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How FHE3 Delivered Rapid Time-to-Market and Flexible Customer Service Using Kubermatic KubeOne

The Challenge

Meeting Customer Expectations for Cluster Management

As an IT service provider, an FHE3 customer approached their team with the requirement to deploy and operate multiple Kubernetes clusters on an OpenStack environment in their data center. However, FHE3's toolset and the customer's environment did not work together. FHE3 needed to find a way to deliver the project according to the client's needs despite the incompatible stack.

The Solution

Powerful Tools for Lifecycle Management

Overcoming delays with the project and a shortage of manpower, FHE3 decided to use Kubermatic's KubeOne cluster lifecycle management tool which fits any infrastructure. With a short time-to-market, FHE3 was able to leverage Kubermatic KubeOne to deploy and operate the setup requested by their client.

The Impact

Rapid Time-to-Market

Without Kubermatic KubeOne, FHE3 would have had to duplicate their complete toolset on the customer's data center in their environment. The speed of delivery was less than a quarter of the alternative approach thanks to the advantages of Kubermatic KubeOne.

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Enabling Tailored IT Services

FHE3 is specialized in building and operating tailor-made, business-critical IT systems. They act as an extension to clients' IT departments rather than taking a one-size-fits-all approach. Many of their customers come from the advertisement industry and other industries with a strong requirement for high availability.



500
physical servers



2,500
virtual servers



25,000
servers worldwide

Currently, there is a high demand for cloud technologies, especially for container technologies and microservices. "Most of our customers would like to or already are moving in that direction because there are a lot of benefits for their business," said Kai Focke, Head of Projects & Operations EMEA at FHE3.

From FHE3's perspective, one of the challenges in meeting these business goals is keeping up with the newest developments in IT and being able to provide customers with solutions in the moment they notice a demand within their business. "You need to live up to the speed to really provide your customers with what they're looking for, which is cloud-native technologies, containerization and Kubernetes," said Focke.

"In our team, as people in the tech industry, we also innately want to be part of the newest developments and that's a win-win for us and our customers," Focke continued.

Finding the Perfect-Fitting Cluster Management Tool

This journey started when a customer of FHE3 asked for their team to deploy and operate multiple Kubernetes clusters on top of OpenStack to deliver a web base CSM service for the pharma industry in different countries. This cloud service must be highly available for end users and the continuous deployment of code easily doable by developers who build and ship Docker containers.

When the project started, working in the customer's environment proved challenging. FHE3 couldn't use their own toolset or infrastructure, which caused delays. Setting up their own option would have needed a lot of manpower as it entailed duplicating their complete toolset to the client's data center.

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At this point Kubermatic KubeOne was suggested to their team by a Kubermatic engineer. Kubermatic KubeOne is an open source cluster lifecycle management tool that automates cluster operations in the cloud, and in on-prem, edge, and IoT environments.

When choosing a solution, FHE3 needed a short time to market. “Duplicating our own toolset would have taken at least half a year,” said Focke. “It was really, really helpful that we were able to deploy clusters very quickly and in a timely manner with Kubermatic KubeOne.”

“Kubermatic KubeOne's biggest strength is that it works out-of-the-box on a lot of cloud providers, as well as in on-premise and bare-metal environments. Having just one tool for all situations is a great thing.

Kai Focke

To achieve the project's requirements, Kubermatic engineers first embraced different technologies like Terraform for setting up the VMs and security groups that are required to run Kubernetes. Then, they introduced self hosted GitLab instances to keep the code organized and bundled it directly with Flux CD to automatically ensure that the state of the Kubernetes clusters matches the desired configuration defined in Git.

Finally, the Kubermatic engineers installed Kubermatic KubeOpen on top of the customer's environment and coupled it directly with best practice automation concepts to easily spawn multiple Kubernetes clusters in different environments over different OpenStack hypervisors. Implementing the solution with Kubermatic KubeOne allowed FHE3 to have the first cluster for testing ready in one or two weeks.

Utilizing Fast and Reliable Support

FHE3 found one of the key benefits of Kubermatic KubeOne to be that it works out-of-the-box on any infrastructure including on-premise and bare-metal environments. Moreover, Kubermatic KubeOne comes with native support for all major public cloud providers including AWS, Azure, DigitalOcean, and GCP. “You have just one tool for all situations,” said Focke.

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For a high amount of clusters, Kubermatic KubeOne provides the necessary support in maximizing efficiency with ease. Integrating the solution in early stages allowed FHE3 to save large amounts of time and manpower.

“ We started to work with Kubermatic KubeOne right from the beginning. I don't think that there is a different way to go there; I would do it the same way again.

Retrospectively, FHE3 is satisfied with the decision to work with external technology, rather than building their own alternative from the ground up, to ensure they could deliver a solution with speed and without having to iron out kinks along the way. “I wouldn't recommend reinventing the wheel. In most cases, go with the solutions that are out there and that work,” he continued.

FHE3

FHE3 is specialized in operating high availability systems and is dedicated to remaining very flexible to fulfill customer needs. The team looks after more than 500 physical servers and has over 2,500 virtual servers in use. 25,000 services are actively monitored in their own data center in Frankfurt (Main) and other locations worldwide.

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Kubermatic empowers organizations worldwide to fully automate their Kubernetes and cloud native operations across multi-cloud, edge and on-prem. As the Top 5 corporate committer to the Kubernetes Project in 2019, Kubermatic develops enterprise-grade software solutions and provides professional services and support to safely navigate and accelerate the cloud native transformation. Leading enterprises including Lufthansa, Bosch, Siemens, and T-Systems trust Kubermatic on their cloud native journey.

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