



## CASE STUDY

# Crafting a Scalable Video Workflow with Quantum StorNext

Craftsy offers more than 1,200 interactive video courses for a variety of creative projects, from knitting sweaters to decorating cakes. With its growing community of users, Craftsy deployed Quantum StorNext storage to improve scalability, performance, and reliability while supporting new, more demanding workflows.

FEATURED PRODUCTS



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**Justin Lang**  
Development engineer, Craftsy



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#### SOLUTION OVERVIEW

- Quantum StorNext® M440 Metadata Appliance
- Quantum StorNext Q-Series Storage

#### KEY BENEFITS

- **Helps provide fast, simultaneous file access** through the single StorNext file system
- **Scales seamlessly for continuous growth** of video content and course offerings
- **Enables efficient multi-camera video editing** with exceptional storage performance
- **Accelerates nightly video exports**—streamlining the review process
- **Eliminates video export errors** and avoids productivity-killing downtime

In the six years since the company's launch, Craftsy has become a premier meeting place for thousands of creative pros and millions of "makers." The company has produced more than 1,200 video classes on topics ranging from sewing and baking to photography and jewelry making. The classes—which include up to eight 15-minute videos—feature how-to lessons and enable direct online interaction with instructors and other students. Craftsy also offers downloadable templates, supplies, and complete kits designed to accompany classes.

Craftsy has a substantial video production operation in place to help meet the growing demand for video classes. The company uses five video studios and employs more than 10 video editors plus several producers to continuously generate compelling content.

Craftsy also needs a robust storage environment for capturing, storing, and editing video content. Editors must quickly access video footage, edit material, and share versions with producers to garner feedback.

#### OUTGROWING ITS EXISTING ENVIRONMENT

Craftsy initially implemented an iSCSI-based storage area network (SAN) to serve as the repository for video files. Editors drew from the repository as they assembled video classes.

But within two years, Craftsy began to outgrow the SAN as the volume of video content rose. "I had to continuously move files around to free capacity—it was a huge pain," says Justin Lang, development engineer at Craftsy. "Unfortunately, we weren't able to scale the SAN without purchasing a new base. We needed an environment that could grow with us as we generate more content."

#### REQUIRING GREATER PERFORMANCE FOR MULTI-CAMERA EDITING

Craftsy production teams also recognized the need for better storage performance. The teams wanted to efficiently edit multi-camera video content. Multi-camera production enables a creative team to record video from multiple angles at once, deciding later how to stitch the content together.

Unfortunately, the SAN couldn't support multi-camera editing. "Multi-cam editing requires strong storage performance because editors need to play those multi-angle video streams simultaneously when editing," explains Lang. "We needed a system that could deliver better performance, so we could produce high-quality videos, faster."

#### FACING STORAGE RELIABILITY ISSUES

In addition to performance problems, Craftsy needed to address reliability issues that were apparent whenever editors exported videos for producer reviews. "Every night, we export about 15 videos," says Lang. "With the SAN, we had one or two failures per night, which slowed our workflow. The SAN just didn't have the performance needed to export files reliably."

Downtime was another potential problem. "Our environment must be stable," says Lang. "If there's ever downtime, we might have 30 people unable to access their content."

#### ADOPTING THE STORNEXT FILE SYSTEM

Craftsy deployed a new Fibre-Channel SAN based on Quantum StorNext to help scale the environment, streamline management, and provide fast access to its growing collection of video files. StorNext offers a high-performance shared file system that can provide rapid, low-latency access to files and content across a multi-tier storage environment.

Craftsy opted for a "roll-your-own" approach, building its own StorNext metadata controller and integrating it with third-party storage. The company subsequently deployed a Reach Engine media asset management (MAM) system from Levels Beyond to help users find, manage, share, and distribute video assets.

Integration with StorNext, the MAM, and Adobe Premiere Pro editing software streamlines access to files. "Editors can easily grab a project file from within Adobe Premiere Pro," says Lang. "With the MAM and a single StorNext file system, it doesn't matter where the original files reside. Editors don't have to manage footage, and administrators avoid the headaches of trying to find files."

A local integrator installed the customized solution and managed the environment until that integrator went out of business. "Fortunately, it was easy for me to learn the file system and take over management," recalls Lang.

#### UPGRADING TO STORNEXT APPLIANCES

When it was time to upgrade the workflow storage, Craftsy turned to StorNext appliances to take advantage of easier support. "The Quantum team introduced us to its metadata appliances and assured us they would help with a smooth transition," says Lang.

Craftsy selected a Quantum StorNext M440 Metadata Appliance, which uses the StorNext 5 platform to manage data. The Craftsy team continued to use its existing SAN, adding StorNext Q-Series Storage to create a scalable, high-performance SAN environment that is cost-effective and easy to manage.

#### ACHIEVING A SMOOTH DEPLOYMENT

Craftsy worked with Quantum and a new integrator to help ensure smooth deployment of the appliance. "The Quantum team knew that we had experienced some challenges in the past with compatibility of the various workflow applications and operating systems, and they wanted to make sure the new environment was set up really well," says Lang. "They were there every step of the way."

Using the StorNext appliance made deployment much easier than creating a customized roll-your-own environment. "With an appliance, we didn't have any software incompatibilities or integration issues," says Lang.

The cutover to the new system went quickly. "We prepared the environment during the day and did the cutover at night," says Lang. "Downtime was less than a day."

#### ESTABLISHING A STREAMLINED WORKFLOW

The StorNext solution plays a key role in the Craftsy video production workflow, which begins when video is captured on set to an Apple Mac Pro with local RAID storage. Production team members immediately ingest the content using a Reach Engine panel within Adobe Prelude, which

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Development engineer,  
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#### ABOUT CRAFTSY

Founded by technical entrepreneurs in 2010, Craftsy is an online destination for makers who love what they do. More than a million curious and creative members visit Craftsy every week for ideas and inspiration in everything from knitting and quilting to photography and cake decorating. The Craftsy community also includes thousands of creative professionals who share their expertise as instructors, pattern designers, and contributing editors.



enables them to easily log and tag assets for Adobe Premiere Pro.

“Once editors begin the ingest process, data is transferred to the SAN, then the MAM picks it up for ingest,” says Lang.

“Ultimately, all of the raw content resides in the StorNext environment—that’s where our entire repository of assets lives until it’s time for archiving. With StorNext, multiple users can simultaneously access the assets they need.”

Integration of the MAM with StorNext makes it simple to restore data to the editing environment. “If we want to create a best-of-knitting video compilation, we can do so easily,” says Lang.

Craftsy keeps content in the StorNext SAN for about 45 days after a class goes live. “If a student needs greater clarification on a topic, or if there’s some issue with a video, we can quickly access the video from the repository,” says Lang. After that 45-day mark, Lang manually archives files from the on-set system to cloud-based Amazon Glacier storage.

### ACCELERATING EXPORTS

With StorNext, Craftsy teams can accelerate several aspects of their workflow. “The StorNext SAN delivers significantly better

performance than our iSCSI SAN,” says Lang. “Video exports are much faster. As a result, producers can start reviewing footage and providing feedback to editors more rapidly than before.”

### ENABLING MULTI-CAMERA EDITING WORKFLOWS

The strong performance of the StorNext solution also enables editors to do multi-camera editing, with multiple video streams running at once during the editing process. “StorNext gives us the performance to do multi-cam editing efficiently,” says Lang. “Production teams can stay focused on set, we have greater flexibility for editing, and the entire workflow is faster.”

### ELIMINATING EXPORT FAILURES AND ENHANCING STABILITY

The StorNext solution has also helped eliminate the export failures that sapped time and resources in the past. “With the StorNext solution, export failures have gone from one or two per night to zero,” says Lang. “Our editors can concentrate on the creative process instead of technical issues.”

The IT group has also been impressed with the system’s stability. “The system has been very reliable and stable,” says Lang. “Our editors can get what they need, when they

need it. We all can depend on the system to just run, and we don’t have to fuss with it all the time.”

### GAINING SCALABILITY FOR VIDEO CONTENT GROWTH

With the StorNext solution, Craftsy has the scalability for continued growth. “Now that we’ve implemented our StorNext solution, I don’t have to worry about scaling,” says Lang. “Whenever we need to increase our production output, I can just add disk capacity, and the system scales seamlessly. As a company, Craftsy can continue to produce more videos, offer more classes, and support an expanding community of makers without requiring a major overhaul of our storage environment.”

### RECOMMENDING QUANTUM FOR VIDEO CONTENT STORAGE AND MANAGEMENT

“We would definitely recommend Quantum StorNext to other organizations that need to store and manage large volumes of video content,” says Lang. “StorNext delivers the performance, reliability, manageability, and scalability for supporting the production of compelling content.”

#### ABOUT QUANTUM

Quantum is a leading expert in scale-out storage, archive and data protection. The company’s StorNext® 5 platform powers modern high-performance workflows, enabling seamless, real-time collaboration and keeping content readily accessible for future use and re-monetization. More than 100,000 customers have trusted Quantum to address their most demanding content workflow needs, including top studios, major broadcasters and cutting-edge content creators. With Quantum, customers have the end-to-end storage platform they need to manage assets from ingest through finishing and into delivery and long-term preservation. See how at [www.quantum.com/customerstories-mediaent](http://www.quantum.com/customerstories-mediaent).

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