

Symantec™ ApplicationHA 6.2 Release Notes - AIX on IBM PowerVM

Symantec™ ApplicationHA Release Notes

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Documentation

Product guides are available on the media in PDF format. Make sure that you are using the current version of the documentation. The document version appears on page 2 of each guide. The latest product documentation is available on the Symantec website.

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

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<https://www-secure.symantec.com/connect/storage-management/forums/storage-and-clustering-documentation>

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Symantec ApplicationHA Release Notes

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Introduction

This document provides important information about Symantec ApplicationHA 6.2. Review this entire document before you install or upgrade ApplicationHA.

The information in the Release Notes supersedes the information provided in the product documents for ApplicationHA.

For the latest patches available for this release, go to:
<https://sort.symantec.com/patch/matrix>.

What is Symantec ApplicationHA

Symantec ApplicationHA provides monitoring capabilities for applications running inside logical partitions in the IBM PowerVM virtualization environment. Symantec ApplicationHA adds a layer of application awareness to the core high availability (HA) functionality offered by Symantec™ Cluster Server (VCS) in the management LPAR.

Symantec ApplicationHA is based on VCS and uses similar concepts such as agents, resources, and service groups. However, it does not include the high availability cluster components such as the Group Membership and Atomic Broadcast (GAB), Low Latency Transport (LLT), and Veritas Fencing (VxFEN). Symantec ApplicationHA has a lightweight server footprint that allows faster installation and configuration.

Key benefits include the following:

- Out of the box integration with VCS.
- Full visibility and control over applications with the ability to start, stop, and monitor applications running inside managed LPARs.
- High availability of the application as well as the managed LPAR inside which the application runs.
- Graded application fault-management responses such as:-
 - Application restart
 - ApplicationHA-initiated, graceful internal reboot (soft reboot) of a managed LPAR
 - VCS-initiated, external reboot (hard reboot) of managed LPAR
 - Failover of the managed LPAR to another VCS node.
- Specialized Application Maintenance mode, in which ApplicationHA allows you to intentionally take an application out of its purview for maintenance or troubleshooting.

Salient features

Following are the salient features of ApplicationHA:

- Support for enterprise applications such as Oracle Database, Apache HTTP Server and DB2.
- Speedy fault management of select applications by using the Intelligent Monitoring Framework (IMF).

- Simple workflow for installation and configuration
- Access control based on organization, user group, or other organizational entities such as clusters, using Veritas Operations Manager (VOM) 6.0 or later.
- Option to install ApplicationHA with a keyless license. Veritas Operations Manager (VOM)-integrated option to view and manage licenses (evaluation and permanent license keys).
- Ability to centrally manage installations of Symantec storage and high availability management products across a data center, using a deployment server.
- Single GUI (Symantec High Availability view or tab) to manage applications running on Windows, Linux, AIX, and Solaris SPARC platforms.
- Ability to view component dependency of configured applications over the GUI
- Ability to configure graceful reboot of virtual machines in case of an application failure
- Continued updates and additional application support distributed via Symantec Agent Pack releases
- VCS support for ApplicationHA, which enables you perform application-aware monitoring of the virtualization infrastructure (logical partitions).

Changes in this release

This section lists the new features as well as changes in attributes, platform support, and filesets.

Intelligent Monitoring Framework

VRTSsamf is a new fileset introduced in this release. The package enables Symantec ApplicationHA agents to leverage the Intelligent Monitoring Framework (IMF) module.

In this release, the VRTSveki fileset is also introduced as part of the ApplicationHA filesets. VRTSveki contains the kernel interface, which is a common set of modules that the IMF driver uses.

IMF offers a way for ApplicationHA agents to avoid polling for state changes among the monitored application components. IMF allows the agents to register which components to monitor. When the state of an application component changes, IMF immediately notifies the agent. Corrective action can therefore be immediately taken once an event occurs. IMF enables the ApplicationHA agents to monitor a large number of components with a minimal effect on performance.

IMF support for the following ApplicationHA agents is introduced in this release:

- Apache HTTP Server
- DB2 Database
- Oracle Database
- Generic (custom) applications

Note: The Symantec High Availability Configuration wizard by default enables IMF support. To disable IMF support, you must use Symantec Cluster Server (VCS) commands.

Online upgrade for ApplicationHA

You can perform an online upgrade to ApplicationHA 6.2 by using the installer, while keeping your applications online. Ensure that you use one of the supported upgrade paths listed in the *Symantec ApplicationHA Installation Guide*.

During this upgrade process, ApplicationHA does not monitor the configured applications for high availability.

System requirements

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

- The software compatibility list (SCL) contains information about supported software and it is updated regularly. For the latest information on supported software, visit the following URL
<http://www.symantec.com/docs/TECH225258>
- For the latest information on application versions supported by Symantec high availability agents, see:
<https://sort.symantec.com/agents>
- For important updates regarding this release, review the Late-Breaking News TechNote on the Symantec Technical Support website:
<http://www.symantec.com/docs/TECH211540>
- For the latest patches available for this release, go to:
<https://sort.symantec.com/>
- The hardware compatibility list contains information about supported hardware and is updated regularly. For the latest information on supported hardware visit the following URL:

<http://www.symantec.com/docs/TECH211575>

- For information about the supported operating systems, hardware and software requirements, supported applications and other general requirements, also see the *Symantec™ ApplicationHA Installation and Upgrade Guide*.

Software limitations

The following limitations apply to this release of the product.

Configuration wizard does not support hardware monitoring

You cannot configure hardware components such as storage and network, using the ApplicationHA wizard.

Workaround

- You can ensure that these components do not require monitoring. For example, for storage, you can add appropriate entries in the `/etc/filesystems` file.
- Alternately, you can configure hardware components by using the Command Line Interface of Symantec Cluster Server (VCS) or Veritas Operations Manager (VOM).

ApplicationHA configuration wizard supports only one application per managed LPAR

You can use the Symantec ApplicationHA Configuration wizard to monitor only one application per managed LPAR.

Workaround

If you are familiar with underlying VCS and VOM concepts, you can add more applications or application components for monitoring.

For more information on how to use VCS commands or VOM to configure additional applications, see the following technical note:

<http://www.symantec.com/docs/TECH159846>

You cannot edit an application monitoring configuration

Once you configure an application, ApplicationHA does not support edits or additions to the configuration.

Workaround

Remove existing configuration and then re-configure

Simultaneous multiple installations may be slow

If you try to install ApplicationHA guest components on a large number of systems, the process may take a long time.

Workaround

Specify smaller batches of systems while using the ApplicationHA install program or response file for multi-system installations.

Multiple VCS clusters are not supported on a single physical server

In the IBM PowerVM virtualization environment, you can designate only one LPAR as a management LPAR on each physical server.

VCS on the management LPAR provides high availability to managed LPARs, by forming a cluster with management LPARs on other physical servers, not the same physical server.

In a VCS cluster, management LPARs must belong to same subnet

If you want to configure application-aware monitoring of managed LPARs, then management LPARs in the same VCS cluster must be on the same subnet. If the management LPARs are on different subnets, VCS may not be able to successfully fail over managed LPARs from one management LPAR to another. (2623075)

Known issues

The following known issues exist in this release of the product.

App.RestartAttempts setting does not take effect if value is set to 2 or more

App.RestartAttempts configuration option defines the number of times Symantec ApplicationHA tries to restart a failed application or its component. Its value can range from 1 to 6.

For certain application configurations, this setting fails to take effect if its value is set to 2 or more. After successfully configuring an application, if there is a fault in the application or its dependent component, ApplicationHA attempts to restart it once. If the application fails to start, ApplicationHA reports the application state as faulted. (2508392)

This issue is applicable only for the following applications/components:

On AIX

- Custom Application
- Apache HTTP Server
- DB2

Workaround

Currently there is no workaround to resolve this issue.

Symantec recommends that for applications mentioned earlier, you set the `App.RestartAttempts` value to 1.

This ensures that ApplicationHA makes at least one attempt to restart the failed component. If the component still fails to start, ApplicationHA then declares it as faulted and takes further action as per the configuration settings (for example, a graceful reboot of the managed LPAR).

Compatibility with other clustering products

Symantec ApplicationHA runs on Symantec Cluster Server (VCS). The version of VCS used by ApplicationHA is a customized version of VCS. Many components have been removed in order to provide a lighter footprint inside the virtual machine. You cannot run both ApplicationHA and VCS together inside the same virtual machine. There is no method to upgrade from ApplicationHA to VCS.

Additionally ApplicationHA does not co-exist with other clustering solutions offered by Symantec. These include, Symantec Storage Foundation High Availability, Clustered File System, Clustered File System High Availability and Clustered Volume Manager.

Application monitoring configuration freezes

This issue occurs if you configure application monitoring on systems where host names start with a hyphen. (2038685)

The application monitoring configuration may freeze and the ApplicationHA view in the vSphere Client may not display the status of the application. If the configured application fails, ApplicationHA takes no action.

Symantec recommends that you rename systems whose host names start with a hyphen before installing ApplicationHA and configuring application monitoring on those systems.

Symantec ApplicationHA commands do not display the time as per the locale settings

This issue occurs with all the ApplicationHA commands that display the date and time stamp in the output. The date and time stamp do not display as per the locale settings on the system. They are displayed only in English. (2142740)

ApplicationHA fails to work if Veritas Operations Manager is uninstalled

The Managed Host components of Veritas Operations Manager (VOM) are installed on the management LPAR and the managed LPAR, during the ApplicationHA installation. (2361128, 2323516)

Uninstallation of VOM removes the VRTSsfmh fileset which breaks the ApplicationHA functionality. The VRTSsfmh fileset contains the 'Veritas Storage Foundation Messaging Service' (xpirtld) that is used by both, ApplicationHA and VOM.

Note: This issue also occurs when you uninstall the Veritas Operations Manager Central Server.

Workaround

Perform the following steps

- 1 Insert the ApplicationHA software disc into your system drive and navigate to the directory that contains the fileset for the AIX operating system:

```
# cd cdrom_root/applicationha/pkggs
```

- 2 Run the following command:

```
# installp -a VRTSsfmh
```

- 3 Stop the `xpirtld` service.

```
# /opt/VRTSsfmh/adm/xpirtldctrl stop
```

- 4 Ensure that the file `/etc/opt/VRTSsfmh/xpirtld.conf` contains the following text:

```
namespaces vcs=/opt/VRTSvcsvcs/portal
```

- 5 Start the `xpirtld` service.

```
# /opt/VRTSsfmh/adm/xpirtldctrl start
```

Refreshing the Symantec High Availability view multiple times displays a network connectivity error

This issue is typically observed in case of IE7 browser.

Symantec High Availability view refreshes the application status every 60 seconds. However, in case of network failure if you manually refresh the ApplicationHA view multiple times, IE displays a network connectivity error. (2379946, 2379707)

If you click **Ok** on the error message and then click another virtual machine on the VOM Management Server console, then the Symantec High Availability view displays the application status of an unknown application.

This issue also occurs if you refresh the Symantec High Availability view and simultaneously reset the virtual machine.

Workaround

For details, refer to the following knowledge base article from Microsoft.

http://support.microsoft.com/kb/927917#more_information

VCS configuration incorrectly retains read-write mode

When you execute the `enable_applicationha` script on the management LPAR, if an error occurs, the script exits. However, the VCS configuration remains in the read-write mode. In this mode, the configuration is vulnerable to unintentional editing. (2607134)

Workaround

Revert the VCS configuration to the read-only mode by using the following command:

```
# haconf -dump -makeo
```

Configuration option of ApplicationHA installer malfunctions

When you run the Symantec ApplicationHA installer, it displays the following option to configure ApplicationHA: **Configure an Installed Product**.

If you specify this option, the installer fails to configure ApplicationHA. Instead, the installer starts stopping certain ApplicationHA processes. (2621468)

Workaround

Do not use the installer option to configure an application. Instead, to configure Symantec ApplicationHA for monitoring an application, use one of the following methods:

- If you have already installed ApplicationHA, navigate to the following URL, and use the **Configure Application Monitoring** link to launch the Symantec ApplicationHA Application Monitoring Configuration Wizard:

```
https://<logicalPartitionNameorIPAddress>:5634/vcs/admin/  
application_health.html?priv=ADMIN
```

- You can launch the wizard from the Symantec High Availability view of the Veritas Operations Manager Management Server Console. For more information on working with VOM and accessing the ApplicationHA, see the *Symantec ApplicationHA User's Guide*.

Heartbeat service group may fail to come online

If the high availability daemon (HAD) on the managed LPAR is restarted, the configured heartbeat service group (VCSAppMonHBSG) does not automatically come online. (2605506)

Workaround

To continue application monitoring, you must manually bring the VCSAppMonHBSG online by using the following command:

```
# /opt/VRTSvcs/bin/hagrp -online VCSAppMonHBSG -sys System
```

Where *System* is name of the managed LPAR.

Failure of management LPAR may obstruct managed LPAR monitoring

If a management LPAR fails, VCS may be unable to execute VCS-specific fault-management steps such as hard reboot or fail over of managed LPARs. However, ApplicationHA functionalities such as application restart and graceful internal (soft) reboot of the managed LPARs continue to work. (2564186)

Workaround

Restart the management LPAR to enable re-connection with the managed LPAR on the physical frame.

Attributes of a managed LPAR may retain stale values

If the physical frame crashes, the managed LPARs may indicate stale values for attributes such as ConnectionState and SysState. The settings are updated after a managed LPAR fails over to a new physical frame. (2611726)

VCS is unable to restart a managed LPAR

If a monitored application develops a fault, Symantec Cluster Server (VCS) in the management LPAR fails to restart the related managed LPAR as a fault management remedy. (3297281)

When an application faults, ApplicationHA tries to restart it. If that fails, ApplicationHA communicates with VCS in the management LPAR to restart the related managed LPAR. However, due to an error in the AIX operating system, the DHCP client fails to assign a netmask address to the managed LPAR. As a result, ApplicationHA on the managed LPAR is unable to access the private network of VCS on the management LPARs. Subsequent fault management steps, such as managed LPAR restart, therefore fail.

Workaround

Apply one of the following patches from IBM:

For AIX 6.1: 6100-08-03-1339

For AIX 7.1: 7100-02-03-1334

Note that the APAR numbers for this fixes are:

For AIX 6.1 is: IV38800

For AIX 7.1 is: IV34235

Users cannot modify the default log path for Symantec High Availability Wizard

The Symantec High Availability Wizard by default writes its backend logs to the following directory:

```
/var/VRTSvcs/log.
```

ApplicationHA users cannot modify this default path. No workaround exists for this issue. (3609791)

Application monitoring may not resume on exiting maintenance mode

If you suspend application monitoring from the Symantec High Availability view, and later resume it by clicking **Exit Maintenance Mode**, application monitoring may not resume as expected.

If you then refresh the tab/view, the Configure Application Monitoring link may appear. This issue may occasionally occur in any setup because of variations in the time taken by internal commands to complete, after you click **Exit Maintenance Mode**. In some cases, before the internal commands are complete, the High

Availability Daemon (HAD) module may shut down and stop application monitoring.
(3640282)

Workaround

Perform the following steps:

1. From the command line, execute the following command:

```
# /opt/VRTSvcs/bin/hastart -onenode
```

2. From the Symantec High Availability view, try to resume application monitoring by clicking **Exit Maintenance Mode**.

Software fixes and enhancements in this release

This section provides information about the Symantec ApplicationHA incidents that have been fixed in this release.

Incident number	Description
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3335745	While upgrading ApplicationHA, the install program does not provide users with the option to specify keyless licensing.
3491170	ApplicationHA installer displays incorrect EULA path for non-English locales
3491158	If you have configured Oracle database instances for detail monitoring with ApplicationHA 6.0 or earlier, you cannot perform a live upgrade to ApplicationHA 6.1.

Documentation

Symantec Storage Foundation and High Availability Solutions product documentation is available in the Adobe Portable Document Format (PDF) on the product discs or with the downloaded software. See the release notes for information on documentation changes in this release.

Make sure that you are using the current version of documentation. The document version appears on page 2 of each guide. The publication date appears on the title page of each document. The latest product documentation is available on the Symantec website.

Symantec ApplicationHA guides are also available in the PDF format on the software media in the `/docs/applicationha` directory. Additional documentation is available online.

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

Documentation set

This topic describes the Symantec ApplicationHA documentation set that includes release notes, an installation guide, a user's guide, and agent guides.

Symantec ApplicationHA documentation

[Table 1-1](#) lists the documentation for Symantec ApplicationHA.

Table 1-1 Symantec ApplicationHA documentation

Document title	File name	Description
<i>Symantec ApplicationHA Release Notes</i>	applicationha_notes_62_lpar_aix.pdf	Describes the new features and software and system requirements. This document also contains a list of limitations and issues known at the time of the release.
<i>Symantec ApplicationHA Installation Guide</i>	applicationha_install_62_lpar_aix.pdf	Describes the steps for installing and configuring Symantec ApplicationHA. Some of the most common troubleshooting steps are also documented in this guide.
<i>Symantec ApplicationHA User's Guide</i>	applicationha_users_62_lpar_aix.pdf	Provides information about configuring and managing Symantec ApplicationHA in Logical Partition (LPAR) virtualization environments. Some of the most common troubleshooting steps are also documented in the guide.
<i>Symantec ApplicationHA Agent for Oracle Configuration Guide</i>	applicationha_oracle_agent_62_lpar_aix.pdf	Describes how to configure application monitoring for Oracle.
<i>Symantec ApplicationHA Generic Agent Configuration Guide</i>	applicationha_gen_agent_62_lpar_aix.pdf	Describes how to configure application monitoring for a generic application.
<i>Symantec ApplicationHA Agent for DB2 Configuration Guide</i>	applicationha_db2_agent_62_lpar_aix.pdf	Describes how to configure application monitoring for DB2.
<i>Symantec ApplicationHA Agent for Apache HTTP Server Configuration Guide</i>	applicationha_apache_agent_62_lpar_aix.pdf	Describes how to configure application monitoring for Apache HTTP Server.

Veritas Operations Manager (VOM) is a management tool that you can use to manage Symantec Storage Foundation and High Availability Solutions products. If you use VOM, refer to the VOM product documentation at:

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