

## Innovation in Healthcare: A Leap into the Hybrid Cloud

### industry

Public Service

### location

Germany

### key challenges

- Increased workload
- Outdated hardware
- Need for new technologies

### VMware products

- VMware Cloud on AWS
- VMware Cloud Foundation with Tanzu
- VMware vRealize Operations Manager Cloud

This public healthcare organisation aids individuals in challenging situations. In order to manage the various services, the organisation maintained two local data centres. Here, purpose-built apps, for example for information centres, consultation centres, and home visits, were utilised. With the rise of digitalisation, there was increasing pressure on the data centres, making hardware upgrades imperative.

"We offer a broad range of services, from support for the disabled and homeless to in-home care for the elderly," stated the CIO. "Our mission is to provide top-quality social services while efficiently using our resources. Hence, we needed something robust and reliable." For strategic consultation, the organisation turned to their long-standing partner, comdivision.

Tobias Paschek, lead architect at comdivision, recommended a problem-solving workshop. This was because the IT administrators were constantly occupied ensuring the systems ran smoothly.

### the challenge

The capacities in the local data centres were nearing their limits. "We needed a flexible infrastructure that allowed us to scale quickly when required," explained Paschek, adding, "For the IT administrators, it often became a full-time job just to maintain system stability. They were consistently occupied moving workloads manually to prevent server overloads. Our objective was to simplify this process for them."

"The first step was standardising the infrastructure to streamline update and patch processes," Paschek noted. "In the second phase, we wanted to ease the burden on administrators while enabling developers to utilise Kubernetes in the future." Paschek also observed tensions between the IT-administrators and the app developers: "It seemed that this division was due to the organisation engaging numerous external partners for varied tasks. Moreover, many app developers were subcontractors."

*our lead architect on the case*



*Tobias Paschek*

### solution

A hybrid-cloud solution, comprising VMware Cloud on AWS (off-prem) and VMware Cloud Foundation (on-prem), provided them with the flexibility to scale as needed within minutes. Simultaneously, it facilitated an easily updatable local infrastructure with self-provisioning options for developers.

The CIO added, "Resource allocation for developers increasingly became a full-time responsibility for one of our VI-administrators. Thus, we considered introducing self-service options for our development teams."

### the solution

Tobias Paschek proposed a hybrid-cloud solution: "We distributed the workload between a new on-prem data centre built on VMware Cloud Foundation with Tanzu and the off-prem VMware Cloud on AWS. The administrative workloads stayed local, while those of the external consulting offices and mobile teams ran on the VMware Cloud on AWS."

To simplify and standardise the local infrastructure, they used some older hardware nodes to establish a new VMware Cloud Foundation management cluster in the new data centre. The latest hardware was then deployed for the workload clusters. To ensure regulatory compliance and security, they implemented NSX-T, allowing the network to dynamically respond to application requirements. They employed VMware vRealize Operations Cloud for SLA monitoring.

### the result

"VMware Cloud on AWS offered us maximum flexibility with minimal effort for the VI-administrators," emphasised Paschek. "We configured the VMware Cloud in AWS infrastructure with Elastic vSAN and Elastic DRS to automatically scale during high capacity needs. When storage needs peak, the system not only expands the storage space in the cluster but also adds a new host," Paschek further elaborated. Using VMware Tanzu, VI-administrators can deploy a Supervisor Cluster, enabling on-demand Kubernetes clusters for developers. In practice, this means administrators provide developers a defined space where they can experiment without constantly booting up or shutting down virtual machines. Developers can thus add or remove required resources via self-service.

### further details???

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