3P Learning Transforms Digital Education with Akamai
Australia-based online education pioneer relies on Akamai to provide over five million users with a smooth, secure, and satisfying e-learning experience

Working with Akamai has enabled us to avoid potential pitfalls associated with content delivery and page load times, and focus on the quality of the content instead.

— Mitch Nicholls, Chief Technology Officer, 3P Learning

The Situation
Headquartered in Australia, 3P Learning prides itself as a world leader in online education. Run by a global team of passionate educators and educational technologists, the organization’s programs cover an array of subjects from mathematics and science to spelling and literacy. Since its launch in 2006, 3P Learning has grown to become a trusted e-learning resource provider for over 5.3 million students in 17,000 schools worldwide. Many of the organization’s core products are today household names, including Mathletics, Spellodrome, and IntoScience. 3P Learning also runs the World Education Games (WEG) in partnership with UNICEF and Microsoft. Occurring every two years, WEG has become world’s largest online educational event and set the Guinness World Record for the largest online maths event in 2010.

The Challenge
With a winning portfolio of products, 3P Learning has become one of the online education landscape’s biggest success stories. However, skyrocketing user numbers increasingly placed a strain on its e-learning content delivery network and threatened to compromise its ability to scale effectively while maintaining service quality.

“Using a flash-based user interface, our platforms have always required significant bandwidth to ensure students enjoy a smooth, uninterrupted learning experience. As there are only so many telco cables coming into the country, trying to secure a guarantee of international bandwidth was relatively impossible. This makes hosting global content out of Australia extremely challenging,” says Mitch Nicholls, Chief Technology Officer, 3P Learning.

These fundamental issues were brought into sharp focus in 2008, when 3P Learning staged the predecessor to the WEG. Called World Maths Day, the online global mathematics competition was powered by the company’s flagship learning resource, Mathletics.

“The 48-hour event proved incredibly popular, with as many as a million kids enthusiastically logging on. However, that was also the biggest problem we faced – it was so successful that we quickly ran out of bandwidth. That meant a lot of children simply weren’t able to connect to the platform, which was as disappointing to us as it was to them,” Nicholls adds. “We were a fairly small company that was growing exponentially and internationally, so we knew we had to change, and change fast. Our first priority was to ensure that bandwidth would never be a limiting factor again.”

The Goals
3P Learning needed to meet three key requirements to support its business objectives:

• **Support peak traffic at all times:** With a fast-growing user base, 3P Learning sought the ability to support any amount of site traffic without expanding its web infrastructure
• **Consistent delivery of dynamic content:** In order to accelerate at scale, 3P Learning needed to ensure fast and reliable delivery of feature-rich content and web application performance as well as improve site response times, regardless of end-user location
• **Mobile optimization:** With one in five users signing in via a mobile device, 3P Learning realized the importance of seamlessly delivering web content across multiple touch points

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INDUSTRY
Online Education

SOLUTIONS
• Akamai Web Performance Solutions

KEY IMPACTS
• Enhanced site response times by offloading 70% of their traffic
• Improved web performance, with a 30% reduction in page load times
• Heightened user experience with the ability to deliver dynamic content seamlessly
• Bolstered security with no signs of DDoS attacks since working with Akamai
Why Akamai

In light of these goals, 3P Learning sought a Content Delivery Network (CDN) service provider that could support the “heavy lifting”, says Nicholls. “We realized if we wanted to grow quickly and efficiently, we needed a best-of-breed CDN partner. That meant working with the bigger players in the industry – and Akamai was clearly one of the biggest and the best for us,” comments Nicholls. “We’ve been able to leverage Akamai to really improve the quality of the user experience, while at the same time support a constantly growing global user base.”

Positioned for International Growth

Akamai has acted as a reliable and secure global content delivery platform for 3P Learning, allowing the organization to expand its footprint into both international and emerging markets. A case in point was the opening of a new office in South Africa. “No other global CDN provider seemed to offer support in that part of the world; but working with Akamai, it wasn’t a problem for us,” says Nicholls.

With Akamai delivering content from thousands of geographically distributed CDN servers, 3P Learning also saw a dramatic improvement in the speed of delivery during peak times – not only in Australia, but globally. “That’s Akamai’s bread and butter and it has served us really well since we became a customer,” he adds.

Enhanced Digital Education Experience for End Users

In recent years, 3P Learning has also increased its focus on serving content dynamically, with a view to boost site response times and the overall user experience.

“Kids are incredibly receptive to online learning, especially if they feel like they are having fun. That said, they also have extremely short attention spans. This means if the platform keeps them waiting for the next exercise or piece of information – even if it were only for a few seconds – it is very likely that you will lose them,” says Nicholls.

Today, 3P Learning has offloaded as much as 70% of all site traffic to Akamai. Website performance has also improved, with page load times dramatically reduced by as much as 30%. “Working with Akamai has enabled us to avoid potential pitfalls associated with content delivery and page load times and focus on the quality of the content instead,” Nicholls explains.

Immediate Security Improvements Realized

As the size and complexity of Internet content has rapidly increased over time, the Akamai CDN has played an important role in enhancing the user experience, reducing costs, and improving security, as well as managing site traffic.

“Being within the Akamai environment makes it feel a lot safer and more secure, which has really helped in taking the weight off our minds. In fact, I’ve been sleeping a lot better since we began using Akamai,” says Nicholls.

Poised to Face the Future of Mobile and 3D Learning

With 20% of users now signing in via mobile, 3P Learning saw the need to deliver a seamless e-learning experience across multiple touchpoints. To do so, it worked with Akamai to develop a mobile optimization strategy that comprised responsive designs and adaptable user interfaces. On top of that, with 3D inching its way into the future of digital education – in fact, 3P Learning’s IntoScience platform is already 3D-enabled – this also places added stress on the network.

“One of the coolest things we’ve done in IntoScience is to 3D model the Jenolan Caves. Teachers and kids can explore the spectacular cave formation located in the foothills of Australia’s Blue Mountains, without having to leave the classroom,” Nicholls says. “Akamai helps ensure that the information is served up as quickly and seamlessly as necessary every time. I am assured that as immersive 3D experiences become more pervasive, we’ll be able to keep up easily with Akamai. Ultimately, the priority for 3P is to do what we can to ensure our web environment is as rich, smooth, and safe as it can be for our community – that includes schools, students, parents, and teachers. Maximizing performance and minimizing risks – Akamai has helped us achieve that,” he concludes.

About 3P Learning

3P Learning is the global leader in online learning for school-aged students, with our programs covering mathematics (Mathletics), spelling and literacy (Spellodrome), reading skills (Reading Eggs), and Science (IntoScience). All of our e-learning programs are designed by educators and educational technologists and are fully aligned with over a dozen international curricula – just one reason why they are trusted by over 4 million students and 17,000 schools across the world.

As the global leader in Content Delivery Network (CDN) services, Akamai makes the Internet fast, reliable, and secure for its customers. The company's advanced web performance, mobile performance, cloud security, and media delivery solutions are revolutionizing how businesses optimize consumer, enterprise, and entertainment experiences for any device, anywhere. To learn how Akamai solutions and its team of Internet experts are helping businesses move faster forward, please visit www.akamai.com or blogs.akamai.com, and follow @Akamai on Twitter.

Akamai is headquartered in Cambridge, Massachusetts in the United States with operations in more than 57 offices around the world. Our services and renowned customer care are designed to enable businesses to provide an unparalleled Internet experience for their customers worldwide. Addresses, phone numbers, and contact information for all locations are listed on www.akamai.com/locations.

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