VECTOR DATA™

Vault 2050 DC

PRODUCT OVERVIEW

The Vault 2050 DC is a DC-powered storage appliance based on NetApp's proven technology, designed to meet the needs of storage intensive central office applications for both SAN and NAS. The Vault 2050 DC is an energy and cost-saving solution, offering 40 - 60% less power consumption than competitive products.

With the addition of the Vault 2050 DC to Vector Data's product line, Vector Data™ can now provide network operators with a consistent storage product across their entire infrastructure, including AC and DC-powered and NEBS and non-NEBS facilities. As a NetApp OEM Partner, a simple, yet effective upgrade path to the Vault 2050 DC from the DC-powered FAS270 is mapped out and ready for seamless deployment.

The Vault 2050 DC supports the full suite of software available from NetApp including: NFS, CIFS, iSCSI, fibre channel, SnapMirror and more.

The Vault 2050 DC contains redundant storage controllers for reliability and high-performance 15K RPM SAS disk drives. It also operates using NetApp's WAFL file system and RAID-DP, a Double Parity RAID 6 implementation that prevents data loss when two drives fail.

Additional software features include:
- Data deduplication
- Snapshot
- FlexVol
- SyncMirror
- FlexClone & more

Specialized software to store, backup and improve the reliability and performance of the following is also available:
- Microsoft Exchange
- Microsoft SQL Server
- Microsoft SharePoint Server
- Oracle
- SAP
- VMware

The Vault 2050 DC is an excellent solution for any media-rich applications network operators to deploy in today's data-driven world.

TECHNICAL HIGHLIGHTS

SAN Protocol Support	iSCSI, Fibre Channel Protocol (FCP)
NAS Protocol Support	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
LUNs	Up to 1,024
FlexVol® Volumes	Up to 500 per controller
Snapshot™ Copies	Up to 127,000 per controller
Number of Supported Hosts	Up to 2 ports per controller configured as front-end (host) connectivity ports Up to 4 directly connected servers per active/active configuration Up to 32 SAN host connected servers
Supported Configurations	Controller Configurations Single controller, active/active controller with clustered failover (CFO)[1] Back-End (Disk) Configurations Dual-path, multipath HA storage
Reliability	Redundant hot-swappable controllers, cooling fans and power supplies
Management	Full-duplex 10/100 Base-T Ethernet onboard console, diagnostic LED, Maintenance Center, SNMP, telnet, SSH, HTTP, Web (SSL), host scripting, e-mail alerts
Security	Virus protection, SecureAdmin, IPSec, CHAP authentication, role-based access control (RBAC)

MAXIMUM RAID GROUP AND AGGREGATE SIZES

	FC or SAS	SATA
RAID 6 (RAID-DP™)	28 (26 data disks plus 2 parity disks)	16 (14 data disks plus 2 parity disks)
RAID 4[3]	14 (13 data disks plus 1 parity disk)	7 (6 data disks plus 1 parity disk)
SyncMirror® (High Resiliency RAID 1) Options: **(1) RAID-DP + RAID 1** **(2) RAID 4 + RAID 1**	FC Expansion	Yes
Volume/Aggregate	16TB	16TB

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SCALABILITY

	Active/Active Configuration	Single Controller
Max. Raw Capacity[4]	104TB	104TB
Max. Number of Internal Disk Drives	20	20
Max. Number of Expansion Disk Drives	84	84
Max. Number of Total Disk Drives (Int. + Ext.)	104	104
Max. Drives per Back-End (Disk) FC Loop	84	84
ECC Memory	4GB	2GB
Nonvolatile Memory	512MB	256MB

1 For more information about cluster configurations, please contact your Vector Data account manager.
2 1) Max. capacity is derived based on the type, size, and number of the drives.
2) Max. capacity is calculated using Base10 arithmetic (1TB = 1012 bytes).
3 RAID 6 is the recommended configuration for drives greater than 144GB.
4 Maximum capacity is calculated using Base10 arithmetic (1TB = 1012 bytes).

ONBOARD I/O

	Active/Active Configuration	Single Controller
Onboard Fibre Channel Ports (target or initiator)	4 ports of 1, 2, or 4Gb (auto sensing)	2 ports of 1, 2, or 4Gb (auto sensing)
Onboard GbE Ports	4	2
Modular I/O Slots	2	1

SOFTWARE

Operating System	NetApp Data ONTAP®	
Operating Systems Supported	Windows® 2000, Windows Server 2003, Windows XP, Linux®, Sun™ Solaris™, AIX, HP-UX, Mac® OS, VMware ESX	
Software Features	**Standard** RAID manager, including RAID-DP Snapshot Fast Boot NIS DNS FilerView® FlexVol™ FlexCache™ FlexShare™ Network Data Management Protocol (NDMP) Maintenance Center FAS Easy Start Wizard for iSCSI	**Licensed[5]** FlexClone® MultiStore® Clustered Failover SnapMirror® SnapRestore® Single Mailbox Recovery SnapVault® SnapMover® NearStore® SyncMirror® Manageability Software **Application Suite:** · SnapManager® for Microsoft Exchange · SnapManager® for Microsoft SQL Server · SnapManager® for Microsoft Office **SharePoint** · SnapManager® for Oracle® · SnapManager® for SAP **Server Suite:** · SnapDrive® for UNIX · SnapDrive® for Windows **Data Suite:** · Protection Manager · Virtual File Manager™ - EE · Virtual File Manager™ - ME **Storage Suite:** · CommandCentral™ Storage · File Storage Resource Manager · Operations Manager

For more information on available software, please contact your Vector Data account manager.

I/O CARD SUPPORT

	Active/Active Configuration	Single Controller
Dual port 4Gb FC Disk Adapter (max.)	2	1
Dual port 4Gb FC Tape Adapter (max.)	2	1
Dual port GbE (copper or fiber) (max.)	2	1
Quad port 4Gb FC Disk/ Tape Adapter (max.)	2	1
2-port Ultra320 SCSI Tape Adapter (max.)	2	1
2-port 1Gb iSCSI (copper or fiber) Adapter (max.)	2	1

SYSTEM SPECIFICATIONS

Disk Drive Support	SATA: 1TB, 750GB, 500GB, 250GB disks SAS (15K RPM): 144GB, 300GB, 450GB disks
Internal Disk Drive Storage Interface	SAS, SATA
Power Supply/Cooling Fans	Dual, redundant, hot-pluggable, integrated power supply/fan assemblies
Thermal Rating	2918 Btu/hr (rated), 2247 Btu/hr (typical), fully loaded
Operating Acoustic Noise	≤ 60 dBA sound pressure (LpA) @ normal operating conditions (at 23°C and at sea level)
Dimensions (height/width/depth)	Height - 4 EIU (6.9", 17.5 cm), Width - 19" IEC rack- (height/width/depth) compliant (17.6", 44.7 cm), Depth 24" (61 cm)
Weight	110 lb (50 kg) fully loaded
Min. Cabinet Clearances for Airflow	10 in (25.4 cm) in front, 12 in (30.5 cm) in rear
Min. Cabinet Clearances for Service	30 in (76.2 cm) in front, 30 in (76.2 cm) in rear
Operating Temperature, Altitude, and Relative Humidity	10°C to 40°C (50°F to 104°F); at ≤ 3,000 m (at ≤ 10,000') elevation; 20% to 80% relative humidity, non condensing (28°C wet bulb temperature)
Non-operating Temperature and Relative Humidity	-40°C to 70°C (-40°F to 158°F); 8% to 80% relative humidity, non condensing, in original container

For more information, please contact Vector Data at sales@vectordata.com.