Getting started in the world of containers

State-owned enterprise accelerates application development
with Future Cloud Infrastructure and Container-as-a-Service

"With Future Cloud Infrastructure (FCI) based on VMware, T-Systems has delivered an infrastructure solution that suits the customer perfectly. The modern private cloud is a perfect fit for the 'do it in-house' customer – it opens the doors to the world of cloud-native applications and provides greater flexibility for accelerating its development and testing processes. The new infrastructure resources from T-Systems' Frankfurt data center are being integrated with the customer's resources and can be delivered as a supplement to the on-premise resources in the customer's own data center in future, with the exact same functionality."

Guido Ising, project manager, T-Systems

A German state-owned enterprise with thousands of employees prefers to develop its IT in-house. No wonder – with this approach, the enterprise fulfills the regulatory requirements that are demanded of its business activities in a sensitive area. The company operates its own development department, which provides special software for operating business-critical and security-relevant processes. This software is run in internal data centers, to support business activities at a number of locations. Security and compliance play an exceptional role at the enterprise. As such, an individual path had to be found for its digitalization journey.

At a glance

- State-owned enterprise with high security and compliance requirements
- Internal development and operation of security-relevant software
- Acceleration of innovation
- Future Cloud Infrastructure as an appropriate IaaS offering
- Use of container technologies
- Increase in service availability

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The reference in detail

The challenge

State-owned enterprises aren't immune from pressure to digitalize. With long release cycles of its core applications for business-critical systems, the company can no longer cover its demands for updates and innovations. The classic software development cycles have to be scrapped – a paradigm shift to containers and micro-services is planned. This doesn't only mark a transformation of the company's culture, however, but also necessitates infrastructures and platforms that support the switch toward DevOps toolchains. From "do it in-house" devotee directly to hyperscaler user? The company quickly discarded that thought, because BSI C5 certification isn't enough for the state-owned enterprise. That's just the tip of the iceberg. The extensive security and compliance requirements also include security checks for the service provider's staff – a demand that U.S. hyperscalers can't fulfill. In addition, German-speaking support from Germany was another mandatory criterion.

The solution

An additional challenge was posed at the technical level. For its "do it in-house" culture, the enterprise bases its technology strategy on VMware. This had to remain unchanged on the way to a more flexible infrastructure. With Future Cloud Infrastructure (FCI), which is also based on VMware, T-Systems has delivered an infrastructure solution that suits the customer perfectly. The customer elected to test the IaaS in a proof of concept. The modern private cloud is a perfect fit for the 'do it in-house' customer – it opens the doors to the world of the cloud and provides greater flexibility for accelerating its development and testing processes. The new infrastructure resources from the T-Systems data center in Frankfurt will be integrated with the customer's infrastructures. At the same time, the customer will still maintain a high level of control, because the FCI is being provided as pure IaaS (infrastructure as a service). Above the hypervisor level, the customer has full design flexibility. For example, it is integrating its existing internal LDAP to implement self-controlled two-factor authorization. In addition, T-Systems has provided a native Kubernetes as "Container as a Service" in an initial step. A switch to Tanzu is planned in a later step, in line with the customer's technology strategy. Thanks to the VMware-based FCI, this is all merely an evolutionary step that can be achieved with little effort – just like the scaling of the FCI.

Customer benefits

Together with T-Systems, the state-owned enterprise is building a private cloud tailored to its individual needs. This cloud variant not only meets demands for greater dynamism for supporting the business processes, but also fulfills the high technical security and compliance requirements. This makes the FCI the optimal solution for the customer's current situation – particularly since it supports the existing technology strategy with VMware. It facilitates the first steps into the world of cloud computing and enables the customer to accelerate its software development cycles and implement modern development platforms and methods. As a result, the customer will be able to react to changing business requirements more quickly. With T-Systems at its side, the customer also has an experienced partner with a matching company culture. T-Systems guarantees German-speaking support and can offer security-vetted staff, as well as assist with the further development of the IT landscape. Last but not least, the state-owned enterprise can also improve the availability of its applications, thanks to the infrastructures from the private cloud.