codezero

Civo Case Study

"For Civo, Codezero's value is enabling testing, QA, collaboration, and rapid iterations to save us many unnecessary deploy cycles. **Codezero plays really well with enabling testing and QA in a complex microservices environment.**"

CIVO

About Civo

Civo is a cloud-native service provider, renowned for its focus on simplifying Kubernetes for developers of all levels. Since launching the world's first K3s-powered, managed Kubernetes service in 2019, Civo has rapidly evolved to offer industry-leading carbon-neutral GPUs, machine learning environments, and a variety of other cloud infrastructure services.

Focused on its speed, ease of use, and accessibility, Civo is shaped by user feedback and a strong commitment to ethical and transparent operations. Providing a real alternative to the hyperscalers in the industry, Civo strives to build a fairer, simpler cloud for all.

Civo uses Codezero to improve collaboration across development teams

Civo was looking for a way for cross-functional teams developing microservices to collaborate easily and resolve service communication issues faster. Debugging issues in cross-component communication was happening too late in the development process.

"**If you use** *Codezero*, **you will get better QA responses. Your developers will be happier because they'll stop working through days of ticket cycles of integrated testing between cross-functional teams.** *Codezero* **enables us to collaborate at a cultural level, changing the way product development occurs and speeding our dev team interactions.**"

—Dinesh Majrekar, CTO @ Civo

Civo now uses Codezero for cross-functional team development between their front-end, mid-tier API, and back-end ML teams. Using infrastructure in Kubernetes, the different teams can develop against using Codezero to communicate in real-time. This allows for better integration and helps Civo avoid issues arising from dev teams working together remotely from all corners of the globe.

The Challenge

For an upcoming project, Civo has a front-end team, mid-tier API teams, and a back-end ML team. This project required multiple infrastructure components, including Kafka, Redis, Databases, and GPU-backed Kubernetes clusters. All of these were required to allow for seamless development: the API, a front-end JavaScript tier, and the machine learning models. These all need to communicate through REST, gRPC, or flowing data through different queues.

Before transitioning to Codezero, the development process at Civo involved teams usually working in isolation as they are a fully remote company. This sometimes caused small changes in requirements and integration issues discovered too late in the development cycle.
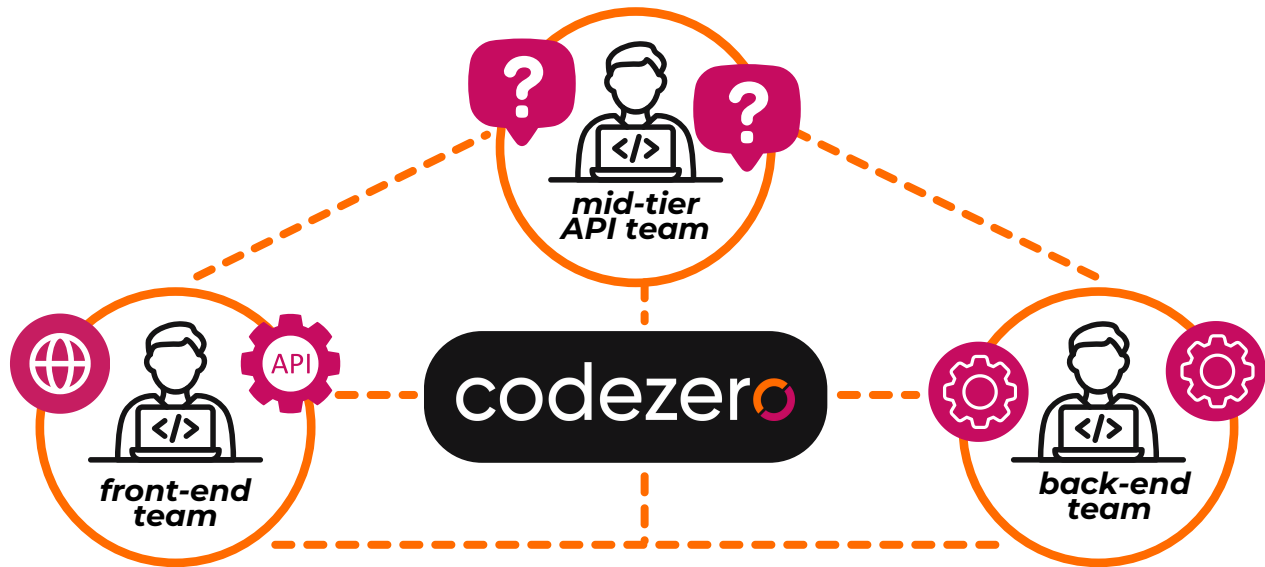

front-end team   mid-tier API team   back-end team

"**Before Codezero**, our front-end team worked on web interfaces, mocking up responses from the API. The API team made assumptions about the back-end teams' needs, while the machine learning team operated independently. Everyone worked on their pieces remotely, and after two weeks, teams uncovered blocking issues like data type changes or unexpected additional fields due to small changes in requirements…"

The Solution

With Codezero in place, the Civo development teams could restructure their approach to test collaboratively and actively develop + pair-program together.

For example, the API team first developed a response endpoint with dummy data, allowing the front-end team to work with real API responses. The initial deployment, although lacking tests, facilitated quick collaboration and adjustments. The front-end team could submit forms and receive responses even without a fully functional database. Different teams would test changes collaboratively, communicating using Slack, and coordinating immediate adjustments. The API team pushed new Codezero variants into the cluster, enabling all developers to access the updated API endpoints.

This rapid, iterative, and collaborative process reduced integration challenges and the expectation is that as the dev teams become more familiar with Codezero, integration pain will further diminish.

"**Codezero has really been a game-changer for us**. It's helped us improve cross-team collaboration and efficiency while enabling us to deliver code faster and with fewer bugs."