

Taking monitoring to the next level

How Datadog's cloud-first monitoring platform helps Devsisters rapidly tackle cloud-scale issues for gaming infrastructure

DEVSISTERS

Devsisters is a leading gaming company that develops iOS and Android applications, including Cookie Run, which has over 100 million downloads. Devsisters focuses on promoting social interaction in its games, while ensuring top-notch user experiences for its community of gamers. As an early adopter of Amazon Web Services (AWS) cloud and other modern technologies, Devsisters is considered a leader among tech companies in South Korea.

The need: a cloud-first monitoring solution

Devsisters set out to build great experiences for a rapidly growing user base while improving speed to market. To achieve this, the company harnessed cutting-edge technologies by building its infrastructure on AWS and utilizing tools such as Elasticsearch and Kafka. Although these new technologies allowed them to scale faster, they also added complexity that made it increasingly difficult to get critical visibility into potential user-facing issues.

As Devsisters' engineering team set out to monitor and ensure the reliability of their cloud-native systems, they initially adopted a handful of open source tools for their perceived low cost. However, implementing and integrating these tools with their tech stack required a significant time investment from the engineering team, both upfront and continually.

More importantly, Devsisters realized that these open source tools could not handle the scale and complexity of their modern environments. They needed a monitoring solution that would provide ongoing visibility into their auto-scaling infrastructure—and one that would seamlessly scale to support the company's growing cloud usage.

To avoid taking time away from developing new games and exciting features for their users, the Devsisters team decided to go with a cloud-native, Software-as-a-Service (SaaS) solution. They ultimately chose Datadog for its flexibility, ease of use, and built-in support for dynamic and ephemeral systems. By partnering with Datadog, the engineers at Devsisters could focus their time solely on building great gaming experiences.

Seamless integrations with 350+ supported technologies

With hundreds of vendor-backed, turn-key integrations, Datadog enables Devsisters to monitor all the technologies they use in a single place. Unlike previous monitoring solutions, Datadog does not require engineers to invest time in building out their own integrations; Devsisters is able to simply plug and play with any of the 350+ integrations that Datadog offers and easily start collecting data. "If we had chosen Prometheus, or any of the other open source tools, we would have spent a lot of time building out integrations or worrying about scaling," says SeungYong Oh, Devsisters' DevOps lead.

Datadog is also developer-friendly and scalable by design, with support for automation tools and monitoring-as-code technologies like Terraform. "I don't check the dashboards each day, but I rely on the alerts coming from Datadog to tell me there is a problem I need to address," says SeungYong Oh. "These were easy to create at scale using Terraform, so I didn't have to do everything by hand when onboarding onto Datadog."

Custom metrics to track gaming industry issues

In the gaming industry, abuse and hacking by players can have detrimental effects on a game's loyal fan base. For some of Devsisters' titles, abuse often takes the form of in-game currency manipulation. Therefore, combating abuse is a top priority for the team. Devsisters pinpoints abuse by tracking custom metrics—and, because they were already using StatsD for their metrics, porting them over to Datadog took almost no effort. “The custom metrics we were tracking to understand usage patterns were incredibly easy to bring into Datadog since we were already using StatsD,” says SeungYong Oh. “Transferring to Datadog's DogStatsD was as simple as it could get.”

Devsisters tracks custom metrics such as concurrent users and coins per user on Datadog dashboards, displayed on large TV monitors around their office. This allows team members to quickly detect any abnormal trends and immediately investigate. When a user's number of coins spikes unexpectedly, this usually indicates that the user hacked the system for an unfair advantage. The company can now detect and revert this unlawful gaming behavior, which improves the user experience for the rest of the rule-abiding community. “Understanding this level of user behavior and detecting issues would be much more difficult to do without Datadog,” says SeungYong Oh.

Automatic monitoring for auto-scaling environments

Because Datadog was built for the cloud, it can automatically recognize—and track—ephemeral instances as they spin up and shut down in real time. Datadog's automated alerts are designed to provide ongoing coverage for autoscaling infrastructure, meaning that Devsisters can get visibility into new instances without manually setting up any additional alerts. Devsisters engineers can rest assured that their entire infrastructure is fully covered—and they can spend less time actively monitoring their environment and more time building out new infrastructure and innovating.

“With Datadog, we're able to catch issues before things go all the way down,” says SeungYong Oh. “Our monitoring solution used to be a bottleneck for us during live outages. Graphs would be delayed by seconds during critical times. Datadog always functions in real time and produces graphs almost immediately. It is a difference of seconds, but these few seconds matter.”

Where Devsisters is today

With the launch of DevPlay in 2018 (Devsisters' global game platform), and expansions to the hit franchise such as Cookie Run: OvenBreak, Devsisters has continued to scale and strengthen its operations. It has also expanded its market reach by investing in new genres such as casual Match 3 and RPG (role-playing games). As the company continues to grow and innovate, Devsisters' team can focus on creating the best player experience, while relying on Datadog to rapidly scale to accommodate their needs. Per SeungYong Oh, “Even if we scale 10x in 10 minutes, Datadog is able to handle it, and that's immensely beneficial to us.”