



Customer Reference

SLY AG

Company

Industry: eCommerce Hosting
Location: ZH, Schweiz
Founded: 2017
Employees: 15

VELOX is the world's first open source e-commerce platform based on a complete microservice architecture. The company behind the development is Sly AG, whose employees have been involved in e-commerce for over 25 years. The Sly team supports companies in the development, implementation, operation, and marketing of sales platforms, with a strong focus on B2B platforms.

The initiators of the «VELOX» project are René Hämmerli and Luca Solimine. While working with customers, the team noticed time and again that conventional eShop construction kits, which are supposed to make integration work easier, can only meet part of the customer's requirements. This meant that many end products for customers either had to be built on compromises or Sly rebuilt the standard solutions into custom solutions. This gave the team an idea ...



At an offsite in the mountains, Sly's development team began to redefine the foundation for e-commerce solutions. With experience from numerous customer projects, the team was able to consolidate requirements effectively as well as technologically deduce how to build a foundation. «We taught ourselves how to deploy microservices on Docker and on the AWS public cloud. In our eyes, our first prototype was a good basis for a marketable product,» René Hämmerli says of the project. But as soon as the first projects were built on the solution, the complexity increased, especially in connection with the integration

into AWS Managed Services. Adapting the foundation to the increasing new requirements also took a lot of time. The team reached its limits.

That's when copebit came into play. Not during a call for tenders or through a catalog of requirements - but over an aperitif at the TechHub community. As Marco Kuendig and René Hämmerli philosophized over a glass of white wine about how such foundations can be built, the idea of a cooperation was born. VELOX entered the second phase after this glass, this time with full cloud power from copebit.

Skill Set

«Implementing a good web store requires two core competencies: a well thought-out concept that both presents the products well and enables the sale seamlessly, as well as positively accompanies the customer experience. It also needs a technical foundation that connects to key services and databases, ensures the availability of the store, and enables a good customer experience. In the collaboration with copebit, we were able to combine both disciplines into one product and create something unique.» This is how René Hämmerli describes the collaboration on the project.

The copebit team took a close look at the basic structure of the Sly team. The services used, which were all described in code, and the documented requirements meant that it was possible to quickly analyze what changes were needed to improve the solution and efficiently achieve the goal.

In the meantime, the product has been refined with such precision that setting up a new environment takes only 30 minutes. This is a massive improvement on the original process, which took several days and was manual and therefore error-prone.

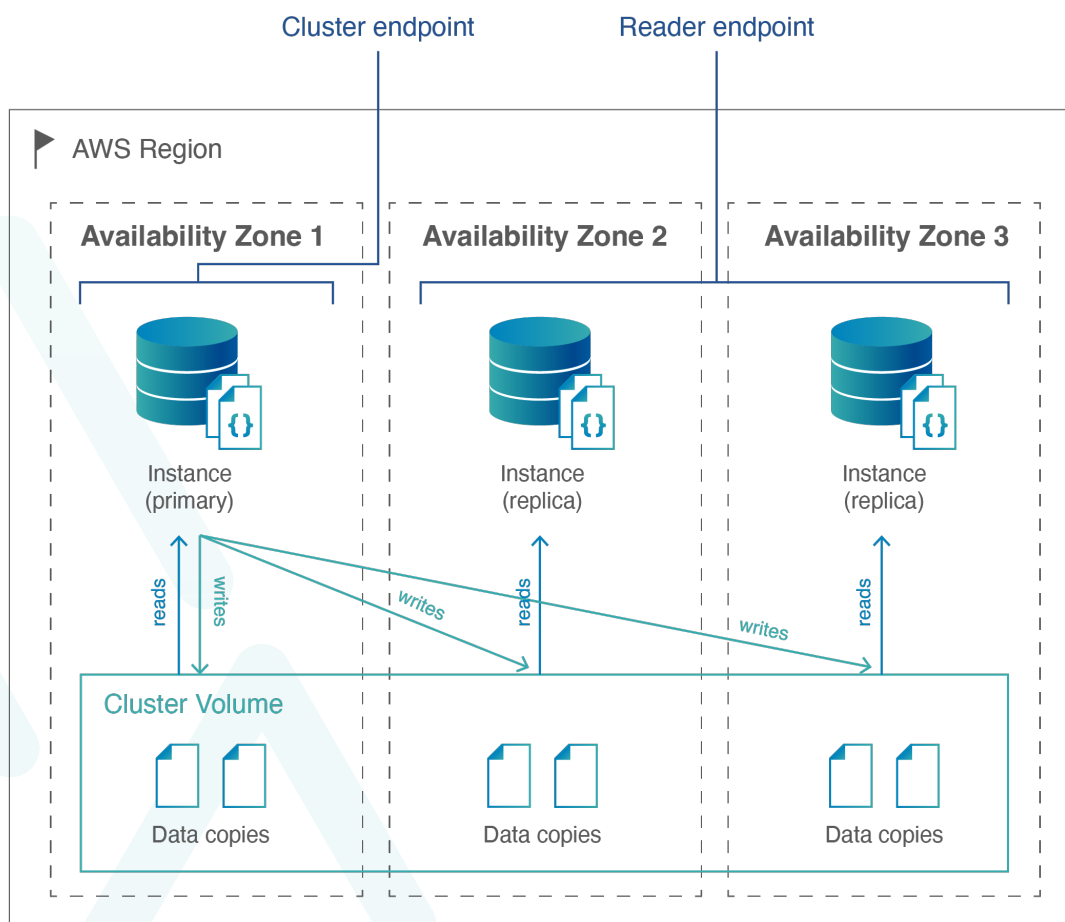
Tech Set

The application is built on Java Spring Boot, which runs in the AWS Cloud. 14 microservices have been created, which cover all basic functions of the webshop. VELOX follows a headless approach and uses React as a frontend library for the showcase as well as for the back office.

The entire environment was then containerized on Kubernetes and runs on AWS EKS. For the eCommerce operators, this means that their workloads can act elastically and operate in an optimized manner depending on the workload situation.

As underlying infrastructure, a DocumentDB that is fully compatible with MongoDB. Amazon DocumentDB supports two types of clusters: instance-based clusters and elastic clusters. Elastic clusters support workloads with millions of read/write accesses per second and petabytes of storage capacity.

Amazon DocumentDB automatically increases the size of the storage volume as storage needs for the database grow. The storage volume grows in 10 GB increments, up to a maximum size of 128 TiB. No additional storage needs to be provisioned for clusters to handle future growth.



By using RDS Aurora Serverless with MySQL, a scalable and serverless database solution from Amazon Web Services (AWS) was deployed. It automatically adapts to application requirements and allows developers to focus on application development. Costs are charged based on actual resource usage, and scalability and availability are managed automatically. Pause and resume capabilities save costs when the database is not actively in use. This is the optimal solution for development-oriented applications. In addition, the Amazon OpenSearch service was used.

The Well Architected Principles from AWS also help to form not only efficient, but also secure cloud infrastructures. The following components were used in the project:

- Secrets in AWS Secrets Manager
- AWS Backup with cross region and cross account
- Monitoring and logging with AWS CloudWatch
- All data encrypted with customer managed keys
- Infrastructure as Code with Terraform

Care has been taken to ensure that the entire environment is highly automated and that developers receive the best possible support during eCommerce projects. The app developers have a component store at their disposal, which gives them access to various functions and keeps the focus on app development without having to accept restrictions from the cloud.

Deployment of the app on Kubernetes takes place using CI/CD pipelines running on GitLab.

SETUP

Through the cooperation, the learning curve was extremely steep on both sides. Marco Kuendig talks about the collaboration: "We discussed all developments together with Sly and neatly documented how the project was structured. This way, the customer remains the project owner in all phases 100% of the time, and we are the expert who accompanies the customer."

Today, the two teams continue to work hand-in-hand. Customers are first set up in the demo environment and the infrastructure is tested until all processes run cleanly. Then the environment is migrated to a live cloud and copebit provides operational support through the day-to-day. It remains the fruitful combination of two experts: the e-commerce gurus and the cloud specialists.

"We have created something that surpasses the performance of many large corporates, and we have done so simply by following two of our most important principles:

1) The user is at the center, his requirements are the ultimate goal of every project.

2) Every expert has his limits, it's important to know them and seek external expertise for anything beyond that,"

René laughs about the success of the project and opens a bottle of chilled white wine.



René Hämmerli

Sly AG

Partner & Software Architect

About copebit

copebit AG is an innovative and dynamic Swiss IT company with focus on cloud consulting, development, engineering and operations. Besides the standard to always master the latest cloud portfolio, copebit AG also offers project management from «classic» over HERMES 5 to the diverse world of «agile methods» like SCRUM and SAFe. Results and a successful cooperation with the customer are always in the foreground.

copebit consciously focuses on sustainable values such as transparency, partnership and a long-term approach - for a meaningful everyday working life.

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