

Full stack monitoring for Docker & Kubernetes apps

Visibility across the entire modern application stack

To stay competitive in today's economy and to deliver excellent customer experience, enterprises are building a new class of container-based modern apps. To manage these apps better, enterprises need to analyze the machine data from these modern apps to provide actionable insights to their DevOps teams.

Companies are adopting container technologies like Docker and orchestration solutions like Kubernetes as a way to scale services and increase the speed of innovation. These technologies, used in microservice architectures, allow agile teams to easily package and distribute functionality, while being able to easily roll back changes, if needed.

Docker and Kubernetes monitoring challenges

Today's cross-functional engineering teams struggle to monitor, troubleshoot, and secure their microservices because the technology is changing so quickly and their traditional tools just haven't kept up. The insights required to quickly solve customer issues requires deep visibility into every part of the modern application stack - cloud platform, container and orchestration platforms, custom code, etc.

There are many ways to collect machine data in a microservices environment, and they differ by technology and by the type of data being gathered - logs, performance metrics, and events. And even once machine data has been collected, producing meaningful metrics such as the condition of your host environment, the number of running containers, pods, namespaces, CPU usage, memory consumption and network performance can be arduous.

To investigate issues, developers often have to inspect multiple tools and try to manually correlate the problems that they see, wasting time and increasing unwanted downtime.

The challenges include:

- The dynamic and ephemeral nature of containers and microservices makes it difficult to effectively troubleshoot issues
- Dramatic growth in the number of containers leads to an increase in the variety of data which overwhelms legacy analytics tools built for traditional architectures and silo-ed teams

- Containers add to the complexity of achieving a unified view of your applications across the hierarchy of services, clusters, hosts, pods, and containers, making it difficult to optimize your applications

Sumo Logic analytics platform

Sumo Logic cloud-native machine data analytics platform delivers a comprehensive strategy for monitoring Kubernetes and Docker deployments - no matter how or where they are running. The Sumo Logic applications for Kubernetes and Docker utilize Sumo Logic's advanced machine-learning and analytics capabilities to enable DevOps teams to monitor, troubleshoot, and perform root cause analysis of issues surfacing from distributed container-based applications and complex architectures.

The Kubernetes and Docker Apps deliver out-of-the box insights, dashboards, and best-practice queries. The Kubernetes integration leverages the open source integrations with FluentD and Heapster. The Docker integration provides multiple methods - including the Docker Logging Driver, and standard containerized Sumo Logic collector, as well as native Docker integration with the collector.

Pre-built dashboards and queries allow you to view logs and performance metrics for your container and orchestration environments. The apps also provide visibility into important events.

Sumo Logic capabilities

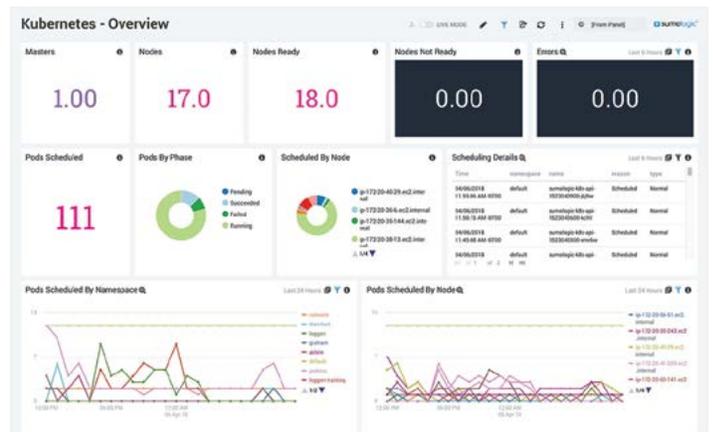
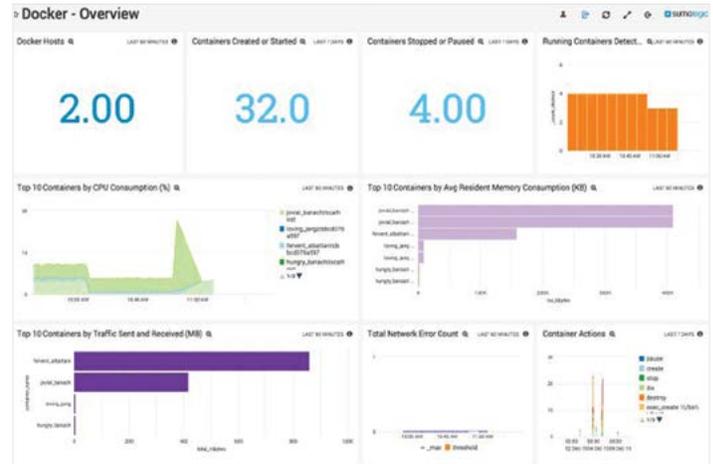
Collect and centralize: Sumo Logic can effortlessly collect terabytes of data from any application platform, or architecture. Lightweight collectors collect, compress, cache and encrypt the data for secure transfer, while open collection APIs and

integrations with open-source collection tools like FluentD, Heapster, and CollectD provide options.

Proactively monitor: Low latency, real-time alerting allows users to monitor the key performance indicators (KPIs) of their application, while reducing the impact of any issues on their users. A unified view across performance metrics, as well as logs and events, means that KPIs can be monitored across any component in your stack, and nothing will ever be missed. Outlier Detection and dynamic baselines allow users to focus on what is important and ignore false positives. Integrations with popular tools like Slack, PagerDuty, HipChat, and VictorOps means that alerts can work with existing processes.

Efficiently troubleshoot: Minutes matter in today's competitive environment, and the faster issues are resolved - the happier your users are. Users can analyze and correlate events in real-time across the entire application stack using an easy-to-use query syntax. Sumo Logic's patented LogReduce™ and LogCompare technology reduces hundreds of thousands of container and orchestration log events into groups of patterns increasing the efficiency of investigations. The integrated analytics platform for both logs and performance metrics allows teams to rapidly correlate symptoms with system events, reducing the time wasted with multiple tools.

Confidently scale: Microservices based on containers provide the tools needed to achieve unprecedented scale and innovation. In order to leverage those technologies, you need to be confident that your analytics tools are compatible with your approach. Sumo Logic uses the community-supported integrations for Docker and Kubernetes, while providing extensive APIs for automating your rollouts.



Sumo Logic app for Kubernetes

Using open-source and native integrations widely adopted for Kubernetes and Docker, the Sumo Logic App for Kubernetes helps you visualize log and metric data for full visibility into microservices architectures leveraging Kubernetes. Sumo Logic provides out of the box dashboards that show the status and performance of your nodes, pods, namespaces, and clusters - as well as your customer code.

About Sumo Logic

Sumo Logic is the leading cloud-native, machine data analytics platform, that delivers real-time, continuous intelligence across the application lifecycle and stack. www.sumologic.com.

“The Sumo Logic platform is easy to set up, offers a powerful query language, and provides native Docker support, making it the ideal log aggregation and analytics solution for me to understand critical application behaviors.”

OpenX



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