



DDN | Case Study



Accelerate >

Broadcast Workflows

Playing-to-win, MLSE implements a centralized storage solution to increase speed & efficiency across their entire media workflow.

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INFORMATION IN MOTION™

Solution

MLSE implemented a DataDirect Networks (DDN) xSTREAMScaler File Storage system, a high-performance, high-capacity storage solution, enabling real-time workflows and long-term content archiving.

Benefits

An easy to manage storage system that allowed MLSE's production and broadcasting professionals to have real-time access to digitized content, bringing productivity and workflow efficiencies, and accelerated return on assets (ROA). With the highest storage density and lowest power consumption, the DDN solution dramatically lowered operating costs and use of datacenter floor space while providing a flexible and scalable content repository that is enabled for future storage capacity and performance demands.

Storage Challenge

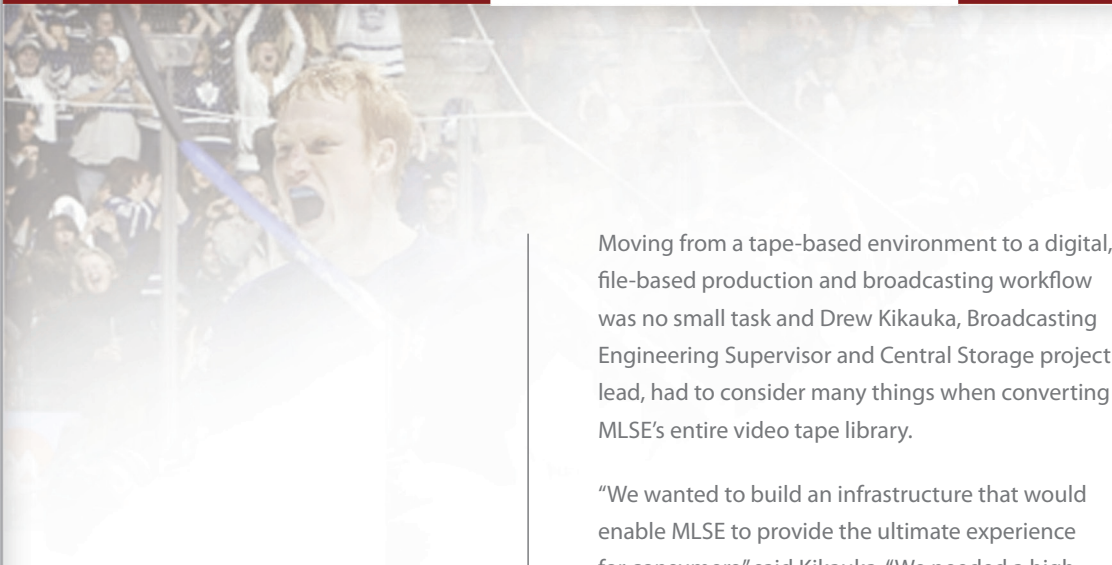
Maple Leaf Sports and Entertainment (MLSE) – home to some of Toronto's biggest sports teams in the NHL®, NBA® and MLS®, as well as TV stations Leafs TV and Raptors NBA TV – wanted to create a central media repository to store and archive all of its digital broadcasting workflow, from production and ingest through editing, post-production and play-out.

The "Central Storage" project needed a storage system that could support a wide variety of devices and software packages, including ingest devices, editing stations running Apple Final Cut Pro and Avid, as well as play-out servers from Harris. The solution also needed to integrate with a Digital Asset Management (DAM) solution which would be implemented during the second phase of the project.

The solution not only needed to enable full connectivity and content sharing between heterogeneous systems, but allow them to work simultaneously, at full speed, without dropping frames or causing delays.

All-in-One Media Storage

Maple Leaf Sports and Entertainment (MLSE), owner and operator of the Toronto Maple Leafs NHL® team, the Toronto Raptors NBA® team, the Toronto FC MLS® team, the Toronto Marlies AHL® team and Leafs TV, Raptors NBA TV, as well as the Air Canada Centre, home to both the Maple Leafs and Raptors, decided to undertake a storage consolidation initiative. Aply named the "Central Storage" project, it would encompass digitizing and archiving over 11,000 hours of video tape, eliminating multiple storage islands and streamlining content into a single centralized storage repository, making the content easier to manage, archive and repurpose for additional revenue-generating activities.



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Moving from a tape-based environment to a digital, file-based production and broadcasting workflow was no small task and Drew Kikauka, Broadcasting Engineering Supervisor and Central Storage project lead, had to consider many things when converting MLSE's entire video tape library.

“We wanted to build an infrastructure that would enable MLSE to provide the ultimate experience for consumers,” said Kikauka. “We needed a high density, high capacity system that would replace our video library but would also scale and give us room to grow. We considered other broadcast-focused systems such as Isilon, Omneon and Avid but DDN offered a pay-as-you-grow architecture which would allow us to simply add capacity and/or performance as needed. DDN's solution not only met our price, performance and density requirements, but also provided the data protection and energy efficiency we were looking for.”

MLSE operates three television channels, two in SD and the third in HD, and has a fourth going live later this year, which will be a hybrid SD/HD channel. The broadcasting workflow at MLSE includes 10 editing bays running Apple Final Cut Pro and Avid and Harris Nexio servers for play-out. The DDN xSTREAMScaler serves as the central storage repository for all video and audio content such as game footage and interviews, as well as all graphics and content created for the sporting arena's jumbotron and digital signage.

“The DDN system was designed to be our central storage for everything media related within our company,” said Kikauka. “From Web and cell phone media, video server files, graphics, content creation, audio files, anything to do with broadcast, the jumbotron and digital signage in the arena, it is all stored in one central location so we can manage it easily. That was the vision we had for the project and DDN is at the heart of it.” DDN's xSTREAMScaler



DDN xSTREAMScaler

The DDN xSTREAMScaler file storage and HSM system, combined with the industry leading throughput of the S2A Extreme Storage, is an ideal choice for heterogeneous environments requiring the very lowest latency data streaming.

xSTREAMScaler supports a broad range of server platforms and operating systems, enabling organizations to eliminate islands of storage and centralize data in a single, cost-optimized SAN storage system.

Windows, UNIX, Linux and Mac client operating systems are all supported within the SAN storage environment, tying together disparate systems and providing greater bandwidth via SAN file sharing as compared to network attached storage approaches. Coupled with an optional, automated tiered data management engine, the xSTREAMScaler manages data across performance storage tiers, archive storage tiers and tape systems to reduce data management overhead and reduce capital expense.

Visit ddn.com/xstream-scaler.

file storage system enables MLSE to connect all of their broadcast workflow elements into a single, consolidated storage system, virtually eliminating the need to copy or transcode content, only to get it from one system into another. Having all the content in one place has dramatically improved efficiencies for the editors and creative workers since all content is available immediately, all in one single namespace. No more searching for content across different online and offline libraries; no more searching for tapes that are sitting on a shelf.

Since implementing the DDN system, MLSE's editors are able to create and collaborate easily and produce content more quickly, including publishing more content to the web at Raptors.com and Mapleleafs.com. In fact, the editors have won several awards for their broadcast packages from the North American Broadcast Design Awards. It is a prestigious awards program that recognizes submissions from all of the major television networks.

"We have the most active web site of any NBA or NHL team," said Kikauka. "Any footage that we can't fit into our broadcast schedule, such as extra interviews or bonus footage, we will publish it to the web site and it is all pushed through the DDN storage. On an average day, we will publish 40 clips, per team, making a much more dynamic experience for viewers. We're trying to lead the other teams with these initiatives and I think our Web sites are proof of that."

The centralized storage environment also supports a new field acquisition process, utilizing file-based cameras and single camera operators instead of traditional broadcasting crews for a number of international sports events. As a file-based workflow leveraging internet connectivity for content transfers, production costs are drastically reduced and the file-based content is available immediately for further editing and play-out.

In addition to reduced production costs, the solution has saved MLSE time and money. Time previously spent retrieving videotapes off a shelf and manually feeding them into a video server, which is a real-time process.

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With the DDN xSTREAMScaler, we are able to ingest content 8x faster than with traditional video tape and we don't have to spend time trying to find a specific tape and insert it into a VTR. And since the files are digital we no longer have to create duplicate tapes so we are able to save about \$100,000 a year in tape purchases.”

MLSE's consolidated workflow solution is managed by a team of only four engineers. Instead of deploying a number of systems to achieve the needed capacity and performance, DDN's solution eliminates the need to manage multiple systems and provides an easy-to-use interface for administrative tasks.

The xSTREAMScaler solution also delivers performance that not only enables all applications and systems to reliably work in real-time, but also provides plenty of room for growth for future performance needs. MLSE can add more HD channels and higher-resolution content without disruptive equipment changes.

The high density of the DDN solution enables MLSE to store all content, roughly 280 TB per year, on the smallest amount of square footage of any vendor considered for this project – and provides the ability to scale the digital media library over many years. This eliminated the need to expand the datacenter to accommodate traditional, lower density storage systems.

Having successfully completed the first phase of the project and beginning to execute phase two, evaluating and implementing a Digital Asset Management system, which will enable search and index capabilities for the digital files, Kikauka reflects, “The xSTREAMScaler has been one of those products that we've been able to install and pretty much forget about it. That has been my favorite part about this project, considering all the things we have tried to install and integrate, the DDN system has been an absolute dream in the sense that the system runs so well that I keep forgetting it is even there.”



DDN | About Us

DataDirect Networks (DDN) is the world's largest privately held information storage company.

We are the leading provider of data storage and processing solutions and services, that enable content-rich and high growth IT environments to achieve the highest levels of systems scalability, efficiency and simplicity. DDN enables enterprises to extract value and deliver results from their information. Our customers include the world's leading online content and social networking providers, high performance cloud and grid computing, life sciences, media production organizations and security & intelligence organizations. Deployed in thousands of mission critical environments worldwide, DDN's solutions have been designed, engineered and proven in the world's most scalable data centers, to ensure competitive business advantage for today's information powered enterprise.

For more information, go to www.ddn.com or call +1-800-TERABYTE.

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