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```

Installation and Upgrade Checklist Report for Storage Foundation Cluster File System HA 5.1, Solaris 10, x86-64

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Important Notes

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Note: You have not selected the latest product version. Consider installing or upgrading to the latest version; otherwise, you may encounter issues that have already been fixed. To run a new report for the latest product version, select it from the Veritas product drop-down list.

Veritas File Systems with Disk Layout Version 4 or Version 5 Cannot be Mounted or Upgraded with Veritas File System Release 5.1

As documented in the 5.1 Release Notes, Veritas File System (VxFS) 5.1 supports only disk layout Version 6 and Version 7, and no prior disk layout versions can be created or mounted.

Due to a software restriction, the vxfsconvert utility in release 5.1 is currently unable to support a layout upgrade from disk layout Version 4 or Version 5 to disk layout Version 7. The vxfsconvert utility in release 5.1 can still be used to upgrade disk layout Version 2 and Version 3 to disk layout Version 7.

If an upgrade to release 5.1 is performed, it will not be possible to mount any file systems with disk layout Version 4 or Version 5, nor will it be possible to upgrade from disk layout Version 4 or Version 5 to disk layouts Version 6 or Version 7.

For complete details and our recommendations, please visit the following reference document: File systems with disk layout Version 4 or Version 5 cannot be mounted or upgraded running VERITAS File System (VxFS) 5.1 <http://entsupport.symantec.com/docs/339064>

Array Support Libraries (ASLs)

When installing Veritas products, please be aware that ASLs updates are not included in the patches update bundle. Please go to the Array Support Libraries (ASLs) to get the latest updates for your disk arrays.

System requirements

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Required number of CPUs: 2

Required disk space:

Partitions	Minimum space required	Maximum space required	Recommended space
/opt	287 MB	530 MB	484 MB
/root	44 MB	45 MB	45 MB
/usr	156 MB	156 MB	156 MB
/var	1 MB	1 MB	1 MB

Supported architectures:

AMD Opteron architecture [1][2]

Intel EM64T architecture [1][2]

1. Supports Solaris 10, 64 bit only.
2. Check Oracle's HCL for specific models: <http://www.oracle.com/webfolder/technetwork/hcl/index.html>.

Product features

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The features in the list are enabled in this release.

Feature	Storage Foundation CFSHA
1-256 TB File System	✓
CFS Multi-transaction server	✓
Cluster File System	✓
Cluster Server	✓
Cluster Volume Manager	✓
Concurrent I/O	✓
Data management application programming interface (DMAPI)	✓
Device names consistent across cluster nodes	✓
Device names using Array Volume IDs	✓
Direct I/O	✓
Dirty region logging	✓
Dynamic LUN expansion	✓
Dynamic Multi-pathing	✓
Dynamic Storage Tiering	✓
Enclosure based naming	✓
File Change Log	✓
File system snapshots	✓
File system storage checkpoints	✓
Flashsnap: Disk group split & join	✓

Flashsnap: Fast resynchronization	✓
Full size instant snapshots	✓
Hardware assisted copy	✓
Hot-relocation	✓
Import cloned LUN	✓
Keyless licensing	✓
Mount lock	✓
Named data streams	✓
Online coordinator disk replacement	✓
Online file system defragmentation	✓
Online file system grow & shrink	✓
Online relay out	✓
Online volume grow & shrink	✓
Operations Manager	✓
Oracle Disk Manager (ODM) and Cached ODM (CODM)	✓
Portable Data Containers (formerly known as Cross-Platform Data Sharing (CDS))	✓
Quick I/O (QIO) and Cached QIO (CQIO)	✓
Remote mirrors for campus clusters	✓
Rolling upgrade	✓
SCSI-3 based I/O fencing	✓
SSD device exploitation	✓
Site awareness with remote mirrors	✓
SmartMove	✓
Space-optimized instant snapshot	✓
Split-mirror snapshot	✓
Thin storage reclamation	✓
User & group quotas	✓
iSCSI device support	✓
Volume Replicator option	Optional
Database Dynamic Storage Tiering	Oracle only
Database storage checkpoints & rollback	Oracle only
FlashSnap: Database	Oracle only

Product documentation

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Product guides

[Release Notes](#)

[Veritas Storage Foundation Cluster File System Release Notes - English](#)

File System Guides



Veritas File System Administrator's Guide - English



Veritas File System Programmer's Reference Guide - English

Storage Foundation Cluster File System Guides



Veritas Storage Foundation Cluster File System Installation Guide - English



Veritas Storage Foundation Cluster File System Administrator's Guide - English

▼ Patches for Storage Foundation Cluster File System HA and Platform

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Product (recommended)

Patch	Date	Size
perl-sol_x64-5.1P1a	2012-10-12	14.83 KB
cpi-5.1RP1P1	2010-12-28	2.56 KB
cpi-5.1RP2P1	2010-12-16	1.12 KB
cpi-5.1P2	2010-11-26	3.01 KB
cpi-5.1P3	2010-11-26	871 Bytes
sfha-sol_x64-5.1RP2	2010-09-17	138.9 MB
vm-sol_x64-5.1RP...ltpathing_patch	2010-09-15	34.58 MB
cpi-5.1P1	2010-08-17	1.17 KB

Platform (required)

- Solaris patch number: [118844-26](#)
- Solaris patch number: [119131-09](#)
- Solaris patch number: [119375-03](#)
- Solaris patch number: [119043-02](#)
- Solaris patch number: [125732-02](#)
- Solaris patch number: [128307-05](#)
- Solaris patch number: [118844-19](#)
- Solaris patch number: [127112-01](#)

To check if the patch has been installed, use the `showrev -p | grep patch_number` command

▼ End of Support Life information

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Last updated on 2024-04-19. Refer to [EOSL page](#) for more information about support.

Release Date(GA)	Extended Support Starts	Sustaining Support Starts	End of Support Life Date(EOSL)
2009-12-05	2016-12-19	2018-12-31	2024-12-31

Platform configuration

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Supported platform version

Product versionPlatform version5.1Solaris 10

Required platform packages:

SUNWpool

Related documentation

[Oracle Solaris 10 Operating System Overview](#)

[Oracle Solaris 10 8/11 Product Documentation](#)

Host bus adapter (HBA) parameters and switch parameters

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Unless otherwise stated, the specified Veritas product supports all HBAs (except iSCSI HBAs) and fibre channel switches supported by the platform and storage array manufacturers listed in the hardware compatibility list (HCL).

Operations Manager

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Veritas InfoScale Operations Manager gives you a single, centralized management console for the InfoScale products. You can use it to monitor, visualize, and manage storage and cluster resources, and generate reports about these components in the Management Server domain. It can also help administrators centrally manage diverse data center environments. This section lists the documents for Veritas InfoScale Operations Manager 8.0.2.

Documentation

Array Support Libraries (ASLs)

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Array family (model)	Documentation	Libraries	
3PAR E-Class, S-Class		libvx3par (embedded in the package VRTSaslapm)	See TechNote
Dell EqualLogic PS3000 series		libvxelogic (embedded in the package VRTSaslapm)	See TechNote
Dell EqualLogic PS4000 series		libvxelogic (embedded in the package VRTSaslapm)	See TechNote
Dell EqualLogic PS5000 series		libvxelogic (embedded in the package VRTSaslapm)	See TechNote
Dell EqualLogic PS6000 series		libvxelogic (embedded in the package VRTSaslapm)	See TechNote
EMC CLARiiON AX series		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
EMC CLARiiON CX series	CLARiiON CX Series	libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC CLARiiON CX series with		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote

PowerPath	CLARiiON CX Series	libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC CLARiiON CX3 series		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC CLARiiON CX3 series with PowerPath		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC CLARiiON CX4 series		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC CLARiiON CX4 series with PowerPath		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC Symmetrix 8000 series	EMC Symmetrix 8000 Series	libvxemc (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC Symmetrix 8000 series with PowerPath	EMC Symmetrix 8000 Series	libvxemc (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC Symmetrix DMX series	EMC Symmetrix DMX Architecture	libvxemc (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC Symmetrix DMX series with PowerPath	EMC Symmetrix DMX Architecture	libvxemc (embedded in the package VRTSaslapm)	See TechNote
		libvxpp (embedded in the package VRTSaslapm)	See TechNote
EMC Symmetrix VMAX series with PowerPath		libvxemc (embedded in the package VRTSaslapm)	See TechNote
EMC Symmetrix VMAX series		libvxemc (embedded in the package VRTSaslapm)	See TechNote
EMC VNX series		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
EMC VNX series with PowerPath		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
EMC VNX2 series with PowerPath		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
EMC VNX2 series		libvxCLARiiON (embedded in the package VRTSaslapm)	See TechNote
EMC VPLEX		libvxInvista (embedded in the package VRTSaslapm)	See TechNote
Fujitsu ETERNUS VS850		libvxibmsvc (embedded in the package VRTSaslapm)	See TechNote
		libvxibmsvc (embedded in the package VRTSaslapm)	See TechNote
Hewlett Packard Enterprise 3PAR F/T-Class, StoreServ 7000/8000/10000 /20000 Storage		libvx3par (embedded in the package VRTSaslapm)	See TechNote
Hewlett Packard Enterprise EVA4000 /6000/8000		libvxhpalua (embedded in the package VRTSaslapm)	See TechNote
		libvxhpalua (embedded in the package VRTSaslapm)	See TechNote
Hewlett Packard Enterprise EVA4100 /6100/8100		libvxhpalua (embedded in the package VRTSaslapm)	See TechNote
		libvxhpalua (embedded in the package VRTSaslapm)	See TechNote
Hewlett Packard Enterprise EVA4400 /6400/8400 series		libvxhpalua (embedded in the package VRTSaslapm)	See TechNote
		libvxhpalua (embedded in the package VRTSaslapm)	See TechNote

Hewlett Packard Enterprise P2000 G3 MSA series		libvxmsa2kfc_sa (embedded in the package VRTSaslapm)	See TechNote
Hewlett Packard Enterprise P6000 EVA series		libvxhpalua (embedded in the package VRTSaslapm)	See TechNote
Hewlett Packard Enterprise XP10000 /12000		libvxxp12k (embedded in the package VRTSaslapm)	See TechNote
		libvxxp1281024 (embedded in the package VRTSaslapm)	See TechNote
		libvxxp256 (embedded in the package VRTSaslapm)	See TechNote
		libvxxp1281024 (embedded in the package VRTSaslapm)	See TechNote
Hewlett Packard Enterprise XP20000 /24000		libvxxp256 (embedded in the package VRTSaslapm)	See TechNote
		libvxxp1281024 (embedded in the package VRTSaslapm)	See TechNote
		libvxxp12k (embedded in the package VRTSaslapm)	See TechNote
		libvxxp1281024 (embedded in the package VRTSaslapm)	See TechNote
Hewlett Packard Enterprise P9500		libvxxp12k (embedded in the package VRTSaslapm)	See TechNote
		libvxxp256 (embedded in the package VRTSaslapm)	See TechNote
		libvxxp1281024 (embedded in the package VRTSaslapm)	See TechNote
		libvxxp1281024 (embedded in the package VRTSaslapm)	See TechNote
Hitachi AMS/WMS series		libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
Hitachi HUS 100 series	Hitachi Unified Storage 100 Family	libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
Hitachi Lightning 9900V series	Lightning 9900V Series Enterprise Storage Systems	libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
Hitachi SMS/AMS2000 series		libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
Hitachi Thunder 9500V series	Thunder 9500V Series Modular Storage Systems	libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
Hitachi USP/NSC series		libvxhdsusp (embedded in the package VRTSaslapm)	See TechNote
		libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
Hitachi USPV/USPVM		libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsusp (embedded in the package VRTSaslapm)	See TechNote
Hitachi HUS VM		libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsusp (embedded in the package VRTSaslapm)	See TechNote

Hitachi TMS1000		libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsalua (embedded in the package VRTSaslapm)	See TechNote
Hitachi VSP		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
		libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsusp (embedded in the package VRTSaslapm)	See TechNote
IBM Storwize series		libvxibmsvc (embedded in the package VRTSaslapm)	See TechNote
		libvxibmsvc (embedded in the package VRTSaslapm)	See TechNote
IBM System Storage DS3000 series		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
IBM System Storage DS5000 series		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
IBM System Storage DS6000 series	IBM System Storage DS6000 Series	libvxibmds6k (embedded in the package VRTSaslapm)	See TechNote
IBM System Storage DS8000 series	IBM System Storage DS8000 series	libvxibmds8k (embedded in the package VRTSaslapm)	See TechNote
IBM System Storage N series	IBM System Storage N series IBM System Storage N7000 Modular Disk Storage System	libvxnetapp (embedded in the package VRTSaslapm)	See TechNote
IBM System Storage XIV series		libvxxiv (embedded in the package VRTSaslapm)	See TechNote
		libvxxiv (embedded in the package VRTSaslapm)	See TechNote
NetApp FAS2000/FAS900/FAS200 series		libvxnetapp (embedded in the package VRTSaslapm)	See TechNote
NetApp FAS3000/V3000 series		libvxnetapp (embedded in the package VRTSaslapm)	See TechNote
NetApp FAS6000/V6000 series		libvxnetapp (embedded in the package VRTSaslapm)	See TechNote
NetApp FAS8000/FAS9000 Series		libvxnetapp (embedded in the package VRTSaslapm)	See TechNote
Oracle Axiom series		libvxpillaraxiom (embedded in the package VRTSaslapm)	See TechNote
Oracle Storage 6580/6780 series		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
Oracle StorageTek 2500 series		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
Oracle StorageTek 9900 series		libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsusp (embedded in the package VRTSaslapm)	See TechNote
Oracle StorageTek 9985/9990 series		libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsusp (embedded in the package VRTSaslapm)	See TechNote
Oracle ZFS Storage Appliance series		libvxsun7x10 (embedded in the package VRTSaslapm)	See TechNote
		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote

Oracle StorageTek 6140 array		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
Oracle StorageTek 9985V system		libvxhdsusp (embedded in the package VRTSaslapm)	See TechNote
		libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
Oracle StorageTek 9990V system		libvxhds (embedded in the package VRTSaslapm)	See TechNote
		libvxhds9980 (embedded in the package VRTSaslapm)	See TechNote
		libvxhdsusp (embedded in the package VRTSaslapm)	See TechNote
Oracle Sun Storage 6180 array		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
StorageTek FlexLine 200/300 series		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
Sun StorEdge 3510/3511		libvxsunse3k (embedded in the package VRTSaslapm)	See TechNote
Sun StorageTek 6130		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote
Sun StorageTek 6540		libvxlsiall (embedded in the package VRTSaslapm)	See TechNote