Save

Success Story

ALLIANT TECHSYSTEMS (ATK)

Advanced Weapon and Space Systems Company Achieves High-Velocity Data Protection with Overland's Tiered Solutions

Challenges

- Rapid storage growth oversaturated existing EMC SAN.

- Goal of meeting aggressive storage projections while maximizing IT budget created the need for agile, expandable nearline storage.

- Multiple layers of data protection required to ensure rapid recovery of 60 days worth of data.

The Solution

ULTAMUS™ RAID 4800, REO SERIES® 4000, NEO™ 2000

Benefits

- Multiple tiers of protection enable recovery of 60 days of data within 10 minutes.

- ULTAMUS RAID with 1 TB drives delivers unprecedented density—with 48 TBs in a 4U form factor.

- Value for dollars facilitates capacity expansion while ensuring multiple tiers of data protection

Alliant Techsystems (ATK) is a leading provider of advanced weapon and space systems with $3.9 billion in annual sales, approximately 16,500 employees and operations in 21 states. The company also is the leading supplier of solid rocket motors and the nation's largest manufacturer of ammunition.

At the Elkton, Md.-based Tactical Propulsion and Control Systems Division of ATK's Mission Systems Group, a service-oriented, performance-based data protection and disaster recovery model safeguards soaring storage requirements. In supporting its local team, division headquarters in Baltimore and a remote location in California, 150 TBs of storage have been allocated for active, production data along with data backups and resource volumes.

> "With ULTAMUS RAID 4800's combined density and price point, I can't imagine a better value on the market today. We attained roughly twice the storage for a third of the price of a comparable tier-one storage solution, which is a phenomenal advantage."
>
> Peter McCallum
> Storage and Server Administrator
> ATK-Elkton

In addition to keeping pace with escalating storage, ATK-Elkton also maintains a steadfast focus on providing elevated levels of disaster recovery and SOX compliance.

According to Peter McCallum, storage and server administrator for ATK-Elkton, the division embraces tiered data protection, including disk-to-disk-to-tape (D2D2T) back-up and recovery, nearline storage, remote replication, snapshots, mirroring, vaulting for long-term archival, as well as storage and server virtualization. "The multiple layers of data protection permit us to restore well within our SLA parameters," he says. "We have at least three ways to recover mission-critical data, encompassing vital document imaging, statistical analysis, SQL Server and Exchange applications."

The Challenge

At ATK-Elkton, the duo responsible for data protection is a big proponent of tiered data protection. Several years earlier, as early adopters of disk-to-disk (D2D) backup and recovery, they installed Overland's REO SERIES 4000 disk-based backup, recovery and VTL appliances to bolster business continuity. They proved the value proposition of D2D for accelerating both backup and recovery operations while also reinforcing the ease with which disk-based data could be archived to tape for longer-term retention.

"Three years ago, we deployed REO VTLs with iSCSI connectivity when a lot of people were just starting to talk about D2D backup and recovery," recalls McCallum. "We then installed Overland's NEO 2000 scalable tape library, which totally outperformed an ADIC Scalar library. With REO and NEO, we achieved completely seamless D2D2T data protection."

The team made its next pioneering move when embracing VMware and FalconStor's IPStor SANs for server and storage virtualization. Over time, more data was migrated onto FalconStor while leveraging high-availability functionality, such as block-level mirroring, replication and snapshots. ATK-Elkton also relied on several EMC Clariion CX3-20 Storage Area Networks (SANs) to consolidate and mange ever-increasing amounts of crucial data. By early 2007,

however, it became apparent that the division needed to refresh its storage foundation yet again to have ample capacity to accommodate growth projections.

"ATK-Elkton had saturated one EMC Clariion box with no room for expansion except to add more disks," recalls McCallum. "Once the HBAs, fibre channel switches, servers and licensing for increased capacity were tallied, it became impossible to reach our storage expansion goal with EMC. The challenge then became determining how to optimize our IT budget while still securing at least 30-to-40 TBs of enterprise-class, nearline storage."

The Solution

By mid year, ATK-Elkton's team had reviewed other potential storage solutions, including a smaller EMC SAN for handling mission-critical SQL and Exchange data while seeking a high-capacity SATA solution to augment nearline storage. To that end, the team evaluated Nexsan's enterprise-class SATABeast disk storage array with up to 42 TBs in a 4u form factor. Also considered was a high-capacity storage solution from EqualLogic before learning that Overland was readying the launch of its ULTAMUS RAID 4800 nearline storage appliance with industry-leading capacity, density and performance.

"We were immediately intrigued by the ULTAMUS RAID 4800, especially since ATK-Elkton had a long-standing relationship with Overland and their products were proven to be an exceptional value," notes McCallum. "In particular, this product's expansion-on-demand capabilities seemed well suited for our rapidly growing environment."

ATK-Elkton next completed an extensive round of due diligence, conducting a side-by-side comparison of the URAID 4800 and Nexsan SATABeast as well as hands-on lab testing of URAID's performance, reliability and high-availability features. "We put the product through its paces with exhaustive testing and were pleasantly surprised when it sustained better performance than our tier-one EMC array during the write cycle," adds McCallum.

After validating URAID 4800 performance and reliability, the team presented management with Overland's compelling value proposition. When configured with Overland's newly available 1 TB drives, the ULTAMUS RAID leads the industry in storage rack efficiency by offering up to 48 TBs in only 4U of rack space.

Overland's ULTAMUS RAID also offers energy-efficient hardware components and power-saving technology for spinning down idle drives to reduce energy consumption. As a result, URAID can yield up to 40 percent savings in power consumption without impacting I/O, application uptime or performance.

The Benefits

In early 2008, Overland's ULTAMUS RAID 4800 was implemented in ATK-Elkton's production environment to mirror all the division's EMC disk LUNs as well as FalconStor block-based snapshots or TimeViews for point-in-time recoveries. In this fashion, the division has at least three ways to recover data for dramatically heightened disaster recovery capabilities.

"We can go back 60 days and now recover a file in less than 10 minutes," explains McCallum. "The URAID 4800 plays a crucial role in this DR strategy as most often we'll use FalconStor's TimeMark snapshot, which resides on our Overland nearline storage, for rapid recovery at the individual file level. As our highly functional DR workhorse, the URAID is tasked with handling an even heavier I/O load than our tier-one EMC Clariion."

ATK-Elkton also has implemented 1 TB drives on its ULTMAUS RAID for maximum capacity. "No one else offers this much density in a 4u form factor," McCallum adds. "Plus, we could easily scale to 96 TBs using an additional 4u expansion array." The combination of industry-leading density and value for dollars tops ATK-Elkton's list of ULTAMUS RAID 4800 benefits. "With URAID 4800's combined density and price point, I can't imagine a better value on the market today," McCallum adds. "We attained roughly twice the storage for a third of the price of a comparable tier-one storage solution, which is a phenomenal advantage."

ATK-Elkton is planning to add a second ULTAMUS RAID 4800 for load balancing as well as capacity expansion to meet a growing need for offsite replication mirrors. By dynamically scaling two ULTAMUS RAID 4800 appliances, ATK-Elkton can acquire nearly 200 TBs of storage for about $100,000 less than a tier-one 50 TB storage array. Moreover, ULTAMUS RAID 4800 complements the division's existing Overland REO 4000 disk-based and NEO 2000 tape-based appliances for multiple layers of data protection.

"From a disaster recovery standpoint, we have a great deal of agility to adjust our DR foundation to keep pace with requirements, which is why other locations are looking at modeling our configuration," concludes McCallum. "By deploying different tiers of storage at different performance and price points, we have optimized our budget while raising the bar for ensuring the highest levels of data protection."

About Overland Storage

Overland Storage offers the most complete set of smart, affordable data protection appliances that ensure data is constantly protected, readily available and always there. Overland Storage brings enterprise-class capabilities to mid-range customers through affordable and reliable solutions that reduce the backup window, improve data recovery speed, simplify short- and long-term data retention and make cost-effective disaster recovery a reality for all. Overland products include award-winning NEO SERIES® and ARCvault™ tape libraries, REO SERIES® disk-based backup appliances with VTL capabilities, and ULTAMUS™ RAID high-performance, high-density storage. For more information, visit www.overlandstorage.com.