

SUCCESS STORY

Containers On AWS, Italian-Style



THE PROBLEM

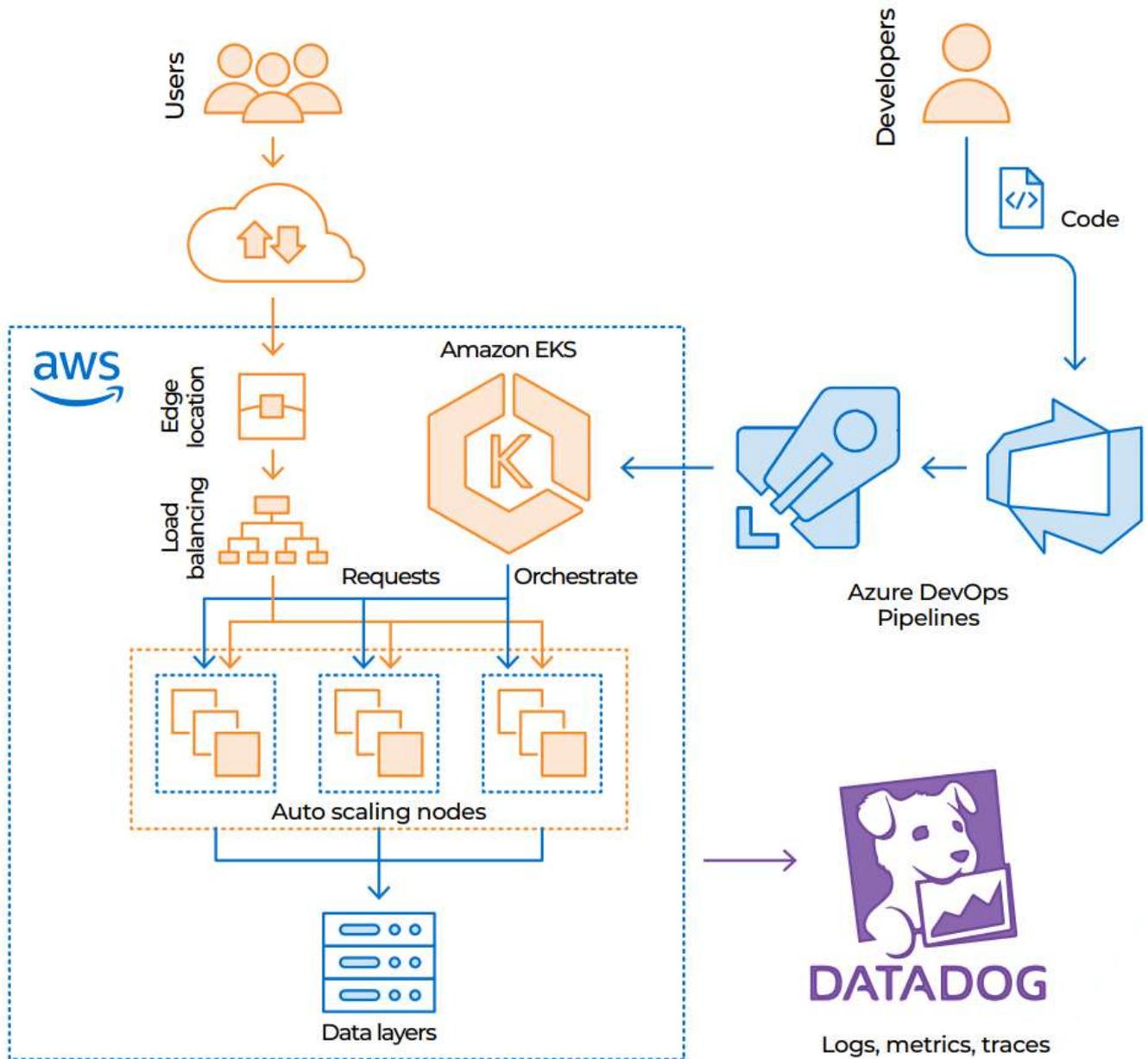
The customer had a killer idea for an application to sell hotel reservations and required expert help to containerize it and deploy it in Amazon Web Services (AWS) following best practices. Plus, they

needed to take the burden of IT operations off their developer's shoulders so that they could focus on building the business logic and hit the market in time for the high season.

THE SOLUTION

Enter 3XM Group. Our specialists took the application concept and designed a highly-available, elastic, and cost-effective architecture based on the Amazon Elastic Kubernetes Service (EKS). All the AWS infrastructure derived from this architectural design and subsequent changes there of were described and managed as code using Terraform. Our team also brought in their expertise in Docker to build efficient and secure container images for the application components and devised clever ways to

orchestrate these containers with Kubernetes allowing for auto scaling and Canary releases with zero downtime. We set up CI/CD pipelines on Azure DevOps that let the developers effortlessly build, analyze, test and deploy their code to multiple environments at the push of a button. Last but not least, we enabled the mechanisms through which logs, metrics and traces were collected and sent to Datadog for detailed monitoring of the application and underlying infrastructure.



BENEFITS

Consistent Operations Model

Introducing containers allowed to abstract away the complexities of the different application components and manage them using the same well-understood processes and tools.

Resilience & Performance

Following Kubernetes and AWS architectural best practices, the system was built to be robust, highly-available and self-healing. Edge caches and auto scaling across availability zones enable a top-notch performance level, even during traffic spikes

Improved Focus And Productivity

Automating operations and infrastructure management allowed developers to concentrate their efforts exclusively on the application itself and thus deliver faster.

Reduced Risk

Automated canary deployments and CI/CD pipelines increase predictability and let developers spot bugs early on so they can roll out new versions of their application into production with a very high degree of confidence.

Cost Efficiency

By setting up auto scaling, we made sure that the right amount of compute resources are provisioned exactly when they are needed in response to changing demand, allowing for an economy of scale where the customer pays only for the infrastructure they need and effectively use.

Observability

With logging, monitoring and distributed tracing through Datadog the customer can easily determine what the status of the application and its components are at all times, visualize important performance and business metrics, identify errors and root causes and take corrective action when required.