ATTO Technology and Dell

SCALABLE, SECURE STORAGE SOLUTION FOR OIL AND GAS PRODUCTION

SYSTEM COMPONENTS:

- Dell PowerEdge R720 server (running Windows Server® 2012 R2)
- ATTO Technology R680 RAID Adapter w/ Cache Assure (ESAS-R680-C00; S&P SKU A7497834)
- Dell PowerVault™ MD3060e Storage Enclosure
- Microsoft Exchange Server 2013

ABOUT ATTO

For 30 years, ATTO Technology, Inc. has been a global leader across the IT and media & entertainment markets, specializing in storage and network 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. Working as an extension of customer's design teams, ATTO manufactures host and RAID adapters, network adapters, storage controllers, Thunderbolt™ adapters, and software. ATTO solutions provide a high level of connectivity to all storage interfaces, including Fibre Channel, SAS/SATA, iSCSI, Ethernet, NVMe, NVME over Fabrics and Thunderbolt. ATTO is the Power Behind the Storage.

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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.

One of the world's largest crude oil exporters and producer of almost 10% of the world's oil supply was seeking a solution to provide a reliable, high performance Microsoft Exchange environment to several dozen of its data centers located worldwide. A further requirement of the solution was high-density storage that could be easily scaled in response to growing business demands while minimizing data center footprint for power and cooling cost savings.

RECIPE FOR SUCCESS: ATTO AND DELL

The solution that the company chose to implement for its worldwide network consists of Dell PowerEdge® R720 servers, ATTO Technology ExpressSAS® R680 RAID adapters and Dell's PowerVault MD3060e storage enclosure.

Dell PowerEdge R720 Server with ATTO ExpressSAS R680 RAID Adapter

Dell PowerVault MD306e

ATTO R680 contributes high performance and data protection to the configuration by providing a low latency, high availability connection between servers and storage. This is enabled by a combination of features:

Adaptive Path Optimization

- An ATTO-exclusive feature that provides high availability, load balancing and latency reduction via redundant paths to storage for faster transactions. In an Exchange environment, it increases the number of mailboxes the server can support

Advanced Caching Algorithms

- Uses 1GB onboard cache to accelerate I/O acknowledgement
- Optimized to ensure early write completion for faster data transfers
- Improves efficiency by discerning random, sequential, small and large data streams (email, attachments, log files) and coalescing them

Single Member JBOD Mode

- Improves performance by distributing reads and writes among disks to reduce latency and increase system responsiveness
- Protects data by providing redundancy and higher availability via multiple SAS connections

The time-proven ATTO RAID stack featured in the R680 provides the robust data protection that's required for email and Web servers. The card also features proprietary CacheAssure™ technology, a flash-based module that successfully completes writes in the event of a power failure, securing transactions in non-volatile flash memory to ensure that no data is lost. For scale-up capability, the R680's dual-domain mode can support JBOD expansion for up to 120 drives per adapter.