Datasheet

NetApp E5400 Storage System

Designed to address wide-ranging requirements, the E5400 is setting a new standard for performance density and modular flexibility.

The Challenge
The amount of data being generated and its inherent value continue to grow. Organizations of all sizes must be productive, responsive, and competitive in today's unrelenting environments. While keeping service-level agreements and increasing data demands in mind, organizations are looking for a better way to improve operational efficiency, reduce their data center footprint, and maintain high availability—all while keeping it simple and within their limited budget.

The Solution
The NetApp E5400 is a high-performance storage system that meets demanding performance and capacity requirements without sacrificing simplicity and efficiency. Designed to address wide-ranging solution requirements, its balanced performance is equally adept at supporting high-performance file systems, bandwidth-intensive streaming applications, and transaction-intensive workloads. And its fully redundant I/O paths, advanced protection features, and extensive diagnostic capabilities deliver the highest levels of availability, integrity, and security.

Balanced Performance
The E5400 storage system continues NetApp's longstanding heritage of balanced performance designed to support any workload. High-performance file systems and data-intensive bandwidth applications benefit from the E5400's ability to sustain high read and write throughput, while database-driven transactional applications benefit from its lightning-quick responsiveness and linear scalability. Regardless of the environment, the E5400 is designed to support maximum solution performance.

Modular Flexibility
The E5400 offers multiple form factors and drive technology options to best meet requirements. The ultra-dense 60-drive disk shelf supports up to 180TB in just 4U and is perfect for environments with vast amounts of data and limited floor space. Its 24-drive shelf combines low power consumption and exceptional performance density with its cost-effective 2.5" drives. And the 12-drive shelf is a great fit for cost-conscious organizations that need to deploy both performance and capacity drives. All three shelves support E5400 controllers, or can be used for expansion, enabling optimized configurations that best meet performance, capacity, or cost requirements.

Maximum Storage Density
Today's storage must keep up with continuous growth and meet the most demanding capacity requirements. The E5400 is purpose-built for capacity-intensive environments requiring

E5400 Technical Specifications

All data in this table applies to dual-controller configurations.

	E5460	E5424	E5412
Maximum raw capacity	1080TB	354TB	576TB
Maximum disk drives*	360	384	192
Form factor	4U/60 drives	2U/24 drives	2U/12 drives
Drive types supported	• 2.5" MLC SSD 200GB/800GB • 3.5" 7.2K SAS 2TB/3TB	• 2.5" MLC SSD 200GB/800GB • 2.5" 10K SAS 600GB/900GB	• 3.5" 15K SAS 600GB • 3.5" 7.2K SAS 2TB/3TB
Memory	12GB or 24GB		
I/O interface options	(8) 8Gb FC (16) 8Gb FC (4) 40Gb InfiniBand		
Expansion disk shelves supported—drive offerings	DE6600 (4U/60 drives)—200GB/800GB SSD; 2TB/3TB 7.2K SAS DE5600 (2U/24 drives)—200GB/800GB SSD; 600GB/900GB 10K SAS DE1600 (2U/12 drives)—600GB 15K SAS; 2TB/3TB 7.2K SAS		
OS version	SANtricity 10.80		
High-availability features	Dual-active controller with automated I/O path failover Supports RAID levels 0, 1, 3, 5, 6, and 10 Redundant, hot-swappable storage controllers, disk drives, power supplies, and cooling fans Automatic drive failover and detection and rebuild using global hot spare drives Mirrored data cache with battery backup and destage to flash SANtricity Proactive Drive Health monitoring identifies problem drives before they create issues SANtricity Persistent Monitor makes periodic copies of the storage system configuration		
Operating systems supported	Windows Server® 2003, Windows Server 2008, Linux®, VMware® ESX, Solaris		
Software features	**Standard** Dynamic Volume Expansion Dynamic Capacity Expansion Dynamic RAID Level Migration Dynamic Segment Size Migration Persistent Monitor Proactive Drive Heath Monitoring Nondisruptive Firmware Upgrades Media Scan with Autoparity Check and Correction	**Optional** **Extended-Value Software:** SafeStore Encryption Services SANtricity Snapshot™ SANtricity Volume Copy SANtricity Remote Volume Mirroring	

*All models are capable of reaching 384 disk drives when configured with intermixed drive shelves. Maximum disk drives limited to 240 when using InfiniBand interface option.

Designed to meet wide-ranging requirements, its balanced performance is equally adept at supporting high-performance file systems, bandwidth-intensive streaming applications, and transaction-intensive workloads.

Dimensions and Weight	E5460 System Shelf DE6600 Disk Shelf	E5424 System Shelf DE5600 Disk Shelf	E5412 System Shelf DE1600 Disk Shelf
Height	7.0" (17.78 cm)	3.47" (8.81 cm)	3.4" (8.64 cm)
Width	19" (48.26 cm)	19" (48.26 cm)	19" (48.26 cm)
Depth	32.5" (82.55 cm)	19.6" (49.78 cm)	21.75" (55.25 cm)
Weight	232 lb (105.2 kg)	57.32 lb (26 kg)	59.52 lb (27 kg)

Max Power and Cooling	E5460 System Shelf	E5424 System Shelf	E5412 System Shelf
KVA	1.268	0.331	0.400
Watts	1,222	330	399
BTU	4,180	1,127	1,366

Max Power and Cooling	DE6600 Disk Shelf	DE5600 Disk Shelf	DE1600 Disk Shelf
KVA	1.268	0.241	0.276
Watts	1,222	240	276
BTU	4,180	821	945

optimal space utilization and reduced power/cooling requirements. Its ultra-dense 60-drive 4U disk shelf provides industry-leading TB/U that reduces rack space by up to 60%. And its high-efficiency power supplies and intelligent design can lower power and cooling requirements by up to 10%.

High Reliability

The E5400 storage system enables not only high-speed data access, but continuous access to the data as well. With over 20 years of storage development behind it, the E5400 is based on a field-proven architecture designed to provide high reliability and availability. Its redundant components, automated path failover, and online administration keep organizations productive 24/7/365.

And its advanced protection features and extensive diagnostic capabilities deliver high levels of data integrity.

Intuitive Management

NetApp SANtricity® storage management software offers an appealing combination of robustness and ease of use. Storage administrators appreciate the extensive configuration flexibility that allows optimal performance tuning and complete control over data placement. With its dynamic capabilities, SANtricity software supports on-the-fly expansion, reconfigurations, and maintenance without interrupting storage system I/O.

SafeStore Protection

When data is entrusted to your storage, protecting it is essential, and NetApp

SafeStore technologies do just that. Optional SafeStore Encryption Services combine local key management with drive-level encryption for comprehensive security for data at rest that doesn't sacrifice performance or ease of use.

About NetApp

NetApp creates innovative storage and data management solutions that deliver outstanding cost efficiency and accelerate business breakthroughs. Discover our passion for helping companies around the world go further, faster at *www.netapp.com*.

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