Veritas InfoScale 7.4.1 Patch 1200 Release Notes - Linux

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Veritas Services and Operations Readiness Tools (SORT) is a website that provides information and tools to automate and simplify certain time-consuming administrative tasks. Depending on the product, SORT helps you prepare for installations and upgrades, identify risks in your datacenters, and improve operational efficiency. To see what services and tools SORT provides for your product, see the data sheet:

https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

Release notes

This document includes the following topics:

About this document

This document provides information that is specific to 7.4.1 Patch 1200 of the Veritas InfoScale products.

Review this entire document before you install 7.4.1 Patch 1200 for the following products:

- Veritas InfoScale Availability
- Veritas InfoScale Enterprise
- Veritas InfoScale Foundation
- Veritas InfoScale Storage

The information in this document supersedes the information that is provided in the product-specific documents and the earlier versions of release notes.

Changes introduced in this release

The following changes are introduced in this release.

Changes related to supported configurations

The following new configuration is supported.

InfoScale support in Nutanix HCI environments

InfoScale supports Nutanix hyper-converged infrastructure (HCI) architecture. The Nutanix Acropolis Hypervisor (AHV) can co-exist with the existing storage infrastructure and offload workloads from existing storage platforms to improve the performance, capability, and linear scalability for InfoScale. This capability delivers a unified, scale-out, shared-nothing architecture with no single point of failure (SPOF). You can set up InfoScale clusters on virtual machines (VMs) that are hosted on Nutanix AHV.

You can create the following high availability (HA) configurations for applications by using InfoScale components on Nutanix VMs:

- Active/active configuration where application data resides on Veritas Cluster File System (CFS)
- Active/passive configuration where application data resides on Veritas File System (VxFS)

You can configure applications for disaster recovery (DR) by using the Volume Replicator (VVR) component and the Global Cluster Option (GCO) feature of InfoScale.

Note: InfoScale configurations are supported only with Nutanix AOS 5.10.5 and later.

For details on the supported use cases, the prerequisites, and the setup recommendations, refer to the Veritas white paper at:

https://www.veritas.com/content/support/en_US/doc/infoscale_hci_support_nutanix_whitepaper

Changes related to Cluster Server

The following changes are made to the Cluster Server (VCS) component.

Stopping VCS without evacuating service groups

By default, when VCS is stopped as part of a system restart operation, the active service groups on the node are migrated to another cluster node. In some cases, you may not want to evacuate the service groups during a system restart. For example, you may want to avoid administrative intervention during a manual shutdown. InfoScale now lets you choose whether or not to evacuate service groups when VCS is stopped.

A new environment variable, NOEVACUATE, is introduced to specify whether or not to evacuate service groups when a node is shut down or restarted.

- The default value of NOEVACUATE is 0, which specifies that the service groups should be evacuated when VCS is stopped.
  The service groups are evacuated by executing the following command, before the system is stopped:
  `hastop -local -noautodisable`
- If this value is set to 1, the VCS stop script does not evacuate the service groups. The service groups evacuation is skipped because the following command is executed, depending on the VCS time-out value:
  `hastop -sysoffline -noautodisable`

This variable is present in the `/etc/sysconfig/vcs` file.

Disabling CmdServer

By default, the `CmdServer` process runs as a daemon. It starts as soon as VCS starts, and you cannot disable the daemon. InfoScale now lets you disable the `CmdServer` daemon.

A new environment variable, STARTCMDSERVER, is introduced to specify whether to disable `CmdServer`.

- The default value of STARTCMDSERVER is 1, which indicates that the `CmdServer` starts as a daemon process when HAD starts and then runs as a background process.
- If this value is set to 0, the VCS start script does not start `CmdServer` when the HAD starts.

This variable is present in the `/etc/sysconfig/vcs` file.

Changes related to Cluster Server agents

The following changes are made to the Cluster Server (VCS) agents.

SystemD support for Sybase and SybaseBk agents

The VCS agents for Sybase and SybaseBk are now supported in SystemD environments, and VCS unit service files are available for the corresponding application services.

Using SystemD attributes for Sybase and SybaseBk

SystemD attributes are only applicable on SLES 12, RHEL 7, and supported RHEL-compatible distributions. InfoScale provides the following optional attributes to the Sybase and the SybaseBk agents in SystemD environments.

Attribute	Description
Name: **UseSystemD** Type: **Boolean** Dimension: **Scalar**	SystemD is a system and service manager for Linux operating systems. It helps manage applications across Linux distributions that support SystemD feature. ■ When this attribute is set to 0, the online entry point starts the resource in user.slice. ■ When this attribute is set to 1, the online entry point brings the Sybase or the SybaseBk resource online as a service in system.slice. The application process can be viewed as `vcs-`*`resourceName`*`.service`, in `/etc/systemd/system`. **Note:** After a system restart, if an application resource is started under user.slice, there is a possibility that the processes are not stopped gracefully. In this case, you can enable the UseSystemD attribute.
Name: **SystemDAttrList** Type: **String** Dimension: **Scalar**	Set the key-value pairs for the SystemD environment using this attribute. **Note:** Ensure that UseSystemD is set to 1 before you set the key-value pairs. To know more about the different limits that you can apply to an application, refer to the appropriate Red Hat documentation.

You can customize the Sybase or the SybaseBk application unit service file with the attributes for SystemD in the following ways:

- Adding key-value pairs to the SystemDAttrList attribute
  The SystemDAttrList attribute contains a set of key-value data pairs that map to system-specific attributes and their values. These values are used to set the platform- and application-specific environment.
- Customizing the application unit service file with SystemD attributes
  Veritas recommends that you do not modify or add new SystemD attributes to the existing `vcs-`*`resourceName`*`.service` unit file, because it gets overwritten when the online entry point is invoked.

Adding key-value pairs to the SystemDAttrList attribute

1. Set the UseSystemD attribute to 1.
2. To add a key-value pair in the SystemDAttrList attribute, run the command:

   ```
   # hares -modify resourceType SystemDAttrList key value
   ```

   For example:

   ```
   # hares -modify sybase SystemDAttrList LimitNOFILE 2048
   ```

3. (Optional) To modify an existing attribute, run the command:

   ```
   # hares -modify resourceType SystemDAttrList -update key value
   ```

   For example:

   ```
   # hares -modify sybase SystemDAttrList -update LimitNOFILE 1024
   ```

   After you update the SystemDAttrList attribute, the `vcs-custom.conf` file reflects the added key-value pairs.

   A sample set of SystemD attribute-value pairs:

   ```
   Systemd attribute = Value
   LimitLOCKS = infinity
   LimitMEMLOCK = infinity
   LimitCORE = infinity
   LimitNOFILE = 1024
   ```

Customizing the application unit service file with SystemD attributes

1. To customize additional SystemD attributes in the `vcs-resourceName.service` file, create the `foo.conf` unit configuration file under `/etc/systemd/system/vcs-sybase_res.service.d` with new attributes.

   When the online entry point is invoked, SystemD applies the new attributes from `foo.conf` to `vcs-resourceName.service`, and then uses the unit service file for the application.

2. After you add the required system attributes in `foo.conf`, load the SystemD daemon.

   ```
   # systemctl --system daemon-reload
   ```

3. Verify the status of the application service.

   ```
   # systemctl status -l vcs-resourceName.service
   ```

Fixed issues

The following issues are fixed in this release.

Fixed issues related to installation

Incident	Description
3971982	The CPI menu for installation or configuration takes longer than expected to respond.

Fixed issues related to Cluster Server and Cluster Server agents

Incident	Description
3971555	RVGSharedPri fails to come online on a CVM slave.
3975142	After upgrading to InfoScale 7.4, AMF fails to register disk group Online events.
3966474	Registration keys fail to refresh on CP servers.
3962607	Unable to start multiple SMB server instances.
3977099	VCS does not support non-evacuation of the service groups during a system restart.
3973227	`cmdserver` starts every time HAD starts and cannot be disabled.
3968449	An incomplete error code is logged when the Oracle agent is brought online.

Fixed issues related to Veritas File System

Incident	Description
3978645	A system panic occurs during a VxFS mount operation.
3966612	(RHEL 7.6) After restart, a cluster node was stuck in the LEAVING state because `cvm_clus` failed to go offline and `cvm_vxconfigd` was in the FAULTED state.
3974770	A system panic occurs during a VxFS mount operation on a node with the SLES 12 SP3 kernel (4.4.175-94.79).
3976577	An issue with the `vx_upgrade` utility caused VxFS to panic.

Incident	Description
3980044	A file system corruption occurred during a VxFS mount operation.
3978646	A high workload caused an entire cluster to become unresponsive.

Fixed issues related to Veritas Volume Manager

Incident	Description
3868154	If DMP native support is set to ON, the `vxdmpadm native ls` command incorrectly displays the volume group information when multiple volume groups exist on a disk.
3915523	When a private disk group is imported with its name, a remote disk is created for it even though the disk does not belong to the same disk group.
3969860	The event source daemon, `vxesd`, takes a long time to start when several LUNs (approximately 1700) are attached to the system.
3899568	The DMP `iostat` daemon cannot be stopped persistently.
3907596	The `vxdmpadm setattr` command reports an error when it sets the path attribute.
3925345	The `vxvolgrp` command inadvertently created thousands of empty `vx.*` folders under `/tmp` in a very short interval.
3931048	VxVM creates some log files and incorrectly assigns the write permission to all the users.
3958114	Read operations on a subordinate node are 50% slower than those on a master node.
3959986	A memory management issue with `vxencryptd` causes the system to hang.
3955979	I/O operations became unresponsive during synchronous replication.
3973364	If network lags occur when the synchronous mode of volume replication is used with TCP, I/O operations may become unresponsive for as long as 15-20 minutes.
3972679	`vxconfigd` failed to start because it accessed an invalid address and caused a memory segment fault.
3964964	Performance issues occurred due to soft lockup of `vxnetd`.

Incident	Description
3978330	The values of the VxVM and the VxDMP tunables do not persist after a system restart with 4.4 and later versions of the Linux kernel.
3947265	The `vxvm-startup` script includes a delay for the discovery of Infiniband devices, which causes `vxfen` to fail and eventually causes a split-brain situation.
3975405	`cvm_clus` fails to stop even after `hastop -all` is triggered and causes the cluster nodes to get stuck in the LEAVING state.