

## SOFTWARE

# NETWORK APPLIANCE™ SNAPMIRROR® SOFTWARE

## KEY FEATURES

### Easy Setup

Needs virtually no additional IT resources; allows frequent testing of the disaster recovery plan.

### Replicate from FC to ATA Storage

Replicates from FC to ATA storage, reducing disaster recovery (DR) storage costs.

### More Efficient Storage and Network Utilization

Cuts the costs of data replication and disaster recovery.

### Replication Synchronicity Level

One product controls frequency of replication (async, sync, and semi-sync).

### Fast Data Replication and Failover

Minimizes downtime costs in case of a failure at the primary site.

### Access to Mirrored Data

Enables offloading tape backup, doubling the value of your disaster recovery investment.

### Putting DR Storage to Active Business Use

Can be combined with FlexClone™ to enable use of DR storage for testing/development/QA.

## Global data availability and disaster recovery.

### THE CHALLENGE:

#### Instant Access to Mission-Critical Data

Today, global enterprises need to protect and quickly recover data in the event of natural and man-made disasters, operator errors, and technology and application failures. They also need an efficient way to distribute data to remote locations. Without an effective data protection and distribution strategy, operations can be brought to a standstill, resulting in millions of dollars of lost revenue.

### THE SOLUTION:

#### NetApp SnapMirror Software

Exceptionally powerful, yet easy to use and administer, NetApp SnapMirror software delivers the disaster recovery and data distribution solution that today's global enterprises need. By replicating data at high speeds over a LAN or a WAN, SnapMirror software provides the highest possible data availability and fastest recovery for mission-critical applications.

SnapMirror technology mirrors data to one or more NetApp storage systems. It continually updates the mirrored data to keep it current and available for disaster recovery, offloading tape backup, read-only data distribution, testing on non-production storage systems, online data migration, and more. If your enterprise is geographically dispersed and all locations need access to the same data set, such

as training videos, CAD tools, and the like, SnapMirror can distribute the same data to all locations. By automatically updating this data and allowing local access to mirrored data, SnapMirror can dramatically improve employee productivity and efficiency.

### PRESERVES VALUABLE NETWORK BANDWIDTH

NetApp SnapMirror software has many bandwidth-saving features that lower the infrastructure cost of data replication and disaster recovery. You can perform an initial full-volume transfer using tapes, and then use the tapes to populate data in remote locations. After that, you need only to update the new and changed blocks incrementally over the network. By replicating only a subset of the entire storage data, SnapMirror significantly reduces network bandwidth requirements. In addition, SnapMirror takes checkpoints during data transfers. If the system goes down, the transfer restarts from the most recent checkpoint. SnapMirror also performs intelligent resynchronization, which eliminates the need for full transfers when recovering from a broken mirror or loss of synchronization. If data on the mirrored copy was modified during application testing, it can be quickly resynchronized with the production data by copying the new and changed data blocks from the production system to the mirrored copy.

## CONFIGURATION FLEXIBILITY

NetApp SnapMirror deploys easily into any networking infrastructure with enough bandwidth to handle the data transfers. The ability to use multiple transports (FC and IP) allows greater use of existing equipment and better availability because you can fail over between paths.

SnapMirror provides high disaster recovery protection by allowing you to choose the right level of synchronicity (sync, semi-sync, or async). For instance, with the sync option, the replicated data at the remote site is always up to date and ready for use after a failure. This simplifies disaster recovery and reduces system downtime. Semi-sync allows you to determine for how many I/O operations or for how long the replicated site can be out of sync with the source, based on your site needs. With async, you can schedule transfers whenever you want—every minute, hour, or day. You can establish the frequency that works best for each site. The schedule can be easily modified, and changes can be made effective immediately. You can also choose different storage configurations or models for the source and mirrored systems, or even replicate from FC-based storage to ATA-based storage to save costs. In addition, cascading and multihop mirroring let a NetApp SnapMirror target volume serve as a source to other targets, with each mirror pair running on its own schedule to meet site-specific

requirements. Cascade mirroring is the perfect solution if you need to replicate data over a distance. Another use of cascading is to replicate to a nearby business continuance site using synchronous mode, to eliminate data loss in the event of a site disaster; and then replicate over long distance on the second hop using asynchronous mode, to protect against a regional disaster.

## APPLICATION READINESS

SnapMirror provides effective disaster protection not just for file services but also for critical business applications like Microsoft® Exchange, Microsoft SQL Server, and Oracle®. SnapManager® software provides a wizard-based GUI to schedule Snapshot™ copies, and ensures that the Snapshot copies are consistent from an application standpoint. SnapMirror replicates these consistent Snapshot copies, providing effective DR protection for these applications.

## EASY TO USE AND COST EFFECTIVE

Users can set up SnapMirror in minutes and handle administration and operations through the easy-to-use DataFabric® Manager (DFM) graphical user interface. Built-in SNMP support enables easy integration with an SNMP framework. This ease of use also reduces the likelihood of operator error during the recovery process, ensuring fast recovery from disaster.

## EASY-TO-LEVERAGE DR STORAGE FOR OTHER BUSINESS USES

Not only does SnapMirror reduce overall TCO, it also makes it easier to justify the DR investment for non-mission-critical applications, by enabling you to put the DR site to active business use. NetApp solutions make storage utilization very efficient, without requiring multiple physical copies for each business use. SnapMirror with FlexClone enables space-efficient copies to be created on the DR storage for other uses such as application testing, QA, and production staging, without affecting the production system. SnapMirror also provides a readable mirror copy, enabling centralized backup of data to tape from multiple data centers, reducing investment in tape infrastructure as well as offloading the production system from tape backups.

## SNAPMIRROR CAN BE USED FOR:

- Disaster Recovery
- Data Distribution—use cascading to send data long distances
- Remote Data Access with readable mirror copy
- Offsite Tape Archival—replicate to remote site and then backup to tape
- Online Data Migration
- Test/Dev, QA, Production Staging using FlexClone
- Load Balancing—spread load by accessing mirrored data
- Compliant Data Protection using SnapLock® software

## ABOUT NETWORK APPLIANCE

Network Appliance is a world leader in unified storage solutions for today's data-intensive enterprise. Since its inception in 1992, Network Appliance has delivered technology, product, and partner firsts that simplify data management. Information about Network Appliance solutions and services is available at [www.netapp.com](http://www.netapp.com).

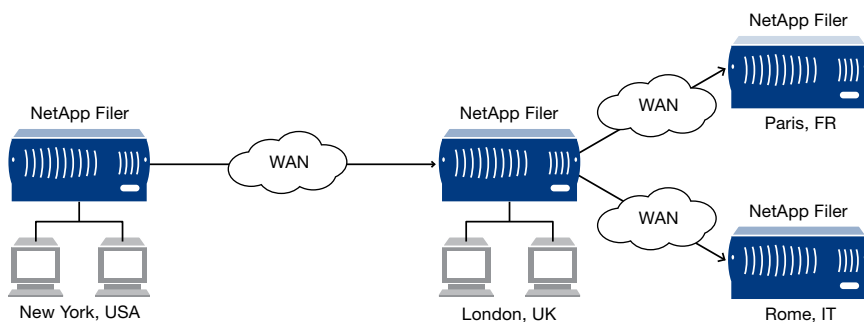


Figure 1) SnapMirror: Cascaded configuration.

Using SnapMirror, data can be efficiently and cost effectively replicated to remote sites for disaster recovery or data distribution.

