StorageWorks RAID Software for OpenVMS

Ensure data availability and performance with software-based RAID technology.

Can you afford to turn off your business while you scramble to re-create lost data? Or slow it down for intensive applications such as transaction processing and customer service? StorageWorks™ RAID Software for OpenVMS™ protects the data your business depends on, while boosting application performance. And at a very affordable cost.

RAID (Redundant Array of Independent Disks) technology coordinates multiple disk drives to provide data redundancy, ensuring your data stays available if any one of your disks fails. RAID Software for OpenVMS provides RAID protection and performance enhancements:

- Striping distributes data—and I/O workload—across multiple disk spindles, improving overall application performance.
- Parity plus striping distributes “parity data” (or check data) across the disk array. Parity data allows reconstruction of a failed disk’s data, providing cost-effective data redundancy.
- Combine striping with Digital’s Volume Shadowing for OpenVMS software for the highest combined performance and availability. Volume Shadowing software keeps copies of data on extra disks in "shadow sets." If any one disk fails, processing continues from its shadow set copy.

RAID software benefits:

- **Investment protection**—Build a software-based RAID solution on existing, older systems.
- **High data availability**—Keeps your data available when any one disk in an array fails.
- **Better performance**—disk striping balances I/O load, improving overall application performance.
- **Enhanced productivity**—Your employees won’t waste valuable time re-doing work lost if a disk fails.
- **Transparent to applications and end-users**—Multiple disks appear as a single ‘virtual’ disk.

*Just a Bunch of Disks*

**HIGHEST PERFORMANCE**

**Striping and Mirroring**

**Striped Parity**

**JBOD**

**HIGHEST AVAILABILITY**

**Mirroring**

**LOWEST COST**
Digital offers both software and hardware-based RAID solutions. Choose software-based RAID implementations for existing storage hardware or if your solution uses multiple host adapters or controllers.

Solves storage and I/O problems affordably
StorageWorks RAID Software for OpenVMS protects your system's investment by extending RAID capability to disks not otherwise capable of RAID technology — such as older disks, direct-attached SCSI disks, disks attached via HSD05 DSSI array controllers, and arrays consisting of more than one type of device.

It also provides disk partitioning technology, which lets you subdivide arrays (or individual disks) into multiple virtual disks for easier storage management.

Boosts system performance
To maximize your system's performance, select disk striping. Striping balances the I/O workload by mapping data across an entire array. As a result, "hot spots" generated by frequently accessed data are minimized as their associated read and write requests are distributed. The result? Improved system performance.

Cost effective availability
For cost effective data availability, choose parity plus striping. StorageWorks RAID software protects an array of up to 32 disks against data loss due to any single disk failure. Parity data allows reconstruction of a disk's data, should a disk fail. It requires the capacity equivalent of just a single disk for data protection — regardless of how many disks comprise the array.

For highest data availability and performance
When you absolutely cannot afford to lose your mission-critical data, combine disk striping from StorageWorks RAID Software with Digital's Volume Shadowing for OpenVMS software. Volume Shadowing software ensures data availability by keeping up to three copies of data on fully redundant disks. It supports 24x7x52 data center uptime, letting you conduct routine backup operations without disrupting system operations and while updates continue.

Conventional Disks
(data distributed sequentially)

Striped array

"Hot Spot"; 80/20 effect. Entire system is bottlenecked by the slowest data access.

"Hot Spot" is spread across multiple disks, improving overall performance.

Striping distributes frequently accessed data (hot spots) and associated workload across multiple disk spindles, for better application and subsystem performance.

Call Us
For more information on StorageWorks software and other StorageWorks products, please call your local sales representative or one of the following numbers:

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