

Motus Gains Visibility into Dockerized Applications and Improves App Performance with New Relic

Motus is a mobile workforce management company that helps mobile employees get more done when they're on the road.

Formerly known as Corporate Reimbursement Services (CRS), the company delivers efficiencies to mobile workforces by capturing, automating, and integrating vehicle reimbursement, personal-use of fleet vehicles, T&E expenses and CRM entries. All of this is done via software as a service (SaaS), with seamless integration between all major CRM, ERP, T&E, and payroll solutions.

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Vice president of technology, Motus

Navigating a new microservices world

Like many companies looking to gain speed and agility, Motus decided it was time to build for the future by adopting a microservices architecture. As part of this shift, the company is heavily leveraging Docker containers, clustering technologies like Apache Mesos, and cloud providers like Amazon Web Services (AWS)



Industry	Location	Employees
Mobile workforce management	Boston, MA	75-100

Use Case
360-degree view into entire web and mobile app environment, including connections between applications, and Docker containers, and servers they run on

Why New Relic
Single software analytics platform that offers everything from application, server, and Docker monitoring to browser and mobile monitoring

Highlights

- Gained visibility into relationship between apps and containers
- Reduced time it takes to identify and fix problems in Docker containers by up to 30%
- Improved application performance and customer experience

to help it scale and size its infrastructure appropriately. Today, roughly 95% of its production workload is running in Docker containers.

While the container technology has been great in helping Motus reduce infrastructure complexity, the added network layer it brings into the picture also created a blind spot for the team from a monitoring perspective. "When we were running on servers, we had the ability to track application to server to process, and get that rolled up visibility," says Scott Rankin, vice president of technology at Motus. "But when we moved to Docker, we lost that visibility because the link was broken."

One linkage in particular that Rankin's team was trying to fix was between containers and applications. "We could see that a particular container might be having an issue, but then we'd have to guess and find which container and which node that container was running on," says Rankin. Although tools like Marathon and Chronos helped provide health checks of the application, what Motus really needed was an easier way to correlate applications and containers, and investigate into problems.



Tying containers back to the applications

Motus had already been using New Relic for the last four years to monitor its applications and servers. So when Rankin first heard of New Relic's beta program for Docker monitoring, he was eager to give the solution a try. "With New Relic's Docker monitoring, the process of identifying which container was running which app immediately became a lot smoother," says Rankin. "We could tell which node a container was running on, and if there was a problem, we could quickly go in and inspect that, do some deeper investigation, and decide whether or not we just kill that particular container or re-spawn a new one."

Because Motus has everything isolated in Docker containers, another task that New Relic helps Rankin's team with is "right sizing" their containers. "We want to make sure we're not over-allocating or under-allocating resources, so we're constantly using New Relic to ensure that each container has the right amount of CPU, memory, and disk utilization in order to optimize both app performance and budget," says Rankin.

Occasionally, Motus has the same application running a couple different versions simultaneously in production (when doing A/B testing, for example), which means they have different sets of Docker images as well. "I find the linking to a New Relic-monitored application with the app rollup feature extremely helpful," says Rankin, who uses it to drill down from the app to the container to find the root cause of resource allocation problems whenever an issue arises. From their apps to the containers, and the containers to their servers, Motus now has complete visibility into the performance of its containerized applications with Docker.

"New Relic has given us back a 360-degree view of our entire environment. It allows us to go in and get a picture of exactly how things are performing."

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A 360-degree view of performance

Today, Motus uses the New Relic Software Analytics Platform for monitoring everything from Docker containers, applications, and servers, to browsers and mobile devices. "New Relic has been invaluable in helping us diagnose a number of different application performance issues," says Rankin. Most recently, his team used New Relic's Transaction Traces feature to trace a hanging request down through several layers of applications to a container that was having trouble making DNS requests. "That would have involved a lot more digging through logs and systems to figure out had we not had the ability to track execution contexts through New Relic," says Rankin, estimating that New Relic helps reduce the time it takes to find and fix problems in its Docker containers by up to 30%.

New Relic Browser, in particular, has helped Motus improve the customer experience by reducing latency. Says Rankin, "We recently moved a bunch of things over to a content delivery network as a response to some latency issues we were seeing with New Relic browser monitoring."

Most importantly, however, New Relic has eliminated the Docker blind spot. "New Relic has given us back a 360-degree view of our entire environment," says Rankin. "It allows us to go in and get a picture of exactly how things are performing." As a result, Motus can easily figure out how to improve application performance and ensure customers are getting the stellar experience they deserve.

About New Relic

New Relic is a software analytics company that makes sense of billions of data points about millions of applications in real time. New Relic's comprehensive SaaS-based solution provides one powerful interface for web and native mobile applications and consolidates the performance monitoring data for any chosen technology in your environment. More than 500,000

users and 11,000 paid business accounts trust New Relic to tap into the billions of real-time metrics from inside their production software—and provide answers to their important business questions. When your brand and customer experience depend on the performance of modern software, New Relic provides insight into your overall environment.

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