



Athena Systems and SanDisk® accelerate analytics for hedge fund customers

Solution Focus

- Financial Services
- IT Solutions (SaaS)
- Analytics
- Transaction Processing

“Since deploying SanDisk SSDs, the latency has gone way down. It used to take 15 to 20 seconds between request and display and now it is closer to two seconds. The time required to service client requests has vastly improved. It is truly phenomenal.”

Scott Sykowski,
Managing Director, Athena Systems.”

Athena Systems’ “Aura,” is the leading enterprise software-as-a-service (SaaS) solution for hedge fund and asset management firms. Since February, 2014, Athena Systems has partnered with SanDisk to deploy solid state drives (SSDs) to accelerate workflow performance for their customers.

The Challenge

High-frequency trading buy-side shops, such as hedge funds and asset management firms, are demanding higher performance from their portfolio management and trade/order management systems. These firms are experiencing and processing elevated volumes of trades, executions, and allocations. Due to an ever-increasing level of transactions, data throughput, and related computation-intensive analytics, these firms are demanding improvements in speed and flexibility from their applications and storage infrastructure.

The Solution

Athena Systems, founded in 2007, delivers Athena Aura, a fully customizable hedge fund management and analytics software, in a single tenant or multi-tenant architecture. Used by more than 50 highly specialized firms worldwide, Athena provides portfolio management, trade/order management, analytics and risk surveillance and alerts, business intelligence, profit & loss calculations, and performance attribution functionality

For more than 25 years, SanDisk has been transforming digital storage with breakthrough products, such as the Lightning® 12 GB/s SAS SSDs and the Optimus Max™ 4TB SAS SSDs. These products push the boundaries of leading-edge enterprise IT capabilities, giving customers access to next-generation computer infrastructure. SanDisk’s flash technologies are used by many of the world’s largest data centers—including cloud and SaaS service providers. SanDisk’s high-performance, highly reliable storage products are trusted by enterprises and consumers around the world. Athena Systems utilizes SanDisk solid state drives (SSDs) to optimize the hosted servers deployed in their SaaS platform. The system provides a unique mechanism around the database servers to cache frequent queries and rapidly serve out responses in real time.

Athena Systems deploys SSDs to optimize I/O on high-end hosted data and analytic servers that are running a SaaS portfolio, analytics, trading, performance, and compliance platform for hedge fund customers. Sandisk’s Lightning SAS SSDs feature a proprietary controller with an advanced parallel processing architecture for low-latency data access. Now that all high I/O files have been pushed to SSD storage, Athena’s customers have experienced predictable, sustained I/O performance across a wide range of write-intensive, mixed-use, and read-intensive applications workloads. While older 32-bit applications experience a built-in memory limitation of 2GB which inhibits real-time manipulation of data sets larger than 200MB, a 64-bit application is not subject to the same memory limitations.



Lightning® 6Gb/s SAS 200GB*
Enterprise Solid State Drive

Deploying the SanDisk SSDs across the four Athena data centers and two client sites took approximately three months. Athena first created an optimized standard image and then determined how to partition the servers. Once it was decided which sets of files should reside on which drives, the process was fairly straight-forward. "Athena had specific requirements on deploying the drives and we found the 'sweet spot' on the number of files to optimize the I/O on each drive," said Scott Sykowski, Managing Director at Athena Systems. "Once this was architected, reimaging the remaining servers was pretty easy."

Why SanDisk?

Prior to selecting SanDisk, Athena Systems reviewed products from several competitors, such as Intel, Samsung, and Kingston. However, SanDisk provided caching features and unexpected power loss protection that other solutions did not have. In addition, the performance per dollar and storage capacity per dollar provided by SanDisk SSDs were superior to other options.

The Result

Athena Systems now boasts customers in Canada, U.S., South America, Europe, Asia, and Middle East. Four data centers and two client sites support heavy loads and hundreds of users accessing Aura software on a daily basis. Since deploying SSDs, system "crunch time" performance has vastly improved, compared with HDDs.

Despite the high volume and wide breadth of data that customers are generating, latency has decreased significantly. Prior to implementation of SanDisk SSDs, customers were experiencing a 15 to 20 second delay between data requests, calculation, and display. This delay has now been reduced to just two seconds, vastly improving the time to service clients. "The results have been truly phenomenal," said Sykowski. "We look forward to maintaining our partnership with SanDisk well into the future, so that we can continue to provide this level of service to our clients."

About Athena Systems

Since 2005, Athena Systems has been helping financial services firms fine-tune their software systems to match the unique refinements of their business strategies. Athena counts leading hedge funds and asset managers among its clients. Its work spans fine-tuning and network integration of vendor software to custom enhancements that precisely match the unique business models of its clients. Athena Systems provides the full life-cycle of planning, development, implementation and training. Typical results are dramatic improvement in STP, faster time to equities markets, and more efficient execution of transactions.

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SanDisk®

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At SanDisk, we're expanding the possibilities of data storage. For more than 25 years, SanDisk's ideas have helped transform the industry, delivering next generation storage solutions for consumers and businesses around the globe.

* 1 GB = 1,000,000,000 bytes. Actual user capacity less.

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