



# StoneFly Reflection™

DISASTER RECOVERY

## First Line of Defense for Disaster Recovery

Today, enterprises need to protect and recover data quickly in the event of disasters, operator errors or technology failures. StoneFly Reflection™ synchronous mirroring solution is designed for IT professionals managing environments where business operations would suffer a severe financial blow if critical data were lost or offline for even a moderate period of time.

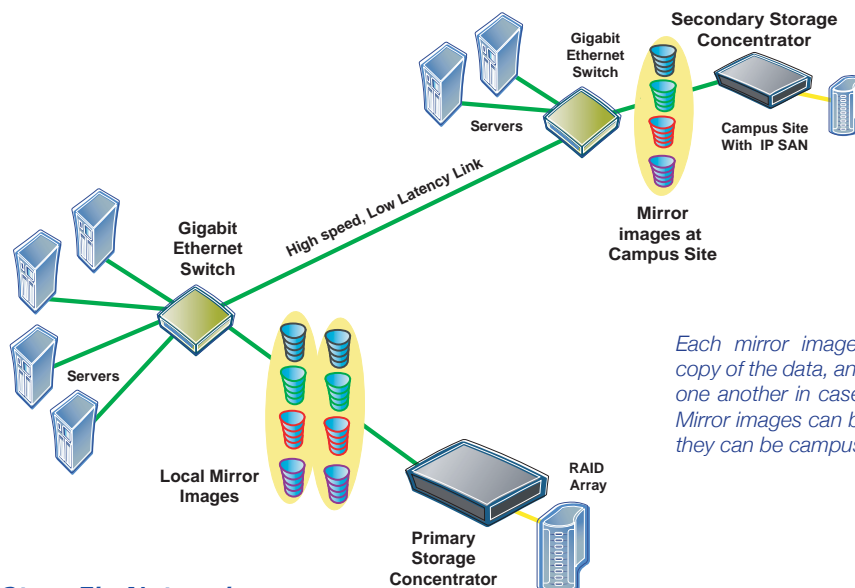
Mirroring prevents critical volumes from being a single point of failure and is a powerful tool for a wide variety of data protection and disaster recovery implementations. StoneFly Reflection provides continuous access to a volume without interruption to data availability by substituting an exact mirror image, simplifying disaster recovery and reducing system downtime.

StoneFly Reflection synchronous mirroring provides high speed Storage Concentrator-based mirroring to a local or campus site. This effectively moves 'intelligence to the network core' by consolidating disk management and mirroring functions at the Concentrator. This offloads these functions from servers and localizes mirroring traffic on the IP SAN.

StoneFly Reflection synchronous mirroring simplifies deployment, operating transparently to users, applications, databases, and host processors. The result is "Next Generation" performance, reliability and high data availability for critical applications.

## StoneFly Reflection Benefits:

- Protects against loss of critical data
- Increases productivity
- Reduces the risk of downtime
- Offloads mirroring functions from servers and consolidates disk management and mirroring functions at the Storage Concentrator
- Fully compatible with StoneFly Backup Advantage™ and StoneFly Replicator™ as well as customer defined applications for integration of synchronous mirroring functions into backup, archive, and remote replication functions
- Saves time getting applications back on line by substituting identical mirror images when required
- Autonomously maintains local and campus mirrors
- Used to support zero backup window operations



*Each mirror image contains an identical copy of the data, and can be substituted for one another in case of data loss or errors. Mirror images can be either local mirrors or they can be campus mirrors.*

## About StoneFly Networks

StoneFly Networks™ is the innovator of powerful, cost-effective data protection and management for departments, workgroups and mid-tier organizations via the StoneFly Business Advantage™ solutions suite.



## StoneFly Mirroring Solutions

### StoneFly Reflection Applications

Synchronous mirrors are used for a variety of applications, both locally and on campus sites. Common uses include backup/restore, business continuance, archiving, data migration, disaster recovery, content distribution, and business intelligence.

**Backup/Restore:** Data is copied on a periodic basis, sometimes to a campus location, and can be restored in case of data loss. A detached mirror volume can be mounted as a separate volume. Once the mirror is backed up, it can be rebuilt or deleted as required. Backups can also be sent to WORM media or tape as a background activity.

**Business Continuity:** Mirrored images are identical to each other, and are interchangeable, and entirely transparent to applications. For example if primary volume is broken, the application will continue to run from a different mirrored volume in the mirror set.

**Archive/Retrieve:** For long-term data storage, mirror images can be permanently detached and written onto optical WORM or WORM tape.

**Data Migration:** Duplicate mirror images are created with the original source data for use at a new server or campus location, often in conjunction with corporate moves, system upgrades, or to meet business continuity objectives.

**Disaster Recovery:** Mirrored images are always an exact duplicate of each other and can be substituted at any time in case of disaster or failure of a mirror image.

**Content Distribution:** Mirror images are created for a different server location to improve access response times for online databases or websites. Or for educational applications, each student can access a detached mirror image of an application to perform individual work.

**Business Intelligence:** A static database is required for business intelligence or data mining operations. Reflection can detach a mirrored image so the user can perform the business intelligence function. The Mirror image can then be reattached or deleted as required.

### Specifications

**Method of Operation:**  
Synchronous mirroring

**Platform:** StoneFly Storage Concentrators running StoneFusion™ Intelligent Networking Platform

**Bandwidth Requirements:** Deploys easily into any networking infrastructure with enough GbE bandwidth to handle data transfers

**Number of Simultaneous Mirrors:** Four images per volume

#### Operation

- Continuously replicates desired data volumes ensuring data is valid and up to date
- Supports Storage Concentrator FailOver Clustering on both Primary and Secondary Storage Concentrators (local and campus)
- Automatically maintains mirror images without user intervention

#### Management:

- Web enabled GUI allows for central storage management over any standard web browser
- StoneFly Networks SAN CLI (SFSANCLI.EXE) for integration with Stonefly Backup Advantage
- StoneFly iSCSI Volume Manager (SFIVSM.EXE) for mounting /unmounting iSCSI volumes during zero window backup operations

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