



Powerful self-optimized enterprise storage

Designed for business results



Efficiency and agility

Most storage systems treat data as static. But data isn't something to be "stored" forever—it's something to be actively managed to deliver the right returns on performance and efficiency for your enterprise.

Built on Dell™ Fluid Data™ technology, the Dell Compellent storage product family delivers built-in block-level intelligence and automation to dynamically manage enterprise data and lower the overall cost of storage.

Together, storage virtualization, integrated software, and modular hardware enable exceptional efficiency, simplicity, and security—providing a cost-efficient enterprise storage infrastructure that is designed to gain efficiency at scale and provide a flexible response to changing business conditions.

The Dell difference:

Efficiency designed to drive down your total cost of storage

- Reduce disk costs up to 80%*
- Classify and migrate data with patented automated tiering
- Thinly provision storage volumes
- Efficiently deploy and manage virtualized storage
- Minimize data center footprint and power consumption

Intelligent automation helps increase your IT productivity

- Move data with built-in block-level intelligence
- Set policies and let the system run
- Optimize data placement by tier/RAID level
- Support capacity planning, robust reporting, and storage chargebacks

Scalability on a single platform with the future built in

- Maximize storage investment with perpetual licenses designed to eliminate forklift upgrades
- Quickly deploy new technologies on standards-based hardware
- Scale to meet demand— from performance to protection
- Create a single pool of storage resources—consolidated file and block on the same storage

Resiliency against downtime and disaster

- Protect data your way with space-efficient snapshots
- Maximize uptime and availability
- Stay up during planned downtime with dynamic business continuity
- Proactively monitor and optimize your environment with acclaimed support
- Recover most volumes to a server in less than 10 seconds
- Replicate data with less bandwidth and disk capacity—and without the need for identical configurations at local and remote sites

* Assumption: 20% active data for Data Progression, relative drive material cost

Dell Compellent Storage Center: self-optimized, powerful

Dell Compellent Storage Center puts data in the right place at the right time—and at the right cost. Modular hardware, intelligent automation, persistent software licensing—it all adds up to core storage that could help slash storage costs by up to 80% for your enterprise.*

**Assumption: 20% active data for Data Progression, relative drive material cost*

Modular, scalable hardware

Reduce technology risk, easily adopt new technologies, and scale capacity, connectivity and performance on a single platform with Dell Compellent Storage Center. Administrators can mix SSD, Fibre Channel and SAS drives and enclosures in the same system, as well as access data across a full range of standard interconnects and protocols—providing the ability to choose the right interface for each application and IT environment. Fully redundant hardware components and advanced failover features keep data available, and storage can scale up and out—without downtime and on demand—to keep pace as business grows.

Persistent software design

“Future-proof” your investment and combat the wasted capacity of traditional SANs with perpetually licensed intelligent data management software built into Storage Center. With Dell Compellent, you buy a perpetual controller software license once, and controller software upgrades can be done without downtime. A perpetual software licensing model designed to eliminate forklift upgrades means you only pay for more licenses as you add more drives.

Advanced storage virtualization

With Dell Compellent, block-level intelligence delivers granularity and awareness that allows enterprise storage to be virtualized at the disk level, creating a dynamic pool of shared storage resources. Present network storage to servers simply as disk capacity, regardless of tier, RAID level or server connectivity, and create any size virtual volumes without allocating drives to specific servers or dealing with complicated capacity planning or performance tuning. Data is automatically restriped

Simply put:

“With Dell Compellent you get less hardware and more brainware. All other storage technology now seems obsolete in comparison. Thanks to Dell Compellent, we’ve created the perfect modern storage architecture for our business.”

Giovanni Oteri
ICT Manager
Iper Montebello SpA Finiper Group

across all drives within a storage pool when capacity is added for non-disruptive scaling.

Advanced thin provisioning

Use fewer physical disks and improve utilization by eliminating pre-allocation of capacity. Dell Compellent Dynamic Capacity thin provisioning utilizes only the capacity actually written by an application, leaving all allocated but unused disk space available to all other servers and applications. With thin import technology, companies can accelerate data migration, minimize application downtime and maintain data integrity when moving from a legacy Fibre Channel-based storage system to a Dell Compellent SAN. And thin write technology transforms legacy SAN volumes into thinly provisioned volumes on the Dell Compellent SAN to help significantly reduce the storage capacity needed to support your applications.

Automated tiered storage

Buy fewer and less expensive drives with patented Dell Compellent Data Progression software. Data Progression intelligently migrates data in configurable blocks to the optimum storage tier and/or RAID level based on actual use and performance needs—without technology add-ons or manual intervention. The result? A self-tuning storage

Dell Fluid Data solutions

system that requires fewer high-performance disks, reduces power and cooling costs, and minimizes the data center footprint.

Continuous snapshots

Protect your data and minimize your backup window. Dell Compellent Data Instant Replay delivers data protection using pointer-based snapshots called Replays. Once an initial snapshot of a volume is taken, only incremental changes in data need to be captured—and most volumes can be recovered to a server in less than 10 seconds. These readable and writable Replays are automatically stored on lower cost drives, saving disk space while speeding local recovery of lost or deleted files. You decide the Replay schedule that best suits your business.

Thin replication

Right-size recovery without the cost of traditional disaster recovery solutions. Dell Compellent Remote Instant Replay replicates space-efficient Replays between local and remote sites—after initial

site synchronization, only incremental changes in data are replicated, cutting hardware, bandwidth and administration costs. Administrators can easily set up replication, automate restores, and perform DR testing without downtime. Plus Dell Compellent storage integrates directly with VMware vCenter Site Recovery Manager (SRM), delivering seamless, automated disaster recovery for virtual infrastructures.

Dynamic storage migration

Keep applications online and data accessible during planned downtime. Dell Compellent Live Volume is designed to deliver dynamic business continuity by providing a new layer of virtualization that enables a physical server or virtual machine to share a virtual storage volume between two Storage Center SANs in a semi-synchronous configuration. With dynamic horizontal movement of data between systems, administrators can easily migrate data to a new array, optimize I/O performance, and easily balance workloads across systems to maximize resource utilization.

Feature	Dell Compellent Storage Center SAN		
Storage Capacity*	Each system supports up to 1,232 FC drives or 960 SAS drives.		
Hard Drives	Each 3.5" FC enclosure holds up to 16 FC or 14 SSD drives (with a FC drive in bays 1 and 16). Each 3.5" SAS enclosure holds up to 12 SAS drives. Each 2.5" SAS enclosure holds up to 24 SAS drives.		
3.5" Drive Performance and Capacities**	15,000 RPM SAS drives available in 450GB and 600GB 15,000 RPM FC drives available in 300GB and 600GB 10,000 RPM FC drives available in 450GB 7,200 RPM SAS drives available in 1TB and 2TB		
2.5" Drive Performance and Capacities	15,000 RPM SAS drives available in 146GB 10,000 RPM SAS drives available in 450GB and 600GB 7,200 RPM SAS drives available in 1TB SAS Solid State Drive (SSD) available in 200GB		
Host Connectivity	Maximum of 22 front-end ports per controller. A switch is recommended for all configurations and required for clustered controller configurations.		
Storage Controllers and RAID Levels			
Storage Controllers	Each Series 40 controller features a 2.53GHz quad-core processor, 6 PCI-E expansion slots and 4GB of battery-less multi-threaded read-ahead mirrored cache Each Series 30 controller features a 3.00GHz dual-core processor, 1 PCI-X and 4 PCI-E expansion slots and 3.5GB of battery-backed multi-threaded read-ahead mirrored cache Multi-path software provides failover management of redundant data paths between the server and storage array Virtual ports increase port capacity, drive bandwidth, I/O connectivity and port failover		
RAID Levels	Support for RAID levels 0, 5, 6 and 10 Any combination of RAID levels can exist on a single Storage Center Multiple RAID levels can exist on the same storage tier within an array Storage is virtualized and pooled across array without RAID group limitations		
Enterprise Software			
Storage Center Core	Drive virtualization Port virtualization Server mapping Drive optimizer Thin import	Application optimizer Copy-mirror-migrate Boot from SAN Heterogeneous OS LUN masking	Performance monitoring Unified user interface System administration Remote monitoring/phone home
Storage Center Applications	Data Instant Replay Remote Instant Replay Dynamic Capacity Data Progression	Fast Track Dynamic Controllers Enterprise Manager	Multipath Manager for Microsoft Servers Replay Manager Live Volume

Increase capability, lower your costs

With a unified SAN and NAS solution from Dell Compellent, you can provide file-level access and control while taking advantage of the full Dell Compellent feature set for NAS-dedicated volumes. File serving operations remain separate from application operations to avoid bottlenecks, and clustered configurations, hardware redundancy and the ability to add storage capacity on the fly further enhance availability. Our portfolio allows you to select the best architecture for your IT environment—the Dell Compellent zNAS is ideal for midsize and large organizations with either pure NFS or mixed CIFS/NFS environments, while the Dell NX3000 for Compellent is optimal for pure CIFS environments.

Feature	Dell NX3000 for Compellent	Dell Compellent zNAS
Hardware		
Form Factor	2U rack mount	1U rack mount
Clustering	Yes, up to 4 nodes	Yes, up to 2 nodes
CPU	2 Quad-Core Xeon X5650 (2.66Ghz), 64-bit	2 Quad-Core Xeon E5540 (2.53 GHz), 64-bit
Memory Capacity	24GB ECC DDR3 DIMM RAM	24GB or 48GB ECC DDR3 DIMM RAM
Expansion Slots	4 PCI-E slots	2 PCI-E slots
Network Connectivity	On-board: 4 1GbE ports LAN: 1 quad-port 1GbE NIC or 1 dual-port 10GbE NIC SAN: 1 dual-port 8Gb Fibre Channel HBA or 1 dual-port 10Gb iSCSI HBA	On-board: 2 1GbE ports LAN: 1 quad-port 1GbE NIC or 1 dual-port 10GbE NIC SAN: 1 dual-port 8Gb Fibre Channel HBA
Remote Management	Lifecycle Controller	Embedded IPMI card
Hard Drive	Yes, 2 internal disks in Raid 1	No, boot from SAN
Peripheral Devices	CD/DVD-ROM	CD/DVD-ROM
High Availability	Redundant power supplies, clustered heads (up to 4) with active/active failover	Redundant power supplies, clustered heads (up to 2) with active/active failover
Software		
Platform	Windows Storage Server 2008 R2 Enterprise	OpenSolaris ZFS
Environment	Ideal for pure CIFS	Ideal for pure NFS or mixed CIFS/NFS
Administration	Active Directory	LDAP or mixed

Proactive support

Dell Compellent Copilot Support goes beyond traditional support offerings with the right combination of proactive processes, personal support and professional expertise to help ensure the satisfaction of every customer.

Feature	Dell Compellent Copilot Support		
Support Options	24x7 Support, Priority Response	24x7 Support, Next Business Day Response	24x7 Support, Call Center Only
Call Center Support	24x7 Support Center	24x7 Support Center	24x7 Support Center
On-Site Response	Priority (4-, 8- or 24-hour)	Next Business Day	—
Parts Delivery	Priority (4-, 8- or 24-hour)	Next Business Day	UPS Ground
Software Releases	Perpetual Software Licensing	Perpetual Software Licensing	Perpetual Software Licensing
PhoneHome Technology	24x7 Monitoring & Response	24x7 Monitoring & Response	24x7 Monitoring & Response
Incident Fees	\$0	\$0	Time & Material

Learn how Dell Compellent can give you the power to do more with your data at www.compellent.com.

