



Customer Reference

AR Informatik AG: well-ARchItected

Company

Industry: Informatics
Location: AR, Switzerland
Founded: 2013
Staff: 70+

The Appenzell region stands for Swiss tradition and embodies the independence and autonomy of Switzerland.

When Appenzellers think something is right, they do it - also when it comes to digitalization. This is the case with ARI (AR Informatik AG), the IT service provider for cantonal and municipal administrations, hospitals, schools, the cantonal police and other customers in the public sector.

With a cutting-edge network infrastructure, ARI already laid a solid foundation in 2016, so that over the last few years it has been possible to centralize, standardize and professionalize some of the IT infrastructure and applications. As a full service provider, ARI provides professional services for around 3'500 users in the area of business-critical applications at over 200 locations. ARI also supports the digitalization of business processes and the introduction of innovative e-government services for the public.

Marcel Zoller, Head of Infrastructure and member of ARI's Management Board, has also driven forward cloud technologies on the basis of the IT strategy. In this way, he created the basis for innovation and expanded the organizations know-how. The vision for the future is the hybrid model, which combines the best of both worlds – on-premise and cloud. ARI is a leader as a full service provider in the government environment and also an attractive, future-oriented employer.

This in-depth knowledge of ARI and our specific competencies as an AWS Advanced Consulting Partner were therefore an optimal starting point for the very challenging AWS project.

We are very proud and pleased to have successfully implemented an important step into the AWS Cloud with ARI.

The Project

Facts

- Management account / SSO integration
- Log Archive account
- SecurityTooling account
- Backup/Restore account
- Network account
- Mapping and extension of the network zone concept
- Firewall cluster
- AWS CloudHSM cluster (cryptographic service)
- Workload accounts for different payers, with strict frontend/backend separation and different stages (Dev, Test, Prod)

Together, we started with a discovery phase with the goal of clarifying the requirements for technology, security and governance, but also defining the time frame. The target design with scheduling was developed to create a common understanding. In the initialization phase, the most important quality gates were efficiently completed. This is how the project took shape.

The jointly developed AWS design with systematic access structures, defined zoning and encryption services was able to excellently meet the compliance requirements.

In the realization phase, we worked hand in hand, which allowed us to best implement the customer and software requirements using AWS technologies. Step by step, iteratively and with an agile approach, all AWS management units, accounts, services and interfaces to surrounding systems were built and tested. The AWS accounts were created with the AWS Account Factory and automatically integrated into the Control Tower. This allows efficient creation of AWS resources while providing high security and standardization. All AWS resources were bootstrapped as Infrastructure as Code via Terraform, meaning that the account instrumentation for security, monitoring and automation was created.

The actual workload accounts, which contain the applications and their infrastructure, were also segmented, which also guarantees vertical and horizontal performance, availability and security scaling. This also allowed the Cloud Security Policy (CSP-AR) requirements for the Canton of AR to be met.

For the very strict requirements in the area of network zoning, the Network account was used, through which all cross-zone data traffic flows (AWS Transit Gateway) and which is checked with a firewall cluster. This ensures that the Network Security Policy (NSP-AR) of the Canton AR can also be applied in the AWS Cloud and is valid.

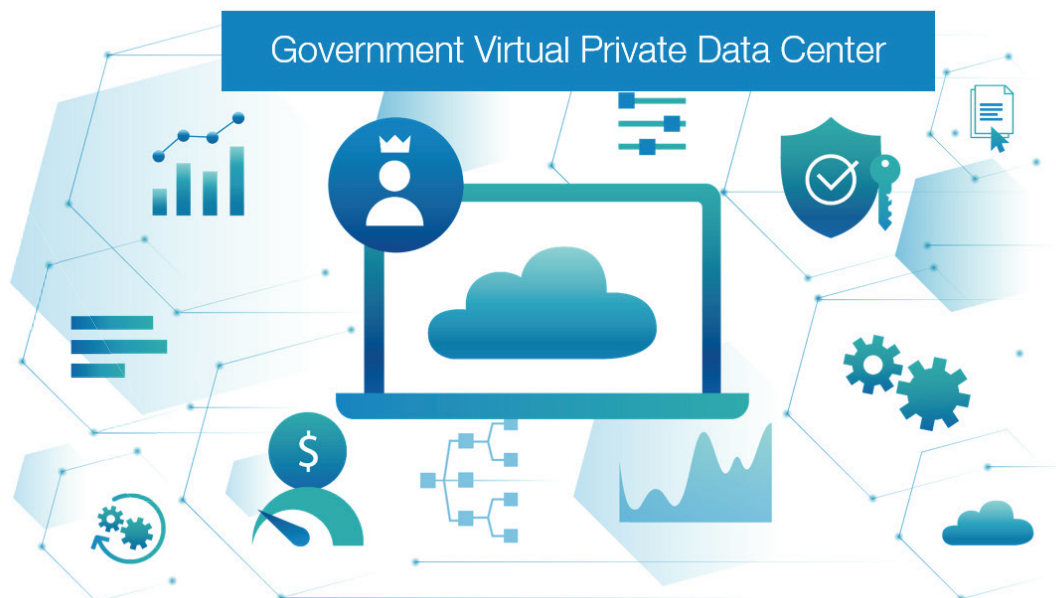
Strict cantonal requirements apply with regard to encryption. Security keys are stored in a dedicated AWS CloudHSM cluster (Hardware Security Module). This ensures that only ARI itself has access and no one else, not even the cloud provider.

copebit built an automated and well-structured AWS environment with multiple accounts based on the «6 Pillars of the AWS Well-Architected Framework» and security and compliance best practices. Additional enhancements in the areas of AWS CloudHSM and 3rd party firewall further increased the security maturity.

The final phase was the handover phase with training and final documentation. ARI was able to commission the AWS environment independently and copebit will be used as a partner when new issues arise or specific action is required.

The result was the ARI Government VPDC (Virtual Private Data Center), which could be seamlessly integrated into the existing on-premise infrastructure. This means that all AWS cloud technologies are available for current and future projects.

Based on the lessons learned from the project, ARI has decided to use this as a basis to further develop the ARI cloud strategy.



«Together with copebit, we were able to develop, build and commission the ARI Government VPDC (Virtual Private Data Center) within a short period of time. This was done based on AWS' Well-Architected Framework, best practices and additional security services. We were able to increase our AWS expertise immensely and can now ideally implement running and further applications on this very good basis. As a result, we are now able to provide our customers and partners with hybrid services that meet the highest requirements. With copebit, we have gained a qualified and valuable partner who will continue to provide us with advice and support after the go-live.»

Marcel Zoller, Head of Infrastructure

AR Informatik AG (ARI)
Head of Infrastructure Division, Executive Member



The Future

For ARI as a «full service provider», it makes sense to be involved with hybrid cloud services already today in order to actively meet future developments and to secure its own cloud expertise and experience.

This is a consistent further step for informatics development and the bundling of forces and resources so that ARI can continue to offer all customers secure, cost-effective and innovative solutions in the future. Together with ARI, we have created a solid foundation that makes it possible to implement dozens of applications without having to make decisive changes to the basis.

Contributors

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About copebit AG

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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