

Veritas InfoScale Storage™
Management Pack Guide
for Microsoft System Center
Operations Manager -
Windows

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About the InfoScale Storage Management Pack

This chapter includes the following topics:

- [Overview](#)
- [Veritas InfoScale Storage for Windows monitoring](#)
- [InfoScale Storage servers with CVM or fast failover](#)

Overview

The Veritas InfoScale Storage for Windows Management Pack for Microsoft System Center Operations Manager (SCOM) monitors the InfoScale Storage and InfoScale Enterprise servers and generates events and, when necessary, alerts for critical events. The InfoScale Storage Management Pack helps you monitor the events generated by the InfoScale Storage components (such as disks, disk groups, and volumes), Volume Replicator, and DMPW. The InfoScale Storage Management Pack collects and displays error, warning, and informational event messages.

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

This guide provides information about how to deploy and configure the InfoScale Storage Management Pack in your SCOM environment. Veritas provides you with a .mp file to enable SCOM monitoring for InfoScale Storage. The .mp file must be imported and installed into SCOM to enable monitoring. The guide also provides information about how you can monitor InfoScale Storage for Windows using the different views in the SCOM console. The views supported by the InfoScale Storage

Management Pack enable you to monitor the health of the different components within the managed SCOM environment.

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.

Note: The InfoScale Storage Management Pack is delivered in English only. However, event text that comes from a localized server does appear in the localized language.

Veritas InfoScale Storage for Windows monitoring

Using the Monitoring pane of the Microsoft System Center Operations Manager (SCOM) console, you can view the status of the InfoScale Storage servers and learn about the events and alerts generated by the servers. The top-level view for the InfoScale Storage Management Pack is called Veritas InfoScale Storage for Windows. The three folders under the top-level view provide information about the alerts, events, and state of the InfoScale Storage servers. For more information, See [“Monitoring the InfoScale Storage Management Pack”](#) on page 16.

Depending on the rule that has been set for an event, an appropriate event or alert is generated when the event is received on the SCOM server.

[Table 1-1](#) indicates the event severity categories for the InfoScale Storage Management Pack:

Table 1-1 InfoScale Storage Management Pack event severity categories

Event severity	Description
INFORMATION	Indicates an informational event.
WARNING	Indicates a potential problem or a low-priority issue that does not require any immediate action.
ERROR	Indicates errors that require your attention.

There are alert rule categories in the InfoScale Storage Management Pack that are used for monitoring the specific components. Each of the categories consist of a set of events that are used to monitor the specific components.

[Table 1-2](#) indicates the alert rule categories of the InfoScale Storage Management Pack:

Table 1-2 InfoScale Storage Management Pack alert rule categories

Alert rule category	Description
Licensing	Monitors license-related issues and failures.
Veritas InfoScale Storage for Windows	Monitors the operational status of InfoScale Storage Management Pack and generates alerts when necessary.
Veritas InfoScale Storage Volume Replicator	Monitors the operational status of Volume Replicator and generates alerts when necessary.
Veritas Dynamic Multi-Pathing for Windows	Monitors the operational status of arrays managed by DMPW Array Support Libraries (ASLs) and DMPW MPIO Device Specific Modules (DSMs) and generates alerts when necessary.
FlashSnap	Monitors the operational status of FlashSnap and generates alerts when necessary.

Note: The InfoScale Storage Management Pack does not include a notification group for automatic alerts by email. If email alerts are required, you must add the alert processing rules manually. For more information, refer to Microsoft SCOM documentation.

InfoScale Storage servers with CVM or fast failover

In case of an InfoScale Storage Management Pack configuration with Cluster Volume Manager (CVM) or fast failover, the GAB/LLT components are present on the InfoScale Storage installed nodes. There is a new, separate Management Pack called "Symantec Cluster Communication Management Pack" that has GAB/LLT specific rules and alerts. To monitor events and alerts generated by the GAB/LLT components, you need to import this Management Pack separately. In the Monitoring pane, the events and alerts of this Management Pack are displayed under the global event and alert views and, if the InfoScale Storage Management Pack is installed, under the Veritas InfoScale Storage for Windows view as well.

For more information about the Symantec Cluster Communication Management Pack, refer to the *Symantec Storage Foundation and High Availability Cluster Communication Management Pack Guide for Microsoft SCOM*.

Deploying the InfoScale Storage Management Pack

This chapter includes the following topics:

- [About deploying the InfoScale Storage Management Pack](#)
- [Supported software](#)
- [Prerequisites](#)
- [Deploying the InfoScale Storage Management Pack](#)
- [Technical reference](#)

About deploying the InfoScale Storage Management Pack

This chapter describes how to deploy and configure the InfoScale Storage Management Pack in your existing Microsoft System Center Operations Manager (SCOM) environment.

Supported software

This section provides information about the supported software for the InfoScale Storage Management Pack version 7.2.0.0.

Supported SCOM versions

- Microsoft System Center Operations Manager 2012 SP1
- Microsoft System Center Operations Manager 2012 R2
- Microsoft System Center Operations Manager 2016

Supported product versions

Table 2-1 Supported Product Version for InfoScale Storage Management Pack

Product Name	Version
Symantec Storage Foundation for Windows	6.0, 6.01, 6.02, 6.1
Symantec Storage Foundation and High Availability Solutions for Windows	6.0, 6.01, 6.02, 6.1
Veritas InfoScale Storage	7.0, 7.1, 7.2, 7.3
Veritas InfoScale Foundation	7.0, 7.1, 7.2, 7.3
Veritas InfoScale Enterprise	7.0, 7.1, 7.2, 7.3

Prerequisites

Before deploying the InfoScale Storage Management Pack, ensure that the following prerequisites are met:

- Ensure that the Microsoft System Center Operations Manager (SCOM) infrastructure is set up and running correctly. For more information, refer to the Microsoft SCOM documentation.

Moreover, if you want to monitor GAB/LLT components in an Veritas InfoScale Storage configuration with Cluster Volume Manager (CVM) or fast failover, ensure that you install the Symantec Cluster Communication Management Pack that is available separately.

Deploying the InfoScale Storage Management Pack

This section provides information about importing and installing the InfoScale Storage Management Pack and about adding the InfoScale Storage servers to SCOM for monitoring.

Importing the InfoScale Storage Management Pack

The Veritas InfoScale Storage for Windows Management Pack for Microsoft System Center Operations Manager (SCOM) is a sealed Management Pack named `Veritas.InfoScale.Storage.mp`. A sealed Management Pack means that you have the ability to make limited changes to the Management Pack. Perform the steps provided below to import and install the InfoScale Storage Management Pack in SCOM.

To install the InfoScale Storage Management Pack in SCOM:

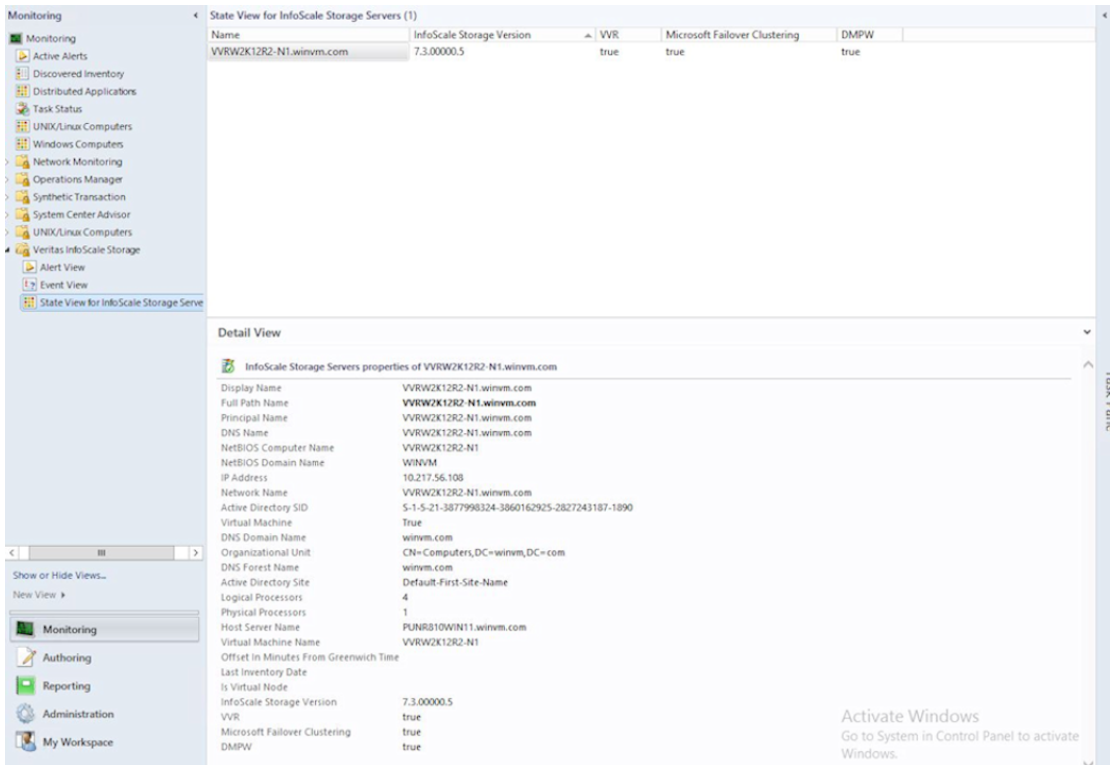
- 1 In the SCOM console, click **Administration**.
- 2 Right-click **Management Packs**, and then click **Import Management Packs**. The Import Management Packs wizard opens.
- 3 In the wizard, click **Add**, and then click **Add from disk**. The "Select Management Packs to import" dialog box appears.
- 4 In the dialog box, navigate to the InfoScale Storage Management Pack file `Veritas.InfoScale.Storage.mp` and select it. The InfoScale Storage Management Pack "Veritas InfoScale Storage" with version 7.2.0.0 is listed.
- 5 Click **Install** to install the InfoScale Storage Management Pack for SCOM.
- 6 Click **Close** to close the wizard.

When the Management Pack is successfully imported, it is listed under **Administration > Management Packs** in the SCOM console.

To view the InfoScale Storage Management Pack alerts and events and the state of InfoScale Storage servers, click **Monitoring** in the SCOM console and then select **Veritas InfoScale Storage for Windows**.

[Figure 2-1](#) shows the State view of Veritas InfoScale Storage for Windows providing information about the current state of InfoScale Storage servers.

Figure 2-1 State view of Veritas InfoScale Storage for Windows



Adding InfoScale Storage servers to SCOM for monitoring

This section provides information about adding InfoScale Storage Management Pack and InfoScale Enterprise servers to Microsoft System Center Operations Manager (SCOM) for monitoring.

To monitor InfoScale Storage servers for the InfoScale Storage Management Pack, you need to add them to SCOM. Perform the steps provided below to discover and add InfoScale Storage servers to SCOM for monitoring events and status of the servers.

Note: The following instructions are provided in brief. For detailed instructions and information, refer to the Microsoft SCOM documentation.

To add InfoScale Storage servers to SCOM for monitoring:

- 1 In the Operations console, click **Administration**.
- 2 At the bottom of the navigation pane, click **Discovery Wizard**. This opens the Computer and Device Management Wizard.
- 3 On the Discovery Type panel, click **Windows computers**, and then click **Next**.
- 4 On the Auto or Advanced? panel, select appropriate options, and then click **Next**.
- 5 On the Discovery Method panel, select appropriate options and provide required information, and then click **Next**.
- 6 On the Administrator Account panel, select appropriate options and provide required information, and then click **Discover** to discover InfoScale Storage servers.
- 7 On the Select Objects to Manage panel, after the discovery process is completed, the wizard lists all the discovered servers. Select the InfoScale Storage servers that you want to add to SCOM for monitoring. Select Agent as the Management Mode.
Click **Next**.
- 8 On the Summary panel, select appropriate options and provide required information, and then click **Finish**.
- 9 The Agent Management Task Status window opens. It shows the progress of adding InfoScale Storage servers to SCOM.

After the task completes, the added InfoScale Storage servers are listed under **Administration > Device Management > Agent Managed** in the SCOM console.

Technical reference

This section provides information about targets and discovery objects that are used to gather information for the InfoScale Storage Management Pack for SCOM.

InfoScale Storage server target

This target represents all the servers where InfoScale Storage Management Pack is installed. You can see the discovered objects for this target if you go to the discovered inventory and select this target class.

The target has different attributes providing information about the installed InfoScale Storage version and the features installed on an InfoScale Storage server (Volume Replicator, Microsoft Failover Clustering, and DMPW features).

InfoScale Storage version discovery

Discovers servers with InfoScale Storage installed. It will check for the "Version" value from the following registry key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\VERITAS\VxSvc\CurrentVersion\VolumeManager
```

For a list of supported product versions, See ["Supported software"](#) on page 9..

InfoScale Storage features discovery

Discovers whether an InfoScale Storage features are installed by checking for the following respective registry keys:

For the Volume Replicator feature (for SFW and SFW HA version 6.x and for InfoScale Storage and InfoScale Enterprise version 7.x):

```
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Veritas\VPI  
\{F834E070-8D71-4c4b-B688-06964B88F3E8}\SolutionOptions\vrts.soln.opt.vvr
```

For the Volume Replicator feature (for Veritas InfoScale products version 7.x):

```
HKEY_LOCAL_MACHINE\SOFTWARE\VERITAS\ProductOption\VVR
```

For the Microsoft Failover Clustering feature:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Veritas\VPI  
\{F834E070-8D71-4c4b-B688-06964B88F3E8}\SolutionOptions\vrts.soln.opt.msccs
```

For the DMPW feature:

```
HKEY_LOCAL_MACHINE\SOFTWARE\VERITAS\VxSvc\CurrentVersion\Providers\mpioprov
```

Monitoring the InfoScale Storage Management Pack and managing rules

This chapter includes the following topics:

- [About monitoring the InfoScale Storage Management Pack and managing rules](#)
- [Monitoring the InfoScale Storage Management Pack](#)
- [InfoScale Storage Management Pack monitors](#)
- [Managing rules](#)

About monitoring the InfoScale Storage Management Pack and managing rules

This chapter provides information about how you can monitor the Veritas InfoScale Storage for Windows using the available views in Microsoft System Center Operations Manager (SCOM). The chapter also provides information about InfoScale Storage Management Pack monitors and how to locate, enable, and disable event and alert rules. Using the views supported by the InfoScale Storage Management Pack, you can monitor the health of different components within the managed SCOM environment.

Monitoring the InfoScale Storage Management Pack

The views supported by the InfoScale Storage Management Pack are available through the Monitoring pane of the SCOM console. Using these views, you can see events and alerts and assess the state of the InfoScale Storage servers within the managed SCOM environment.

The Monitoring pane supports the following views for the InfoScale Storage Management Pack:

- Alert view
- Event view
- State view for InfoScale Storage servers

Note: Some non-InfoScale Storage events and alerts, such as .NET app monitoring and Apm Scripting, can appear in the event and alert views of Veritas InfoScale Storage for Windows. This is because the InfoScale Storage Management Pack views are targeted to a "Windows.Server.Computer" derived class. Therefore, any non-InfoScale Storage event for an object for this derived or its base class would also appear in the InfoScale Storage views. This is a SCOM behavior and not InfoScale Storage Management Pack specific implementation.

Alert view

The alert view provides a list of issues that require action. It provides the current state of the alerts indicating whether an alert is newly-reported or resolved.

Event view

The event view provides a list of events that have occurred on the InfoScale Storage servers. Each event has the event description, event ID, and the source of the event problem.

Note: The event view for InfoScale Storage Management Pack provides information about all the events of the Warning and Error levels, but it does not collect and display the Information level events 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 documentation.

State view for InfoScale Storage servers




The state view for the InfoScale Storage servers provides a real-time, consolidated look at the health of the InfoScale Storage and InfoScale Enterprise servers within the managed environment, highlighting the servers that require attention.

The InfoScale Storage state displays information about all the servers where InfoScale Storage Management Pack 6.0 or higher is installed. To see details of a server (such as full path name, IP address), select it and the details will appear in the pane below.

For each server, the state view provides information about the InfoScale Storage version, the current state of the server and the features installed on the server.

[Table 3-1](#) provides information about the three states of an InfoScale Storage server.

Table 3-1 InfoScale Storage server states

State	Appearance	Description
Healthy		Indicates that the server is running normally.
Critical		Indicates that there is a problem on the server.
Healthy		Indicates that either the server is not running or there are connectivity issues.

The state view also provides information about whether the Veritas InfoScale Storage Volume Replicator, Microsoft Failover Clustering, and Veritas Dynamic Multi-Pathing for Windows features are installed on a server. If a feature is installed on the server, the value is shown as "true"; otherwise the value is shown as "false".

InfoScale Storage Management Pack monitors

The InfoScale Storage Management Pack for SCOM has monitors for the following InfoScale Storage services:

- Veritas Enterprise Administrator (VEA) service
- Veritas Scheduler service
- Veritas VSS Provider service
- Veritas Volume Replicator Security service
- Veritas Volume Replicator First Failure Data Capture service

Managing rules

This section provides information about how you can locate, enable, and disable event and alert rules in the SCOM console.

Locating rules

In the SCOM console, rules appear in a large list under the **Authoring** pane > **Management Pack Objects** > **Rules**.

You can narrow the scope of the rules being displayed (that is, filter the listed rules) by selecting **View** > **Scope** in the toolbar. In the Scope Management Pack Objects window that appears, you can select the InfoScale Storage Servers as the target to display only the rules provided by the Veritas InfoScale Storage for Windows Management Pack. You can easily search the InfoScale Storage Servers target by entering "symantec" in the **Look for** search field.

Figure 3-1 shows the rules for the InfoScale Storage Management Pack.

Figure 3-1 Veritas InfoScale Storage Management Pack rules

Name	Inherited from	Management Pack	Created	Enabled by default
Data Warehouse maintenance mode information synchr...	Data Warehouse Synchro...	Data Warehouse Internal Library	3/20/2017 1:23:58 A...	Yes
Type: InfoScale Storage Servers (64)				
Vxio	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	No
VxSvc_vssprov	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	No
VxSvc_pnp	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	No
VxSvc_fsys alert	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	Yes
VxSvc_vssprov	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	Yes
VERITAS Enterprise Administrator Service	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	Yes
VxSvc_vxvm	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	Yes
Vxio	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	Yes
Veritas VDS Provider	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	Yes
VxSvc_vxvm alert	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	Yes
Veritas Scheduler Service	InfoScale Storage Servers	Veritas InfoScale Storage	3/26/2017 11:36:07 ...	Yes

Rule details:

VxSvc_vxvm

Management Pack: Veritas InfoScale Storage

Target: InfoScale Storage Servers

Knowledge: [View knowledge](#)

Created: 3/26/2017 11:36:07 PM

Rule Description: Provides information about VxVM Warning and Error events from Veritas Infoscale Storage.

To locate a rule, scroll through the list of rules or enter a search term in the **Look for** field at the top of the display. Using the **Look for** field, you can locate all instances of the rule regardless of the InfoScale Storage group that contains it. For example, to locate rules with the word "alert" in their names, the search term "alert" can be used. Enter the search term in the **Look for** field and click **Find Now** to locate the rules and display the search results.

Enabling and disabling rules

Various views in the SCOM console receive information from the event rules that are enabled. However, not all rules provided by the InfoScale Storage Management Pack are enabled by default.

To enable or disable a rule, you must override the rule's current setting and save its changed state in another Management Pack. Changes are saved in the Default Management Pack by default, however you can isolate InfoScale Storage rule changes in a custom pack set up exclusively for InfoScale Storage rule changes.

For information about how to enable or disable rules using overrides, refer to Microsoft SCOM documentation.

Note: The event view for InfoScale Storage Management Pack provides information about all the events of the Warning and Error levels, but it does not collect and display the Information level events 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 SCOM documentation.

Event and alert rules

This chapter includes the following topics:

- [About rules](#)
- [Event rules](#)
- [Alert rules](#)

About rules

This chapter provides information about the event and alert rules for various InfoScale Storage components for the InfoScale Storage Management Pack for Microsoft System Center Operations Manager (SCOM). In the InfoScale Storage Management Pack, the rules are used for generating events for analysis and reporting and, when necessary, raising alerts.

In the SCOM console, all the rules are for the InfoScale Storage Management Pack target called "InfoScale Storage Servers". Moreover, all the rules are displayed under the alert and event views under **Monitoring > Veritas InfoScale Storage for Windows**.

Event rules

This section provides information about the event sources of the InfoScale Storage components from which the InfoScale Storage Management Pack generates events using rules. The events generated using the rules can be used for analysis and reporting.

[Table 4-1](#) lists the Veritas InfoScale Storage for Windows, Veritas InfoScale Storage Volume Replicator, and Veritas Dynamic Multi-Pathing for Windows sources from which the InfoScale Storage Management Pack generates events using rules.

Table 4-1 Event rule sources for InfoScale Storage, Volume Replicator, and DMPW

Veritas Enterprise Administrator service	Vvrperf	VxSvc_fsyz	VxSvc_sysprov
Veritas Scheduler Service	Vxboot	VxSvc_ftdisk	VxSvc_system
Veritas VDS Provider	VxDgDI	VxSvc_mount	VxSvc_vdsprov
Veritas VSS Provider	Vxio	VxSvc_mpiopro	VxSvc_vssprov
Vmperf	VxSvc_disk	VxSvc_pnp	VxSvc_vvr
VSS	VxSvc_dmpprov	VxSvc_scheduler	VxSvc_vxvm

[Table 4-2](#) lists the DMPW MPIO Device Specific Module (DSM) sources from which the InfoScale Storage Management Pack generates events using rules.

Table 4-2 Event rule sources for DMPW MPIO DSMs

v3paraa (3PARDATA)	vengap (IBM DS4000/SUN 6000)	vhpmsa2 (HP 2000)	vnexenta (NexentaStor)
vcompInt (Compellent)	veqlogic (Dell EqualLogic)	vhuaweiap (HUAWEI S5300/S2300)	vnexsan (NEXSAN SATA/SAS Beast, E60/E18)
vdellmd (Dell MD3200, MD3200i)	vfujitsuua (FUJITSU ETERNUS 2000)	vibmaads (IBM DS8000/ESS)	vpillar (PILLAR)
vemcclar (EMC Clarion)	vhdsaa (Hitachi TagmaStore/HP XP)	vibmap (IBM DS6000)	vsun (SUN)
vemcsymm (EMC Symmetrix/DMX)	vhdsap (Hitachi 95xx-AMS-WM)	vibmapds (IBM DS AP)	vviolin (VIOLIN V3000, V6000)
vemcvplx (EMC VPLEX)	vhpeva (HP EVA-MSA)	vnetapp (NETAPP)	vxiv (IBM XiV Storage System)

Alert rules

This section provides information about the event sources of the InfoScale Storage components from which the InfoScale Storage Management Pack generates alerts using rules. This section lists the alert rules for InfoScale Storage, Volume Replicator, and DMPW.

Note: You can disable an alert rule using its alert rule name. For more information on how to disable an alert rule, refer to Microsoft SCOM documentation.

Licensing alert rules

[Table 4-3](#) lists the licensing sources from which the InfoScale Storage Management Pack generates alerts using rules.

Table 4-3 Alert rule sources for licensing

Event source	Event ID	Event message	Alert rule name	Alert enabled
VxSvc_sysprov	7000	Duplicate license detected.	VxSvc sysprov alert	Yes
VxSvc_sysprov	7004	Evaluation license will expire shortly.	VxSvc sysprov alert	Yes
VxSvc_sysprov	7008	Evaluation license expired.	VxSvc sysprov alert	Yes
VxSvc_sysprov	7012	Product license is invalid.	VxSvc sysprov alert	Yes
VxSvc_sysprov	7016	License authorized usage exceeded.	VxSvc sysprov alert	Yes
VxSvc_sysprov	7026	The product is no longer in licensing compliance even though it is still functioning properly.	VxSvc sysprov alert	Yes

InfoScale Storage alert rules

[Table 4-4](#) lists the Veritas InfoScale Storage for Windows sources from which the InfoScale Storage Management Pack generates alerts using rules.

Table 4-4 Alert rule sources for InfoScale Storage

Event source	Event ID	Event message	Alert rule name	Alert enabled
Vxboot	Alerts will be generated for all events with severity Error and Warning.	Various messages.	Vxboot alert	Yes
Vxio	2	Failed to log DRL volume detach.	Vxio alert	Yes
Vxio	3	DRL volume is detached.	Vxio alert	Yes
Vxio	7	Kernel log full, object detached.	Vxio alert	Yes
Vxio	8	Kernel log update failed, object detached.	Vxio alert	Yes
Vxio	12	Double failure condition detected on RAID-5 volume.	Vxio alert	Yes
Vxio	13	Failure during RAID-5 logging operation.	Vxio alert	Yes
Vxio	29	Read error.	Vxio alert	Yes
Vxio	30	Write error.	Vxio alert	Yes
Vxio	41	Cluster or private disk group has lost access to a majority of its disks. Its reservation thread has been stopped.	Vxio alert	Yes
Vxio	50	Reservation thread stopped for cluster disk group. Cluster software may not be available.	Vxio alert	Yes
Vxio	52	Reservation refresh has been suspended.	Vxio alert	Yes
VxSvc_fsyz	807	Volume capacity reached error condition.	VxSvc fsyz alert	Yes

Table 4-4 Alert rule sources for InfoScale Storage (*continued*)

Event source	Event ID	Event message	Alert rule name	Alert enabled
VxSvc_scheduler	807	Launch task failed.	VxSvc scheduler alert	Yes
VxSvc_vxvm	808	SCSI reservation thread start failure.	VxSvc vxvm alert	Yes
VxSvc_vxvm	809	SCSI Reservation Thread Stop Failure.	VxSvc vxvm alert	Yes
VxSvc_vxvm	811	SCSI reservation thread update failure.	VxSvc vxvm alert	Yes
VxSvc_vxvm	8088	Hot Relocation/Spare failed.	VxSvc vxvm alert	Yes
VxSvc_vxvm	10001	Physical disk was removed or is temporarily unavailable.	VxSvc vxvm alert	Yes
VxSvc_vxvm	10242	Could not lock all volumes. Cluster disk group was not deported.	VxSvc vxvm alert	Yes
VxSvc_vxvm	10260	Could not lock all volumes. Dynamic disk group was not deported.	VxSvc vxvm alert	Yes
VxSvc_vxvm	10284	vxabr backup failed.	VxSvc vxvm alert	Yes
VxSvc_vxvm	10238	Cluster dynamic disk group deported with active I/O.	VxSvc vxvm alert	No
VxSvc_vxvm	10256	Dynamic disk group deported with active I/O.	VxSvc vxvm alert	No

Volume Replicator alert rules

[Table 4-5](#) lists the Veritas InfoScale Storage Volume Replicator sources from which the InfoScale Storage Management Pack generates alerts using rules.

Table 4-5 Alert rule sources for Volume Replicator

Event source	Event ID	Event message	Alert rule name	Alert enabled
Vxio	81	Failed to start connection server.	Vxio alert	Yes
Vxio	90	Latency throttling on inactive RLINK is causing I/O failures.	Vxio alert	Yes
Vxio	91	Log overflow protection for RLINK triggered throttling.	Vxio alert	Yes
Vxio	94	Log overflow protection on inactive RLINK is causing I/O failures.	Vxio alert	Yes
Vxio	95	Log overflow protection on inactive RLINK triggered DCM protection.	Vxio alert	Yes
Vxio	97	RLINK STALE (detached) due to log overflow.	Vxio alert	Yes
Vxio	100	Log capacity threshold reached for RLINK.	Vxio alert	Yes
Vxio	103	Failed to recover RVG.	Vxio alert	Yes
Vxio	104	Detected Replicator Log volume failure while recovering RVG.	Vxio alert	Yes
Vxio	105	Detected configuration error while recovering RVG.	Vxio alert	Yes
Vxio	106	Inconsistent Replicator Log for RVG - detaching all Secondary nodes.	Vxio alert	Yes
Vxio	107	Replicator Log header version mismatch for RVG.	Vxio alert	Yes
Vxio	108	Failed to log the detach of the DCM volume.	Vxio alert	Yes
Vxio	109	DCM volume is detached.	Vxio alert	Yes
Vxio	111	Failed to activate DCM for RVG.	Vxio alert	Yes
Vxio	112	Cannot recover volume.	Vxio alert	Yes

Table 4-5 Alert rule sources for Volume Replicator (*continued*)

Event source	Event ID	Event message	Alert rule name	Alert enabled
Vxio	116	Cannot find any free port to bind.	Vxio alert	Yes
Vxio	124	DCM logs are inaccessible to the volumes. DCM logging aborted.	Vxio alert	Yes
Vxio	125	I/O error on Replicator Log during recovery. Detaching the primary RLINK.	Vxio alert	Yes
Vxio	126	Primary RVG appears to have secondary Replicator Log.	Vxio alert	Yes
Vxio	127	Secondary RVG appears to have primary Replicator Log.	Vxio alert	Yes
Vxio	130	Detaching RLINK due to I/O error on remote Replicator Log.	Vxio alert	Yes
Vxio	131	Incorrect magic number or unexpected upid (1) RVG.	Vxio alert	Yes
Vxio	132	Incorrect magic number or unexpected upid (2) RVG.	Vxio alert	Yes
Vxio	133	Invalid RVG update header.	Vxio alert	Yes
Vxio	140	RLINK has a secondary log error.	Vxio alert	Yes
Vxio	141	RLINK has a secondary config error.	Vxio alert	Yes
Vxio	143	Detaching RLINK due to I/O error on remote Replicator Log during recovery.	Vxio alert	Yes
Vxio	146	Replicator Log for RVG contains earlier version of Replicator Log header.	Vxio alert	Yes
Vxio	147	Inconsistent update IDs.	Vxio alert	Yes
Vxio	150	RLINK paused on secondary due to configuration error.	Vxio alert	Yes

Table 4-5 Alert rule sources for Volume Replicator (*continued*)

Event source	Event ID	Event message	Alert rule name	Alert enabled
Vxio	258	No volume with the specified tag was found in the RVG.	Vxio alert	Yes
Vxio	271	Log flush failed for RVG during takeover.	Vxio alert	Yes
Vxio	339	RVG replicator log config table is corrupted.	Vxio alert	Yes
VxSvc_vvr	786	Replicator Log failed.	VxSvc VVR alert	Yes
VxSvc_vvr	788	Volume under RVG failed.	VxSvc VVR alert	Yes
VxSvc_vvr	791	Replicator Log header error.	VxSvc VVR alert	Yes
VxSvc_vvr	792	Replicator Log error on secondary.	VxSvc VVR alert	Yes
VxSvc_vvr	793	Configuration error on secondary.	VxSvc VVR alert	Yes
VxSvc_vvr	805	RVG failed.	VxSvc VVR alert	Yes
VxSvc_vvr	851	Configuration error on acting secondary.	VxSvc VVR alert	Yes
VxSvc_vvr	852	Replicator Log error on acting secondary.	VxSvc VVR alert	Yes

DMPW alert rules

This section provides information about the Veritas Dynamic Multi-Pathing for Windows alert rules for DMPW Array Support Libraries (ASLs) and DMPW MPIO Device Specific Modules (DSMs) included in the InfoScale Storage Management Pack.

[Table 4-6](#) lists the DMPW MPIO DSM and DMPW ASL sources from which the InfoScale Storage Management Pack generates alerts using rules.

Note: In the table below, "MPIO DSM" in the "Event source" column represents the MPIO DSMs listed in the "Event rules" section. For more information, See [Table 4-2](#) on page 21.

Table 4-6 Alert rule sources for DMPW MPIO DSMs and DMPW ASLs

Event source	Event ID	Event message	Alert rule name	Alert enabled
MPIO DSM	3	Failed to create array context.	MPIO DSM alert	Yes
MPIO DSM	4	Failed to create path context.	MPIO DSM alert	Yes
MPIO DSM	5	Failed to create device container context for SCSI ID.	MPIO DSM alert	Yes
MPIO DSM	6	Failed to register DSM with Microsoft Multipath I/O (MPIO).	MPIO DSM alert	Yes
MPIO DSM	8	Failed to create device container. Maximum number of device containers exceeded.	MPIO DSM alert	Yes
MPIO DSM	10	Failed to perform path failover. Failing path not found.	MPIO DSM alert	Yes
MPIO DSM	11	No path available to perform failover.	MPIO DSM alert	Yes
MPIO DSM	12	Device removed from array.	MPIO DSM alert	Yes
MPIO DSM	14	Path removed from array.	MPIO DSM alert	Yes
MPIO DSM	39	MPIO version mismatch.	MPIO DSM alert	Yes
MPIO DSM	40	Array product ID not supported by DSM.	MPIO DSM alert	Yes
MPIO DSM	41	Special device type will not be claimed by DSM for array.	MPIO DSM alert	Yes
VxSvc_mpiopro	100	Path removed.	VxSvc mpiopro alert	Yes
VxSvc_mpiopro	120	Path arrived.	VxSvc mpiopro alert	Yes
VxSvc_dmpprov	0	Path failed.	VxSvc dmpprov alert	Yes

FlashSnap alert rules

[Table 4-7](#) lists the FlashSnap sources from which the InfoScale Storage Management Pack generates alerts using rules.

Table 4-7 Alert rule sources for FlashSnap

Event source	Event ID	Event message	Alert rule name	Alert enabled
VxSvc_vssprov	1064	Synchronized snapshot validation failed.	VxSvc vssprov alert	Yes
VxSvc_vssprov	1068	Synchronized snapback validation failed.	VxSvc vssprov alert	Yes
VxSvc_vssprov	1079	Log Replay failed.	VxSvc vssprov alert	Yes