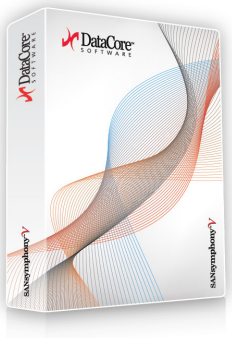
Dot Hill AssuredSAN
12-bay & 24-bay systems

Solution Highlights

- Extremely fast using inexpensive RAM caches
- Accelerates existing storage
- Budget friendly bundles

Dot Hill AssuredSAN Highlights

- DataCore Ready certified
- Up to 5200 MB/s sequential read, and 3000 MB/s sequential write
- Mix SSD and SAS drives within a configuration
- Up to 192 drives per system
- Simulcache™ technology
- Ideal for demanding HPC and Media & Entertainment applications



Supercharge your Storage

Dot Hill AssuredSAN™ & SANsymphony™-V

If you are looking to deliver a significant storage infrastructure performance increase, two key components to achieve that goal include a powerful high performance disk sub-system combined with intelligent data caching technology.

DataCore Ready Certified

The combination of SANsymphony-V and Dot Hill AssuredSAN storage arrays which are certified under the rigorous DataCore Ready Program offers a RAID disk sub-system delivering up to 5200 MB/s read & 3000 MB/s write performance with 100,000 IOPS sustained from disk. Combine this underlying SAN performance with the Level 1 caching technology within SANsymphony-V which can utilize up to 1TB of cache memory on each DataCore node with sub 20 microsecond access times.

Delivering Supercharged Performance at a Compelling Price

The Dot Hill AssuredSAN 4000 series delivers best-in-class price/performance with a modular architecture facilitating simple performance upgrades and maintenance. DataCore SANsymphony-V software accelerates reads and writes by leveraging the powerful processors and large memories of the x86-64 servers on which it runs. Up to 1TB of relatively inexpensive cache may be configured on each DataCore node under Windows® 2008 Enterprise Edition, enabling it to turn around disk requests at electronic memory speeds.

The DataCore Ready Program value proposition

DataCore Ready identifies solutions trusted to strengthen SANsymphony-V-based infrastructures. While DataCore solutions interoperate with common open and industry standard products, the DataCore Ready designation ensures that these solutions have successfully executed a functional test plan and additional verification testing to meet a superior level of joint solution compatibility.

Customers who leverage DataCore Ready offerings benefit from quality assurance, reduced risk and lower integration costs. The DataCore Ready logo helps customers quickly identify products and solutions that are optimized for SANsymphony-V.

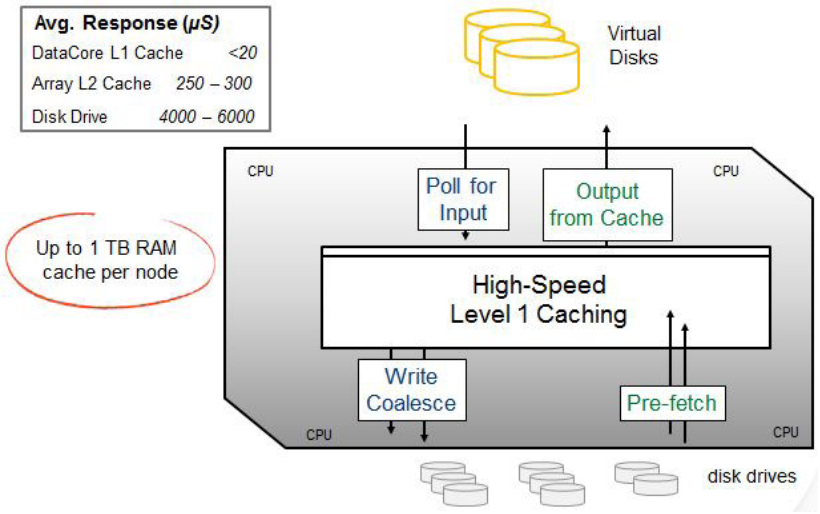
Smart high-speed caching

High-speed caching has long been a potent differentiator for DataCore's products. If you have been conditioned by other suppliers to believe that any form of virtualization brings a performance penalty, think again. In the process of virtualizing disks, DataCore software accelerates reads and writes by leveraging the powerful processors and large memories of the x86-64 servers on which it runs. Caching essentially recognizes I/O patterns helping it anticipate which blocks to read next into RAM from the back-end disks. That way the next request can be fulfilled quickly from memory absent of mechanical disk delays.

In the diagram you see how the software uses the CPUs on the DataCore nodes to rapidly poll for inputs and immediately service input or output requests out of SAN-wide caches. Polling replaces slower (higher latency) interrupt servicing techniques that take much longer to recognize I/O events. The quicker the CPU, the faster the software can turn around an I/O. The same polling method is used whether fielding requests from the host computers or responding to the back-end disks. Write coalescing reduces the delay in writing to disk by grouping inputs, whereas pre-fetching into cache anticipates blocks to be read given earlier reads from that section of the disk. The adaptive algorithms have been perfected over the past decade.

Avoid waiting on disks while extending SSD service life

The simplest way to understand caching on a DataCore node is to view it as a level 1 cache that can respond in less than 20 microseconds, whereas the caches on the disk array may be somewhere in the hundreds of microseconds. Both caches aim to hide the much longer delay of the physical disk I/O which is in the order of 4000 to 6000 microseconds (or 4 to 6 milliseconds). The DataCore caches play an important role when using very fast SSD technology, extending their useful life by reducing the write traffic.



Sequential performance with Dot Hill SimulCache™ technology

Application environments such as data acquisition or video post-production can generate a huge amount of sequential data from the host application. The processing overhead for writing high throughput sequential data streams to disk is therefore an important factor in overall system performance. This is especially important in dual controller RAID configurations where the incoming data must be written to two controllers. Dot Hill's AssuredSAN networked storage arrays employ SimulCache: a unique patented data caching architecture providing exceptionally high bandwidth write performance in RAID protected configurations. SimulCache uses an extremely low latency internal bus to copy incoming data from the active to the standby controller without the noticeable drop in write performance experienced with traditional RAID cache designs.

About Dot Hill Systems

Leveraging its proprietary Assured family of storage solutions, Dot Hill solves many of today's most challenging storage problems; helping IT to improve performance, increase availability, simplify operations, and reduce costs. Dot Hill's solutions combine breakthrough software with the industry's most flexible and extensive hardware platform and automated management to deliver best-in-class solutions. Headquartered in Longmont, Colo., Dot Hill has offices and/or representatives in China, Germany, India, Japan, Singapore, the United Kingdom, and the United States.

About DataCore Software

DataCore Software develops storage virtualization software leveraged in virtual and physical IT environments to obtain high availability, fast performance and maximum utilization from storage. DataCore's SANsymphony-V storage hypervisor is a comprehensive, yet hardware-independent solution which fundamentally changes the economics of provisioning, replicating and protecting storage for large enterprises and small to midsize businesses.

0413

For additional information, please visit **www.datacore.com** or email **info@datacore.com**

DataCore™ SOFTWARE