several9s

Finding the right database mix for a Swiss chemical company

SIKA

Industry: Industrial
Technologies: MariaDB, MySQL
Hosting: AWS, Google, Azure
Datacenters: 8+
Products: ClusterControl

USE CASE

A mission critical network and server monitoring platform experiencing performance issues and outages due to its standalone MySQL database and the team's lack of database knowledge

WHY SEVERALNINES

ClusterControl offered a fully-integrated solution to deploy, monitor, and operate a highly available MariaDB Cluster

BACKGROUND

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing, and protecting in the building sector and motor vehicle industry.

Sika has subsidiaries in 100 countries around the world and manufactures in over 300 factories. Its 25,000 employees generated annual sales of CHF 8.1 billion in 2019. Also in 2019, Sika won the Swiss Technology Award for an innovative new adhesive technology.

CHALLENGE

Database management plays a critical role in order to keep the Sika global network and server monitoring platform up and running, 24×7. This monitoring platform, based on Observium, allows the team to have a single entry point for monitoring server and network resources spread across subsidiaries in over 100 countries.

The uptime and performance of the MySQL-based database at the heart of this system was critical for the team to onboard thousands of servers that required monitoring. The team, however, did not have any on-staff DBAs or specialized database experience. "If the database goes down, the monitoring system goes down," said Sergio Fernandes, Network Engineer at Sika. "If that happens, we are blind to the whole infrastructure."

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> Sergio Fernandes, Network Engineer at Sika

Fernandes and team knew they needed to improve their database management to ensure that their setup was highly available, performant, and resistant to outages. They set out to find a technology or tool that could help them achieve this.

At first, the team evaluated MSSQL and its tools as a potential solution. "We did an estimate on what we needed using MSSQL and the price was huge!" said Fernandes. In addition, the team found a number of linux-based, free tools for high availability MySQL out there, but they solved specific point problems and would have to be integrated and the usability improved in order to be useful to the team.

The team set out to find a solution that would offer them both a technology solution as well as the tools to support it, all from a single vendor and within their budget. They needed a tool to help them deploy a database in a high availability setup, automate backup scheduling, manage performance, and alert in case of problems with the database itself.

SOLUTION

At first, the team attempted to run things on their own and utilize their own load balancing setup. This solution worked fine until the traffic peaked, then the team noticed they were experiencing instability. They would see database crashes a few times per month, and as the load increased, the crashes would be more frequent.

After some quick Google searches, the team found some how-to articles on high availability from Severalnines. This led them to download a trial version of ClusterControl.

Since they already had a setup with F5 load balancers in front of their databases, the team worked with the Severalnines Support Team to deploy a stable three-node, production-ready, MariaDB Cluster and integrated it with their F5 setup. "ClusterControl offered an out-of-the-box software with all the needed features," said Fernandes. "Since implementing we have seen performance gains, high availability, all with an integrated backup solution.

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OUTCOME

In the end, the deployment of the new database environment to production and implementation of operational procedures via ClusterControl took about a month, divided into several non-consecutive steps. The process being watched over by the Severalnines and Observium support teams.

"ClusterControl has reduced the time spent on database administration," said Fernandes. "I encourage any nondatabase administrator (like me) to try ClusterControl as it helps a lot to manage a highly available database setup and all surrounding points, without having deep DB knowledge."