

KUNSTHAUS ZÜRICH

Preserving Artworks for Future Generations Kunsthaus Zürich Secures its Digital Artworks for Eternity with iCAS FS

■ Company:

Kunsthaus Zürich

■ Industry:

Museum | Arts & Culture

■ Background:

The task of a museum is to collect, preserve, research, exhibit and communicate art. Ensuring the quality and integrity of artworks as well as their preservation for future generations is of great importance. Digitization makes this task more difficult (keyword: data growth), but at the same time simplifies the work, as new solutions optimize workflows.

■ Challenges:

Protection of digital art "for eternity"; Storage of extremely large files; Ensuring data integrity and redundancy while minimizing the overall cost of the solution

■ Solution:

iCAS FS

„Only with iCAS FS are we able to safely store our artworks such as videos, photographs and digitized works. None of the evaluated alternative solutions could guarantee comparable flexibility, performance and security.“

Kerstin Mürer

Director of the restoration department at the Kunsthaus Zürich



Kunsthaus Zürich with works *Werken* by Pipilotti Rist.
Works © Courtesy the artist and Hauser & Wirth. Photo © FBM Studio, Zürich.

The success at a glance:

- Securing artworks for future generations with focus on immutability and scalability
- Protecting the data integrity of archived video, photo and image works with the hardware-independent software solution iCAS FS
- Storage of extremely large files with good performance
- Redundancy of data and automatic verification of its integrity



Extension of the Kunsthhaus Zürich. noncommittal rendering, status from 2015.
© David Chipperfield Architects.

„Art is a metaphor for the immortal.“ In order for this statement by Ernst Fuchs not only to remain the artist's wish, but also to become reality on an organizational level, museums must make great efforts today. The central task of a museum is the preservation of artworks for future generations – in high quality, unchangeable and secure for the long term.

The Progressive Digitization of the Art Business

This task takes on completely new dimensions in a digitized art world. In addition to the conversion and digitization of originally analogue works, the number of "born-digital" works, such as digital videos and photos, is also increasing. These must also be stored securely and for the long term. The Kunsthhaus Zürich (KHZ) faced this challenge.

„With more than 700 video works, the Kunsthhaus Zürich has the fourth largest video collection in Switzerland“, reports Kerstin Mürer, director of the restoration department at the Kunsthhaus. With the extension building, the Kunsthhaus is to

become Switzerland's largest art museum by 2020. This means in the same step: more born-digital works and more digitized works, which have to be saved and archived.

IT and Restoration Department under Pressure

Since 1980, the Kunsthhaus Zürich has been buying analogue and digital video tapes – currently with file sizes of up to 300 GB per video. However, file sizes will increase dramatically in the future with Full HD and 4K resolutions.

Thomas Rosemann looks back on the step-by-step development: „It is only in the course of time that we have become aware that we not only have to convert and digitize the videos, but also have to protect them on a suitable system for the long term.“

While many other museums use LTO magnetic tapes for this task, the Kunsthhaus Zürich quickly realized that a digital and flexible solution should be used. „At first, we did not know which technical solution would best meet our

requirements, and there were some detours and learning effects until we finally came across iTernity“, recalls Thomas Rosemann.

„The IT department clearly searched for a solution that integrates well into our standardized IT environment and minimizes the administrative burden on both users and IT. This point combined with the convincing support from iTernity and the flexibility in choosing the hardware provider convinced us as a complete package“, emphasizes Markus Spiri, Head of IT at the Kunsthhaus Zürich.

Accordingly, the requirement profile for the long-term archive was defined:

- Archiving of large files with a size of 300 GB and more
- Backup and automatic monitoring of data integrity
- Redundancy of archive data through mirroring across multiple locations
- Easy handling and good performance
- Future security and planning reliability with low total costs (TCO)

The pressure to implement a suitable solution became more and more noticeable, as Kerstin Mürer reports: „In the restoration department we have to act in a timely and proactive manner before the process of decay of the artworks begins or the storage media can no longer be read due to technological change.“

The Archive as a Cornerstone for Process Optimization

„With iCAS FS, we store images and videos of the museum in an audit-proof manner on three different servers“, explains Simon Polomski, a member of the company's IT department who played

a key role in the introduction of the archiving solution. „Two archives have an unlimited retention period, the third runs as a backup replacement with a retention time of five years.“

At the Kunsthaus, many workflows still run manually. This is partly due to the nature of the archive data, as Eléonore Bernard, staff member of the restoration department in the area of media preservation, points out: „It takes a lot of time to deal with the artworks, for example to clarify what the actual work of art is and whether it can be archived in its present form.“

On the other hand, the processes at the Kunsthaus had to be clearly defined. The interfaces of the individual systems (museum database MuseumPlus and ECM Archivematica) also need to be designed.

For the archiving of a work several steps are necessary: the work has to be analyzed and, if necessary, discussed with the artist, the files have to be packed with the metadata and the documentation has to be added to the museum database. With the introduction of iCAS FS as a digital long-term archive, the awareness of internal processes at the Kunsthaus Zürich has developed enormously. IT and the restoration department agree: „The changeover to iCAS FS helped us enormously in optimizing our processes.“ This is not least due to the flexibility of the solution.

Clean IT Infrastructure, Reduced Effort

„iCAS FS is extremely easy to use, the overall system does not require any special IT management and does not require any expensive proprietary hard-



Kunsthaus Zürich, Collection "Contemporary Art" with a work by Franz Gertsch. Photo © Franca Candrian.

ware“, explains Markus Spiri. The maintenance of the hardware and software is completely carried out and controlled by iTernity, which greatly reduces the workload for the IT department.

Thanks to replication of the data across different locations, the backup solution via LTO tape storage used to date is no longer necessary. The archive data is automatically synchronized on all servers so that data integrity is permanently guaranteed.

The users from the restoration department are also pleased about the simple handling and the significantly improved performance. „Only with iCAS FS we are able to safely store our artworks such as videos, photographs and digitized works. None of the evaluated alternative solutions could guarantee comparable flexibility, performance and security“, says Kerstin Mürer. It is not without pride that Thomas Rosemann adds: „There are currently few other museums in Europe that have such a future-proof and holistic solution in use.“ However, one does not want to rest on ones laurels, the list of planned projects is long.

Outlook Into the Future and Automation

On the one hand, further image collections are to be digitized and archived. At the same time, the Kunsthaus wants to further optimize the existing processes: „We want to automate our workflows more strongly and connect the solutions we use, such as the museum database and the artwork directory, to the long-term archive iCAS FS“, Kerstin Mürer describes the plan of the Kunsthaus Zürich.

The Kunsthaus is looking forward to the implementation in a relaxed manner, because „the cooperation with iTernity was always extremely competent and fast“. Even the trend of increasing data volumes and ever larger files does not worry the Kunsthaus team thanks to iCAS FS.

With the use of iCAS FS, the Kunsthaus Zürich relies on a future-proof and holistic archiving solution and thus fulfills the wish of the Swiss aphorist Paul Schibler: „We owe it to every real artist who has created something lasting to protect his work from being forgotten.“

Next Generation Secure Data Retention

iCAS FS is a software-defined scale-out storage platform providing future-proof data retention and compliance (e.g. HIPAA, GDPR) at extremely low TCO. The archive solution helps you to comply with legal regulations and internal compliance requirements, thus significantly minimizing business risks. The iCAS FS platform optimizes the long-term storage and protection of large amounts of data from various applications. Benefit from data integrity protection and automatic Self-Healing. Rely on next-generation data storage!



Significant Reduction of License & Service Cost



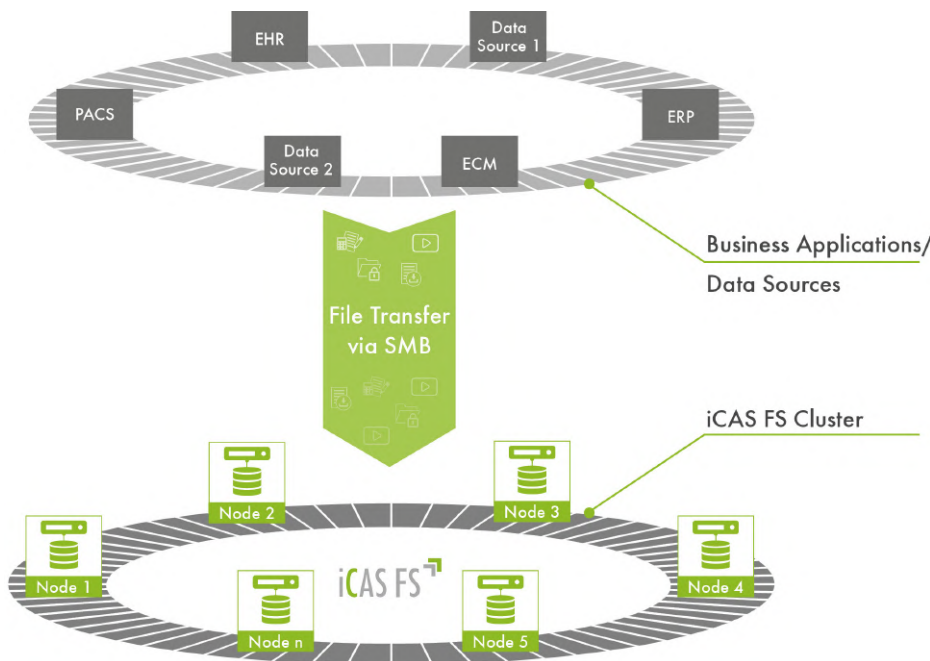
Scalability from 20 TB to 20 PB



On-Premise Cloud Experience



GDPR and KPMG certified



Simple to Deploy, Easy to Consume

The appliance-like architecture requires a minimal infrastructure footprint: only one standard Ethernet network and two industry standard servers (x86) are needed for a starter configuration. iCAS FS is designed for industry standard hardware and offers integrated monitoring of the whole set-up.

iCAS FS ensures data integrity and availability over long periods of time: scalable, legally compliant and easy to use.