



Earwig Academic Migrates to AWS Using Lambert Labs to Gain Stability and Scalability

Executive Summary

Earwig Academic provides schools with solutions that help them to collect teaching evidence, make assessments, track student progress, and create reports for parents and regulators. Previously, running its software solution on a hosted platform proved slow, unreliable, and presented a significant business risk. When Earwig's solution became too unreliable to maintain, the company reached out to AWS Partner Lambert Labs. Working with Lambert, Earwig migrated to Amazon Web Services (AWS) in just 1 week. The new infrastructure is stable, scalable, and delivers 20 percent faster load times. It has also helped the company adopt a more efficient DevOps style of working as it can now deploy updates multiple times per day instead of a single update weekly. The company is hoping to grow internationally now that it can easily scale to support new users.

Earwig Academic Outgrows its Infrastructure

[Earwig Academic](#) had found its niche. Originally launched in 2017, Earwig provides tools to help teachers and administrators to collect, organize, and present evidence of students' educational achievements.

It has experienced particular success with its offering for special education needs (SEN) programs. Where student achievement in mainstream schools is often tracked and documented using standardized tests that provide a numerical grade, SEN schools have different needs. Students tend to have highly individualized learning plans and goals. Achievements may be more qualitative, such as developing motor skills by throwing a ball or developing verbal skills. At the same time, teachers need to document progress to create a timeline of student progress using photos, videos, and written reports. These timelines often result in large paper-based files that are time-consuming to create, update, organize, and access.



About the Customer

Earwig Academic provides schools with solutions that help collect teaching evidence, make assessments, track progress, and create reports.

AWS Services Used

- [Amazon CloudWatch](#)
- [AWS Activate](#)
- [Amazon RDS for My SQL](#)
- [Amazon EC2](#)

Benefits

- 20% improvement in application page load times
- 10,000+ application users migrated in 1 week
- Multiple deployments daily, rather than one per week
- No downtime since migration
- Greater insight into application health

Earwig digitized this process, allowing educators to document SEN student progress and store and organize it online. Using its solutions, schools can more easily analyze results and create and share reports. The reports demonstrate a child's progress to parents and documents learning to the Office for Standards in Education, Children's Services and Skills (Ofsted), a UK government body that inspects services providing education and skills for learners of all ages. Prior to migrating to AWS, Earwig grew to serve more than 200 schools and more than 10,000 individuals.

This large customer base, however, proved challenging for Earwig to manage. Its solution—comprised of a Python application, a MySQL database, Redis, file, and video storage—ran on one server with a 9TB disk that was hosted by a third party. This meant performance was slow and availability was unreliable. When customers couldn't access the solution to create or analyze student reports, it presented a major risk to the business. When the hosting company told Earwig it would no longer manage the company's application, an outside contractor was hired to keep it running. "As a company, none of us were very technical-minded, so we relied on our third-party providers," says Mark Hindmarsh, a director at Earwig Academic. "When the individual managing our account moved on, we looked for a company that could provide more than just keeping things running. That's when we started working with Lambert Labs."

A Failure Leads to A Successful Migration to AWS

[Lambert Labs](#), an [AWS Partner](#), took over management of Earwig's hosted solution, and improved performance and stability. "We have expertise in Python, so that helped a lot with managing the application, but the hosting environment wasn't ideal," says George Lambert, chief executive officer (CEO) of Lambert Labs. "We suggested a migration to AWS early in our relationship with Earwig, but they weren't ready. One thing we did do from the start, however, was to build a staging environment on AWS, where changes could be tested before they were deployed to the production site on the previous hosting provider."

That staging environment proved essential when Earwig Academic's hosted server and storage failed beyond recovery. "George warned us that this sort of failure might happen and then it did," says Hindmarsh. "We had some backups of images and video that were stored on AWS, but we lost 11 hours of data. Fortunately, Lambert was able to upgrade the staging infrastructure on AWS to become production infrastructure that let us continue to run the business. We were down for about a week, but it could have been much worse if it had happened before we were working with Lambert Labs."

"Before the migration to AWS, we couldn't have handled an expansion like this."

Mark Hindmarsh

Director, Earwig Academic

"We needed to get Earwig up and running. We got it done in a week. At the same time, we did our best to optimize the infrastructure."

George Lambert

Chief Executive Officer,
Lambert Labs



Lambert Labs migrated all of the components of Earwig's solution to AWS, moving each to the most appropriate service. The application code was largely a lift-and-shift migration to [Amazon Elastic Compute Cloud](#) (Amazon EC2), which provides secure and resizable compute capacity for virtually any workload. The database was migrated to [Amazon RDS for MySQL](#), which makes it easier to set up, operate, and scale MySQL deployments in the cloud. Redis workloads were moved to [Amazon ElastiCache for Redis](#), a blazing fast in-memory data store that provides sub-millisecond latency to power internet-scale real-time applications. "We needed to get Earwig up and running as soon as possible," says Lambert. "We got it done in a week. At the same time, we did our best to optimize the infrastructure."

Earwig's Stability, Scalability, and Performance Open Up New Opportunities

To help with the migration to AWS, Lambert Labs recommended Earwig apply to [AWS Activate](#), which helps qualifying companies get started on AWS by providing support, resources, and credits. The program helped Earwig Academic make a quick migration while minimizing the financial burden.

Using AWS, Earwig now has greater insight into the health, usage, and performance of its solution, using [Amazon CloudWatch](#), which collects and visualizes real-time logs, metrics, and event data. "We've seen a 20 percent improvement in application page load times since the migration and have experienced no downtime," says Hindmarsh. "We've also adopted a DevOps culture, with deployments multiple times per day compared to the previous rate of a single weekly deployment."

With the stability and scalability of using AWS, the company is now focusing on more growth. It's confident it will be able to support its new offering, [Earwig LITE](#), which it plans to offer globally. "Before the migration to AWS, we couldn't have handled an expansion like this," says Hindmarsh. "Now, with Lambert Labs, we have someone we can trust to advise us and manage our infrastructure for while we focus on helping educators."

About the Partner

Lambert Labs is a software development company and cloud computing consultancy. Founded in 2017, its team of AWS experts consists of mathematicians and scientists who specialize in software engineering and cloud computing. Professional services include application development, database migration, digital transformation, managed hosting, containerization, and microservices architecture and management. The company builds diverse digital solutions for global customers across a range of different industries. Lambert Labs is headquartered in London.

