CASE STUDY

METRICLY®

How Jukin Media Leverages Metricly for Performance and Capacity Monitoring

Jukin Media is a global entertainment company powered by user-generated video content. Jukin receives more than 2.5 billion monthly video views across digital platforms, and is the leader in discovering, acquiring, and curating the web's most compelling UGC videos. Jukin produces original content for TV, the web, and emerging platforms, and is owner/ operator of entertainment franchises FailArmy, JukinVideo, People Are Awesome, and The Pet Collective (with FremantleMedia), which combine for more than 55 million fans online. Additionally, Jukin provides a wide range of solutions that allow premium brands, publishers, and media networks, to commercially utilize user-generated video content.

Metricly's relationships with Jukin began when Jerry Boonstra, Jukin Media's CTO, started looking for alternatives and complements to the company's performance monitoring tools. Jerry was intrigued by Metricly's broad support for open source agent technologies across diverse platforms. After learning more about Metricly's capabilities, he expanded the scope of their project to include alerting, as well as capacity and cloud cost management reporting.

Performance Monitoring Requirements

Performance monitoring requires consistent collection of time series metrics from a variety of sources along the path of a transaction. A new performance problem can start in any area of an application environment, so broad coverage, based on multiple integrations, is key for performance management projects.

Coverage should include areas such as applications, databases, operating systems, application messaging, and even custom metrics. The agent technologies used to collect these metrics is also an important consideration in selecting a monitoring solution.

Proven open source monitoring agents provide the autonomy for Jukin Media to use instrumentation technology independent of a provider's monitoring service, and also offer greater flexibility for customization if ever required in the future.

Challenges in Performance Monitoring

A challenge of performance monitoring is determining the right Key Performance Indicators (KPIs) for each type of middleware technology, in order to avoid being overwhelmed by too many metrics.

Another challenge is setting thresholds to determine when each metric is considered unusually high or low. This process is not intuitive to mentally estimate, and becomes unmanageable when it involves hundreds of metrics in an application environment.

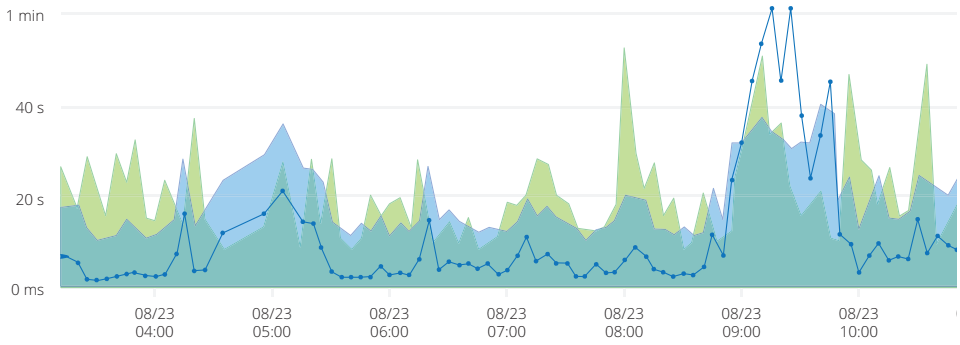
Metricly's Performance Monitoring Solution

Jukin Media started by evaluating Metricly's support for Linux and Java. Their monitoring project focuses on collecting hundreds of different metrics from a variety of technologies in their stack from the host Linux operating system, supporting data systems such as PostgreSQL, ElasticSeasrch Redis cache, as well as the underlying Amazon Web Services (AWS) environment.

"There are hundreds of metrics to monitor across multiple technologies in our application stack so our goal was to automate this process by applying analytics to identify performance anomalies before it affects the quality of our application service" explained Jerry Boonstra, Jukin Media's Chief Technology Officer.

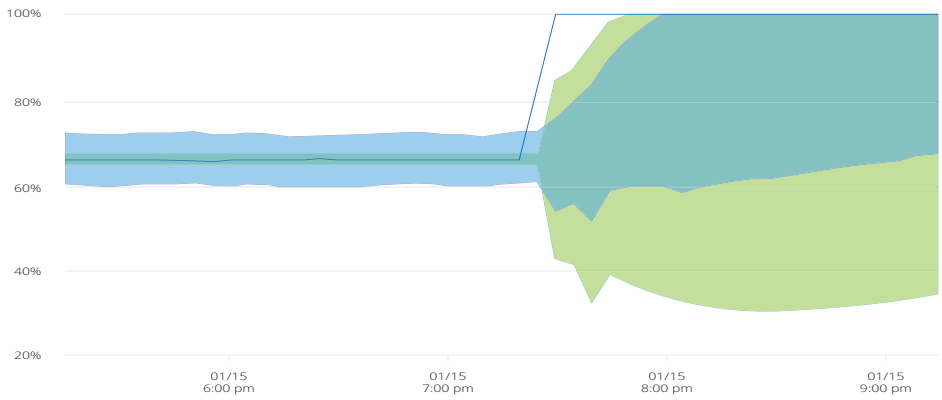
Metricly contributes to, and uses, open source agent technologies for metric collection then applies real-time analytics to learn the behavior of each metric both individually and in correlation with other metrics. Metricly's analytics represent these expected values as two types of bands of normalcy, which are then complemented by a set of best practice alerting policies that look for combination of deviations from expected behavior.

The diagram below shows an ElasticSearch latency metric with both bands of normalcy automatically discovered.



In this instance, users were able to receive alerts when the ElasticSearch metrics deviated from the expected values as opposed to relying on a static threshold.

"Metricly's out-of-the-box alerting policies help us stay ahead of problems", said Kris Shinn who leads DevOps practice at Jukin Media. "We have configured to receive the alerts in a Slack channel and coordinate response across our DevOps team". There are times when it is humanly impossible to mentally guess the right value for a normal range of behavior for a metric, such as the ElasticSearch latency shown in the graph above. There are also other times when a metric is easy to relate to, such as the percentage utilization of a disk volume. However, anomaly detection can still help get an early start in knowing when the usage is jumping, such as the example below.

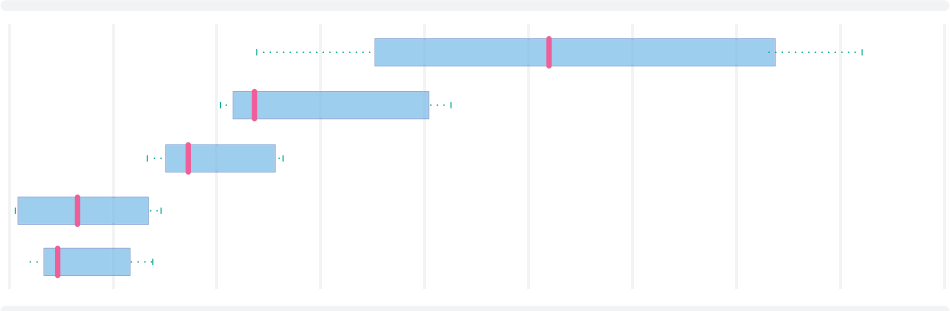


Metricly's Capacity Utilization Solution

The art of capacity utilization management receives much less attention in the industry as compared to performance management. However, it is equally important if you try to balance costs in relation to performance.

Metricly identifies multiple metrics that represent the capacity utilization of any monitored technology. For example, an operating system measures CPU, memory, disk I/O, network I/O, and disk space as various dimensions of capacity of a server.

Metricly graphs the data in a Utilization Box Plot Report, seen below, which shows an efficient approach to aggregating capacity over time (example: one hour, one day or one week.) This allows Jukin Media to identify hot spots and stranded capacity at a glance:

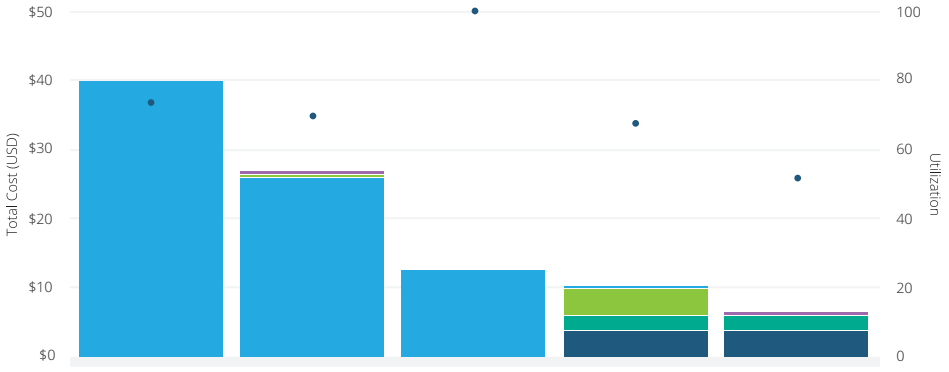


More information on this concept is explained in Metricly's Capacity Utilization with Box (and Whisker) Plots blog post.

Combining Capacity with AWS Cost Analysis

Once performance and capacity are measured and analyzed, the third dimension that can be added to a helpful report is cost.

To the right, Metricly's EC2 Utilization report shows utilization on the right axis represented by dots, and the cost represented by bars on the left axis.



More information about Metricly's EC2 Recommendation Report can be found in this blog post.

Using filters, users can easily identify the AWS EC2 instances that have a high cost and a low aggregate utilization over the course of a specified time period.

This report helps Jukin Media's DevOps team efficiently manage public cloud costs while avoiding capacity bottlenecks.

The advantage of hosting an application platform in AWS or the public cloud is the ability to adjust usage based on needs.

Even though the project at Jukin Media was not started with the goal to analyze cost alongside capacity and performance, this cost analysis became an integral part of the solution offered by Metricly.

About Metricly

Metricly is a SaaS-based adaptive monitoring solution that helps organizations monitor cloud services, applications, infrastructure, and public cloud costs. Metricly's advanced machine learning algorithms learn the behavior and workload patterns of your environment to optimize your resource allocation, reduce your cloud spending, and identify performance anomalies that matter to your business. To learn more and start a free trial, visit: www.metricly.com

Sign up for a free trial at **metricly.com**