THE CHALLENGE

Lukka provides cryptocurrency settlement accounting through its proprietary software products. Lukka's customers require accurate valuations of the cryptocurrencies they trade, in order to establish accurate accounting values of their assets. Lukka applications track pricing data for millions of daily trades across multiple exchanges for multiple cryptocurrencies, while validating trade and pricing data in the blockchains of the currencies themselves to ensure accuracy.

From Day One, Lukka had exceptional software engineering talent. Andy Mei, Lukka's head of engineering, was confident in his team's ability to build a greenfield application with a scalable microservices architecture. But, he knew that worrying about the deployment of this application on cloud-based infrastructure would only slow his team down. Mei remembers, "We needed a partner that understood how to efficiently deploy applications and manage complex microservices architectures day to day so that our team could focus on building value for our customers."

Mei also knew he wanted a streamlined automated code management, testing, and deployment process to maximize the time his team spent actually writing code. "We didn't want to worry about the mechanics of manually testing and deploying our code. We wanted continuous integration capabilities and automated movement of artifacts through our various environments. We were very pleased to find both the skill sets we needed in a single partner—Blue Sentry."

THE SOLUTION

Blue Sentry worked with Lukka's engineering team to define an immutable artifact and the appropriate quality gates for Lukka's continuous integration cycle. Docker containers running on an EC2-based Kubernetes cluster was chosen as the framework to deploy microservices. A PostgreSQL-compliant time-series database was set up in Amazon Aroura for the storage of currency value data with additional storage in S3. Aurora and S3 were chosen for their scalability, reliability and relatively low cost.

Blue Sentry built four distinct Kubernetes clusters for Development, QA, UAT, and Production in discreet VPCs. VPC Transit Gateway was used for VPC peering. Blue Sentry then built an automated CI/CD capability using Jenkins to automate quality gates in the continuous integration cycle and move successful artifacts from Development to the various testing environments.

Once these solutions were in place, Blue Sentry's Cloud Center of Excellence team integrated into Lukka's day to day operations to ensure smooth deployments, site reliability, security, cost management, and other cloud best practices. "We have been very pleased with Blue Sentry. They have allowed us to go much faster while also letting us focus on what we do best," says Mei. "They have been an excellent partner."

THE BENEFIT

Lukka's business is growing rapidly. The application usage and data sets are growing by multiples. Thanks to the teamwork between Lukka's engineering and Blue Sentry's Cloud Center of Excellence integrated team, Lukka's application and DevOps processes are extremely scalable. There is now no technical limit to our growth rate. "We are big believers in cloud-native architectures and automated deployment processes.", says Mei. "The combination of AWS and Blue Sentry has been a powerful accelerator for us."