

# Dell Compellent Flash-optimized Solutions

## Flash performance with high capacity at HDD prices

Enhance performance in enterprise applications and VDI environments with improved I/O and low latency. Dell™ Compellent™ Flash-optimized solutions' unique way of tiering data allows you to deliver high-speed SSD performance to more applications in your environment while reducing your costs significantly compared to other flash-optimized solutions.<sup>1</sup>

### Designed to drive down costs while boosting performance

The Dell Compellent Flash-optimized solutions can provide flash performance at rotating disk capacities and prices. They are the first flash-optimized solutions in their class to automatically tier data from write-intensive, single-level cell (SLC) SSDs to lower-cost, read-intensive, multi-level cell (MLC) SSDs and traditional rotating disks.<sup>2</sup> The innovative Dell Compellent Flash-optimized solutions provide all-flash or hybrid-flash storage for your data center. These solutions offer up to an approximate 2x price advantage over competitive hybrid solutions, and up to an approximate 5x price advantage over competitive all-flash solutions.<sup>3</sup>

The Flash-optimized solutions are designed to provide high performance with low latency for enterprise databases, OLTP and ERP systems, and other I/O intensive workloads. With Compellent Flash-optimized solutions, you can achieve greater than 300,000 IOPS with low latency.<sup>4</sup>

### Flexible configurations to meet your requirements

Dell Compellent Flash-optimized solutions provide all-flash or hybrid-flash storage with the energy-efficient Compellent SC220 flash enclosure that has 24 2.5" drive bays or slots. In the all-flash solution, the 24 2.5" drive bays are populated with SSDs; the hybrid-flash solution uses a mix of SSDs and rotating disks.

Flash-optimized solutions use an SC220 flash enclosure that has six 400GB write-intensive SLC

SSDs and six 1.6TB read-intensive MLC SSDs (one of the highest-capacity 2.5" enterprise-class MLC SSDs available). For an all-flash solution, you can fill the 12 remaining slots in the SC220 with six-packs of SLC and MLC SSDs. For a hybrid-flash solution, you can fill the 12 remaining slots with a combination of SSDs and 1TB 7.2K RPM HDDs.

### SC220 2U 24-drive Flash enclosure



6-pack 400GB write-intensive SSD	6-pack 1.6TB read-intensive SSD	12 empty slots for 6-pack of: <ul style="list-style-type: none"><li>• 400GB write-intensive SSD</li><li>• 1.6TB read-intensive SSD</li><li>• 1TB 7.2K RPM HDD</li></ul>
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An all-flash solution consists of one or more of SC220 flash enclosures and provides two tiers of storage with both read- and write-intensive SSDs for applications that require high IOPs and low latency. A hybrid-flash solution provides three tiers of storage and can be configured using one or more SC220 flash enclosures with both write- and read-intensive SSDs and HDDs, plus the option to expand capacity using additional SC220 enclosures with 7.2K, 10K or 15K RPM drives, additional SC200 enclosures with large capacity drives, or additional SC280 enclosures with 4TB 7.2K RPM drives.

### Advanced enterprise technology

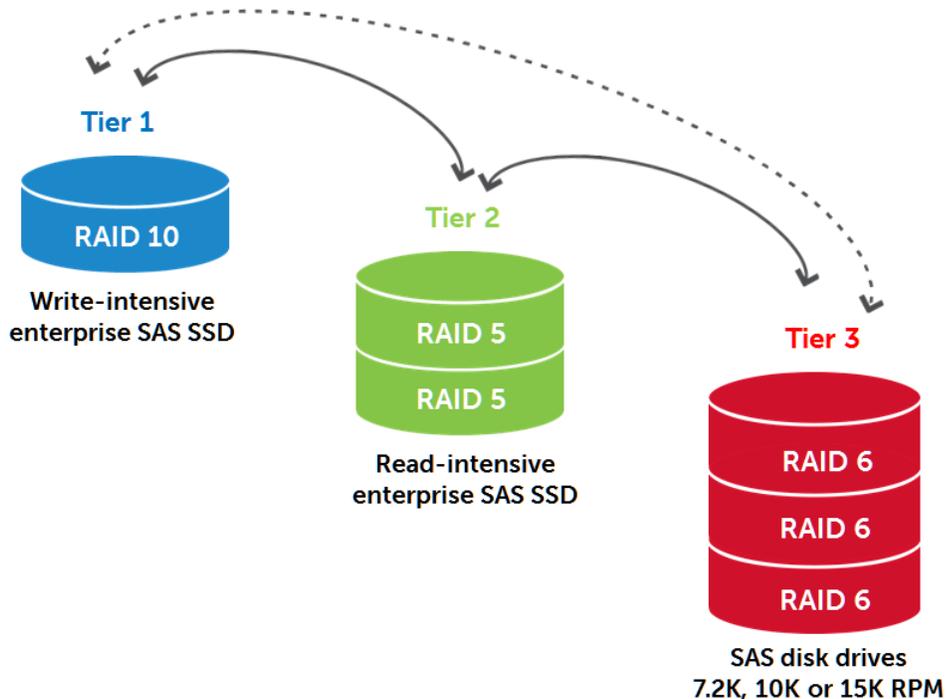
New storage profiles help ensure consistent low latency in performance-sensitive data volumes, while over-provisioned enterprise-class SAS SSDs provide endurance and sustained performance. To avoid any downtime due to SSD failure, the Dell Compellent storage management interface has a "gas-gauge" feature that indicates SSD life expectancy and alerts you when a replacement becomes necessary. Enterprise-class SSDs in

Compellent Flash-optimized solutions have an expected endurance of five years.

The Dell Compellent Data Progression feature offers intelligent auto-tiering that continually optimizes performance and data placement as your system grows, making Flash-optimized solutions ideal for multiple tiers of SSDs. Read-intensive data is automatically moved to read-optimized MLC SSDs, while write-intensive data stays on high-endurance

SLC SSDs and cold data is ultimately moved to spinning disk drives. Use one or several Compellent enclosures to increase your data center's efficiency and performance by keeping highly active data on high-performance, flash-optimized storage and placing less active data on high-capacity HDD storage all within a single array.

With Compellent Data Progression, you can automatically tier data from write-intensive SLC SSDs to lower cost read-intensive MLC SSDs and traditional rotating disks.



<sup>1</sup> G13001797: Dell's innovative Compellent Flash-optimized solution is approximately 1/5 the price versus competitive solutions based on competitive U.S. list pricing from June 2013 IDC Product Evaluation Service (USD). Street pricing calculated assuming a discounting of approximately 50% for all competitive systems and Dell Compellent.

<sup>2</sup> G13001252: Based on internal Dell analysis performed in May 2013, comparing similar Dell Compellent offerings to EMC VNX Family, HP 3PAR StoreServ, HP EVA, IBM V7000, IBM XIV, Hitachi Data Systems HUS 100 Family, and Oracle Sun ZFS Storage Family.

<sup>3</sup> G13001797: Competitive U.S. list pricing from June 2013 IDC Product Evaluation Service (USD). Street pricing calculated assuming a discounting of approximately 50% for all competitive systems and Dell Compellent.

<sup>4</sup> G13001116: Internal test performed by Dell in March 2013 with Storage Center v6.3.10 on dual SC8000 controllers running workloads using IOMeter with a 100% read, 100% sequential load with 4K sector transfer size. Actual performance will vary based on configuration, usage and manufacturing variability.

## Global services and support

Dell Services can help reduce IT complexity, lower costs, and eliminate inefficiencies by making IT and business solutions work harder for you. The Dell Services team delivers distinctive capabilities, including Copilot support and optimization as well as full data migration solutions to facilitate consolidation from multiple file systems. Dell takes a holistic view of your needs and designs solutions for your environment and business objectives while using established delivery methods, local talent and in-depth domain knowledge to help lower your total cost of ownership.

Dynamically unify your data center. Visit [Dell.com/Compellent](http://Dell.com/Compellent).

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