

Jetstack partners with global bank to build a managed GKE platform for developers to build better and faster.

The project enabled this customer to standardise with cloud native Infrastructure for its developers, while abstracting away core platform complexity, so developers focus solely on building and innovating.

This well known global financial services company over time has built a well-established modern cloud operation using Google Cloud Platform services across on-premise and public cloud. Its infrastructure is built predominantly around microservices architectures and this has vastly improved the bank's ability to develop applications flexibly and efficiently.

The bank's overall cloud operation was already successfully supporting many areas of its business operations, but less mature was its ability to fully utilise application development using containers since internal security controls and core platform processes made it difficult for individual development teams to use full-scale automation. An overarching aim of the project was to prevent the development teams from falling into siloed development patterns that would make it difficult for engineering teams on the core platform to ensure compliance and maintain security control.

In order to continue to modernise and allow its hundreds of application development teams to benefit from highly automated modern tooling, a custom-built cloud-native application development platform would be required to allow these teams to build in a consistent and secure way, but without the need to have different core network controls form part of the development process. The decision was taken to further extend the bank's use of Kubernetes to improve the experience for its hundreds of developer teams by building a homogenous, purpose-built cloud-native application development platform.

Given the bank's core cloud operation was successfully running on GCP, with large elements of GKE already in operation, it was decided that GKE should be used as the core technology to build this new application

Executive Summary

Industry: Financial Services

- Jetstack reviewed the current usage of GKE On-Prem and GKE on Google Cloud, as well as the wider suite of Anthos components, whilst modernising the bank's workflow using containers, GKE, CI/CD and other Google Cloud components.
- As well as providing a layer of abstraction to prioritise delivering customer feature code, the resulting "overlay" GKE platform decreased mean-time-change for application workloads, and opened up a clear path for application modernization.
- The bank was able to provide a consistent and compliant developer experience for its hundreds of development teams allowing them to fully benefit from using Kubernetes.
- The project delivered speed and consistency for the developers with guardrails for security controls which increased productivity and encouraged greater innovation and improving security posture.

development platform. The principal reason for selecting GKE was this would allow the application development teams to take advantage of the high level of abstraction and automation supported by their Google Cloud infrastructure. This in turn will unify deployment patterns across the teams, create consistency for the development teams and provide a high quality developer experience.

Solution: Jetstack

One of the first decisions made was to hire Jetstack to help with the GKE buildout. Jetstack was identified as having the engineering expertise and ecosystem experience across Google Cloud, Anthos and Kubernetes needed to meet the project's objectives as well as having relevant experience deploying GKE for large multinational, enterprise clients. Consequently, the bank was readily convinced of Jetstack's credentials.

Jetstack's first major contribution was to evaluate the existing GCP infrastructure, including on-premises Kubernetes platform leveraging Anthos GKE On-Prem. Jetstack partnered directly with the core platform engineering team and conducted a technical audit of the GCP operation to help ensure the new GKE developer platform can be designed and built to meet the business needs. This exercise provided a number of insightful recommendations which identified opportunities to ameliorate the developer experience, software supply chain, as well as the core platform offering. The technical proposals included a new centralised container inventory service as well as determining how the current GCP operations could be better optimised for Kubernetes using GKE through open-source and Anthos components.

Part of the challenge which Jetstack was required to address related to the limited overall understanding of Kubernetes amongst the development teams. Initially, these teams were not familiar with using GKE and Jetstack was instrumental in setting up a series of developer-focused learning environments based on a Jenkins pipeline to build simple Java applications.

As the project progressed Jetstack set up a deployment structure that automated the provisioning and orchestration of standardised environments from the development stage to production so that each stage was consistent and reliable. The application teams now benefit from a separation of

responsibilities, through infrastructure concerns like networking being abstracted away, allowing for a primary focus on the application development lifecycle. The full 1st phase of the project was completed and launched in November 2021.

The success of the engagement relied on establishing a core stakeholder group, which represented a multidisciplinary set of users, advocates and enablers, with whom Jetstack could collaborate to converge on a solution which met the business and technical needs. Through Jetstack's technical versatility, customer empathy and GCP solution delivery experience, multiple user communities within the bank were able to explore, enhance and extract the value of GKE and cloud-native environments, facilitating quicker container workload adoption, streamlining the SDLC whilst adhering to organisational policy and security controls.

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 visiting our website www.jetstack.io.

Once the successful build-out of our GKE platform was complete and in use, we no longer had to worry about potential inconsistencies amongst our developer environments that might later lead to multiple problems with the deployment of apps and services, as well as maintenance.



Customer Digital Transformation Manager