

ATTO FastFrame™ Drivers for Information Technology

Performance Optimized for Small-Block Size Transfer Applications

Overview

When backing up data, write speed is the most important metric to an organization. ATTO SpeedWrite™ keeps paths between host and ATTO XstreamCORE® intelligent Bridge filled with data to significantly boost write performance to tape. Multiple hosts can each be talking to different tape drives and all hosts benefit from SpeedWrite's early response mechanism. SpeedWrite boosts tape performance by up to 25% over a direct connect SAS HBA connection to tape drives. SpeedWrite gives a successful response to the host in parallel with sending commands to the drive. Hosts can send the next command down to XstreamCORE, making the system look like tape devices can handle a queue depth of two.

ATTO FastFrame™ NICs provide users with all the benefits associated with 10GbE speed while allowing organizations the cost-benefits reaped by leveraging existing Ethernet knowledge and infrastructure already existing within the organization, all while providing performance ATTO has become known for in the industry. ATTO drivers for IT applications provide users with performance optimized for the small-block size transfers typically required by IT applications.

The ATTO Advantage

ATTO provides experience with IT applications, coupled with a holistic development model between hardware and software, has resulted in performance characteristics with ATTO drivers that are optimized for the unique needs of those working with numerous IT applications.

Benchmark testing conducted with dual-channel ATTO FastFrame NICs indicates a pronounced advantage across smaller block-size transfers. Testing was conducted with the same hardware setup between the ATTO and Intel® drivers to provide equivalent comparisons.

As a whole, across block sizes ranging from 4K to 64K and encompassing reads and writes, the ATTO drivers provided significant performance improvements, both from an MB/s and IOPS perspective. Read performance shows up to a 39% improvement in both MB/s and IOPS, while write performance shows up to an impressive 76% improvement in both MB/s and IOPS. This can translate to significant user benefits. For instance, imagine a backup process that may normally take 12 hours suddenly taking 25% as much time and being completed within three hours.

About ATTO

For over 30 years, ATTO Technology, has been a global leader across the IT and media & entertainment markets, specializing in network and storage connectivity and infrastructure solutions for the most data-intensive computing environments. ATTO works with partners to deliver end-to-end solutions to better store, manage and deliver data.

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Summary and Conclusions

ATTO is experienced in developing drivers specifically optimized for its hardware has continued with our entry into 10GbE products. The pronounced benefits of utilizing a 10GbE manufacturer that knows how to optimize every last piece of performance for the industry are quantifiably demonstrated above, leaving little doubt: If your workflow involves 10GbE, FastFrame NICs utilizing ATTO hardware-optimized drivers are the industry's best-performing choice.

Configuration

IOMeter test

Host 1	Host 2
SMB 3.0 Share	Client mapped share
Intel® computer	Dell® computer
Xeon 2.6G 8-core CPU	Xeon 2.4G 4-core processor
16GB memory	4GB memory
FastFrame NS12 NIC	FastFrame NS12 NIC
Windows 2012	Windows 2012

