Huge Burden from Informational Visits, but No Sales
Ever since it first took to the skies as a Japanese air carrier, Japan Airlines (JAL) has aimed to preserve its original spirit of embracing challenge and caring for its customers in order to become “customers’ most preferred and valued airline group.” Despite going through bankruptcy in 2010, the airline returned to the market in 2012 after a dramatic recovery, and currently operates 143 domestic and 571 international routes, linking 56 countries (as of March 2017).

The huge increase in bot traffic in recent years has caused headaches for JAL. “This access does not reflect on sales, it only refers to inquiries and information,” notes Kentaro Kandori, Customer & e-commerce Systems Supervisor of the IT Planning & Promotion Department in JAL’s IT Planning Division. He is responsible for systems maintenance on their international route site, and planning and promotion for development projects.

Every inquiry for seat availability or request for seat reservation made through JAL’s overseas and international inbound route reservation site generates a request to an external reservation engine service, based on volume of requests. Although ticket sales through reservation sites had increased in recent years due to inbound demand, as informational inquiries increased, the cost of external system use also increased.

The purpose of these visits wasn’t clear, but JAL suspected they were from price comparison sites that they had not authorized. The operators of these sites created programs (bots) to automatically scrape seat and fare information and used them to frequently query multiple airline sites.

Massive Cost Savings through Visualizing and Controlling Bots
JAL attempted to mitigate the negative effect of the bots by using a firewall to manually block IP addresses with an abnormally high number of access attempts. “We even developed a program for automatic blocking. But once that strategy was known, the bots evolved to constantly change where they were coming from so it was no longer effective,” Kandori recalls.

That was when JAL trialed Akamai Bot Manager. They had already implemented Dynamic Site Delivery, DSA Secure, China CDN and Web Application Accelerator on their international route site in 2014 for site acceleration and other reasons. Kandori’s manager, Kazuya Onda, summarizes their reasoning: “We considered security and bot management products of other companies, but Akamai was already held in high regard internally for the products we had previously implemented. After hearing the great results overseas airline companies had achieved by implementing Bot Manager, we decided to try the service out.”

In the trial stage, Bot Manager was run in monitoring mode for two months. The number of bots detected was much smaller than what was expected. “After seeing the results, we thought implementation would be difficult. But once that strategy was known, the bots evolved to constantly change where they were coming from so it was no longer effective,” Kandori remembers.

All site traffic was sent through the Akamai network. In addition, adjusting settings for custom rules developed using expertise from implementing the system for other airlines resulted in a massive improvement in bot detection. “We were shocked when, thanks to this optimization, it became clear that 86% of all visitor traffic was bots. We were finally able to see the perspective and understand the impact that the bots were having,” says Kandori. JAL then implemented the system, configuring it for appropriate management of detected bad bot traffic. Thanks to eliminating extraneous requests from bots, fees to external service providers were reduced by 59% — eliminating a problem that had been plaguing them for years.
Grateful for Akamai’s Determination to Make the Project Succeed

“Another factor in the decision to implement Bot Manager was the variety of ways in which it can respond to bots,” explains Kandori. “The firewall could only do simple per-session blocking, so as soon as the bot realized what was happening, it took action to circumvent the block. Bad bots cannot detect when they are being managed by Bot Manager, which means bots can be controlled. Just like a martial arts master ‘negates’ an attack, Bot Manager’s highly intelligent operation checkmates the negative effects of those bots.”

Company Recognition for Bot Solution

The bot countermeasures have also been recognized internally. "One of the things JAL is focusing on since recovering from bankruptcy is consistent profitability in conformity with divisional accounting system. We've received praise from other divisions we work with for the results of these bot countermeasures," comments Onda.

"The inability to predict spending on the external reservation engine service was a huge problem when setting budgets for our division. We had no option but to pay the charge for unforeseeable increases in bot activity. Implementing Bot Manager has put us in control of the situation, and that has received high praise," adds Kandori.

Onda wraps up: "In March 2017, we met the medium-term goals in our first five-year plan after bankruptcy. The key phrase for the plan was 'Establishing a High Profitability Structure.' We achieved significant cost reductions in the final fiscal year of the medium-term plan, thanks to the support we received from Akamai, another success that we’re grateful for. The key phrase for the new four-year medium-term plan for FY2020 is 'Challenge, Leading to Growth.' As one of the world’s leading airlines, we continue to embrace new challenges and aim to constantly create new value that delights our customers. Providing services that seamlessly combine people and technology is essential to achieving this aim. We have high hopes for future products backed by Akamai’s advanced, high-level technology."

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