



## Highlights

### Integrated Data Protection

- **Zero data loss, high availability architecture** with hot-swappable components and non-disruptive upgradability
- **Asynchronous replication** that protects data regardless of the distance between sites
- **Synchronous mirroring with zero data loss**
- **Stretch cluster** with transparent application failover between sites
- **Application consistent snapshots** provide space efficient snapshots for Oracle, SQL Server, VMware, and more

# Multi-Level Data Protection for Flash Storage

## Conquering the Inevitable

With proven performance advantages and vastly improved economics, flash-based storage is the clear choice for today's primary storage applications. The key to successfully deploying flash storage is adequate data protection. Without it, data corruption, hardware failure or worse can undermine every other flash storage benefit.

Enterprise-grade all-flash storage solutions must assure any-circumstance availability throughout the corporate infrastructure. Violin Flash Storage Platform™ (FSP) all-flash arrays meet this need by providing:

- An enterprise class, no single point of failure, high availability design
- The ability to meet up to zero recovery point objectives (RPOs) and zero recovery time objectives (RTOs) throughout a network, including remote sites
- Integrated functionality without the need for additional hardware or complexity
- Cost savings that meet the needs of today's efficiency-oriented budgets

## Full-Spectrum Protection through a Single Pane of Glass

Violin's FSP provides a broad range of data protection: a zero data loss high availability architecture, asynchronous replication, synchronous mirroring, and stretch clusters. All of which are delivered as integrated components of the FSP product family. Options ranging from zero RPO and RTO solutions to fully redundant zero downtime hardware enable customers to align the level of protection with business requirements.

The complete suite of data protection features comes fully integrated with the FSP as part of the Concerto OS 7 operating system. Violin's Symphony management suite features a single user interface with visibility across the entire storage ecosystem, even in complex infrastructures spanning multiple data centers connected over great distances.

## Zero Data Loss High Availability Architecture

The Violin Flash Fabric Architecture™ (FFA) provides baseline data protection for every enterprise. Features include all hot-swappable components in a purpose-built architecture with no single point of failure, and non-disruptive hardware and software upgrade capabilities. These enable zero data loss within the FSP, and free administrators to add the backup and recovery technology of their choice. This level of data protection is delivered as part of every FSP and is ideal for businesses that are not constrained by the need to maintain mission-critical application availability.

## Asynchronous Replication

Asynchronous replication adds a disaster recovery component to the in-box protection of the FSP. Space-efficient snapshots combine with remote replication to provide instant recovery between Violin products in any location, over any distance.



This feature set is ideal for customers who cannot tolerate data loss and would like the option to select RPO or RTO windows that are aligned with business needs. Asynchronous replication is supported by all FSPs.

### Synchronous Mirroring

For organizations seeking business continuity, synchronous mirroring adds disaster avoidance with application failover to a DR site, and the ability to roll back operations to any point in time. Consistency checks show the exact point in time of each validated copy operation. With that guarantee, an administrator can spin up an image from a specific point in time and know that it is consistent with local operations and that the data has not been corrupted.

Synchronous Mirroring requires the Violin FSP 7700. When other Violin platforms are deployed as Fibre Channel-attached shelves in the same rack behind the FSP 7700, their data can be synchronously mirrored as well.

### Stretch Cluster

Stretch clustering provides transparent, instant failover to a DR site without application disruption. To take advantage of this feature, customers must deploy hardware in the production and DR sites with sufficient free capacity for either site to absorb the load of the other while maintaining service level agreement response times. Zero recovery time with zero data loss capability delivers the security of disaster avoidance with the benefits of virtually zero recovery time.

Like synchronous mirroring, the stretch cluster data protection level requires the FSP 7700. When other Violin platforms are deployed as Fibre Channel-attached shelves in the same rack behind the FSP 7700, their data is available through the Stretch Cluster capability as well.

Violin Data Protection Capabilities	Supporting Products
Zero Data Loss High Availability Architecture Asynchronous Replication Continuous Data Protection	All Violin FSPs
Synchronous Mirroring Stretch Cluster	FSP 7700 Other FSP 7xxx and Violin 6000 series AFAs as shelves behind an FSP 7700

### Spotlighting Data Protection

A strong data protection strategy is vital for business continuity, and should be an integral part of any enterprise security plan. When considering all-flash storage, administrators should be sure to integrate data protection into performance, manageability, and cost analyses. The multiple data protection capabilities of the Violin FSP will help users reap the full benefits of flash technology and maintain peak business operating efficiency.

To learn more about how Violin's data protection strategy provides integrated, infrastructure-wide protection with centralized visibility, contact a Violin Memory sales representative or visit [www.violin-memory.com](http://www.violin-memory.com).