

# Akamai Bot Manager Eliminated Bad Bot Activity Responsible for More Than 80% of Traffic, Generating Massive Cost Reductions



## 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 then Akamai analyzed the vast quantity of log data accumulated during the trial period and came up with a suggested cause. Based on their hypothesis, they repeatedly made fine adjustments to increase detection sensitivity while confirming how the bots were behaving," Onda 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.



**JAPAN AIRLINES**

### Company

Japan Airlines  
jal.com (international site)

Kazuya Onda, Manager, Customer & e-commerce Systems, IT Planning & Promotion Department, IT Planning Division

Kentaro Kandori, Supervisor, Customer & e-commerce Systems, IT Planning & Promotion Department, IT Planning Division

### Industry

Airline

### Solutions

- Akamai Bot Manager
- Site Shield

### Key Impact

- Visualization of bots that were hard to detect by established means
- Control of bot traffic making up approximately 86% of all visits
- Huge reduction in fees for external reservation engines used by the reservation system
- Internal recognition for bot control measures



Kazuya Onda, Manager, Customer & e-commerce Systems, IT Planning & Promotion Department, IT Planning Division



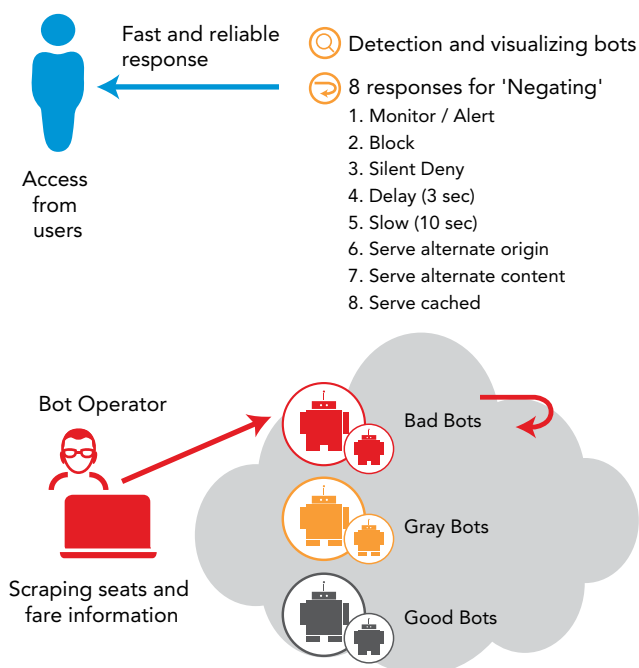
Kentaro Kandori, Supervisor, Customer & e-commerce Systems, IT Planning & Promotion Department, IT Planning Division

## Japan Airlines

### 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."

#### AKAMAI BOT MANAGER



Onda adds, "What I really want to highlight is Akamai's sincere and committed support after the results of the initial trial period. They were determined to make the project a success somehow, and their drive to make the unseen bots visible was what led to this great success. We're really grateful to them." After seeing the shocking results before fine-tuning, JAL and Akamai met repeatedly to engage in fierce debate. But Onda sees the ability to talk openly about issues as one of Akamai's strong points. "With Akamai, we were in regular, frank discussion with sales and technical experts, and they never failed to respond to high-level requests or accept orders. There's no question that they are a trusted partner."

### 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.

The bot problem, seen as a veritable bed of nails after regular requests at company performance reviews to do something about it, was resolved in one fell swoop by the successful implementation of Bot Manager. The solution also attracted attention inside the company for instantly and significantly reducing huge costs.

"Kandori was under a lot of pressure as the person entrusted with finding a solution. Of course, the results are thanks not only to him but also to Akamai and all our partners who support us," Onda says. JAL is considering expanding use of the service to their other sites.

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."



Kazuya Onda and Kentaro Kandori of JAL with the Akamai Sales and Support Teams



As the world's largest and most trusted cloud delivery platform, Akamai makes it easier for its customers to provide the best and most secure digital experiences on any device, anytime, anywhere. Akamai's massively distributed platform is unparalleled in scale with over 200,000 servers across 130 countries, giving customers superior performance and threat protection. Akamai's portfolio of web and mobile performance, cloud security, enterprise access, and video delivery solutions are supported by exceptional customer service and 24/7 monitoring. To learn why the top financial institutions, e-commerce leaders, media & entertainment providers, and government organizations trust Akamai please visit [www.akamai.com](http://www.akamai.com), [blogs.akamai.com](http://blogs.akamai.com), or [@Akamai](https://twitter.com/Akamai) on Twitter. You can find our global contact information at [www.akamai.com/locations](http://www.akamai.com/locations). Published 06/17.