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Scalable Migration to Support Enterprise MAM Modernisation and AWS Archive Transformation

NATIONAL GEOGRAPHIC CHANNEL

National Geographic Channel is home to one of the world's most iconic documentary and factual content libraries. As part of a major transformation programme, National Geographic introduced a new enterprise Media Asset Management (MAM) platform designed to modernise downstream workflows, enable enhanced discovery, and improve global access to content.

However, unlike many archive transformations where assets can be migrated directly from legacy tape to cloud storage, National Geographic's new enterprise MAM required assets to be locally registered during migration operations. This created a unique operational challenge. High resolution archive assets needed to land on local storage first, so the MAM could detect their arrival, generate proxies, and complete metadata registration, before they could be transitioned into AWS.

The Challenge

National Geographic's legacy archive was stored on aging and proprietary data tape (LTO) systems, presenting the familiar risks of legacy archives... rising maintenance costs, limited workflow agility, constrained disaster recovery capabilities, vendor lock-in, and long term sustainability concerns. At the same time, the migration had to support a complex enterprise workflow requirement: every asset needed to be ingested and registered by the new MAM platform "in flight" during the migration process. National Geographic also required continued operational stability and the ability to maintain their legacy archive environment throughout the transformation.

Cloudfirst's data driven archive transformation methodology

Cloudfirst began the engagement with its Legacy Archive Audit and Modeling Service, deploying a team of data scientists and archive engineers to analyze more than a decade of archive growth, usage patterns, and performance characteristics.

This forensic analysis produced a detailed report containing visualizations, key performance indicators, and forward looking cost and capacity models. These insights provided the client with the clarity required to build a robust internal business case for archive modernization, balancing technical requirements with long-term financial sustainability.

With a clear, data driven roadmap in place, the client approved the transition and selected Cloudfirst's Archive Migration as a Service (AMaaS) to manage and execute the end to end migration as a fully managed service.

The Cloudfirst Solution

Cloudfirst worked closely with National Geographic and the enterprise MAM vendor to design and deploy a scalable, archive and MAM migration workflow, enabling seamless archive transformation without disruption to production operations.

Using Cloudfirst's Archive Migration as a Service (AMaaS) and the Rapid Migrate orchestration platform, Cloudfirst executed a controlled migration process that:

1. Migrated archive assets from legacy proprietary LTO data tape onto local landing storage
2. Ensured all vendor lock-in and proprietary wrappers were removed from all assets migrated to cloud
3. Actively monitored downstream content processing workloads and storage systems
4. Enabled the new enterprise MAM to automatically detect arriving assets
5. Triggered proxy generation and asset registration in the MAM
6. Subsequently migrated registered assets to AWS as part of the next generation archive strategy

Cloudfirst's migration orchestration platform automatically ebbed and flowed with both production operational requirements and the downstream processing capabilities of the enterprise MAM, ensuring efficient utilisation of compute, storage, and migration resources, while also achieving the most efficient migration path off legacy tape.

Dual-Target Strategy: AWS + Modern tape re-archiving

In addition to building the AWS next generation archive, National Geographic required an ongoing on-premises copy of content for the foreseeable future. Cloudfirst therefore implemented a dual target migration strategy, ensuring every migrated object was also re-archived back to modern tape technology acting as a cloud "safety net" reducing future operational risks.

This approach delivered the best of both worlds: 1) Cloud enabled access and transformation, alongside an on-premises tape copy for compliance 2) Operational comfort, without reliance on the legacy archive platform. On-prem operations could continue with a modernized archive infrastructure, while future cloud-centric workflows could leverage a decoupled and fully independent digital archive footprint in AWS with no reliance or connection to the on-prem infrastructure.

Metadata Driven routing and archive clean up

Throughout the migration, Cloudfirst preserved and extracted critical metadata to ensure the archive became more usable and future-proof after transformation. Cloudfirst routed, reorganised, and normalised asset names and downstream workflow selections based on asset metadata, ensuring a clean archive footprint both in the new enterprise MAM and on modernised on-premises tape.

Critically, Cloudfirst removed vendor lock-in and proprietary wrappers from the archive assets during migration, ensuring National Geographic obtained a pure, preservation-grade copy of all media assets outside of the legacy archive system, while still maintaining the on-prem legacy archive infrastructure for as long as required.

Preservation grade migration confidence

Cloudfirst's migration methodology is true preservation-grade, guaranteeing exact replication of data and metadata from the legacy archive system to all selected targets. Metadata was preserved throughout, including:

- Legacy archive metadata
- Legacy MAM metadata
- Extracted technical metadata during migration

This metadata was then used to support program-intelligent routing and can be automatically populated into MAM or media supply chain systems through API connectivity. Metadata was also written to cloud storage and preserved via sidecar JSON manifests for future access, fully independent of the old or new MAM systems.

Results

Cloudfirst enabled National Geographic to modernise archive workflows while maintaining complete operational continuity, unlocking scalable archive transformations that aligned enterprise MAM requirements with AWS migration objectives.
The result was a next generation archive foundation that is cloud enabled, vendor neutral, preservation grade, and designed for long term accessibility, without forcing disruptive changes to sustaining operations.