NESN

How Spectra Logic Helps NESN Archive Legendary Sports Footage in 4K UHD

NESN needed an easy, reliable archive to preserve 4K UHD footage from iconic sports teams. Here's how the Spectra Logic® solution knocked it out of the park.

THE CHALLENGE

With its Sony ODA system approaching end-of-life, NESN needed a new archive that **offered "set it and forget it" migration and storage capabilities** for content from sports teams like the Boston Red Sox and the Boston Bruins. The system also had to be scalable enough to support NESN's 4K UHD content initiatives, which can generate up to 700 GB per game.
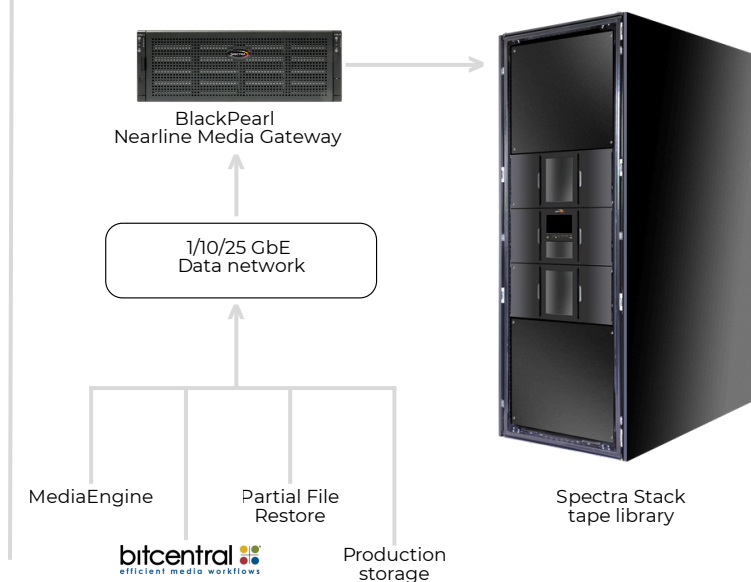
THE SOLUTION

NESN partnered with Spectra Logic to design and deploy a custom archive and migration system capable of storing up to 4 PB of media, **purpose-built for long-term scalability, reliability, and affordability.**

THE RESULT

NESN now operates with a robust, high-density archive that protects decades of legendary sports footage. **By switching from disk to tape, the team unlocked 7x more storage per cartridge.** The integration between Spectra Logic and BitCentral software allows editors to retrieve historical content and transform it into compelling narratives for fans.

THE SYSTEM

BlackPearl
Nearline Media Gateway

1/10/25 GbE
Data network

MediaEngine

Partial File
Restore

bitcentral
efficient media workflows

Production
storage

Spectra Stack
tape library

THE ENVIRONMENT SNAPSHOT

- Spectra Stack tape library, 240-slots
- LTO-9 SAS tape drives, 4 qty
- BlackPearl® Nearline Media Gateway
- MediaEngine software
- Partial File Restore (PFR) software
- Oasis MAM by BitCentral

SPECTRA

THE STORY

When the New England Sports Network (NESN) broadcasts home games of the Boston Red Sox and the Boston Bruins, fans may feel particularly invested in the action.

Here, a shimmering bead of sweat rolls down an athlete's cheek.

There, infinitesimally small specks of dirt explode as a player dives head-first into home base.

The colors are brighter. The motion is smoother. And the close-up shots are shockingly realistic.

Such spectacular detail is the result of NESN's growing initiative to produce sports games in 4K UHD — ultra-high-definition (UHD) content offering viewers a cinematic sports experience that makes them feel like they're watching from front-row stadium seats.

Since 2020, NESN has produced all Boston Red Sox and Boston Bruins home games in 4K UHD, a feat that presented a major storage hurdle for NESN's Technical Support Manager, Chris Reese.

ABOUT NESN

Founded in 1984, NESN is owned by the Boston Red Sox and the Boston Bruins, and is available throughout the six-state New England region, as well as nationally via NESN National.

NESN is New England's largest television network, reaching 4 million homes.

NESN.com is the most visited regional sports website in the U.S. and is committed to creating and distributing New England sports content that entertains, informs, and enriches people's lives.

He is tasked with archiving massive footage volumes and keeping it accessible for years to come.

Reese notes that **a single 4K UHD game can generate between 600-700 GB**, posing a significant storage challenge. In other words, higher-resolution content means more storage capacity.

Reese knew NESN's aging Sony Optical Disk Archive (ODA) wouldn't keep pace. It was nearing end-of-life, and NESN needed a solution that could not only migrate more than a petabyte of existing footage but also support the organization's surge in new content.

He turned to Spectra Logic for help.

A CUSTOM ARCHIVE THAT "JUST WORKS"

Reese had a clear goal when it came to choosing a storage system: simplicity.

"To me, the best archive is one you don't have to think about," he says. "It just needs to work."

To build a system that delivered on that promise, **Reese worked with Spectra Logic to configure a fully integrated, scalable archive tailored to NESN's exact needs.**

The system includes:

- Spectra Stack tape library, 240-slots
- LTO-9 SAS tape drives, 4 qty
- BlackPearl Nearline Media Gateway
- MediaEngine software
- Partial File Restore (PFR) software
- Oasis MAM by BitCentral

ABOUT THE SPECTRA STACK

Spectra Stack tape libraries are designed for growing enterprises and growing data.

From a single control module to as many as six expansion modules, Spectra Stack solutions deliver the right capacity and performance at every stage of growth.

A peek inside the Spectra Stack. Each module contains 80 slots.

In a first of it's kind integration, Spectra partnered directly with engineers at BitCentral to connect NESN's Oasis media asset management (MAM) system with MediaEngine, the flagship data mover that is a component of the Spectra Logic Rio Media Suite.

The result: a fully automated, hands-off migration from the Sony ODA to the new Spectra Stack — no manual interventions required.

For Reese and his team, that means editors can focus on what they do best: telling legendary stories.

Even decades-old footage is just a quick search away.

"If an editor needs a clip from 1985, they can find it, restore it, and air it fast," explains Reese. "Our Spectra system allows us to tell stories without worrying whether the footage is going to come back or not."

SCALING FOR THE FUTURE, REDUCING MEDIA COSTS

With rising demand for 4K UHD content, Reese knew NESN's storage needs would only grow.

Using LTO-9 Spectra Certified Media, which cleans, tests, and verifies every tape cartridge for maximum reliability and performance, the new system can store up to 4 PB — four times the capacity of NESN's current media library.

> **Our Spectra system allows us to tell stories** without worrying whether the footage is going to come back or not.
>
> **Chris Reese**
> Technical Support Manager
> NESN

When NESN eventually requires more space, scaling will be simple. The modular design of the Spectra Stack allows users to add capacity in 10-slot increments, supporting up to 560 slots and 25.2 PB using LTO-9. (New tape generations like LTO-10 and beyond increase storage capacity even more.)

Tape also lends major cost advantages. Compared to the older Sony ODA system, tape storage is significantly denser: A disk cartridge could hold 2.7 TB. A similarly priced LTO-9 tape cartridge holds 18 TB (native).

"I can get as much content on one tape cartridge as I did with seven disk cartridges," says Reese. "There's a significant cost savings there."

An additional benefit of such data density? The low-footprint solution optimizes valuable data center floor space and power, allowing NESN to get more out of its physical IT environment.
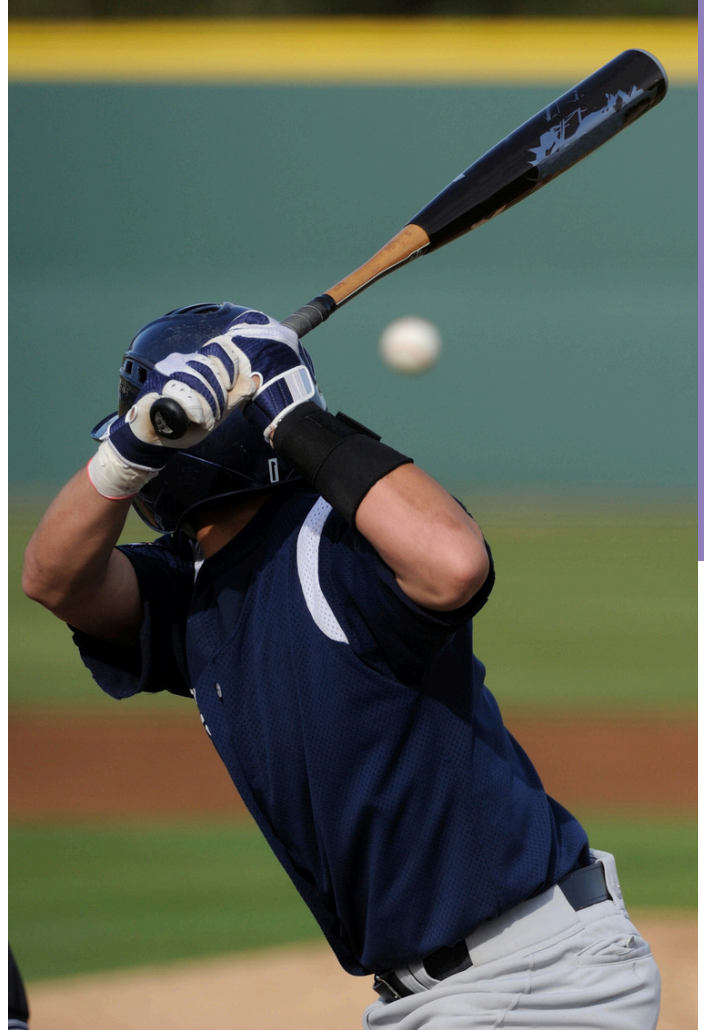
PRESERVING SPORTS MOMENTS WITH SPECTRA

With Spectra, NESN didn't just solve a storage problem. It future-proofed its migration and archive systems.

Reese and his team now have a scalable, cost-effective solution that efficiently manages 4K UHD footage behind the scenes.

Decades of unforgettable sports history are easily accessed, from vintage Bruins games to last night's Red Sox highlight. **Editors can focus on storytelling, not system maintenance.**

And when the next legendary moment happens, NESN will be prepared to preserve it in full 4K UHD glory.

Contact Spectra Logic

EXPLORE MORE CASE STUDIES

SNY

"The Spectra migration solution was simple to configure and use."

Randy Bishop, Systems Manager, SportsNet New York

Read the Story

Studio Hamburg

"Spectra infrastructure offered the performance we needed at a great value."

Dietmar Schuldt, IT Services Manager, Studio Hamburg

Read the Story

BFI

"Spectra helped us create a content strategy to preserve the BFI National Archive digital collection."

Stephen McConnachie, Head of Data & Preservation, British Film Institute

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