

Cloud Initiatives Transforms the Technical Classroom

Cloud Initiatives product CourseMatix, provides a Unified Platform for Continuous Education on Google Cloud.

Customer Overview

Colorado-based Cloud Initiatives, Inc. (Cloud Initiatives) provides transformative cloud technology solutions. Utilizing industry-leading cloud architects, developers, and engineers and focusing on full-stack development and implementation, they prescribe best-practice frameworks for security, cost, automation, and performance to government, education and enterprise environments.

The Challenge

With the increasing number of courses, concurrent users, and various lab environment tools, Cloud Initiatives technical higher education customers faced significantly increased challenges with application reliability, deployment automation, and infrastructure scalability. In order to solve for these and other evolutionary changes, Cloud Initiatives' senior solution architects created CourseMatrix, a platform which enables technical colleges to differentiate themselves and deliver modern computer information systems and computer science curricula. Instructors have the freedom to teach anything, providing students with access to the best industry tools and experiences, and grade anything with the automated assignment grading system.

The CourseMatrix platform was historically spread across both public cloud as well as on-site datacenters, but in order to deliver services at scale without human intervention and to enable engineering teams to release innovations at the speed of modern business Cloud Initiatives knew they needed to migrate to the cloud.

The Solution

Without automation, scaling seemed impossible. To enable Cloud Initiatives to realize their mission, CDW migrated the entire CourseMatrix platform to GKE on Google Cloud and set up a seamless container orchestration process. Cloud Initiatives had no prior experience with GCP and pursued learning quickly to improve its services. CDW had to master these challenges and create solutions focusing on problem areas, offering a simple and declarative model for complex deployments.

The Benefits

As a result of the evolution to GCP, CourseMatrix enabled their customers to begin scaling to support any number of students while simultaneously increasing agility by a factor of three. The engineering team could now optimize the workload of container instances and increase the usage of provisioned resources which reduced bulk assignment grading time from the original 6 hours to 35 minutes. In addition, CourseMatrix enhanced their artificial intelligence models, providing each student's course content based on assignments' data and the student's performance. Since the transition, the company and its customers have experienced zero downtime.