

Veritas[™] Cluster Server One Release Notes

AIX, ESX, HP-UX, Linux, Solaris, Windows

5.0 Service Pack 2



Veritas Cluster Server One

Release Notes

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- Version and patch level
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Veritas Cluster Server One Release Notes

What's included

These release notes include the following topics:

- [“Introduction”](#) on page 8
- [“Features introduced in VCS One 5.0 Service Pack 2”](#) on page 8
- [“Hardware requirements and recommendations”](#) on page 10
- [“Supported platforms and software for the Policy Master”](#) on page 15
- [“Supported platforms and software for the client”](#) on page 18
- [“Supported platforms for the Simulator”](#) on page 24
- [“Supported web browsers and Flash versions”](#) on page 24
- [“Software limitations”](#) on page 25
- [“Issues fixed in VCS One 5.0 Service Pack 2”](#) on page 35
- [“Known issues”](#) on page 38
- [“Documentation errata”](#) on page 85
- [“Documentation”](#) on page 87

Introduction

This document provides important information about Veritas™ Cluster Server One (VCS One) by Symantec for supported versions of AIX, ESX, HP-UX, Linux, Solaris, and Windows. Review this entire document before installing VCS One. For the latest information about updates, patches, and software issues for this release, read the Late-Breaking News TechNote:

<http://www.symantec.com/business/support/index?page=content&id=TECH87872>

Also, be sure to read the *Veritas Cluster Server One Getting Started Guide* and the *Veritas Cluster Server One Installation Guide* before you install.

Features introduced in VCS One 5.0 Service Pack 2

New replication agent on Solaris

This version of VCS One also supports the following new replication agents:

- Veritas Volume Replicator support in the form of RVG and RVGPrimary Agents
- VCS One Agent for Oracle Dataguard 11gR2

Even distribution of VFrame/Group load

The VCS One Policy Master now introduces a RoundRobin policy to help you evenly distribute service groups/VFrames across client systems. You can use this option if you do not want to manually set the Advanced Workload Management load and capacity values. For more information, refer to the *VCS One User's Guide*.

Shared authentication principals

With this release, VCS One allows you to use non-unique (shared) authentication (AT) principals for local zone users.

Panic on network loss

You can now configure a VCS One client system to intentionally panic if it loses network connectivity with the VCS One Policy Master. This feature helps prevent data corruption during the subsequent failover scenario. If you disable this feature, data corruption may occur when the PM initiates a failover of service groups from one system to another, and both systems try to access the

same shared data disk. You can control this feature at the cluster, client system, resource type, and resource levels.

Failover of applications across Solaris zones

This release of VCS One extends the scope of the ContainerInfo attribute from the global level to the local level. As a result, you can now configure an application to fail over/switch across Solaris Zones. That is, an application running under one Solaris Zone on one system, can fail over/switch and run under a different Solaris Zone on another system.

More granular VMware discovery wizard

The VCS One discovery wizard for VMware now allows you to discover objects at an individual cluster level, apart from the data center level.

ESX support

VCS One now supports VMware ESX 4.1 and VMware ESX 4.1i platforms.

RHEL support

Symantec now also supports VCS One clients on Red Hat Enterprise Linux 6.

Hardware requirements and recommendations

For information on supported hardware, see the hardware compatibility list (HCL) in the following TechNotes. The hardware compatibility information for your version of Veritas Storage Foundation and High Availability Solutions applies for VCS One.

For Veritas Storage Foundation and High Availability Solutions 5.0 MP1, MP2, and MP3 (UNIX), see:

<http://www.symantec.com/business/support/index?page=content&id=TECH47620>

For Veritas Storage Foundation and High Availability Solutions 5.1 (UNIX), see:

<http://www.symantec.com/business/support/index?page=content&id=TECH74012>

For Veritas Storage Foundation and High Availability Solutions 5.1 SP1 for Windows, see:

<http://www.symantec.com/business/support/index?page=content&id=TECH77195>

The hardware requirements and recommendations for the Policy Master are covered in the following two sections:

- [“Hardware requirements and recommendations for the Policy Master on UNIX”](#)
- [“Hardware requirements and recommendations for the Policy Master on Windows”](#)

Hardware requirements and recommendations for the Policy Master on UNIX

To set up the Policy Master cluster, you will need to acquire the basic hardware components. Configure the Policy Master systems to access SAN- or NFS-based shared storage that will contain the Policy Master configuration database and associated files.

See [“Minimum hardware components for the Policy Master on UNIX”](#) on page 11.

See [“Configuration database storage requirements”](#) on page 12.

Minimum hardware components for the Policy Master on UNIX

Table 1-1 lists the CPU, memory, storage, and networking requirements and recommendations for the Policy Master on UNIX.

Table 1-1 Hardware requirements for the Policy Master cluster on UNIX

Component	Requirements	Additional Recommendations
Policy Master Cluster (Two to four systems)	<ul style="list-style-type: none">■ Two to four Linux systems running Opteron® or Extended Xeon® 64-bit processors (not Itanium®) OR <ul style="list-style-type: none">■ Two to four Solaris SPARC-based systems Additional requirements: <ul style="list-style-type: none">■ 1 GHz minimum CPU■ CD-ROM drive for installation from a software disc Check the technical support web site to make sure the system hardware and software is supported	Dual processor systems
Memory	<ul style="list-style-type: none">■ Two gigabytes minimum for Linux■ Four gigabytes minimum for Solaris	Eight gigabytes of memory for large numbers of systems, service groups or application resources in the VCS One cluster
Local storage	With Storage Foundation: 520 megabytes local disk space minimum. Without Storage Foundation: 350 megabytes local disk space minimum. 1 built-in SCSI adapter per system to access the local disks	

Table 1-1 Hardware requirements for the Policy Master cluster on UNIX

Component	Requirements	Additional Recommendations
Shared storage	1 SCSI or Fibre channel attached array-based storage shared between the Policy Master cluster systems One data disk at least 2 GB in size for Policy Master configuration database. Disk must be protected by mirroring or RAID technology. At least 3 coordinator disks for I/O fencing All disks must be SCSI-3 compliant Check the hardware compatibility list (HCL) to make sure the storage is supported	Fibre channel attached array-based storage recommended Two host bus adapters to eliminate the HBA as a single point of failure
Network	Three 100BaseT network interface cards (NIC) <ul style="list-style-type: none">■ One public network■ Two cluster interconnect links	Use gigabit network interface cards Additional separate NIC(s) for Policy Master to client communications Configure a low priority heartbeat link for the Policy Master cluster using one of the links between the Policy Master and the VCS One cluster.

Caution: Not using SCSI-3 compliant shared storage in the Policy Master cluster can lead to data corruption issues. This can be due to loss of communication between the Policy Master cluster system, manual actions by the operator, or other instances where the Policy Master does not have complete control of the environment.

Configuration database storage requirements

The Policy Master cluster nodes require access to shared storage that will contain the Policy Master configuration database and associated files. This storage can be either SAN- or NFS-based:

- SAN-based storage must support SCSI-3 persistent reservations (PR).

- NFS-based storage must be served from a NetApp Filer. No other NFS server is approved or supported with this release of VCS One.

These requirements allow the VCS One I/O fencing feature to function correctly and ensure the integrity of the database through failure connections.

Hardware requirements and recommendations for the Policy Master on Windows

Review the following product installation requirements for your systems before you install the VCS One Policy Master on a Windows system. Minimum requirements and Symantec recommended requirements may vary.

Table 1-2 Hardware requirements for the Windows Policy Master cluster

Component	Requirements	Additional Recommendations
Policy Master Cluster (Two to four systems)	<ul style="list-style-type: none"> ■ x64 systems ■ CD-ROM drive for installation from a software disc <p>Check the technical support web site to make sure the system hardware and software is supported</p>	Dual processor systems
Memory	2 gigabytes minimum	Eight gigabytes of memory for large numbers of systems, service groups or application resources in the VCS One cluster
Display	Minimum resolution: 1024 x 768 pixels or higher	
Local storage	900 Megabytes	
Shared storage	<ul style="list-style-type: none"> ■ SCSI, Fibre Channel, iSCSI host bus adapters (HBAs), or iSCSI Initiator supported NICs to access shared storage. ■ One data disk at least 2 GB in size for Policy Master configuration database. <p>Check the hardware compatibility list (HCL) to make sure the storage is supported</p>	<p>Fibre channel attached array-based storage recommended</p> <p>Two host bus adapters to eliminate the HBA as a single point of failure</p>

Table 1-2 Hardware requirements for the Windows Policy Master cluster

Component	Requirements	Additional Recommendations
Network	At least two 100BaseT network interface cards (NIC); three required for a production environment <ul style="list-style-type: none">■ one shared public and private network■ one exclusively for the private network. In a production environment, three NICS are required, two private, one public.	Use gigabit network interface cards Additional separate NIC(s) for Policy Master to client communications

Hardware requirements for client systems

Table 1-3 lists the CPU, memory, storage, and networking requirements for the VCS One client.

Table 1-3 Hardware requirements client system

Component	Requirements
VCS One cluster systems	1 GHz minimum CPU AIX, HP-UX, Linux, Solaris, and Windows-based systems
Memory	256 megabytes minimum for UNIX clients; 1 GB for Windows clients
Local Storage	300 megabytes local disk space minimum for UNIX clients; 900 megabytes for Windows clients
Shared storage	Disk space as needed for application Check the hardware compatibility list (HCL) to make sure the storage is supported SCSI-3 compliant shared storage between systems if application movement (manual or automatic) is configured
Network	One network interface card connecting the system to both the Policy Master cluster and the customer systems Symantec recommends Separate NIC(s) to connect to the Policy Master cluster and the customer systems

Supported platforms and software for the Policy Master

This section lists the supported platforms for the VCS One Policy Master and the Veritas Storage Foundation High Availability (HA) versions that are installed with the Policy Master.

Supported platforms for the Policy Master

[Table 1-4](#) shows the operating systems and architectures supported by the VCS One Policy Master.

VCS One operates on subsequent kernel and patch releases provided the operating systems maintain kernel application binary interface (ABI) compatibility.

Table 1-4 Supported operating systems and architectures for the Policy Master

Operating system	Architecture
Red Hat Enterprise Linux 5 (RHEL 5)	x64 (Intel Xeon, AMD Opteron)
Solaris 10 Update 3 and later	64-bit SPARC
Windows Server 2008 with Service Pack 1 (SP1)	x64
Windows Server 2008 with Service Pack 2 (SP2)	x64
Windows Server 2008 R2	x64

Supported versions of Storage Foundation for the Policy Master

Veritas Storage Foundation HA is installed with the VCS One Policy Master.

[Table 1-5](#) lists the Storage Foundation HA versions that are installed with the VCS One Policy Master.

Table 1-5 Storage Foundation HA versions installed with the Policy Master

Policy Master platform	Architecture	Storage Foundation version installed
Red Hat Enterprise Linux 5 (RHEL 5)	x64 (Intel Xeon, AMD Opteron)	Veritas Storage Foundation High Availability 5.0 MP3

Table 1-5 Storage Foundation HA versions installed with the Policy Master (Continued)

Policy Master platform	Architecture	Storage Foundation version installed
Solaris 10 Update 3 and later	64-bit SPARC	Veritas Storage Foundation High Availability 5.0 MP3 RP1. The VCS One Policy Master also supports Veritas Storage Foundation High Availability 4.x, although it is not installed with the Policy Master.
Windows Server 2008 with Service Pack 1 (SP1)	x64	Veritas Storage Foundation High Availability Solutions 5.1 Service Pack 1 (SP1) for Windows
Windows Server 2008 with Service Pack 2 (SP2)	x64	Veritas Storage Foundation High Availability Solutions 5.1 Service Pack 1 (SP1) for Windows
Windows Server 2008 R2	x64	Veritas Storage Foundation High Availability Solutions 5.1 Service Pack 1 (SP1) for Windows

Required patches

This section provides information about required patches for the Policy Master.

Linux

Ensure that the following required Linux patches are installed before installing the VCS One Policy Master on the Linux operating systems.

Table 1-6 Required patches

Operating system	Required Linux patches	Where to download
Red Hat Enterprise Linux 5 (RHEL 5)	Authentication in VCS One requires the standard C++ version 5.0. You must install the following C++ compat library rpm before installing the VCS One Policy Master: compat-libstdc++-33-3.2.3-61.i386.rpm	You can obtain the compat libraries from the following URL: http://rpmfind.net/linux/RPM/System_Environment_Libraries.html

Solaris

Ensure that the following required Solaris patches are installed before installing the VCS One Policy Master on the Solaris operating systems.

Table 1-7 Required patches

Operating system	Required Solaris patches	Where to download
Solaris 9 SPARC	111711-11 111712-11 125731-04	Solaris patches may be downloaded from: http://www.sunsolve.sun.com
Solaris 10 SPARC	119254-53 (or later) 125731-04 127111-11 (or later)	These patches are required by the VRTSvxvm package. Solaris patches may be downloaded from: http://www.sunsolve.sun.com
Solaris 10 x64	119964-05 125731-04	Solaris patches may be downloaded from: http://www.sunsolve.sun.com

Supported platforms and software for the client

This section lists the supported platforms, Storage Foundation versions, and HA Agent Pack version for the VCS One client.

VCS One operates on subsequent kernel and patch releases provided the operating systems maintain kernel application binary interface (ABI) compatibility.

Supported platforms

The VCS One client runs on Linux, Solaris, ESX, AIX, HP-UX, and Windows.

Supported Linux platforms

Table 1-8 shows the Linux operating systems and architectures supported by the VCS One client.

Table 1-8 Supported Linux operating systems and architectures

Operating system	Architecture
Red Hat Enterprise Linux 4 (RHEL 4)	x86 (32-bit)
Red Hat Enterprise Linux 4 (RHEL 4)	x64 (Intel Xeon, AMD Opteron)
Red Hat Enterprise Linux 5 (RHEL 5)	x64 (Intel Xeon, AMD Opteron)
Red Hat Enterprise Linux 6 (RHEL 6)	x64 architecture
SUSE Linux Enterprise Server Linux 10, SP3	x64 (Intel Xeon, AMD Opteron)
SUSE Linux Enterprise Server Linux 11	x64 (Intel Xeon, AMD Opteron)

Supported Solaris platforms

Table 1-9 shows the Solaris operating systems and architectures supported by the VCS One client.

Table 1-9 Supported Solaris operating systems and architectures

Operating system	Architecture
Solaris 9	64-bit SPARC
Solaris 10 Update 3 and later	64-bit SPARC
Solaris 10 Update 3 and later	x64

Supported VMware ESX Server and VMware VirtualCenter versions

[Table 1-10](#) shows the ESX versions supported by the VCS One client.

Table 1-10 Supported ESX Server versions

ESX Server versions
VMware ESX Server 3.5
VMware ESX Server 4.0, 4.0 Update 1, and 4.1
VMware ESX Server 4i , 4i Update 1, and 4.1i

[Table 1-11](#) shows the VMware vCenter Server version supported by the VCS One client.

Table 1-11 Supported VMware vCenter Server versions

VMware vCenter Server versions
VMware VirtualCenter 2.5. (VMware VirtualCenter 2.0.1 is not supported.)
VMware vCenter Server 4.0

Supported AIX platforms

[Table 1-12](#) shows the AIX operating systems and architectures supported by the VCS One client.

Table 1-12 Supported AIX operating systems and architectures

Operating system	Architecture
AIX 5.3	Power5
AIX 6.1	Power5 and Power6

Supported HP-UX platforms

[Table 1-13](#) shows the HP-UX operating systems and architectures supported by the VCS One client.

Table 1-13 HP-UX operating systems and architectures

Operating system	Architecture
HP-UX 11i v2 with the September 2007 Quality Pack	IA and PA

Table 1-13 HP-UX operating systems and architectures (Continued)

Operating system	Architecture
HP-UX 11i v3 with the September 2007 Quality Pack	IA and PA

Supported Windows platforms

Table 1-14 shows the Windows operating systems and architectures supported by the VCS One client.

Table 1-14 Supported Windows operating systems for the VCS One client

Operating system	Architecture
Windows Server 2003 with Service Pack 2 (SP2)	x64
Windows Server 2008 with Service Pack 1 (SP1)	x64
Windows Server 2008 with Service Pack 2 (SP2)	x64
Windows Server 2008 R2	x64

Supported versions of Storage Foundation for the client

Veritas Storage Foundation for client nodes is not included with VCS One, but is recommended. Although it is not installed with the VCS One client, Storage Foundation is supported on VCS One client nodes. This section includes information about the versions of Veritas Storage Foundation supported by the VCS One client.

Table 1-15 lists the Storage Foundation versions supported on VCS One client nodes.

Table 1-15 Storage Foundation versions that are supported on VCS One client nodes

Client platform	Architecture	Storage Foundation version supported
Red Hat Enterprise Linux 4 (RHEL 4)	x86 (32-bit)	Veritas Storage Foundation 4.x
Red Hat Enterprise Linux 4 (RHEL 4)	x64 (Intel Xeon, AMD, Opteron)	Veritas Storage Foundation 4.x and 5.0 MP3

Table 1-15 Storage Foundation versions that are supported on VCS One client nodes (Continued)

Client platform	Architecture	Storage Foundation version supported
Red Hat Enterprise Linux 5 (RHEL 5)	x64 (Intel Xeon, AMD, Opteron)	Veritas Storage Foundation 5.0 MP3
SUSE Linux Enterprise Server Linux 10, SP3	x64 (Intel Xeon, AMD, Opteron)	Veritas Storage Foundation 5.0 MP3
SUSE Linux Enterprise Server Linux 11	x64 (Intel Xeon, AMD, Opteron)	Veritas Storage Foundation 5.0 Release Update 1 (RU1)
Solaris 9	64-bit SPARC	Veritas Storage Foundation 4.x and 5.0 MP3
Solaris 10 Update 3 and later	64-bit SPARC	Veritas Storage Foundation 4.x and 5.0 MP3
Solaris 10 Update 3 and later	x64	Veritas Storage Foundation 5.0
AIX 5.3	Power5	Veritas Storage Foundation 4.x and 5.0 MP3
AIX 6.1	Power5 and Power6	Veritas Storage Foundation 5.0MP3 for AIX 6.1
HP-UX 11i v2 with the September 2007 Quality Pack	IA and PA	Veritas Storage Foundation 5.0MP1
HP-UX 11i v3 with the September 2007 Quality Pack	IA and PA	Veritas Storage Foundation High Availability 5.0 for HP-UX 11i v3
Windows Server 2003 with Service Pack 2 (SP2)	x64	Veritas Storage Foundation 5.1 and 5.1 SP1
Windows Server 2008 with Service Pack 1 (SP1)	x64	Veritas Storage Foundation 5.1 and 5.1 SP1
Windows Server 2008 with Service Pack 2 (SP2)	x64	Veritas Storage Foundation 5.1 SP1
Windows Server 2008 R2	x64	Veritas Storage Foundation 5.1 SP1

Required patches

Linux

Ensure that the following required Linux patch is installed before installing the VCS One client on the Linux operating system.

Table 1-16 Required patches

Operating system	Required Linux patch	Where to download
Red Hat Enterprise Linux 6 (RHEL 6) x86_64	libstdc*.i686 (32-bit package)	The patch may be downloaded from: http://rpmfind.net/linux/RPM/System_Environment_Libraries.html

AIX

Ensure that the following required AIX patch is installed before installing the VCS One client on AIX 5.x operating systems.

Table 1-17 Required patches

Operating system	Required AIX patch	Where to download
AIX 5.x	xlC.aix50.rte-8.0.0.8 (or later)	The patch may be downloaded from: http://www-1.ibm.com/support/docview.wss?uid=swg24015076
Note: This patch upgrades xlC.rte to version 8.0.0.8. To check the existing xlC.rte version on an AIX system, enter: lslpp -L grep xlC.rte xlC.rte 8.0.0.8 C F C Set ++ Runtime		
AIX 5.x	The required C++ runtime is 8.0 and above.	To download this patch, use the following URL: http://www-1.ibm.com/support/docview.wss?uid=swg24015076

HP-UX

Ensure that the following required HP-UX patch is installed before installing the VCS One client on HP-UX 11i operating systems.

Table 1-18 Required patches

Operating system	Required HP-UX patch	Where to download
HP-UX 11i v2 PA-RISC	PHCO_34718 (or later)	The patch may be downloaded from: http://www.hp.com
HP-UX 11i (all versions)	PHSS_26560 PHSS_26946 PHSS_27740	The patches may be downloaded from: http://www.hp.com
HP-UX 11i (all versions)	TOUR package is needed to support IPv6 functionality.	The patch may be downloaded from: https://h20293.www2.hp.com/portal/swdepot/try.do?productNumber=TOUR

Storage Foundation for Windows

If you want to use Storage Foundation for Windows version 5.1, apply this hotfix before using it with VCS One:

http://svlvault.veritas.com/cgi-bin/patch_central?archive=3248

This Storage Foundation for Windows hotfix includes an enhancement to support SCSI (including SCSI-3) persistent disk reservations on shared disks in a Storage Foundation for Windows storage environment with VCS One. You must install this hotfix to use SCSI (including SCSI-3) disk reservations with VCS One.

Install this hotfix only if you are using SFW 5.1. This hotfix is not required if you are using SFW 5.1 SP1 or later versions.

Supported High Availability Agent Pack

This release supports the Veritas High Availability Agent Pack 4Q2010 and later.

Supported platforms for the Simulator

Table 1-19 shows the Windows operating system supported by the VCS One Simulator.

Table 1-19 Supported Windows operating system for the VCS One Simulator

Operating system	Architecture
Windows XP with Service Pack 2 (SP2) or higher	x86 (32 bit)
Windows Vista	32 bit

Supported web browsers and Flash versions

The VCS One console is the web-based graphical user interface (GUI) used to manage VCS One cluster systems. The VCS One console supports the following web browsers and Flash versions:

- Firefox 3.5, or Internet Explorer 7.0 or later
- Adobe Flash Player version 10.0 or later

Software limitations

The following software limitations exist in this release.

VMware resource pools are not supported

VMware resource pools are not supported with this release of VCS One.

Backup and restore of VxAT Private Domain Repositories

VCS One provides the following commands to enable backup and restore of the VxAT security repositories.

```
# haadmin -backup -vss full_path_to_backup_directory  
# haadmin -restore -vss full_path_to_backup_directory
```

These commands back up and restore all the Private Domain Repositories (PDRs) on the host where the command is executed. There is no capability to back up or restore individual PDRs. To restore a single PDR, the administrator must manually extract and place the pertinent files from the backup.

Stack size for VCS One agents

On HP-UX 11i v2 systems with PA-RISC architecture, the default stack size for threads is 64 KB. This stack size is not sufficient for VCS One agents and can cause a SIGBUS error.

Workaround: To prevent the issue, ensure that the following patch from HP is applied on HP-UX 11i v2 PA-RISC systems:

PHCO_34718 (or later)

This patch allows the PTHREAD_DEFAULT_STACK_SIZE environment variable to be set to a larger value that becomes the default thread stack size for the applications that run with this environment variable set. To increase the stack size, Symantec has set the PTHREAD_DEFAULT_STACK_SIZE environment variable to 512 KB in the file `/opt/VRTSvcsone/bin/vcsoneenv`.

Do not modify the PTHREAD_DEFAULT_STACK_SIZE environment variable.

IntentionalOffline for the Oracle and Netlsnr agents is not supported

This release of VCS One does not support the IntentionalOffline feature for the Oracle and Netlsnr agents for any of the client platforms.

The NIS yxstop command removes the NFS entries from the /etc/mnttab files inside of Solaris non-global zones

Running the NIS `yxstop` command removes the NFS entries from the `/etc/mnttab` files inside of Solaris non-global zones. This can cause the Mount agent to fault all NFS resources inside the non-global zones on the host.

Workaround: To avoid this fault, evacuate or shut down all service groups that have NFS Mount resources configured before you run the `yxstop` command.

You cannot run the VCS One installer using c shell (csh)

You can only run the VCS One installer from `ksh`, `bash`, or `sh` shells.

The MonitorOption attribute is not supported in Oracle9i

The `MonitorOption` attribute used by the VCS One agent for Oracle (UNIX) is supported in Oracle 10g and later. It is not supported in Oracle9i. [1040129]

Oracle agent health check may not work (Oracle 10g)

Using Oracle 10g, if you set `MonitorOption` to 1, Oracle agent health check monitoring may not function when the following message is displayed [998494]:

Warning message - Output after executing Oracle Health Check is:
GIM-00105: Shared memory region is corrupted.

Workaround: Set `MonitorOption` to 0 to continue monitoring the resource.

Setting the PATH variable to use the command line interface

On the Policy Master, both VCS and VCS One are installed. In some instances, the same command (for example, `halog` and `haclus`) exists in both of these products. Be aware of the order of your `PATH` variable.

To avoid confusion, use the full path name when executing a command.

To set the `PATH` variable to use the command line interface (CLI) with VCS One, enter:

```
# PATH=$PATH:/opt/VRTSvcsone/bin
export PATH
```

The config.cmd command script is platform dependent

The `config.cmd` command script generated using `haconf -dbtocmd` or `haconf -xmltocmd` is platform dependent. This means that the `config.cmd` generated on one OS platform cannot be run on another OS platform.

VCS One may reject commands when too many are issued simultaneously

Each command issued from a cluster system requires a secure network connection to the Policy Master server. The number of commands that may be in the queue waiting for connection is finite, typically 64. A high number of commands may cause the queue to fill up, causing the subsequent commands to be rejected. Subsequent commands succeed when the queue is no longer full. [432472]

Workaround: Reissue the command at a later time.

Users can log in to the VCS One console without a password when using LDAP server

When using an LDAP server, users can log in to VCS One console without a password. This issue is due to an LDAP server that allows either anonymous bind or unauthenticated bind. [858087]

Workaround: Edit the slapd.conf file to disable anonymous bind and unauthenticated bind on the LDAP server.

To disable anonymous bind and unauthenticated bind on the LDAP server:

- 1 Shut down the stand-alone LDAP daemon, slapd.
- 2 Open the file slapd.conf for editing.
- 3 Add the following lines to the slapd.conf file:
`disallow bind_anon`
`disallow bind_anon_cred`
`disallow bind_anon_bind_simple`
- 4 Restart slapd.

The VCS One console displays a Security Information dialog box when you click a link

The VCS One console displays the following Security Information dialog box when you click any link:

`This page contains both secure and nonsecure items. Do you want to display the nonsecure items?`

[914186]

Workaround: Perform the following settings changes in Internet Explorer 6.

To alleviate the issue of the VCS One console displaying the Security Information dialog box on any link click when using Internet Explorer 6:

- 1 Select **Tools > Internet Option**.

- 2 From the **Security** tab, select **Custom Level** button.
Scroll to the **Miscellaneous** section in the top box.
- 3 In **Display Mixed Content**, select **Enable**.

Note: You will not receive the Security Information dialog box for any website and nonsecure items will be displayed on the page.

With Internet Explorer 7, the VCS One console may not refresh

The VCS One console may not always refresh with Internet Explorer 7 because the browser may be displaying a cached web page. [926185]

Workaround: Perform the following changes in Internet Explorer 7:

- 1 Select **Tools > Internet Option > General**.
- 2 In **Browsing history**, select **Settings**.
- 3 From **Check for newer versions of Pages**, select **Every time I visit the page**.

If a network error occurs while the database server is attempting to perform an I/O operation, the engine will dump core

If the VCS One database is on network storage and a network error occurs while the database server is trying to perform any I/O operation, the database engine will terminate.

The database engine will be restarted automatically and operations can continue. [970164]

You may only change the case of an editable attribute by editing its XML file

When an editable attribute is case insensitive, such as `PrecedenceOrder`, you may only change the case of the attribute by editing the XML file that defines the attribute.

For example, the attribute name “Mem” can only be changed to “MEM” by editing the XML file.

When you change the configuration by editing the XML file, you must reload the configuration database from the updated XML file for the changes to take effect. See the *Veritas Cluster Server One User's Guide* for more information. [1167126]

If a very large number of VCS One clients attempt to connect to the Policy Master at the same time, a TCP/IP socket connection error can occur

There is a default operating system limit to the number of file descriptors (FDs) that can be open at any given time. The number can be changed.

TCP/IP socket FDs are released back to the system after a short delay after closing, which can cause closed socket FDs to linger after the socket has been closed. If the number of open connections is greater than the specified operating system number, a TCP/IP socket connection error can occur. [1211952]

Workaround: To prevent this issue, increase the limit for the number of FDs that can be open at any given time. On most operating systems, you may configure this limit using the `ulimit` tool.

For example:

```
bash-3.00# ulimit -a
core file size          (blocks, -c) unlimited
data seg size           (kbytes, -d) unlimited
file size               (blocks, -f) unlimited
open files              (-n) 256
pipe size               (512 bytes, -p) 10
stack size              (kbytes, -s) 8192
cpu time                (seconds, -t) unlimited
max user processes      (-u) 29995
virtual memory          (kbytes, -v) unlimited
```

In the above example, the `open files` attribute on the system is 256. As a result, the TCP/IP socket connection error will occur after 256 client connections have been made to the Policy Master.

On most Linux systems, the default limit is 1024. On Solaris, the default limit is 256.

To prevent the issue, increase the number of FDs that can be open at any given time using the following command:

```
# ulimit -n newnumber
```

Where *newnumber* is the increased number of FDs.

Do not specify any command with resource variables when configuring the HACOMMAND task action in a job

When configuring the HACOMMAND task action in a job, do not specify any command with resource variables. Commands with resource variables are not supported by the HACOMMAND task action in a job. [1248439]

You can't add an ESX server to the VMware VirtualCenter using an IP address

VCS One does not support adding an ESX server to the VMware VirtualCenter (VC) using an IP address. An ESX server that is added to the VC using the IP address cannot be added the VCS One configuration. [1250642]

Workaround: Use the system name, not the IP address, when adding an ESX server to the VC. If you are adding an ESX server to the VC remotely, the system name must be DNS resolvable.

The operating system displayed for a virtual machine does not match the operating system of the system object running within it

The guest operating system for a virtual machine is a name provided by VMware. It does not need to be the same name as the operating system of the system object running within the virtual machine.

For example, it is possible to create a Windows virtual machine and install Linux within it. In this scenario, VMware will use Windows as the name of the guest operating system even though Linux is running within it.

If you encounter this issue, change the VMware setting for the virtual machine to the operating system that runs within the virtual machine. [1255293]

Authenticating a user who does not have a home directory on the system

On UNIX, if a VCS One user does not have a home directory, or the user does not have read and write privileges to the directory, then the user cannot run "ha" commands from the CLI.

By default, the authentication credentials for a VCS One user are stored in the user's home directory. If the user has no home directory on the system, the credentials may be stored in an alternate location. [1258468]

Workaround:

If a user has no home directory and cannot run "ha" commands from the CLI, perform the following steps:

- 1 Change the permissions of the `/var/VRTSat` directory to 755:
`# chmod 755 /var/VRTSat`
- 2 Create a directory named `profiles` under `/var/VRTSat`:
`# mkdir /var/VRTSat/profiles`
- 3 Change the permissions of the `/var/VRTSat/profiles` directory to 1777:
`# chmod 1777 /var/VRTSat/profiles`

The user with no home directory may now log in and execute “ha” commands successfully from the CLI.

Jobs can be executed out of order for related events

Business policy automation (BPA) jobs can be executed out of order for related events. For example, when an ESX server joins the server farm, two related events are generated: STARTED and RUNNING. These events are recorded in the correct order in the BPA log, but, because the BPA process is multi-threaded, these events have the potential to be executed out of order. [1267835]

The Policy Master assumes a host is faulted and fails over the service group to another system

The Policy Master does not distinguish between a host failure and a network link failure. If a host becomes unreachable via all public network links, the Policy Master assumes that the system has faulted. In this situation, the application should set the appropriate permissions when exporting a volume to prevent data corruption. [1290582]

VCS One may be unable to fail over the Policy Master if NFS-mounted file systems exist in LD_LIBRARY_PATH

If NFS-mounted directories exist in LD_LIBRARY_PATH, VCS One may be unable to fail over the Policy Master in the event of a network outage because most of the commands that depend on LD_LIBRARY_PATH hang. [1449646]

Workaround: Do not mount well known paths (such as /bin and /usr/local/bin) from the network. Instead, use locally available libraries, if possible.

Mount resources can cause core dumps

Due to a known Solaris issue, certain system calls create memory leaks that can lead to a core dump. This happens in situations where the Mount resource's `FSType` attribute has a value of `nfs`, and is exacerbated when the resource is for a non-global zone and the value of the `SecondLevelMonitor` attribute is `1`. [1464953]

Mount agent support on AIX workload partitions

This release adds support for the Mount agent and other bundled agents in AIX workload partitions (WPARs).

This release, however, does not support the following combination of RunInContainer (RIC) and PassCInfo (PCI) for the Mount agent in WPARs:

RIC=0 and PC1=1

This combination is unsupported only if the mount point is specified relative to the WPAR root file system for NFS mounts. For example, if the file system is mounted in `/wpar/p1/mnt`, but the value specified for the MountPoint attribute is `/mnt`, the RIC=0 and PC1=1 combination is not supported.

If you use an absolute path for the MountPoint attribute, the RIC=0 and PC1=1 combination is supported and there is no issue. [1477678]

The Solaris operating system in an LDOM must be based on a UFS file system for failover to work

When you install the Solaris operating system in an LDOM, you must choose a file system type (UFS or ZFS). If you want the LDOM to fail over, you must choose UFS. If you choose ZFS, failover fails. The failure to fail over when an LDOM has a ZFS-based file system is a known issue with the Solaris operating system.

If you install Solaris with a UFS file system, but the LDOM is based on ZFS storage, failover still works. [1597896]

With Internet Explorer 8, you may get certificate errors when you click on a drop-down list in VCS One

If you access VCS One through Internet Explorer 8, you may get certificate errors when you click on drop-down lists. The certificate errors require you to accept the certificate each time, even if you accept the certificate for the main browser window. [1600324]

With security-enhanced Linux, hadb commands may fail

With security-enhanced Linux, `hadb -up` and `hadb -initdb` commands may fail. [1804444]

The error message might be similar to the following:

error while loading shared libraries:

`/opt/VRTSvcsone/db/lib/libdbserv11_r.so: cannot restore segment port after reloc: Permission denied`

DBSPAWN ERROR: -80

Unable to start database server


```
SQL Anywhere Start Server In Background Utility Version  
11.0.1.2044
```

```
VCS One ERROR V-97-33-1145 Failed to start the database  
server
```

Workaround: Disable SE Linux.

Configuring shared AT for a VCS Management Console hosted on the same server as the VCS One Policy Master

When you install the VCS One Policy Master, the installer installs both a shared and an embedded version of the authentication services (AT). If you install the VCS Management Console on the same host, VCS has its own version of the authentication service.

Follow the steps in this section to configure shared AT for a VCS Management Console hosted on the same server as the VCS One Policy Master. [1824617]

1 Check the version of Shared VRTSat binaries Installed

```
# /opt/VRTSat/bin/vssat showversion
```

```
vssat version: 5.0.27.1
```

2 Remove VRTSat package completely. Do one of the following:

- On Solaris, enter the following:

```
# pkgrm VRTSat
```

- On Linux, find the package name, and remove the package. Enter the following:

```
# rpm -qa | grep VRTSatClient
```

```
# rpm -e --nodeps VRTSatClient
```

3 If you receive a warning message about verifying packages, ignore the warning message.

4 Remove VRTSat directories. Enter the following:

```
# rm -rf /var/VRTSat
```

```
# rm -rf /var/VRTSat_lhc
```

5 Install the authentication services. Follow the instructions in <deliverable name>.

CPU and memory reservations do not work as expected for ESX clients

When a VFrame loads, it has only 10% of the capacity of the PFrame. The GUI does not get refreshed for all of the VMs on the ESX server's resource allocation page. [1853500]

Workaround: Log in and out again from the GUI. You should see the changes in resource allocations right away.

Config.cmd is not platform independent

The config.cmd command script which is generated using the `haconf -dbtocmd` or `haconf -xmltocmd` command is not platform independent. Consequently, the config.cmd generated on one OS platform cannot be run on another OS platform. [1971792]

Issues fixed in VCS One 5.0 Service Pack 2

The following issues have been fixed in VCS One 5.0 Service Pack 2.

Table 1-20 Veritas Cluster Server One fixed issues

Incident	Description
1935875	<p>If you try to upgrade the VCS One Policy Master in a single node cluster by using the <code>installvcsonepm -import</code> command, VCS One asks you to specify a private NIC ID. This question may be confusing in the context of a single node cluster as you may expect a smooth flow similar to <code>installvcsone</code>.</p> <p>This is a question related to GAB/LLT modules. Symantec has modified the upgrade code to ensure that you see GAB/LLT related questions, only if you choose to enable these modules during a single node configuration.</p>
1949692	<p>When you install the VCS One Policy Master and IPv6 is enabled in your network, the installer may display several instances of the same NIC ID.</p> <p>Symantec has fixed this issue.</p>
1955493	<p>VCS One lets you to access files systems on two nodes in a cluster, under certain circumstances. This leads to a concurrency violation.</p> <p>Symantec has modified the code to prevent this concurrency violation.</p>
1979187	<p>You cannot install VCS One packages for ESX server from system that is running non-Linux operating systems.</p> <p>Symantec has fixed this issue</p>
2031989	<p>If you run the following command on the VCS One Policy Master (PM), then the PM dumps core.</p> <pre>haclus -modify SiteAddress -delete -keys</pre> <p>Symantec has fixed this issue.</p>
2032918	<p>If you export the VCS One Policy Master configuration and data by using the <code>./installvcsonepm -export</code> command, VCS One installer does not allow you to use the special characters such as "." and "-", when you specify the target directory path.</p> <p>Symantec has fixed the issue.</p>

Table 1-20 Veritas Cluster Server One fixed issues (Continued)

Incident	Description
2039404/2039424	<p>The Mount agent may consume 100 per cent CPU under certain network failure scenarios.</p> <p>Symantec has fixed this issue.</p>
2050700	<p>The VCS One Policy Master dumps core on expiry of the DeploymentTimeout attribute value. The attribute defines the validity period of a deployment credential.</p> <p>Symantec has fixed this issue.</p>
2052052	<p>If you flush the pending Group Transition Queue (GTQ) entries for VFrames, under certain circumstances the VCS One Policy Master dumps core.</p> <p>Symantec has fixed this issue.</p>
2052727/2082608	<p>When you add a virtual machine to an existing VCS One configuration. You may experience random failovers. For example:</p> <ul style="list-style-type: none"> ■ An ESXVM resource goes to the FAULTED state and displays the "Invalid encrypted password specified" error in the ESXVM logs. ■ An ESXDatastore resource hangs while going online/offline. ■ An ESXDatastore or an ESXVM resource, or both, go to the FAULTED state, and display the "Could not connect to ESX web server" error in the appropriate log file. <p>Symantec has fixed these issues.</p>
2070976	<p>If you include a distributed VSwitch in a setup, then the VCSOne discovery wizard is unable to detect the virtual infrastructure over a vCenter server.</p>
2086005	<p>The VCS One SRDF agent does not support an SRDF resource in a Vframe.</p> <p>Symantec has now added the required support</p>
2115308	<p>If you run the <code>halogin</code> command, it fails to pick up the exported environment variables user name (VCSONE_USERNAME) and the domain type (VCSONE_DOMAINTYPE).</p> <p>Symantec has fixed this issue.</p>

Table 1-20 Veritas Cluster Server One fixed issues (Continued)

Incident	Description
2171895	If you add a cluster to a CSG cluster list, an error is logged twice This is caused because of two error calls - one implicit, one explicit. Symantec has removed the explicit call.
2171899	If you disable the network connection to a remote cluster, error messages flood the engine log. Symantec has fixed this issue.
2173693	Under certain circumstances the <code>deletegrp</code> CLI option fails for composite service groups (CSGs). Also, the VCS One Policy Master may not set the Intransition attribute for CSGs. Symantec has fixed this issue.
2200863	In some cases, the <code>hares -action</code> option does not work on the VCS One GUI. Symantec has fixed the issue.
2242800	The Policy Master process crashes in the following case: The Policy Master server sets an incorrect value for the ProbesPending service group attribute, when a client daemon reconnects with the Policy Master server after a temporary loss of connection. Symantec has modified the code to ensure that the Policy Master server resets the SystemSequenceNumber when a client system loses connectivity. The Policy Master also resets the value of ProbesPending.
2268934	On a VCS One PM node, if you set Mii to 0 and configure the NetworkHosts attribute in the NIC resource configuration, then the monitor entry point of the NIC agent logs the following error in the engine logs. Can't use string (" <code><n></code> ") as an ARRAY ref while "strict refs" in use at /opt/VRTSvcs/bin/net_functions.pl line 302. Symantec has fixed this issue.

Known issues

The following are known issues in this release of VCS One. Known issues are anticipated to be fixed in future releases.

The known issues are classified into the following categories:

- [“VCS One console issues”](#) on page 38
- [“Operational issues”](#) on page 42
- [“Policy Master issues”](#) on page 62
- [“Simulator issues”](#) on page 67
- [“Authentication issues”](#) on page 69
- [“VCS One client issues”](#) on page 70
- [“Installation and uninstallation issues”](#) on page 70
- [“Bundled agent issues”](#) on page 77
- [“Fencing issues”](#) on page 84

VCS One console issues

Flash 9 or later can cause the web browser to crash on Windows

On Windows, Adobe Flash Player version 9 or later can cause the web browser (Firefox 2.0 or later, or Internet Explorer 7.0) to crash when you perform operations in the AWM, Resource dependency, Group dependency, and Map views in the VCS One console. [540032]

In the Service Group Configuration window, the platform field may not display correctly

In the Service Group Configuration window of the VCS One console, the pull-down arrow for the Platform field may not appear. [852600]

Clear the browser cache before switching to a different Policy Master

If you switch to another Policy Master, you must clear the browser cache and open a new web browser window before logging into the VCS One console. [968580]

VCS One console cannot accept single quote mark in object descriptions

Use of single quote (apostrophe) special character (') in any description field causes errors in the VCS One console display. [1004445]

Workaround: From the command line, modify the value of the attribute entered in the field such that the special character (') is not used.

Autorefresh does not work during a rule invalidation

If you delete an object, such as a service group, from the CLI, no notification of the deletion is sent to the **Rule Detail** screen of the VCS One console.

For example, if you:

- 1 Create a rule in the VCS One console.
- 2 Select a group or events for the group.
- 3 In the **Object Selection** screen, select groups (for example, sg1 and sg2).
- 4 Complete the rule configuration.
- 5 From the CLI, delete the service group named sg1.

The **Rule Detail** screen in the VCS One console does not refresh for rule invalidation. [1194851]

Workaround: Press F5 to refresh the screen manually.

You may not specify event parameters for a job while that job is running

When adding a job using the VCS One console and adding a task for that job using the **Task Details Page**, if **Execute Script** or **Execute Script using SSH** is selected from the **Select Action Type** pull-down menu, you can select the **Use event parameters as arguments** checkbox. However, you are not allowed to define event parameters while the job is running. For this reason, select the **Use event parameters as arguments** option only for jobs that are associated with a rule.

Similarly, when adding a job and a task for that job using the **Task Details Page**, if **Send Syslog** is selected from the **Select Action Type** pull-down menu, you can select the **Prefix event message** checkbox. However, because you are not allowed to define event parameters while the job is running, select this checkbox only for jobs that are associated with a rule. [1206106]

Some “ha” commands are not validated on the Job wizard while adding an HA command on the Task Detail Page

Some “ha” commands are not validated when you select the **Validate** option while selecting **Execute HA Command** in the **Task Detail Page** of the **Job** wizard in the VCS One console. The wizard accepts some “ha” commands as correct even if the syntax is incorrect.

For example, the wizard accepts the following command even though the command is missing the `-any` option:

```
hagrp -online/offline -ou /
```

[1225823]

If you add a user to VCS One without setting a password, anyone can log in as that user with any string

If you add a user to VCS One without setting a password, anyone can log in as that user with any password string. [1323590]

Workaround: Symantec strongly recommends that users set a password, and not leave the password field blank.

Do not explicitly add the root user to the Policy Master's user list

If you explicitly add the root user to the Policy Master's user list, the root user gets removed from the UserPref object list. As a result, service groups are not listed on the service group selection page if you are logged in with root credentials and run any wizard in edit and delete mode.

To avoid this issue, do not explicitly add the root user to the Policy Master's user list. [1391718]

The Add/Modify Resources wizard may not open if the number of resources is large

If the number of resources is large (on the order of thousands), wizards such as **Add/Modify Resources** may not open. [1393920]

Entering non-English characters into a wizard results in an empty wizard page

Entering non-English characters into a VCS One wizard results in an empty wizard page. [1532205]

VCS One web console login fails with a user privileges error

This issue is applicable if you have configured a Windows Policy Master.

You may not be able to log on to a VCS One farm with a user or group if the user or group is configured as `user@domain.com` or `usergroup@domain.com` on the Policy Master.

For example, if a user Tom is part of a domain *mydomain.com*, and `Tom@mydomain.com` is configured on the Policy Master server, you may not be able to log on to the web console using user Tom. [1726164]

The web console displays the following error on the logon page:

```
VCS One ERROR V-97-1-18079 Command failed. User '<user
name>@<domain name>' does not have privilege on server farm
'<server farm name>'
```

Workaround: Add the user or group in the format **user@domain** or **usergroup@domain** (without the .com suffix) to the Policy Master server.

Considering the example mentioned earlier, to log on to farm using user Tom, add **Tom@domain** to the Policy Master.

The rule scheduler does not reset correctly for March

For a rule schedule that executes every five days, the scheduler resets every month and starts again from the first day of the month; the next execution happens every five days. Because of an issue with the quartz 1.6.0 binaries, the rule execution for March does not happen on the first day of March. [1975325]

Attribute values are displayed incorrectly in the Edit Attribute wizard

When you override default attribute values using the Edit Attribute wizard, the wizard incorrectly displays the default value instead of your override. This is a display issue only. The correct values are stored in the resource. To see the correct values, go to the All Attributes page for that resource. [1789333]

You cannot take a composite service group offline when a resource is in the ONLINE | STATE UNKNOWN state

If a resource is in the ONLINE | STATE UNKNOWN state, the Policy Master does not allow you to take that resource offline. [1804787]

You cannot use the GUI to edit a disaster recovery IP address

You cannot use the GUI to edit the Cluster DRAddress attribute. [1810021]

Workaround: To edit a disaster recovery IP address, you must use the `haadmin` command.

Refer to the *Veritas Cluster Server One User's Guide* for instructions.

Some wizard screens may go blank

If you are running `nspluginwrapper` 0.9.91 and 32-bit Flash plug-in version 10.0.32 for Firefox 3 beta 5, some wizard screens, such as group online and group offline screens, may go blank when you click **OK**. [1818640]

Workaround: Update `nspluginwrapper` to version to 1.2.2, install the 64-bit Flash plug-in for version 10.0.32, and restart Firefox.

Taking a VMA vframe offline takes a long time

In a console-less VMware environment like ESXi, the VMA is discovered by the virtual infrastructure discovery wizard and added to the VCS One configuration. However, no operations should be performed on the VMA from VCS One. For example, the offline operation on the VMA will result in the VMA going offline, but VCS One does not detect the correct state of the VMA. To disable user operations, disable the VMA using `havframe -disable VMA_vframe`. To disable policy actions, freeze the VMA using `havframe -freeze VMA_freeze`. [1930116]

VCS One displays a blank page when you launch an operation or wizard, or click a pop-up link

If you use Internet Explorer 8, you may get a blank page when you launch an operation or wizard, or click a pop-up link. [1941653]

Workaround: Switch to a different browser, such as Internet Explorer 7, or FireFox.

Operational issues

Simultaneous online or fail over of multiple ESX virtual machines fails

Occasionally, with reservations enabled, in certain situations such as a power outage, when multiple virtual machines try to come online or fail over simultaneously on the same ESX server, some of them may fail to come online. This will result in the failed VFrames being added to the GTQ list in case no failover target is available. [1943614]

Workaround:

Clear the attribute *ESXServer:FailedReservationVFrames* manually on all the PFrames where the VFrames failed to come online by using the following command:

```
# hapframe -modify pframe_name ESXServer:FailedReservationVFrames -
delete -keys
```

where *pframe_name* is the PFrame on which the VFrames failed to come online.

As soon as this attribute value is cleared, VCS One tries to online the VFrames on the PFrame specified in the above command.

If you do not manually clear the attribute *ESXServer:FailedReservationVFrames*, the VCS One Policy Master will automatically clear this attribute after the interval specified in the *ESXServer:FailedReservationTimerExpiry* attribute value. The default value of this attribute is 60 minutes. You can set this to a lower value to clear the *ESXServer:FailedReservationVFrames* attribute more frequently.

VCS One does not fail over ESX virtual machines in case of storage outage

Occasionally, VCS One Policy Master does not fail over the virtual machines residing on shared storage when the shared storage is not accessible from the ESX server. There is no workaround for this issue. [1589860]

Incorrect error message

The correct message corresponding to message ID 1037 is:

Please do the same on all the other VCS One policy master nodes.

Due to an error in the message catalog, the message corresponding to message ID 1036 is printed for message ID 1037 also.

The xprtld process acquires lock on the current working directory which blocks unmount of DVD

The xprtld process acquires lock on the current working directory which blocks unmount of DVD. [1999419]

Workaround: To unmount the DVD, use the following steps:

- 1 Kill the xprtld process:

```
# pkill xprtld
```
- 2 Unmount the DVD.
- 3 Restart the xprtld process:

```
# /opt/VRTSsfmh/bin/xprtld -X 1 /etc/opt/VRTSsfmh/xprtld.conf
```

Insufficient privilege error message

If you receive an insufficient privilege error for an action on a system, it may be because the system is not anchored to the same organization unit node as the user in whose context the command is run.

The recommended design is to anchor the system to the same organization unit node as the user in whose context the command is run. See “How you manage users using the Organization Tree” in the *Veritas Cluster Server One User’s Guide*.

With security-enhanced Linux, VCS One controlled mount fails, while manual mount of volume succeeds

Security-enhanced Linux must be disabled, because the Security-enhanced (SE) Linux support is provided for evaluation purposes only and the Security policy files are not currently available for the Veritas product stack. Problems such as the mount issue in the subject title can result when Security-enhanced Linux is enabled.

Workaround: To disable SE Linux at boot time on both SUSE Linux Enterprise Server 9 (SLES 9) and Red Hat Enterprise Linux 4 (RHEL 4), set the kernel boot parameter `selinux` to 0 (`selinux=0`) and reboot the machine. Assuming the system has been configured for booting from the machine *machine_name*, edit the file `/boot/machine_name/menu.lst` to include `selinux=0` on the kernel line. Then reboot the machine to ensure the setting takes effect.

Semaphores initialized by database are not cleaned

The VCS One database and the clients communicate using the shared memory protocol. In the case where the client or database processes are killed using SIGKILL, the semaphores are not cleaned up. Once the number of initialized semaphores exceeds the operating system limit, the database does not come up. [343871]

Harmless “duplicate tcp line” messages can be suppressed

On Red Hat Linux, when a TCP connection is rapidly closing and re-connecting on the same address/port pair, several messages may appear that contain the text:

```
warning, got duplicate tcp line.
```

These messages are harmless and do not impact performance. Refer to the Red Hat Knowledgebase link:

http://kbase.redhat.com/faq/FAQ_80_6180.shtm

[422083]

Workaround: These messages may be suppressed by changing the values of the kernel parameters `tcp_tw_recycle` and `tcp_tw_resuse` in the file `/etc/sysctl.conf` to 0. After changing the parameter values in the file, execute the `sysctl -p` command to put them to effect.

haconf -verify fails to warn about attribute defined twice

If, by mistake, a user defines an attribute twice in a VCS One configuration file, the `haconf -verify` command does not give a warning. Instead, it causes the second definition to override the first. For example:

```
<group name="g2">
  <attributes>
    <attribute name="CompatibleGroups">
      <val key="ALLGROUPS"></val>
    </attribute>
    <attribute name="Load">
      <val key="cpu">10</val>
      <val key="memory">10</val>
    </attribute>
    <attribute name="SystemList">
      <val key="vcssun31">0</val>
      <val key="vcssun32">1</val>
    </attribute> <attribute name="Load">
      <val key="cpu">0</val>
    </attribute> </attributes>
  </group>
```

The Load attribute has two values, the second overriding the first. [570978]

Workaround: Be careful to define an attribute value only once.

Inability to contact DNS server may cause “ha” commands to hang

When “ha” commands are issued after a network failure, they may hang for a long time if the DNS server cannot be reached. The commands require the DNS server for authentication functionality. [602987]

Workaround: Perform the following two actions:

- 1 On each Policy Master system, specify the Policy Master virtual IP address in the file `/etc/hosts`.
- 2 Edit the file `nsswitch.conf` and precede “dns” with the word “files” such that it contains the line: `hosts: files dns`.

VCS may not shut down if you change a system from run level 3

If you change a system from run level 3 to run level 1, 2 or single user, VCS will not shut down and any resources managed by VCS may fail when the underlying resources disappear. [635269]

Workaround: Take the system down to run level 0 and then bring it up to single user or run level 1, 2.

Do not use commas in an extended attribute value

If a single extended attribute (EA) value contains a comma, the value is interpreted as multiple values when the VCS One database is reloaded. To avoid this issue, do not use commas in an extended attribute value. [932599]

haconf may fail

In some situations, `haconf` may return a failure or dump core. [995630]

Workaround: Reissue the command.

Ensure that VCS One group administrators also have system administrator privileges

Ensure that VCS One group administrators also have system administrator privileges for those systems where their service group can fail over. [1000394]

If resource variables are used, the ExportACL attribute for the NetAppExport agent does not get the values for other systems in SystemList

Resource variables are associated with specific systems in the `ArgListValues` that are passed to the agent. As a result, if resource variables are used in the `ExportACL` attribute, `ExportACL` does not get the values for the other systems in the `SystemList` when passed to the `NetAppExport` agent. For example, the `NetAppExport` agent will not get the value for system A as part of a snapshot for System B for `ExportACL`. [1004445]

Workaround: You can avoid this issue if ExportACL is explicitly defined without using resource variables.

Built-in and extended attribute names should be enclosed in double quotes if they contain escape sequences for special characters

Ensure that attribute values/validations (both built-in and extended) that contain escape sequences for special characters are enclosed in quotation marks (“”).

For example:

```
<attribute name="StartProgram"><scalar>"start in bg -- &";"  
</scalar></attribute>
```

[1005373]

VCS One commands will not work if the system needed to perform the action is unavailable

VCS One commands may be accepted by the Policy Master, but will not work if the system needed to perform the action does not have a heartbeat or has faulted. [1010240]

Workaround: To work around this issue, reissue the command after the needed system is running again.

In some situations, hadb -up may result in errors

In some situations, `hadb -up` may result in errors. These errors are Sybase ASA errors from the `dbspawn` utility. Examples of the errors are below. [1011122]

Example 1

```
DBSPAWN ERROR = -81
```

Frequency of occurrence: Very low

Cause: Unknown.

Workaround: To work around this issue, do one of the following:

- Start the server again using `hadb -up`.

Or:

- Copy the database files to a backup directory to ensure the current configuration is saved. Then, run `hadb -reloaddb backup_dir` from the backup directory.

Or:

- If the above two actions do not work and if an XML backup is available, then run these commands:

```
hadb -initdb  
hadb -up  
haconf -loaddb XML_backup_dir
```

Example 2

DBSPAWN ERROR = -80

Frequency of occurrence: Very low

Cause: Starting and stopping the database immediately may sometimes result in this issue.

Workaround: See the workaround in Example 1 above.

Example 3

DBSPAWN ERROR = -832

Frequency of occurrence: Low

Cause: When system semaphores are exhausted, the max semaphore OS limit is reached. This occurs when database clients (vcsoned/haconf) are killed abruptly using SIGKILL/SIGSTOP.

Workaround: To work around this issue, do one of the following:

- Manually delete the semaphores using ipcrm (UNIX).

Or:

- Reboot the node.

On Linux, changing the system clock to an earlier date or time may cause Policy Master notifications to be delayed

On Linux, if you change the system clock to an earlier date or time when the VCS One console is running, notifications from the Policy Master may be delayed for a duration equal to the amount of time the system clock has been set back. You may see stale data for this duration. After the duration, the console will refresh and any notifications from the Policy Master will appear. [1014469]

A fault with NetApp Filer caused “ha” commands to hang

If the VCS One configuration database resides on a NetApp Filer and the NetApp Filer faults and goes down, “ha” commands hang for a period of several minutes, the pmexport agent goes into a monitor timeout state, and the PMSG faults. This occurs only under certain conditions. [1021318]

Group compatibility privilege is effective only at /

With this release, group compatibility privilege is effective only at /. This means that the compatibility privilege granted at other OU nodes does not have any effect. You may not modify group compatibility at OUValues other than / even if you have the privilege to do so at those OUValues, unless you also have the privilege at /. [1024724]

Symbolic links in /opt/VRTS/bin have different owner than binaries in /opt/VRTSvcsone/bin

The binaries in /opt/VRTSvcsone/bin have root:sys as the owner but the symbolic links in /opt/VRTS/bin have the owner as root:other. [1029460]

hagetcf requires an absolute path

The hagetcf command asks you to enter the path where the configuration can be saved. The default path is /var/tmp. If you supply a relative path, the command will fail.

For example, entering “.” to specify the current directory results in an error message similar to the following:

```
VCS One ERROR V-97-1-17430 Directory './vcsoneconf.01May2007_154928'
does not exist
```

[1037594]

Workaround: To work around this issue, supply an absolute path (for example, /tmp).

VCS One CLI commands may sometimes hang on a client system if the socket connection uses an IP address configured using the IP resource on the client system as its source IP address

VCS One CLI commands may open a socket connection using an IP address configured using the IP resource on VCS One client systems. If the IP resource is down on the client node, the CLI commands will not be able to resolve the IP address configured by the IP resource. In this situation, the VCS One CLI commands can hang indefinitely. [1038213, 1126275]

Workaround: Specify a local IP address on the client system as the source IP to bind to while connecting to the Policy Master on an IP address specified in vcsone.conf. Doing so prevents the socket connection from using any other IP address as the source IP address.

- 1 Specify the source IP for a given Policy Master IP in vcsone.conf:

```
PM_IPS=[pm_ip]:port: [src_ip]
```

Each PM_IPS record can have an additional source IP separated by a colon (“:”).

- 2 Specify the source IP (*src_ip*) the same way you would specify the Policy Master IP. That is, enclose the IP in square brackets “[]” to indicate an IPv6 IP.

By default, the OfflineMonitorInterval is set to zero

By default, the OfflineMonitorInterval attribute is set to zero. Therefore, resources are not monitored after they go offline. [1124752]

Workaround: To work around this issue, you may change the value of `OfflineMonitorInterval` using the `hatype` command.

Do not rename virtual machines that are under VCS One control

If a virtual machine that is under VCS One control is renamed, VCS One does not rename the frame name.

For this reason, this release of VCS one does not support renaming virtual machines. Do not rename virtual machines that are under VCS One control. [1128991]

Workaround: If this problem occurs, however, run the synchronize wizard.

Specify the disk name for the first system in the system list

If the name of the shared disk is not the same on all the systems, when prompted to enter the disk name when installing the Policy Master, enter the disk name for the first system in the system list. [1149268]

When an ESX server faults due to network issues, virtual machines that use shared storage may not migrate correctly

When an ESX server faults due to network issues, virtual machines that use shared storage may not migrate as expected to a failover ESX server. This issue was observed when a virtual machine did not migrate when an ESX server faulted. [1150333]

Engine logs fill up with message 40502 when earlier client versions connect to the Policy Master

When earlier versions of the client connect to the Policy Master, the engine logs fill up with message 40502. [1201279]

Workaround: To prevent this issue, ensure that earlier versions of the client are removed before installing this release of VCS One. Earlier client versions include Veritas Application Director 1.0, Veritas Application Director 1.1, and Veritas Application Director 1.1 Platform Expansion.

Parallel service group with a disabled resource

If a parallel service group contains a disabled resource then the `online anywhere` command always attempts to bring the service group online on the same system and the `hagrp -online -everywhere` command brings the group online on one system only. [1250599]

The group state appears incorrectly as ONLINE

When all OnOff type resources in a group have `AutoStart = 0`, the group state incorrectly appears as ONLINE even if any single resource is ONLINE. The group state should appear as PARTIAL in this situation. [1252792]

If vcsoneclientd issues a warning about a non-available SysIPAddress, “ha” commands will not work in a local zone

If the SystemIPAddr attribute is not configured in vcsone.conf and the host name of the VCS One client is not resolvable to an IP address, then vcsoneclientd issues a warning message in the vcsoneclientd logs stating that there are no IP addresses available for the Policy Master to ping vcsoneclientd.

If you see this warning in the vcsoneclientd log files, then the Solaris local zone entry points stop working and “ha” commands will not work. This issue occurs because “ha” commands issued from the local zone entry points use the same set of IP addresses to communicate with vcsoneclientd running on a global zone. [1278703]

Workaround: To resolve this issue, do one of the following two things:

- Configure the SystemIPAddr in the vcsone.conf file.
In the /etc/VRTSvcsone/vcsone.conf file on the client node, add the following line to the file:

```
SystemIPAddr=10.10.10.10:11.11.11.11
```
- Ensure that the local host name of the client can be resolved by DNS to an IP address so that this IP address can be used by “ha” commands inside the local zone to communicate with vcsoneclientd running on the global zone.
Log in to the client node and run the following command:

```
# nslookup hostname
```

Volume resources in ONLINE|UNABLE TO OFFLINE state

If the Volume resources are in ONLINE|UNABLE TO OFFLINE state on any node, deport the disk group on that node by issuing the following command:

```
# vxkg deport dgname
```

Then, probe the corresponding volume and the disk group resources. [1281657]

Cloned service groups can not be edited using the service group configuration wizards on Windows

After cloning the service groups using the VCS One console if you attempt to edit them using the service group configuration wizards on Windows, the wizards may either not be able to make all the desired changes to the service group configuration or may crash. [1282385]

To be able to successfully edit cloned service groups using wizards, you must do the following:

- 1 After cloning the service group using the VCS One console, edit the cloned service group attributes (such as IP, Lanman, NIC, and storage resources) manually. This is to ensure that the original and the cloned service groups are unique in the cluster.
- 2 Bring the cloned service group online.

- 3 After the cloned service group comes online, use the wizards to edit the service group for any changes in future. Do this only once for each cloned service group. Thereafter, you can use the wizards for making any changes to the service group configuration.

When a system joins the server farm, AgentVersionInfo error messages appear in the engine logs

When a system joins the server farm, the following error messages appear in the engine logs:

```
VCS One ERROR V-97-1-17369 [system_name::AgentVersionInfo]
Attribute key 'agent_name' does not exist
VCS One ERROR V-97-1-17363 [system_name::AgentVersionInfo]
Attribute key 'agent_name' already exists
```

Workaround: To prevent the issue, execute the following command locally on the system:

```
# haagent -update agent
```

This command adds the agent version to the AgentVersionInfo attribute.

[1297798]

Remove the user from the VCS One configuration when the user is removed from an external directory

If a user is removed from an external directory, for example, Active Directory or LDAP, but is not also removed from the VCS One configuration, the rules owned by that user will still execute. Whenever you remove a user from an external directory, also remove the user from the VCS One configuration. [1364434]

hagrp -online group -everywhere is not supported

In BPA, `hagrp -online group -everywhere` is not supported. The command displays the following error in the web console:

```
VCS One Error v-97-11-1178 Command is not a valid or supported
HACommand
```

[1367271]

If you delete an object that is used in a job, the policy is marked “Invalid”

If you delete an object that is used in a job, both the job and its associated policies are marked “Invalid” and the job is not executed. If you delete an object that is used in a policy, such as conditions or event selections, only the policy is marked as “Invalid”.

If the object referenced in the Execute HACommand task is deleted, BPA does not recognize the deletion and may leave the job and associated policies marked as “Valid”. [1367271]

The agent framework may sometimes incorrectly convert INTENTIONALOFFLINE to OFFLINE

When the Monitor function reports INTENTIONALOFFLINE, the agent framework (AGFW) converts INTENTIONALOFFLINE to OFFLINE in these situations: [1373188]

- On the first probe
- On unquiesce
- When you issue `hares -probe` for a resource that is already offline

This issue can result in the following two scenarios:

- **Scenario 1:** You have a resource that supports INTENTIONALOFFLINE detection and is online. The agent dies and you manually take the resource offline outside of VCS One control.

For the ESXVirtualMachine agent, taking a virtual machine intentionally offline can mean that the virtual machine migrated to another ESX node because of a user-initiated action outside of VCS One control. In this scenario, the Policy Master continues to assume that the resource is online because the agent is not running to report the resource's state.

When the agent comes back up, it runs the first probe for the resource. Even if the first probe returns IntentionalOffline, the AGFW converts the state to OFFLINE and reports it to the Policy Master. Since the Policy Master assumed that the resource was ONLINE, an unexpected OFFLINE state update from the agent causes the resource to go into the FAULTED state.

If the agent had been running, it would have reported the INTENTIONALOFFLINE state to the Policy Master and the resource state would have changed from ONLINE to OFFLINE instead of FAULTED.

- **Scenario 2:** You have a resource that supports INTENTIONALOFFLINE detection and is online.

The connectivity between the client daemon and the Policy Master is broken. As a result, all resources on that client system move to the QUIESCED state. You then take the resource intentionally offline outside of VCS One control. For the ESXVirtualMachine agent, taking a virtual machine intentionally offline can mean that the virtual machine migrated to another ESX node because of a user-initiated action outside of VCS One control. In this scenario, the Policy Master assumes that the resource is ONLINE because the client connectivity is not available to verify the resource's state.

When the connectivity is re-established, the agent runs the first probe for the resource. If the first probe returns INTENTIONALOFFLINE (because you took the resource intentionally offline when the connectivity was broken), the AGFW converts the state to OFFLINE and reports it to the Policy Master. Since the Policy Master assumed that the resource was ONLINE, an

unexpected OFFLINE state update from the agent causes the resource to go into the FAULTED state.

If the connectivity between the client daemon and the Policy Master had not been broken, the agent would have reported the INTENTIONALOFFLINE state to the Policy Master and the resource state would have changed from ONLINE to OFFLINE instead of FAULTED.

hadb -backupxml does not copy orgtree.dtd and vtypes.dtd

The `hadb -backupxml backup_dir` command does not copy the files `orgtree.dtd` and `vtypes.dtd` to `backup_dir`. This issue may cause problems when opening the xml files in an xml editor. [1373589]

Workaround: Copy the `orgtree.dtd` and `vtypes.dtd` files manually from the default location.

The VCS One database transaction log file may fill up disk space, causing database corruption and VCS One failure

The VCS One database transaction log file continues to grow over time. (It has been observed to reach approximately 3 to 4 gigabytes.) As a result, it may use up all the free disk space. This issue may result in database corruption and VCS One failure. [1391882]

Workaround: Periodically, take a full database backup to a different device or partition, using the following command:

```
haadmin -backup -db backup_dir
```

This command backs up the database and transaction log files, and then truncates the transaction log file that is in use. Only a full back up truncates the transaction file.

In addition, ensure that there is ample disk space for the transaction log file to grow between backups.

In some situations, the Policy Master log page is empty in the web console

In some situations, the Policy Master log page is empty in the web console. If you encounter this issue, the system may have exceeded its open file descriptor limit. To determine whether this is the case, open the following file and look for a “too many open files” error:

```
/var/VRTSvcsone/log/vcsonems-rca.log
```

[1393726]

Workaround: If the error is present, run the following command to view the current file descriptor limit value:

```
ulimit -n
```

Next, set a considerably higher file descriptor limit value:

```
ulimit -n new_value
```

If Policy Master switches servers during client installation, the installer may fail or produce an error

If the Policy Master switches servers during client installation, the installer may fail or produce an ssh error. This occurs only if the Policy Master switches server during the question and answer part of the installation.

Note that it is assumed that ssh communications has been set up and works correctly outside of the installer between the installation and Policy Master servers. [1394597]

Workaround: If the installer produces an ssh error during the installation and the Policy Master has switched servers, abort and restart the installer. The ssh issues will be resolved when you re-run the installer.

If the installer fails after the question and answer part of the installation and the Policy Master has switched servers, re-run the installation. Note that the failure occurs during the credential setup, but the client software should have installed correctly on each server.

The haconf -loadddb option does not allow the overriding of attribute properties if they are present in both vcsone.xml and types*.xml

For attributes that are present in both vcsone.xml and types*.xml files, the haconf -loadddb option considers only the attribute properties that are present in vcsone.xml. It will ignore the attribute properties that are present in types*.xml. [1448425]

When you add a set, the set is not dynamically updated with extended attribute changes or updates to the organization tree

When you add a set using the `haset -add` command, the set is static. The set is not dynamically updated if the organization tree or the referenced extended attribute (EA) changes. [1463742]

For example, add the following set:

```
haset -add mysolsystems -ou /LOB=MYBIZUNIT/Dept=MYDEPT -ea  
OS=Solaris10
```

If another user deletes **Dept=MYDEPT** from the organization tree, then **MYDEPT** is not automatically removed from the **mysolsystems** definition. The same is true for extended attribute changes. If someone removes **Solaris10** from the OS attribute, the **mysolsystems** set definition is not automatically updated.

Workaround: The OU and EA components are only validated when you create, modify, or use a set. To validate changes in the above example, do one of the following:

- Delete the set and add it again, redefining the attributes. For example, enter the following, (substituting your own attribute definitions):

```
haset - delete mysolsystems
```

```
haset -add mysolsystems -ou /LOB=MYBIZUNIT/Dept=<NEW
DEPARTMENT> -ea Platform=Solaris
```

- **Modify the set.** For example, enter the following, (substituting your own attribute definitions):

```
haset -modify mysolsystems -ou /LOB=MYBIZUNIT/
Dept=<NEW DEPARTMENT> -ea Platform=Solaris
```

- **Use the set.** For example, enter the following, (substituting your own attribute definitions):

```
hasys -display mysolsystems -ou /LOB=MYBIZUNIT/
Dept=MYDEPT -ea Platform=Solaris
```

When you display the set, you see an error message if MYDEPT is renamed or deleted from the organization tree. You can then modify the set with the updated information.

A set based on a location in the Organization Tree no longer works when you remove the location

You can create a set to manage a collection of objects at any location in the Organization Tree. If you remove that location, however, any set based on that location no longer works.

When you remove the location, the command line displays an error. The GUI does not, but the set will be invalid the next time you invoke it. [1463761]

When a default root user adds a set on the Policy Master, the set may not be visible in the GUI or on another Policy Master Node

A set that the root user creates using the `haset` command on the Policy Master host is associated with the user name `root@pm_hostname`. This set will not be visible to the root user via the GUI, where the default user name is `root@cluster_name` or to the root user on other Policy Master hosts where the user name is `root@other PM_hostname`. [1480037]

Workaround: To avoid this visibility issue, the root user should use the explicit domain type, `unixpwd`, when using the `haset` command. For example:

```
haset -add set -ou / -user root -domaintype unixpwd
hagrp -display -setname -user root -domaintype unixpwd
```

VCS One does not initiate failover following a web server crash

When the VCSOneWeb resource in the Policy Master Service Group (PMSG) crashes, VCS One does not initiate failover. This is because the VCSOneWeb resource is not set as a critical resource by default. [1513083]

Workaround: Make the VCSOneWeb resource a critical resource so that the PMSG will fail over if the web server crashes. Enter the following:

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

```
/opt/VRTSvcs/bin/hares -modify VCSOneWeb Critical 1
/opt/VRTSvcs/bin/haconf -dump -makero
```

In the Add Extended Attribute wizard, you must click twice on the combo box to select the default value

When you add or remove keys from an enumerated extended attribute, you must click twice to get the focus out of the table and select the value in the default value combo box. [1587659]

You cannot change or set the SourceFile attribute value for the haset command

Changing or setting the SourceFile attribute value for the haset command has no effect. [1663946]

For more information about the haset command, see *Veritas Cluster Server One Command Reference Guide*.

The LinkStatus attribute value in the disaster recovery panel sometimes toggles between UP and DISABLED

If EnableConnections is set to 1 on the Initiator cluster and 0 on the Acceptor cluster, then the Initiator cluster periodically attempts to connect to the Acceptor cluster. This causes the LinkStatus attribute value for the connections between the clusters to toggle between UP and DISABLED. The toggling happens in the GUI. It also happens in the CLI if you invoke the CLI frequently. [1740009]

Workaround: Set EnableConnections to 1 on the Acceptor cluster.

Modifying the ClusterAddress attribute using C shell (csh) may result in errors

If you use csh, modifying the ClusterAddress attribute may result in errors. The reason for the errors is that VCS One and csh interpret square bracket characters “[” and “]” differently. [1804504]

The issue occurs when you use the following commands:

- **haclus -modify ClusterAddress -add [ipaddr]:port**
- **haclus -modify ClusterAddress -delete [ipaddr]:port**

Workaround: When you use the above commands, include double quotation marks around text, such as “[ipaddr]:port”, that contains square brackets.

Deleting a NIC may cause failover issues (Solaris only)

When you delete a NIC from a MultiNICB resource, only the groupname is removed from that NIC. All IP addresses are left on the NIC. As a result, the virtual IP addresses on that NIC are no longer under IPMP. [1822396].

Workaround: Manually remove the IP addresses from the NIC and plumb them to the NICs you want to use.

Setting up Policy Master communication for local zones may not work

If the home directory of the root user in a global zone is different from the home directory of the root user in local zones running on the same node, the VCS One resource action for setting up Policy Master communication for the local zone does not work. One example of such scenario is when LDM (logical domain manager) is running in the global zone. [1835533]

Before a business policy automation (BPA) event is generated, all of the attribute values affected by the event must be fully populated

If VCS One generates a BPA event before all the attribute values are fully populated, the script may fail through a BPA rule. This can happen after the database has been reloaded. For example, if VCS One generates a SYS_JOINED event, the script may fail if the SysInfo attribute is not fully populated before the BPA job runs. [1838091]

Workaround: Stop and restart the client.

Sets may not work correctly for root users on the Policy Master

Sets may not work correctly for root users on the Policy Master. This affects all ha commands that take `setname` arguments. [1839060]

Workaround: Root users should avoid using sets on the Policy Master. It's best not to log on to the Policy Master as root to perform daily operations. If you must log on to the Policy Master as a root user, you should forcibly specify the root username and `unixpwd` or `pam` domain type for every ha command that uses `setname` arguments.

Business policy automation (BPA) jobs time out after 1000 seconds

BPA jobs have a maximum time limit of 1000 seconds. [1840291]

Groups remain FAULTED on a VFrame

Because the `PropagateFaultPolicy` attribute is set to `NoPropagate` by default, a group on a VFrame remains in the `FAULTED` state. [1844110]

Workaround: Set the `PropagateFaultPolicy` attribute to default to `Propagate`. Enter the following command:

```
# hagrp -modify group PropagateFaultPolicy Propagate
```

MSDTC service fails to start on a Windows client system

The Microsoft Distributed Transaction Coordinator (MSDTC) service fails to start in the local system context.

This issue occurs if the system was part of an MSDTC Server service group in the VCS One cluster and then you removed that system from the service group. [1856978]

Workaround: Perform the following steps:

- 1 Ensure that the MSDTC service is in the stopped state. If not, stop the MSDTC service on the system.
Type the following on the command prompt:
`net stop msdtc`
- 2 Remove the MSDTC service on the system.
Type the following on the command prompt:
`msdtc -uninstall`
- 3 Install the MSDTC service on the system again.
Type the following on the command prompt:
`msdtc -install`
- 4 Start the MSDTC service on the system.

When you restart the Policy master, the Fault_Propagated Group state of a vframe is marked as offline

If you bring a vframe offline because of an application fault within the vframe (because of fault propagation) then the vframe group state is OFFLINE|FAULT_PROPAGATED. But if the Policy Master restarts after this, then the state of the vframe is OFFLINE. This does not affect the basic functionality of Fault Propagation logic. [1871744]

The VCS One database transaction log file may become corrupt in case of file system errors

Errors in the file system where the VCS One database is mounted can corrupt the database transactions log. This may result in VCS One failure. [1928467]

In such cases, the database log file (`vcstone_msg.log`) may contain the following message:

```
Error: Cannot open transaction log file -- Can't use log file
"vcstone.log" since it is shorter than expected
```

Workaround: Perform the following steps:

- 1 Restore the database using the most recently backed up copy of the database.
Type the following at the command prompt:
`haadmin -restore -db backup_dir`
Here, *backup_dir* is the directory that holds the most recent backup copy of the database.
- 2 Clear the faulted resources in the Policy Master service group.

Type the following at the command prompt:

```
hagrp -clear service_group
```

Here, *service_group* is the name of the Policy Master service group.

- 3 Bring the Policy Master service group online.

Type the following at the command prompt:

```
hagrp -online service_group -sys system
```

Here, *service_group* is the name of the Policy Master service group and *system* is the node where you wish to bring it online.

The NotifyAttrChange attribute will not work for interface attributes

Because the NotifyAttrChange attribute will not work for interface attributes, you cannot register for the event notifications related to interface attributes for pframe and vframe objects. The notifications for registered non-interface attributes work as expected. [1932701]

CPU and memory reservations fail on VFrames

When a node faults unexpectedly, sometimes CPU and memory reservations fail on vframes on the target pframe and those vframes are unable to come online. [1943614]

If the VMware SDK API that the ESXVM agent calls to register the virtual machine fails, you may see the following error message:

```
Validation constraint violation: tag name or namespace  
mismatch in element RegisterVM_TaskResponse>]
```

Workaround: Clear the ESXServer:FailedReservationVFrames attribute of the target pframe before attempting online.

HA command may be unresponsive when the Policy Master heartbeat connection goes down

The first HA command run after the heartbeat connection goes down may be unresponsive for about 30 seconds. The command will complete after 30 seconds, but will not perform the requested operation. [1968598]

Workaround: Re-run the HA command.

Reservations do not update as expected

If you enable resource reservations in VCS One for virtualization technologies, certain VCS One operations on the service groups configured on the system linked with a vframe do not proceed if the corresponding resource reservations are not completed successfully. [1969053]

Workaround: To proceed with the VCS One operations, disable VMHA policy for the system. You can do this using the GUI or the CLI. To do this using the CLI, enter the following:

```
# $> hasys -disablevmha system_object_name
```

No stack trace is available for core dumps on ESX 4.0

Core files are sometimes not generated even when an agent dumps core on an ESX 4.0 machine. [1969711]

Workaround: Install the correct gdb package on the ESX machine so that the stack text file is created correctly.

Sets cannot be changed to have an empty OUExpression or EAExpression

Sets once created cannot be edited to have an empty OUExpression or EAExpression. [1973649]

Workaround: Recreate the set by setting only the OUExpression or EAExpression as required.

After a DR failover, the system object (host name) associated with a VFrame may report status as Faulted instead of Exited in the primary site PM environment

In an ESX environment, a static IP address is assigned to a VFrame. During a DR failover, the VFrame moves from the primary site to the secondary site along with the original network and the Policy Master configuration settings. However, after the failover, these configuration settings get changed to those set on the secondary site.

In a scenario where the network settings are the same on both the sites but the Policy Master configuration settings are different, the VFrame initially tries to communicate with the Policy Master on the primary site but later communicates with the Policy Master on the secondary site. Consequently, the VFrame status

on the primary site changes from Running to Faulted instead of Exited.
[1970859]

Workaround: Make sure the database and client processes are terminated properly.

The vcsoneclientd fails to start after you switch a composite service group to a remote cluster

If you switch the operations of a composite service group to a remote cluster, your client may fail to start.

If the client was initially connected to a remote VCS One cluster and registered to that cluster, and you reconfigure it with a Policy Master in a different cluster, the client may fail after the composite service group switch. [1975011]

Workaround: Delete the client from the remote site before you reconfigure it in a different Policy Master cluster.

Event Viewer may crash on Windows Server 2008 client systems

This issue is applicable only if you have configured service groups on Windows Server 2008 client systems.

Whenever a configured agent resource or an application service group faults, the VCS One AgentFramework module logs an event of type Error under Application Logs in the Windows Event Viewer. You can click the Error event to view more details about the fault. On Windows Server 2008 systems, whenever you click such an Error event, the Event Viewer console may crash with the following error:

Snap-in Unavailable

This snap-in performed a non-valid operation and has been unloaded. To continue working with this snap-in, restart MMC or try loading the snap-in again.

You then have to restart the Event Viewer. [1980652]

Workaround: Perform the following steps on the system:

- 1 Open registry editor.
Click **Start > Run**, type **regedit** and then click **OK**.
- 2 From the left pane, navigate to the registry key
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
Eventlog\Application\AgentFramework.
- 3 In the right pane, double-click **EventMessageFile**, and in the Edit String dialog box copy the entries from the Value data field and paste it in a text editor.

The Value data field entries should be similar to the following:

```
%vcsone_root%\cluster server
one\bin\vcstone_client_msgs_en.dll;%vcsone_root%\cluster server
one\bin\vcstone_agfw_msgs_en.dll;%vcsone_root%\cluster server
one\bin\vcstone_w2k3bagents_msgs_en.dll;%vcsone_root%\cluster
server one\bin\vcstone_eagents_msgs_en.dll;%vcsone_root%\cluster
server one\bin\vcstone_had_msgs_en.dll;
```

Ensure that you copy all the entries.

- 4 After copying the Value data entries, delete all the entries from the Value data field.
- 5 Copy the entries that you pasted in a text editor earlier and paste it back in the Value data field. Ensure that there is no empty space or a new line character at the end of the entry.
- 6 Click **OK** on the Edit String dialog box and then exit the registry editor.
- 7 Launch the Windows Event Viewer to view the details of the specific Error event.

HA commands may fail under certain circumstances

If you execute an ha command, you may receive the following error message on Unix or Linux systems:

```
VCS One WARNING V-97-1-11135 Cannot get password -- error 0xd
```

Workaround: Ensure that you have the requisite permissions for the /dev/tty file.

Policy Master issues

Policy Master cannot connect to database if previous .odbc.ini file exists

When the Policy Master is restarted, a previous .odbc.ini file in the current working directory of the database client (Policy Master or haconf) system prevents the connection to the Policy Master database. For example, the error may resemble:

```
VCS One ERROR V-97-7-17 Unable to connect to database server.
```

Workaround: Look for the .odbc.ini file in the current working directory of the database client, and, if it exists, move it outside of the directory and attempt to reconnect.

System connection to Policy Master fails if time setting lag is more than 30 minutes

The Symantec Product Authentication Service program may reject connections from cluster systems that have a time setting greater than 30 minutes behind the Policy Master time setting. The failure may be logged with a message that resembles:

VCS One ERROR V-97-19-12358 Failed to obtain the credential from Local cache, please ensure that the System credential is deployed on the node and the System does not lag behind the PM node

Workaround: Use the NTP utility to correct the system's time.

On Solaris, a single Policy Master may not start automatically after rebooting

On Solaris, if the runlevel3 VCS script file in the `/etc/rc3.d` directory has the same sequence of numbers as the other files (that is, if for some reason, S99vcs and S99sunwcccr_b both have the same sequence number, 99, in the Policy Master host, VCS One and VCS will not automatically start after rebooting. [1016563]

Workaround: Manually restart VCS One and VCS after rebooting. Start VCS using the `-onenode` option.

A time difference between the Policy Master and authentication broker may prevent a user from logging into the web console

If an external node is used as an authentication broker and there is a time difference of one and a half hours between the Policy Master node and the authentication broker node, then logging into the web console fails. [1193573]

Workaround: Change the time of either the Policy Master or authentication broker node.

When the Policy Master fails over or restarts, the group states displayed in the CLI may not update right away

When the Policy Master fails over or restarts, the state of the groups displayed in the CLI may not update until all of the group resources are probed.

Workaround: To find out if the group state has been updated, check the ProbesPending attribute. If that attribute value is not 0, then the group resources are not yet updated. You can also view the group state in the GUI. If the group state has not been updated, it shows in the GUI as "stale." [1278400]

If a job script is running while the Policy Master is switching over to another node, a user privilege error occurs

If a script is running while the Policy Master is switching over to another node, the script continues to run on the first node and is not invoked again on the new Policy Master node. Because the user executing the job is not recognized on the new Policy Master node, a user privilege error occurs.

Similarly, if a script task in a job times out, it is not killed. It must be killed manually.

These issues occur because outstanding requests are not preserved and continued on the target node when the Policy Master switches over.

[1321011]

Workaround: To prevent these issues, ensure that no jobs are in progress when the Policy Master is switched to another node.

Scripts configured in a job are not killed when the scripts time out

If a script configured in a job does not finish within the specified timeout period, the job will fail, but the script continues to run. In this situation, you need to kill the script manually. If many scripts are hanging, it could potentially result in the Policy Master node running out of resources. To avoid this issue, whenever a job fails due to a script timeout, kill the script manually. [1362168]

If you host Policy Master storage on a NetApp filer

During a simultaneous outage of all systems that are configured to be able to host the VCS One Policy Master, VCS One may not be able to clear locks on the NetApp filer. If the locks are not cleared, the subsequent restart of the Policy Master may be affected.

The following document from NetApp addresses this situation:

<https://now.netapp.com/Knowledgebase/solutionarea.asp?id=ntapcs1386>

[1401796]

On Solaris, the donating server may not be able to reconnect when the Policy Master switches servers if IPMP is in use

When the Policy Master is clustered on Solaris, IP multipathing (IPMP) is in use, and the Policy Master is switched from one server to another, the donating server may, in some circumstances, not be able to reconnect to the Policy Master when it comes up on the receiving server. The system appears as faulted if the VCS One client is installed. [1507271]

Workaround: This issue is due to an invalid ARP table entry. You can resolve the issue by deleting the offending entry using the following command:

```
arp -d PM_Virtual_IP_address
```

After the command completes, the donating server reconnects.

The Policy Master resource monitor may fail if the root user uses csh

If the root user uses csh, the Policy Master resource monitor may fail. If this happens, the `ps` command output does not match what is set for `MonitorProcess`. [1804513]

Workaround: Switch the root shell from csh to sh.

After backing up and restoring a Policy Master, HA commands may not work

After backing up and restoring a Policy Master on a clean system, HA commands may not work. [1819159]

Workaround: Set up trust between the client node and the authentication broker. On each Policy Master node, enter the following:

```
# /opt/VRTSvcsone/bin/haat setuptrust -b
policy_master_virtual_ipaddress:BrokerPort -s low -j client
```

Then, confirm that the HA command works.

In certain situations when an off-host resource is configured, you may get a Policy Master error message

If you create a resource and immediately assign a control group to the resource to convert it to an off-host resource, you may get an error message. [1830937]

The error message may look similar to the following:

```
VCS One INFO V-97-1-53234 Configuration version number on
Policy Master for system_name is 166, VCS One Client
Daemon has 165
```

```
VCS One WARNING V-97-1-11080 Rejected NetAppExport agent
from system_name because no resource of type NetAppExport
exists on system_name
```

Workaround: Ignore the error message, or put a sleep of 3 seconds between creating the resource and assigning control group.

The Policy Master NIC faults even if everything is set correctly

The Policy Master NIC sometimes faults even if everything is set correctly. [1930541]

Workaround: Enable broadcast pings (PingOptimize = 0) or set up one or more pingable IP addresses in the NetworkHosts attribute of the pmnic resource (and all other pmsecnic resources). This is to ensure that the pmnic resource does not rely entirely on the status reported by the media independent interface (MII).

To set the attribute values

- 1 Set PingOptimize to 0. Enter the following:


```
# /opt/VRTSvcs/bin/haconf -makerw
# /opt/VRTSvcs/bin/hares pmnic -modify PingOptimize 0
# /opt/VRTSvcs/bin/haconf -dump -makero
```
- 2 Set the NetworkHosts (to values like nh1, nh2, nh3, and so on). Enter the following:


```
# /opt/VRTSvcs/bin/haconf -makerw
# /opt/VRTSvcs/bin/hares pmnic -modify NetworkHosts -
add nh1 nh2 nh3
# /opt/VRTSvcs/bin/haconf -dump -makero
```

where **pmnic** is one of the following: pmnic, pmsecnic1, pmsecnic2, and so on.

Windows Policy Master service group fails to come online if you change the Address attribute of the pmip1 resource after Policy Master configuration

When you configure the Windows Policy Master, the IP address of the specified public NIC is added as the pmip1 resource of the Policy Master service group (PMSG). [1952482]

Later, if you manually change the Address attribute of the pmip1 resource in the PMSG, the pm resource will fail to come online. The reason is that the initial Policy Master configuration stores the IP address in the Windows registry, and the vcsoned service uses the address that is stored in the registry. The registry entry is not modified if you edit the attribute in the Policy Master service group.

Workaround: Change the IP address using the following procedure.

- 1 Take the Policy Master service group completely offline.
- 2 Change the Address attribute of pmip1 resource from VCS Java Console. (Say the attribute is changed from *a.b.c.d* to *x.y.z.w*)
- 3 Open the Windows registry.
- 4 Change the registry entry as follows:
Original registry entry
HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Services\vcsoned
ImagePath: "C:\Program Files\Veritas\Cluster Server One\bin\vcsoned.exe" -ras -ipaddrs a.b.c.d
New registry entry
HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Services\vcsoned
ImagePath: "C:\Program Files\Veritas\Cluster Server One\bin\vcsoned.exe" -ras -ipaddrs x.y.z.w
Note that here we are assuming the installation directory as C:\Program Files\Veritas\
5 Bring the Policy Master service group online.

The single-system Windows Policy Master may fail to start after a system reboot

This issue may occur if you configure a Windows Policy Master server on a single system.

If you reboot the system where the Policy Master Server service group is online, then after the reboot the service group may fail to come online. [1960883]

This happens because the process resource configured for the VCS One database may take time to come online and may even fault before it comes online. As a result, by the time the Process resource comes online, the other resources in the service group are already in the offline state.

Workaround: Change the Process agent's OnlineWaitLimit attribute value from the default 2 to 7 or more and then bring the service group resources online.

Windows Policy Master server configuration may fail if you click format disk on the Windows pop-up dialog box

This issue is applicable if you are configuring a Windows Policy Master using the Policy Master Configuration Wizard.

If you choose to configure the storage from within the Policy Master Configuration Wizard (the **New configuration** option on the Storage Configuration panel), the wizard creates the required volumes on the specified disk, assigns drive letters, and then performs the Policy Master configuration tasks.

While the wizard is configuring the storage, you may sometimes see a Windows format disk dialog box that prompts you whether you wish to format the drive that the wizard created. If you click **Format disk**, Windows will begin formatting the drive created by the wizard. As a result, the Policy Master configuration may fail.

If you see the format disk dialog box during the Policy Master configuration, click **Cancel**. Do not format the disk. [1974930]

Temporary loss of network connectivity may lead to incorrect failover

When two nodes regain connectivity after a temporary loss of network connectivity, the VCS One Policy Master fails over all service groups to the node that comes up first during the restoration of connectivity. However, it is desirable that the service group must come online on the node on which the service group was originally online.

[2102560]

Simulator issues

Simulator Launch Pad does not show correct status

If you start or stop a Simulator instance externally using the command line interface, the Simulator Launch Pad does not show that the Simulator has been started or stopped.

Workaround: If you start or stop a Simulator instance using the command line interface, refresh the Simulator Launch Pad page to show the correct status.

VCS One Simulator user credential is valid for eight hours

After logging into the VCS One Simulator, a user's authentication credentials are valid for eight hours. When the credential is no longer valid, some operations in the Simulation Panel of the VCS One management console continue to succeed, such as taking groups online and offline, but some user actions fail, such as faulting systems or groups and starting systems. When an operation fails, a user receives a message resembling:

```
Command: hasim -faultsys solsys1
Result: Could not connect to proxysim.
```

Workaround: Log back into the VCS One Simulator.

Network connection error messages during VCS One Simulator startup are harmless

When you start the VCS One Simulator from the command line, it is possible to see messages that resemble:

```
V-97-1-10057 ClentHandle::net_recvb failed Error (-4)
```

Such error messages may appear when the Policy Master attempts to initiate a control connection to the VCS One Simulator during the time the Simulator is attempting to register with the Policy Master. When the registration is complete, the Simulator successfully responds to subsequent attempts by the Policy Master, so the initial error messages are harmless. [568368]

Cannot add WebLogic9, WebSphere5, and WebSphereMQ6 resources

If you start the Simulator using default configurations, you cannot add resources of the following types:

- WebLogic9 and
- WebSphere5
- WebSphereMQ6

[1393669]

Workaround: Add the lines below in main.xml and then load the configuration:

```
<include>WebLogic9Types.aix.xml</include>
<include>WebLogic9Types.linux.xml</include>
<include>WebLogic9Types.sun.xml</include>
<include>WebLogic9Types.windows.xml</include>
<include>WebSphere5Types.aix.xml</include>
<include>WebSphere5Types.linux.xml</include>
<include>WebSphere5Types.sun.xml</include>
<include>WebSphereMQ6Types.aix.xml</include>
<include>WebSphereMQ6Types.linux.xml</include>
<include>WebSphereMQ6Types.sun.xml</include>
```

After adding these lines to main.xml, you can load the configuration and start the Simulator.

Authentication issues

Deleting a VCS One client system does not delete the security principal and credential

When deleting a client system or a user from the VCS One configuration, the security principal and credential are not deleted. [1271612]

Workaround: To completely delete a client system, including the security principal and credential, from the VCS One configuration, perform the following steps:

- 1 To delete a client system, enter the following command:

```
# /opt/VRTSvcsone/bin/hasys -delete system_name
```
- 2 From the active Policy Master system, remove the security principals by entering the following command:

```
# /opt/VRTS/vcsone/bin/haat deleteprpl -t ab -d VCSONE_USERS \  
-p system_name
```
- 3 From the client system, remove the security credentials by entering the following command:

```
# /opt/VRTSvcsone/bin/haat deletecred -d vx:VCSONE_USERS \  
-p system_name
```

To completely delete a user, including the security principal and credential, from the VCS One configuration, perform the following steps:

- 1 To delete a user, enter the following command:

```
# /opt/VRTSvcsone/bin/hauser -delete user_name
```
- 2 From the active Policy Master system, remove the security principals by entering the following command:

```
# /opt/VRTS/vcsone/bin/haat deleteprpl -t ab -d VCSONE_USERS \  
-p principal_name
```

where *principal_name* is the user name.
- 3 From the client system, remove the security credentials by entering the following command:

```
# /opt/VRTSvcsone/bin/haat deletecred -d vx:VCSONE_USERS \  
-p principal_name
```

where *principal_name* is the user name.

LDAP authentication may fail

LDAP referral takes a lot of time and hence LDAP authentication fails.

Workaround: You can use a more specific UserBaseDN (as compared to a generic one) to reduce the time that the LDAP referral takes. [2177632]

VCS One client issues

On AIX, vcsoneclntd may be unable to start

On an AIX system on which the VCS One client is installed, vcsoneclntd cannot start after the system is rebooted, if the entry `install_assist` exists in the `/etc/inittab` file. The `install_assist` entry prevents the vcsoneclntd startup and shutdown scripts from being executed. [1231089]

Workaround: To prevent this issue from occurring, comment out the `install_assist` line in the `/etc/inittab` file:

```
# : install_assist:2:wait:/usr/sbin/install_assist </dev/\
console >/dev/console
# 2>& 1
```

Installation and uninstallation issues

Installing the Policy Master on Solaris with zones configured is not supported

This release of VCS One does not support installing the Policy Master on Solaris with zones configured. On Solaris, the Policy Master must be installed on a system free of zones.

When you install VCS One, IPv6 must be enabled to use rcp from a Solaris 8 system to a non-Solaris system

When installing and uninstalling, IPv6 must be enabled to run the `rcp` command from a Solaris 8 system to a non-Solaris system. [545197]

Workaround: To enable IPv6 on a Solaris 8 system, execute the following commands, where *interface* is the name of the NIC device:

- 1 Log in as root on the Solaris 8 system.
- 2 Run the following command:

```
# ifconfig interface inet6 plumb up
```
- 3 Create the file `hostname6.interface` to enable IPv6 each time the system boots:

```
# touch /etc/hostname6.interface
```

Some SSH implementations may cause VCS One installations to fail

The SSH protocol is required for installation of the VCS One client node software. To function successfully during a VCS One installation, `ssh` and `scp` commands must:

- Be passwordless.
- Return 0 for successful command execution.

- Not leave residual processes after successful command execution; this can be verified by using the command: `ps -ef` and scanning the output for any `ssh` or `scp` processes.
- Not make use of banners.

Some implementations of `ssh` and `scp` commands on Solaris fail to meet the above requirements and may cause installations to fail. [574207]

When installing VCS One with Storage Foundation, a warning message is logged

When installing VCS One with Storage Foundation, the following warning message is logged:

```
SF WARNING: lwp_default_stksize is set more than once in /etc/  
system
```

You may safely ignore this warning message. [934936]

After installing VCS One with Storage Foundation and rebooting, GAB/LLT errors appear

After installing VCS One with Storage Foundation, GAB/LLT errors appear when you first reboot the system. These error messages are expected since configuration has not yet been performed.

You may safely ignore the messages. [935001]

Installing many clients from the same installation session may be time consuming

Installing more than 8 to 12 clients from the same installation session may be time consuming. [1048075]

Workaround: To work around this issue, start installation sessions from different windows to reduce the installation time for a large number of nodes.

When installing the VCS One client on AIX 5.x, the xIC.rte version must be 8.0.0.8

If the version of `xIC.rte` is not 8.0.0.8, installing the VCS One client on AIX 5.x fails with the following error:

```
CPI ERROR V-9-0-0 Error in configuring VxSS
```

Before installing the VCS One client on an AIX 5.x system that already has Symantec Product Authentication Service (AT) installed, ensure that the `xIC.rte` version is 8.0.0.8. [1172993]

Ignore Perl warning message if you install Storage Foundation after VCS One

If you install Storage Foundation 5.0 using the Storage Foundation installer on a Linux system where the VCS One Policy Master or client is installed, the following warning message appears:

```

CPI WARNING V-9-1-1267 SF version 5.0 includes VRTSperl version
5.0.2.1. A more recent version of VRTSperl, 5.8.8.0, is already
installed on system1.
CPI WARNING V-9-1-1271 In this situation VRTSperl version
5.8.8.0 will not be installed or downgraded on system1.
SF version 5.0 may not operate correctly with this more recent
rpm.
The VRTSperl rpm must be removed manually before version 5.0.2.1
can be installed.
Do you want to continue? [y,n,q,?] (n)

```

If you encounter this warning message, answer “yes” (or “y”) to continue and do not downgrade the perl version. [1258357]

Installing the Policy Master using Storage Foundation for storing configuration information may produce an error

If you install the Policy Master using Storage Foundation for storing configuration information, the following error messages may appear (this situation is rare):

```

UX:vxfs mount.vxfs: ERROR: V-3-22168: Cannot open portal device:
No such file or directory
UX:vxfs mount.vxfs: ERROR: V-3-25255: mount.vxfs: You don't have
a license to run this program

```

[1279667]

Workaround: If these error messages appear during installation, perform the following work around:

- 1 Check if the `vxportal` module is loaded:
`lsmod | grep vxportal`
 If it is not listed, proceed to the next step.
- 2 Run the following command:
`/etc/vx/vxfs-startup`
- 3 Verify that the `vxportal` module is now loaded:
`lsmod | grep vxportal`
 The `vxportal` module should now be listed.
- 4 Mount the volume manually. Do one of the following:
 - On Linux, enter the following:
`mount -t vxfs /dev/vx/dsk/vcsone_dg_name/volume_name /mount_point_name`
 - On Solaris, enter the following:
`mount -F vxfs /dev/vx/dsk/vcsone_dg_name/volume_name /mount_point_name`

You may now proceed with the installation.

The Policy Master is not supported on SLES 9 x64

The installer script for SUSE Linux Enterprise Server 9 x64 displays an option to install the VCS One Policy Master. This option, however, is not supported. This release of VCS One does not support the Policy Master on this platform. [1386212]

Certain installer script options are for internal use only

The `installer` and `installat` scripts include the following options, which are for internal use only:

```
-start, -stop, -nooptionspkgs, -noextrapkgs, -installpkgs,
-requiredpkgs, -nohapkgs, -serial
```

In addition the `installer` script includes the following option for the client, which is for internal use only:

```
-nolic
```

Do not use these options. [1394206]

On Solaris 10, the installer uses an incorrect path to `in.mpathd` in an IPMP configuration

On Solaris 10, the VCS One installer uses an incorrect path to `in.mpathd` in an IP multipathing (IPMP) configuration. As a result, the MultiNICB resource alternates between having a state of ONLINE and UNKNOWN. [1451578]

Workaround: To avoid this issue, correct the path for `in.mpathd` in the `types.cf` file. In `types.cf`, edit the `in.mpathd` so that it appears as indicated below in bold.

```
type MultiNICB (
    static int MonitorInterval = 10
    static int OfflineMonitorInterval = 60
    static str ArgList[] = { UseMpathd, MpathdCommand,
ConfigCheck,
MpathdRestart, Device, NetworkHosts, LinkTestRatio, Ig
noreLinkStatus, NetworkTimeout, OnlineTestRepeatCount,
OfflineTestRepeatCount,
NoBroadcast, DefaultRouter, Failback, GroupName
}

    static str Operations = None
    int UseMpathd
    str MpathdCommand = "/usr/lib/inet/in.mpathd -a"
    int ConfigCheck = 1
    int MpathdRestart = 1
```

You may get installation errors if you use `csh`

Installation errors may occur if the root user has `csh` as the default shell. [1804490]

Workaround: Switch the root shell from `csh` to `sh`.

If your VCS One 5.0.1 Policy Master uninstallation is interrupted, you may have problems installing VCS One 5.0.2

If your VCS One 5.0.1 Policy Master uninstallation is interrupted, the database uninstallation may not be clean. Later, if you want to install the VCS One 5.0.2 Policy Master, you may have installation problems. [1806831]

Workaround: If you have an `/opt/VRTSvcstone/db` directory, delete it and try the installation again.

Upgrading VCS One 5.0.1 Windows clients to VCS One 5.0.2 is not supported

You can upgrade your VCS One 5.0.1 UNIX Policy Master and client systems to VCS One 5.0.2. However, upgrading VCS One 5.0.1 Windows clients to VCS One 5.0.2 is not supported. [1827731]

Removing directories from a local zone on Solaris

When you uninstall VCS One from a global zone, the `/.vcsoneprofile` and `/var/VRTSvcstone/data` directories are not deleted from your local zones. [1828364]

Workaround: Manually remove the directories from your local zones. Enter the following:

```
$> /usr/bin/rm -f /.vcsoneprofile
$> /usr/bin/rm -fr /var/VRTSvcstone
```

On Linux, if the incorrect netmask is used to plumb the base IP address, the network connection may be lost

If you are installing the Policy Master on Linux, and the incorrect netmask is used to plumb the Base IP address, the network may not work. [1833357]

Workaround: Symantec recommends using MultiNICA Performance Mode in the Policy Master Service Group (PMSG). MultiNICA Performance Mode requires a unique Base IP address with the correct netmask addresses plumbed on the required NICs.

Refer to the *Veritas Cluster Server One Bundled Agents Reference Guide* for information about MultiNICA Performance Mode.

When VCS and VCS One are installed on the same machine, there are installation and uninstallation considerations

When VCS and VCS One are installed on the same machine, the symlinks in `/opt/VRTS/bin` point to the binaries of the product you install last. If you uninstall VCS or VCS One, the symlinks—such as `hares` and `hagrp`—are removed from the `/opt/VRTS/bin` directory. [1835526]

Workaround: Access the VCS binaries and commands from `/opt/VRTSvc` bin and the VCS One binaries from `/opt/VRTSvcstone/bin`.

Upgrading from VCS One 2.0.1 to 5.0.1 may fail if you only configure one NIC

If you use the `./installvcsonepm -migrate` option to upgrade from VCS One 2.0.1 to VCS One 5.0.1, the operation may fail if you only configure one NIC. [1843891]

Workaround: Configure more than one NIC in the pmnic resource. If you cannot configure multiple NICs, follow these steps to export your 2.0.1 configuration, upgrade the Policy Master node to 5.0.1, and import the configuration to VCS One 5.0.1.

For more details, see the upgrade instructions in *Veritas Cluster Server One Installation Guide*.

- 1 Export your VCS One 2.0.1 configuration.
- 2 Install VCS One 5.0 on the Policy Master system.
- 3 Import the VCS One 2.0.1 configuration to the 5.0 Policy Master system.
- 4 Stop the VCS One 2.0.1 Policy Master.
- 5 Configure the VCS One 5.0.1 Policy Master using the VCS One 2.0.1 cluster ID and virtual IP address.

Installer does not support adding a node with fencing

Adding a Policy Master node using the `./installvcsonepm -addnode` option fails if you have already set up fencing. [1899792]

Workaround: Add a node with fencing manually. Follow these steps:

To add a node with fencing

- 1 Make sure the coordinated disks are accessible on both the ONLINE and the NEW added Policy Master cluster nodes.
- 2 Copy the `/etc/vxfenmode` and `/etc/vxfendg` from the ONLINE node to the NEW added node under the same path.
- 3 Start I/O fencing on the NEW added node. Do one of the following:
 - On Linux, enter the following: `/etc/init.d/vxfen start`
 - On Solaris, enter the following: `/usr/sbin/svccadm enable vxfen`
- 4 Restart VCS after starting I/O fencing. Do one of the following:
 - On Linux, enter the following: `/etc/init.d/vcs restart`
 - On Solaris, enter the following: `/usr/sbin/svccadm restart vcs`

Clients installed inside auto-discovered VMs cannot connect to the Policy Master

Clients installed inside auto-discovered VMs cannot connect to the Policy Master unless the VFrame object is linked to the system representing the client. For this auto linking, the MAC addresses must be populated in the vframe object. The discovery wizard can only populate the MAC addresses if VMware tools are installed. VMware tools are also needed to properly shut down a client installed inside a vframe if the vframe is taken offline.

[1914671]

Workaround: Make sure VMware tools are installed inside the vframe in which the VCS One client is installed.

Windows Policy Master configuration fails if Symantec Endpoint Protection has been installed

On a system with Symantec Endpoint Protection (SEP) 11.0 MR5 installed, the Policy Master Configuration Wizard is unable to configure the Policy Master cluster. (1942365)

Workaround: If SEP is installed, uninstall SEP, run the Policy Master Configuration Wizard to fully configure the Policy Master, then re-install SEP. If SEP is not yet installed, fully install and configure VCS One on the Policy Master servers before installing SEP.

The task completion bar displays incorrectly during Solaris SPARC installations

If you install the VCS One client on a Solaris SPARC machine, the task completion bar displays on a new line for each update of the task completion percentage. [1945471]

Workaround: Do not use “sun” as the terminal type.

After upgrading a client to VCS One 5.0.2, resources erroneously show as FAULTED

This issue occurs when you upgrade the VCS One client from 5.0 to 5.0.1 on a system where a disaster recovery agent resource (such as HTC, SRDF, or SVCCopyServices) is online and you are not evacuating online service groups during an uninstallation. After you successfully upgrade the client to VCS One 5.0.2, the resource shows as FAULTED if you removed the VRTSvcsone residual directories during uninstallation. [1962193]

Workaround: During the upgrade process, while uninstalling, say "No" to the prompt for removal of residual directories to avoid the removal of the lockfiles that the disaster recovery agent uses to report that resources are online.

The Policy Master resource continuously faults

If the Policy Master resource continuously faults and restarts, you may have set the Policy Master virtual IP addresses in a way that VCS One does not expect.

The command `hadebug -pingnw` used by the monitor entry point of the Policy Master resource reads only the first IP address listed in the `/etc/VRTSvcsone/vcsone.conf` file on the Policy Master nodes. [1969768]

Workaround: If you manually changed the virtual IP address for the Policy Master in the `/etc/VRTSvcsone/vcsone.conf` file, always specify the primary virtual IP address as the first entry in the `PM_IPS`.

Installer does not migrate some authentication files

If you upgrade the VCS One Policy Master by using the CPI installer, the installer fails to migrate `VRTSatlocal.conf`. This file includes information on LDAP domains, expiry intervals, among others.

However, the CPI installer, successfully migrates the following:

- Credentials (trusted credentials and credentials of various users including vx users).
- ABAuthSource (which contain PDs).
- RBAuthSource (which contain PDs).

Workaround : You can recreate the pending authentication configuration after the upgrade. For details on recreating LDAP domain configuration, see the Veritas Cluster Server One Installation Guide.

Bundled agent issues

Mount agent resources may fail to go offline on Windows Server 2008 systems

A Windows Server 2008 issue causes the operating system to intermittently lock mounted volumes. As a result the configured Mount agent resources may fail to go offline.

The Mount agent log may contain the following message:

```
VCS One ERROR V-97-10041-8029
Mount:<servicegroupname>.<Mountresourcename>:offline:Unable to lock
the volume. Disk No. = <#>, PartitionNo = <#>. Error : 5
```

Workaround: Microsoft has released a hotfix for this issue. Install this hotfix on all systems where this issue occurs.

See <http://support.microsoft.com/kb/952790>.

Configuring the Lanman setting

Before you configure the Lanman settings in VCS One, ensure that the DNS settings correctly resolve. Incorrect settings can cause the wizard to fail.

Entry points for agents

Script-based entry points for agents on the Windows platform are not supported unless they are bundled with this release of VCS One.

Agents may dump core when shutting down on RHEL 4

Veritas VCS One bundled agents may dump core when shutting down if multiple agent threads attempt to exit simultaneously. This problem occurs on Red Hat Enterprise Linux Version 4 (RHEL 4), Updates 1 and 2. [536782]

Workaround: Red Hat can provide a patch to Updates 1 and 2 that resolves this issue (Red Hat Issue-Tracker 82911).

The Agent Pack installer can uninstall agents even when they are running

The Agent Pack installer script can uninstall the following agent packages even if their corresponding agent processes are running. During the pre-uninstallation check for these agents, the script does not check whether the agent processes are running.

This issue applies to the following agents:

- Oracle agent
- Sybase agent
- WebSphere MQ6 agent
- WebLogic9 agent
- WebSphere Application Server agent

[1024748]

The DiskGroup agent may malfunction if you run vxconfigd in DEBUG mode

Running the `vxconfigd` command in DEBUG mode may cause the DiskGroup agent to malfunction. [1125380]

Network agents do not support IPv6 addresses

The VCS One network agents (IP, NIC, IPMultiNIC, IPMultiNICB, MultiNICB, and DNS) do not support IPv6 addresses. The network agents may not work as expected if IPv6 addresses are configured on the system. [1129614]

If you use Storage Foundation for Windows

A DiskGroup resource does not transition to the online state if SCSI-3 support is enabled. A future hot fix will address this SCSI-3 configuration. Check the Symantec Support knowledge base. [1265554]

hasys may display an incorrect agent version

The version displayed for an agent in the output of the following command may not be the correct version:

```
# hasys -value sys AgentVersionInfo
```

This issue arises if an agent instance (INST1) has an *agent.xml* file with an agent version that was reported to the Policy Master and stored in the AgentVersionInfo system-level attribute. If you then modify the AgentDirectory attribute to use an agent instance from a different directory (INST2) and that agent's directory does not have an *agent.xml* file, the new agent instance incorrectly displays the version value from INST1. [1287435]

Workaround: To avoid this issue, ensure that the agent's directory contains an *agent.xml* file and that the *agent.xml* file indicates the correct version number for the agent.

If you use NFS mount points

If the NFS server is not accessible during the monitoring of an NFS mount, the Mount agent may hang. [1288578]

Workaround: To avoid this issue, for any Mount resource that monitors an NFS mount point, if the value of the Mount agent AccessPermissionChk attribute value is not zero, ensure that the SecondLevelMonitor attribute value is 1.

The Application agent may not be able to monitor process IDs in the PidFile attribute

If the value of the PidFile attribute for any application contains leading spaces, the Application agent may not be able to parse the file and extract the process ID of the daemon. [1387123]

Workaround: Use the MonitorProgram attribute instead of PidFile. The administrator may write a script that extracts the process ID out of the PidFile attribute and checks that the process ID exists using the *ps* command. This script may be configured as the MonitorProgram attribute of the application.

For information on how to configure the MonitorProgram attribute, see the *Veritas Cluster Server One Bundled Agents Reference Guide*.

In rare circumstances, vcsoned may hang

In rare circumstances, the Policy Master daemon, vcsoned, may hang after logging the message:

```
Server Farm logger started
```

[1390012]

In a Solaris LDom environment, the Mount agent may stop heartbeating with the VCS One client, which can cause a core dump

The Mount agent may stop heartbeating with the VCS One client daemon (vcsoneclientd). As a result, vcsoneclientd sends a signal to the Mount agent to obtain a core file. The core that the agent generates results when it stops heartbeating with vcsoneclientd.

This issue occurs only in a Solaris logical domain (LDom) environment where vcsoneclientd runs inside of an I/O domain. That is, the I/O domain has been configured as a client system in the VCS One server farm. This issue is not observed in a non-LDom Solaris environment.

After the agent dumps core, vcsoneclientd starts a new instance of the agent that works without an issue until the next time this event occurs. In a test environment, Symantec has found that the frequency of the core dumps is anywhere between 30 minutes and two hours.

Over a period of time, the diagnostics directory in `/var/VRTSvcsone/diag/` (or the directory configured using the `VCS_LOG` environment variable) and `/var/core` fills up with the core files generated by the agent. To free up space in the `/var` file system, manually delete the older core files.

There is no workaround for this issue. [1464956]

In a VMware ESX server environment, some agents may stop heartbeating with the VCS One client, which can cause a core dump

In VMware environments, where the VCS One client system is an ESX server, sometimes some agents may stop heartbeating with the VCS One client daemon (vcsoneclientd). As a result, vcsoneclientd sends a signal to these agents to obtain a core file. The core that the agent generates results when it stops heartbeating with vcsoneclientd.

This issue occurs only in a VMware ESX environment and not on other Linux-based set ups.

After the agent dumps core, vcsoneclientd starts a new instance of the agent, that works without an issue until the next time this event occurs.

Over a period of time, the diagnostics directory in `/var/VRTSvcsone/diag/` (or the directory configured using the `VCS_LOG` environment variable) and `/var/core` fills up with the core files generated by the agent. To free up space in the `/var` file system, manually delete the older core files. [1507244]

Workaround: If the system load is high, agent threads may not get enough CPU to run. To avoid the creation of core files due to missed heartbeats, increase the `AgentReplyTimeout` attribute value at the type level.

IP and Lanman agent resources fault while bringing the service group online on an alternate system

When a Windows client system goes in to a Daemon Dead Node Alive (DDNA) state, the Policy Master does not fail over service groups running on that system. The administrator is required to verify that the service groups are offline on the failed system and then manually fail over the service groups to alternate systems.

After faulting the affected system, when you try to bring the service group online on another system, the IP and Lanman agent resources configured in the service group fault. (1904460)

The IP agent log contains the following message:

```
VCS One ERROR V-97-10051-4005 IP:<SGname>.IP:online:Host <IP address> already exists
```

Workaround: Perform the following steps:

- 1 Try restarting the VCS One client daemon.
Type the following on the command prompt:

```
net start vcsoneclientd
```
- 2 If the VCS One client daemon starts on the system then the service group comes online on the system automatically.
This is true only if you have not faulted the system from the VCS One console (Operations > Mark as Faulted).
- 3 If the VCS One client daemon fails to start on the system, restart the system.
After the system restarts, the resource fault is cleared automatically and the service group comes online on the alternate system.

VMDg resources may fail to come online or may fault

This is applicable if you are using SCSI-3 Persistent Group Reservation (PGR) in a Storage Foundation 5.1 for Windows (SFW) storage environment.

The VMDg storage agent resources configured in service groups may fail to come online or may fault on the client systems.

The VMDg agent log may contain the following messages:

```
VCS One ERROR V-97-2-13120 Thread(2400) Error receiving from the engine. Agent(VMDg) is exiting.
```

```
VCS One ERROR V-97-10051-9515 VMDg:<VMDg resource name>:online:Init diskgroup : The Diskgroup is not present.
```

```
VCS One ERROR V-97-2-13066 Thread(3864) Agent is calling clean for resource(<VMDg resource name>) because the resource is not up even after online completed.
```

This issue occurs if you have installed SFW 5.1 after installing the VCS One client on your systems. [1904473]

Workaround:

A hotfix to support SCSI (including SCSI-3) persistent disk reservations on shared disks in an SFW 5.1 storage environment with VCS One is available.

Install the SFW 5.1 hotfix from the following location:

http://svlvault.veritas.com/cgi-bin/patch_central?archive=3248

You must install this hotfix only if you are using SFW 5.1 to manage your storage in a VCS One cluster environment.

This hotfix is not required if you are using SFW 5.1 SP1 or later versions.

Sybase and SybaseBk agents fail to start on a VCS One 2.0.1 client

The Sybase and SybaseBk agents fail to start on a VCS One 2.0.1 client connected to a VCS One 5.0 or VCS One 5.0.1 Policy Master. For the Sybase and SybaseBk agents to correctly start on a VCS One 2.0.1 client when connected to a VCS One 5.0 or VCS One 5.0.1 Policy Master, the agent version in the agent.xml file should be greater than or equal to the value of the MinCompatAgentVersion resource type attribute.[1944362]

Workaround: To correctly start the Sybase and SybaseBk agents, set the value of the MinCompatAgentVersion resource type attribute to 5.0 using the following commands:

```
# /opt/VRTSvcsone/bin/hatype -modify Sybase
MinCompatAgentVersion 5.0 -platform platform
# /opt/VRTSvcsone/bin/hatype -modify SybaseBk
MinCompatAgentVersion 5.0 -platform platform
```

Agent modifications only show when an agent is RUNNING

If you set AgentDirectory To "" using the hatype -modify option, your change shows at Client Side Agent::_attribute only when the agent is RUNNING. [1951231]

Workaround: When AgentDirectory="", an agent is started from /opt/VRTSvcsone/bin. If you set AgentDirectory to an invalid value, and you want to reset it to "" then set an agent directory pathname before you set it to "". Enter the following:

```
AgentDirectory=/opt/VRTSvcsone/bin
first before setting the agent to "".
```

Oracle database starts and stops despite invalid username and password

Oracle allows invalid user or invalid password to start or stop the Oracle database. Therefore, the VCS One agent for Oracle also does not fault the Oracle resource when you define an invalid value for the DBAUser and the DBAPword attributes. [1956854]

Attribute help does not display on the web console for disaster recovery agents

When you click the **Help** button, the help screens do not display for disaster recovery agents (HTC, SRDF, and SVC Copy Services). You get an error message instead. [1959457]

Workaround: Refer to the installation and Configuration guide for the respective agent for more information on the agent's attributes.

Agent upgrade recommendation

When upgrading an agent, Symantec recommends that you explicitly run the command `haagent -update type/-all` after installing the new agent image. [1972533]

VMDg resources in the service may go in to the unknown state

This issue is applicable if you use SFW 5.1 to manage your storage in a VCS One cluster environment.

The VMDg resource in a service group may go in to the UNKNOWN state if you have configured your storage to use SCSI-3 reservations. (1972657)

The VMDg agent log may contain the following message:

```
VCS One WARNING V-97-10051-9561
VMDg:<servicegroupname>.<VMDgresourcenam>:monitor:Query SCSI
Reservation : VXIO failure.
```

This is a known issue in SFW 5.1 and has been fixed in SFW 5.1 SP1.

Install the client first before you can install the agent pack

VCS One requires that you install the client before you can install the agent pack. [1974151]

Agents do not start when the localhost is mapped to ipv6 in the /etc/hosts file

When localhost is mapped to a "::1" IPv6 address in the `/etc/hosts` file, the VCS One agents may not start on the system. [1975514]

Workaround: Remove the ::1 entry for localhost from the `/etc/hosts` file.

RVG agent fails to stop RVG object after failover

If the network connectivity between the VCSOne Policy Master (PM) and client system (say, system 1) goes down, then the PM marks the RVG service group OFFLINE on system 1 and fails it over to system 2. When the connectivity between the PM and system 1 is restored, the service group is probed as ONLINE on system1. This is a concurrency violation. When the PM tries to take the RVG service group OFFLINE on system 1, the RVG agent fails to stop the RVG object as the disk group is imported to system2.

Work around: Perform the following steps:

- 1 Freeze the service group.
- 2 Manually deport the disk group from system1.
- 3 Unfreeze the service group.
- 4 Probe all the resources.

Fencing issues

I/O fencing on VCS One client system may appear to fail

On some Linux-based VCS One client systems that have been I/O fenced, block writes, which are buffered before being written to the shared disk, may appear to have been successful. In fact, when the writes are reported as failing, as they should, the information is written to the console and may escape notice.
[583236]

Workaround: To verify this, you may elect to write to the corresponding raw device, in which case writes that are properly I/O fenced are reported immediately. See Linux operating system documentation for information about the raw command.

Enterprise agents

Oracle and Netlsnr enterprise agents display or ship unsupported action entry points in VCS One configuration

The Oracle and Netlsnr enterprise agents display or ship unsupported action entry points in the VCS One configuration. [1840535]

Oracle unsupported action entry points (under the directory
/opt/VRTSagents/ha/bin/Oracle/actions):

- DBRestrict
- DBResume
- DBSuspend
- DBTbspBackup
- DBUndoRestrict
- VRTS_GetInstanceName
- VRTS_GetRunningServices
- getid.vfd
- owner.vfd

- home.vfd
- pfile.vfd

Netlsnr unsupported action entry points (under the directory
/opt/VRTSagents/ha/bin/Netlsnr/actions):

- VRTS_GetInstanceName
- VRTS_GetRunningServices
- tnsadmin.vfd

Documentation errata

The following sections cover additions or corrections for Document version: 5.1SP2.0. These additions or corrections may be included in later versions of the product documentation that can be downloaded from the Symantec Support website and the Symantec Operations Readiness Tools (SORT).

Veritas Cluster Server One Installation Guide

In the chapter “Upgrading to VCS One 5.0.2”, when you install the VCS One Policy Master with the “-installonly” option (`./installvcsonepm -installonly`), if there is a more recent version of VRTSsfmh package already installed, then CPI displays the following warnings:

```
CPI WARNING V-9-1-1267
VCS One PM version 5.0.2 includes VRTSsfmh version 2.1.198.0. A
more recent version of VRTSsfmh, 4.0.1026.0, is already installed on
vcs1x264.
```

```
CPI WARNING V-9-1-1874 In this situation VRTSsfmh version 4.0.1026.0
will not be uninstalled or downgraded on vcs1x264.
VCS One PM version 5.0.2 may not operate correctly with this more
recent rpm.
The VRTSsfmh rpm must be removed manually before version 2.1.198.0
can be installed.
Do you want to continue? [y,n,q,?] (n)
```

The steps to run the `./installvcsonepm -installonly` command appear in the following sections:

“Obtaining new systems and installing VCS One 5.0.2”

and

“Installing VCS One 5.0.2 on the deleted system”

Veritas Cluster Server One Bundled Agents Reference Guide

Symantec has added two new attributes to the Zone agent in this release. [Table 1-21](#) lists the two new attributes that must be eventually added to the Zone agent section of the *VCS One Bundled Agents Reference Guide*.

Table 1-21 Zone agent enhancements in VCS One 5.0 SP2

Attribute	Description
DetachZonePath	<p>Determines whether or not the Zone agent must detach the Zone root during the Clean and Offline operations. If this attribute is disabled, the Zone agent does not detach the Zone root during the said operation. DetachZonePath is enabled (1) by default.</p> <p>Type and dimension: boolean-scalar</p> <p>Default: 1</p> <p>Example: 0</p>
ForceAttach	<p>Determines whether the Zone agent must attach the ZonePath with the -F option or without the -F option during a Zone resource Online operation. If disabled, the Zone agent attaches the ZonePath without the -F option during the said operation. ForceAttach is enabled (1) by default.</p> <p>Type and dimension: boolean-scalar</p> <p>Default: 1</p> <p>Example: 0</p>

Documentation

The following sections contain important information about VCS One product documentation.

Email your comments about the documentation to:
docs@symantec.com

Note: For documentation updates related to VCS One 5.0 SP2 features and enhancements, refer only to the *VCS One Installation Guide*, *VCS One User's Guide*, and the *VCS One Release Notes*. The rest of the documents in this release were updated in the VCS One 5.0 SP1 release.

Finding product documentation

Product documents are in the Adobe Portable Document Format (PDF).

To access product documentation

- ◆ Go to the docs subdirectory under the platform-specific directory . All VCS One product documentation is included in this location except the *Veritas Cluster Server One Getting Started Guide* (getting_started.pdf). This guide is available at the top level .

Note: Product documentation is not installed with the product. Symantec recommends that you copy the documentation to the /opt/VRTS/docs directory for future reference.

Latest product documentation

The latest product documentation is available from the Symantec Web site at the following location:
<http://www.symantec.com/business/support/overview.jsp?pid=51657>

About the guides

Table 1-22 lists the titles and file names of the VCS One guides.

Table 1-22 Veritas Cluster Server One documentation set

Document	File name
<i>Veritas Cluster Server One Getting Started Guide</i>	getting_started.pdf

Table 1-22 Veritas Cluster Server One documentation set (Continued)

Document	File name
<i>Veritas Cluster Server One Release Notes</i>	vcsone_notes.pdf
<i>Veritas Cluster Server One Installation Guide</i>	vcsone_install.pdf
<i>Veritas Cluster Server One User's Guide</i>	vcsone_users.pdf
<i>Veritas Cluster Server One Command Reference Guide</i>	vcsone_commands.pdf
<i>Veritas Cluster Server One Bundled Agents Reference Guide</i>	vcsone_bundled_agents.pdf
<i>Veritas Cluster Server One Agent Developer's Guide</i>	vcsone_agent_dev.pdf

[Table 1-23](#) shows the guides that are included with VCS One and the recommended order in which to read them.

Table 1-23 Read the VCS One guides in this order

Read in this order	Title	Description
1	Veritas Cluster Server One Getting Started Guide	Provides an overview of the product and the contents of the directories.
2	Veritas Cluster Server One Release Notes	Describes new features, system requirements, known issues, and fixed issues
3	Veritas Cluster Server One Installation Guide	Contains installation instructions and sample installation output
4	Veritas Cluster Server One User's Guide	<div><div>■</div> Defines the components, architecture, and theory of operations</div> <div><div>■</div> Outlines VCS One cluster design principles</div> <div><div>■</div> Explains how to use VCS One</div>

Table 1-24 shows the reference guides that are included with VCS One. These guides do not need to be read in a particular order.

Table 1-24 VCS One reference guides

Title	Description
<i>Veritas Cluster Server One Command Reference Guide</i>	Contains information about VCS One commands
<i>Veritas Cluster Server One Bundled Agents Reference Guide</i>	Contains information about the agents that are packaged (bundled) with VCS One
<i>Veritas Cluster Server One Agent Developer's Guide</i>	Explains how to create a custom agent
Examples of enterprise agent guides <ul style="list-style-type: none">■ <i>Veritas Cluster Server One Agent for Oracle Installation and Configuration Guide</i>■ <i>Veritas Cluster Server One Agent for DB2 Installation and Configuration Guide</i>	These guides explain how to install and configure enterprise agents. Enterprise agents are not bundled with VCS One. They are included with the Agent Pack.

Online manual pages

On UNIX systems, online manual pages are installed under the following directory:

/opt/VRTS/man

A note about online help

If you notice a discrepancy between information in online help and in the PDF documentation, the information in the PDF documentation is the most current.

Getting help

For technical assistance, visit http://www.symantec.com/business/support/assistance_care.jsp and select phone or email support.

