AVIATRIX®

CASE STUDY

How RheinEnergie Solved Hybrid Connectivity to Unlock a Fully Cloud Future

RheinEnergie

RheinEnergie, a German energy service provider based in Cologne and the Rhineland region, set a bold strategy: retire nearly all on-premises applications by 2030 and embrace a cloud-native approach. With business-critical workloads like SAP S/4HANA, Oracle, and NetApp spanning AWS, Azure, and Google Cloud, the company needed a secure, scalable way to manage multicloud networking and enforce consistent policies.

The hybrid cloud challenge

When RheinEnergie began their cloud journey with Microsoft Azure, they relied on multiple cloud-native tools plus legacy VPN routers to connect on-premises and cloud environments. As internal demand grew and performance expectations rose, they knew that model would fall apart quickly. The challenges of a hybrid infrastructure would further escalate as they added more clouds into the mix–fragmenting control across environments, requiring manual provisioning of network connectivity, adding security risk, and increasing operational burden and costs.

“We didn’t want an Azure solution, plus an AWS solution, plus a Google Cloud solution, plus legacy on-premises VPN routers to build our infrastructure,” said Erik Schubert, IT Service Architect at RheinEnergie. “We wanted a single way to easily connect and manage all of these environments.”

RheinEnergie required a new solution that would minimize operational complexity while seamlessly and securely integrating with existing on-premises systems through standard protocols. The ideal platform also needed to leverage their current internet infrastructure while providing a clear path for future network evolution. *(Continued)*

COMPANY

- RheinEnergie is a German energy service provider based in Cologne and the Rhineland region
- Business-critical workloads like SAP S/4HANA, Oracle, and NetApp span AWS, Azure, and GCP
- They set a strategic goal to retire nearly all on-premises applications by 2030

CHALLENGES

- Fragmented control across multiple cloud environments
- Manual provisioning of network connectivity
- Performance limitations with legacy VPN solutions
- Increased security risks and operational burden

RESULTS

- Aviatrix Secure High-Performance Datacenter Edge implemented as the secure backbone of RheinEnergie's cloud foundation
- 10x performance improvement for business-critical applications
- Deployment time reduced from weeks to hours
- Self-service networking capabilities through "one-click" provisioning
- Enhanced security through High-Performance Encryption
- Clear path established toward 2030 cloud-native transformation

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CASE STUDY

Security, simplicity, and a 10x performance boost

RheinEnergie selected **Aviatrix Secure High-Performance Datacenter Edge** as the secure backbone of their cloud foundation. By eliminating the need for multiple networking stacks and consolidating cloud security operations under one platform, Aviatrix gave RheinEnergie the centralized visibility, control, and encryption they needed to meet modern compliance and performance standards. With automated provisioning powered by Terraform and zero-touch provisioning, RheinEnergie can automate cloud access and accelerate deployment of consistent, scalable infrastructure. High-performance encryption over private or public connectivity ensures that security scales with performance–protecting critical data without introducing latency. Aviatrix's automated infrastructure as code (IaC) deployments provide consistent configurations, cut setup time, and reduce disruptions, ensuring reliable performance across hybrid environments. The unified management console gives the RheinEnergie team the power to oversee and orchestrate complex hybrid networks for streamlined operations and improved efficiency.

RheinEnergie first connected their Aviatrix hub-and-spoke architecture to their on-premises VPN router in Azure, then rapidly expanded to AWS and Google Cloud within just one year. The flexibility Aviatrix offers also allowed them to quickly test and subsequently decommission a fourth cloud provider when it proved unsuitable for their requirements–demonstrating the agility Aviatrix brought to their infrastructure decisions. Through Terraform automation, the team transformed these network connections into readily available "products" within their multicloud foundation platform. This service-oriented approach empowers internal business units and sister companies to consume cloud networking as a self-service offering–enabling them to establish automated on-premises connections via Aviatrix for applications running in any supported cloud environment with remarkable simplicity and consistency.

> **"When you want an on-premises connection for an application in AWS, you just one-click buy it with Aviatrix. Aviatrix is an easy deployment that supports great scalability."**
>
> *Erik Schubert, IT Service Architect at RheinEnergie.*

"When you want an on-premises connection for an application in AWS, you just one-click buy it with Aviatrix. Aviatrix is an easy deployment that supports great scalability," said Schubert. "Aviatrix has become a core part of our internal Meshcloud Cloud Foundation, powering multicloud networking as a self-service product for internal teams."

Within just a couple of months of implementation, RheinEnergie began seeing tangible value from their Aviatrix deployment. The one-click provisioning of their hub-and-spoke architecture transformed how internal customers accessed *(Continued)*

cloud resources, offering unprecedented flexibility to deploy network connections, select IP address ranges, and define subnet sizes–all through automated Terraform code. What previously took weeks to connect now happened in hours, dramatically accelerating cloud adoption across the organization.

In 2019, the team established a cloud competence center to provide standardized processes for cloud governance and foundation services. This initiative became a cornerstone of the company's long-term cloudification strategy, with Aviatrix serving as a key enabler.

“We have to build a solid, stable cloud foundation, and Aviatrix is a major part of that effort, enabling us to speed up our cloud journey,” said Schubert.

When legacy on-premises VPN routers failed to meet throughput and performance requirements for applications like SAP and NetApp, RheinEnergie turned to Aviatrix Edge Gateways with High-Performance Encryption (HPE). The most dramatic improvement came when the RheinEnergie team migrated several business-critical applications to AWS, including SAP S/4HANA and NetApp storage. Initial performance with their legacy connections proved inadequate for these demanding workloads. By replacing traditional VPNs with Aviatrix edge gateways, implementing High-Performance Encryption, and adjusting some operating system (OS) configurations, they achieved a remarkable 10x performance boost–unlocking the throughput needed for latency-sensitive operations like energy trading and power station planning.

"Our customers had expectations for their network attached storage based on the historical on-premises performance, and the only way we were able to meet those levels in the cloud was with the Aviatrix edge gateways," explained Schubert.

Beyond performance gains, this represented an architectural breakthrough–a critical security and operational milestone. Aviatrix unified cloud network security under a single platform, eliminating fragmented configurations and reducing the operational burden of managing multiple security stacks. The RheinEnergie team no longer needed expertise in multiple solutions; they could leverage one technology for all cloud connections. This consistency provides the small team with a key foundation for enforcing Zero Trust architecture across multicloud infrastructure. ***(Continued)***

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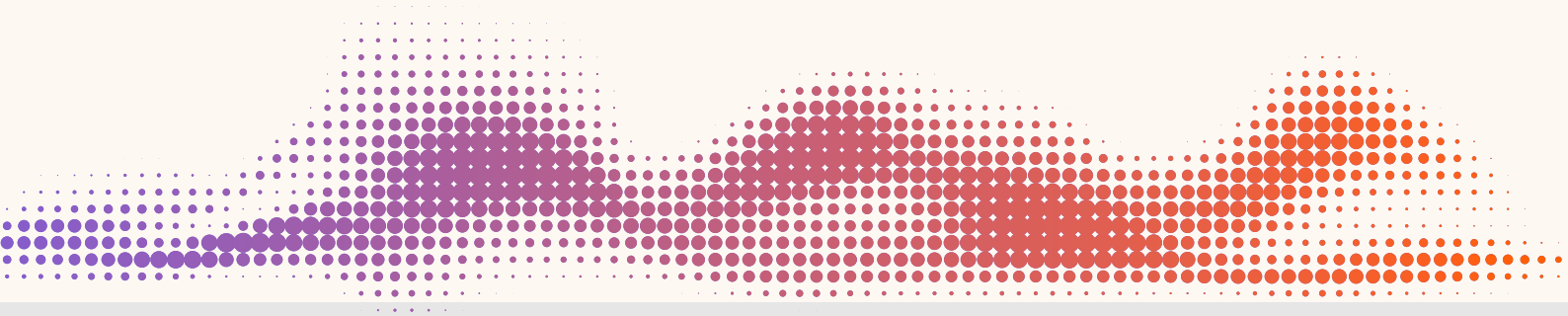
IT Service Architect at RheinEnergie.

Continuous multicloud evolution

Upper management gave the IT team the mandate to begin the cloud transformation process and move nearly everything to the cloud by 2030. “This is a good thing for us,” said Schubert, “but if we didn’t have Aviatrix, it simply wouldn’t be possible in such a seamless way.”

With north-south traffic already protected through Aviatrix edge gateways and High-Performance Encryption, RheinEnergie is now advancing its Zero Trust strategy by extending encryption and segmentation to east-west traffic–the internal flows between VPCs, accounts, and clouds. This next phase aims to prevent lateral movement, enhance visibility, and enforce consistent security policies across multicloud environments–all while maintaining the performance and operational simplicity Aviatrix is known for.

For RheinEnergie, Aviatrix has become more than a solution to hybrid connectivity challenges–it's the foundation enabling their fully cloud-native future.



About Aviatrix

Aviatrix® is the cloud network security company trusted by more than 500 of the world’s leading enterprises. As cloud infrastructures become more complex and costly, the Aviatrix Cloud Network Security platform gives companies back the power, control, security, and simplicity they need to modernize their cloud strategies. Aviatrix is the only secure networking solution built specifically for the cloud, that ensures companies are ready for AI and what’s next. Combined with the Aviatrix Certified Engineer (ACE) Program, the industry’s leading secure multicloud networking certification, Aviatrix unifies cloud, networking, and security teams and unlocks greater potential across any cloud.