

Release Notes

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Product description

The EMC® VNX Management Pack for System Center is used in conjunction with Microsoft's System Center Operations Manager 2007 R2 (SCOM). VNX's integration with SCOM is through a Windows host that is set up as a VNX event monitoring station. This monitoring station retrieves events from the VNX array event log and inserts them into its Windows Application event log. The VNX Block events that are monitored and imported are defined by a Navisphere monitoring template on the array, while the VNX File events that are monitored are defined through a filters file on the EMC VNX Monitor Service installation path. Once an associated event is inserted into the monitoring station's Application event log, the VNX Management pack will determine if the event should be raised as an alert in SCOM.

For this release of the VNX Management Pack, there are 104 VNX Block events and 1207 VNX File events that will raise a SCOM alert. The VNX Block events are a subset of the total VNX Navisphere Alerts. They have been selected because they are the most commonly seen alerts. The VNX File events include all such events, but unwanted events can be filtered out through the use of the filters file. (Refer to the [Define events to monitor](#) section on page 7 for more information.) The VNX Management integration pack provides actionable details for each alert.

New features and changes

The VNX Management Pack provides the features from previous releases and has been updated to:

- ♦ Include VNX File events monitored by the VNX Monitor Service.

Fixed problems

There are no fixed problems in this release.

Environment and system requirements

The following minimum requirements must be met to install and use the VNX Management Pack:

- ◆ Microsoft System Center Operations Manager (SCOM) 2007 / R2
- ◆ A designated Navisphere or Unisphere Monitoring station should be established within the environment (Refer to the [VNX Navisphere/Unisphere Monitoring Station Setup](#) on page 4 for more information.)
- ◆ The SCOM Management pack needs to be imported into SCOM. (Refer to the [Configuring the service installer](#) section on page 7 for more information.)

Known problems and limitations

The VNX Management Pack has the following limitation.

- ◆ Events posted in SCOM are typically suppressed based on the event IDs. As such, only the latest event of the same event ID will show up in SCOM, until the event is resolved and closed.

Technical notes

There are no technical notes associated with this release.

Documentation

[Table 1](#) on page 3 lists the document that is available from the EMC Powerlink website to support the current release of the EMC VNX Management Pack for System Center.

Table 1 Product document

Part number	Name
300-009-134	<i>EMC VNX Management Pack for System Center Release Notes</i>

Software media, organization, and files

The VNX Management Pack is distributed as a zip file containing a single-file installer. After you download the zip file from the EMC Powerlink website, the VNX Management Pack software is available for installation.

VNX Navisphere/Unisphere Monitoring Station Setup

1. Install the Navisphere Host Agent on the VNX monitoring station.
Note: Set up the proper credentials during the installation.
2. Using the SCOM server as the VNX monitoring station is not supported. The monitoring station should be a dedicated system.
3. TCP port 6389 needs to be open to the VNX Monitoring Station from both VNX storage processors.
4. The VNX Monitoring Station needs to be registered as a host on the VNX storage array.
5. The VNX Monitoring Station credentials need to be entered on the SP Agent tab so that the array can communicate with it.

On the VNX array, a monitoring template needs to be created linking which events will be logged into the Windows Application Log as shown in [Figure 1](#) through [Figure 3](#) on page 5 and [Figure 4](#) on page 6.

7. After the template is in place the array will begin logging events within the Windows Event Viewer Application Event Log on the monitoring station as shown below in [Figure 5](#) on Page 6.

Figure 1 highlights the **Monitoring and Alerts** section of EMC Unisphere. This feature allows users to receive alerts as an email, page or SNMP traps on object they choose to monitor.

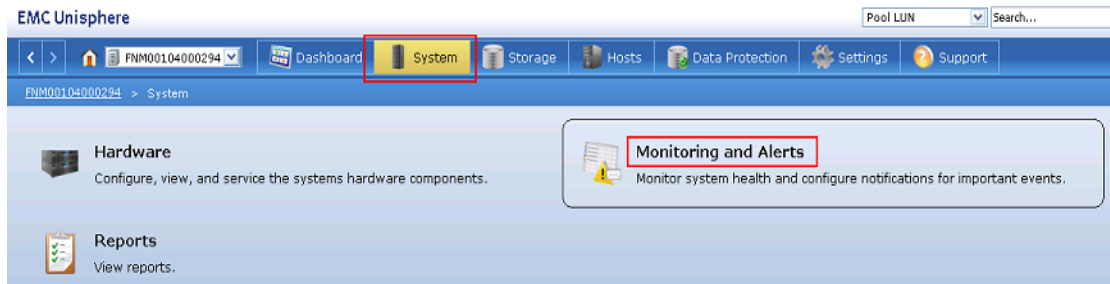


Figure 1 EMC Unisphere: Monitoring and Alerts

Figure 2 highlights the **Notifications** section of EMC Unisphere. Notifications can be configured and customized based on the file system, storage pool usage, and time-to-fill predictions.

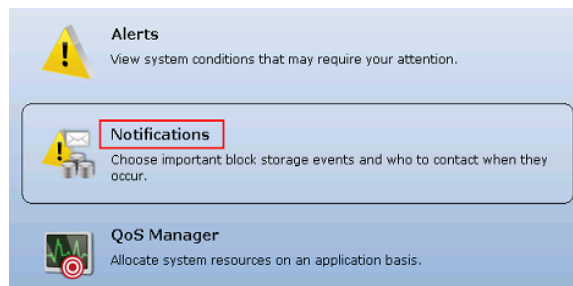


Figure 2 EMC Unisphere: Notifications

Figure 3 highlights the **Create Template** section of the Event Notification for CLARRiiON Storage Systems.

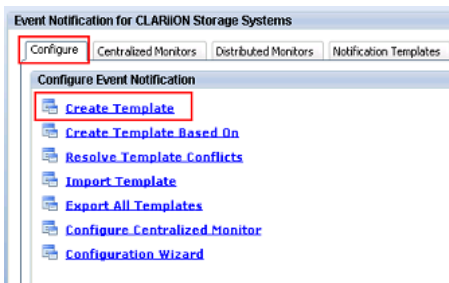


Figure 3 Event Notification for CLARRiiON Storage Systems

Figure 4 highlights the Template Properties in the Event Notification for CLARRiON Storage Systems.

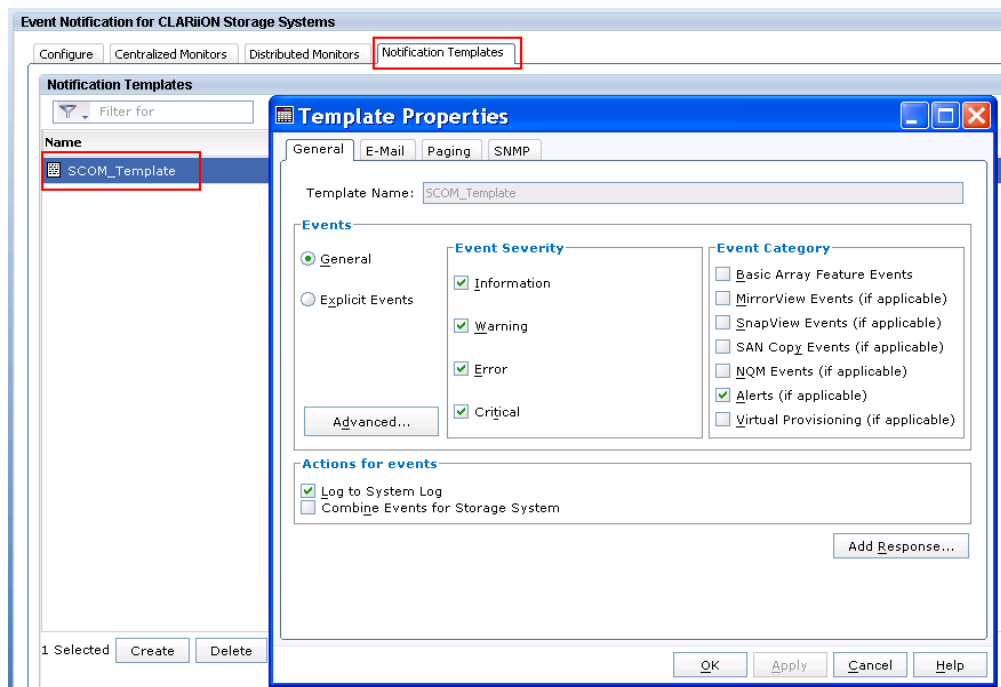


Figure 4 Template Properties

Figure 5 highlights events within the Application event log.

Application 3,114 event(s)							
Type	Date	Time	Source	Category	Event	User	
Error	9/16/2008	8:49:51 AM	Userenv	None	1053	SYSTEM	
Warning	9/16/2008	8:49:32 AM	Perflib	None	2003	N/A	
Error	9/16/2008	8:49:12 AM	Userenv	None	1053	SYSTEM	
Information	9/16/2008	8:49:03 AM	Navisphere Agent	None	1	N/A	
Information	9/16/2008	8:49:03 AM	Navisphere Agent	None	1	N/A	
Information	9/16/2008	8:49:00 AM	vmtools	None	105	N/A	
Information	9/16/2008	8:48:53 AM	EventSystem	None	4625	N/A	
Information	9/16/2008	8:48:53 AM	MSDTC	TM	4193	N/A	
Information	9/15/2008	3:22:40 PM	SceCli	None	1704	N/A	
Information	9/15/2008	11:31:30 ...	Navisphere Agent	None	17920	N/A	
Information	9/15/2008	11:31:30 ...	Navisphere Agent	None	17920	N/A	

Figure 5 Events from VMX placed within Application Event Log

Configuring the service installer

Run the installer and complete the following steps to configure the VNX Management Pack and VNX Monitor Service:

1. After installation, run the Config Manager from the start menu, located in the installation programs folder.
2. Use the Config Manager to add arrays that the VNX Monitor Service Pack will monitor.

Note: Be sure to provide the arrays' control station IP addresses, as this will be required for the service to log on to the arrays and register for event notifications.

3. Add host machines that will be notified when an event is generated by the arrays.

Note: The host machines should be hosts monitored by SCOM. It should be the same host or hosts as the VNX Monitoring Station that was set up previously. This ensures that the events posted in the host machines are picked up by the VNX Management Pack and posted in SCOM.

4. Click **Save Config**, and when prompted to select the file in which to save the changes, select the old ManagementFile.cfg located in the installation directory.
5. Click **Restart Service** to restart the service.
6. Import the Management Pack file VNXMP.mp into SCOM.
 - a. From SCOM, Select Administration and then right click on Management Pack and select Import Management Pack.
 - b. Browse for the path of the VNXMP.mp file and import the management pack. The file VNXMP.mp is located in to the installation directory where the VNX Monitor Service was installed.

Define events to monitor

There are 1207 possible events that are monitored by the Management Pack. Complete the following steps to cause the VNX Monitor Service to ignore the events that do not need to be monitored:

1. Open the **ServiceEventsFilters.txt** file. The file is in XML format.
2. Change the property of **Include** to **False** for any event, facility, or component that should not be monitored.
3. Save the changes to the file.

4. Run the Config Manager and click **Restart Service**.

Confirm configuration

Make sure that the IP addresses provided for the arrays are those of the VNX Control Station.

During configuration using the Config Manager, if the host machine selected to receive the event notifications is different from the machine in which the VNX Monitor Service is running, the service will need permissions to post events in the host's Application event log. If this is not possible, be sure to install the service in that host machine.

Check the event log of the host where the service is installed for additional errors, warnings, and other information that may indicate problems.

Check the registry keys located at:

HKEY_LOCAL_MACHINE\SOFTWARE\EMC\EMC VNX Management Pack for System Center

or:

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\EMC\EMC VNX Management Pack for System Center

The keys are as follows:

ConfigFilePath: The path of the config file that the service will use when starting.

FiltersFilePath: The path of the filters file that the service will use to filter unwanted events. If this file is not present, all events will be monitored.

IgnoreCertificate: If the connection to the VNX Control Station cannot be established due to an SSL certificate issue, this option can be set to "1" so that certificate errors are ignored.

CAUTION: This option is not recommended. The arrays should have a valid certificate installed when used in production environments. It is highly recommended that this option be used as a last resort, as it can compromise the security of the system.

SystemEncrypt: This registry key can be changed so that the passwords saved in the config file will be encrypted with a user token, instead of the system token. Note that if the service runs under LocalSystem, (the default when the service is installed) this setting must be kept as "1". Only change this option if the service is configured to run as a specific user. Note that if this option is set to "0", the config file must be edited while logged on as the same account in which the service runs.

If the config file was saved while SystemEncrypt was set to "0", and the service fails to decrypt the saved passwords as a result, simply log on to

the server as the account that was used to save the config file, change the registry key back to "1", re-open the config file using the Config Manager, and re-save the config file so that it is re-saved with the system token.

Troubleshooting and getting help

EMC support, product, and licensing information can be obtained as follows.

Product information: For documentation, release notes, software updates, or for information about EMC products, licensing, and service, go to the EMC Powerlink® website (registration required) at:

<http://Powerlink.EMC.com>

Technical support: For technical support, go to EMC Customer Service on Powerlink. To open a service request through Powerlink, you must have a valid support agreement. Please contact your EMC sales representative for details about obtaining a valid support agreement or to answer any questions about your account.

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