MANAGED KUBERNETES DESIGNED FOR MACHINE LEARNING AND AI APPLICATIONS

The cluster software Kubernetes offers methods and tools that support data scientists in developing efficient machine learning applications. Containers orchestrated using Kubernetes and the resulting isolation of workloads enable easy execution of reproducible ML / AI mechanisms. We support you regarding both the migration to Kubernetes and the management of the Kubernetes environment.

OUR MANAGED KUBERNETES SERVICE RUNS ENTIRELY WITHIN THE CLOUD&HEAT DATA CENTER INFRASTRUCTURE AND IS BASED ON VANILLA OPENSTACK WITH ADDITIONAL SECURITY ENHANCEMENTS.

Managed Kubernetes Cluster

with or without Virtualization Layer

VM Master

VM Worker e.g. database or application

YOUR BENEFITS FROM CHOOSING CLOUD&HEAT MANAGED KUBERNETES

▶ **FLEXIBILITY**

▶ **OPTIMIZATION FOR MACHINE LEARNING**

▶ **SUSTAINABILITY**

▶ **TECHNICAL SUPPORT**

▶ **LOCALITY**

▶ **DATA SOVEREIGNTY & SECURITY POWERED BY:**

secustack
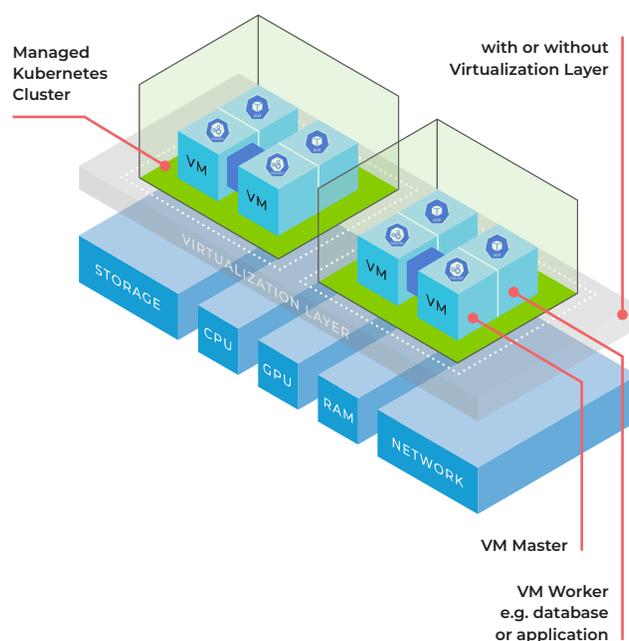
SCOPE OF FUNCTIONS

KUBERNETES API
When ordering a Kubernetes cluster, you automatically get access to kubectl CLI or other tools of the Kubernetes ecosystem.

MONITORING
We continuously monitor the underlying IaaS (Infrastructure as a Service) and Kubernetes control plan to ensure that your cluster can be quickly restored in case of failure.

UPGRADES
We inform you about updates and plan them for your clusters together with you, so that you can use the latest features of the Kubernetes platform.

FLEXIBLE SCALING
We give advice and adapt the IaaS platform under your Kubernetes cluster to improve performance.

WHY OUR CUSTOMERS CHOOSE CLOUD&HEAT MANAGED KUBERNETES

Our customer nyris aims to digitize the incredible capability of human sight. For this, artificial visual intelligence is used to enable the nyris visual search engine for spare parts, products or objects and allow users to find those more naturally and efficiently. Besides profound knowledge, creativity and passion, artificial intelligence requires a huge amount of compute capacity and energy to develop and train the associated complex machine learning algorithms.
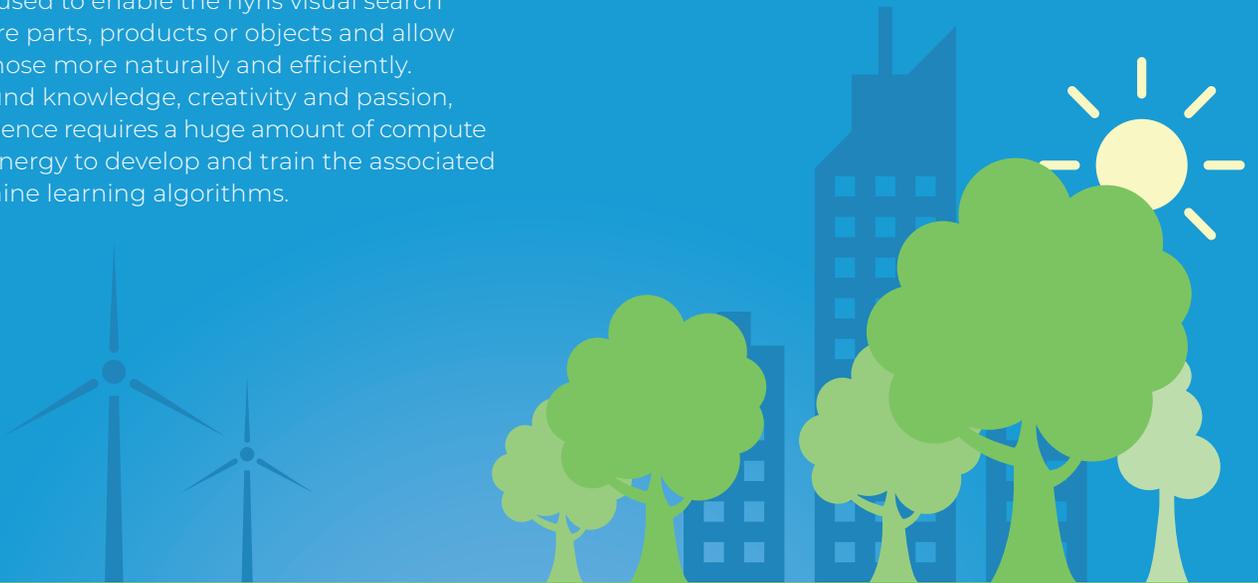
SECURE AND SUSTAINABLE AI FOR A GREENER PLANET

NYRIS' CUSTOMIZED INFRASTRUCTURE SETUP

- ▶ Selection of NVIDIA Tesla V100 GPU especially developed for AI applications providing excellent performance and efficiency
- ▶ Supermicro "X11DPG-HGX2" leveraging GPU usage at reasonable bandwidth
- ▶ Equipment of V100 with heat sinks enabling waste heat recovery
- ▶ Embedding into 1U chassis accommodating space for four GPUs enabling huge power density

REASONS TO CHOOSE CLOUD&HEAT MANAGED KUBERNETES

- ▶ Latest hardware assembled to nyris' needs
- ▶ High amount of flexibly scalable compute capacity
- ▶ Ecologically meaningful and holistic solution at a reasonable price

SUSTAINABLE MANAGED K8S INFRASTRUCTURE

Based on the energy-efficient Cloud&Heat infrastructure, nyris can reduce their carbon footprint by roughly 11 t CO_2 per year. The whole use case inclusive explicit calculations can be found here:
managed-kubernetes.cloudandheat.com

WE BUILD THE MOST ENERGY EFFICIENT DATACENTERS. WORLDWIDE.

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FUTURE OF COMPUTE