



Scalar Series

Quantum Scalar LTFS Provides Easy, Cost-Effective Storage Solution for University's Growing Video Library

Online courses, distance learning, and other video initiatives were swallowing more disk storage than Biola University's IT budget could support, so the team graduated to the simplicity and cost savings of tape archiving using Quantum's Scalar® LTFS appliance.

EXPLODING DATA MAKES BUDGETING IMPOSSIBLE

Biola University is a private Christian college serving over 6,000 students in Southern California. Yet the school aspires to reach an even broader audience, so staff and administrators have embarked on an ongoing mission to extend the institution through free content, extended courses, distance learning opportunities and more—all available online.

Over the last few years, this "Open Biola" initiative has meant video. Lots and lots of video.

"Our marketing department produces more video content than we know what to do with, and the amount grows every semester," explains Ben Wright, Director of Systems Administration. "That means disk cost can be a big variable. And beyond a certain point, rapid data growth becomes almost impossible to budget for—the volume inevitably exceeds expectations."

Complicating matters, ironically, were improvements in the school's video production values. Not only was the university steadily increasing the number of recorded courses, events, and seminars, but adoption of multiple camera angles, HD video content, and advanced editing techniques added significant data volume.

"We currently produce at least five to ten terabytes of raw video footage a semester," says David Baxter, the marketing lead on video production. "Our edited files add at least another five terabytes on top of that, and then we start shooting again for the next session. It's a never-ending escalation."

Moreover, the marketing group wanted to indefinitely store all of the raw video footage, as well as the edited final copies, allowing them to easily repurpose content as needed. Unfortunately, this made it impossible to reclaim any storage over time; the volume just kept growing.

At first, marketing and IT worked to centralize this content on a single server, but quickly outgrew that solution as costs rose and external drives began to stack up. Yet without a centralized solution, it was difficult for the marketing department to self-manage the storage, protect the content, and keep track of individual files.

"At some point the IT group finally looked at our video content projections and told us, 'Yeah, we're not going to be able to support that on disk anymore,'" says Baxter. "That's when we knew we had to find another solution."

QUANTUM SCALAR LTFS APPLIANCE FITS THE ENTERPRISE

Fortunately, about that time the Biola team learned about Linear Tape File System (LTFS) technology at an industry trade show and quickly realized it could meet their needs. LTFS allows the use of tape almost as if it were a hard disk. Files can be easily dragged and dropped from a workstation or server to a tape cartridge. Users can see the list of saved files using a standard operating system directory (no backup software catalog needed) and use point-and-click to restore.



"I like the cost per gigabyte of tape and love the path tape is on with LTO-5, LTO-6 and beyond, but it was never a good primary storage option. LTFS changes that. It's an open standard, so there's no vendor lock-in, and by making tape as easy to use as disk, we can get all the flexibility and cost benefits while allowing individual departments to directly manage their own files."

Ben Wright
Director of Systems Administration,
Biola University

SOLUTION OVERVIEW

- Quantum Scalar LTFS appliance
- Quantum Scalar i500 tape library

KEY BENEFITS

- Cuts storage costs by minimizing the need for disk
- Delivers backup and archiving in a single package
- Bends cost curve for escalating storage needs
- Saves IT time by allowing self-managed file storage
- Integrates easily with existing network and tape libraries

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Yet in talking to various LTFS vendors, Baxter and Wright were disappointed to learn that most solutions were designed for small workgroups with direct tape access. The university needed something that fit well into a larger IT environment, allowing the group to leverage tape libraries located in the data center. Then they found the Quantum Scalar LTFS appliance.

"We already had Quantum products for tape backup, so we knew the company was easy to work with and offered solid products," Wright says. "And once we discovered how well the new LTFS appliance would integrate with our overall IT environment, we were eager to get hold of one."

LTFS MAKES COST-EFFECTIVE STORAGE EASY

The university now has the Quantum Scalar LTFS appliance as an integral part of its storage process for video production. As camera footage is ingested, a copy is immediately transferred to the LTFS file share at the data center, ensuring that the original footage is safe. Then the marketing department begins the editing process, and at the end of the semester a second copy of the raw source and completed project is again put on the LTFS system for archival purposes, ensuring that all material remains together.

The ability of LTFS to present tape storage as just another file share is crucial for both the IT group and various departments at Biola, minimizing friction and significantly simplifying the storage environment. The IT group doesn't have to stage data; there's no special client software required; and individual groups can self-manage their storage needs.

In addition, Quantum's Scalar LTFS appliance allows the university to deliver these benefits while leveraging the overall IT infrastructure already in place. The LTFS appliance sits in front of an existing tape library, in Biola's case a Quantum Scalar i500, and enables individual drives to be assigned to remote LTFS access or traditional data backup.

"When you look at not only cost per gigabyte, but harder-to-measure figures like the cost of cooling and power, the price advantage of tape is compelling," says Wright. "Add to that the scalability of Quantum libraries and the ability to better control what data goes on disk and what is archived or backed up on tape, and you'll understand why we're excited about all the things we can do with Quantum's Scalar LTFS. In fact, because of LTFS, we're actually planning on expanding our use of tape."

Given his role in the marketing department, Baxter takes a more traditional view.

"Archiving content to LTFS has been a real relief for me, both because of its reliability and because it's cost-effective and easy to have multiple geographically distributed copies. As a producer I care deeply that the university's content is protected and we can get to it as needed—so it helps me sleep at night knowing that things are backed up and safe. We've always relied on Quantum, and it's good to know that the company will continue to meet our evolving storage needs."

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ABOUT BIOLA UNIVERSITY

Biola University, named one of 19 "up-and-coming" national universities by *U.S. News & World Report* three years in a row, is a private Christian university located in Southern California. For more than 100 years, Biola has remained committed to its mission of biblically centered education, integrating biblical principles with every academic program. With a current record-high enrollment of 6,250 students, the university's six schools offer 145 academic programs, ranging from the B.A. to the Ph.D.

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