

FIBRE CHANNEL'S FUTURE IS BRIGHT IN MEDIA AND ENTERTAINMENT

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Despite the push for Ethernet adoption in the Media and Entertainment industry, Fibre Channel storage network connectivity remains an essential enabler of today's content creation and media workflows.

As video resolution and frame rates continue to grow, so does Fibre Channel network storage within the Media and Entertainment market. Coughlin Associates, publisher of the Media and Entertainment Storage Report, projects close to 10% growth in Fibre Channel ports in 2019 in Media & Entertainment applications.

To support demanding new 8K and 4K workflows, system administrations and other IT professionals in Media and Entertainment are choosing to expand and upgrade their existing high-performance, easy-to-manage and well-known Fibre Channel SAN fabrics, rather than add additional performance sensitive traffic to their Ethernet network.

Choosing the Right Network

The choice between using Fibre Channel or Ethernet is largely dictated by whether a dedicated SAN is required and/or desirable. Typically, Ethernet-based SANs are implemented in the context of a converged network or at the minimum sharing of switch ports, although there has been an increased use of dedicated iSCSI fabrics as well. Fibre Channel networks are always utilized as dedicated SANs. For many use cases such as telecom central offices and embedded applications, a dedicated SAN is not an option. In other cases, the mission-critical nature of the application alone justifies a dedicated SAN. Examples of this include billing systems and enterprise resource planning (ERP) systems for Fortune 500 companies and raw content editing and post-production workflows in the Media and Entertainment industry.

Rich Media Content Thrives on Fibre Channel

Technology leaders in Media and Entertainment continue to invest in Fibre Channel because of its proven and unique edge over other networking technologies in terms of rock-solid reliability, unmatched predictable performance and massive scalability.

In today's time-sensitive environments, it's critical to ensure creative professionals have secure and dedicated bandwidth. In post-production, visual effects and animation, there is nothing faster and more reliable than Fibre Channel. With 48% less overhead per frame compared with Ethernet, and the ability to handle a 40% bigger workload without requiring re-transmission or error checking, Fibre Channel is built specifically for low-latency flash storage. It's built on foundational technology with the guarantee data will transmit in order, on time and without corruption.

With Fibre Channel, a SAN administrator can also dedicate ports to ensure adequate bandwidth is available to easily zone a SAN and efficiently divide workloads. Fibre Channel provides better security because permissions can be allocated and cross traffic is eliminated. With the risk of a data breach significantly reduced, entertainment organizations have the peace of mind that their latest project will not leak early and jeopardize their business.

New leading-edge media technologies like 8K and 4K video, virtual reality, augmented reality formats, and other visual enhancement technologies such as high dynamic range (HDR), high frame rate (HFR) and wider color gamut, demand new, higher performance delivery requirements to support workflows. With 16 times the resolution of 1080p HD, 8K video, in particular, creates one of the toughest technical challenges for studios. This is where Gen 6 Fibre Channel delivers the most robust solution in the industry with 32 Gbps performance, low latency and the flexible scalability to handle complex workflows and the growing storage requirements for future Media and Entertainment projects.

Unpacking the post-production workflow reveals multiple steps taking place in the processing of content to support the editing that occurs from distribution, production, and data protection. The workflow demands of creating, transferring, duplicating, storing, securing, and archiving data require a reliable network that guarantees frames are not dropped.

Other examples of use cases requiring a high-performance network include:

- **Video ingest** – Capturing, transferring or importing different types of video, audio or image media into an editing program
- **Mastering and finishing** – Color correction, checking for gaps, bad transitions, visual errors, broadcast legalization or finessing of graphics
- **Playout and distribution** – Servers for broadcasting have no-fail commercial requirements for no dropped frames
- **Digital asset management** – An integral part of today's push in the Media and Entertainment industry to provide better protection and utilization of media assets
- **Accessing digital assets** – Retrieving content stored on tape, HDDs, or SSDs that are transitioning to advanced storage array technology

- **Data center applications** – Content analytics deliver insight into the amount of content being created, the nature of that content and how it's used to optimize workloads and time to market
- **High power server connectivity to all-flash arrays** – Supports enterprise applications to combine business intelligence and business analytics practices and apply them to digital content

This is why Fibre Channel is the storage enabler the world's leading media and film companies have relied on for decades. Gen6 32GFC is the most advanced storage networking technology purpose-built to address the most challenging Media and Entertainment workloads.

Looking Ahead

Since its inception over two decades ago, Fibre Channel has been the fabric of choice for SANs. With over 120 Million ports shipped, an estimated 46M Fibre Channel ports are currently in operation today, most of which provide up to Gen6 Fibre Channel. This represents not only a massive base of Fibre Channel already installed but also a significant financial investment. This in-place infrastructure provides a solid foundation for the adoption of technologies like Gen 7 64GFC and NVMe over Fibre Channel.

Fibre Channel SANs have been the best choice for storage architects and will continue to be the lowest risk and highest performing option. Because Fibre Channel SANs are dedicated to storage traffic, they can scale and grow without impacting performance. Therefore, the future for Fibre Channel is very bright within the Media and Entertainment industry!

For more information, check out [interviews with experts in Media and Entertainment](#) as they discuss why Fibre Channel is the key to making 8K and 4K media production possible or read [Fibre Channel Connectivity in Modern Content Creation Workflows](#) by Jim McKenna, Facilis Technology, for an in-depth analysis of Ethernet versus Fibre Channel in rich media environments.