Rodeo FX Teams with Qumulo to Manage 25% Growth in VFX Files and 13PB of Unstructured Data

RODEO FX

Rodeo FX is a high-end creative company offering services in visual effects, advertising, animation, audio and experiential. Starting from a Montréal basement with an artist-driven, four-person team in 2006, magic-making began and international recognition soon followed. They received their first Oscar two years later for Best Visual Effects with New Line Cinema's The Golden Compass film.

Now their creative, imaginative, innovative work is visible across dozens and dozens of productions: Guardians of the Galaxy, Dune, Wanda Vision, Game of Thrones, and many more. In the nearly two decades since its launch, their VFX mastery has received several Emmys, Oscars, BAFTAs, and awards from the Visual Effects Society and Hollywood Professional Association, most notably.

Rodeo FX is anchored in three strategic pillars; they are the foundation of their culture and the high-end creative services that customers depend on in the entertainment industry.

Stay Creative with an agile mindset to elevate ideas and achieve the highest quality work.

Stay Collaborative with individual and collective accountability and trust to achieve collective success.

Stay Cool by persevering, having a positive mindset and courage, and embracing the unknown to go higher and achieve successful results.

Substantial file growth increases VFX demands, requires scalable storage and more per-user capacity

After years of rapid growth and the 2014 acquisition of Hatch FX, Rodeo FX has grown to 870 employees supporting projects for well-known studios, and expanding their physical footprint across Canada, the U.S., and Europe.

The team's expansion and higher-demand projects led to significant growth in the file data which must be stored, managed, and rendered in high-dynamic range (with more pixels, definition of color, and wider contrast ratio), and put increased pressure on the company's infrastructure. After trying several storage solutions, Rodeo FX discovered none of the options provided scale, flexibility, and performance to match their double-digit growth.

"We hit storage limits and couldn't expand our cluster any further to support our production, disaster recovery, and file replication," explained Marc-André Desgagné, Infrastructure Supervisor at Rodeo FX. File latency was a problem, too, with a geographically-dispersed team and larger, more dynamic projects impacting project rendering, which slowed down the network and reduced team productivity.

In 2016, Rodeo FX hired a new IT lead to manage its infrastructure, oversee a revamping, and replace their legacy storage solution with the Qumulo QC208 series cluster, becoming an early adopter.

"It just worked and the Qumulo metrics revealed what was happening with our storage. That was a game changer," said Zotta. In a few years, one cluster grew to three and replaced legacy storage. They leverage an all-flash solution for production and hybrid systems for simulation and nearline. The third is for disaster recovery and file replication.

Qumulo has helped Rodeo FX scale over time to handle expanded storage needs plus NVMe production, replication and file disaster recovery.

- **Qumulo handles 13PB of unstructured VFX data:** Rodeo FX uses three clusters to store its VFX work: half of it is in disaster recovery and file replication, and the rest is for their all-flash, NVMe production files. They can add nodes, when needed, increasing storage capacity that supports their evolving customer projects and business demands.

- **Increased data connectivity per user:** Qumulo, running on an all-NVMe Supermicro platform, expanded the Rodeo FX network backbone and increased GbE per user to 2.5 or more.

- **Insightful analytics solve storage, rendering issues:** IT depends on Qumulo analytics to understand what jobs benefit or hamper storage capacity. Now, troubleshooting time and the number of network outages has decreased, plus storage capacity is stable.

In the transition to Qumulo, Rodeo FX also relied on Montreal-based Images et Technologie who has a long-standing presence in the Canadian media and entertainment space with expertise in designing, building, and deploying complex IT and HPC infrastructure solutions. Images et Technologie leads with Qumulo as their primary storage solution which meant Rodeo FX received local, on-site support from them to debug, monitor, and optimize network performance, size Qumulo and their new 400GbE network switch stack, and deploy the All-Flash storage cluster—as they worked to optimize production workflows, meet deadlines, and stay on budget.

Multiple clusters and analytics help IT successfully manage 13PB of unstructured VFX file data

Qumulo provides faster, easier, and more seamless execution of the data-intensive, VFX work created by Rodeo FX. Collectively, the **three Qumulo clusters** store approximately **13 petabytes of data**, including: an all-flash solution for production; hybrid systems for replication,nearline and disaster recovery. IT can add nodes to increase storage capacity with evolving projects and changing business demands. When an unexpected challenge occurs, Qumulo can quickly absorb those stored files. In fact, the Qumulo cluster received new data from the onsite in just a few hours, and leaving staff experienced little-to-no downtime.

"There's now peace of mind that as our company grows, and as projects increase the number of files and data we manage that Qumulo will grow with us, and we won't have scalability issues."

– Tony Zotta
Vice President of Technology
Rodeo FX

While Rodeo FX saw relatively flat growth during Covid as the industry halted productions, dealt with empty theaters, and lowered consumer demand, since then they've observed nearly **25% growth** from pre- to post-Covid. They are now planning for steady growth over the next few years as "studios want to bring people back to theaters and increase the number of users on their platform," explained Tony Zotta, Vice President of Technology at Rodeo FX.

This means there are more production releases using more special effects to enhance the content, attract platform users, and differentiate studios from the competition. On the flip side, this is putting increased pressure on their storage as production staff juggles multiple requests and uses High Dynamic Range (HDR) to add more color depth for better visual effects, which increases the total file size and data to manage.

With the changing nature of work, higher project demands, and increase in rendering, Qumulo analytics have been essential for Rodeo FX. "Before we were blind, but now we see and understand which jobs are in the render farm and how they impact the file system," said Zotta.

Rendering can sometimes double file volumes or the specific size of an asset with a few simple clicks. With the metrics in hand, IT definitely knows which group or project must pause, then optimize, so more production staff and overall work performance and storage capacity aren't negatively impacted.

Now, the **troubleshooting time** spent on rendering and other issues has **decreased** and **so has the number of network outages** because Qumulo shines a light on storage-depleting jobs and tasks. "Thanks to Qumulo, we're pretty quick to figure things out instead of two or three people digging into logs for several hours to discover what's going on," stated Desgagné. Instead, IT can turn its attention and time toward other challenges that are squeezing the network and impacting staff productivity.

Support is a team effort with Qumulo to find and resolve issues

Customer support is a major differentiator between Qumulo and other vendors as well. To have opportunities to speak with several people, write in a collaborative Slack channel which sparks new conversations and multiple responses, and get better visibility into feature releases wasn't something Rodeo FX experienced with other storage providers in the past. "We would usually get 'that's not our problem.' Where Qumulo keeps digging, pushing, and helping—even if it looks like a network issue," added Desgagné. Zotta also shared how back-end networking isn't something where you say "go with this and you'll be okay," but Qumulo shares suggestions and helps find a solution or identifies a problem before it becomes a bigger challenge.

There's one-to-one conversation, engagement, and instead of opening a ticket then hoping that someone responds, "you know there's a community at Qumulo eager, ready, and willing to listen, jump in, and join the conversation," stated Zotta.

Qumulo on all-NVMe platform increases GbE connectivity per user, and addresses evolving pipeline

Currently, Rodeo FX staff members are limited to approximately one GbE of connectivity to the file system. Depending on a project, the content needs, and how much is sitting in the render farm, it can put too much stress on the network, and bottlenecks happen. From Planning ahead to anticipating workflows and client demands, Rodeo FX is looking to expand their network backbone with Qumulo running on the all-NVMe Supermicro platform, and flex individual GbE access to 2.5 or more. The result being that storage performance supports their evolving, complicated pipeline and customer demands.