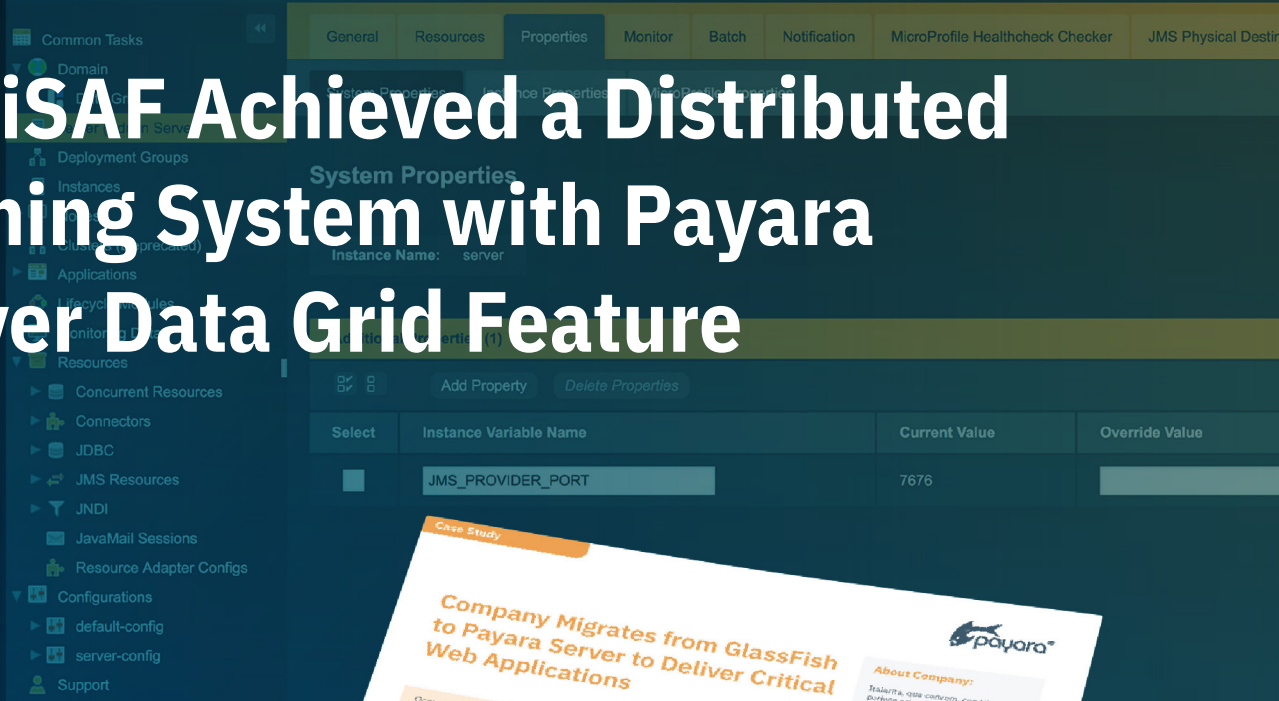# FlexiSAF Achieved a Distributed Caching System with Payara Server Data Grid Feature

The Payara® Platform - Production-Ready, Cloud Native and Aggressively Compatible.

Case Study

FlexiSAF Achieved a Distributed Caching System with Payara Server Data Grid Feature

FlexiSAF runs two main enterprise web applications on Payara Server, SAF School Management Software (SAFSMS) and SAF Tertiary Information Management System (SAFTIMS), with a user base of over one million across the two platforms. They deploy their platforms as cloud services in a multi-tenant architecture, maintaining a single application version deployed on a cluster of Amazon AWS EC2 instances running Payara Server behind a load balancer in an autoscaling group.

Challenges

Before using the Payara Platform, FlexiSAF ran GlassFish 2 and later migrated to GlassFish 3. FlexiSAF was growing quickly and struggled to scale their application due to increased traffic. Their developers were spending too much time trying to get their application server to work with the increased traffic and not enough time developing the features of their applications, so they decided to look at other options.

After doing some research, FlexiSAF tried WildFly and TomCat, but discovered Payara Server Enterprise was the best option due to the level of professional support included and because Payara Server is similar to GlassFish, which made it an easy migration process.

Before migrating to Payara Server, FlexiSAF scaled their application on multiple Amazon instances. Their biggest challenge was JPA data caching. When FlexiSAF scaled, the cache didn't distribute to all instances. When a customer logged into 'instance A' they might be distributed to 'instance B', but the application wasn't aware of it. FlexiSAF needed a distributed caching system to solve the JPA cache issue and resolve data from user sessions. Before migrating to Payara Server, none of the other application servers they tried could solve the cache problem, and the huge instances FlexiSAF launched were very expensive.

Solution

Payara Server Enterprise provides a distributed caching system with the Data Grid feature. Instead of scaling to two very large, expensive instances, FlexiSAF uses the Payara Server Data Grid which provides a greater number of instances that are smaller in size, helping FlexiSAF reduce expenses.

About FlexiSAF

FlexiSAF is an indigenous software development company with more than 10 years' experience in the education sector. They provide the most effective, affordable, and innovative solutions to about 500 schools in Nigeria to revolutionize education in Africa and help strengthen the next generation of leaders.

Industry: Technology

Location: Africa

Software & Services

- Payara Server Enterprise 5
- Payara Server Data Grid
- Amazon AWS

Results

The Data Grid reduces costs for FlexiSAF, handles JPA data caching, and resolves data from user sessions. With the included Payara Enterprise support services, FlexiSAF's engineering team can focus on their business applications instead of researching and learning how to optimize the application server. FlexiSAF saves a significant amount of time and doesn't need to hire new people to manage the application server.

> "In Nigeria, our currency is not a high value. So when we convert the cost of Payara to our money – it's quite expensive. But we had to make the decision about how effective Payara Enterprise would be for FlexiSAF. Being engineers ourselves, we know the value of knowledge and service side. We know Payara has the experience and immense knowledge that comes from working with the platform all the time. We had great hope that it would work out and we were right. We communicate with the support team whenever we have a challenge and we find that the Payara Team already experienced our challenges before and they are very engaging, doing screen shares, and providing suggestions for fixing."

Al-amin lbrahim, CTO, FlexiSAF

Payara Platform Enterprise Includes:

Choice of support:

- Migration & Project Support
- 24x7 – for mission critical environments
- 10x5 – business hours support

Ensures service level agreement (SLA) operation of your application server with:

- Unlimited tickets
- Customer Knowledge Base
- On-boarding support
- 10-year software lifecycle
- Fully supported production binaries
- Fully supported ecosystem components
- Access to Zulu Enterprise-fullysupported builds of OpenJDK

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