

Veritas InfoScale™
Availability Management
Pack Guide for Microsoft
SCOM 2012

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About Veritas InfoScale Availability Management Pack

This chapter includes the following topics:

- [Overview](#)
- [Rules](#)
- [Alerts and Events](#)
- [Views](#)

Overview

The Veritas InfoScale Availability (VCS) Management Pack for Microsoft System Center Operations Manager 2012 (SCOM) helps you to monitor VCS components in a SCOM monitoring environment.

The VCS Management Pack also creates necessary alerts for critical events that require your attention.

This guide provides information about how to deploy and configure the VCS Management Pack in your SCOM environment. Veritas provides you with a .mp file to enable SCOM monitoring for VCS. The .mp file must be imported and installed into SCOM to enable monitoring.

This guide is intended for the Microsoft System Center Operations Manager (SCOM) administrator. For specific information about Microsoft System Center Operations Manager (SCOM), refer to the Microsoft SCOM documentation.

Table 1-1 lists the file name and description of the VCS Management Pack for SCOM.

Table 1-1 VCS Management Pack: file name and description

File name	Description
Veritas.Cluster.Server.mp	The management pack that contains rules for monitoring VCS components.

The VCS Management Pack, *Veritas.Cluster.Server.mp*, is a sealed management pack that contains rules to monitor the following VCS components:

Table 1-2 VCS Management Pack: VCS components monitored

Component name	Description
Engine (HAD)	The high availability engine, or HAD, is the main VCS daemon running on each system. It is responsible for building the running cluster configuration from the configuration files, distributing the information when new nodes join the cluster, responding to operator input, and taking corrective action when something fails. The VCS Management Pack monitors the status of the HAD and notifies the user in case of errors.
Agents (Agent Framework)	The VCS Management Pack monitors the status of the VCS Bundled agents and Enterprise agents. The VCS agent framework is a set of common, predefined functions compiled into each agent. These functions include the ability to connect to the VCS engine (HAD) and to understand common configuration attributes. The agent framework frees the developer from developing support functions required by the cluster, and instead focus on controlling a specific resource type. The VCS management pack monitors the status of the common agent framework.

Rules

The VCS Management Pack rules collect data, such as events, from the logs generated by the VCS components. Some of the rules have an associated alert that notifies the administrator about the event that triggered the alert. You can view the VCS rules after you import the VCS Management Pack in Operations Manager 2012.

The VCS Management Pack contains the following rules to collect various events:

- HAD source with severity as “error”

- HAD source with severity as “warning”
- HAD source with severity as “information”
- Agent Framework source with severity as “error”
- Agent Framework source with severity as “warning”
- Agent Framework source with severity as “information”

'HAD All Information Events', and 'AgentFramework All Information Events' rules are disabled by default. To collect and display Information events, you need to manually enable rules using overrides for a particular event source. For information about how to enable rules using overrides, refer to Microsoft System Center Operations Manager 2012 documentation.

Alerts and Events

Depending on the rule and the alert that has been set for an event, an appropriate alert is generated when the event is received on the Operations Manager 2012 server. An alert notifies the administrator about the event that triggered the alert.

Each rule that generates the alert assigns an alert level that indicates the severity of that event. You can use the severity level to determine the importance of the alert and the necessary steps required to address the alert.

Note: The VCS Management Pack does not include a notification group for automatic alerts by e-mail. If e-mail alerts are required, you must add the alert processing rules manually.

Views

Views are groups of managed objects that have a commonality, which is defined in the view properties. The views supported by the VCS Management Pack enable you to monitor the health of the VCS components within the managed environment. These views enable you to assess the state of the required cluster node within the managed environment.

When you import the VCS Management Pack, an item named Veritas Cluster Server is created under the Monitoring node in the Monitoring pane of the Operations Manager 2012 console. Expand **Veritas Cluster Server** to see the views supported by the VCS Management Pack.

The following views are supported:

- Active Alerts

This view provides a list of alerts which are generated from the VCS nodes and requires Administrator's attention. Such alerts indicate the current state and severity of these alerts.

- VCS Health Dashboard

The VCS Health Dashboard provides single pane of glass that integrates VCS Health State view and VCS Application Health State view.

- VCS Health State:

The VCS Health State view provides a real-time, consolidated look of the health of the cluster within the managed environment, highlighting the systems that require attention. It displays the state of the service groups and the resources configured in the service group.

In the Monitoring pane, expand **Veritas Cluster Server** and click **VCS Health Dashboard**. In the VCS Health State view pane, click an item in the VCS Service Groups column. The Detail View section displays the status of the service groups and the resources. Depending on the state of the particular service group, the following status is displayed:

- *Healthy*: Indicates that the service group and its resources are online on the node.
- *Warning*: Indicates that the service group is partially online on the node.
- *Critical*: Indicates that either the service group or the resources in the service group have faulted on the node.

Whenever a service group or a resource in a service group faults on a node, an appropriate alert is generated. Such alert is displayed in the Active Alerts pane.

VCS management pack has a separate monitor for monitoring the health of the Veritas High Availability Daemon (HAD). If HAD is not running on a node, then an appropriate alert is generated. This alert stays active until the HAD starts on that node. As soon as HAD starts on the node, the alert gets resolved automatically.

- VCS Application Health State:

The VCS Application Health State provides a real-time, consolidated look of the health of the service group within the VCS managed environment, highlighting the service group that require attention. It displays the state of the resources configured in the service group.

In the Monitoring pane, expand **Veritas Cluster Server** and click **VCS Health Dashboard**. In the VCS Application Health State view pane, click an item in the VCS Resources column. The Detail View section displays the status of the resources. Depending on the state of the particular resource, the following status is displayed:

- *Healthy*: Indicates that the resource is online on the node.
 - *Warning*: Indicates that the resource is in 'offline on node' state.
 - *Critical*: Indicates that the resource is offline on the node, or the resource has faulted.
- Alerts
Displays alerts for the VCS components: Agents, and Engine. This view provides a list of issues, current state, and severity of each alert. It indicates whether the alerts have been acknowledged, escalated, or resolved, and also whether a Service Level Agreement has been breached.
 - Events
Displays events for the VCS components: Agents, and Engine. The Event view provides a list of events that have occurred on managed servers, a description of each event, and the source of the problem.

Deploying the VCS Management Pack

This chapter includes the following topics:

- [Supported software](#)
- [Prerequisites](#)
- [Importing the VCS Management Pack](#)

Supported software

The VCS Management Pack is compatible with the following product versions:

- Microsoft System Center Operations Manager 2012 SP1
- Microsoft System Center Operations Manager 2012 R2
- Storage Foundation and High Availability Solutions 6.0 for Windows
- Storage Foundation and High Availability Solutions 6.0.1 for Windows
- Storage Foundation and High Availability Solutions 6.0.2 for Windows
- Storage Foundation and High Availability Solutions 6.1 for Windows
- Veritas Cluster Server 6.0 for Windows
- Veritas Cluster Server 6.0.1 for Windows
- Veritas Cluster Server 6.0.2 for Windows
- Symantec Cluster Server 6.1 for Windows
- Veritas InfoScale Availability 7.1 for Windows

Prerequisites

Ensure that the following prerequisites are complete before you proceed:

- Verify that Operations Manager 2012 infrastructure is set up and configured correctly.
See the Microsoft System Center Operations Manager 2012 documentation for more information.
- Download and import the VCS Library Management Pack on the management server.
Refer to the *Veritas InfoScale Availability Library Management Pack Guide for System Center Operations Manager* for instructions. Ensure that you complete all the procedures mentioned in the guide.
- Download and import the Veritas Cluster Communication Management Pack on the management server.
Refer to the *Veritas InfoScale Enterprise Cluster Communication Management Pack Guide for Microsoft SCOM* for instructions.

Importing the VCS Management Pack

Use the following procedure to import the VCS Management Pack, `Veritas.Cluster.Server.mp`

To import the VCS Management Pack for SCOM

- 1 Log on to the computer with an account that is a member of the Operations Manager Administrators role for the Operations Manager management group.
- 2 In the Operations Console, click **Administration**.
- 3 Under Required Configuration Tasks: section, click **Required: Import management packs** to launch Import Management Packs wizard.
- 4 Click **Add**, and then click **Add from disk**.
- 5 The Select Management Packs to import dialog box appears. Change to the directory that holds the VCS Management Pack file, select the management pack **Veritas.Cluster.Server.mp** and then click **Open**.

- 6 On the Select Management Packs page, the management pack that you selected for import is listed. A green check mark indicates that the management pack can be imported. Click **Import**.

A red error icon indicates that the management pack is dependent on one or more management packs that are not in the Import list and are not available in the catalog. To view the missing management packs, click **Error** in the Status column. To remove the management pack with the error from the Import list, right-click the management pack, and then click **Remove**.

- 7 The Import management packs page appears and shows the progress for management pack. The management pack is downloaded to a temporary directory, imported to Operations Manager, and then deleted from the temporary directory. If there is a problem at any stage of the import process, select the management pack in the list to view the status details. Click **Close**.

VCS Management Pack monitoring alerts

This chapter includes the following topics:

- [About monitoring alerts](#)
- [HAD monitoring alerts](#)
- [Agent Framework monitoring alerts](#)

About monitoring alerts

This chapter lists the monitoring rules for VCS components such as HAD and Agent Framework. Depending on the alert that has been set for an event, an appropriate alert is generated. An alert notifies the administrator about the event that triggered the alert.

HAD monitoring alerts

[Table 3-1](#) lists the alerts for the VCS High Availability Engine (HAD).

Table 3-1 HAD monitoring alerts

Event source	Event ID	Event message	Alert severity
HAD	10205	Service Group is faulted on the system.	Error
HAD	10621	Local cluster configuration error.	Error

Table 3-1 HAD monitoring alerts (*continued*)

Event source	Event ID	Event message	Alert severity
HAD	10623	Invalid local cluster configuration.	Error
HAD	11303	HAD has encountered a critical error.	Error
HAD	11331	HAD cannot register with SCM (Service Control Manager).	Error
HAD	12038	HAD failed to change the current working directory. Ensure that <code>VCS_ROOT</code> and <code>VCS_HOME</code> environment variables are set properly.	Error
HAD	40112	Heartbeat from another cluster is down.	Warning
HAD	11306	Node did not receive cluster membership. Manual intervention may be needed for seeding.	Error
HAD	10113	System is in DDNA membership.	Error
HAD	10622	Local cluster configuration error. Run <code>hacf -verify config</code> to check if the cluster configuration is valid.	Error
HAD	10214	Concurrency violation for service group.	Error
HAD	11033	GAB open failed.	Error

Table 3-1 HAD monitoring alerts (*continued*)

Event source	Event ID	Event message	Alert severity
HAD	10322	System state changed.	Error
HAD	51135	Global counter not updated.	Error
HAD	10111	System is in regular and jeopardy membership.	Error

Agent Framework monitoring alerts

[Table 3-2](#) lists the Agent Framework alerts included in the VCS Management Pack.

Table 3-2 Agent Framework monitoring alerts

Event source	Event ID	Event message	Alert severity
AgentFramework	30006	IMF registration failed from the underlying framework.	Warning
AgentFramework	13067	Agent is calling clean for resource because the resource became OFFLINE unexpectedly, on its own.	Warning
AgentFramework	13051	Agent is exiting because another agent of same type is already running.	Error
AgentFramework	13066	Agent is calling clean for resource because resource is not online.	Warning