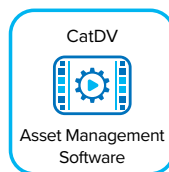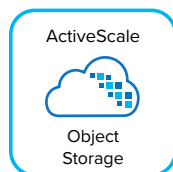# Quantum®

CASE STUDY

Miami HEAT Transforms Content Production, Future-Proofing Their Workflow with High-Performance, Scalable Solutions from Quantum and IMT

The Miami HEAT is a hot NBA team in a fast-paced market, and they rely on their creative services group to deliver a wide range of critical in-game and between-game content to boost fan engagement and experience at every level. To future-proof the capability and productivity of their editors, animators, and photographers, the group needed to break free from a restrictive storage platform and asset management system. With guidance from leading systems integrator, Integrated Media Technologies (IMT), they have implemented an agile, end-to-end workflow based on Quantum StorNext, CatDV, and ActiveScale that delivers extraordinary performance, scalability, and non-stop access to support any content production challenge.

FEATURED PRODUCTS

StorNext	ActiveScale	CatDV
File System	Object Storage	Asset Management Software

NSA Stats Injector

telestream Vantage Media Processing Platform

> "We needed someone who had experience dealing with sports teams' unique needs and experience integrating workflows across different vendors."
>
> **Blake Engman**
> Director of Creative Services
> Miami HEAT

"" Using ActiveScale, we know we'll be able to sustain our growth rate for at least eight or nine years without having to make large capital purchases. ""

Blake Engman, Director of Creative Services — Miami HEAT

SOLUTION OVERVIEW

· Quantum StorNext® File System
· Quantum Xcellis® Workflow Director
· Quantum F-Series All-Flash Storage
· Quantum QXS™-Series Hybrid Storage
· Quantum CatDV™ Asset Management and Workflow Automation
· Quantum ActiveScale® Object Storage
· Telestream Vantage
· North Shore Automation Stats Injector

KEY BENEFITS

· **Unlocked high-performance content access for large creative team** delivering 120 GB/sec aggregate throughput across team of 60 members.
· **Enhanced flexibility across multiple groups and workflows,** supporting multiple apps, formats, and systems.
· **Achieved 24x7 content availability to meet rapid production schedules** with reliable, highly available storage infrastructure.
· **Streamlined content insight, retrieval, and workflow automation** integrating asset management with a league-standard data platform.
· **Achieved easy access to years of rich content at low cost,** by deploying scalable, durable object store with active and cold storage classes.

The Miami HEAT relies on their creative services group to deliver a wide range of critical in-game and between-game content to boost fan engagement and experience at every level. The content they produce fuels the in-arena show, with video displayed on the Kaseya Center's enormous LED screens. Between games they create content for multiple digital distribution channels—including the team's mobile app, their highly popular heat.com website, and multiple social media platforms.

To rapidly produce rich media and video content for all these destinations at once, the team needed a storage platform and asset management system that could support multiple applications and formats. Their existing storage environment and asset management system couldn't keep up.

"Our existing storage platform had a very rigid workflow," says Blake Engman, director of creative services for the HEAT. "But we had creative services, animation, and media production departments that were using content in very distinct ways."

Maintaining multiple storage environments or asset management tools that added complexity was not an option as they would add complexity and limit flexibility. "We needed a single source of truth—one location for all our content," says Engman. "At the same time, we had to support multiple broadcast teams, no matter how they wanted to use content."

Performance was another top priority. "We have 60 creators, animators, and other content people who need high-throughput storage for their work," says Engman. "We wanted a storage platform that could read and write two gigabytes per second for each one of them."

IMPLEMENTING HIGH-PERFORMANCE STORAGE WITH IMT AND QUANTUM

The Miami HEAT turned to leading systems integrator IMT, with a proven record of working with sports teams and managing multiple vendors to deliver a complete workflow solution. The team at IMT helped them design and implement a flexible, workflow-agnostic solution to replace their rigid

legacy system. "IMT has extensive experience working with professional sports organizations like the Miami HEAT, where end-to-end workflows for media asset management, high-performance storage, and deep archive solutions are essential," says Jason Kranitz, President of IMT. "We started this engagement with IMT's Advanced Consulting team reviewing the media supply chain needs of the HEAT. Quantum was the clear single vendor choice to meet the MAM and storage requirements in combination with IMT's Professional Services & MSP."

"Our infrastructure team had been using Quantum StorNext within the building for more than a decade, so we were very familiar with the platform," says Engman. "Still, we had to be sure we could build a multi-tiered, multi-speed environment that would support more than 14 petabytes of capacity and deliver 120 gigabytes of combined read and write speed per second. So, we decided to launch a proof of concept."

When the proof of concept deployment demonstrated that a Quantum solution could deliver the bandwidth required to meet their rigorous content production demands, the group moved forward implementing the Quantum StorNext file system with Quantum QXS-Series storage as their primary 'work in progress' production storage platform. "We wanted a platform that we knew, understood, and could trust—so we chose Quantum," says Engman.

SELECTING CATDV FOR ASSET MANAGEMENT AND WORKFLOW ORCHESTRATION

As a second phase of their project to refresh their infrastructure and workflows, the creative services group focused on building a new workflow dedicated to high-resolution content. "The second phase was to create an HDR workflow to support the huge new video screens installed in Kaseya Center," says Engman.

That new workflow required a new asset management system. The team needed to rapidly and consistently organize the large amounts of video it was capturing every game and then provide all team members with fast access to the right clips.

Flexibility was critical. "We wanted an asset management system that was technology agnostic: It had to support any application and any format of media," says Engman.

Engman's team began to consider CatDV asset management and workflow orchestration. CatDV's integration with North Shore Automation's Stats Injector presented a huge advantage over other options. Built for sports content teams, Stats Injector automatically logs clips with data from the NBA's statistics tagging format – making it easy to tag precise action shots within video clips.

"The ability to capitalize on automated logging with Stats Injector clearly set CatDV apart from the other solutions. With CatDV, we can quickly find a player's third bucket of the night and pull up all 17 camera angles right away," says Engman. "The fact that CatDV was offered by Quantum was a bonus—we could see a very nice marriage of our solutions coming together."

GAINING THE FLEXIBILITY FOR EVOLVING WORKFLOWS

Beyond its integration with Stats Injector, CatDV also provides additional workflow flexibility. For example, the team integrated CatDV with Telestream Vantage—a leading video transcoding and workflow automation solution. "Using Vantage lets us support a variety of formats and codecs," says Engman. "For providing the media pre-process

ABOUT THE MIAMI HEAT

The Miami HEAT is a professional basketball team that is a member of the NBA's Southeast Division of the Eastern Conference. Founded in 1988 as an expansion team, the HEAT has won three NBA championships. The creative services team is responsible for producing a full range of captivating content for in-arena shows, the team's website, and additional media channels.

ABOUT IMT

Integrated Media Technologies (IMT) is a leading media technology systems integrator in North America with more than 20 decades of combined experience and a world-class team of over 50 engineers. IMT is a trusted technology partner for hundreds of businesses across a wide range of industries.

automation prior to ingest in CatDV, Vantage was the ideal choice."

In addition, the team is no longer locked into particular software or video formats. "We regularly use Adobe Premier and other Adobe applications. But we also might need to use Cinema 4D, DaVinci Resolve, or Avid Media Composer. At the same time, we want the ability to work with multiple formats, from RED files to animation content," says Engman. "CatDV gives us the flexibility to use a full range of editing systems and file formats."

If new workflow requirements materialize, the creative services team will be ready. "CatDV lets us script in whatever technology we need to add as we build new workflows," says Engman.

BUILDING A MULTI-TIER STORAGE ENVIRONMENT WITH QUANTUM

In support of increasingly higher resolution workflows, the creative services team continued to expand their Quantum StorNext environment, adding Quantum F-Series NVMe all-flash storage to deliver exceptional read/write performance.

"If we shoot in 4K, we leave files in 4K. Meanwhile, we're generating up to 400 TB of data per season and then keeping those files online for two or three years," says Engman. "By adding NVMe storage to the hybrid StorNext storage environment, we have strong read/write performance plus the

capacity to keep large volumes of content online."

The F-Series solution delivers the required two gigabytes per second of read/write speed for each of the 60 members of the creative services team, while also supporting additional team members who might be playing back content at any given moment. "With the Quantum platform, we can deliver high throughput to every team member and maximize productivity," says Engman.

For an object storage tier to efficiently archive and protect their entire asset catalog, the team chose Quantum ActiveScale. CatDV seamlessly manages all assets and automates workflows across both the StorNext and ActiveScale resources, allowing the organization to seamlessly migrate assets to and from the ActiveScale archive as required when projects start and finish.

As an S3-compatible object storage solution, ActiveScale enables the team to maintain online access to both active, lower-resolution proxy files and full-resolution cold content for years. The team implemented both ActiveScale all-flash storage for fast content recall and processing and a low-cost tier based on ActiveScale's Cold Storage feature that enables long-term, low-cost archiving using integrated LTO tape resources. With an initial deployment over 10 petabytes, the ActiveScale's future expansion

is seamless and low cost with anticipated growth to over 30 petabytes to meet future needs.

"Using ActiveScale, we know we'll be able to sustain our growth rate for at least eight or nine years without having to make large capital purchases," says Engman.

The Quantum solutions have helped the creative services team avoid problems that can quickly derail their nonstop work. "This environment has to operate 24/7. It there's a hiccup, we have to resolve it quickly and transparently," says Engman.

The reliability and resilience of the StorNext platform allows the team to achieve that high level of availability. "Now that we have the Quantum solutions in place, we can overcome failures," says Engman. "In fact, we had a failure recently—and no one in the content creation department even knew that it had happened. They were just able to keep working."

INCREASING AGILITY FOR THE FUTURE

The creative services team now feels better prepared for any changes that may lie ahead. "In the past, we were locked into a single platform and single way of working. If team members needed to work in a different format, use a different editing application, or work from home, it was difficult to change," says Engman. "With Quantum storage and CatDV, we no longer have workflow limitations. We can choose which tools to use and how to work—and the content keeps flowing."