AMD | STORIES

# SPINVFX & AMD EPYC™ VISUAL EFFECTS LARGER THAN LIFE


SpinVFX gets EPYC threading and memory performance that can bring creative visions to life.

**CUSTOMER**

## SPINVFX

**INDUSTRY**

Media and Entertainment

**CHALLENGES**

Increase processing power to meet escalating demands to cut rendering times while enhancing creativity and reducing costs.

**PARTNER**

Dell

**SOLUTION**

Deployed Dell PowerEdge R7425 powered by the AMD EPYC™ 7501 processor.

**RESULTS**

Dramatically reduced rendering times by up to 50% over SpinVFX's existing Intel Xeon hardware, saving an estimated 85 hours on a typical 200-frame effects job and fueling greater creative productivity with significantly lower cost.

**SOFTWARE USED**

Arnold™
Mantra
Renderman™

**AMD TECHNOLOGY AT A GLANCE**

AMD EPYC™ 7000 Series Processors with up to 32 cores

**Creating out-of-this-world creatures like the Protomolecule from Syfy series *The Expanse* is all in a day's work for SpinVFX, a leading visual effects studio for film and television. While SpinVFX's talented artists can make Toronto look like Boston or digitally wipe out graffiti, they can't edit time. And it can take hours to render even a short effects-filled scene, creating all the computer-generated effect layers and needed to merge with live action shots into seamless finished frames. It took AMD's EPYC™ processor to help SpinVFX slash its rendering times and get more creative flexibility.**

"Rendering is a big bottleneck; it always takes longer than you want it to," said Colin Davies, Chief Technology Officer & Partner at SpinVFX. Working with AMD and Dell, SpinVFX deployed servers equipped with the AMD EPYC 7501, a 32-core, 64-thread processor. The EPYC powered servers cut rendering time by 50 percent, compared to the rendering times on Intel's Xeon 2650s. "With AMD EPYC, we got double the performance," he said.

### FASTER RENDERING, LOWER COSTS

As SpinVFX's business grows and special effects software and video technologies advance, their rendering demands for CPU performance are dramatically increasing. Where only a few years ago the baseline resolution for theatrical films was 2K and HD for television, now television episodes are routinely produced in 4K. "That's a very big jump," said Davies. "You're basically increasing rendering times by a factor of 4."

To ensure the AMD EPYC processors could meet their fast-growing demands, SpinVFX tested them against its existing Intel Xeon-based hardware using Renderman, the industry's workhorse software for rendering. Where the Intel Xeon processor required three hours and 24 minutes to render four complete frames, the AMD EPYC server required only half the time, finishing the same four frames in one hour and 42 minutes. (There are approximately 24-30 frames in each second of 4k video.)

On one of their typical 200-frame jobs, Davies said the AMD EPYC processor reduced rendering time by 85 hours. "That scales in a quite meaningful way," he said. The AMD EPYC powered servers are so efficient that, while comprising about 40% of SpinVFX's render farm, we load them with nearly 100% of our heavy rendering jobs."

There is the added benefit of AMD EPYC processors delivering this high performance at a lower cost. "The AMD EPYC processors are not only more powerful, they were significantly more affordable as well," said Davies.

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>
> *Colin Davies, Chief Technology Officer & Partner, SpinVFX*

## MULTITHREADING AND MEMORY POWER FOR MAXIMUM PRODUCTIVITY

In addition to delivering rendering performance, Davies said the AMD EPYC processor's multithreading capacity helps drive artistic productivity. Rendering applications including Mantra, Arnold, and Renderman, all used by SpinVFX, have recently been optimized for multi-threading, and AMD EPYC processors take advantage of that software capability.

Using 512GB of RAM in its EPYC server configurations adds to SpinVFX's productivity. This memory footprint with AMD EPYC's processing power gives the studio's artists greater ability to deliver the sophisticated organic look that SpinVFX is known for. Simulated water, hair, and fur have realistic colors, textures, and fine details that mimic natural, physical movements and properties when created by SpinVFX artists and simulated on the render farm. The AMD EPYC memory architecture easily accommodates these huge 4K effects files, Davies said.

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*Colin Davies, Chief Technology Officer & Partner, SpinVFX*

## AMD EPYC FUELS CREATIVITY

The high performance delivered by AMD EPYC-powered servers also contributes to enhancing creative quality even when time is short. For example, on television series delivery deadlines get tighter later in a show's season, when the complexity of special effects also increases to support dramatic finales.

"Being able to turn around complex work is vital for clients like Nighflyers," said Davies. "Having the confidence to tell our client "yes, we can do that" and not having to restrict them in what they wanted to do was a big part in making them so satisfied. AMD EPYC processors deliver the high performance that gives us this confidence."

Davies and SpinVFX are very satisfied with Dell, which worked closely with the studio and AMD to deliver and test several different AMD EPYC server configurations with the various applications that SpinVFX uses. "That's not something people are used to doing," Davies said, noting that "Dell has always been very responsive. They understand our business."

The power of AMD EPYC processors has allowed SpinVFX to respond to the growing demand for its leading-edge effects on acclaimed series such as Condor and Nightflyers, in addition to Haunting of Hill House, while simultaneously meeting tight deadlines with complex effects, all while managing costs.

"It's a creative industry. We are always trying to push the limits, always trying to make it better –and always have a hard release date," Davies said. "With the AMD EPYC processor, we know we have that bandwidth. We can get that extra bump in quality or get that last-minute request fulfilled. That can make a big difference on the creative end. We can make directors, producers, and visual effects supervisors happier, and we can satisfy the business side by delivering the show on time," he said.

## ABOUT SPINVFX

Established in 1987, SPINVFX is a creative and technically dedicated visual effects studio producing captivating imagery for feature film and television. SPINVFX's roots trace back to creative and technological innovations that are now standard in visual effects facilities around the globe. SPINVFX has evolved into an internationally recognized Visual Effects studio, working with respected directors, VFX supervisors, and producers. With television credits that include the Emmy award-winning series Game of Thrones (HBO), Neil Jordan's thrice Emmy-nominated The Borgias (Showtime), and film credits such as Suicide Squad (2016), Hunter Killer (2018), The First Purge (2018), and the Academy Award winning biopic Spotlight (2015), SPINVFX delivers on vision. SPIN is located in Toronto with sales support in Los Angeles.

## ABOUT AMD

For more than 45 years AMD has driven innovation in high performance computing, graphics, and visualization technologies – the building blocks for gaming, immersive platforms, and the datacenter. Hundreds of millions of consumers, leading Fortune 500 businesses, and cutting-edge scientific research facilities around the world rely on AMD technology daily to improve how they live, work, and play. AMD employees around the world are focused on building great products that push the boundaries of what is possible. For more information about how AMD is enabling today and inspiring tomorrow, visit amd.com/epyc-server.