

Data Caching Server (DCS) Gateway Appliance

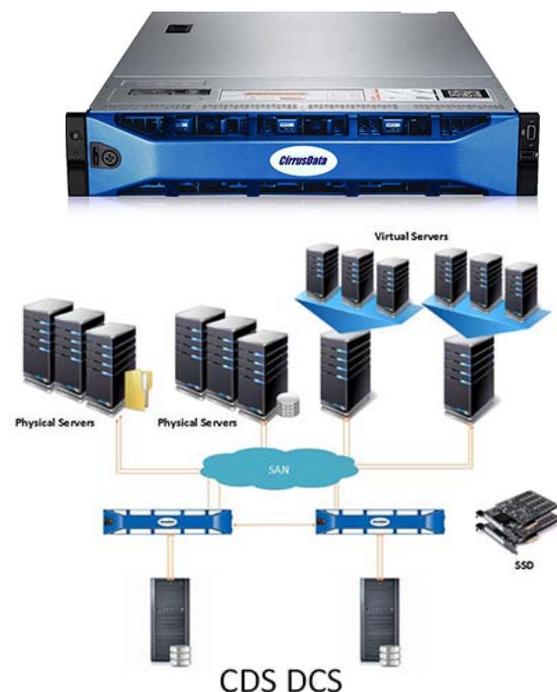
Turnkey Server System
Specification

Centralized Disk Caching for Accelerated Data Access

Performance bottlenecks found in legacy and private/public cloud data centers are often caused by limitations of the storage devices. IT managers have to make tough decision to balance between deploying low cost, slow storage in order to meet budgetary constraints, or over-spending on very expensive storage in order to ensure mission critical applications perform at adequate levels. Because applications typically demand top storage performance in various times of the day or days of the week, it is impossible to manually move sets of application data to faster storage on an hour-by-hour or day-by-day basis in order for the "hot" data to be stored on the fastest, most expensive disks. Caching is typically the solution, but the devil is in the detail. Storage-controller based caching is not practical because adding cache memory to disk-controllers is very expensive, and the maximum amount is limited. Host-based disk caching is not ideal because it is very costly to add a large amount of cache to every application server and difficult to manage on a server-by-server basis.

The Cirrus Data Solutions (CDS) DCS Gateway Appliance is the industry's first SAN-based Disk Caching server, providing cost-effective centralized data acceleration. DCS enables a group of application hosts on the SAN to share one or more pools of disk cache dynamically. A single TB of high-speed SSD (and/or RAM) cache can be assigned to a group of many hosts, making it possible for a central policy to automatically allocate the limited 1TB cache to the hosts that are in actual demand for cache. This unique patent-pending architecture eliminates the need to deploy a rigid amount of expensive cache on every host, thereby realizing a significant amount of cost savings and greatly improves ROI.

With this architecture, the cache-to-storage ratio can be virtually 5 to 10 times better than host-based caching, and 20 to 40 times better than controller-based caching. The net result is significantly improved cache hit-ratio and increased performance.



DCS Key Features



- ◇ Plug and go appliance(s) inserts into active production system with zero down-time using Transparent Data Interception technology (US Patent No. 8,255,538)
- ◇ No re-configuration of client hosts, SAN switch zoning, or storage required
- ◇ Centralized sharing of DRAM and SSD cache pools (client-server architecture)
- ◇ Dynamic (on—demand) or scheduled allocation/re-allocation.
- ◇ Utilizes existing off-the-shelf hardware components (DRAM and/or SSD).
- ◇ High availability protection with no single-point-of-failure.
- ◇ Accelerates both read and write IO with self-optimizing, Application-aware “Evolution” algorithm.
- ◇ 10x or better cache ratio compared with standard Tier-1 storage (improves from 1:1000 to 1:100 or better)

Hardware Specification



DCS-2000

Form Factor	2U Rack mount	Processor	Dual Intel Xeon 6 cores processor
Number of Nexus	2 (4x8Gb FC Ports)	Migration Ports	2xSAS Ports
Memory	128GB	Ethernet Ports	Quad Port1GbE
Max Throughput	1600MB/s	Max IOPS	500,000
Weight	58 LB (26.3 kg)	Power	2 x Hot-plug Dual Supply
Heat Generation	2891 BTU/hr	Size	3.44” X17.08” X29.75” (8.73x44.4x75.58cm)

DMS-4000

Form Factor	2U Rack mount	Processor	Dual Intel Xeon 6 cores processor
Number of Nexus	4 (8x8Gb FC Ports)	Migration Ports	2xSAS Ports
Memory	256GB	Ethernet Ports	Quad Port 1GbE
Max Throughput	3200MB/S	Max IOPS	1,000,000
Weight	58 LB (26.3 kg)	Power	2 Hot-plug Dual Supply
Heat Generation	2891 BTU/hr	Size	3.44” X17.08” X29.75” (8.73x44.4x75.58cm)

DMS-4500

Form Factor	2U Rack mount	Processor	Dual Intel Xeon 6 cores processor
Number of Nexus	4 (8x8Gb FC Ports)	Migration Ports	2xSAS Ports
Memory	384GB	Ethernet Ports	Quad Port 1GbE
Max Throughput	3200MB/S	Max IOPS	1,000,000
Weight	58 LB (26.3 kg)	Power	2 Hot-plug Dual Supply
Heat Generation	2891 BTU/hr	Size	3.44” X17.08” X29.75” (8.73x44.4x75.58cm)