Dell Client Management Pack Version 5.1 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.

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Overview

The Dell Client Management Pack version 5.1 for Microsoft System Center 2012 R2 Operations Manager, Microsoft System Center 2012 SP1 Operations Manager, System Center 2012 Operations Manager, or System Center Operations Manager 2007 R2 allows you to manage and monitor the availability of Dell client systems.



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



NOTE: The readme file packaged in the self-extracting executable **Dell_Client_Management_Pack_v5.1_A00.exe** contains the latest information about software and management station requirements, and information about known issues. The latest readme file is available at **dell.com/support/manuals**.



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

What Is New In This Release

The Dell Client Management Pack version 5.1 supports:

- Support for OpenManage Client Instrumentation (OMCI) v8.1, v8.1.1, v8.2, v8.2.1
- Microsoft System Center 2012 R2 Operations Manager
- Microsoft Windows 2012 R2 as management server operating system
- Microsoft Windows 8 with OMCI 8.2 for client
- Support for alerts for Intel-based RAID Controller, Virtual Disk and Physical Disk.

Key Features Of Dell Client Management Pack

The following table lists the key features and functionality of the Dell Client Management Pack version 5.1.

Table 1. Features And Functionality

Feature	Functionality
Discovery	Supports in-band discovery of Dell Precision, Dell Latitude, and Dell OptiPlex client systems that has the supported OMCI version and Windows operating system installed.

Feature	Functionality
	NOTE: Dell Client Management Pack version 5.1 groups client systems without OMCI service installed, OMCI version earlier than 8.0, Dell client systems on which OMCI service has been stopped or disabled, and Dell Vostro client systems as Dell UnManaged Clients .
Monitoring	Supports health monitoring for Dell client systems and instance level health information for processors, OMCI service, sensors, and storage.
	NOTE: Only group level monitoring is supported for memory component. Instance level monitoring is not supported for memory instance.
Alerts from Dell Client systems	Events generated by OMCI in the windows event log.
Report OpenManage Windows Event Log	The event analysis report displays the event time, log record, and status (criticality) of OMCI events for selected Dell Windows client systems.
Launching Remote Desktop	Launches the remote desktop for client systems through OpsMgr console.
Client Shutdown and Reboot	Supports the shutdown and reboot tasks for the Dell client systems through OpsMgr console.
Hardware Health roll up	Provides the client hardware health roll up to Windows Computer Health. For more information, see <u>Viewing Dell Client Hardware Health Roll-up</u> .

About Dell Client Management Pack

The following table describes the management packs and utilities, and their dependencies with each other.

Table 2. Management Pack Functionalit	And Dependencies Management Pack
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Management Pack/Utility	Description	Dependency
Base Folder Utility	Defines the Dell Hardware Group and Dell folders in the Monitoring pane of the OpsMgr console.	None
Dell Windows Client Management Pack	Discovers, monitors, and provides alert management for supported Dell client systems and its components.	Base Folder Utility 4.0

Details Of Components Modelled By The Dell Client Management Pack

The following table lists the details and the components modelled by the management pack.

Table 3. Management Pack Details And Components Modelled

Management Pack	Component Details	
Dell Windows Client Management Pack (Dell.WindowsClient.mp)	Displays hardware components of the Dell client systems and monitors up to the component group levels.	
	Health of individual components in the Client Diagram View is shown for the following:	
	OMCI Service	
	Processors	
	Sensors	
	Storage	

Dell Client Management Pack Operations

This chapter provides information on the various operations that you can perform on 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, using the Dell Client Management Pack version 5.1.

The Client Management Pack enables the following operations to manage Dell client systems:

- Discover and monitor Dell Latitude, Dell Precision, and Dell OptipPlex computers running supported OMCI and client Windows operating systems.
- Group Dell Clients without instrumentation and client systems running without OMCI service under the **Dell UnManaged Clients** group.



NOTE: Dell Vostro systems are displayed under the Dell UnManaged Clients group.

- Monitor the health status for client hardware components by polling at periodic intervals, and update the state of each component in the diagram view. A health status is a standardized description of the functional performance of a component, system, or service. For more information, see <u>Tasks</u>.
- Perform client shutdown and reboot tasks.
- Launch remote desktop for Dell client systems.
- Generate reports on Dell Windows Event Log and OMCI events from the Windows Event Log of the managed system.

Discovery And Grouping

Discovering A Dell Client

To discover Dell client systems in the network, ensure that the devices appear in the **Agent Managed** view under the **Administration** section of the OpsMgr console. You can use overrides to increase or decrease the discovery and monitoring intervals for specific Dell hardware to meet the needs of your implementation.

The client discovery process classifies a system as **Dell UnManaged Clients** if:

- Lower version than OMCI 8.0 is installed on the Dell client system.
- Client instrumentation (OMCI) services is disabled or not running.
- Client system is a Vostro system.

Adding Dell Client Systems

To add a Dell client system to the Agent Managed list:

- **1.** Log on to the system with an account that has the OpsMgr Administrator role for the OpsMgr management groups.
- 2. In the OpsMgr console, click Administration.
- **3.** At the bottom of the **Administration** pane, click **Discovery Wizard**. The **Computer and Device Management Wizard** screen is displayed.

- 4. Click **Next** after reading the instructions on the screen.
- 5. To discover Dell client systems, select the Advanced discovery option.
- 6. In the Computer and Device Classes drop-down list, select Clients Only.
- 7. Click Next.

The **Discovery Method** screen is displayed.

- 8. Select one of the two options given below:
 - Scan Active Directory enables you to specify the selected objects from the Active Directory.
 - 1. Click **Configure** to create a query to find the objects that you want to scan.
 - 2. Select the domain where the objects that you want to discover reside, from the **Domain** drop-down list.
 - Browse for, or type-in computer names enables you to browse for or type the names of the Dell client systems you want to discover. Click Browse to search for systems on the network or type the name of the system you want to discover.

9. Click Next.

The Administrator Account page is displayed.

- **10.** Specify the user account that has administrator rights on the computers that you want to scan using one of the two options:
 - Use selected Management Server Action Account indicates that you can use the existing Management Server Action Account as the administrator account.
 - Other user account indicates that you can specify any account other than the existing Management Server Action Account. Specify the User Name, Password, and the Domain in which the account is present.



NOTE: If you select **This is a local computer account, not a domain account**, then you must specify the **Computer Name** instead of the Domain name.

11. Click Discover.

The Select Objects to Manage page displays the list of Dell client systems that you selected.

- 12. Select the Dell client systems that you want to manage and click Next.
- **13.** Specify the path for **Agent Installation Directory**, specify the credentials for **Agent Action Account**, and click **Finish**.

Dell Hardware Discovery And Grouping

The following table lists the details of the hardware discovery and grouping by the Dell Client Management Pack.

Table 4. Dell Hardware Discovery And Grouping

Classification	Group Name on OpsMgr Console	Hardware Type
Dell Windows	Dell Managed	Dell client systems:
		LatitudeDell PrecisionOptiplex
	Dell UnManaged	Vostro client system

Objects Discovered By Dell Client Management Pack

The following table lists the details of objects discovered by the Dell Client Management Pack.

Table 5. Dell Object Discoveries

Discovery Object	Description
Dell Managed Client Group population discovery	Discovers the Dell Managed Group with all the supported models of Dell business clients.
Dell Client discovery	Discovers all the supported models of Dell Business Clients that have the supported Dell Product Instrumentation.
Discover Hardware Components for Dell clients	Discovers all Dell Clients Components which includes Processors, Sensors, Storage and Memory components.
Services discovery	Discovers the Dell OpenManage Client Instrumentation Service.
Dell Hardware Group population discovery	Discovers the Dell Hardware Group of Dell Clients Groups.
UnManaged Client Group population discovery	Discovers the Dell Client systems that are not being monitored either due to the absence of Dell Instrumentation or has a lower version of OMCI than 8.0 or if the OMCI service has been disabled or stopped and Dell Vostro Client systems as Dell Unmanaged Group.
Dell Client Group population discovery	Discovers the Dell Clients Group with Managed and Unmanaged Clients Groups.

Monitoring

The Dell Client Management Pack enables you to monitor the discovered Dell Client systems. The Health Status Indicators helps you to monitor the health of your Dell Client systems on the network.

Health Status Indicators

The following table lists the icons that indicate the health status of the discovered Dell client systems on the OpsMgr console. For more information on severity propagation, see <u>State Views</u>.

lcon	Severity Level
\oslash	Normal/OK — The component is working as expected.
1	Warning/Noncritical — 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

Severity Level

requires immediate attention and may need replacement. Data loss may have occurred.

The specific component is not monitored.

The service is unavailable.

Views

You can monitor the Dell Client systems using the following views:

- <u>Alerts Views</u>
- Diagram Views
- State Views

Alerts Views

The **Alerts Views** displays alerts for the events received from the OMCI service running on the systems that you are monitoring. To view the alerts for the systems you are monitoring:

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 Alerts Views → Client Alerts. The OpsMgr console displays the alerts for all the Dell client systems that you are monitoring in the Client Alerts pane. You can see alerts that meet the criteria that you specified in the Authoring pane of the OpsMgr console, such as severity, resolution state, or alerts that are assigned to you.
- 4. Select an alert to view the details in the Alert Details pane.

Diagram Views

The **Diagram Views** displays a hierarchical and graphical representation of all Dell clients on your network that OpsMgr manages. The Dell Windows Client Management Pack offers the following views:

- Client Diagram
- Complete Diagram View

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Client Diagram View



Figure 1. Graphical Representation Of Dell Client Systems Managed By OpsMgr

To access the Client Diagram:

- 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 Diagram Views → Client Diagram.

The **Client Diagram** offers a graphical representation of all Dell client systems that OpsMgr manages. You can expand and verify the status of individual systems and their components in the diagram. The root node for this view is the **Dell Windows Clients** group. You can view details for **Dell Clients** with this view.

- **4.** Select a component in the diagram to view the details in the **Detail View** pane. You can view details of the OMCI service as well as the following hardware components of Dell clients:
 - Memory
 - Processors
 - Sensors
 - Storage

Complete Diagram View



Figure 2. Graphical Representation Of All Dell Devices

To access the Complete Diagram View:

- 1. In the OpsMgr console, click Monitoring.
- 2. In the **Monitoring** pane on the left side, navigate to the **Dell** folder and click the folder to display the different views.
- 3. Click Diagram Views \rightarrow Complete Diagram View.

The **Complete Diagram** View offers a graphical representation of all Dell devices that OpsMgr manages. You can expand and verify the status of individual devices and their components in the diagram. You can view details for **Dell Clients** and **Dell UnManaged** with the **Complete Diagram View**.

4. Select a component in the diagram to view the details in the **Detail View** pane.

Viewing Dell Client Hardware Health Roll-Up

You can view the Dell Client Hardware Health rolled up to Windows Computer Health. To view the Dell Client Hardware Health roll-up:

- 1. In the OpsMgr console, click My Workspace.
- 2. Right-click on Favorite Views and from the pop-up menu select New \rightarrow Diagram Views. A Create Diagram View window is displayed.
- 3. In the Name text box, type the desired name.
- 4. In the **Description** text area, type the desired description.
- 5. In the Choose Target section, click Browse. The Select Object window is displayed.
- 6. In the Select Object window, select Dell Windows Clients from the Look for drop-down list and then click Search.
- 7. Click Add and then click OK.

- 8. In the Choose from a template section, select Client Diagram from the drop-down list.
- 9. Click Create.

State Views

The **State Views** displays the status of each Dell device managed by OpsMgr on your network. The Dell Client Management Pack provides a list of severity level indicators to help you monitor the health of the Dell client systems on the network.

Accessing State Views

To access the State Views:

- 1. In the OpsMgr console, click Monitoring.
- 2. In the **Monitoring** pane on the left side, navigate to the **Dell** folder and click the folder to display the different views.
- 3. Click State Views \rightarrow Clients.

The OpsMgr console displays the status of all the Dell client systems that you are monitoring on the right pane.

4. Select a state to view the details in the **Detail Views** pane.

Tasks

Tasks are available in the **Actions/Tasks** pane of the OpsMgr console. When you select a client system in the **Diagram Views** or the **State Views**, the relevant tasks appear in the **Actions/Tasks** pane.

Client Reboot And Shutdown

To reboot or shutdown a client:

- 1. In the OpsMgr console, navigate to either the State Views or Diagram Views.
- 2. Select any discovered Dell client system.
- In the Actions/Task pane, click either Client Reboot or Client Shutdown. The Run Tasks screen is displayed.
- 4. Click Run.

Launching The Remote Desktop For A Dell Client System

To launch a remote desktop for the client system:

- 1. In the OpsMgr console, navigate to either the **Diagram Views** or **State Views**.
- 2. Select any discovered Dell client system.
- **3.** Click Launch Remote Desktop under Dell Client Instance Tasks in the Actions/Tasks pane. The remote desktop for the client system is launched.

Reports

To access the reporting feature:

- 1. Click **Reporting** in the OpsMgr console.
- 2. Expand **Reporting** in the navigation pane.

3. Click Dell Client.



NOTE: You can also access **Reporting** from the **Diagram Views** by clicking on the client instance. The option **Dell OpenManage Windows Event Log** is located in the **Actions/Tasks** pane under the Dell System instance reports along with the default Microsoft reports.

OpenManage Windows Event Log

The reporting feature is available with the Dell Client Management Pack. The event analysis report displays the event time, log record, and status (criticality) of OMCI events for selected Dell Windows client systems.

- 1. Click **Reporting** in the OpsMgr console.
- 2. Expand **Reporting** in the navigation pane.
- 3. Click Dell Client for the OpenManage Windows Event Log.
- 4. Click **Open** in the **Actions/Tasks** pane.
- 5. Select the time period to generate the report.
- 6. Click Add Object or Add Group.
- 7. Click **Search** to search for an object or group.
- Select Add to add a single or multiple objects.
 The object is displayed in the selected object pane.
- 9. Choose the event severity to generate a report.
- 10. Click Run to generate the Windows Event Log report.

Customizing The Dell Client Management Pack

You can customize the following components of the Dell Client Management Pack by using overrides to increase or decrease the intervals to the specific Dell hardware management needs of the OpsMgr operator:

- **Monitors** Assesses various conditions that can occur in monitored objects. The result of this assessment determines the health state of a target and the alerts that are generated.
- **Object Discoveries** Finds objects on a network that need to be monitored.
- Rules Collects data, such as events generated by managed objects.

Unit Monitors

The following table provides information for the various Dell unit monitors and the applicable parameters for client systems.

Table 6. Dell Unit Monitors In The Dell Client Management Pack

Groups	Unit Monitor Name	Default Periodic Poll Setting
OMCI Service Instance	Periodic	3600 seconds (60 minutes)
Memory Group for Dell Client	Periodic	3600 seconds (60 minutes)
Processor Group for Dell Client	Periodic	3600 seconds (60 minutes)

Groups	Unit Monitor Name	Default Periodic Poll Setting
Processor Unit Instance	Periodic	3600 seconds (60 minutes)
 Sensors of Dell client systems Battery Fan Intrusion Temperature 	Periodic	3600 seconds (60 minutes)
Storage Group for Dell Client	Periodic	3600 seconds (60 minutes)
Disk Unit Instance	Periodic	3600 seconds (60 minutes)

NOTE: When chassis door is removed or closed, OMCI generates **Chassis Intrusion** events. For more information on enabling, disabling, and clearing **Chassis Intrusion** events, see System Setup (BIOS) in the Owner's Manual of the Dell client system.

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NOTE: Monitoring for memory is available at the Group level only.

Customizing Unit Monitors

You can customize the following parameters of the Dell Client Management Pack unit monitors by using overrides:

- Enabled Allows you to enable or disable Monitors. You can set the Override setting to True or False. The default setting is True.
- Interval in Seconds The frequency in seconds with which the Dell Management Pack polls the Dell device to check the health of a component. The default is 3600 seconds (60 minutes).

The unit monitors are triggered by a periodic poll configured as interval seconds.

Object Discoveries

Table 7. Dell Discovery Object

Discovery Object	Description	Groups
Discover Hardware Components	Discovers the disk, memory,	Dell clients
for Dell Client systems	sensors, and processor of your	Dell client instance
	system.	Hardware components of Dell client
		Storage group for Dell client
		Disk unit instance
		Memory group for Dell client
		Processor group for Dell client
		Processor unit instance
		Sensor group for Dell client
OMCI Services discovery	Discovers the OMCI services.	Dell clients Dell client instance

Discovery Object	Description	Groups

Services of Dell client OMCI service instance

Customizing Object Discoveries

Using overrides, you can customize the following Dell Client Management Pack discovery parameters:

- Enabled Allows you to enable or disable discoveries. You can set the **Override** setting to **True** or **False**. The default setting is **True**.
- Interval in Seconds Specifies the frequency in seconds that the Dell Management Pack discovers the component instance and attributes of your Dell Client system. The default value for this attribute is 86400 seconds (24 hours).

Rules

Dell Systems Event Processing Rules

The Dell Client Management Pack processes rules from OMCI. You can customize the rules by setting override parameters for the rules.

To customize the rules:

- **1.** In the OpsMgr console, click the **Authoring** tab.
- 2. Select Rules under Management Packs Objects in the Authoring pane.
- 3. In the **Rules** pane, expand **Dell Client instance** and select a rule.
- 4. Right-click the rule and select **Overrides**.
- Select Disable the Rule and any of the sub-options to disable the rule. Or

Select **Override the Rule** and any of the sub-options to set the override parameters for the rule. You can also change the **Severity** setting in the **Override Properties** window for the rule.

6. Click OK to apply the override parameter to your rule or Cancel to cancel the changes.

OMCI Override Properties

All warning and critical events for OMCI have a corresponding event processing rule.

Each of these rules are processed, based on the following criteria:

- Source Name = "OpenManage Client Instrumentation"
- Event ID = Event ID of the OMCI event
- Severity = Severity of the OMCI event
- Data Provider = Windows System Event log

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Related Documentation And Resources

Microsoft Guidelines For Performance And Scalability For Operations Manager

For optimal performance, deploy device-specific Server Management Pack Suite on different management servers.

For information on Microsoft's recommendations for scalability, see the Microsoft website at **technet.microsoft.com**.



NOTE: Make sure that the **Autogrow** option is enabled in Operations Manager Data Warehouse and/or Database for improved performance.

Other Documents You May Need

Besides this User's Guide, see the following guides available at dell.com/support/manuals.

- The Dell OpenManage Client Instrumentation User's Guide provides information about how the Dell OpenManage Client Instrumentation software enables remote management application programs to access client system information, monitor the client system status, or change the state of the client system.
- The Dell Client Configuration Toolkit User's Guide describes the installation and use of the client configuration toolkit (CCTK) to configure various BIOS features for Dell client computer platforms.
- The client hardware's *Owner's Manual* provides information about your system, installing the system components and troubleshooting your system.

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 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.

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Troubleshooting

The following table lists the known issues, resolutions, and where the issues are applicable.

Table 8. Issues And Resolutions Applicable To OpsMgr

Issue	Resolution
Dell alerts are not sorted chronologically.	Check the registry on the managed system that has this problem. The sorting flags in the left overview definition may have been set to false .
	In some instances, when you import a management pack with changes already done to the sorting flags, the sorting flags may not get updated in the registry of the managed system. If you delete these settings for the view in the registry, they are recreated from the new management pack when you navigate to that view again. You can also edit the sorting flags in the registry for the view.
	Registry edit:
	HKEY_CURRENT_USER\Software\Microsoft \Microsoft Operations Manager \3.0\Console\% <i>GUID.ViewTitle</i> %AlertsView\Age
	To enable sorting of alerts, ensure the keys IsSortable and IsSorted are set to 1.
Under certain conditions, alerts related to Handle Count Threshold and Private Bytes Threshold are displayed on the OpsMgr console of the management server.	Microsoft KB968760 available at support.microsoft.com resolves this.
Under certain conditions, an error message is displayed on the OpsMgr console of the management server with the Event ID – 623 and Event Source – Health Service ESE Store.	Microsoft KB975057 available at support.microsoft.com resolves this.
The System Center Operations Manager 2007 console may crash on certain operating systems.	Microsoft KB951327 , KB951526 available at support.microsoft.com resolves this.
You may experience one or more of the following situations:	Microsoft KB954049 available at support.microsoft.com resolves this
The web console does not open.	
• The My Workspace page does not display.	
Performance and Power Monitoring Views do not display.	
• Health Service may not start up on the system.	
Reports do not appear as expected in the Reporting space of the Administration console.	Microsoft KB954643 available at support.microsoft.com resolves this.

Issue	Resolution
The OpsMgr console intermittently displays the following error message - Health service Host Process encountered a problem and needed to close as a result of the Health Service crash. You may notice unexpected behavior in the discovery and monitoring of Dell devices.	Microsoft KB951526 available at support.microsoft.com resolves this.
Deleting management pack from OpsMgr console does not delete the client Alerts view and Diagram view. If user opens any of the client views, Object not found error displays.	Close and re-open the OpsMgr console.
Tooltip for objects in the Diagram Views of the OpsMgr web console does not display any information related to attributes.	Switch to OpsMgr operation console.
OMCI alerts are not displayed in the Alerts Views of the web console.	Switch to OpsMgr operation console.
Few unit monitors in the Dell client Management Pack under the Sensors instance may display the status as green even though the sub-instance does not exist when you use the health explorer.	This is because unit monitors cannot display an Unavailable state when the instance is present and the unit monitor has been executed.
Client system not shutting down through the Client Reboot and Shutdown task.	Make sure that no application is running on the client system.