

Fusion-io directCache

Fusion's directCache transforms ioMemory into a transparent, auto-tiering, acceleration device to cache any block-based storage medium whether it is a disk array, SAN, direct attached storage or iSCSI target. directCache places the caching software in the server to deliver lower cache latency. With directCache, Fusion-io customers can have Terabytes of cache acceleration at their fingertips to speed performance of any backing store. This add-on module for ioSphere integrates tightly with Fusion's Virtual Storage Layer, a flash-optimized OS subsystem, to deliver immediate application workload performance improvements.

directCache Benefits

- Transparently accelerate existing storage volumes. directCache caches the most frequently accessed blocks for instant performance gains
- Seamless integration with existing block storage devices. directCache eliminates the need for costly and complex disk tiering systems across Fibre Channel or SATA drives
- Minimum disruption with maximum benefit. directCache requires no changes to the storage infrastructure, preserving existing configurations
- Immediate performance improvements. Requests coming from NAND flash memory at the server-level can be hundreds of times faster than going to disk-based solutions
- Reduce the reliance on configuring IOPS with disk drives. directCache delivers up to hundreds of thousands of IOPS, eliminating the need to overprovision drives, and cutting cost and complexity
- Maximum performance from NAND flash memory. ioMemory with directCache removes the overhead of legacy storage protocols by integrating directly with a native PCIe implementation

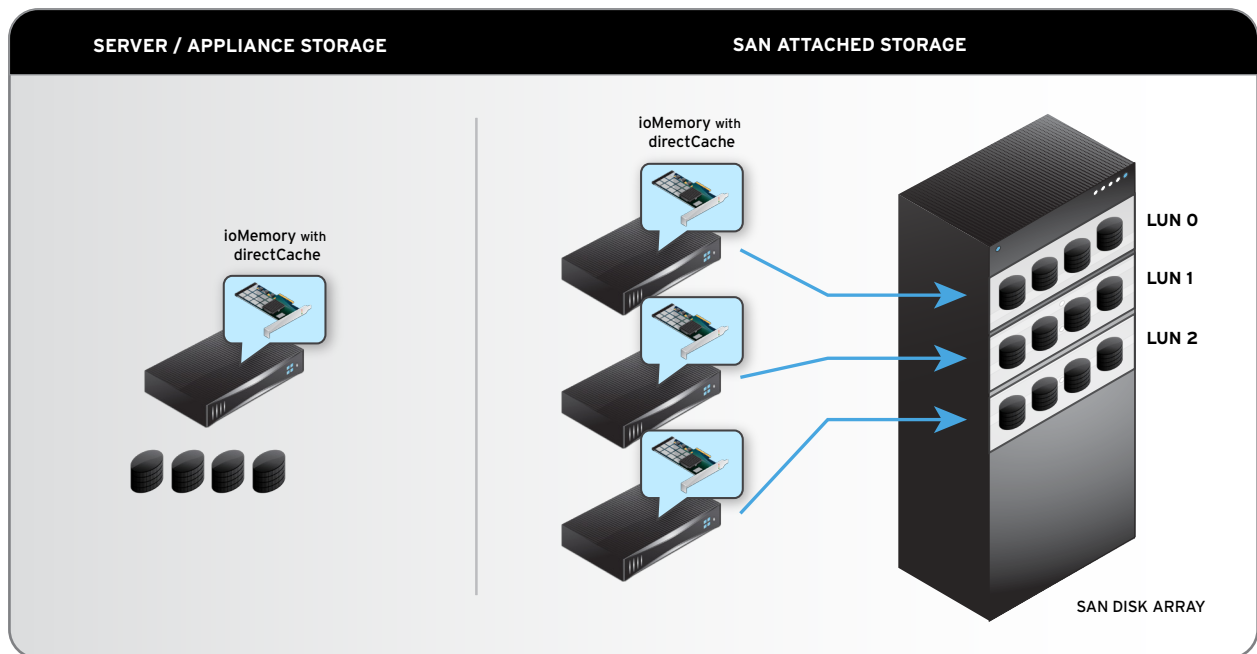
Features

- Support for direct attached, SAN-attached, and appliance-attached storage
- Transparent installation. Host operating systems continue to see block devices as-is
- Support for multiple caching modes including write around, write through, and write back
- Statistics to monitor cache hits and performance

Technical Detail

- Accelerate any OS visible block storage volume
- Read-write caching and read-only caching modes
- Replacement based on recency, frequency and hints
- Direct integration with Virtual Storage Layer (VSL)
 - Fully associative
 - Individual storage sector granularity
 - Avoids meta-data double writing on fault load
 - Maintains 100% cache capacity utilization
 - Avoids saturated write performance loss and wear
 - Full performance of backing-store even with no cache hits
 - Adapts to current health and usable capacity of the ioMemory

directCache Diagram



For More Information:

Visit <http://www.fusionio.com>

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To speak with a Fusion-io specialist outside the U.S.: <http://fusionio.com/company/contact>