



Compellent array boosts flexibility

REVIEW: STORAGE CENTER 3.2 PROVIDES ISCSI CONNECTIVITY AND NEW FAILOVER CAPABILITIES

By Henry Baltazar

BLENDING FLEXIBILITY and functionality, Compellent's Storage Center 3.2 array proves that IT managers don't have to purchase different arrays to meet their various storage needs.

Version 3.2 of Compellent's midlevel storage array, which shipped in May, is the first modular storage system eWEEK Labs has seen that can provide inexpensive storage using iSCSI connectivity and SATA (Serial ATA) drives and create high-performance storage leveraging Fibre Channel drives and SANs (storage area networks).

Priced at \$26,500 for an entry-level system with a 1.5TB iSCSI SATA array, the Storage Center costs significantly more than competing systems, but companies that make the investment will get a lot for their money.

In contrast, competitors, including Hewlett-Packard Co.'s MSA1000 (Modular Smart Array 1000), use mid-range SCSI drives yet offer only Fibre Channel connectivity.

The Storage Center's flexibility allows IT managers unmatched leeway when it comes to upgrading systems to meet expanding needs. For example, a small or midsize business that isn't ready to spend a lot of money on a Fibre Channel SAN can buy a Storage Center configured with iSCSI that leverages the company's IP network and then move to Fibre Channel if necessary.

We tested a \$58,500 Storage Center unit that came with both SATA and Fibre Channel disk shelves and a single controller unit that had Fibre Channel and iSCSI connectivity. The Storage Center was relatively easy to set up, and we had the test system sharing storage in a matter of minutes. The Web-based management interface guided us through volume creation tasks and let us easily assign volumes to servers.

The Storage Center gave us the choice of basic RAID 5 or RAID 10 for enhanced performance when creating vol-



umes. However, it can also perform in-place RAID conversions if a company's storage needs change.

As with most midlevel arrays, Compellent's Storage Center can generate volume expansions on the fly. This allowed us to easily give test servers more storage when they needed it.

Using the Storage Center's

Compellent Storage Center 3.2 offers highly flexible storage.

Dynamic Capacity function, IT managers can create virtual storage volumes and delay purchasing physical storage until they need it.

For data protection, the Storage Center uses snapshots (which Compellent calls Replays) that allowed us to make point-in-time copies of data volumes. After creating Replays, we could quickly recover data that was erased or corrupted, and we could restore that data to the primary data volume. In the event of a server outage, the Storage Center's management interface makes it easy to unmount a volume from a downed server and remount the data onto a backup server.

The Storage Center has remote Replay capabilities that enable replication of Replays over a WAN connection. This will allow IT managers to set up failover sites.

Active-Active Clustering is also available for the Storage Center, providing automatic failover in the event that a controller goes down. Clustering is limited to two nodes, but with high-capacity disks, IT managers can scale up to 100TB of storage. **e**

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EXECUTIVE SUMMARY

Compellent Storage Center 3.2

The updated Compellent Storage Center provides valuable flexibility and functionality suitable for midsize companies.

KEY PERFORMANCE INDICATORS

UPGRADABILITY	EXCELLENT
INTEROPERABILITY	GOOD
MANAGEABILITY	GOOD
SCALABILITY	GOOD
DATA PROTECTION	GOOD

With the ability to use Fibre Channel and SATA disks, as well as both iSCSI and Fibre Channel interconnects, the Compellent Storage Center can be reconfigured to meet future needs. More information is available at www.compellent.com.

COST ANALYSIS:

An entry-level Compellent Storage Center sporting a 1.5TB SATA array with iSCSI costs \$26,500. Although IT managers could buy a unit for less than half that price from a competitor, they wouldn't get key functionality like Compellent's Replays (snapshots) and dynamic capacity capabilities. Top-level functionality, in addition to the ability to easily upgrade to Fibre Channel, makes the Compellent Storage Center worth its relatively high price of admission.

EVALUATION SHORTLIST

- **Dell Inc.'s iSCSI AX100i** Designed by EMC Corp. and sold by Dell, this inexpensive iSCSI unit uses SATA drives (www.dell.com)
- **HP's StorageWorks MSA1000** This is HP's entry-level Fibre Channel unit (www.hp.com)