

ATTO Technology and Dell Power Genomic Research

SYSTEM COMPONENTS:

- Dell PowerEdge™ R720 server (running Windows Server 2012 R2)
- ATTO Technology R680 RAID Adapter w/ CacheAssure™ (ESAS-R680-CA1; S&P SKU A9012942)
- Dell PowerVault™ MD3060e Storage Enclosure



ABOUT ATTO

ATTO Technology, Inc. is a global leader of storage and network connectivity and infrastructure solutions for data-intensive computing environments. ATTO provides a wide range of end-to-end solutions to better help customers store, manage and deliver their data. With a focus toward markets that require higher performance, ATTO manufactures host adapters, RAID adapters, network adapters, storage controllers, Thunderbolt enabled devices, switches and software. For more information, visit www.atto.com.

ABOUT DELL

Dell Inc. listens to customers and delivers innovative technology and services that give them the power to do more. For more information, visit www.dell.com.

Quintiles Transnational is the world's largest provider of biopharmaceutical development solutions, with a focus on clinical trials and associated laboratory and analytical services.

A division of Quintiles dedicated to genomics research was experiencing frustration with an IT solution that handled DNA sequencing. Specifically, it required XFS-optimized Linux drivers to support the custom software applications used to process large (100GB-plus) data sets. In addition, with research generating multiple terabytes of data per week, a high-capacity, redundant storage solution was needed to archive and protect that data.

RECIPE FOR SUCCESS: ATTO AND DELL

The system that the company transitioned to consists of Dell's PowerEdge™ R720 server and PowerVault™ MD3060e storage enclosure and ATTO Technology's ExpressSAS® R680 RAID adapter. This combined solution delivered the performance, redundancy and capacity required for the division's data processing and archiving needs.

ATTO's R680 RAID adapter contributes data protection to the configuration by providing a redundant, high availability connection between servers and storage.

A main reason why Quintiles selected the Dell/ATTO solution was the configurability provided by the ExpressSAS R680 RAID Adapter. ATTO works with OEM manufacturers to create solutions that address a

user's specific workflow requirements. Said Daniel Sterling, HPC System Administrator at Quintiles, "Having a supported RAID card and being able to call up ATTO was a big plus. Also, being able to configure the RAID card quickly and easily the way we wanted to was something we weren't able to do before."

KEY FEATURES

Advanced Data Streaming (ADS™)

ATTO's optimized driver algorithms provide consistently high-performance reads and writes of large files. The R680's 1GB onboard cache additionally improves write performance by providing early responses to write commands. It also provides a larger read-ahead cache, which allows the card to prefetch more data and deliver it faster.

Smart Reads/Writes

Large block data transfers can create "write holes" as the file system interrupts I/O for logging operations. The R680 efficiently parses these to maintain consistent data throughput.

DriveAssure

Enables applications to operate at peak levels by actively scanning drives to mitigate the effect of premature slowdowns and failures. Works to identify and resolve issues with poor performing and problematic drives and provides controls to tune hardware for application needs.

