



Firefly Boosts Student and Teacher Experiences in the AWS Cloud

Delivering its software as a service via the AWS Cloud gives Firefly Learning the ability to onboard schools in one day rather than weeks, helping students benefit from flexible learning faster. The company's online learning tool brings together teachers, students, and parents to make learning more effective. Through services such as Amazon RDS and AWS Business Support, Firefly ensures it delivers a consistent user experience with minimal infrastructure management.

About Firefly Learning

The co-founders of [Firefly Learning](#), Joe Mathewson and Simon Hay, developed the first version of their learning management software when they were high school students. They saw a way of bringing together teachers, students, and parents to make learning more effective.

The result is Firefly, an online tool through which teachers can set homework, students can share and access resources, and parents can track their children's progress. The aim behind it is creating better outcomes through more flexible learning. Today, hundreds of leading schools around the world, like Eton College in the UK, Dulwich College in Singapore, and Caulfield Grammar School in Australia, all use Firefly.

The Challenge

According to Hay, there's significant opportunity in the education sector. "EdTech is expected to be a \$250 billion market by 2020, so there's great potential for technology in this sector. We wanted to create a solution that would help join up the learning experience."

Firefly launched commercially in 2008. The deployment process at this time involved installing Firefly software on Windows servers locally at each school. "We encountered a lot of challenges with this setup," says Hay. "We found that supporting schools largely consisted of solving problems with their underlying infrastructure—dealing with backup issues, domain name system failures—not our software. There were too many factors out of our control."

The issues multiplied as more schools adopted Firefly. "We got to the point where we had hundreds of customers, which was brilliant, but it meant our software was installed on hundreds of servers, and we had the huge task of supporting them all," says Hay.

Why Amazon Web Services

Firefly had started looking at cloud technology from the beginning, with a view to eventually delivering its software as a service. "Our technology stack is based on Microsoft, which is also standard across schools, so the ability to use Microsoft technology was a major consideration when we started testing cloud services," says Hay. Mathewson and Hay found that Amazon Web Services (AWS) had the most mature offering, and by 2013 Firefly was launching its software in the cloud—starting with small schools that didn't have the IT capacity to run on-premises installations.



Company: Firefly Learning
Industry: EdTech
Country: United Kingdom
Employees: 76
Website: <https://fireflylearning.com>

About Firefly Learning

Firefly Learning is an online tool for teachers, students, and parents. It aims to create better outcomes through more flexible learning, allowing teachers to set work, students to access resources, and parents to track their children's progress.

Benefits

- 99.99% uptime in the cloud
- Better security than on premises
- 13% higher teacher satisfaction
- Auto scaling for spiky loads
- Same-day school onboarding

AWS Services Used

- [Amazon Relational Database Service](#)
- [AWS Business Support](#)

99.99% uptime in the cloud

“With faster deployment in the AWS Cloud, students can start using Firefly software the same day the school signs the contract.”

Simon Hay, Co-Founder and CEO,
Firefly Learning

“We’re glad we chose to invest early in cloud services and AWS. It gave us a head start on other companies struggling to move away from the concept of bare metal,” says Hay. “And, as AWS rolled out more services, we shifted more of our work onto AWS.”

For example, whereas before the Firefly team used to run and backup SQL servers, now they automate the process using [Amazon Relational Database Service](#) (Amazon RDS). As a result, the infrastructure team hasn’t had to expand even as the client base has grown rapidly.

Fast-forward to the present day, and Firefly has customers around the world, which it serves through [AWS Regions](#) in Dublin, Sydney, Singapore, and the US. “We can work in whatever regions our customers are based. Not only does this mean that performance is never an issue, but it also gives us confidence that we can grow on a global scale without any limits,” says Hay. The Firefly team also uses [AWS Business Support](#). Hay says, “We’re under immense pressure from clients, and in turn we expect a lot from AWS Support. It was another reason we wanted a mature cloud provider. The quality of response we receive directly impacts our customers, and we get a highly professional service from AWS.”

Benefits

About 70 percent of the company’s customers are now running Firefly software in the cloud, and Hay says more are switching all the time. “We monitor our customers’ experiences closely, and we know performance is better in the cloud. Responses from a survey we ran in 2017 shows that the satisfaction score for teachers is 13 percent higher at Firefly cloud-hosted schools compared to those on local installations.”

So, teachers are happier—but there are also other measures of success.

Schools’ workloads are spikey. There are daily peaks—for example, in the evening when students are doing their homework—as well as peaks at certain times of the year, such as around exam season when students are revising intensively. On premises, there are two solutions to this issue: either you buy a server big enough to cope with maximum load, and have it sitting idle most of the time—an expensive option—or you size it for normal load in the knowledge that service will be slow at busy times.

“Neither are great options,” says Hay. “Scalability is an area where you really see the benefits of running in the cloud. Being able to automatically ramp up to meet the load is cost-effective, responsive, and, most importantly, gives users a great experience. In terms of availability, too, it’s very difficult for schools to create an environment on premises that delivers 99.99 percent uptime, as we can in the AWS Cloud.”

Education institutions are also starting to realize that working in the cloud is more secure. “Recently, one of the schools that uses Firefly was advised by the UK National Cyber Security Centre to move from its on-premises infrastructure to the cloud. The message is clear: data is better protected in the cloud,” says Hay.

The CEO concludes, “We’re trying to supercharge students’ learning experiences, and ultimately their futures, by helping them learn at times and in ways that suit them. With faster deployment in the AWS Cloud, students can start using Firefly software the same day the school signs the contract with us. Previously, it would take several weeks before the infrastructure was in place.”