

# **Dell EqualLogic Storage Management Pack Suite Version 6.0 for Microsoft System Center Operations Manager**

User's Guide

## Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your computer.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

**Copyright © 2016 Dell Inc. All rights reserved.** This product is protected by U.S. and international copyright and intellectual property laws. Dell™ and the Dell logo are trademarks of Dell Inc. in the United States and/or other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.

<b>1 Introduction.....</b>	<b>4</b>
What is New in This Release.....	4
Key Features and Functionalities.....	4
About Dell EqualLogic Storage Management Pack Suite.....	5
Details of Components Modelled by the Dell EqualLogic Storage Management Pack Suite.....	5
<b>2 Using Dell EqualLogic Storage Management Pack Suite.....</b>	<b>7</b>
Discovery.....	7
Discovering Dell EqualLogic Devices.....	7
Monitoring.....	7
Health Status Indicators.....	8
Views.....	8
Tasks.....	11
Launching EqualLogic Group Manager GUI.....	11
Customizing the Dell EqualLogic Storage Management Pack.....	12
Specifying Override Parameters.....	12
Customizing Unit Monitors.....	12
Object Discoveries.....	13
Rules.....	13
<b>3 Troubleshooting.....</b>	<b>16</b>
<b>4 Related Documentation and Resources.....</b>	<b>18</b>
Other Documents you may Need.....	18
<b>5 Accessing documents from the Dell EMC support site.....</b>	<b>19</b>
Contacting Dell.....	19

# Introduction

This document describes the activities that you can perform with Dell EqualLogic Storage Management Pack Suite version 6.0 for Microsoft System Center 2012 R2 Operations Manager, Microsoft System Center 2012 SP1 Operations Manager, Microsoft System Center 2012 Operations Manager, and Microsoft System Center Operations Manager 2007 R2.

The integration of the Dell EqualLogic Storage Management Pack Suite version 6.0 with Microsoft System Center 2012 R2 Operations Manager, Microsoft System Center 2012 SP1 Operations Manager, Microsoft System Center 2012 Operations Manager, and Microsoft System Center Operations Manager 2007 R2, environment allows you to monitor, and ensure the availability of the Dell EqualLogic PS series storage arrays (EqualLogic storage arrays).

**CAUTION:** To avoid data corruption and/or data loss, perform the procedures in this document only if you have knowledge and experience in using the Microsoft Windows operating system and Microsoft System Center 2012 R2 Operations Manager, Microsoft System Center 2012 SP1 Operations Manager, Microsoft System Center 2012 Operations Manager, and Microsoft System Center Operations Manager 2007 R2.

**NOTE:** All references to OpsMgr in this guide are applicable to Microsoft System Center 2012 R2 Operations Manager, Microsoft System Center 2012 SP1 Operations Manager, Microsoft System Center 2012 Operations Manager, and Microsoft System Center Operations Manager 2007 R2, unless otherwise specified.

Read the Dell EqualLogic Storage Management Pack Suite's release notes, which contain the latest information about software and management server requirements, in addition to information about known issues. The release notes is posted to the Systems Management documentation page on [dell.com/support/home](http://dell.com/support/home). The release notes is also packaged in the self-extracting executable Dell\_EqualLogic\_Storage\_Management\_Pack\_Suite\_v6.0\_Axx.exe file.

## Topics:

- [What is New in This Release](#)
- [Key Features and Functionalities](#)
- [About Dell EqualLogic Storage Management Pack Suite](#)

## What is New in This Release

New Feature	Functionality
Latest platform and EqualLogic firmware versions	Supports Dell EqualLogic PS6610 Supports EqualLogic firmware versions 8.0.x and 8.1..x.

## Key Features and Functionalities

Feature	Functionality
Discovery and Monitoring	Supports discovery and monitoring of Dell EqualLogic devices with supported firmware versions.
Launch the EqualLogic Group Manager GUI	Launches the EqualLogic Group Manager GUI for a group from the OpsMgr console.
Alerts from Dell EqualLogic devices	Displays the Simple Network Management Protocol (SNMP) based hardware alerts for the monitored Dell EqualLogic devices in the <b>Alerts Views</b> of the OpsMgr console.

Feature	Functionality
Configurable Monitoring Level	Monitors and displays the consolidated health status of components.  For more information, see <a href="#">Details of Components Modelled by the Dell EqualLogic Storage Management Pack Suite</a> .

## About Dell EqualLogic Storage Management Pack Suite

Supported OpsMgr Version	Management Pack	Dependency
OpsMgr 2007 R2	Dell EqualLogic (SCOM 2007 R2) MP	Dell Base Hardware Library MP Dell Common Operations Library Dell EqualLogic Model MP Dell EqualLogic Operations Library MP Dell EqualLogic View MP Dell EqualLogic Monitoring Library Dell EqualLogic Detailed Monitoring On - Overrides Management Pack
OpsMgr 2012 R2, OpsMgr 2012 SP1, and OpsMgr 2012	Dell EqualLogic (SCOM 2012) MP	Dell Base Hardware Library MP Dell Common Operations Library Dell EqualLogic Model MP Dell EqualLogic Operations Library MP Dell EqualLogic View MP Dell EqualLogic Monitoring Library Dell EqualLogic Detailed Monitoring On - Overrides Management Pack

## Details of Components Modelled by the Dell EqualLogic Storage Management Pack Suite

The Dell EqualLogic Storage Management Pack Suite consists of Scalable and Detailed feature. The following table lists the components modelled by each feature.

Monitoring Feature	Component Details
Dell EqualLogic Scalable Monitoring	Provides full inventory for the Dell EqualLogic devices. Contains the unit monitors for all components of the Dell EqualLogic devices, but enables unit monitors only up to the following groups: <ul style="list-style-type: none"> <li>• <b>Storage Pools Group</b> — monitors the storage pools group and provides the health as the consolidated health of all the array members in the Dell EqualLogic group.</li> <li>• <b>Volumes Group</b> — monitors the volumes and provides the volumes group health as the consolidated health of all the volumes in the Dell EqualLogic group.</li> </ul>

Monitoring Feature	Component Details
Dell EqualLogic Detailed Monitoring	<p>Enables unit monitors up to the component groups level of Dell EqualLogic devices. Health status for the following component groups is displayed:</p> <ul style="list-style-type: none"> <li>• <b>Controllers Group</b> — displays the consolidated controller health status.</li> <li>• <b>Disks Group</b> — displays the consolidated disk health status.</li> <li>• <b>Ethernet Interfaces Group</b> — displays the consolidated health status of Ethernet interface cards.</li> <li>• <b>Power Supplies Group</b> — displays the consolidated health status of power supply modules and power supply fans.</li> <li>• <b>Sensors Group</b> — displays the consolidated health status of fan sensors and temperature sensors.</li> </ul>

# Using Dell EqualLogic Storage Management Pack Suite

This chapter describes the various operations that you can perform on OpsMgr using the Dell EqualLogic Storage Management Pack Suite version 6.0.

The management pack enables you to:

- Discover and provide detailed inventory information on the EqualLogic groups. For more information, see [Discovery](#).
- Monitor the health of the EqualLogic groups and its constituent components. For more information, see [Monitoring](#).
- Launch the EqualLogic Group Manager GUI as a task from the OpsMgr console. For more information, see [Launching EqualLogic Group Manager GUI](#).
- Customize parameters for discovery, monitoring, and event processing of the discovered Dell EqualLogic devices. For more information, see [Customizing the EqualLogic Storage Management Pack](#).

## Topics:

- [Discovery](#)
- [Monitoring](#)
- [Tasks](#)
- [Customizing the Dell EqualLogic Storage Management Pack](#)

## Discovery

The management pack discovers Dell EqualLogic devices present in the **Network Devices** list of OpsMgr.

## Discovering Dell EqualLogic Devices

To discover a Dell EqualLogic device:

1. Log on to the system with an account that has the OpsMgr Administrator role for the Management Group.
2. Launch the OpsMgr console and click **Administration**.
3. Expand **Administration > Network Management**.
4. Right-click on **Network Devices** and select **Discovery Wizard** from the pop-up menu.
5. On the **Computer and Device Management Wizard** menu, select **Network Devices**, and click **Next**.

Follow the instructions on the screen to discover your Dell EqualLogic devices. For more information, see the Microsoft documentation for OpsMgr at [technet.microsoft.com](http://technet.microsoft.com).

### NOTE:

**Use EqualLogic management IP for discovering EqualLogic devices, when the device is configured for management mode.**

**Use only EqualLogic group IP address for discovering EqualLogic devices, when the device is not configured for management mode.**

**Do not use member IP address for discovering EqualLogic devices, when the device is configured or not configured for management mode.**

## Monitoring

The Dell EqualLogic Storage Management Pack Suite version 6.0 enables you to monitor the discovered Dell EqualLogic devices. The [Health Status Indicators](#) help you to monitor the health of your Dell EqualLogic devices on the network.





Monitoring Dell EqualLogic devices include:

- The health of Dell EqualLogic Group and its components.
  - If you import the Dell EqualLogic Scalable feature, you can monitor the health of Storage Pools Group and Volumes Group.
  - If you import the Dell EqualLogic Detailed feature, you can monitor the health of EqualLogic members and their component groups.
- Process the SNMP alerts for the events received from the Dell EqualLogic devices.

**NOTE:** To receive traps from a Dell EqualLogic device on a management server, the IP address of the management server must be added to the trap destination list of the device. For a clustered RMS (in OpsMgr 2007 R2), add the cluster IP address.

## Health Status Indicators

The following table lists the icons that indicate the health status of the discovered Dell EqualLogic devices on the OpsMgr console. For more information on severity propagation, see [State Views](#).

Icon	Health Status
	Normal/OK — The component is working as expected.
	Warning/Non-critical — A probe or other monitoring device has detected a reading for the component that is above or below the acceptable level. The component may still be functioning, but it could fail. The component may also be functioning in an impaired state.
	Critical/Failure/Error — The component has either failed or failure is imminent. The component requires immediate attention and may need replacement. Data loss may have occurred.
	Not Monitored — The specific component is not monitored.

## Views

You can monitor the Dell EqualLogic devices through the various views that the Dell EqualLogic Storage Management Pack Suite provides on the OpsMgr console.

The different views are:

- [Alerts Views](#)
- [Diagram Views](#)
- [State Views](#)

### Alerts Views

The Alerts Views displays the alerts for:

- SNMP traps received from the individual Dell EqualLogic devices that you are monitoring. Alerts are associated with the Ethernet interface card of the device.
- Health state change notification from **Volumes** group and **Disks** group unit monitors. These alerts are automatically resolved when the health state of the groups change to normal.
- Incorrect installation of the Dell EqualLogic Storage Management Pack Suite. This alert is automatically resolved after you repair the installation.

**NOTE:** If you manually close an auto-resolving alert, it is cleared from the Alerts Views of the OpsMgr console and not generated again.

### Viewing Alerts on the OpsMgr Console

To view the alerts for the Dell EqualLogic devices you are monitoring:



1. In the OpsMgr console, click **Monitoring**.
2. In the **Monitoring** pane, navigate to the **Dell** folder.
3. Expand **Alerts Views > EqualLogic Device Alerts**.  
The OpsMgr console displays the alerts for all the arrays that you are monitoring in the **EqualLogic Device Alerts** pane. These alerts meet the criteria you specified in the **Authoring** pane, such as severity, resolution state, age, or alerts that are assigned to you.
4. Select an alert to view the details in the **Alert Details** pane.

## Using the Custom Field for SNMP Alerts

To view the SNMP alerts received from an EqualLogic group or member, you can use **Custom Field 1**. **Custom Field 1** is a combination of the EqualLogic group name and the EqualLogic member name that is added to each alert. You can sort the **Alerts Views** on this field to list the alerts that belong to a particular EqualLogic group.

## Diagram Views

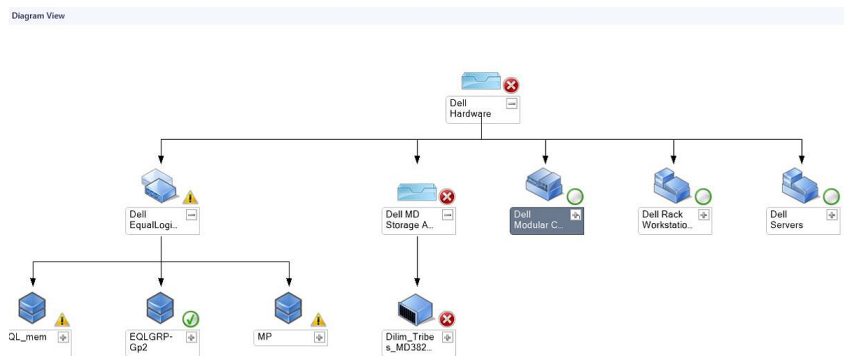
The Diagram views offers a hierarchical and graphical representation of all Dell EqualLogic devices discovered and monitored by the Dell EqualLogic Storage Management Pack. The **Diagram Views** displays icons for the various components of the Dell EqualLogic group.

### Viewing Diagrams in the OpsMgr Console

To view the diagrams on the OpsMgr console:

1. Launch the OpsMgr console and click **Monitoring**.
2. In the **Monitoring** pane on the left side, navigate to the **Dell** folder.
3. Expand **Diagram Views**. The options available are:
  - [Complete Diagram View](#)
  - [EqualLogic Diagram View](#)
4. Select any of the options.  
The right pane displays the hierarchical and graphical representation of the selected Dell device.
5. Select a component in the diagram to view the details in the **Detail View** pane.

### Complete Diagram View



**Figure 1. Complete Diagram View**

The **Complete Diagram View** offers a graphical representation of all Dell devices that OpsMgr manages, and allows you to expand and verify the status of individual devices and their components in the diagram. The root node for this view is the **Dell Hardware** group.

## EqualLogic Diagram View

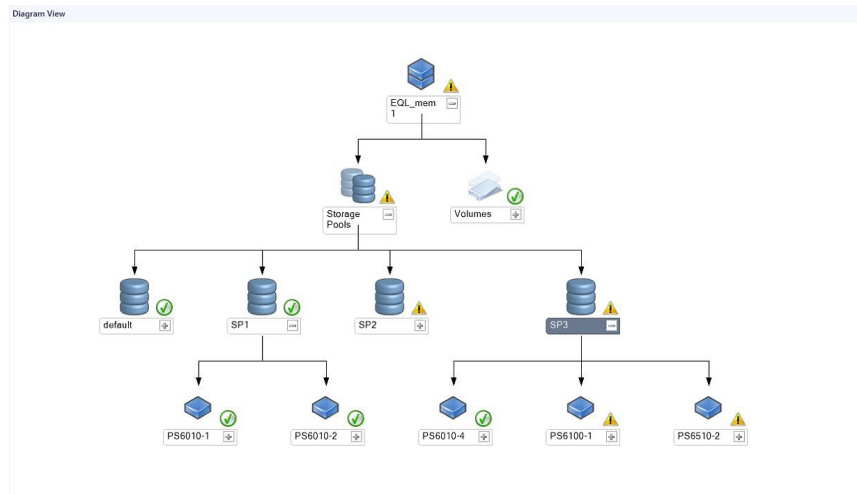


Figure 2. EqualLogic Diagram View

The **EqualLogic Diagram View** offers a graphical representation of all Dell EqualLogic devices that OpsMgr manages, and allows you to expand and verify the status of individual devices, and their components in the diagram. The root node for this view is the **Dell EqualLogic** group.

If you import only the **Dell EqualLogic Scalable Feature**, all the components are displayed, but monitoring is available only up to the **Storage Pools** group and **Volumes** group.

If you import the **Dell EqualLogic Detailed Feature**, all the components are displayed and monitoring is available up to the component group level.

The **Diagram Views** displays the following hierarchy of the EqualLogic storage arrays and their components under the **Dell EqualLogic** group:

- EqualLogic group
  - Storage Pools group
    - Storage Pool(s)
  - Volumes group

The following hierarchy is displayed under each **Storage Pool**:

- Member
  - Controllers group
  - Disks group
  - Ethernet Interfaces group
  - Power Supplies group
  - Sensors group

## Health Status in the Diagram Views

The following table describes the details of each of the groups in the Diagram views and the health status for the Dell EqualLogic Storage Management Pack:

Table 1. Health Status in the Diagram Views

Group Name	Display Details	Health Status
EqualLogic Group	Storage Pools group and Volumes group.	Displays the consolidated health of Volumes group and Storage Pools group.
Volumes Group	Only the Volumes group and not the individual volumes.	Displays the consolidated health of the volumes within the group.

Group Name	Display Details	Health Status
Storage Pools Group	Storage Pools within an EqualLogic group.	Displays the consolidated health of the storage pools within an EqualLogic group.
Storage Pool	Members in the storage pool.	Displays the consolidated health of the individual member instances within the storage pool.
Controllers Group	All the controllers in the EqualLogic member.	Displays the consolidated health of the controllers within the EqualLogic member. The individual controllers are unmonitored.
Disks Group	Only the Disk group and not the individual disks.	Displays the consolidated health of the disks within the EqualLogic member.
Ethernet Interfaces Group	All the Ethernet interfaces in the EqualLogic member.	Displays the consolidated health of the Ethernet interfaces within the EqualLogic member. The individual Ethernet interfaces are unmonitored.
Power Supplies Group	All the power supplies in the EqualLogic member.	Displays the consolidated health of the power supply and power supply fan within the EqualLogic member. The individual power supplies are unmonitored.
Sensors Group	Only the Sensors group and not the individual sensors.	Displays the consolidated health of the temperature sensor and fan sensor within the member.

## State Views

The **State Views** displays the overall health state of all the EqualLogic groups, which includes the health of Volumes group and Storage Pools group.

### Accessing State Views

To access the **State Views**:

1. In the OpsMgr console, click **Monitoring**.
2. In the **Monitoring** pane, navigate to the **Dell** folder and click the folder to display the different views.
3. Click **State Views > EqualLogic Devices**.  
The OpsMgr console displays the status of all the Dell EqualLogic groups that you are monitoring, on the right pane.
4. Select the device to view the details in the **Detail View** pane.

## Tasks

### Launching EqualLogic Group Manager GUI

You can launch the **EqualLogic Group Manager GUI** from the **Tasks** pane of the OpsMgr console.

When you select an EqualLogic group in the **Diagram Views** or **State Views**, the **Launch EqualLogic Group Manager GUI** task appears under **Dell EqualLogic Member Group Tasks** in the **Tasks** pane.

Click **Launch EqualLogic Group Manager GUI** to perform various functions on the EqualLogic group.

# Customizing the Dell EqualLogic Storage Management Pack

You can customize the Dell EqualLogic Storage Management Pack by using overrides.

## Specifying Override Parameters

To specify override parameters for management pack objects:

1. Launch the OpsMgr console, click **Authoring**.
2. Expand **Authoring > Management Pack Objects**.
3. Select the management pack object you want to override — **Monitors**, **Object Discoveries**, or **Rules**.
4. Right-click on any of the components of a management pack object you selected, and from the pop-up menu select **Overrides > Override the <management pack object>**.  
You can choose to override **all objects of the selected class, for all groups, specific object of the selected class, or for all objects of another class**.  
The **Override Properties** window is displayed.
5. Select the object and change the override value(s).
6. Click **Apply**.

 **NOTE:** You can also change the Severity setting for the Rules option.

## Customizing Unit Monitors

You can customize the following parameters of the Dell EqualLogic Storage Management Pack unit monitors by the following overrides:

- **Enabled** — Allows you to enable or disable monitors. You can set the **Override Setting** to either **True** or **False**.
- **Interval in Seconds** — The frequency (in seconds) with which the management pack polls the Dell device to check the health of a component. The default setting for the interval in seconds is 3700 (62 minutes).
- **SNMP Timeout Intervals** — The time specified for the SNMP stack to wait till the same request is retried. The default setting for the SNMP timeout is 60 seconds.
- **SNMP Retries** — The number of times the management pack retries polling in case of an SNMP timeout. The default setting for the SNMP retry is 5.

 **NOTE:** For optimal performance, it is recommended that you specify the same value for all unit monitors.

## Unit Monitors

Table 2. Unit Monitors — Dell EqualLogic Storage Management Pack

Group Name	Monitor Type	Description	Default Periodic Poll Setting
<b>Monitors enabled by the EqualLogic Scalable Feature</b>			
Dell EqualLogic Group	Dependency rollup	Rolls up the health status of individual EqualLogic groups to the Dell EqualLogic group.	Not applicable
Dell EqualLogic Member Group	Dependency rollup	Rolls up the health status of Storage Pools group to the EqualLogic group.	Not applicable
Dell EqualLogic Volumes Group	Dependency rollup	Rolls up the health status of Volumes group to the EqualLogic group.	Not applicable

Group Name	Monitor Type	Description	Default Periodic Poll Setting
	Unit monitor	Polls the health status of the Volumes group at regular intervals.	3700 seconds
Dell EqualLogic Storage Pool Group	Unit monitor	Polls the health status of Storage Pool(s) group at regular intervals.	3700 seconds
EqualLogic Helper Utility	Unit monitor	Rolls up the version information of Dell EqualLogic helper utility.	3700 seconds
<b>Monitors enabled by the EqualLogic Detailed Feature</b>			
Dell EqualLogic Storage Pool Group	Dependency rollup	Rolls up the health status of Storage Pool(s) to the Storage Pools group.	Not applicable
Dell EqualLogic Controller Group	Unit monitor	Polls the health status of Controllers at regular intervals.	3700 seconds
Dell EqualLogic Ethernet Interfaces Group	Unit monitor	Polls the health status of Ethernet interfaces at regular intervals.	3700 seconds
	Unit monitor (event-based)	Computes the health status of Ethernet interfaces when a link up or link down event is received.	Not applicable
Dell EqualLogic Power Supply Group	Unit monitor	Polls the health status of power supplies at regular intervals.	3700 seconds
Dell EqualLogic Storage Pool	Dependency rollup	Rolls up the health status of the members to the Storage Pool.	Not applicable
Dell EqualLogic Member	Unit monitor	Polls the health status of the members at regular intervals.	3700 seconds
Dell EqualLogic Disk Group	Unit monitor	Polls the health status of the physical disks at regular intervals.	3700 seconds
Dell EqualLogic Member Sensors Group	Unit monitor	Polls the health status of the sensors at regular intervals.	3700 seconds

## Object Discoveries

You can customize the following Dell EqualLogic Storage Management Pack discovery parameters, using the following overrides:

- **Enabled** — Allows you to enable or disable discoveries. You can set the **Override Setting** to be **True** or **False**.
- **Interval in Seconds** — The frequency (in seconds) with which the Dell Management Pack discovers the component instance and attributes of your Dell device. The default value for this attribute is 86399 seconds (24 hours).
- **SNMP Query Timeout in Seconds** — The time specified for the SNMP stack to wait till the same request is retried. The default setting is 4 seconds.
- **Number of SNMP Query Retries** — The number of times the management pack retries polling in case of an SNMP timeout. The default setting is 3.

## Rules

There are 36 rules, which process SNMP traps from the EqualLogic device and display them as Dell EqualLogic alerts in the OpsMgr **Alerts View**.

The following table lists the **Dell EqualLogic Alerts**.

**Table 3. Rules — Dell EqualLogic Storage Management Pack**

Alert	Description	Severity
<b>Dell EqualLogic: Temperature Sensor High Threshold Alert</b>	High Threshold Enclosure Temperature sensor <i>&lt;temperature sensor name&gt;</i> is at <i>&lt;value&gt;</i> °C. Temperature sensor is now in <i>&lt;status&gt;</i> state.	Based on current state of temperature threshold.
<b>Dell EqualLogic: Temperature Sensor Low Threshold Alert</b>	Low Threshold Enclosure Temperature sensor <i>&lt;temperature sensor name&gt;</i> is at <i>&lt;value&gt;</i> °C. Temperature sensor is now in <i>&lt;status&gt;</i> state.	Based on current state of temperature threshold.
<b>Dell EqualLogic: Fan Speed High Threshold Alert</b>	Speed of enclosure fan <i>&lt;fan name&gt;</i> is <i>&lt;speed&gt;</i> rpm. Sensor is now in <i>&lt;status&gt;</i> state.	Based on current state of fan speed threshold.
<b>Dell EqualLogic: Fan Speed Low Threshold Alert</b>	Speed of enclosure fan <i>&lt;fan name&gt;</i> is <i>&lt;speed&gt;</i> rpm. Sensor is now in <i>&lt;status&gt;</i> state.	Based on current state of fan speed threshold.
<b>Dell EqualLogic: Power Supply Fan Status Alert</b>	Status of power supply fan <i>&lt;power supply&gt;</i> has changed to <i>&lt;status&gt;</i> .	Based on power supply fan health.
<b>Dell EqualLogic: Power Supply Status Alert</b>	Status of Power Supply module <i>&lt;power supply&gt;</i> has changed to <i>&lt;status&gt;</i> .	Based on power supply health.
<b>Dell EqualLogic: RAID Set Double Faulted Alert</b>	Double fault has been detected in the RAID set. User intervention is required	Critical
<b>Dell EqualLogic: Both the Fan Trays Removed Alert</b>	Both fan trays of the member have been removed from the chassis.	Critical
<b>Dell EqualLogic: RAID Lost Cache Alert</b>	RAID driver is unable to recover the battery-backed cache. User intervention is required to initialize the disk array.	Critical
<b>Dell EqualLogic: One Fan Tray Removed Alert</b>	One of the fan trays of the member has been removed from the chassis.	Critical
<b>Dell EqualLogic: RAID Lost Block Table Full Alert</b>	RAID lost block table is full.	Critical
<b>Dell EqualLogic: Battery Less Than 72 Hours Alert</b>	Insufficient battery charge to last a 72 hour power outage.	Warning
<b>Dell EqualLogic : RAID Orphan Cache Alert</b>	RAID driver found data in the battery-backed cache with no matching disk. User intervention is required.	Critical
<b>Dell EqualLogic: Multiple RAID Sets Found Alert</b>	Multiple RAID sets found. The array cannot choose which one to initialize.	Critical
<b>Dell EqualLogic: NVRAM Battery Failed Alert</b>	NVRAM battery failed and cannot be used.	Critical
<b>Dell EqualLogic: Critical Hardware Component Failed Alert</b>	A critical hardware component of the member has failed.	Critical

Alert	Description	Severity
<b>Dell EqualLogic: Incorrect Control Module Inserted Alert</b>	An incorrect control module has been inserted in the chassis.	Critical
<b>Dell EqualLogic: High Battery Temperature Alert</b>	Cache battery temperature exceeds the upper limit.	Critical
<b>Dell EqualLogic: Low Ambient Temperature Alert</b>	One or more sensors is below the low ambient temperature range.	Critical
<b>Dell EqualLogic: Enclosure Open for Long Time Alert</b>	The enclosure is open for a long time.	Critical
<b>Dell EqualLogic: Ops Panel Missing or Broken Alert</b>	Operations panel is missing or broken.	Critical
<b>Dell EqualLogic: EMM Link Failure Alert</b>	Enclosure Management Services are unavailable.	Critical
<b>Dell EqualLogic: Both the Channel Cards Missing Alert</b>	Both the channel cards are missing.	Critical
<b>Dell EqualLogic: EIP Card Failed in Channel Card Alert</b>	EIP card failed in channel cards.	Critical
<b>Dell EqualLogic: Both the Channel Cards Failed Alert</b>	Both the channel cards have failed.	Critical
<b>Dell EqualLogic: EqualLogic Disk Status Change Alert</b>	Status of EqualLogic disk at Slot (Slot#) has changed to <status>.	Based on disk health.
<b>Dell EqualLogic: Network Interface Link Down Alert</b>	One of the Network interface links is down.	Critical
<b>Dell EqualLogic: Network Interface Link Up Alert</b>	One of the network interface links is up.	Informational
<b>Dell EqualLogic : SCSI Logical Unit Status Changed</b>	Status of a SCSI logical unit has changed to <status>.	Based on the logical unit status.
<b>Dell EqualLogic : iSCSI Target Login Failure Alert</b>	The login credentials for the iSCSI device is incorrect.	Critical
<b>Dell EqualLogic : SCSI Target Device Status Changed</b>	Status of a SCSI target device has changed to <status>	Based on the target device status.
<b>Dell EqualLogic : iSCSI Initiator Login Failure Alert</b>	The login credentials are incorrect.	Critical
<b>Dell EqualLogic : iSCSI Initiator Session Failure Alert</b>	iSCSI session between the initiator and the array iSCSI Ethernet ports has failed.	Critical
<b>Dell EqualLogic : Authentication Failure Alert</b>	The credentials entered are incorrect.	Critical
<b>Dell EqualLogic : Warm Start Alert</b>	The Dell EqualLogic device was restarted.	Informational
<b>Dell EqualLogic : Cold Start Alert</b>	The Dell EqualLogic device was powered on.	Informational

# Troubleshooting

The following table lists the known issues and resolutions.

**Table 4. Troubleshooting**

Issue	Resolution
Dell alerts are not sorted by the duration of the alerts.	<p>When importing a management pack with changes to the sorting flags, the sorting flags may not get updated in the registry. Check if the sorting flags are set to 'false' in the view definition in the registry with the problem on the management system. If you delete the settings in the registry, the settings will get recreated from the new management pack when you navigate to that view again. You can also edit the sorting flags in the registry.</p> <p><b>Registry edit:</b></p> <pre>HKEY_CURRENT_USER\Software\Microsoft\Microsoft Operations Manager\3.0\Console\ %&lt;GUID.ViewTitle&gt;%AlertsView\Age</pre> <p>To enable sorting of alerts, ensure that the keys <b>IsSortable</b> and <b>IsSorted</b> are set to <b>1</b>.</p>
Under certain conditions, alerts related to <b>Handle Count Threshold</b> and <b>Private Bytes Threshold</b> are displayed on the OpsMgr console of the management server.	Microsoft <b>KB968760</b> available at <a href="http://support.microsoft.com">support.microsoft.com</a> resolves this issue.
Under certain conditions, an error message is displayed on the OpsMgr console of the management server with the Event ID – <b>623</b> and Event Source – <b>Health Service ESE Store</b> .	Microsoft <b>KB975057</b> available at <a href="http://support.microsoft.com">support.microsoft.com</a> resolves this issue.
The OpsMgr 2007 R2 console crashes on certain operating systems.	Microsoft <b>KB951327</b> and <b>KB951526</b> available at <a href="http://support.microsoft.com">support.microsoft.com</a> resolves this issue.
<p>You may experience one or more of the following situations:</p> <ul style="list-style-type: none"> <li>• The web console does not open.</li> <li>• The <b>My Workspace</b> page does not display.</li> <li>• <b>Performance</b> and <b>Power Monitoring</b> views do not display.</li> <li>• <b>Health Service</b> does not start up on the system.</li> </ul>	Microsoft <b>KB954049</b> available at <a href="http://support.microsoft.com">support.microsoft.com</a> resolves this issue.
The reports do not appear as expected in the <b>Reporting</b> space of the <b>Administration</b> console.	Microsoft <b>KB954643</b> available at <a href="http://support.microsoft.com">support.microsoft.com</a> resolves this issue.
The OpsMgr console intermittently displays the following error message - Health service Host Process encountered a problem and needed to close of this Health Service crash. You may notice unexpected behavior in the discovery and monitoring of Dell devices.	Microsoft <b>KB951526</b> available on the Microsoft support site at <a href="http://support.microsoft.com">support.microsoft.com</a> resolves this issue.
OpsMgr 2007 R2 cannot receive SNMP trap data when you use a Microsoft Windows Server 2008-based computer or a Microsoft Windows Vista-based computer as a proxy agent for SNMP devices.	Microsoft <b>KB958936</b> available at <a href="http://support.microsoft.com">support.microsoft.com</a> resolves this issue.



Issue	Resolution
The OpsMgr 2007 R2 console crashes on systems running Internet Explorer 9.	Install the Cumulative Update 5 for System Center Operations Manager 2007 R2. For more information, see <a href="http://support.microsoft.com/kb/2495674">support.microsoft.com/kb/2495674</a> .

## Related Documentation and Resources

This chapter gives the details of documents and resources to help you work with the Dell EqualLogic Storage Management Pack version 6.0.

### Topics:

- [Other Documents you may Need](#)

## Other Documents you may Need

Besides this *User's Guide*, you can find the following guide at **dell.com/support/home**:

- The *Overview of Dell EqualLogic Products and Resources* gives you an overview of Dell EqualLogic products.

You can also see the EqualLogic documents at **equallogic.com/resourcecenter/documentcenter.aspx**.

# Accessing documents from the Dell EMC support site

You can access the required documents in one of the following ways:

- Using the following links:
  - For Dell EMC Enterprise Systems Management, Dell EMC Remote Enterprise Systems Management, and Dell EMC Virtualization Solutions documents — [www.dell.com/esmmanuals](http://www.dell.com/esmmanuals)
  - For Dell EMC OpenManage documents — [www.dell.com/openmanagemanuals](http://www.dell.com/openmanagemanuals)
  - For iDRAC documents — [www.dell.com/idracmanuals](http://www.dell.com/idracmanuals)
  - For Dell EMC OpenManage Connections Enterprise Systems Management documents — [www.dell.com/OMConnectionsEnterpriseSystemsManagement](http://www.dell.com/OMConnectionsEnterpriseSystemsManagement)
  - For Dell EMC Serviceability Tools documents — <https://www.dell.com/serviceabilitytools>
- From the Dell EMC Support site:
  1. Go to <https://www.dell.com/support>.
  2. Click **Browse all products**.
  3. From **All products** page, click **Software**, and then click the required link from the following:
    - **Analytics**
    - **Client Systems Management**
    - **Enterprise Applications**
    - **Enterprise Systems Management**
    - **Mainframe**
    - **Operating Systems**
    - **Public Sector Solutions**
    - **Serviceability Tools**
    - **Support**
    - **Utilities**
    - **Virtualization Solutions**
  4. To view a document, click the required product and then click the required version.
- Using search engines:
  - Type the name and version of the document in the search box.

## Topics:

- [Contacting Dell](#)

## Contacting Dell

**NOTE:** If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Go to **Dell.com/support**.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link based on your need.