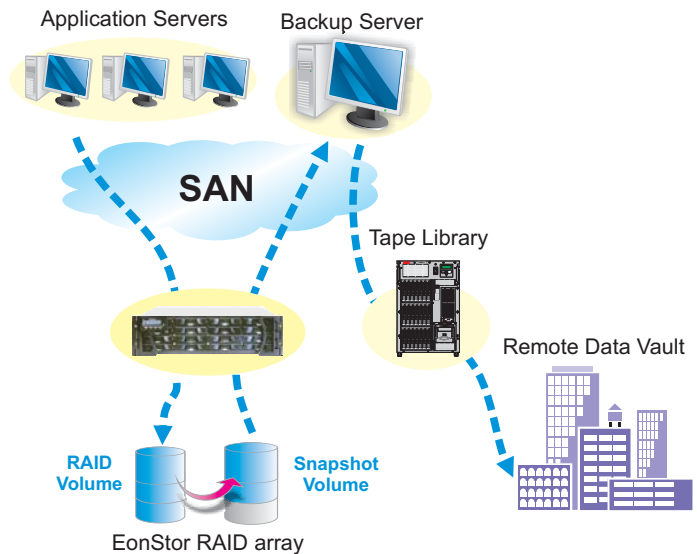


Snapshot

Enhancing Data Protection Using Snapshot, a SANWatch Feature Package

OVERVIEW

- **Facilitates backup and restore operations**, and hence reduces interruptions to service and allows frequent backups.
- **Improves data integrity:**
via proprietary flush agents
- or -
cooperation with application-aware VSS
- **Maximizes storage efficiency**
using space-saving point-in-time, copy-on-write technology.
- **Minimizes acquisition cost**
- VSS support for immediate integration with
3rd-party VSS-compatible software.



TECHNICAL BRIEF

Infotrend's Snapshot produces instantaneous, point-in-time mirror images of working volumes. With the help of flush agents and VSS support, host applications need only be put in a quiescent state for a very short period of time. Data integrity is retained with open files and on-going applications.

Traditional backup requires applications to be brought offline for an extended period of time. With slow process and growing size of data, time pressure is placed on IT staff to finish backup jobs within schedule. By backing up a volume from a snapshot copy, IT staff can perform a backup with minimum disruptions to the working volumes. In this way, Snapshot can dramatically improve an IT organization's backup and recovery operations, allowing frequent backups and shortening the backup windows.

Infotrend implements multi-layer snapshot tables for maximum storage efficiency. Snapshot variables and differential images are managed as independent storage volumes that look and behave like complete backups. Snapshot volumes are mounted as real LUNs when data retrieval takes place allowing concurrent access to the working or snapshot volumes.

Snapshots are performed by the RAID hardware, off-loading host CPUs from backup tasks. For system administrators, Snapshot not only protects data from software or human errors, but also are useful when replicating services from one server to another or reproducing test environments.

FEATURES

- **Simplifies and speeds up** data backup and recovery procedures.
- **Ease-of-use** by the Snapshot scheduler utility.
- **Reliable and robust** - snapshots are protected in RAID volumes.
- **Performance:**
 - Snapshot processed by RAID hardware, off-loaded from application servers.
- **Scalable:** both the production & snapshot volumes are expandable.
- **Space efficiency:**
 1. Copy-on-Write differential copy, consumes minimum disk space
 2. Space usage control: snapshot life-cycling by
 - life expectancy of snapshots.
 - thresholds for removing obsolete snapshots
- Hardware provider for Microsoft Volume Shadow Copy Service

Snapshot

Enhancing Data Protection Using Snapshot, a SANWatch Feature Package

● Snapshot Uses

- Ensures data integrity against human errors, virus, or application failures
- Facilitates backup with tape and 3rd-party backup software
- Duplicates applications to multiple servers
- Duplicates application volumes for testing

● Snapshot Stations

- DAS or SAN servers running Microsoft Windows Server 2003
 - R2 SP2 32-bit
 - R2 SP2 32-bit

● Applicable EonStor Models

- ASIC400 series



Snapshot Versions & Specifications

Specifications		Express	Professional
Capacity	No. of source volumes	4	Per system LD limitations
	Snapshots per source volume	8	128
	Max. no. of snapshots per system	32	Up to 1024 (depends on cache size and storage capacity)
Online Snapshot Image Mapping		4	128
Snapshot Scheduler & Automated Prune		N/A	Yes
Space Threshold Setting & Automated Prune		N/A	Yes
Read-only Access		Yes	Yes
VSS (Microsoft Volume Shadow Copy)		VSS requestor: CA ARCserve Backup r11.5, Symantec Backup Exec 11d, VSS writer: Microsoft SQL Server 2005	
OS Support		Windows, Linux, Solaris*	

* Please refer to SANWatch OS Support information.

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