SaaS Solution for Real-Time Reporting and Analytics

How Cynosuresoft Achieved Actionable Insights with CubAngles's Serverless SaaS Solution

Executive Summary

Cynosuresoft, a Toronto-based Software as a Service (SaaS) company, wanted to develop a reporting and analytics solution to give FOREX and Crypto trading brokerage companies near real-time access to critical metrics like Profit & Loss (P&L) and Swap. The company worked with software developer and AWS Partner, CubeAngle, to develop the solution. CubeAngle delivered a working product in less than four months using AWS serverless architecture and the AWS SaaS Factory Pattern. The solution is helping Cynosuresoft scale its services for customers of all sizes with high performance, security, and cost effectiveness.

The Challenge

Capacity planning was a major challenge was Cynosuresoft. Like any other SaaS providers, they wanted to be able to scale as they bring more customers onboard.

Cynosuresoft wanted to be able to offer tiered-subscription to its customers and enable them to pay based on their consumption.

In addition,Cynosuresoft wanted to be able to offer different features based on the subscription tier.

Given their small IT and operations team Cynosuresoft was looking for a solution with very low operations overhead with built-in monitoring and alerting features.

About Cynosuresoft

Cynosuresoft, a Toronto-based startup established in 2020, wanted to build a real-time dashboard and analytics Software as a Service (SaaS) solution to help FOREX and Crypto brokers to collect deals, trade, and position data in real-time and drive actionable insights to help them make informed risk management decisions. If there's anything brokers need to make it's the right information at the right time. For finance companies, having a comprehensive and immediate view on Profit and Loss (P&L) is crucial. To build the solution it partnered with CubeAngle, a Toronto-based software and cloud company, founded in 2010 and an AWS partner since 2017.

A Perfect Partnership

Why CubeAngle

Cynosuresoft's customers, were ready for a faster and more efficient way of obtaining those critical metrics . As Gabby Shambayati, Manager and Director of Cynosuresoft, explains, "At the end of every business day, their customers needed on average four traders to download data from different sources and convert the data to Excel to generate the necessary P&L reporting."

As a software developer serving a range of industries, Cubeangle saw an opportunity to make near-real-time reporting accessible across sectors. It wanted to partner with a startup on the initiative and was excited by the prospect of working with Cynosuresoft. "It was a perfect match," says Mohammad Meimandi, CEO of CubeAangle CEO. "We were eager to build up our pipeline and prove out the business case as a flagship project."

Shambayati was familiar with CubeAangle from a previous working relationship.

She knew it was a small, talented team that had the expertise to deliver what Cynosuresoft was looking for. "It was the best opportunity for both our companies."

Manual Processing

The data comes in from a variety of vendors that use a range of technologies, APIs and proprietary Software Development Kits (SDKs). For brokers without IT departments, generating those crucial P&L reports is a manual, error-prone task that takes time and resources away from the core business.

For small to medium sized brokerage houses, getting those critical insights efficiently and quickly can be a game changer.

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From MVP to Serverless Architecture

The companies started working together in early 2021. As a preliminary phase, CubeAangle learned the finance industry particulars and business logic.

It developed a Minimum Viable Product (MVP) on traditional architecture, including a database server, a web server, and an application server. The MVP acquired the necessary data from a single trading server, displayed a basic report that refreshed every minute, and generated an end-of-day report.

The MVP was a success. "Cynosuresoft found the MVP very useful," says Meimandi. "They wanted more."

While traditional infrastructure functioned well for the proof of concept, it didn't scale to meet Cynosuresoft's growth objectives.

Cynosuresoft wanted to deploy new features and onboard new customers. It needed to find a way to provide the necessary data isolation, data security, and scale capacity with minimal operational overhead to future clients within an efficient cost model.

CubeAangle decided that serverless architecture in AWS Cloud would deliver these capabilities best.

A well-architected solution on AWS could acquire data from a variety of trading servers in different cities and time zones, provided under service agreements by different vendors, and provide near real-time reporting in and insights dashboard.

55%
Cost savings in servers, operations, and software licenses

90%
Faster new customer onboarding

70%
Less downtime for code release and maintenance

Building SaaS Solution on AWS

Serverless Architecture with SaaS Factory Pattern

Over five months, CubeAangle built a modern serverless architecture with AWS SaaS Factory Pattern used AWS DynamoDB, AWS Lambda, AWS S3, Amazon Cognito, Quick Sight for BI, and Fargate.

The solution incorporates different connectors that are able access data through different technologies, REST APIs clients, Financial Information Exchange (FIX) protocol, and proprietary SDKs.

Quick Gains

At the end of the trading day, the solution automatically generates an Excel report that is emailed to company management and stores the numbers in Data Lake for historical analysis.

Broker's traders can see P&L reports on a real-time dashboard, improving the risk management posture of the brokerage. "That's a huge difference," says Shambayati, "Now they can adjust their decisions every minute."

The MVP was developed as a pilot in cooperation with initial customer for over a year at no cost. When Cynosuresoft sent the company a service renewal contract reflecting the actual cost, they signed and returned it without negotiation.

"They're relying on our solution and they're happy to pay for it – no questions asked," says Shambayati. "That's the best customer feedback we can ask for."

Scalable Architecture for a Growing Startup

With serverless architecture on AWS, Cynosuresoft gained the capacity and the confidence to scale up its business and offer its SaaS solution to more customers. CubeAangle created an interface that makes it easy to onboard and manage new customers, keeps customer data separate and secure, and provides different tiers of service to different clients without performance degradation.

Streamlined Onboarding

Now, when Cynosuresoft provisions a new client, they simply select a service tier and click a button.

The registrations, features, and resources are all managed automatically with the AWS SaaS Factory Pattern.

The tiered SaaS service lets Cynosuresoft offer features to small and big clients based on different pricing models due to pay-as-you-go pricing on AWS.

The partners are also building out new features that give brokers more independent control over file processing, report generation, and analysis – and reduce overhead for Cynosuresoft.

Operational Excellence

For CubeAangle, it was important to build the SaaS Factory Pattern on a solid foundation. Being on AWS helped with reliability and scalability.

With an integrated, streamlined, serverless solution, Cynosuresoft can offer its services to multiple customers with more brokers without worrying about procurement cycles, capacity planning, server patching, upgrading, and licensing.

On AWS, CubeAangle doesn't need to worry about uptime, performance, capacity, or maintenance. "I sleep well at night knowing that if Cynosuresoft grows from serving 15 brokers to 500 brokers, the system just grows," says Meimandi. "That's a game-changer for both our companies because we're relatively small."

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Real-Time Reporting for Any Industry

On AWS, CubeAngle created a scalable, serverless architecture that is transferable to other industries that need real-time reporting.

Its next objective is to turn the P&L reporting solution built using the AWS SaaS Factory Pattern into a turnkey solution so other startups can leverage the same benefits.

"For finance, P&L is the key metric, but we can apply a different business logic for another application," says Meimandi.

"The only thing that needs to change is where we source the data. Once the infrastructure is in place, it's going to work for any industry."

With the solid serverless architecture designed and implemented by CubeAngle, we have the confidence to accelerate our growth knowing that infrastructure, scaling, security, and operation, and data isolation is all handled.

We can onboard a new customer with a few clicks. Cannot ask for something better.

Gabby Shambayati
Manager

About CubeAngle

At CubeAngle, we are a leading cloud professional services company and an AWS Select Partner dedicated to transforming businesses through innovative cloud solutions. We specialize in assisting organizations in their journey towards efficient Data Ingestion and Processing, Intelligent Document Processing, and IoT applications.

aws partner network
Select
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