Dell™ Printer Management Pack Version 4.0 For Microsoft® System Center Operations Manager 2007 and System Center Essentials 2007

User's Guide

Notes and Cautions

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 if instructions are not followed.

Contents

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Introduction

This document is intended for system administrators who use the Dell™ Printer Management Pack version 4.0 to manage and monitor Dell printers.

> **NOTE:** The Dell Printer Management Pack is supported on Microsoft® Systems Center Operations Manager (SCOM) 2007 SP1/R2 and Systems Center Essentials (SCE) 2007 SP1 versions.

With the integration of the Dell Printer Management Pack with SCOM or SCE environment, you can manage, monitor, and ensure the availability of supported Dell printers.

> ⚠ **CAUTION: The procedures in this document should be performed only by personnel with knowledge and experience in using the Microsoft Windows operating system and the SCOM or SCE. Due to the possibility of data corruption and/ or data loss, it is recommended that only such persons use the procedures described in this document.**

The readme file packaged with the management pack contains the latest information about software and management station requirements, in addition to information about known issues. The readme file is posted to the Systems Management documentation page on the Dell Support website at **support.dell.com/manuals**. The readme files are also packaged in the self-extracting executable **Dell_Printer_Management_Pack_v4.0_A00.exe** file.

All references to SCOM in this guide are applicable to SCE as well, unless otherwise explicit product and version information is mentioned specifically.

Accessing the Management Pack and Documentation

The Dell Printer Management Pack (MP) version 4.0 consists of the following:

- Dell Base Library (Sealed) MP: **Dell.Connections.HardwareLibrary.mp**
- Dell Printer (Sealed) MP: **Dell.NetworkDevice.Printer.mp**

> **NOTE:** The MP also contains a PrinterTrapDescription folder, which contains a reference guide on Printer traps.

The Dell Printers MP and readme file, along with this user's guide are packaged in a self-extracting executable Dell_Printer_Management_Pack_v4.0_A00.exe file. You can download the .exe from the Dell Support website at **support.dell.com**.

What is New in Dell Printer Management Pack Version 4.0?

Dell Printer MP version 4.0 provides performance improvements over the previous releases by providing a stand-alone management pack for managing Dell printers. The previous releases (Dell MP version 3.1.1 and earlier) provided only one management pack for managing Dell servers and printers. Now, you can import only the Printer MP for managing Dell printers and provide granularity.

The Dell Printer MP supports both Simple Network Management Protocol (SNMP) version1 and SNMP version2 printers.

Understanding Dell Printer Management Pack Version 4.0

Dell Hardware Group Definition

The base folder utility, **Dell.Connections.HardwareLibrary.mp** defines the Dell Hardware group.

The Dell Printer MP refers to this base folder utility. After you import this utility and any of the other management packs, the corresponding hardware components are placed under Dell Hardware group.

When you delete or uninstall the Dell Printer MP, the corresponding printers under Dell the Hardware group are removed.

Dell Printers

The Dell Printer MP enables SCOM and SCE to accurately depict the status of Dell printers on a defined network segment.

The Dell Printer MP groups the printers present in the network and displays their attribute information.

The Dell Printer MP provides the following features to manage Dell printers:

- Discover and group Dell printers

- Attribute information for Dell printers

- Provide health status of Dell printers through periodic polling

- Launch the Printer Console

- Process SNMP traps and link to knowledge base for printer trap

NOTE: For the **Reference Guide** link present in the **Printer Trap Details** feature to work, maintain the **PrinterTrapDescription** folder in the Printer MP default location. The default location is **C:\Dell Management Packs\Printer Management Pack\4.0**.

Supported Dell Devices

The Dell Printer MP version 4.0 supports the following printers:

Table 1-1.

Mono Laser Printer	Color Laser Printer	Mono Laser Multifunction Printer	Color Laser Multifunction Printer
Dell 5310n	Dell 3110cn	Dell 1815n	Dell1235cn
Dell 5210n	Dell 3010cn	Dell 2335dn	Dell 2135cn
Dell 1720dn	Dell1320c		Dell 2145cn
Dell 5330dn	Dell 2130cn		Dell 3115cn
Dell 7330dn	Dell 3130cn		
Dell 2330dn			

Obtaining Technical Assistance

If at any time you do not understand a procedure described in this guide, or if your product does not perform as expected, different types of help are available. For more information see "Getting Help" in your system's *Hardware Owner's Manual*.

Additionally, Dell Enterprise Training and Certification is available. For more information, see **dell.com/training.** This service might not be offered in all locations.

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Getting Started

Requirements

Generic Requirements

- To discover Dell™printers on your network, enable Simple Network Management Protocol(SNMP)on printers, and perform network device discovery.

- Ensure all SNMP-enabled printers have a valid IP address that you can communicate from the management station.

Printers

- The Dell Printer Mangement Pack (MP) functions even if the System Center Operations Manager(SCOM) or System Center Essentials(SCE) Management Server Action account has normal user privileges on all Dell managed systems.

- The Dell Printer MP discovers and monitors Dell printers that support Community-based SNMP version1 and version2.

Configuring Management Account

To configure a management account, follow these steps:

1. Install SCOM on the management station, with **Management Server Action Account** as a Domain user.

2. Import the Dell Printer MP on the management station.

3. Initiate discovery of printers using the **Network Devices Discovery** wizard.

4. Wait till the printer is discovered again by the management pack.

Importing Management Packs into SCOM

NOTE: Import the base folder utility (**Dell.Connections.HardwareLibrary.mp**) before importing the printer management pack.

To import the Printer MP, use the **SCOM Import Management Pack** wizard:

1 Download the management pack from the Dell Support website at **support.dell.com**.

The **Dell_Printer_Management_Pack_v4.0_A00.exe** is a self-extracting **.exe** file.

2 Copy the downloaded file to the destination directory on the hard drive of your local system.

3 Open the **Dell_Printer_Management_Pack_v4.0_A00.exe** file to extract the management pack and base folder utility.

4 Click **Start** →**Programs** →**System Center Operations Manager 2007** and select **Operations Console.**

5 In the **Operations Console**, click **Administration** on the navigation pane.

6 Expand the **Administration** tree, right-click **Management Packs**, and select **Import Management Packs.**

7 Click **Add.** Select the **Add from disk** option.

8 Type or browse to the location of the management pack or utility files, which is usually the same location to which you downloaded and extracted the contents of the **Dell_Printer_Management_Pack_v4.0_A00.exe** file.

9 Select the management pack or utility you want to import and click **Open.**

The **Import Management Packs** screen appears with the selected management packs or utilities displayed in the **Import List**.

10 Click **Install** to complete the task.

Microsoft Guidelines for Performance and Scalability for Operations Manager 2007 SP1/R2

For optimal performance, deploy device-specific Dell Management Packs on different management stations.

For information on Microsoft's recommendations for scalability, see the Microsoft website at **http://technet.microsoft.com/hi-in/library/bb735402(en-us).aspx.**

NOTE: Ensure that the Autogrow Option is enabled in Operations Manager Data Warehouse and/ or Database.

Upgrading From the Previous Management Packs

Upgrading from the previous management pack is not supported. Ensure you delete Dell Server and Printer Management Pack 3.1.x (**Dell.Connections.001.mp**) prior to importing the Dell Printer MP version 4.0.

For information on the steps to import Dell Printer MP version4.0, see "Getting Started."

Deleting the Management Packs

While deleting the Dell Printer MP, ensure that you delete the management pack before deleting the base folder utility.

1 Select **Administration** →**Management Packs** in the SCOM 2007 Operations Console.

2 Select the Dell Printer MP from the **Management Packs** pane.

3 Right-click the selected Dell Printer MP and click **Delete.**

After you delete the management pack or utility, it is recommended that you close and re-launch the SCOM Console.

NOTE: Deleting any of the management packs may affect the scope of some user roles.

Security Considerations

Operations Console access privileges are handled internally by SCOM. This can be setup using the **User Roles** option under **Administration →Security** feature on the SCOM console. The profile of the role assigned to you determines what actions you can perform. For more information on security considerations see the *Microsoft Operations Manager 2007 SP1/R2* or the *Microsoft Systems Centre Essentials SP1 online help*.

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Understanding Dell™ Printer Management Pack Operations

Features

The Dell Printer Management Pack (MP) version 4.0 provides the following features to manage Dell printers:

- Discover and group Dell printers
- Attribute information for Dell printers
- Provide health status of Dell printers through periodic polling
- Launch the printer console
- Process SNMP traps and provide knowledge base for printer traps

Discovery

Dell printers can be classified as network devices. To discover Dell devices, the devices must appear in the **Network Devices** view under the **Administration** section of the Operations Console.

To add a Dell printer to the **Network Devices** list:

1 Log on to the system with an account that has the System Centers Operations Manager(SCOM) Administrators role, for the SCOM Management Group.

2 In the Operations Console, click **Administration**.

3 At the bottom of the navigation pane, click **Discovery Wizard**. The **Introduction** screen is displayed.

4 Click **Next** after reading the instructions on the **Introduction** screen.

5 Select **Advanced Computer Discovery**, select **Network Devices** in the **Computer & Device Types** menu, and click **Next**.

> **NOTE:** In SCOM 2007 R2, select **Network Devices** in the **Computer & Device Types** menu, and click Next.

6 Type the **Start** and **End** of the IP address range that you want to scan, type the SNMP Community, and select the SNMP version.

7 Click **Discover**. The **Discovery Progress** page is displayed.

8 On the **Select Objects to Manage** page, select the devices you want to manage and click **Next**.

9 Click **Finish**.

Monitoring

The Dell Printer MP provides three views for monitoring the Dell Printers. The views are:

• Alerts View

• Diagram View

• State View

Alerts View

The Alerts View displays alerts for the Simple Network Management Protocol (SNMP)traps received from the Dell printers that are managed by SCOM or SCE.

Figure 3-1 displays the Alerts processed by SCOM from the SNMP traps received from the printers.

Alerts View

Figure 3-1. Alerts View

To view the **Alerts** for the printers you are monitoring:

1   In the **Operations Console**, click **Monitoring**.

2   In the Monitoring pane, click **Dell→Alerts Views→Printer Alerts.**

3   Select an item in the view to display its details in the **Details View** pane.

📝 **NOTE:** You can refer to the **Reference Guide** for printer traps using the link provided in the **Details** view to troubleshoot. Copy the link and paste it on your browser to access the guide.

Diagram View

The **Diagram View** displays a hierarchical and graphical representation of all Dell printers on your network that SCOM or SCE manages. The **Diagram View** offers the following:

•   Complete Diagram View

•   Printer Group

📝 **NOTE:** You can launch device or component specific tasks from the **Actions** pane of the Operations Console. For more information on launching tasks, see "Tasks".

Complete Diagram View

Figure 3-2.   Complete Diagram View
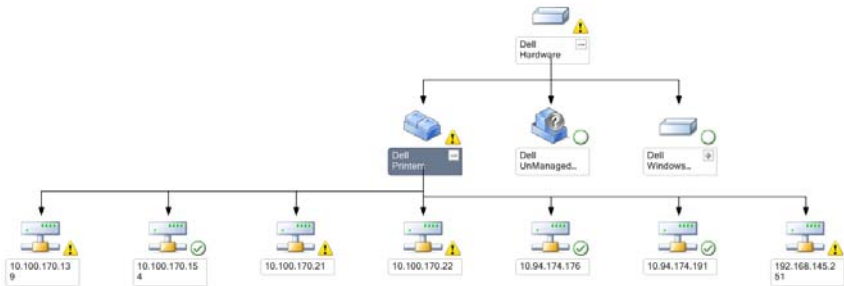
The **Complete Diagram View** offers a graphical representation of all Dell devices that SCOM or SCE manages and allows you to expand and verify the status of individual devices and their components in the diagram. You can view details for Dell printers with the **Complete Diagram** view.

To access the **Complete Diagram View**:

1   In the **Operations Console**, click **Monitoring**.

2   In the Monitoring pane, click **Dell→Diagram Views →
    Complete Diagram View.**

3   Select a component in the diagram to view its details in the
    Detail View pane.

Dell Printer Group View

Figure 3-3.   Dell Printer Group Diagram

The **Printer Group** view offers a graphical representation of all Dell Printers that
SCOM/SCE manages and allows you to expand and verify the status of
individual printers in the diagram. The root node for this view is the **Dell
Printers** group.

To access the **Printer Group View**:

1   In the Operations Console, click **Monitoring**.

2   In the Monitoring pane, click **Dell→Diagram Views →Printer Group.**

3   Select a printer in the diagram to view its details in the **Detail View** pane.

    NOTE: For security reasons, SCOM or SCE displays the Community String
    attribute as an encoded string value.

State View

The State view displays the status of each Dell device managed by SCOM or
SCE on your network.

The Dell Printers MP provides a list of severity level indicators to help you
monitor the health of the Dell printers on the network.

To access the State View:

1 In the Operations Console, click **Monitoring**.

2 In the **Monitoring** pane, click **State View→Printer**.

   The Operations Console displays the status of all the Dell printers that you
   are monitoring on the right pane.

3 Select a state to view its details in the **Detail** view.

State Components and Severity Levels

Table 3-1.   Severity Level 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, 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 health status is not applicable for the specific component.
	The service is unavailable.

Tasks

Tasks are available in the **Actions** pane of the Operations Console. When you
select a device or a component in any of the Dell diagram views, the relevant
tasks appear in the **Actions** pane.

NOTE: You can run the tasks from the Diagram view, State view, or the Alert view.

Dell Printer Tasks

Launch Printer Console

1 In the Operations Console, navigate to a **Dell Diagram** view.

2 Expand the diagram and select the desired Dell printer.

3 In the **Actions** pane, select **SNMP Network Device Tasks→Launch Printer Console**.

Web Console

The Web console server enables you to monitor and manage your Dell devices with Dell Printer Management Pack using a browser instead of the Operations Manager 2007 console. You can use the Web console server without installing the Operations console. Using the Web console has the following limitations:

- Provides only the Monitoring feature for the management pack
- Console launch tasks are not available
- Administration, Authoring, and Reporting are not available
- Personalize view is not available
- Tool tip is not available

Customizing the Printer Management Pack

The Dell Printer MP allows you to customize discovery and monitoring of your Dell devices. You can customize the following components:

- **Monitors**: Monitors to 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**: Object discoveries are used to find objects on a network that need to be monitored.

📝 **NOTE:** For more information, see SCOM 2007 SP1/ R2 documentation.

Unit Monitors

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

- **Enabled**: Allows you to enable or disable Monitors. You can choose the **Override Setting** to be **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.
- **Unit Monitor:** Monitor triggered by a periodic poll configured as IntervalSeconds. The default value for this attribute is 6 hours.

  This is a Unit Monitor for printer availability and it indicates the health of your Dell printer.

Object Discoveries

You can customize the following object discovery parameters, using overrides:

Enabled: Allows you to enable or disable discoveries. You can choose 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 24 hours (one day).

Customising Alert Rules

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

To customize the rules:

1 Click the **Authoring** tab in the Operations Console.

2 Select **Rules** under **Management Packs** in the **Authoring** pane.

3 In the **Rules** pane, select **Dell Printer instance** and select a rule.

4 Right-click the rule and select the **Overrides** option.

5 Select **Disable the Rule** and any of the sub-options to disable the rule.

6 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.

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

A

Appendix- A

Known Issues in SCOM/SCE

1   The Dell™ Management Pack Diagram Views displays a
    blank screen intermittently.

    The actual diagram view will not come up even after refreshing the
    screen several times.

2   Under certain conditions, the following error messages are displayed on
    the Operations console of the management station:

    - `MonitoringHost.exe Handle Count Threshold Alert`
      `Message (Management Server)`

    - `MonitoringHost.exe Private Bytes Threshold`
      `Alert Message (Management Server)`

    To resolve this issue, see Microsoft KB968760 available on the Microsoft
    support site at **support.microsoft.com**.

3   Under certain conditions, an error message is displayed on the Operations
    console of the management station with an Event ID 623 and Event
    Source as Health Service ESE Store.

    To resolve this issue, see Microsoft KB975057 available on the Microsoft
    support site at **support.microsoft.com**.

4   Dell alerts are not sorted according to their age.

    Check the registry on the machine that has this problem. There could be a
    left over view definition that has the sorting flags set to 'false'. In some
    instances, when you import an MP with changes to the sort flags, it may
    not get updated in the registry. If you delete the settings for the view in the
    registry, they will be recreated from the new MP when you navigate to that
    view again. You can also edit the sort flags in the registry for the view.
    Registry edit: HKEY_CURRENT_USER\Software\Microsoft\Microsoft
    Operations Manager\3.0\Console\%GUID.ViewTitle%AlertView\Age For
    sorting to be enabled, ensure the keys IsSortable and IsSorted are set to 1.

5 Under certain conditions, the following error messages are displayed on the Operations console of the management station:

- `MonitoringHost.exe Handle Count Threshold Alert Message (Management Server)`

- `MonitoringHost.exe Private Bytes Threshold Alert Message (Management Server)`

To resolve this issue, see Microsoft KB968760 available on the Microsoft support site at support.microsoft.com resolves this.

Known Limitations

SCOM / SCE

Path Name attribute value is not unique and proper for all Dell Hardware devices.

The format of Path Name attribute value for Agent-based discovered devices and SNMP-based discovered devices are different. This is according to the design of SCOM 2007.

Dell Printer Management Pack v4.0

In the SCE **Diagram** view, for Dell network devices (Printers), you can view the SNMP interface objects under the Dell network device object.

In the **Diagram** view for Dell network devices, the basic attributes are displayed for the Dell Printer objects. You can view the detailed set of attributes by clicking on the objects in the **State** view.

Microsoft® Fixes for SCOM 2007 SP1

1 **The SCOM console displays a run time error.**

   A run time error (Microsoft Visual C++ Runtime Library) with the following message is displayed under some instances- Runtime Error! Program: C:\Program Fil... R6025 - pure virtual function call.

   To resolve this issue, see Microsoft KB951526 available on the Microsoft support site at **support.microsoft.com**.

2 **The System Center Operations Manager 2007 console may crash in Windows Server™ 2008 or in Windows Vista™ when you open the Health Explorer window.**

   In the Alerts view, when you right-click an item to open the Health Explorer window, the System Center Operations Manager 2007 console may stop responding. You cannot use Health Explorer to see any monitored objects in Windows Server 2008 or in Windows Vista™.

   To resolve this issue, see Microsoft KB951327 available on the Microsoft support site at **support.microsoft.com.**

3 **When you upgrade an Operations Manager agent system from Windows Server 2003 to Windows Server 2008, the Health Service does not start on the computer.**

   This issue occurs because the upgrade removes the certificate store in which the Health Service includes its certificate for secure storage data encryption. When the secure storage manager component of the Health Service initializes, it fails if there is a certificate serial number that is set, but the store does not exist.

   To resolve this issue, see Microsoft KB954049 available on the Microsoft support site at **support.microsoft.com** .

4 **The Operations Manager Web Console does not display pages correctly because of changes in User Access Control (UAC) in Windows Server 2008**.

You may experience one or more of the following situations:

- The Web Console does not open.
- The My Workspace page does not display.
- Performance and Power Monitoring Views do not display.

To resolve this issue, see Microsoft KB954049 available on the Microsoft support site at **support.microsoft.com**.

5 **After you upgrade a computer that performs the Operations Manager Management Server role from Windows Server 2003 to Windows Server 2008, the Operations Manager performance counters are not registered.**

To resolve this issue, see Microsoft KB954049 available on the Microsoft support site at **support.microsoft.com.**.

6 **The SCOM console shows a Health service error message. SCOM generates the error - "Health service host process has stopped working".**

The error message - "Health service Host Process encountered a problem and needed to close" pops up once in a while. As a result of this Health Service Crash, you may notice unexpected behavior in the discovery and monitoring of Dell devices.

To resolve this issue, see Microsoft KB951526 available on the Microsoft support site at **support.microsoft.com**.