Shopping the World with BUYMA

Enigmo delivers a unique shopping experience by implementing origin logic at the edge with EdgeWorkers

50%
Increase in offload rate with dynamic content caching

Works with web caching by processing cookies with EdgeWorkers

Runs custom JavaScript code at the edge with Akamai

Shopping the world with BUYMA, the secure and easy shopping service

BUYMA is a marketplace operated by Enigmo where people can purchase items from individual buyers, referred to as "personal shoppers," around the world. Consumers can buy fashion items from overseas brands that are difficult to obtain in Japan, new brands that are not yet available in Japan, or other products that have special, personal value — all for a reasonable price.

Personal shoppers compete to curate local products, list them on the site, and sell them to other individuals in consumer-to-consumer transactions. This unique business model has attracted attention since BUYMA started in 2005. Since then, members and sales have grown steadily. The marketplace currently has 8.5 million users working with 170,000 personal shoppers, exchanging more than 5.6 million items from 15,000 brands. Beyond just luxury fashion items, the lifestyle category — which includes everything from furniture to kitchen utensils — grew rapidly as more people started working at home during the pandemic.

Enigmo distinguishes BUYMA from other digital commerce sites with its focus on being a specialty marketplace. In other words, it is a place to find special items for special occasions, not just everyday necessities. Consumers expect a high-quality shopping experience, and Enigmo considers the stability and usability of the website to be important factors when delivering that experience.

"For us to create a true specialty marketplace, our website needs to be stable and continuously available so that our users can use our services without any stress," says Mr. Kenji Ozawa, Director, Engineering Department at Enigmo. "A stable base also allows application developers to manage apps more easily, which is crucial for creating a modern development environment where we can quickly provide convenient features at the right time."

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Enigmo Co., Ltd.
Tokyo, Japan
enigmo.co.jp

Industry
Retail & Consumer Goods
Software & Technology

Solution
EdgeWorkers

Using edge coding for tightening cookie regulations

BUYMA delivers most of its advertising campaigns through television commercials and social media. Users tend to flood the site immediately after the announcements of big sales, such as Black Friday and Cyber Monday, and then again once the sales begin. Enigmo was concerned about system instability during peak traffic, so the company decided to rely more on web caching across the entire site, including dynamic content such as campaign landing pages.

However, this resulted in a new challenge. BUYMA places great importance on delivering personalized services like product recommendations. Furthermore, the company needs to measure campaign results through metrics such as access analysis. Enigmo uses cookies to implement these types of user-tracking features.

In recent years, concerns about privacy protection have led to more restrictions on client-side cookie use. For example, starting with Intelligent Tracking Prevention (ITP) 2.1, Apple began restricting the use of cookies set through JavaScript APIs in the browser. First-party cookies for a company's server domain were also set to expire after seven days. For sites that attracted many iPhone users who would visit more than seven days apart, the ITP restrictions meant that cookies needed to be set on the server side. BUYMA also migrated cookie processing from the client to the origin server. However, as Enigmo started relying more on web caching to handle peak traffic, some requests would not reach the origin server and cookies processed by the server would not work properly.

Enigmo investigated whether Akamai EdgeWorkers could solve this problem by moving cookie processing logic performed on the origin server to the edge. With EdgeWorkers, developers can implement their own logic in JavaScript code on Akamai's edge servers distributed all over the world, and automatically deploy and run it on edge servers close to the access source. Of course, it is also possible to use the distributed edge caching to reduce the load of peak traffic at the same time, and with the configuration built by Enigmo, dynamic content delivery and first-party cookies can be used without increasing the load on the origin server.

"We really like the idea of developers being able to deploy their own JavaScript code at the edge when needed," says Mr. Shintaro Kimura, Data Technology Group Manager, Service Engineering Department. "It took a bit of time to get used to developing with EdgeWorkers, but one developer released an initial version of the code in about one week just by referring to documentation and sample code. They didn't even need direct support from Akamai. Even though this code was executed for the first time at the edge, the start-up time was less than 10 milliseconds, and the execution time was less than 1 millisecond, resulting in strong performance that had almost no impact on the user experience."

Mr. Kimura appreciates the separation between the CDN infrastructure properties and application management. This means that Enigmo can separate the roles for infrastructure engineers and application engineers, which will reduce the risk of issues such as accidentally overwriting code.

Increasing offload rate by up to 50%

Using Akamai services, BUYMA's performance has improved dramatically, and the company can deliver even more stable services than before. Caching has had a particularly big impact on campaign pages, and the offload rate increased by up to 50% for pages with dynamic content. Before, Enigmo teams struggled to keep services stable during peak campaign periods. Because of the significant reduction in the load for the origin server and infrastructure, BUYMA can now handle a huge number of access requests with ease.

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> **Mr. Shintaro Kimura**
> Data Technology Group Manager, Service Engineering Department

"For many years, we've struggled with issues such as capacity planning on the origin server and tuning databases and applications," says Mr. Kimura. "With the combination of the reliable Akamai Intelligent Edge Platform web caching and EdgeWorkers, we can easily solve these problems and achieve strong performance in both operation and cost."

Enigmo plans to continue maintaining a stable infrastructure while developing convenient functions and services that will allow more users to enjoy their specialty marketplace without stress.

"We plan to enhance overall services by further improving the development experience," says Ozawa. "We believe that legacy systems also need to be made more modern by incorporating edge computing technology such as EdgeWorkers. Based on our success in Japan, BUYMA plans to expand the number of users in English-speaking countries, primarily in North America, and further enhance the product lineup. Akamai provides stable services throughout the world, and it greatly supports our ability to solve problems. We look forward to how it will contribute to advanced technologies and functions in the future."

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Enigmo focuses on internet services, from planning to development. Its brands include BUYMA, the marketplace where consumers can find a variety of items, from fashion to cosmetics, from personal shoppers around the world; BUYMA TRAVEL, which provides personal tours and experiences; and STYLE HAUS, a fashion media site. Enigmo builds Specialty Marketplaces that differ from traditional markets in terms of both goods and people, helping to create a special shopping experience that has never been seen before.
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