Case Study

Film production company creates Hollywood-blockbuster special effects based on Kingston SSDs

"The Kingston SSDs deliver such blazing performance that it allows our artists to do their work faster, uninterrupted, and free to focus on the art versus waiting for the technology. The bottom line is that we now deliver an even better product to our demanding movie clients."

Terry Dale
V.P. Infrastructure and Training
Arc Productions

Business challenge

When the producers of *The Amazing Spiderman* wanted to incorporate state-of-the art visual effects, they turned to the people at Arc Productions. That's because the Canadian company has a stellar artistic reputation. It's that status that draws a talented group of artists, producers and Hollywood veterans to its Toronto cityscape. The company's 45,000 square feet of open-concept workspace also helps recruit top talent. But what sets Arc apart, is a modern computing and data storage center that would be the envy of small colleges the world over.

The data center includes a climate-controlled rendering room hosting a 4,300 core server farm, plus 24GB of RAM assigned to each server. This computing power is supported by a full petabyte of network attached storage (NAS).

On its face, you would think that the full-bodied data center was more than sufficient to satisfy Hollywood producers. "When we worked on *Spiderman*, we had a very tight production timeline," recalls Terry Dale, VP of Infrastructure and Training at Arc Productions in Toronto. "So we had to find a way to speed up our quality control (QC) process."

Arc's QC process involves loading and playing back, final imagery for artists to manipulate. In the case of the *Spiderman* project, "We needed to play out two streams simultaneously because it was done in stereo," explains Dale. "And we needed to have it stream from our NAS flawlessly, without any hiccups."

After considering his options, Dale chose to build a new editing system based on SSDs. "The streaming bandwidth we were working with was extremely high so we decided that the only way to go was with high I/O SSDs."

Technology solution

Dale spoke to his Kingston representative to learn about the company's SSD offerings. The drive's high I/Os was a perfect fit for his editing system. Still, before putting a new solution into production he had to test it.

Starting with a basic workstation, Dale installed three Kingston SSDs. "It was dead simple stupid to set up. We hooked the drives right up to the motherboard's onboard RAID controller, and then striped them as basically a JBOD array and we were good to go."

With the test system assembled, it was time to test it using some preliminary footage from the Spiderman project. "We ran two streams continuously for a couple of days and everything worked perfectly," says Dale. "The production crew was really excited because we had all kinds of problems with continuous playback on the spindle systems we used previously."

After passing Dale's real-world test, "We put the SSD-based system into production and never looked back."

Business results

The Kingston SSDs delivered a number of benefits to Dale's business.

Summary

Arc Productions is a well-known animation and special effects art house. A very short production schedule for a major motion picture forced managers to accelerate the performance of their content editing systems. They installed three Kingston SSDs into a workstation, tested it and put it into production.

- **Achieved content load times 30-40 percent faster than legacy systems to deliver client-satisfying content on time.**
- **Faster performance allowed artists to complete more revisions while focusing on the art to boost the quality of customer content.**
- **SSD-based system delivers better performance, much cheaper and more reliably, than the 25- and 50-spindle-based systems it replaced.**

"The Kingston SSDs boosted our edit system load speeds by 30 to 40 percent. Not only is our system faster, but it's much more reliable than the spindle-based systems it replaced. Time is money in our business so it's a big deal for us that we haven't had a single failure to date."

Terry Dale
V.P. Infrastructure and Training
Arc Productions

Smaller mobile solution boosts productivity

Increased performance leads to happier clients
"With the SSD-based edit system, we've seen a content load speed that is 30 to 40 percent faster than the systems we used previously," states Dale.

The enhanced performance accelerated the company's review-revise-review cycle. That allowed specialists to more quickly review special effects and get them back in artists' hands to revise. Once done, artists would forward the revised content to be reviewed and the cycle would begin anew.

"By compressing our review cycles, we met the very tight production schedule for the Spiderman project," recalls Dale. "Completing more review cycles allowed us to develop an even better product too."

The SSDs yielded several important qualitative benefits as well.

"The employees really enjoyed using the SSD-based system compared to the spindle-disk-based systems," explains Dale. "Their work flowed more smoothly because they weren't waiting on the technology. So they were able to focus on the art—the part they enjoy the most—versus the technology."

Economical solution saves money
Says Dale, "Budget-wise, using the Kingston SSDs has been great because I was able to create a small system which outperformed a much larger, much more expensive spindle-based system."

Dale also expects the smaller replacement to improve data center environmental performance. "Our smaller, three-disk SSD system uses a lot less power than the 24- and 50-disk-based systems we have. So over the course of a year or two, we're going to save money on power."

The Kingston SSDs allowed Dale to field a smaller solution than its spindle-based predecessors. The three-SSD-drive system, for example, replaced the 24- and 50-spindle drive systems that would have been needed to meet Spiderman's 2K stereo playback specification.

The system's compact size allows employees to wheel it around the facility for use. "What that means is that a group of artists can look at shots as, and when, they need to instead of having to book time in one of our big screening rooms [that are tethered to spindle-based systems]."

Reliable SSDs yield high endurance cycles to reduce downtime
"Our production team has pounded on the Kingston SSD system every single day and we haven't has a single failure to date," says Dale. "Previously, if a spindle-based drive failed in a big way, we'd lose production time by having to rebuild the array. That's money lost fiddling with drives when we should have been producing something for a client."

SSDs deliver benefits to other areas of the business
Buoyed by the success of the Kingston SSDs, Dale's team looked to improve the performance of other production systems. First on the list was Arc's gigantic production database.

"The Kingston SSDs were an ideal solution because of their read speed," recalls Dale. "That's especially important for our database where we can have hundreds of users requesting data very, very quickly."

After installing the SSDs, Dale found that the drives "Considerably sped up the access to that database, which all of our artists touch. Now we're looking to apply this technology across our business to improve performance further."