

Veritas Storage Foundation™ and High Availability Release Notes

Linux

5.0 Maintenance Pack 4 Rolling Patch
1



Veritas Storage Foundation and High Availability Release Notes

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350 Ellis Street
Mountain View, CA 94043
<http://www.symantec.com>

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When you contact Technical Support, please have the following information available:

- Product release level

- Hardware information
- Available memory, disk space, and NIC information
- Operating system
- Version and patch level
- Network topology
- Router, gateway, and IP address information
- Problem description:
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 - Troubleshooting that was performed before contacting Symantec
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- Information about upgrade assurance and support contracts
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- Advice about Symantec's technical support options
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docs@symantec.com

Support agreement resources

If you want to contact Symantec regarding an existing support agreement, please contact the support agreement administration team for your region as follows:

Asia-Pacific and Japan

customercare_apac@symantec.com

Europe, Middle-East, and Africa

semea@symantec.com

North America and Latin America

supportsolutions@symantec.com

Veritas Storage Foundation Release Notes

This document includes the following topics:

- [Overview of this release](#)
- [Changes in Veritas Storage Foundation](#)
- [System requirements](#)
- [Downloading the rolling patch archive](#)
- [RPMs included in this rolling patch](#)
- [Upgrading and uninstalling](#)
- [Software limitations](#)
- [Fixed issues](#)
- [Known issues](#)
- [Documentation](#)
- [Documentation errata](#)

Overview of this release

Before you continue, make sure that you are using the current version of this guide. For the latest patches or patch documentation available for this release, go to the following URL:

<http://sort.symantec.com/>

This document provides information specific to Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1. For information on Veritas Storage Foundation 5.0 MP4, including software fixes and limitations for the bundled products, see the *Veritas Storage Foundation 5.0 MP4 Release Notes*.

This document provides release information about the products in the SFHA 5.0 MP4 RP1; product line:

- Veritas Storage Foundation and High Availability™ (Basic, Standard, Standard HA, Enterprise, and Enterprise HA)
- Veritas Storage Foundation and High Availability™ for Oracle (Standard, Enterprise, and HA Editions)
- Veritas Storage Foundation™ for Sybase (Standard, Enterprise, and HA Editions)
- Veritas Storage Foundation and High Availability™ for DB2 (Standard, Enterprise, and HA Editions)
- Veritas™ Volume Replicator (VVR)
- Veritas™ Volume Manager (VxVM)
- Veritas™ File System (VxFS)
- Veritas Storage Foundation™ Cluster File System (SFCFS)™ Cluster File System (SFCFS) (Standard and HA Editions)
- Veritas™ Cluster Server (32-bit and 64-bit)
- Veritas Storage Foundation and High Availability™ Cluster File System for Oracle RAC (SFCFS for Oracle RAC)

About the Simple Admin utility

Veritas Storage Foundation has an optional utility, called Simple Admin, that you can use with Veritas File System and Veritas Volume Manager. The Simple Admin utility simplifies storage management by providing a single interface to the administrator and by abstracting the administrator from many of the commands needed to create and manage volumes, disks groups, and file systems.

You can download the Simple Admin utility for Veritas Storage Foundation from the following URL:

http://www.symantec.com/business/products/agents_options.jsp?pcid=2245&pvid=203_1

About Storage Foundation Manager

Storage Foundation Manager (SFM) is a free license add-on to Veritas Storage Foundation that provides centralized application, server and storage management capabilities across a heterogeneous infrastructure.

You can download SFM packages and SFM Add-ons from the following URL:

<http://go.symantec.com/vom>

About Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 documentation

The Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release is cumulative with and based on the Veritas Storage Foundation 5.0 MP3 release. The documents updated for this SF 5.0 MP4 RP1 release are:

- Veritas Storage Foundation and High Availability Release Notes (this document)

The full documentation set for all previous releases is also available online from the Symantec Veritas Storage Foundation website:

<http://www.symantec.com/business/support/overview.jsp?pid=15107>

For the latest information on updates, patches, and known issues regarding this release, see the Late-Breaking News TechNote on the Symantec Technical Support website:

<http://www.symantec.com/docs/TECH46445>

See the Hardware Compatibility List (HCL) for information about hardware support for this release:

<http://www.symantec.com/docs/TECH47620>

Review this entire document before installing your Veritas Storage Foundation and High Availability product.

Changes in Veritas Storage Foundation

The following sections describe the changes in Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1.

Installation and upgrade

Storage Foundation installation and upgrade includes the following changes in the 5.0 MP4 RP1 release.

Veritas Storage Foundation can be installed using Yellowdog Updater, Modified (YUM)

Starting with this release, you can install Veritas Storage Foundation using Yellowdog Updater, Modified (YUM) on RHEL5 Update 2 and later releases.

Veritas Storage Foundation supported operating systems

This release of Veritas Storage Foundation supports SUSE Linux Enterprise Server 10 Service Pack 4 on x86_64.

Veritas Volume Replicator

Veritas Volume Replicator (VVR) includes the following changes in the 5.0 MP4 RP1 release.

Minimum size for the Storage Replication Log

On PowerPC platforms, the minimum size for the Storage Replication Log (SRL) is increased to 130 MB.

Veritas Cluster Server

Veritas Cluster Server (VCS) includes the following changes in the 5.0 MP4 RP1 release.

The Sybase agent now checks for the NOT_IN_RECOVERY state during online operations

If the optional attribute `WaitForRecovery` is set to 1, then during the online entry point, the Sybase agent now checks for the `NOT_IN_RECOVERY` state to know when the recovery has completed.

Veritas Cluster Server not handling NFS services correctly

Changed the NFS agent to script based due to pthread and timeout issues.

Veritas Cluster Server share agent hostname comparison is case sensitive

The share agent client comparison is changed to be case insensitive.

ASMinst is hard coded to perform health check monitoring which fails against Oracle 10.2.0.4

A new attribute `MonitorOption` is added for the ASMinst agent. The value of the `MonitorOption` option determines whether to run health check in monitor. Health check runs if `MonitorOption` is set to 1 and is disabled when set to 0.

System requirements

This section describes the system requirements for the Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Veritas Storage Foundation supported Linux operating systems

This section describes the supported operating systems for the Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

SF operates on the following operating systems:

- Red Hat Enterprise Linux 4 Update 3 and later on x86_64
- Red Hat Enterprise Linux 5 Update 1 and later on x86_64
- Red Hat Enterprise Linux 5 Update 2 and later on PowerPC
- Oracle Enterprise Linux 4 Update 4 and later on x86_64
- Oracle Enterprise Linux 5 Update 1 and later on x86_64
- SUSE Linux Enterprise Server 9 Service Pack 3 on x86_64
- SUSE Linux Enterprise Server 9 Service Pack 4 on x86_64
- SUSE Linux Enterprise Server 10 Service Pack 2 on x86_64
- SUSE Linux Enterprise Server 10 Service Pack 3 on x86_64
- SUSE Linux Enterprise Server 10 Service Pack 4 on x86_64
- SUSE Linux Enterprise Server 10 Service Pack 2 on PowerPC
- SUSE Linux Enterprise Server 10 Service Pack 3 on PowerPC
- SUSE Linux Enterprise Server 11 GA on x86_64
- SUSE Linux Enterprise Server 11 GA on PowerPC

Symantec supports only SUSE distributed kernel binaries. Symantec products operate on subsequent kernel and patch releases provided the operating systems maintain kernel ABI (application binary interface) compatibility.

Information about the latest supported SUSE service packs is available in the following Late-Breaking News TechNote:

<http://entsupport.symantec.com/docs/281993>

The TechNote also includes any updates to the supported operating systems and software. Read the Late-Breaking News TechNote before you install Symantec products.

Operating system fresh installs and upgrades for Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1

If your system is running an older version of SUSE Linux Enterprise Server, you must upgrade the operating system before attempting to install the Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 software.

Note: Not all platforms and products have a full installer for this release. In these cases, you must install an earlier version of the product and upgrade the product to the 5.0 MP4 RP1 release.

The 5.0 MP4 RP1 release supports fresh installs of SF using the `installer` script for SLES 10 SP3 for Linux on IBM™ Power or SLES 11 for Linux on IBM Power. The 5.0 MP4 RP1 release supports upgrades of SF using the `installmp` script for RHEL 5 Update 2 and later and SLES 10 SP3 for Linux on IBM Power from SF 5.0 RU3, and SLES 11 and SLES 10 SP3 for Linux on IBM Power from SF 5.0 RU4.

SF supports both fresh installs and upgrades from the SF 5.0 Release Update (RU) 4 release or later for SLES 10 SP3 for x86_64-bit platforms in this release.

See the SUSE documentation as well as the installation section of this document for more information on upgrading your system.

Software and hardware requirements

The hardware compatibility list (HCL) contains the latest information about supported hardware and software and is updated regularly.

Before installing or upgrading Veritas Volume Manager, review the current compatibility list to confirm the compatibility of your hardware and software.

The hardware compatibility list (HCL) is available at the following URL:

<http://www.symantec.com/docs/TECH87944>

The hardware TechNote is available at the following URL:

<http://www.symantec.com/docs/TECH47620>

If you do not find your hardware or software listed or if you have questions about the information in the compatibility list, contact Symantec Technical Support.

Veritas Volume Manager licenses

The following table shows the levels of licensing in Veritas Volume Manager (VxVM) and the features supported at each level.

[Table 1-1](#) describes the levels of licensing in VxVM and supported features.

Table 1-1 Levels of licensing in Veritas Volume Manager and supported features

VxVM License	Description of Supported Features
Full	Concatenation, spanning, rootability, volume resizing, multiple disk groups, co-existence with native volume manager, striping, mirroring, DRL logging for mirrors, striping plus mirroring, mirroring plus striping, RAID-5, RAID-5 logging, Smartsync, hot sparing, hot-relocation, online data migration, online relayout, volume snapshots, volume sets, Intelligent Storage Provisioning, FastResync with Instant Snapshots, Storage Expert, Device Discovery Layer (DDL), Dynamic Multipathing (DMP), and Veritas Enterprise Administrator (VEA).
Add-on Licenses	Features that augment the Full VxVM license such as clustering functionality (cluster-shareable disk groups and shared volumes) and Veritas Volume Replicator.

Note: You need a full VxVM license to make effective use of add-on licenses to VxVM.

To see the license features that are enabled in Veritas Volume Manager

◆ Enter the following command:

```
# vxctl license
```

Cross-Platform Data Sharing licensing

The ability to import a Cross-Platform Data Sharing (CDS) disk group on a platform that is different from the platform on which the disk group was last imported is controlled by a CDS license. The Veritas Storage Foundation license includes the CDS license.

Note: The Cross-Platform Data Sharing (CDS) feature is also referred to as Portable Data Containers.

Downloading the rolling patch archive

The patches included in the Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release are available for download from the Symantec website. After downloading the 5.0 MP4 RP1 file, use `gunzip` and `tar` to uncompress and extract the RPMs.

To download the 5.0 MP4 RP1, see the following TechNote on the Symantec Technical Support Web site:

<http://www.symantec.com/business/support/index?page=content&id=TECH46445>

RPMs included in this rolling patch

This section describes the RPMs included in this rolling patch.

[Veritas Cluster Server RPMs](#)

[Veritas Cluster Server database agent RPMs](#)

[Veritas Storage Foundation RPMs](#)

[Veritas File System RPMs](#)

[Veritas Volume Manager and Volume Replicator RPMs](#)

[Veritas Storage Foundation Cluster File System RPMs](#)

[Veritas Storage Foundation Cluster File System for Oracle RAC RPMs](#)

[Veritas Storage Foundation for DB2 RPMs](#)

[Veritas Storage Foundation for Oracle RPMs](#)

[Veritas Storage Foundation for Sybase RPMs](#)

Veritas Cluster Server RPMs

This section describes the Veritas Cluster Server RPMs.

RedHat Enterprise Linux 4

[Table 1-2](#) describes the RedHat Enterprise Linux 4 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-2 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 4 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	i686	420140
VRTSllt	5.0.41.000	i686	1700912
VRTSperl	5.10.0.2	i686	12335077
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	31743020
VRTSvcsag	5.0.41.000	i686	498233
VRTSvcsdr	5.0.41.000	i686	61954
VRTSvxfen	5.0.41.000	i686	536366

RedHat Enterprise Linux 4 x64

[Table 1-3](#) describes the RedHat Enterprise Linux 4 x64 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-3 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	x86_64	463954
VRTSllt	5.0.41.000	x86_64	1856970
VRTSperl	5.10.0.3	x86_64	13422917
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	31743020
VRTSvcsag	5.0.41.000	i686	498233

Table 1-3 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs (continued)

Name	Version	Arch	Size in bytes
VRTSvcscr	5.0.41.000	x86_64	69363
VRTSvxfen	5.0.41.000	x86_64	572824

RedHat Enterprise Linux 5

[Table 1-4](#) describes the RedHat Enterprise Linux 5 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-4 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 5 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	i686	1575571
VRTSllt	5.0.41.000	i686	2484658
VRTSperl	5.10.0.0	i686	13031417
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i686	31911272
VRTSvcscag	5.0.41.000	i686	514705
VRTSvcscr	5.0.41.000	i686	371312
VRTSvxfen	5.0.41.000	i686	450184

RedHat Enterprise Linux 5 x64

[Table 1-5](#) describes the RedHat Enterprise Linux 5 x64 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-5 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	x86_64	825464
VRTSllt	5.0.41.000	x86_64	1352420
VRTSperl	5.10.0.7	x86_64	13551260

Table 1-5 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcS	5.0.41.000	i686	31911272
VRTSvcSag	5.0.41.000	i686	514705
VRTSvcSdr	5.0.41.000	x86_64	197841
VRTSvcxfen	5.0.41.000	x86_64	379796

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-6](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-6 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	ppc64	984858
VRTSllt	5.0.41.000	ppc64	1643549
VRTSperl	5.10.0.1	ppc64	13214954
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcS	5.0.41.000	ppc64	32537524
VRTSvcSag	5.0.41.000	ppc64	627365
VRTSvcSdr	5.0.41.000	ppc64	236580
VRTSvcxfen	5.0.41.000	ppc64	393952

SUSE Linux Enterprise Server 9

[Table 1-7](#) describes the SUSE Linux Enterprise Server 9 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-7 Veritas Cluster Server 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	i586	2228877
VRTSllt	5.0.41.000	i586	4796548
VRTSperl	5.10.0.0	i686	11573656
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcscs	5.0.41.000	i586	25859677
VRTSvcscsag	5.0.41.000	i586	378818
VRTSvcscsdr	5.0.41.000	i586	451743
VRTSvcxfen	5.0.41.000	i686	2362544

SUSE Linux Enterprise Server 9 x64

[Table 1-8](#) describes the SUSE Linux Enterprise Server 9 x64 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-8 Veritas Cluster Server 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	x86_64	1348836
VRTSllt	5.0.41.000	x86_64	2923625
VRTSperl	5.10.0.0	x86_64	12043981
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcscs	5.0.41.000	i586	25859677
VRTSvcscsag	5.0.41.000	i586	378818
VRTSvcscsdr	5.0.41.000	x86_64	277027
VRTSvcxfen	5.0.41.000	x86_64	1475990

SUSE Linux Enterprise Server 10

[Table 1-9](#) describes the SUSE Linux Enterprise Server 10 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-9 Veritas Cluster Server 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	i686	4453778
VRTSllt	5.0.41.000	i686	10755199
VRTSperl	5.10.0.0	i686	12556837
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	27408650
VRTSvcsag	5.0.41.000	i586	381340
VRTSvcsdr	5.0.41.000	i586	1103440
VRTSvxfen	5.0.41.000	i586	4533678

SUSE Linux Enterprise Server 10 x64

[Table 1-10](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-10 Veritas Cluster Server 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	x86_64	2768311
VRTSllt	5.0.41.000	x86_64	6754795
VRTSperl	5.10.0.7	x86_64	11712016
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	27408650
VRTSvcsag	5.0.41.000	i586	381340
VRTSvcsdr	5.0.41.000	x86_64	716362
VRTSvxfen	5.0.41.000	x86_64	2960511

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-11](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-11 Veritas Cluster Server 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	ppc64	1369479
VRTSllt	5.0.41.000	ppc64	2363040
VRTSperl	5.10.0.2	ppc64	11154125
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	27572890
VRTSvcsag	5.0.41.000	ppc64	436609
VRTSvcsdr	5.0.41.000	ppc64	387558
VRTSvxfen	5.0.41.000	ppc64	1628724

SUSE Linux Enterprise Server 11 x64

[Table 1-12](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-12 Veritas Cluster Server 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	x86_64	615947
VRTSllt	5.0.41.000	x86_64	1315644
VRTSperl	5.10.0.5	x86_64	10368813
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	18901304
VRTSvcsag	5.0.41.000	i686	343047
VRTSvcsdr	5.0.41.000	x86_64	177432
VRTSvxfen	5.0.41.000	x86_64	700622

SUSE Linux Enterprise Server 11 on PowerPC x64

[Table 1-13](#) describes the SUSE Linux Enterprise Server 11 on PowerPC x64 Veritas Cluster Server RPMs that are included in this rolling patch:

Table 1-13 Veritas Cluster Server 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	ppc64	1155060
VRTSllt	5.0.41.000	ppc64	2075625
VRTSperl	5.10.0.0	ppc64	9950406
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	18989014
VRTSvcsag	5.0.41.000	ppc64	380029
VRTSvcsdr	5.0.41.000	ppc64	374924
VRTSvxfen	5.0.41.000	ppc64	1260876

Veritas Cluster Server database agent RPMs

This section describes the Veritas Cluster Server database agent RPMs for Oracle, Sybase, and DB2 RPMs.

RedHat Enterprise Linux 4

[Table 1-14](#) describes the RedHat Enterprise Linux 4 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-14 Veritas Cluster Server database agent 5.0 MP4 RP1 RedHat Enterprise Linux 4 RPMs

Name	Version	Arch	Size in bytes
VRTSvcsdb	5.0.41.000	noarch	22645
VRTSscsocw	5.0.41.000	noarch	530222
VRTSvcsor	5.0.41.000	i686	3678886
VRTSvcssy	5.0.41.000	i686	43578

RedHat Enterprise Linux 4 x64

[Table 1-15](#) describes the RedHat Enterprise Linux 4 x64 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-15 Veritas Cluster Server database agent 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSvcscdb	5.0.41.000	noarch	22645
VRTScsocw	5.0.41.000	noarch	530222
VRTSvcscor	5.0.41.000	i686	3678886

RedHat Enterprise Linux 5

[Table 1-16](#) describes the RedHat Enterprise Linux 5 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-16 Veritas Cluster Server database agent 5.0 MP4 RP1 RedHat Enterprise Linux 5 RPMs

Name	Version	Arch	Size in bytes
VRTSvcscdb	5.0.41.000	noarch	23823
VRTScsocw	5.0.41.000	noarch	530222
VRTSvcscor	5.0.41.000	i686	3765905
VRTSvcssy	5.0.41.000	i686	44362

RedHat Enterprise Linux 5 x64

[Table 1-17](#) describes the RedHat Enterprise Linux 5 x64 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-17 Veritas Cluster Server database agent 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSvcscdb	5.0.41.000	noarch	23823
VRTScsocw	5.0.41.000	noarch	530222
VRTSvcscor	5.0.41.000	i686	3765905

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-18](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-18 Veritas Cluster Server database agent 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSvcsdb	5.0.41.000	noarch	23837
VRTSscsocw	5.0.41.000	noarch	530222
VRTSvcsor	5.0.41.000	ppc64	2013688

SUSE Linux Enterprise Server 9

[Table 1-19](#) describes the SUSE Linux Enterprise Server 9 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-19 Veritas Cluster Server database agent 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 RPMs

Name	Version	Arch	Size in bytes
VRTSvcsdb	5.0.41.000	noarch	21237
VRTSscsocw	5.0.41.000	noarch	530222
VRTSvcsor	5.0.41.000	i586	3500705
VRTSvcssy	5.0.41.000	i586	47856

SUSE Linux Enterprise Server 9 x64

[Table 1-20](#) describes the SUSE Linux Enterprise Server 9 x64 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-20 Veritas Cluster Server database agent 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSvcsdb	5.0.41.000	noarch	21237
VRTSscsocw	5.0.41.000	noarch	530222
VRTSvcsor	5.0.41.000	i586	3500705

SUSE Linux Enterprise Server 10

[Table 1-21](#) describes the SUSE Linux Enterprise Server 10 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-21 Veritas Cluster Server database agent 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 RPMs

Name	Version	Arch	Size in bytes
VRTSvcscdb	5.0.41.000	noarch	21251
VRTSvcscow	5.0.41.000	noarch	530222
VRTSvcscor	5.0.41.000	i586	3506464
VRTSvcscsy	5.0.41.000	i586	48716

SUSE Linux Enterprise Server 10 x64

[Table 1-22](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-22 Veritas Cluster Server database agent 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSvcscdb	5.0.41.000	noarch	21251
VRTSvcscow	5.0.41.000	noarch	530222
VRTSvcscor	5.0.41.000	i586	3506464

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-23](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-23 Veritas Cluster Server database agent 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSvcscdb	5.0.41.000	noarch	21256
VRTSvcscow	5.0.41.000	noarch	530222
VRTSvcscor	5.0.41.000	ppc64	1884024

SUSE Linux Enterprise Server 11 x64

[Table 1-24](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-24 Veritas Cluster Server database agent 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSvcscdb	5.0.41.000	noarch	20366
VRTSvcscow	5.0.41.000	noarch	530222
VRTSvcSOR	5.0.41.000	i686	1636357

SUSE Linux Enterprise Server 11 on PowerPC x64

[Table 1-25](#) describes the SUSE Linux Enterprise Server 11 on PowerPC x64 Veritas Cluster Server database agent RPMs that are included in this rolling patch:

Table 1-25 Veritas Cluster Server database agent 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSvcscdb	5.0.41.000	noarch	20379

Veritas Storage Foundation RPMs

This section describes the Veritas Storage Foundation RPMs.

RedHat Enterprise Linux 4 x64

[Table 1-26](#) describes the RedHat Enterprise Linux 4 x64 Veritas Storage Foundation RPMs that are included in this rolling patch:

Table 1-26 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSvcscow	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i686	4701575

Table 1-26 Veritas Cluster Server 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs (continued)

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	x86_64	237409
VRTSgab	5.0.41.000	x86_64	463954
VRTSllt	5.0.41.000	x86_64	1856970
VRTSvmconv	5.0.40.10	i686	66774
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i686	31743020
VRTSvcscag	5.0.41.000	i686	498233
VRTSvcscdb	5.0.41.000	noarch	22645
VRTSvcscdr	5.0.41.000	x86_64	69363
VRTSvcscor	5.0.41.000	i686	3678886
VRTSvcscsy	5.0.41.000	i686	43578
VRTSvmman	5.0.40.10	noarch	435340
VRTSvxfen	5.0.41.000	x86_64	572824
VRTSvxfs-common	5.0.40.10	i686	5711738
VRTSvxfs-platform	5.0.40.10	x86_64	5717365
VRTSvxvm-common	5.0.40.10	i686	19138799
VRTSvxvm-platform	5.0.40.10	x86_64	4404616

RedHat Enterprise Linux 5 x64

[Table 1-27](#) describes the RedHat Enterprise Linux 5 x64 Veritas Storage Foundation RPMs that are included in this rolling patch:

Table 1-27 Veritas Storage Foundation 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987

Table 1-27 Veritas Storage Foundation 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i686	4910179
VRTSfssdk	5.0.40.10	x86_64	243633
VRTSgab	5.0.41.000	x86_64	825464
VRTSilt	5.0.41.000	x86_64	1352420
VRTSilmconv	5.0.40.10	i686	69162
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	31911272
VRTSvcsag	5.0.41.000	i686	514705
VRTSvcsdb	5.0.41.000	noarch	23823
VRTSvcsdr	5.0.41.000	x86_64	197841
VRTSvcsor	5.0.41.000	i686	3765905
VRTSvcssy	5.0.41.000	i686	44362
VRTSvmman	5.0.40.10	noarch	439492
VRTSvxfen	5.0.41.000	x86_64	379796
VRTSvxfs-common	5.0.40.10	i686	5200263
VRTSvxfs-platform	5.0.40.10	x86_64	3035461
VRTSvxvm-common	5.0.40.10	i686	18410176
VRTSvxvm-platform	5.0.40.10	x86_64	2667302

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-28](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Storage Foundation RPMs that are included in this rolling patch:

Table 1-28 Veritas Storage Foundation 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	ppc	5039375
VRTSfssdk	5.0.40.10	ppc64	357589
VRTSgab	5.0.41.000	ppc64	984858
VRTSllt	5.0.41.000	ppc64	1643549
VRTSlmconv	5.0.40.10	ppc64	69129
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	ppc64	32537524
VRTSvcscsag	5.0.41.000	ppc64	627365
VRTSvcscdb	5.0.41.000	noarch	23837
VRTSvcscdr	5.0.41.000	ppc64	236580
VRTSvcscor	5.0.41.000	ppc64	2013688
VRTSvcscsy	5.0.41.000	ppc64	53688
VRTSvmman	5.0.40.10	noarch	439720
VRTSvxfen	5.0.41.000	ppc64	393952
VRTSvxfs-common	5.0.40.10	ppc	6442675
VRTSvxfs-platform	5.0.40.10	ppc64	2361700
VRTSvxvm-common	5.0.40.10	ppc	16583015
VRTSvxvm-platform	5.0.40.10	ppc64	1583693

SUSE Linux Enterprise Server 9 x64

Table 1-29 describes the SUSE Linux Enterprise Server 9 x64 Veritas Storage Foundation RPMs that are included in this rolling patch:

Table 1-29 Veritas Storage Foundation 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i586	4759578
VRTSfssdk	5.0.40.10	x86_64	193175
VRTSgab	5.0.41.000	x86_64	1348836
VRTSllt	5.0.41.000	x86_64	2923625
VRTSsvmconv	5.0.40.10	i686	59343
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcscs	5.0.41.000	i586	25859677
VRTSvcscsag	5.0.41.000	i586	378818
VRTSvcscsdb	5.0.41.000	noarch	21237
VRTSvcscsdr	5.0.41.000	x86_64	277027
VRTSvcscsor	5.0.41.000	i586	3500705
VRTSvcscssy	5.0.41.000	i586	47856
VRTSvmman	5.0.40.10	noarch	435035
VRTSvxfen	5.0.41.000	x86_64	1475990
VRTSvxfs-common	5.0.40.10	i586	4139531
VRTSvxfs-platform	5.0.40.10	x86_64	5628767
VRTSvxvm-common	5.0.40.10	i586	16247612
VRTSvxvm-platform	5.0.40.10	x86_64	4859792

SUSE Linux Enterprise Server 10 x64

[Table 1-30](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas Storage Foundation RPMs that are included in this rolling patch:

Table 1-30 Veritas Storage Foundation 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i586	4817380
VRTSfssdk	5.0.40.10	x86_64	185632
VRTSgab	5.0.41.000	x86_64	2768311
VRTSllt	5.0.41.000	x86_64	6754795
VRTSlmconv	5.0.40.10	i686	59398
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	27408650
VRTSvcsag	5.0.41.000	i586	381340
VRTSvcsdb	5.0.41.000	noarch	21251
VRTSvcsdr	5.0.41.000	x86_64	716362
VRTSvcsor	5.0.41.000	i586	3506464
VRTSvcssy	5.0.41.000	i586	48716
VRTSvmman	5.0.40.10	noarch	434971
VRTSvxfen	5.0.41.000	x86_64	2960511
VRTSvxfs-common	5.0.40.10	i586	4190819
VRTSvxfs-platform	5.0.40.10	x86_64	4996527
VRTSvxvm-common	5.0.40.10	i586	15945927
VRTSvxvm-platform	5.0.40.10	x86_64	6590850

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-31](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas Storage Foundation RPMs that are included in this rolling patch:

Table 1-31 Veritas Storage Foundation 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	ppc	4923125
VRTSfssdk	5.0.40.10	ppc64	219437
VRTSgab	5.0.41.000	ppc64	1369479
VRTSllt	5.0.41.000	ppc64	2363040
VRTSsvmconv	5.0.40.10	ppc64	59338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	27572890
VRTSvcsag	5.0.41.000	ppc64	436609
VRTSvcsdb	5.0.41.000	noarch	21256
VRTSvcsdr	5.0.41.000	ppc64	387558
VRTSvcsor	5.0.41.000	ppc64	1884024
VRTSvcssy	5.0.41.000	ppc64	54441
VRTSvmman	5.0.40.10	noarch	434893
VRTSvxfen	5.0.41.000	ppc64	1628724
VRTSvxfs-common	5.0.40.10	ppc	4470635
VRTSvxfs-platform	5.0.40.10	ppc64	1994320
VRTSvxvm-common	5.0.40.10	ppc	13581001
VRTSvxvm-platform	5.0.40.10	ppc64	1297652

SUSE Linux Enterprise Server 11 x64

[Table 1-32](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas Storage Foundation RPMs that are included in this rolling patch:

Table 1-32 Veritas Storage Foundation 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i586	4302464
VRTSfssdk	5.0.40.10	x86_64	169698
VRTSgab	5.0.41.000	x86_64	615947
VRTSllt	5.0.41.000	x86_64	1315644
VRTSsvmconv	5.0.40.10	x86_64	60347
VRTSodm-common	5.0.40.10	x86_64	14121
VRTSodm-platform	5.0.40.10	x86_64	654533
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i686	18901304
VRTSvcscag	5.0.41.000	i686	343047
VRTSvcscdb	5.0.41.000	noarch	20366
VRTSvcscdr	5.0.41.000	x86_64	177432
VRTSvcscor	5.0.41.000	i686	1636357
VRTSvcssy	5.0.41.000	i686	43208
VRTSvmman	5.0.40.10	noarch	437454
VRTSvxfen	5.0.41.000	x86_64	700622
VRTSvxfs-common	5.0.40.10	i586	1775573
VRTSvxfs-platform	5.0.40.10	x86_64	2064782
VRTSvxvm-common	5.0.40.10	i586	9225400
VRTSvxvm-platform	5.0.40.10	x86_64	3250755

SUSE Linux Enterprise Server 11 on PowerPC x64

Table 1-33 describes the SUSE Linux Enterprise Server 11 on PowerPC x64 Veritas Storage Foundation RPMs that are included in this rolling patch:

Table 1-33 Veritas Storage Foundation 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTSfspro	5.0.40.10	ppc	4387150
VRTSfssdk	5.0.40.10	ppc64	179568
VRTSgab	5.0.41.000	ppc64	1155060
VRTSllt	5.0.41.000	ppc64	2075625
VRTSlmconv	5.0.40.10	ppc64	60338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	18989014
VRTSvcsag	5.0.41.000	ppc64	380029
VRTSvcsdb	5.0.41.000	noarch	20379
VRTSvcsdr	5.0.41.000	ppc64	374924
VRTSvcssy	5.0.41.000	ppc64	46986
VRTSvmman	5.0.40.10	noarch	437450
VRTSvxfen	5.0.41.000	ppc64	1260876
VRTSvxfs-common	5.0.40.10	ppc	1633500
VRTSvxfs-platform	5.0.40.10	ppc64	1464726
VRTSvxvm-common	5.0.40.10	ppc	8387751
VRTSvxvm-platform	5.0.40.10	ppc64	1179724

Veritas File System RPMs

This section describes the Veritas File System RPMs.

RedHat Enterprise Linux 4 x64

[Table 1-34](#) describes the RedHat Enterprise Linux 4 x64 Veritas File System RPMs that are included in this rolling patch:

Table 1-34 Veritas File System 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	x86_64	237409
VRTSvmconv	5.0.40.10	i686	66774
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	435340
VRTSvxf-common	5.0.40.10	i686	5711738
VRTSvxf-platform	5.0.40.10	x86_64	5717365
VRTSvxvm-common	5.0.40.10	i686	19138799
VRTSvxvm-platform	5.0.40.10	x86_64	4404616

RedHat Enterprise Linux 5 x64

[Table 1-35](#) describes the RedHat Enterprise Linux 5 x64 Veritas File System RPMs that are included in this rolling patch:

Table 1-35 Veritas File System 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	x86_64	243633
VRTSvmconv	5.0.40.10	i686	69162
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	439492
VRTSvxf-common	5.0.40.10	i686	5200263
VRTSvxf-platform	5.0.40.10	x86_64	3035461
VRTSvxvm-common	5.0.40.10	i686	18410176
VRTSvxvm-platform	5.0.40.10	x86_64	2667302

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-36](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas File System RPMs that are included in this rolling patch:

Table 1-36 Veritas File System 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	ppc64	357589
VRTSvmconv	5.0.40.10	ppc64	69129
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	439720
VRTSvxfs-common	5.0.40.10	ppc	6442675
VRTSvxfs-platform	5.0.40.10	ppc64	2361700
VRTSvxvm-common	5.0.40.10	ppc	16583015
VRTSvxvm-platform	5.0.40.10	ppc64	1583693

SUSE Linux Enterprise Server 9 x64

[Table 1-37](#) describes the SUSE Linux Enterprise Server 9 x64 Veritas File System RPMs that are included in this rolling patch:

Table 1-37 Veritas File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	x86_64	193175
VRTSvmconv	5.0.40.10	i686	59343
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	435035
VRTSvxfs-common	5.0.40.10	i586	4139531
VRTSvxfs-platform	5.0.40.10	x86_64	5628767
VRTSvxvm-common	5.0.40.10	i586	16247612
VRTSvxvm-platform	5.0.40.10	x86_64	4859792

SUSE Linux Enterprise Server 10 x64

[Table 1-38](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas File System RPMs that are included in this rolling patch:

Table 1-38 Veritas File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	x86_64	185632
VRTSvmconv	5.0.40.10	i686	59398
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	434971
VRTSvxf-common	5.0.40.10	i586	4190819
VRTSvxf-platform	5.0.40.10	x86_64	4996527
VRTSvxvm-common	5.0.40.10	i586	15945927
VRTSvxvm-platform	5.0.40.10	x86_64	6590850

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-39](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas File System RPMs that are included in this rolling patch:

Table 1-39 Veritas File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	ppc64	219437
VRTSvmconv	5.0.40.10	ppc64	59338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	434893
VRTSvxf-common	5.0.40.10	ppc	4470635
VRTSvxf-platform	5.0.40.10	ppc64	1994320
VRTSvxvm-common	5.0.40.10	ppc	13581001
VRTSvxvm-platform	5.0.40.10	ppc64	1297652

SUSE Linux Enterprise Server 11 x64

[Table 1-40](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas File System RPMs that are included in this rolling patch:

Table 1-40 Veritas File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	x86_64	169698
VRTSsvmconv	5.0.40.10	x86_64	60347
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	437454
VRTSvxfs-common	5.0.40.10	i586	1775573
VRTSvxfs-platform	5.0.40.10	x86_64	2064782
VRTSvxvm-common	5.0.40.10	i586	9225400
VRTSvxvm-platform	5.0.40.10	x86_64	3250755

SUSE Linux Enterprise Server 11 on PowerPC x64

[Table 1-41](#) describes the SUSE Linux Enterprise Server 11 on PowerPC x64 Veritas File System RPMs that are included in this rolling patch:

Table 1-41 Veritas File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfspro	5.0.40.10	ppc	4387150
VRTSfssdk	5.0.40.10	ppc64	179568
VRTSsvmconv	5.0.40.10	ppc64	60338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	437450
VRTSvxfs-common	5.0.40.10	ppc	1633500
VRTSvxfs-platform	5.0.40.10	ppc64	1464726
VRTSvxvm-common	5.0.40.10	ppc	8387751

Table 1-41 Veritas File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvxvm-platform	5.0.40.10	ppc64	1179724

Veritas Volume Manager and Volume Replicator RPMs

This section describes the Veritas Volume Manager and Veritas Volume Replicator RPMs.

RedHat Enterprise Linux 4 x64

[Table 1-42](#) describes the RedHat Enterprise Linux 4 x64 Veritas Volume Manager and Veritas Volume Replicator RPMs that are included in this rolling patch:

Table 1-42 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSlvconv	5.0.40.10	i686	66774
VRTSperl	5.10.0.3	x86_64	13422917
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	435340
VRTSvxvm-common	5.0.40.10	i686	19138799
VRTSvxvm-platform	5.0.40.10	x86_64	4404616
VRTSfspro	5.0.40.10	i686	4701575

RedHat Enterprise Linux 5 x64

[Table 1-43](#) describes the RedHat Enterprise Linux 5 x64 Veritas Volume Manager and Veritas Volume Replicator RPMs that are included in this rolling patch:

Table 1-43 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfspro	5.0.40.10	i686	4910179

Table 1-43 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSsvmconv	5.0.40.10	i686	69162
VRTSperl	5.10.0.7	x86_64	13551260
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	439492
VRTSvxvm-common	5.0.40.10	i686	18410176
VRTSvxvm-platform	5.0.40.10	x86_64	2667302

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-44](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Volume Manager and Veritas Volume Replicator RPMs that are included in this rolling patch:

Table 1-44 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfspro	5.0.40.10	ppc	5039375
VRTSsvmconv	5.0.40.10	ppc64	69129
VRTSperl	5.10.0.1	ppc64	13214954
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	439720
VRTSvxvm-common	5.0.40.10	ppc	16583015
VRTSvxvm-platform	5.0.40.10	ppc64	1583693

SUSE Linux Enterprise Server 9 x64

[Table 1-45](#) describes the SUSE Linux Enterprise Server 9 x64 Veritas Volume Manager and Veritas Volume Replicator RPMs that are included in this rolling patch:

Table 1-45 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfspro	5.0.40.10	i586	4759578
VRTSvmconv	5.0.40.10	i686	59343
VRTSperl	5.10.0.0	x86_64	12043981
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	435035
VRTSvxvm-common	5.0.40.10	i586	16247612
VRTSvxvm-platform	5.0.40.10	x86_64	4859792

SUSE Linux Enterprise Server 10 x64

[Table 1-46](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas Volume Manager and Veritas Volume Replicator RPMs that are included in this rolling patch:

Table 1-46 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfspro	5.0.40.10	i586	4817380
VRTSvmconv	5.0.40.10	i686	59398
VRTSperl	5.10.0.7	x86_64	11712016
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	434971
VRTSvxvm-common	5.0.40.10	i586	15945927
VRTSvxvm-platform	5.0.40.10	x86_64	6590850

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-47](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas Volume Manager and Veritas Volume Replicator RPMs that are included in this rolling patch:

Table 1-47 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfspro	5.0.40.10	ppc	4923125
VRTSsvmconv	5.0.40.10	ppc64	59338
VRTSperl	5.10.0.2	ppc64	11154125
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	434893
VRTSvxvm-common	5.0.40.10	ppc	13581001
VRTSvxvm-platform	5.0.40.10	ppc64	1297652

SUSE Linux Enterprise Server 11 x64

[Table 1-48](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas Volume Manager and Veritas Volume Replicator RPMs that are included in this rolling patch:

Table 1-48 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfspro	5.0.40.10	i586	4302464
VRTSsvmconv	5.0.40.10	x86_64	60347
VRTSperl	5.10.0.5	x86_64	10368813
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	437454
VRTSvxvm-common	5.0.40.10	i586	9225400
VRTSvxvm-platform	5.0.40.10	x86_64	3250755

SUSE Linux Enterprise Server 11 on PowerPC x64

[Table 1-49](#) describes the SUSE Linux Enterprise Server 11 on PowerPC x64 Veritas Volume Manager and Veritas Volume Replicator RPMs that are included in this rolling patch:

Table 1-49 Veritas Volume Manager and Veritas Volume Replicator 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSfspro	5.0.40.10	ppc	4387150
VRTSvvmconv	5.0.40.10	ppc64	60338
VRTSperl	5.10.0.0	ppc64	9950406
VRTSspt	5.5.000.006	noarch	17655824
VRTSvmman	5.0.40.10	noarch	437450
VRTSvxvm-common	5.0.40.10	ppc	8387751
VRTSvxvm-platform	5.0.40.10	ppc64	1179724

Veritas Storage Foundation Cluster File System RPMs

This section describes the Veritas Storage Foundation Cluster File System RPMs.

RedHat Enterprise Linux 4 x64

[Table 1-50](#) describes the RedHat Enterprise Linux 4 x64 Veritas Storage Foundation Cluster File System RPMs that are included in this rolling patch:

Table 1-50 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSfssdk	5.0.40.10	x86_64	237409
VRTSgab	5.0.41.000	x86_64	463954
VRTSglm	5.0.40.10	x86_64	287595
VRTSllt	5.0.41.000	x86_64	1856970
VRTSvvmconv	5.0.40.10	i686	66774
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	31743020
VRTSvcsag	5.0.41.000	i686	498233

Table 1-50 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvcsdr	5.0.41.000	x86_64	69363
VRTSvmman	5.0.40.10	noarch	435340
VRTSvxfen	5.0.41.000	x86_64	572824
VRTSvxfs-common	5.0.40.10	i686	5711738
VRTSvxfs-platform	5.0.40.10	x86_64	5717365
VRTSvxvm-common	5.0.40.10	i686	19138799
VRTSvxvm-platform	5.0.40.10	x86_64	4404616

RedHat Enterprise Linux 5 x64

[Table 1-51](#) describes the RedHat Enterprise Linux 5 x64 Veritas Storage Foundation Cluster File System RPMs that are included in this rolling patch:

Table 1-51 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSfssdk	5.0.40.10	x86_64	243633
VRTSgab	5.0.41.000	x86_64	825464
VRTSglm	5.0.40.10	x86_64	1099717
VRTSllt	5.0.41.000	x86_64	1352420
VRTSlvconv	5.0.40.10	i686	69162
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	31911272
VRTSvcsag	5.0.41.000	i686	514705
VRTSvcsdr	5.0.41.000	x86_64	197841
VRTSvmman	5.0.40.10	noarch	439492

Table 1-51 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvxfen	5.0.41.000	x86_64	379796
VRTSvxfs-common	5.0.40.10	i686	5200263
VRTSvxfs-platform	5.0.40.10	x86_64	3035461
VRTSvxvm-common	5.0.40.10	i686	18410176
VRTSvxvm-platform	5.0.40.10	x86_64	2667302

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-52](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Storage Foundation Cluster File System RPMs that are included in this rolling patch:

Table 1-52 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTSfssdk	5.0.40.10	ppc64	357589
VRTSgab	5.0.41.000	ppc64	984858
VRTSglm	5.0.40.10	ppc64	1369443
VRTSllt	5.0.41.000	ppc64	1643549
VRTSlvconv	5.0.40.10	ppc64	69129
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	32537524
VRTSvcsag	5.0.41.000	ppc64	627365
VRTSvcsdr	5.0.41.000	ppc64	236580
VRTSvmmman	5.0.40.10	noarch	439720
VRTSvxfen	5.0.41.000	ppc64	393952
VRTSvxfs-common	5.0.40.10	ppc	6442675

Table 1-52 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvxfs-platform	5.0.40.10	ppc64	2361700
VRTSvxvm-common	5.0.40.10	ppc	16583015
VRTSvxvm-platform	5.0.40.10	ppc64	1583693

SUSE Linux Enterprise Server 9 x64

[Table 1-53](#) describes the SUSE Linux Enterprise Server 9 x64 Veritas Storage Foundation Cluster File System RPMs that are included in this rolling patch:

Table 1-53 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSfssdk	5.0.40.10	x86_64	193175
VRTSgab	5.0.41.000	x86_64	1348836
VRTSglm	5.0.40.10	x86_64	1602542
VRTSllt	5.0.41.000	x86_64	2923625
VRTSvmconv	5.0.40.10	i686	59343
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	25859677
VRTSvcsag	5.0.41.000	i586	378818
VRTSvcsdr	5.0.41.000	x86_64	277027
VRTSvmman	5.0.40.10	noarch	435035
VRTSvxfen	5.0.41.000	x86_64	1475990
VRTSvxfs-common	5.0.40.10	i586	4139531
VRTSvxfs-platform	5.0.40.10	x86_64	5628767
VRTSvxvm-common	5.0.40.10	i586	16247612

Table 1-53 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvxvm-platform	5.0.40.10	x86_64	4859792

SUSE Linux Enterprise Server 10 x64

[Table 1-54](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas Storage Foundation Cluster File System RPMs that are included in this rolling patch:

Table 1-54 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSscavf	5.0.40.10	i386	107987
VRTSfssdk	5.0.40.10	x86_64	185632
VRTSgab	5.0.41.000	x86_64	2768311
VRTSglm	5.0.40.10	x86_64	1703214
VRTSllt	5.0.41.000	x86_64	6754795
VRTSlmconv	5.0.40.10	i686	59398
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	27408650
VRTSvcsag	5.0.41.000	i586	381340
VRTSvcsdr	5.0.41.000	x86_64	716362
VRTSvmman	5.0.40.10	noarch	434971
VRTSvxfen	5.0.41.000	x86_64	2960511
VRTSvxfs-common	5.0.40.10	i586	4190819
VRTSvxfs-platform	5.0.40.10	x86_64	4996527
VRTSvxvm-common	5.0.40.10	i586	15945927
VRTSvxvm-platform	5.0.40.10	x86_64	6590850

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-55](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas Storage Foundation Cluster File System RPMs that are included in this rolling patch:

Table 1-55 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTSfssdk	5.0.40.10	ppc64	219437
VRTSgab	5.0.41.000	ppc64	1369479
VRTSglm	5.0.40.10	ppc64	1047584
VRTSllt	5.0.41.000	ppc64	2363040
VRTSlmconv	5.0.40.10	ppc64	59338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	27572890
VRTSvcsag	5.0.41.000	ppc64	436609
VRTSvcsdr	5.0.41.000	ppc64	387558
VRTSvmman	5.0.40.10	noarch	434893
VRTSvxfen	5.0.41.000	ppc64	1628724
VRTSvxfs-common	5.0.40.10	ppc	4470635
VRTSvxfs-platform	5.0.40.10	ppc64	1994320
VRTSvxvm-common	5.0.40.10	ppc	13581001
VRTSvxvm-platform	5.0.40.10	ppc64	1297652

SUSE Linux Enterprise Server 11 x64

[Table 1-56](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas Storage Foundation Cluster File System RPMs that are included in this rolling patch:

Table 1-56 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSfssdk	5.0.40.10	x86_64	169698
VRTSgab	5.0.41.000	x86_64	615947
VRTSglm	5.0.40.10	x86_64	673100
VRTSllt	5.0.41.000	x86_64	1315644
VRTSlmconv	5.0.40.10	x86_64	60347
VRTSodm-common	5.0.40.10	x86_64	14121
VRTSodm-platform	5.0.40.10	x86_64	654533
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i686	18901304
VRTSvcscag	5.0.41.000	i686	343047
VRTSvcscdr	5.0.41.000	x86_64	177432
VRTSvmman	5.0.40.10	noarch	437454
VRTSvxfen	5.0.41.000	x86_64	700622
VRTSvxfs-common	5.0.40.10	i586	1775573
VRTSvxfs-platform	5.0.40.10	x86_64	2064782
VRTSvxvm-common	5.0.40.10	i586	9225400
VRTSvxvm-platform	5.0.40.10	x86_64	3250755

SUSE Linux Enterprise Server 11 on PowerPC x64

[Table 1-57](#) describes the SUSE Linux Enterprise Server 11 on PowerPC x64 Veritas Storage Foundation Cluster File System RPMs that are included in this rolling patch:

Table 1-57 Veritas Storage Foundation Cluster File System 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTSfssdk	5.0.40.10	ppc64	179568
VRTSgab	5.0.41.000	ppc64	1155060
VRTSglm	5.0.40.10	ppc64	800206
VRTSllt	5.0.41.000	ppc64	2075625
VRTSllmconv	5.0.40.10	ppc64	60338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	18989014
VRTSvcsag	5.0.41.000	ppc64	380029
VRTSvcsdr	5.0.41.000	ppc64	374924
VRTSvmman	5.0.40.10	noarch	437450
VRTSvxfen	5.0.41.000	ppc64	1260876
VRTSvxfs-common	5.0.40.10	ppc	1633500
VRTSvxfs-platform	5.0.40.10	ppc64	1464726
VRTSvxvm-common	5.0.40.10	ppc	8387751
VRTSvxvm-platform	5.0.40.10	ppc64	1179724

Veritas Storage Foundation Cluster File System for Oracle RAC RPMs

This section describes the Veritas Storage Foundation Cluster File System for Oracle RAC RPMs.

RedHat Enterprise Linux 4 x64

[Table 1-50](#) describes the RedHat Enterprise Linux 4 x64 Veritas Storage Foundation Cluster File System for Oracle RAC RPMs that are included in this rolling patch:

Table 1-58 Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i686	4701575
VRTSfssdk	5.0.40.10	x86_64	237409
VRTSgab	5.0.41.000	x86_64	463954
VRTSglm	5.0.40.10	x86_64	287595
VRTSllt	5.0.41.000	x86_64	1856970
VRTSlmconv	5.0.40.10	i686	66774
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i686	31743020
VRTSvcscag	5.0.41.000	i686	498233
VRTSvcscdb	5.0.41.000	noarch	22645
VRTSvcscdr	5.0.41.000	x86_64	69363
VRTSvcscor	5.0.41.000	i686	3678886
VRTSvmman	5.0.40.10	noarch	435340
VRTSvxfen	5.0.41.000	x86_64	572824
VRTSvxfs-common	5.0.40.10	i686	5711738
VRTSvxfs-platform	5.0.40.10	x86_64	5717365
VRTSvxvm-common	5.0.40.10	i686	19138799
VRTSvxvm-platform	5.0.40.10	x86_64	4404616

RedHat Enterprise Linux 5 x64

[Table 1-60](#) describes the RedHat Enterprise Linux 5 x64 Veritas Storage Foundation Cluster File System for Oracle RAC RPMs that are included in this rolling patch:

Table 1-59 Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i686	4910179
VRTSfssdk	5.0.40.10	x86_64	243633
VRTSgab	5.0.41.000	x86_64	825464
VRTSglm	5.0.40.10	x86_64	1099717
VRTSllt	5.0.41.000	x86_64	1352420
VRTSsvmconv	5.0.40.10	i686	69162
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i686	31911272
VRTSvcscag	5.0.41.000	i686	514705
VRTSvcscdb	5.0.41.000	noarch	23823
VRTSvcscdr	5.0.41.000	x86_64	197841
VRTSvcscor	5.0.41.000	i686	3765905
VRTSvmman	5.0.40.10	noarch	439492
VRTSvxfen	5.0.41.000	x86_64	379796
VRTSvxfs-common	5.0.40.10	i686	5200263
VRTSvxfs-platform	5.0.40.10	x86_64	3035461
VRTSvxvm-common	5.0.40.10	i686	18410176
VRTSvxvm-platform	5.0.40.10	x86_64	2667302

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-60](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Storage Foundation Cluster File System for Oracle RAC RPMs that are included in this rolling patch:

Table 1-60 Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	ppc	5039375
VRTSfssdk	5.0.40.10	ppc64	357589
VRTSgab	5.0.41.000	ppc64	984858
VRTSglm	5.0.40.10	ppc64	1369443
VRTSllt	5.0.41.000	ppc64	1643549
VRTSvmconv	5.0.40.10	ppc64	69129
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	ppc64	32537524
VRTSvcscag	5.0.41.000	ppc64	627365
VRTSvcscdb	5.0.41.000	noarch	23837
VRTSvcscdr	5.0.41.000	ppc64	236580
VRTSvcscor	5.0.41.000	ppc64	2013688
VRTSvmman	5.0.40.10	noarch	439720
VRTSvxfen	5.0.41.000	ppc64	393952
VRTSvxfs-common	5.0.40.10	ppc	6442675
VRTSvxfs-platform	5.0.40.10	ppc64	2361700
VRTSvxvm-common	5.0.40.10	ppc	16583015
VRTSvxvm-platform	5.0.40.10	ppc64	1583693

SUSE Linux Enterprise Server 9 x64

Table 1-61 describes the SUSE Linux Enterprise Server 9 x64 Veritas Storage Foundation Cluster File System for Oracle RAC RPMs that are included in this rolling patch:

Table 1-61 Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i586	4759578
VRTSfssdk	5.0.40.10	x86_64	193175
VRTSgab	5.0.41.000	x86_64	1348836
VRTSglm	5.0.40.10	x86_64	1602542
VRTSllt	5.0.41.000	x86_64	2923625
VRTSsvmconv	5.0.40.10	i686	59343
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i586	25859677
VRTSvcscag	5.0.41.000	i586	378818
VRTSvcscdb	5.0.41.000	noarch	21237
VRTSvcscdr	5.0.41.000	x86_64	277027
VRTSvcscor	5.0.41.000	i586	3500705
VRTSvmman	5.0.40.10	noarch	435035
VRTSvxfen	5.0.41.000	x86_64	1475990
VRTSvxfs-common	5.0.40.10	i586	4139531
VRTSvxfs-platform	5.0.40.10	x86_64	5628767
VRTSvxvm-common	5.0.40.10	i586	16247612
VRTSvxvm-platform	5.0.40.10	x86_64	4859792

SUSE Linux Enterprise Server 10 x64

[Table 1-62](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas Storage Foundation Cluster File System for Oracle RAC RPMs that are included in this rolling patch:

Table 1-62 Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i586	4817380
VRTSfssdk	5.0.40.10	x86_64	185632
VRTSgab	5.0.41.000	x86_64	2768311
VRTSglm	5.0.40.10	x86_64	1703214
VRTSllt	5.0.41.000	x86_64	6754795
VRTSvmconv	5.0.40.10	i686	59398
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	27408650
VRTSvcsag	5.0.41.000	i586	381340
VRTSvcsdb	5.0.41.000	noarch	21251
VRTSvcsdr	5.0.41.000	x86_64	716362
VRTSvcsor	5.0.41.000	i586	3506464
VRTSvmman	5.0.40.10	noarch	434971
VRTSvxfen	5.0.41.000	x86_64	2960511
VRTSvxfs-common	5.0.40.10	i586	4190819
VRTSvxfs-platform	5.0.40.10	x86_64	4996527
VRTSvxvm-common	5.0.40.10	i586	15945927
VRTSvxvm-platform	5.0.40.10	x86_64	6590850

SUSE Linux Enterprise Server 11 x64

[Table 1-63](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas Storage Foundation Cluster File System for Oracle RAC RPMs that are included in this rolling patch:

Table 1-63 Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	i586	4302464
VRTSfssdk	5.0.40.10	x86_64	169698
VRTSgab	5.0.41.000	x86_64	615947
VRTSglm	5.0.40.10	x86_64	673100
VRTSllt	5.0.41.000	x86_64	1315644
VRTSsvmconv	5.0.40.10	x86_64	60347
VRTSodm-common	5.0.40.10	x86_64	14121
VRTSodm-platform	5.0.40.10	x86_64	654533
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	18901304
VRTSvcsag	5.0.41.000	i686	343047
VRTSvcsdb	5.0.41.000	noarch	20366
VRTSvcsdr	5.0.41.000	x86_64	177432
VRTSvcsor	5.0.41.000	i686	1636357
VRTSvmman	5.0.40.10	noarch	437454
VRTSvxfen	5.0.41.000	x86_64	700622
VRTSvxfs-common	5.0.40.10	i586	1775573
VRTSvxfs-platform	5.0.40.10	x86_64	2064782
VRTSvxvm-common	5.0.40.10	i586	9225400
VRTSvxvm-platform	5.0.40.10	x86_64	3250755

Veritas Storage Foundation for DB2 RPMs

This section describes the Veritas Storage Foundation for DB2 RPMs.

RedHat Enterprise Linux 4 x64

[Table 1-64](#) describes the RedHat Enterprise Linux 4 x64 Veritas Storage Foundation for DB2 RPMs that are included in this rolling patch:

Table 1-64 Veritas Storage Foundation for DB2 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSdbcom-common	5.0.40.100	i686	3263357
VRTSfssdk	5.0.40.10	x86_64	237409
VRTSgab	5.0.41.000	x86_64	463954
VRTSllt	5.0.41.000	x86_64	1856970
VRTSvmconv	5.0.40.10	i686	66774
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	31743020
VRTSvcsag	5.0.41.000	i686	498233
VRTSvcsdb	5.0.41.000	noarch	22645
VRTSvcsdr	5.0.41.000	x86_64	69363
VRTSvmman	5.0.40.10	noarch	435340
VRTSvxfen	5.0.41.000	x86_64	572824
VRTSvxfes-common	5.0.40.10	i686	5711738
VRTSvxfes-platform	5.0.40.10	x86_64	5717365
VRTSvxvm-common	5.0.40.10	i686	19138799
VRTSvxvm-platform	5.0.40.10	x86_64	4404616

RedHat Enterprise Linux 5 x64

[Table 1-65](#) describes the RedHat Enterprise Linux 5 x64 Veritas Storage Foundation for DB2 RPMs that are included in this rolling patch:

Table 1-65 Veritas Storage Foundation for DB2 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSdbcom-common	5.0.40.100	i686	3263357
VRTSfssdk	5.0.40.10	x86_64	243633
VRTSgab	5.0.41.000	x86_64	825464
VRTSilt	5.0.41.000	x86_64	1352420
VRTSilmconv	5.0.40.10	i686	69162
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	31911272
VRTSvcsag	5.0.41.000	i686	514705
VRTSvcsdb	5.0.41.000	noarch	23823
VRTSvcsdr	5.0.41.000	x86_64	197841
VRTSvmman	5.0.40.10	noarch	439492
VRTSvxfen	5.0.41.000	x86_64	379796
VRTSvxfs-common	5.0.40.10	i686	5200263
VRTSvxfs-platform	5.0.40.10	x86_64	3035461
VRTSvxvm-common	5.0.40.10	i686	18410176
VRTSvxvm-platform	5.0.40.10	x86_64	2667302

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-66](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Storage Foundation for DB2 RPMs that are included in this rolling patch:

Table 1-66 Veritas Storage Foundation for DB2 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965

Table 1-66 Veritas Storage Foundation for DB2 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	ppc64	357589
VRTSgab	5.0.41.000	ppc64	984858
VRTSllt	5.0.41.000	ppc64	1643549
VRTSlmconv	5.0.40.10	ppc64	69129
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	32537524
VRTSvcsag	5.0.41.000	ppc64	627365
VRTSvcsdb	5.0.41.000	noarch	23837
VRTSvcsdr	5.0.41.000	ppc64	236580
VRTSvmman	5.0.40.10	noarch	439720
VRTSvxfen	5.0.41.000	ppc64	393952
VRTSvxf-common	5.0.40.10	ppc	6442675
VRTSvxf-platform	5.0.40.10	ppc64	2361700
VRTSvxvm-common	5.0.40.10	ppc	16583015
VRTSvxvm-platform	5.0.40.10	ppc64	1583693

SUSE Linux Enterprise Server 9 x64

[Table 1-67](#) describes the SUSE Linux Enterprise Server 9 x64 Veritas Storage Foundation for DB2 RPMs that are included in this rolling patch:

Table 1-67 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSdbcom-common	5.0.40.100	i586	2674619
VRTSfssdk	5.0.40.10	x86_64	193175

Table 1-67 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	x86_64	1348836
VRTSllt	5.0.41.000	x86_64	2923625
VRTSvmconv	5.0.40.10	i686	59343
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	25859677
VRTSvcsag	5.0.41.000	i586	378818
VRTSvcsdb	5.0.41.000	noarch	21237
VRTSvcsdr	5.0.41.000	x86_64	277027
VRTSvmman	5.0.40.10	noarch	435035
VRTSvxfen	5.0.41.000	x86_64	1475990
VRTSvxfs-common	5.0.40.10	i586	4139531
VRTSvxfs-platform	5.0.40.10	x86_64	5628767
VRTSvxvm-common	5.0.40.10	i586	16247612
VRTSvxvm-platform	5.0.40.10	x86_64	4859792

SUSE Linux Enterprise Server 10 x64

[Table 1-68](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas Storage Foundation for DB2 RPMs that are included in this rolling patch:

Table 1-68 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTSscavf	5.0.40.10	i386	107987
VRTSdbcom-common	5.0.40.100	i586	2674619
VRTSfssdk	5.0.40.10	x86_64	185632
VRTSgab	5.0.41.000	x86_64	2768311

Table 1-68 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSllt	5.0.41.000	x86_64	6754795
VRTSvmconv	5.0.40.10	i686	59398
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	27408650
VRTSvcsag	5.0.41.000	i586	381340
VRTSvcsdb	5.0.41.000	noarch	21251
VRTSvcsdr	5.0.41.000	x86_64	716362
VRTSvmman	5.0.40.10	noarch	434971
VRTSvxfen	5.0.41.000	x86_64	2960511
VRTSvxf-common	5.0.40.10	i586	4190819
VRTSvxf-platform	5.0.40.10	x86_64	4996527
VRTSvxvm-common	5.0.40.10	i586	15945927
VRTSvxvm-platform	5.0.40.10	x86_64	6590850

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-69](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas Storage Foundation for DB2 RPMs that are included in this rolling patch:

Table 1-69 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTSfssdk	5.0.40.10	ppc64	219437
VRTSgab	5.0.41.000	ppc64	1369479
VRTSllt	5.0.41.000	ppc64	2363040
VRTSvmconv	5.0.40.10	ppc64	59338

Table 1-69 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	ppc64	27572890
VRTSvcscag	5.0.41.000	ppc64	436609
VRTSvcscdb	5.0.41.000	noarch	21256
VRTSvcscdr	5.0.41.000	ppc64	387558
VRTSvmman	5.0.40.10	noarch	434893
VRTSvxfen	5.0.41.000	ppc64	1628724
VRTSvxfs-common	5.0.40.10	ppc	4470635
VRTSvxfs-platform	5.0.40.10	ppc64	1994320
VRTSvxvm-common	5.0.40.10	ppc	13581001
VRTSvxvm-platform	5.0.40.10	ppc64	1297652

SUSE Linux Enterprise Server 11 x64

[Table 1-70](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas Storage Foundation for DB2 RPMs that are included in this rolling patch:

Table 1-70 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTSdbcom-common	5.0.40.100	i586	2674619
VRTSfssdk	5.0.40.10	x86_64	169698
VRTSgab	5.0.41.000	x86_64	615947
VRTSllt	5.0.41.000	x86_64	1315644
VRTSllmconv	5.0.40.10	x86_64	60347
VRTSspt	5.5.000.006	noarch	17655824

Table 1-70 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvcsc	5.0.41.000	i686	18901304
VRTSvcscag	5.0.41.000	i686	343047
VRTSvcscdb	5.0.41.000	noarch	20366
VRTSvcscdr	5.0.41.000	x86_64	177432
VRTSvmman	5.0.40.10	noarch	437454
VRTSvxfen	5.0.41.000	x86_64	700622
VRTSvxfs-common	5.0.40.10	i586	1775573
VRTSvxfs-platform	5.0.40.10	x86_64	2064782
VRTSvxvm-common	5.0.40.10	i586	9225400
VRTSvxvm-platform	5.0.40.10	x86_64	3250755

SUSE Linux Enterprise Server 11 on PowerPC x64

[Table 1-71](#) describes the SUSE Linux Enterprise Server 11 on PowerPC x64 Veritas Storage Foundation for DB2 RPMs that are included in this rolling patch:

Table 1-71 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTSfssdk	5.0.40.10	ppc64	179568
VRTSgab	5.0.41.000	ppc64	1155060
VRTSllt	5.0.41.000	ppc64	2075625
VRTSvmconv	5.0.40.10	ppc64	60338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	ppc64	18989014
VRTSvcscag	5.0.41.000	ppc64	380029

Table 1-71 Veritas Storage Foundation for DB2 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 on PowerPC x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvcsdb	5.0.41.000	noarch	20379
VRTSvcsdr	5.0.41.000	ppc64	374924
VRTSvmman	5.0.40.10	noarch	437450
VRTSvxfen	5.0.41.000	ppc64	1260876
VRTSvxfs-common	5.0.40.10	ppc	1633500
VRTSvxfs-platform	5.0.40.10	ppc64	1464726
VRTSvxvm-common	5.0.40.10	ppc	8387751
VRTSvxvm-platform	5.0.40.10	ppc64	1179724

Veritas Storage Foundation for Oracle RPMs

This section describes the Veritas Storage Foundation for Oracle RPMs.

RedHat Enterprise Linux 4 x64

[Table 1-72](#) describes the RedHat Enterprise Linux 4 x64 Veritas Storage Foundation for Oracle RPMs that are included in this rolling patch:

Table 1-72 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsow	5.0.41.000	noarch	530222
VRTSdbcom-common	5.0.40.100	i686	3263357
VRTSdbed-common	5.0.40.100	i686	894065
VRTSfssdk	5.0.40.10	x86_64	237409
VRTSgab	5.0.41.000	x86_64	463954
VRTSglm	5.0.40.10	x86_64	287595
VRTSllt	5.0.41.000	x86_64	1856970

Table 1-72 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 RedHat Enterprise Linux 4 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSsvmconv	5.0.40.10	i686	66774
VRTSorgui-common	5.0.40.100	i686	7896119
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	31743020
VRTSvcsag	5.0.41.000	i686	498233
VRTSvcsdr	5.0.41.000	x86_64	69363
VRTSvcsor	5.0.41.000	i686	3678886
VRTSvmman	5.0.40.10	noarch	435340
VRTSvxfen	5.0.41.000	x86_64	572824
VRTSvxfes-common	5.0.40.10	i686	5711738
VRTSvxfes-platform	5.0.40.10	x86_64	5717365
VRTSvxvm-common	5.0.40.10	i686	19138799
VRTSvxvm-platform	5.0.40.10	x86_64	4404616

RedHat Enterprise Linux 5 x64

[Table 1-73](#) describes the RedHat Enterprise Linux 5 x64 Veritas Storage Foundation for Oracle RAC RPMs that are included in this rolling patch:

Table 1-73 Veritas Storage Foundation for Oracle RAC 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSdbcom-common	5.0.40.100	i686	3263357
VRTSdbed-common	5.0.40.100	i686	894065
VRTSfssdk	5.0.40.10	x86_64	243633

Table 1-73 Veritas Storage Foundation for Oracle RAC 5.0 MP4 RP1 RedHat Enterprise Linux 5 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSgab	5.0.41.000	x86_64	825464
VRTSglm	5.0.40.10	x86_64	1099717
VRTSllt	5.0.41.000	x86_64	1352420
VRTSvmconv	5.0.40.10	i686	69162
VRTSorgui-common	5.0.40.100	i686	7896119
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i686	31911272
VRTSvcscag	5.0.41.000	i686	514705
VRTSvcscdr	5.0.41.000	x86_64	197841
VRTSvcscor	5.0.41.000	i686	3765905
VRTSvmman	5.0.40.10	noarch	439492
VRTSvxfen	5.0.41.000	x86_64	379796
VRTSvxfsc-common	5.0.40.10	i686	5200263
VRTSvxfsc-platform	5.0.40.10	x86_64	3035461
VRTSvxxvm-common	5.0.40.10	i686	18410176
VRTSvxxvm-platform	5.0.40.10	x86_64	2667302

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-74](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Storage Foundation for Oracle RPMs that are included in this rolling patch:

Table 1-74 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTScsocw	5.0.41.000	noarch	530222

Table 1-74 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSfssdk	5.0.40.10	ppc64	357589
VRTSgab	5.0.41.000	ppc64	984858
VRTSglm	5.0.40.10	ppc64	1369443
VRTSllt	5.0.41.000	ppc64	1643549
VRTSvvmconv	5.0.40.10	ppc64	69129
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	ppc64	32537524
VRTSvcscag	5.0.41.000	ppc64	627365
VRTSvcscdr	5.0.41.000	ppc64	236580
VRTSvcscor	5.0.41.000	ppc64	2013688
VRTSvmman	5.0.40.10	noarch	439720
VRTSvxfen	5.0.41.000	ppc64	393952
VRTSvxfs-common	5.0.40.10	ppc	6442675
VRTSvxfs-platform	5.0.40.10	ppc64	2361700
VRTSvxvm-common	5.0.40.10	ppc	16583015
VRTSvxvm-platform	5.0.40.10	ppc64	1583693

SUSE Linux Enterprise Server 9 x64

Table 1-75 describes the SUSE Linux Enterprise Server 9 x64 Veritas Storage Foundation for Oracle RPMs that are included in this rolling patch:

Table 1-75 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222

Table 1-75 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 SUSE Linux Enterprise Server 9 x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSdbcom-common	5.0.40.100	i586	2674619
VRTSdbed-common	5.0.40.100	i586	941676
VRTSfssdk	5.0.40.10	x86_64	193175
VRTSgab	5.0.41.000	x86_64	1348836
VRTSglm	5.0.40.10	x86_64	1602542
VRTSllt	5.0.41.000	x86_64	2923625
VRTSlvconv	5.0.40.10	i686	59343
VRTSorgui-common	5.0.40.100	i586	7723315
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcsc	5.0.41.000	i586	25859677
VRTSvcscg	5.0.41.000	i586	378818
VRTSvcscdr	5.0.41.000	x86_64	277027
VRTSvcscor	5.0.41.000	i586	3500705
VRTSvmman	5.0.40.10	noarch	435035
VRTSvxfen	5.0.41.000	x86_64	1475990
VRTSvxfs-common	5.0.40.10	i586	4139531
VRTSvxfs-platform	5.0.40.10	x86_64	5628767
VRTSvxvm-common	5.0.40.10	i586	16247612
VRTSvxvm-platform	5.0.40.10	x86_64	4859792

SUSE Linux Enterprise Server 10 x64

[Table 1-76](#) describes the SUSE Linux Enterprise Server 10 x64 Veritas Storage Foundation for Oracle RPMs that are included in this rolling patch:

Table 1-76 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSdbcom-common	5.0.40.100	i586	2674619
VRTSdbed-common	5.0.40.100	i586	941676
VRTSfssdk	5.0.40.10	x86_64	185632
VRTSgab	5.0.41.000	x86_64	2768311
VRTSglm	5.0.40.10	x86_64	1703214
VRTSllt	5.0.41.000	x86_64	6754795
VRTSlmconv	5.0.40.10	i686	59398
VRTSorgui-common	5.0.40.100	i586	7723315
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i586	27408650
VRTSvcsag	5.0.41.000	i586	381340
VRTSvcsdr	5.0.41.000	x86_64	716362
VRTSvcsor	5.0.41.000	i586	3506464
VRTSvmman	5.0.40.10	noarch	434971
VRTSvxfen	5.0.41.000	x86_64	2960511
VRTSvxfs-common	5.0.40.10	i586	4190819
VRTSvxfs-platform	5.0.40.10	x86_64	4996527
VRTSvxvm-common	5.0.40.10	i586	15945927
VRTSvxvm-platform	5.0.40.10	x86_64	6590850

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-77](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas Storage Foundation for Oracle RPMs that are included in this rolling patch:

Table 1-77 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	ppc	4923125
VRTSfssdk	5.0.40.10	ppc64	219437
VRTSgab	5.0.41.000	ppc64	1369479
VRTSglm	5.0.40.10	ppc64	1047584
VRTSllt	5.0.41.000	ppc64	2363040
VRTSlmconv	5.0.40.10	ppc64	59338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	27572890
VRTSvcsag	5.0.41.000	ppc64	436609
VRTSvcsdb	5.0.41.000	noarch	21256
VRTSvcsdr	5.0.41.000	ppc64	387558
VRTSvcsor	5.0.41.000	ppc64	1884024
VRTSvmman	5.0.40.10	noarch	434893
VRTSvxfen	5.0.41.000	ppc64	1628724
VRTSvxfs-common	5.0.40.10	ppc	4470635
VRTSvxfs-platform	5.0.40.10	ppc64	1994320
VRTSvxvm-common	5.0.40.10	ppc	13581001
VRTSvxvm-platform	5.0.40.10	ppc64	1297652

SUSE Linux Enterprise Server 11 x64

[Table 1-78](#) describes the SUSE Linux Enterprise Server 11 x64 Veritas Storage Foundation for Oracle RPMs that are included in this rolling patch:

Table 1-78 Veritas Storage Foundation for Oracle 5.0 MP4 RP1 SUSE Linux Enterprise Server 11 x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	i386	107987
VRTScsocw	5.0.41.000	noarch	530222
VRTSdbcom-common	5.0.40.100	i586	2674619
VRTSdbed-common	5.0.40.100	i586	941676
VRTSfssdk	5.0.40.10	x86_64	169698
VRTSgab	5.0.41.000	x86_64	615947
VRTSglm	5.0.40.10	x86_64	673100
VRTSllt	5.0.41.000	x86_64	1315644
VRTSlmconv	5.0.40.10	x86_64	60347
VRTSodm-common	5.0.40.10	x86_64	14121
VRTSodm-platform	5.0.40.10	x86_64	654533
VRTSorgui-common	5.0.40.100	i586	7723315
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	i686	18901304
VRTSvcsag	5.0.41.000	i686	343047
VRTSvcsdr	5.0.41.000	x86_64	177432
VRTSvcsor	5.0.41.000	i686	1636357
VRTSvmman	5.0.40.10	noarch	437454
VRTSvxfen	5.0.41.000	x86_64	700622
VRTSvxfs-common	5.0.40.10	i586	1775573
VRTSvxfs-platform	5.0.40.10	x86_64	2064782
VRTSvxvm-common	5.0.40.10	i586	9225400
VRTSvxvm-platform	5.0.40.10	x86_64	3250755

Veritas Storage Foundation for Sybase RPMs

This section describes the Veritas Storage Foundation for Sybase RPMs.

RedHat Enterprise Linux 5 on PowerPC x64

[Table 1-79](#) describes the RedHat Enterprise Linux 5 on PowerPC x64 Veritas Storage Foundation for Sybase RPMs that are included in this rolling patch:

Table 1-79 Veritas Storage Foundation for Sybase 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTScavf	5.0.40.10	ppc	109965
VRTScsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	ppc	5039375
VRTSfssdk	5.0.40.10	ppc64	357589
VRTSgab	5.0.41.000	ppc64	984858
VRTSglm	5.0.40.10	ppc64	1369443
VRTSllt	5.0.41.000	ppc64	1643549
VRTSvmconv	5.0.40.10	ppc64	69129
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	32537524
VRTSvcsag	5.0.41.000	ppc64	627365
VRTSvcsdr	5.0.41.000	ppc64	236580
VRTSvcsor	5.0.41.000	ppc64	2013688
VRTSvcssy	5.0.41.000	ppc64	53688
VRTSvmman	5.0.40.10	noarch	439720
VRTSvxfen	5.0.41.000	ppc64	393952
VRTSvxfs-common	5.0.40.10	ppc	6442675
VRTSvxfs-platform	5.0.40.10	ppc64	2361700
VRTSvxvm-common	5.0.40.10	ppc	16583015

Table 1-79 Veritas Storage Foundation for Sybase 5.0 MP4 RP1 RedHat Enterprise Linux 5 on PowerPC x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvxvm-platform	5.0.40.10	ppc64	1583693

SUSE Linux Enterprise Server 10 on PowerPC x64

[Table 1-80](#) describes the SUSE Linux Enterprise Server 10 on PowerPC x64 Veritas Storage Foundation for Sybase RPMs that are included in this rolling patch:

Table 1-80 Veritas Storage Foundation for Sybase 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs

Name	Version	Arch	Size in bytes
VRTSscavf	5.0.40.10	ppc	109965
VRTSscsocw	5.0.41.000	noarch	530222
VRTSfspro	5.0.40.10	ppc	4923125
VRTSfssdk	5.0.40.10	ppc64	219437
VRTSgab	5.0.41.000	ppc64	1369479
VRTSglm	5.0.40.10	ppc64	1047584
VRTSllt	5.0.41.000	ppc64	2363040
VRTSlvconv	5.0.40.10	ppc64	59338
VRTSspt	5.5.000.006	noarch	17655824
VRTSvcs	5.0.41.000	ppc64	27572890
VRTSvcsag	5.0.41.000	ppc64	436609
VRTSvcsdr	5.0.41.000	ppc64	387558
VRTSvcsor	5.0.41.000	ppc64	1884024
VRTSvcssy	5.0.41.000	ppc64	54441
VRTSvmman	5.0.40.10	noarch	434893
VRTSvxfen	5.0.41.000	ppc64	1628724
VRTSvxf-common	5.0.40.10	ppc	4470635

Table 1-80 Veritas Storage Foundation for Sybase 5.0 MP4 RP1 SUSE Linux Enterprise Server 10 on PowerPC x64 RPMs (*continued*)

Name	Version	Arch	Size in bytes
VRTSvxfs-platform	5.0.40.10	ppc64	1994320
VRTSvxvm-common	5.0.40.10	ppc	13581001
VRTSvxvm-platform	5.0.40.10	ppc64	1297652

Upgrading and uninstalling

The following sections describe how to upgrade to and uninstall Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1.

Upgrading to Veritas Storage Foundation Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1

Upgrades are supported for SLES 10 x86_64 platforms in the Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 release only when upgrading SF from the same underlying operating system. For example, a customer running SF 5.0 MP3 on SLES 10 SP2 can perform an in-place upgrade to Veritas Storage Foundation and High Availability (SFHA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1.

See [“To upgrade Veritas Storage Foundation”](#) on page 76.

Upgrade the operating system to SLES 10 SP3 before upgrading to SFHA 5.0 MP4 RP1.

Note: Upgrading Veritas Storage Foundation on a previously-upgraded operating system is not supported as an in-place upgrade in this release. Customers running SF on SLES 10 SP1, for example, cannot upgrade to the 5.0 MP4 RP1 release on SLES 11. In this case, customers must uninstall any existing SF release, upgrade the operating system, perform a fresh installation of SF 5.0 MP4, and then upgrade to SF 5.0 MP4 RP1.

Table 1-81 Installation and upgrade scenarios

Product	Installation/Upgrade scenario	Instructions
Veritas Storage Foundation Cluster File System (SFCFS)	Upgrading SFCFS	See “Upgrading Veritas Storage Foundation Cluster File System from a previous 5.0 release to 5.0 Maintenance Pack 4 Rolling Patch 1” on page 79.
Veritas Storage Foundation (SF)	Upgrading SF	See “Upgrading Veritas Storage Foundation products from a previous 5.0 release to 5.0 Maintenance Pack 4 Rolling Patch 1” on page 75.
Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC)	Upgrading SFCFS RAC	See “Upgrading Veritas Storage Foundation Cluster File System for Oracle RAC from a previous 5.0 release to 5.0 Maintenance Pack 4 Rolling Patch 1” on page 91.
	Phased upgrade of SFCFS RAC	See the <i>Veritas Storage Foundation Cluster File System 5.0 MP3 Administrator's Guide</i> .

Table 1-81 Installation and upgrade scenarios (*continued*)

Product	Installation/Upgrade scenario	Instructions
Veritas Storage Foundation and High Availability Solutions (SFHA)	Upgrading SFHA	See “Upgrading a Veritas High Availability product from 5.0x to 5.0 Maintenance Pack 4 Rolling Patch 1 for x86_64 and from Release Update 3 or Release Update 4 on PowerPC” on page 95. See “Upgrading a Veritas High Availability product from 4.1 Maintenance Pack 4 Rolling Patch x to 5.0 Maintenance Pack 4 Rolling Patch 1 on SLES 10” on page 102.
	Phased upgrade of SFHA	See “Phased upgrade of the Veritas Storage Foundation High Availability or Veritas Storage Foundation High Availability for Databases software to 5.0 Maintenance Pack 4 Rolling Patch 1” on page 98.
Veritas Cluster Server (VCS)	Upgrading VCS	See the <i>Veritas Cluster Server 5.0 MP4 Release Notes</i> .

Upgrading Veritas Storage Foundation products from a previous 5.0 release to 5.0 Maintenance Pack 4 Rolling Patch 1

Use the following procedure to upgrade to Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1. You can use this procedure to upgrade a standalone system or the nodes of a cluster. If you are upgrading nodes of a cluster, repeat the procedure for each node.

The SF 5.0 MP4 RP1 release supports upgrades of SF for RHEL 5 Update 2 and later and SLES 10 SP3 for Linux on IBM Power from SF 5.0 RU3, and SLES 11 and SLES 10 SP3 for Linux on IBM Power from SF 5.0 RU4. In-place upgrades are supported from the SF 5.0 RU4 release on SLES 10 SP3 for x86_64 platforms in this release.

Upgrading Veritas Storage Foundation Cluster File System uses a separate procedure.

To upgrade Veritas Storage Foundation

- 1 Verify that `/opt/VRTS/bin` is in your `PATH` so that you can execute all product commands.
- 2 Check if the root disk is under VxVM control:

```
# df -v /
```

The root disk is under VxVM control if `/dev/vx/dsk/rootvol` is listed as being mounted as the root (`/`) file system. If so, unmirror and unencapsulate the root disk as described in the following steps:

- Use the `vxplex` command to remove all the plexes of the volumes `rootvol`, `swapvol`, `usr`, `var`, `opt` and `home` that are on disks other than the root disk. For example, the following command removes the plexes `mirrootvol-01`, and `mirswapvol-01` that are configured on a disk other than the root disk:

```
# vxplex -o rm dis mirrootvol-01 mirswapvol-01
```

Do not remove the plexes on the root disk that correspond to the original disk partitions.

- Enter the following command to convert all the encapsulated volumes in the root disk back to being accessible directly through disk partitions instead of through volume devices:

```
# /etc/vx/bin/vxunroot
```

There must be at least one other disk in the `rootdg` disk group in addition to the root disk for `vxunroot` to succeed. Following the removal of encapsulation, the system is rebooted from the unencapsulated root disk.

- 3 If required, you can upgrade the operating system and patch the operating system to a supported kernel version.
- 4 Use the following command to check if any VxFS file systems or Storage Checkpoints are mounted:

```
# df -T | grep vxfs
```

- 5 Unmount all Storage Checkpoints and file systems:

```
# umount /checkpoint_name  
# umount /filesystem
```

- 6 If you have created any Veritas Volume Replicator (VVR) replicated volume groups (RVGs) on your system, perform the following steps:
 - Stop all applications that are involved in replication. For example, if a data volume contains a file system, unmount it.
 - Use the `vxrvrg stop` command to stop each RVG individually:

```
# vxrvrg -g diskgroup stop rvg_name
```

- On the Primary node, use the `vxrlink status` command to verify that all RLINKs are up-to-date:

```
# vxrlink -g diskgroup status rlink_name
```

To avoid data corruption, do not proceed until all RLINKs are up-to-date.

- 7 Stop activity to all VxVM volumes. For example, stop any applications such as databases that access the volumes, and unmount any file systems that have been created on the volumes.
- 8 On each node, stop all VxVM volumes by entering the following command for each disk group:

```
# vxvol -g diskgroup stopall
```

- Verify that no volumes remain open:

```
# vxprint -Aht -e v_open
```

- If any volumes remain open, repeat this step to close the volumes.

- 9 Check if the VEA service is running:

```
# /opt/VRTS/bin/vxsvcctrl status
```

- 10 If the VEA service is running, stop it:

```
# /opt/VRTS/bin/vxsvcctrl stop
```

- 11 Download the Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 archive to a temporary directory, such as `/tmp`.

See [“Downloading the rolling patch archive”](#) on page 14.

- 12 Move to the temporary directory:

```
# cd /tmp
```

13 Unzip the archive:

```
# gunzip -d *.gz
```

14 Untar the archive:

```
# tar -xvf *.tar
```

15 Manually install the 5.0 MP4 RP1 RPMs to upgrade your Veritas product:

```
# rpm -Uvh *.rpm
```

16 Reboot each of the nodes on which you upgraded SF:

```
# shutdown -r now
```

17 Reinstate any missing mount points in the `/etc/fstab` file.

18 Restart all of the volumes by entering the following command for each disk group:

```
# vxvol -g diskgroup startall
```

19 If you have stopped any Veritas Volume Replicator (VVR) replicated volume groups (RVGs) on your system, restart each RVG:

```
# vxrvg -g diskgroup start rvg_name
```

20 Remount all VxFS file systems and Storage Checkpoints on all nodes:

```
# mount /filesystem  
# mount /checkpoint_name
```

21 Check if the VEA service was restarted:

```
# /opt/VRTS/bin/vxsvcctrl status
```

22 If the VEA service is not running, restart it:

```
# /opt/VRTS/bin/vxsvcctrl start
```

23 If you need to re-encapsulate and mirror the root disk, do so now.

See the *Veritas Volume Manager Administrator's Guide*.

Upgrading Veritas Storage Foundation Cluster File System from a previous 5.0 release to 5.0 Maintenance Pack 4 Rolling Patch 1

Use the following procedures to upgrade to Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack 4 Rolling Patch 1. You can use the procedures to upgrade a standalone system or the nodes of a cluster.

Before you upgrade, you must prepare the cluster nodes for the upgrade.

See [“Preparing to upgrade to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 79.

There are two ways to upgrade cluster nodes to the latest version of SFCFS: phased and full.

See [“Phased upgrade of the Veritas Storage Foundation Cluster File System software to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 80.

See [“Full upgrade of Veritas Storage Foundation Cluster File System software to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 87.

An upgrade requires stopping cluster failover functionality during the entire procedure. The upgrade is performed in a number of stages depending on the type of upgrade you are performing.

You must have superuser (root) privileges to install the Veritas software.

Preparing to upgrade to 5.0 Maintenance Pack 4 Rolling Patch 1

If you are upgrading an installed Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack (MP) 3 or later release, preserve the existing configuration information.

To preserve the existing configuration information

- 1 Make a record of the mount points for VxFS file systems and VxVM volumes that are defined in the `/etc/fstab` file. You must recreate these entries in the `/etc/fstab` file on the freshly installed system.
- 2 Before upgrading, ensure that you have made backups of all data that you want to preserve. In particular, you need the information in files such as `/boot/grub/menu.lst`, `/etc/grub.conf`, `/etc/elilo.conf`, or `/etc/lilo.conf` (as appropriate), and `/etc/fstab`.
- 3 Run the `vxlicrep`, `vxdisk list`, and `vxprint -ht` commands, and record the output from these commands. You may need this information to reconfigure your system after the upgrade.
- 4 Use the `vxlicrep` command to make a record of the currently installed Veritas licenses.

Phased upgrade of the Veritas Storage Foundation Cluster File System software to 5.0 Maintenance Pack 4 Rolling Patch 1

A phased upgrade minimizes downtime by upgrading portions of the cluster, one node at a time. Although the entire cluster is offline for a shorter period than a full upgrade, this method requires command-line interaction and some manual configuration.

Each phase of the phased upgrade should be performed on more than one node of the cluster.

The stages of the phased upgrade procedure include the following steps:

- Freeze service group operations and stop cluster failover operations.
- Select a two or more nodes to upgrade, and leave a group of one or more nodes running.
- Take the selected group of nodes offline and prepare them for the upgrade.
- Upgrade the Veritas Storage Foundation Cluster File System software on the selected group of nodes.
- Take the second group of nodes offline.
- Bring the first group of nodes online.
- Upgrade the second group of nodes.
- Bring the second group of nodes online and restart cluster failover services. The cluster is fully restored.
- After the selected group of nodes is offline, the Veritas Storage Foundation Cluster File System software can be upgraded using `installmp` or `installsfcs`.

Taking the selected group of nodes offline and preparing them for the upgrade

The following procedure takes the selected group of nodes offline and prepares them for the upgrade.

To take the selected group of nodes offline and prepare them for the upgrade

- 1 Log in as superuser.
- 2 Verify that `/opt/VRTS/bin` is in your PATH so that you can execute all product commands.
- 3 Switch the failover service group from the first sub-cluster (nodes that are being upgraded) to the second sub-cluster using the following command:

```
# hagrpf -switch failover_group_name -to second_sub_cluster_node_name
```


- 4 From any node in the cluster, make the cluster configuration writable.

```
# haconf -makerw
```

- 5 Enter the following command to freeze high availability service group operations on each node:

```
# hasys -freeze -persistent node_name
```

- 6 Make the configuration read-only

```
# haconf -dump -makero
```

- 7 Stop cluster operations on each node in the group being upgraded, by entering the following command:

```
# hastop -local
```

- 8 Stop all VCS components--ODM, GMS, and GLM:

```
# /etc/init.d/vxodm stop  
# /etc/init.d/vxgms stop  
# /etc/init.d/vxglm stop  
# /etc/init.d/vxfen stop  
# /etc/init.d/gab stop  
# /etc/init.d/llt stop
```

- 9 Check if each node's root disk is under VxVM control:

```
# df -v /
```

The root disk is under VxVM control if `/dev/vx/dsk/rootvol` is listed as being mounted as the root (`/`) file system. If so, unmirror and unencapsulate the root disk as described in the following steps:

- Use the `vxplex` command to remove all the plexes of the volumes `rootvol`, `swapvol`, `usr`, `var`, `opt` and `home` that are on disks other than the root disk. For example, the following command removes the plexes `mirrootvol-01`, and `mirswapvol-01` that are configured on a disk other than the root disk:

```
# vxplex -o rm dis mirrootvol-01 mirswapvol-01
```

Do not remove the plexes on the root disk that correspond to the original disk partitions.

- Enter the following command to convert all the encapsulated volumes in the root disk back to being accessible directly through disk partitions instead of through volume devices.

```
# /etc/vx/bin/vxunroot
```

Following the removal of encapsulation, the system is rebooted from the unencapsulated root disk.

- 10** On each node, use the following command to check if any VxFS file systems or Storage Checkpoints are mounted:

```
# df -T | grep vxfs
```

- 11** On each node in the cluster, unmount all Storage Checkpoints and file systems:

```
# umount /checkpoint_name  
# umount /filesystem
```

- 12** If you have created any Veritas Volume Replicator (VVR) replicated volume groups (RVGs) on your system, perform the following steps:

- Stop all applications that are involved in replication. For example, if a data volume contains a file system, unmount it.
- Use the `vxrvrg stop` command to stop each RVG individually:

```
# vxrvrg -g diskgroup stop rvg_name
```

- On the Primary node, use the `vxrlink status` command to verify that all RLINKs are up-to-date:

```
# vxrlink -g diskgroup status rlink_name
```

To avoid data corruption, do not proceed until all RLINKs are up-to-date.

- 13** Check if the VEA service is running:

```
# /opt/VRTS/bin/vxsvcctrl status
```

- 14** If the VEA service is running, stop it:

```
# /opt/VRTS/bin/vxsvcctrl stop
```

- 15** If there are still disk groups that are imported at this time then proceed with the remaining steps. Otherwise, skip to the procedure to upgrade the Veritas software.

- 16 Stop activity to all VxVM volumes. For example, stop any applications such as databases that access the volumes, and unmount any file systems that have been created on the volumes.
- 17 Upgrade the selected nodes.
See [“Upgrading the Veritas Storage Foundation Cluster File System and High Availability software”](#) on page 83.

Upgrading the Veritas Storage Foundation Cluster File System and High Availability software

The following procedure upgrades the Veritas Storage Foundation Cluster File System and High Availability software.

To upgrade the Veritas Storage Foundation Cluster File System and High Availability software

- 1 If your operating system is not at a supported level, you must upgrade the operating system.
Upgrade the operating system with the following steps:
 - Disable the startup scripts before upgrading the operating system.

```
# insserv -r vcs
# insserv -r vxfen
# insserv -r vxgms
# insserv -r gab
# insserv -r llt
```
 - Upgrade the operating system to the supported operating system and service pack level for the first sub-cluster nodes.
See the operating system documentation for more information.
- 2 Download the Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 archive to a temporary directory, such as /tmp.
See [“Downloading the rolling patch archive”](#) on page 14.
- 3 Move to the temporary directory:

```
# cd /tmp
```
- 4 Unzip the archive:

```
# gunzip -d *.gz
```

- 5 Untar the archive:

```
# tar -xvf *.tar
```

- 6 Manually install the 5.0 MP4 RP1 RPMs to upgrade your Veritas product:

```
# rpm -Uvh *.rpm
```

- 7 Take offline the second group of nodes to be upgraded before rebooting the first group of nodes.

See [“Taking the selected group of nodes offline and preparing them for the upgrade”](#) on page 80.

- 8 Reboot the systems in the first group of nodes.

```
# shutdown -r now
```

- 9 Upgrade the remaining nodes.

See [“Upgrading the remaining nodes”](#) on page 84.

Upgrading the remaining nodes

This section describes how to upgrade the remaining nodes.

Upgrading the remaining nodes includes the following steps:

- Take the second group of nodes offline.
- Bring the first group (with the newly installed patches) online.
- Upgrade the second group of nodes.

To take the second group of nodes offline

- 1 Unfreeze all the VCS service groups using the command:

```
# hagrpl -unfreeze group_name -persistent
```

- 2 Offline all SFCFS resources on nodes to be upgraded by running the following commands on one of the cluster nodes.

```
# hagrpl -offline service_group -sys system1  
# hagrpl -offline service_group -sys system2
```

- 3 Stop cluster operations on each node in the second group being upgraded, by entering the following command:

```
# hastop -local
```

- 4 Stop all VCS components--ODM, GMS, and GLM:

```
# /etc/init.d/vxodm stop  
# /etc/init.d/vxgms stop  
# /etc/init.d/vxglm stop  
# /etc/init.d/vxfen stop  
# /etc/init.d/gab stop  
# /etc/init.d/llt stop
```

To bring the first group of nodes online

- ◆ Bring the first group of nodes online.

See [“Bringing the upgraded group of nodes online”](#) on page 85.

To upgrade the second group of nodes

- 1 Perform the "To take the selected group of nodes offline and prepare them for the upgrade" procedure on the second group of nodes, starting from step 9.

See [“Phased upgrade of the Veritas Storage Foundation Cluster File System software to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 80.

- 2 Then bring the second group of nodes online.

See [“Bringing the upgraded group of nodes online”](#) on page 85.

Bringing the upgraded group of nodes online

Use the following procedure to bring the upgraded group of nodes online.

To bring the upgraded group of nodes online

- 1 If you need to re-encapsulate and mirror the root disk on each of the nodes, follow the procedures in the “Administering Disks” chapter of the *Veritas Volume Manager Administrator’s Guide*.
- 2 If necessary, reinstate any missing mount points in the `/etc/fstab` file on each node.
- 3 If any VCS configuration files need to be restored, stop the cluster, restore the files to the `/etc/VRTSvcs/conf/config` directory, and restart the cluster.

- 4 When the first group of cluster nodes come up, no GAB ports are OPEN. That is, the `gabconfig -a` command shows no GAB ports. For example:

```
# gabconfig -a
GAB Port Memberships
=====
```

Perform the following command to form a cluster after the upgraded nodes are rebooted in the first group of the cluster.

```
# gabconfig -xc
```

GAB ports a, b, d and h now appear in the `gabconfig -a` command output.

- 5 Make the VCS configuration writable again from any node in the upgraded group:

```
# haconf -makerw
```

- 6 Enter the following command on each node in the upgraded group to unfreeze HA service group operations:

```
# hasys -unfreeze -persistent node_name
```

- 7 Make the configuration read-only:

```
# haconf -dump -makero
```

- 8 On the first group of the cluster, bring the VCS service groups online:

```
# hagrps -online cvm -sys node_name
```

After you bring the `cvm` service group ONLINE, then all of the GAB ports v, w and f come ONLINE. Also, all of the CFS mounts service groups come ONLINE automatically. Only failover service groups need to be brought ONLINE manually.

- 9 If required, restart all the volumes by entering the following command for each disk group:

```
# vxvol -g diskgroup startall
```

- 10 If you have stopped any Veritas Volume Replicator (VVR) replicated volume groups (RVGs) on your system, restart each RVG:

```
# vxrvgs -g diskgroup start rvg_name
```

11 Remount all VxFS file systems and Storage Checkpoints on all nodes:

```
# mount /filesystem
# mount /checkpoint_name
```

12 Check if the VEA service was restarted:

```
# /opt/VRTS/bin/vxsvcctl status
```

13 If the VEA service is not running, restart it:

```
# /opt/VRTS/bin/vxsvcctl start
```

Full upgrade of Veritas Storage Foundation Cluster File System software to 5.0 Maintenance Pack 4 Rolling Patch 1

A full upgrade upgrades the product on the entire cluster and the cluster remains offline for the duration of the procedure. Minimal command-line interaction and some manual configuration are required.

The stages of the full upgrade procedure are as follows:

- Stop all activity on the cluster and install software patches.
- Bring all the nodes (with the newly installed patches) online to restart cluster failover services. The cluster is fully restored.

Preparing for a full upgrade to Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1

The following procedure prepares for a full upgrade to Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1.

To prepare for a full upgrade to Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1

- 1 Log in as superuser.
- 2 Verify that `/opt/VRTS/bin` is in your PATH so you can execute all product commands.
- 3 Check if each node's root disk is under VxVM control:

```
# df -v /
```

The root disk is under VxVM control if `/dev/vx/dsk/rootvol` is listed as being mounted as the root (`/`) file system. If so, unmirror and unencapsulate the root disk as described in the following steps:

- Use the `vxplex` command to remove all the plexes of the volumes `rootvol`, `swapvol`, `usr`, `var`, `opt` and `home` that are on disks other than the root disk. For example, the following command removes the plexes `mirrootvol-01`, and `mirswapvol-01` that are configured on a disk other than the root disk:

```
# vxplex -o rm dis mirrootvol-01 mirswapvol-01
```

Do not remove the plexes on the root disk that correspond to the original disk partitions.

- Enter the following command to convert all the encapsulated volumes in the root disk back to being accessible directly through disk partitions instead of through volume devices.

```
# /etc/vx/bin/vxunroot
```

Following the removal of encapsulation, the system is rebooted from the unencapsulated root disk.

- 4 Check if any VxFS file systems or Storage Checkpoints are mounted:

```
# df -T | grep vxfs
```

- 5 Unmount all Storage Checkpoints and file systems:

```
# umount /checkpoint_name  
# umount /filesystem
```

- 6 If you have created any Veritas Volume Replicator (VVR) replicated volume groups (RVGs) on your system, perform the following steps:

- Stop all applications that are involved in replication. For example, if a data volume contains a file system, unmount it.
- Use the `vxrvrg stop` command to stop each RVG individually:

```
# vxrvrg -g diskgroup stop rvg_name
```

- On the Primary node, use the `vxrlink status` command to verify that all RLINKs are up-to-date:

```
# vxrlink -g diskgroup status rlink_name
```

To avoid data corruption, do not proceed until all RLINKs are up-to-date.

- 7 If there are still disk groups that are imported at this time then proceed with the remaining steps. Otherwise, skip to the procedure to upgrade the Veritas software.

- 8 Stop activity to all VxVM volumes. For example, stop any applications such as databases that access the volumes, and unmount any file systems that have been created on the volumes.
- 9 Stop all VxVM volumes by entering the following command for each disk group:

```
# vxvol -g diskgroup stopall
```

- 10 Verify that no volumes remain open:

```
# vxprint -Aht -e v_open
```

- 11 Perform the full upgrade.

See [“Performing a full upgrade to Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 89.

Performing a full upgrade to Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1

The following procedure performs a full upgrade to Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1.

To perform a full upgrade to Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1

- 1 Upgrade your operating system, and patch the operating system to a supported kernel version.
- 2 Download the Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 archive to a temporary directory, such as /tmp.

See [“Downloading the rolling patch archive”](#) on page 14.

- 3 Move to the temporary directory:

```
# cd /tmp
```

- 4 Unzip the archive:

```
# gunzip -d *.gz
```

- 5 Untar the archive:

```
# tar -xvf *.tar
```

- 6 Install the 5.0 MP4 RP1 RPMs:

```
# rpm -Uvh *.rpm
```

- 7 Manually install the 5.0 MP4 RP1 RPMs to upgrade your Veritas product:

```
# rpm -Uvh *.rpm
```

- 8 Shut down and reboot the systems.

```
# shutdown -r now
```

- 9 Bring the upgraded cluster online and the cluster's restore components.

See [“Bringing the upgraded cluster online and restore the cluster's components”](#) on page 90.

Bringing the upgraded cluster online and restore the cluster's components

The following procedure brings the upgraded cluster online and restores the cluster's components.

To bring the upgraded cluster online and restore the cluster's components

- 1 If you need to re-encapsulate and mirror the root disk on each of the nodes, follow the procedures in the “Administering Disks” chapter of the *Veritas Volume Manager Administrator's Guide*.
- 2 If necessary, reinstate any missing mount points in the `/etc/fstab` file on each node.
- 3 If any VCS configuration files need to be restored, stop the cluster, restore the files to the `/etc/VRTSvcs/conf/config` directory, and restart the cluster.
- 4 Restart all the volumes by entering the following command for each disk group:

```
# vxvol -g diskgroup startall
```

- 5 If you have stopped any Veritas Volume Replicator (VVR) replicated volume groups (RVGs) on your system, restart each RVG:

```
# vxrvrg -g diskgroup start rvg_name
```

- 6 Remount all VxFS file systems and Storage Checkpoints on all nodes:

```
# mount /filesystem
```

```
# mount /checkpoint_name
```

7 Check if the VEA service was restarted:

```
# /opt/VRTS/bin/vxsvcctl status
```

8 If the VEA service is not running, restart it:

```
# /opt/VRTS/bin/vxsvcctl start
```

Upgrading Veritas Storage Foundation Cluster File System for Oracle RAC from a previous 5.0 release to 5.0 Maintenance Pack 4 Rolling Patch 1

Use the following procedure to upgrade to Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) 5.0 Maintenance Pack 4 Rolling Patch 1. You can use this procedure to upgrade a standalone system or the nodes of a cluster.

Veritas Storage Foundation Cluster File System for Oracle RAC upgrade paths

[Table 1-82](#) lists the upgrade paths for Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) depending on the system architecture and operating system. For all paths, the target SFCFS RAC release is the 5.0 Maintenance Pack 4 Rolling Patch 1 release.

Table 1-82 Veritas Storage Foundation Cluster File System for Oracle RAC upgrade paths

Architecture	Current Veritas Storage Foundation Cluster File System for Oracle RAC release	Current operating system version	Target operating system version
x86_64	SFCFS RAC 5.0 MP2 (including all RPs)	SLES 9 SP3	SLES 9 SP4 SLES 10 SP2 SLES 10 SP3 SLES 11
	SFCFS RAC 5.0 MP3 (including all RPs)	SLES 10 SP1 SLES 10 SP2	SLES 10 SP2 SLES 10 SP3 SLES 11
	SFCFS RAC 5.0 RU4	SLES 10 SP3	SLES 10 SP3
	SFCFS RAC 5.0 MP2 (including all RPs) SFCFS RAC 5.0 MP3 (including all RPs)	RHEL 4 U3 up to U7 RHEL 5 U1 up to U3 OEL 4 U4 up to U8 OEL 5 U1 up to U3	RHEL 4 U8 RHEL 5 U4 OEL 4 U8 OEL 5 U4
PowerPC	SFCFS RAC 5.0 RU3	SLES 10 SP2	SLES 10 SP3
	SFCFS RAC 5.0 RU4	SLES 10 SP3	SLES 10 SP3

Upgrading the operating system to a higher major release and upgrading Veritas Storage Foundation Cluster File System for Oracle RAC

A major operating system upgrade is upgrading to a higher major release, instead of only upgrading to a higher update release or service pack release. The following procedure provides an overview of the steps necessary to upgrade the operating

system to a higher major release and upgrade Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC).

To upgrade the operating system to a higher major release and upgrade Veritas Storage Foundation Cluster File System for Oracle RAC

- 1 Uninstall SFCFS RAC.
- 2 Upgrade the operating system to a level that the SFCFS RAC 5.0 MP4 RP1 release supports.
- 3 Install SFCFS RAC 5.0 MP4 RP1.
See the *Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 MP3 Installation Guide*.
- 4 Upgrade Oracle, if required.
- 5 Relink the ODM library.

Upgrading the operating system to a higher minor release or not upgrading the operating system, and upgrading Veritas Storage Foundation Cluster File System for Oracle RAC

A minor operating system upgrade is upgrading to a higher minor release, such as a higher update release or service pack release. The following procedure provides an overview of the steps necessary to upgrade the operating system to a higher minor release or not upgrade the operating system, and upgrade Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC).

To upgrade the operating system to a higher minor release or not upgrading the operating system, and upgrade Veritas Storage Foundation Cluster File System for Oracle RAC

- 1 Upgrade SFCFS RAC to 5.0 MP4 RP1 using the `installmp` script.
See [“Upgrading Veritas Storage Foundation Cluster File System for Oracle RAC”](#) on page 94.
- 2 Upgrade the operating system to a level that the SFCFS RAC 5.0 MP4 RP1 release supports, if required.
- 3 Upgrade Oracle, if required.
- 4 Relink the ODM library.

Upgrading Veritas Storage Foundation Cluster File System for Oracle RAC

The following procedure upgrades Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) to the 5.0 Maintenance Pack 4 Rolling Patch 1 release.

To upgrade Veritas Storage Foundation Cluster File System for Oracle RAC

- 1 Gracefully bring down Oracle RAC and any application depending on Oracle RAC. The following command brings down the Oracle database:

```
# $ORACLE_HOME/bin/srvctl stop database -d database_name
```

The following command stops Oracle clusterware:

```
# $CRS_HOME/bin/crsctl stop crs
```

- 2 Download the Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 archive to a temporary directory, such as /tmp.

See [“Downloading the rolling patch archive”](#) on page 14.

- 3 Move to the temporary directory:

```
# cd /tmp
```

- 4 Unzip the archive:

```
# gunzip -d *.gz
```

- 5 Untar the archive:

```
# tar -xvf *.tar
```

- 6 Manually install the 5.0 MP4 RP1 RPMs to upgrade your Veritas product:

```
# rpm -Uvh *.rpm
```

- 7 Reboot each of the nodes on which you upgraded SFCFS RAC:

```
# shutdown -r now
```

- 8 Reinstate any missing mount points in the /etc/fstab file.

- 9 If you want to use features of SFCFS RAC 5.0 MP4 RP1 for which you do not currently have an appropriate license installed, obtain the license and run the `vxlicinst` command to add the license to your system.

Upgrading a Veritas High Availability product from 5.0x to 5.0 Maintenance Pack 4 Rolling Patch 1 for x86_64 and from Release Update 3 or Release Update 4 on PowerPC

This section describes how to upgrade Veritas Storage Foundation High Availability, Veritas Storage Foundation Cluster File System High Availability, or Veritas Storage Foundation High Availability for Databases to the 5.0 Maintenance Pack 4 Rolling Patch 1 release.

Upgrading the operating system and upgrading a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

Use the following procedures to upgrade the operating system on a Veritas Storage Foundation node that you plan to upgrade to the 5.0 Maintenance Pack 4 Rolling Patch 1 release.

Upgrading the operating system to Red Hat Enterprise Linux 4 Update 8 and a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

This section describes how to upgrade Red Hat Enterprise Linux 4 (RHEL 4) on a Veritas Storage Foundation node and upgrade a Veritas product to the 5.0 Maintenance Pack 4 Rolling Patch 1 release.

To upgrade to Red Hat Enterprise Linux 4 Update 8 and a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

- 1 Stop Veritas Storage Foundation.
- 2 Upgrade the operating system to RHEL 4 Update 8.
- 3 Upgrade a Veritas product to 5.0 MP4 RP1.

See [“Upgrading a Veritas product from a 5.0x release to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 97.

- 4 Start Veritas Storage Foundation.

Upgrading the operating system to Red Hat Enterprise Linux 5 Update 4 and a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

This section describes how to upgrade Red Hat Enterprise Linux 5 (RHEL 5) on a Veritas Storage Foundation node and upgrade a Veritas product to the 5.0 Maintenance Pack 4 Rolling Patch 1 release.

To upgrade to Red Hat Enterprise Linux 5 Update 4 and a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

- 1 Stop Veritas Storage Foundation.
- 2 Upgrade the operating system to RHEL 5 Update 4.

- 3 Upgrade a Veritas product to 5.0 MP4 RP1.
See [“Upgrading a Veritas product from a 5.0x release to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 97.
- 4 Start Veritas Storage Foundation.

Upgrading the operating system to SuSE Linux Enterprise Server 9 Service Pack 4 and a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

This section describes how to upgrade SuSE Linux Enterprise Server 9 (SLES 9) on a Veritas Storage Foundation node and upgrade a Veritas product to the 5.0 Maintenance Pack 4 Rolling Patch 1 release.

To upgrade to SuSE Linux Enterprise Server 9 Service Pack 4 and a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

- 1 Stop Veritas Storage Foundation.
- 2 Upgrade the operating system to SLES 9 Service Pack 4.
- 3 Upgrade a Veritas product to 5.0 MP4 RP1.
See [“Upgrading a Veritas product from a 5.0x release to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 97.
- 4 Start Veritas Storage Foundation.

Upgrading the operating system to SuSE Linux Enterprise Server 10 Service Pack 3 and a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

This section describes how to upgrade SuSE Linux Enterprise Server 10 (SLES 10) on a Veritas Storage Foundation node and upgrade a Veritas product to the 5.0 Maintenance Pack 4 Rolling Patch 1 release.

To upgrade to SuSE Linux Enterprise Server 10 Service Pack 3 and a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

- 1 Stop Veritas Storage Foundation.
- 2 Upgrade the operating system to SLES 10 Service Pack 3.
- 3 Upgrade a Veritas product to 5.0 MP4 RP1.
See [“Upgrading a Veritas product from a 5.0x release to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 97.
- 4 Start Veritas Storage Foundation.

Upgrading a Veritas product from a 5.0x release to 5.0 Maintenance Pack 4 Rolling Patch 1

This section describes how to upgrade a Veritas High Availability product from a 5.0x release to the 5.0 Maintenance Pack 4 Rolling Patch 1. You can upgrade to 5.0 MP4 RP1 only if you have installed and configured your current 5.0x version of the product.

The operating system must be one of the supported operating systems.

See [“Upgrading the operating system and upgrading a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1”](#) on page 95.

To upgrade a Veritas product to 5.0 Maintenance Pack 4 Rolling Patch 1

- 1 Offline all application service groups on all nodes of the cluster.
- 2 Download the Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 archive to a temporary directory, such as `/tmp`.

See [“Downloading the rolling patch archive”](#) on page 14.

- 3 Move to the temporary directory:

```
# cd /tmp
```

- 4 Unzip the archive:

```
# gunzip -d *.gz
```

- 5 Untar the archive:

```
# tar -xvf *.tar
```

- 6 Manually install the 5.0 MP4 RP1 RPMs to upgrade your Veritas product:

```
# rpm -Uvh *.rpm
```

- 7 After the initial system checks have completed successfully, press **Enter** to start the requirement checks for the upgrade.

- 8 After the requirement checks have completed successfully, press **Enter** to begin upgrading Storage Foundation.

- 9 Reboot each of the nodes on which you upgraded Storage Foundation.

```
# shutdown -r now
```

- 10 Reinstall any missing mount points in the `/etc/fstab` file.

- 11 If you want to use features of Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 for which you do not currently have an appropriate license installed, obtain the license and run the `vxlicinst` command to add it to your system.
- 12 Verify that the cluster and all service groups are up and running.

Phased upgrade of the Veritas Storage Foundation High Availability or Veritas Storage Foundation High Availability for Databases software to 5.0 Maintenance Pack 4 Rolling Patch 1

A phased upgrade minimizes downtime by upgrading portions of the cluster, one node at a time. Although the entire cluster is offline for a shorter period than a full upgrade, this method requires command-line interaction and some manual configuration.

Each phase of the phased upgrade should be performed on more than one node of the cluster.

The stages of the phased upgrade procedure include the following steps:

- Freeze service group operations and stop cluster failover operations.
- Select a two or more nodes to upgrade, and leave a group of one or more nodes running.
- Take the selected group of nodes offline and prepare them for the upgrade.
- Upgrade the Veritas Storage Foundation HA software on the selected group of nodes.
- Take the second group of nodes offline.
- Bring the first group of nodes online.
- Upgrade the second group of nodes.
- Bring the second group of nodes online and restart cluster failover services. The cluster is fully restored.
- After the selected group of nodes is offline, the Veritas Storage Foundation HA software can be upgraded.

To perform a phased upgrade of the Veritas Storage Foundation High Availability or Veritas Storage Foundation High Availability for Databases software to 5.0 Maintenance Pack 4 Rolling Patch 1

- 1 Select the subcluster that will be upgraded first with the phased upgrade steps. All the applications will be online on the nodes in the second subcluster.

This procedure uses **system1** and **system2** as example nodes in the cluster. **system1** is part of the first subcluster, and **system2** is part of the second subcluster.

- 2 Unmount all of the VxFS mount points on all the nodes in the first subcluster.
- 3 If you created local VxFS mount points on VxVM volumes and added the mount points to the `/etc/fstab` file, comment out the mount point entries in the `/etc/fstab` file.
- 4 Switch the all Failover Application service group on any node in the second subcluster.

```
# hagrpswitch service_group -to system2
```

- 5 Bring the parallel service group offline on the nodes in the first subcluster.

```
# hagrpsoffline service_group -sys system1
```

- 6 Freeze all of the nodes in the first subcluster:

```
# haconf -makerw
# hasys -freeze -persistent system1
# haconf -dump -makero
# hastatus -sum
```

- 7 Stop VCS on all the nodes in first subcluster. Execute the following command on all the nodes in the first subcluster:

```
# hastop -local -force
```

- 8 On each node of the first subcluster, edit the `/etc/vxfenmode` file to configure I/O fencing in disabled mode.

```
# cat /etc/vxfenmode
vxfen_mode=disabled
```

- 9 If the cluster-wide attribute `UseFence` is set to **SCSI3**, then reset the value to **NONE** in the `/etc/VRTSvcs/conf/config/main.cf` file.

- 10** Stop the vxfen, gab, and llc modules on the first subcluster:

```
# /etc/init.d/vxfen stop
# /etc/init.d/gab stop
# /etc/init.d/llc stop
```

- 11** Upgrade the operating system to the required version on all the nodes in the first subcluster.

- 12** Mount the media and go to the appropriate operating system and architecture directory:

```
# mount -o ro /dev/cdrom /mnt
```

- 13** Upgrade the product stack on the nodes in the first subcluster using `installmp` and specify all of the nodes in the first subcluster to be upgraded.

```
# ./installmp system1
```

After the upgrade on the first subcluster is complete, do not reboot the nodes in the first subcluster.

- 14** Bring all of the Service groups offline on the nodes in the second subcluster:

```
# hagr -offline service_group -sys system2
# hagr -offline service_group -sys system2
# hagr -offline service_group -sys system2
```

- 15** Freeze all the Service groups on second subcluster:

```
# haconf -makerw
# hagr -freeze service_group -persistent
# hagr -freeze service_group -persistent
# hagr -freeze service_group -persistent
# haconf -dump -makero
```

- 16** Unmount any private VxFS mount points on all of the nodes in the second subcluster.

- 17** If you created local VxFS mount points on VxVM volumes on nodes in the second subcluster and added them to the `/etc/fstab` file, comment out the mount point entries in the `/etc/fstab` file.

- 18 Stop the vxfen, gab, and llt modules on the second subcluster:

```
# hastop -local -force
# /etc/init.d/vxfen stop
# /etc/init.d/gab stop
# /etc/init.d/llt stop
```

- 19 On each node of the second subcluster, edit the `/etc/vxfenmode` file to configure I/O fencing in disabled mode:

```
# cat /etc/vxfenmode
vxfen_mode=disabled
```

- 20 If the cluster-wide attribute `UseFence` is set to **SCSI3**, then reset the value to **NONE** in the `/etc/VRTSvcs/conf/config/main.cf` file.

- 21 Before rebooting all of the nodes in the first subcluster, uncomment the VxFS mount point entries in the `/etc/fstab` file.

- 22 Enable fencing.

- 23 Remove the following line from the `/etc/VRTSvcs/conf/config/main.cf` file:

```
Frozen=1
```

- 24 Set the clusterwide attribute `UseFence` to use SCSI3. Add the following line in the `/etc/VRTSvcs/conf/config/main.cf` file:

```
UseFence=SCSI3
```

- 25 Reboot all the nodes in the first subcluster that were upgraded.

```
# shutdown -r now
```

- 26 When all the nodes are up and running, seed the cluster membership. Execute the following command on any one node, only:

```
# gabconfig -x
```

- 27 Check if all the ports are up and running and have formed a membership in the first subcluster.

- 28 Upgrade the operating system on all of the nodes in the second subcluster.
- 29 Using the product media, upgrade all of the nodes in the second subcluster.

```
# ./installmp system2
```

Upgrading a Veritas High Availability product from 4.1 Maintenance Pack 4 Rolling Patch x to 5.0 Maintenance Pack 4 Rolling Patch 1 on SLES 10

The following procedure upgrades Veritas Storage Foundation High Availability (SFHA), Veritas Storage Foundation Cluster File System High Availability (SFCFSHA), or Veritas Storage Foundation High Availability for Databases from 4.1 Maintenance Pack (MP) 4 Rolling Patch (RP) x to 5.0 Maintenance Pack 4 Rolling Patch 1 on SLES 10.

Note: Upgrading SF from a 4.1 MP 4 RP x release on SLES 9 to MP4 is not supported as an in-place upgrade in this release. In this case, you must uninstall any existing SF release, upgrade the operating system to the required level, and then perform a fresh installation of SF 5.0 MP4 RP1.

To upgrade Veritas Storage Foundation High Availability, Veritas Storage Foundation Cluster File System High Availability, or Veritas Storage Foundation High Availability for Databases from 4.1 Maintenance Pack 4 Rolling Patch x to 5.0 Maintenance Pack 4 Rolling Patch 1 on SLES 10

- 1 Offline all application service groups on all nodes of the cluster and unmount all of the private VxFS mount points.
- 2 Bring all of the service groups offline on all nodes in the cluster.
- 3 Download the Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1 archive to a temporary directory, such as /tmp.

See [“Downloading the rolling patch archive”](#) on page 14.

- 4 Move to the temporary directory:

```
# cd /tmp
```

- 5 Unzip the archive:

```
# gunzip -d *.gz
```

6 Untar the archive:

```
# tar -xvf *.tar
```

7 Install the 5.0 MP4 RP1 RPMs:

```
# rpm -Uvh *.rpm
```

8 Upgrade the operating system to the required version on all of the nodes in the cluster.

9 Verify that the cluster and all service groups are online.

10 Reinstate any missing mount points in the `/etc/fstab` file.

11 If you want to use features of Veritas Storage Foundation 5.0 MP4 RP1 for which you do not currently have an appropriate license installed, obtain the license and run the `vxlicinst` command to add the license to your system.

12 Verify that the cluster and all service groups are up and running.

Uninstalling Veritas Storage Foundation 5.0 Maintenance Pack 4 Rolling Patch 1

This section provides instructions for removing Veritas Storage Foundation and High Availability 5.0 Maintenance Pack 4 Rolling Patch 1. Follow the procedure for the Veritas product that you have installed.

The uninstallation steps are the same as for 5.0MP3, except as described in this section. For additional details, see the 5.0 MP3 installation guide for your product.

To uninstall Veritas Volume Replicator, see the *Veritas Storage Foundation 5.0 MP3 Installation Guide*.

Storage Foundation or Storage Foundation for databases	See “Uninstalling Veritas Storage Foundation or Veritas Storage Foundation for Databases” on page 104.
Storage Foundation Cluster File System	See “Uninstalling Veritas Storage Foundation Cluster File System” on page 106.
Veritas Cluster Server	See the <i>Veritas Cluster Server 5.0 MP4 Release Notes</i> .
Veritas Storage Foundation Cluster File System for RAC	See the <i>Veritas Storage Foundation Cluster File System 5.0 MP3 Administrator's Guide</i> .

Uninstalling Veritas Storage Foundation or Veritas Storage Foundation for Databases

This section provides procedures for uninstalling Storage Foundation or Storage Foundation for databases. You must complete the preparatory tasks before you uninstall Veritas Storage Foundation or Veritas Storage Foundation for databases.

Preparing to uninstall Veritas Storage Foundation or Veritas Storage Foundation for Databases

The following procedure prepares your system for uninstalling Veritas Storage Foundation or Veritas Storage Foundation for Databases.

To prepare to uninstall Veritas Storage Foundation or Veritas Storage Foundation for Databases from a cluster

- 1 Log in as the root user. In an HA configuration, log in to any node in the cluster.
- 2 Verify that the following directories are set in your `PATH` environment variable:

```
/opt/VRTS/bin
```

```
/opt/VRTSvcs/bin
```

- 3 In an HA configuration, back up the following configuration files:

```
# mv /etc/llttab /etc/llttab.`date +%m-%d-%y_%H-%M-%S`
# mv /etc/llthosts /etc/llthosts.`date +%m-%d-%y_%H-%M-%S`
# mv /etc/gabtab /etc/gabtab.`date +%m-%d-%y_%H-%M-%S`
# mv /etc/vxfenmode /etc/vxfenmode.`date +%m-%d-%y_%H-%M-%S`
```

- 4 In a stand-alone configuration for Veritas Storage Foundation for Oracle or Veritas Storage Foundation for DB2, use the `sfua_db_config` command with the `-o dropdb` option to remove the database and unmount the database repository volume:

```
# /opt/VRTSdbcom/bin/sfua_db_config -o dropdb
# /opt/VRTSdbcom/config/sfua_rep_mount stop
```

- 5 In an HA configuration, stop VCS:

```
# hstop -all
```

- 6 Check if any VxFS file systems or Storage Checkpoints are mounted:

```
# df -T | grep vxfs
```


- 7 Unmount all Storage Checkpoints and file systems:

```
# umount /checkpoint1  
# umount /filesystem1
```

- 8 If the root disk is encapsulated, remove rootability.

See the *Veritas Storage Foundation 5.0 MP3 Installation Guide*.

- 9 Stop all VxVM volumes by entering the following command for each disk group:

```
# vxvol -g dg1 stopall
```

To verify that no volumes are open:

```
# vxprint -Aht -e v_open
```

- 10 Uninstall the product.

See the *Veritas Storage Foundation 5.0 MP3 Installation Guide*.

Uninstalling Veritas Storage Foundation or Veritas Storage Foundation for Databases on a cluster

Perform the steps in the following procedure to uninstall Veritas Storage Foundation or Veritas Storage Foundation for Databases on a cluster.

To uninstall Veritas Storage Foundation or Veritas Storage Foundation for Databases

- 1 Log in as the root user on any node in the cluster.
- 2 Navigate to the directory that contains the uninstallation program:

```
# cd /opt/VRTS/install
```

3 Run the uninstallation program.

For Storage Foundation:

```
# ./uninstallsf
```

For Storage Foundation for DB2:

```
# ./uninstallsfdb2
```

For Storage Foundation for Oracle

```
# ./uninstallsfora
```

For Storage Foundation for Sybase

```
# ./uninstallsfsyb
```

4 When prompted, enter one or more system names, separated by a space, from which to uninstall Veritas Storage Foundation:

```
Enter the system names separated by spaces from which to  
uninstall Storage Foundation: host1
```

5 Confirm the uninstallation:

```
Are you sure you want to uninstall SF [y,n,q] (y)
```

The installer stops the Veritas Storage Foundation or Veritas Storage Foundation for Databases processes and uninstalls the packages.

6 Reboot the nodes:

```
# /sbin/shutdown -r now
```

Uninstalling Veritas Storage Foundation Cluster File System

This section provides procedures for uninstalling Veritas Storage Foundation Cluster File System (SFCFS). You must complete the preparatory tasks before you uninstall SFCFS.

Preparing to uninstall Veritas Storage Foundation Cluster File System

The following procedure prepares your system for uninstalling Veritas Storage Foundation Cluster File System (SFCFS).

To prepare to uninstall Veritas Storage Foundation Cluster File System

- 1 Log in as the root user on any node in the cluster.
- 2 Verify that the following directories are set in your `PATH` environment variable:

```
/opt/VRTS/bin
```

```
/opt/VRTSvcS/bin
```

- 3 Back up the following configuration files:

```
# mv /etc/llttab /etc/llttab.`date +%m-%d-%y_%H-%M-%S`  
# mv /etc/llthosts /etc/llthosts.`date +%m-%d-%y_%H-%M-%S`  
# mv /etc/gabtab /etc/gabtab.`date +%m-%d-%y_%H-%M-%S`  
# mv /etc/vxfenmode /etc/vxfenmode.`date +%m-%d-%y_%H-%M-%S`
```

- 4 Stop VCS:

```
# hastop -all
```

- 5 Check if any VxFS file systems or Storage Checkpoints are mounted:

```
# df -T | grep vxfs
```

- 6 Unmount all Storage Checkpoints and file systems:

```
# umount /checkpoint1  
# umount /filesystem1
```

- 7 Stop all VxVM volumes by entering the following command for each disk group:

```
# vxvol -g dg1 stopall
```

To verify that no volumes are open:

```
# vxprint -Aht -e v_open
```

Uninstalling Veritas Storage Foundation Cluster File System

The following uninstalls Veritas Storage Foundation Cluster File System (SFCFS).

To uninstall Veritas Storage Foundation Cluster File System

- 1 Log in as the root user on any node in the cluster.
- 2 Navigate to the directory that contains the uninstallation program:

```
# cd /opt/VRTS/install
```

- 3 Run the uninstallation program while specifying each node in the cluster:

```
# ./uninstallsfcfs system1 system2
```

- 4 Confirm the uninstallation:

```
Are you sure you want to uninstall SFCFS [y,n,q] (y)
```

The installer stops the Storage Foundation Cluster File System processes and uninstalls the packages.

- 5 Reboot the nodes:

```
# /sbin/shutdown -r now
```

Software limitations

The following sections describe Storage Foundation software limitations that exist in this release.

See the *Veritas Cluster Server Release Notes* for Veritas Cluster Server (VCS) software limitations.

Veritas Storage Foundation software limitations

Software limitations in the Veritas Storage Foundation (SF) 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283859>

The following sections provide the software limitations in this release of Veritas Storage Foundation (SF).

Veritas Storage Foundation 5.0 Maintenance Pack 4 Rolling Patch 1 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Veritas Storage Foundation 5.0 Release Update 4 software limitations

The following software limitation exists in the Veritas Storage Foundation (SF) 5.0 Release Update (RU) 4 release.

unmount can hang when inotify watches are used (1590324)

If `inotify` watches are used, then an unmount can hang in the `vx_softcnt_flush()` call. The hang occurs because `inotify` watches increment the I-count variable and cause the `v_os_hold` value to remain elevated until the `inotify` watcher releases the hold.

Veritas Storage Foundation 5.0 Release Update 3 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) 5.0 Release Update (RU) 3 release.

Veritas Storage Foundation 5.0 Release Update 1 software limitations

The following are additional software limitations in the Veritas Storage Foundation (SF) 5.0 Release Update (RU) 1 release.

Xen platform, Security-enhanced Linux, and database support limitations

The Veritas Storage Foundation 5.0 Release Update 1 release on SuSE Linux Enterprise Server (SLES) 11 is not supported on the Xen platform for Linux.

There is no support for the Xen kernel on SLES11 in the 5.0 RU1 release.

Security-enhanced Linux (SE Linux) is not supported in the Veritas Storage Foundation 5.0 RU1 release.

Because of the database and Xen support limitations on SuSE Linux Enterprise Server (SLES) 11, Veritas Storage Foundation for DB2, Veritas Storage Foundation for Oracle, and Veritas Storage Foundation Cluster File System for Oracle RAC is not available on SuSE Linux Enterprise Server (SLES) 11 at the time of the 5.0 RU1 release.

For the latest information on updates, patches, and known issues regarding the 5.0 RU1 release, see the following TechNote on the Symantec Technical Support Web site :

<http://entsupport.symantec.com/docs/281993>

odmmkfile command must be run as a privileged user

The `odmmkfile` command must be run as a privileged user. This behavior has changed from the previous releases where this command is run by any user.

Veritas Storage Foundation 5.0 Maintenance Pack 3 software limitations

The following are additional software limitations in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 3 release.

Support for Red Hat Enterprise Linux 5, Security-Enhanced Linux (1133511)

The Storage Foundation software stack has been enhanced in 5.0 MP3 to operate normally with Security-Enhanced Linux (SE Linux) enabled and used in enforcing mode with the Red Hat Enterprise Linux 5 targeted policy. At the moment, only the targeted policy in the `unconfined_t` domain is supported. No support is given for `strict`, `mls`, or user-customized security policies, nor is there support present in Veritas File System (VxFS) for SE Linux file labels or context mounts.

Veritas Enterprise Administrator may fail to function (1192238)

VEA processes fail to function on SLES9 (SP3 or later) and SLES10 (SP1 and SP2) with the existing `libgcc` rpm version shipped by SuSE.

odmmkfile command must be run as a privileged user

The `odmmkfile` command must be run as a privileged user. This behavior has changed from the previous releases where this command could be run by any user.

Veritas Storage Foundation 5.0 Maintenance Pack 2 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 2 release.

Veritas Storage Foundation 5.0 Maintenance Pack 1 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 1 release.

Veritas Volume Manager software limitations

Software limitations in the 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283859>

The following sections provide the software limitations in this release of Veritas Volume Manager (VxVM).

Veritas Volume Manager 5.0 Maintenance Pack 4 Rolling Patch 1 software limitations

There are no additional software limitations in the Veritas Volume Manager (VxVM) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Veritas Volume Manager 5.0 Release Update 4 software limitations

There are no additional software limitations in the Veritas Volume Manager (VxVM) 5.0 Release Update (RU) 4 release.

Veritas Volume Manager 5.0 Release Update 3 software limitations

There are no additional software limitations in the Veritas Volume Manager (VxVM) 5.0 Release Update (RU) 3 release.

Veritas Volume Manager 5.0 Maintenance Pack 3 software limitations

The following software limitation exists in the Veritas Volume Manager (VxVM) 5.0 Maintenance Pack (MP) 3 release.

Devices and some paths are not discovered properly with IBM's DS4700 disk array after a reboot (1205369)

On a system with IBM's DS4700 disk array, use fewer than 30 LUNs to ensure that the disk array discovers all of the devices and paths after a reboot.

Veritas Volume Manager 5.0 Maintenance Pack 2 software limitations

There are no additional software limitations in the Veritas Volume Manager (VxVM) 5.0 Maintenance Pack (MP) 2 release.

Veritas Volume Manager 5.0 Maintenance Pack 1 software limitations

There are no additional software limitations in the Veritas Volume Manager (VxVM) 5.0 Maintenance Pack (MP) 1 release.

Veritas File System software limitations

Software limitations in the 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL.

<http://entsupport.symantec.com/docs/283859>

The following sections provide the software limitations in this release of Veritas File System (VxFS).

Veritas File System 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 software limitations

There are no additional software limitations in the Veritas File System 5.0 Maintenance Pack 4 Rolling Patch 1 release.

Veritas File system 5.0 Release Update 4 software limitations

The following software limitations exist in the Veritas File System 5.0 Release Update (RU) 4 release.

Support of 32 terabyte file systems

Only Veritas Storage Foundation Enterprise and Veritas Storage Foundation Enterprise HA support file systems that are greater than 32 TB.

Veritas File System Maintenance Pack 3 software limitations

There are no additional software limitations in the Veritas File System 5.0 Maintenance Pack (MP) 3 release.

Veritas File System Maintenance Pack 2 software limitations

There are no additional software limitations in the Veritas File System 5.0 Maintenance Pack (MP) 2 release.

Veritas File System Maintenance Pack 1 software limitations

There are no additional software limitations in the Veritas File System 5.0 Maintenance Pack (MP) 1 release.

Veritas Storage Foundation Cluster File System software limitations

Software limitations in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 release are listed in the *Veritas Storage Foundation Cluster File System 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283857>

The following sections provide the software limitations in this release of Veritas Storage Foundation Cluster File System (SFCFS).

Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1 software limitations

There are no additional software limitations in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Veritas Storage Foundation Cluster File System 5.0 Release Update 4 software limitations

There are no additional software limitations in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Release Update (RU) 4 release.

Veritas Storage Foundation Cluster File System 5.0 Release Update 3 software limitations

There are no additional software limitations in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Release Update (RU) 3 release.

Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 3 software limitations

The following software limitations exist in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack (MP) 3 release.

Compatibility with previous versions of Veritas File System

A disk layout Version 7 file system created with VxFS 5.0 software will not be accessible if the VxFS 5.0 file system software is removed and the system is reverted to VxFS 4.1.

Quick I/O, ODM, mount -o cio, and the VX_CONCURRENT advisory are mutually exclusive

The `VX_CONCURRENT` advisory cannot be set on a file that is actively open by Quick I/O or ODM. A file that has the `VX_CONCURRENT` advisory set may not be

concurrently opened by Quick I/O or ODM. Quick I/O and ODM access are not allowed for any files on a file system that is mounted with the `-o cio` mount option.

Consistent distribution and kernel version for Storage Foundation Cluster File System

All the nodes in a SFCFS cluster must be at the same OS version and patch level. In addition, mixing nodes running 32-bit kernel with nodes running 64-bit kernel is not supported with SFCFS.

Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 2 software limitations

There are no additional software limitations in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack (MP) 2 release.

Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 1 software limitations

There are no additional software limitations in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack (MP) 1 release.

Veritas Storage Foundation Cluster File System for Oracle RAC software limitations

The following sections provide the software limitations in this release of Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC).

Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 Release Update 4 software limitations

There are no additional software limitations in the Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) 5.0 Release Update (RU) 4 release.

Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 Release Update 3 software limitations

There are no additional software limitations in the Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) 5.0 Release Update (RU) 3 release.

Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 Maintenance Pack 3 software limitations

The following software limitations exist in the Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) 5.0 Maintenance Pack (MP) 3 release.

I/O Fencing

Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) is not licensed to support the I/O Fencing feature. If you use the product installer or installation scripts, you are not given the option during installation to enable I/O Fencing, and the I/O Fencing driver will be disabled. If you install the product manually, use the `/etc/vxfen.d/vxfenmode_disabled` file as a template for the `/etc/vxfenmode` configuration file.

If you subsequently enable I/O Fencing, importing a shared disk group will fail with the following error message:

```
VxVM vxdg ERROR V-5-1-10978 Disk group shared_dg: import failed:  
License has expired or is not available for operation
```

To verify the state of the I/O Fencing driver, use the `/sbin/vxfenadm -d` command.

Storage Foundation Cluster File System for Oracle RAC does not support Symantec's implementation of SCSI-3 PGR based I/O fencing and Oracle Clusterware (CRS) is expected to handle any split-brain situations. More information is available at the following URL:

<http://entsupport.symantec.com/docs/306411>

Avoiding the serial split brain condition

Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) does not include support for the I/O Fencing feature. As a result, SFCFS requires that two heartbeat links be configured during installation. When a node is reduced to a single heartbeat connection, SFCFS can no longer discriminate between the loss of a system and the loss of the final network connection. This "jeopardy" state affects all applications that use the cluster file system mount points. (Jeopardy cannot be avoided as the I/O Fencing feature is not available.)

If a node fails after the jeopardy state has been notified, all the cluster nodes cease to be members of the shared disk group, but the mounted cluster file systems are not disabled on all the nodes in the cluster. This is fine because Oracle's native fencing will evict the problem node from the cluster and prevent potential data corruption. The surviving cluster nodes will be unaffected and continue to operate.

Oracle's native fencing will evict the problem node from the cluster if either of the following events occur:

- Simultaneous failure of both heartbeat links to a node.
- A node hangs and is unable to respond to heartbeat messages.

Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 Maintenance Pack 2 software limitations

The following software limitation exists in the Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) 5.0 Maintenance Pack (MP) 2 release.

Storage Foundation Management Server is not supported for centralized servers

Storage Foundation Management Server is only supported for managed hosts; it is not supported for centralized servers.

Veritas Storage Foundation for Oracle software limitations

The following sections provide the software limitations in this release of Veritas Storage Foundation (SF) for Oracle.

Veritas Storage Foundation for Oracle 5.0 Release Update 4 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) for Oracle 5.0 Release Update (RU) 4 release.

Veritas Storage Foundation for Oracle 5.0 Release Update 3 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) for Oracle 5.0 Release Update (RU) 3 release.

Veritas Storage Foundation for DB2 software limitations

Software limitations in the 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL.

<http://entsupport.symantec.com/docs/283990>

The following sections provide the software limitations in this release of Veritas Storage Foundation (SF) for DB2.

Veritas Storage Foundation for DB2 5.0 Release Update 4 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) for DB2 5.0 Release Update (RU) 4 release.

Veritas Storage Foundation for DB2 5.0 Release Update 3 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) for DB2 5.0 Release Update (RU) 3 release.

Veritas Storage Foundation for DB2 5.0 Maintenance Pack 3 software limitations

There are no additional software limitations in the Veritas Storage Foundation (SF) for DB2 5.0 Maintenance Pack (MP) 3 release.

Veritas Storage Foundation for DB2 5.0 Maintenance Pack 1 software limitations

The following software limitation exists in the Veritas Storage Foundation (SF) for DB2 5.0 Maintenance Pack (MP) 1 release.

DBDST class names limited to 29 characters (601746)

The `dbdst_admin -o rmclass` command fails when attempting to remove a class name of 30 characters or more. The maximum class name length is 29 characters.

Cannot restore if tablespace is converted from Quick I/O to regular file after backup (25272)

If you convert a tablespace from a Quick I/O file to a regular file after backing up the database, you will not be able to restore the tablespace from that backup. For example, if you take a backup of a database that has a DMS tablespace with Quick I/O files as containers, and later convert the Quick I/O files to regular files, restoring the database from that backup will fail.

Workaround

Use the `qio_recreate` command to re-create the necessary Quick I/O files before you restore the database.

Selected utilities require setuid (643964)

Some Veritas Storage Foundation for Databases programs are setuid binaries because they are meant to be run as a database administrator and the APIs used

are root access-only Symantec internal APIs. The affected binaries are used mainly for information query purposes.

For these reasons, in Veritas Storage Foundation for DB2, the following programs are setuid-enabled:

- /opt/VRTSdb2ed/.dba/vxdb2adm
- /opt/VRTSdbcom/bin/vxstorage_stats
- /opt/VRTSdbcom/.dba/vxdbd_start
- /opt/VRTSdbcom/.dba/vxckpt_ismounted

Repository hostnames are case-insensitive (851129)

Since DNS hostname lookup queries are, by definition, case-insensitive, make sure the SFDB repository is running on a host with a name that is truly unique -- regardless of case -- within the local subnet. Errors may occur if the repository hostname differs from another hostname only by case.

Veritas Volume Replicator software limitations

Software limitations in the 5.0 release are listed in the *Veritas Volume Replicator 5.0 Release Notes*, which is available at the following URL.

<http://entsupport.symantec.com/docs/290244>

The following sections provide the software limitations in this release of Veritas Volume Replicator (VVR).

Veritas Volume Replicator 5.0 Release Update 4 software limitations

There are no additional software limitations in the Veritas Volume Replicator (VVR) 5.0 Release Update (RU) 4 release.

Veritas Volume Replicator 5.0 Release Update 3 software limitations

There are no additional software limitations in the Veritas Volume Replicator (VVR) 5.0 Release Update (RU) 3 release.

Veritas Volume Replicator 5.0 Maintenance Pack 3 software limitations

There are no additional software limitations in the Veritas Volume Replicator (VVR) 5.0 Maintenance Pack (MP) 3 release.

Veritas Volume Replicator 5.0 Maintenance Pack 2 software limitations

There are no additional software limitations in the Veritas Volume Replicator (VVR) 5.0 Maintenance Pack (MP) 2 release.

Veritas Volume Replicator 5.0 Maintenance Pack 1 software limitations

There are no additional software limitations in the Veritas Volume Replicator (VVR) 5.0 Maintenance Pack (MP) 1 release.

Fixed issues

The following sections describe issues that were fixed in this release.

Veritas Storage Foundation fixed issues

[Table 1-83](#) describes fixed issues in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Table 1-83 Veritas Storage Foundation fixed issues

Incident	Description
1885725	Fixed an issue in which dynamically changing the timezone of a system resulted in the CVMVolDg resources being reported as OFFLINE in the next monitor cycle, and the CVMVolDg and CFSPMount resources entered a faulted state.

Veritas Volume Manager and Veritas Volume Replicator fixed issues

[Table 1-84](#) describes fixed issues in the Veritas Volume Manager (VxVM) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release and Veritas Volume Replicator (VVR) 5.0 MP4 RP1 release.

Table 1-84 Veritas Volume Manager and Veritas Volume Replicator fixed issues

Incident	Description
1315575	Fixed the issue that if SNIA HBA API is not available, then the HBA information should be gathered from proc or sys fs.
1426480	Fixed the issue that <code>VOLCVM_CLEAR_PR()</code> ioctl does not propagate the error returned by DMP to the caller.

Table 1-84 Veritas Volume Manager and Veritas Volume Replicator fixed issues
(continued)

Incident	Description
1427205	Fixed the issue that machine on RHEL5 panicked while removing <code>VRTSvxvm-platform rpm</code> .
1441406	Fixed the issue that <code>vxdisk -x list</code> displays the wrong diskgroup ID.
1471487	Enhanced DMP to have a critical minimum queue and use a round-robin selection method.
1482555	Fixed the issue that <code>vxconfigd</code> hung when unloading APM modules <code>vxdmp_unload_all_apms()</code> .
1586095	Fixed an issue for DMP in which the <code>vxdmpadm include</code> command failed for including excluded <code>dmpnodename</code> .
1589715	Fixed the issue that <code>vxconfigd</code> dumps core, after <code>vxdmpadm getportids ctrlr=ctrlr_name</code> on a disabled <code>ctrlr</code> .
1603097	Fixed the cause of a panic while uninstalling VxVM spec driver.
1635999	Fixed the issue that misleading error message on Linux: "Cannot allocate mem of size 32768 bytes1".
1665400	Fixed the issue that <code>vxsnap refresh</code> hung for long time, as <code>vxconfigd</code> response is slow due to GAB EAGAIN errors.
1669719	Fixed the issue that after removing a LUN from the array side, <code>listenclosure all o/p</code> did not list that array enclosure.
1829285	Fixed the issue that <code>vxconfigd</code> core dumps while assigning unique native name to a disk.
1831634	Fixed the issue that for CVR that Wrong sending sibling count causing replication hang, which can result in I/O hang.
1880279	Fixed the issue that evaluate the need for intelligence in <code>vxattachd</code> to clear stale keys on failover/shared diskgroups in CVM and non CVM environment.
1933375	Fixed the issue that tunable value of <code>voliomem_chunk_size</code> is not aligned to page-size granularity.
1933528	Fixed the issue that during dynamic reconfiguration VxVM disk ends up in error state after replacing physical LUN.

Table 1-84 Veritas Volume Manager and Veritas Volume Replicator fixed issues
(continued)

Incident	Description
1936611	Fixed the issue that <code>vxconfigd</code> core dump while splitting a diskgroup.
1946460	Fixed the issue that <code>campus cluster:reattchsite</code> is not doing <code>da-dm</code> association on slave after diskgroup <code>deport-import</code> , when disks are in detached state.
1952197	Fixed the issue that running <code>vxtrace</code> against a volume shows response times as negative.
1960341	Fixed the issue that toggling of naming scheme is not properly updating the <code>daname</code> in the VxVM records.
1974393	A cluster no longer hangs when the transaction client times out.
1982715	Fixed the issue that <code>vxclustadm</code> dumping core while memory re-allocation.
1992537	Fixed the issue that memory leak in <code>vxconfigd</code> causing diskgroup Agent to timeout.
1992872	Fixed the issue that <code>vxresize</code> fails after DLE.
1998447	Fixed the issue that <code>vxconfigd</code> dumped core due to incorrect handling of signal.
1999004	Fixed the issue that I/Os hang in VxVM on linked-based snapshot.
2005339	Fixed the issue that procedure for converting foreign disks under Powerpath to simple disk DMP control.
2010426	Fixed the issue that tag setting and removal do not handle wrong enclosure name.
2012016	Fixed the issue that slave node panics while <code>vxrecovery</code> is in progress on master.
2015570	Fixed the issue that file system read failure seen on space optimized snapshot after cache recovery.
2015577	Fixed the issue that VVR init scripts need to exit gracefully if VVR license not installed.
2020373	Fixed the issue that system crashes (due to page fault) in <code>gendmpopen</code> while running test suite.

Table 1-84 Veritas Volume Manager and Veritas Volume Replicator fixed issues
(continued)

Incident	Description
2021737	Fixed the issue that vxdisk list shows HDS TrueCopy S-VOL read only devices in error state.
2027831	Fixed the issue that vxdg free not reporting free space correctly on CVM master. vxprint not printing DEVICE column for SDs.
2034564	Fixed the issue that I/Os hung in serialization after one of the disk which formed the RAID 5 volume was pulled out.
2034898	Fixed the issue that allow Linux to create and import cdsdisks of size more than 1 TB.
2036929	Fixed the issue that renaming a volume with link object attached causes inconsistencies in the diskgroup configuration.
2038137	Fixed the issue that system panics if volrdmirbreakup() is called recursively.
2038735	Fixed the issue that incorrect handling of duplicate objects resulting in node join failure and subsequent panic.
2040150	Fixed the issue that existence of 32 or more keys per LUN leads to loss of SCSI3 PGR keys during cluster reconfiguration.
2052203	Fixed the issue that master vold restart can lead to diskgroup disabled and abort of pending transactions.
2052459	Fixed the issue that CFS mount failed on slave node due to registration failure on one of the paths.
2055609	Fixed the issue that allocation specifications not being propagated for DCO during a grow operation.
2060785	Fixed a panic in vol_rv_merge_config that occurred while creating the primary RVG.
2070531	Fixed the issue that for Campus cluster that could not enable siteconsistency on a DCL volume, when trying to make the diskgroup and its volumes siteconsistent.
2076700	Fixed the issue for VVR that Primary panic due to NULL pointer dereference of nmcom_trans_connection_info structure.
2094685	Fixed the issue that diskgroup corruption following an import of a cloned BCV image of a SRDF-R2 device.

Table 1-84 Veritas Volume Manager and Veritas Volume Replicator fixed issues
(continued)

Incident	Description
2105722	Fixed the issue for VVR that I/O hang on Primary with link-breakoff snapshot.
2112568	Fixed the issue that system panics while attaching back two Campus Cluster sites due to incorrect DCO offset calculation.
2122009	Fixed the issue that vxddladm list shows incorrect hba information after running <code>vxconfigd -k</code> .
2131814	Fixed the issue for VVR that System panic due to corrupt sio in <code>_VOLRPQ_REMOVE</code> .
2133503	Fixed the issue that Renaming enclosure results in <code>dmpevents.log</code> reporting Mode for Enclosure has changed from Private to Private.
2139179	SSB now checks for invalid data when copying a LUN.
2141176	Fixed the issue that machine panicked with the following message: "Panic: BAD TRAP: type=31 in <code>dmp_decode_modmap_dmpnode()</code> ."
2160199	Fixed the issue that Master takeover fails as the upcoming Master could not import shared diskgroup.
2181631	Fixed the issue that striped-mirror volume cannot be grown across sites with <code>-oallowsites</code> with DRL.
2183984	Fixed the issue that system panics due to race condition while updating DMP I/O statistics.
2197254	Fixed the issue that while creating volumes on thinrclm disks, the option <code>logtype=none</code> does not work with the <code>vxassist</code> command.
2201149	Fixed the issue that DMP should try all possibilities to service I/O upon receipt of a SCSI illegal request following HBA fault.
2220926	Fixed the issue that <code>vxprivutil -D set attr</code> command on Linux leads to permanent <code>vxprivutil</code> command hang.
2226813	Fixed the issue that rlinks remain disconnected with UDP protocol if data ports are specified.
2232789	Added support for the NetApp Metro Cluster.

Veritas File System fixed issues

[Table 1-85](#) describes fixed issues in the Veritas File System 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Table 1-85 Veritas File System fixed issues

Incident	Description
2008096 (1972205)	Fixed the issue that full fsck is very slow on an fs with many ilist holes.
2016368 (1978884)	Fixed the issue that "Customer uses heavy workload to monitor for abuses of application API by users. These abuses were missed twice due to high average load at time of worklist threads"
2026560 (2009472)	Fixed the issue that system hang as threads hang during directory creation using transaction
2026678 (1952484)	Fixed the panic in vx_recv_getemapmsg() due to alignment fault
2032159 (2018946)	Fixed the issue that node hangs under heavy IO traffic to the NFS share
2079559 (2079457)	Fixed the issue that "storage quota fs userquota user hardlimit namespace XX FS" does not work, customer can make files after reaching hardlimit.
2080393 (2031040)	Fixed the issue that threads loop in vx_traninit() because of corrupt vx_bufspace
2080587 (2080469)	Fixed the issue that setting soft limit more than hard limit by vxquota doesn't report any error. Same with setting quota more than 1TB.
2086895 (2078171)	Fixed the issue that machine had a soft lockup (hang) and got rebooted during mount
2090252 (2062269)	Fixed the issue that Linux native AIO panics in kernel code while pre-faulting the pages on IA64 platforms
2112792 (2076059)	Fixed the issue that VxFS sendfile() returns 0 instead of EAGAIN which breaks pop3 daemon

Table 1-85 Veritas File System fixed issues (*continued*)

Incident	Description
2114165 (2091103)	Fixed the issue that CFS hangs in cluster
2135881 (2069462)	Fixed the issue that full fsck runs slowly on sles10
2163906 (2139016)	Fixed the issue with IPv6:service network restart throws vximc.vxportal error when Ipv6 addr is configured.
2164888 (2111921)	Fixed the issue that Linux DB2 readv() behavior with CIO/DIO enabled
2192029 (2178147)	Fixed the issue that Link of IFSOC file does not call vx_dotdot_op resulting in a corrupted inode
2196899 (2184528)	Fixed the issue that fsck fails to repair corrupt directory blocks having duplicate directory entries.
2220457 (2074806)	Fixed the issue that dm_punch_hole request does not invalidate pages
2230170 (2226762)	Fixed the issue that vx_ntran overflow causes a lot of buffer flushes
2244378 (2126233)	Fixed the issue that real time pri threads looping in vx_ireuse() causing system hang during hazard testing.
2244394 (1634788)	Fixed the issue that fsadm core dumps intermittently on 5.0 MP3
2257989 (1296491)	Fixed the panic occurs while doing nested mount when the base cluster mounted base fs gets force unmounted
2258662 (2246127)	Fixed the issue that Mount should perform read ahead on IAUs
2258665 (2199173)	Enhanced SFS replication on fsckpt_fopen

Table 1-85 Veritas File System fixed issues (*continued*)

Incident	Description
2258688 (2242630)	Remove limits on inode and buffer cache sizes
2258699 (2100823)	Enhanced returning parent inode number API for SFS replication
2258701 (2251015)	Fixed the issue that fsck should perform read ahead on IAUs
2277477 (2206065)	Fixed the issue that CFS panic due to corrupt freelist
2284841 (1881224)	Fixed the issue that make changes in VxFS to match kernel's memory pressure detection algorithms
2292336 (2272072)	Fixed the issue that GAB panics the box because VCS engine "had" did not respond. The loboltwraps around
2292363 (2283893)	Added functionality of free space defragmentation through fsadm.
2333932 (2316094)	Fixed the issue that there was discrepancy between vxi_bcache_maxkbyte and vx_bc_bufhwm.

Veritas Storage Foundation Cluster File System fixed issues

[Table 1-86](#) describes fixed issues in the Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Table 1-86 Veritas Storage Foundation Cluster File System fixed issues

Incident	Description
2003349 (1807536)	Fixed the issue that the VX_FREEZE_ALL ioctl should work with CFS file systems
2008096 (1972205)	Fixed the issue that full fsck is very slow on an fs with many ilist holes.

Table 1-86 Veritas Storage Foundation Cluster File System fixed issues
(continued)

Incident	Description
2016368 (1978884)	Fixed the issue that "Customer uses heavy workload to monitor for abuses of application API by users. These abuses were missed twice due to high average load at time of worklist threads"
2016395 (1999493)	Fixed the issue that corruption found when using DirectIO write with buffered read
2026537 (1544221)	Fixed the issue that getattr call optimization to speedup the case when binaries are being mmaped from many nodes on CFS.
2026560 (2009472)	Fixed the issue that system hang as threads hang during directory creation using transaction
2026678 (1952484)	Fixed the panic in vx_rcv_getemapmsg() due to alignment fault
2032159 (2018946)	Fixed the issue that node hangs under heavy IO traffic to the NFS share
2079559 (2079457)	Fixed the issue that "storage quota fs userquota user hardlimit numspace XX FS" does not work, customer can make files after reaching hardlimit.
2080393 (2031040)	Fixed the issue that threads loop in vx_traninit() because of corrupt vx_bufspace
2080587 (2080469)	Fixed the issue that setting soft limit more than hard limit by vxquota doesn't report any error. Same with setting quota more than 1TB.
2086895 (2078171)	Fixed the issue that machine had a soft lockup (hang) and got rebooted during mount
2090252 (2062269)	Fixed the issue that Linux native AIO panics in kernel code while pre-faulting the pages on IA64 platforms
2092082 (2030289)	Fixed the FS corruption issue
2112792 (2076059)	Fixed the issue that VxFS sendfile() returns 0 instead of EAGAIN which breaks pop3 daemon

Table 1-86 Veritas Storage Foundation Cluster File System fixed issues
(continued)

Incident	Description
2114165 (2091103)	Fixed the issue that CFS hangs in cluster
2135881 (2069462)	Fixed the issue that full fsck runs slowly on sles10
2163906 (2139016)	Fixed the issue with IPv6:service network restart throws vximc.vxportal error when Ipv6 addr is configured.
2164888 (2111921)	Fixed the issue that Linux DB2 readv() behavior with CIO/DIO enabled
2192029 (2178147)	Fixed the issue that link of IFSOC file does not call vx_dotdot_op resulting in a corrupted inode
2196878 (2184114)	Fixed the issue that three node VCS/CFS cluster where the CVM/CFSMount monitoring is getting timeout very frequently
2196899 (2184528)	Fixed the issue that fsck fails to repair corrupt directory blocks having duplicate directory entries.
2220457 (2074806)	Fixed the issue that dm_punch_hole request does not invalidate pages
2230170 (2226762)	Fixed the issue that vx_ntran overflow causes a lot of buffer flushes
2230252 (2214700)	Fixed the nfsd hung issue
2244378 (2126233)	Fixed the issue that real time pri threads looping in vx_ireuse() causing system hang during hazard testing.
2244382 (2032525)	Fixed the issue that NFS stale file handle in Linux
2244394 (1634788)	Fixed the issue that fsadm core dumps intermittently on 5.0 MP3

Table 1-86 Veritas Storage Foundation Cluster File System fixed issues
(continued)

Incident	Description
2257989 (1296491)	Fixed the panic occurs while doing nested mount when the base cluster mounted base fs gets force unmounted
2258662 (2246127)	Fixed the issue that mount should perform read ahead on IAUs
2258665 (2199173)	Enhanced SFS replication on fsckpt_fopen
2258676 (2040647)	Fixed the issue that CFS does not enforce vxquota hard-limit
2258688 (2242630)	Removed limits on inode and buffer cache sizes
2258699 (2100823)	Enhanced to return parent inode number API for SFS replication
2258701 (2251015)	Fixed the issue that fsck should perform read ahead on IAUs
2277477 (2206065)	Fixed the CFS panic due to corrupt freelist
2282088 (1931666)	Fixed the panic during vxresize expand of 100% full file-system due to NULL pointer dereferencing
2284841 (1881224)	Made changes in VxFS to match kernel's memory pressure detection algorithms
2292336 (2272072)	Fixed the issue that GAB panics the box because VCS engine "had" did not respond. The loboltwraps around
2292363 (2283893)	Added functionality of free space defragmentation through fsadm.
2292372 (2253938)	Fixed the issue that EAU delegation timeouts

Table 1-86 Veritas Storage Foundation Cluster File System fixed issues
(continued)

Incident	Description
2292379 (1392781)	Fixed the issue that GLM hang due to an EXCLUSIVE waiting lock request to be starved by giving priority to SHARED lock requests.
2333932 (2316094)	Fixed the issue that there was discrepancy between vxi_bcache_maxkbyte and vx_bc_bufhwm.

Veritas Storage Foundation Cluster File System for Oracle RAC fixed issues

[Table 1-86](#) describes fixed issues in the Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Table 1-87 Veritas Storage Foundation Cluster File System for Oracle RAC fixed issues

Incident	Description
1856719	Fixed the cause of a hang with the <code>df</code> and <code>rm</code> commands.

Veritas Storage Foundation for Oracle fixed issues

[Table 1-88](#) describes fixed issues in the Veritas Storage Foundation for Oracle 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Table 1-88 Veritas Storage Foundation for Oracle fixed issues

Incident	Description
1923171	Fixed an issue in which the <code>vxdbms3</code> daemon did not start after installing the <code>VRTSdbms3</code> RPM.

Veritas Storage Foundation for DB2 fixed issues

[Table 1-89](#) describes fixed issues in the Veritas Storage Foundation for DB2 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Table 1-89 Veritas Storage Foundation for DB2 fixed issues

Incident	Description
1923171	Fixed an issue in which the <code>vxdbms3</code> daemon did not start after installing the <code>VRTSdbms3</code> RPM.

Veritas Cluster Server fixed issues

Table 1-90 describes fixed issues in the Veritas Cluster Server 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Table 1-90 Veritas Cluster Server fixed issues

Incident	Description
2318316	Fixed the issue that Oracle needs its database's <code>\$Oracle_home/lib</code> library to be first in <code>LD_LIBRARY_PATH</code> before <code>/usr/lib</code>
2301510	Fixed the issue that memory leaks found in <code>ASMinst</code> and Oracle agents using <code>libumem</code>
2296834	Fixed the issue that VCS cannot bring the Sybase dataserver online. However, the Sybase dataserver can be started outside VCS control.
2277536	Fixed the issue that SNMP traps are not sent for "V-16-1-53025 Agent X has faulted; ipm connection was lost; restarting the agent"
2277526	Fixed the issue that <code>vxfcntlshdw</code> scp'ing to local host. Customer wants us to avoid scp to local host
2277517	Fixed the issue that Cannot configure SCSI-3 fencing using RamSan DMP devices.
2277508	Fixed the issue that the <code>VCS_SERVICE</code> was changed from previous <code>vcs</code> to <code>vcs-app</code> which caused the gui port couldn't be changed.
2277486	Fixed the issue that IP agent unable to send the correct ARP request after fail over
2276652	Fixed the issue that PidFiles issue like e293412 on Linux
2235517	Fixed the issue that Samba Server fails to be ONLINE when a Samba server was configured with the non-default path of the <code>smb.conf</code> file.
2230371	Fixed the issue that <code>"/usr/sbin/_vxfenswap -g fendg -a autoconfirm"</code> failed

Table 1-90 Veritas Cluster Server fixed issues (*continued*)

Incident	Description
2215888	Fixed the issue that the monitor script of Db2udb do not handle the case when a parameter is undefined, which make an empty value being passed to next level.
2212112	Fixed the issue that NotifierMngr agent dose not online correctly VCS 5.0MP4 with Linux 5.5.
2204035	Fixed the issue that MonitorTimeStats incorrecly showing 303 secs Intermittently.
2199047	Fixed the issue that monitor for Process resource faults right after online, though the process appears to be running correctly.
2198773	Fixed the issue that hagr -switch of child group fails in 5.0MP3RP2 and later if 2 or more parent groups online on alternate.
2195571	Fixed the issue that RemoteGroup resource during network failure cannot be recovered without bouncing entire cluster.
2194409	Fixed the issue that hacf dies dumping VCS configuration due to some attributes containing strings > 4Kb in length
2185545	Fixed the issue that Customer looking for IcmpAgent cpu consumption (e2005490) fix for 5.0MP3RP4
2177206	Fixed the issue that Split-brain occurs even when using VCS Steward
2138472	Fixed the issue that the agent dumps core when a Script based WAN heartbeat is added.
2136747	Fixed the issue that - notifier - SMTP mail - missing line break between Event Time and Entity Name
2117381	Fixed the issue that DB2 resourec generating excessive logging in engine_A.log
2104850	Fixed the issue that whilst VCS is onlign a group on one node, it does so on another node - why?
2099904	Fixed the issue that memory leak in command hareg -group
2099209	Fixed the issue that in convert_attribute_list - hares core dump.
2098103	Fixed the issue that if PreOnline and OnlineRetryLimit > 1, service group will not restart locally

Table 1-90 Veritas Cluster Server fixed issues (*continued*)

Incident	Description
2091444	Fixed the issue that vxfcntlstdhw fails on unregistering keys in Japanese Locale
2080884	Fixed the issue that Request to disable RFC check with DNS Agent
2080855	Fixed the issue that IP resource can't online when both eth0:0/eth0:255 were used
2080534	Fixed the issue that CIFS Samba server failed to start after VCS upgrade.
2078943	Fixed the cause of a diskgroup agent panic.
2077397	Fixed the issue that VCS Dumps core under heavy load and the node goes for panic.
2077392	Fixed the issue that _had gets killed on a heavily loaded system
2077381	Improved heartbeating logic b/w engine and agfw during snapshotting and during steady cluster operation.
2077191	Fixed the issue that nfs client I/O thrash got interrupted during cluster failover caused by split-brain.
2067297	Fixed the issue of vxfsnwap_common.sh: remove redundant KSH instances
2052116	Fixed the issue that hastart fails to start had on one of the nodes with message GabHandle::open failed errno = 16 .
2033683	Fixed the issue that RemoteGroup resource doesn't currently support remote groups that are a parallel SG.
1939135	Fixed the issue that the hadsim core dumps when the systems are switching to running state for simulator.

Known issues

The following are known issues in this release of Veritas Storage Foundation.

Veritas Storage Foundation known issues

Known issues in the 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283859>

The following sections provide the known issues in this release of Veritas Storage Foundation (SF).

Veritas Storage Foundation 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

The following known issue exists in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

VRTSexplorer displays an error when collecting dynamic multi-pathing configuration information after you upgraded to 5.0 Maintenance Pack 4 Rolling Patch 1 (1972138)

VRTSexplorer outputs the following error message when collecting dynamic multi-pathing configuration information:

```
VxVM ERROR V-5-2-9002 apm_keyget: invalid APM crc
```

This error message is observed only after you upgrade the stack from the 4.1 MP4 RP4 release to the 5.0 MP4 release. You do not see this message after a fresh installation.

Workaround

After upgrading the stack from the 4.1 MP4 RP4 release to the 5.0 MP4 release, you must remove the extra APM key, `dmpsvc.key`, which is from the 4.1MP4RP4 release:

```
# rm -f /etc/vx/apmkey.d/32/dmpsvc.key
```

Veritas Storage Foundation 5.0 Release Update 4 known issues

The following known issue exists in the Veritas Storage Foundation (SF) 5.0 Release Update (RU) 4 release.

32-bit JRE requirement (1870929)

Installation of the 32-bit JRE `ibm-java-ppc-jre-6.0-6.0.ppc` is required in the 5.0 RU4 release.

Veritas Storage Foundation 5.0 Release Update 3 known issues

The following known issue exists in the Veritas Storage Foundation (SF) 5.0 Release Update (RU) 3 release.

VRTSvcssy package and Sybase Agent installation (1877566)

CPI does not automatically install the VCS Sybase Agent in the Veritas Storage Foundation (SF) RU3 release.

Workaround

Install the VCS Sybase Agent RPM manually.

Note: This issue is fixed in the 5.0 RU4 release.

Veritas Storage Foundation 5.0 Maintenance Pack 3 known issues

The following known issues exist in the Veritas Storage Foundation 5.0 Maintenance Pack (MP) 3 release.

While configuring Storage Foundation Management Server and the Cluster Management Console through the CPI for authentication passwords, some special characters are not passed correctly through the CPI (1245237)

While configuring Storage Foundation Management Server and the Cluster Management Console through the Common Package Interface (CPI) for authentication passwords, some special characters are not correctly passed through the CPI to the nodes, even though these special characters are accepted by authentication.

The following special characters are not correctly passed through the CPI to the nodes:

- \' (single quote)
- \" (double quote)
- \@ (at sign)
- \\$ (dollar)
- \ (slash)
- * (star)

Workaround

There is no workaround for this issue. When entering authentication passwords, do not use any of the special characters listed above.

PATH setting when using product installer to install on remote nodes

There is a problem with some versions of `rsh` and `ssh` that causes the `PATH` to not get set correctly on remote shell invocations. As a result some of the commands fails to run. Before running the product installer, ensure that the `PATH` is set correctly for the `root` user. For bash shells, it can be set in the `~/.bashrc` or the `~/.bash_profile` file.

To ensure that the PATH has been set properly

- ◆ Run the following command for each remote node you want to install and check that the command succeeds.

```
# rsh remote_node lsmod
```

Using ODM with Storage Foundation or Storage Foundation Cluster File System

Starting with 5.0MP3, Quick I/O and Veritas Extension for Oracle Disk Manager (ODM) are now enabled by default for Storage Foundation and Storage Foundation Cluster File System.

To use this functionality, you may need to manually install the required packages and patches. Refer to the chart below for your product and install scenario.

Table 1-91 Installation and upgrade scenarios

Product	Installation/Upgrade scenario	Instructions
Storage Foundation Cluster File System	Upgrading SFCFS from 5.0 or a previous 5.0 MP	Install ODM and GMS if ODM and GMS are not already installed before upgrading SFCFS to 5.0 MP4. See “Installing ODM” on page 137.
	Upgrading SFCFS from 4.x version.	The product installer installs ODM and GMS. No manual steps are required.
	Installing SFCFS for the first time.	The product installer installs ODM and GMS. No manual steps are required.

Table 1-91 Installation and upgrade scenarios (*continued*)

Product	Installation/Upgrade scenario	Instructions
Storage Foundation	Upgrading SF from 5.0 or a previous 5.0 MP	Install ODM if ODM is not already installed before upgrading Storage Foundation to 5.0 MP4. See “Installing ODM” on page 137.
	Upgrading SF from 4.x version.	The product installer installs ODM. No manual steps are required.
	Installing SF for the first time.	The product installer installs ODM. No manual steps are required.

Installing ODM

The following procedure installs ODM to use with Veritas Storage Foundation or Veritas Storage Foundation Cluster File System.

To install ODM to use with Veritas Storage Foundation or Veritas Storage Foundation Cluster File System

- 1 Locate the appropriate platform directory for your installation. For example, the platform directory may be `rhel14_x86_64`, `rhel15_x86_64`, `sles9_x86_64`, or `sles10_x86_64`.
- 2 Install the ODM rpms.
- 3 If you are installing SFCFS, install the GMS rpms.
- 4 After installing 5.0 MP4, configure ODM.

For information about configuring ODM, see the *Veritas Storage Foundation for Oracle Administrator's Guide*.

- 5 If you reboot the machine during or after the installation, GMS is automatically loaded. If you do not reboot, you must manually load GMS.

Veritas Storage Foundation 5.0 Maintenance Pack 1 known issues

There are no new known issues in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 1 release.

Veritas Storage Foundation Basic known issues

Known issues in the 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283859>

The following sections provide the known issues in this release of Veritas Storage Foundation (SF) Basic.

Veritas Storage Foundation Basic 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

There are no additional known issues in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Veritas Storage Foundation Basic 5.0 Release Update 4 known issues

There are no additional known issues in the Veritas Storage Foundation (SF) 5.0 Release Update (RU) 4 release.

Veritas Storage Foundation Basic 5.0 Release Update 3 known issues

There are no additional known issues in the Veritas Storage Foundation (SF) 5.0 Release Update (RU) 3 release.

Veritas Storage Foundation Basic 5.0 Maintenance Pack 3 known issues

There are no additional known issues in the Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 3 release.

Veritas Volume Manager known issues

Known issues in the 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283859>

The following sections provide the known issues in this release of Veritas Volume Manager (VxVM).

Veritas Volume Manager 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

The following known issues exist for the Veritas Volume Manager 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Site consistent detach does not happen if the master loses access to all storage (1894089)

If the master loses access to all storage, the `dgfailpolicy` parameter is set to `leave`, and the `diskdetpolicy` parameter is set to `global`, then the site consistent detach does not happen and only the first affected plex gets detached.

Workaround

There is no workaround for this issue.

use_all_paths attribute does not function properly (1592330)

The `use_all_paths` attribute, which allows all paths of an ALUA or A/A-A array to be used for I/O, is not honored properly while distributing the I/O across all of the paths. As a result, you might not see I/O on all the paths despite this attribute being set.

Workaround

There is no workaround for this issue.

DMP cannot detect the re-enabled OS device status on SLES 11 after restoring the daemon (1718573, 1753740, 1870300, 1961609)

Because SLES 11 does not have the `remove_on_dev_loss` parameter of the `scsi_transport_fc` module, the operating system device files are removed after a device loss due to the `dev_loss_tmo` parameter. When the device comes back online, the port names may have changed, in which case DMP cannot recognize the device's status with the restored daemon.

Workaround

The workaround depends on which drivers you are using.

Preventing the device files from being removed with Fibre Channel drivers

To prevent the device files from being removed with Fibre Channel drivers, you must go to `/sys/class/fc_remote_ports/rport-xxxx/`, set the `fast_io_fail_tmo` parameter to 20, and set the `remove_on_dev_loss` parameter to 864000 for each report port.

To prevent the device files from being removed with Fibre Channel drivers

- 1 Download and upgrade to kernel 2.6.27.45-0.1.1 or later from Novell.
- 2 Create file `/etc/udev/rules.d/40-rport.rules` with the following line:

```
KERNEL=="rport-*", SUBSYSTEM=="fc_remote_ports", \
ACTION=="add", RUN+="/bin/sh -c 'echo 20 > \
/sys/class/fc_remote_ports/%k/fast_io_fail_tmo;echo 864000 \
> /sys/class/fc_remote_ports/%k/dev_loss_tmo'"
```

- 3 Reboot the system.

Preventing the device files from being removed with MPTSAS drivers

To prevent the device files from being removed with MPTSAS drivers, you must set the `mpt_disable_hotplug_remove` parameter to 1.

To prevent the device files from being removed with MPTSAS drivers

- 1 Edit the `/etc/modprobe.conf.local` file and add following line at the end of the file:

```
options mptsas mpt_disable_hotplug_remove=1
```

- 2 Rebuild the `initrd` image:

```
# mkinitrd -k kernel_name -I new_initrd_name
```

- 3 Edit the `/boot/grub/menu.lst` file to boot the system with new `initrd` name that you created in step 2.
- 4 Reboot the system.

Native LVM commands hang and LUNs randomly switch between primary and secondary controllers with a modified `multipath.conf` file in which not all devices are blacklisted (1886266, 2022838)

By default, the `/etc/multipath.conf` file has all devices blacklisted. Native LVM commands may hang with a modified `/etc/multipath.conf` file in which not all devices are blacklisted, if the devices belong to a storage array configured in Active/Passive-Failover (A/P-F) mode. This issue occurs even if you disabled the `multipathd` daemon.

In addition, the current ownership of LUNs belonging to a storage array configured in Active/Passive (A/P) or Active/Passive-Concurrent (A/P-C) mode randomly switches between primary and secondary paths with the modified `/etc/multipath.conf` file. As LVM commands by default probe all devices on the

system, the commands can issue I/O to a non-owning path of a LUN, which causes this behavior.

Workaround

Revert the `/etc/multipath.conf` file to blacklist all devices. Verify that the `/etc/multipath.conf` file contains the following lines:

```
# Blacklist all devices by default. Remove this to enable multipathing
# on the default devices.
blacklist {
    devnode "*"
}
```

For the issue of LUN ownership randomly switching between primary and secondary paths, in addition to the `/etc/multipath.conf` file's default setting, modify the `/etc/lvm/lvm.conf` file's filter to reject operating system devices and accept only DMP or multipathed devices.

I/O path failing a test causes the HBA bus reset to fail, and some subpaths do not come back online until the next reboot (1939622)

The I/O path failing a test causes the reset of the HBA bus to fail. As a result, some subpaths do not come back online until next the reboot.

Workaround

See the following TechNote on the Symantec Technical Support website for the workaround:

<http://entsupport.symantec.com/docs/317870>

Operating system block device cannot come online after enabling a disabled switch port on a system with SLES 10 SP3 and a QLA2342 Fibre Channel adapter (1942035, 1967821)

A system running SLES 10 SP3 and a QLogic SANblade QLA2342 Fibre Channel adapter has a compatibility issue in which enabling a previously disabled switch port does not change the Fibre Channel driver's status from "linkdown", and the operating system block device cannot come back online.

Workaround

Use the `issue_lip` command or reboot the system to bring the block device back online:

```
# echo 1 > /sys/class/fc_host/hostx/issue_lip
```

Replace `x` with the Fibre Channel host number.

With software initiators on SLES 11 ppc64, under heavy I/O, Fibre Channel link failure may lead to system hang (1955939)

With software initiators on SLES 11 ppc64, occasionally while under heavy I/O, the system may become too busy and will not respond to user operations.

Workaround

Reduce I/O stress.

Veritas Volume Manager 5.0 Release Update 4 known issues

The following known issue exists for the Veritas Volume Manager 5.0 Release Update (RU) 4 release.

vxconfigd daemon issue (1893139)

When using an EMC CX4-240 ALUA iSCSI target on a SLES10 SP3 x86_64 platform in a clustered environment, after connecting the iscsi array through the software initiator, the `vxconfigd` daemon does not start due to a Novell issue. When a second iscsi session is opened and a scandisks operation is performed, it takes approximately 30 minutes to stabilize the connection and many connection errors may take place:

```
ISCSI_ERR_CONN_FAILED (1011) .  
    connection1:0: detected conn error (1011)
```

Workaround

There is currently no workaround available.

Bugzilla opened with Novell (bugzilla #564524)

Evaluate the need for intelligence in vxattachd to clear stale keys on failover/shared dg's in CVM and non CVM environment (1880279)

The sites/plexes might not be automatically reattached when the faulted disks are reconnected. Some of the dmp events might be ignored by the auto reattach daemon (`vxattachd`) due to the overflow of the events buffer. The auto reattach daemon might fail to reattach the site/disk in the presence of stale PGR keys in the disks.

Workaround:

Manually remove the stale keys that are still present on the reconnected faulted disks and then fire the `vxreattach` command to initiate the reattach.

vxvmconvert will not work properly with the LVM volumes having multiple path to the disk(2230912)

`vxvmconvert` utility may not work with RHEL5 update 5 or later with the disk having multiple paths. This is limitation with the LVM library, where `pvcreate` command fails on the disk having multiple paths and prevents `vxvmconvert` utility to function properly.

Workaround:

Remove all the additional paths to the device and retry the operation.

Veritas Volume Manager 5.0 Release Update 3 known issues

The following known issues exist for the Veritas Volume Manager 5.0 Release Update (RU) 3 release.

LVM volume not converted by vxvmconvert utility (1809789)

Because of changes to the `pvmove` command in the LVM package, `vxvmconvert` cannot convert LVM diskgroups to VxVM diskgroups after LVM version 2.02.32. LVM version 2.02.32 is the last known working version.

Workaround

There is no workaround for this issue.

Restrictions on acceptable root disk layouts for root disk encapsulation (1837396)

There are known restrictions for acceptable root disk layouts for root disk encapsulation. To root encapsulate a system where the swap partition is not the last partition on the rootdisk requires that there is space for a private partition at the end of the disk (typically 32MB). Disks with > 32MB free at the end of the root disk can be encapsulated successfully.

Veritas Volume Manager 5.0 Maintenance Pack 3 known issues

The following known issues exist in the Veritas Volume Manager 5.0 Maintenance Pack (MP) 3 release.

Limitation of automatic site reattachment feature (1256764)

The site does not reattach automatically in the case where the site storage has disconnected and reconnected to a CVM slave node, but the master node never lost connection to the site storage.

Deport operation on a shared disk group fails (1368377)

With all primary paths inaccessible, the deport operation on a shared disk group fails to clear the PGR keys as the DMP database is not up-to-date. The deport operation succeeds but the PGR keys are not cleared as the DMP database is not updated to reflect the inaccessibility of failed primary paths.

Workaround

Running `vxdisk scandisks` before the DG deport operation triggers DMP reconfiguration which updates the DMP database such that a disk is accessible through active paths.

vxmconvert fails for LVM volumes created on whole CCISS disks (1253830)

`vxmconvert` on 5.0 MP3 only works for the LVM volumes created on CCISS device disk partitions, not whole CCISS disks. If a Sistina Physical Volume was created on a whole CCISS disk, LVM and LVM2 volumes created on that physical CCISS disk cannot be converted to VxVM volumes by `vxmconvert`. The operation will fail and can result in the destruction of LVM partitions. For the Physical Volumes created on CCISS device disk partitions, `vxmconvert` will succeed.

I/O failures result in the disk failing flag (1205380)

In some DMP failover scenarios, I/O retry causes the disk failing flag to be set, although there is nothing wrong with the disks except for the failing flag.

Workaround

Clear the failing flag using the `vxedit` command.

Manually installing the VRTSvxvm patch requires a reboot (1180992)

After you manually install the `VRTSvxvm` patch, you must reboot the system.

Plex disabled in DS4000 disk array (924680)

This issue has been identified in the 5.0 MP1 related to the DS4000 disk array. If there is a high I/O load to the array, a device inquiry may fail. This failure causes the DMP node to be disabled. When the DMP node is disabled, all I/O to the DMP node fails.

Autotagging can cause the reattach of a site to fail in a Campus Cluster (1470548)

Using the autotagging feature for a Campus Cluster can cause the site attach to fail. VxVM displays an error message such as the following:

```
VxVM vxdg ERROR V-5-1-10128 tagid already assigned to disk
```


Workaround:

Tag disks manually; do not use autotagging.

DMP issues of Veritas Volume Manager

The following are DMP issues in the Veritas Volume Manager 5.0 Maintenance Pack (MP) 1 release.

Identification of ATA and SATA disks (862137)

DMP is unable to identify ATA or SATA disks uniquely. This results in a single DMP virtual device being created for multiple ATA and SATA disks.

Workaround

Disable DMP for ATA and SATA disks.

To disable multipathing for ATA and SATA disks

- 1 Configure the device discovery layer to detect ATA disks as JBOD disks:

```
# vxddladm addjbod vid=ATA pid=*
```

- 2 Run the `vxdiskadm` command and select option 17 (Prevent multipathing/Suppress devices from VxVM's view).
- 3 Select option 7 (Prevent multipathing of disks by specifying a VID:PID combination).
- 4 Enter `ATA:*` as the VID:PID combination.
- 5 Exit from `vxdiskadm`, and reboot the system.

Handling intermittently failing paths

The `dmp_health_time` and `dmp_path_age` tunables control how DMP handles intermittently failing paths. The default values of `dmp_health_time` and `dmp_path_age` are 60 and 300 seconds respectively. The value of `dmp_health_time` represents the minimum time in seconds for which a path must stay healthy. If a path changes state between enabled and disabled on a shorter time scale than this, DMP marks the path as intermittently failing and disables I/O on the path. I/O is not re-enabled on an intermittently failing path until `dmp_path_age` seconds have elapsed without further outage.

The minimum configurable value of `dmp_path_age` is 0, which prevents DMP from detecting intermittently failing paths.

Veritas Volume Manager cluster issues

The following cluster issue exists in this release of Veritas Volume Manager.

Handling intermittently failing paths in a Campus Cluster

In remote mirror configurations, a site is reattached when its disks come back online. Recovery is then initiated for the plexes of a volume that are configured at that site. Depending on the configuration, recovery of the plexes can take a considerable time and consume considerable resources. To minimize the frequency of having to perform a site reattachment operation, it is recommended that you use the `vxdmpadm settune` command to configure a value smaller than 60 seconds for `dmp_health_time`, and a value larger than 300 seconds for `dmp_path_age`.

Veritas File System known issues

Known issues in the Veritas File System 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283859>

The following sections provide the known issues in this release of Veritas File System (VxFS).

Veritas File System 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

The following known issues exist in the Veritas File System 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

fsppadm takes 4 or more hours to enforce a policy on 1,000 or more files (1843445)

The `fsppadm` command takes approximately 4 hours or more to enforce a dynamic storage tiering policy on a group of 1,000 or more data files.

Workaround

There is no workaround for this issue.

Veritas File System 5.0 Release Update 4 known issues

There are no additional known issues in the Veritas File System 5.0 Release Update (RU) 4 release.

Veritas File System 5.0 Release Update 3 known issues

The following known issue exists in the Veritas File System 5.0 Release Update (RU) 3 release.

The disk space used by sparse files is higher on SLES11 compared to SLES10 (1907776)

The current mechanism of space allocation for sparse files is based on the memory page size of the underlying operating system. The page size on SLES11 is 64Kb, which makes the disk space used by sparse files on SLES11 higher compared to SLES10 which has a 4Kb page size.

Veritas File System 5.0 Release Update 1 known issues

The following known issues exist in the Veritas File System 5.0 Release Update (RU) 1 release.

fsadmin cannot grow a file system that is already full (1468375)

Under some circumstances, the `fsadmin` command cannot grow a file system that is already 100 percent full.

Veritas File System 5.0 Maintenance Pack 3 known issues

The following known issues exist in the Veritas File System 5.0 Maintenance Pack (MP) 3 release.

Possible error messages using 32-bit commands on raw devices on 64-bit system (1079725)

On 64-bit systems, using 32-bit commands on raw devices sometimes produces error messages in the system log similar to the following example:

```
ioctl132(mkfs.vxfs:7471): Unknown cmd fd(3) cmd(564f4c02){16}  
arg(fff51138) on /dev/sdc2
```

You can safely ignore these messages.

Unmounting a VxFS file system takes long time after an iSCSI dynamic multipathing failover

Unmounting a VxFS file system can take several minutes after an iSCSI dynamic multipathing failover.

Workaround

The following procedure eliminates the long unmount time.

To eliminate the long unmount time

- 1 After a failover, run the `iostat` command to verify that all I/Os are drained:

```
# iostat
```

- 2 Unmount the file system or stop VCS:

```
# umount /MyFileSystem
```

Or:

```
# hastop -local
```

fsapadm enforceckpt core dumps if you do not specify a Storage Checkpoint

The `fsapadm` command core dumps if you do not specify a Storage Checkpoint when specifying the `enforceckpt` keyword.

Workaround

The proper usage is as follows:

```
fsapadm enforceckpt [-f strict] mountpoint  
storage_checkpoint
```

Veritas Storage Foundation Cluster File System known issues

Veritas Storage Foundation Cluster File System (SFCFS) known issues in the 5.0 release are listed in the *Veritas Storage Foundation Cluster File System 5.0 Release Notes*.

The *Veritas Storage Foundation Cluster File System 5.0 Release Notes* can be viewed at the following URL:

<http://entsupport.symantec.com/docs/283857>

The following sections provide the known issues in this release of Veritas Storage Foundation Cluster File System (SFCFS).

Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

The following known issues exist in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

The VX_FREEZE_ALL ioctl does not work on Cluster File Systems (1828185)

The *Veritas File System Programmer's Reference Guide* states that the `VX_FREEZE_ALL` ioctl works on both local and cluster file systems, but on cluster file systems this ioctl fails with EBUSY.

Workaround

There is no workaround for this issue.

cfsmount command fails in a Veritas Storage Foundation Cluster File System High Availability stack (1890312)

The `cfsmount` command fails in a Veritas Storage Foundation Cluster File System High Availability stack if the 32-bit `libstdc++` library is not installed. The `CFSmountAgent` requires the `compat-libstdc++` library to function properly.

Workaround

Install the `libstdc++33-32bit-*.x86_64.rpm` RPM.

Veritas Storage Foundation Cluster File System 5.0 Release Update 4 known issues

The following known issues exist in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Release Update (RU) 4 release.

Fencing utilities vxfenswap and vxfentsthdw error (1846607)

The `chk_ssh_passwordless()` function in the `vxfenswap` script requires correction when passwordless communication is not set up on the node for which the command is executed. After proper configuration, the `vxfenswap` command works without issues.

Workaround

In order to run fencing utilities `vxfenswap` and `vxfentsthdw`, ensure that you have `ssh` or `rsh` configured for password-free logins, and provide configuration for the node on which these commands are executed.

During a link failure, the MultiNICA agent does not failover the virtual IP to other active devices (1923602)

On SLES10 (SP3) PPC only, the virtual IP configured for a MultiNICA resource type does not fail over to other active devices. This is due to `miiagent` binary being unable to detect the device state correctly.

Workaround

Rename the existing `miagent` file in `/opt/VRTSvcs/bin/MultiNICA` to **`miagent1`**. Create a new shell script with the name `miagent` with execute permissions as a replacement. The contents should be as follows:

```
#!/bin/sh echo 99
```

With this change, the modified `miagent` indicates that it cannot determine the state of the NIC card.

Veritas Storage Foundation Cluster File System 5.0 Release Update 3 known issues

There are no additional known issues in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Release Update (RU) 3 release.

Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 3 known issues

The following known issues exist in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack (MP) 3 release.

CFSMount resource may fault

During cluster startup in a SFCFS RAC or SFCFS environment, a CFSMount resource may fault even though the underlying CVMVolDg resource becomes online successfully. If the CVMVolDg resource contains layered VxVM volumes, the reason for the fault could be that the CVMVolDg resource went online before all the subvolumes of the layered volume could be started.

Workaround

In order to ensure that a CVMVolDg resource containing layered volumes becomes online only after all the subvolumes are enabled, the `CVMVolume` attribute in the `main.cf` file should be populated with the names of the layered volumes under that CVMVolDg resource.

See the *Veritas Cluster Server User's Guide*.

Veritas Storage Foundation Cluster File System 5.0 Maintenance Pack 1 known issues

The following known issues exist in the Veritas Storage Foundation Cluster File System (SFCFS) 5.0 Maintenance Pack (MP) 1 release.

Oracle-Linux (840486)

Problems uninstalling or upgrading Veritas Storage Foundation for Oracle when Veritas Storage Foundation Cluster File System is installed on the same system.

If Veritas Storage Foundation for Oracle and Veritas Storage Foundation Cluster File System are installed on the same machine, do not use the installer to uninstall if you are planning to uninstall only one product.

If you want to uninstall the product, you must uninstall the Veritas Storage Foundation for Oracle packages manually.

To uninstall the Veritas Storage Foundation for Oracle packages

- 1 Review the uninstallation requirements in the *Veritas Storage Foundation Installation Guide*.
- 2 Stop the repository database and unmount the repository volume.

In a stand-alone configuration:

Stop the database repository:

```
# /opt/VRTSdbcom/bin/sfua_db_config -o stopdb
```

Unmount the database repository:

```
# /opt/VRTSdbcom/config/sfua_rep_mount stop
```

In an HA configuration:

Stop VCS processes on either the local system or all systems.

To stop VCS processes on the local system:

```
# hastop -local
```

To stop VCS processes on all systems:

```
# hastop -all
```

- 3 Remove the Veritas Storage Foundation for Oracle packages using the `rpm -e` command.

```
# rpm -e VRTSorgui-common VRTSdbed-common VRTSdbcom-common \
VRTSdbdoc
```

If Veritas Storage Foundation for Oracle and Veritas Storage Foundation Cluster File System are installed on the same machine and you are upgrading both products, use the installer to upgrade Veritas Storage Foundation Cluster File System first. Then, use the installer to upgrade Veritas Storage Foundation for Oracle.

If the second upgrade fails, remove the Veritas Storage Foundation for Oracle packages as described above, then run the installer to upgrade Veritas Storage Foundation for Oracle.

DB2-Linux (840486)

Problems uninstalling or upgrading Veritas Storage Foundation for DB2 when Veritas Storage Foundation Cluster File System is installed on the same system.

If Veritas Storage Foundation for DB2 and Veritas Storage Foundation Cluster File System are installed on the same machine, do not use the installer to uninstall if you are planning to uninstall only one product.

If you want to uninstall the product, you must uninstall the Veritas Storage Foundation for DB2 packages manually.

To uninstall the Veritas Storage Foundation for DB2 packages

- 1 Review the uninstallation requirements in the *Veritas Storage Foundation Installation Guide*.
- 2 Stop the repository database and unmount the repository volume.

In a stand-alone configuration:

Stop the database repository:

```
# /opt/VRTSdbcom/bin/sfua_db_config -o stopdb
```

Unmount the database repository:

```
# /opt/VRTSdbcom/config/sfua_rep_mount stop
```

In an HA configuration:

Stop VCS processes on either the local system or all systems.

To stop VCS processes on the local system:

```
# hastop -local
```

To stop VCS processes on all systems:

```
# hastop -all
```

- 3 Remove the Veritas Storage Foundation for DB2 packages using the `rpm -e` command.

```
# rpm -e VRTSd2gui-common VRTSdb2ed-common VRTSdbcom-common VRTSdbdoc
```

If Veritas Storage Foundation for DB2 and Veritas Storage Foundation Cluster File System are installed on the same machine and you are upgrading both products, use the installer to upgrade Veritas Storage Foundation Cluster File System first. Then, use the installer to upgrade Veritas Storage Foundation for DB2.

If the second upgrade fails, remove the Veritas Storage Foundation for DB2 packages as described above, then run the installer to upgrade Veritas Storage Foundation for DB2.

Veritas Storage Foundation Cluster File System for Oracle RAC known issues

The following sections provide the known issues in this release of Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC).

Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

There are no additional known issues in the Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) 5.0 Maintenance Pack (MP) 4 release.

Veritas Storage Foundation Cluster File System for Oracle RAC 5.0 Release Update 4 known issues

There are no additional known issues in the Veritas Storage Foundation Cluster File System for Oracle RAC (SFCFS RAC) 5.0 Release Update (RU) 4 release.

Veritas Volume Replicator known issues

Known issues in the Veritas Volume Replicator 5.0 release are listed in the *Veritas Volume Replicator 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283839>

The following sections provide the known issues in this release of Veritas Volume Replicator (VVR).

Veritas Volume Replicator 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

There are no additional known issues in the Veritas Volume Replicator 5.0 Maintenance Pack 4 Rolling Patch 1 release.

Veritas Volume Replicator 5.0 Release Update 4 known issues

There are no additional known issues in the Veritas Volume Replicator 5.0 Release Update (RU) 4 release.

Veritas Volume Replicator 5.0 Release Update 3 known issues

There are no additional known issues in the Veritas Volume Replicator 5.0 Release Update (RU) 3 release.

Veritas Volume Replicator 5.0 Maintenance Pack 3 known issues

The following known issue exists in the Veritas Volume Replicator 5.0 Maintenance Pack (MP) 3 release.

Mirrors are not synchronized when volumes created using `init=active` option (1287111)

For volumes created using `init=active` option, the mirrors (plexes) are not synchronized. The `vradmin verifydata` command could incorrectly report differences for such volumes. To rectify this situation, synchronize mirrors (plexes) and resynchronize the secondary by doing Automatic Synchronization, Full Synchronization, or Difference-based Synchronization.

Veritas Volume Replicator 5.0 Maintenance Pack 1 known issues

The following known issue exists in the Veritas Volume Replicator 5.0 Maintenance Pack (MP) 1 release.

Issue with VVR VEA in the Japanese locale (616709)

In the Japanese locale, the Add Bunker wizard page has truncated text. When you add a bunker using VVR VEA, the description text for the Bunker DG and Protocol fields is truncated.

The incomplete text should read as follows:

- Bunker DG: If protocol is Storage the Bunker DG is expected to have been imported on the Primary host.
- Protocol: Protocol should be set to Storage when Bunker storage is directly accessible from the Primary host.

Veritas Storage Foundation for Oracle known issues

Known issues in the Veritas Storage Foundation (SF) for Oracle 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283859>

The following sections provide the known issues in this release of Veritas Storage Foundation (SF) for Oracle.

Veritas Storage Foundation for Oracle 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

The following known issue exists in the Veritas Storage Foundation (SF) for Oracle 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

ohasd daemon does not automatically start the ocssd.bin process

When Oracle's `ohasd` daemon (Oracle High Availability Services Daemon) starts, the daemon does not automatically start the `ocssd.bin` process. This prevents `ASMInstAgent` from bringing online the ASM instance. The ASM instance requires the `ocssd.bin` process (Oracle's Cluster Synchronization Services Daemon process) to be up and running.

Workaround

For the `ohasd` process to start the `ocssd.bin` process automatically, run the following command:

```
# $GRID_HOME/bin/crsctl modify resource ora.cssd -attr AUTO_START=always
```

odmstat output does not match vxstat and Oracle v\$filestat output (1926165)

The output from the `odmstat` command does not match the output from the `vxstat` command or the Oracle `v$filestat` command for I/O count and I/O service time.

Workaround

There is no workaround for this issue.

DBDST commands hang intermittently on x86_64 (1950467, 1952431, 1969365)

DBDST commands may hang or fail in some cases on x86_64 platforms.

Workaround

The following procedure resolves a DBDST command hang or failure.

To resolve a DBDST command hang or failure

1 Stop `vxd`:

```
# /opt/VRTSdbcom/bin/vxdctrl stop
```

2 Stop the Storage Agent:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a StorageAgent -c stop
```

3 Stop the DBED Agent:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a DBEDAgent -c stop
```

4 Start the Storage Agent:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a StorageAgent -c start
```

5 Start the DBED agent:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a DBEDAgent -c start
```

6 Start vxdbd:

```
# /opt/VRTSdbcom/bin/vxdbdctrl start
```

7 Rerun the DBDST command that hung or failed.**Using raw VxVM Volumes for ASM (1972379)**

In a SLES 11 environment, raw VxVM volumes cannot be used for ASM diskgroups. As such, the following SQL fails:

```
SQL> create diskgroup asmdg1 external redundancy disk
SQL> '/dev/vx/rdisk/asmdg/asmvol';
create diskgroup asmdg1 external redundancy disk
'/dev/vx/rdisk/asmdg/asmvol'
*
ERROR at line 1:
ORA-15018: diskgroup cannot be created
Linux-x86_64 Error: 14: Bad address
Additional information: -1
Additional information: 655360
Linux-x86_64 Error: 14: Bad address
Additional information: -1
```

Workaround

There is no workaround for this issue. Symantec recommends having database files on a VxFS filesystem and enabling ODM. ODM provides performance close to RAW datafiles and easier management.

Using raw VxVM volumes as Oracle datafiles

In a SLES 11 environment, raw VxVM volumes cannot be used as Oracle datafiles. As such, the following SQL fails:

```
SQL> create tablespace raw_tbs datafile '/dev/vx/rdisk/testdg/testvol' size 1g;
create tablespace raw_tbs datafile '/dev/vx/rdisk/testdg/testvol' size 1g
*
ERROR at line 1:
ORA-19502: write error on file "/dev/vx/rdisk/testdg/testvol", blockno 384 (blocksize=8192)
ORA-27061: waiting for async I/Os failed
Linux-x86_64 Error: 14: Bad address
Additional information: -1
Additional information: 1048576
```

Workaround

There is no workaround for this issue. If your database has raw VxVM datafiles, migrate the datafiles to a VxFS file system. Symantec recommends having database files on a VxFS filesystem and enabling ODM. ODM provides performance close to RAW datafiles and easier management.

Veritas Storage Foundation for Oracle 5.0 Release Update 4 known issues

The following known issue exists in the Veritas Storage Foundation (SF) for Oracle 5.0 Release Update (RU) 4 release.

VRTSdbms3 startup issue (1923171)

VRTSdbms3 for SFORA does not start the database server during a manual bootup if the DBED repository is not configured. The user must explicitly configure the DBED repository after a manual reboot to start using DBED commands.

Workaround

Configure the DBED repository after rebooting.

Veritas Storage Foundation for Oracle 5.0 Release Update 3 known issues

The following known issues exist in the Veritas Storage Foundation (SF) for Oracle 5.0 Release Update (RU) 3 release.

Temporary files and dbed operations (1840689)

Temporary files must be cleaned up from `/tmp` directory after dbed operations.

Environment variable issue and dbed snapshot command (1840686)

The `dbed_vmsnap -o snapshot` fails if the `ORACLE_SID` environment variable is not set.

Veritas Storage Foundation for Oracle 5.0 Maintenance Pack 3 known issues

The following known issues exist in the Veritas Storage Foundation (SF) for Oracle 5.0 Maintenance Pack (MP) 3 release.

Datafile rollback in a Dynamic Storage Tiering environment fails to rollback the files (1227083)

In a Dynamic Storage Tiering setup, when you execute the `dbed_ckptrollback` command using the `-F <datafile>` option, the operation may fail and display the following error:

```
# dbed_ckptrollback -S $ORACLE_SID -H $ORACLE_HOME -c Checkpoint_name -F datafile_name.dbf
Rolling back files using Checkpoint_XXXXXXXXX ...
VXDBA_PRODUCT vxckptadm WARNING V-81-4565
The following files/directories do not reside on VxFS file systems:
VXDBA_PRODUCT vxckptadm WARNING V-81-999
datafile_name.dbf
VXDBA_PRODUCT vxckptadm
ERROR V-81-4562 Storage Rollback failed.
SFORA rb.file
ERROR V-81-3046 Could not roll back datafiles.
```

This is only observed in the Dynamic Storage Tiering setup.

Workaround

You must restart the Veritas `vxdbd` daemon using the following procedure.

To restart the Veritas vxdbd daemon.

- 1 Check the Veritas vxdbd daemon status using the following command:

```
# /etc/init.d/vxdbdctrl status
Status of Veritas vxdbd
/opt/VRTSdbcom/bin/vxdbd ping SUCCESS
```

- 2 Stop the Veritas vxdbd daemon using the following command:

```
# /etc/init.d/vxdbdctrl stop
Stopping Veritas vxdbd
```

- 3 Start the Veritas vxdbd daemon using the following command:

```
# /etc/init.d/vxdbdctrl start
Starting Veritas vxdbd
/opt/VRTSdbcom/bin/vxdbd start SUCCESS
```

After restarting the Veritas vxdbd daemon, you may attempt the rollback operation again.

VRTSddlpr directory may exist in /opt/ after uninstalling the stack (1315258)

After uninstalling VRTSddlpr package, the /opt/VRTSddlpr directory may still exist.

Workaround

After uninstalling the VRTSddlpr package, you must manually clean up the /opt/VRTSddlpr directory.

VRTSdbcom directory may exist in /opt/ after uninstalling the stack (1315247)

After uninstalling the stack, the directory /opt/VRTSdbcom may still exist.

Workaround

After uninstalling the stack, you must manually clean up the /opt/VRTSdbcom directory .

VRTSdbms3 directory may exist in /opt/ after uninstalling the stack (1315262)

After uninstalling VRTSdbms3 package, the /opt/VRTSdbms3 directory may still exist.

Workaround

After uninstalling the `VRTSdbms3` package, you must manually clean up the `/opt/VRTSdbms3` directory.

VRTSvxms directory exists in /opt/ even after uninstalling the stack (1316534)

After uninstalling the stack, the `VRTSVxms` directory may still exist.

Workaround

After uninstalling the stack, you must check the `VRTSVxms` directory and all its subdirectories to see if they are empty.

You may manually clean up the `VRTSVxms` directory and all its subdirectories only if they are empty.

Reverse Resync not supported if database is created using Oracle Managed Files (1192729)

If an Oracle database is created with Oracle Managed Files (OMF), then `reverse_resync` operations would fail.

The following errors are displayed:

```
oracle@swlx07:~> /opt/VRTSdbed/bin/dbed_vmsnap -S $ORACLE_SID \  
-f sp4 -o reverse_resync_begin  
dbed_vmsnap started at 2007-12-28 12:02:42  
SFORA dbed_vmsnap WARNING V-81-5725 After reverse_resync_commit  
is performed, you need to recreate the Authentication Password  
File using the ORAPWD utility.  
SFORA dbed_vmsnap ERROR V-81-4882 An error occurred while  
reconfiguring Oracle instance 'sfora'.  
SFORA dbed_vmsnap ERROR V-81-4881 Log file is at  
/tmp/dbed_vmclonedb.12313/nomount.log.  
SFORA dbed_vmsnap ERROR V-81-4918 Database sfora has not been  
correctly recovered.  
SFORA dbed_vmsnap ERROR V-81-4881 Log file is at  
/tmp/dbed_vmclonedb.12313/recover.log.
```

Workaround

The `reverse_resync` operation for a database created with OMF is not supported in the 5.0 MP4 RP1 release.

There is no workaround for this issue.

Veritas Storage Foundation for Oracle 5.0 Maintenance Pack 2 known issues

The following known issues exist in the Veritas Storage Foundation (SF) for Oracle 5.0 Maintenance Pack (MP) 2 release.

Cannot unmount single-host clone in HA environment after failover (818522)

In an HA environment, after successfully taking a snapshot and cloning the database on the same host where primary is running, if a node failover happens then `dbed_vmclonedb -o umount` does not work.

Workaround

Fix the issue that caused the failover to the other node, and then fallback to the fixed node.

Veritas Storage Foundation for Oracle 5.0 Maintenance Pack 1 known issues

The following known issues exist in the Veritas Storage Foundation (SF) for Oracle 5.0 Maintenance Pack (MP) 1 release.

Cannot unmount single-host clone in HA environment after failover (818522)

In an HA environment, after successfully taking a snapshot and cloning the database on the same host where primary is running, if a node failover happens then `dbed_vmclonedb -o umount` does not work.

Workaround

Fix the issue that caused the failover to the other node, and then fallback to the fixed node.

Problems uninstalling or upgrading Veritas Storage Foundation for Oracle when Veritas Storage Foundation Cluster File System is installed on the same system (840486)

If Veritas Storage Foundation for Oracle and Veritas Storage Foundation Cluster File System are installed on the same machine, do not use the installer to uninstall if you are planning to uninstall only one product.

You must uninstall the Veritas Storage Foundation for Oracle packages manually if you want to uninstall the product.

To uninstall the Veritas Storage Foundation for Oracle packages

- 1 Review the uninstallation requirements in the *Veritas Storage Foundation Installation Guide*.
- 2 Remove the Veritas Storage Foundation for Oracle packages using the `rpm -e` command.

```
# rpm -e VRTSorgui-common VRTSdbed-common VRTSdbcom-common \  
VRTSdbdoc
```

dbed_vmclonedb -p failed to create clonedb with modified pfile (852188)

If you are running the `dbed_vmclonedb -p` or the `dbed_clonedb -p` command, the pfile modification will fail if there is an unquoted or unescaped special character in the primary instance's pfile. The following error will be displayed:

```
SFORA pfile_mod ERROR V-81-5781 Parse error in file  
/oracle/dbs/pfile_name. line 6: .
```

```
SFORA dbed_vmclonedb WARNING V-81-5788 Pfile modification failed.  
Clone instance CLONE_SID may not start.
```

Workaround

To avoid this issue, make sure all special characters in the primary instance's pfile are either placed within quotes or escaped.

You can check the Oracle Reference Manual for a list of special characters which must be either placed within quotes or escaped when used as pfile parameter values. In some cases, Oracle will process pfile correctly at startup even if a parameter values contains unquoted special characters. However, the pfile parser we use strictly enforces the pfile specification contained in the Oracle Reference Manual.

Note: The primary instance's pfile is saved at the time of snapshot creation. If you attempt to clone the database using that snapshot you will be using the saved pfile, not the current pfile. Therefore you must create a new snapshot in order to ensure that the clone will use an updated pfile.

One-time scheduled tasks need Specific Date (861274)

When scheduling a one-time task from the GUI, the task may not be executed if a Specific Date (Include Date) is not set for it.

Database FlashSnap archive log destinations (862092, 862687)

With Oracle Release 10g and above, Database FlashSnap clones do not support `DB_RECOVERY_FILE_DESTINATION` as the sole mandatory archive log destination. This issue will not be detected by FlashSnap validation with `dbed_vmchecksnap`, or by the snapshot command `dbed_vmsnap`. However, recovery will fail when attempting to clone a database using the snapshot, and the message "ORA-01195: online backup of file 1 needs more recovery to be consistent" may appear in the log file.

Workaround

Define a mandatory log archive destination that is not `DB_RECOVERY_FILE_DESTINATION` and set the `ARCHIVELOG_DEST` parameter of the snapplan to this value.

Veritas Storage Foundation for DB2 known issues

Known issues in the Veritas Storage Foundation (SF) for DB2 5.0 release are listed in the *Veritas Storage Foundation 5.0 Release Notes*, which is available at the following URL:

<http://entsupport.symantec.com/docs/283859>

Veritas Storage Foundation for DB2 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

The following known issue exists in the Veritas Storage Foundation (SF) for DB2 5.0 Maintenance Pack (MP) 4 release.

DBDST commands hang intermittently on x86_64 (1950467, 1952431, 1969365)

DBDST commands may hang or fail in some cases on x86_64 platforms.

Workaround

The following procedure resolves a DBDST command hang or failure.

To resolve a DBDST command hang or failure

- 1 Stop vxdbd:

```
# /opt/VRTSdbcom/bin/vxdbdctrl stop
```

- 2 Stop the Storage Agent:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a StorageAgent -c stop
```

3 Stop the DBED Agent:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a DBEDAgent -c stop
```

4 Start the Storage Agent:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a StorageAgent -c start
```

5 Start the DBED agent:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a DBEDAgent -c start
```

6 Start vxdbd:

```
# /opt/VRTSdbcom/bin/vxdbdctrl start
```

7 Rerun the DBDST command that hung or failed.

Veritas Storage Foundation for DB2 5.0 Release Update 4 known issues

The following known issue exists in the Veritas Storage Foundation (SF) for DB2 5.0 Release Update (RU) 4 release.

VRTSdbms3 startup issue (1923171)

VRTSdbms3 for DB2 does not start the database server during a manual bootup if the DBED repository is not configured. The user must explicitly configure the DBED repository after a manual reboot to start using DBED commands.

Workaround

Configure the DBED repository after rebooting.

Veritas Storage Foundation for DB2 5.0 Release Update 3 known issues

There are no additional known issues in the Veritas Storage Foundation (SF) for DB2 5.0 Release Update (RU) 3 release.

Veritas Storage Foundation for DB2 5.0 Maintenance Pack 3 known issues

There are no additional known issues in the Veritas Storage Foundation (SF) for DB2 5.0 Maintenance Pack (MP) 3 release.

Veritas Enterprise Administrator known issues

The following are known issues in this release of Veritas Storage Foundation (SF) for Oracle.

Veritas Enterprise Administrator 5.0 Maintenance Pack 4 Rolling Patch 1 known issues

There are no additional known issues in the Veritas Enterprise Administrator (VEA) 5.0 Maintenance Pack (MP) 4 Rolling Patch (RP) 1 release.

Veritas Enterprise Administrator 5.0 Release Update 4 known issues

There are no additional known issues in the Veritas Enterprise Administrator (VEA) 5.0 Release Update (RU) 4 release.

Veritas Enterprise Administrator 5.0 Release Update 3 known issues

The following known issues exist in the Veritas Enterprise Administrator (VEA) 5.0 Release Update (RU) 3 release.

VEA GUI and `df -k` command show different results (1848089)

The VEA GUI and `df -k` display different results. The VEA GUI **Properties** tab displays incorrect disk space used on a volume.

No VEA login to Windows 4.x (1849818)

Login to Windows 4.x stack box fails through VEA graphical user interface. The VEA interface uses IBM JRE which encounters problems during the SSL handshakes. Because the VEA interface uses anonymous cipher suites that are not supported by IBM JRE, the VEA interface running on 5.0 RU3 machines cannot be used to connect to the 4.x VEA server (running on Linux, Solaris, AIX, Windows, or HP).

Workaround

There is no workaround for this issue.

Veritas Enterprise Administrator 5.0 Maintenance Pack 3 known issues

The following known issues exist in the Veritas Enterprise Administrator (VEA) 5.0 Maintenance Pack (MP) 3 release.

Issue with SNMP settings through Tools (1209747)

This issue is specific to Rule Manager window in the VEA Client which is running on a Linux system. When **Default SNMP Settings** dialog is launched in Rule Manager using menu **Tools > Default SNMP Settings**, the **Hostname** field does not allow any characters to be entered.

Workaround

To resolve this issue

- 1 Click on the **Port** field in `Default SNMP Settings` dialog.
- 2 Enter the port number in the **Port** field.
- 3 Click on **Hostname** field to enter hostname details.

Veritas Storage Foundation Graphical User Interface known issues

The following are known issues in this release of the Veritas Storage Foundation (SF) Graphical User Interface (GUI).

Cannot convert mountpoint to volume set using the Java Graphical User Interface (1176531)

When you use the Java Graphical User interface to convert a mountpoint into a volume set, the operation is not successful.

Workaround

You must use the `dbdst_convert` command line interface to convert a mountpoint volume to a volume set. You must not use the Java Graphical User Interface to convert volumes.

Adding two storage classes consecutively through VEA Java Graphical User Interface fails (1231856)

When you use the VEA Java Graphical User Interface to add the first class, the operation is successful. However, when you use the VEA Java Graphical User Interface to add a second class, you may see the following error:

```
SFORA dbdst_admin V-81-6212  
Do not add or remove class in a single command.
```

This issue is encountered only with Graphical User Interface and not with the command line interface.

Workaround

You must logout and disconnect from VEA. Then you must start a new session to add a second class through the Graphical User Interface.

Alternatively, you may use the `dbdst_admin` command in the command line interface to add a new class:

```
# /opt/VRTS/bin/dbdst_admin -D DB4 -o addclass=NEWCLASS:"newclass"
```

Some disks may not appear in the VEA GUI (1826607)

Whenever the VxVM disk naming scheme is modified, the VEA GUI needs to recognize the new naming scheme.

Workaround

If the VEA GUI is not showing the new disk names, use the **Actions > Refresh** menu item for proper disk updating.

Disks or volumes may not appear in the VEA GUI (1727003)

After you configure any Storage Foundation product, some disks or volumes may not appear in the VEA GUI.

Workaround

Restart the Storage Agent using the following command:

```
# /opt/VRTSobc/pal33/bin/vxpalctrl -a StorageAgent -c restart
```

Veritas Cluster Server known issues

There are no known issues for Veritas Cluster Server in this release.

Documentation

The Veritas Storage Foundation (SF) 5.0 Maintenance Pack (MP) 3 product guides contain relevant information for the SF 5.0 MP4 release, except as superseded by this document and the *Veritas Storage Foundation 5.0 Maintenance Pack 4 Rolling Patch 1 Getting Started Guide*. The SF 5.0 MP3 product guides are available on the SF 5.0 MP3 software media and on the Symantec website in PDF format.

See the *Veritas Storage Foundation 5.0 Maintenance Pack 3 Release Notes* for a list of the documents in the SF 5.0 MP3 release.

Symantec's Veritas Storage Foundation 5.0 MP4 RP1 documentation set is available at the following URL:

<http://www.symantec.com/business/support/overview.jsp?pid=15107>

Documentation errata

The following sections describe documentation errata.

Veritas Cluster Server User Guide (2278673)

In the "VCS environment variables" section, read the default value of VCS_SERVICE environment variable as "vcs-app" instead of "vcs".

