



# HKU

As resolutions and frame rates rise, HKU’s students need to store and share increasing quantities of multimedia data. The university’s existing fragmented, multi-site storage infrastructure could no longer meet these growing demands. By deploying a four-node SUSE Enterprise Storage™ cluster—which will soon stretch across two locations for added resilience—HKU has gained a robust, high-performance backbone for file and block storage that offers exceptional scalability combined with low total cost of ownership.

## Overview

Located in the Netherlands, Hogeschool voor de Kunsten Utrecht (University of the Arts Utrecht, HKU) offers preparatory courses and both undergraduate and postgraduate degrees in fine art, design, media, games, music, theatre and arts management. With more than 3,900 students, HKU is one of the largest art and culture-oriented educational institutions in Europe.

## Challenge

At HKU, where students create, store and share growing amounts of digital media, the rising number of higher-resolution files has significantly accelerated the growth in data storage requirements. Adding in a decentralized, multi-site infrastructure with disconnected islands of storage provided all the ingredients for a significant IT challenge.

Emile Bijk, Head of Network and Information Systems at HKU, said: “We wanted to consolidate our existing infrastructure to

**“As our storage needs grow, it’s quick and easy to extend the SUSE Enterprise Storage cluster.”**

### EMILE BIJK

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make it more robust, more scalable, and easier to manage. Several isolated storage systems each served the needs of multiple application servers, creating unhelpful dependencies. For example, if we needed to take a storage system down for maintenance or to increase its capacity, the hosted applications would also suffer downtime.”

By adopting a single, centralized storage environment—clustered for high availability—HKU aimed to increase performance and reduce downtime. This in turn would help students make the most of their time at HKU and increase the university’s attractiveness to new applicants.

## Solution

As a long-term user of SUSE® Linux Enterprise Server and enthusiast for open source solutions, HKU decided to trial SUSE Enterprise Storage, a software-defined storage solution powered by Ceph technology.

“Ceph is designed to provide extreme scalability and resilience at relatively low TCO, which made it a great fit with our objectives,” said Emile Bijk. “Choosing SUSE’s implementation of Ceph gave us the assurance of enterprise-class support. Centralization meant that we were effectively creating a single point of failure for storage, so of course it was vital to ensure this high level of protection and support.”

## Success Story

SUSE Enterprise Storage



# HKU

## HKU at a Glance:

HKU is a liberal-arts university in the Netherlands offering preparatory courses, bachelor and master programs and research degrees in fine art, design, media, games, music, theatre and arts management.

### Industry and Location

Education, the Netherlands

### Products and Services

SUSE Enterprise Storage  
SUSE Linux Enterprise Server

### Results

- + Removed barriers to storage scalability, supporting growing data and student numbers
- + Eliminated downtime associated with maintenance, raising user productivity
- + Freed up funds by reducing total cost of ownership for storage

**“In our experience, SUSE Enterprise Storage offers much lower TCO. Not only have we cut administration time and effort, but also the solution enables us to practically eliminate downtime.”**

**EMILE BIJK**

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HKU worked with SUSE to design and deploy a three-node cluster of SUSE Enterprise Storage running on Supermicro hardware. Following a three-month test phase, the university moved into production, adding a fourth node for greater capacity and performance. The SUSE Enterprise Storage cluster now hosts practically all file and block storage for HKU, including the KVM images for 25 virtualized servers.

“We introduced SUSE Enterprise Storage at the same time as we were consolidating three locations into one, and the solution also simplified the migration,” said Emile Bijk. “We now have a resilient, scalable, cost-efficient storage solution that provides us with a firm foundation for future growth.”

SUSE Enterprise Storage gives HKU a platform that can scale across multiple locations for added resilience. The university has invested in a fast network connection to a backup data center, and will soon add two nodes there.

“It’s easy to add nodes to a SUSE Enterprise Storage cluster, even in other locations,” said Emile Bijk. “As our users become increasingly dependent on their digital assets, it’s great that we can keep their data available even if we lose power at our primary site.”

## Results

SUSE Enterprise Storage has given HKU a robust and highly scalable backbone for storing and distributing its most important data.

“As our storage needs grow, it’s quick and easy to extend the SUSE Enterprise Storage cluster by adding disk capacity to existing nodes or by setting up entirely new nodes,” said Emile Bijk. “We’re also keen to explore using built-in enterprise storage features such as snapshots, thin-provisioning and compression.”

HKU has seen a significant reduction in the time and effort dedicated to managing data storage. Previously, repairing or upgrading a storage system implied downtime for users. The clustered nature of SUSE Enterprise Storage means HKU can perform any required maintenance on any individual node without downtime: applications and users are automatically redirected to one of the remaining live nodes.

“Day-to-day administration is much easier with SUSE Enterprise Storage, as we can complete regular maintenance work without interrupting students or teaching staff,” said Emile Bijk. “We also no longer need to work evenings or weekends, so our technicians are much happier!”

“Although there are storage solutions with lower acquisition costs, in our experience SUSE Enterprise Storage offers much lower TCO, freeing up funds for other activities. Not only have we cut administration time and effort, but also the solution enables us to practically eliminate downtime, which represents a huge cost saving and is vital for our students’ productivity and satisfaction.”



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