

A decorative graphic consisting of a network of interconnected nodes and lines, rendered in shades of blue and orange, spanning across the middle of the slide.

CASE STUDY
MODERNIZING A LEGACY **CLOUD APPLICATION**

CLIENT OVERVIEW:

Financial services organization that provides student loan services to allow college students to obtain university or college level education.

CLIENT PROFILE:



LOCATION:
Midwest



EMPLOYEES:
100+



INDUSTRY:
Financial Services

CASE STUDY: MODERNIZING A LEGACY CLOUD APPLICATION

CHALLENGE:

The client's "Compare Tool" allows students to compare various private and federal loan options to an ISA with school-specific branding and to amortize payment schedules and total cost. The original tool utilized a per-school implementation, deployed as nearly identical, but separate stacks on EC2. When adding a new school, a completely new stack had to be created and deployed.



The legacy application was time intensive, requiring more than 2 weeks to onboard new schools. The multiple cloud instances were not cost effective and proved difficult to manage, leaving the tool susceptible to configuration drift and security vulnerabilities.

Additionally, the Route 53 A-records were pointed to Elastic IPs (EIPs) to resolve to the EC2 instances. SSL was then terminated on the instance via Lets Encrypt. The default soft limit of 5 EIPs per region, per account is reached quickly with the legacy cloud application.



“ CleanSlate was recommended to us by another company for their AWS expertise. We have been delighted with their expertise, adaptability, quality, responsiveness, and sense of urgency. In a very short period of time, they helped us deliver an adaptable tool that has thrilled our business partners. ”
- VP IT

SOLUTION:

CleanSlate cloud experts were engaged to work with the client to design and implement a new modern legacy cloud based solution. CleanSlate brought to the table a data-driven solution, eliminating the EC2 backend by creating an API and Lambda solution to function as a single back end for any school, including new schools that may be added in the future.

CleanSlate's cloud team also worked alongside the client internal front-end developer, who was performing a complete rewrite of the customer facing site using React and migrating the hosting solution from Netlify to Amplify Console (S3/CloudFront/Route 53/Certificate Manager).

This collaborative partnership allowed for the creation of a seamless solution. Branch-based environments allowed a quick, iterative process while also maintaining control of infrastructure and code rollouts to development and production environments.

CLIENT OVERVIEW:

Financial services organization that provides student loan services to allow college students to obtain university or college level education.

CLIENT PROFILE:



LOCATION:
Midwest



EMPLOYEES:
100+



INDUSTRY:
Financial Services

CASE STUDY: MODERNIZING A LEGACY CLOUD APPLICATION

SOLUTION COMPONENTS:

- ◇ AWS Amplify CLI for multi-environment serverless backend management
- ◇ AWS Amplify Console for secure hosting and source control-connected environment deployments
- ◇ AWS API Gateway for client application request/response communication
- ◇ AWS Lambda for business logic workload
- ◇ AWS S3 for data storage
- ◇ AWS S3 Select for efficient data selection
- ◇ Amazon CloudFront for edge-distributed client application
- ◇ Amazon Route 53 for DNS, domain, and redirect management
- ◇ AWS Certificate Manager for secure SSL connections

“CleanSlate is always quick to solve problems and adapt to shifting requirements. The solution is clean and concise. This new tool lets me focus on new projects and features, rather than constant maintenance on a legacy system. ”

- Front-end Developer

RESULTS:

The construction of the first release of the application was completed in 6 weeks.

The successful implementation has led to faster onboarding time for new schools (hours vs weeks), as well as the elimination of configuration drift since change management is now handled in version control.

This migration solved the previous problems of configuring NGINX/LetsEncrypt certificates and using EIPs to resolve domain A-records to the EC2 instances. Additionally, the retirement of the legacy application means a lower total cost of ownership to manage and secure the application.

Along with the new front-end development, and a source control driven CI/CD pipeline, this completely modernized application meets the needs of the client and their customers for their immediate needs and future growth.

