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Enhanced Fan Experience at New Sacramento Kings Arena Powered by Quantum Advanced Storage Solution

The Sacramento Kings professional basketball team uses cutting-edge technology to deliver captivating visual experiences to fans on its home court and beyond. Implementing a Quantum storage solution along with CatDV asset management has enabled the team to store huge volumes of video, retrieve clips rapidly, and play out ultra-high-definition content on one of the world's largest 4K video boards.

FEATURED PRODUCTS

StorNext®

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>
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SOLUTION OVERVIEW

- Quantum StorNext® scale-out storage
- Quantum StorNext AEL tape archive
- Quantum StorNext gateway appliance
- CatDV media asset management system

KEY BENEFITS

- **Stores huge volumes of video content**, including new 4K video plus 50 years of archived material
- **Enables fast retrieval of clips** for reuse and remonetization
- **Facilitates collaboration** among multiple editors
- **Delivers exceptional reliability** and helps ensure content availability
- **Provides cost-effective scalability** for continued video content growth

In 2016, the NBA's Sacramento Kings moved into one of the most technologically advanced arenas in the world. The Golden 1 Center features powerful wireless connectivity, 360-degree sound, and a giant, center-hung 4K ultra-high-definition (UHD) LED video board—the largest in the NBA. Offering 6,100 square feet of stunning visuals, the video board helps create an unparalleled visual experience for fans. The Kings' AV and production team delivers 4K in-game content for that video board while also producing a variety of additional content, including online game highlights and promotional materials to continuously engage fans.

PREPARING FOR 4K

Prior to the Kings' move into the new arena, the AV and production team decided to transition to a new storage solution—one that could provide the capacity for enormous amounts of HD and 4K video. "We capture video for 41 home games a year," says Brian Plumb, Vice President of AV and Production for the Kings.

"We knew that moving to 4K would generate two to three terabytes of data per game. We needed a scalable solution that would let us store and archive this fast-growing volume of content."

In addition, the solution had to help archive 50 years of historic content. The Kings had 50,000 hours of media stored on LTO tape, video tape, film, and direct-attached disk drives. All of that material needed to be ingested into the new storage environment.

The AV and production team also required a way to retrieve stored content quickly. "We frequently reuse older content online and in promotional materials," says Plumb. "We ingest hours of footage for every game, but we might only need a 15-second clip. Locating a clip without having to scrub six hours of video is critical."

SELECTING AN INTEGRATED QUANTUM AND CATDV SOLUTION

The AV and production team began evaluating a variety of storage solutions plus media asset management (MAM) systems, which would

provide the metadata tagging required for fast content retrieval. It quickly became clear, however, that not all storage solutions are created equal—and not all storage vendors recognize the key differences between video and data.

"Early on, one vendor told us we didn't need storage that was specific to a video workflow—we could just install some drives, throw a MAM system on top of it, and everything would be fine," says Plumb. "But when you're editing video, you need to recall content in an unbroken stream. That isn't something a regular disk array can provide."

The technology integrator Diversified recommended Quantum—a vendor that Plumb had worked with in his previous job.

"Quantum has a very video-centric workflow," says Plumb. "Using a Quantum solution, we saw that we could find what we need through an integrated MAM system, pull it up in that unbroken stream, and start working on it right away."

Plumb's experience with Quantum and CatDV asset management in a previous job helped tip the balance toward using the two solutions for the Kings. "There are many storage and archive solutions out there, but I like the tight integration of Quantum and CatDV," says Plumb.

With help from Diversified, the Kings implemented a Quantum StorNext solution that includes nearline storage, a metadata controller, a local-area network (LAN)/network-attached storage (NAS) gateway, and a tape archive plus the CatDV MAM system. The AV and production team currently has 140 TB of storage with two LTO-6 drives in the tape archive system.

For Plumb's team, the Quantum disk storage and tape archive systems were a better fit than a cloud solution. "I like having the content in hand when I need it and not having to rely on a third party to get our stuff back," says Plumb. "With our current environment, we have the capacity to store up to two years of Kings games on disk, then archive to tape for the third year."

Since the Kings moved into the new arena, the Quantum and CatDV solutions have become part of fully integrated 4K production and post-production workflows. The AV and production team uses 4K cameras on the floor to capture live action and eight networked workstations running Adobe Premiere to edit video.

SIMPLIFYING SUPPORT

From installation to ongoing solution management, Plumb has had valuable assistance from Quantum and its technology partners. "It helps tremendously to have

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somebody to call who knows how to work with you and understands what you're trying to do," says Plumb. "Quantum, CatDV, and Diversified do that for me. I've never been left hanging."

ACCELERATING CONTENT RETRIEVAL

The integration of the Quantum storage and the CatDV MAM system helps speed retrieval of stored content. As a result, the organization can reuse and remonetize content easily.

"We have years of Kings footage archived," says Plumb. "With the MAM system, we know where everything is. Whenever we need to retrieve content, the recall process is simple and fast. For content stored in standard definition, we can pull a whole game back from a tape in the Quantum library in a matter of minutes."

IMPROVING RELIABILITY AND ENHANCING EFFICIENCY

For retrieving stored content and assembling new clips fast, storage availability and efficiency are

crucial. Fortunately, the new storage environment is delivering what the Kings' AV and production team needs.

"The Quantum solution has been a rock. From nearline storage to the tape archive, I've never had a problem," says Plumb. "I can use the recent content right off the spinning disks, and if I have to go back a few years, it's no time at all to retrieve content from the LTO tapes. These solutions give us an extremely efficient, reliable way to produce engaging content."

FACILITATING COLLABORATION

While CatDV helps keep track of stored content, the Quantum StorNext file system provides a single, global namespace that streamlines access to that content and enables easy collaboration. "In the past, our editors had stacks of disk drives sitting on shelves. There was no easy way to find or share content," says Plumb. "With StorNext, we can have several editors working on the same project at the same time—it's a very efficient way to collaborate."

PREPARING FOR FUTURE GROWTH

As the AV and production team continues to amass new 4K content, the Quantum solution provides cost-effective scalability for ongoing growth. "We plan to upgrade to half a terabyte of usable spinning disk and LTO-7 drives," says Plumb. "That should hold us until a cloud archive becomes a viable option for us economically. We know that Quantum is helping streamline integration with cloud storage, so we have confidence that we've future-proofed our environment by choosing Quantum."

RECOMMENDING QUANTUM

Plumb and his team strongly endorse Quantum and its technology partners for supporting media workflows. "If I had to do it all over again, I'd pick exactly the same solutions I currently have," says Plumb. "I would choose Quantum, CatDV, and Diversified. These companies have really delivered."

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