WHY SYSELEVEN RELIES ON KUBERMATIC

Customers began to approach SysEleven about running containers and using container orchestration. To offer their customers the highest quality services for which they are known, they sought an easy to use container orchestration solution. SysEleven chose to partner with Loodse to create MetaKube, a white label of Loodse's Kubermatic Container Engine, giving their customers Kubernetes clusters in one click. Simon Pearce, MetaKube Team Lead and Systems Architect at SysEleven, explains why they chose Kubermatic to run Kubernetes in their data centers.

Why did you start looking into Kubernetes at SysEleven?

S: We've been doing managed hosting now for over 10 years and we've been running Linux containers for our customers for a long time. However, with the advent of container orchestration, we felt the need to more or less reinvent ourselves.

Two years ago, it was plain to see that Kubernetes was going to take over and be the market leader, which has really proven to be true. It was also quite clear that we weren't going to install stock Kubernetes ourselves. We needed something more: we required a strong partner who already had a production-ready solution. We looked around the market at products like Tectonic, OpenShift, and Rancher. But all of these products didn't provide lifecycle management for multiple Kubernetes clusters. We asked ourselves: How are you going to maintain hundreds of clusters? That would have been a nightmare.

We wanted a product which would allow us to install one big management cluster within our environment. And we wanted a product that would give customers a self-service portal which they could log in to and organize their clusters.

What made you choose Loodse and Kubermatic?

S: Loodse and Kubermatic had four big bonus points that were important for us. First, Kubermatic's maintenance overhead is so much lower because of its Kubernetes-in-Kubernetes architecture. This allows us to manage and run all of our clusters from one big seed cluster. We run an OpenStack cloud and once Loodse installed the seed clusters in our data centers, we could run production workloads straightaway. We can have multiple customers all running their own clusters and all we have to maintain is one seed cluster. Kubermatic made it possible to avoid the nightmare of managing them all as individual clusters.

Second, Kubermatic has a self service web front end. It is great to have a UI that customers can get their heads around within five minutes and control their own resources. They can choose in which region to install their clusters and whom to give access. Furthermore, it allows users to choose the OpenStack flavor and scale their clusters.

Third, Kubermatic gives us the ability to partner with other cloud providers, letting customers consume foreign resources. With that, we can give customers the freedom to choose where to integrate certain software components. They can benefit from the advantages each cloud provider has and we can keep customers within SysEleven's ecosystem – even if we do not offer a certain feature that one of our competitors has. And with offering that freedom we can actually stand out from the competition!

Finally, Loodse is a partner that is open to our ideas. Even as a premium ISP, we've often made the experience that technology providers send engineers around when there's a problem. But in many cases they wouldn't offer a customized solution for our individual needs. That's different with Loodse. Kubermatic is what it is today because we could influence the product by sharing our ideas: We've worked together at eye level.

How exactly does Kubermatic interact with your environment?

S: We are running OpenStack with a bunch of VMs set up with Terraform for the seed cluster. Then, we installed Kubernetes in high availability mode. Currently, we have more than 10 worker nodes where every single customer gets his own namespace.

In that environment, Kubermatic provides the UI to easily manage multiple Kubernetes clusters. So, what would our customers do? They would log in with their OpenStack credentials and the UI leads them through the cluster creation. The whole process only takes four minutes. From this point on they can add, upgrade, or delete their clusters whenever required. Furthermore, they have access to all their worker nodes through the OpenStack API. With that, they can access and administrate everything. And that's very powerful!

How has your customer service changed since using Kubermatic?

S: Before Kubermatic, if customers wanted to scale their application, we would have to build new containers for them. They would create a ticket and describe the issue and we would use our orchestration tools like Puppet to manage their setup. Depending on the size, one task could take hours and sometimes one or two days. Now, with Metakube, people can basically scale containerized applications instantly. It's a lot faster and easier now, and most of all: it's fully automated!

That is one reason, too, why SysEleven as a company benefits from Kubermatic. Before, we had to admit that applications and servers scale well but staff wouldn't: with every 10th new customer, we needed a new member of staff as an engineer. Pretty work-intense and a bottleneck in the end. With Kubermatic we are beginning to change that model. We get rid of toil work and by that give our engineers time to focus on improving our products.

What advice would you give to others that are embarking on a similar journey?

S: You should definitely not walk alone: First, look for partners who have been working within the Kubernetes ecosystem. They most probably are in touch with the community and people in larger corporations working on Kubernetes. Second, being able to read the code is crucial, so ideally you have some developers on your side. That, additionally, is pretty cool because you can contribute upstream to the community. And third, you should be aware that a lot of engineering work needs to be done. Of course, there are a lot of things to consider, but in the end, it was definitely worth it looking at what we can offer our customers now.

![SysEleven logo]

About Simon

Simon Pearce is the MetaKube team lead at SysEleven in Berlin. He has over 15 years of experience in the web hosting industry with a focus on building distributed systems on public and private clouds. At SysEleven, he is responsible for MetaKube, SysEleven's Kubernetes-as-a-Service which is designed for carefree Kubernetes usage and which comes with powerful managed components. Currently, he is working on improving the experience of running multiple Kubernetes clusters on an OpenStack cloud with a Quobyte storage cluster.