

A LEADING POSTPRODUCTION AND COLOR GRADING STUDIO SELECTS RAIDIX DATA STORAGE



Colorkitchen (www.colorkitchen.ru) – is a professional postproduction studio specializing in high-end color grading for feature films, commercials and musical video for international clients.

Challenge

For handling parallel 2K-video streams and efficient processing of video content from multiple workstations with the use of Nucoda software, the color grading studio Colorkitchen required a high performance and reliable data storage system.

The customer's specification encompassed functional and business requirements. The selected data storage system should have provided optimal price-to-performance ratio, compatibility with standard server hardware and elastic scalability with minimal hardware overhead.

Mindful of large data volumes, Colorkitchen focused on:

- High performance with sequential workloads.
- Support for high-definition video formats (HD/2K/4K).
- Ability to set performance priorities on the application level.
- High QoS (quality of service).

Another key task for the grading studio was to ensure fast video processing given the stringent industry deadlines. Technology-wise, this requirement implies highest throughput and fault-tolerance on all stages of video content delivery.

RAIDIX supports commodity-off-the-shelf hardware and enables the customer to hone the RAID configurations to specific tasks and decrease TCO.

Solution

The RAIDIX-powered data storage system met the customer's performance and fault-tolerance requirements, and allowed for simultaneous content processing from 10+ workstations – without latency or performance degradation.

ColorKitchen deployed a RAIDIX-based data storage system – high-capacity SAN expandable with a JBOD enclosure, connected over Fibre Channel 16Gb, supporting highest performance levels and multiple 2K/4K video streams. The full storage volume included over 600TB of data.

The configuration included:

- Supermicro 2x Xeon 128Gb RAM 24 HDD.
- ATTO 2x16Gb FC.
- ATTO 4x8Gb FC.
- 3xLSI 6Gb SAS.
- 4x6Gb SAS Supermicro JBODs 12-28-45-45 disks RAID 6i, 7i.
- 154x4TB HDD SAS Seagate.
- 600TB capacity.
- Five logical volumes.

RAIDIX ensures data integrity with no frames dropped, using the patented RAID 7.3 (triple parity) level. This RAID model guarantees uninterrupted operations with sustainable high performance even when up to three disks fail.

RAIDIX supports commodity-off-the-shelf hardware and enables the customer to hone the RAID configurations to specific tasks and decrease TCO. In addition, RAIDIX allows for direct installation of professional color grading software (Digital Vision Nucoda, DaVinci Resolve), right on the storage node.

Business impact

ColorKitchen employed the RAIDIX data storage in postproduction of numerous projects, including the feature films "Soulless 2", "Icebreaker", "Viking", "Attraction", a multitude of music videos and commercials. The RAIDIX technology enabled the customer to shorten the average grading timeframe by a factor of two – due to optimal paralleling of data processing activity. The implementation also ensured high data availability (99,999), quick deployment and scaling of the system.

RAIDIX updates the hardware and software components in the data storage system on a regular basis, and performs tech support and system maintenance since 2013.

Benefits for Media & Entertainment:

- Video streaming without a single frame dropped.
- Record performance in the multi-thread mode, min. 300 MB/s per workstation.
- Identification and prioritization of applications in line the customer's goals.
- Universal support for SAN (Fibre Channel, InfiniBand, iSCSI, 12Gb SAS) and NAS (NFS, SMB, AFP, FTP) interfaces.
- Minimal overheads due to compatibility with commodity server hardware.
- Tech support and regular system upgrades.