



CASE STUDY

Cost-Effective Shared Storage for Media & Entertainment with Western Digital, RAIDIX, and Tiger Technology Software



Company Profile

POSTMODERN is an award winning post-production company providing film and animation production for motion pictures and gamedev companies. They operate as part of FILM.UA Group – one of the largest Eastern European media groups. They have worked on productions of Ukrainian mega hits like "The Tribe" and "The Stronghold" and adapted movies by Warner Brothers, SONY PICTURES and others to the local Ukrainian market.

Challenge

Customer's network of workstations with local attached storage did not enable a good and efficient workflow for all production team members

Solution

An open, flexible storage solution based on Western Digital Ultrastar® Data60 hybrid storage platform, RAIDIX, and Tiger Technology software

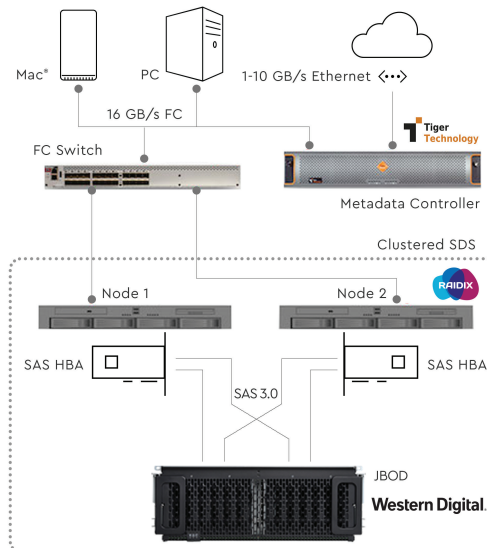
Key Results

- 600TB of raw, shared storage
- Improved workflow for all team members
- Fast access to all storage, improved collaboration
- Cost-effective storage infrastructure without vendor lock in
- Flexible infrastructure providing upgrade path to higher capacity and/or performance

Unique Storage Requirements of Media & Entertainment Companies

Post-production workflow combines video editing, adding visual effects, sound mixing, color correction and other stages of content creation on its way to TV, big screen or CDNs. New video resolutions, computer-aided modelling and visual effects keep driving the need for storage systems with higher capacity and performance.

All post-production workflow begins with processing and keeping videos on montage workstations. High capacity, high performance storage is extremely important for the montage process. Furthermore, creative work is collaborative and storage-centric: teams operate with hundreds of terabytes of data. Everyone needs a comfortable work environment, with fast access to video materials, reliable storage, and simple management of data distributed over multiple volumes. The modern video production infrastructure should support any OS on its client workstations (macOS®, Windows®, Linux®), heterogeneous storage resources (SAN, NAS, object and cloud storage) and access protocols (FC, iSCSI, SAS, NFS, SMB, http), and use broadband network connections (FC 8-16Gb, Ethernet 10-40-100Gb).



Compute

- x86 Servers with RAIDIX 4.6 software
 - 256GB DDR4 DRAM
 - 1x SAS RAID
 - 2x dual port 16Gb/s Fibre Channel
- Metadata server with Tiger Technology software & Metadata controller

Storage

- 1x Ultrastar Data60 hybrid data storage platform (60x Ultrastar He10 SAS HDDs)

"For us, a post-production team, a good storage infrastructure is a key investment. As we operate with huge volumes of media data, our storage should have enough capacity (thanks Western Digital!), be productive and manageable (thanks RAIDIX!) and the workflow comfortable (thanks Tiger Technology!). We are grateful to Entry, who designed the affordable solution with a great potential for growth."

Iaroslav Savitskyi
Postmodern CTO

High-bandwidth Access to Shared Storage Resources

POSTMODERN used a flat network where each workstation used locally attached storage for its workflow. This solution was limiting the company in many ways. Several teams needed to work with this data at the same time (titration, montage, voice acting, etc.), and high-speed access to the content was a prerequisite for efficient collaboration. Unfortunately, the existing set up was not scalable, there were performance bottlenecks, and most importantly work could not be shared among the team efficiently.

System integration partner Entry proposed a solution based on standard x86 servers, fast network connections, Tiger Technology and RAIDIX data software and Western Digital's Ultrastar Data60 hybrid storage platform. Client workstations were connected to the servers via 16Gb FC SAN connection, getting high-bandwidth, low latency access to the shared storage resource (i.e. the Ultrastar Data60 platform).

The Ultrastar Data60 platform provided 600TB of raw data storage, with the ability to scale out in numbers of enclosures or scale up in individual HDD capacity. RAIDIX software was installed onto two mirrored standard x86 servers, while the Tiger Technology software ran on a server that also incorporated a Tiger Technology Metadata controller.

For this configuration, the customer chose to utilize 60x HelioSeal® 10TB1 SAS SSDs, providing 600TB of raw storage. Additional capacity could be added in the future through either deploying larger capacity hard drives (up to 720PB in a 4U form factor), or by adding another Ultrastar Data60 platform to the configuration.

RAIDIX and Tiger Technology Management Software

Tiger Technology software and metadata controller lets you easily build a highly scalable NAS and SAN framework. Used in-band as a metadata/data server, it maximizes the server performance, connects multiple servers/clients to the storage, combines storages into pools, and provides flexible connections between storage tiers.

RAIDIX 4.6 is a high-performance data storage system that ensures data integrity and fast workflows for data-intensive operations. Installed on standard server hardware, it commits to resilient storage with high throughput, robust performance and low latency. Tailored solutions for Media and Entertainment customers are the showcase for RAIDIX.

Ultrastar Data60 Hybrid Storage Platform Provides Scalable, High Reliable Storage

Having worked with Western Digital on other projects, system integrator Entry chose the Ultrastar Data60 platform for its high reliability, scalability and warranty terms. Two patented technologies IsoVibe™ and ArcticFlow™ both contribute to long-term reliability and reduced drive failure, enabling a five year limited warranty on the entire platform. A combination of HDD and SSDs can be chosen to balance capacity, performance and cost.

"An open approach allows small studios to optimize costs and develop without regard to artificial restrictions. Any brand-name turnkey solution would be too expensive, full of vendor lock-ins, making future upgrades more expensive than desirable" said Vladimir Gregul, the main architect at Entry for Media & Entertainment projects.

Storage-centric Workflow, Elastic and Productive

For production teams, a reliable, and elastic storage infrastructure is the core of their existence. They work with large volumes of data, that need to be accessed in an easy and fast way for all team members. Waiting until data becomes available, running out of storage capacity or not being able to share finished work are all bottlenecks in running a smooth workflow. The proposed solution took away all these bottlenecks and provided a pathway for future growth. POSTMODERN expanded the range of its productive collaborative work by adding a high capacity, high reliability, high performance storage system.

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¹One MB is equal to one million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to hard drive capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drive, the computer's operating system, and other factors.