Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1,
Dynamic Multi-Pathing for VMware 6.1, 6.2, and
Veritas Access 7.1, 7.2
Hardware Compatibility List

Introduction

Created on July 27, 2023

This Hardware Compatibility List (HCL) contains support information for hardware products tested with the following **Symantec Storage Foundation and High Availability Solutions** product releases and platforms:
• 6.1, 6.1.1, 6.2 and 6.2.1 for AIX, Linux, and Solaris (SPARC).

The HCL also contains information for **Dynamic Multi-Pathing for VMware** 6.1, 6.2, and **Veritas Access** 7.1, 7.2.

For Veritas Access supported storage arrays, refer to the "Linux (Red Hat/Oracle)" platform section in this HCL.

The list is divided into sections for servers, disk storage arrays, host bus adapters, and switches. Use the links in the Contents to access the specific sections. All devices are presented by operating system and manufacturer.

This HCL represents the limits of Symantec support for disk storage arrays qualified for use with the Symantec 6.1 and 6.2 Storage Foundation products. There are no implied additions or exceptions to the tested or compatible devices on the provided lists.

The information in the Hardware Compatibility List (HCL) for Storage Foundation documentation is provided "as is", and all expressions or implied conditions, representations and warranties, including any implied warranty of merchantability, fitness for a particular purpose or non-infringement, are disclaimed, except to the extent that such disclaimers are held to be legally invalid, Symantec corporation shall not be liable for incidental or consequential damages in connection with the furnishing, performance, or use of this documentation.

The information contained on this website and in this HCL documentation is subject to change without notice.

General Notes:

• For support purposes, "Yes", or the instance of any software option in a cell in any of the matrices, indicates Symantec support for the product stack under which it appears. To verify support for a given device, make sure that the manufacturer also shows support for the device in its own HCL.

• Devices are listed by the name and series model number provided by the manufacturer.

• Symantec Volume Replicator has no hardware dependencies. It is only supported when it is used as part of Storage Foundation.

NOTE: The Dynamic Multi-Pathing (DMP) OS native stack support feature is supported with the DMP 6.1 and 6.2 releases. DMP OS native stack support allows non-root OS native volume groups or file systems operate over DMP devices. This feature is available for ZFS on Solaris 10, and 11, LVM on AIX 6.1, and 7.1, and LVM on Linux RHEL5, RHEL6, RHEL7, and SLES 11.

NOTE: The new functionality and cumulative fixes of the ASL/APM are delivered through the updated VRTSaslapm package to ensure proper functioning of the storage hardware. The latest VRTSaslapm package can be found at <https://sort.veritas.com/asl> . For more details about the latest VRTSaslapm package changes, see: <http://www.veritas.com/docs/TECH217296> .

Product Acronyms

Acronym	Definition
DMP	Dynamic Multi-Pathing
DMP for VMware	Dynamic Multi-Pathing for VMware
SF	Storage Foundation
SF HA	Storage Foundation and High Availability
SFCFSHA/SF Oracle RAC	Storage Foundation Cluster File System High Availability / Storage Foundation for Oracle RAC

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Servers

Servers are listed on the basis of their processor architecture.

Support Legend

Symbol	Meaning
Yes	Supported
No	Not supported

AIX

Processor architecture	SF	SF HA	SFCFSHA/SF Oracle RAC
Power4 series	Yes	Yes	Yes
Power4+ series	Yes	Yes	Yes
Power5 series	Yes	Yes	Yes
Power5+ series	Yes	Yes	Yes
Power6 series	Yes	Yes	Yes
Power6+ series	Yes	Yes	Yes
Power7 series	Yes	Yes	Yes
Power7+ series	Yes	Yes	Yes
Power8 series	Yes	Yes	Yes
PowerPC 970MP series	Yes	Yes	Yes

Linux - Red Hat/SUSE

Processor architecture	SF	SF HA	SFCFSHA/SF Oracle RAC
AMD Opteron architecture [1]	Yes	Yes	Yes
Intel EM64T architecture [1]	Yes	Yes	Yes

1. Supports only the 64-bit versions of the software stacks.

Solaris

Processor architecture	SF	SF HA	SFCFSHA/SF Oracle RAC
SPARC M5 series [1]	Yes	Yes	Yes
SPARC M6 series [1]	Yes	Yes	Yes
SPARC M7 series [1] [2]	Yes	Yes	Yes
SPARC S7 series [1] [3]	Yes	Yes	Yes
SPARC T3 series [1]	Yes	Yes	Yes
SPARC T4 series [1]	Yes	Yes	Yes
SPARC T5 series [1]	Yes	Yes	Yes
SPARC T7 series [1] [2] [3]	Yes	Yes	Yes
SPARC64-V series	Yes	Yes	Yes
SPARC64-VI series	Yes	Yes	Yes
SPARC64-VII/VII+ series	Yes	Yes	Yes
SPARC64-X series [1]	Yes	Yes	Yes
SPARC64 X+ series [1]	Yes	Yes	Yes
UltraSPARC II series	Yes	Yes	Yes
UltraSPARC III series	Yes	Yes	Yes
UltraSPARC IV series	Yes	Yes	Yes
UltraSPARC T1 series [1]	Yes	Yes	Yes
UltraSPARC T2/T2+ series [1]	Yes	Yes	Yes

1. Oracle VM Server for SPARC supported. See the following TechNote: <http://www.veritas.com/docs/DOC5860> .

2. eUSB device is not supported.

3. Storage Foundation version 6.2.1 or higher is required.

VMware ESXi 5.X

Processor architecture	DMP for VMware
AMD Opteron architecture [1]	Yes
Intel EM64T architecture [1]	Yes

1. Check VMware's HCL for specific models: <http://www.vmware.com/resources/compatibility/search.php> .

Unified Computing and Blade Platforms

All Unified Computing and Blade Platforms shown here were tested with drivers and firmware supported by the OS and storage manufacturers. Check with these manufacturers for:

• Minimum driver and firmware levels

• Specific driver and firmware support

• Support for the stated Symantec products

• Other functional options

Device Support

Manufacturer	Platform/module	Connection
Cisco	UCS Platform	FCoE M72KR-Q, 10GbE
HP	Virtual Connect Module	FC, 1GbE, 10GbE
Oracle	Sun Blade Modular Systems	FC, 1GbE, 10GbE

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Disk Arrays and Storage Devices

Storage arrays qualified with Storage Foundation and High Availability or Storage Foundation for Oracle RAC were tested with fencing enabled.

All storage configurations shown here were tested with drivers and firmware supported by the storage array vendors. Check with these vendors for:

• Minimum driver and firmware levels

• Specific driver and firmware support

• Support for the stated Symantec products

• Other functional options

Symantec supports hardware products listed here that include virtualization capability, but Symantec does not support compatibility issues that can be attributed to the virtualization feature. Symantec requires any compatibility issue to be reproduced in a non-virtualization environment. If the issue is confirmed to be related to Symantec products, Symantec will support its software at the same level as when that software is not running with hardware virtualization products. Symantec will cooperate with virtualization vendors, and attempt to assist in the diagnosis of problems found between the virtualization and Symantec products.

If the Device/family column in a table includes the qualifier **with PowerPath**, it means the storage array supports EMC PowerPath. If a row does not include the **with PowerPath** qualifier, PowerPath is not supported on that storage array.

Hardware-specific features like LUN Snapshot or Thin Reclamation are supported only if they are explicitly listed for the devices. When a hardware-specific feature is listed, it applies to all product stacks (SF, SF HA, SFCFSHA, and SF Oracle RAC).

NOTE: For Active/Active (A/A) arrays, unless stated otherwise, Symantec supports the same Non-Disruptive Upgrade (NDU) operations that the storage vendor supports.

NOTE: Device must be formatted with 512-byte sector size for support.

For more information about the arrays in this HCL, including specific settings, see "Related Documents" in the Symantec Storage Foundation and High Availability Solutions Hardware TechNote <http://www.veritas.com/docs/TECH47728>

Support Legend

Term	Meaning	Definition
Yes	Supported	"Yes" or any other details imply the device is supported with the features listed, if any.
No	Not supported	"No" or the absence of any details imply the device is not supported for that product.
Fencing	Supported with fencing	Symantec I/O fencing is supported for Storage Foundation products. Symantec I/O fencing uses SCSI3 PGR capable devices to allow write access to members of the active cluster. If a split-brain condition occurs, Symantec I/O fencing blocks access to non-members and help in fencing out nodes to prevent data corruption.
Advanced Reporting	Advanced Reporting supported	Support reporting special properties of a LUN discovered by the Device Discovery Layer (DDL) that helps storage administration. See <http://www.veritas.com/docs/TECH217296> for details.
NDU	NDU supported	Support for upgrading firmware/microcode on storage array controllers while applications are running on servers.
SAN Boot	SAN Boot supported	Support for booting a server from a multi-pathed storage array LUN and rootability on SAN LUNs.
Thin Reclamation	Thin Reclamation supported	Support for storage optimization by recovering blocks from deleted files or data. It supports WRITE_SAME, UNMAP, and TRIM/PTRIM depending upon the reclamation method supported by a given device. It adds the storage back to the storage thin pool. LUNs supported with thin reclamation are denoted by their Advanced Reporting attribute. See <http://www.veritas.com/docs/TECH217296> for details.

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Modes

Term	Meaning	Definition
Active/Active (A/A)	Array supported in Active/Active mode	A/A arrays support simultaneous I/O on all paths.
Active/Active-Asymmetric (A/A-A)	Array supported in Active/Active-Asymmetric mode	A/A-A arrays support simultaneous I/O on all paths, but seek the most optimized path for the I/O transmission rate. Asymmetric Logical Unit Access (ALUA) array support is also denoted by A/A-A.
Active/Passive (A/P)	Array supported in Active/Passive mode	A/P arrays in auto-trespass mode support I/O on a single primary (active) path, while the secondary (passive) path is engaged if the primary path fails. A/P implies A/P-C operation mode.
Active/Passive-Concurrent (A/P-C)	Array supported in Active/Passive-Concurrent mode	A/P-C arrays support I/O on multiple primary (active) paths, while the secondary (passive) paths are engaged if all primary paths fail.
Active/Passive-Failover (A/P-F)	Array supported in Active/Passive-Failover (explicit) mode	A/P-F arrays in **explicit** failover mode support I/O on a single primary (active) path, while the secondary (passive) path is engaged through the use of an explicit command if the primary path fails.

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NOTE: For details on specific PowerPath versions supported for storage Device/Family indicated "with PowerPath", see the EMC Support Matrices at <http://www.emc.com/interoperability> .

For details on Advanced Reporting support, see: <http://www.veritas.com/docs/TECH217296> .

For details on Thin Reclamation support, see: <http://www.veritas.com/docs/TECH217296> .

NOTE: DMP is supported in VIO server (VIOS), and VIO client (VIOC). All the arrays listed here are supported with DMP in VIO server or client with the 6.1 release.

NOTE: Array manufacturer Object Data Manager (ODM) definitions are required with MPIO disabled for DMP to manage multi-pathing. See: <http://www.veritas.com/docs/HOWTO21854> .

NOTE: For information on Storage Foundation DMP co-existence with OS native multi-pathing driver MPIO on AIX, see TechNote <http://www.veritas.com/docs/TECH51507> .

3PAR

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
E-Class, S-Class [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. More 3PAR array systems support information is under the HP section.

2. Supported only with 3PAR array Emulex target HBA ports. Legacy 3PAR array QLogic and LSI target HBA ports are not supported. Support of 3PAR E-Class, and S-Class will be dropped in the next release of Storage Foundation software stacks.

Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
CLARiiON CX3 series [1] [2]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot
CLARiiON CX3 series [2]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU
CLARiiON CX3 series with PowerPath [1] [2]	A/A-A	Yes	Yes, Fencing	No	Fibre Channel	
CLARiiON CX3 series with PowerPath [2] [3]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX3 series with AIX VIO [2]	A/P-F	Yes	Yes	No	Fibre Channel	SAN Boot
CLARiiON CX4 series [1] [2] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
CLARiiON CX4 series [2] [4] [5]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, Thin Reclamation
CLARiiON CX4 series with PowerPath [1] [2] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX4 series with PowerPath [2] [3] [4] [5]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX4 series with AIX VIO [1] [2] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX4 series with AIX VIO [2] [4] [5]	A/P-F	Yes	Yes	No	Fibre Channel	SAN Boot
PowerMax series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

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Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Symmetrix DMX series [6]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
Symmetrix DMX series with PowerPath [6]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Symmetrix VMAX series [7] [8] [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Symmetrix VMAX series with PowerPath [7] [8] [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Symmetrix VMAX series with AIX VIO [7] [8] [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
Unity series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Unity series with PowerPath	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VMAX3/VMAX All Flash Family series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VMAX3/VMAX All Flash Family series with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX series [10] [2] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VNX series [10] [11] [2] [4]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, Thin Reclamation
VNX series with PowerPath [10] [2] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX series with PowerPath [10] [11] [2] [3] [4]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2 series [10] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
VNX2 series with PowerPath [10] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2e series [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VNX2e series with PowerPath [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VPLEX	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
VPLEX with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
XtremIO	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
XtremIO with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. A minimum flare code version 26 or above is required to support this mode.

2. NDU operations are supported. For exact procedures for performing NDU on the array, consult with Dell EMC support.

3. For PowerPath 5.3SP1 release, more than two storage paths configuration are not supported by SF HA and SFCFS/SF Oracle RAC.

4. The management tools must be used to report physically allocated space for Thin LUNs.

5. Thin Reclamation is supported with this array; the minimum array firmware FLARE 29 is required. To obtain the maximum reclamation benefits, FLARE 30 is highly recommended; for more detail, see Dell EMC Powerlink Primus Doc ID# emc233231: CLARiiON Thin LUN Space Reclamation for details. Thin Reclamation is not supported with PowerPath.

6. Supports Symmetrix DMX-3 and Symmetrix DMX-4 only.

7. Array microcode level 5876 or above requires the latest ASL to support Thin Reclamation function, see <http://www.veritas.com/docs/TECH194376> for more detail.

8. Reporting of physically allocated space requires firmware level of 5876.159.102 or higher.

9. Thin Reclamation is supported with this array; the minimum array firmware 5875.135.91 is required. Thin Reclamation is not supported with PowerPath.

10. Supports block mode storage only.

11. With SF 6.2 and higher versions, the ALUA (A/A-A) mode is strongly recommended. Please consult Dell EMC support matrix for further guidance.

Fujitsu

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
ETERNUS DX400/DX500/DX600 series [1] [2] [3] [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS DX400/DX500/DX600 series [1] [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [3] [5] [6]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [3] [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS DX8000 S3/S4 series [1] [7] [8] [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS DX8000 S3/S4 series [1] [7] [8] [9]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS DX8000 series [1] [10] [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS DX8000 series [1] [10] [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS VS850	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
ETERNUS2000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
ETERNUS4000 series [10] [11] [12]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS8000 series [10] [12]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation

1. Ensure proper array settings are configured to support this mode.

2. Thin Reclamation is supported with this array. V20L40 or later version of firmware is required to support Thin Reclamation with ETERNUS DX400 series. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

3. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the certain firmware level of ETERNUS DX S2 arrays. Please consult with the storage vendor for the firmware level.

4. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX500 S3 and ETERNUS DX600 S3 are supported with V10L42 or newer.

5. Thin Reclamation is not supported with ETERNUS DX60/DX60 S2/DX80/DX90. ETERNUS DX80 S2 and DX90 S2 are supported with Thin Reclamation with the minimum array firmware V10L10. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

6. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX100 S3, ETERNUS DX200 S3 and ETERNUS DX200F are supported with V10L42 or newer, ETERNUS DX60 S3 is supported with V10L50 or newer.

7. Thin Reclamation is supported with this array. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

8. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX8700 S3 and ETERNUS DX8900 S3 are supported with V10L50 or newer.

9. VRTSaslapm version 6.1.1.400 (Veritas Volume Manager 6.1) / 6.2.1.100 (Veritas Volume Manager 6.2) or later is required to support this array.

10. Thin Reclamation is supported with this array; The minimum array firmware V20L40 is required. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

11. Excludes ETERNUS4000 models 80 and 100.

12. Thin Reclamation is not supported when the shared disk is protected by I/O fencing in SF-HA configuration.

Generic

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FC JBOD	A/A	Yes	Yes	No	Fibre Channel	
SCSI JBOD	A/A	Yes	Yes	No	SCSI	

Hewlett Packard Enterprise

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
3PAR F/T-Class, StoreServ 7000/8000/9000/10000/20000 Storage [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
EVA4100/6100/8100	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
EVA4400/6400/8400 series [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
P6000 EVA series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
P6000 EVA series with AIX VIO	A/A-A	Yes	Yes	No	Fibre Channel	SAN Boot
P9500	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
XP10000/12000	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
XP10000/12000 with AIX VIO	A/A	Yes	Yes	No	Fibre Channel	
XP20000/24000 [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
XP7 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation

1. 3PAR F/T-Class maximum firmware version is 3.1.3; 3PAR StoreServ 7000/10000 minimum firmware version 3.1.2 and StoreServ 8000/20000 minimum firmware version. 3.2.2 are required.

2. StoreServ 8000/20000 minimum firmware version 3.2.2 MU1 is required for Thin Reclamation support.

3. The minimum array firmware xcs11200000 is required to support Thin Reclamation.

4. Thin Reclamation is supported with this array; the minimum array firmware 60.06.05-00 is required.

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Hitachi Vantara

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
HUS 100 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
HUS VM	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
SMS/AMS2000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
SMS/AMS2000 series with AIX VIO [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
USP/NSC series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
USPV/USPVM [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
USPV/USPVM with AIX VIO [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
VSP [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP G series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP Gx00/Fx00 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot

1. Excludes SMS100.

2. Thin Reclamation is supported with this array; the minimum array firmware 60.06.05-00 is required.

3. Thin Reclamation is supported with this array; the minimum array firmware 70-02-02-00/00 is required.

Huawei

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
18000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
18000 series [2]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
OceanStor Series [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
S5000 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VIS series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. The 18000 series A/A only includes 18500, 18800 and 18800F.

2. The proper array settings is required to support this mode.

3. Disks from ALUA array are not claimed by Array Support Library (ASL) if RTPG data is greater than 255 bytes. For more info please refer - <https://www.veritas.com/content/support/en_US/article.100049723> and apply the required patch.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

IBM

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
DS3950	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
DS5020	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Flash Adapter 90 [1] [2]	A/A	Yes	Yes	No	PCIe	
FlashSystem series [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
Spectrum Virtualize series [4] [5] [6] [7] [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
Spectrum Virtualize series with AIX VIO [4] [5] [6] [7] [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
Storwize series [4] [5] [6] [7] [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
Storwize series with AIX VIO [4] [5] [6] [7] [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
System Storage DS5000 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
System Storage DS6000 series	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
System Storage DS8000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage DS8000 series with AIX VIO	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
System Storage N series [10] [9]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
System Storage XIV series [11] [12] [13]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage XIV series [11] [13]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. Device must be formatted with 512-byte sector size.

2. Storage Foundation version 6.2 or higher is required.

3. Array firmware version 1.2.x.x or higher is required.

4. A version higher than 4.2.1.1 is required to obtain support of this array. Contact IBM support to get Firmware with version greater than 4.2.1.1 for SVC.

5. After added back a previous removed array storage controller for maintenance, issue command "vxdctl enable" to re-discover the controller if the controller is not displayed in the Volume Manager.

6. The DMP recovery option attribute of recoveryoption set to timebound and iotimeout set to 600 are required to support this array.

7. The VIO NPIV setup supports both SF-HA and SF-RAC with fencing. The VIO vSCSI setup only supports SF-HA, and fencing is not supported.

8. Thin Reclamation is supported with this array; the minimum array firmware 6.2 is required. Additional steps required to reclaim the storage space, see <http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=SA&subtype=WH&htmlfid=TSW03164USEN> for detail.

9. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

10. The DMP tunable dmp_lun_retry_timeout must be set to 60 to support this array.

11. Excludes A9000 & A9000R models.

12. Thin Reclamation is supported with this array; the minimum array firmware 10.2.2 are required.

13. With array firmware version 10.2.1 or above, the array will be claimed as ALUA mode by DMP.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Infinidat

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
InfiniBox F-Series with AIX VIO	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

NEC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
iStorage M series [1]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. iStorage M11e/M110/M310/M510/M710 are not supported yet.

NetApp

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
AFF Series [1]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS2000/FAS900/FAS200 series [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS3000/V3000 series [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS6000/V6000 series [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS8000/FAS9000 Series [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation

1. A minimum version of ONTAP 8.3 is required to support this array.

2. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

3. Storage Foundation 6.2.1 or higher version supports Clustered Data ONTAP (cDOT) version 8.1 or greater with multiple Controller Nodes.

4. The DMP tunable dmp_lun_retry_timeout must be set to 60 to support this array.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Oracle

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Storage 6580/6780 series [1]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU
StorageTek 2500 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 6140 array	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 9900 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
StorageTek 9985/9990 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
StorageTek 9985V system	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot, Thin Reclamation
StorageTek 9990V system	A/A	Yes	Yes, Fencing	Yes	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Sun Storage 6180 array	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. A minimum array firmware version 07.60.18.10 is required to support NDU with this array.

Sun

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
StorageTek 6540	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

Violin Memory

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Violin 3000/6000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
Violin 3000/6000 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot

Linux (Red Hat/Oracle)

NOTE: For details on specific PowerPath versions supported for storage Device/Family indicated "with PowerPath", see the EMC Support Matrices at <http://www.emc.com/interoperability> .

For details on Advanced Reporting support, see: <http://www.veritas.com/docs/TECH217296> .

For details on Thin Reclamation support, see: <http://www.veritas.com/docs/TECH217296> .

NOTE: The DMP tunable dmp_fast_recovery needs to be set to off with iSCSI storage array configuration.

NOTE: With Oracle Linux, only supports RHEL compatible mode.

NOTE: Veritas Access supports RHEL 6.6 and RHEL 6.7 only.

3PAR

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
E-Class, S-Class [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. More 3PAR array systems support information is under the HP section.

2. Supported only with 3PAR array Emulex target HBA ports. Legacy 3PAR array QLogic and LSI target HBA ports are not supported. Support of 3PAR E-Class, and S-Class will be dropped in the next release of Storage Foundation software stacks.

Amazon

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Elastic Block Store	A/A	Yes	Yes	Yes	Xen_Virtual	
Instance Store	A/A	Yes	Yes	Yes	Xen_Virtual	

Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
CLARiiON AX series [1] [2]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX3 series [1] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot
CLARiiON CX3 series [1] [4] [5]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, NDU
CLARiiON CX3 series with PowerPath [1] [4] [5]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX4 series [1] [3] [4] [6] [7]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	FCoE, Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation

Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
CLARiiON CX4 series [1] [4] [5] [6] [7]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, Thin Reclamation
CLARiiON CX4 series with PowerPath [1] [3] [4] [6] [7] [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX4 series with PowerPath [1] [4] [5] [6] [7] [8]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
EqualLogic PS series	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS3000 series [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS4000 series [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS5000 series [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS6000 series [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
PowerMax series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
PowerVault MD38xx Series	A/A-A	Yes	Yes, Fencing	No	Fibre Channel	
SC Series [10]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
Symmetrix DMX series [11]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
Symmetrix DMX series with PowerPath [11]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Symmetrix VMAX series [12] [13] [14] [15]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Symmetrix VMAX series with PowerPath [12] [13] [14] [15]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Unity series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Unity series with PowerPath	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VMAX3/VMAX All Flash Family series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VMAX3/VMAX All Flash Family series with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX series [1] [16] [4] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
VNX series [1] [16] [4] [5] [6]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
VNX series with PowerPath [1] [16] [17] [4] [6] [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	
VNX series with PowerPath [1] [16] [4] [5] [6] [8]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2 series [16] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VNX2 series with PowerPath [16] [18] [6] [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2e series [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VNX2e series with PowerPath [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VPLEX	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
VPLEX with PowerPath	A/A	Yes	Yes, Fencing	Yes	Fibre Channel	

Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
XtremIO	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, Thin Reclamation
XtremIO with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. NDU operations are supported. For exact procedures for performing NDU on the array, consult with Dell EMC support.

2. Supports CLARiiON AX4 only.

3. A minimum flare code version 26 or above is required to support this mode.

4. When using Dell EMC SnapView feature, DMP tunable dmp_monitor_owernship must be set to off on all hosts where the source and snapshot LUNs are not both imported on the same host.

5. For details of iSCSI support, see the "Host Bus Adapters" section below.

6. The management tools must be used to report physically allocated space for Thin LUNs.

7. Thin Reclamation is supported with this array; the minimum array firmware FLARE 29 is required. To obtain the maximum reclamation benefits, FLARE 30 is highly recommended; for more detail, see Dell EMC Powerlink Primus Doc ID# emc233231: CLARiiON Thin LUN Space Reclamation for details. Thin Reclamation is not supported with PowerPath.

8. PowerPath versions 5.7.x are supported with Storage Foundation 6.1.1 and later versions.

9. A minimum firmware version of V4.3.6 is required to support fencing function.

10. Support Storage Center OS (SCOS) software version 6.2.2 and higher.

11. Supports Symmetrix DMX-3 and Symmetrix DMX-4 only.

12. Array microcode level 5876 or above requires the latest ASL to support Thin Reclamation function, see <http://www.veritas.com/docs/TECH194376> for more detail.

13. On RHEL 5 Update 8 with QLogic QLE2460/QLE2462 HBAs, a minimum driver version of 8.03.07.14.5.6-k is required to support this array to avoid duplicated OS devices issue.

14. Reporting of physically allocated space requires firmware level of 5876.159.102 or higher.

15. Thin Reclamation is supported with this array; the minimum array firmware 5875.135.91 is required. Thin Reclamation is not supported with PowerPath.

16. Supports block mode storage only.

17. SCSI3 PR Fencing is not supported with iSCSI.

18. A minimum PowerPath version 6.0SP1 is required on RHEL 6.6 and RHEL 7 for Storage Foundation support.

Fujitsu

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
ETERNUS DX400/DX500/DX600 series [1] [2] [3] [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX400/DX500/DX600 series [1] [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [3] [5] [6] [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [3] [5] [6] [7]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

Fujitsu

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
ETERNUS DX8000 S3/S4 series [1] [10] [8] [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 S3/S4 series [1] [10] [8] [9]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 series [1] [11] [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 series [1] [11] [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS VS850	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
ETERNUS2000 series [5]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
ETERNUS4000 series [11] [12] [13]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, Thin Reclamation
ETERNUS8000 series [11] [13]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation

1. Ensure proper array settings are configured to support this mode.

2. Thin Reclamation is supported with this array. V20L40 or later version of firmware is required to support Thin Reclamation with ETERNUS DX400 series. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

3. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the certain firmware level of ETERNUS DX S2 arrays. Please consult with the storage vendor for the firmware level.

4. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX500 S3 and ETERNUS DX600 S3 are supported with V10L42 or newer.

5. Also supported in direct-attach configurations with SF RAC product.

6. Thin Reclamation is not supported with ETERNUS DX60/DX60 S2/DX80/DX90. ETERNUS DX80 S2 and DX90 S2 are supported with Thin Reclamation with the minimum array firmware V10L10. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

7. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX100 S3, ETERNUS DX200 S3 and ETERNUS DX200F are supported with V10L42 or newer, ETERNUS DX60 S3 is supported with V10L50 or newer.

8. Thin Reclamation is supported with this array. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

9. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX8700 S3 and ETERNUS DX8900 S3 are supported with V10L50 or newer.

10. VRTSaslapm version 6.1.1.400 (Veritas Volume Manager 6.1) / 6.2.1.100 (Veritas Volume Manager 6.2) or later is required to support this array.

11. Thin Reclamation is supported with this array; The minimum array firmware V20L40 is required. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

12. Excludes ETERNUS4000 models 80 and 100.

13. Thin Reclamation is not supported when the shared disk is protected by I/O fencing in SF-HA configuration.

page 20, Disk Arrays and Storage Devices, Linux (Red Hat/Oracle), Fujitsu

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Generic

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FC JBOD	A/A	Yes	Yes	No	Fibre Channel	
SCSI JBOD	A/A	Yes	Yes	No	SCSI	

Hewlett Packard Enterprise

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
2000 G2 series	A/A-A	Yes	Yes, Fencing	Yes	Fibre Channel	
3PAR F/T-Class, StoreServ 7000/8000/9000/10000/20000 Storage [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
EVA4100/6100/8100	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
EVA4400/6400/8400 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
MSA 1040 SAN	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
MSA 2040 SAN	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
MSA 2050 Storage [3]	A/A-A	Yes	Yes, Fencing	No	SAS	
MSA 2060 Storage	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
MSA2000fc series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
MSA2012sa	A/A-A	Yes	Yes	No	SAS	
P2000 G3 MSA series [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI, SAS	Advanced Reporting, SAN Boot
P6000 EVA series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	FCoE, Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
P9500	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
XP10000/12000	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
XP20000/24000 [5]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
XP7 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation

1. 3PAR F/T-Class maximum firmware version is 3.1.3; 3PAR StoreServ 7000/10000 minimum firmware version 3.1.2 and StoreServ 8000/20000 minimum firmware version 3.2.2 are required.

2. StoreServ 8000/20000 minimum firmware version 3.2.2 MU1 is required for Thin Reclamation support.

3. Storage Foundation 6.2.1 is required to support this array.

4. For I/O Fencing support, array FW TS250 R023 minimally required.

5. Thin Reclamation is supported with this array; the minimum array firmware 60.06.05-00 is required.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Hitachi Vantara

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
HUS 100 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
HUS VM	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
SMS/AMS2000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
USP/NSC series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
USPV/USPVM [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP G series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
VSP Gx00/Fx00 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. Excludes SMS100.

2. Thin Reclamation is supported with this array; the minimum array firmware 60.06.05-00 is required.

3. Thin Reclamation is supported with this array; the minimum array firmware 70-02-02-00/00 is required.

Huawei

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
18000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
18000 series [2]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
ES3000 V2	A/A	Yes	Yes, Fencing	Yes	PCIe	Advanced Reporting, Thin Reclamation
OceanStor Series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
OceanStor Series [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, Thin Reclamation
S5000 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VIS series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. The 18000 series A/A only includes 18500, 18800 and 18800F.

2. The proper array settings is required to support this mode.

3. Disks from ALUA array are not claimed by Array Support Library (ASL) if RTPG data is greater than 255 bytes. For more info please refer - <https://www.veritas.com/content/support/en_US/article.100049723> and apply the required patch.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

IBM

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
DS3950	A/P-F	Yes	Yes, Fencing	No	Fibre Channel	
DS5020	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting
FlashSystem series [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, InfiniBand	NDU, SAN Boot
Spectrum Virtualize series [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
Storwize series [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage DS3000 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI, SAS	
System Storage DS3500 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, SAS	SAN Boot
System Storage DS3500 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, SAS	Advanced Reporting
System Storage DS5000 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
System Storage DS6000 series	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
System Storage DS8000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage N series [5] [6]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
System Storage N series [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
System Storage XIV series [7] [8]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
System Storage XIV series [8] [9]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation

1. Array firmware version 1.2.x.x or higher is required.

2. For FlashSystem arrays attached to the host via Infiniband, setting the tunable a??dmp_fast_recovery=offa?? is required.

3. After added back a previous removed array storage controller for maintenance, issue command "vxdctl enable" to re-discover the controller if the controller is not displayed in the Volume Manager.

4. Thin Reclamation is supported with this array; the minimum array firmware 6.2 is required. Additional steps required to reclaim the storage space, see <http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=SA&subtype=WH&htmlfid=TSW03164USEN> for detail.

5. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

6. The DMP tunable dmp_lun_retry_timeout must be set to 60 to support this array. On the RHEL 6 Update 1 platform, a minimum version Emulex driver 8.3.5.44.4p is required to support Emulex LPe12002 HBA; a minimum version QLogic driver 8.03.01.06.05.06-k is required to support QLogic QLE2562 HBA.

7. Thin Reclamation is supported with this array; the minimum array firmware 10.2.2 are required.

8. With array firmware version 10.2.1 or above, the array will be claimed as ALUA mode by DMP.

9. FlashSystem A9000 with HyperSwap is supported with latest VRTSaslapm for v6.2.1

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Imation

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Nexsan E-Series Systems	A/A-A	Yes	Yes, Fencing	No	Fibre Channel	

Infinidat

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
InfiniBox F-Series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU

Intel

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
DC P3700 [1] [2] [3] [4]	A/A	Yes	Yes	Yes	PCIe	
SSD 910 [1]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting

1. Device must be formatted with 512-byte sector size.

2. DMP EBN namingscheme is required.

3. RHEL 6.6 and higher versions are not supported.

4. Storage Foundation version 6.2 or higher is required.

Kaminario

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
K2	A/A	Yes	Yes, Fencing	No	Fibre Channel	

page 24, Disk Arrays and Storage Devices, Linux (Red Hat/Oracle), Imation

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

NEC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
iStorage D1/D3 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
iStorage D8 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
iStorage M series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
Symmetrix DMX-4	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
Symmetrix DMX-4 with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Symmetrix VMAX	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting
Symmetrix VMAX with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. Also supported in direct-attach configurations.

NetApp

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
AFF Series [1]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
E_SERIES [2]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, InfiniBand	Advanced Reporting, NDU
FAS2000/FAS900/FAS200 series [3] [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
FAS2000/FAS900/FAS200 series [3] [4] [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	FCoE, Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS3000/V3000 series [3] [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
FAS3000/V3000 series [3] [4] [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	FCoE, Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS6000/V6000 series [3] [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
FAS6000/V6000 series [3] [4] [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	FCoE, Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS8000/FAS9000 Series [3] [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
FAS8000/FAS9000 Series [3] [4] [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	FCoE, Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation

1. A minimum version of ONTAP 8.3 is required to support this array.

2. A minimum array firmware version 08.10.09.00 is required.

3. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

4. The DMP tunable dmp_lun_retry_timeout must be set to 60 to support this array. On the RHEL 6 Update 1 platform, a minimum version Emulex driver 8.3.5.44.4p is required to support Emulex LPe12002 HBA; a minimum version QLogic driver 8.03.01.06.05.06-k is required to support QLogic QLE2562 HBA.

5. Storage Foundation 6.1 supports configurations that run Clustered Data ONTAP (cDOT) version 8.1 or greater with a limitation of TWO Controller Nodes only.

6. Storage Foundation 6.2.1 or higher version supports Clustered Data ONTAP (cDOT) version 8.1 or greater with multiple Controller Nodes.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

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Nexsan

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Beast Systems	A/A-A	Yes	Yes, Fencing	No	Fibre Channel	

NimbleStorage

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
CS/AF/HF-Series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation

Oracle

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FS1-2	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Storage 6580/6780 series [1]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU
StorageTek 2500 series [2]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI, SAS	
StorageTek 6140 array	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 9900 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 9985/9990 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
StorageTek 9985V system	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 9990V system	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
Sun Storage 6180 array	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU
ZFS Storage Appliance series [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU

1. A minimum array firmware version 07.60.18.10 is required to support NDU with this array.

2. To obtain support for this array, configuration change at the OS level is needed. Specifically in modprobe.conf file mpt_disable_hotplug_remove parameter should be set to 1 instead of default value of 0. A rebuild of initrd may be required.

3. See Hardware TechNote for array limitation - <http://www.veritas.com/docs/TECH47728>

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Pure Storage

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FlashArray series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation

SanDisk

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
ioDrive [1] [2] [3]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting, Thin Reclamation
ioDrive Duo [1] [2] [3] [4]	A/A	Yes	No	No	PCIe	Advanced Reporting, AtomicIO, Thin Reclamation
ioDrive2 [1] [2] [3] [4]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting, AtomicIO, Thin Reclamation
ioMemory PX600 series [1] [5]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting, Thin Reclamation
ioMemory SX300 series [1] [5]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting, Thin Reclamation
ioMemory SX350 series [1] [5]	A/A	Yes	Yes, Fencing	Yes	PCIe	Advanced Reporting, Thin Reclamation
ION Data Accelerator [6] [7] [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, InfiniBand	NDU
ioScale2 [1] [3]	A/A	Yes	No	No	PCIe	Advanced Reporting, Thin Reclamation

1. Device must be formatted with 512-byte sector size.

2. Supports the Thin Reclamation TRIM operation with Red Hat Linux 6.0 (RHEL6). See the Fusion-IO documentation for the firmware version requirements for TRIM support.

3. The minimum firmware version 3.0 is required.

4. AtomicIO is supported with SF 6.2 and higher versions.

5. Storage Foundation version 6.2 or higher is required.

6. Only supports ION standalone mode.

7. Supports RadHat Linux 7.1 and higher versions.

8. Supports Storage Foundation 6.2.1 and higher versions.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Shannon

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Direct-IO	A/A	Yes	Yes, Fencing	Yes	PCIe	

sTec

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
s1120 [1] [2]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting

1. Device must be formatted with 512-byte sector size.

2. DMP EBN namingscheme is required.

StorageTek

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FlexLine 200/300 series	A/P	Yes	Yes	No	Fibre Channel	

Sun

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
StorEdge 3510/3511 [1]	A/A	Yes	Yes, Fencing	No	Fibre Channel	SAN Boot

1. Only direct attach topology is supported on this array.

Violin Memory

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Flash Storage Platform 7000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Violin 3000/6000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot
Violin 3000/6000 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot

Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Linux (SUSE)

NOTE: For details on specific PowerPath versions supported for storage Device/Family indicated "with PowerPath", see the EMC Support Matrices at <http://www.emc.com/interoperability> .

For details on Advanced Reporting support, see: <http://www.veritas.com/docs/TECH217296> .

For details on Thin Reclamation support, see: <http://www.veritas.com/docs/TECH217296> .

NOTE: The DMP tunable dmp_fast_recovery needs to be set to off with iSCSI storage array configuration.

NOTE: With SF versions 6.1x, Arrays with A/P-F mode are not supported with SLES11SP2 and SLES11SP3. For details, see: <https://bugzilla.novell.com/show_bug.cgi?id=767964> .

3PAR

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
E-Class, S-Class [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. More 3PAR array systems support information is under the HP section.

2. Supported only with 3PAR array Emulex target HBA ports. Legacy 3PAR array QLogic and LSI target HBA ports are not supported. Support of 3PAR E-Class, and S-Class will be dropped in the next release of Storage Foundation software stacks.

Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
CLARiiON CX3 series [1] [2] [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot
CLARiiON CX3 series [2] [3] [4]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot
CLARiiON CX3 series with PowerPath [1] [2] [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX3 series with PowerPath [2] [3] [4]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX4 series [1] [2] [3] [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
CLARiiON CX4 series [2] [3] [4] [5] [6]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
CLARiiON CX4 series with PowerPath [1] [2] [3] [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
EqualLogic PS3000 series [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS4000 series [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS5000 series [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	Advanced Reporting
EqualLogic PS6000 series [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
SC Series [8]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, Thin Reclamation
Symmetrix DMX series [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
Symmetrix DMX series with PowerPath [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Symmetrix VMAX series [10] [11] [12]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Symmetrix VMAX series with PowerPath [10] [11] [12]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Unity series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Unity series with PowerPath	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VMAX3/VMAX All Flash Family series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VMAX3/VMAX All Flash Family series with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX series [13] [2] [3] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
VNX series [13] [2] [3] [4] [5]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
VNX series with PowerPath [13] [2] [3] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2 series [13] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2 series with PowerPath [13] [14] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2e series [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2e series with PowerPath [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VPLEX	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
VPLEX with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
XtremIO	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	
XtremIO with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. A minimum flare code version 26 or above is required to support this mode.

2. NDU operations are supported. For exact procedures for performing NDU on the array, consult with Dell EMC support.

3. When using Dell EMC SnapView feature, DMP tunable dmp_monitor_owernship must be set to off on all hosts where the source and snapshot LUNs are not both imported on the same host.

4. For details of iSCSI support, see the "Host Bus Adapters" section below.

5. The management tools must be used to report physically allocated space for Thin LUNs.

6. Thin Reclamation is supported with this array; the minimum array firmware FLARE 29 is required. To obtain the maximum reclamation benefits, FLARE 30 is highly recommended; for more detail, see Dell EMC Powerlink Primus Doc ID# emc233231: CLARiiON Thin LUN Space Reclamation for details. Thin Reclamation is not supported with PowerPath.

7. A minimum firmware version of V4.3.6 is required to support fencing function.

8. Support Storage Center OS (SCOS) software version 6.2.2 and higher.

9. Supports Symmetrix DMX-3 and Symmetrix DMX-4 only.

10. Array microcode level 5876 or above requires the latest ASL to support Thin Reclamation function, see <http://www.veritas.com/docs/TECH194376> for more detail.

11. Reporting of physically allocated space requires firmware level of 5876.159.102 or higher.

12. Thin Reclamation is supported with this array; the minimum array firmware 5875.135.91 is required. Thin Reclamation is not supported with PowerPath.

13. Supports block mode storage only.

Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

14. A minimum PowerPath version 6.0SP1 is required on SLES 12 for Storage Foundation support.

Fujitsu

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
ETERNUS DX400/DX500/DX600 series [1] [2] [3] [4] [5]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX400/DX500/DX600 series [1] [2] [3] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [2] [4] [6] [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [2] [4] [6] [7]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 S3/S4 series [1] [10] [2] [8] [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 S3/S4 series [1] [10] [2] [8] [9]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 series [1] [11] [2] [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 series [1] [11] [2] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS VS850	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
ETERNUS2000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
ETERNUS4000 series [1] [11] [12] [13]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
ETERNUS8000 series [1] [11] [13]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
FibreCAT SX80/100 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. Also supported in direct-attach configurations with SF RAC product.

2. Ensure proper array settings are configured to support this mode.

3. Thin Reclamation is supported with this array. V20L40 or later version of firmware is required to support Thin Reclamation with ETERNUS DX400 series. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

4. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the certain firmware level of ETERNUS DX S2 arrays. Please consult with the storage vendor for the firmware level.

5. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX500 S3 and ETERNUS DX600 S3 are supported with V10L42 or newer.

6. Thin Reclamation is not supported with ETERNUS DX60/DX60 S2/DX80/DX90. ETERNUS DX80 S2 and DX90 S2 are supported with Thin Reclamation with the minimum array firmware V10L10. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

7. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX100 S3, ETERNUS DX200 S3 and ETERNUS DX200F are supported with V10L42 or newer, ETERNUS DX60 S3 is supported with V10L50 or newer.

8. Thin Reclamation is supported with this array. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

9. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX8700 S3 and ETERNUS DX8900 S3 are supported with V10L50 or newer.

10. VRTSaslapm version 6.1.1.400 (Veritas Volume Manager 6.1) / 6.2.1.100 (Veritas Volume Manager 6.2) or later is required to support this array.

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11. Thin Reclamation is supported with this array; The minimum array firmware V20L40 is required. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

12. Excludes ETERNUS4000 models 80 and 100.

13. Thin Reclamation is not supported when the shared disk is protected by I/O fencing in SF-HA configuration.

Generic

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FC JBOD	A/A	Yes	Yes	No	Fibre Channel	
SCSI JBOD	A/A	Yes	Yes	No	SCSI	

Hewlett Packard Enterprise

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
2000 G2 series	A/A-A	Yes	Yes	Yes	Fibre Channel	SAN Boot
3PAR F/T-Class, StoreServ 7000/8000/9000/10000/20000 Storage [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
EVA4100/6100/8100	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
EVA4400/6400/8400 series [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
MSA 1040 SAN	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
MSA 2040 SAN	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
MSA2000fc series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
MSA2012sa	A/A-A	Yes	Yes	No	SAS	
P2000 G3 MSA series [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI, SAS	
P6000 EVA series [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	FCoE, Fibre Channel, iSCSI	Advanced Reporting, SAN Boot
P9500	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
XP10000/12000	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
XP20000/24000 [6]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. 3PAR F/T-Class maximum firmware version is 3.1.3; 3PAR StoreServ 7000/10000 minimum firmware version 3.1.2 and StoreServ 8000/20000 minimum firmware version 3.2.2 are required.

2. StoreServ 8000/20000 minimum firmware version 3.2.2 MU1 is required for Thin Reclamation support.

3. The minimum array firmware xcs11200000 is required to support Thin Reclamation.

4. For I/O Fencing support, array FW TS250 R023 minimally required.

5. A minimum firmware version of CR2094lesp-10100000 is required to support this array.

Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

6. Thin Reclamation is supported with this array; the minimum array firmware 60.06.05-00 is required.

Hitachi Vantara

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
HUS 100 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
HUS VM	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
SMS/AMS2000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
USP/NSC series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
USPV/USPVM [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP G series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP Gx00/Fx00 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. Excludes SMS100.

2. Thin Reclamation is supported with this array; the minimum array firmware 60.06.05-00 is required.

3. Thin Reclamation is supported with this array; the minimum array firmware 70-02-02-00/00 is required.

Huawei

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
18000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
18000 series [2]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
OceanStor Series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
OceanStor Series [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
S5000 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VIS series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. The 18000 series A/A only includes 18500, 18800 and 18800F.

2. The proper array settings is required to support this mode.

3. Disks from ALUA array are not claimed by Array Support Library (ASL) if RTPG data is greater than 255 bytes. For more info please refer - <https://www.veritas.com/content/support/en_US/article.100049723> and apply the required patch.

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IBM

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
DS3950	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
DS5020	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
FlashSystem series [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
Spectrum Virtualize series [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Storwize series [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage DS3000 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, SAS	
System Storage DS3500 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, SAS	Advanced Reporting, SAN Boot
System Storage DS3500 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting
System Storage DS5000 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
System Storage DS6000 series	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
System Storage DS8000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage N series [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
System Storage XIV series [7] [8] [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage XIV series [7] [9]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. Array firmware version 1.2.x.x or higher is required.

2. System fails to boot up after SAN bootdisk encapsulation with SLES12. Refer to Technote <http://www.veritas.com/docs/TECH231778> for solution.

3. After added back a previous removed array storage controller for maintenance, issue command "vxdctl enable" to re-discover the controller if the controller is not displayed in the Volume Manager.

4. Thin Reclamation is supported with this array; the minimum array firmware 6.2 is required. Additional steps required to reclaim the storage space, see <http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=SA&subtype=WH&htmlfid=TSW03164USEN> for detail.

5. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

6. On the SLES 11 SP1 platform, Emulex driver 8.3.5.44.4p is the minimum version required to support the Emulex LPe12002 HBA. On the SLES 11 SP2 platform, QLogic driver 8.05.00.03.11.1-k is the minimum version required to support the QLogic HBA.

7. Excludes A9000 & A9000R models.

8. Thin Reclamation is supported with this array; the minimum array firmware 10.2.2 are required.

9. With array firmware version 10.2.1 or above, the array will be claimed as ALUA mode by DMP.

Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Infortrend

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
ESVA-F75-2830	A/A-A	Yes	Yes, Fencing	No	Fibre Channel	NDU

Intel

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
SSD 910 [1]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting

1. Device must be formatted with 512-byte sector size.

NetApp

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
AFF Series [1]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
E_SERIES [2]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU
FAS2000/FAS900/FAS200 series [3] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS3000/V3000 series [3] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS6000/V6000 series [3] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS8000/FAS9000 Series [3] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation

1. A minimum version of ONTAP 8.3 is required to support this array.

2. A minimum array firmware version 08.10.09.00 is required.

3. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

4. On the SLES 11 SP1 platform, Emulex driver 8.3.5.44.4p is the minimum version required to support the Emulex LPe12002 HBA. On the SLES 11 SP2 platform, QLogic driver 8.05.00.03.11.1-k is the minimum version required to support the QLogic HBA.

5. Storage Foundation 6.2.1 or higher version supports Clustered Data ONTAP (cDOT) version 8.1 or greater with multiple Controller Nodes.

Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Oracle

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Storage 6580/6780 series [1]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU
StorageTek 2500 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI, SAS	
StorageTek 6140 array	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 9900 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 9985/9990 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
StorageTek 9985V system	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot, Thin Reclamation
StorageTek 9990V system	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Sun Storage 6180 array	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU

1. A minimum array firmware version 07.60.18.10 is required to support NDU with this array.

Pure Storage

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FlashArray series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation

SanDisk

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
ioDrive [1] [2] [3]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting, Thin Reclamation
ioDrive2 [1] [2] [3]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting, Thin Reclamation
ioMemory PX600 series [1]	A/A	Yes	Yes, Fencing	Yes	PCIe	
ioMemory SX300 series [1]	A/A	Yes	Yes, Fencing	Yes	PCIe	
ION Data Accelerator [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU

1. Device must be formatted with 512-byte sector size.

2. Supports the Thin Reclamation TRIM operation with SUSE Linux Enterprise Server 11 (SLES11). See the Fusion-IO documentation for the firmware version requirements for TRIM support.

3. The minimum firmware version 3.0 is required.

4. Only supports ION standalone mode.

sTec

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
s1120 [1] [2]	A/A	Yes	Yes	Yes	PCIe	Advanced Reporting

1. Device must be formatted with 512-byte sector size.

2. DMP EBN namingscheme is required.

StorageTek

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FlexLine 200/300 series	A/P	Yes	Yes	No	Fibre Channel	

Violin Memory

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Violin 3000/6000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot

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Solaris

NOTE: For details on specific PowerPath versions supported for storage Device/Family indicated "with PowerPath", see the EMC Support Matrices at <http://www.emc.com/interoperability> .

For details on Advanced Reporting support, see: <http://www.veritas.com/docs/TECH217296> .

For details on Thin Reclamation support, see: <http://www.veritas.com/docs/TECH217296> .

NOTE: Direct-Attach (no switch) Configurations:

• All array types are supported in direct-attach configurations with SFHA products.

• A/A type arrays are supported in direct-attach configurations with the SF Oracle RAC product.

• Inquire with the array manufacturer for specific limitations of use.

NOTE: For information on Storage Foundation DMP co-existence with OS native multi-pathing driver MPxIO on Solaris, see TechNote <http://www.veritas.com/docs/TECH204060> .

NOTE: Fibre Channel Single Root-I/O Virtualization (FC SR-IOV) is supported, See "Storage Foundation and High Availability Solutions 6.2 Virtualization Guide - Solaris" for configuration details and requirements.

3PAR

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
E-Class, S-Class [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. More 3PAR array systems support information is under the HP section.

2. Supported only with 3PAR array Emulex target HBA ports. Legacy 3PAR array QLogic and LSI target HBA ports are not supported. Support of 3PAR E-Class, and S-Class will be dropped in the next release of Storage Foundation software stacks.

Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
CLARiiON CX3 series [1] [2] [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, NDU, SAN Boot
CLARiiON CX3 series [2] [3]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot
CLARiiON CX3 series with PowerPath [1] [2] [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX3 series with PowerPath [2] [3]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
CLARiiON CX4 series [1] [2] [3] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
CLARiiON CX4 series [2] [3] [4] [5]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
CLARiiON CX4 series with PowerPath [1] [2] [3] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

Dell EMC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
CLARiiON CX4 series with PowerPath [2] [3] [4] [5]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
EqualLogic PS3000 series [6] [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS4000 series [6] [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS5000 series [6] [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
EqualLogic PS6000 series [6] [7]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
PowerMax series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
PowerStore series [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, Thin Reclamation
SC Series [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Symmetrix DMX series [10]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
Symmetrix DMX series with PowerPath [10]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Symmetrix VMAX series [11] [12] [13]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
Symmetrix VMAX series with PowerPath [11] [12] [13]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Unity series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
Unity series with PowerPath	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VMAX3/VMAX All Flash Family series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VMAX3/VMAX All Flash Family series with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX series [14] [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
VNX series [14] [2] [3] [4]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
VNX series with PowerPath [14] [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX series with PowerPath [14] [2] [3] [4]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	
VNX2 series [14] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
VNX2 series with PowerPath [14] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VNX2e series [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
VNX2e series with PowerPath [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VPLEX	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
VPLEX with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
XtremIO	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	
XtremIO with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. A minimum flare code version 26 or above is required to support this mode.

2. NDU operations are supported. For exact procedures for performing NDU on the array, consult with Dell EMC support.

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3. SUN patch 119090-30 or above is required for iSCSI support.

4. The management tools must be used to report physically allocated space for Thin LUNs.

5. Thin Reclamation is supported with this array; the minimum array firmware FLARE 29 is required. To obtain the maximum reclamation benefits, FLARE 30 is highly recommended; for more detail, see Dell EMC Powerlink Primus Doc ID# emc233231: CLARiiON Thin LUN Space Reclamation for details. Thin Reclamation is not supported with PowerPath.

6. To use with hardware iSCSI initiators, the TGT_KeepAliveTimeout iSCSI HBA tunable needs to be set to 180 seconds.

7. To use with software iSCSI initiators, minimum OS version of Solaris 10 Update 8 and host side iSCSI link aggregation are required.

8. Dell EMC PowerStore is supported with latest VRTSaslapm for v6.2.1 only

9. Support Storage Center OS (SCOS) software version 6.2.2 and higher.

10. Supports Symmetrix DMX-3 and Symmetrix DMX-4 only.

11. Array microcode level 5876 or above requires the latest ASL to support Thin Reclamation function, see <http://www.veritas.com/docs/TECH194376> for more detail.

12. Reporting of physically allocated space requires firmware level of 5876.159.102 or higher.

13. Thin Reclamation is supported with this array; the minimum array firmware 5875.135.91 is required. Thin Reclamation is not supported with PowerPath.

14. Supports block mode storage only.

Fujitsu

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
ETERNUS DX400/DX500/DX600 series [1] [2] [3] [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX400/DX500/DX600 series [1] [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [3] [5] [6]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [3] [5] [6]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 S3/S4 series [1] [7] [8] [9]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 S3/S4 series [1] [7] [8] [9]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 series [1] [10] [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS DX8000 series [1] [10] [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS VS850	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
ETERNUS2000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
ETERNUS4000 series [10] [11] [12]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
ETERNUS8000 series [10] [12]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
FibreCAT SX80/100 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. Ensure proper array settings are configured to support this mode.

2. Thin Reclamation is supported with this array. V20L40 or later version of firmware is required to support Thin Reclamation with ETERNUS DX400 series. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

3. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the certain firmware level of ETERNUS DX S2 arrays. Please consult with the storage vendor for the firmware level.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

4. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX500 S3 and ETERNUS DX600 S3 are supported with V10L42 or newer.

5. Thin Reclamation is not supported with ETERNUS DX60/DX60 S2/DX80/DX90. ETERNUS DX80 S2 and DX90 S2 are supported with Thin Reclamation with the minimum array firmware V10L10. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

6. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX100 S3, ETERNUS DX200 S3 and ETERNUS DX200F are supported with V10L42 or newer, ETERNUS DX60 S3 is supported with V10L50 or newer.

7. Thin Reclamation is supported with this array. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

8. Thin Reclamation when the shared disk is protected by I/O fencing in SF-HA configuration is supported with the following firmware level: ETERNUS DX8700 S3 and ETERNUS DX8900 S3 are supported with V10L50 or newer.

9. VRTSaslapm version 6.1.1.400 (Veritas Volume Manager 6.1) / 6.2.1.100 (Veritas Volume Manager 6.2) or later is required to support this array.

10. Thin Reclamation is supported with this array; The minimum array firmware V20L40 is required. There are known issues with Reclamation, see <http://www.veritas.com/docs/TECH164853> for details.

11. Excludes ETERNUS4000 models 80 and 100.

12. Thin Reclamation is not supported when the shared disk is protected by I/O fencing in SF-HA configuration.

Generic

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FC JBOD	A/A	Yes	Yes	No	Fibre Channel	
SAS JBOD	A/A	Yes	Yes	No	SAS	
SCSI JBOD	A/A	Yes	Yes	No	SCSI	

Hewlett Packard Enterprise

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
2000 G2 series	A/A-A	Yes	Yes	No	Fibre Channel	SAN Boot
3PAR F/T-Class, StoreServ 7000/8000/9000/10000/20000 Storage [1] [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
EVA4100/6100/8100	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
EVA4400/6400/8400 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
P6000 EVA series [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	FCoE, Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
P9500	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
XP10000/12000	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
XP20000/24000 [4]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
XP7 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation

1. 3PAR F/T-Class maximum firmware version is 3.1.3; 3PAR StoreServ 7000/10000 minimum firmware version 3.1.2 and StoreServ 8000/20000 minimum firmware version 3.2.2 are required.

2. StoreServ 8000/20000 minimum firmware version 3.2.2 MU1 is required for Thin Reclamation support.

3. Fencing is not supported with HP P6350 iSCSI config.

4. Thin Reclamation is supported with this array; the minimum array firmware 60.06.05-00 is required.

Hitachi Vantara

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
HUS 100 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
HUS VM	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
SMS/AMS2000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
USP/NSC series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
USPV/USPVM [2]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP G series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
VSP Gx00/Fx00 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation

1. Excludes SMS100.

2. Thin Reclamation is supported with this array; the minimum array firmware 60.06.05-00 is required.

3. Thin Reclamation is supported with this array; the minimum array firmware 70-02-02-00/00 is required.

Huawei

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
18000 series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
OceanStor Series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
OceanStor Series [2]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, Thin Reclamation
S5000 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
VIS series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. The 18000 series A/A only includes 18500, 18800 and 18800F.

2. Disks from ALUA array are not claimed by Array Support Library (ASL) if RTPG data is greater than 255 bytes. For more info please refer - <https://www.veritas.com/content/support/en_US/article.100049723> and apply the required patch.

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

IBM

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
DS3950	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
DS5020	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
FlashSystem series [1]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
Spectrum Virtualize series [2] [3]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
Storwize series [2] [3] [4]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage DS3500 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, SAS	SAN Boot
System Storage DS3500 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, SAS	
System Storage DS5000 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
System Storage DS6000 series	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
System Storage DS8000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage N series [5] [6]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
System Storage N series [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
System Storage XIV series [7] [8]	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot, Thin Reclamation
System Storage XIV series [8]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation

1. Array firmware version 1.2.x.x or higher is required.

2. After added back a previous removed array storage controller for maintenance, issue command "vxdctl enable" to re-discover the controller if the controller is not displayed in the Volume Manager.

3. Thin Reclamation is supported with this array; the minimum array firmware 6.2 is required. Additional steps required to reclaim the storage space, see <http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=SA&subtype=WH&htmlfid=TSW03164USEN> for detail.

4. A minimum array firmware 6.4.0.4 is required to support V7000 iSCSI, and Fencing is not supported with the V7000 iSCSI config.

5. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

6. iSCSI support requires SUN patch 119090-30 or later.

7. Thin Reclamation is supported with this array; the minimum array firmware 10.2.2 are required.

8. With array firmware version 10.2.1 or above, the array will be claimed as ALUA mode by DMP.

page 44, Disk Arrays and Storage Devices, Solaris, Huawei

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Imation

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Nexsan E-Series Systems	A/A-A	Yes	Yes	No	Fibre Channel	

Infinidat

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
InfiniBox F-Series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

Kaminario

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
K2	A/A	Yes	Yes, Fencing	No	Fibre Channel	Advanced Reporting, NDU, Thin Reclamation

NEC

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
iStorage D1/D3 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
iStorage D8 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
iStorage M series [1]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
iStorage S1000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
iStorage S2000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Symmetrix DMX-4	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, SAN Boot
Symmetrix DMX-4 with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Symmetrix VMAX	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting
Symmetrix VMAX with PowerPath	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

1. Device scans on I/O fenced LUNs can take a long time to complete.

page 45, Disk Arrays and Storage Devices, Solaris, Imation

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

NetApp

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
AFF Series [1]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS2000/FAS900/FAS200 series [2] [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
FAS2000/FAS900/FAS200 series [2] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS3000/V3000 series [2] [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
FAS3000/V3000 series [2] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS6000/V6000 series [2] [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
FAS6000/V6000 series [2] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation
FAS8000/FAS9000 Series [2] [3]	A/A	Yes	Yes, Fencing	Yes, Fencing	iSCSI	
FAS8000/FAS9000 Series [2] [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation

1. A minimum version of ONTAP 8.3 is required to support this array.

2. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

3. iSCSI support requires SUN patch 119090-30 or later.

4. Storage Foundation 6.1 supports configurations that run Clustered Data ONTAP (cDOT) version 8.1 or greater with a limitation of TWO Controller Nodes only.

5. Storage Foundation 6.2.1 or higher version supports Clustered Data ONTAP (cDOT) version 8.1 or greater with multiple Controller Nodes.

Nexsan

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Beast Systems	A/A-A	Yes	Yes, Fencing	No	Fibre Channel	

Oracle

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Axiom series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU
F40 [1] [2]	A/A	Yes	No	No	PCIe	
F80 [1] [2]	A/A	Yes	No	No	PCIe	
FS1-2	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
Storage 6580/6780 series [3]	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU
StorageTek 2500 series	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI, SAS	

Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Oracle

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
StorageTek 6140 array	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
StorageTek 9900 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 9985/9990 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot
StorageTek 9985V system	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot, Thin Reclamation
StorageTek 9990V system	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot, Thin Reclamation
Sun Storage 6180 array	A/P-F	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU
ZFS Storage Appliance series [4] [5]	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel, iSCSI	NDU, SAN Boot

1. Device must be formatted with 512-byte sector size.

2. Storage Foundation version 6.2 or higher is required.

3. A minimum array firmware version 07.60.18.10 is required to support NDU with this array.

4. See Hardware TechNote for array limitation - <http://www.veritas.com/docs/TECH47728>

5. The SF HA and SFCFS/SF Oracle RAC are not yet supported with iSCSI connection.

Pure Storage

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FlashArray series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	Advanced Reporting, NDU, SAN Boot, Thin Reclamation

StorageTek

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
FlexLine 200/300 series	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

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Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

Sun

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
StorageTek 3310	A/A	Yes	Yes, Fencing	Yes, Fencing	SCSI	
StorageTek 3320	A/A	Yes	Yes, Fencing	Yes, Fencing	SCSI	
StorageTek 6130	A/P	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	
StorageTek 6540	A/P-F	Yes	Yes, Fencing	No	Fibre Channel	
StorEdge 3510/3511	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	

Violin Memory

Device/Family	Mode	SF	SF HA	SFCFSHA/SF Oracle RAC	Interface	Advanced Features
Violin 3000/6000 series	A/A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	NDU, SAN Boot
Violin 3000/6000 series	A/A-A	Yes	Yes, Fencing	Yes, Fencing	Fibre Channel	SAN Boot

Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List

VMware ESXi 5.X

NOTE: Check VMware's HCL for specific models: <http://www.vmware.com/resources/compatibility/search.php> .

NOTE: DMP for VMware and DMP are two different products; DMP for VMware requires a separate package.

NOTE: In addition to check this section for storage array hardware support, for guest OS that is configured with both Raw Device Mappings (RDM) with Storage Foundation inside the guest OS, see the Symantec Storage Foundation HCL with the corresponding OS section to ensure the storage array hardware is also supported for that guest OS.

Dell EMC

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
Celerra NS series [1] [2] [3]	A/A-A	Yes	Fibre Channel	SAN Boot
CLARiiON CX4 series [1] [3]	A/A-A	Yes	Fibre Channel, iSCSI	SAN Boot
EMC CX4 series [1] [3]	A/A-A	Yes	Fibre Channel	SAN Boot
Symmetrix DMX series [4]	A/A	Yes	Fibre Channel	SAN Boot
Symmetrix VMAX series	A/A	Yes	Fibre Channel	SAN Boot
Unity series	A/A-A	Yes	Fibre Channel	
VMAX3/VMAX All Flash Family series	A/A	Yes	Fibre Channel	SAN Boot
VNX series [1] [3] [5]	A/A-A	Yes	Fibre Channel, iSCSI	SAN Boot
XtremIO	A/A	Yes	Fibre Channel, iSCSI	SAN Boot

1. A minimum flare code version 29 or above is required to support this mode.

2. Support native block mode storage only.

3. The dmp_monitor_ownership tunable must be set to off to support this mode.

4. Supports Symmetrix DMX-4 only.

5. Supports block mode storage only.

Fujitsu

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
ETERNUS DX400/DX500/DX600 series [1] [2]	A/A-A	Yes	Fibre Channel	SAN Boot
ETERNUS DX60/DX80/DX90/DX100/DX200 series [1] [3]	A/A-A	Yes	Fibre Channel	SAN Boot
ETERNUS DX8000 series [1] [4]	A/A-A	Yes	Fibre Channel	SAN Boot
FibreCAT CX4 series [5] [6]	A/A-A	Yes	Fibre Channel	SAN Boot

1. Ensure proper array settings are configured to support this mode.

2. ETERNUS DX410 S2, DX440 S2, DX500 S3 and DX600 S3 are supported.

3. ETERNUS DX80 S2, DX90 S2, DX100 S3, DX200 S3 and DX200F are supported.

4. ETERNUS DX8100 S2 and DX8700 S2 are supported.

5. A minimum flare code version 29 or above is required to support this mode.

6. The dmp_monitor_ownership tunable must be set to off to support this mode.

Hewlett Packard Enterprise

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
3PAR F/T-Class, StoreServ 7000/8000/9000/10000/20000 Storage [1]	A/A	Yes	Fibre Channel	SAN Boot
EVA4400/6400/8400 series [2]	A/A-A	Yes	Fibre Channel	SAN Boot
XP20000/24000	A/A	Yes	Fibre Channel	SAN Boot

1. 3PAR F/T-Class maximum firmware version is 3.1.3; 3PAR StoreServ 7000/10000 minimum firmware version 3.1.2 and StoreServ 8000/20000 minimum firmware version 3.2.2 are required.

2. Supports ESXi 5.0 and ESXi 5.1 only.

Hitachi Vantara

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
HUS 100 series	A/A	Yes	Fibre Channel	SAN Boot
SMS/AMS2000 series [1]	A/A	Yes	Fibre Channel	SAN Boot
USPV/USPVM	A/A	Yes	Fibre Channel	SAN Boot
VSP	A/A	Yes	Fibre Channel	SAN Boot
VSP G series	A/A	Yes	Fibre Channel	SAN Boot

1. Excludes SMS100.

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IBM

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
Spectrum Virtualize series	A/A-A	Yes	Fibre Channel	SAN Boot
Storwize series	A/A-A	Yes	Fibre Channel	SAN Boot
System Storage DS8000 series	A/A	Yes	Fibre Channel	SAN Boot
System Storage N series [1] [2]	A/A-A	Yes	Fibre Channel	SAN Boot
System Storage XIV series [3] [4]	A/A-A	Yes	Fibre Channel	SAN Boot

1. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

2. Supports N6000, and N7000 series only.

3. Excludes A9000 & A9000R models.

4. With array firmware version 10.2.1 or above, the array will be claimed as ALUA mode by DMP.

Intel

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
SSD 910 [1] [2]	A/A	Yes	PCIe	SAN Boot

1. Device must be formatted with 512-byte sector size.

2. DMP for VMware version 6.2 or higher is required.

NEC

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
Symmetrix DMX-4	A/A	Yes	Fibre Channel	SAN Boot
Symmetrix VMAX	A/A	Yes	Fibre Channel	SAN Boot

NetApp

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
E_SERIES [1] [2]	A/A-A	Yes	Fibre Channel	SAN Boot
FAS3000/V3000 series [3] [4] [5]	A/A-A	Yes	FCoE, Fibre Channel	SAN Boot
FAS6000/V6000 series [3] [5]	A/A-A	Yes	Fibre Channel	SAN Boot

1. A minimum array firmware version 08.10.09.00 is required.

2. DMP for VMware version 6.2 or higher is required.

3. A minimum version of ONTAP 7.3.3, ONTAP 8.0.1 and higher versions of 7-Mode are supported.

4. Excludes FAS3020, FAS3050, FAS3210, FAS3240, FAS3270, V3020, and V3050.

5. Supports configurations that run Clustered Data ONTAP (cDOT) version 8.1 or greater with a limitation of TWO Controller Nodes only.

sTec

Device/Family	Mode	DMP for VMware	Interface	Advanced Features
s1120 [1] [2]	A/A	Yes	PCIe	SAN Boot
s1122 [1] [2]	A/A	Yes	PCIe	SAN Boot

1. Device must be formatted with 512-byte sector size.

2. DMP for VMware version 6.2 or higher is required.

Device Family Membership

3PAR

Device Family	Members
E-Class, S-Class	E200 Storage System, S200 Storage System, S400 Storage System, S800 Storage System

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Dell EMC

Device Family	Members
Celerra NS series	Celerra NS-120, Celerra NS-480, Celerra NS-960
CLARiiON AX series	Celerra NX4, CLARiiON AX100, CLARiiON AX4
CLARiiON CX3 series	CLARiiON CX3 Model 10, CLARiiON CX3 Model 20, CLARiiON CX3 Model 40, CLARiiON CX3 Model 80
CLARiiON CX4 series	CLARiiON CX4 Model 120, CLARiiON CX4 Model 240, CLARiiON CX4 Model 480, CLARiiON CX4 Model 960
EMC CX4 series	EMC CX4-120, EMC CX4-240, EMC CX4-480, EMC CX4-960
EqualLogic PS series	EqualLogic PS100E
EqualLogic PS3000 series	EqualLogic PS3000E, EqualLogic PS3000X, EqualLogic PS3000XV
EqualLogic PS4000 series	EqualLogic PS4000E, EqualLogic PS4000X, EqualLogic PS4000XV, EqualLogic PS4100E, EqualLogic PS4100X, EqualLogic PS4100XV, EqualLogic PS4100XV3.5"
EqualLogic PS5000 series	EqualLogic PS5000E, EqualLogic PS5000X, EqualLogic PS5000XV, EqualLogic PS5500E
EqualLogic PS6000 series	EqualLogic PS6000E, EqualLogic PS6000S, EqualLogic PS6000X, EqualLogic PS6000XV, EqualLogic PS6000XVS, EqualLogic PS6010E, EqualLogic PS6010S, EqualLogic PS6010X, EqualLogic PS6010XV, EqualLogic PS6010XVS, EqualLogic PS6100E, EqualLogic PS6100X, EqualLogic PS6100XV, EqualLogic PS6100XV3.5", EqualLogic PS6500E, EqualLogic PS6500X, EqualLogic PS6500XV, EqualLogic PS6510E, EqualLogic PS6510X, EqualLogic PS6600, EqualLogic PX6100S, EqualLogic PX6100XS
PowerMax series	PowerMax 2000, PowerMax 2500, PowerMax 8000, PowerMax 8500
PowerStore series	PowerStore 1000T, PowerStore 1000X, PowerStore 3000T, PowerStore 3000X, PowerStore 5000T, PowerStore 5000X, PowerStore 500T, PowerStore 7000T, PowerStore 7000X, PowerStore 9000T, PowerStore 9000X
PowerVault MD38xx Series	PowerVault MD3800f
SC Series	SC4000, SC4020, SC420F, SC5020, SC5020F, SC7020, SC7020F, SC8000, SC9000, SCv2000, SCv3000
Symmetrix DMX series	Symmetrix DMX 1000, Symmetrix DMX 2000, Symmetrix DMX 3000, Symmetrix DMX 800, Symmetrix DMX-3, Symmetrix DMX-4
Symmetrix VMAX series	Symmetrix VMAX, Symmetrix VMAXe
Unity series	Unity 300, Unity 300F, Unity 350F, Unity 400, Unity 400F, Unity 450F, Unity 500, Unity 500F, Unity 550F, Unity 600, Unity 600F, Unity 650F, Unity VSA
VMAX3/VMAX All Flash Family series	VMAX 100K, VMAX 10K, VMAX 200K, VMAX 20K, VMAX 250F, VMAX 250FX, VMAX 350F, VMAX 400K, VMAX 40K, VMAX 450F, VMAX 450FX, VMAX 850F, VMAX 850FX, VMAX 950F, VMAX 950FX, VMAX3
VNX series	VNX 5100, VNX 5300, VNX 5500, VNX 5700, VNX 7500
VNX2 series	VNX5200, VNX5400, VNX5600, VNX5800, VNX7600, VNX8000
VNX2e series	VNXe1600, VNXe3200

Fujitsu

Device Family	Members
ETERNUS DX400/DX500/DX600 series	ETERNUS AF650, ETERNUS AF650 S2, ETERNUS AF650 S3, ETERNUS DX410, ETERNUS DX410 S2, ETERNUS DX440, ETERNUS DX440 S2, ETERNUS DX500 S3, ETERNUS DX500 S4, ETERNUS DX500 S5, ETERNUS DX600 S3, ETERNUS DX600 S4, ETERNUS DX600 S5
ETERNUS DX60/DX80/DX90/DX100/DX200 series	ETERNUS AF150 S3, ETERNUS AF250, ETERNUS AF250 S2, ETERNUS AF250 S3, ETERNUS DX100 S3, ETERNUS DX100 S4, ETERNUS DX100 S5, ETERNUS DX200 S3, ETERNUS DX200 S4, ETERNUS DX200 S5, ETERNUS DX200F, ETERNUS DX60, ETERNUS DX60 S2, ETERNUS DX60 S3, ETERNUS DX60 S4, ETERNUS DX60 S5, ETERNUS DX80, ETERNUS DX80 S2, ETERNUS DX90, ETERNUS DX90 S2
ETERNUS DX8000 S3/S4 series	ETERNUS DX8700 S3, ETERNUS DX8900 S3, ETERNUS DX8900 S4, ETERNUS DX900 S5
ETERNUS DX8000 series	ETERNUS DX8100, ETERNUS DX8100 S2, ETERNUS DX8400, ETERNUS DX8700, ETERNUS DX8700 S2
ETERNUS2000 series	ETERNUS2000 Model 100, ETERNUS2000 Model 200, ETERNUS2000 Model 50
ETERNUS4000 series	ETERNUS4000 Model 100, ETERNUS4000 Model 300, ETERNUS4000 Model 400, ETERNUS4000 Model 500, ETERNUS4000 Model 600, ETERNUS4000 Model 80
ETERNUS8000 series	ETERNUS8000 Model 1100, ETERNUS8000 Model 1200, ETERNUS8000 Model 2100, ETERNUS8000 Model 2200, ETERNUS8000 Model 700, ETERNUS8000 Model 800, ETERNUS8000 Model 900
FibreCAT CX4 series	FibreCAT CX4-120, FibreCAT CX4-240, FibreCAT CX4-480, FibreCAT CX4-960
FibreCAT SX80/100 series	FibreCAT SX100, FibreCAT SX80

Hewlett Packard Enterprise

Device Family	Members
2000 G2 series	MSA2312fc, MSA2312i, MSA2312sa, MSA2324fc, MSA2324i, MSA2324sa
3PAR F/T-Class, StoreServ 7000/8000/9000/10000/20000 Storage	3PAR F200 Storage, 3PAR F400 Storage, 3PAR StoreServ 10400 Storage, 3PAR StoreServ 10800 Storage, 3PAR StoreServ 20450 Storage, 3PAR StoreServ 20450R2 Storage, 3PAR StoreServ 20800 Storage, 3PAR StoreServ 20850 Storage, 3PAR StoreServ 20850R2 Storage, 3PAR StoreServ 7200 Storage, 3PAR StoreServ 7400 Storage, 3PAR StoreServ 7450 Storage, 3PAR StoreServ 8200 Storage, 3PAR StoreServ 8400 Storage, 3PAR StoreServ 8440 Storage, 3PAR StoreServ 8450 Storage, 3PAR StoreServ 9450 Storage, 3PAR T400 Storage, 3PAR T800 Storage
EVA4100/6100/8100	EVA4100, EVA6100, EVA8100
EVA4400/6400/8400 series	EVA4400, EVA6400, EVA8400
MSA 2050 Storage	MSA 2050 SAN, MSA 2050 SAS, MSA 2052 SAN, MSA 2052 SAS
MSA 2060 Storage	MSA 2060 FC, MSA 2062 FC
MSA2000fc series	MSA2012fc, MSA2212fc
P2000 G3 MSA series	P2000 G3 FC, P2000 G3 FC/iSCSI, P2000 G3 iSCSI, P2000 G3 SAS
P6000 EVA series	P6300, P6350, P6500, P6550
XP10000/12000	XP10000, XP12000
XP20000/24000	XP20000, XP24000
XP7 series	XP7, XP7 Gen 2

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Hitachi Vantara

Device Family	Members
HUS 100 series	HUS110, HUS130, HUS150
SMS/AMS2000 series	AMS2100, AMS2300, AMS2500, SMS100
USP/NSC series	NSC55, USP100, USP1100, USP600
USPV/USPVM	USP V, USP VM
VSP G series	VSP F1500, VSP G1000, VSP G1500
VSP Gx00/Fx00 series	VSP F350, VSP F370, VSP F400, VSP F600, VSP F700, VSP F800, VSP F900, VSP G130, VSP G150, VSP G200, VSP G350, VSP G370, VSP G400, VSP G600, VSP G700, VSP G800, VSP G900

Huawei

Device Family	Members
18000 series	18500, 18800, 18800F, HVS85T, HVS88T
ES3000 V2	ES3000 V2-1200, ES3000 V2-1200H, ES3000 V2-1600, ES3000 V2-2400H, ES3000 V2-3200H, ES3000 V2-600, ES3000 V2-800
OceanStor Series	Dorado2100, Dorado2100G2, Dorado5100, OceanStor 18500 V3, OceanStor 18500 V5, OceanStor 18500F V5, OceanStor 18800 V3, OceanStor 18800 V5, OceanStor 18800F V5, OceanStor 2100 V3, OceanStor 2200 V3, OceanStor 2600 V3, OceanStor 5300 V3, OceanStor 5300 V5, OceanStor 5300F V5, OceanStor 5500 V3, OceanStor 5500 V5, OceanStor 5500F V5, OceanStor 5600 V3, OceanStor 5600 V5, OceanStor 5600F V5, OceanStor 5800 V3, OceanStor 5800 V5, OceanStor 5800F V5, OceanStor 6800 V3, OceanStor 6800 V5, OceanStor 6800F V5, OceanStor 6900 V3, OceanStor Dorado 18000 V6, OceanStor Dorado 3000 V6, OceanStor Dorado 5000 V6, OceanStor Dorado 6000 V6, OceanStor Dorado 8000 V6, OceanStor Dorado18000 V3, OceanStor Dorado5000 V3, OceanStor Dorado6000 V3, S2200T, S2600T, S2600T V2, S3900-M100, S3900-M200, S3900-M300, S5500T, S5500T V2, S5600T, S5600T V2, S5800T, S5800T V2, S5900-M100, S5900-M200, S6800T, S6800T V2, S6900-M100
S5000 series	S2100, S2300, S2300E, S2600, S5100, S5300, S5500, S5600, S6800E, V1500, V1800
VIS series	S8000, VIS6000, VIS6000T

IBM

Device Family	Members
FlashSystem series	FlashSystem 710, FlashSystem 820, FlashSystem 840, FlashSystem 900
Spectrum Virtualize series	FlashSystem 5010, FlashSystem 5030, FlashSystem 5100, FlashSystem 5200, FlashSystem 7100, FlashSystem 7200, FlashSystem 7300, FlashSystem 9100, FlashSystem 9200, FlashSystem 9200R, FlashSystem 9500, FlashSystem V9000, SAN Volume Controller, SANVC(2145), Spectrum Virtualize for Public Cloud, Storwize V3500, Storwize V3700, Storwize V5000, Storwize V5010, Storwize V5020, Storwize V5030, Storwize V7000, Storwize V7000 Unified
Storwize series	FlashSystem V9000, SANVC(2145), Storwize V3500, Storwize V3700, Storwize V5000, Storwize V5010, Storwize V5020, Storwize V5030, Storwize V7000, Storwize V7000 Unified

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IBM

Device Family	Members
System Storage DS3000 series	DS3200, DS3300, DS3400
System Storage DS3500 series	DCS3700, DS3512, DS3524
System Storage DS5000 series	DS5100, DS5300
System Storage DS6000 series	DS6000 (1750-511), DS6800
System Storage DS8000 series	DS8000, DS8100, DS8300, DS8700, DS8800, DS8870, DS8880
System Storage N series	N3150, N3220, N3240, N3300, N3400, N3600, N3700, N5200, N5300, N5500, N5600, N6040, N6060, N6070, N6210, N6220, N6240, N6250, N6270, N7550T, N7600, N7700, N7750T, N7800, N7900, N7950T
System Storage XIV series	FlashSystem A9000, FlashSystem A9000R, XIV Storage System, XIV Storage System Gen3

Imation

Device Family	Members
Nexsan E-Series Systems	Nexsan E18, Nexsan E48, Nexsan E60

Infinidat

Device Family	Members
InfiniBox F-Series	InfiniBox F2000, InfiniBox F4000, InfiniBox F6000

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NEC

Device Family	Members
iStorage D1/D3 series	iStorage D1-10, iStorage D1-30, iStorage D1-30i, iStorage D3-10, iStorage D3-10i, iStorage D3-30, iStorage D3-30i, iStorage D4-30, iStorage D4-30i
iStorage D8 series	iStorage D8-10, iStorage D8-20, iStorage D8-30
iStorage M series	iStorage M100, iStorage M10e, iStorage M110, iStorage M11e, iStorage M120, iStorage M12e, iStorage M300, iStorage M310, iStorage M310F, iStorage M320, iStorage M320F, iStorage M500, iStorage M510, iStorage M700, iStorage M710, iStorage M710F
iStorage S1000 series	iStorage S1100, iStorage S1300, iStorage S1400, iStorage S1500
iStorage S2000 series	iStorage S2100, iStorage S2300, iStorage S2400, iStorage S2500, iStorage S2800, iStorage S2900

NetApp

Device Family	Members
AFF Series	AFF 8020, AFF 8040, AFF 8060, AFF 8080EX, AFF A150, AFF A200, AFF A220, AFF A250, AFF A300, AFF A320, AFF A400, AFF A700, AFF A700s, AFF A800, AFF A900, AFF C190, AFF C250, AFF C400, AFF C800, AFF-A150, AFF-A200, AFF-A220, AFF-A250, AFF-A300, AFF-A320, AFF-A400, AFF-A700, AFF-A700s, AFF-A800, AFF-A900, AFF-C250, AFF-C400, AFF-C800
E_SERIES	E2600, E2700, E2800, E5400, E5500, E5600, E5612, E5624, E5660, E5700, EF540, EF550, EF560, EF570
FAS2000/FAS900/FAS200 series	FAS2020, FAS2040, FAS2050, FAS2220, FAS2240-2, FAS2240-4, FAS250, FAS2520, FAS2552, FAS2554, FAS2620, FAS2650, FAS270, FAS2720, FAS2750, FAS500F, FAS920, FAS940, FAS960, FAS980
FAS3000/V3000 series	FAS3020, FAS3040, FAS3050, FAS3070, FAS3140, FAS3160, FAS3170, FAS3210, FAS3220, FAS3240, FAS3250, FAS3270, V3020, V3040, V3050, V3070, V3140, V3160, V3170, V3210, V3220, V3240, V3250, V3270
FAS6000/V6000 series	FAS6030, FAS6040, FAS6070, FAS6080, FAS6210, FAS6220, FAS6240, FAS6250, FAS6280, FAS6290, V6030, V6040, V6070, V6080, V6210, V6220, V6240, V6250, V6280, V6290
FAS8000/FAS9000 Series	FAS8020, FAS8040, FAS8060, FAS8080EX, FAS8200, FAS8300, FAS8700, FAS9000, FAS9500

Nexsan

Device Family	Members
Beast Systems	SASBeast, SATABeast, SATABeast2

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NimbleStorage

Device Family	Members
CS/AF/HF-Series	AF1000, AF20, AF3000, AF40, AF5000, AF60, AF7000, AF80, AF9000, CS1000, CS235, CS300, CS3000, CS500, CS5000, CS700, CS7000, HF20, HF40, HF60

Oracle

Device Family	Members
Axiom series	Axiom 300, Axiom 500, Axiom 600
Storage 6580/6780 series	Sun Storage 6580 array, Sun Storage 6780 array
StorageTek 2500 series	StorageTek 2510 array, StorageTek 2530 array, StorageTek 2540 array, Sun Storage 2530-M2 array, Sun Storage 2540-M2 array
StorageTek 9900 series	StorageTek 9970 array, StorageTek 9980 array
StorageTek 9985/9990 series	StorageTek 9985 system, StorageTek 9990 system
ZFS Storage Appliance series	ZFS Storage 7110, ZFS Storage 7120, ZFS Storage 7210, ZFS Storage 7310, ZFS Storage 7320, ZFS Storage 7410, ZFS Storage 7420, ZFS Storage 7430, ZFS Storage ZS3-2, ZFS Storage ZS3-4, ZFS Storage ZS4-4, ZFS Storage ZS5-2, ZFS Storage ZS5-4

Pure Storage

Device Family	Members
FlashArray series	FA-400, FA-405, FA-420, FA-450, FlashArray //X10, FlashArray //X20, FlashArray //X50, FlashArray //X90, FlashArray//C, FlashArray//m10, FlashArray//m20, FlashArray//m50, FlashArray//m70, FlashArray//x70, FlashArray//XL, FlashArray//Xr2, FlashArray//Xr3

SanDisk

Device Family	Members
ioMemory PX600 series	ioMemory PX600-1000, ioMemory PX600-1300, ioMemory PX600-2600, ioMemory PX600-5200
ioMemory SX300 series	ioMemory SX300-1300, ioMemory SX300-1600, ioMemory SX300-3200, ioMemory SX300-6400
ioMemory SX350 series	ioMemory SX350-1300, ioMemory SX350-1600, ioMemory SX350-3200, ioMemory SX350-6400

StorageTek

Device Family	Members
FlexLine 200/300 series	FlexLine FLX280, FlexLine FLX380

Sun

Device Family	Members
StorEdge 3510/3511	StorageTek 3510, StorageTek 3511

Violin Memory

Device Family	Members
Flash Storage Platform 7000 series	Flash Storage Platform 7250, Flash Storage Platform 7300, Flash Storage Platform 7300E, Flash Storage Platform 7600, Flash Storage Platform 7700
Violin 3000/6000 series	3120, 3202, 3205, 3210, 3220, 6212, 6232, 6264, 6606, 6616

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Host Bus Adapters

The information presented here does not refer to specific host bus adapter (HBA) models or architectures. Unless stated otherwise, Storage Foundation supports all the HBAs that are supported by the OS and storage array manufacturers listed here. Storage Foundation includes support for Fibre Channel over Ethernet (FCoE) Converged Network Adapters (CNAs), but not iSCSI HBAs. For the required HBA BIOS/firmware and driver versions, see the operating system and storage array manufacturers' hardware compatibility support matrices.

The information presented here is only to add exceptions for HBA models that have issues and are therefore not supported by the Storage Foundation products listed.

For supported iSCSI initiator versions, see the table below. For details on configuring the iSCSI software initiator, see <http://www.veritas.com/docs/TECH62838> .

iSCSI Support

OS	iSCSI software initiator version
RHEL 5	6.2.0.868 or above
SLES 10/11 [1]	2.0.707 or above

1. For SLES 11SP1, the node.session.timeo.replacement_timeout tunable needs to be set to 40 or above.

For supported SAN Boot boot code versions, see the table below.

SAN Boot Support

OS	HBA model	Boot code version
Solaris SPARC/X64	QLogic QLE246x/QLA246x	FCode v1.12 or above
Solaris SPARC/X64	SUN SG-XPCIxFC-QF4/SG-XPCIExFC-QF4	FCode v1.12 or above

Generic RAID SCSI/SAS/e-SATA Controller (Internal Card With External Storage Attached)

All RAID SCSI/SAS/e-SATA Controllers shown here were tested with drivers and firmware supported by the OS and the storage vendors. Check with these vendors for:

• Minimum driver and firmware levels

• Specific driver and firmware support

• Support for the stated Symantec products

• Other functional options

NOTE: Mode page 83 SCSI inquiry and native OS SCSI driver support are required. For more details, check with the hardware manufacturer. Symantec recommends adding SCSI3 conformant disk support.

Switches

The information presented here does not refer to specific switch models or architectures.

Unless stated otherwise, Storage Foundation supports all Fibre Channel switches that are supported by the OS and storage array manufacturers listed here. For the required BIOS/firmware and driver versions for the switches, see the operating system and storage array manufacturers' hardware compatibility support matrices.

The information presented here is only to add exceptions for switch models that have issues and are therefore not supported by the Storage Foundation products listed.

Symantec Storage Foundation and High Availability Solutions 6.1, 6.1.1, 6.2, 6.2.1, Dynamic Multi-Pathing for VMware 6.1, 6.2, and Veritas Access 7.1, 7.2 Hardware Compatibility List