CUSTOMER SUCCESS STORY

DreamWorks Animation takes imagination to new heights

NetApp

DreamWorks The Bad Guys © DWA LLC.

NetApp hybrid cloud technology supports production agility.

DreamWorks Animation has transformed the animation and entertainment industry by creating some of the most beloved family films of the last 25 years. With each release—from memorable franchises such as *Shrek* and *Kung Fu Panda* to its latest animated action-comedy *The Bad Guys*—DreamWorks delights audiences with eye-popping visual storytelling and unforgettable characters.

As DreamWorks constantly pushes the boundaries of animation, they must also push the boundaries of technology. Each film is an entirely new world created from evolving tools and techniques that bring the story to life with richer textures, depth, and emotion. This evolving complexity in the production process, coupled with explosive changes in the entertainment industry and the increasing demands of content, means that DreamWorks must actively engage in innovation.

500,000,000+
digital files per film

"NetApp ONTAP being 'always-on' with our data was a critical business multiplier— it was ahead of the curve. When we found ourselves wanting to move into the hybrid cloud, again NetApp was ahead of the curve—they had already started investing in cloud enablement solutions."

Skottie Miller, Technology Fellow for Systems Architecture, DreamWorks Animation

For every one of DreamWorks' CG films produced in the last 20 years, NetApp® solutions have played an integral role in supporting the studio's data management strategy. From a solid on-premises foundation to a rapidly evolving hybrid cloud, NetApp provides the studio with innovative technology to help manage the massive amount of data generated by production, while balancing data storage performance, flexibility, and cost.

Recently, DreamWorks and NetApp entered into a multiyear strategic alliance to advance the studio's hybrid cloud data management environment in support of its creative and business objectives. The alliance has never been stronger than it is today, with co-engineering technology solutions that have a material impact on the studio's production capabilities.

Digital storage and data management are vital to DreamWorks' production workflow. Hundreds of artists at a time work on each feature film in production. Billions of files and petabytes of data must be efficiently managed and accessible across various data locations, including on premises, private cloud, and public cloud. Availability of data is crucial to keep production on schedule and to enable artists to respond quickly to creative direction and business demands.

NetApp technology at DreamWorks includes a myriad of hybrid cloud, storage, data, and virtualization solutions that streamline the management of applications and data. By providing hybrid solutions that enable artists and engineers to access, protect, and store critical data, NetApp is accelerating the studio's focus on what matters most—its artists' creativity.

Hybrid cloud for agility

Like most of its film productions, DreamWorks' recent release, The Bad Guys, took approximately four years to create. During the time that it took to bring the film to audiences, significant changes in production and the industry, partly driven by the pandemic, required the storage team to quickly pivot and accelerate its adoption of hybrid cloud.

Kate Swanborg, Senior VP of Technology Communications and Strategic Alliances at DreamWorks, points out that the on-premises adoption of NetApp® ONTAP® data management software and supporting management tools has made the transition to cloud easier at this crucial time.

"Every business needs to be agile, but the pandemic accelerated our need to have additional solutions as we had to address new workflows, new data management requirements, and shifting schedules and release plans," Swanborg said.

As the growing demand for creative content necessitated an expansion of its cloud investment, DreamWorks built a cloud control plane on top of their on-premises infrastructure by using microservices and containerized applications, which allows it to function as a private cloud. This expansion gives DreamWorks the flexibility to store data on premises, in a separate private cloud, or in the public cloud, with a consistent user experience. DreamWorks artists have complete control over their data, but they don't need to know or be concerned about where their data is located.

300M
Compute Hours

20%
of The Bad Guys was rendered in the cloud

According to Skottie Miller, Technology Fellow for Systems Architecture at DreamWorks, "NetApp ONTAP being 'always-on' with our data was a critical business multiplier—it was ahead of the curve. When we found ourselves wanting to move into the hybrid cloud, again NetApp was ahead of the curve—they had already started investing in cloud enablement solutions."

The integration of a hybrid cloud environment is enabling DreamWorks to scale their infrastructure without having to build new data centers. The studio is currently in the process of implementing several new NetApp cloud offerings in the process, including Cloud Data Services, Astra™, and Azure NetApp Files.To fill out its data management environment, DreamWorks also relies on FlexCache® to accelerate their data and StorageGRID® for tiering data, short-term archiving, and long-term asset preservation.

"Hybrid cloud will be the best option when we want to achieve a new business ambition [or take advantage of an opportunity] without significantly changing pipelines or workflows," Swanborg said.

As DreamWorks continues to respond to and engage with the ever-changing CG animation landscape, the ability to manage data quickly and efficiently continues to be mission critical. "We have identified and started work on a robust hybrid cloud roadmap that integrates into the DreamWorks business," said Swanborg. "As that roadmap comes to full fruition, a truly robust, always-on hybrid cloud infrastructure allows us to produce any piece of content that DreamWorks needs, in the most agile way possible."

NetApp products

Active IQ Unified Manager
AFF A900s running ONTAP
Astra
Astra Trident
Cloud Checkr
E-Series
FabricPool
FAS9000s running ONTAP
FlexCache
FlexGroup
Mix of HDD and SSD storage media
SolidFire
Spot by NetApp
StorageGRID

The making of The Bad Guys: NetApp tech

A mix of **NetApp FAS** and **AFF** controllers across two main storage clusters are dedicated to animation production and used for offsite backup and disaster recovery. The blend of hardware offers the ability to tier data within the cluster while moving cool data to StorageGRID to free up high-performance resources.

DreamWorks uses **NetApp ONTAP** for data management of its hybrid cloud. As a unifying platform for on premises and the public cloud, data storage processes and workflows are seamless.

NetApp Active IQ® Unified Manager provides real-time, single-pane views for DreamWorks to monitor and manage the performance of its clustered Data ONTAP environment. By leveraging analytics through Active IQ, the studio is informed of risks and advisories remotely and via automation.

NetApp FlexCache technology gives the studio the ability to cache "hot" or active data to wherever compute is required. DreamWorks' public cloud vision is to extend, rather than move, data. With FlexCache, it can extend data to the cloud while reducing latency by caching the appropriate data for scale-out performance and read-intensive workloads.

NetApp StorageGRID is a software-defined object storage solution for large archives, media repositories, and web data stores. StorageGRID along with FabricPool is used to move "cold" data such as completed movies to object storage, freeing up valuable resources. DreamWorks plans to use StorageGRID for long-term asset preservation and also for cost-effective, reliable, short-term archiving.

NetApp E-Series storage arrays provide simple and reliable data storage where high performance is key. DreamWorks primarily uses E-Series systems in postproduction for enhancements in color grading, conforming, and transcoding. In addition to solid performance, E-Series offers DreamWorks flexible and cost-effective backup and recovery to the cloud and features a modern, browser-based GUI that enables simple, flexible administration and rapid data access.

NetApp SolidFire® scale-out storage system provides primary storage for the studio's virtualization environments, including Red Hat and VMware. SolidFire enables DreamWorks with dynamic scaling, predictable performance, automated simplicity, and flexible deployment. Powered by NetApp Element® software, SolidFire consistently delivers performance to the studio while providing agile, automated private cloud storage solutions for the modern software-defined data center.

Ansible modules for NetApp are used to automate storage management tasks, such as provisioning, migration, decommissioning, and cloning. DreamWorks has seen a 90% reduction in storage management tickets due to this workflow, freeing up engineers to prioritize and focus on more meaningful, impactful studio initiatives.

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About NetApp

In a world full of generalists, NetApp is a specialist. We're focused on one thing, helping your business get the most out of your data. NetApp brings the enterprise-grade data services you rely on into the cloud, and the simple flexibility of cloud into the data center. Our industry-leading solutions work across diverse customer environments and the world's biggest public clouds.

As a cloud-led, data-centric software company, only NetApp can help build your unique data fabric, simplify and connect your cloud, and securely deliver the right data, services and applications to the right people—anytime, anywhere. To learn more, visit www.netapp.com

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