ends siloed and unproductive remediation efforts. With its predictive insights and root cause identification, Moogsoft helps DevOps pros and SRE teams make better decisions, and fix problems earlier — before they turn into outages — and more quickly, regardless how complex and dynamic their CI/CD environment.

Streamlining IT Incident Management

Incident management can consume many hours of a workday — or worknight — for DevOps pros and SRE teams. Moogsoft transforms the management of service incidents by automating tasks to ensure faster issue detection, probable root cause identification, faster MTTR, reduced escalations and improved incident workflows.

Reducing Costs and Boosting the Business

By helping to prevent outages and attain continuous service assurance, Moogsoft reduces costs and benefits the business in a variety of ways. Savings may result from operational efficiencies of automation, from reallocation of staff, reduction of overhead, and consolidation of now redundant or obsolete tools. Meanwhile, the business benefits from the optimal uptime, stability and reliability of digital services that power sales, customer support, supply chains, and myriad other processes.

Intelligent Monitoring

Modern applications are uniquely complex, involving multiple components, sometimes multiple cloud providers, and often chained microservices. This complexity makes root cause identification challenging for DevOps pros and SRE teams, especially as application architectures evolve over time. Moogsoft brings the AI and observability capabilities DevOps pros need for their applications, via its cloud-native architecture, flexible correlation capabilities, and ability to monitor both events derived from any source and native metrics analysis with intelligent anomaly detection. In addition, it can correlate and analyze new and unknown issues and data sources without additional configuration. As a result, teams can be agile in responding to the sudden changes that are common in DevOps environments.

Infrastructure Monitoring

Many applications run on hybrid infrastructures, with some elements on premises and others in the cloud. Applications are also commonly distributed across physical and virtual infrastructure types with tools such as Docker and Kubernetes deployed to manage the different elements of applications. Underlying all of these are the physical devices, including routers, switches, load balancers, and servers. Each of these adds complexity and requires robust monitoring capabilities. In particular, metrics are key to monitoring many infrastructure stacks to understand performance and overall behavior and identify anomalies quickly. Moogsoft's native ability to analyze metrics directly and identify anomalies, and then to correlate those anomalies with other events generated by the infrastructure makes it much more efficient to identify the root cause of any issues so DevOps pros and SREs can quickly remediate them.

If your DevOps pros or SRE teams need to better monitor and manage metrics, alerts, and events from their tools, we invite you to sign up for a free trial of Moogsoft at:
www.moogsoft.com

Moogsoft is the AI-driven observability leader that provides intelligent monitoring solutions for smart DevOps. Moogsoft delivers the most advanced cloud-native, self-service platform for software engineers, developers and operators to instantly see everything, know what's wrong and fix things faster. Founded in 2012, Moogsoft has more than 140 customers worldwide including American Airlines, Fannie Mae, Fiserv, HCL Technologies, SAP SuccessFactors, and Verizon Media. It has established strategic partnerships with leading managed service providers and outsourcing organizations including AWS, Cisco, HCL Technologies, TCS and Wipro.