

NGINX > NGINX Plus > Team Fresh Optimizes Microservices and Cloud Environments with F5 NGINX Plus



Team Fresh Optimizes Microservices and Cloud Environments with F5 NGINX Plus

Easier Management and Enhanced Security Help Maintain Customer Satisfaction as Systems Develop



HEADQUARTERS

Seoul, Korea

FOUNDED

2018

USE CASES

Security, Microservices, Monitoring, Cloud

SOLUTIONS

Application Delivery (Load Balancer)

OVERVIEW

Team Fresh is a leading provider of domestic cold-chain logistic services for delivery of food to customers safely and quickly.

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CHALLENGE

Team Fresh found it could no longer effectively manage its infrastructure with NGINX Open Source as it increased its use of cloud services and microservices-based applications.

Results



Operate Services More Efficiently



Defend Against Advanced Threats and Evasive Attacks



Reduce Complexity and Tool Sprawl

Overview

Team Fresh's services include early-morning delivery, freight forwarding, fulfillment, and third-party logistics for fresh food commodities. The company is experiencing a meteoric rise as one of the most sought-after prospects in Korea's B2B distribution market, securing more than 300 clients in just 3 years since its establishment.

Challenge

Team Fresh strives to operate its platform using internally developed services as much as possible, based on two key technologies: cloud services and its Microservices Architecture (MSA). The company has already developed its core early-morning delivery and freight-forwarding services on its own and plans to deploy a warehouse management system in 2022.

In terms of service operation, Team Fresh is pursuing a "MSA First" strategy. Currently, the company is establishing this strategy for a freight-forwarding system, but both fulfillment and early morning delivery services will be operated under its MSA strategy in 2022. Today, Team Fresh operates separate systems in the public cloud and its data center but plans to consolidate the systems into a single hybrid-cloud platform in 2022.

The company had based its services on the NGINX Open Source web server from the beginning. It knew about NGINX Open Source's superb capabilities for managing massive amounts of traffic, and that many companies are able to operate their services relying on NGINX Open Source alone. However, Team Fresh was finding it could no longer manage its infrastructure with NGINX Open Source in the face of ever-increasing usage of cloud services and its MSA strategy.

Solution

It found the solution in F5 NGINX Plus, the commercial version of NGINX Open Source, with its additional features such as advanced authentication and authorization, non-disruptive updates to configuration, enabling seamless flow of traffic without downtime, and technical support services.

Young Rag Seo, Team Leader of TimF LABS at Team Fresh, explains, "NGINX Open Source is more than enough when only a web-server function is required. However, it is more effective to leverage NGINX Plus in MSA, Kubernetes, and cloud environments. Developers can save a lot of time in server management allocation when NGINX Plus is introduced. This is especially good for start-ups who usually experience a lack of infrastructure engineers."

With NGINX Plus, Team Fresh can manage both cloud services and its own server-based MSA effectively.

An MSA can increase the management burden, especially for startups which commonly have difficulty recruiting enough developers. Mr. Seo says, "One of the shortcomings of an MSA is management difficulties when used frequently due to an increase in communications amongst services. NGINX Plus solves the problem easily. When MSA and cloud environments are largely used, NGINX Plus is the best option." He adds, "NGINX Plus also automates the development, build, and distribution processes. One other strong feature for startups is that they can get technical support from NGINX."

Team Fresh plans to strengthen the effectiveness of its services by improving the MSA environment continuously in the near future. The company is also looking at ways to discover insights, such as delivery patterns and daily inbound trends, by integrating data from separate system logs.

Continuous upgrades of its MSA means there are always more service APIs to manage too. Team Fresh is considering deployment of a NGINX Plus API gateway solution to manage its MSA APIs more effectively.

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– Young Rag Seo, Team Leader of TimF LABS at Team Fresh

Team Fresh also deployed NGINX App Protect web application firewall (WAF) on top of NGINX Plus. The company decided that a traditional hardware-based WAF is not effective for managing modern applications because its whole system is web-based.

Mr. Seo stresses, "We thought that our system would not be managed properly if we only add the web application security option to the hardware-based firewall and introduced NGINX App Protect WAF to manage security at the application level."

NGINX App Protect WAF provides an agile application security environment by protecting the system from various intelligent threats and elusive attacks, as well as reducing overall complexity. A key NGINX App Protect feature is easy integration into a DevOps environment. NGINX App Protect WAF supports teams by basically integrating security throughout the CI/CD pipeline and allowing them to distribute light software packages free from limitations imposed by the infrastructure.

Mr. Seo explains, "NGINX App Protect WAF can be applied whenever policies are necessary. It is also updated regularly, which is another strong point."

Team Fresh also deployed NGINX Controller to simplify setup, distribution, management, and analysis of not only NGINX Plus, but also NGINX App Protect WAF.

[Editor – NGINX Controller is now [F5 NGINX Management Suite](#).]

Results

With the introduction of NGINX Plus, Team Fresh can operate services more effectively with on-going technical support from NGINX. Most of all, the commercial NGINX products have slashed the time the internal workforce at Team Fresh allocates to the management of its system and services compared to NGINX Open Source. This translated immediately into enhanced application uptime and performance, and eventually shortened the time to deploy updated services as well.

Another key benefit of MSA for Team Fresh is its ability to flexibly respond to changes. For example, Team Fresh's key "Early Morning Delivery" service often faced excessive loads when its customers placed huge orders during early morning hours. Team Fresh has dramatically reduced the possibility of overload or failure by separating order registration as an individual service and introducing load balancing.

The security environment has been enhanced in a big way with NGINX App Protect WAF. It greatly reduces the time taken to detect and neutralize threats. The regular updates and ability to apply policies when necessary is a key outcome for Team Fresh.

About Team Fresh

Founded in 2018 by CEO Lee Sung-il, Team Fresh has focused on providing cold-chain platform services, such as early-morning deliveries. The company now has some 300 e-commerce clients, including eBay Korea, Brandi, and Rankingdak.com.