

CASE STUDY

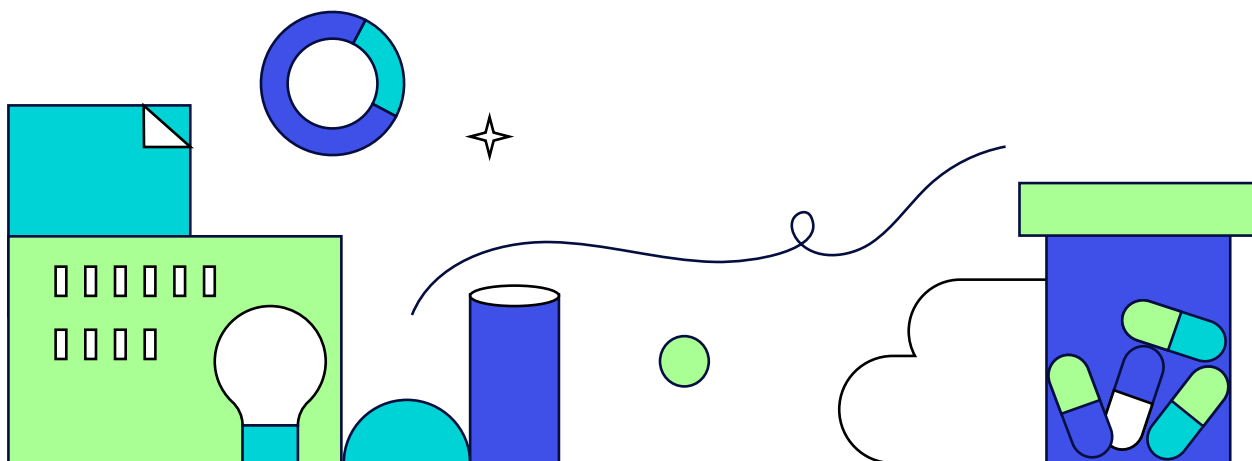
**ANTHOS & AUTOMATION
FOR HEALTHCARE**

softserve

Our client received a security-focused, consistent foundation to deliver applications anywhere, with full-stack automated operations and streamlined developer workflows.

Companies have spent a significant amount of time scrambling to achieve greater efficiency, consistency, reliability, and operations automation. This was the case with our client—a US-based healthcare company that provides kidney dialysis services—that was seeking a more reliable and cost-effective alternative application hosting platform solution. Additionally, this company had been seeking another vendor as the previous agreement was expiring.

Our client approached Google to consult on the available solutions. It was at this moment that Google recommended to partner with SoftServe to address this need by delivering Anthos for optimization, automation, and application modernization. In 2020, SoftServe achieved the Anthos: Hybrid/Multi-Cloud App Platform Expertise as part of the Google Cloud Partner Advantage Program. This expertise affirms that SoftServe has the experience and technical acumen to accelerate a client's enterprise digital journey by modernizing existing applications and building cloud-native applications with Anthos. With a dedicated team of Anthos trained and solutions-ready engineers serving the US and EMEA, SoftServe has an extensive history with Istios and 25+ projects delivered to date.



Our experts faced a challenge in providing a managing solution for the traditional workloads as well as modern GPU-based workload used by the client's data science team in on-premises data centers and enabling smart usage of GPU workloads in the new solution.

SoftServe's approach had multiple phases.

The first step was a discovery phase where SoftServe's expert needed to assess the client's current infrastructure and provide technical advisory services for the future solution. The existing infrastructure was built in Docker, which influenced the increase in the client's operational expenses. After careful deliberation, our team proposed the usage of Google Anthos to incorporate both an on-premise and cloud environments. After the requirements analysis and evaluation, SoftServe built a well-thought-out implementation strategy.

During the implementation phase, our team:

- Configured Anthos and started the application migration from Docker that resulted in significant reduction of operational expenses.
- Optimized graphic processing units (GPUs)
- Workload management—compared to on-premises GPUs used by client's data science team. This reduced costs for ML-based workloads and boosted the speed of new projects onboarding.
- Integrated a unified management and deployment CD (Continuous Delivery) process with the GitOps approach to make sure the workloads correctly migrate between environments. This resulted in increased productivity, enhanced developer experience, and stronger security guarantees.
- Implemented a multi-datacenter global load balancing system based on Citrix ADC and Citrix in REST controllers that improved stability and reliability in modernizing the application.
- Set up a liable and robust monitoring and alerting system to provide management and control of the entire infrastructure. Improved incident management. This helped reduce time-to-response on incidents, improved the end-user experience, allowed for more proactive response to changes, and optimized costs to increase ROI.

Not only did SoftServe's team configure and set up Anthos, but we also developed an innovative solution to automatically manage the GPU workloads in the datacenters. Since Anthos didn't have a solution for this challenge and wasn't yet compatible with GPU workloads, and the process of managing these workloads was entirely manual, our experts created their own innovative solution. The team implemented automated integration of Athos with GPUs on VMware, which provides full control and management of the workloads.

TECH STACK

Development:

- Python
- GoLang
- Operator SDK

Tool set:

- Jenkins
- FluxCD
- Helm
- Terraform

Infrastructure:

- Citrix
- Anthos
- ELK
- VmWare
- ROS

Tool set:

- OPA
- Gatekeeper

By partnering with Google and SoftServe, the client was able to:

- Receive a security-focused and consistent foundation to deliver applications anywhere, with full-stack automated operations and streamlined developer workflows.
- Establish a simplified onboarding process for all new applications, reduced operating expenses, and increased developer productivity.
- Get a significantly improved Anthos setup that fostered the product's resilience, reliability, security, and flexibility.

[Let's talk](#) about how SoftServe can increase security, reliability, and flexibility of your applications with Anthos optimization and automation.

ABOUT US

We are advisors, engineers, and designers who deliver innovation, quality, and speed—elevating and accelerating our clients' digital journeys.

Our approach is built on a foundation of empathetic, human-focused experience design that ensures value and continuity from concept to release.

WE IDENTIFY WHERE YOU ARE.

WE PREPARE YOU FOR THE ROAD AHEAD.

WE TAKE YOU WHERE YOU NEED TO GO.

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