Veritas Storage Foundation™ and High Availability Solutions Release Notes

HP-UX 11i Version 2

5.0 Maintenance Pack 2 Rolling Patch 3

Symantec™

Veritas Storage Foundation™ and High Availability Solutions Release Notes

The software described in this book is furnished under a license agreement and may be used only in accordance with the terms of the agreement.

Product version: 5.0 MP2RP3

Document version: 5.0MP2RP3.0

Legal Notice

Technical Support

Symantec Technical Support maintains support centers globally. Technical Support's primary role is to respond to specific queries about product features and functionality. The Technical Support group also creates content for our online Knowledge Base. The Technical Support group works collaboratively with the other functional areas within Symantec to answer your questions in a timely fashion. For example, the Technical Support group works with Product Engineering and Symantec Security Response to provide alerting services and virus definition updates.

Symantec's support offerings include the following:

- A range of support options that give you the flexibility to select the right amount of service for any size organization
- Telephone and/or Web-based support that provides rapid response and up-to-the-minute information
- Upgrade assurance that delivers software upgrades
- Global support purchased on a regional business hours or 24 hours a day, 7 days a week basis
- Premium service offerings that include Account Management Services

For information about Symantec's support offerings, you can visit our Web site at the following URL:

www.symantec.com/business/support/index.jsp

All support services will be delivered in accordance with your support agreement and the then-current enterprise technical support policy.

Contacting Technical Support

Customers with a current support agreement may access Technical Support information at the following URL:

www.symantec.com/business/support/contact_techsupp_static.jsp

Before contacting Technical Support, make sure you have satisfied the system requirements that are listed in your product documentation. Also, you should be at the computer on which the problem occurred, in case it is necessary to replicate the problem.

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:

    - Error messages and log files

    - Troubleshooting that was performed before contacting Symantec

    - Recent software configuration changes and network changes

Licensing and registration

If your Symantec product requires registration or a license key, access our technical support Web page at the following URL:

www.symantec.com/business/support/

Customer service

Customer service information is available at the following URL:

www.symantec.com/business/support/

Customer Service is available to assist with non-technical questions, such as the following types of issues:

- Questions regarding product licensing or serialization

- Product registration updates, such as address or name changes

- General product information (features, language availability, local dealers)

- Latest information about product updates and upgrades

- Information about upgrade assurance and support contracts

- Information about the Symantec Buying Programs

- Advice about Symantec's technical support options

- Nontechnical presales questions

- Issues that are related to CD-ROMs or manuals

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

Documentation

Your feedback on product documentation is important to us. Send suggestions for improvements and reports on errors or omissions. Include the title and document version (located on the second page), and chapter and section titles of the text on which you are reporting. Send feedback to:

docs@symantec.com

About Symantec Connect

Symantec Connect is the peer-to-peer technical community site for Symantec's enterprise customers. Participants can connect and share information with other product users, including creating forum posts, articles, videos, downloads, blogs and suggesting ideas, as well as interact with Symantec product teams and Technical Support. Content is rated by the community, and members receive reward points for their contributions.

http://www.symantec.com/connect/storage-management

Contents

About this release

This chapter includes the following topics:

- Introduction

- System requirements

- What's new in this release

- Fixed issues in this release

- Known issues in this release

- List of patches

- Downloading the patches

Introduction

This document provides information about the products in Veritas Storage Foundation and High Availability Solutions 5.0 Maintenance Pack 2 Rolling Patch 3 (5.0 MP2RP3) for HP-UX 11i Version 2 (11iv2). Symantec strongly recommends installing 5.0 MP2RP3 for HP-UX 11iv2 immediately after installing Veritas Storage Foundation and High Availability Solutions 5.0 for HP-UX 11iv2 or 5.0 MP2 for HP-UX 11iv2.

For important updates regarding this release, review the Late-Breaking News TechNote on the Symantec Technical Support website:

http://entsupport.symantec.com/docs/319349

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

For further details, depending on the product for which you want to install this Rolling Patch, refer to one of the following release notes:

■ *Veritas Storage Foundation Release Notes (Version 5.0 MP2 for HP-UX 11iv2)*

■ *Veritas Storage Foundation Cluster File System Release Notes (Version 5.0 MP2 for HP-UX 11iv2)*

■ *Veritas Cluster Server Release Notes (Version 5.0 MP2 for HP-UX 11iv2)*

■ *Veritas Storage Foundation for Oracle RAC Release Notes (Version 5.0 MP2 for HP-UX 11iv2)*

Apply this patch for the following Veritas Storage Foundation and High Availability Solutions products:

■ Veritas Storage Foundation (SF)

■ Veritas Storage Foundation for Oracle (SFORA)

■ Veritas Storage Foundation High Availability (SFHA)

■ Veritas Storage Foundation Cluster File System (SFCFS)

■ Veritas Cluster Server (VCS)

■ Veritas Storage Foundation for Oracle RAC (SF Oracle RAC)

About Symantec Operations Readiness Tools

Symantec™ Operations Readiness Tools (SORT) is a set of Web-based tools and services that lets you proactively manage your Symantec enterprise products. SORT automates and simplifies administration tasks, so you can manage your data center operations more efficiently and get the most of out of your Symantec products.

SORT lets you do the following:

■ Collect, analyze, and report on server configurations across UNIX or Windows environments. You can use this data to do the following:

  ■ Assess whether your systems are ready to install or upgrade Symantec enterprise products

  ■ Tune environmental parameters so you can increase performance, availability, and use

  ■ Analyze your current deployment and identify the Symantec products and licenses you are using

■ Upload configuration data to the SORT Web site, so you can share information with coworkers, managers, and Symantec Technical Support

■ Compare your configurations to one another or to a standard build, so you can determine if a configuration has "drifted"

- Search for and download the latest product patches

- Get notifications about the latest updates for:

  - Patches

  - Hardware compatibility lists (HCLs)

  - Array Support Libraries (ASLs)

  - Array Policy Modules (APMs)

  - VCS agents

- Determine whether your Symantec enterprise product configurations conform to best practices

- Search and browse the latest product documentation

- Look up error code descriptions and solutions

To access SORT, go to:

http://sort.symantec.com

System requirements

For information on system requirements, refer to the product documentation for Veritas Storage Foundation and High Availability Solutions 5.0 MP2 for HP-UX 11iv2.

Note: This release requires that Version 5.0 for HP-UX 11iv2 or 5.0 MP2 for HP-UX 11iv2 is installed on your systems.

Before installing or upgrading Veritas Storage Foundation and High Availability Solutions products, review the current compatibility list to confirm the compatibility of your hardware and software.

For the latest information on supported hardware, visit:

http://entsupport.symantec.com/docs/283161

Symantec recommends installing the latest HP-UX patches from HP.

What's new in this release

This section lists the new features in Veritas Storage Foundation and High Availability Solutions 5.0 MP2RP3 for HP-UX 11iv2.

■ Changes in Veritas Storage Foundation:
See "New in Veritas Storage Foundation" on page 12.

■ Changes in Veritas Storage Foundation Cluster File System:
See "New in Veritas Storage Foundation Cluster File System" on page 12.

New in Veritas Storage Foundation

This release contains the following new feature:

■ Support for resizing a 100% full file system
Veritas File System (VxFS) now supports the resizing of a 100% full file system.

New in Veritas Storage Foundation Cluster File System

This release contains the following new feature:

■ Reduced file removal time in CFS environments
The time required for file removal in a CFS environment is now comparable to the time required for file removal in a local mount.

Fixed issues in this release

This section describes issues fixed in this release.

■ Veritas Storage Foundation:
See "Veritas Storage Foundation fixed issues" on page 12.

■ Veritas Storage Foundation for Oracle:
See "Veritas Storage Foundation for Oracle fixed issues" on page 15.

■ Veritas Cluster Server:
See "Veritas Cluster Server fixed issues" on page 17.

■ Veritas Storage Foundation Cluster File System:
See "Veritas Storage Foundation Cluster File System fixed issues" on page 22.

■ Veritas Storage Foundation for Oracle RAC:
See "Veritas Storage Foundation for Oracle RAC fixed issues" on page 23.

Veritas Storage Foundation fixed issues

Table 1-1 lists the Veritas File System issues fixed in this release.

Table 1-1   Veritas File System fixed issues

Incident	Description
2082342	The umount(1M) operation that is followed by the force unmount operation panics.

2125456	When the file systems are resized, with clones either mounted or in use, the fsadm(1M) command displays the following error messages:
	
	`vmunix: vxfs: WARNING: msgcnt 1`
	`mesg 096: V-2-96: vx_setfsflags - <path>`
	`- filesystem fullfsck flag set - vx_ierror`
	
	`vmunix: vxfs: WARNING: msgcnt 2`
	`mesg 017: V-2-17: vx_clone_setup`
	`- <path>- file system inode 313 marked bad incore`
	
	The file system is marked for the full fsck operation even if there is no metadata corruption.

2080387	There are two observations:
	
	In the first instance, the fsadm(1M) command cannot shrink the file system because the structural files reside on the shrinking area. The following console error message is displayed:
	
	`UX:vxfs fsadm: ERROR: V-3-20340:`
	`attempt to resize <device path >`
	`UX:vxfs fsadm: ERROR: V-3-23643:`
	`Retry the operation after freeing up some space`
	
	In the second instance, the file system is 100% full and cannot be resized. The following console error message is displayed:
	
	`vxfs: NOTICE: msgcnt 1 mesg 001:`
	`<device path> file system full (1 block extent)`

1894113	The fsck(1M) command dumps core due to the SIGBUS signal. The following error message is displayed:
	
	`log replay in progress 13054 Bus Error (coredump)`
	`Failed to full fsck cleanly, exiting`

1945169	When the vxfs_bc_bufhwm(5) tunable does not specify the upper limit of the tunable, and if the tunable is set to a very high value, for example greater than 2 to 3 percent of the file system size, the subsequent system reboot hangs.

Table 1-1 Veritas File System fixed issues *(continued)*

Incident	Description
1946129	The reorg operation performed by the fsadm(1M) command may take a long time to complete.
2026515	In a Veritas File System (VxFS) environment with a large number of files in the root directory, if any read(1M), write(1M), creat(2), or open(2) operation is performed, while the file unmount operation is in progress, the system may panic.
2026557	A create directory operation appears to be hung.
2026575	The fsadm (1M) command fails to shrink a file system and displays the following errors: UX:vxfs fsadm: ERROR: V-3-20340: attempt to resize `<file system>` failed with errno 16 UX:vxfs fsadm: ERROR: V-3-20343: cannot shrink `< file system >` -blocks are currently in use.
2026624	The -v option of the sar(1M) utility does not report the overflow of the inodes.
2090241	The getacl(1M) shows no permissions for a user to access a file, but the user can access the file.
2114136	The system panics with the data TLB fault in the function secfs_recompute_fs.
2117230	A full fsck operation on a file system greater than 2 TB fails with the following error message: UX:vxfs fsck: ERROR: V-3-25289: could not seek to block offset devid/blknum 0/`<offset>` failed UX:vxfs fsck: ERROR: V-3-20694: cannot initialize aggregate file system check failure, aborting ...
2159494	During an internal stress testing, the f:vx_getimap:1a assert is hit while a clone removal operation is in progress.
2159499	During an internal stress test, the f:vx_msgprint:ndebug assert is hit through the vx_fset_markbad() function.

Table 1-1   Veritas File System fixed issues *(continued)*

Incident	Description

2161555	The fsmap(1) command, on a file system whose underlying volume is Logical Volume Manager (LVM), displays the following error if the OnlineJFS license is not present:
	
	`UX:vxfs fsmap: ERROR: V-3-20: :0000`
	`<absolute filename> is not on a VxFS file system:`
	
	In cases where the underlying volume is VxVM , the fsmap(1) command shows the volume name of the last cluster-mounted volume of the system.

Table 1-2 lists the rollup patches included in Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2. For details about the issues fixed in these patches, go to the respective patch details URL.

Table 1-2   Veritas Storage Foundation rollup patches

Patch	Patch Details URL
VRTS 5.0 MP2RP1 VRTSfsman Command Patch (Veritas File System Manual Pages) - PHCO_40589	https://sort.symantec.com/patch/detail/3158
VRTS 5.0 MP2RP1 VRTSfspro Command Patch (Veritas File System Management Services Provider) - PHCO_40591	
VRTS 5.0 MP2RP3 VRTSvxvm Command Patch (Veritas Volume Manager) - PHCO_41469	https://sort.symantec.com/patch/detail/4232
VRTS 5.0 MP2RP3 VRTSvxvm Kernel Patch (Veritas Volume Manager) - PHKL_41470	

Veritas Storage Foundation for Oracle fixed issues

Table 1-3 lists the Veritas Storage Foundation for Oracle issues fixed in this release.

Table 1-3   Veritas Storage Foundation for Oracle fixed issues

Incident	Description
2130633	The `dbed_vmchecksnap(1)` command fails and displays the following error message if the Data Change Object (DCO) volume name does not have a "_dco" suffix: ``` The snapshot plex for volume <volume-name> on <diskgroup-name> does not have a DCO log associated with it ```
2130686	The `dbed_vmclonedb(1M)` command with the -o recoverdb option fails on Oracle Database 11g. The following error message is displayed: ``` SFORA dbed_vmclonedb ERROR V-81-4918 Database clonq has not been correctly recovered ```
2134831	The `dbed_ckptpolicy(1M)` command with the -o update option fails when a volume set has only one volume.
2130675	On Oracle Database 11g, the `dbed_ckptrollback -F datafile` command fails with the following error: ``` SFORA rb.file ERROR V-81-3038 Error occurred while querying Oracle Database. ORA-01135: file 1015 accessed for DML/query is offline ORA-01110: data file ```
2132016	The DBED commands do not work with Oracle version 11g on the PA RISC systems. For example, the `dbed_update(1M)` command fails with the following error messages: ``` /usr/lib/dld.sl: Bad magic number for shared library: /orabinvol/oracle/lib/libclntsh.sl /usr/lib/dld.sl: Exec format error /opt/VRTS/bin/dbed_update[767]: 27590 Abort(coredump) SFORA dbed_update ERROR V-81-8828 An error occurred while updating the repository for <database> ```
2134943	The `dbed_vmclonedb(1M)` command fails with the following error message: ``` SFORA dbed_vmclonedb ERROR V-81-5604 mount failed. ```

Table 1-4 lists the Veritas Storage Foundation Common Utilities for Databases issues fixed in this release.

Table 1-4   Veritas Storage Foundation Common Utilities for Databases fixed issues

Incident	Description

2136216	The configuration of the Storage Foundation for Oracle High Availability (SFORA HA) repository fails with the following errors:
	
	`SFORA /opt/VRTS/bin/sfua_db_config`
	`ERROR V-81-6532 Database authentication failed.`
	`SFORA /opt/VRTS/bin/sfua_db_config`
	`WARNING V-81-6522 Repository database`
	`configuration FAILED`
	`SFORA /opt/VRTS/bin/sfua_db_config`
	`ERROR V-81-9116 Failed to create repository for SFORA.`

2134776	The `dbdst_file_move`(1M) command fails and displays the following error:
	
	`SFORA dbdst_file_move ERROR V-81-6244`
	`Could not execute tsdb_oraquery.`

Table 1-5 lists the Symantec Shared DBMS issue fixed in this release.

Table 1-5   Symantec Shared DBMS fixed issue

Incident	Description
2136253	A scan of production database servers reports a few problems with the remote Sybase SQL Anywhere / Adaptive Server Anywhere (Sybase ASA) database server.

Veritas Cluster Server fixed issues

Table 1-6 lists the Veritas Cluster Server issues fixed in 5.0 MP2RP3 for HP-UX 11iv2.

Table 1-6   Veritas Cluster Server fixed issues

Incident	Description

2014637	A system panics with the panic string
	
	`"Port <number> halting system  due to internal`
	`protocol error"`
	
	, and a stack trace similar to the following:
	
	`gab_halt+00007C (??)`
	`gab_halt+00007C (??)`
	`gab_sf_dlv_gaps+000484 (??, ??, ??)`
	`gab_recv_recover+000198 (??, ??, ??)`
	`gab_receive+002B98 (??)`

2018971	The `/sbin/init.d/vxfen` script takes a considerably long time to complete.
2118691	When a node joins a cluster at a time when another node with a lower LLT-node ID (Low Latency Transport-node ID) is leaving the cluster, the new node crashes with the following panic string: `Port b halting system due to network failure`

2118697	When you try to configure more than eight links with Low Latency Transport(LLT), it displays an unrelated error:
	
	`----`
	`LLT lltconfig ERROR V-14-2-15086`
	`PLINK failed: No space left on device`
	`----`

2118702	When a Low Latency Transport (LLT) client generates heavy packet traffic, the following messages appear repeatedly in the syslog:
	
	`"`
	`vxvm:vxconfigd: advresp_master: GAB returned EAGAIN,`
	`retrying`
	`vxvm:vxconfigd: advresp_master: Retry Successful`
	`vxvm:vxconfigd: advresp_master: GAB returned`
	`EAGAIN, retrying`
	`vxvm:vxconfigd: advresp_master: Retry Successful`
	`"`

Table 1-6 Veritas Cluster Server fixed issues *(continued)*

Incident	Description

2118706	A system crashes with the panic string
	
	`"GAB: Port h halting system due to internal protocol error"`
	
	, and a stack trace similar to the following:
	
	`---------`
	`gab:gab_halt+0xb0()`
	`gab:gab_recv_gaps+0x22c()`
	`gab:gab_receive+0x2b9c()`
	`gab:gab_receive_port_que+0x400()`
	`gab:gab_receive_que+0x210()`
	`gab:gab_lrecv+0x580()`
	`llt:llt_lrsrv_port+0x5d8()`
	`gab:gab_receive_que+0x210()`
	`---------`

2118708	If a node with lowest Low Latency Transport node ID (LLT-node ID) joins a cluster and another node simultaneously leaves, then one of the other nodes in the cluster may panic with the following panic string and stack trace:
	
	Panic string:
	
	`"Port f halting system due to network failure"`
	
	Stack trace:
	
	`---------`
	`panic+0x410`
	`cmn_err+0x1b0`
	`gab_halt+0x80`
	`gab_recv_iofence+0x580`
	`gab_receive+0xe90`
	`gab_receive_port_que+0x230`
	`gab_receive_que+0x170`
	`gab_lrecv+0x990`
	`llt_lrsrv_port+0x540`
	`llt_deliver+0x290`
	`---------`

Table 1-6   Veritas Cluster Server fixed issues *(continued)*

Incident	Description
2118734	If you start and stop the VERITAS Fencing (VxFEN) module in quick succession by using VxFEN scripts in a loop, the VxFEN module may fail to start and the following errors may appear in the syslog ``` --------- [Date Timestamp] [machinename] vmunix: WARNING: VXFEN Warning V-11-1-32790 RFSM GAB err 16 in register [Date Timestamp] [machinename] vmunix: WARNING: VXFEN Warning V-11-1-32817 RFSM start failure: GAB failed - err 2 [Date Timestamp] [machinename] vmunix: WARNING: VXFEN Warning V-11-1-32793 receive thread bails out on start [Date Timestamp] [machinename] vmunix: WARNING: VXFEN Warning V-11-1-32793 send thread bails out on start [Date Timestamp] [machinename] vmunix: VXFEN ERROR V-11-1-16 RFSM Start fs error 2... ------- ```
2118739	In some disk arrays, if you run the vxfenadm (1M) command with the **-g** or **-r** options, the output may display invalid registrations or reservations with NULL keys. The problem may persist even after removing the invalid keys by using the REGISTER and IGNORE operations.
2119621	When a system tries to join a running cluster, it crashes with the following panic string: `"Port w halting system due to depleted memory.`
2119641	Multiple nodes crash with the following error message in syslog: `"Error: GAB lost node nodename before Serviceguard"`
2119657	In a cluster where a large number of data disks are shared, when a node reboots, the end-user experiences a significant I/O pause of two to three minutes.
2133847	User may sometimes witness excessive CPU usage in the Low Latency Transport (LLT) module.

Table 1-6   Veritas Cluster Server fixed issues *(continued)*

Incident	Description
2137122	If an IP is plumbed on top of the MultiNICA resource, the offline script of the Netlsnr agent does not kill the listener process when the cable is pulled.
2137126	When Oracle is linked with the libskgxp library, the Oracle agent displays the following redundant message: `The  IPC library is not from Veritas`
2137129	If you configure the Application Agent to start HP Open View, the Open View alert Java browser fails to start up, and displays a blank screen.
2137163	The hasys command does not list the nodes separated by a hash (#).
2137167	If you run the `hagrp` command (IM) with the -switch option, VCS switches only the hard parent and the child, but not the firm parent.
2137170	High Availability Daemon (HAD) hangs while starting if a large number of open files are configured by the user.
2137171	VCS does not support node names that begin with a number.
2137406	The hashadow daemon dumps core due to a null pointer deference.
2137411	The `hares` command allows the creation of resources that have the special character "."
2137413	HAD dumps core due to segmentation violation while logging a notifier message.
2137416	High Availability Daemon (HAD) dumps core due to segmentation violation on the remote cluster.
2137419	A global Service Group, comes online on both nodes of the cluster leading to concurrency violation.
2137431	In the DiskGroup agent clean script, the PATH variable is incorrectly set for the reboot command.
2137433	In the event of a resource failover, the NFSRestart agent is unable to fail over the lock information.

| Table 1-6 | Veritas Cluster Server fixed issues *(continued)* |

Incident	Description
2137434	The NFS agent occasionally fails to detect the resources assigned to it.
2137435	In a configuration with multiple NICs, when the cable connected to the first NIC is pulled and the second NIC is brought down, the IP resource monitored by the MultiNICA agent is reported as FAULTED.
2137436	The NIC agent incorrectly reports the IP address specified in its configuration as invalid.
2137437	The `nfs_restart hatrigger` script issues too many `hares -list` commands. This has adverse impact on the performance of the script.
2137509	Agents dump core while setting the resource name of a dependent attribute.
2137510	The agent process restarts while invoking the action entry point.
2137972	On the HPUX platform, service threads may dump core due to insufficient stack size.
2137996	When MultiNICB has to switch the interface on the same host multiple times, its memory usage increases.
2167255	In case of Oracle RAC, Oracle resource remains in OFFLINE state after HAD is started on the first probe even if the database is up.

Veritas Storage Foundation Cluster File System fixed issues

Table 1-7 lists the Veritas Storage Foundation Cluster File System issues fixed in this release.

Table 1-7 Veritas Storage Foundation Cluster File System fixed issues

Incident	Description

1891139	In a 2-node Cluster File System (CFS) environment, the secondary node is marked for full fsck and messages such as the following can be seen in the syslog file:
	
	`<date> vmunix: vxfs:`
	`WARNING: msgcnt 12 mesg 012: V-2-12: vx_iget -`
	`<filename> file system invalid inode number`
	`<inode number>`

1959376	The rm(1M) operation to delete a large number of files is about seven times slower in the Cluster File System (CFS) environment as compared to the same operation on the local mount.
2117234	In a Cluster File System (CFS) environment, the startup operation of CFS may hang.

Table 1-8 lists the rollup patch included in Veritas Storage Foundation Cluster File System 5.0 MP2RP3 for HP-UX 11iv2. For details about the issues fixed in this patch, go to the patch details URL.

Table 1-8 Veritas Storage Foundation Cluster File System rollup patch

Patch	Patch Details URL
VRTS 5.0 MP2RP1 VRTSglm Kernel Patch (Veritas Group Lock Manager) - PHKL_40586	https://sort.symantec.com/patch/detail/3159

Veritas Storage Foundation for Oracle RAC fixed issues

Table 1-9 lists the fixed issues in SF Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2.

Table 1-9 SF Oracle RAC fixed issues

Incident	Description
2142304	Oracle takes longer time to start with VCS IPC compared to Oracle UDP/IPC. The VCSIPC implementation does not acknowledge posts that are performed outside the wait call of the receiving process. To determine whether the post is called by Oracle or not requires aggressive polling, that may degrade performance under heavy workload.

Table 1-9 SF Oracle RAC fixed issues *(continued)*

Incident	Description
2142306	The Low Latency Transport Multiplexer (LMX) module may cause the system to panic with the following message: `kernel heap corruption detected` Incorrect manipulation of the request queue corrupts the memory and causes the system to panic. When the last request is removed from the queue, the queue pointers are not updated correctly.
2142336	Oracle Clusterware fails to restart due to incorrect registration with VCSMM.

Known issues in this release

This section describes the known issues in this release.

- Veritas Storage Foundation:
  See "Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2 known issues" on page 24.

- Veritas Storage Foundation for Oracle:
  See "Veritas Storage Foundation for Oracle 5.0 MP2RP3 for HP-UX 11iv2 known issues" on page 29.

- Veritas Storage Foundation Cluster File System:
  See "Veritas Storage Foundation Cluster File System 5.0 MP2RP3 for HP-UX 11iv2 known issues" on page 32.

Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2 known issues

The Veritas Storage Foundation known issues in the 5.0 for HP-UX 11iv2 release are listed in *Veritas Storage Foundation Release Notes (Version 5.0 for HP-UX 11iv2)*.

The Veritas Storage Foundation known issues in the 5.0 MP1 and MP2 releases for HP-UX 11iv2 release are listed in *Veritas Storage Foundation Release Notes (Version 5.0 MP2 for HP-UX 11iv2)*.

This section lists the Veritas Storage Foundation known issues in this release.

During the install of SF from DVD media, the installer may display an install failed error messages for VRTSvxvm package [1527735]

When you run the install of SFCFS and SF from DVD media, the installer may display an install failed error messages for `VRTSvxvm` package. The installer may be intervened by a timeout (600 seconds) during the `VRTSvxvm` package installation from a DVD media depending on the speed of DVD driver.

Workaround:

Use `installer -timeout 1800`. The timeout default value (600 seconds) will be overridden to 1800 seconds.

Task Assistant tab is not available in the VEA GUI [1528943]

After upgrading from SF 4.1 to SF 5.0, the **Task Assistant** tab is not available in the VEA GUI. Use the **System** tab to perform operations using the VEA GUI.

vxinstalltemplate binary of VRTSalloc core dumps [1526254]

The `vxinstalltemplate` binary of VRTSalloc core dumps during 5.0 MP2 SF stack installation. A core file with name `core.vxinstalltemplate` is generated.

Workaround:

To resolve this issue, run the following command:

```
# /usr/sbin/vxtemplate -r -C -d \
```

```
/opt/VRTSalloc/config/alloc_capabilities.txt install
```

Information about a managed host is not updated in Central Server GUI [1519528]

After you upgrade from SF or SFORA 4.1MP2 to 5.0 MP2, information about a managed host (MH) is not updated in the Central Server GUI.

Workaround:

You can use the following steps to push the latest patch on the MH after which the host information is discovered correctly.

To push the latest patch on the MH

1   Remove the UNOF patch of VRTSmh on the managed host. For example:

```
# swremove UNOF_36026
```

2   From the central server, push the latest available patch to the managed host using vxdompackage as given below. For example:

```
#/opt/VRTScs/adm/vxdompackage add --hostfile

/hostfile --imagefile \

/opt/VRTScs/adm/vxdom_images/hpux/VRTSMH_1.1.tar
```

where hostfile is the file containing the managed host name.

Warning messages displayed during verification of VRTS packages

Warning messages are displayed for certain VRTS packages when you run the swverify command to verify the installation. These warnings may be ignored.

If you are upgrading from SF 5.0 MP1, the following warning message is displayed for the following VRTS package:

- VRTSvrw [1454379]
  The following warning message is displayed:

  ```
  WARNING: Fileset "VRTSvrw.VRW-FILESET, l=/,r=5.0" had file warnings.
  ```

If you are upgrading from SF 5.0, the following warning message is displayed for the VRTS package:

- VRTSacclib [1454382]
  The following warning message is displayed:

  ```
  WARNING: Fileset "VRTSacclib.library,l=/,r=5.0.00.0" had file warnings.
  ```

Warning messages may appear in the swinstall.log and swremove.log files (1529476)

Warning messages may appear in the swinstall.log files after you have installed the product using the common product installer script. For example:

```
WARNING: The dependencies for fileset
PHCO_38836.VXFS-ENG-A-MAN,r=1.0" cannot be resolved
(see previous lines).

The operation on this fileset will still be attempted even though
there are unresolved dependencies because the "enforce_dependencies"
option is set to "false".
```

```
WARNING: New Install PHCO_38836.VXFS-ENG-A-MAN,r=1.0

WARNING: 1 of 1 filesets had Warnings.

WARNING: The Analysis Phase had warnings. See the above output for
details.

WARNING: The dependencies for fileset "PHCO_38850.VXFS-RUN,r=1.0"
cannot be resolved (see previous lines). The operation on this
fileset will still be attempted even though there are unresolved
dependencies because the "enforce_dependencies" option is set to
"false".

* Summary of Analysis Phase:

WARNING: New Install PHCO_38850.VXFS-RUN,r=1.0

WARNING: 1 of 3 filesets had Warnings.

* 2 of 3 filesets had no Errors or Warnings.

WARNING: The Analysis Phase had warnings. See the above output
for details.

WARNING: The dependencies for fileset "PHKL_38829.VXVM-KRN,r=1.0"
cannot be resolved (see previous lines). The operation on this fileset
will still be attempted even though there are unresolved dependencies
because the "enforce_dependencies" option is set to "false".

* Summary of Analysis Phase:

WARNING: New Install PHKL_38829.VXVM-KRN,r=1.0

WARNING: 1 of 1 filesets had Warnings.

WARNING: The Analysis Phase had warnings. See the above output
for details.

WARNING: The dependencies for fileset "PHCO_38830.VXVM-RUN,r=1.0"
cannot be resolved (see previous lines). The operation on this
fileset will still be attempted even though there are unresolved
```

dependencies because the "enforce_dependencies" option is set to
"false".

* Summary of Analysis Phase:

WARNING: New Install PHCO_38830.VXVM-RUN,r=1.0

WARNING: 1 of 4 filesets had Warnings.

* 3 of 4 filesets had no Errors or Warnings.

WARNING: The Analysis Phase had warnings. See the above output
for details.

Warning messages may appear in the swremove.log file while removing
the patches

* The fileset "PHCO_38831.VMPRO-PRG,l=/opt/VRTSvmpro,r=1.0" requires
the selected fileset "PHKL_38829.VXVM-KRN,l=/,r=1.0" as a corequisite.

WARNING: The dependencies for fileset "PHKL_38829.VXVM-KRN,l=/,r=1.0"
cannot be resolved (see previous lines). The operation on this fileset
will still be attempted even though there are unresolved dependencies
because the "enforce_dependencies" option is set to "false".

* The fileset "PHCO_38831.VMPRO-PRG,l=/opt/VRTSvmpro,r=1.0" requires
the selected fileset "PHCO_38830.VXVM-RUN,l=/,r=1.0" as a corequisite.

WARNING: The dependencies for fileset "PHCO_38830.VXVM-RUN,l=/,r=1.0"
cannot be resolved (see previous lines).The operation on this fileset
will still be attempted even though there are unresolved dependencies
because the "enforce_dependencies" option is set to "false".

* Summary of Analysis Phase:

WARNING: Remove PHKL_38829.VXVM-KRN,l=/,r=1.0

WARNING: Remove PHCO_38830.VXVM-RUN,l=/,r=1.0

WARNING: 2 of 46 filesets had Warnings.

* 44 of 46 filesets had no Errors or Warnings.

```
WARNING: The Analysis Phase had warnings. See the above output for
details.
```

These warning messages are harmless and may be ignored. The required patches
are correctly installed despite these warning messages.

Veritas Storage Foundation for Oracle 5.0 MP2RP3 for HP-UX 11iv2 known issues

The Veritas Storage Foundation for Oracle known issues in the 5.0 for HP-UX
11iv2 release are listed in *Veritas Storage Foundation Release Notes (Version 5.0
for HP-UX 11iv2)*.

The Veritas Storage Foundation for Oracle known issues in the 5.0 MP1 and MP2
releases for HP-UX 11iv2 release are listed in *Veritas Storage Foundation Release
Notes (Version 5.0 MP2 for HP-UX 11iv2)*.

This section lists the Veritas Storage Foundation for Oracle known issues in this
release.

Warning messages may appear in the swinstall.log [1540372]

Warning messages may appear in the swinstall.log file after you have installed
the product using the common product installer script. For example:

```
WARNING: The dependencies for fileset "PHKL_38795.ODM-KRN,r=1.0"
cannot be resolved (see previous lines).

The operation on this fileset will still be attempted even though
there are unresolved dependencies because the "enforce_dependencies"
option is set to "false".
* The software "PHKL_38794.VXFS-KRN,l=/,r=1.0" is not in the correct
state (AVAILABLE, INSTALLED, or CONFIGURED). You will need to recopy,
reinstall or configure this software before operating on software that
depends on it.
The corequisite "PHKL_38794.VXFS-KRN,fa=HP-UX_B.11.23_PA" for fileset
"PHKL_38795.ODM-RUN,r=1.0" cannot be successfully resolved.


WARNING: The dependencies for fileset "PHKL_38795.ODM-RUN,r=1.0" cannot
be resolved (see previous lines). The operation on this fileset will
still be attempted even though there are unresolved dependencies because
the "enforce_dependencies" option is set to "false".
```

```
Summary of Analysis Phase:

WARNING: New Install PHKL_38795.ODM-KRN,r=1.0

WARNING: New Install PHKL_38795.ODM-RUN,r=1.0

WARNING: 2 of 3 filesets had Warnings.

* 1 of 3 filesets had no Errors or Warnings.

WARNING: The Analysis Phase had warnings. See the above output
for details.
```

These warning messages are harmless and may be ignored. The required patches are correctly installed despite these warning messages.

Offline checkpoint clonedb operation for 10gr1 fails for 1000 or more tablespaces [1526006]

The checkpoint dbed_clonedb fails if there are 1000 or more tablespaces in the primary Oracle Database. This issue is specific to Oracle 10gr1 only. The following error message is displayed:

```
SFORA dbed_clonedb ERROR V-81-4919 Database ncln7 has reported an error.

SFORA dbed_clonedb ERROR V-81-4881 Log file is at /tmp/oralog.out.17868.
```

Aries error message is displayed due to the HP-UX Aries Emulator [1484070]

Aries errors are generated on the HP-UX IA architecture by vxstorage_stats and dbed_analyzer.

The following error message is displayed when vxstorage_stats is executed:

```
/opt/VRTSdbed/bin/vxstorage_stats
-s   -f /snap_data11r1/FLAS11r1/system01.dbf
[HP ARIES32]: ***** Log time:  <Date & Time>  *****
[HP ARIES32]:
[HP ARIES32]: Internal Error (code : 021) [PID : <process_ID>]
[HP ARIES32]:   Got masked synchronous signal 11.
[HP ARIES32]:   Aborting process!!
[HP ARIES32]:
[HP ARIES32]: ARIES Version   :
[HP ARIES32]:   11.23 (PHSS_38526) Ver: 2.0.00022 [Date & Time]
```

```
[HP ARIES32]: Invoked command :
[HP ARIES32]:   /opt/VRTSdbed/.dba/vxstorage_stats
-s -f /snap_data11r1/FLAS11r1/system01.dbf
```

The following error message is displayed when `dbed_analyzer` is executed:

```
dbed_analyzer shows following output:

 /opt/VRTSdbed/bin/dbed_analyzer -S FLAS11r1
-H /oracle/11gr1 -o sort=tbs -f listtbs.txt
[HP ARIES32]: ***** Log time:  <Date & Time>  *****
[HP ARIES32]:
[HP ARIES32]: Internal Error (code : 021) [PID : <process_ID>]
[HP ARIES32]:   Got masked synchronous signal 11.
[HP ARIES32]:   Aborting process!!
[HP ARIES32]:
[HP ARIES32]: ARIES Version   :
[HP ARIES32]:   11.23 (PHSS_38526) Ver: 2.0.00022 [Date & Time]
[HP ARIES32]: Invoked command :
[HP ARIES32]:   /opt/VRTSdbed/.dba/dbed_analyzer -S FLAS11r1
-H /oracle/11gr1 -o sort=tbs -f listtbs.txt
```

Cannot unmount single-host clone in an 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 fall back to the fixed node.

An offline mode snapshot clone database fails to start up on the offhost [2134894]

A clone database startup operation on the offhost by using the `dbed_vmclonedb -o recoverdb` fails with the following error:

```
startup database failed
```

The database startup fails on the offhost because the `db_recovery_file_dest` location may not exist on the offhost.

Workaround:

Comment out the `db_recovery_file_dest` parameters in the clone database `pfile`/`spfile` and then restart the clone database.

Veritas Storage Foundation Cluster File System 5.0 MP2RP3 for HP-UX 11iv2 known issues

The Veritas Storage Foundation Cluster File System known issues in the 5.0 for HP-UX 11iv2 release are listed in *Veritas Storage Foundation Release Notes (Version 5.0 for HP-UX 11iv2)*.

The Veritas Storage Foundation Cluster File System known issues in the 5.0 MP1 and MP2 releases for HP-UX 11iv2 are listed in *Veritas Storage Foundation Release Notes (Version 5.0 MP2 for HP-UX 11iv2)*.

This section lists the Veritas Storage Foundation Cluster File System known issues in this release.

Warning messages may appear in the swinstall.log and swremove.log files (1529476)

Warning messages may appear in the `swinstall.log` files after you have installed the product using the common product installer script. For example:

```
WARNING: The dependencies for fileset
PHCO_38836.VXFS-ENG-A-MAN,r=1.0"cannot be resolved (see
previous lines).
The operation on this fileset will still be attempted
even though there are unresolved dependencies because the
"enforce_dependencies" option is set to "false".
WARNING: New Install PHCO_38836.VXFS-ENG-A-MAN,r=1.0
WARNING: 1 of 1 filesets had Warnings.
WARNING: The Analysis Phase had warnings. See the above
output for details.
WARNING: The dependencies for fileset
"PHCO_38850.VXFS-RUN,r=1.0"cannot be resolved (see
previous lines). The operation on this fileset will still
be attempted even though there are unresolved
dependencies because the "enforce_dependencies" option is
set to "false".

* Summary of Analysis Phase:
WARNING: New Install PHCO_38850.VXFS-RUN,r=1.0
WARNING: 1 of 3 filesets had Warnings.
* 2 of 3 filesets had no Errors or Warnings.
```

```
WARNING: The Analysis Phase had warnings. See the above
output for details.
WARNING: The dependencies for fileset
"PHKL_38829.VXVM-KRN,r=1.0" cannot be resolved (see
previous lines). The operation on this fileset will still
be attempted even though there are unresolved
dependencies because the "enforce_dependencies" option is
set to "false".
* Summary of Analysis Phase:
WARNING: New Install PHKL_38829.VXVM-KRN,r=1.0
WARNING: 1 of 1 filesets had Warnings.
WARNING: The Analysis Phase had warnings. See the above
output for details.
WARNING: The dependencies for fileset
"PHCO_38830.VXVM-RUN,r=1.0" cannot be resolved (see
previous lines). The operation on this fileset will still
be attempted even though there are unresolved
dependencies because the "enforce_dependencies" option is
set to "false".
* Summary of Analysis Phase:
WARNING: New Install PHCO_38830.VXVM-RUN,r=1.0
WARNING: 1 of 4 filesets had Warnings.
* 3 of 4 filesets had no Errors or Warnings.
WARNING: The Analysis Phase had warnings. See the above
output for details.
```

Warning messages may appear in the `swremove.log` file while removing the patches. For example:

```
* The fileset
"PHCO_38831.VMPRO-PRG,l=/opt/VRTSvmpro,r=1.0" requires
the selected fileset "PHKL_38829.VXVM-KRN,l=/,r=1.0"
as a corequisite.
WARNING: The dependencies for fileset
"PHKL_38829.VXVM-KRN,l=/,r=1.0"cannot be resolved (see previous lines).
The operation on this fileset will still be attempted even though there
are unresolved dependencies because the "enforce_dependencies" option is
set to "false".
* The fileset
"PHCO_38831.VMPRO-PRG,l=/opt/VRTSvmpro,r=1.0" Storage
Foundation Cluster File System Release Notes 71
Known issues
requires the selected fileset
"PHCO_38830.VXVM-RUN,l=/,r=1.0"
```

```
as a corequisite.
WARNING: The dependencies for fileset
"PHCO_38830.VXVM-RUN,l=/,r=1.0"
cannot be resolved (see previous lines).
The operation on this fileset will still be attempted
even
though there are unresolved dependencies because the
"enforce_dependencies" option is set to "false".
* Summary of Analysis Phase:
WARNING: Remove PHKL_38829.VXVM-KRN,l=/,r=1.0
WARNING: Remove PHCO_38830.VXVM-RUN,l=/,r=1.0
WARNING: 2 of 46 filesets had Warnings.
* 44 of 46 filesets had no Errors or Warnings.
WARNING: The Analysis Phase had warnings. See the above
output for details.
```

These warning messages are harmless and may be ignored. The required patches
are correctly installed despite these warning messages.

During the install of SFCFS from DVD media, the installer may display an install failed error messages for VRTSvxvm package (1527735)

When you run the install of SFCFS and SF from DVD media, the installer may
display an install failed error messages for `VRTSvxvm` package. The installer may
be intervened by a timeout (600 seconds) during the `VRTSvxvm` package installation
from a DVD media depending on the speed of DVD driver.

Workaround:

Use `installer -timeout` 1800. The timeout default value (600 seconds) will be
overridden to 1800 seconds.

Task Assistant tab is not available in the VEA GUI [1520408]

After upgrading from SFCFS 4.1 to SFCFS 5.0, the **Task Assistant** tab is not
available in the VEA GUI. Use the **System** tab to perform operations using the
VEA GUI.

vxinstalltemplate binary of VRTSalloc core dumps [1522127]

The `vxinstalltemplate` binary of VRTSalloc core dumps during 5.0 MP2 SFCFS
stack installation. A core file with name `core.vxinstalltemplate` is generated.

Workaround:

To resolve this issue, run the following command:

```
# /usr/sbin/vxtemplate -r -C -d \

/opt/VRTSalloc/config/alloc_capabilities.txt install
```

Information about a managed host is not updated in Central Server GUI [1519528]

After you upgrade from SFCFS 4.1MP2 to 5.0 MP2, information about a managed host (MH) is not updated in the Central Server GUI.

Workaround:

You can use the following steps to push the latest patch on the MH after which the host information is discovered correctly.

To push the latest patch on the MH

1   Remove the UNOF patch of VRTSmh on the managed host. For example:

```
# swremove UNOF_36026
```

2   From the central server, push the latest available patch to the managed host using vxdompackage as given below. For example:

```
#/opt/VRTScs/adm/vxdompackage add --hostfile

/hostfile --imagefile \

/opt/VRTScs/adm/vxdom_images/hpux/VRTSMH_1.1.tar
```

where hostfile is the file containing the managed host name.

List of patches

This section lists the patches included in this release.

- Veritas Storage Foundation:
  See "Veritas Storage Foundation patches in 5.0 MP2RP3 for HP-UX 11iv2" on page 36.

- Veritas Storage Foundation for Oracle:
  See "Veritas Storage Foundation for Oracle patches in 5.0 MP2RP3 for HP-UX 11iv2" on page 36.

- Veritas Cluster Server:

See "Veritas Cluster Server patches in 5.0 MP2RP3 for HP-UX 11iv2" on page 37.

■ Veritas Storage Foundation Cluster File System:
See "Veritas Storage Foundation Cluster File System patches in 5.0 MP2RP3 for HP-UX 11iv2" on page 38.

■ Veritas Storage Foundation for Oracle RAC
See "Veritas Storage Foundation for Oracle RAC patches in 5.0 MP2RP3 for HP-UX 11iv2" on page 39.

Veritas Storage Foundation patches in 5.0 MP2RP3 for HP-UX 11iv2

Table 1-10 lists the Veritas Storage Foundation patches included in this release.

Table 1-10 Veritas Storage Foundation patches

Patch	Version	Description
PHCO_41468	1.0	VRTS 5.0 MP2RP3 VRTSvxfs Command Patch (Veritas File System)
PHKL_41331	1.0	VRTS 5.0 MP2RP3 VRTSvxfs Kernel Patch (Veritas File System)
PHCO_41469	1.0	VRTS 5.0 MP2RP3 VRTSvxvm Command Patch (Veritas Volume Manager) (Rollup patch)
PHKL_41470	1.0	VRTS 5.0 MP2RP3 VRTSvxvm Kernel Patch (Veritas Volume Manager) (Rollup patch)
PHCO_40591	1.0	VRTS 5.0 MP2RP1 VRTSfspro Command Patch (Veritas File System Management Services Provider) (Rollup patch)
PHCO_40589	1.0	VRTS 5.0 MP2RP1 VRTSfsman Command Patch (Veritas File System Manual Pages) (Rollup patch)

Veritas Storage Foundation for Oracle patches in 5.0 MP2RP3 for HP-UX 11iv2

Table 1-11 lists the Veritas Storage Foundation for Oracle patches included in this release.

Table 1-11   Veritas Storage Foundation for Oracle patches

Patch	Version	Description
PHCO_41450	1.0	VRTS 5.0 MP2RP3 VRTSdbed Command Patch (Veritas Storage Foundation for Oracle)
PHCO_41451	1.0	VRTS 5.0 MP2RP3 VRTSdbcom Command Patch (Veritas Storage Foundation Common Utilities for Databases)
PHCO_41477	1.0	VRTS 5.0 MP2RP3 VRTSdbms3 Command Patch (Symantec Shared DBMS)
PHCO_41468	1.0	VRTS 5.0 MP2RP3 VRTSvxfs Command Patch (Veritas File System)
PHKL_41331	1.0	VRTS 5.0 MP2RP3 VRTSvxfs Kernel Patch (Veritas File System)
PHCO_41469	1.0	VRTS 5.0 MP2RP3 VRTSvxvm Command Patch (Veritas Volume Manager) (Rollup patch)
PHKL_41470	1.0	VRTS 5.0 MP2RP3 VRTSvxvm Kernel Patch (Veritas Volume Manager) (Rollup patch)
PHCO_40591	1.0	VRTS 5.0 MP2RP1 VRTSfspro Command Patch (Veritas File System Management Services Provider) (Rollup patch)
PHCO_40589	1.0	VRTS 5.0 MP2RP1 VRTSfsman Command Patch (Veritas File System Manual Pages) (Rollup patch)

Veritas Cluster Server patches in 5.0 MP2RP3 for HP-UX 11iv2

Table 1-12 lists the Veritas Cluster Server patches included in this release.

Table 1-12   Veritas Cluster Server patches

Patch	Version	Description
PHCO_41465	1.0	VRTS 5.0 MP2 RP3 VRTSvxfen Command Patch (Veritas I/O Fencing)
PHKL_41466	1.0	VRTS 5.0 MP2 RP3 VRTSvxfen Kernel Patch (Veritas I/O Fencing)
PHNE_41464	1.0	VRTS 5.0 MP2 RP3 VRTSgab Kernel Patch (Veritas Group Membership and Atomic Broadcast)
PHNE_41463	1.0	VRTS 5.0 MP2 RP3 VRTSllt Kernel patch (Veritas Low Latency Transport)
PVCO_03921	1.0	VRTS 5.0 MP2 RP3 VRTSvcs/VRTSvcsag Command Patch (Veritas Cluster Server Bundled Agents)
PVCO_03922	1.0	VRTS 5.0 MP2 RP3 VRTSvcsor/VRTScsocw Command Patch (Oracle Agent)

Veritas Storage Foundation Cluster File System patches in 5.0 MP2RP3 for HP-UX 11iv2

Table 1-13 lists the Veritas Storage Foundation Cluster File System patches included in this release.

Table 1-13   Veritas Storage Foundation Cluster File System patches

Patch	Version	Description
PHNE_41463	1.0	VRTS 5.0 MP2RP3 VRTSllt Kernel Patch (Veritas Low Latency Transport)
PHNE_41464	1.0	VRTS 5.0 MP2RP3 VRTSgab Kernel Patch (Veritas Group Membership and Atomic Broadcast)
PHKL_41466	1.0	VRTS 5.0 MP2RP3 VRTSvxfen Kernel Patch (Veritas I/O Fencing)

Table 1-13   Veritas Storage Foundation Cluster File System patches *(continued)*

Patch	Version	Description
PHCO_41465	1.0	VRTS 5.0 MP2RP3 VRTSvxfen Command Patch (Veritas I/O Fencing)
PVCO_03921	1.0	VRTS 5.0 MP2RP3 VRTSvcs Command Patch (Veritas Cluster Server) VRTS 5.0 MP2RP3 VRTSvcsag Command Patch (Veritas Cluster Server Bundled Agents)
PHCO_41468	1.0	VRTS 5.0 MP2RP3 VRTSvxfs Command Patch (Veritas File System)
PHKL_41331	1.0	VRTS 5.0 MP2RP3 VRTSvxfs Kernel Patch (Veritas File System)
PHCO_41469	1.0	VRTS 5.0 MP2RP3 VRTSvxvm Command Patch (Veritas Volume Manager) (Rollup patch)
PHKL_41470	1.0	VRTS 5.0 MP2RP3 VRTSvxvm Kernel Patch (Veritas Volume Manager) (Rollup patch)
PHKL_40586	1.0	VRTS 5.0 MP2RP1 VRTSglm Kernel Patch (Veritas Group Lock Manager) (Rollup patch)
PHCO_40591	1.0	VRTS 5.0 MP2RP1 VRTSfspro Command Patch (Veritas File System Management Services Provider) (Rollup patch)
PHCO_40589	1.0	VRTS 5.0 MP2RP1 VRTSfsman Command Patch (Veritas File System Manual Pages) (Rollup patch)

Veritas Storage Foundation for Oracle RAC patches in 5.0 MP2RP3 for HP-UX 11iv2

Table 1-14 lists the patches that are installed for SF Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2.

Table 1-14   SF Oracle RAC patches in 5.0 MP2RP3 for HP-UX 11iv2

Patch	Version	Description
PHCO_35217	1.0	VRTS 5.0 MP1 VRTSmh Command Patch (MP2)
PHCO_35301	1.0	VRTS 5.0 MP1 VRTSat Command Patch (MP2)
PHCO_37077	1.0	VRTS 5.0 MP1RP2 VRTSdcli Command Patch (MP2)
PHCO_38381	1.0	VRTS 5.0 MP1RP2 OB Command Patch (MP2) (MP2)
PHCO_38383	1.0	VRTS 5.0 MP1RP2 VRTSobgui Command Patch (MP2) (MP2)
PHCO_38384	1.0	VRTS 5.0 MP1RP2 VRTSaa Command Patch (MP2)
PHCO_38385	1.0	VRTS 5.0 MP1RP2 VRTSccg Command Patch (MP2)
PHCO_38831	1.0	VRTS 5.0 MP1RP6 VRTSvmpro Command Patch (MP2)
PHCO_38834	1.0	VRTS 5.0 MP2 VRTSddlpr Command Patch (MP2)
PVCO_03850	1.0	VRTS 5.0 MP1RP1 CAVF Commands Patch (MP2)
PHCO_38981	1.0	VRTS 5.0 MP2 VRTSalloc Command Patch (MP2)
PHCO_38997	1.0	VRTS 5.0 MP2 VRTSobc33 Command Patch (MP2)
PVKL_03920	1.3	VRTS 5.0 MP2RP3 VRTSdbac Patch (MP2)
PHCO_41450	1.0	VRTS 5.0 MP2RP2 VRTSdbed Command Patch (MP2)
PHCO_41451	1.0	VRTS 5.0 MP2RP1 VRTSdbcom Command Patch (MP2)
PHCO_41465	1.0	VRTS 5.0 MP2 RP3 VRTSvxfen Command Patch (MP2)
PHCO_41468	1.0	VRTS 5.0 MP2RP3 VRTSvxfs Command Patch (MP2)
PHCO_41469	1.0	VRTS 5.0 MP2RP3 VRTSvxvm Command Patch (MP2)
PHKL_38795	1.0	VRTS 5.0 MP1RP1 VRTSodm Kernel Patch (MP2)
PHKL_38970	1.0	VRTS 5.0 GARP1 VRTSgms Kernel Patch (MP2)
PHKL_40586	1.0	VRTS 5.0 MP2RP1 VRTSglm Kernel Patch (MP2)
PHCO_40589	1.0	VRTS 5.0 MP2RP1 VRTSfsman Command Patch (MP2)
PHCO_40591	1.0	VRTS 5.0 MP2RP1 VRTSfspro Command Patch (MP2)
PHKL_41331	1.0	VRTS 5.0 MP2RP3 VRTSvxfs Kernel Patch (MP2)
PHKL_41466	1.0	VRTS 5.0 MP2 RP3 VRTSvxfen Kernel Patch (MP2)

Table 1-14   SF Oracle RAC patches in 5.0 MP2RP3 for HP-UX 11iv2 *(continued)*

Patch	Version	Description
PHCO_41477	1.0	VRTS 5.0 RP1 Symantec DBMS3 Command Patch (MP2)
PHKL_41470	1.0	VRTS 5.0 MP2RP3 VRTSvxvm kernel Patch (MP2)
PHNE_41463	1.0	VRTS 5.0 MP2 RP3 VRTSllt Kernel patch (MP2)
PHNE_41464	1.0	VRTS 5.0 MP2 RP3 VRTSgab Kernel Patch (MP2)
PHSS_35962	1.0	Symantec JRE Redistribution (MP2)
PHSS_35963	1.0	Symantec JRE Redistribution (MP2)
PVCO_03671	5.0.1.0	VRTS 5.0 MP1 VRTSvrpro Command Patch (MP2)
PVCO_03672	5.0.1.0	VRTS 5.0 MP1 VRTSvrw GUI Patch (MP2)
PVCO_03678	5.0.1.0	VRTS 5.0 MP1 VRTScscm Command Patch (MP2)
PVCO_03680	5.0.1.0	VRTS 5.0 MP1 VRTScssim Command Patch (MP2)
PVCO_03686	5.0.1.0	VRTS 5.0 MP1 VRTScmccc Command Patch (MP2)
PVCO_03689	5.0.1.0	VRTS 5.0 MP1 VRTScmcs Command Patch (MP2)
PVCO_03690	5.0.1.0	VRTS 5.0 MP1 VRTScscw Command Patch (MP2)
PVCO_03697	1.00	VRTS 5.0 MP1 SYMClma Command Patch (MP2)
PVCO_03698	1.0	VRTS 5.0 MP1 VRTSsmf Command Patch (MP2)
PVCO_03921	1.0	VRTS 5.0 MP2 RP3 VRTSvcs/VRTSvcsag Command Patch (MP2)
PVCO_03922	1.0	VRTS 5.0 MP2 RP3 VRTSvcsor/VRTScsocw Command Patch (MP2)

Downloading the patches

The patches included in Veritas Storage Foundation and High Availability Solutions 5.0 MP2RP3 for HP-UX 11iv2 are available for download from the Symantec website. After downloading the file, use gunzip and tar to uncompress and extract.

For the MP2RP3 download archive and instructions, visit:

http://sort.symantec.com/patch/matrix

2

Installing the patches

This chapter includes the following topics:

- About the installrp script

- Installing Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2

- Installing Veritas Storage Foundation High Availability 5.0 MP2RP3 for HP-UX 11iv2

- Installing Veritas Cluster Server 5.0 MP2RP3 for HP-UX 11iv2

- Installing Veritas Storage Foundation Cluster File System 5.0 MP2RP3 for HP-UX 11iv2

- Installing Veritas Storage Foundation for Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2

About the installrp script

Veritas Storage Foundation and High Availability Solutions 5.0 MP2RP3 for HP-UX 11iv2 provides an installation script. To install the patches included in this release, the recommended method is to use the `installrp` script. The `installrp` script allows you to install all the patches associated with the packages installed. After using the `installrp` script, you may need to reboot systems.

Table 2-1 lists the command line options for the installrp script.

Table 2-1   Command line options for the installrp script

Command Line Option	Function
`[ <system1> <system2>... ]`	Specifies the systems on which to run the installation options. If not specified, the command prompts for a system name.

Table 2-1   Command line options for the installrp script *(continued)*

Command Line Option	Function
[-precheck]	The -precheck option is used to confirm that systems meet the products install requirements before installing.
[-responsefile <*response_file*>]	The -responsefile option is used to perform automated installations or uninstallations using information stored in a file rather than prompting for information. <*response_file*> is the full path of the file that contains configuration definitions. The -enckeyfile option is required with the -responsefile option when the response file contains encrypted passwords.
[-patchpath <*patch_path*>]	The -patchpath option is used to define the complete path of a directory available to all install systems (usually NFS mounted) that contains all patches to be installed by installrp.
[-tmppath <*tmp_path*>]	The -tmppath option is used to select a directory other than /var/tmp as the working directory for installrp. This destination is where initial logging is performed and where filesets are copied on remote systems before installation.
[-logpath <*log_path*>]	The -logpath option is used to select a directory other than /opt/VRTS/install/logs as the location where installrp log files, summary file, and response file are saved.
[-keyfile <*ssh_key_file*>]	The -keyfile option specifies a key file for SSH. When this option is used, -i <*ssh_key_file*> is passed to every SSH invocation.
[-enckeyfile <*encyption_key_file*>]	The -enckeyfile option specifies the location of a file containing the key to decrypt encrypted passwords stored in response files.

Table 2-1   Command line options for the installrp script *(continued)*

Command Line Option	Function
[-encrypt <*password*>]	The -encrypt option encrypts <*password*> using the encryption key provided with the -enckeyfile option so that the encrypted password can be stored in response files.
[-rsh]	The -rsh option is used when rsh and rcp are to be used for communication between systems instead of ssh and scp. When the -rsh option is not used, systems must be pre-configured such that ssh commands between systems execute without prompting for passwords or confirmations.
[-listpatches]	The -listpatches option is used to display product patches in correct installation order.

Installing Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2

The following sample procedure is based on installing Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2 on a single system.

Note: The same procedure can also be used to install Veritas Storage Foundation for 5.0 MP2RP3 for HP-UX 11iv2.

To install Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2

1   Mount the software disc.

2   Move to the top-level directory on the disc.

3   From this directory, type the following command to install on the local system only. Also use this command to install on remote systems using the secure shell (ssh) utilities:

    # **./installrp**

    The sample installation assumes that you are using ssh. However, if you use the remote shell utilities to install on remote systems, additionally specify the -rsh option:

    # **./installrp -rsh**

4   At the prompt, enter the system names on which 5.0 MP2RP3 for HP-UX 11iv2 is to be installed.

```
Enter the system names separated by spaces on which to
install 5.0 MP2RP3 for HP-UX 11iv2: host1
```

5   After the list of patches is displayed, press Return to continue with installation.

6   After installation is complete, reboot the system by using the following command:

```
# shutdown -r now
```

If any patches fail to install, manually install them to complete the installation.

7   Verify the installation of the patches by using the following commands:

```
# swlist | grep -i mp2rp
```

```
# swverify [patch names]
```

Installing Veritas Storage Foundation High Availability 5.0 MP2RP3 for HP-UX 11iv2

You can add high availability functionality to Veritas Storage Foundation High Availability (SFHA) by installing Veritas Cluster Server (VCS). For information on installing VCS 5.0 MP2RP3 for HP-UX 11iv2:

See "Installing Veritas Cluster Server 5.0 MP2RP3 for HP-UX 11iv2" on page 46.

Installing Veritas Cluster Server 5.0 MP2RP3 for HP-UX 11iv2

You can perform the installation in one of the following ways:

■ Full installation
See "Veritas Cluster Server 5.0 MP2RP3 for HP-UX 11iv2 full installation" on page 47.

■ Phased installation
See "Veritas Cluster Server 5.0 MP2RP3 for HP-UX 11iv2 phased installation" on page 48.

Veritas Cluster Server 5.0 MP2RP3 for HP-UX 11iv2 full installation

If you are currently running a VCS cluster, you can run the installrp script to upgrade to VCS 5.0 MP2RP3 for HP-UX 11iv2.

Required HP-UX patches

Before upgrading to VCS 5.0 MP2RP3 for HP-UX 11iv2, install the following HP-UX patches on each node:

PHSS_37958   LIBCL patch Required for HP-UX (PA)
and HP-UX (IA) systems

PHCO_38526   Aries cumulative patch Required for
HP-UX (PA) and HP-UX (IA) systems

These patches are available on HP IT resource center (www.itrc.hp.com).

Before upgrading to VCS 5.0 MP2RP3 for HP-UX 11iv2, Symantec recommends that you take a backup of the types.cf and main.cf configuration files.

Stop the application agents that are installed on the VxVM disk (example, NBU agent). Perform the following steps to stop the application agents.

To stop the application agents

1   Take the resources offline on all systems that you want to upgrade.

```
# hares -offline resname -sys sysname
```

2   Stop the application agents that are installed on VxVM disk on all the systems.

```
# haagent -stop AgentName -sys sysname
```

3   Ensure that the agent processes are not running.

```
# ps -ef | grep Agent
```

This command does not list any processes in the VxVM mount directory.

To upgrade to VCS 5.0 MP2RP3 for HP-UX 11iv2

1   Log in as superuser on one of the systems for installation.

2   Insert the disc containing the 5.0 MP2RP3 for HP-UX 11iv2 software into the disc drive of one of the cluster nodes.

3   Mount the disc on a suitable mount point.

4   Navigate to the folder containing the upgrade program and start the upgrade program:

```
./installrp [-rsh] node1 node2... nodeN
```

5   After the initial system checks and the requirements checks are complete, press **Return** to start upgrading the depots.

6   When the installation is complete, note the locations of the summary, log, and response files indicated by the installer.

7   Perform the following steps:

■   Update the types.cf file to the new version.

```
# cp -p /etc/VRTSvcs/conf/config/types.cf \
/etc/VRTSvcs/conf/config/types.cf.orig
# cp -p /etc/VRTSvcs/conf/types.cf \
/etc/VRTSvcs/conf/config/types.cf
```

■   If you had added custom type definitions in the original types.cf file, you must add them to the new types.cf file.

8   Update the main.cf file to configure resources affected by the upgrade.

Execute the following command to restart your systems:

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

Veritas Cluster Server 5.0 MP2RP3 for HP-UX 11iv2 phased installation

You can perform a minimal downtime upgrade in the following phases:

■   Select a group of one or more cluster nodes to upgrade (group A) and leave a group of one or more nodes running (group B).

■   Upgrade the group A nodes as follows:

■   Switch over the service group to the nodes that are running in group B.

■   Freeze service group operations and stop VCS on the nodes in group A

■   Install the rolling patch using the installrp script on the nodes in the group A.

■   Restart the cluster services on group A.

■   Switch back the service group from group B to the upgrades nodes on group A.

■ Upgrade the remaining nodes in group B.

To perform a minimal downtime upgrade

If you do not have the fencing module configured on your cluster, ignore all commands related to fencing in this procedure.

1 Select a node (or a group of nodes) in the cluster for upgrade (group A).

2 Backup llttab, llthosts, gabtab, types.cf, and main.cf files.

```
# cp /etc/llttab /etc/llttab.bkp
# cp /etc/llthosts /etc/llthosts.bkp
# cp /etc/gabtab /etc/gabtab.bkp
# cp /etc/VRTSvcs/conf/config/main.cf \
/etc/VRTSvcs/conf/config/main.cf.bkp
# cp /etc/VRTSvcs/conf/config/types.cf \
/etc/VRTSvcs/conf/config/types.cf.bkp
```

3 Switch the failover service groups from the nodes in the first subcluster (group A) to the nodes running in the second subcluster (group B).

```
# hagrp -switch groupname -to nodename
```

4 Offline the parallel service groups on the nodes in the first subcluster (group A).

```
# hagrp -offline groupname -sys nodename
```

Note: Before you offline the parallel service groups on the nodes in the first subcluster (group A), ensure that the parallel service groups are online on the nodes in the second subcluster (group B).

5 Make the VCS configuration writable on the nodes running in the second subcluster (group B).

```
# haconf -makerw
```

6 Freeze the service groups.

```
# hagrp -freeze groupname -persistent
```

7 Make the VCS configuration read-only.

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

8 Run the following command on the nodes in the first subcluster (group A) to stop VCS.

```
# /sbin/init.d/vcs stop
```

9 If fencing is configured on the nodes in the first subcluster (group A), stop fencing.

```
# /sbin/init.d/vxfen stop
```

10 Stop gab on the nodes in the first subcluster (group A).

```
# /sbin/gabconfig -U
```

11 Stop llt on the nodes in the first subcluster (group A).

```
# /sbin/lltconfig -Uo
```

12 Edit the following files on the first subcluster (group A) to make the values of LLT_START, GAB_START and VXFEN_START equal to zero. (By default it is 1).

```
# /etc/rc.config.d/lltconf
# /etc/rc.config.d/gabconf
# /etc/rc.config.d/vxfenconf
```

Performing this step prevents LLT, GAB, and VxFEN from restarting if the nodes reboot accidentally. If the nodes in the first subcluster (group A) reboot accidentally, it may cause the nodes on the second subcluster (group B) to panic.

13 Install VCS 5.0 MP2RP3 for HP-UX 11iv2 on the nodes in the first subcluster (group A) using the installrp script:

```
# ./installrp [-rsh]
```

14 Update the types.cf file to the new version.

```
# cp -p /etc/VRTSvcs/conf/config/types.cf \
/etc/VRTSvcs/conf/config/types.cf.bkp
# cp -p /etc/VRTSvcs/conf/types.cf \
/etc/VRTSvcs/conf/config/types.cf
```

15 If you had added custom type definitions in the original types.cf file, you must add them to the new types.cf file.

16 After the initial system checks and the requirements checks are complete, press **Return** to start upgrading the depots.

17 When the installation is complete on the nodes in the first subcluster (group A) , note the locations of the summary, log, and response files indicated by the installer.

Do not start the GAB and LLT processes. Do not start any VCS processes at this time.

18 Restore the copied llttab, llthosts and gabtab files.

```
# cp /etc/llttab.bkp /etc/llttab
# cp /etc/llthosts.bkp /etc/llthosts
# cp /etc/gabtab.bkp /etc/gabtab
# cp /etc/VRTSvcs/conf/config/main.cf.bkp \
/etc/VRTSvcs/conf/config/main.cf
```

19 Edit the main.cf file to configure new attributes, if any.

20 Take the service groups offline on the nodes running in the second subcluster (group B).

Warning: Failure to perform this step can cause data corruption if you try to bring the failover groups online on the nodes in the first subcluster (group A) where you upgraded VCS.

```
# hagrp -offline groupname -sys nodename
```

21 Stop VCS and its components on the nodes running in the second subcluster (group B).

```
# /sbin/init.d/vcs stop
# /sbin/init.d/vxfen stop
# /sbin/gabconfig -U
# /sbin/lltconfig -Uo
```

Note: Your downtime starts from here.

22 Edit the following files on the nodes running in the second subcluster (group B) to make the values of LLT_START, GAB_START and VXFEN_START equal to zero. (By default it is 1).

```
# /etc/rc.config.d/lltconf
# /etc/rc.config.d/gabconf
# /etc/rc.config.d/vxfenconf
```

Performing this step prevents LLT, GAB, and VxFEN from restarting if the nodes reboot accidentally. If the nodes running on the second subcluster (group B) reboot accidentally, it may cause the nodes on the first subcluster (group A) to panic.

23 Reboot the nodes in the first subcluster (group A).

24 Edit the following files on the first subcluster (group A) to make the values of LLT_START, GAB_START and VXFEN_START equal to 1.

```
# /etc/rc.config.d/lltconf
# /etc/rc.config.d/gabconf
# /etc/rc.config.d/vxfenconf
```

25 Start all VCS components on the nodes in the first subcluster (group A) that were upgraded.

```
# /sbin/init.d/llt start
# /sbin/init.d/gab start
# /sbin/gabconfig -cx
# /sbin/init.d/vxfen start
# /sbin/init.d/vcs start
```

26 Unfreeze and bring all services groups online in the new upgraded cluster.

On the upgraded node, run the following commands:

- Make VCS configuration writable:

  ```
  # /opt/VRTSvcs/bin/haconf -makerw
  ```

- For each group in main.cf, run the following commands:

  ```
  # /opt/VRTSvcs/bin/hagrp -unfreeze groupname -persistent
  # /opt/VRTSvcs/bin/hagrp -online groupname -sys sysname
  ```

- Finally, save the configuration using the following command:

```
# /opt/VRTSvcs/bin/haconf -dump -makero
```

27 Perform the above procedure on each cluster node (or set of nodes) that you want to upgrade.

Installing Veritas Storage Foundation Cluster File System 5.0 MP2RP3 for HP-UX 11iv2

You can perform the installation in one of the following ways:

■ Full installation
See "Veritas Storage Foundation Cluster File System full installation" on page 53.

■ Phased installation
See "Veritas Storage Foundation Cluster File System phased installation" on page 55.

Veritas Storage Foundation Cluster File System full installation

Installing 5.0 MP2RP3 for HP-UX 11iv2 on a cluster requires you to stop the cluster during the installation. However, CVM services remain available.

To install 5.0 MP2RP3 for HP-UX 11iv2 on an SFCFS cluster

1 Log in as the root user.

2 Verify that the path is /opt/VRTS/bin in the PATH variable.

3 Change the cluster configuration to read-write mode:

   # **haconf -makerw**

4 Run the following command to freeze HA service group operations on each node:

   # **hasys -freeze -persistent nodename**

5 Change the cluster configuration to read-only mode on any of the nodes:

   # **haconf -dump -makero**

6 Stop all applications on the cluster that are not configured under VCS. Use native application commands to stop the application.

7 Unmount the VxFS and CFS file systems that are not managed by VCS. Make sure that no processes are running that make use of mounted shared file system or shared volumes.

To verify that no processes use the VxFS or CFS mount point, enter the following commands:

```
# mount | grep vx
# fuser -cu /mount_point
# umount /mount_point
```

8 Stop all VxVM and CVM volumes for each diskgroup that are not managed by VCS on the cluster:

```
# vxvol -g disk_group stopall
```

Verify that no volumes remain open:

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

9 Stop VCS on the cluster from any of the nodes:

```
# hastop -all
```

10 Stop the VCS command server on the cluster:

```
# ps -ef | grep CmdServer
# kill -9 pid_of_CmdServer
```

where *pid_of_CmdServer* is the process ID of the VCS command server.

11 Verify that only ports a, b and d are open:

```
# gabconfig -a
GAB Port Memberships
=====================================================
Port a gen 4d3c08 membership 0123
Port b gen 4d3c0c membership 0123
Port d gen 4d3c0b membership 0123
```

12 Mount the 5.0 MP2RP3 for HP-UX 11iv2 product disc and navigate to the directory that contains the installation script. Run the installrp script and specify the names of the nodes:

```
# ./installrp galaxy nebula
```

13 Restart the nodes:

```
# shutdown -r now
```

14 Change the cluster configuration to read-write mode:

```
# haconf -makerw
```

15 Run the following command on each node to unfreeze HA service group operations:

```
# hasys -unfreeze -persistent nodename
```

16 Change the cluster configuration to read-only mode from any of the nodes:

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

17 Bring the VCS service groups online from any of the nodes:

```
# hagrp -online group_name -any
```

Note: Downtime for failover service groups ends here.

---

18 Start the applications on the cluster that are not configured under VCS. Use native application commands to start the application.

19 To list the SFCFS 5.0 MP2RP3 for HP-UX 11iv2 patches installed on your system, run the following command:

```
# swlist| egrep 'PHNE_41463 \
|PHNE_41464|PHKL_41466|PHCO_41465|PVCO_03921 \
|PHCO_41468|PHKL_41331|PHCO_41469|PHKL_41470 \
|PHKL_40586|PHCO_40591|PHCO_40589'
```

Veritas Storage Foundation Cluster File System phased installation

A phased installation involves installing Veritas Storage Foundation Cluster File System 5.0 MP2RP3 for HP-UX 11iv2 on half of the nodes in the cluster at a time. The examples in the procedures assume a three-node SFCFS 5.0 for HP-UX 11iv2 cluster with the nodes galaxy and nebula constituting the first half of the cluster and the node jupiter constituting the second half of the cluster.

Note: Before starting the installation on the first half of the cluster, back up the configuration files.

To install 5.0 MP2RP3 for HP-UX 11iv2 on an SFCFS cluster

1 Log in as the root user.

2 Switch failover groups from a node in the first half of the cluster (galaxy) to the node in the second half of the cluster (jupiter):

```
# hagrp -switch failover_group -to jupiter
```

3 Change the cluster configuration to the read-write mode:

```
# haconf -makerw
```

4 Run the following commands on each node in the first half of the cluster to freeze HA service group operations :

```
# hasys -freeze -persistent galaxy
```

```
# hasys -freeze -persistent nebula
```

5 Change the cluster configuration to the read-only mode on any of the nodes:

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

6 On the first half of the cluster, stop all applications that are not configured under VCS. Use native application commands to stop the application.

7 On the first half of the cluster, unmount the VxFS and CFS file systems that are not managed by VCS. Make sure that no processes are running that make use of mounted shared file system or shared volume:

```
# mount | grep vx
```

```
# fuser -kuc /mount_point
```

```
# umount /mount_point
```

8 Stop the VCS daemons on each node of the first half of the cluster (galaxy and nebula) by using the following commands:

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

```
# vxclustadm  stopnode
```

```
# ps -eaf | grep vxfsckd
```

```
# kill -9 pid_of_vxfsckd
```

where pid_of_vxfsckd is the process ID of vxfsckd.

```
# fsclustadm cfsdeinit
```

```
# /sbin/init.d/odm stop (If applicable)
```

```
# /sbin/init.d/vxfen stop
```

```
# /sbin/init.d/gab stop
```

```
# /sbin/init.d/llt stop
```

```
# gabconfig -U
```

9 Verify that none of the ports is running on the cluster:

```
# gabconfig -a
```

10 Stop the VCS command server on the cluster:

```
# ps -ef | grep CmdServer
```

```
# kill -9 pid_of_CMDserver
```

where pid_of_CmdServer is the process ID of the VCS command server.

11 Mount the 5.0 MP2RP3 for HP-UX 11iv2 product disc and navigate to the folder that contains the installation script. On the first half of the cluster, enter the following command:

```
# ./installrp -rsh galaxy nebula
```

Caution: Do not reboot the first half of the cluster when prompted.

Note: The cluster downtime starts here.

---

12 On the second half of the cluster (jupiter), change the cluster configuration to the read-write mode:

```
# haconf -makerw
```

13 On the second half of the cluster, run the following command to freeze HA service group operations:

```
# hasys -freeze -persistent jupiter
```

14 On the second half of the cluster, change the cluster configuration to the read-only mode:

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

15 Unmount the devices mounted on the first half of the cluster by using the following commands:

```
# mount -p
```

```
# umount mount_point
```

16 On the second half of the cluster, stop all applications that are not configured under VCS. Use native application commands to stop the application.

17 On the second half of the cluster, unmount the VxFS or CFS file systems that are not managed by VCS. Make sure that no processes are running that make use of the mounted shared file system or shared volumes. Verify that no processes use the VxFS or CFS mount point by using the following commands:

```
# fuser -c /mount_point
```

```
# kill -9 pid_number
```

```
# umount /mount_point
```

18 Stop all the VCS daemons to shut down the second half of the cluster by using the following commands:

`hastop -local -force`

`vxclustadm  stopnode`

`ps -eaf | grep vxfsckd`

`kill -9 pid_of_vxfsckd`

where pid_of_vxfsckd is the process ID of `vxfsckd`.

`fsclustadm cfsdeinit`

`/sbin/init.d/odm stop` (If applicable)

`/sbin/init.d/vxfen stop`

`/sbin/init.d/gab stop`

`/sbin/init.d/llt stop`

19 Verify that none of the ports is running on the cluster:

`gabconfig -a`

20 Stop the VCS command server on the second half of the cluster:

`ps -ef | grep CmdServer`

`kill -9 pid_of_CMDserver`

where pid_of_CmdServer is the process ID of the VCS command server.

21 After the second half of the cluster is down, reboot the first half of the cluster

`shutdown -r now`

22 Bring the first half of the cluster online by enabling the seed port:

`gabconfig -cx`

23 Start the HA daemon on the first half of the cluster:

`hastart`

24 Unfreeze the first half of the cluster:

```
# haconf -makerw
```

```
# hasys -unfreeze -persistent galaxy
```

```
# hasys -unfreeze -persistent nebula
```

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

25 Make online the CVM group on all the nodes of the first half of the cluster:

```
# hagrp -online cvm -sys  galaxy
```

```
# hagrp -online cvm -sys  nebula
```

26 Verify that all the ports are up and running on the first half of the cluster by using the following command:

```
# gabconfig -a
```

```
GAB Port Memberships
===============================================================
Port a gen   a2b701 membership 01
Port b gen   a2b704 membership 01
Port f gen   a2b70b membership 01
Port h gen   a2b703 membership 01
Port v gen   a2b707 membership 01
Port w gen   a2b709 membership 01
```

Note: The cluster downtime ends here.

27 Navigate to the folder that contains the installation script. On the second half of the cluster, enter the following command:

```
# ./installrp [-rsh] jupiter
```

28 Reboot the second half of the cluster:

```
# shutdown -r  now
```

29 After the node in the second half of the cluster is up, bring the cluster online by manually seeding the port:

```
# gabconfig -cx
```

30 Start the HA daemon on the second half of the cluster:

```
# hastart
```

31 Unfreeze the second half of the cluster:

```
# haconf -makerw
```

```
# hasys -unfreeze -persistent jupiter
```

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

32 Make online the CVM group on the node in the second half of the cluster:

```
# hagrp -online cvm -sys  jupiter
```

33 Verify that all the ports are up and running on the second half of the cluster by using following command:

```
# gabconfig -a

GAB Port Memberships
===============================================================
Port a gen   a2b701 membership 012
Port b gen   a2b704 membership 012
Port f gen   a2b70b membership 012
Port h gen   a2b703 membership 012
Port v gen   a2b707 membership 012
Port w gen   a2b709 membership 012
```

Note: The node in the second half of the cluster (jupiter) joins the first half of the cluster here.

34 Bring the failover service group online on the second half of the cluster:

```
# hagrp -online failover_group -sys jupiter
```

35 Switch the failover service groups back from the node in the second half of the cluster (jupiter) to a node in the first half of the cluster (galaxy):

```
# hagrp -switch failover_group -to galaxy
```

36 On the second half of the cluster, manually mount the VxFS and CFS file systems that are not managed by VCS.

37 On the second half of the cluster, start all applications that are not managed by VCS. Use native application commands to start the applications.

Installing Veritas Storage Foundation for Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2

You can perform the installation in one of the following ways:

■ Full installation
  See "Veritas Storage Foundation for Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2 full installation" on page 62.

■ Phased installation
  See "Veritas Storage Foundation for Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2 phased installation" on page 64.

Veritas Storage Foundation for Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2 full installation

You can perform a full installation of Veritas Storage Foundation for Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2 on nodes running SF Oracle RAC 5.0 MP2 for HP-UX 11iV2. Full installation denotes that the cluster will be unavailable during the period of installation.

Note: Make sure that you have SF Oracle RAC 5.0 MP2 for HP-UX 11iV2 installed on the nodes. For instruction, see the *Veritas Storage Foundation for Oracle RAC Installation and Configuration Guide (5.0 MP2).*

To install 5.0 MP2RP3 for HP-UX 11iv2 on SF Oracle RAC clusters

1 For Oracle RAC 9i: Stop the GSD processes on each node in the cluster:

■ Determine if the gsd processes are running.

```
$ $ORACLE_HOME/bin/gsdctl stat
```

■ If the processes are running, stop the processes.

```
$ $ORACLE_HOME/bin/gsdctl stop
```

2 Stop all applications using the CFS mounts not under VCS control:

■ Ensure that no processes are using the CFS mount point.

fuser -c mount_point

■ Stop any processes using a CFS mount point.

fuser -ck mount_point

3 Unmount any CFS file systems that are not under VCS control on all nodes:

■ Determine the file systems to unmount by checking the /etc/mnttab file. For example:

cat /etc/mnttab | grep vxfs | grep cluster

The output shows each line of the /etc/mnttab file that contains an entry for a VxFS file system mounted in the cluster mode.

■ By specifying the mount point for the file system, unmount each file system listed in the output:

umount mount_point

4 Stop VCS to take the service groups on all nodes offline.

/opt/VRTSvcs/bin/hastop -all

5 Browse to the directory containing the installation program.

6 Start the installation program. Make sure that passwordless communication between systems exists.

SF Oracle RAC installer	# **./installrp [-rsh]** *galaxy nebula*
Veritas product installer	# **./installer [-rsh]** *galaxy nebula*
	From the opening Selection Menu, choose: "I" for "Install/Upgrade a Product."
	From the displayed list of products to install, choose Veritas Storage Foundation for Oracle RAC.

7 Enter y to upgrade to 5.0 MP2RP3 for HP-UX 11iv2.

8 After the initial system checks and the requirement checks are complete, press Return to start the installation.

9   When the upgrade is complete, note the location of the summary file, the log file, and the response file indicated by the installer.

10   Restart all systems in the cluster.

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

11   Relink the SF Oracle RAC libraries with Oracle RAC.

Veritas Storage Foundation for Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2 phased installation

A phased installation involves installing SF Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2 on half of the nodes in the cluster at a time. The examples in the procedures assume a four-node SF Oracle RAC cluster with the nodes galaxy and nebula constituting the first half of the cluster and the nodes jupiter and mercury constituting the second half of the cluster.

Note: Before you start the installation on the first half of the cluster, back up the configuration files.

To install 5.0 MP2RP3 for HP-UX 11iv2 on an SF Oracle RAC cluster

1   Log in as the root user.

2   Switch failover groups from a node in the first half of the cluster (galaxy/nebula) to the nodes in the second half of the cluster (jupiter and mercury). For example:

```
# hagrp -switch failover_group -to jupiter
# hagrp -switch failover_group -to mercury
```

3   If the Oracle database is managed by VCS, set the AutoStart value to 0 to prevent the database service group from starting automatically when VCS starts:

```
# haconf -makerw
# hagrp -modify oracle_group AutoStart 0
# haconf -dump -makero
```

If the Oracle database is not managed by VCS, change the management policy for the database to manual:

```
$ srvctl modify database -d db-name -y MANUAL
```

4   For Oracle RAC 9i: Stop the GSD daemon:

```
$ $ORACLE_HOME/bin/gsdctl stop
```

5   If the Oracle RAC instance is not managed by VCS, log in as the Oracle user on one of the nodes in the first half of the cluster and shut down the instances:

```
$ srvctl stop instance -d database_name -i instance_name
```

6   On the first half of the cluster, stop all applications that are not configured under VCS. Use native application commands to stop the application.

7   On the first half of the cluster, unmount the VxFS and CFS file systems that are not managed by VCS:

```
# cat /etc/mnttab | grep vxfs
# fuser -cu /mount_point
# umount /mount_point
```

8   On first half of the cluster stop all VxVM and CVM volumes for each disk group that is not managed by VCS:

```
# vxvol -g disk_group stopall
```

Verify that no volumes remain open:

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

9   On first half of the cluster, stop VCS:

```
# hastop -local
```

10   Verify that only ports a, b, d and o are open:

```
# gabconfig -a
GAB Port Memberships
=======================================================
Port a gen 6b5901 membership 01
Port b gen 6b5904 membership 01
Port d gen 6b5907 membership 01
Port o gen 6b5905 membership 01
```

11 Mount the 5.0 MP2RP3 for HP-UX 11iv2 product disc and navigate to the folder that contains the installation script. On the first half of the cluster, enter the installrp script:

```
# ./installrp [-rsh] galaxy nebula
```

Note: After you complete the installation on the first half of the cluster, no GAB ports appear in the output when you run the `gabconfig -a` command.

12 On the first half of the cluster, restart the nodes:

```
# shutdown -r now
```

Note: The rebooted nodes join the cluster and all ports are up.

13 For Oracle RAC 9i: Start GSD on the first half of the cluster:

```
$ $ORACLE_HOME/bin/gsdctl start
```

14 On the first half of the cluster, manually mount the VxFS or CFS file systems that are not managed by VCS.

15 On the first half of the cluster, start all applications that are not managed by VCS. Use native application commands to start the applications.

16 On the first half of the cluster, relink the SF Oracle RAC libraries with the Oracle libraries.

See "Relinking the SF Oracle RAC libraries with Oracle RAC" on page 69.

17 If the Oracle group is managed by VCS, bring the Oracle groups online on the first half of the cluster:

```
# hagrp -online oracle_group -sys galaxy
# hagrp -online oracle_group -sys nebula
```

If Oracle group is not managed by VCS, start the Oracle instances on the first half of the cluster:

```
$ srvctl start instance -d database_name -i instance_name
```

18 Switch failover groups from a node in the second half of the cluster (jupiter/mercury) to the nodes in the first half of the cluster (galaxy/nebula):

```
# hagrp -switch failover_group -to galaxy
# hagrp -switch failover_group -to nebula
```

19 For Oracle RAC 9i: Stop the GSD daemon on the second half of the cluster:

```
$ $ORACLE_HOME/bin/gsdctl stop
```

20 If the Oracle RAC instance is not managed by VCS, log in as the Oracle user on one of the nodes in the second half of the cluster and shut down the instances:

```
$ srvctl stop instance -d database_name -i instance_name
```

21 On the second half of the cluster, stop all applications that are not configured under VCS. Use native application commands to stop the application.

22 On the second half of the cluster, unmount the VxFS or CFS file systems that are not managed by VCS. Make sure that no processes are running that make use of the mounted shared file system or shared volumes.

To verify that no processes use the VxFS or CFS mount point:

```
# cat /etc/mnttab | grep vxfs
# fuser -cu /mount_point
# umount /mount_point
```

23 On the second half of the cluster, stop all VxVM and CVM volumes for each disk group that is not managed by VCS:

```
# vxvol -g disk_group stopall
```

Verify that no volumes remain open:

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

24 On each node in the second half of the cluster, stop VCS:

```
# hastop -local
```

25 Verify that only ports a, b, d, and o are open:

```
# gabconfig -a
GAB Port Memberships
=======================================================
Port a gen 6b5901 membership 01
Port b gen 6b5904 membership 01
Port d gen 6b5907 membership 01
Port o gen 6b5905 membership 01
```

26 Navigate to the directory that contains the installation script. On the second half of the cluster, run the installrp script:

```
# ./installrp [-rsh] jupiter mercury
```

Note: After you complete the installation on the second half of the cluster, no GAB ports appear in the output when you run the gabconfig -a command.

27 On the second half of the cluster, restart the nodes:

```
# shutdown -r now
```

Note: The rebooted nodes join the cluster and all ports are up.

28 On the second half of the cluster, manually mount the VxFS and CFS file systems that are not managed by VCS.

29 For Oracle RAC 9i: Start GSD on the second half of the cluster:

```
$ $ORACLE_HOME/bin/gsdctl stop
```

30 On the second half of the cluster, start all applications that are not managed by VCS. Use native application commands to start the applications.

31 On the second half of the cluster, relink the SF Oracle RAC libraries with the Oracle libraries.

See "Relinking the SF Oracle RAC libraries with Oracle RAC" on page 69.

32 If the Oracle group is managed by VCS, bring the Oracle groups online on the second half of the cluster:

```
# hagrp -online oracle_group -sys jupiter
# hagrp -online oracle_group -sys mercury
```

If the Oracle group is not managed by VCS, start the Oracle instances on the second half of the cluster:

```
$ srvctl start instance -d database_name -i instance_name
```

33 If the Oracle database is managed by VCS, set the AutoStart value to 1:

```
# haconf -makerw
# hagrp -modify oracle_group AutoStart 1
# haconf -dump -makero
```

If the Oracle database is not managed by VCS, change the management policy for the database to automatic:

```
$ srvctl modify database -d db-name -y AUTOMATIC
```

Relinking the SF Oracle RAC libraries with Oracle RAC

If you added or upgraded the Oracle patches, you must relink the SF Oracle RAC libraries to Oracle. You must link Oracle with the Veritas IPC library and enable Oracle to use the Veritas ODM and cluster membership (VCSMM) libraries.

Note: Symantec recommends you to relink the SF Oracle RAC libraries only after completing all the required patch additions.

Make sure that Oracle database is offline on the nodes where you are relinking the libraries.

To relink the SF Oracle RAC libraries with Oracle RAC

1   Start the installsfrac program:

```
# cd /opt/VRTS/install
# ./installsfrac [-rsh] -configure galaxy nebula
```

2   Select **Install or Relink Oracle** from the menu.

Select the appropriate Oracle RAC version:

```
1) Oracle 9iR2
2) Oracle 10gR1
3) Oracle 10gR2
4) Oracle 11gR1
```

Select **Relink Oracle** from the menu.

```
1) Install Oracle Clusterware (CRS)
2) Install Oracle RDBMS server
3) Relink Oracle
b) [Go to previous menu]
```

3   Provide the required information. For example:

```
Enter Oracle UNIX user name: [b] (oracle) oracle
Enter Oracle UNIX group name: [b] (oinstall) oinstall
Enter Oracle base directory: [b] /app/oracle
Enter absolute path of Database Home directory: [b] /app/oracle/orahome
```

Confirm your responses on the verification screen.

Uninstalling the patches

This chapter includes the following topics:

Uninstalling Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2

Perform the following procedure to remove Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2. It is recommended to refer to the Installation Summary Files for the list of patches that get installed during installation.

To uninstall Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2

1   Log in as root.

2   On all the nodes, stop the currently running VxPAL agents. See `vxpalctrl` (1M):

- Stop the storage agent:

    ```
    # /opt/VRTSobc/pal33/bin/vxpalctrl -a StorageAgent -c stop
    ```

- Check the status of the storage agent:

    ```
    # /opt/VRTSobc/pal33/bin/vxpalctrl -a StorageAgent -c status
    ```

■ Stop the action agent:

    # **/opt/VRTSobc/pal33/bin/vxpalctrl -a actionagent -c stop**

■ Check the status of the action agent:

    # **/opt/VRTSobc/pal33/bin/vxpalctrl -a actionagent -c status**

■ Stop the gridnode agent:

    # **/opt/VRTSobc/pal33/bin/vxpalctrl -a gridnode -c stop**

■ Check the status of the gridnode agent:

    # **/opt/VRTSobc/pal33/bin/vxpalctrl -a gridnode -c status**

3 On all the nodes, remove all the patches by using the swremove command:

    # **swremove -x autoreboot=true **
       patch_name1, patch_name2 ...

Symantec recommends that all the patches installed during Veritas Storage Foundation 5.0 MP2RP3 for HP-UX 11iv2 installation be removed through a single command line. The system automatically reboots after removing the patches.

Uninstalling Veritas Cluster Server 5.0 MP2RP3 for HP-UX 11iv2

This section describes the procedure to manually remove VCS 5.0 MP2RP3 for HP-UX 11iv2 packages from your cluster.

To remove VCS 5.0 MP2RP3 for HP-UX 11iv2

1 List the service groups in your cluster along with their status. On any node, type:

    # hagrp -state

2 Take the ClusterService group offline if it is configured.

    # hagrp -offline -force ClusterService -sys *system*

3 Make the VCS configuration writable. On any node, type:

    # haconf -makerw

4   Freeze all service groups. On any node, type:

```
# hagrp -freeze service_group -persistent
```

where service_group is the name of the service group.

Note that the ClusterService group cannot be frozen.

5   Save the configuration (main.cf) file with the groups frozen. On any node, type:

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

6   Take a backup of the current main.cf and all types.cf configuration files. For example, on one of the nodes in the cluster, type:

```
# cp /etc/VRTSvcs/conf/config/main.cf
/etc/VRTSvcs/conf/main.cf.save
# cp /etc/VRTSvcs/conf/config/types.cf
/etc/VRTSvcs/conf/types.cf.save
```

7   Shut down VCS and the VCS CmdServer. On any node, type:

```
# hastop -all -force
# CmdServer -stop
```

8   Verify that VCS has shut down. On each node, type:

```
# gabconfig -a
```

The output resembles

```
GAB Port Memberships
Port a gen 23dc0001 membership 01
```

Note that the output shows no membership for port h.

9   Stop vxfen on each cluster node, if the VCS cluster uses the fencing option.

```
# vxfenconfig -U
```

10   Unconfigure GAB. On each node, type:

```
# gabconfig -U
```

11   Unconfigure LLT. On each node, type:

```
# lltconfig -Uo
```

12 Remove the VCS 5.0 MP2RP3 for HP-UX 11iv2 patches from each node in the cluster.

Type the following command:

```
#swremove -x autoreboot=true PHNE_41463 PHCO_41465
PHNE_41464 PHKL_41466 PVCO_03921 PVCO_03922
```

13 Restore the types.cf configuration files from the location where you saved them, or manually edit the /etc/VRTSvcs/conf/config/types.cf to remove the newly added attributes.

14 Restart all the nodes in the cluster.

```
# shutdown -ry now
```

15 After VCS has started, perform the following steps:

Verify all resources have been probed. On each node, type:

```
# hastatus -summary
```

Unfreeze all service groups. On any node, type:

```
# haconf -makerw
# hagrp -unfreeze service_group -persistent
# haconf -dump -makero
```

where service_group is the name of the service group.

Bring the ClusterService group online, if necessary. On any node type:

```
# hagrp -online ClusterService -sys system
```

where system is the system name.

Uninstalling Veritas Storage Foundation Cluster File System 5.0 MP2RP3 for HP-UX 11iv2

Perform the following procedure to remove 5.0 MP2RP3 for HP-UX 11iv2.

To uninstall SFCFS 5.0 MP2RP3 for HP-UX 11iv2

1 List the service groups in the cluster along with their status. On any node, type:

```
# hagrp -state
```

2 Take the ClusterService group offline if it is configured.

```
# hagrp -offline -force ClusterService -sys system
```

3 Make the VCS configuration writable. On any node, type:

```
# haconf -makerw
```

4 Freeze all the service groups. On any node, type:

```
# hagrp -freeze service_group -persistent
```

where service_group is the name of the service group.

Note: The ClusterService group cannot be frozen.

---

5 Save the configuration (main.cf) file with the groups frozen. On any node, type:

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

6 Take a backup of the current main.cf and all types.cf configuration files.

For example, on one of the nodes in the cluster, type:

```
# cp /etc/VRTSvcs/conf/config/main.cf
/etc/VRTSvcs/conf/main.cf.save
```

```
# cp /etc/VRTSvcs/conf/config/types.cf
/etc/VRTSvcs/conf/types.cf.save
```

7 Shut down VCS and the VCS CmdServer. On any node, type:

```
# hastop -all -force
```

```
# CmdServer -stop
```

8   Verify that VCS has shut down. On each node, type:

```
# gabconfig -a
```

The output resembles

```
GAB Port Memberships
Port a gen 23dc0001 membership 01
```

Note: The output shows no membership for port h.

---

9   Stop vxfen on each cluster node, if the VCS cluster uses fencing option.

```
# vxfenconfig -U
```

10   Unconfigure GAB. On each node, type:

```
# gabconfig -U
```

11   Unconfigure LLT. On each node, type:

```
# lltconfig -Uo
```

12   Remove the SFCFS patches from each node in the cluster. Type the following command:

```
# swremove -x autoreboot=true -x enforced_dependecies=false
patch_name1, patch_name2 ...
```

13   Restore the types.cf configuration files from the location where you saved them, or manually edit the `/etc/VRTSvcs/conf/config/types.cf` file to remove the newly added attributes.

14   Restart all the nodes in the cluster.

```
# shutdown -ry now
```

15   After SFCFS has started, perform the following steps:

■   Verify whether all the resources have been probed. On each node, type:

```
# hastatus -summary
```

■   Unfreeze all the service groups. On any node, type:

```
# haconf -makerw
```

```
# hagrp -unfreeze service_group -persistent
```

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

where service_group is the name of the service group.

■ If necessary, bring the ClusterService group online. On any node type:

```
# hagrp -online ClusterService -sys
        system
```

where system is the system name.

Uninstalling Veritas Storage Foundation for Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2

This section provides instructions for uninstalling the SF Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2 packages.

To uninstall SF Oracle RAC 5.0 MP2RP3 for HP-UX 11iv2

1 For Oracle RAC 9i: Stop the GSD processes:

■ Determine if the gsd processes are running.

```
$ $ORACLE_HOME/bin/gsdctl stat
```

■ If the processes are running, stop the processes.

```
$ $ORACLE_HOME/bin/gsdctl stop
```

2 Oracle must be set up to run with the SF Oracle RAC components after the update. This means you must prevent the Oracle resources from coming online after the systems reboot. Use the following commands to make the cluster writable and to disable the Oracle resource:

```
# haconf -makerw
# hagrp -disable oracle_group -sys node_name
```

For example:

```
# /opt/VRTSvcs/bin/hagrp -disable Oracle1 -sys galaxy
```

If the change is made successfully, save the configuration:

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

3 Stop all applications using the CFS mounts not under VCS control.

■ Ensure that no processes are using the CFS mount point.

```
# fuser -c mount_point
```

■ Stop any processes using a CFS mount point.

```
# fuser -ck mount_point
```

4 Unmount any CFS file systems that are not under VCS control on all nodes.

■ Determine the file systems to unmount by checking the /etc/mnttab file. For example:

```
# cat /etc/mnttab | grep vxfs | grep cluster
```

■ The output shows each line of the /etc/mnttab file that contains an entry for a VxFS file system mounted in the cluster mode.

■ By specifying the mount point for the file system, unmount each file system listed in the output:

```
# umount mount_point
```

5 Stop VCS to take the service groups on all nodes offline.

```
# /opt/VRTSvcs/bin/hastop -all
```

6 On all the nodes, stop VxFEN and ODM processes:

```
# /sbin/init.d/vxfen stop
# /sbin/init.d/odm stop
```

7 Remove the patches:

```
# swremove -x autoreboot=true \
-x enforce_dependencies=false \
PVCO_03921 PHCO_41450 PHCO_41451 \
PHNE_41463 PHNE_41464 PHCO_41465 \
PHKL_41331 PHKL_41466 PHCO_41468 \
PVKL_03920 PHCO_41477 PVCO_03922
```

8   Relink SF Oracle RAC libraries with Oracle RAC.

See "Relinking the SF Oracle RAC libraries with Oracle RAC" on page 69.

9   If Oracle is managed by VCS, enable the Oracle service group and bring the Oracle service group online.

```
# haconf -makerw
# hagrp -enable oracle_group -sys node_name
# haconf -dump -makero
# hagrp -online oracle_group -sys node_name
```

Reference documentation

This chapter includes the following topics:

■ Reference documentation

Reference documentation

The documentation for this release is available on the software disc in the PDF format. Symantec recommends copying documentation from the disc to your system directory. This release includes the following document.

Table 4-1 lists the document included in this release.

Table 4-1   Documentation in 5.0 MP2RP3 (HP-UX 11iv2)

Title	File Name
Veritas Storage Foundation and High Availability Solutions Release Notes	sfha_notes_50mp2rp3_hpux11iv2.pdf

To refer to the product documentation for the Veritas Storage Foundation and High Availability Solutions 5.0 and 5.0 MP2 releases, go to: http://www.symantec.com/business/support/overview.jsp?pid=15107 and click on the **HP-UX** tab.

Reference documentation