CirrusData

DCS

Data Caching Server

Plug-and-Go Caching Eliminates Deployment Downtime

To meet performance requirements in enterprise data centers, IT managers must make difficult purchasing and tiering decisions, balancing the use of legacy storage with SSD/flash storage. Because performance needs fluctuate, it is impossible to manually monitor and move sets of "hot" data. Adding cache at the host or storage may not be an option due to issues such as compatibility, deployment downtime, cost, and management challenges.

The Data Caching Server (DCS) from Cirrus Data provides plug-and-go caching at the SAN layer without requiring any changes to existing hosts, FC switches, or storage. Simply plug them in and obtain 5-times performance increase for your database. No downtime is needed.

Cirrus Data specializes in providing plug-and-go solutions for transparent data management. The unique **Data Caching Server (DCS)** enables dynamic, centralized caching at the SAN layer for busy data systems. Featuring patented Transparent Data Intercept (TDI) technology, DCS installs within minutes and automatically discovers system resources, allowing a group of hosts to share pools of cache for all storage. High-speed SSD and/or RAM can be assigned to groups of hosts, allocating cache to the hosts in greatest need.

By eliminating the need to deploy cache on every host, DCS reduces costs and improves returns on storage investments. Without the need for downtime, the zero-change deployment of DCS allows for immediate remediation of performance issues. This eliminates the work and cost associated with extensive performance analysis, and the subsequent planning and execution of complex remediation projects to deploy alternative storage solutions.

## Zero-Downtime, Zero-Change Installation

Just plug them in. DCS appliances install in minutes in a live production environment, either between the hosts and the switch, or the switch and the storage. It automatically discovers all hosts, storage controllers, and LUNs. Users can set cache policies for various groups of LUNs. Since not all SAN data is hot,

FEATURES

- Inserts directly into live production systems within minutes without downtime

- No re-configuration of client hosts, SAN switch zoning, or storage

- Powered by TDI technology for automatic system discovery, zero-downtime caching

- Cost-effective, centralized SAN-based data acceleration

- Centralized sharing of DRAM and SSD cache pools

- High availability (HA) protection with no single-point-of-failure

- Powerful storage analyzer monitors all I/O, feeding performance data to a self-optimizing LFU/LRU algorithm for acceleration

- Performance analysis reports available for future optimization strategies

DCS only caches data blocks that are frequently accessed (hot spots) on user-specified LUNs. DCS can also dynamically configure cache based on discovered hot spots. Cached data resides on PCIe-based flash cards, flash drives, and DRAM.

Cirrus Data's DCS supports heterogeneous SANs without any changes or downtime required. Just plug in the appliances and they will discover and analyze existing host I/O. The statistics can be used to accurately create pool-based cache policies.
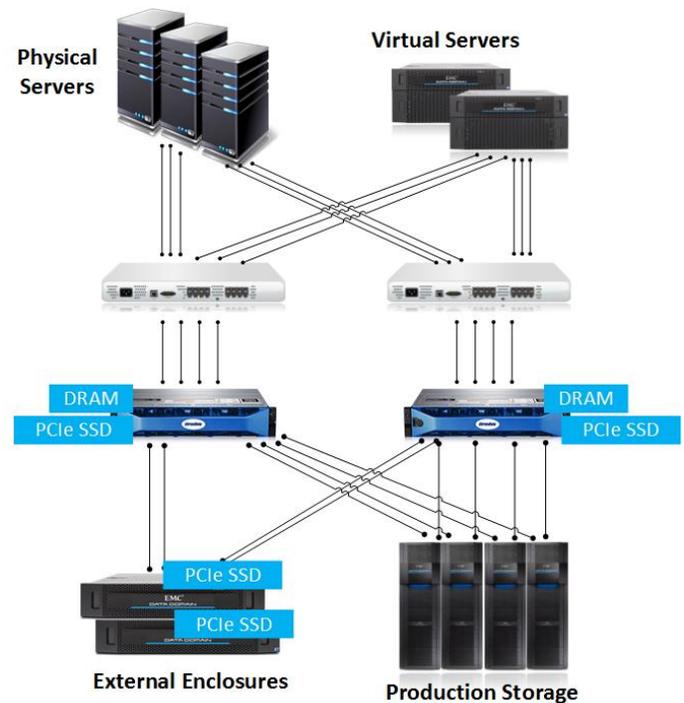
Specifications	DCS-4000	DCS-4500
Form Factor	2U rack mount	
Weight	58 lb (26.3 kg)	
Size	3.44 x 17.08 x 29.75 inches (8.73 x 44.4 x 75.58 cm)	
Power	2 Hot-plug dual supply	
Heat	2891 BTU/hr	
Processor	Dual Intel Xeon 6 cores	
Memory	64GB	96GB
Nodes per Set	2	
Total Number of Nexus	8 (16 x 8Gb FC Ports)	
Total Cache Capacity	8TB	12TB
Total Max. Throughput	6 GB/s	
Total Max. IOPS	1,000,000	

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