

The NHL® and VAST Data – Five Years of Co-Innovation



Introduction

Over the past five years, the National Hockey League (NHL®) and VAST Data have collaborated to innovate and transform the way the NHL manages, stores, and distributes its media. This has helped enhance the League's archival workflows, expanded into real-time game footage operations, and enabled future advancements in AI-powered content discovery.

At the forefront of this transformation are Grant Nodine, NHL Senior Vice President, Technology, and Derek Kennedy, NHL Vice President, Media Operations and DevOps. Together, they led the architectural vision to preserve the League's vast historical assets and make them accessible for future generations. They also brought this vision to life by streamlining media operations and implementing advanced data and replication solutions across NHL arenas.

The Beginning: SMB Protocol and Media Archive

The collaboration between the NHL and VAST began five years ago when the NHL sought a data platform for its production workflows. At the time, the League was looking for a data platform capable of managing their growing media content, which included live games and archival footage. According to Derek Kennedy, "We weren't looking necessarily for solutions for our data; we were looking for a platform for our production arm."

Initially, VAST didn't have the SMB protocol the NHL required for desktop user access. However, VAST committed to co-developing the protocol to meet this need. As Kennedy recalls, "We took a risk and did an engineering exercise to build the SMB protocol. Three months later, it was in production for the NHL to leverage and for all other VAST customers to use." This commitment to partnership and co-innovation became a cornerstone of the relationship, with VAST engineers collaborating directly with the NHL.

This successful collaboration led to an expanded relationship and the NHL moved its footage archive, consisting of over 20 petabytes of data, onto the VAST Data Platform. This decision not only ensured the longevity of their archival content, but also set the stage for future AI-driven innovation. As Kennedy put it, "We have set ourselves up for future AI and machine learning workloads that will benefit the content generation business later down the line."

Expansion into Arenas: Real-Time Game Operations

After the successful archive implementation, the NHL turned to VAST to support their in-arena game footage content and data needs. The goal was to modernize and streamline the way game footage was captured and transferred from all 32 NHL arenas to NHL headquarters in New York City. “We had great success with VAST in the past,” Kennedy explains, “so when we needed to replace storage in the arenas, we decided to future-proof ourselves by implementing VAST in all 32 arenas.”

In response to the NHL's needs, the VAST Research and Development team tested this workflow and collaborated with the NHL on the rollout of all arena systems to ensure content was flowing efficiently to the NHL headquarters in New York City. “VAST replication expands up to 36 sites and now each one of the 32 different NHL arenas sends digital content to a single platform. We've set the table to create a content platform that exists at the edge, where the game is being played,” says Kennedy.

Enabled by the VAST DataSpace, this real-time replication significantly reduces the time it takes for game footage to become available for post-production and distribution among teams and media partners. This operational speed is critical for modern media workflows, where there is a high demand for quick turnaround times. With footage stored locally at each venue and made quickly available at the NHL NYC headquarters, editors and production teams in different locations can work on game highlights and other content without needing to be on-site.

Moving forward, the NHL is equipped to explore new content creation workflows that leverage data and footage directly from the arenas. With the required data capacity at each venue, the League can run real-time AI-driven workflows to generate highlights or unique content that wouldn't be possible in a cloud-based solution. As Kennedy described, “We can create a localized content generation engine by utilizing our exclusive camera angles, game and tracking data, and merging them together on the VAST Data Platform at the arenas. This opens up new possibilities for creating and distributing more engaging and innovative content for fans.”

Safeguarding History: Preserving the NHL's Legacy

The NHL's work with VAST has also been critical in preserving the League's rich history. As Grant Nodine said, “We've taken it very seriously making sure that our history is safeguarded. It's important, our archive is a huge asset for us.” The migration from LTO tape to the VAST Data Platform has not only safeguarded historical game footage, but also enabled the NHL to explore and leverage those assets in new ways.

Nodine comments: “As AI and machine learning technologies continue evolving, we're able to continuously leverage our entire archive. Having our archive readily accessible on a very performant data platform gives us a lot of opportunities to discover more about those assets as time goes by.” By having all their archival data readily accessible on a single data platform, the NHL can now run AI-driven discovery tools on its assets, creating new opportunities to uncover gems from its history.

Why the VAST Data Platform?

The VAST Data Platform is a highly scalable and affordable all-flash data system that allows you to run AI-scale analytics at less than half of the cost of traditional all-flash solutions.

DASE Architecture

With its unique Disaggregated and Shared-Everything architecture, VAST breaks tradeoffs deliver significant savings and make flash affordable for all of your data.

VAST DataStore

The VAST DataStore is an enterprise all-flash NAS platform built to meet the needs of today's powerful AI computing architectures and beyond.

VAST DataBase

The VAST DataBase is a key strategic piece of the Data Platform targeting structured data. It provides transactional and analytical data warehouse functionality on top of the scalable, performant, all-flash base layer to ingest and process data at best-in-class speeds.

VAST Data Catalog

The VAST Data Catalog leverages the Database and SQL to provide a built-in metadata index that allows you to search and find data easily – structured or unstructured – at scale and in a fraction of the time of traditional methods.

AI-Powered Workflows: VAST DataBase & VAST DataEngine

The NHL is now exploring how the VAST DataBase and DataEngine can further enhance NHL operations, particularly through AI and machine learning. AI models will be used to automate the process of tagging and enriching footage with metadata. This involves tasks such as recognizing key moments in games, identifying players, and detecting logos or specific events. Traditionally, this process would require manual logging, but with AI, it becomes automated and scalable for all footage. This automated metadata tagging allows the NHL to make its footage more discoverable and accessible to editors and producers. “We have quite a bit of metadata already. We can now improve upon metadata capture because there have been a bunch of generational jumps lately that unlock tagging capabilities which didn’t exist before,” points out Nodine.

Nodine envisions using VAST’s DataEngine to continuously collect metadata in near real-time as game footage is captured, making the entire process more efficient. “Being able to push AI discovery down into the data tier means that we don’t need an additional asset management system,” he says, emphasizing the potential for streamlining workflows.

Long-Term Collaboration

This partnership is a testament to the power of collaboration, and the future holds even more exciting possibilities for both the NHL and VAST Data. As the League looks ahead, it is clear that VAST will continue to play a pivotal role in helping the NHL innovate, safeguard its history, and provide fans with unique, cutting-edge content experiences. As Nodine states, “It’s been great working to push the envelope in terms of what the VAST Data Platform can do for us.”

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About VAST Data

VAST Data is the leading data platform software company bringing businesses into the AI era. The VAST Data Platform delivers scalable performance, simplifies data management, and enhances productivity by accelerating time-to-insight for workload-intensive applications. Launched in 2019, VAST has become history’s fastest-growing data infrastructure startup.

Looking to simplify your data center and discover insights in all of your data? Contact us at hello@vastdata.com