

**Dell Printer Management Pack Version 6.1 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 product.

 **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

This document describes the activities that you can perform with the Dell Printer Management Pack version 6.1.

The integration of Dell Printer Management Pack version 6.1 with 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, or Microsoft System Center Operations Manager 2007 R2 allows you to manage and monitor the availability of Dell printers.

**CAUTION: To avoid data corruption, data loss, or both; perform the procedures in this document only if you have proper knowledge and experience in using Microsoft Windows operating system and 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.**

The Installation Guide, and Release Notes files are packaged in a self-extracting executable `Dell_Printer_Management_Pack_v6.1_Axx.exe` (where xx is the Dell Printer Management Pack version 6.0 release number) file. You can download the executable file from [dell.com/support](http://dell.com/support).

Read the management pack's release notes, containing the latest information about software and management server requirements, in addition to information about known issues. The release notes is also posted to the Systems Management documentation page at [dell.com/support/home](http://dell.com/support/home).

## Terms used in this document

The following term is used throughout this document. Ensure to substitute the actual term wherever appropriate.

OpsMgr — This term refers 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 Microsoft System Center Operations Manager 2007 R2, unless otherwise specified.

## What is new in this release

- Support for System Center 2016 Operations Manager.
- Support for latest Dell printers. For information on supported printers, refer [Dell Printer Management Pack Version 6.1 for Microsoft System Center Operations Manager Release Notes](#).
- Support for latest firmware.

## Key features of Dell Printer Management Pack

The following table lists the key features and functionality of the Dell Printer Management Pack.

**Table 1. Features and functionality**

Feature	Functionality
Discovery	Supports discovery of Dell printers in a network.
Inventory	Performs inventory of the supported Dell printers.

Feature	Functionality
Monitoring	Supports health monitoring of Dell printers in a network.
Launching Printer Console	Launches the printer console from the OpsMgr console.
Display alerts from Dell printers	Displays the Simple Network Management Protocol (SNMP) based alerts for the monitored Dell printer in the <b>Alerts Views</b> of the OpsMgr console.

## About Dell Printer Management Pack

The following table describes the printer management packs and their dependencies with each other:

**Table 2. Management pack functionality and dependencies**

Supported OpsMgr Version	Management Pack	Description	Dependency
OpsMgr 2016	<b>Dell Printer (SCOM 2012) MP</b> — Dell.Printer.OM12.mp	Management pack for instrumenting supported Dell printers.	None
OpsMgr 2012 R2, OpsMgr 2012 SP1 and OpsMgr 2012	<b>Dell Printer (SCOM 2012) MP</b> — Dell.Printer.OM12.mp	Management pack for instrumenting supported Dell printers.	Dell Base Hardware Library 4.0 — Dell.Connections.HardwareLibrary.mp
OpsMgr 2007 R2	<b>Dell Printer (SCOM 2007 R2) MP</b> — Dell.NetworkDevice.Printer.mp	Management pack for instrumenting supported Dell printers.	Dell Base Hardware Library 4.0 — Dell.Connections.HardwareLibrary.mp



# Dell Printer Management Pack operations

This chapter provides information on the various operations that you can perform on OpsMgr using Dell Printer Management Pack.

The Printer Management Pack enables the following operations to manage Dell printers:

- Discovers and groups Dell printers.
- Displays attribute information of Dell printers.
- Provides health status of Dell printers through periodic polling.
- Launches the printer console.
- Processes SNMP traps, and provides knowledge base articles for printer traps.

## Discovery and grouping

### Discovering a Dell Printer

Dell printers are classified as network devices. To discover Dell printers, ensure that the devices appear under **Administration** → **Network Management** → **Network Devices** in the OpsMgr console.

### Discovering Network Devices

To discover network devices in OpsMgr.

- For OpsMgr 2016, see [technet.microsoft.com/en-us/system-center-docs/om/manage/how-to-discover-network-devices-in-operations-manager](http://technet.microsoft.com/en-us/system-center-docs/om/manage/how-to-discover-network-devices-in-operations-manager)
- For OpsMgr 2012 R2, OpsMgr 2012 SP1, and OpsMgr 2012, see [technet.microsoft.com/en-us/library/hh278846.aspx](http://technet.microsoft.com/en-us/library/hh278846.aspx).
- For OpsMgr 2007 R2, see [technet.microsoft.com/en-us/library/cc950509.aspx](http://technet.microsoft.com/en-us/library/cc950509.aspx).



## Monitoring




The Dell Printer Management Pack enables you to monitor the discovered Dell printers. The health status indicators help you to monitor the health of your Dell printers in the network.

### Health status indicators

The following table lists the icons that indicate the health status of the discovered Dell printers on the OpsMgr console.

**Table 3. Health status indicators**

Icon	Severity Level
	Normal/OK — The component is working as expected.
	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,

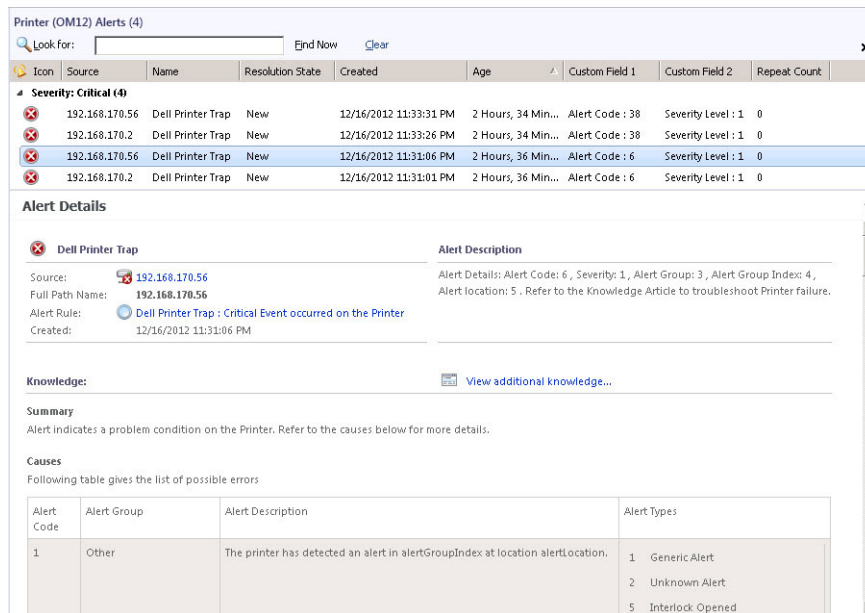
Icon	Severity Level
	but it could fail. The component may also be functioning in an impaired state.
	Critical/Failure/Error — The component has either failed or failure is imminent. The component requires immediate attention and may need to be replaced. Data loss may have occurred.
	The specific component is not monitored.
	The service is unavailable.

## Views

You can monitor the Dell printers using the following views:

- Alerts Views
- Diagram Views
- State Views

## Alerts Views



The screenshot displays the 'Printer (OM12) Alerts (4)' window. It features a search bar and a table of alerts. The table has columns for Icon, Source, Name, Resolution State, Created, Age, Custom Field 1, Custom Field 2, and Repeat Count. Four alerts are listed, all with a 'New' resolution state and a severity level of 1. The selected alert is from source 192.168.170.56, name 'Dell Printer Trap', created on 12/16/2012 at 11:31:06 PM.

Below the table is the 'Alert Details' pane for the selected alert. It shows the alert name 'Dell Printer Trap' and a description: 'Alert Details: Alert Code: 6, Severity: 1, Alert Group: 3, Alert Group Index: 4, Alert location: 5. Refer to the Knowledge Article to troubleshoot Printer failure.' It also includes a 'Causes' section with a table of possible errors.

Alert Code	Alert Group	Alert Description	Alert Types
1	Other	The printer has detected an alert in alertGroupIndex at location alertLocation.	1 Generic Alert 2 Unknown Alert 5 Interlock Opened

Figure 1. Alerts Views

To view the alerts for the printers 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** → **Printer (OM07) Alerts** or **Printer (OM12) Alerts**.  
The OpsMgr console displays the alerts for all the Dell printers that you are monitoring in the printer alerts pane.
4. Select an alert to view the details in the **Alert Details** pane.

## Diagram Views

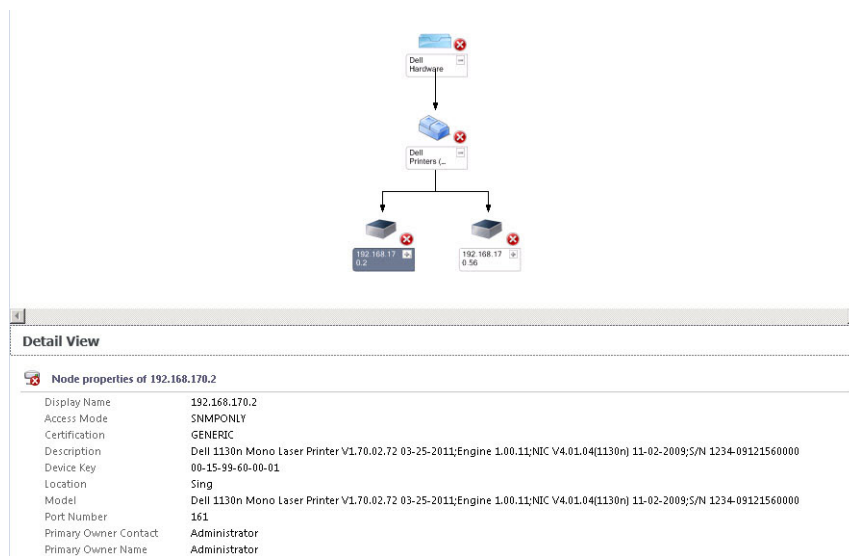
The **Diagram Views** displays a hierarchical and graphical representation of all Dell printers on your network that OpsMgr manages. The **Diagram Views** offers the following:

- **Complete Diagram View**
- **Printer (OM07) Diagram**
- **Printer (OM12) Diagram**

 **NOTE:** You can launch device or component-specific tasks from the **Actions** or **Tasks** pane of the OpsMgr console. For more information on launching tasks, see [Tasks](#).

### 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. You can view details for Dell printers with the **Complete Diagram** view.



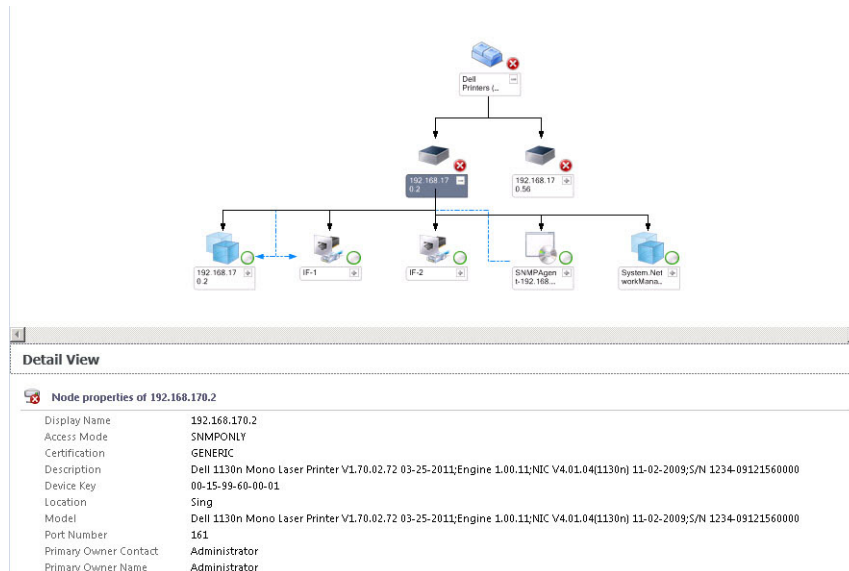
**Figure 2. Complete Diagram View**

To access the **Complete Diagram View**:

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

### Printer (OM07) Diagram or Printer (OM12) Diagram View

The **Dell Printer (OM07) Diagram** or **Dell Printer (OM12) Diagram** view offers a graphical representation of all Dell printers that OpsMgr manages. You can expand and verify the status of individual printers in the diagram. The root node for this view is the **Dell Printer (OM07)** or **Dell Printer (OM12)** group.



**Figure 3. Printer (OM07) Diagram or Printer (OM12) Diagram View**

To access the **Printer (OM07) Diagram** or **Printer (OM12) Diagram** view:

1. In the OpsMgr, 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** → **Printer (OM07) Diagram** or **Printer (OM12) Diagram** view.
4. Select a component in the diagram to view its details in the **Detail View** pane.

## State Views

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

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** → **Printer (OM07) State** or **Printer (OM12) State** view.  
The OpsMgr console displays the status of all the Dell printers that you are monitoring on the right pane.
4. Select a printer to view the details in the **Detail View** pane.

## Tasks

Tasks are available in the **Actions** or **Tasks** pane of the OpsMgr console. When you select a printer or a component in any of the **State Views**, **Diagram Views**, or **Alerts Views**, the relevant tasks appear in the **Actions** or **Tasks** pane.

### Launching Printer console

1. In the OpsMgr console, navigate to **Diagram Views**.
2. Expand the **Diagram Views** and select the desired Dell printer.
3. In the **Actions** or **Tasks** pane:
  - a. For OpsMgr 2007 R2, click **SNMP Network Device Tasks** → **Launch Printer Console**.
  - b. For OpsMgr 2012 and OpsMgr 2016, click **Node Tasks** → **Launch Printer Console**.




# Customizing Dell Printer Management Pack

The Dell Printer Management Pack allows you to customize discovery, monitoring, and alert rules of your Dell printers. You can customize the following components:

- **Monitors** — Assess 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 requires monitoring.
- **Rules** — Collects data, such as events generated by managed objects.


## Unit Monitors

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

- **Enabled** — Allows you to enable or disable monitors. You can set the **Override** setting to **True** or **False**.  
 **NOTE: The default setting is True.**
- **Interval In Seconds** — The frequency (in seconds) with which the management pack polls the Dell Printers to check the health of a component. The default value for this attribute is 21600 seconds (6 hours).

## Object discoveries

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

- **Enabled** — Allows you to enable or disable. You can set the **Override Setting** to **True** or **False**.  
 **NOTE: The default setting is True.**
- **Interval in Seconds** — Specifies the frequency (in seconds) with which the Dell Printer Management Pack discovers the component instance and attributes of your Dell printer. The default value for this attribute is 86400 seconds (24 hours).

## Customizing alert rules

You can customize the alert rules by setting override parameters for the rules.

To customize the rules:

1. In the OpsMgr console, click **Authoring**.
2. In the **Authoring** pane, navigate to **Management Pack Objects**, and click **Rules**.
3. In the **Rules** pane, expand the Dell printer instance and select a rule.
4. Right-click the rule and select **Overrides**.
5. 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 for the rule.

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

# Troubleshooting

## Issues and resolutions

The following table lists the known issues and resolutions.

**Table 4. Known issues and resolutions**

Issue	Resolution
Dell alerts are not sorted chronologically.	<p>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.</p> <p>Registry edit:</p> <p>HKEY_CURRENT_USER\Software\Microsoft\Microsoft Operations Manager\3.0\Console\% GUID.ViewTitle %AlertsView\Age</p> <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 may crash 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> may 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 as a	Microsoft <b>KB951526</b> available at <a href="http://support.microsoft.com">support.microsoft.com</a> resolves this issue.

Issue	Resolution
result of this Health Service crash. You may notice unexpected behavior in the discovery and monitoring of Dell devices.	
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.
Tables in Alert KB are shown without borders.	Right-click an alert and select <b>Properties</b> in the <b>Alerts</b> pane to view the tables with borders in the <b>Alert Properties</b> window.

## Related documentation and resources


This chapter gives the details of the documents and references to help you work with Dell Printer Management Pack.

### Microsoft guidelines for performance and scalability for OpsMgr

For information on Microsoft's recommendations for scalability, see the Microsoft website at [technet.microsoft.com](http://technet.microsoft.com).

 **NOTE:** For improved performance, make sure that the Autogrow Option is enabled in the Operations Manager Database for improved performance.

### 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](http://dell.com/support).
2. Select your support category.
3. If you are not a U.S. customer, select your country code at the bottom of the [dell.com/support](http://dell.com/support) page, or select **All** to see more choices.
4. Select the appropriate service or support link based on your need.

### Accessing documents from the Dell EMC support site

You can access the required documents using the following links:

- For Dell EMC Enterprise Systems Management documents — [Dell.com/SoftwareSecurityManuals](http://Dell.com/SoftwareSecurityManuals)
- For Dell EMC OpenManage documents — [Dell.com/OpenManageManuals](http://Dell.com/OpenManageManuals)
- For Dell EMC Remote Enterprise Systems Management documents — [Dell.com/esmmanuals](http://Dell.com/esmmanuals)
- For iDRAC and Dell EMC Lifecycle Controller documents — [Dell.com/idracmanuals](http://Dell.com/idracmanuals)
- For Dell EMC OpenManage Connections Enterprise Systems Management documents — [Dell.com/OMConnectionsEnterpriseSystemsManagement](http://Dell.com/OMConnectionsEnterpriseSystemsManagement)
- For Dell EMC Serviceability Tools documents — [Dell.com/ServiceabilityTools](http://Dell.com/ServiceabilityTools)
- For Client Command Suite Systems Management documents — [Dell.com/DellClientCommandSuiteManuals](http://Dell.com/DellClientCommandSuiteManuals)
- a. Go to [Dell.com/Support/Home](http://Dell.com/Support/Home).
- b. Click **Choose from all products**.
- c. From **All products** section, click **Software & Security**, and then click the required link from the following:
  - **Enterprise Systems Management**
  - **Remote Enterprise Systems Management**



- **Serviceability Tools**
  - **Dell Client Command Suite**
  - **Connections Client Systems Management**
- d. To view a document, click the required product version.
- Using search engines:
  - Type the name and version of the document in the search box.