

Dell Server Management Pack
Suite Version 4.1 For Microsoft
System Center Operations
Manager 2007 SP1/R2, System
Center Essentials 2007 SP1/
2010

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 and tells you how to avoid the problem.

Information in this document is subject to change without notice.

© 2010 Dell Inc. All rights reserved.

Reproduction of these materials in any manner whatsoever without the written permission of Dell Inc. is strictly forbidden.

Trademarks used in this text: Dell™, the DELL logo, PowerEdge™, PowerVault™, and OpenManage™ are trademarks of Dell Inc. Broadcom® is a registered trademark of Broadcom Corporation. Intel® is a registered trademark of Intel Corporation in the United States and/or other countries. Microsoft®, Windows®, Windows Server®, and Windows Vista® are either trademarks or registered trademarks of Microsoft Corporation in the United States. Other trademarks and trade names may be used in this publication to refer to either the entities claiming the marks and names or their products. Dell Inc. disclaims any proprietary interest in trademarks and trade names other than its own. Dell is not responsible for the availability of external websites or their contents.

December 2010

Contents

1	Introduction	7
	Contents of the Management Pack Suite	7
	What is New in Dell Server Management Pack Suite Version 4.1	8
	Key Features of Dell Server Management Pack Suite	9
	About Dell Server Management Pack Suite v4.1	11
	Supported Dell Devices	13
	Supported Operating Systems	14
	Supported Firmware Versions	15
2	Getting Started	17
	Management Server (MS) Requirements	17
	Software Requirements	17
	Discovery Requirements	18
	Security Configuration	18
	Chassis Modular Server Correlation Requirement	19
	Managed System Requirements	19
	Dell System Requirements	19
	Configuring Management Server Action Account With Normal User Privilege	21

Dell CMC/DRAC MC Requirements	21
Installing the Dell Server Management Pack Suite v4.1	21
Pre-import Tasks	21
Importing the Management Packs	22
Post-Import Tasks for the Dell Server Management Pack Suite v4.1	23
Configuring the Dell Chassis Management Controller Management Pack for Discovering Server Modules and Chassis Slot Summary	23
Creating Advanced Power Control and LED Identification Tasks	24
Upgrading From the Previous Management Packs	26
From Dell Server Management Pack Suite v4.0	26
Post Upgrade Tasks	26
From Dell Server Management Pack 3.x	27
Uninstalling the Dell Server Management Pack Suite v4.1	27
Deleting the Management Packs	27
Before deleting the Dell CMC Management Pack 4.1	28
Access Privileges	29
3 Understanding Dell Server Management Pack Suite Operations	31
Overview	31
Web Console	31
Discovery and Grouping	32

Discovering a Dell System	32
Discovering DRAC and CMC Devices	33
Dell Hardware Discovery and Grouping	34
Objects Discovered by Dell Server Management Pack	35
Monitoring	37
Alerts View	38
Diagram View	39
State View	49
Performance and Power Monitoring Views	49
Tasks	51
Dell Modular and Monolithic Systems Tasks	52
Dell Remote Access Controller (DRAC) Tasks	56
Dell Chassis Management Controller (CMC) Tasks	56
Reports	57
OpenManage Windows Event Log	57
BIOS Configuration	58
Firmware and Driver Versions	58
RAID Configuration	58
Customizing the Dell Server Management Pack Suite	59
Unit Monitors	59
Object Discoveries	64
Rules	64

4	Related Documentation and Resources	67
	Microsoft Guidelines for Performance and Scalability for Operations Manager 2007 SP1/R2	67
	Other Documents You May Need	67
	Obtaining Technical Assistance	68
A	Appendix A- Issues and Resolutions	69
	Known Limitations	72

Introduction

The integration of the Dell Server Management Pack Suite v4.1 with Microsoft Systems Center Operations Manager (SCOM) 2007 SP1/R2, System Center Essentials (SCE) 2007 SP1/2010 environment allows you to manage, monitor, and ensure the availability of your Dell devices.



CAUTION: Perform the procedures in this document only if you have proper knowledge and experience in using Microsoft Windows operating system and the Systems Center Operations Manager 2007 SP1/R2, System Center Essentials 2007 SP1/2010, to avoid data corruption and/or data loss.



NOTE: Read the Management Pack's readme files, which contain the latest information about software and management server requirements, in addition to information about known issues. The readme files are 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_Server_Management_Pack_Suite_v4.1_A00.exe** file.



NOTE: All references to Systems Center Operations Manager (SCOM) 2007 SP1/R2 in this document are also applicable to System Center Essentials (SCE) 2007 SP1/2010.

Contents of the Management Pack Suite

The Dell Server Management Pack Suite v4.1 consists of the following:

Management Packs:

- Dell.WindowsServer.Scalable.mp
- Dell.WindowsServer.Detailed.mp
- Dell.OutOfBand.CMC.mp
- Dell.OutOfBand.DRAC.mp

Utilities:

- Dell.Connections.HardwareLibrary.mp (Base Folder utility)
- Dell.WindowsServer.InformationalAlertsOn.mp
- Dell.ChassisModularServer.Correlation.mp

Documentation:

- DellMPv41_Readme
- DellMPv41_CMC_Readme
- DellMPv41_DRAC_Readme
- DellMPv41_Server_Readme

The four Management Pack files, three utilities, and readme files are packaged in a self-extracting executable

Dell_Server_Management_Pack_Suite_v4.1_A00.exe file. You can download the executable from the Dell Support website at support.dell.com.

What is New in Dell Server Management Pack Suite Version 4.1

Table 1-1. New Features and Functionalities

New Feature	Functionality
Discovery and monitoring of server network interface cards	Supports: <ul style="list-style-type: none">• In-band discovery and monitoring of Physical and Teamed network interfaces for Broadcom and Intel network interface cards (NICs).• Display of enriched properties and attributes of network interface cards on systems running Server Administrator versions 6.2.0.1 - 6.4.• Performance graphs for physical and teamed network interfaces for Server Administrator version 6.2.0.1 and above.• Linkup and linkdown alerts in Network Interfaces Alerts view.• Correlation of physical and teamed network interfaces for Server Administrator version 6.2.0.1 and above in the Dell Modular Systems and Dell Monolithic Systems Diagram Views.
Discovery and monitoring of iDRAC vFlash Cards	Supports in-band discovery and monitoring of iDRAC vFlash card and iDRAC network interface under Dell systems.

Table 1-1. New Features and Functionalities (continued)

New Feature	Functionality
Discovery and monitoring – Chassis Management	Supports: <ul style="list-style-type: none">• Discovery of server modules and chassis slot summary for CMC and DRAC/MC Chassis.• Correlation of Dell Servers with Server Modules of CMC and DRAC/MC Chassis in the Chassis Management Controller Diagram View.
Additional Traps	Supports: <ul style="list-style-type: none">• All new traps introduced in Server Administrator versions 6.2.0.1 - 6.4.• Platform Event Traps (PET) for DRAC and iDRAC.
Remote Desktop Launch	Supports launching of remote desktop for discovered Dell systems from the Operations Manager Console

Key Features of Dell Server Management Pack Suite

Dell Server Management Pack Suite v4.1 provides these features for management of Dell Windows systems and out-of-band Dell devices:

Table 1-2. Features and Functionalities

Feature	Functionality
In-band Discovery and Monitoring - Dell Systems	Supports in-band discovery and monitoring of: <ul style="list-style-type: none">• Dell PowerEdge and PowerVault Monolithic and Modular systems running the supported Windows operating system.• Dell Remote Access Controllers (DRAC), iDRAC and IPMI devices through in-band.

Table 1-2. Features and Functionalities (continued)

Feature	Functionality
Discovery and Monitoring - Chassis Management	Supports: <ul style="list-style-type: none">• Out-of-band discovery and monitoring of Dell Chassis Management Controllers (CMC) and DRAC/ Modular Chassis (DRAC/MC) devices.• Supports discovery of server modules and chassis slot summary for CMC and DRAC/MC Chassis.• Correlation of Dell Servers with Server Modules of CMC and DRAC/MC Chassis.
Out-of-Band Discovery and Monitoring - Dell Remote Access Controllers (DRAC)	Supports: <ul style="list-style-type: none">• Out-of-band discovery and monitoring of Dell Remote Access Controllers (DRAC) 4, DRAC 5, and integrated DRAC.• Additional Platform Event Traps (PET) for DRAC and iDRAC.
Performance Monitoring	For Dell systems, supports: <ul style="list-style-type: none">• Power, temperature and network interface statistics using Performance and Power Monitoring Views.• Performance graphs for physical and teamed network interfaces for Server Administrator version 6.2.0.1 and above.
Advanced Monitoring	<ul style="list-style-type: none">• Provides flexibility in choosing the level of instrumentation for Dell systems based on scalability requirements.• Detailed monitoring using Server Administrator by enabling Informational Alerts.

Table 1-2. Features and Functionalities (continued)

Feature	Functionality
Launching Dell Tools from Operations Console	Supports: <ul style="list-style-type: none">• Launching Server Administrator Console• Launching Dell Remote Access Console• Launching Dell CMC Console• Launching Dell Modular Chassis Remote Access Console• Launching Remote Desktop Console.

About Dell Server Management Pack Suite v4.1

Table below describes the management packs and utilities, and their dependencies with each other:

Table 1-3. Management Pack Functionality and Dependencies

Management Pack/Utility	Description	Dependency
Base Folder Utility	Management Pack for defining the Dell Hardware Group and Dell folder in the Monitoring pane of the Operations Console.	None
Scalable Server MP	Management Pack for instrumenting supported Dell PowerEdge and PowerVault upto component groups level.	Base Folder Utility 4.0
Detailed Server MP	Management Pack for instrumenting supported Dell PowerEdge and PowerVault upto component level. NOTE: Use this MP when you are managing less than 300 nodes	Base Folder Utility 4.0 Scalable Server MP 4.1

Table 1-3. Management Pack Functionality and Dependencies (continued)

Management Pack/Utility	Description	Dependency
Informational-alerts-On Override Utility	Utility for detailed monitoring capability, by enabling Dell OMSA Informational Alerts defined in Scalable Server MP.	Base Folder Utility 4.0 Scalable Server MP 4.1
CMC MP	Management Pack for discovering and monitoring CMC and DRAC/MC Chassis.	Base Folder Utility 4.0
DRAC MP	Management Pack for discovering and monitoring Dell Remote Access Cards - DRAC4, DRAC5, iDRAC Modular and iDRAC Monolithic.	Base Folder Utility 4.0
Chassis Modular Server Correlation Utility	Management Pack for correlating Dell Modular systems with CMC and DRAC/MC Server Modules. This utility is supported only on SCOM 2007 R2 NOTE: For correlation feature to work, you must configure Run As Accounts and enable CMC Slot Discovery and/or DRACMC Slot Discovery . For more information, see Chassis Modular Server Correlation Requirement .	Base Folder Utility 4.0 Scalable Server MP 4.1 CMC MP 4.1

NOTE: Import all dependencies first before importing the Management Pack. Delete the Management Pack first before deleting the dependencies.

Comparison of Scalable Management Pack and Detailed Management Pack

Table 1-4 helps you understand the environment in which you can use Scalable Management Pack (Scalable MP) and Detailed Management Pack (Detailed MP) optimally.

Table 1-4. Scalable Management Pack vs Detailed Management Pack

Property	Scalable Management Pack	Detailed Management Pack
Component Hierarchy	Scalable MP shows details upto the component groups and the presence of iDRAC.	Detailed MP shows details upto component level. Detailed MP provides an additional level of information about Memory, Processors, Network Interfaces, Storage Controllers, Disks and Volumes, and so on. Additionally, BIOS information is also shown
Scalability	You can use the Scalable MP to monitor optimal hardware inventory and can scale above 300 servers per management server	You can use the Detailed MP to monitor detailed inventory and can scale upto 300 servers per management station
Reports	Only OpenManage Windows Event log report is available with this Management Pack.	BIOS configuration, Firmware and Driver version, and RAID configuration reports are available with this Management Pack.

Supported Dell Devices

The following Dell devices are supported for Dell Server Management Pack Suite v4.1:

- Dell PowerEdge systems - complete support for systems ranging from x8xx to xx1x (both inclusive).
- Dell PowerVault systems - complete support for systems ranging from x8xx to xx1x (both inclusive).



NOTE: Both PowerEdge and PowerVault systems are supported with Detailed Server Management Pack and Scalable Server Management Pack. The updated list of supported platforms is available on the Dell Support website at support.dell.com.

- DRAC 4, DRAC 5, iDRAC 6 with DRAC Management Pack
- CMC and DRAC/MC with CMC Management Pack.

For more information, see [Feature Support Matrix](#).

Supported Operating Systems

Table below lists the Operating Systems supported on the management server:

Table 1-5. Operating Systems Supported on the Management Server

Windows Version	Standard Edition	Enterprise Edition	Datacenter Edition
Windows Server 2003 SP2	x86 and x64	x86 and x64	x86 and x64
Windows Server 2003 R2 SP2	x86 and x64	x86 and x64	x86 and x64
Windows Server 2008	x86 and x64	x86 and x64	x86 and x64
Windows Server 2008 SP2	x86 and x64	x86 and x64	x86 and x64
Windows Server 2008 R2	x64	x64	x64

The operating systems supported on the managed nodes are:

- Windows Server 2003 SP2, x86 , x64 (Standard, Enterprise and Datacenter Edition)
- Windows Server 2003 SP2, x86, x64 (Standard, Enterprise and Datacenter Edition)
- Windows Server 2003 R2 SP2, x86, x64(Standard, Enterprise and Datacenter Edition)
- Windows Storage Server 2003 R2 SP2 x64
- Windows Server 2003 Unified Data Storage x64
- Windows Server 2008, x86, x64 (Standard, Enterprise and Datacenter Edition)
- Windows Server 2008 SP2, x86,x64 (Standard, Enterprise, Datacenter Edition)
- Windows Server 2008 R2, x64 (Standard, Enterprise and Datacenter Edition)
- Windows Server 2008 Small Business Server (Standard and Premium Edition)
- Windows Server 2008 Essential Business Server (Standard and Premium Edition)

- Windows Unified Data Storage Server 2008 (Workgroup, Standard and Premium Edition)
- Windows Storage Server 2008 (Standard and Enterprise Edition)
- Windows Server 2008 Unified Data Storage Server,
- Windows Server 2008 HPC Edition
- Microsoft Hyper-V Server 2008 x64
- Windows Server 2008 Unified Data Storage Server x64



NOTE: For Windows Server 2008 operating systems, both SP1 and SP2 versions are supported.

For the list of supported operating systems for the management server for SCOM/SCE, see the Microsoft website at

[http://technet.microsoft.com/hi-in/library/bb309428\(en-us\).aspx](http://technet.microsoft.com/hi-in/library/bb309428(en-us).aspx)

Supported Firmware Versions

Table below lists the supported firmware versions for DRAC and CMC devices.

Table 1-6. Supported Firmware Versions for DRAC and CMC Devices

DRAC	CMC and DRAC/MC
iDRAC6 Modular: versions 2.3 and 3.0	CMC: versions 2.1 and above
iDRAC6 Monolithic: versions 1.5 and 1.54	DRAC/MC : versions 1.5 and above
xx0x iDRAC: versions 1.4 and 1.52	
DRAC 5: versions 1.5 and 1.51	
DRAC 4: versions 1.71 and 1.75	

Getting Started


Management Server (MS) Requirements

Software Requirements

Table below lists the software requirements in the MS.

Table 2-1. Pre-requisites for Software

Software	Purpose
OpenManage Server Administrator (Server Administrator)	To discover and manage Dell systems, which host the management server, discover Chassis Slot Summary and Server Modules for CMC and DRAC/MC Chassis.
OR	
DRAC Tools	To discover Chassis Slot Summary and Server Modules for CMC and DRAC/MC Chassis.
BMC Management Utility version 2.0	To run the Remote Power Control tasks or the LED Identification Control tasks on Dell-managed systems.

 **NOTE:** The BMC Management Utility, OpenManage Server Administrator (Server Administrator) and DRAC tools are available on the Dell Systems Management Tools and Documentation media, or can be downloaded from support.dell.com.


 **NOTE:** To discover managed systems with IPv6 attributes, you must enable and configure IPv6 in the management server.

Table 2-2. Feature Support Matrix

MS Configuration	8G	8G	9G, 10G, 11G	9G, 10G, 11G
	OMSA	Drac Tools	OMSA	Drac Tools
MS Discovered as Dell Server	✓	✗	✓	✗
CMC/DRAC MC Discovery	✓	✓	✓	✓
CMC and DRAC/MC Slot Discovery	✗	✓	✓	✓
Chassis Blade Correlation	✗	✓	✓	✓

The Management Server Action Account needs the following additional privileges on Dell systems for the features listed below.

Table 2-3. Management Server Action Account Privileges

Feature	User Privilege
Dell Monolithic server in-Band DRAC discovery and the corresponding DRAC Console launch	Admin or Power user
Clear ESM Log	Admin or Power user Alternatively, if the Management Server Action Account has normal user privileges, operators can, instead of selecting Use the predefined Run as Account , enter task credentials with Power User (or higher) privileges to run the Clear ESM Logs task.

Discovery Requirements

- For discovery of Windows systems on your network, perform Windows Computers discovery.
- For discovery of DRAC 4, DRAC 5, iDRAC 6, DRAC/MC, and CMC out-of-band, perform network device discovery.

Security Configuration

Applicable to — Dell CMC MP

To discover Chassis Slot Summary and Server Modules for CMC and DRAC/MC Chassis, you need to configure the applicable **Run As Accounts** and link them to the **Dell CMC Login Account** or **DRAC/MC Login Account Run As Profiles**. For more information, see [Configuring the Dell Chassis Management Controller Management Pack for Discovering Server Modules and Chassis Slot Summary](#)

Chassis Modular Server Correlation Requirement

In a distributed SCOM environment where you have a **Multiple Management Server — Single Management Group** scenario, you must enable server proxy on the management server where you discover and monitor the CMC and/or DRAC/MC chassis.

To enable the proxy agent:

- 1 In the SCOM console, click **Administration**.
- 2 In the **Administration** pane, click **Management Servers**.
- 3 Select the management server where you have discovered CMC and/or DRAC/MC devices.
- 4 Right-click and then select **Properties**.
- 5 In the **Management Server Properties** dialog box, click the **Security** tab.
- 6 Select the check box to allow the server to act as a proxy and discover managed objects on other computers.
- 7 Click **OK**.



NOTE: The Chassis Modular Server Correlation feature is available only on SCOM 2007 R2. You must enable **CMC Slot Discovery** and **DRAC/MC Slot Discovery** for the correlation feature to work.

Managed System Requirements

Dell System Requirements

The requirements for managed systems are:


- Install Server Administrator (including the Server Administrator Storage Management Service.)


Table 2-4 lists the Server MP features and the corresponding supported OMSA versions.


Table 2-4. Server Administrator Version and Supported Feature


Server Administrator Version	5.5	6.1	6.2	6.2.0.1	6.3	6.4
Discovery, inventory and monitoring of Dell Windows servers	✓	✓	✓	✓	✓	✓
Basic network interface attributes	✓	✓	✓	✓	✓	✓
Enriched network interface attributes	✗	✗	✗	✓	✓	✓
Monitoring iDRAC	✗	✗	✗	✗	✓ (*)	✓ (*)

(*): iDRAC firmware version ≥ 1.54

 **NOTE:** If a system has Server Administrator version lesser than 5.5, it is grouped under *Unmanaged* and monitoring is disabled.

 **NOTE:** If you want to upgrade or uninstall Server Administrator on the managed system, the Alerts View of the managed system may display the following error: *Script or Executable failed to run.* If managed system is not a management server, then switch the system to the **Maintenance Mode** till the upgrade/uninstall completes. If the managed system is the management server, you may manually close the alerts after the upgrade/uninstall is complete.

 **NOTE:** In-Band discovery of iDRAC takes place when the iDRAC firmware version is greater than or equal to 1.54 and OMSA version is greater than or equal to 6.3.

 **NOTE:** Enable and run the WMI service.

- Install the DRAC agent using the *Dell Systems Management Tools and Documentation* media, if Dell Remote Access Controller (DRAC) is installed on your Dell system.
- Configure a valid IP address for your BMC and ensure network connectivity for Advanced power control and LED identification tasks to work.

Configuring Management Server Action Account With Normal User Privilege

To configure the management server action account:

- 1 Install SCOM 2007 SP1/R2 and System Center Essentials 2007 SP1/2010 on the management server, with Management Server Action Account as a Domain user (non Domain Administrator.)
- 2 Install Operations Manager Agent on the managed system (Auto Agent Push/ Manual Install).
- 3 Add the Management Server Action Account (as described in step1 - Domain User) as part of the local admin group for Agent install to work.
- 4 Initiate discovery and monitoring of managed system and demote the Management Server Action Account from the Local Admin group. Reboot to make sure that the user is not an administrator/power user.
- 5 Import the Dell Management Pack on the management server.
The management pack rediscovers the managed systems depending on the discovery cycle time.

Dell CMC/DRAC MC Requirements

Enable RACADM on CMC/DRAC MC chassis for slot discovery and correlation to work. For more information, see the *Command Line Reference Guide for iDRAC6 and CMC* available at support.dell.com/manuals.

Installing the Dell Server Management Pack Suite v4.1

Before importing any management pack, import the dependent management packs first. For MP dependencies, see Table 1-3.

Pre-import Tasks



NOTE: If Dell Server Management Packs 3.x are already present in SCOM, delete them before you perform the steps below.




NOTE: If Dell Server Management Packs 4.0 are already present in SCOM, you do not need to delete the Management Packs. You can directly upgrade the management packs to version 4.1 if you follow the steps given below.

To import the management packs or utilities, use the SCOM Import Management Pack wizard:

- 1 Download the management packs or utilities from the Dell Support website at support.dell.com.
- 2 Copy the downloaded file, **Dell_Server_Management_Pack_Suite_v4.1_A00.exe** to a temporary folder on your local system. For example, *C:\Temp*.
- 3 Run the **Dell_Server_Management_Pack_Suite_v4.1_A00.exe** and extract the management packs or utilities. By default, the files are extracted to *C:\Dell Management Packs\Server Mgmt Suite\4.1*.

Importing the Management Packs

To import the management packs:

- 1 Launch System Center Operations Manager Operations Console or System Center Essentials Console.
- 2 From the navigation pane, click **Administration**.
- 3 Expand **Administration**, right-click **Management Packs**, and select **Import Management Packs**.
- 4 Click **Add**. Select the **Add from disk** option.
- 5 Type or browse to the location of the Management Pack/utility files where you extracted the Dell Server Management Pack Suite 4.1. If you had chosen to extract the files in the default directory, then the management packs are available under *C:\Dell Management Packs\Server Mgmt Suite\4.1*.
- 6 Select the Management Pack/utility you want to import, and click **Open**.
The **Import Management Packs** screen appears with the selected Management Packs/utilities displayed in the **Import List**.
 **NOTE:** If any of the management packs of Dell Server Management Pack Suite v4.0, then you must upgrade them in the same import session.
- 7 Click **Install**.

Post-Import Tasks for the Dell Server Management Pack Suite v4.1

You must perform the following post-import tasks after you import the management packs:

- 1 Configure CMC MP 4.1 for discovering Chassis Slots Summary and Server Modules. For more information, see [Configuring the Dell Chassis Management Controller Management Pack for Discovering Server Modules and Chassis Slot Summary](#).
- 2 Create Advanced Power Control and LED Identification tasks. For more information, see [Creating Advanced Power Control and LED Identification Tasks](#).

Configuring the Dell Chassis Management Controller Management Pack for Discovering Server Modules and Chassis Slot Summary

Create **Run As Profiles** and **Run As Accounts** to select users with privileges that are needed to discover CMC and DRAC/MC server modules and chassis slot summary.

- 1 Create a **Simple Run As Account** that has privileges to connect to the CMC and/or DRAC/MC chassis. You can also create a **Simple Run As Account** with Active Directory (AD) user credentials when the CMC and/or DRAC/MC Chassis is configured to work with AD. You can also use **Basic** or **Digest Run As Account** types for configuring the user credentials.
- 2 Associate the **CMC Chassis** and **DRAC/MC Chassis Run As** accounts with the **Dell CMC Login Account** and **Dell DRAC/MC Login Account Run As Profile** included in the Dell CMC MP4.1. Target the configuration with respect to the Dell CMC or Dell DRAC/MC class respectively. For SCOM 2007 R2/SCE 2010, you can select the **More Secure** option in Run As Account configuration, so that you can selectively distribute the configuration to specific management servers.

- 3 To enable server module and chassis slot summary discovery for CMC, enable the **Dell CMC Slot Discovery** rule. It is disabled by default.
- 4 To enable server module and free slot discovery for DRAC/MC, enable the **Dell DRAC/MC Slot Discovery** rule.



NOTE: After the slot discovery, if you remove the link between RunAsAccount with RunAsProfile, or disable the slot-discovery workflow, the discovered slots remain with old data.

Creating Advanced Power Control and LED Identification Tasks

Advanced power Control and LED Identification Tasks use the default BMC credentials, operating system and BMU install path (C:\Program Files\Dell\SysMgt\bmc), that cannot be modified.

If your systems deviate from these, install BMU 2.0 or later on the management server and create new console tasks in the **Authoring** pane targeted on **BMC for Dell Server**.



CAUTION: The below steps require you to create a task and give the password in plaintext. If BMC is not installed on the box, the SCOM Console may display an error that displays the entire command in a dialog box, and reveals the password. If you export the created override management pack containing this task to a disk, you can open the exported management pack in a common text editor or SCOM Authoring Console and the view the password in plain text. Create a new task only if absolutely required and consider the above security aspects before you proceed.

To create a new task:

- 1 In the **Authoring** pane, right-click **Tasks** under **Management Pack Objects**, and select **Create new task**.
- 2 In the **Task Type** screen, select **Command line** under **Console Tasks**.
- 3 Select the destination management pack and click **Next**.
- 4 Type **Task name**, **Description**, and select **Dell Windows Server** as the **Task Target** and click **Next**.

The **Command Line** screen appears.

- 5 Type the path of the application **ipmitool.exe** (the path where BMU was installed on the management server) in the **Application** field. For example, C:\Program Files\Dell\SysMgt\bmc\ipmitool.exe (default BMU Path

may differ based on your operating system language.) For the two LED identification tasks, the application path is `C:\Program Files\Dell\SysMgt\bmc\ipmish.exe` (default BMU Path may differ based on your operating system language.)

- 6 For power control tasks, in the **Parameters** field, enter the command line parameters in the following format:
 - Type `-I lan -H` and then choose the **Remote Access IP with IPMI capability** from the drop-down menu.
 - Type `-U <username> -P <password> -k <kgkey> <IPMI Task String>`
 - Replace `<IPMI Task String>` with one of the following options:
 - `power status` (for **Check Power Status** task)
 - `power on` (for **Power On** task)
 - `power soft` (for **Power Off Gracefully** task)
 - `power off` (for **Forced Power Off** task)
 - `power cycle` (for **Power Cycle** task)
 - `power reset` (for **Power Reset** task)
 - `identify on` (for **LED Identification On** task)
 - `identify off` (for **LED Identification Off** task)

A sample command line parameter entry:

```
-I lan -H $Target/Property[Type="Dell.WindowsServer.Server"]/RemoteAccessIP$ -U  
root -P <password> -k <kgkey> power status
```

- 7 For LED on or off tasks, enter the command line parameters in following format:
 - Type `-ip` and choose the **Remote Access IP with IPMI capability** from drop-down menu.
 - Type `-u <username> -p <password> -k <kgkey> <IPMI task string>`.
- 8 Click **Create** to create the task and repeat this procedure for each new BMC task.

Upgrading From the Previous Management Packs

Upgrade happens *only* when you import the upgraded management packs to the Operations Console. Follow the steps provided in [Installing the Dell Server Management Pack Suite v4.1](#) to upgrade the new management packs. This section also includes certain [Post Upgrade Tasks](#), that you need to perform.

From Dell Server Management Pack Suite v4.0

You can upgrade from Dell Server Management Pack Suite v4.0 to Dell Server Management Pack Suite v4.1.



NOTE: If any of the management packs of Dell Server Management Pack Suite v4.0 are present on the Management Server, then you must upgrade them to v4.1 in the same import session.

Post Upgrade Tasks

If you upgrade from Dell Server Management Pack Suite v4.0 to Dell Server Management Pack Suite v4.1, the **Servers** state view does not display the **Network Interfaces Group**, and **iDRAC** columns. To see these columns you must personalize the view and add the columns.

To personalize the view:

- 1 On the Operations Console, select Servers State view and right-click on the Servers pane.
- 2 Select Personalize View from the menu. The Personalize View screen is displayed.
- 3 Select Network Interfaces Group, and iDRAC.
- 4 Click the Up arrow to move the order of the columns so that they are displayed after the Name column.
- 5 Close the **Personalize View** screen.

From Dell Server Management Pack 3.x

You cannot upgrade from Dell Server Management Pack 3.x to Dell Server Management Pack Suite 4.1. You must delete the corresponding previous version of Dell Server MP and then install Dell Server Management Pack Suite v4.1 on Systems Center Operations Manager. For information on the steps to import Dell Server Management Pack Suite v4.1 see [Installing the Dell Server Management Pack Suite v4.1](#).



NOTE: Ensure you delete Dell Server Management Pack 3.x (Dell.Connections.001.mp) prior to importing any of the Management Packs that are a part of the Dell Server Management Pack Suite v4.1.



CAUTION: If you delete the Dell Management Packs 3.x, you may lose all the monitoring data you have collected so far from the Operations Database.

Uninstalling the Dell Server Management Pack Suite v4.1

Before you uninstall the management packs, you must first delete the dependent management packs and overrides if any and then delete the specific management packs. For more information on dependencies, see Table 1-3.

Deleting the Management Packs

To delete any of the Management Packs or utilities:

- 1 Select **Administration** → **Management Packs** in the Systems Center Operations Manager 2007 Operations Console.
- 2 Select the Dell Management Pack/utility you want to delete from the **Management Packs** pane.
- 3 Right-click the selected Dell Management Pack/utility and click **Delete**.

After deleting a Management Pack/utility, Dell recommends closing and reopening the SCOM Console.



NOTE: Deleting any of the Management Packs may affect the scope of some user roles.

Before deleting the Dell CMC Management Pack 4.1

Dell CMC management pack includes two **Run As Profiles** for CMC and DRAC/MC respectively. All **Run As Accounts** associations that you create get added to the **Microsoft.SystemCenter.SecureReferenceOverride** management pack. Deleting the CMC management pack with similar **Run As Account** association having dependencies with **Microsoft.SystemCenter.SecureReferenceOverride**, would result in conflicts.

To delete CMC management pack:

- 1 Launch System Center Operations Manager Operations Console or System Center Essentials Console.
- 2 From the navigation pane, click Administration.
- 3 Expand Administration, right click Management Packs
- 4 Select **Microsoft.SystemCenter.SecureReferenceOverride** MP, click Export and save it as a local file.
- 5 Delete the **Microsoft.SystemCenter.SecureReferenceOverride** MP.
- 6 Edit the saved MP in the SCOM Authoring Console by deleting the following overrides and references:
 - Navigate to **Health Model** and select **Overrides**.
 - Delete all overrides with **Dell.ModularChassis.CMC** or **Dell.ModularChassis.DRACMC** references.
 - Open the **File** menu, select **Management Pack Properties**, to launch the **Microsoft.SystemCenter.SecureReferenceOverride Properties** screen.
 - Click the **References Tab**, and delete the **Dell.OutOfBand.CMC** reference.
 - Open **File** menu and select **Save**.
- 7 Re-import the edited **Microsoft.SC.SecureReferenceOverride** MP.

Access Privileges

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 assigned to you determines what actions you can perform. For more information on security considerations, see the *Microsoft Operations Manager 2007 SP1/ Microsoft Systems Centre Essentials SP1 R2/Microsoft Systems Center Essentials 2010* online help available with System Center Essentials 2010.

Understanding Dell Server Management Pack Suite Operations

Overview

This chapter describes the various operations that you can perform on Microsoft Systems Center Operations Manager (SCOM) or Systems Center Essentials (SCE) using the Dell Server Management Pack Suite version 4.1.

The Dell Server Management Pack Suite version 4.1 enables you to:

- 1 Discover and group the Windows servers, Dell Modular Chassis, Dell Remote Access Controllers (DRAC), Chassis Management Controllers (CMC), and integrated DRAC (iDRAC). For more information, see [Discovery and Grouping](#).
- 2 Monitor the discovered Dell systems and network devices. For more information, see [Monitoring](#).
- 3 Perform various tasks on the discovered Dell systems and network devices. For more information, see [Tasks](#).
- 4 Create pre-canned reports for OpenManage Windows Event Log, Dell Server BIOS, Firmware, and RAID configuration. For more information, see [Reports](#).
- 5 Customize discovery, monitoring, and event processing of the discovered Dell systems and devices. For more information, see [Customizing the Dell Server Management Pack Suite](#).

Web Console

The Web console server enables you to monitor and manage your Dell devices with Dell Server Management Pack Suite using a browser instead of the Operations 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 all Management Packs
- Administration, Authoring, and Reporting are not available

- Personalize view is not available
- Only first 200 alerts are displayed in the **Alert** view
- For the Server Management Pack:
 - Displays only Clear ESM Log task
 - Information alerts are suppressed even after importing Information-On override utility
- For the DRAC and CMC Management Packs:
 - Console launch tasks are not available

Discovery and Grouping

Dell Windows systems are discovered through the SCOM Agent Management infrastructure. Dell systems that do not have Dell OpenManage Server Administrator installed, or have Server Administrator earlier than 5.5 are grouped as **Dell Unmanaged**.

To discover Dell devices, the devices must appear in the **Agent Managed** view under the **Administration** section of the Operations Console.

Discovering a Dell System

To discover a Dell system:

- 1** Log on to the system with an account that has the 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 **Computer and Device Management Wizard** is launched.

- 4 Select **Windows Computers** and click **Next**.
- 5 To discover Dell Modular and Monolithic systems, select **Automatic Computer Discovery** and click **Next**.
 - a Provide user account details on the **Administrator Account** screen and click **Discover**. The **Discovery Progress** page appears.
 - b On the **Select Objects to Manage** page, select the devices you want to manage and click **Next**.
 - c On the **Summary** screen, specify the path for **Agent Installation Directory**, specify the credentials for **Agent Action Account**, and click **Finish**.



NOTE: Dell windows systems that do not have the instrumentation component running and Server Administrator lesser than 5.5 installed are grouped under Dell Unmanaged systems.

Discovering DRAC and CMC Devices

To discover Dell DRAC and CMC devices:

- 1 Follow steps 1 to 3 as described under [Discovering a Dell System](#).
- 2 Select **Network Devices** in the **Computer and Device Management Wizard** screen, and click **Next**.
- 3 Type the **Start** and **End** of the IP address range that you want to scan, type the SNMP Community, and select the SNMP version.
- 4 Click **Discover**. The **Discovery Progress** page appears.
- 5 On the **Select Objects to Manage** page, select the devices you want to manage and click **Next**.
- 6 Click **Finish**.



NOTE: You can override the discovery intervals from the Authoring pane of the Operations console. To override the discovery intervals for iDRAC 6 modular, modify the discovery interval period for both the discoveries - **DRAC5/iDRAC Discovery** and **Dell Integrated Remote Access (Modular) Discovery**.

Dell Hardware Discovery and Grouping

Table 3-1 lists the details of the hardware discovery and grouping by the Dell Server Management Pack suite.

Table 3-1. Dell Hardware Discovery and Grouping

Classification	Group Name on SCOM Console	Hardware Type
Windows Servers	<ul style="list-style-type: none"> • Dell Monolithic Servers. • Dell Modular Servers. 	Dell PowerEdge and PowerVault systems running OpenManage Server Administrator (version 5.5 and above).
Dell Modular Chassis Remote Access	Dell Chassis Management Controllers (parent group): <ul style="list-style-type: none"> • Dell Modular Chassis Remote Access (child group). • Dell CMCs (child group). 	CMC, DRAC/MC instances on the network, chassis slot summary and server modules for CMC and DRAC/MC.
Dell Remote Access Controllers	Dell Remote Access Controllers (parent group): <ul style="list-style-type: none"> • Dell Remote Access 4 (child group). • Dell Remote Access 5 (child group). • Dell Integrated Remote Access Modular (child group). • Dell Integrated Remote Access Monolithic (child group). 	DRAC 4, DRAC 5, iDRAC modular, and iDRAC 6 monolithic instances.

NOTE: Dell Remote Access Controller Management Pack does not support the discovery of xx0x iDRAC modular controller out-of-band systems due to iDRAC hardware limitation. To manage iDRAC xx0x modular controller, use Scalable Server Management Pack where xx0x iDRAC would be discovered in-band as a part of the Server Inventory.

Objects Discovered by Dell Server Management Pack

Table 3-2. Dell Object Discoveries

Discovery Object	Description
Dell Server Detailed BIOS Discovery	Discovers BIOS object for each Dell System.
Dell Server Discovery	Classifies your Dell System and populates the basic attributes.
Dell Server Hardware Components Discovery	Discovers hardware components at a group level (Sensors, Processor, Memory, and Power Supplies) and attributes (such as launch points for OpenManage Server Administrator, DRAC, Remote Access IP with IPMI capability, and so on) for your Dell system.
Dell OpenManage Software Services Discovery	Discovers the objects for Dell OpenManage Server Administrator Windows services and the WMI.
Dell Server Detailed Memory Discovery	Discovers memory instances for your Dell system.
Dell Server Detailed Power Supply Discovery	Discovers power supply instances for your Dell system.
Dell Server Detailed Processor Discovery	Discovers processor instances for your Dell system.
Dell Server Detailed Storage Discovery	Discovers the complete storage hierarchy for your Dell system.
Dell Server Network Interface Discovery	Discovers the network interface instances of your Dell system.
Dell Windows Server Detailed Network Interfaces Discovery Module	Discovers the physical and teamed network interface instances of your Dell system.
Dell Windows Server Network Interfaces Group Discovery Module	Discovers the Network Interfaces Group.
Dell CMC Discovery	Discovers all supported Dell CMCs.
Dell CMC Slot Discovery	Discovers all supported Dell CMC server modules and chassis slot summary.
Dell CMC Chassis to Modular Server Correlation Discovery	Discovers the correlation between the CMC Chassis and the Dell modular systems.

Table 3-2. Dell Object Discoveries (continued)

Discovery Object	Description
Dell DRAC/MC Chassis to Modular Server Correlation Discovery	Discovers the correlation between DRAC/MC chassis and Dell modular systems.
Dell DRAC/MC Discovery	Discovers all supported Dell DRAC/MCs.
Dell DRAC/MC Slot Discovery	Discovers all supported Dell DRAC/MC server modules and chassis slot summary.
Dell Integrated Remote Access Modular Group Discovery	Discovers the Dell Integrated Remote Access Modular Group and populates with Dell Integrated Remote Access Controllers (Modular).
Dell Remote Access Group Discovery	Discovers the Dell Remote Access Group and populates with Dell Remote Access Controllers.
Dell Integrated Remote Access Monolithic Group Discovery	Discovers the Dell Integrated Remote Access Monolithic Group and Dell Integrated Remote Access Controllers (Monolithic).
Dell Remote Access 4 Group Discovery	Discovers the Dell Remote Access 4 Group and Dell Remote Access 4 Controllers.
Dell Remote Access 5 Group Discovery	Discovers the Dell Remote Access 5 Group with Dell Remote Access 5 Controllers.
Dell Integrated Remote Access Modular Discovery	Discovers the Chassis Name and Chassis Service Tag of Dell Integrated Remote Access Controllers for Modular systems.
DRAC5/iDRAC Discovery	Discovers all supported Dell Remote Access 5 Controllers and Integrated Remote Access Controllers.
DRAC4 Discovery	Discovers all supported Dell Remote Access 4 Controllers.
Dell Unmanaged Server Group Discovery	Discovers Dell systems that are not being monitored either due to the absence of Dell instrumentation, or has a lower version of instrumentation than the required version.

Monitoring

The Dell Server Management Pack Suite v4.1 enables you to monitor the discovered Dell systems and network devices. The [Severity Level Indicators](#) help you to monitor the health of your Dell devices on the network.

Monitoring of Dell devices includes the following tasks:

- Process events raised by Dell OpenManage Server Administrator (Server Administrator) agents running on Dell Modular and Monolithic systems and display the alerts on the Operations Console
- Monitor Health of Dell Modular and Monolithic systems and their components both at regular intervals and on occurrence of events
- Process SNMP trap and knowledge base for CMC, DRAC/MC, and Dell Remote Access Controllers
- Monitor Health of CMC, DRAC/MC, and Dell Remote Access Controllers - both at regular intervals of six hours and on occurrence of SNMP traps

You can monitor the Dell systems and devices through the various views that the Dell Server Management Pack Suite provides on the SCOM console. The different views are:

- [Alerts View](#)
- [Diagram View](#)
- [State View](#)
- [Performance and Power Monitoring Views](#)

Severity Level Indicators

Table 3-3 lists the icons that indicate the severity levels of the status of the discovered Dell devices on the Operations Console.

Table 3-3. 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.

Table 3-3. Severity Level Indicators (continued)

Icon	Severity Level
	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.

Alerts View

This view is available for managing hardware and storage events from Dell Windows systems, Dell CMC and DRAC/MC, Network Interfaces, and Dell Remote Access devices.

The Dell Server Management Pack Suite displays the following alerts and traps:

- Alerts for events received from Dell OpenManage Server Administrator for Dell PowerEdge and PowerVault systems.
- Link Up/Link Down alerts for events received from Broadcom and Intel network interface cards for Dell PowerEdge systems.
- Informational alerts if you import the **Dell.WindowsServer.InformationalAlertsOn.mp**.
Informational alerts are turned off by default. You need to turn them on after importing **Dell.WindowsServer.InformationalAlertsOn.mp**.
- SNMP Traps sent by DRAC 4, DRAC 5, iDRAC 6, DRAC/MC, and CMC devices.
- Platform Event Traps (PET) for Dell systems.

Viewing Alerts on the Operations Console

To view Alerts on the Operations Console:

- 1 Launch the Operations Console and click **Monitoring**.
- 2 Click **Dell** → **Alerts Views**.

The following individual Alerts Views are displayed:

- **CMC** — displays SNMP traps from the discovered CMC devices
- **Network Interface Alerts** — displays the Link up and Link down alerts from the discovered NICs.
- **DRAC/MC** — displays events and SNMP traps from the discovered DRAC/MC devices
- **PET Traps** — displays platform event traps from discovered Dell systems
- **Remote Access** — displays SNMP traps from DRAC 4, DRAC 5, iDRAC 6 devices.
- **Server** — displays Server Administrator alerts from Dell systems, Link up and Link down alerts from the NICs on Dell systems.

- 3 Select any of the Alerts Views.

The right pane of each of the individual Alerts Views displays alerts that meet the criteria you specify, such as alert severity, resolution state, or alerts that are assigned to you.

- 4 Select an alert to view the details in the **Alert Details** pane.

When you select an alert listed in any of the Alerts Views, the associated tasks appear in the **Actions** pane. For more information on the tasks, see [Tasks](#).



NOTE: The Remote Access view displays DRAC 4, DRAC 5, and iDRAC 6 alerts.

Diagram View

The Diagram view offers a hierarchical and graphical representation of all Dell Windows systems, Dell CMC and DRAC/MC, and Dell Remote Access devices that the Dell Server Management Pack Suite manages. The Diagram view displays realistic icons for the various components modeled by the Dell Server Management Pack Suite.

To view the diagrams on the Operations Console:

- 1 Launch the Operations Console and click **Monitoring**.
- 2 In the **Monitoring** pane on the left side, navigate to the Dell folder to display the following views:
 - [Chassis Management Controllers Group Diagram View](#)
 - [Complete Diagram View](#)
 - [Dell Modular Systems Diagram View](#)
 - [Dell Monolithic Systems Diagram View](#)
 - [Remote Access Controllers Group Diagram View](#)
- 3 Select any of the Diagram Views.

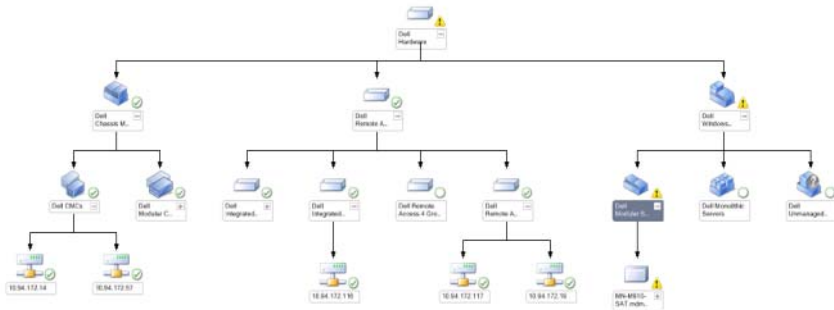
The right pane displays the hierarchical and graphical representation of the selected Dell device.

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

Complete Diagram View


Figure 3-1 represents the complete diagram view under **Dell Hardware** group.

Figure 3-1. Dell Complete Diagram View- Detailed Management Pack



The **Complete Diagram View** offers a graphical representation of all Dell devices that SCOM/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:

- Modular and Monolithic Systems
- Chassis Management Controllers and DRAC/MC Devices
- Remote Access Controllers

 **NOTE:** The Dell Hardware Group is defined in the Base Management Pack.

Modular and Monolithic Systems

The Diagram view under the Monolithic and Modular systems offers the following details:

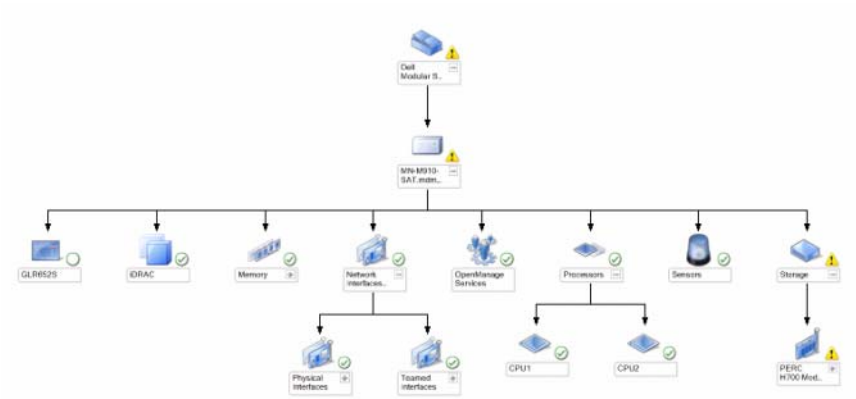
- Physical and teamed network interfaces
- Memory
- Power Supply (only monolithic systems)
- Sensors
- Processors
- Dell OpenManage Software services
- Storage controller
- BIOS object (only inventory)
- iDRAC

 **NOTE:** You can launch device/component specific tasks from the **Actions** pane of the Operations Console. For more information, see [Tasks](#).

Dell Modular Systems Diagram View

Figure 3-2 represents diagram view of the Dell Modular systems.

Figure 3-2. Dell Modular Systems Diagram - Detailed Management Pack

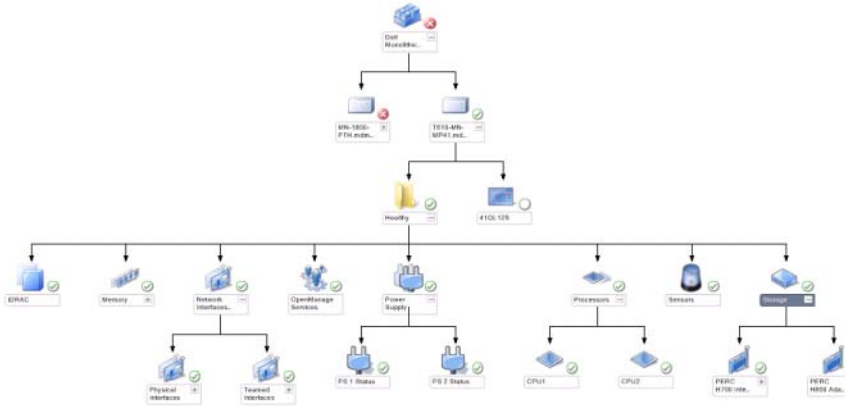


The Dell Modular Systems Diagram View offers a graphical representation of all Dell Modular Systems and allows you to expand and verify the status of individual devices and their components in the diagram.

Dell Monolithic Systems Diagram View

Figure 3-3 represents the diagram view of the Dell Monolithic systems.

Figure 3-3. Dell Monolithic Systems Diagram - Detailed Management Pack

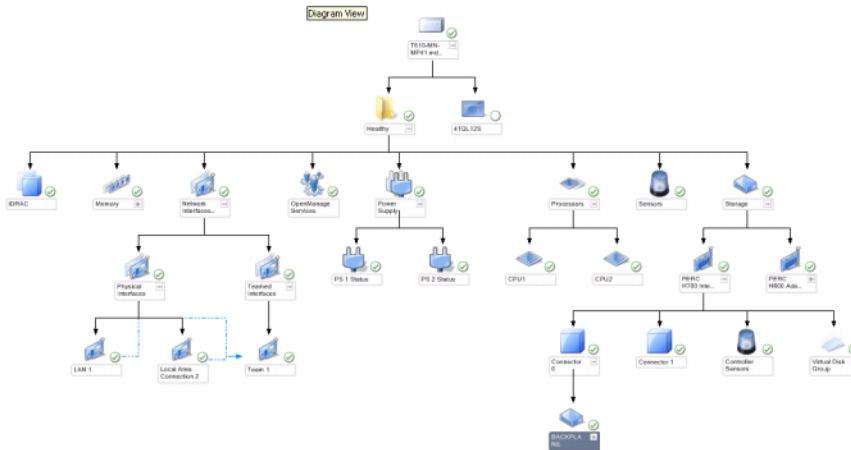


The **Dell Monolithic Systems Diagram View** offers a graphical representation of all Dell Monolithic Systems and allows you to expand and verify the status of individual devices and their components in the diagram.

Dell Server Instance Diagram

Select a Dell system, from the **Dell Modular System** or **Dell Monolithic System Diagram** views, to view the diagram specific to that particular system.

Figure 3-4. Dell Server Instance Diagram - Detailed Management Pack



System-specific diagrams illustrate and indicate the status of the following components:

- Memory
- Power supply (only for Monolithic servers)
- Processors
- Sensors
- OpenManage services
- Network Interfaces
- Storage Controllers
- BIOS Objects
- iDRAC

The Detailed Management Pack displays memory, processors, and power supply components in detail.

Storage Controller Component Hierarchy

Expand the **Storage** component in any Dell System instance diagram view, to view the status and health of components like Physical Disks, Connectors, and Virtual Disks. Each Connector instance contains the Sensors and Physical Disk components. However, there are no sensors for the backplane.

Network Interfaces Component Hierarchy

The Network Interfaces group is created *only* when an Intel or Broadcom network interface card is present on the Dell Windows Server and is enabled. Network interfaces are grouped under **Physical Interfaces** and **Teamed Interfaces**. If you disable a network interface, it is removed from management in the next discovery cycle.

A reference relationship is created between a Teamed network interface and its associated Physical network interfaces. You can view the reference relationship *only* when you enable the **Enable Correlation** attribute of **Dell Windows Server Physical and Teamed Relationship Discovery**.

To enable the **Enable Correlation** attribute:

- 1** In the **Authoring** tab, **Authoring** → **Management Pack Objects** → **Object Discoveries**
- 2** Click **Change Scope** at the top of the screen.
- 3** Click **View all targets** radio button and type **Dell** at the **Look for** field.
- 4** Check **Teamed Network Interface instance (Basic)** and **Teamed Network Interface instance (Enriched)** and click **OK**.
- 5** Right-click **Dell Windows Server Physical and Teamed Relationship Discovery Rule** → **Overrides** → **Override the Object Discovery** → for all objects of class: **Teamed Network Interface instance (Enriched)**.

In the **Override Properties** pop-up page, check **Enable Correlation** and set the **Override Value** to **True** and click **OK**.

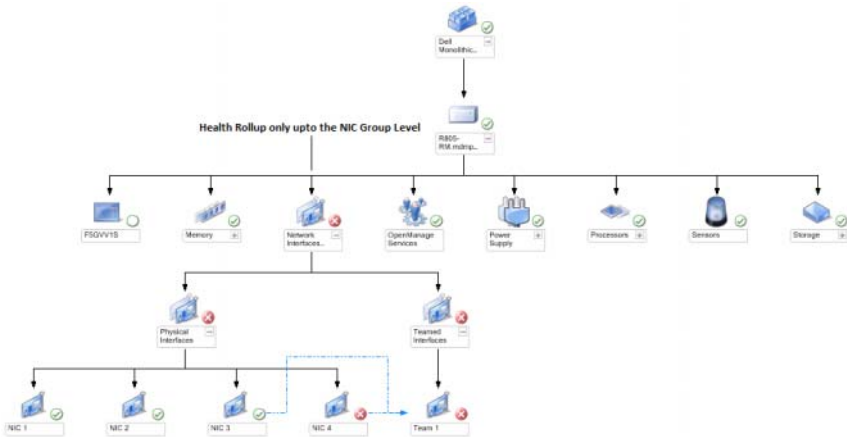
The status roll-up of network interfaces on the Diagram view is displayed only up to the **Network Interfaces** group level. For example, if the remaining components of the Dell system are normal and only one or more of the network interfaces are critical or noncritical, then the Dell system displays the Normal icon, and the **Network Interfaces** group displays the Critical or Warning icon.

For the status roll-up to be displayed at the server level, you must enable the **Network Interfaces Group to Dell Server Health Roll up** dependency monitor.

To enable the monitor:

- 1 Click the **Authoring** tab on the Operations Console.
- 2 Click **Monitors** and on the left pane and select the **Network Interfaces Group** monitor on the right pane.
- 3 Click **Entity Health** → **Availability**.
- 4 Right-click on **Network Interfaces Group to Dell Server Health Roll up** and select **Overrides** → **Enable the Monitor** from the menu options.

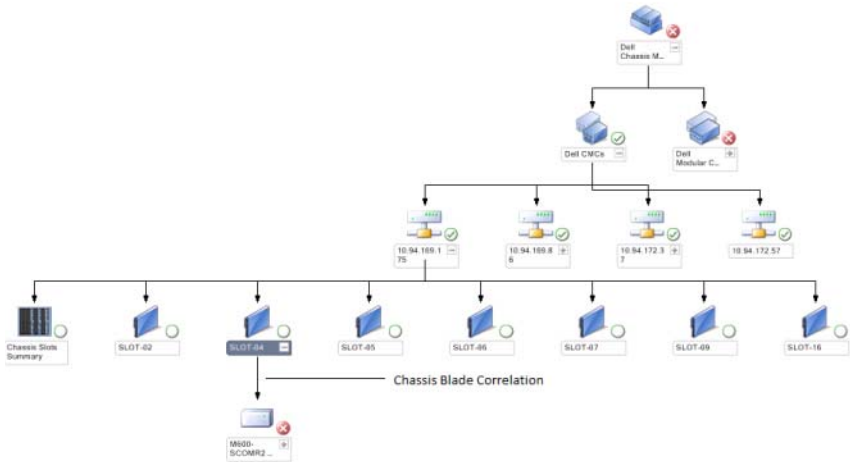
Figure 3-5. Network Interfaces Diagram View



Chassis Management Controllers Group Diagram View

Figure 3-6 represents the Chassis Management Controller Group Diagram view.

Figure 3-6. Chassis Management Controllers Group Diagram







The **Chassis Management Controllers Group** diagram view offers a graphical representation of all Dell CMC, DRAC/MC devices, and their inventory. For CMC discovery, see, [Discovering DRAC and CMC Devices](#). CMCs are discovered under Modular Chassis.

For discovered CMC and DRAC/MC chassis, you can view the occupied and free slot summary in the Chassis Slots Summary.

If slot names are modified on CMC and DRAC/MC chassis, they are reflected in the diagram view.

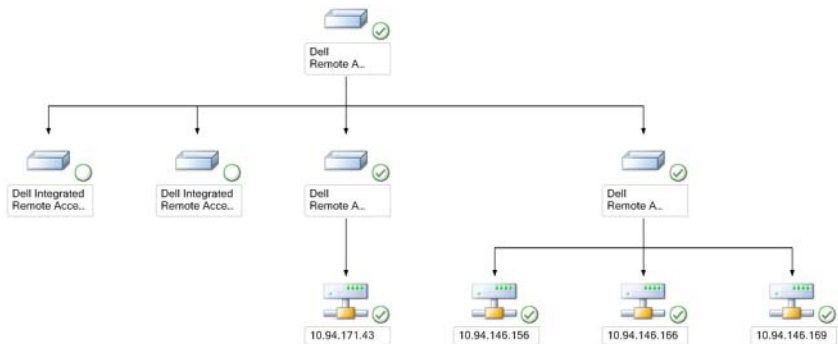
The **Chassis Management Controllers Group** diagram also displays the correlation of Dell servers with the server modules of CMC and DRAC/MC chassis. The Dell system is visible under the slot in the diagram.

-  **NOTE:** Create RunAsAccount for CMC slots discovery with simple, basic, or digest authentication only. For more information, see [Configuring the Dell Chassis Management Controller Management Pack for Discovering Server Modules and Chassis Slot Summary](#).
-  **NOTE:** Only one set of credentials is considered for discovering CMCs in SCOM SP1 and SCE SP1. SCOM 2007 R2 and SCE 2010 allow greater flexibility where the credentials can be specified for group or instance level.
-  **NOTE:** The iDRAC firmware of the Modular systems should be compatible with the CMC firmware, failing which, the Service Tag is displayed as "Not Available" and the Chassis-Blade correlation may not be possible.
-  **CAUTION:** The Chassis Modular Server Correlation Utility discovers the correlation between the Dell CMCs or DRAC/MCs discovered by the CMC management pack and the Dell modular systems discovered by the Server management pack. To discover the correlation, the utility queries the Root Management Server (RMS). When you are monitoring a large number of chassis and modular systems, the number of queries to the RMS increases and this results in high CPU utilization on the management server that manages the CMCs or DRAC/MCs. The CPU utilization comes down after the correlation is complete. This behaviour occurs in every discovery cycle set in **Dell CMC Chassis to Modular Server Correlation Discovery** or the **Dell DRAC/MC Chassis to Modular Server Correlation Discovery**.

Remote Access Controllers Group Diagram View

Figure 3-7 represents the Remote Access Controllers Group Diagram

Figure 3-7. Remote Access Controllers Group Diagram



The **Remote Access Controllers Group** diagram view offers a graphical representation of all DRAC 4, DRAC 5, and iDRAC 6 (modular and monolithic) devices. Select a component in the diagram to view its details in the **Detail View** pane.

State View

This view is available for managing Dell Windows systems, Dell CMC and DRAC/MC, and Dell Remote Access devices. In the Operations Console **Dell** → **State Views** displays the status of each Dell device managed by SCOM 2007 SP1/R2 on your network.

Select the device group for which you want to see the State view. For example, click **Servers** to view the status of your Dell Monolithic and Modular systems. You can view the status of the following groups:

- CMC
- Servers
- DRAC 4
- DRAC 5
- DRAC/MC
- iDRAC

The health of a component is derived by reviewing the unresolved alerts associated with the component. Table 3-3 explains the various state components that the Dell Server Management Pack Suite v4.1 uses with their corresponding severity levels.

Performance and Power Monitoring Views

To view the performance and power monitoring on the Operations Console:

- 1 Launch the Operations Console and click **Monitoring**.
- 2 In the **Monitoring** pane on the left side, click **Dell** → **Performance and Power Monitoring** to display the following views:
 - Ambient Temperature
 - Amperage Per Power supply
 - Energy Consumption
 - Peak Amperage

- Peak Power
- Physical Network Interface
- Power Consumption (in Watts)
- Power Consumption (in BTU/hr)
- Teamed Network Interface



NOTE: Power Monitoring is applicable for specific Dell Systems with Power Monitoring capability for that particular attribute.



NOTE: Teamed and Physical network interface instances appear only when detailed MP is present.

- 3 Select the counters from the individual performance views and select the time range for which the values are required. The data collected is represented in a graphical format for each system.

A unit monitor monitors the performance counter over two successive cycles to check if it exceeds a threshold value. When the condition is breached, the server changes state and generates an alert. This unit monitor is disabled by default. You can override (enable and modify) the threshold values from the **Authoring** pane of the Operations console, under **Monitors for Dell Windows Server objects**.

For more information on performance information collection, see [Performance Collection Rules](#).

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.

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

A summary of the Dell Tasks that you can perform using the Dell Management Packs are explained in Table 3-4:

Table 3-4. Dell Tasks Using the Management Pack for SCOM 2007 SP1/R2

Dell Task	Description
Dell Modular and Monolithic System Tasks	
Clear ESM Logs	Backs up the content of the Embedded System Management (ESM) log and clear the ESM log file for a selected system.
Launch Server Administrator	Launches the Dell OpenManage Server Administrator.
Launch Remote Desktop	Launches remote desktop of the selected system.
Check Power Status	Checks the overall power status of the system.
Forced Power Off	Turns off the system's power without shutting down the operating system.
Launch InBand Dell Remote Access Console	Launches the DRAC console for the in-band discovered DRAC.
Power Cycle	Turns off the power, and after a delay, turns it on again.
Power Off Gracefully	Shuts down the operating system first, then turns off the system's power.
Power On	Turns on the system power. This option is available even if the system is on.
Power Reset	Turns off the system's power and turns it on again.
Turn LED Identification On	Turns on the Identify LED of the selected system for 255 seconds.
Turn LED Identification Off	Turns off the Identify LED of the selected system.
DRAC4/DRAC5/iDRAC Tasks	

Table 3-4. Dell Tasks Using the Management Pack for SCOM 2007 SP1/R2 (continued)

Dell Task	Description
Launch Dell RemoteAccess Console	Launches the DRAC console for the discovered DRAC.
Dell CMC, DRAC/MC Tasks	
Launch Dell CMC Console	Launches the CMC console.
Launch Dell Modular Chassis Remote Access Console	Launches the DRAC/MC Console.

Dell Modular and Monolithic Systems Tasks

Clear ESM Logs

The Server Administrator Embedded Server Management (ESM) log, also referred to as the hardware log, maintains a list of all system events generated by the hardware, such as error-correcting code (ECC), system reset and boot, and probe threshold changes. You can refer to this log when hardware errors appear or when the system is not functioning properly.

To run the **Clear ESM Logs** task:

- 1** In the Operations Console, navigate to a Diagram view, State view, or Alert view.
- 2** Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3** Click **Clear ESM Logs** under **Dell Windows Server Tasks** in the **Actions** pane. The **Run Tasks** window appears.
- 4** Click **Run** to clear the ESM logs of the device that you selected.

When you run the **Clear ESM Logs** task, the task execution screen displays only the result of the task initiation and not the result of the task execution. For example, the task execution screen may show a success result even if the ESM logs are not cleared. This means that the **Clear ESM Logs** task initiation was successful.

Launch Server Administrator

To launch Server Administrator from the Operations Console:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 Click **Launch Server Administrator** under **Dell Windows Server Tasks** in the **Actions** pane.



NOTE: Dell Management Pack Tasks launch the Remote Console in Internet Explorer.

Launch Remote Desktop

To launch Remote Desktop from the Operations Console:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 Click **Launch Remote Desktop** under **Dell Windows Server Tasks** in the **Actions** pane.



NOTE: Launching remote desktop is possible only if remote desktop is enabled manually in the managed node.

Check Power Status

You can check the power status and allow power control tasks through the IPMI shell.

To check the power status of a system:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the **Actions** pane, select **Dell Windows Server Tasks → Check Power Status**.

Power Cycle

You can use this task to turn off the power to the Dell system, and after a delay, turn it on again.

To run the power cycle:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **Dell Windows Server Tasks → Power Cycle**.

Force Power Off

You can use this task to power off the system without shutting down the operating system.

To power off the system:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **Dell Windows Server Tasks → Force Power Off**.

Power Off Gracefully

You can use this task to shut down the operating system and power off the system.

To power off the system gracefully

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **Dell Windows Server Tasks → Power Off Gracefully**.

Power On

You can use this task to power on the server. This option is available even if the system power is on.

To power on a system:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **Dell Windows Server Tasks → Power On**.

Power Reset

You can use this task to turns power off and power on the system.

To reset the power of the system:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **Dell Windows Server Tasks → Power Reset**.

Turn LED Identification Off

You can use this task to turn off the LED identification of the selected system.

To turn off LED identification:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **Dell Windows Server Tasks → Turn LED Identification Off**.

Turn LED Identification On

You can use this task to turn on the LED identification on the system.

To turn on LED identification:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alert view.
- 2 Select the desired Dell system in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **Dell Windows Server Tasks → Turn LED Identification On**.

Dell Remote Access Controller (DRAC) Tasks

Launch Dell Remote Access Console

You can use this task to launch the Dell Remote Access Console, if the DRAC is installed on your Dell system.

To launch Dell Modular Chassis Remote Access Console:

- 1 In the Operations Console, navigate to a Dell Diagram view, State view, or Alerts view.
- 2 Select the desired DRAC/iDRAC device in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **SNMP Network Device Tasks → Launch Dell RemoteAccess Console**.

Dell Chassis Management Controller (CMC) Tasks

Launch Dell CMC Console

You can use this task to launch the CMC Console.

- 1 In the Operations Console, navigate to the Dell Diagram view, State view or Alerts view.
- 2 Select the CMC device in any of the Diagram or State views or an alert in the Alerts view.
- 3 In the Actions pane, select **SNMP Network Device Tasks → Launch Dell CMC Console**.

Launch Dell Modular Chassis Remote Access Console

You can use this task to launch the DRAC/MC Console.

- 1 In the Operations Console, navigate to the Dell Diagram view, State view or Alerts view.
- 2 Select the DRAC/MC device in any of the Diagram or State views or an alert in the Alerts view.

In the **Actions** pane, select **SNMP Network Device Tasks**→ **Launch Dell Modular Chassis Remote Access Console**.

Reports

The Reporting feature is available with the Dell Server Management Pack Suite v4.1. It allows you to create pre-canned reports for OpenManage Windows Event Log, Dell Server BIOS, Firmware, and RAID configuration.

Dell Server BIOS, Firmware, and RAID Configuration Reports are only available in Detailed Server Management Pack. You cannot see these reports if you choose to have only the Scalable Server Management Pack.

To access the Reporting feature perform the following steps:

- 1 Click **Reporting** in your Operations Console.
- 2 Expand **Reporting** in the navigation pane.
- 3 Click on **Dell Windows Server Scalable Edition** for the Windows Event Log and click on **Dell Windows Server Detail Edition** for BIOS, firmware, and RAID reports.

You can also access Reporting from the diagram view by clicking on the server instance. The option for **Dell Reports** is located in the **Actions** pane under the Dell System instance reports along with the default Microsoft reports.

OpenManage Windows Event Log

To create an OpenManage Windows Event Log:

- 1 Click on **OpenManage Windows Event Log**. Click **Open** in the **Actions** pane.
- 2 Select a time period for which you want the report generated.
- 3 Click on **Add Object** or **Add Group**.

- 4 Click **Search**, to search for an object or group. Choose add (you can add multiple objects). You can find the object in the selected object pane.
- 5 Choose the severity of the events whose report you want to generate.
- 6 Click **Run**. The OpenManage Windows Event Log report is generated.

BIOS Configuration



NOTE: You can create BMC reports only if BMU is installed on the Management Server.

To create a report for the BIOS configuration:

- 1 Click on **BIOS Configuration**. Click **Open** in the **Actions** pane.
- 2 Select a time period for which you want the report generated.
- 3 Click on **Add Object** or **Add Group**.
- 4 Click **Search**, to search for an object or group. Choose add (you can add multiple objects). You can find the selected object in the selected object pane.
- 5 Choose the required **Properties**.
- 6 Click **Run**. The BIOS configuration report is generated.

Firmware and Driver Versions

To create a report for Firmware and Driver Versions:

- 1 Click on **Firmware and Driver Versions**. Click **Open** on the **Actions** pane.
- 2 Select a time period for which you want the report generated.
- 3 Click on **Add Object** or **Add Group**.
- 4 Click **Search**, to search for an object or group. Choose add (you can add multiple objects). You can find the selected object in the selected object pane.
- 5 Choose the required **Properties**.
- 6 Click **Run**. The Firmware and Driver versions report is generated.

RAID Configuration

To create a report for RAID Configuration:

- 1 Click on **RAID Configuration**. Click **Open** on the **Actions** pane.
- 2 Select a time period for which you want the report generated.

- 3 Click on **Add Object** or **Add Group**.
- 4 Click **Search**, to search for an object or group. Choose add (you can add multiple objects). You can find the selected object in the selected object pane.
- 5 Choose the required **Properties**.
- 6 Click **Run**. The RAID configuration report is generated.

Customizing the Dell Server Management Pack Suite

The Dell Server Management Pack Suite v4.1 allows you to customize discovery, monitoring, and event processing of your Dell devices. You can customize the following components of the Dell Management Packs:

- **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.
- **Rules** — Rules are used to collect data, such as events generated by managed objects.



NOTE: See the Microsoft System Center Operations Manager 2007 SP1/ R2 documentation for more information.

Unit Monitors

You can customize the following parameters of the Dell Server Management Pack Suite v4.1 unit monitors by using overrides:

- **Enabled:** Allows you to enable or disable Monitors. You can choose the **Override Setting** to be **True** or **False**.
- **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 unit monitors can be:

- **Event Monitor:** This Monitor is triggered by the event that the Dell instrumentation logs in the Windows event log, indicating the health of the corresponding object.
- **Unit Monitor:** This Monitor is triggered by a periodic poll configured as IntervalSeconds.

Table 3-5 illustrates the various Dell monitors and the applicable parameters for your Dell devices.

Table 3-5. Dell Unit Monitors in Management Pack

Groups	Unit Monitor
Memory	
Dell Server Memory Status	Event and Periodic
Memory Unit Instance	
Detailed Memory Event Monitor	Event
Detailed Memory Unit Monitor	Periodic
OpenManage Software Services	
DSM Connection Service Availability Status	Windows Service
DSM Data Manager Availability Status	Windows Service
DSM Event Manager Availability Status	Windows Service
DSM Shared Service Availability Status	Windows Service
DSM Storage Service Availability Status	Windows Service
WMI Service Availability Status	Windows Service
Power Supplies	
Dell Server Power Supplies Status	Event and Periodic
Power Supplies Unit Instance	
Detailed Power Supply	Event and Periodic
Processor	
Dell Server Processors Status	
Processor Unit Instance	

Table 3-5. Dell Unit Monitors in Management Pack (continued)

Groups	Unit Monitor
Detailed Processor	Event and Periodic
Sensors	
Dell Server Battery Status	Event and Periodic
Dell Server Current Status	Event and Periodic
Dell Server Fans Status	Event and Periodic
Dell Server Intrusion Sensor Status	Event and Periodic
Dell Server Temperature Sensor Status	Event and Periodic
Dell Server Voltage Sensor Status	Event and Periodic
Storage	Event and Periodic
Storage Connector Physical Disk Group	Event and Periodic
Storage Controller	
Storage Controller Status	Event and Periodic
Storage Controller Connector Instance	
Controller Connector Event Monitor	Event
Controller Connector Unit Monitor	Periodic
Storage Controller EMM Instance	
Enclosure EMM Event Monitor	Event
Enclosure EMM Unit Monitor	Periodic
Storage Controller Enclosure Instance	
Controller Enclosure Event Monitor	Event
Controller Enclosure Unit Monitor	Periodic
Storage Controller Physical Disk Instance	
Controller Physical Disk Event Monitor	Event
Controller Physical Disk Unit Monitor	Periodic
Enclosure Physical Disk Event Monitor	Event
Enclosure Physical Disk Unit Monitor	Periodic
Storage Controller Power Supply Instance	

Table 3-5. Dell Unit Monitors in Management Pack (continued)

Groups	Unit Monitor
Enclosure Power Supply Event Monitor	Event
Enclosure Power Supply Unit Monitor	Periodic
Storage Controller Sensors	
Controller Sensor Event Monitor	Event
Controller Sensor Unit Monitor	Periodic
Storage Controller Virtual Disk Group	Event and Periodic
Storage Controller Virtual Disk Instance	Event and Periodic
Storage Enclosure Physical Disk Group	Event and Periodic
Storage Enclosure Sensors	Event and Periodic
Network Interfaces Group(Basic)	
Global Network Interfaces (Basic) Connection Status	Event and Periodic
Network Interfaces Group(Enriched)	
Global Enriched Network Interfaces Status	Event and Periodic
Global Network Interfaces(Basic) Connection Status	Event and Periodic
Physical Network Interface Instance (Basic)	
Connection Status	Event and Periodic
Physical Network Interface Instance (Enriched)	
Administrative Status	Event and Periodic
Connection Status	Event and Periodic
Link Status	Event and Periodic
Operational Status	Event and Periodic
Teamed Network Interface Instance(Basic)	
Teamed Network Interface (Basic) Availability Status	Event and Periodic
Teamed Network Interface Instance(Enriched)	

Table 3-5. Dell Unit Monitors in Management Pack (continued)

Groups	Unit Monitor
Teamed Network Interface Instance(Enriched) Administrative Status	Event and Periodic
Teamed Network Interface Instance(Enriched) Connection Status	Event and Periodic
Teamed Network Interface Instance (Enriched) Link Status	Event and Periodic
Teamed Network Interface Instance(Enriched) Operational Status	Event and Periodic
Teamed Network Interface Instance(Enriched) Redundancy Status	Event and Periodic
CMC	
Dell CMC Status	Event and Periodic
DRAC/MC	
Dell DRAC/MC Status	Event and Periodic
Dell Remote Access Controller 4	
Dell RemoteAccess Status	Event and Periodic
Dell Remote Access Controller 5	
Dell RemoteAccess Status	Event and Periodic
iDRAC	
Dell Server iDRAC Network Interface Monitor	Periodic
Dell RemoteAccess Status	Event and Periodic
iDRAC Modular	
Dell RemoteAccess Status	Event and Periodic
iDRAC Monolithic	
Dell RemoteAccess Status	Event and Periodic

Object Discoveries

You can customize the following Dell Management Pack 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).

Rules

Dell Systems Event Processing Rules

The Dell Management Pack processes rules from Server Administrator, Server Administrator Storage Management events, DRAC, and CMC traps.

Server Administrator

All informational, warning, and critical events for Server Administrator have a corresponding event processing rule.

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

- Source Name = "Server Administrator"
- Event ID = Actual event ID of the Server Administrator instrumentation event
- Severity = Severity of the actual event
- Data Provider = Windows system event log

Storage Management

All informational, warning, and critical events for the Server Administrator Storage Management Service have a corresponding event processing rule.

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

- Source Name = "Server Administrator"
- Event ID = Actual event ID of the Server Administrator Storage Management Service event
- Severity = Severity of the actual event
- Data Provider = Windows system event log

DRAC / CMC / DRAC/MC

All informational, warning, and critical SNMP traps for the DRAC, CMC, and DRAC/MC devices have a corresponding SNMP trap rule.

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

- Source Name = "DRAC/CMC/DRAC/MC name/ip"
- OID = Actual trap ID of the DRAC /CMC/DRAC/MC SNMP trap event
- Severity = Severity of the actual event
- Data Provider = SNMP trap

Performance Collection Rules

There are nine performance collection rules that collect information on the following parameters:

- Ambient Temperature
- Amperage Per Power supply
- Energy Consumption
- Peak Amperage
- Peak Power
- Physical Network Interface
- Power Consumption (Watts)
- Power Consumption (in BTU/hr)
- Teamed Network Interface

In the Operations Console, click **Dell** → **Performance and Power Monitoring Views** to view the performance information that is collected from Dell Systems. This feature is available on installation of Scalable Server Management Pack. By default this feature is disabled.

To enable this feature:

- 1** Open the **Authoring** pane in the Operations Console.
- 2** Select **Rules**.
- 3** Right-click the rule you want to enable.

For example, to enable information to be collected on Network Interface, of all Dell Systems, perform step 4 to step 6 for the rules listed below:

- Total Transmitted Packets
 - Received Bytes
 - Total Received Packets
 - Transmitted Bytes
- 4** Select **Overrides** → **Override the rule** → **For all objects of class**
 - 5** Select **Override** and provide **Override value** as True.
 - 6** Click **Apply**.

Alternatively, when the Detailed Server Management Pack is imported, these disable Performance collection rules are enabled by default.



NOTE: Network Statistics are defined in Detailed MP only and are disabled by default. Enable them manually.

Related Documentation and Resources

This chapter gives the details of documents and references to help you work with Dell Server Management Pack Suite v4.1

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

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

For information on Microsoft's recommendations for scalability, see the Microsoft website at

[http://technet.microsoft.com/hi-in/library/bb735402\(en-us\).aspx](http://technet.microsoft.com/hi-in/library/bb735402(en-us).aspx)



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*, you may need to refer to the following guides available on the Dell Support website at support.dell.com/manuals. On the Manuals page, click **Software** → **Systems Management**. Click the appropriate product link on the right-side to access the documents.

- Dell Integrated Remote Access Controller User's Guide
- Dell Chassis Management Controller User's Guide
- Dell OpenManage Installation and Security User's Guide
- Dell OpenManage Software Quick Installation Guide
- Dell OpenManage Server Administrator Compatibility Guide
- Dell OpenManage Server Administrator CIM Reference Guide
- Dell OpenManage Server Administrator Messages Reference Guide

- Dell OpenManage Server Administrator Command Line Interface User's Guide
- Dell OpenManage Baseboard Management Controller Utilities User's Guide
- Dell Remote Access Controller 4 User's Guide
- Dell Remote Access Controller 5 User's Guide
- Dell Remote Access Controller Racadm User's Guide
- Dell Life Cycle Controller User's Guide
- Dell Remote Access Controller/ Modular Chassis User's Guide

The *Glossary* provides information about the terms used in this document.

The *Dell Systems Management Tools and Documentation* DVD contains a readme file for Server Administrator and additional readme files for other systems management software applications found on the DVD.

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; see www.dell.com/training for more information. This service might not be offered in all locations.

Appendix A- Issues and Resolutions

Issues and Resolutions

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

Table A-1. Issues and Resolutions

Issue	Resolution	Applicable To
Dell alerts not getting sorted according to age	<p>Check the registry on the machine that has this problem. 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 are 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.</p> <p>Registry edit:</p> <pre>HKEY_CURRENT_USER\Software\Microsoft\Microsoft Operations Manager\3.0\Console\%GUID.ViewTitle%AlertView\Age</pre> <p>For sorting to be enable ensure the keys IsSortable and IsSorted are set to 1.</p>	SCOM 2007 SP1, SCE 2007 SP1

Table A-1. Issues and Resolutions (continued)

Issue	Resolution	Applicable To
Under certain conditions, alerts related to Handle Count Threshold and Private Bytes Threshold are displayed on the Operations console of the management server.	Microsoft KB968760 available on the Microsoft support site at support.microsoft.com resolves this.	SCOM 2007 SP1, SCE 2007 SP1
Under certain conditions, an error message is displayed on the Operations Console of the management server with the Event ID – 623 and Event Source – Health Service ESE Store .	Microsoft KB975057 available on the Microsoft support site at support.microsoft.com resolves this.	SCOM 2007 SP1, SCE 2007 SP1
The System Center Operations Manager 2007 console may crash	Microsoft KB951327 , KB951526 available on the Microsoft support site at support.microsoft.com resolves this.	SCOM 2007 SP1, SCE 2007 SP1
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.	Microsoft KB954049 available on the Microsoft support site at support.microsoft.com resolves this	SCOM 2007 SP1, SCE 2007 SP1
The reports do not appear as expected in the Reporting space of the Administration console.	Microsoft KB954643 available on the Microsoft support site at support.microsoft.com resolves this.	SCOM 2007 SP1, SCE 2007 SP1

Table A-1. Issues and Resolutions (continued)

Issue	Resolution	Applicable To
In the Diagram view for Dell network devices, the basic attributes are displayed for the Dell DRAC and CMC objects.	To resolve this issue, you can view the detailed set of attributes by clicking on the objects in the State View.	Dell Remote Access MP, Dell Chassis Management Controller MP.
The health of your Dell system's hardware log is not monitored by the Dell Management Pack.	You can view your Dell system's hardware log on the Server Administrator.	Dell Scalable MP
Server Modules and Chassis Slot Summary Information are not visible under CMC or DRAC/MC	<ul style="list-style-type: none">• Make sure that OMSA or DRAC Tools are installed on the management server managing the CMC or DRAC/MC.• Make sure that you have configured the RunAsAccounts for CMC or DRAC/MC devices and associated them with "Dell CMC Login Account" or "Dell DRAC/MC Login Account".• Make sure that "Dell CMC Slot Discovery" and "Dell DRAC/MC Slot Discovery" rules are enabled from the Authoring pane of Operations console.	Dell CMC MP

Known Limitations

Table A-2. Limitations in SCOM/SCE and Dell Server Management Pack Suite 4.1

Limitation	Applicable to
Security: Dell MP, Power Control and LED tasks use only the default credentials. When you create a new task in the Authoring pane and view it, you can see the username and the password you specified. The credentials are not hidden when you view the task	SCOM/SCE and Dell Server Management Pack Suite.
When using health explorer, some unit monitors in Dell Management Pack (under Sensors and OpenManage Services instances) may show green status though the sub-instance does not exist. This is because unit monitors cannot have an <i>Unavailable</i> state when the target class is present and the unit monitor has been executed.	SCOM/SCE and Dell Server Management Pack Suite.
Intrusion unit monitor status under sensors is only for chassis and does not include health of bezel intrusion.	Dell Server Management Pack Suite.