

Vault 2552

Product Overview

Designed to support more of your IT needs, longer, Vector Data Vault 2552 hybrid and all-flash storage arrays provide more value for your money than any other systems in their class. Vault 2552 simplifies the task of managing growth in house and in the cloud by providing support for a broader range of workloads along with seamless scaling of performance and capacity.

The Vault 2552 can be optionally configured for rugged environments, including NEBS Level 3 and ETSI certification and MIL-STD-810 F/G compliance. Vector Data continues to provide network operators with a consistent storage product across their entire infrastructure, including AC and DC power and all-flash options for telecom, military, and other rugged installations.

Perfect for NFV (network function virtualization), the Vault 2552 offers full support for OpenStack, VMware and other leading virtualization platforms, letting you combine the performance and security of Netapp Data ONTAP® with the flexibility and unified management of cloud deployments. Vault 2552 is the perfect foundation for SDN and the network of the future.

Delivers the most value for your IT investment

Vector Data Vault 2552 hybrid storage arrays are built to deliver robust capabilities so that you don't need to buy additional equipment as IT needs change. Every Vault 2552 includes unified support for NAS and SAN workloads and can be configured as a hybrid, even all-flash system, to meet specific price/performance goals.

In addition, every Vault 2552 delivers:

- Increased price/performance value. Leverage up to 5x more of the industry's most efficient flash technology, increasing usable capacity by 48% and accelerating workloads by up to 46% compared to hard disk only systems.
- Best-in-class storage efficiency. Deduplication, compression, and thin provisioning guarantee 50% storage savings.
- Advanced IT integration options. Supports a broader set of applications and delivers 2x the connectivity than previous generation with the new flexible, on-board unified target adapters (UTA2s).



Simplifies storage operations

Free up your time, money, and people. You don't need to be a storage expert to deploy and manage Vector Data storage systems. The Vault 2552 series offers a powerful range of technologies to help reduce complexity and increase the efficiency of your storage administrators:

- Reduce setup time by 3x using System Setup utility than manual installation and eliminate repetitive operations. Updated OnCommand® suite of software tools automates tasks with the click of a button.
- Upgrade software and add or retire storage without downtime. Enhanced nondisruptive operation technology dynamically handles more storage tasks without costly interruption to IT.
- Keep operations running at peak efficiency. Easily tune and troubleshoot virtual server environments with OnCommand Balance. Quickly resolve issues with proactive service diagnostics.
- Protect your critical data more efficiently with integrated data protection such as RAID-DP®, Snapshot™, and Open Systems SnapVault®.

KEY FEATURES

Delivers Best Value for Your IT Investment

- Serves a wide range of SAN and NAS workloads with advanced unified architecture
- Meets more business needs with best-in-class data management
- Achieves better price/performance with up to 5x more flash than previous generation

Simplifies Storage Operations

- 3x faster to set up and easy to manage with the click of a button
- Reduces storage growth complexity with nondisruptive operations

Perfect for NFV (network function virtualization)

- Full support for OpenStack, VMware and other leading virtualization platforms
- Start small and grow big, invest in what you need, add without disruption as you go

Vault 2552 Technical Specifications

	Single Controller	Dual Controller
Maximum Raw Capacity	172.8TB	172.8TB
Internal Drives	24	24
Supported Drives		
Performance HDD	600GB, 900GB, 1.2TB	
SDD	400GB, 800GB, 1.6TB	
Max. Drives (Internal + External)	144	144
ECC Memory	18GB	36GB
Controller Form Factor	1 or 2 controllers in a single 2U chassis	
Maximum Flash Pool	4TB	4TB
NVMEM/NVRAM	2GB	4GB
Onboard I/O: UTA 2 (8Gb FC/16Gb FC/FCoE/10GbE)	4	8
Onboard I/O: 6Gb SAS	2	4
Onboard I/O: GbE	2	4
Storage protocols supported	iSCSI, FCoE, and FC for FAS255x; iSCSI for FAS2520, NFS V2/V3/V4 over UDP or TCP, PCNFSD V1/V2 for (PC) NFS client authentication, Microsoft® CIFS, HTTP 1.0, HTTP 1.1 virtual hosts	
OS Version	Data ONTAP® 8.2.2 RC1 or later	
High Availability Features	Alternate Control Path (ACP); Ethernet-based service processor and Data ONTAP management interface; Redundant hot-swappable controllers, cooling fans, and power supplies	
Supported Configurations	<p>Cluster Configurations</p> <ul style="list-style-type: none"> • Single-node cluster • Two-node switchless cluster • Two-node switched cluster • Clusters of HA pairs <p>7-Mode Configurations Controllers:</p> <ul style="list-style-type: none"> • Single Controller • Active-active controllers in an HA pair • Active-passive controllers in an HA pair <p>Back-End Disks:</p> <ul style="list-style-type: none"> • Single path with single controller or HA Pair • Dual path with single controller • MP-HA with HA pair (best practice) 	

Vault 2552 Technical Specifications

Disk Shelves Supported	Vault DS2246 (2U; 24 drives, 2.5" SFF)
Maximum RAID Group Sizes	RAID 6 (RAID-DP®) <ul style="list-style-type: none"> * SAS and FC: 28 (26 data disks plus 2 parity disks) RAID 4 <ul style="list-style-type: none"> * SAS and FC: 14 (13 data disks plus 1 parity disk) RAID 6 + RAID 1 or RAID 4 + RAID 1 (SyncMirror®)
Host/client operating systems supported	Windows® 2000, Windows Server® 2003, Windows Server 2008, Windows Server 2012, Windows XP, Linux®, Oracle® Solaris, AIX, HP-UX, Mac® OS, VMware®, ESX
Max. Number of LUNs	2048 per controller
Number of Supported Hosts	<ul style="list-style-type: none"> * Up to 6 ports per controller configured as front-end (host) connectivity ports * Up to 12 directly connected servers per active-active configuration * Connected hosts per HA pair: Up to 512 SAN connected servers
FlexVol Volumes	Up to 500 per controller
Snapshot Copies	Up to 127,500 per controller
Maximum Volume/Aggregate Size	120TB

Specifications For Scale-Out Configurations (Hybrid and Disk-Only Configurations)

NAS/SAN scale-out	1-8 nodes (4 HA pairs)
Maximum drives	576
Maximum raw capacity	691.2TB
Maximum Flash Pool	16TB
Maximum memory	144GB
Cluster interconnect	10GbE

Power

Power Consumption Vault 2552	-48 VDC Nominal (-40 to -60 VDC), 7.29 Amp, 339W typical 100 - 120 VAC/3.95 Amp, 200 to 240 VAC/1.72 Amp
Thermal Rating Vault 2552	1,218 BTU/hr (typical) 1,737 BTU/hr (worst case)
Power Consumption Vault DS2246	-48 VDC Nominal (-40 to -60VDC), 6.04 Amp, 280W typical 100 to 120 VAC/3.6Amp, 200 to 240 VAC/1.46 Amp
Thermal Rating Vault DS2246	1,157 BTU /hr(typical) 1,557 BTU/hr (worst case)

Vault 2552 System Environmental Specifications

Weight	55.4 lbs
Height	3.35" (8.5 cm), fits into 2U space
Width	19" IEC rack-compliant (17.6", 44.7 cm)
Depth (without cable management brackets)	19" (48 cm)
Operating Temperature, Altitude, and Relative Humidity	0° C to 40° C (32° F to 104° F); at <= 3,000 m (at <= 10,000' feet) elevation; 20% to 80% relative humidity, noncondensing*
Nonoperating Temperature and Relative Humidity	-40° C to 70° C (-40° F to 158° F); at </= 12,192 m (at</= 40,000') typical of unconditioned airplane cargo bay, 8% to 80% relative humidity, noncondensing, in original container*
Operating Acoustic Noise	<ul style="list-style-type: none"> * Declared sound power (LwAd) per ISO 9296: 6.2 Bel * Sound pressure (LpAm) (bystander positions): 49.6 dB

Safety Agency Approval

CAN/CSA C22.2 NO. 60950-1	
UL 60950-1	
IEC 60950-1	
EN 60950-1	Safety of Information Technology Equipment

Telco NEBS/ETSI Certifications

Telcordia GR-63-CORE NEBS Requirements: Physical Protection
Telcordia GR-1089-CORE EMC and Electrical Safety
Telcordia SR-3580 Level 3
ETSI ETS 300-019 Physical Protection and ETSI ETS 300-753 Acoustic Noise

Military Specifications

MIL-STD-810 F/G compliant

Electromagnetic Emission and Immunity

FCC Part 15 and Class A	
VCCI	Japan
KCC	Korea
Electromagnetic Interference	ATT-TP-76200 GR1089-CORE Section 3
ESD - Electrostatic Discharge	IEC 61000-4-2
EFT - Electrical Fast Transient	ATT-TP-76200 GR-1089-CORE Section 2.2
Lightning and Power Fault	ATT-TP-76200 GR-1089-CORE Section 4
DC Power - Telecommunication	ATT-TP-76200 GR-1089-CORE Section 10

Electrical Safety/Bonding and Grounding

Electrical Safety	ATT-TP-76200 GR-1089-CORE Section 7
Bonding and Grounding	ATT-TP-76200 GR-1089-CORE Section 9

System Physical Environmental

Airborne Contaminants	ATT-TP-76200 GR-63-CORE Section 4
Earthquake, Shock and Vibration	Zone - 4, ATT-TP-76200 GR-63-CORE Section 4
Fire Resistance	ATT-TP-76200 GR-63-CORE Section 4

Physical Design and Mounting

Rackmount	19-inch rack mount supporting racks compliant: - ANSI/EIA-310-D - ETS 300 119 - GR-63-CORE Seismic Zone 4
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