SUCCESS STORY | ELASTIC

# GPU RENDERING WITH OCTANE LETS ELASTIC SPEND MORE TIME CREATING.





# TIGHT DEADLINES ARE NO MATCH FOR THE TIME EFFICIENCIES PROVIDED BY OCTANE AND NVIDIA GPUS.



#### **REASONS FOR NVIDIA® QUADRO®**

- > Faster, interactive creative iteration
- > Final-frame performance increases
- > Large GPU memory frame buffer

#### **SUMMARY**

- > Elastic is an award-winning visual effects studio, known in part for stunning title sequences for popular TV shows like Westworld, Game of Thrones, The Crown, and True Detective.
- > To create the main title sequence for The Alienist in a two-week time frame, the studio used powerful NVIDIA® Quadro® GP100 GPUs.
- > The firm's artists were able to render more than 30,000 frames in eight days.
- > More iterations mean happier clients, because of the higherquality final animations.

# Introduction:

Elastic is a Los Angeles-based collection of visual storytellers who use a complete range of techniques—design, animation, live action, visual effects (VFX), live events, and immersive media-to bring new worlds to life and to reveal stunning details in the one we know.

The visual effects studio has received accolades at film and advertising festivals around the globe, earning top honors at Cannes, Annecy, the Academy Awards, the Emmys, D&AD, SXSW, and many others. The artists at Elastic live by a simple motto: Creative is king.

# **Challenge Statement:**

According to Kirk Shintani, Elastic's head of 3D, the firm's greatest challenge is "outputting high-resolution, high-quality imagery in shorter and shorter timelines." He adds that every minute counts when the studio is up against tight deadlines and that "every artist wants to keep tweaking until the very last minute."

Because creative products are stronger when they can go through more iterations, tighter deadlines are making it harder for the company to use traditional CPU rendering software. When Elastic was hired to create the main title sequence for the TNT drama The Alienist, the company's leaders knew they needed a fast, fluid workflow.

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#### **CUSTOMER PROFILE**



Organization Flastic

Industry Media and Entertainment

Location Los Angeles, CA

Website Media, 2008 www.elastic.tv



#### PRODUCTS

#### SOFTWARE

Modeling: Maya

**GPU Rendering:** Cinema 4D, Otoy's Octane rendering software

**Compute Management:** Deadline

Video Editing: Adobe® After Effects®

### HARDWARE

GPU: NVIDIA Quadro GP100

**Memory:** Ultra-fast 16 GB HBM2, ideal for large-scene, texture, and high-resolution rendering workloads

NVIDIA NVLink<sup>™</sup>: The scalable interconnect that combines two GP100s to provide twice the compute power and up to 32 GB of memory per node

NVIDIA CUDA<sup>®</sup> Cores: 3,584

#### Nodes: 8

**Workstation:** Dual 10-core Haswell Xeon E5-2630v4 2.2 GHz 64-bit CPU

# **Solution Statement:**

To meet the challenge of creating The Alienist title sequence, Elastic used OctaneRender GPU software powered by NVIDIA Quadro GP100 graphics cards. With two weeks to create a sequence with a working duration of 30 seconds, the studio had to deliver compelling creative that quickly established location and time and rewound from modern-day New York City to 1896.

While rendering occurred around the clock in an eight-node GPU render farm, Elastic's artists could continue working on their local machines. They could focus on creating better imagery without waiting for renders to get proper feedback. "GPU-based rendering and the GP100s allow us to iterate interactively, speeding up our workflow exponentially."

Kirk Shintani Head of 3D Elastic

"With production schedules getting tighter and more aggressive, the NVIDIA Quadro GP100 cards made it possible for us to produce a stellar main title under a highly compressed deadline."

Jennifer Sofio Hall, Managing Director

# **Results Statement:**

With eight nodes, Elastic's GPU farm was a fraction of the size of a typical CPU farm, but it enabled the rendering of more than 30,000 frames at HD resolution in eight days.

Because the rendering happened so fast, creative teams were allowed to play with color, lighting, texturing, and camera angles on the fly until they were satisfied with the results. Creative directors didn't need to wait 30 minutes to review a scene—they could provide feedback on the spot for greater quality control.

For one complex scene called the Bowery shot, final production frames only took about 90 seconds to render. Tweaks could be done at production quality, which allowed for accurate, fast adjustments that prevented delays and sped up the iterative process. The entire shot was built, animated, lit, rendered, and composited in about two days.

With the demand for more complex imagery done at a high standard in less time, GPU rendering allows Elastic to keep pushing its creative and visual boundaries. The interactive feedback has given artists the power to take shots further, irrespective of deadlines. Time efficiencies also put more jobs in play, giving the firm the ability to engage in work that wasn't always possible before, while providing the time necessary for creative development.

More Information: www.nvidia.com/gpurendering

www.nvidia.com



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