Dell MD Storage Array Management Pack Suite for Microsoft System Center Operations Manager

Release Notes

Release Type and Definition

This release notes provides information on the Dell MD Storage Array Management Pack Suite version 6.1, which can be imported into Microsoft System Center 2016 Operations Manager, 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 mentioned below in this document are applicable to Microsoft System Center 2016 Operations Manager, Microsoft System Center 2012 R2 Operations Manager, Microsoft System Center 2012 SP1 Operations Manager, Microsoft System Center 2012 Operations Manager, and System Center Operations Manager (SCOM) 2007 R2 unless otherwise specified.

The Dell MD Storage Array Management Pack Suite v6.1 enables OpsMgr to discover and monitor the status of Dell PowerVault MD Storage Arrays, on a defined network segment. This representation includes the receipt of alerts and pre-failure alerts with the ability to drill down to each hardware component from the overall Dell hardware health, and allows Dell customers to assess, respond to, and ensure availability of Dell Storage systems monitored in the OpsMgr environment. In addition to improved availability, the Management Pack enhances the ability to monitor and manage the hardware in a single management solution.

The Dell MD Storage Array Management Pack Suite v6.1 packages a utility tool: Dell Discovery Utility to discover Dell PowerVault MD Storage Arrays and create a text file with a list of discovered MD storage arrays. This list is used by the Dell MD Storage Array Management Pack Suite to discover and monitor the Dell PowerVault MD Storage Arrays in OpsMgr. This utility discovers Dell PowerVault MD Storage Arrays from the IP Addresses/IP Address ranges (IPv4 or IPv6 address (es)) that you specify.

Version
6.1

Release Date
April 2017

Previous Version
6.0

Importance

RECOMMENDED: Dell recommends applying this update during your next scheduled update cycle. The update contains feature enhancements or changes that will help keep your system software current.

What is Supported?

Management Station Requirements:

- Microsoft System Center 2016 Operations Manager, Microsoft System Center 2012 R2 Operations Manager or Microsoft System Center 2012 SP1 Operations Manager or Microsoft System Center 2012 Operations Manager or Microsoft System Center Operations Manager 2007 R2
- Administrator access on the system; to run the Dell Discovery utility, and Dell PowerVault Modular Disk Storage Manager IP list extraction Utility
- Minimum disk space of 5 MB; for installing and running the Dell MD Storage Array Management Pack Suite version 6.1
- (Optional) Dell PowerVault Modular Disk Storage Manager (MDSM) is required to diagnose and resolve recovery failure alerts

Supported Operating Systems

- List of Operating Systems supported on the Management Station: Following is the list of supported operating systems for the Management Station:

    o For OpsMgr 2016, see technet.microsoft.com/en-us/library/dn997272(v=sc.16).aspx.

    o For OpsMgr 2012 R2, OpsMgr 2012 SP1 and OpsMgr 2012, see technet.microsoft.com/en-us/library/hh205990.aspx.

    o For OpsMgr 2007 R2, see technet.microsoft.com/en-us/library/bb309428(en-us).aspx.

Managed System Requirements

Controller Firmware
- The supported Controller Firmware (CFW) versions are:
    o 08.20.21.60, 08.20.20.60 for MD34x0, MD38x0i, MD38x0f.
    o 08.25.09.61, 08.25.08.60 for MD32x0, MD32x0i, MD36x0i, MD36x0f.

(Optional) Storage Array Host Software
Install Dell PowerVault Modular Disk Storage Manager (MDSM) Client on the server that hosts the Dell PowerVault MD storage arrays in order to discover the storage array through in-band. The recommended version is 11.25.
The supported versions are:
- 11.20
- 11.25

Requirements for running Dell Discovery Utility

- Microsoft .NET version 3.5

- Administrator access to the system - To run the Dell Discovery utility and modify the IP configuration file (For more information on the Dell Discovery utility, see the online help - DellDiscoveryUtility.chm provided with the utility)

Supported Dell PowerVault MD Storage Arrays:

- MD3800f
- MD3820f
- MD3860f
- MD3800i
- MD3820i
- MD3860i
- MD3600i
- MD3620i
- MD3600f
- MD3660f
- MD3400
- MD3420
- MD3460
- MD3260i
- MD3260
- MD3220i
- MD3200i
- MD3200

What's New

- Support for System Center 2016 Operations Manager
- Support for new Controller Firmware versions

Fixes

None

Important Notes

Management Pack Suite Structure

The Dell Server Management Pack Suite consists of the following management packs and utilities, which are copied into the installation folder.

MD Storage Array Monitoring

Dell.Storage.MDStorageArray.mp

- Dell MD Storage Array Management pack for discovery, and monitoring of Dell MD Storage Array devices with OpsMgr 2012/ 2007 versions.

Dell.Storage.MDStorageArray.DetailedMonitoringOn.mp

- Overrides for enabling health monitoring for all component groups for the Dell MD Storage Arrays.

Dell.Storage.MDStorageArray.SNMP.mp

- Management pack that supports SNMP traps for OpsMgr 2012 versions only.

Library

Dell.Connections.HardwareLibrary.mp

- Dell Base folder utility for the basic folder structure and Root node.

NOTE: The Library folder also contains:

- Dell MD Storage Auto discovery Utility which is used to discover Dell MD Storage Arrays in your network
- Dell ABB toolset which helps in retrieving data from the devices
- Supporting DLLs used by the above components of the Management Pack Suite.
- dell_MDStorageArray_ip_sample.cfg which is a sample configuration file that needs to be renamed to dell_MDStorageArray_ip.cfg which will be used to contain the list of device IP addresses for discovery and monitoring. The Dell MD Storage Auto discovery Utility can be used to generate this file too.
- Dell_MDStorageArray_ExtractMDListFromMDSM.vbs is a VB script that can be used to export the list of Dell MD Storage Array IP addresses being managed by the MDSM. The output file contains the IP addresses which can then be added to the dell_MDStorageArray_ip.cfg file.

Known Issues

Issue (357269):

Removing an IP address from the MD Array IP configuration file, should remove the corresponding alerts for that device in OpsMgr console.

Description

When you remove IP addresses from the MD Array IP configuration file, their corresponding alerts are retained in OpsMgr console views.

Workaround

You must manually close the alerts in the OpsMgr console.

Versions Affected
All OpsMgr consoles.

Issue (493772):
When Physical Disk is in impending failure state, OpsMgr may show the Physical Disk as healthy in the Diagram View.

Workaround
You can check for Physical Disk Impending Failure State alerts in MD Storage Array Alerts view of the OpsMgr and take appropriate action as specified in the Alert's Knowledge Article.

Versions Affected
All OpsMgr consoles.

Issue (473374):
When EMM firmware does not match the MD Storage Array, OpsMgr may show the EMM as healthy.

Workaround
You need to check for EMM Firmware mismatch alerts in MD Storage Array Alerts view and take appropriate action as specified in the Alert's Knowledge Article.

Versions Affected
All OpsMgr consoles.

Issue (174255)
'File not found' error pops up after invoking the task to launch the 'Dell Discovery Utility' when the Management pack suite is installed in a non-default location.

Workaround
Refer the "Dell MD Storage Array Management Pack Suite Version 6.1 for Microsoft System Center Operations Manager User's Guide" to create a console task to point to the installed location.

Versions Affected
All OpsMgr consoles.

Issue (469943)
Uninstallation of MD Storage Array management pack fails due to Operations Manager database transaction log getting full.

Description
When there is large amount of data related to the MD Storage Arrays in the Operations Manager database, uninstall operation will cause Operations Manager database to delete the data causing the

Operations Manager Database transaction log to fill. When the transaction log is full and data deletion is not complete, the uninstall operation will fail and report a Database exception to the user with the message 'The transaction log for database 'Operations Manager' is full.

Workaround
You need to increase Operations Manager transaction log size (5GB or as desired) temporarily and delete the management pack. You can restore the transaction log size back to original settings after the management pack is deleted.

Versions Affected
All OpsMgr consoles.

Issue (310069)
Deleting management pack from OpsMgr console, does not delete the MD Storage Array Alerts view and Diagram view. If user clicks any of these views, an error is shown as "Object not found".

Description
After removing the imported management pack, the diagram view and alerts view
should get cleaned up. If the Base Management Pack is deleted or if user closes & re-opens the OpsMgr console then cleanup happens.

Workaround
You need to restart OpsMgr Console with /clearcache option.

Versions Affected
All OpsMgr consoles.

Issue (340250)
The Display Name attribute for Dell PowerVault MD Array is not displayed in the tooltip for MD storage Array objects in OpsMgr.

Description
The tooltip displayed on selecting the MD storage Array device objects in the Diagram view of the OpsMgr and its Web console does not display any information related to the Display Name attribute of the device, though other attribute information get displayed.

Workaround
No known workaround. This is a limitation in the OpsMgr.

Versions Affected
All OpsMgr consoles.

Issue (345485)
The Microsoft System Center Operations Manager (SCOM) 2007 R2 Web console displays only 15 objects in its Diagram view.

Description

When there are more than 15 objects in a group, the Microsoft System Center Operations Manager (SCOM) 2007 R2 Web console displays only 15 objects.

Workaround
No known workaround. This is a limitation in the Microsoft System Center Operations Manager (SCOM) 2007 R2 Web console.

Versions Affected
Microsoft System Center Operations Manager (SCOM) 2007 R2 web console.

Issue
The tooltip for objects in the Diagram view of the OpsMgr Web console does not display any information related to attributes.

Description
The tooltip shown on selecting the MD storage Array device objects in the Diagram view of the OpsMgr Web console does not display any information related to attributes.

Workaround
No known workaround. This is a limitation in the OpsMgr Web consoles.

Versions Affected
All OpsMgr Web consoles.

Issue (21049)
Enclosure Inventory Attribute 'Type' shows 'Unknown Enclosure' for few MD models.

Description
For Enclosure, the value of inventory attribute "Type" may show as "Unknown Enclosure" for some models such as MD3260, and MD3860F.

Workaround
No known workaround.

Versions Affected
All OpsMgr consoles.

Issue (23172)
Overall health of MD array will show as Critical instead of Warning. Check the MD Array health state in MDSM console, when it shows critical in SCOM console

Description
When any of underlying components of MD Array goes to "Warning", the overall health of MD Array will shows as "Critical" instead of "Warning". Check the MD Array health in MDSM console, when it shows critical in SCOM console.

Workaround
No known workaround.

Versions Affected
All OpsMgr consoles.

Issues related to Dell Discovery Utility

Issue (354368)
You cannot launch the Dell Discovery utility from a network share.

Workaround
You must modify the .Net security policy in order to run the application from a network share.

Additional Information

Security Consideration for Dell Discovery Utility

When you run Dell Discovery utility on any system, to discover the MD storage arrays, there is a delay of 40-45 seconds to launch the utility if the system does not have access to the Internet. The delay occurs because in the .NET Framework 2.0, when the CLR loads an assembly into a process, if the CLR finds an Authenticode signature (which involves a Certificate), it generates Publisher Evidence from it and validates the Certificate by contacting the issuing authority to ensure the Certificate has not been revoked. When validating the Certificate the operating system scans the chain of Certificates and tries to download the Certificate Revocation List from a server on the internet. If you do not have internet access or network is too slow, then this process is delayed - thereby delaying start of the application.

Note: When you disable signature verification, the .NET Framework 2.0 managed application no longer receives publisher evidence. This behavior affects the .NET Framework 2.0 managed application only when you use publisher evidence or when you use the PublisherIdentityPermission class.

To avoid the delay in launching the utility on a system without Internet access:

1. Open the DellDiscoveryUtility.exe.config file from the location where you
   have installed the Dell MD Storage Array Management Pack suite 6.1.

2. Set the value of <generatePublisherEvidence enabled="True"/> to "False".
   For more information, see http://support.microsoft.com/kb/936707.

Non-responding MD Arrays shown in OpsMgr

MD Storage arrays from OpsMgr Diagram view will disappear if MD Arrays stop responding. The OpsMgr console displays a new alert provided by the Management Pack. You must take the corrective actions suggested in the alert to ensure that the storage arrays that have disappeared from the console start responding in the subsequent discovery cycles, and are displayed in the OpsMgr console.

Fixes

None

Limitations

Refer to the Installation Guide.

Installation

Installation and configuration Notes

This section provides information about the minimum requirements for installing and using the Dell MD Storage Array Management Pack Suite version 6.1.

Installation details for Dell MD Storage Array Management Pack Suite version 6.1

For information on installing the Dell MD Storage Array Management Pack Suite version 6.1 for your OpsMgr version refer the "Dell PowerVault MD Storage Array Management Pack Suite Version 6.1 for Microsoft System Center Operations Manager Installation Guide".

NOTE: The Installation Guide (DellMPv61_MDStorageArray_IG.pdf) can be found under the folder where you extracted the Dell MD Storage Array Management Pack Suite version 6.1.

Installation Details for Dell Discovery Utility

No specific installation needed. This utility is installed by running the Dell MD Storage Array Management Pack Suite 6.1 installer. For information on launching the Dell Discovery utility version 6.1, refer, "Dell MD Storage Array Management Pack Suite Version 6.1 for Microsoft System Center Operations Manager Installation Guide".

Installation Details for Dell PowerVault Modular Disk Storage Manager IP list Extraction Utility

No specific installation needed. This utility is installed by running the Dell MD Storage Array Management Pack Suite 6.1 installer. Dell_MDStorageArray_ExtractMDListFromMDSM.vbs is a VBScript that is packaged in the Dell MD Storage Array Management Pack Suite version 6.1. This script helps in extracting and saving the IP addresses of MD Arrays being managed by the Dell PowerVault Modular Disk Storage Manager (MDSM) so that they can be managed in your OpsMgr. The saved file containing the IP addresses must be copied to your SCOM Management Station (OpsMgr) and the contents added to the dell_MDStorageArray_ip.cfg so that the MD Arrays can be discovered and monitored. The IP addresses are saved in the format required by the MD Storage Array MP.

Note: Run the script as Administrator because the script invokes smclient.exe (installed with MDSM) to retrieve the list of IP addresses and smclient.exe requires elevation (run as Administrator) when run from the installed folder. For information on launching the Dell MD Storage Array IP List Extraction Utility, refer the "Dell MD Storage Array Management Pack Suite Version 6.1 for Microsoft System Center Operations Manager Installation Guide".

Upgrading from Previous Versions

You can upgrade Dell MD Storage Array Management Pack Suite 6.0 to Dell MD Storage Array Management Pack Suite 6.1. For information on upgrading the Dell MD Storage Array Management Pack Suite version 6.1 for your version of OpsMgr, refer the "Dell MD Storage Array Management Pack Suite Version 6.1 for Microsoft System Center Operations Manager Installation Guide".

NOTE: Dell.Storage.MDStorageArray.mp is the scalable edition of the management pack. It monitors the health of the Dell PowerVault MD Storage Array on Dell.Storage.MDStorageArray.DetailedMonitoringOn.mp is the Management Pack that enables health computation for all components in the Dell PowerVault MD Storage Array.

NOTE: You cannot however apply Dell MD Storage Array Management Pack Suite 6.1 as an upgrade over versions other than Dell MD Storage Array Management Pack 6.0 as it is not supported.

Uninstallation

For information on uninstalling the Dell MD Storage Array Management Pack Suite version 6.1 refer the "Dell MD Storage Array Management Pack Suite Version 6.1 for Microsoft System Center Operations Manager Installation Guide".

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. Visit **www.dell.com/support**.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down menu at the top of page.
4. Select the appropriate service or support link based on your need.

For information about documentation support:

1. Go to **dell.com/support/manuals**
2. In the **Tell us about your Dell system** section, under **No**, select **Choose from a list of all Dell products** and click **Continue**.
3. In the **Select your product type** section, click **Software & Security**.
4. In the **Choose your Dell Software** section, click the required link from the   following:
   – Client System Management
   – Enterprise System Management
   – Remote Enterprise System Management
   – Serviceability Tools
5. To view the document, click the required product version.

   Note: You can also directly access the documents using the following links:

   o For Client System Management documents — **dell.com/OMConnectionsClient**
   o For Enterprise System Management documents — **dell.com/openmanagemanuals**
   o For Remote Enterprise System Management documents — **dell.com/esmmanuals**
   o For Serviceability Tools documents — **dell.com/serviceabilitytools**