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10k+
Requests per minute

Net 0%
Downtime

90%
Revenue increase

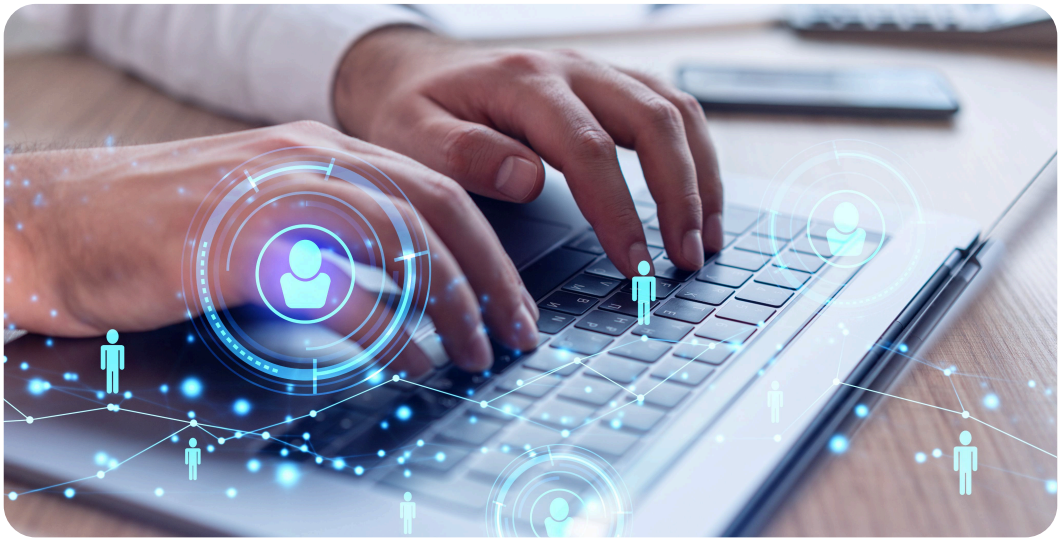
A B2B SaaS Startup Grows Customer Base With Secure AWS EKS Migration

Industry: B2B | SaaS

Project: Cloud | App & Mobile

A Next-Gen Headless E-commerce Provider With Frequent System Outages, Slow Response Time, and Lack of Security & Control

Our customer is a provider of next-gen headless e-commerce solution designed using microservices. Their primary challenge was the inability to cater to a growing customer base. So our primary goal was to pass on to their customers the ability to scale and enhance their respective e-commerce performance. This also took away their customers' pain of migrating to another solution. It ensured no changes required to the customer base's e-commerce solutions and technologies in the longer run.



The lack of resources to design a cloud-native K8s-based architecture on AWS EKS for the application in a secure environment resulted in system slowness, slow response time, and lax security & control. Our solution smoothly handled peak hours and high traffic volumes. We also helped them scale from a dockerized environment to revamped architecture.

Outcomes Achieved by Implementing a Highly Scalable & Distributed Architecture

- Highly available cloud-native k8s architecture that now handles high traffic load.
- Zero trust and highly elastic architecture to achieve close to zero downtime and remove single points of failure.
- Improved customer delight and revenue potential with performance enhancements as a result of quick response time and no latency
- Fully encrypted data plane resulting in highly secure data management with reduced data exfiltration and exposure risks.
- Robust monitoring and alerts leading to improved operational efficiency.

Let's learn about the blueprints of building such a network for yourself.

From Designing to Implementing a Highly Elastic Architecture That Shifts Focus on Business Growth

The client could only reach a few thousand customers and was looking to expand the business, but the current architecture did not support expansion. The infrastructure was not elastic; it was dependent on dedicated servers. It involved too many manual interventions, hence slowing down business service.

After a thorough analysis, the best route was proposed by our team to ensure a phenomenal user experience with improved system speediness, zero latencies, and faster response times. Single points of failure and lax security issues were resolved as well.

With the proposed architecture, our client can now reach a much larger customer base with fully-supportive cloud architecture, even on peak days.

Implemented Approach and Best Practices

- Designed data preloading architecture for application databases Mongo and MySQL using EFS to set up database Persistent Volumes, thus resolving the challenge of storing persistent data in Kubernetes.
- Implemented a cloud-native k8s architecture for the application, with infra coded via helm charts and terraform, making the architecture elastic, scalable, and more future-proof.
- Implemented custom data priming using backup-enabled EFS to set up DB Persistent Volumes for Mongo and MySQL. Usually, DBs are not highly available. We used RDS to make it highly available and highly persistent as well.
- Volume and DB encryption with a Customer Managed Key (CMK) using AWS KMS to provide enhanced security for at-rest and in-transit data.
- Implemented monitoring and alerting, including AWS EKS container insights integration, thus making it more reliable and available with improved performance metrics.

Did You Know?

This smartly orchestrated, future-proof architecture empowered the customer with independence to avoid and resolve downtime and scalability issues internally with minimal to zero manual interventions.

About Us

Established in 2012, Xgrid has a history of delivering a wide range of intelligent and secure cloud infrastructure, user interface and user experience solutions. Our strength lies in our team and its ability to deliver end-to-end solutions using cutting edge technologies.

Reach out to us at letstalk@xgrid.co

Schedule an Assessment