

# **Dell Server PRO Management Pack Version 4.0 For Microsoft System Center Virtual Machine Manager Installation 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

This guide provides information on software prerequisites and requirements to install and uninstall Dell Server Performance and Resource Optimization Management Pack (PRO Pack) version 4.0. Dell PRO Pack is a tool to monitor Dell systems and take remedial action when an inefficient system is identified.

The Dell PRO Pack version 4.0 integrates with the following:

- Microsoft System Center 2012 R2 Operations Manager
- Microsoft System Center 2012 SP1 Operations Manager
- Microsoft System Center 2012 Operations Manager
- Microsoft System Center 2012 R2 Virtual Machine Manager
- Microsoft System Center 2012 SP1 Virtual Machine Manager
- Microsoft System Center 2012 Virtual Machine Manager

This integration enables you to proactively manage virtual environments and ensure high availability of your Dell systems.

To implement PRO Pack, see the User's Guide at [dell.com/support/manuals](http://dell.com/support/manuals).



**NOTE:** All references to Operations Manager in this document is applicable to Microsoft System Center 2012 R2 Operations Manager, Microsoft System Center 2012 SP1 Operations Manager, and Microsoft System Center 2012 Operations Manager unless otherwise specified.



**CAUTION:** Due to the possibility of data corruption and/or data loss, it is recommended that the procedures in this document should be performed only by personnel with knowledge and experience of using the Microsoft Windows operating system and all supported versions of Operations Manager and Virtual Machine Manager.

The Management Pack Suite Installer, Installation Guide, and Release Notes files are packaged in a self-extracting executable **Dell\_PROPack\_v4.0\_A00.exe** file. You can download the executable from [dell.com/support](http://dell.com/support).

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

## Minimum Requirements

To install and implement the Dell PRO Pack version 4.0, make sure that the minimum execution environment exists on the following components:

- Management station:
  - Installation of System Center 2012 R2 Operations Manager, System Center 2012 SP1 Operations Manager, or System Center 2012 Operations Manager on supported hardware and operating system

- Installation of Microsoft System Center 2012 R2 Virtual Machine Manager (VMM), Microsoft System Center 2012 SP1 Virtual Machine Manager (VMM) or Microsoft System Center 2012 Virtual Machine Manager (VMM) on supported hardware and operating system
- Integration of Operations Manager, and VMM
- Install VMM Admin Console on management systems in which Operations Manager is integrated with VMM for Performance and Resource Optimization (PRO).
- Managed system:
  - Microsoft Hyper-V hosts on any Dell PowerEdge systems ranging from 10th generation to 13th generation (both inclusive).
  - Dell OpenManage Server Administrator (including the Dell OpenManage Server Administrator Storage Management Service)
    - \* Install OpenManage Server Administrator 7.2, or later versions
    - \* Minimum supported version of OpenManage Server Administrator is 7.2
- Live Migration:
  - VMM 2012 with Windows Server 2012 SP1, Windows Server 2012 R2, Windows Server 2008 R2, Hyper-V Server 2008 R2, or Hyper-V Windows Server 2012

You can download the latest version of OpenManage Server Administrator from [dell.com/support](http://dell.com/support).

 **NOTE:** For the list of supported operating systems for Operations Manager and VMM, see the **Microsoft TechNet Library** at [technet.microsoft.com/hi-in/library/default\(en-us\).aspx](http://technet.microsoft.com/hi-in/library/default(en-us).aspx).

## Supported Operating Systems

For information on the supported operating systems for Dell Pro Pack version 4.0 see the Dell PRO Pack release notes. The release notes, **DellMPv40\_PROPack\_Readme.txt**, is packaged in the self-extracting executable file **Dell\_PROPack\_v4.0\_A00.exe**.


## Installing Operations Manager and VMM Agents

When you use the setup to monitor the infrastructure, Operations Manager agents installed on the managed hosts enable data transfer between the managed system and management stations. Agents of both VMM and Operations Manager are manually or automatically installed during the discovery process on all Hyper-V hosts.

## Integrating Operations Manager with VMM

For the setup to support Dell PRO Pack, Operations Manager must be integrated with VMM. For more information, see the Microsoft TechNet Library at [technet.microsoft.com](http://technet.microsoft.com).

## Importing Dell PRO Pack

 **NOTE:** For alerts and PRO Tips, make sure that VMM discovers the managed objects and displays them in the **State View**.

Dell PRO Pack version 4.0 is provided as a **.mp** file.

To import Dell PRO Pack:

1. Download the **Dell\_PROPack\_v4.0\_A00.exe** file from **dell.com/support** to a removable media or a local repository.
2. Extract the contents of the file to a folder on the system.
3. Launch the Operations Manager console.
4. On the **Administration** tab, right-click **Management Packs** and click **Import Management Packs**.  
The **Select Management Pack to import** window is displayed.
5. Click **Add** → **Add from disk**.
6. Browse the location where you extracted the **Dell\_PROPack\_v4.0\_A00.exe** file and select **Dell.Connections.hyperv.PROPack.mp** and **Dell.Connections.hyperv.PROPackExt.mp** file.
7. Click **Open**.

The **Import Management Packs** window is displayed.



**NOTE:** When you manually install a management pack, Operations Manager displays a generic warning as a part of the security process. For more information, see the **Microsoft TechNet Library**. Click **Close** to close the security warning message.

8. Click **Install**.  
A confirmation dialog box is displayed.
9. Click **Yes**.

Once the import of Dell PRO pack is completed, proceed to the planning step, to enable PRO Monitors relevant for your environment. For more information, see [Planning the Environment for PRO Tips](#).

## Planning the Environment for PRO Tips

You can plan for enabling the PRO Monitors that are relevant for the environment. By default, all the PRO Monitors are disabled in the Dell PRO Pack. For the list of alerts and the recovery actions, see the *Alerts and Recovery Actions* section in the *Dell Server PRO Management Pack Version 4.0 For Microsoft System Center Virtual Machine Manager User's Guide*. Select the alerts that you want to enable. Using Operations Manager Authoring Console (or) Authoring Pane in Operations Manager console, create an override for the management packs that enables the relevant PRO Monitors. Steps for enabling the PRO Monitors are as follows:

1. Launch the Operations Manager console.
2. From the navigation pane, click **Authoring**.
3. In the **Authoring** tab, select **Management Pack Objects** → **Monitors**.
4. Click **Change Scope** at the top of the screen.  
The **Scope Management Pack Objects** screen is displayed.
5. Select **View all targets** and in **Look for** enter **Dell PRO**.
6. Select **Dell\_PROPack Class for Discovery** and click **OK**.
7. Expand **Entity Health** → **Availability**.
8. From the listed monitors, right-click the monitors you want to enable, and select **enable** → **Overrides** → **Override the Monitors** → **For all objects of class: Dell\_PROPack Class for Discovery**.  
The **Override Properties** page is displayed.
9. Select **Enabled** and set **Override Value** to **True** and click **OK**.  
To view the Dell PRO Monitored Servers Health updates, the next cycle of Dell PRO Monitored Servers discovery and monitoring must complete.

# Configuring PRO Tips

The Dell systems and virtual infrastructure are monitored for both Critical and Warning alerts.

- A **Warning** alert is generated when the reading of a component is above or below the acceptable level. For example, the component may be functioning, but it may be functioning in an impaired state.
- A **Critical** alert is generated when a component has either failed or failure is imminent.

## Enabling PRO Tips

To enable PRO Tips for both **Warning** and **Critical** alerts and automatically implement PRO Tips:

1. Launch the VMM console.
2. Click **Settings** → **System Center Settings**.
3. Right-click **Operations Manager Settings** and click **Settings**.

The **Operations Manager Settings** window is displayed, as shown in the following figure.

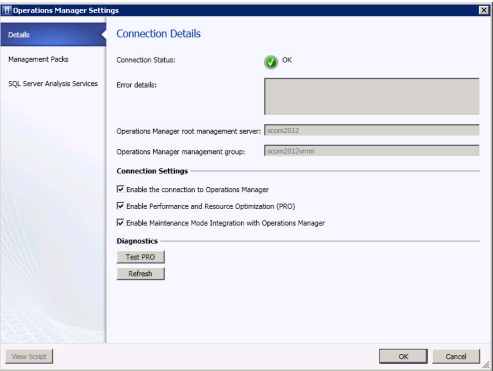


Figure 1. Configuring PRO Tips Properties

4. Make sure that the **Enable Performance and Resource Optimization (PRO)** check box is selected.
5. Click **OK** to save your settings.


## Testing the Setup Using Scenarios

To confirm that the imported Dell PRO Pack is fully functional, create the scenarios listed in the following table and check if the activities listed under Expected System Response column are carried out.

Scenario - The Ambient System Temperature exceeds its warning threshold value on a managed system.

 **CAUTION: Run this test on a server which does not run any Workloads.**

Your Actions	Expected System Response
Using OpenManage Server Administrator, generate a temperature-alert warning on the managed system by configuring the <b>Maximum Warning Threshold</b> value to be lesser than the current <b>System Board Ambient Temperature</b> . For more	<ul style="list-style-type: none"><li>• The state of the server changes appropriately. In this case, it changes to Warning.</li><li>• Dell PRO Pack generates the corresponding alert in Operations Manager.</li><li>• Operations Manager passes an alert associated with the PRO Tip to VMM.</li></ul>

Your Actions	Expected System Response
information, see the <i>Dell OpenManage Server Administrator User's Guide</i> .	<ul style="list-style-type: none"> <li>PRO Tip is displayed in the VMM <b>PRO Tip</b> window. In this case it is a <b>Warning</b>.</li> </ul>
 <b>CAUTION: Make sure to restore the temperature sensors to default value after the test is complete.</b>	
Select the <b>Implement</b> option in the <b>PRO Tip</b> window.	Places the host in <b>Restrict</b> mode.
Verify that the host is placed in the <b>Restrict</b> mode and the <b>PRO Tip</b> has resolved the alert.	<ul style="list-style-type: none"> <li>After successful implementation of the PRO Tip, the status changes to <b>Resolved</b> and the PRO Tip entry moves out of the <b>PRO Tip</b> window.</li> <li>Corresponding alert disappears in the <b>Operations Manager Alert View</b>.</li> </ul>
Select the <b>Dismiss</b> option instead of the <b>Implement</b> option in the <b>PRO Tip</b> window.	Dismisses the PRO Tip. No recovery task is performed. The corresponding PRO Tip entry moves out of the <b>PRO Tip</b> window.


## Upgrading from Previous Management Packs

### Upgrading from Dell PRO Pack Version 3.0.1 and 3.0 Version

You can upgrade from Dell PRO Pack version 3.0.1, and version 3.0 by importing the version 4.0 management pack. To import the Dell PRO Pack version 4.0, follow the steps as given in [Importing Dell PRO Pack](#).

## Uninstalling Dell PRO Pack

You can uninstall Dell PRO Pack by deleting it in the Operations Manager console. When you delete Dell PRO Pack, all the settings and overrides associated with it are removed from Operations Manager.

 **NOTE:** Close all the PRO Tips before uninstalling the Dell PRO Pack.

To uninstall the Dell PRO Pack:

1. Launch the Operations Manager console.
2. Click **Administration** → **Management Packs**.
3. In the **Management Packs** pane, right-click **Dell PRO-enabled Management Pack** and click **Delete**.

## Security Considerations

Operations Console access privileges are handled internally by Operations Manager. This can be setup using the **User Roles** option under **Administration** → **Security** feature on the Operations Manager console. The profile of the role assigned to you determines what actions you can perform and which objects you can manage. For more information on security considerations, see the documentation for Microsoft System Center 2012 R2 Operations Manager, Microsoft System Center 2012 SP1 Operations Manager, or Microsoft System Center 2012 Operations Manager Online Help at [technet.microsoft.com](http://technet.microsoft.com).



## Accessing documents from Dell support site

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

- Using the following links:
  - For all Enterprise Systems Management documents — [dell.com/softwaresecuritymanuals](https://dell.com/softwaresecuritymanuals)
  - For Enterprise Systems Management documents — [dell.com/openmanagemanuals](https://dell.com/openmanagemanuals)
  - For Remote Enterprise Systems Management documents — [dell.com/esmmanuals](https://dell.com/esmmanuals)
  - For OpenManage Connections Enterprise Systems Management documents — [dell.com/OMConnectionsEnterpriseSystemsManagement](https://dell.com/OMConnectionsEnterpriseSystemsManagement)
  - For Serviceability Tools documents — [dell.com/serviceabilitytools](https://dell.com/serviceabilitytools)
  - For Client Systems Management documents — [dell.com/clientsystemsmanagement](https://dell.com/clientsystemsmanagement)
  - For OpenManage Connections Client Systems Management documents — [dell.com/connectionsclientsystemsmanagement](https://dell.com/connectionsclientsystemsmanagement)
- From the Dell Support site:
  - a. Go to [dell.com/support/home](https://dell.com/support/home).
  - b. Under **General support** section, click **Software & Security**.
  - c. In the **Software & Security** group box, click the required link from the following:
    - **Enterprise Systems Management**
    - **Remote Enterprise Systems Management**
    - **Serviceability Tools**
    - **Client Systems Management**
    - **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.