

CASE STUDY

Scaling an Education Platform Securely

“

Control Plane’s ease of use and the ability to see everything in one place has made a real difference for our team”

NANTANA MINALE, DIRECTOR OF ENGINEERING**Subject****KEY DETAILS**

- ✓ Streamline SOC2 Compliance
- ✓ Use Both AWS & GCP
- ✓ Increased Developer Productivity

INSTITUTION

Subject

LOCATION

USA

INDUSTRY

Education

SNAPSHOT

Subject is an accredited learning platform that empowers school districts to deliver quality education to any learner – augmenting a district’s existing educators. The company is addressing a huge problem in the current education system, and one made even more pressing by the pandemic: how to deliver equal educational opportunities amid vast inequalities in socioeconomic status, district resources, and educator staffing. The company delivers video-based courses through a frontend React portal for students and educators paired with an internal administration interface. Both frontends interact with backend services through a REST API.



PROBLEM

Staying Focused on Student Outcomes

The large and growing demand for solutions which help to level the educational playing field has kept Subject's growth at a rapid clip but in order to continue this level of expansion, Subject must also maintain strict security controls for district compliance and student privacy. Additionally, Subject's platform must deliver relatively low latency and high availability for students and educators.

Scale, security, and availability, however, are merely table stakes. For Subject to deliver successful educational experiences to its students, it must create a fine-tuned user experience – one that's obsessively-focused on the student's learning outcomes. This level of focus is hard to maintain while also addressing core infrastructure requirements.

NANTANA MINALE
DIRECTOR OF ENGINEERING, SUBJECT



“
For us to work with these large school districts, we need to ensure student privacy and be able to check the right boxes. Control Plane makes this much easier.”

THE SOLUTION

A Foundation for Growth

Subject began using Control Plane almost from the beginning of their journey after initially considering implementing Kubernetes clusters in both GCP and AWS. The company is currently using AWS for video processing and hosts their frontend applications on Vercel. Subject's backend is deployed on Control Plane running on Google Cloud Platform (GCP) and these workloads are backed by a Postgres database hosted natively on GCP. Control Plane has allowed Subject to address a number of key challenges they face as a young and growing company:

Choosing the Best Tool for the Job

Subject wanted the flexibility to choose the best cloud for the job – and they had multiple jobs to perform. When Subject was first starting out, this push for flexibility had the added benefit of allowing the company to take advantage of credits offered by multiple cloud providers.

Control Plane interfaces with disparate infrastructure, enabling Subject to deploy to GCP while connecting easily with other cloud services – with flexibility for the future to use multiple regions of multiple clouds.

“The database is on Google cloud and our other infrastructure is on Control Plane and the integration is pretty seamless.”



Nantana Minale, Director of Engineering

A Productive Partnership

The Control Plane team has formed a great relationship with Subject's engineering team and helped them institute security best practices for access control and data security, starting with Control Plane and extending outward to other aspects of Subject's infrastructure. Subject's Director of Engineering Nantana Minale has appreciated this holistic approach to problem solving along with Control Plane's responsiveness to routine support issues.

"Usually, Control Plane's support team is able to address the problems we bring to them on the same day."



Nantana Minale, Director of Engineering

Security and Audit for SOC2

Subject is progressing toward SOC2 certification, which will give them an advantage when working with larger, security-sensitive school districts. Control Plane's complete audit trail of every developer action along with functionality for fine-grained access control moves the company closer to this goal.

"Control Plane's ease of use and the ability to see everything in one place has made a real difference for our team."



Nantana Minale, Director of Engineering

Flexibility & Ease of Use for Growth

According to Subject, the Control Plane developer experience is easy to reason about and enables them to stay focused on the user experience of students and educators. This has also enabled new members of the team to begin contributing more quickly. Having a Global Virtual Cloud within Control Plane that is split into production and development environments with clear separation has increased developer efficiency.

Summary

Subject is working to empower learners, educators, and school administrators through an education platform that unlocks opportunities. Control Plane enables Subject to deliver this platform reliably, securely, and flexibly, even as the company's infrastructure needs grow and change.

About Control Plane

Control Plane is a platform enabling you to run on any cloud without the pain. With Control Plane, engineering leaders can easily combine and configure public and private clouds and mix and match cloud services from AWS, GCP, Azure, and any other cloud to build flexible yet unbreakable cloud infrastructure.

www.controlplane.com



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