

Hardware Certification List (HCL) for NexentaStor 4.0.x

Product Management
Certification Team

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Table of Contents

Revision History	3
1.0 Overview	4
1.1 Introduction	4
1.2 Nexenta Storage Solutions	4
1.2.1 Reference Architecture (RA)	4
1.2.2 Reference Architecture Plus (RA+).....	5
1.2.3 Certified Solution (CS)	5
1.3 Certification	6
2.0 Reference Architectures	7
2.1 Dell RA (13G Based R730).....	7
2.2 Dell RA (13G Based R730xd)	8
2.3 Dell RA (12G Based)	9
2.4 Supermicro RA (X10 Based)	10
2.5 SuperMicro RA (X9 Based)	11
2.6 Fujitsu RA.....	12
3.0 Reference Architecture Plus	13
3.1 Dell RA+ (13G Based R730).....	13
3.2 Dell RA+ (12G Based).....	14
3.3 Supermicro RA+ (X10 Based)	15
3.4 Supermicro RA+ (X9 Based)	16
3.5 HP RA+	17
4.0 Certified Solutions	18
4.1 Certified Solutions 4.0	18
4.2 Certified Solutions Building Blocks	19
5.0 NexentaStor in Virtual Machines – Virtual NAS Use Cases	20
5.1 NexentaStor as a VMware Storage Virtual Appliance (SVA).....	20
5.2 NexentaStor in XenServer Virtual Machines	21
6.0 MetroHA Configurations	22
7.0 About Nexenta	23
Appendix A - Supported SSDs.....	24

Revision History

<p>4/6/15</p>	<p>Additions</p> <p>Section 2.1: Dell RA (R730): Added last column with expanded Backup & Archive column</p> <p>Section 2.2: Dell RA (R730XD): Added R730XD (13G based) RA. Note that this configuration requires updated drivers that must be obtained separately. Please contact Nexenta Support for details.</p> <p>Section 2.3: Dell RA (R720): Added 400GB MLC in ZIL/SLOG row</p> <p>Section 2.4: Supermicro RA (X10): Added X10 based RA</p> <p>Section 2.5: Supermicro RA (X9): In ZIL/SLOG row, added 400GB MLC to the NSM-54 configuration</p> <p>Section 2.6: Fujitsu RA: Added RX300 RA</p> <p>Section 3.1: Dell RA+(R730): In Controller row, added R630 as supported platform</p> <p>Section 3.2: Dell RA+(R720): In ZIL/SLOG row, under MD1220 column, added 400GB MLC</p> <p>Sections 2.1, 2.3, 3.1, 3.3: Dell RA and RA+: Added a note to contact Dell for detailed wiring diagrams</p> <p>Section 3.3: Supermicro RA+: Added section for X10-based system</p> <p>Section 4.1: Certified Solutions: Added Cirrascale, Maguay, Redapt, SGI, Silicon Mechanics zStax 94</p> <p>Section 4.1: Certified Solutions: Added JBOD in AIC row</p> <p>Section 4.2: Certified Solutions Building Blocks-Controllers: Added LSI 9300 series in SAS HBA column</p> <p>Section 4.2: Certified Solutions Building Blocks-Controllers: Populated FC HBA column</p> <p>Section 4.2: Certified Solutions Building Blocks-Controllers: Added Cisco C240 in Controller column</p> <p>Section 5.0: Added section on Virtual NAS use cases</p> <p>Section 6.0: Added section on MetroHA Solution</p> <p>Corrections</p> <p>Section 2.1, 2.3, 2.5: Dell RA(13G), Dell RA(12G), Supermicro RA(X9): Reflected correct 10GbE port count.</p> <p>Section 2.2: Dell RA(12G): For ND-176 column, Enclosure row, changed 4X MD1200 to 8X MD1200</p> <p>Deletions</p> <p>Section 2.5: Supermicro RA (X9): Removed NSM-40 column</p> <p>Section 4.2: Certified Solutions Building Blocks- Storage Enclosure: Deleted Data HDD, ZIL/SLOG and L2ARC columns. See respective partner's AVL for supported drive list.</p> <p>Modifications</p> <p>Section 2.1: Dell RA(13G): In ZIL/SLOG row, specified DELL ZeusRAM part numbers</p> <p>Section 2.3: Dell RA(12G): In ZIL/SLOG row, specified DELL ZeusRAM part numbers</p> <p>Section 2.3: Dell RA(12G): In CPU row, added v2</p> <p>Section 2.5: Supermicro RA(X9): In CPU row, added v2</p> <p>Section 2.5: Supermicro RA(X9): In CPU row, changed 2.4GHz to 2.5GHz, 3.3GHz to 3.5GHz</p> <p>Section 3.1: Dell RA+(R730): In FC HBA row, replaced QLogic QLE 2462 with QLogic QLE 2560</p> <p>Section 3.1: Dell RA+(R730): In Data HDD row, MD1400 column, changed form factor for 10k and 15k SAS HDD from 3.5" to 2.5"</p> <p>White on grey items are supported but not preferred for new deployments</p> <p>Section 2.5: Supermicro RA (X9): In Storage Enclosure row, NSM-54 config, replaced 216E26 with 847E26</p> <p>Section 2.5: Supermicro RA (X9): In Data HDD row, replaced 1.2TB SAS 10k 2.5 with 2TB SAS 7.2k 3.5</p> <p>Section 3.4: Supermicro RA+(X9): 216E26-R1200LPB not supported for new deployments</p>
<p>4/14/15</p>	<p>Corrections and Modifications:</p> <p>All RA and RA+ sections: Removed NL (Near Line) qualifier for SAS drives</p> <p>Section 2.4: Supermicro RA(X10): corrected number of data drives for NSM-82-X10, NSM-166-X10, NSM-340-X10, NSM-508-X10 columns</p> <p>Section 3.3: Supermicro RA+(X10): Added SYS6018U controller</p> <p>Section 3.3: Supermicro RA+(X10): Corrected storage enclosure to 847E2C-R1K28JBOD</p> <p>Section 4.2: Certified Solutions Building Blocks- Storage Enclosure: Added Quanta JB7</p>

1.0 Overview

1.1 Introduction

NexentaStor is Nexenta's flagship Software Defined Storage (SDS) platform, allowing thousands of customers all around the world to transform their storage infrastructure, increase flexibility and agility, simplify management, and dramatically reduce costs without compromising on availability, reliability, or functionality.

NexentaStor delivers unified file and block storage services, runs on industry standard hardware, scales from tens of terabytes to petabyte configurations, and includes all data management functionalities. NexentaStor is Software Defined Storage with SMARTS: Security, Manageability, Availability, Reliability, (lower) TCO, and Scalability.

This document is intended for Nexenta Partners and Nexenta customer-facing organizations. The latest version of Nexenta Hardware Certification List (HCL) is posted on Partner Portal. For NexentaConnect utilizing VMware vSphere, please refer to VMware HCL.

1.2 Nexenta Storage Solutions

Partners who are looking to offer NexentaStor storage solutions have the following options:

- Reference Architecture (RA)
- Reference Architecture Plus (RA+)
- Certified Solution (CS)

1.2.1 Reference Architecture (RA)

A Reference Architecture consists of fixed sets of components within RA building blocks. RA building blocks are:

- Controllers: x86 servers with specific CPU, memory, NICs, and HBAs
- Storage enclosures: JBOD with specific HDDs and SSDs
- NexentaStor software

The detailed list of components for each RA configuration is listed in Section 2.0. Nexenta and hardware technology partners (such as Dell, Supermicro, and others) collaborate to pre-certify NexentaStor software releases on each RA solution. In most cases, hardware technology partners offer consolidated SKUs for RA configurations to simplify ordering and selling of NexentaStor solutions. As a result, RAs typically provide the fastest path to market for Nexenta Partners.

1.2.2 Reference Architecture Plus (RA+)

Reference Architecture Plus are targeted variations from RA configurations and provide additional flexibility to Nexenta Partners. That flexibility is limited to modifying specific attributes of RA building blocks. Specifically, RA+ allows variations in CPU, DRAM, NIC, SAS HBA, and FC HBA in controllers and enclosure count, HDDs, SSDs in storage enclosures. Refer to Section 3.0 for more details. While RA+ provide additional flexibility to Nexenta Partners, they also require a lightweight Nexenta certification effort.

1.2.3 Certified Solution (CS)

Any deviations outside the scope of Reference Architecture and Reference Architecture Plus require Nexenta certification. Certification may be a lengthy process depending on the nature of the certification and requires extra efforts from both Partners' and Nexenta's engineering resources. Additional fees are required for certification. Unless CS is necessary, it is recommended that RA is the first choice of considerations for all deployments.

Note: Certified Solutions are specific to NexentaStor major releases. For example, a Certified Solution for NexentaStor 3.1.x does not automatically carry forward to NexentaStor 4.0 and will need to get re-certified.

RA	RA+	CS
<ul style="list-style-type: none"> Exact configurations with specific components within each configuration 	<ul style="list-style-type: none"> Controller Variations <ul style="list-style-type: none"> CPU type DRAM quantity NIC SAS HBA FC HBA Storage Enclosure Variations <ul style="list-style-type: none"> Enclosure count HDD type and count SSD type and count 	<ul style="list-style-type: none"> Controllers and/or Storage Enclosures that are outside of RA+ scope Open Configurations Certifications Required

1.3 Certification

Certification requests (certification request CR form and certification testing requirement CTR form) can be made at <http://www.nexenta.com/hcl>. Both RA+ and CS require certification request. Estimation of completion time is in the following (from the receipt of certification requests):

	RA	RA+	CS
Certification Request	<ul style="list-style-type: none"> No certification or approval necessary 	<ul style="list-style-type: none"> Submit CR and CTR Nexenta SE can pre-approve RA+ 	<ul style="list-style-type: none"> Submit CR and CTR
Certification Process	<ul style="list-style-type: none"> Nexenta certification process (default) 	<ul style="list-style-type: none"> Review RA+ config No certification tests Approval of RA+ 	<ul style="list-style-type: none"> Review CS config Nexenta certification tests Approval of CS
Estimated Completion	n/a	Up to two weeks	Approximately eight weeks
Certification Fees	n/a	n/a	Yes (Contact Sales)

Above estimation completion does not include new driver development and is subject to change at any time. For questions, contact certsolprg@nexenta.com.

2.0 Reference Architectures

2.1 Dell RA (13G Based R730)

Dell RA	Entry Level ND-44-13G	Midrange ND-88-13G	Midrange Expanded ND-176-13G	Large ND-224-13G	Large Expanded ND-456-13G	Backup & Archive ND-960-13G	Backup & Archive Expanded ND-1920-13G
Raw Capacity	44TB	88TB	176TB	224TB	456TB	960TB	1920 TB
Data Drive #	44	44	88	112	228	240	480
Form Factor (total system)	8U	12U	20U	12U	20U	20U	36U
Memory (total system)	192GB	192GB	192GB	512GB	512GB	512GB	512GB
Read Cache	Up to 800GB	Up to 800GB	Up to 1.6TB	Up to 1.6TB	Up to 1.6TB	n/a	n/a
10GbE port	8	8	8	8	8	8	8
Software	NexentaStor 4.0						
Protocol	NFS v3, v4, CIFS, SMB 2.1, FC, iSCSI						
Client OS	RHEL, Windows, VMware, Hyper-V, OpenStack, CloudStack						

Dell RA	Entry Level ND-44-13G	Midrange ND-88-13G	Midrange Expanded ND-176-13G	Large ND-224-13G	Large Expanded ND-456-13G	Backup and Archive ND-960-13G	Backup & Archive Expanded ND-1920-13G
Controller	2x R730						
CPU	E5-2609 v3 1.9GHz, 6-core, 2-socket			E5-2643 v3 3.4GHz, 6-core, 2-socket			
DRAM	96GB (12x 8GB)			256GB (16x 16GB)			
Boot Drive	2TB (2x 1TB SAS 7.2k 3.5")						
SAS HBA	2x LSI 9300-8e	4x LSI 9300-8e	4x LSI 9300-8e	2x LSI 9207-8e	4x LSI 9207-8e	4x LSI 9207-8e	4x LSI 9206-16e
NIC	1x X520 10GbE DA/SFP+						
Storage Enclosure	2x MD1420 (24-bay)	4x MD1400 (12-bay)	8x MD1400 (12-bay)	2x MD3060e (60-bay)	4x MD3060e (60-bay)	4x MD3060e (60-bay)	8x MD3060e (60-bay)
Data HDD	1TB SAS 7.2k 2.5"	2TB SAS 7.2k 3.5"				4TB SAS 7.2k 3.5"	
Data Drive #	44	44	88	112	228	240	480
L2ARC	Up to 800GB (0 – 2x 400GB)		Up to 1.6TB (0 – 4x 400GB)			n/a	
ZIL/SLOG	2x Dell 200GB SSD PN: CV6W8	2x Dell 8GB ZeusRAM PN: 400-ADLK	4x Dell 8GB ZeusRAM PN: 400-ADLK	4x Dell 8GBZeusRAM PN: 400-ADOZ	8x Dell 8GB ZeusRAM PN: 400-ADOZ	n/a	

Note 1: For Dell deployments, please use Nexenta-labeled hardware in DellStar ordering system

Note 2: BIOS for R730 system should be 1.0.4 and above

Note 3: 10GbE port count takes into account the 2 ports on the server Network Daughter Card

Note 4: Please contact Dell for detailed wiring diagrams of these configurations

Note 5: PCIe based SSDs are not supported

2.2 Dell RA (13G Based R730xd)

Reference Architectures with Dell R730xd servers and NexentaStor 4.0 provide single node (non-HA) configurations combining controller and storage in a single 2U chassis.

Dell RA	ND-24xd-13G (Non-HA) 24x 2.5" Drives	ND-16xd-13G (Non-HA) 16x 3.5" Drives
Raw Capacity	Up to 43.2 TB	Up to 96TB
Max # of Data Devices	Up to 24	Up to 16
Form Factor (total system)	2U	
Controller	1x R730xd	
CPU	All CPUs supported by Dell	
DRAM	128GB(8x16GB)	
Boot Drive	2TB (2x 1TB SAS 7.2k 2.5")	
SAS HBA	n/a	
Built-in Ethernet	2x 10GbE	
NIC (Optional)	X540 10GbE RJ45 X520 10GbE SFP+ I350	
FC HBA	Emulex LPe 12000, LPe 12002 QLLogic QLE 2560, QLE 2562	
Storage	24x 2.5" Data + 2x 2.5" Boot devices	16x 3.5" Data + 2x 2.5" Boot devices
Data HDD or SSD	See Dell AVL list for 2.5" and 3.5" devices – Note that PCIe devices are not supported	
Data Drive #	Up to 24	Up to 16
L2ARC	Up to 1x 400GB SSD device	
ZIL/SLOG	Up to 1x 200GB SSD device	
Software	NexentaStor 4.0	
Protocol	NFS v3, v4, CIFS, SMB 2.1, FC, iSCSI	
Client OS	RHEL, Windows, VMware, Hyper-V, OpenStack, CloudStack	

Note 1: For Dell deployments, please use Nexenta-labeled hardware in DellStar ordering system

Note 2: BIOS for R730xd system is 1.1.4

Note 3: The R730xd configurations require updated drivers that must be installed separately. Contact support@nexenta.com for details.

Note 4: All-SSD configurations are supported on the X730xd platform. There is no need for separate ZIL or L2ARC devices on all-SSD configurations.

Note 5: PCIe based SSDs are not supported

2.3 Dell RA (12G Based)

Dell RA	Entry Level ND-44	Midrange ND-88	Midrange Expanded ND-176	Large ND-224	Large Expanded ND-456	Backup and Archive ND-960
Raw Capacity	44TB	88TB	176TB	224TB	456TB	960TB
Data Drive #	44	44	88	112	228	240
Form Factor (total system)	8U	12U	20U	12U	20U	20U
Memory (total system)	192GB	192GB	192GB	512GB	512GB	512GB
Read Cache	Up to 800GB	Up to 800GB	Up to 1.6TB	Up to 1.6TB	Up to 1.6TB	n/a
10GbE port	8	8	8	8	8	8
Software	NexentaStor 4.0					
Protocol	NFS v3, v4, CIFS, SMB 2.1, FC, iSCSI					
Client OS	RHEL, Windows, VMware, Hyper-V, OpenStack, CloudStack					

Dell RA	Entry Level ND-44	Midrange ND-88	Midrange Expanded ND-176	Large ND-224	Large Expanded ND-456	Backup and Archive ND-960
Controller	2x R720					
CPU	E5-2609 v2 2.5GHz, 4-core, 2-socket			E5-2643 v2 3.5GHz, 6-core, 2-socket		
DRAM	96GB (12x 8GB)			256GB (16x 16GB)		
Boot Drive	2TB (2x 1TB SAS 7.2k 3.5")					
SAS HBA	2x LSI 9207-8e		4x LSI 9207-8e			
NIC	H710 (for internal SysPool drives only)					
NIC	1x X520 10GbE DA/SFP+					
Storage Enclosure	2x MD1220 (24-bay)	4x MD1200 (12-bay)	8x MD1200 (12-bay)	2x MD3060e (60-bay)	4x MD3060e (60-bay)	4x MD3060e (60-bay)
Data HDD	1TB SAS 7.2k 2.5"	2TB SAS 7.2k 3.5"				4TB SAS 7.2k 3.5"
Data Drive #	44	44	88	112	228	240
L2ARC	Up to 800GB (0 – 2x 400GB)		Up to 1.6TB (0 – 4x 400GB)			n/a
ZIL/SLOG	2x 200GB SLC 2x Dell 200GB MLC PN: CV6W8	2x Dell 8GB ZeusRAM PN: 400-ADLK	4x Dell 8GB ZeusRAM PN: 400-ADLK	4x Dell 8GB ZeusRAM PN: 400-ADOZ	8x Dell 8GB ZeusRAM PN: 400-ADOZ	n/a

Note 1: For Dell deployments, please use Nexenta-labeled hardware in DellStar ordering system

Note 2: BIOS for R720 system is 2.2.3

Note 3: White on grey items are supported but not preferred for new deployments

Note 4: Please contact Dell for detailed wiring diagrams of these configurations

Note 5: 10GbE port count takes into account the 2 ports on the server Network Daughter Card

2.4 Supermicro RA (X10 Based)

Supermicro RA	NSM-20-X10	NSM-54-X10	NSM-82-X10	NSM-166-X10	NSM-340-X10	NSM-508-X10	NSM-1408-X10
Raw Capacity	20TB	54TB	82TB	166TB	340TB	508TB	1408TB
Data Drive #	10	45	41	83	170	254	352
Form Factor (total system)	2U	8U	8U	12U	20U	28U	36U
Memory (total system)	96GB	512GB	512GB	512GB	512GB	512GB	512GB
Read Cache	n/a	400GB	400GB	800GB	800GB	800GB	n/a
10GbE port	2	4	4	8	8	8	8
Software	NexentaStor 4.0						
Protocol	NFS v3, v4, CIFS, SMB 2.1, FC, iSCSI						
Client OS	RHEL, Windows, VMware, Hyper-V, OpenStack, CloudStack						

Supermicro RA	NSM-20-X10	NSM-54-X10	NSM-82-X10	NSM-166-X10	NSM-340-X10	NSM-508-X10	NSM-1408-X10
Controller	1x SYS6028U-TR4+	2x SYS6028U-TR4+					
CPU	E5-2609 v3 1.9GHz, 6-core, 2-socket				E5-2643 v3 3.4GHz, 6-core, 2-socket		
DRAM	96GB (12x 8GB)				256GB (16x 16GB)		
Boot Drive	2TB (2x 1TB SAS 7.2k 3.5)						
SAS HBA	3x AOC-SAS-9300-8i	1x AOC-SAS-9300-8e		2x AOC-SAS-9300-8e	2x AOC-SAS-9300-16e		
NIC	1x AOC-STGN-12S			2x AOC-STGN-12S			
Data HDD	10x 2TB 7.2k SAS	n/a					
Storage Enclosure	n/a	2x 216BE2C-R920LPB (24-bay)	1x 847E2C-R1K28JBOD (44-bay)	2x 847E2C-R1K28JBOD (44-bay)	4x 847E2C-R1K28JBOD (44-bay)	6x 847E2C-R1K28JBOD (44-bay)	8x 847E2C-R1K28JBOD (44-bay)
Data HDD	n/a	1.2TB SAS 10k 2.5"	2TB SAS 7.2k 3.5"				4TB SAS 7.2k 3.5"
Data Drive #	10	45	41	83	170	254	352
L2ARC	n/a	400GB MLC (1x 400GB)			800GB MLC (2x 400GB)		n/a
ZIL/SLOG	n/a	2x 400GB SSD	2x ZeusRAM	4x ZeusRAM		8x ZeusRAM	n/a

Note 1: Chassis management for these storage enclosures is targeted for delivery by end of Q2 2015

Note 2: Motherboard BIOS for the SMC X10 RA is 1.01

2.5 SuperMicro RA (X9 Based)

SuperMicro RA	NSM-20	NSM-54	NSM-84	NSM-170	NSM-348	NSM-520	NSM-1440
Raw Capacity	20TB	54TB	84TB	170TB	348TB	520TB	1440TB
Data Drive #	10	45	42	85	174	260	360
Form Factor (total system)	2U	8U	8U	12U	20U	28U	36U
Memory (total system)	96GB	512GB	512GB	512GB	512GB	512GB	512GB
Read Cache	n/a	400GB	400GB	800GB	800GB	800GB	n/a
10GbE port	2	4	4	8	8	8	8
Software	NexentaStor 4.0						
Protocol	NFS v3, v4, CIFS, SMB 2.1, FC, iSCSI						
Client OS	RHEL, Windows, VMware, Hyper-V, OpenStack, CloudStack						

Supermicro RA	NSM-20	NSM-54	NSM-84	NSM-170	NSM-348	NSM-520	NSM-1440
Controller	1x SSG-6027R		2x SSG-6027R				
CPU	E5-2609 v2 2.5GHz, 4-core, 2 socket				E5-2643 v2 3.5GHz, 6-core, 2-socket		
DRAM	96GB (12x 8GB)				256GB (16x 16GB)		
Boot Drive	2TB (2x 1TB SAS 7.2k 3.5)						
SAS HBA	n/a	1x LSI 9207-8e		2x LSI 9207-8e	2x LSI 9206-16e	3x LSI 9206-16e	4x LSI 9206-16e
	Internal embedded LSI 2308 (on Motherboard, in IT/JBOD mode, for internal SysPool drives only)						
NIC	1x X520 10GbE DA/SFP+			2x X520 10GbE DA/SFP+			
Data HDD	10x 2TB SAS 7.2k 3.5"	n/a					
Storage Enclosure	n/a	2x 216E26-R1200LPB (24-bay) 1x 847E26-RJBOD1 (45-bay)	1x 847E26-RJBOD1 (45-bay)	2x 847E26-RJBOD1 (45-bay)	4x 847E26-RJBOD1 (45-bay)	6x 847E26-RJBOD1 (45-bay)	8x 847E26-RJBOD1 (45-bay)
Data HDD	n/a	1.2TB SAS 10k 2.5" 2TB SAS 7.2k 3.5"	2TB SAS 7.2k 3.5"				4TB SAS 7.2k 3.5"
Data Drive #	n/a	45	42	85	174	260	360
L2ARC	n/a	400GB MLC (1x 400GB)			800GB MLC(2x 400GB)		n/a
ZIL/SLOG	n/a	2x 400GB MLC 2x 200 GB UltraStar SSD (see Appendix A)	2x ZeusRAM Z4RZF3D-8UC	4x ZeusRAM Z4RZF3D-8UC		8x ZeusRAM Z4RZF3D-8UC	n/a

Note 1: White on grey items are supported but not preferred for new deployments.

2.6 Fujitsu RA

Fujitsu RA	NF-90	NF-135
Raw Capacity	90TB	135TB
Data Drive #	90	135
Form Factor (total system)	12U	16U
Memory (total system)	192GB	
Read Cache	Up to 400GB	
10GbE port	4	
Software	NexentaStor 4.0	
Protocol	NFS v3, v4, CIFS, SMB 2.1, FC, iSCSI	
Client OS	RHEL, Windows, VMware, Hyper-V, OpenStack, CloudStack	

Fujitsu RA	NF-90	NF-135
Controller	2x RX300 S8	
CPU	Xeon E5-2620 v2 2.10GHz, 4-core, 2-socket	
DRAM	96GB (12x8GB)	
Boot Drive	2TB (2x 1TB SAS 7.2k 3.5")	
SAS HBA	2x LSI-9207-8e	3x LSI-9207-8e
NIC	1x X520 10GbE DA/SFP+	
Storage Enclosure	4x JX40	6x JX40
Data HDD	1 TB SAS 7.2k 2.5"	
Data Drive #	90	135
L2ARC	1x Up to 400GB SSD	
ZIL/SLOG	4x 200GB SSD	6x 200GB SSD

Note 1: BIOS for Fujitsu RX300 is 1.7.0

Note 2: Any HDD in a NexentaStor 4.0 system must have idle state functionality disabled before being added to the configuration

3.0 Reference Architecture Plus

3.1 Dell RA+ (13G Based R730)

- Controllers and storage enclosures pairing is restricted within RA building blocks only. For example, R730 can be paired with any storage enclosures in the following list, but not across different RA partners building blocks, e.g. Supermicro.
- Variations in the following are permitted:
 - Controller: CPU type, DRAM capacity, type and count for SAS HBA, NIC and FC HBA
 - Storage enclosure: HDD type and count, SSD type and count, storage enclosure type and count
- All Dell-qualified HDD and SSD manufacturers are supported as data HDD and data SSD respectively.

Dell RA+ Building Blocks - Controller	
Controller	R730 or R630
CPU	All CPUs on Dell-supported list
DRAM	96GB to 256GB per controller
Boot Drive	2x 1TB SAS 7.2k 2.5" (mirrored)
SAS HBA	LSI-9300-8e LSI 9207-8e LSI 9206-16e H730 (for internal SysPool drives only)
NIC	X520 10GbE DA/SFP+ X540 10GbE RJ45 I350
FC HBA	Emulex LPe 12000, LPe 12002 QLogic QLE 2560, QLE 2562

Dell RA+ Building Blocks – Storage Enclosure			
Storage Enclosure	MD1400	MD1420	MD3060e
Data HDD	All SAS HDD on Dell-qualified list 7.2k SAS HDD ≤ 4TB 3.5" 10k SAS HDD ≤ 1.2TB 2.5" 15k SAS HDD ≤ 300GB 2.5"	All SAS HDD on Dell-qualified list 7.2K SAS HDD ≤ 1TB 2.5" 10k SAS HDD ≤ 1.2TB 2.5" 15k SAS HDD ≤ 600GB 2.5"	All SAS HDD on Dell-qualified list 7.2k SAS HDD ≤ 6TB 3.5" 7.2K SAS HDD ≤ 1TB 2.5" 10k SAS HDD ≤ 1.2TB 2.5" 15k SAS HDD ≤ 300GB 2.5"
L2ARC	200GB MLC 2.5" 400GB MLC 2.5"		
ZIL /SLOG	ZeusRAM 3.5"	200GB SSD 2.5"	ZeusRAM 3.5"
Data SSD	All SAS SSD on Dell-qualified list		

Note 1: Up to 8x MD3060e supported.

Note 2: There is no Self-encrypting Drives (SED) support in NexentaStor at this time. SED drives certification can be waived with the following assumptions:

- Same hardware and firmware as non-SED (that was certified by Nexenta)
- Self-encrypting feature turned off

Note 3: [White on grey items](#) are supported but not preferred for new deployments

Note 4: Please contact Dell for detailed wiring diagrams of these configurations

Note 5: PCIe based SSDs are not supported

3.2 Dell RA+ (12G Based)

- Controllers and storage enclosures pairing is restricted within RA building blocks only. For example, R720 can be paired with any storage enclosures in the following list, but not across different RA partners building blocks, e.g. SMC.
- Variations in the following are permitted:
 - Controller: CPU type, DRAM capacity, SAS HBA type and count, NIC type and count, FC HBA type and count.
 - Storage enclosure: HDD type and count, SSD type and count, storage enclosure type and count.
- All Dell-qualified HDD and SSD manufacturers are supported as data HDD and data SSD respectively.

Dell RA+ Building Blocks - Controller	
Controller	R620 R720
CPU	All CPUs on Dell-supported list
DRAM	96GB to 256GB per controller
Boot Drive	2x 1TB SAS 7.2k 2.5" (mirrored)
SAS HBA	LSI 9207-8e LSI 9206-16e H710 (for internal SysPool drives only)
NIC	X520 10GE DA/SFP+ X540 10GE RJ45 same as above I350
FC HBA	Emulex LPe 12000, LPe 12002 QLogic QLE 2462, QLE 2562

Dell RA+ Building Blocks – Storage Enclosure			
Storage Enclosure	MD1200	MD1220	MD3060e
Data HDD	All SAS HDD on Dell-qualified list 7.2k SAS HDD ≤ 4TB 3.5" 10k SAS HDD ≤ 1.2TB 3.5" 15k SAS HDD ≤ 600GB 3.5"	All SAS HDD on Dell-qualified list 10k SAS HDD ≤ 1.2TB 2.5" 15k SAS HDD ≤ 600GB 2.5"	All SAS HDD on Dell-qualified list 7.2k SAS HDD ≤ 6TB 3.5" 7.2K SAS HDD ≤ 1TB 2.5" 10k SAS HDD ≤ 1.2TB 2.5" 15k SAS HDD ≤ 300GB 2.5"
L2ARC	400GB SLC 200GB MLC 2.5" 400GB MLC 2.5"		
ZIL /SLOG	ZeusRAM 3.5"	200GB SLC 200GB MLC 2.5" 200GB SSD 2.5"	ZeusRAM 3.5"
Data SSD	All SAS SSD on Dell-qualified list		

Note 1: Up to 8x MD3060e supported.

Note 2: There is no Self-encrypting Drives (SED) support in NexentaStor at this time. SED drives certification can be waived with the following assumptions:

- Same hardware and firmware as non-SED (that was certified by Nexenta)
- Self-encrypting feature turned off

Note 3: [White on grey items](#) are supported but not preferred for new deployments

Note 4: Please contact Dell for detailed wiring diagrams of these configurations

3.3 Supermicro RA+ (X10 Based)

- Controllers and storage enclosures pairing is restricted within RA building blocks only. For example, **SYS6028U-TR4+** can be paired with any storage enclosures in the following list, but not across different RA partners building blocks, e.g. Dell.
- Variations in the following are permitted:
 - Controller: CPU type, DRAM capacity, SAS HBA type and count, NIC type and count, FC HBA type and count.
 - Storage enclosure: HDD type and count, SSD type and count, storage enclosure type and count.
 - All HDD and SSD manufacturers qualified by Supermicro are supported as data HDD and data SSD respectively.

SMC RA+ Building Blocks - Controller	
Controller	SYS6028U-TR4+ (2U), SYS6018U-TR4+ (1U)
CPU	E5-2609v3, 1.9 GHz, 6-core, 2-socket E5-2643v3, 3.4GHz, 6-core, 2-socket
DRAM	96GB to 256GB per controller
Boot Drive	2x 1TB SAS 7.2k 3.5" (mirrored)
SAS HBA	AOC-SAS-9300-8i AOC-SAS-9300-8e AOC-SAS-9300-16e
NIC	AOC-STGN-12S
FC HBA	Emulex LPe 12000, LPe 12002, LPe 12004 QLogic QLE 2560 and 2562

SMC RA+ Building Blocks – Storage Enclosure	
Storage Enclosure	847E2C-R1K28JBOD 216BE2C-R920LPB
Data HDD	All SAS HDD ≤ 6TB on SMC-qualified list
L2ARC	200GB MLC 2.5" – See Appendix A for specific options 400GB MLC 2.5" – See Appendix A for specific options
ZIL/SLOG	400GB MLC ZeusRAM 3.5" – See Appendix A for SSD based alternatives
Data SSD	All SAS SSD on SMC-qualified list

Note 1: There is no Self-encrypting Drives (SED) support in NexentaStor at this time. SED drives certification can be waived with the following assumptions:

- Same hardware and firmware as non-SED (that was certified by Nexenta)
- Self-encrypting feature turned off

Note 2: Motherboard BIOS for the SMC X10 RA+ is 1.01

Note 3: Chassis management for these storage enclosures is targeted for delivery by end of Q2 2015

3.4 Supermicro RA+ (X9 Based)

- Controllers and storage enclosures pairing is restricted within RA building blocks only. For example, 6027R-E1R12L can be paired with any storage enclosures in the following list, but not across different RA partners building blocks, e.g. Dell.
- Variations in the following are permitted:
 - Controller: CPU type, DRAM capacity, SAS HBA type and count, NIC type and count, FC HBA type and count.
 - Storage enclosure: HDD type and count, SSD type and count, storage enclosure type and count.
 - All HDD and SSD manufacturers qualified by SuperMicro are supported as data HDD and data SSD respectively.

Supermicro RA+ Building Blocks - Controller	
Controller	SSG-6027R-E1R12L
CPU	E5-2609, 2.4GHz, 4-core, 2-socket E5-2609 v2, 2.5GHz, 4-core, 2-socket E5-2643, 3.3GHz, 4-core, 2-socket E5-2643 v2, 3.5GHz, 6-core, 2-socket
DRAM	64GB to 256 GB per controller
Boot Drive	2x 1TB SAS 7.2k 3.5 (mirrored)
SAS HBA	LSI 9207-8e LSI 9206-16e Internal embedded LSI 2308 (on Motherboard, in IT/JBOD mode, for internal SysPool drives only)
NIC	X520 10GE DA/SFP+ X540 10GE RJ45
FC HBA	Emulex LPe 12000, LPe 12002, LPe 12004 QLogic QLE 2462, QLE 2562

SMC RA+ Building Blocks – Storage Enclosure				
Storage Enclosure	826E26-R1200LPB	847E26-RJBOD1	216E26-R1200LPB	847DE26-R2K02JBOD⁴
Data HDD	All SAS HDD ≤ 4TB on SMC-qualified list			
L2ARC	400GB MLC 2.5" – See Appendix A for specific options			
ZIL/SLOG	200GB SLC 400GB MLC ZeusRAM 3.5" – See Appendix A for SSD based alternatives			

Note 1: There is no Self-encrypting Drives (SED) support in NexentaStor at this time. SED drives certification can be waived with the following assumptions:

- Same hardware and firmware as non-SED (that was certified by Nexenta)
- Self-encrypting feature turned off

Note 2: Motherboard BIOS is 3.0

Note 3: **White on grey items** are supported but not preferred for new deployments. Enclosure 216E26 is no longer available.

Note 4: Deploying 90-bay JBOD will require professional services

3.5 HP RA+

- Controllers and storage enclosures pairing is restricted within RA building blocks only. For example, DL380e can be paired with any storage enclosures in the following list, but not across different RA partners building blocks, e.g. Dell.
- Variations in the following are permitted:
 - Controller: CPU type, DRAM capacity, SAS HBA type and count, NIC type and count, FC HBA type and count
 - Storage enclosure: HDD type and count, SSD type and count, storage enclosure type and count
- All HP-qualified HDD and SSD manufacturers are supported as data HDD and data SSD, respectively.

HP RA+ Building Blocks - Controller		
Controller	DL380e G8	DL380p G8
CPU	E5-2407, 2.2GHz, 4-core, 2-socket	E5-2643, 3.3GHz, 4-core, 2-socket
DRAM	96GB to 384GB per controller	256GB to 512GB per controller
Boot Drive	2x 1TB SAS 7.2k 2.5 (mirrored)	
SAS HBA	HP H221 (external) HP H220 (internal)	
NIC	HP 560SFP+	
FC HBA	Emulex LPe 12000, LPe 12002, LPe 12004 QLogic QLE 2462, QLE 2562	

HP RA+ Building Blocks – Storage Enclosure			
Storage Enclosure	D2600	D2700	D6000
Data HDD	All SAS HDD ≤ 4TB on HP-qualified list		
	3.5" HDD	2.5" HDD	3.5" HDD
L2ARC	n/a	200GB MLC 2.5 (741136-B21) 400GB MLC 2.5 (741140-B21) 800GB MLC 2.5 (741144-B21)	n/a
ZIL/SLOG	ZeusRAM 3.5	200GB SLC 2.5 (741148-B21) 400GB SLC 2.5 (741153-B21)	n/a
Data SSD	All SAS SSD on HP-qualified list		

Note 1: There is no Self-encrypting Drives (SED) support in NexentaStor at this time. SED drives certification can be waived with the following assumptions:

- Same hardware as non-SED (that was certified by Nexenta)
- Same firmware as non-SED (that was certified by Nexenta)
- Self-encrypting feature turned off

Note 2: BIOS for HP RA/RA+ is P70

Note 3: D6000 starting with NexentaStor 4.0.3

4.0 Certified Solutions

4.1 Certified Solutions 4.0

The following is a list of Nexenta partners' solutions that are certified with NexentaStor 4.0.

Nexenta Certified Solutions		
Partner Name	Partner Solutions	NexentaStor Release
Aberdeen	<ul style="list-style-type: none"> AberSAN Z22 AberSAN Z32 AberSAN Z42 AberSAN ZXP2 AberSAN ZXP3 AberSAN Petarack2 AberSAN Petarack3 	4.0
Adcap Systems	<ul style="list-style-type: none"> Adcap SwiftStor C7000 series 	4.0
AIC	<ul style="list-style-type: none"> SB402-CP2 4U Storage Server + JX3000-4603S JBOD 	4.0
Besta	<ul style="list-style-type: none"> Besta SD201 	4.0
Cirrascale	<ul style="list-style-type: none"> SB1460 	4.0
Maguay	<ul style="list-style-type: none"> Impex PowerStor-NXT 	4.0
Pogo Storage	<ul style="list-style-type: none"> StorageDirector ZXR 	4.0
Q5	<ul style="list-style-type: none"> Predator Beluga 	4.0
Redapt	<ul style="list-style-type: none"> SC280 	4.0
SGI	<ul style="list-style-type: none"> Single node (non-HA) SGI ISS3112-RP2 + SGI MIS 1.5 JBOD 	4.0
Silicon Mechanics	<ul style="list-style-type: none"> Silicon Mechanics zStax 104 4U Silicon Mechanics zStax 104 3U Silicon Mechanics zStax 64 Silicon Mechanics zStax 94 	4.0
Zstor	<ul style="list-style-type: none"> Q-3560 Q-HA356 	4.0

Note 1: Chassis management for Redapt SC280 enclosure is targeted for delivery by Q2 2015

4.2 Certified Solutions Building Blocks

The following is a list of CS building blocks that are certified with NexentaStor 4.0.

CS building blocks serve as an indication or record of the hardware that went through certification and are for reference only.

Certified Solutions Building Blocks – Controller						
Controller	CPU	DRAM	Boot Drive	SAS HBA	NIC	FC HBA
Supermicro X9DRH-iTF	E5-2603, 1.8GHz, 4-core, 2-socket			LSI 9200-8e		Emulex LPe 12000
X9DRi-LN4+	E5-2620 v2, 2.1GHz, 6-core, 2-socket			LSI 9201-16e		LPe 12002
X9DR3-LN4+	E5-2630 v2, 2.6GHz, 6-core, 2-socket			LSI 9205-8e	X520 10GE DA/SFP+	LPe 12004
X9DRW-3LN4F+	E5-2630 v2, 2.6GHz, 6-core, 2-socket	96GB, 256GB	1TB, 2TB SAS 7.2k 3.5	LSI 9206-16e		QLogic 4Gb
X9DRW-3TF+	E5-2690, 2.9GHz, 8-core, 2-socket			LSI 9207-8e		QLE 2460
X9DRD-7LN4F	E5-2690, 2.9GHz, 8-core, 2-socket			LSI 9207-8i	X540 10GE RJ45	QLE 2462
X10DRU-i+	E5-2643, 3.3GHz, 4-core, 2-socket			LSI-9211-8i		QLogic 8Gb
Cisco C240-M3 ²	E5-2643, 3.3GHz, 4-core, 2-socket			LSI-9300-8e		QLE 2560
				LSI-9300-16e		QLE 2562

Certified Solutions Building Blocks – Storage Enclosure

AIC XJ3000-4603S (4U 60-bay)
Quanta JB9 (M4600H 4U 60-bay)
Quanta JB7 (M4240H 4U 24-bay)
Supermicro 837E26-RJBOD1 (3U 28-bay)
Xyratex HB-2435-E6EBD (2U 24-bay)

Note 1: See respective partner AVL for supported drive list.

Note 2: This is a custom configuration by the reseller that uses standard LSI-9207-8i and LSI-9207-8e SAS HBAs to replace the default LSI-9266-8i/9271-8i RAID HBAs.

5.0 NexentaStor in Virtual Machines – Virtual NAS Use Cases

5.1 NexentaStor as a VMware Storage Virtual Appliance (SVA)

NexentaStor can be deployed as a Storage Virtual Appliance (SVA) on VMware ESXi. This is particularly interesting to support Software-Defined Multi-Tenant Virtual NAS use cases where each tenant gets a dedicated Virtual NAS SVA. In this scenario, the NexentaStor SVA consumes vmdks on a VMware Datastore. Data protection is handled by the underlying SAN storage, and NexentaStor can be leveraged to provide NFS and SMB file services.

This solution can be leveraged to eliminate the management complexity of Multi-Tenant NAS services on legacy appliances: instead of trying to pack multiple-tenants within the same hardware appliance, one can deploy on NexentaStor SVA per tenant, relying on VMware to provide resource management. This use case is depicted below:

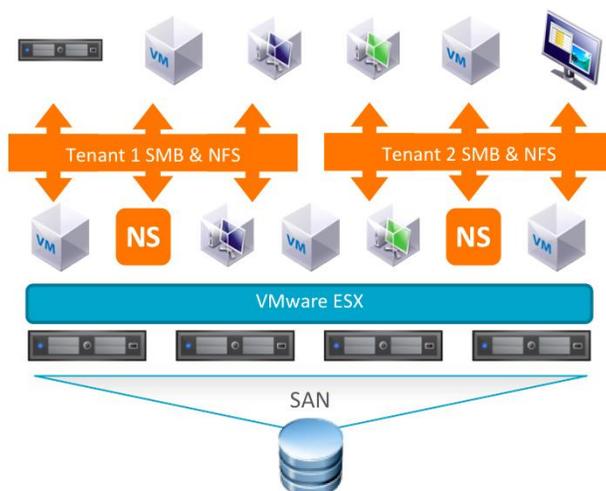


Figure 5-1 – Two NexentaStor SVAs deployed on VMware ESX, providing NAS Services to 2 separate tenants

In this use case, the NexentaStor SVA consumes vmdks and relies on VMware HA for high-availability.

Nexenta supports the following deployment model:

- 1) NexentaStor 4.0 on VMware ESXi 5.0 or later
- 2) Solaris 11 x64 Virtual Machine with a minimum of 2 vCPUs and 16GB of DRAM
- 3) Make sure you install the open-vm-tools on the NexentaStor SVA. Run:


```
# apt-get install open-vm-tools
```

 from bash as root, to get the supported version from Nexenta's public repositories. Then restart the Virtual Machine to activate the drivers.
- 4) Single instance SVA consumes vmdks for syspool and data devices. Assuming that the underlying storage array supporting the ESX Datastore is responsible for data protection, the simplest configuration is for NexentaStor to simply stripe across data vmdks.
- 5) More advanced RAIDz configurations are supported. The actual benefit of deploying more advanced RAIDz is a function on the data protection provided by the underlying SAN storage.

In the model above, each NexentaStor SVA is deployed in a single node configuration and high-availability is delivered by VMware HA.

It is also possible to deploy NexentaStor with the High-Availability plugin across 2 SVAs when utilizing shared disks via RDM across these SVA. This configuration is more complex and requires the use of host limitations on the NexentaStor appliance. The head nodes must be pinned to hypervisors and heads must reside on separate hypervisors. If you're considering deploying the HA-Plugin across SVAs, please contact Nexenta Customer Services.

Note: The default e1000 and VMxnet3 drivers are supported and included in NexentaStor for network interface controllers. LSI Logic Parallel driver needs to be used to create VMDKs or pass-through RDM can be used with supported HBAs.

5.2 NexentaStor in XenServer Virtual Machines

Similar configurations are supported on XenServer 5.5 and later.

6.0 MetroHA Configurations

For Disaster Recovery requirements, NexentaStor supports periodic asynchronous long distance replication, allowing application data to be replicated between different sites over IP. For business critical applications that cannot afford any data loss in the event of a disaster, NexentaStor can be deployed in a MetroHA configuration.

NexentaStor MetroHA delivers continuous availability and disaster recovery for business critical applications. The solution can be deployed between sites connected via a stretched SAN on the same campus or in the same metro area, over distances up to 30 miles / 50 km. The solution relies on a stretched HA cluster of NexentaStor head nodes (one per site) connected via Fibre Channel to backend storage in each site. NexentaStor synchronously mirrors all data between sites to ensure zero data loss in the event of a site failure. This software-based solution builds on proven hardware from ATTO Technology to deliver simple and cost effective zero RPO disaster recovery. The solution is currently going through final certification testing and is targeted for NexentaStor 4.0.4.

Requirements

- 2 sites connected via a stretched SAN over distances not exceeding 30 miles / 50 km
- NexentaStor 4.0.4
- 2x ATTO FibreBridge 6500
- 4-way mirrors **are required**
 - No hot spares allowed
- Components must be tested by both Nexenta and ATTO Technology
 - Dell 13G – R730 with MD14xx or MD3060e, or
 - SMC X10 – SYS6028U-TR4+ with SC847E2C (44 bay)

High Level Topology

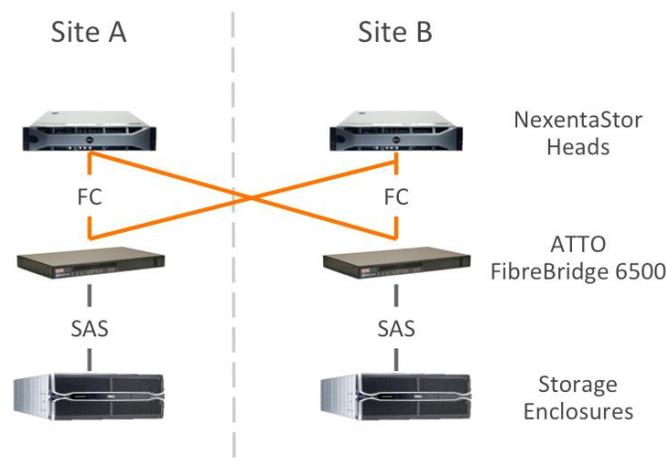


Figure 6-1 – Typical NexentaStor MetroHA Deployment with 2x ATTO FibreBridge 6500

Note 1: Configurations with 4x ATTO FibreBridge 6500 (2x per site) are also supported. Contact Nexenta Customer Services for details.

Note 2: NexentaStor 4.0.4 is targeted for release by end of Q2 2015

7.0 About Nexenta

Nexenta is the global leader in Open Source-driven Software-Defined Storage (OpenSDS) with 6,000+ customers, 1,000+ partners, 30+ patents, and more than 1,000 petabytes of storage under management. Nexenta uniquely integrates software-only “Open Source” collaboration with commodity hardware-centric “Software-Defined Storage” innovation. Nexenta OpenSDS solutions are 100% software-based; and 100% hardware-, protocol-, and app-agnostic providing organizations with Total Freedom protecting them against punitive vendor lock-in. Nexenta provides organizations with the “true” benefits of Software-Defined Everything-centric Cloud Computing – from data centers to end users; from the infrastructure to apps. Nexenta OpenSDS enables everyday apps from rich media-driven Social Living to Mobility; from the Internet of Things to Big Data; from Open-Stack and CloudStack to Do-It-Yourself Cloud deployments – for all types of Clouds – Private, Public, and Hybrid. Founded around an “Open Source” platform and industry-disrupting vision, Nexenta delivers its award- and patent-winning software-only unified storage management solutions with a global partner network, including Cisco, Citrix, Dell, HP, Quanta, SanDisk, Seagate, Supermicro, VMware, Western Digital, Wipro, and many others.

For more information, visit, www.nexenta.com, [Twitter](#), [Facebook](#), [LinkedIn](#) and [YouTube](#). Also, download the newly published [Nexenta Special Edition Software Defined Data Centers \(SDDC\) for Dummies](#) eBook.

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Date: April 2015

Appendix A - Supported SSDs

The following table lists SSDs that have been specifically tested by Nexenta and identifies recommended use cases for each. In general, SSDs with higher write endurance and lower sequential write latency should be used for ZIL/SLOG. SSDs with higher capacity and lower cost / performance profiles should be used for L2ARC.

This information is provided to help select devices as part of Certified Solutions or RA+ configurations that provide flexibility for SSD selection. Note that SSDs used as part of any RA+ configuration must also be supported by the enclosure vendor. For example, an SSD used in a Supermicro RA+ configuration should be listed in this Appendix and on Supermicro's list of qualified devices.

Nexenta Use Case	Manufacturer	Model	Interface	Capacity as Sold	Form Factor	Part Number	Min. Firmware
ZIL/SLOG	HGST	ZeusRAM *	6G SAS	8GB	3.5"	Z4RZF3D-8UCS	C025
ZIL/SLOG	HGST/STEC	S842Z *	6G SAS	32GB	2.5"	S842Z32M2	E4R3
ZIL/SLOG	HGST	s842 *	6G SAS	200GB	2.5"	S842E200M2 / 0T00169	E4R3
ZIL/SLOG	HGST	s842 *	6G SAS	400GB	2.5"	S842E400M2 / 0T00177	E4R3
ZIL/SLOG	HGST	UltraStar SSD800MH *	12G SAS ⁱ	200GB	2.5"	HUSMH8020ASS200	A210
ZIL/SLOG	HGST	UltraStar SSD800MH *	12G SAS ¹	400GB	2.5"	HUSMH8040ASS200	A210
ZIL/SLOG	HGST	UltraStar SSD800MH *	12G SAS ¹	800GB	2.5"	HUSMH8080ASS200	A210
ZIL/SLOG	HGST	UltraStar SSD800MH.B *	12G SAS ¹	100GB	2.5"	HUSMH8010BSS200	A45C
ZIL/SLOG	HGST	UltraStar SSD800MH.B *	12G SAS ¹	200GB	2.5"	HUSMH8020BSS200	A45C
ZIL/SLOG	HGST	UltraStar SSD800MH.B *	12G SAS ¹	400GB	2.5"	HUSMH8040BSS200	A45C
ZIL/SLOG	HGST	UltraStar SSD800MH.B *	12G SAS ¹	800GB	2.5"	HUSMH8080BSS200	A45C
ZIL/SLOG	SanDisk	Optimus.2 Extreme	6G SAS	100GB	2.5"	SDLKOE9W100G5CA1	F6C2
ZIL/SLOG	SanDisk	Lightning	6G SAS	100GB	2.5"	LB206S	P329
ZIL/SLOG	SanDisk	Optimus.2 Extreme	6G SAS	200GB	2.5"	SDLKOD9W200G5CA1	F6C2
ZIL/SLOG	SanDisk	Optimus.2 Extreme	6G SAS	400GB	2.5"	SDLKOC9W400G5CA1	F6C2
ZIL/SLOG	SanDisk	Optimus.2 Extreme	6G SAS	800GB	2.5"	SDLLOC9W800G5CA1	F6C2

Nexenta Use Case	Manufacturer	Model	Interface	Capacity as Sold	Form Factor	Part Number	Min. Firmware
ZIL/SLOG	Seagate	1200 *	12G SAS ¹	100GB	2.5"	ST100FM0103	0004
ZIL/SLOG	Seagate	1200 *	12G SAS ¹	200GB	2.5"	ST200FM0103	0004
ZIL/SLOG	Seagate	1200 *	12G SAS ¹	400GB	2.5"	ST400FM0103	0004
ZIL/SLOG	Seagate	1200 *	12G SAS ¹	100GB	2.5"	ST100FM0093	0004
ZIL/SLOG	Seagate	1200 *	12G SAS ¹	200GB	2.5"	ST200FM0093	0004
ZIL/SLOG	Seagate	1200 *	12G SAS ¹	400GB	2.5"	ST400FM0093	0004
ZIL/SLOG	Toshiba	PX02SS	12G SAS ¹	200GB	2.5"	PX02SSF020	A4AC
L2ARC	HGST	UltraStar SSD1600MR *	12G SAS ¹	250GB	2.5"	HUSMR1625ASS200	A100
L2ARC	HGST	UltraStar SSD1600MR *	12G SAS ¹	400GB	2.5"	HUSMR1640ASS200	A100
L2ARC	HGST	UltraStar SSD1600MR *	12G SAS ¹	500GB	2.5"	HUSMR1650ASS200	A100
L2ARC	HGST	UltraStar SSD1600MR *	12G SAS ¹	800GB	2.5"	HUSMR1680ASS200	A100
L2ARC	HGST	UltraStar SSD1600MR *	12G SAS ¹	1000GB	2.5"	HUSMR1610ASS200	A100
L2ARC	HGST	UltraStar SSD1600MR *	12G SAS ¹	1600GB	2.5"	HUSMR1616ASS200 ²	A100
L2ARC	SanDisk	Optimus.2 Ultra	6G SAS	150GB	2.5"	SDLKOEKW150G5CA1	F6C2
L2ARC	SanDisk	Optimus.2 Ascend	6G SAS	200GB	2.5"	SDLKOEDM200G5CA1	F6C2
L2ARC	SanDisk	Optimus.2 Ultra	6G SAS	300GB	2.5"	SDLKODGW300G5CA1	F6C2
L2ARC	SanDisk	Optimus.1 Ascend	6G SAS	400GB	2.5"	SDLKAD6M400G5CA1	KZ40
L2ARC	SanDisk	Optimus.2 Ascend	6G SAS	400GB	2.5"	SDLKODDM400G5CA1	F6C2
L2ARC	SanDisk	Optimus.2 Eco	6G SAS	400GB	2.5"	SDLKOD6R400G5CA1	K0A0
L2ARC	SanDisk	Optimus.2 Ultra	6G SAS	600GB	2.5"	SDLKOCGW600G5CA1	F6C2
L2ARC	SanDisk	Optimus.2 Ascend	6G SAS	800GB	2.5"	SDLKOC8M800G5CA1	F6C2
L2ARC	SanDisk	Optimus.2 Eco	6G SAS	800GB	2.5"	SDLKOC6R800G5CA1	K0A0
L2ARC	SanDisk	Optimus.2 Ultra	6G SAS	1.2TB	2.5"	SDLLOCW012T5CA1	F6C2

Nexenta Use Case	Manufacturer	Model	Interface	Capacity as Sold	Form Factor	Part Number	Min. Firmware
L2ARC	SanDisk	Optimus.2 Ascend	6G SAS	1.6TB	2.5"	SDLLOCDM016T5CA1	F6C2
L2ARC	SanDisk	Optimus.2 Eco	6G SAS	1.6TB	2.5"	SDLLOC6R016T5CA1	K0A0
L2ARC	SanDisk	Optimus.2 Eco	6G SAS	2TB	2.5"	SDLLOC6R020T5CA1	K0A0
L2ARC	Seagate	1200 *	12G SAS ¹	200GB	2.5"	ST200FM0053	0004
L2ARC	Seagate	1200 *	12G SAS ¹	400GB	2.5"	ST400FM0053	0004
L2ARC	Seagate	1200 *	12G SAS ¹	800GB	2.5"	ST800FM0043	0004
L2ARC	Seagate	1200 *	12G SAS ¹	200GB	2.5"	ST200FM0073	0004 ²
L2ARC	Seagate	1200 *	12G SAS ¹	400GB	2.5"	ST400FM0073	0004 ²
L2ARC	Seagate	1200 *	12G SAS ¹	800GB	2.5"	ST800FM0053	0004 ²

Note 1: 12Gb SAS devices are currently only certified within 6Gb SAS enclosures. Full 12Gb SAS support is pending

Note 2: SED functionality is not supported by NexentaStor

Note 3: * - Tested and supported by Nexenta and Supermicro since January 2015