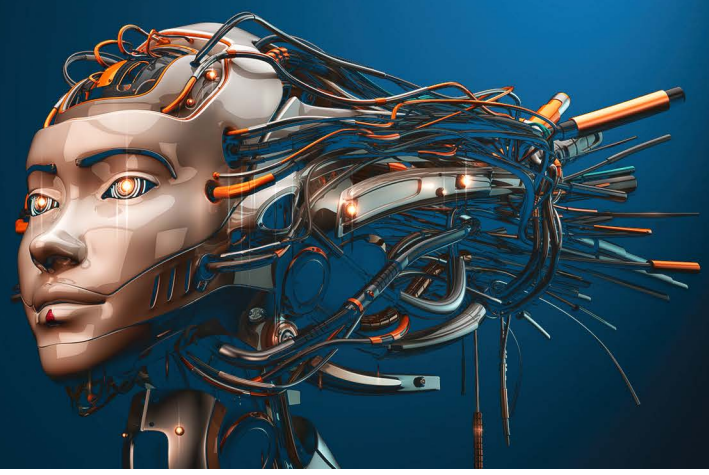


EFS for Visual Effects

Super-fast shared storage for VFX collaboration



A heritage of storage innovation

Meeting the challenges of storing and accessing shared digital assets

Creating today's eye-popping visual effects puts unprecedented demands on storage infrastructure. Multiple artist stations and render nodes need unfettered and lightning quick access to shared material. Renders that can run for days must complete without interruption. Playback capability of a huge variety of formats, including industry standards such as Open EXR, is essential. Storage must be expandable without complexity and compromise. All of these prerequisites must be met whilst also adhering to stringent security requirements such as those set out by the CDSA and MPAA.

Behind the scenes of a production, a vast technology infrastructure operates to create and support the amazing VFX shots we see in everyday films. Efficiency and dependability are primary concerns throughout the entire workflow - including initial video preprocessing, meeting throughput demands for VFX, finishing and rendering workloads, disaster recovery and storage expansion. These film pipelines are also a part of the ever changing global production business with multiple studios spread around the world involved in any single production. Of paramount importance to these facilities is the ability for them to work collaboratively with no downtime and to share valuable assets securely.

Choosing the right scale-out storage helps the artists stay efficient, keeping them on the creative edge by freeing them from technological constraints around performance and accessibility, enabling them to individually and collectively focus on production standards. Any slowdown of storage silos or speed will interrupt the creative process and ultimately cost the company money. Rock-solidly dependable storage infrastructure gives a facility firm ground for creative exploration and technical innovation.

The ability to Turbocharge your storage

VFX facilities are well known for their 'elasticity' - their need to scale up very quickly by adding a host of new staff in a short space of time. The preferred storage platform has to meet the demands of very fast expansion of number of clients connecting to storage, all whilst maintaining exceptional bandwidth with zero downtime. Ultimately, storage choice is absolutely essential to ensuring a smooth and successful operation and production, that delivers both on time and on budget.

EditShare - Media Workflow Engineering

EditShare's foundations are deeply rooted in the media and entertainment sector. Having started out as a media focused storage vendor, EditShare are uniquely positioned to understand the fast-paced changes that are happening at production facilities globally. For more than 15 years we have worked with a global list of clients, identifying and addressing those issues that impede productivity, in a climate of ever-changing requirements. In this time EditShare has seen an accelerating growth in demand for higher production values, fuelled by viewer-appetite for blockbuster-style visual effects on virtually every production.

Our premium and award-winning EFS storage servers are built for performance, strength, flexibility and future-proofing. Based on a highly resilient architecture with a powerful distributed scale-out file system, the EFS platform is engineered for media-intensive workflows. The current IABM media storage champion, EFS provides your facility with a super-high-performance, unified media ecosystem.

EFS platforms offer facilities a single global namespace, at the same time providing unrivalled throughput performance, whilst always offering the ability to scale to meet your needs. EFS can help you get the most out of your VFX facility, working natively with the vast majority of leading applications such as The Foundry's Nuke, Mari, Modo, Autodesk Maya and Flame Premium through to SideFX Houdini. EditShare removes barriers to creativity.

To complement the storage platform and add further intelligence, EditShare has developed Flow - a robust and mature set of media asset management and workflow tools, designed to streamline and enhance every media pipeline. Additionally, Autodesk Shotgun can be enabled to work in collaboration with Flow to index all media associated on your storage. EditShare has also addressed the needs of Adobe's Creative Suite users by implementing our own application-integrated Adobe CC Panel.

Fine Grain control with ACL

Access Control Lists (ACL) are another hot feature built into the EditShare EFS suite of tools. Pipeline managers are granted fine-grain control over project, folder and file access. Permissions can be applied to individuals or groups of users. Each user or group have control of their own folders and files within the global ACL media space. Access and visibility of areas outside this designation can be tightly controlled.

At the top level, ACL enables a facility to define clear boundaries around and throughout the thousands or millions of valuable assets in the shared pool. Operationally it enables groups and users to share material with stakeholders - e.g. The 'geometric lighting' group administrator could grant access to the 'Nuke' group, whilst the 'rigging' group could grant access to the 'Flame' team by sharing the FBX data folder. Control is made available through Finder and Windows Explorer extensions that are installed with EFS' Administration component, EditShare Connect.

Media Optimized Intelligent Storage

There are many reasons why facilities choose EditShare as their storage partner when investing in their production pipeline. Whilst we can't list them all, take a look at some of the key reasons why EditShare should take the top spot when you come to discuss your next production.

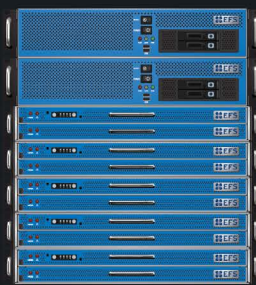
- ▶ EditShare's VFX storage solutions are based on the powerful award-winning media engineered EFS parallel distributed file system
- ▶ Powerful ACL media spaces enable creatives to only see the content they need to, wherever it's located
- ▶ Easy implementation and painless expansion - set up of additional nodes is simple and efficient
- ▶ Powerful folder structures to breakdown the content for each VFX/animation group
- ▶ Enhanced Security with the addition of File Auditing which is aligned with the MPAA guidelines when dealing with highly valuable assets
- ▶ EditShare Sync Tool enables studios to sync media with remote EFS storage nodes situated in other global offices
- ▶ No single point of failure options including redundancy across nodes on a per directory or per file basis (duplication or file-level "RAID-on-RAID")
- ▶ Native drivers for all major operating systems (Windows, OS X and Linux)
- ▶ Smooth playback of DPX and other "file per frame" formats
- ▶ Start with single storage units. Scale to many petabytes, the more nodes added, the higher the throughput becomes
- ▶ Single namespace design - no individual partitions that run out of space
- ▶ Multi optional Ethernet connectivity - 1, 10, 25 and 40 Gigabit
- ▶ Optimized for media workflows with performance that can exceed 2500 MB/sec per node (SSD based storage)
- ▶ Blazing fast metadata access -- file system metadata stored in RAM for very low latency
- ▶ Hardware RAID 6 within each storage node
- ▶ EditShare 'Storage Goals' bandwidth allocation enables suites who need speed to have it
- ▶ Performance scales linearly as more storage is added
- ▶ Automatic rebalancing and no downtime during storage expansion
- ▶ Disaster recovery options available with EditShare's latest EFS node, the 40NL
- ▶ Powerful node based automator scripting based on Flow Automation module
- ▶ Ability to playback multi layer timelines, in multiple suites
- ▶ Support for finishing suites such as Assimilate, Avid, Adobe, DaVinci Resolve and Autodesk Flame, no need for local cached storage for playback
- ▶ Guaranteed stream count playback
- ▶ Private Airflow cloud enabling review and approval remotely of content
- ▶ Transcoding modules with the ability to deliver up to 470 different encoded versions
- ▶ A tailored solution to meet your needs. With support offices located globally, our team are here to help you when you need it most

Typical workflow with EFS storage plus Flow media asset management

1 3D models & render files written to EFS storage



2 Real time 4K DPX playback to check render results.



3 Flow Automation detects new render files, transcodes to high-quality proxies, and sends email notification for review and approval.



5 When shots are approved, Flow Automation transcodes them to ProRes, DNxHD or other high-quality formats and automatically delivers them to client via FTP, standard file acceleration services, as well as LTO tape.



4 AirFlow "Private Cloud" provides proxy access anywhere in the world for comments or review and approval.



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