SOLUTION BRIEF

ATTO

ATTO 10Gb Ethernet Solutions for Dell FluidFS

Challenge

With the arrival of new high-resolution video formats including 4K and 8K, there's an increasing need in the media & entertainment industry for storage solutions that can easily scale across a network and efficiently adapt to changing post-production workflows. A key requirement in these environments is the ability for multiple editors and digital effects artists to collaborate on shared media files. With multiple streams of content being accessed simultaneously over the network, there's also a need for low-latency, high-bandwidth connectivity to reduce file-transfer bottlenecks.
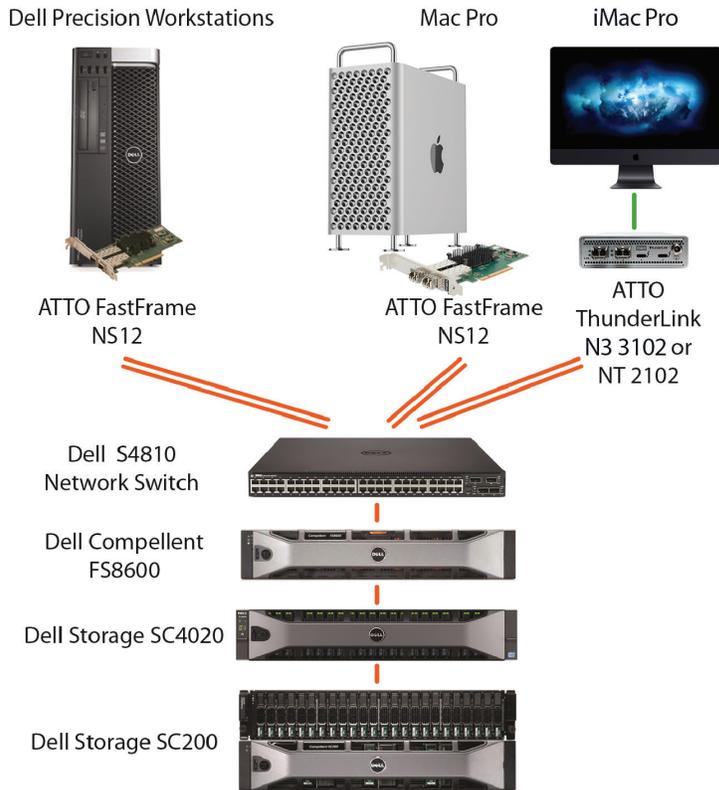
The Solution

When combined with Dell Compellent FS8600 Scale-out NAS with Fluid File System (FluidFS), ATTO FastFrame™ 10GbE network interface cards (NICs) and ThunderLink® 10GbE Thunderbolt™ adapters provide high-performance, low-latency network connectivity for macOS®, Windows® and Linux® clients. ATTO 10GbE solutions simplify networking administration and integrate seamlessly into Dell FluidFS environments, giving FluidFS users the ease of use of a shared network volume as well as high throughput. They also reduce the total cost of ownership by improving connection bandwidth and eliminating redundant network infrastructure components.

ATTO FastFrame™ 10GbE NICs and ThunderLink® 10GbE Thunderbolt™adapters leverage unparalleled performance to meet the performance needs of today's bandwidth-intensive post-production environments. They are ideal for applications that require low-latency, high-bandwidth data transfers, such as data back-up and restoration, video-on-demand and video streaming, medical imaging, and clustered databases. Advanced Data Streaming (ADS™) Technology, a proprietary feature found throughout the ATTO product line, manages network latency to provide high-performance media file transfers and reliable playback of streaming media.

Windows	10but YUV		16bit RGB	
	Writes	Reads	Writes	Reads
720x486 NTSC	241	136	276	170
1920x1080 HD - 1080p	343	276	383	414
3840x2160 4K Red HD	369	478	381	518
3840x2160 Ultra HD	379	475	384	467
4096x2160 4K-2160	383	472	405	500
5120x2700 5K Red	375	498	397	507

macOS	10but YUV		16bit RGB	
	Writes	Reads	Writes	Reads
720x486 NTSC	284	157	326	207
1920x1080 HD - 1080p	360	255	364	260
3840x2160 4K Red HD	382	265	373	259
3840x2160 Ultra HD	388	261	310	249
4096x2160 4K-2160	388	253	380	261
5120x2700 5K Red	388	263	380	264

The Dell Fluid File System is designed to go beyond the limitations of traditional storage by offering customers a flexible, scale-out architecture that grows non-disruptively as business needs evolve. FluidFS is a fully distributed, clustered file storage solution that supports both high-capacity and performance-intensive workloads. As a core component of the Dell Fluid Data architecture, FluidFS brings differentiated value to the Dell SC Series and PS Series storage platforms.

Dell Precision Workstations   Mac Pro   iMac Pro

ATTO FastFrame NS12

ATTO FastFrame NS12

ATTO ThunderLink N3 3102 or NT 2102

Dell S4810 Network Switch

Dell Compellent FS8600

Dell Storage SC4020

Dell Storage SC200

Solution Benefits

- Flexible connectivity with broad operating system support, ATTO FastFrame™ 10GbE NICs and ThunderLink® Thunderbolt™ adapters offer optimized connectivity for high-bandwidth media and entertainment workflows
- Performance engineered with support for link aggregation and failover, FastFrame 10GbE NICs offer redundancy and high availability
- Reliable streaming: ATTO's proprietary Advanced Data Streaming (ADS™) Technology manages latency to provide reliable, high-performance media file transfers
- Workflow mobility: ATTO Thunderbolt adapters enable workbook/portable workstation connectivity to Dell file based storage
- Seamless scaling: Dell FluidFS technology scales capacity and performance non-disruptively; extends advanced features and efficiencies of block storage to file-based storage

Solution Components

- ATTO FastFrame NICs
- ATTO ThunderLink 10GbE Thunderbolt adapters
- Dell Compellent FS8600 Scale-out NAS with Fluid File System
- Dell Storage SC200 expansion enclosure
- Dell Storage SC4020 all-in-one array
- Dell S4810 managed network switch