Tangent Animation

Reduces IT Spend and Simplifies Expansion with Virtual Workstations on Amazon Web Services—Powered by Teradici Cloud Access Software

TANGENTANIMATION

With studios in Toronto and Winnipeg, Canada, Tangent Animation delivers computer-generated animation, live-action film production, visual effects, and software development. Films include the Netflix sci-fi feature *Next Gen* and the Spanish-Canadian co-production feature film *Ozzy*.

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JEFF BELL
VICE PRESIDENT AND COO,
TANGENT ANIMATION

Challenges

- Effectively manage IT resources and costs
- Deliver high production value without high workstation costs
- Comply with stringent security requirements
- Access top talent anywhere

Solutions

- Teradici Cloud Access Software, used to securely access creative applications on Amazon Web Services (AWS) with NVIDIA T4 graphics processing units (GPUs)

Results

- Produced portion of animated feature film using virtual workstations on AWS
- Strengthened endpoint security: only encrypted pixels travel between the artist's device and AWS
- Reduced IT costs by replacing local workstations with inexpensive thin clients
- Lowered barriers to operating in new cities for access to talent and tax incentives

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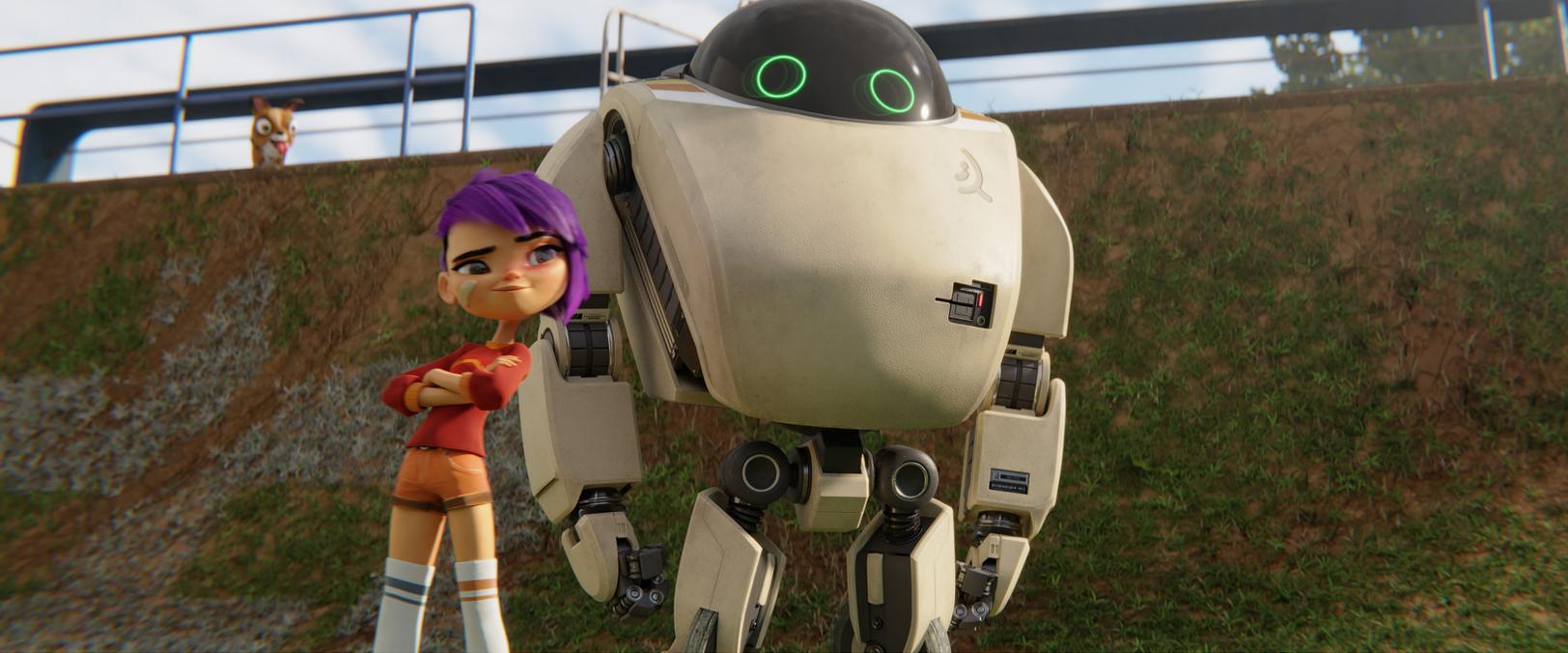
Breakthrough: no cursor lag on Wacom pen displays and tablets

When Wacom input is processed in the cloud, latency can cause cursor lag—intolerable for artists doing detailed pen work. Tangent delivers a great artist experience by configuring Teradici Cloud Access Software to process Wacom tablet content locally rather than in the cloud. The cursor moves immediately, even with network latency of 25 milliseconds or more.

Tangent Animation emerged as a rising star when it received multiple Annie Award nominations for its work on Next Gen, a computer-animated action film that Netflix released in 2018. Tangent's leadership attributes the company's success to top talent, industry-leading production tools—and innovative approaches to driving down production costs. "When working on Next Gen, we saved $500,000 in licensing fees by using Blender, the open-source 3D creation suite, investing the savings in software development and artists to increase show quality," says Ken Zorniak, President and CEO of Tangent Animation. "And by rendering on Amazon Web Services (AWS) instead of our on-premises services, we quadrupled our capacity—completing 3.5 million hours in just two months."

The success of rendering on AWS sparked another idea. Why not also move artists' workstations to AWS? "Virtual workstations would enable us to avoid the costs of replacing 150 physical workstations nearing end of life," says Jeff Bell, Vice President and COO of Tangent Animation. What's more, enabling artists to connect to a virtual workstation from anywhere would make it simpler to work with top talent in any location.

To realize the vision, Tangent needed a solution that would support stringent content-security requirements from the Trusted Partner Network (TPN), support Wacom pen-display and tablets, and deliver a great experience anywhere.

Tangent found its solution in Teradici Cloud Access Software. "We chose Teradici Cloud Access Software because it keeps content securely in AWS—never on endpoints—is easy to deploy, and delivers an excellent artist experience with Blender, Houdini, and 2D applications like Adobe Photoshop and Substance Designer," says Bell. Another plus: Teradici Cloud Access Software works with Linux as well as Windows applications, giving Tangent the flexibility to choose the best application for the task regardless of the required operating system.

To test Teradici Cloud Access Software, two artists used it to produce part of a new animated feature. One artist worked on an ordinary PC; the other on an Intel NUC (4"x 4" mini PC) with a Wacom Cintiq Pro 32. The artists used Blender software running on AWS G4 instances with NVIDIA T4 GPUs and NVIDIA Quadro Virtual Workstation which includes the latest Quadro driver supporting 3D applications and AI-features. "Our artists really liked the Teradici experience on both clients," Bell says. "There's no cursor lag on the tablet—a huge plus." (See sidebar)

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> **"** *With Teradici Cloud Access Software and AWS we pay for just the GPU power we need,"* Zorniak says. *"An artist can log into a Blender instance powered by multiple NVIDIA T4 GPUs running the Quadro Virtual Workstation for crowd work and later log into an instance with a single GPU for simpler animation. Managing our IT costs this way leaves more budget for artists and technical staff—leading to a better product.*

KEN ZORNIAK
PRESIDENT AND CEO
TANGENT ANIMATION

Now Tangent is getting ready to introduce virtual workstations to 150-200 artists in Toronto and Winnipeg.

Replacing 150+ physical workstations with virtual workstations on AWS will lower costs. Tangent can spin up virtual machines when needed and spin them right back down when the project is done, paying only for resources actually needed.

Say an artist works on a crowd scene in the morning and a two-character scene in the afternoon. Crowd work requires more GPU power. "With Teradici Cloud Access Software and AWS we pay for just the GPU power we need," Zorniak says. "An artist can log into a Blender instance powered by multiple NVIDIA T4 GPUs running the Quadro Virtual Workstation for crowd work and later log into an instance with a single GPU for simpler animation. Managing our IT costs this way leaves more budget for artists and technical staff—leading to a better product."

Hiring talent is simpler with Teradici Cloud Access Software and AWS. If the best artist for a job is in Montreal or Vancouver, for example, Tangent can ship a sandwich-size Intel NUC for next-day delivery. "We don't have to worry about endpoint security because with Teradici Cloud Access Software, data never leaves AWS," Zorniak says. Only encrypted pixels travel between AWS and the endpoint. And instead of renting a large studio for all artists, Tangent can rent smaller offices by the day for collaborative work. As a result, the company expects to maintain or reduce overall office space over the next two years despite increasing crew size.

Zorniak concludes, "Virtual workstations are the future for our industry, but getting to the cloud typically takes a lot of effort. Teradici Cloud Access Software simplifies the journey."

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