



CASE STUDY

Quantum StorNext Meets the Challenge of Managing Growing Video Content for Duke's Blue Devil Network

Duke University's Blue Devil Network captures on video the excitement of the university's 27 sports teams for fans, coaches, players, and TV networks. The network's production team deployed a Quantum StorNext storage solution to gain capacity, performance, and accessibility for a fast-growing volume of content.

**DUKE
UNIVERSITY**



FEATURED PRODUCTS





DUKE UNIVERSITY

SOLUTION OVERVIEW

- Quantum StorNext® M440 Metadata Appliance
- Quantum StorNext QXS-1200 Storage

KEY BENEFITS

- **Scales to support large volumes of video** while controlling costs
- **Simplifies video sharing workflows** with pooled data and fast concurrent access
- **Speeds responses to last-minute requests** by keeping video online and available
- **Delivers a reliable, responsive experience** for users who need round-the-clock access
- **Provides a storage foundation for the future** even as video formats continue to evolve
- **Makes all video content available to transcode** into multiple formats (university's network, official web site, TV network partners, coaching videos, social media)

From pre-season practices to NCAA championship games, the Blue Devil Network records a tremendous amount of video content of Duke University's sports teams. The network presents live and on-demand video on GoDuke.com (the university's official web site for the Department of Athletics), shares video with TV network partners, and provides video to coaches and players to help facilitate decision making.

Enabling coaches and players to review practices and games contributes to continued success of Duke teams, including the renowned men's basketball team. "Over the past 30 years, Duke men's basketball has been one of the most successful basketball programs in the country, winning five national championships, achieving a number of conference championships, and earning a number-one ranking in the country for multiple years," says Kevin Cullen, director of technology for Duke basketball.

The extensive use of video by Duke teams reflects a deep commitment to capitalizing on technology to enhance coaching. In fact, the

Duke basketball team was one of the first teams in college athletics to capitalize on big data analytics to prepare for games. "From video to analytics, we provide players and coaches with as much information as possible so they can optimize their game and make the best, most-educated decisions," says Cullen.

COLLECTING GROWING VOLUMES OF HIGH-RES VIDEO CONTENT

The video production team has to manage rapidly rising volumes of video data. "The amount of footage has grown exponentially over the past five years," says Chad Lampman, executive director of the Blue Devil Network.

The production team is collecting not only more video but also larger files. "We are increasingly capturing high-resolution video and receiving uncompressed high-definition video from our network partners—the file sizes are gigantic," says Lampman. "We need a storage environment that can continue to scale to meet our capacity and performance needs."

The capacity required to support the basketball team alone is substantial. “We might store 100 practices a year, 40 of our games, and opponent games that can provide scouting information,” says Cullen. “We want to store all of it perpetually, so we need a platform that will let us continually add disks.”

RUNNING OUT OF ONLINE STORAGE CAPACITY

Rather than archiving video to tape, the Duke team wanted to keep a large amount of content readily available to editors and producers. “We had to figure out a way to keep everything online, as much as possible,” says Lampman.

Ironically, the success of several Duke sports teams made that goal even more difficult to achieve. As teams competed in more post-season tournaments, the Duke production team captured and had to store more and more content. Eventually, it simply ran out of online storage capacity. “About two-thirds of the way through our season last year, we had to start taking content offline, moving it to tape, and storing tapes on shelves—we just didn’t have enough space,” says Lampman.

IDENTIFYING TOP STORAGE REQUIREMENTS: RELIABILITY AND EASY FILE SHARING

In selecting a new storage platform, reliability was a top priority. “We work in an always-on environment,” says Cullen. “Our coaches are up all night watching film after games. We needed a system that would be there with us the whole time.”

The ability to share content among video production teams was another key priority. After Duke Basketball won the NCAA National Championship in 2015, production teams found it difficult to bring together footage from different storage silos. “It became a nightmare to share footage,” says Lampman. “We would sit around for an hour or two just copying different files to each other.”

“In some cases, we had stored the same footage twice,” says Cullen. “We realized there was a need to combine and share a lot of that video so we could all work off the same server system.”

SELECTING THE STORNEXT PLATFORM

The Duke team called on LH Computer Services to help find a dependable storage solution that would enable Duke to expand online capacity and improve sharing. LH Computer Services is a storage reseller and integrator specializing in media, entertainment, and sports.

“The team at LH Computer Services met with us and presented a variety of options,” says Lampman. “They really put the time and effort into helping us find a solution that would deliver the greatest bang for the buck.”

After considering different options, the Duke team selected a Quantum StorNext M440 Metadata Appliance. StorNext metadata appliances use the StorNext 5 platform to manage large workflow environments. The appliances can be combined with disk-based StorNext Q-Series Storage to provide scalable, high-performance solutions that are cost-effective and easy to manage. “We started looking at Quantum StorNext, and it just made sense—it was a no-brainer for us,” says Lampman.

“The more people you talk to in the broadcast industry, the more you realize that it begins and ends with Quantum,” says Cullen. “Everybody wants to have it. It was the obvious choice for us.”

STREAMLINING DEPLOYMENT & INTEGRATION

In deploying the StorNext platform, the production team was able to continue to use content from two existing storage area networks (SANs). Teams from Quantum and LH Computer Services helped convert one SAN—an Apple Xsan—to the StorNext platform, leaving the data in place. The production team then deployed a StorNext QXS-1200 system to add some much-needed capacity.

The process was painless. “The Quantum StorNext solution allowed us to integrate the existing content into StorNext as well as reuse the storage hardware seamlessly,” says Lampman. “It was a perfect transition—we had no issues at all.”



ABOUT DUKE

Located in Durham, North Carolina, Duke University consistently ranks among the top research universities in the United States. Nearly 15,000 Duke students study in a wide range of academic disciplines. With 27 NCAA Division I varsity sports teams, the university has won national championships in men’s basketball, lacrosse, and soccer, and women’s golf and tennis. The Blue Devil Network supports the Duke Department of Athletics by producing live and on-demand multimedia content for GoDuke.com, TV networks, as well as coaches and players.

Quantum and LH Computer Services teams then helped with a more complex migration. They moved data from a second existing SAN—a Scale Logic HyperFS—to the StorNext file system, reformatted the disk storage, and added that system to the StorNext environment.

Throughout both projects, Quantum and LH Computer Services teams worked side by side to help ensure smooth transitions. “From pre-sales to installation and support, the partnership between Quantum and LH Computer Services has been perfect for Duke Athletics,” says Lampman.

By integrating legacy systems, the Duke production team can maximize the value of its existing investments and save money. “I wanted our legacy systems to be usable,” says Lampman. “Not only are they usable, they function at a higher level than in the past. You couldn’t ask for anything more than that.”

SIMPLIFYING CONTENT SHARING

By creating a single, shared content environment and providing ultra-fast concurrent access for multiple users, the StorNext solution eliminates content silos, making it easier for the Duke production team and its partners to access and share video. The production team can easily deliver footage to coaches and players, prepare content for the GoDuke.com web site, share clips with network partners, and more.

“We’re saving a tremendous amount of time by avoiding the need to copy files back and forth,” says Lampman. “We can get things done in a timely manner.”

PROVIDING DEPENDABLE ACCESS AND ACCELERATING RESPONSES TO CONTENT REQUESTS

With the StorNext solution, the Duke production team can reliably deliver content to all the people and organizations that need it. “We were searching for a dependable solution, and Quantum fit that bill better than any other player in the market,” says Cullen. “We know we can depend on the StorNext platform to provide video to everyone who needs it, any time of day or night.”

The Duke production team also can respond faster to content requests, including fast-turnaround requests from coaches or TV network partners. “In the sports world, things change fast,” says Lampman. “Now we can handle last-minute requests. We did not have that flexibility before Quantum.”

The Duke production team can respond faster in part because it can keep more footage online. “Before, it was almost impossible to provide footage that networks and others wanted—it might take half a day to dig up,” says Lampman. “With the Quantum solution, we now can keep content online and give people what they want almost instantaneously.”

DELIVERING A RESPONSIVE END-USER EXPERIENCE

The new StorNext platform offers the performance required to provide a responsive experience for end users. “Our coaches can’t stop watching video,” says Cullen. “They don’t care how the system works in the background. They just want to see game video the second they hop on their computer. The video has to start playing quickly—everything has to work.

With the Quantum solution, we can deliver. Our coaches, without even knowing what changed, know that something is better.”

GAINING SCALABILITY FOR THE FUTURE

The Duke production team now has a flexible, scalable platform that can accommodate changing requirements and growing data volumes well into the future. “Nobody knows what’s on the horizon for video—video formats continue to evolve and change. We have seen the introduction of HD, 3-D, 4K, and now 8K Ultra-HD video,” says Lampman. “We’re not entirely sure what the future holds, but with the Quantum StorNext platform, we know we have a foundation that we can build on.”

One thing is fairly certain: the size and number of video files will continue to expand rapidly. Fortunately, the Duke production team can continue to scale the StorNext platform easily and cost-effectively. The team can increase storage capacity and incorporate new storage options, including extended online, archive, and cloud solutions. “With the Quantum StorNext platform, we no longer have capacity or performance constraints,” says Lampman. “We can keep adding capacity or performance as we need it, independently, without crushing our budget.”

RECOMMENDING QUANTUM FOR COLLEGE ATHLETICS

Given the benefits that the Duke production team has achieved with its new storage platform, it’s not surprising that it is quick to recommend Quantum to other prospective colleges. “Just in the past four months, we’ve had different people from different schools call us and ask us about the Quantum solution,” says Lampman. “We tell them it’s been amazing. It is the perfect solution for college athletics.”

To contact your local sales office, please visit www.quantum.com

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