



SOLUTION BRIEF

Accelerate Media Workflows with a Hybrid Cloud Solution



Challenge

Media workflow is inefficient and storage is not keeping up with growth

- Growing warm and cold media capacity is pressuring existing infrastructure and budgets
- Newer media formats have made daily storage a challenge with current infrastructure
- Distributed teams struggle to collaborate on multi-geo projects online
- Teams unable to efficiently retrieve archived media files from disparate locations
- Old media assets can lose their value if not available quickly

Solution

Private cloud storage and media asset management solution that is easy to scale and manage, lowers TCO and makes assets available online forever.

- Massively scalable, highly durable ActiveScale™ Cloud Object Storage System for online archiving
- CatDV Media Asset Management system to centralize and share assets for more efficient but familiar workflows
- Support for private and hybrid cloud-based transcoding and distribution

The volume of digital content produced by media companies is growing rapidly, driven by the number of simultaneous projects, higher resolution, and the proliferation of mobile and social consumption platforms. Organizations are struggling to keep up with this growth and waste a significant amount of time and money searching for, then often failing to find their media assets. This is especially true with teams at differently locations around the world.

Conventional media workflows and infrastructure can present many challenges that can impact success in a global environment. Content ingest, edit and play-out are still fairly linear, and self-contained systems are still the norm. In some cases, media assets are organized and managed on individual hard drives. As a result, storage and media asset management present some of the biggest pain points media organizations have today.

Many producers, broadcasters and media distribution businesses are facing the limitations of using legacy storage infrastructure that is difficult to manage and scale, causing workflow delays. Western Digital works with media businesses to help streamline and accelerate production workflows and provide long-term archival strategies.

Figure 1 is an example workflow and hybrid cloud infrastructure including media asset management that can help collaboration across distributed creative teams and multi-platform distribution needs.

Media Workflow with ActiveScale and CatDV MAM

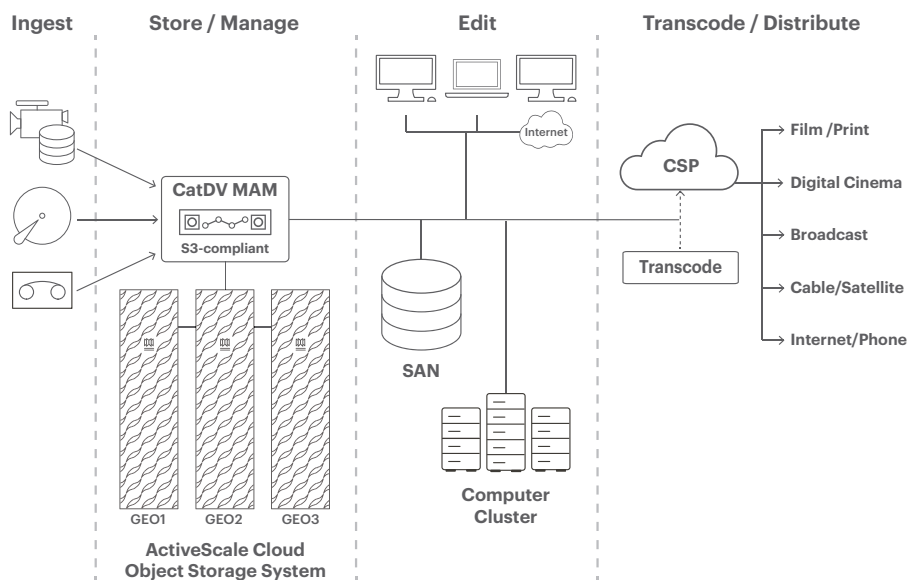


Figure 1. Post Production workflow and architecture leveraging ActiveScale Cloud Object Storage System

A Mountain of Content

Production and broadcast environments today can range from a few cameras to 30 or more, recording from different angles. Some projects are done in HD resolution and others in UHD 4K and 8K. Multiple production teams in different locations are generating a mountain of raw content. Some production teams store their content on individual hard drives or other digital media and send the drives back to the home office for processing. Once there, the drives can sit on shelves and remain uncatalogued until copied to a high-speed SAN for editing.

Ingest and Collaborate at Scale

With content sitting on shelves, offline and uncatalogued, production workflows can become cumbersome and time consuming when searching for the right content. Some content may need to be transcribed or transcoded before ingest, taking even more time. A more efficient approach would be to ingest and catalogue a project's raw content immediately, making it available to teams no matter where they are located.

Traditional storage systems don't scale easily and tend to isolate data in silos making it difficult for distributed teams to access and work on projects. Modern solutions built using cloud technology offer the scalability and global accessibility that make it easy for teams to collaborate more efficiently.

By implementing a private cloud media solution with the an ActiveScale Cloud Object Storage System and CatDV Media Asset Management (MAM) system, producers and editors can overcome the barriers and headaches of the past. No more searching or guessing which disk drive or array has the files they need or if they can be accessed by their teams. CatDV MAM helps teams organize media assets, communicate and collaborate more effectively. It is easy to use and simple to manage, yet powerful in that it can support sophisticated multi-petabyte workflows, plus it has the flexibility to allow teams to work in ways familiar to them.

Improve SAN Utilization

SANs used for high performance post-production tasks like real-time editing are expensive. Files no longer being actively worked-on are often left in the system consuming a resource that should otherwise be available for other performance-sensitive tasks. This can lead to over-provisioning the SAN and driving storage costs higher. An ideal strategy is to store a project's files in a capacity-optimized storage tier—ActiveScale Cloud Object Storage System—and move them to the SAN for editing. Once the post work is completed, the project can be moved back, clearing the SAN for other projects.

Highly Durable Private/Hybrid Cloud

Storing, and protecting large media files over the long-term presents some unique challenges and opportunities. Built using next-generation object storage technology, the ActiveScale Cloud Object Storage System has the performance, durability and scalability to enable the consolidation of multiple storage tiers/systems below the high performance SAN. High throughput performance makes it possible to work directly from the ActiveScale for certain tasks and only move the most demanding editing tasks to the SAN. This can further optimize SAN provisioning and allow more work to be done in parallel, saving time and money.

Using advanced erasure coding, the ActiveScale Cloud Object Storage System delivers durability up to 17 nines using less storage than traditional methods. Granular data integrity checks ensure data is safe from corruption over the long-term. The system can also be configured to spread data across 3 different locations, making it ideal for distributed teams. Work will not be disrupted even in the event of a full site outage with built-in disaster recovery protection.

CatDV MAM makes it easy to integrate the solution into existing environments without the need to modify applications. Standard file access is supported on the front-end with an Amazon® S3™-compliant interface on the backend for the ActiveScale Cloud Object Storage System. The solution offers media organizations the best of both worlds: standard file access with cloud-scale economics in their data center.

Delivering the Best Experience

The work does not end with the final production output. Today's multi-platform environment means content needs to be transcoded into different formats to deliver the best possible customer experience. Transcoding can be done on-premises via CatDV MAM or by leveraging the power and flexibility of the cloud to do both transcoding and distribution. The architecture (Figure 1) supports a hybrid cloud environment where the final production files are uploaded to a cloud service provider like Amazon Web Services™. Once transcoded, they can distribute the content to traditional outlets or over-the-top with low latency and high data transfer speeds.

Conclusion

The combined ActiveScale and CatDV media workflow solution helps companies simplify and accelerate the most sophisticated post-production workflows, while reducing the total cost of ownership. The solution is easy to learn, deploy and manage, with the flexibility to let teams work in familiar ways. The use of standard file and cloud interfaces makes it easy to integrate into existing environments with support for wide range of popular applications. To learn more, visit www.westerndigital.com/solutions/media-entertainment and www.squarebox.com.

Western Digital

5601 Great Oaks Parkway
San Jose, CA 95119, USA
US (Toll-Free): 800.801.4618
International: 408.717.6000
www.westerndigital.com

© 2017–2018 Western Digital Corporation or its affiliates. All rights reserved. Produced 10/17, Rev. 10/18. Western Digital, G-Technology, the G-Technology logo, the Western Digital logo, G-RACK, G-NAS and ActiveScale are registered trademarks or trademarks of Western Digital Corporation or its affiliates in the U.S. and/or other countries. Avalanche and the Avalanche.io logo are registered trademarks or trademarks of Avalanche.io Inc. or its affiliates in the U.S. and other countries. All other marks are the property of their respective owners. Please visit our website, www.wdc.com/dc-support for additional information on product specifications. One gigabyte (GB) is equal to 1,000MB (one billion bytes) and one terabyte (TB) is equal to 1,000GB (one trillion bytes) when referring to storage capacity. Usable capacity will vary from the raw capacity due to object storage methodologies and other factors.