tec RACER
Cloud Enabling Your Business

Swiss Cryptocurrency Exchange built on AWS

SMART VALOR was founded in 2017 in Switzerland, one of the leading locations for blockchain technology. The company was named one of the ten most exciting technology SMEs in Europe by Forbes. From the Swiss headquarter and offices in Liechtenstein and Germany, the full-service digital asset investment platform serves private clients from over 130 countries as well as financial institutions. The crypto platform combines Swiss quality with German know-how. Through their Liechtenstein entity they operate a crypto platform, one of the first approved digital asset exchanges and token custodians in the region. It allows buying, earning and selling cryptocurrencies - anywhere, anytime.

## Building a future-proof AWS environment to support growth

SMART VALOR wants to bridge the digital and real worlds to make assets fully digital, easily transferable, and accessible. The startup built the platform on AWS from the very beginning. With a growing customer base, service portfolio and regulatory requirements, the complexity of their IT infrastructure and operations increased as well. Therefore, the company needed a well-architected AWS environment to lay the foundation for continuous growth, with greatest possible transparency. tecRacer, as an AWS Premier Tier Services Partner in the APN Amazon Partner Network, was able to contribute its many years of experience from numerous projects and optimized infrastructure and software deployments through automation tooling, relieving IT staff from repeating and administrative tasks.
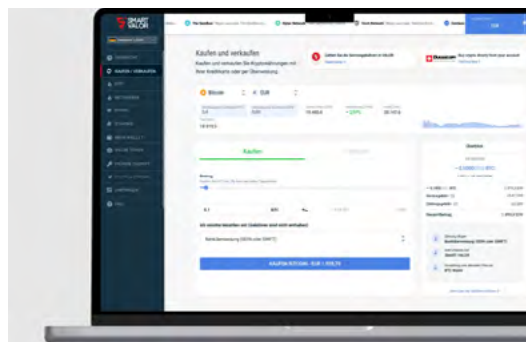
Copyright © Smart Valor

Automation ensures compliance and quality

tecRacer separated the workload into multiple AWS accounts to reduce complexity of individual parts of the workload. They also implemented Single Sign-On and a network concept for SMARTVALOR that includes external partners - all automated with Infrastructure as Code (Terraform). In addition, tecRacer designed and implemented the Continuous Integration / Continuous Delivery (CI/CD) pipelines to optimize the software development process. Highest security standards as well as enforcement of code review and approval steps ensure compliance with applicable law and improve quality of the platform itself. Github Actions was used to implement these workflows, and ArgoCD for automatically deploying approved and tested software changes into the environment.
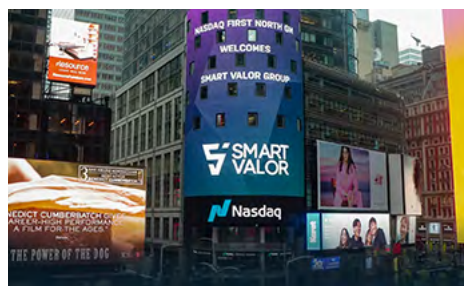
Copyright © Smart Valor

Lighter and flexible – Amazon Elastic Kubernetes Services (EKS)

Managed Kubernetes clusters were setup on Amazon EKS to run the containerized microservices. Amazon EKS provides the benefits of performance, scalability, reliability, and availability of AWS infrastructure, as well as integration capabilities for other AWS network and security services. An oberservability stack based on CloudWatch Logs, Prometheus and Grafana was built to provide insight into infrastructure and applications, too. Various external services for securing crypto transactions were finally connected.

Thomas Felber, CTO & Co-Founder of SMART VALOR:

„Thanks to the support of tecRacer, we now have a brand-new environment. This resulted in a significant reduction of DevOps maintenance effort, shorted massively the deployment time, increased the overall system availability, and allows us to have a permission setup that is based 100% on permission requests. This is a very important step forward in our mission to provide a highly scaleable, secure digital asset platform!"

CUSTOMER: SMART VALOR

Project Goals
- Build a clean new AWS environment with a multi-account setup that is in line aws AWS best practices
- Optimization of the software development process through full automation of build and deployment processes
- In particular, ensuring code reviews with approvals and compliance with the staging concept

Project Duration
April to October 2022

Project contribution by tecRacer
- Multi-account setup, Single Sign-On and network concept
- Design and implementation of CI/CD pipelines with Github Actions and ArgoCD to optimize the software development process
- Setup and configuration of the Kubernetes clusters (AWS EKS)
- Setup of the observability stack based on CloudWatch Logs, Prometheus and Grafana
- Connecting various external services to secure crypto transactions

Tools
- Terraform for building AWS, CloudFlare and Kubernetes components
- Managed Grafana, Managed Prometheus, CloudWatch Logs for Observabillity
- Github Actions with self-hosted Action Runners and ArgoCD for CI/CD
- CloudFlare as caching and security layer to front incoming traffic

Further AWS Services
- Identity Manager (former AWS SSO)
- EKS
- ECS
- RDS Aurora PostgreSQL
- RDS MySQL
- Transit Gateway
- Redshift

About tecRacer

tecRacer, headquartered in Hannover and with locations in Duisburg, Frankfurt, Hamburg, Munich, Vienna, Lucern, Geneva and Lisbon, offers AWS (Amazon Web Services) Consulting & Training Services from a single source - seamlessly integrated, across the entire cloud lifecycle - from strategy to implementation to operation.

The strategy also remains the clear focus on Amazon Web Services. Here, according to an independent study by Crisp Research, tecRacer is probably the most competent and important partner in Germany. And the focus on AWS proves tecRacer right: As part of the AWS Partner Summit 2021, tecRacer received the „AWS Consulting Partner of the Year" award. The owner-managed company, which was awarded as a Top Employer for medium-sized companies, now employs more than 150 permanent staff, has trained more than 12,000 participants in AWS and has already successfully implemented more than 250 AWS Consulting projects.

For more information, visit www.tecracer.com. Or contact us at aws-sales@tecracer.com.