Jetstack Helps Alpha FX Supercharge Their Payments Business

Migrating payments platform to cloud-native AWS infrastructure, Alpha FX's payments volume increased by more than 600% in less than a year

Executive Summary

ALPHA

Industry: Financial Services

IT Environment: This financial services company was migrating from legacy technologies to cloud-native services to support its fast-growing payments business.

Business Challenges:

- Alpha FX wanted the ability to handle complex financial transactions quickly at increased scale
- Legacy infrastructure couldn't scale to support company's growth objectives
- Migration to cloud-native AWS required internal team to quickly build knowledge on best practices
- Internal development teams needed additional expertise to build necessary cloud-native infrastructure

Solution's Business Impact:

- Standardised, optimised and automated company's cloud-native infrastructure
- Cut deployment to production from three days to 20 minutes
- Increased payments volumes to almost 630% within a space of months
- Enabled company to offer targeted, unique features to their customers

Business Profile

Founded in 2009, Alpha FX offers FX (foreign exchange) risk management, payment and other currency management solutions. Despite having less than 200 employees, the company has an impressive portfolio of corporate and institutional clients that conduct business around the world, including ASOS, Capital Dynamics and Magimix. It has been trading on the London Stock Exchange since 2017.

Business Challenge

London-based Alpha FX has been one of Europe's leading corporate foreign exchange brokers for more than a decade. In the last few years, their business has expanded into the payments and collections space, particularly global financial payments. The payments space was growing at a dramatic pace—as much as 10-fold over the previous three years alone—and Alpha FX saw they had the potential of becoming the leader in this specialised, extremely lucrative space. And in order to differentiate themselves from their competition, they would grant customers the ability to execute complex financial transactions at lightning-fast speed.

Alpha FX had a base capability built into their legacy stack to onboard a number of their customers; however, they had reached a level of volume that taxed the capabilities of the existing infrastructures. They knew that in order to grow, they would need to migrate from their legacy system to cloud-based microservices using AWS (Amazon Web Services) that could easily scale to handle more volume and respond nimbly to their customers' varying requirements. They also saw the opportunity to move quickly to get a jump over

their competitors. To implement this plan to build a modern scalable platform using the latest open source cloud computing technologies, James Carey was hired in April 2020 as their new director of technology.

IT Environment

Alpha FX was using a combination of legacy and cloud-native technologies. Their FX-based hedging system used some third-party software and was used primarily for phone-based trades. The company wanted to introduce a new platform for its burgeoning payments business, and in order to achieve this objective, they needed to make significant investments in cloud-native technology that would enable them to build and deploy software using services from AWS.

They planned to build out this team from eight employees to almost 40; however, few of the initial eight employees had experience working with AWS, and the project was in danger of not meeting important milestones to be in full production ahead of their competitors.

Once on board, Carey immediately found that his team required specific support to allow them to build more effectively using cloud-native technology. In addition, the operational management required resetting to properly benefit from more advanced best practices. For example, it was decided to manage dev, test and production data into properly segregated environments, rather than risk that data becoming intermingled into one central service.

Carey recognised that building the new platform would require engaging a partner that understood how to create modern, cloud-native infrastructure and work alongside the Alpha FX platform teams. This meant directly supporting the team members to create this new cloud-native environment as well as working through various Proof of Concept phases all the way through to having an effective release and production environment.

Solution: Jetstack

One of the first decisions Carey made after joining Alpha FX was to hire Jetstack to help with the AWS buildout. He had already worked with Jetstack in

a previous position at a much larger organisation where this team needed to containerise many of their services using GCP (Google Cloud Platform). Consequently, Carey was already convinced of Jetstack's credentials and that they could make the same impact by building with AWS.

"Actually, before I even joined Alpha FX, I recommended Jetstack to my team so that they could get the relationship started. Then, when I joined, I took control of the Jetstack relationship and started working more closely with Matt Barker [president and cofounder at Jetstack] to get our AWS infrastructure up and running as quickly as possible," said Carey.

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>
> James Carey
> Director of Technology at Alpha FX

Solution's Business Impact

Standardise Cloud-Native Infrastructure Without Sacrificing System Integrity

Jetstack's first major contribution was standardising Alpha FX's infrastructure estate. Leveraging their expertise in building and maintaining secure cloud-native environments, Jetstack designed a framework that standardised Alpha FX's container setup and deployment mechanisms, segregated data within their proper environments and set up a certificate authority (CA) into the infrastructure. "Before Jetstack, we didn't have a proper certificate store. Jetstack implemented an automated certificate management solution into Entrust, which is fundamental to keeping our AWS environment secure," Carey noted.

After getting the basic framework down, Jetstack then set up a deployment structure that automated the provisioning and orchestration of standardised environments from the development stage to the production one, so that each stage was consistent and

reliable. "We were now able to trust all our developers to get deployments all the way through to production," Carey said. "We no longer had to worry about potential inconsistencies among these environments that could later lead to multiple problems with the deployment of apps and services, as well as maintenance."

Acceleration of Innovation Increases Customer Confidence

By providing Alpha FX developers standardised development environments and tooling throughout the CI/CD pipeline, Alpha FX saw the pace of app development speed up almost immediately. And these actions have already paid off. A key metric Alpha FX uses is the number of payments that goes through its system. In January 2020, before Jetstack was brought on board, Alpha FX had around 7,000 payments run through their systems. By December 2020, Alpha FX pushed through 51,000 payments, an increase of almost 630%. "Because we get paid per payment, this is the most obvious competitive advantage we've gained from being able to scale up so quickly," Carey said.

And Carey expects that the speed and reliability of the AWS environment Jetstack architected will allow Alpha FX to process more payments and give their customers more confidence in using Alpha FX as their primary payments vendor. Many larger customers use a selection of payments processors to minimise risk of failure. "If a customer gives us £50 million to process and we fail, then they know that at least they have another £50 million elsewhere as a backup," said Carey. "Now they can increasingly trust us to handle all of their payments volume, which means it's not going to competitors. And when the larger customers trust us enough to use us as their No. 1 provider, that gives us an even greater competitive advantage—and greater profits as well."

Responsiveness to Every Customer Leads to Bigger Profits

Jetstack also helped Alpha FX transform their payments platform to build features tailored to the needs of individual customers, something they couldn't do in a fixed legacy environment.

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James Carey
Director of Technology at Alpha FX

In addition, the efficiency improvements have been startling. Before Jetstack, it typically took Alpha FX three days to deploy a workload to production. "Now we're pushing out three or four releases a day, which takes about 20 minutes," said Carey. With Jetstack's help, Alpha FX plans to use AWS' dynamic scaling capabilities to better serve their more high-volume clients, using the new deployment tooling to churn out features much faster to clients—all without having to take the site down to push them out, as they often had to do in the past. "I want to push out new features tens, if not hundreds, of times a day," he added.

"Corporate hedge funds and institutional clients don't handle payments in the ways consumers do. They may want to pay 10,000 individuals certain amounts that total £500 million—and do that all at once," said Carey. He explained that Alpha FX needs the capability to consume their customers' data in various proprietary formats, shepherd these payments through a gauntlet of banking and compliance systems and ensure that everything reconciles to zero when the payments are completed. And all this complexity must be hidden from the customer because that is what they're paying for.

"Now that we're microservices-based, we can say, 'The £500 million that just left your organisation is correct, and all 10,000 entities you wanted to pay have received their payments.' That peace of mind is what our customers want, and now we can give it to them in a way that we couldn't before," Carey said.

In addition, Alpha FX now can test the various features that their customers need, as well as come up with new features that anticipate market needs. "The ability to completely segregate these flows means that any changes we make in one won't break the others. This innovation is really important because now we can try out new things—and if they work, we're confident that we can push it live to the client. We could have never done this with our legacy system," Carey said.

Alpha FX's current customers have already commented on their new level of responsiveness, which is driving increased customer loyalty. But Alpha FX isn't content to solidify its current customer base. "We believe our responsiveness will attract a new breed of customer— and we want to get to the point where we're taking customers away from the competition because we have a richer feature set," said Carey.

The Importance of Expertise and Partnership

Alpha FX initially hired Jetstack to create a blueprint that would get their AWS environment and the solutions deployed within AWS in the fastest, most efficient way possible. "Jetstack understood what we needed better than we ever could have on our own. They knew what environments we needed to have, the availability zones we wanted to run and the best ways to deploy," Carey said. What was especially valuable was the excellent working relationship between Jetstack and Alpha FX, particularly Jetstack's willingness to share so much of their knowledge, such as the latest trends in containerised deployments, with his team.

Alpha FX's partnership with Jetstack was not a one-time engagement. In fact, it's expanding in concert with Alpha FX's increasingly ambitious goals in the payments space. "It makes so much sense to partner with Jetstack because they have the deep subject expertise that will always be a requirement for our business. It's a more scalable model that gives you a much better quality of output than anything we could

provide in-house. And it lets us focus on building out our payment capabilities, which is core to our business," Carey said. Added Carey: "A lot of fintech businesses get bogged down with their move to the cloud because they assume they've got the skills to do everything themselves. Fortunately, we knew better, and thanks to Jetstack's expertise and commitment, we are getting to where we want to be quicker than we ever imagined."

About Jetstack

Jetstack builds enterprise cloud-native platforms using Kubernetes and OpenShift. We give modern cloud-native infrastructure efficiency, integrity and security. Our flagship products, open source credentials and deep expertise as a Kubernetes services provider empowers development and security teams to build modern cloud-native environments that scale with full machine identity protection and efficient workload management.

To start a discussion on how we help you with your cloud-native infrastructure, reach out to directly by emailing info@jetstack.io or visit **jetstack.io**