



# SWITCHkaas

Kubernetes-as-a-Service for the learning, research and innovation landscape in Switzerland.

### Kubernetes-as-a-Service

SWITCHkaas is a Kubernetes-as-a-Service (KaaS) for the learning, research and innovation landscape in Switzerland. The service is based on the software “Kubermatic Kubernetes Platform (KKP)”, which simplifies the management of your Kubernetes clusters and minimises operational overhead. It’s never been so easy to set up, manage and scale your clusters. SWITCHkaas orchestrates and automates hundreds of Kubernetes clusters in multiple regions using a single management interface and API. The service is operated on SWITCHengines, guaranteeing

that your applications run smoothly and reliably and that your data never leaves Switzerland.

Applications are increasingly being set up on a container basis with microservices, their dependencies and configurations. The open-source platform Kubernetes orchestrates and automates the tasks involved in setting up, running, managing and scaling cloud-native applications. The container system makes it easy to organise your workload on multiple machines with high availability.

### Enjoy numerous benefits with Kubernetes



**Ensure efficient use of resources**  
Run multiple containers without mutual dependencies on the same nodes. This allows you to use your virtual machines much more efficiently.



**Your applications run more flexibly**  
Start containers with flexibility and speed on the orchestration platform.



**Your applications scale better**  
Scale your applications with flexibility and speed thanks to containers as independently functioning units.



**More agile software development**  
As the containers are reproducible, you can transfer your applications from your development environment to the productive environment with flexibility and ease.



**Your applications become more reliable**  
Splitting your application into microservices and containers results in higher redundancy and availability. Kubernetes ensures that your containers are automatically started on a new available host in the event of a failure.



**Your containers are portable**  
Migrate container applications smoothly to other Kubernetes cluster.

### Moves like a freight container

The term “Kubernetes” comes from the Greek word for helmsman. The nautical analogy is easily explained. In the past, freight ships used to have large, cluttered cargo holds. Containers solved this problem, allowing freight to be organised and moved in manageable, mobile containers. Today, this principle can be applied to servers. Growing volumes of data mean a growing level of complexity. This increases vulnerability to errors and complicates and delays processes – and this in turn costs time and money. The solution can also be found in the IT container. A container as a standard software unit packages the code and all its dependencies so that an application can be run quickly and reliably in a computer environment. The helmsman – the open-source system Kubernetes – takes over the central task of deploying, scaling and configuring the containers.

### Simple and quick cloud-native transformation

You can create a Kubernetes cluster that drives your cloud-native transformation in just a few clicks. SWITCHkaas simplifies the work involved with Kubernetes clusters so that you can concentrate on your application. Your development and operations teams work together on one platform in order to set up, run, manage and scale applications quickly and easily. SWITCHkaas and our expertise can help you take your IT infrastructure to the next level with security, stability, flexibility and speed.

Manual cluster management on a cloud platform is complex, prone to errors and expensive. It can also be difficult to find the right specialists. SWITCHkaas helps you reduce operating expenses, minimise costs and establish the basis for flexible and fast applications with impressive reliability.

### Accelerate the cloud-native roll-out

Set up your Kubernetes platform in no time to allow your developers and operations team to deploy clusters extremely efficiently and securely. Manage your clusters centrally and intuitively with one single, clearly arranged dashboard.

### More time for what matters

It costs a lot of time and money to operate an infrastructure. SWITCHkaas simplifies your work and gives you the freedom to develop your applications. Your operating expenses are reduced and you have more time to spend on your core tasks.

### Make the most of the open-source community

Benefit from the Kubernetes (K8s) and the Cloud Native Computing Foundation (CNCF) community. This way, for example, you can enhance your existing software packages with configurable Helm Charts or Kustomizations. This simplifies the migration and operation of your existing applications considerably.

### 100% vanilla Kubernetes

Kubernetes is an open-source software used to orchestrate and automate container-based applications. SWITCHkaas simplifies work with the complex infrastructure of Kubernetes. The tool makes it easier to carry out migration tasks because open-source components are carried over without modifications. You save valuable resources because you no longer need to develop, maintain or keep your platform on the latest release level yourself.

### Kubernetes community

Kubernetes is the result of a collaboration between thousands of individuals and hundreds of organisations who bring with them their knowledge, their code and their continuous user support. The community continues to contribute to the success of the system. Use the collaborative project as the basis for the success of your own IT.

### Your data remains in Switzerland

Your containers and data are stored on our cloud platform SWITCHengines. The data never leaves Switzerland.

### Discover our services

Experts from the SWITCHkaas team will be happy to provide advice and training. We have years of experience in operating complex, container-based applications and we understand the requirements, needs and challenges of your industry. Our expertise makes it easier for you to get started and helps you reach your objective faster. We are the right contact partner for all your concerns regarding containerisation, Kubernetes and GitOps.

### SWITCHkaas offers you a comprehensive range of services:

- Self-service Kubernetes-as-a-Service with basic support to ensure operation.
- Support and advice during cloud-native projects and migration.
- Support with more complex issues (e.g. Kubernetes or GitOps-specific).

### Do you have any questions? We will be happy to help.

Our team is ready to lend a hand when it comes to implementation, training and technical matters.

#### SWITCH

##### Diego Tres

Community Account Manager

PO Box

8021 Zurich

✉ [diego.tres@switch.ch](mailto:diego.tres@switch.ch)

✉ [kaas-support@switch.ch](mailto:kaas-support@switch.ch)

☎ +41 44 268 16 57

🔗 [switch.ch/kubernetes-as-a-service](https://switch.ch/kubernetes-as-a-service)

**SWITCH**