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BAE MIN

South Korean food delivery app BAEMIN scales rapidly in Vietnam with MongoDB Atlas on AWS

INDUSTRIES

Food Delivery - FoodTech StartUp

PRODUCT

MongoDB Atlas

USE CASE

Cloud Data Strategy

CUSTOMER SINCE

2019

INTRODUCTION

Global expansion

Seoul-based **Woowa Brothers** was established in 2011 after creating the highly successful BAEMIN food delivery app, which had reached No. 1 on the App Store in South Korea.

To implement its vision of enabling customers to lead happier and more convenient lifestyles, BAEMIN leverages data to ensure accurate, reliable and fast delivery. For example, once an order is placed, a recommendation system selects the optimal rider and determines the fastest route.

Over the decade, the business became the top food delivery platform in Korea and Woowa Brothers saw an opportunity to expand globally. After expanding to Vietnam as the first overseas market, they achieved significant growth and later entered a partnership agreement with Delivery Hero - a world leader who provides services in more than 50 countries in 2021.

Woowa Brothers in Korea was already an established MongoDB user which paved the way for Woowa Vietnam to adopt MongoDB Atlas to support speed to market, scaling and resilience.

THE CHALLENGE

How to scale rapidly in a new market and adapt to changing pandemic regulations

Woowa Brothers Vietnam introduced the BAEMIN application to local users in May 2019 with the ambition to become the leading food technology company, creating and nurturing the food ecosystem in Vietnam.

The existing infrastructure for the Korean market had been in development for 10 years, and it supported a range of services, including grocery deliveries and restaurant supply. This would have been excessive and too complex for what was needed for the Vietnam venture, so a new platform was built from scratch.

The first version of BAEMIN was developed within six months and needed to enable fast, reliable and efficient food delivery to satisfy new customers in the competitive food delivery market. At the time, it also wasn't clear how the business would grow and change, so flexibility in the data model was important.

BAEMIN's seven-person tech team needed to focus on the essential task of developing new features and fixing bugs, and didn't have the resources to set up and operate the database system on-premise.

Another factor that needed to be considered was that food delivery services are notoriously spiky when it comes to online traffic (around mealtimes and weekends, there is a huge amount of traffic, but at other times very little) so the platform required a way to easily handle scaling between peak demand times efficiently.

THE SOLUTION

MongoDB Atlas on AWS to support speed to market and developer efficiency

From the beginning of the development process Woowa Brothers Vietnam used MongoDB Atlas on AWS. They chose Atlas for its enhanced features, fully managed services capability and that it would enable them to get started very quickly. Other key considerations included:

- minimal effort administering database infrastructure (setup, scaling, upgrade and patching)
- ease of gathering metrics to analyze monitor and manage infrastructure operations
- access management, logging, and auditing
- MongoDB's reputation for a secured and reliable database solution
- 24/7 support and in-depth technical competency to troubleshoot incidents.

They also needed to free up time for the developers to focus on innovation and scaling efforts rather than database management.



Tung Phan, SDE Lead, Weasie Brothers Vietnam

As **Tung Phan**, SRE Lead, explained, “Our team was small at the time, and we wanted to make our application available on the market quickly. By using MongoDB Atlas, our developers could build more features, make patches and do other valuable work, rather than managing the database.”

Originally, they had considered native AWS database services because the infrastructure team and developers were already using AWS as the primary cloud provider and a number of its other cloud services. However, they determined these solutions would require more effort to manage, compared to MongoDB Atlas.

“Considering our situation, the cloud version of MongoDB was the obvious choice,” Tung said.

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Tung Phan, SRE Lead, Woowa Brothers Vietnam



Phong Do, Back End Lead, Meow Brothers Vietnam



Phong Do explained that Atlas provides lots of practical metrics for effective system analysis, such as system utilization, query execution effectiveness, and database statistics.

“These metrics have helped the development team to optimize the platform’s logics and performance. Furthermore, the team has also employed the built-in real-time monitoring tool as a dashboard for visualized system tracking and evaluation,” Phong said.

“During the incident handling process, Atlas notifies the team in real time with handy information for incident investigation. Additionally, the Profiler tool helps us to analyze the system’s weaknesses and detects potential issues before they arise,” he said.

Phong reinforced how the BAEMIN Tech team makes the most of Atlas by leveraging many of Atlas’ built-in complementary features.

For instance, triggering the data synchronization between systems; dashboards and charts for operational teams; and many more.

During the pandemic, the government changed policies quickly, which required the rapid development of new functionality to comply – shutting down and switching on food delivery services by specific location with very short notice. App use could increase one-hundredfold in a very short period due to changes to in-person dining rules for restaurants and cafes.

“Whatever situation arose, we could respond quickly and make changes to the database-related infrastructure,” Tung said.

“Comparing the experience of scaling with MongoDB to other solutions, we can handle scaling depending on the traffic and the type of application we are aiming to create. Using alternative data cloud solutions in the past, we had to create nodes and do this manually. This was very time consuming and introduced a higher risk of human error. With MongoDB Atlas, that’s all taken care of,” Tung said.

MongoDB will continue to play a role in the ongoing development of the app, including training the machine learning model that will be part of their next major product enhancements. Funding from AWS and MongoDB’s Workload Migration Program helped Woowa accelerate the migration to Atlas on AWS.

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Tung Phan, SRE Lead, Woowa Brothers Vietnam

THE RESULTS

Speed and flexibility drives massive growth for BAEMIN to become the top app in Vietnam

By leveraging the flexibility of MongoDB to provide quick and reliable food delivery services, BAEMIN Vietnam has been able to achieve impressive business growth whilst delivering multiple orders per second across the country.

In 2021, it expanded from serving three cities to serving 21 cities throughout Vietnam – representing a 70% increase in the number of customers, and it also increased its employee numbers in Vietnam by 40% in 2021.



BAEMIN's presence spans 21 cities across Vietnam

Almost three years after being established in Vietnam, BAEMIN is ranked among the top three apps by market share for food delivery platforms. BAEMIN is now number one in terms of geographical coverage and customer satisfaction.

“From the very beginning in South Korea, MongoDB delivered great improvements for Woowa Brothers which gave us the confidence that Atlas was the right solution for our Vietnam business. Compared with existing RDBMS on the market, Atlas provides the flexibility, scalability and development productivity to store, utilize and manage our ever-growing rich data,” Tung said.

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