



# Fast Track Your Data Warehouse Applications for Real-Time Business Value

Violin and Microsoft deliver the first all-silicon Data Warehouse solution, dramatically simplifying the configuration, usage, and management of deployments while delivering consistent and predictable performance for any data, anywhere, at any scale.

## Highlights

### Accelerated, Sustained Performance

- 20x increase application performance
- 20x faster report generation
- Sub-millisecond latency at any workload

### Lower Total Cost of Ownership

- Reduced operational and capital expenses
- Up to 80% reduction in power, cooling, space costs
- Lower data locality management software licensing

### Cost-effective Scalability, Enterprise-class Reliability

- Scale the number of transactions at sustained performance
- Cheaper per IOP than traditional disk-based storage
- Enterprise-class flash array for any data, any time, any scale

### Business Needs

In the modern business world, data is growing exponentially and the number of access points and users are increasing multifold. To better enable decision makers, the mandate is ad hoc, dynamic queries, where reports can be generated in real-time, anytime.

To address this growth and enable organizations to gain valuable business insights from their data volumes, solutions need to be more predictable in their performance behavior as well as scale cost-effectively.

### Business Challenges

Data is loaded, updated, changed and accessed throughout the day. As data and the number of users increase exponentially, the infrastructure needs to scale without any performance degradation. To gain timely business insights, you need an all-silicon system, where every piece of data is equally accessible as any other data, allowing you to expand your deployments with the number of users involved, without any degradation in performance.

### The Violin Memory Difference

Flash memory arrays ensure the lowest latency data access, provide high-bandwidth connections and scale to hundreds of TB's so even the largest databases can be stored in memory. Violin's unique and dynamic all-flash, all-silicon, parallelized array enables applications that are predictable in their performance and linearly scalable, at a lower TCO than traditional disk-based storage. Violin's arrays meet the needs of extreme concurrency and allows for the on-demand nature of today's businesses with minimum administration.

### Always Available, Always Running at Full Speed

Violin's fully redundant, no single-point-of-failure, field replaceable components provide the storage High Availability required in all enterprise applications. By accelerating Microsoft Clustering and SQL Server Mirroring, Replication, Log-Shipping and HADRON, Violin enables software High Availability.

With Violin's enterprise-class flash array, the application is always available and always functioning at full speed, at the lowest latency.

## Sustained Predictable and Scalable Performance

Today's enterprise applications are spindle-bound, therefore IO-bound. Because of Violin's unique, distributed, parallelized all-flash array architecture, all data can be equally accessed at all times for predictable scaling. Violin arrays provide a massively scalable architecture that scales IO requirements without upgrades in hardware. Application architects can reliably provision exactly what they need, and scale with confidence.

Online Transaction Processing (OLTP) applications can only go as fast as transactions can be written to storage. Violin's sub-millisecond latency can accelerate applications by up to 20x, enhancing end-user experience as well as supporting timely business insights. With Violin's plug-n-play architecture, you can achieve significant performance gains right out of the box.

## Lower Total Cost of Ownership at a Lower Administrative Overhead

To achieve the minimum latency and highest throughput, administrators generally overprovision hardware or use software to mitigate but not fully eliminate performance issues. These workarounds are generally expensive in both capital as well as operational expenditures.

Violin all-flash Memory Arrays provide high throughput and maximized system resources, reducing the number of database instances and thereby reducing the number of licenses. At 3U rack-space, you can consolidate and scale, all while reducing storage footprint, power and cooling costs.

## Simplified Management

As the database and concurrent users grow, so does the administration time and complexity. Spindle performance can degrade; locality of access points will migrate, causing hot spots and further unpredictability in the production environment. All this requires administrative overhead for troubleshooting and performance tuning.

Violin's distributed and parallelized arrays eliminate intermittent performance issues due to hot spots or data locality. All LUNs are spread evenly over all internal storage components, providing maximum speed at all times. Violin accommodates simplified, cost-effective maintenance and growth. The all-flash systems eliminate the need for migrating hot spots, configuring and maintaining storage tiering tools and purchasing costly add-on software.



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