

Image & Video Manager and Cloud Wrapper Help Improve User Experience and Reduce Origin Traffic Costs by 90%



The Challenge of Improving User Experience and Reducing Origin Traffic Costs

The company eBook Initiative Japan Co., Ltd. was founded in May 2000 with the aim of providing services for digitizing and distributing content. In September 2016, the company became a consolidated subsidiary of Yahoo Japan Corporation (hereinafter “Yahoo”) and SoftBank Group Corp. With its “ebookjapan” e-book service and its “bookfan” online shop service for paper book, it emerged as a leader of the e-book industry. Yuki Terasawa from the CISO Office Security Group Infrastructure Team tells us more about the company’s operations:

“Our ebookjapan service is at present one of the largest e-book services in Japan, boasting more than 650,000 books. We offer tons of engaging content, including books that are only available on ebookjapan. As entertainment is becoming more and more diverse, we must keep coming up with seamless and hassle-free ways of getting our content to end users to increase the amount of time they spend with our comics and books.”

The company also needs to be able to quickly adapt to major changes to its business. In the spring of 2019, the number of access requests made to its content delivery origin server almost tripled when Yahoo’s Yahoo! Bookstore and ebookjapan were integrated.

“This increase in access requests led directly to increased traffic costs paid to the data center that houses the origin server. We also needed to come up with ideas to further speed up content delivery times on our website to provide a pleasant user experience. For this, we had our eye on using Akamai’s Image & Video Manager to optimize image data and leveraging Cloud Wrapper to drastically reduce origin traffic costs,” recalls Terasawa.

Improving the User Experience While Maintaining Image Quality

The company had previously been using Akamai’s Download Delivery to distribute image files for comic book cover thumbnails and ad banners to be displayed on ebookjapan pages, as well as the binary files that are contained within e-books. The large quantity of image files displayed on the website has the most significant impact on the user experience. To maintain a seamless page load in light of the sudden increase in access requests, the company needed a way of compressing image size more than ever before.



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INDUSTRY

E-book and paper book sales

SOLUTIONS

[Image & Video Manager](#)
[Cloud Wrapper](#)
[DataStream](#)
[Download Delivery](#)
[Premium Service and Support](#)

KEY IMPACTS

- **Improved user experience** by implementing Image & Video Manager for automatically optimized image compression
- **Improved offload rates** and reduced origin traffic costs by approximately 90% by implementing Cloud Wrapper

eBook Initiative Japan Co Improves User Experience and Reduce Origin Traffic Costs with Akamai

Image & Video Manager is a solution that automates image management workflows such as image compression, and intelligently optimizes and delivers the highest-quality images and short videos to suit the end user's web browser. It drastically reduces image file size and image processing workloads without compromising perceivable image quality. This leads to improved load times on the website for a dramatically improved user experience.

"Thumbnail images such as cover pages are converted into three sizes, based on the user's device. We had been resizing and compressing these images using a tool we made ourselves. The image quality of cover pages has a significant impact on sales numbers, particularly for e-comics. Maintaining image quality is also essential for building a relationship of trust with creators and authors. This is why our web designers are incredibly particular about image quality and were unwilling to reduce image size past a certain level," explains Terasawa.

The company found it difficult to improve the load time of the pages that have a direct impact on usability and profitability. That's when they discovered Image & Video Manager's image compression algorithm based on perceptual quality as a solution.

"With Image & Video Manager, we recompressed and resized images based on the device's display capabilities, resulting in a 33% reduction in total image size delivered compared to before. We were also able to reduce the file size of some large JPEG images by 90% or more without compromising image quality. Even the most uncompromising and discerning web designers gave the output image quality their seal of approval," recalls Terasawa.

Another impressive advantage was the ability to deliver optimal images quickly, thanks to automated image compression. Although the company had also considered services provided by other companies, it chose Image & Video Manager for its highly flexible image creation settings, and the fact that web engineers would not need to alter HTML code to reference the optimized images.

Origin Traffic Costs Reduced by Approximately 90% Due to Improved Offload

Meanwhile, the company adopted Cloud Wrapper to reduce origin traffic costs. Cloud Wrapper sits between the origin server and CDN cache server providing a reserved cache footprint for long tail content that is otherwise not well optimized for CDN delivery.

"The need to shift to long-tailing the e-book content we deliver became even more apparent with the increased number of titles and users that came with our integration with Yahoo! Bookstore. We could no longer get by with just the Download Delivery cache, as this would lead to us having to go to the origin more frequently to retrieve content. The data reading – or egress – costs from the AWS S3 origin server could no longer be ignored, and we needed to improve CDN content offloading to reduce spending," explains Terasawa.

By applying Cloud Wrapper, the company was able to improve content offload, reduce access requests to the origin server, and reduce egress costs.

"Previously, content offloading reached up to 93.8% through fine-tuning with the help of Akamai. However, this improved further to 99.3% with the adoption of Cloud Wrapper. As a result, our AWS egress costs have been reduced by around 90%, which is a significant achievement," says Terasawa.

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Seamlessly Delivering High-Quality Images While Also Reducing Costs

The company began using Image & Video Manager in October 2019, then started using Cloud Wrapper shortly thereafter at the end of January 2020.

“We also considered replacing the CDN to keep our total costs down. However, Akamai was the only IT vendor that could meet our two strict requirements – improving user experience and lowering origin traffic costs. In addition, Image & Video Manager automates the image management workflow to deliver the best image for each user’s web browsing environment. Not only does this reduce our workload, but it also enables us to quickly post titles and provide a service that helps users easily find books they like, regardless of their device or internet connection.”

These results have not gone unnoticed, and Terasawa has been hailed as the MVP of his department.

Further Fine-Tuning and Preventing Missed Opportunities Going Forward

The company intends to fine-tune its use of Image & Video Manager to further improve image compression.

To that end, they have also chosen to use Premium Service and Support, Akamai’s top-level support service. Through this service, Akamai offers proactive improvement recommendations and provides rapid issue resolution. In addition to this, the company has also adopted the DataStream performance analysis tool.

“With the ‘new normal,’ users have higher expectations with regard to the quality of the services that we provide. It is essential that we make further use of Image & Video Manager to minimize site downtime and latency, while also continuing to improve compression without compromising image quality. We look forward to the continued technical support Akamai will provide in this regard through its Premium Service and Support team,” says Terasawa.



About eBook Initiative Japan Co., Ltd.

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Akamai secures and delivers digital experiences for the world’s largest companies. Akamai’s intelligent edge platform surrounds everything, from the enterprise to the cloud, so customers and their businesses can be fast, smart, and secure. Top brands globally rely on Akamai to help them realize competitive advantage through agile solutions that extend the power of their multi-cloud architectures. Akamai keeps decisions, apps, and experiences closer to users than anyone – and attacks and threats far away. Akamai’s portfolio of edge security, web and mobile performance, enterprise access, and video delivery solutions is supported by unmatched customer service, analytics, and 24/7/365 monitoring. To learn why the world’s top brands trust Akamai, visit www.akamai.com, blogs.akamai.com, or [@Akamai](https://twitter.com/Akamai) on Twitter. You can find our global contact information at www.akamai.com/locations. Published 04/21.