



Leading Children's Gaming Site Roblox Deploys Sumo Logic™



The Sumo Logic Approach



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ERIK CASSEL
ROBLOX CO-FOUNDER
AND CHIEF SCIENTIST

ROBLOX is one of the most popular children's entertainment sites on the Internet, providing a multi-player 3D game environment for nearly 7 million users. ROBLOX emphasizes user-generated content. Players use core components to create online games that simulate the real world. They also build places for friends to meet, and create virtual goods to sell in the ROBLOX virtual economy.

ROBLOX, with its more than a billion page views per month, is no ordinary online gaming site. Instead of offering a predetermined menu of games, it provides a set of basic programming tools with which its users create their own games. This poses challenges for the site's IT staff, which not only has to provide a stable platform for the games to run on, but also must be careful not to interfere with the user-created games.

"We can't make changes to our API [application programming interface] without making sure that it won't break games and affect our users," says Erik Cassel, ROBLOX co-founder and chief scientist. In addition, "we want to make sure the peer-to-peer networking infrastructure is running very efficiently and smoothly."

To help achieve these objectives, Cassel turned to Sumo Logic's log management and analytics service to help turn large amounts of operational log data into actionable insights.

"We have hundreds and hundreds of servers running at any one time," Cassel notes, "and there's a rich amount of data there for the taking. But we didn't have a system that could handle all the data that we wanted to collect and analyze."

Cassel says ROBLOX had three primary criteria in selecting a solution for managing and analyzing its large volumes of operational log data:

- + it could be hosted by someone else. We didn't want to burden our storage infrastructure with such a high volume of log data."
- + It must be scalable. "We want something we can grow into."
- + It must have strong analytics. "The kinds of queries we want to explore are often very complex and require a quick response so we can implement appropriate measures."

Cassel says Sumo Logic met all three criteria better than any of the competition. "I came to Sumo Logic because I wanted to get insight into how our games are performing and wanted ways to analyze how to make them work better."

"Getting the data collection, management and analysis to start working took just a few minutes of our time,"

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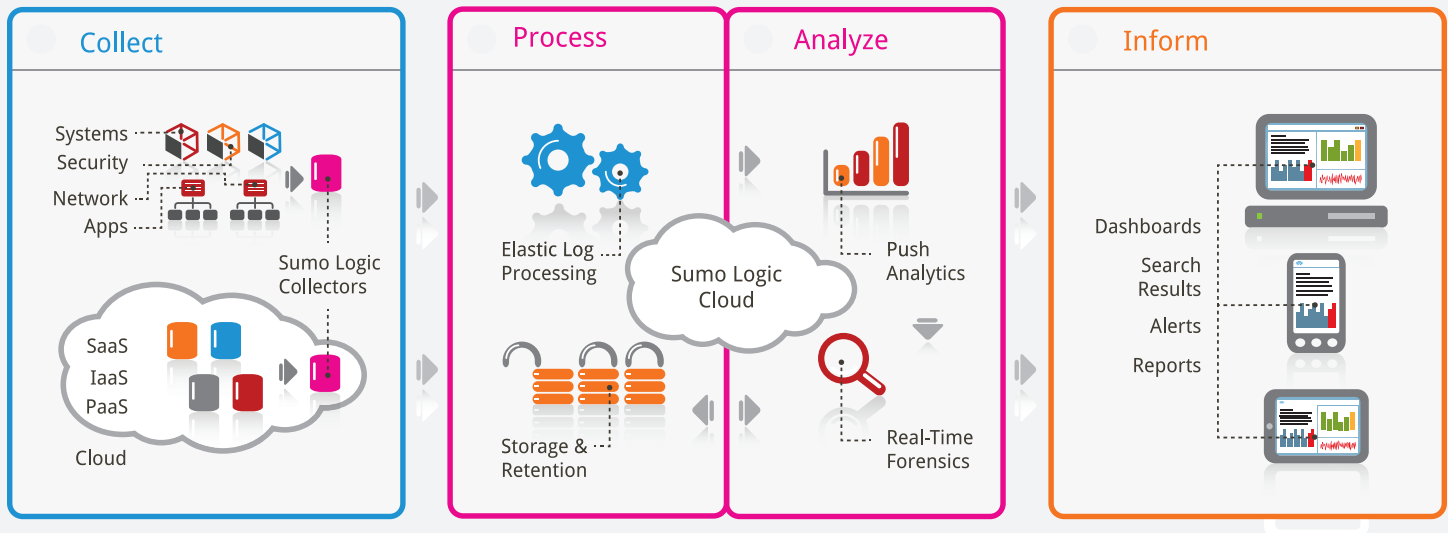
Sumo Logic's cloud-based service made it easy for ROBLOX to get started. "Getting the data collection, management and analysis to start working took just a few minutes of our time," Cassel recalls.

Sumo Logic's advanced analytics provide Cassel and his team with much greater insight into key operational issues. "We often want to make changes to our APIs to improve them, but we have to make sure we don't introduce regressions that might inadvertently break our games. With Sumo Logic, we are now fully analyzing the way games run, how the scripts are running internally, and gathering significant volumes of log information about potential issues if we were to make a change."

Sumo Logic also is helping achieve optimal network performance. "For our network games -- where people are playing each other in a multi-player environment -- we want to make sure the peer-to-peer game networking infrastructure is running efficiently and smoothly. And we want to optimize it. To do that, you need to collect a lot of real-world data, such as how the connection rates between our servers and millions of online players are performing. This involves a tremendous amount of log data to be collected and analyzed."

Cassel also is impressed by Sumo Logic's scalability. "Right now, we're easily talking about a gigabyte (of operational data) per day. One of the benefits of Sumo Logic is that their scaling model can easily accommodate a factor of 10 or more amount of our data so we don't have to concern ourselves with growing volumes of log data."

The Sumo Logic Service at Work



"We have a lot of data that we want to gather, and every day we come up with new uses for how we'd like to analyze what's really going on with our games. Up until now, we've just been doing in-house analysis using simple databases. Once you have a system in place like this (Sumo Logic's service), other parts of the IT organization will say 'Hey, I want to do that, too.'"

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"Most important for us is the analytics," Cassel emphasizes. "The kinds of questions we want to ask are often very complex; they're not simply 'let me get a count of this kind of a log here'. We want to do statistical analysis on, for example, the networking throughput of our games. So, we're going to have lots of different kinds of data, and we want to run sophisticated queries off them. We're not really looking at web server logs. We're looking at analyzing numerical data. The kinds of queries that we want to run aren't just run-of-the-mill counts of events."

Cassel says the impact of Sumo Logic's service on ROBLOX goes beyond operational efficiency.

"This is more than saying 'We want our boxes to run more efficiently or we want to have better uptime'. We're using this to be able to improve our products and new features, be confident that when we introduce a new feature or make some significant change to the system, it's going to behave the way you want."

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