



# ANY-K VIDEO STORAGE FOR MEDIA WORKFLOWS

## SOLUTION BRIEF

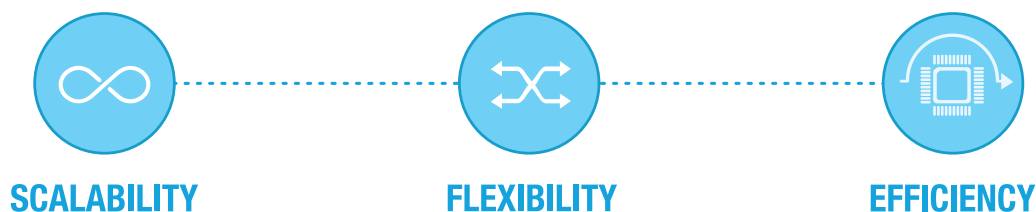


### INTRODUCTION

*Customers in the Media and Entertainment space are choosing Excelero's NVMesh® to provide editors' workstations with access to high bandwidth and low latency performance to accommodate streaming editing and reel presentation to any workstation at any time. NVMesh is a software-defined block storage solution that enables production and post-production workflows to be ready for current and future film standards while the business enjoys a hardware-agnostic approach, driving down costs and enabling flexibility while not sacrificing performance. A 100% software-only server SAN technology using standard networks, NVMesh allows unmodified applications to utilize the NVMe protocol across network storage at local speeds and latencies.*

### RESOLUTION & FRAMERATES

The media and entertainment industry is one of the fastest evolving industries. Their constant goal is to offer viewers better, more realistic, more impressive viewing experiences. Over the past decade in particular, the industry has experienced massive video quality progression – think HD, 3D, 2K, 4K, HFR, UHD TV, etc. But as video resolution and frame rates increase, there is a big impact on the infrastructure's production and post-production teams that need to produce, finish, and deliver the content.



## POST-PRODUCTION HOUSES ARE WHERE THE REAL MAGIC HAPPENS IN FILM PRODUCTION.

This entails large studios with teams of artists specialized in specific domains such as color correction, special effects, sounds, and more.



These artists' workstations constantly stream footage from and to backend storage systems in order to modify content, add visual effects, correct colors, and be able to play any video back in real time. This is often done with the customers (directors) watching over the shoulders of the artists.

*"The IT infrastructure required to feed dozens of workstations of 4K files at 24fps is mindboggling – and that doesn't even consider what storage demands we'll face with 8K or even 16K formats. It's imperative that we can scale to future film standards today. Now, with innovations like the shared NVMe storage such as Excelero provides, Technicolor can enjoy a hardware-agnostic approach, driving down costs and enabling flexibility for tomorrow while not sacrificing performance."*

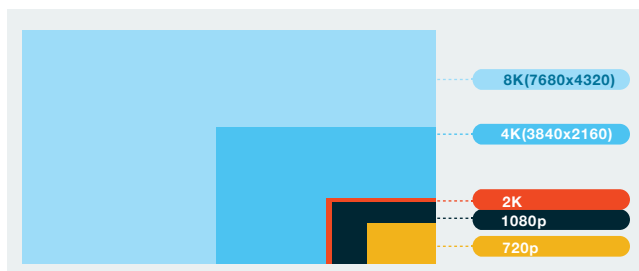
*Amir Bemanian, Engineering Director at Technicolor.*



***Just imagine the bandwidth that is required to feed dozens of workstations concurrent streams of 4k video at 30fps!***

## FUTURE-PROOFING POST-PRODUCTION STORAGE

Today's reality is that data center and infrastructure teams at post-production houses are struggling to keep up with the rapid evolution from one resolution to the other: 4K is becoming the default and 8K is on the horizon — frame rates are increasing to 48 and even 60 frames per second (fps). The additional storage capacity – and thus also bandwidth – that is needed for higher frame rates increases linearly: doubling the frame rate from 30 fps to 60 fps also doubles the storage needs. Increasing resolution from 2K to 4K quadruples the storage needs, as naming refers to the amount of horizontal pixels (but the number of pixels also doubles vertically). When a studio switches from 2K 30fps to 4K 60fps, that means the post-production house needs to be ready to store and stream eight times as much data. That is, if the studio did not invest in extra cameras, more visual effects, HDR, color depth and gamut....

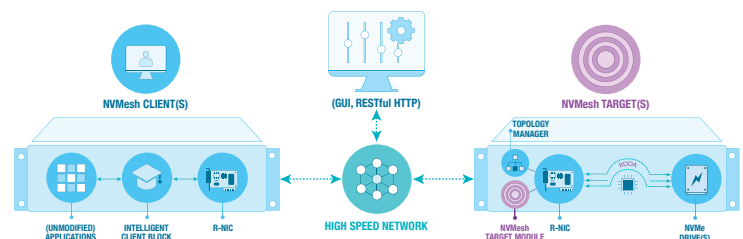


As a result of this rapid evolution, and to be better prepared for current and future storage and streaming needs, M&E customers are exploring new storage and network architectures. Many of those customers have legacy infrastructures with a Fibre Channel network and storage arrays serving tens of workstations.

The main storage problem is that the speed to ingest data to the workstations from the Fibre Channel storage arrays is just too slow and does not scale. Another challenge for media and entertainment post-production workflows is to not drop frames. Dropped frames impact the technical quality of an asset. They can cause on-screen motion, which distracts the viewer from a seamless viewing experience.

## EXCELERO'S NVMECH FOR ANY-K MEDIA WORKFLOWS

Excelero NVMesh is a Software Defined Storage solution that is taking the media and entertainment post-production and sound studio ecosystem by storm. NVMesh enables workstations' access to large scalable bandwidth and low latency performance that studios and their customers need for streaming editing and reel presentation to any workstation at any time. With 4K becoming the standard and 8K on the horizon, NVMesh enables workstations to be ready for the future while the business enjoys a hardware agnostic approach driving down costs and enabling flexibility. One customer found that with just (6x) standard servers powered by NVMe flash, NVMesh enabled 4K streaming @ 60fps to 55 workstations concurrently with a low cost per GB (includes servers, NVMe drives, and networking).



### NVMESH BENEFITS FOR ANY-K MEDIA WORKFLOWS

#### SCALE & PERFORMANCE

- Delivers 99.8% of the local NVMe storage servers' performance over the network to workstations.
- Leverage the full performance of your NVMe flash at any scale, over the network
- Scale your performance and capacity linearly
- Leverage high IOPS, high bandwidth or mixed

#### EFFICIENCY

- Supports current and future media workflows
- Maximize the utilization of your NVMe flash devices
- Choose hardware from any server, storage and network vendor
- Easy to manage & monitor, reduces the maintenance TCO

#### FLEXIBILITY

- The block interface facilitates easy integration with other legacy storage, such as GPFS or Stornext
- Choice of architecture: converged, disaggregated or mixed
- Mix different storage media types to optimize for cost, scale or performance
- Scale storage and compute separately, as needed

### ABOUT EXCELERO NVMeSh

NVMeSh features Elastic NVMe, a distributed block layer that allows any application to utilize pooled NVMe storage devices across a network at local speeds and latencies. Distributed NVMe storage resources are pooled with the ability to create arbitrary, dynamic block volumes that can be utilized by any host running the NVMeSh block client. These virtual volumes can be striped, mirrored or both while enjoying centralized management, monitoring and administration. In short, applications can enjoy the latency, throughput and IOPS of a local NVMe device while at the same time getting the benefits of centralized, redundant storage. NVMeSh is deployed as a virtual, distributed non-volatile array and supports both converged and disaggregated architectures, giving customers full freedom in their architectural design.