

Dell OpenManage™  
Server Administrator Version 2.0  
Compatibility Guide

# Notes and Notices



**NOTE:** A NOTE indicates important information that helps you make better use of your computer.



**NOTICE:** A NOTICE 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.**

**© 2003–2005 Dell Inc. All rights reserved.**

Reproduction 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 *Dell OpenManage* are trademarks of Dell Inc.; *Microsoft*, *Windows*, and *Windows NT* are registered trademarks of Microsoft Corporation; *Novell* and *NetWare* are registered trademarks of Novell Inc.; *Red Hat* is a registered trademark of Red Hat, Inc.; *Intel*, *Pentium*, and *EtherExpress* are registered trademarks of Intel Corporation; *3COM* is registered trademark of 3Com Corporation.

Server Administrator includes software developed by the Apache Software Foundation ([www.apache.org](http://www.apache.org)). Server Administrator utilizes the OverLIB JavaScript library. This library can be obtained from [www.bosrup.com](http://www.bosrup.com).

Other trademarks and trade names may be used in this document 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.

**January 2005**

# Contents

1	Introduction	
	<b>Overview</b>	9
	<b>What's New in Server Administrator 2.0?</b>	9
	Update Service	9
	Storage Management Service	9
	<b>Purpose of This Guide</b>	10
	<b>Update of Compatibility Guide</b>	10
	<b>Supported Instrumentation</b>	10
	<b>Supported Operating Systems</b>	11
	<b>Supported Browsers</b>	12
	<b>Supported GUI Languages</b>	12
	<b>Other Documents You Might Need</b>	12
2	Server Administrator Services	
	<b>Overview</b>	15
	<b>Descriptions of Server Administrator Services</b>	15
	Instrumentation Service	15
	Remote Access Service	15
	Storage Management Service	15
	Update Services	16
	Diagnostic Service	16
	Logs	16
	<b>Available Services on Supported Operating Systems</b>	16
3	Systems Management Standards Availability	
	<b>Overview</b>	19
	<b>Availability on Supported Systems</b>	19

	<b>Availability on Supported Operating Systems</b>	<b>20</b>
<b>4</b>	<b>Server Administrator Supported Applications and Systems</b>	
	<b>Version Number Information</b>	<b>21</b>
	<b>Compatible Systems and Applications by Systems Management CD Version</b>	<b>22</b>
	<b>Device Drivers and Red Hat Enterprise Linux Kernel Support</b>	<b>42</b>
<b>5</b>	<b>Server Agent Supported Applications and Systems</b>	
<b>6</b>	<b>Hardware Instrumentation Package Supported Applications and Systems</b>	
<b>7</b>	<b>BIOS Update Requirements</b>	
	<b>Overview</b>	<b>49</b>
	<b>Minimum Requirements for BIOS Update Support</b>	<b>49</b>
	Downloading the Latest BIOS Packages	49
	<b>Latest Available BIOS and Minimum Required BIOS for Update by System</b>	<b>50</b>
<b>8</b>	<b>RAID Controller Supported Servers, Operating Systems, Firmware, and Driver Versions</b>	
	<b>Overview</b>	<b>53</b>
	Version of Storage Management Service in RAID Controller Tables	54
	Key to Table Footnotes	54
	Operating System and Driver Discrepancies **	54
	Linux Driver Included in RPM ***	55
	<b>PERC 2/SC</b>	<b>55</b>
	<b>PERC 2/DC</b>	<b>56</b>
	<b>PERC 4/DC</b>	<b>59</b>
	<b>PERC 4 e/DC</b>	<b>60</b>

<b>PERC 3/SC</b> . . . . .	<b>60</b>
<b>PERC 3/DC</b> . . . . .	<b>61</b>
<b>PERC 3/DCL</b> . . . . .	<b>62</b>
<b>PERC 3/QC</b> . . . . .	<b>63</b>
<b>PERC 4/Di</b> . . . . .	<b>64</b>
<b>CERC ATA 100 4/CH</b> . . . . .	<b>66</b>
<b>PERC 2</b> . . . . .	<b>67</b>
<b>PERC 2/Si</b> . . . . .	<b>68</b>
<b>PERC 3/Si</b> . . . . .	<b>69</b>
<b>PERC 3/Di</b> . . . . .	<b>70</b>
<b>PERC 4/IM</b> . . . . .	<b>75</b>
<b>PERC 4/SC</b> . . . . .	<b>76</b>
<b>CERC SATA 1.5/6 Channel</b> . . . . .	<b>77</b>
<b>PERC 4e/Di</b> . . . . .	<b>77</b>
<b>PERC 4e/Si</b> . . . . .	<b>78</b>
<b>CERC SATA 1.5/2S</b> . . . . .	<b>79</b>
<b>LSI 1020/1030 Embedded SCSI Controller</b> . . . . .	<b>80</b>

## 9 Network Interface Controllers and Supported Operating Systems

<b>Overview</b> . . . . .	<b>83</b>
<b>NIC Drivers and Operating Systems</b> . . . . .	<b>83</b>

## 10 Update Service Availability and Supported Operating Systems

<b>Overview</b> . . . . .	<b>85</b>
<b>Updating of Components</b> . . . . .	<b>85</b>
<b>Operating Systems That Support Update Services</b> . . . . .	<b>85</b>

<b>Required Drivers</b> . . . . .	86
<b>Update Service Exceptions for System BIOS</b> . . . . .	86
<b>Update Service Exceptions for Firmware</b> . . . . .	86
<b>Devices That Can Be Updated Using Dell OpenManage™ Server Administrator Update Services</b> . . . . .	86
<b>11 Remote Access Service Availability</b>	
<b>Overview</b> . . . . .	87
<b>RAC Types</b> . . . . .	87
<b>Availability of RACs on Specific PowerEdge Systems</b> . . . . .	87
<b>RAC Firmware Versions</b> . . . . .	88
<b>12 Diagnostic Service Supported Devices and Operating Systems</b>	
<b>Overview</b> . . . . .	91
<b>Diagnostics for Dell-Supplied Devices</b> . . . . .	91
<b>Diagnostics for Tape Drives, Autoloaders, and Libraries</b> . . . . .	92
Tape Drives . . . . .	92
Tape Arrays, Autoloaders, and Libraries . . . . .	93
<b>Diagnostics for RAID Controllers, SCSI Controllers, and Attached Hard Drives</b> . . . . .	93
RAID, SCSI, and IDE Controllers and Attached Hard Drives . . . . .	93
Diagnostics Supported on Systems Running Microsoft Windows . . . . .	93
Diagnostics Supported on Systems Running Red Hat Linux . . . . .	94
<b>13 Historical Release Information for Legacy Systems</b>	
<b>Overview</b> . . . . .	97
<b>Server Agent 4.5</b> . . . . .	97
Requirements . . . . .	97

Operating Systems . . . . .	97
New in Server Agent Version 4.5 . . . . .	97
<b>Server Agent 4.4.1 . . . . .</b>	<b>98</b>
Requirements . . . . .	98
Operating Systems . . . . .	98
New in Server Agent Version 4.4.1 . . . . .	98
<b>Server Agent 4.4.0 . . . . .</b>	<b>98</b>
Requirements . . . . .	98
Operating Systems . . . . .	99
New in Server Agent Version 4.4.0 . . . . .	99
<b>Server Agent 4.3.0 . . . . .</b>	<b>99</b>
Requirements . . . . .	99
Operating Systems . . . . .	99
New in Server Agent Version 4.3.0 . . . . .	99
Server Agent 4.3.0 Resolved Issues . . . . .	100
<b>Server Agent 4.2.2 . . . . .</b>	<b>100</b>
Requirements . . . . .	100
Operating Systems . . . . .	100
New and Resolved Issues in Server Agent Version 4.2.2 . . . . .	101
<b>Server Agent 4.2.1 . . . . .</b>	<b>101</b>
Requirements . . . . .	101
Operating Systems . . . . .	101
New in Server Agent Version 4.2.1 . . . . .	101
Resolved Issues for Server Agent Version 4.2.1 . . . . .	101
<b>Server Agent 4.2.0 . . . . .</b>	<b>102</b>
Requirements . . . . .	102
Operating Systems . . . . .	102



# Introduction

## Overview

Dell OpenManage™ Server Administrator (OMSA) provides a powerful, integrated set of systems management applications for keeping the systems on your network healthy. Server Administrator provides fault management information, prefailure information, and asset and inventory information to management applications. Server Administrator installs from the *Dell™ PowerEdge™ Installation and Server Management* CD provided with your system. In addition to supporting systems management industry standards, Server Administrator provides additional systems management information about the components of your specific system. Server Administrator can also run diagnostics and configure BIOS and system settings.



**NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management* CD has been replaced by the *Dell PowerEdge Installation and Server Management* CD. References in this guide to the *Systems Management* CD are for Dell OpenManage releases 3.0 through 4.2.

Server Administrator's integrated security draws on the system's operating system security and uses the secure socket layer (SSL) encryption protocol.



**NOTE:** For more information on the secure socket layer, see the Dell Support website at [support.dell.com](http://support.dell.com).

## What's New in Server Administrator 2.0?

The following changes in the OMSA 2.0 affect the Compatibility Guide:

### Update Service

Updates are no longer performed using the **Update** tab in Server Administrator. Updates are performed using the *Server Update Utility* or *Dell Update Packages*, both of which can be downloaded from [support.dell.com](http://support.dell.com).

### Storage Management Service


The enhanced Storage Management Service is installed by default using Express Setup on Red Hat® Enterprise Linux systems or on Microsoft® Windows® systems that do not have an existing Array Manager installation.

## Purpose of This Guide

Server Administrator operates on many Dell™ hardware platforms (hereafter called systems) and with operating systems such as Microsoft® Windows®, Novell® NetWare®, and Red Hat® Enterprise Linux. To fully use the systems management features of Server Administrator, you must understand which features of Server Administrator match your system's hardware configuration and operating system.

## Update of Compatibility Guide

The *Server Administrator Compatibility Guide* is updated each business quarter, and it summarizes all of the *Dell Installation and Server Management CD* releases that precede the release date in its Table of Contents ([index.htm](#)) page. Always consult the [readme.txt](#) file on your *Dell PowerEdge Installation and Server Management CD* for each release for the most current information on compatible systems management elements.

 **NOTE:** You can find systems management software on the *Systems Management CD* prior to release 4.3 of the CD. You can find systems management software on the *Applications CD* prior to the version 3.0 release of the CD. The systems management software was relocated to the *Systems Management CD* beginning with version 3.0. For the purposes of this guide, some references to the *Systems Management CD* may also include the *Applications CD*.

## Supported Instrumentation

Each supported *Dell PowerEdge Installation and Server Management CD* contains instrumentation for your Dell system. Three sections of this guide are organized around the primary instrumentation product name and show the relationship among the following variables:

- *Dell PowerEdge Installation and Server Management CD* version number (or the *Applications CD*)
- Supported operating systems
- Instrumentation service
- Dell PowerEdge™ system product name (for example, PowerEdge 1600SC)


In Table 1-1, instrumentation product names are associated with a range of the *Applications CD* or *Systems Management CD* version (prior to Dell OpenManage version 4.3) or *Dell PowerEdge Installation and Server Management CD* numbers.

**Table 1-1. Systems Management Product Name and Corresponding Version Numbers**

<b>Instrumentation Product Names</b>	<b>CD Version</b>	<b>Section in This Guide</b>
Dell OpenManage Server Administrator	3.0 through 4.2 ( <i>Systems Management</i> CD)  4.3 on ( <i>Installation and Server Management</i> CD)	Server Administrator Supported Applications and Systems  Server Administrator Supported Applications and Systems
Dell OpenManage Server Agent	2.0 through 2.2 ( <i>Applications</i> CD)	Server Agent Supported Applications and Systems
Dell OpenManage™ Hardware Instrumentation Package (HIP)	1.2 through 1.7 ( <i>Applications</i> CD)	Hardware Instrumentation Package Supported Applications and Systems


## Supported Operating Systems

Server Administrator supports major operating systems offered by Microsoft, Novell, and Red Hat. See the tables in this guide to find the operating system that matches the configuration of system and applications that you are installing or upgrading.

 **NOTE:** Each *Dell PowerEdge Installation and Server Management* CD (or the *Applications* CD) supports specific operating system versions, service packs, support packs, and kernels. For precise operating system, application, firmware, and other requirements, see the table that lists the *Dell PowerEdge Installation and Server Management* CD (or *Systems Management* CD) version for the system that you are configuring. The tables in the following sections of this guide are a good place to begin:

- Hardware Instrumentation Package Supported Applications and Systems
- Server Agent Supported Applications and Systems
- Server Administrator Supported Applications and Systems

Operating system version numbers, support packs, service packs, and kernel versions can vary with each *Dell PowerEdge Installation and Server Management* CD (or *Systems Management* CD) version and cannot be accurately generalized. For example, a particular *Dell PowerEdge Installation and Server Management* CD (or *Systems Management* CD) may support only a version of the Red Hat Enterprise Linux operating system with a specific kernel. Some systems management applications are available only on specific operating systems.

 **NOTE:** To address any Simple Network Management Protocol (SNMP) security vulnerabilities associated with an operating system, see the appropriate website for your system's operating system (for example, [www.microsoft.com](http://www.microsoft.com), [www.redhat.com](http://www.redhat.com), or [www.novell.com](http://www.novell.com)).

## Supported Browsers

Server Administrator supports Microsoft Internet Explorer (IE) version 6.0 SP1 and SP2, and Mozilla versions 1.7.1, 1.7.3 open-source Web browser. Server Administrator does not support Netscape Navigator.

## Supported GUI Languages

Dell OpenManage is localized into French, German, Spanish, Japanese, and Simplified Chinese. Dell OpenManage software is localized according to the matrix in the following table. Languages outside of this table have the same support as other **non-supported** configurations.

The table plots the language of the Dell Open Manage GUI against the operating system languages.

**Table 1-2. Supported Server Administrator GUI Languages**

<b>OpenManage GUI Languages</b>	<b>English OS</b>	<b>French OS</b>	<b>German OS</b>	<b>Spanish OS</b>	<b>Simplified Chinese OS</b>	<b>Japanese OS</b>
English	X	X	X	X	X	X
French		X				
German			X			
Spanish				X		
Simplified Chinese					X	
Japanese						X

## Other Documents You Might Need

In addition to this *Compatibility Guide*, you can find the following guides either on the Dell Support website at [support.dell.com](http://support.dell.com) or on the documentation CD:

- The *Dell OpenManage Installation and Security User's Guide* provides complete information on installation procedures and step-by-step instructions for installing, upgrading, and uninstalling Server Administrator for each supported operating system.
- The *Dell OpenManage Software Quick Installation Guide* provides an overview of applications that you can install on your management station (console) and on your managed systems and procedures for installing your console and managed system applications on systems running supported operating systems.

- The *Dell OpenManage Server Administrator User's Guide* describes the installation and use of Server Administrator. Server Administrator is a suite of management agents, installed on the managed system, that provide fault management information, prefailure information, and asset inventory information to management console applications such as Server Administrator and IT Assistant. This guide also provides information about configuring your remote access controller (RAC).
- The *Dell OpenManage Server Administrator SNMP Reference Guide* documents the Simple Network Management Protocol (SNMP) management information base (MIB). The SNMP MIB defines variables that extend the standard MIB to cover the capabilities of systems management agents.
- The *Dell OpenManage Server Administrator CIM Reference Guide* documents the Common Information Model (CIM) provider, an extension of the standard management object format (MOF) file. The CIM provider MOF documents supported classes of management objects.
- The *Dell OpenManage Server Administrator Messages Reference Guide* lists the messages that are displayed in your Server Administrator home page Alert log or on your operating system's event viewer. This guide explains the text, severity, and cause of each Instrumentation Service Alert message that Server Administrator issues.
- The *Dell OpenManage Server Administrator Command Line Interface User's Guide* documents the complete command line interface for Server Administrator, including an explanation of CLI commands to view system status, access logs, create reports, configure various component parameters, and set critical thresholds.
- The *Dell OpenManage Array Manager User's Guide* is a comprehensive reference guide for configuring and managing local and remote storage attached to a system. This document is also available in HTML and PDF formats on the *Dell Installation and Server Management* CD, as well as from the Array Manager console as online help.
- The *Dell Remote Access Controller Installation and Setup Guide* provides complete information about installing and configuring a DRAC III, DRAC III/XT, and an ERA/O controller, configuring an ERA controller, and using a RAC to remotely access an inoperable system.
- The *Dell Remote Access Controller Racadm User's Guide* provides information about using the racadm command-line utility.
- The *Dell Embedded Remote Access/MC Controller User's Guide* provides complete information about configuring and using an ERA/MC controller to remotely manage and monitor your modular system and its shared resources through a network.
- The *Dell™ PowerEdge™ 1655MC Systems — System Configuration Guide* provides an overview of initially setting up a modular system.
- The *Dell OpenManage Remote Install User's Guide* provides information about unattended, simultaneous provisioning and configuration solutions over the network by leveraging image-based technology.


- The *Dell Update Packages User's Guide* provides information about obtaining and using Dell Update Packages as part of your system update strategy.
- The *Server Update Utility User's Guide* provides information about obtaining and using the Server Update Utility (SUU) to update your Dell PowerEdge server or to view the updates available for any server listed in the Repository.

The *Dell Installation and Server Management* CD contains a readme file for Server Administrator and additional readme files for most applications found on the CD.

# Server Administrator Services

## Overview

Server Administrator has a modular architecture that allows system administrators to select and install the functions that are most needed in their particular IT environment. The services available to you vary from one operating system to another. The following sections describe the contribution of each service to your systems management capabilities.

 **NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management CD* has been replaced by the *Dell™ PowerEdge™ Installation and Server Management CD*. References in this guide to the *Systems Management CD* are for Dell OpenManage releases 3.0 through 4.2.

## Descriptions of Server Administrator Services

Each service provides a functionally related set of systems management tasks that you can use to manage your system.

### Instrumentation Service

The Instrumentation Service provides rapid access to detailed fault and performance information gathered by industry-standard systems management agents and allows remote administration of monitored systems, including shutdown, start-up, and security.


### Remote Access Service


The Remote Access Service provides a complete, remote system management solution for systems equipped with a remote access controller (RAC) solution. The Remote Access Service provides remote access to an inoperable system, allowing you to get the system up and running as quickly as possible. The Remote Access Service also provides alert notification when a system is down and allows you to remotely restart a system. Additionally, the Remote Access Service logs the probable cause of system crashes and saves the most recent crash screen.


### Storage Management Service

The enhanced Storage Management Service is installed by default using Express Setup on Red Hat® Enterprise Linux systems or on Microsoft® Windows® systems that do not have an existing Array Manager installation. If Array Manager is already installed on a Windows system, then Express Setup upgrades Array Manager to the latest version and the enhanced Storage Management Service is not installed. On Windows systems, either the enhanced Storage

Management Service or Array Manager can be installed using Custom Setup. Array Manager is not supported on Linux and the enhanced Storage Management Service is installed by default using Express Setup on Linux systems. Likewise, the enhanced Storage Management Service does not support NetWare. On a NetWare system, Array Manager is installed by default using Express Setup.

 **NOTE:** The basic Storage Management Service is not available on systems running Red Hat Enterprise Linux operating systems.

 **NOTE:** The Red Hat Enterprise Linux operating system provides drivers for some of the RAID controllers listed in this section. However, when the basic Storage Management Service is installed on a Red Hat Enterprise Linux operating system, the Linux drivers do not report data to the Storage Management Service.

 **NOTE:** The enhanced Storage Management Service is not available on systems running Novell® NetWare® operating systems.

See the *Dell OpenManage Server Administrator User's Guide* for more information on basic and enhanced Storage Management Service.

## Update Services

Update functionality takes place outside of Server Administrator with Dell OpenManage release 4.3. To update individual components, use component-specific Dell Update Packages. Use the *Dell Server Update Utility Application* CD to view the complete version report and to update an entire system. Server Update Utility is a CD-ROM based application for identifying and applying updates to your server. The Server Update Utility can be downloaded from <http://support.dell.com>.

Section 7, "BIOS Update Requirements" and Section 10, "Update Service Availability and Supported Operating Systems" in this guide provide historical information on the update service within OMSA for users who do not upgrade to Dell OpenManage version 4.3.

## Diagnostic Service

The Diagnostic Service provides a suite of diagnostic programs that run locally on your system or remotely on a system connected to the network. The Diagnostic Service is engineered to diagnose problems on individual systems and to run concurrently with all other applications running on the system under test.

## Logs

Server Administrator displays logs of commands issued to or by the system, monitored hardware events, POST events, and system alerts. You can view logs on the home page, print or save them as reports, and send them by e-mail to a designated service contact.

## Available Services on Supported Operating Systems

Table 2-1 summarizes the services that are available for each supported operating system.

**Table 2-1. Server Administrator Services Available With Supported Operating Systems**

<b>Operating System</b>	<b>Services Available</b>
<ul style="list-style-type: none"><li>• Windows Server 2003 family (includes Web, Standard, and Enterprise Editions) and Microsoft Windows Small Business Server 2003</li><li>• Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server, and Microsoft Windows Small Business Server 2000)</li></ul>	<ul style="list-style-type: none"><li>• Instrumentation</li><li>• Storage Management</li><li>• Diagnostic</li><li>• Remote Access</li></ul>
Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)	<ul style="list-style-type: none"><li>• Instrumentation</li><li>• Diagnostic</li><li>• Remote Access</li><li>• Enhanced Storage Management Service (<i>Dell PowerEdge Installation and Server Management</i> CD or <i>Systems Management</i> CD version 4.1 or later)</li></ul>
<ul style="list-style-type: none"><li>• Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)</li><li>• Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes)</li></ul>	<ul style="list-style-type: none"><li>• Instrumentation</li><li>• Remote Access</li><li>• Basic Storage Management (<i>Systems Management</i> CD version 3.6 or later)</li></ul>





# Systems Management Standards Availability


## Overview

Server Administrator supports the following major systems management protocols:

- HyperText Transfer Protocol Secure (HTTPS)
- Common Information Model (CIM)
- Simple Network Management Protocol (SNMP)

 **NOTE:** See the Dell OpenManage™ Server Administrator **readme** file on the *Systems Management* CD for information on SNMP security concerns, as well as the Dell Support website at [support.dell.com](http://support.dell.com). You must apply updates from your operating system's master SNMP agents to ensure that Dell's SNMP subagents are secure.

 **NOTE:** After you install SNMP, it must be enabled. For more information on enabling SNMP supporting agents, see the *Server Administrator User's Guide*.

 **NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management* CD has been replaced by the *Dell™ PowerEdge™ Installation and Server Management* CD. References in this guide to the *Systems Management* CD are for Dell OpenManage releases 3.0 through 4.2.

If your system supports SNMP, you must install and enable the service on your operating system. If SNMP services are available on your operating system, the Server Administrator installation program installs the supporting agents for SNMP.

HTTPS is supported on all operating systems. Support for CIM and SNMP is operating system-dependent and, in some cases, operating system-version dependent.

## Availability on Supported Systems

On supported Microsoft® Windows® operating systems, Server Administrator supports these two systems management standards: CIM/WMI and SNMP.

On supported Red Hat® Linux and Novell® NetWare® operating systems, Server Administrator supports the SNMP systems management standard.

Server Administrator adds considerable security to those systems management standards. All Set operations for attributes (for example, changing the value of an asset tag) must be performed with Dell OpenManage™ IT Assistant while logged in with the required authority. As a result of the added security that IT Assistant offers for systems management, IT Assistant is the only management console that you can use to change attributes.

## Availability on Supported Operating Systems


Table 3-1 shows the availability of the systems management standards for each supported operating system.

**Table 3-1. Availability of Systems Management Standard by Operating System**


<b>Operating System</b>	<b>SNMP</b>	<b>CIM</b>
Windows Server 2003 family and Windows 2000 Server family	Available from the operating system installation media	Always installed
Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)	Available from the operating system installation media	Unavailable
Novell NetWare	Always installed	Unavailable

# Server Administrator Supported Applications and Systems

This section provides information on instrumentation, applications, and systems that are supported by the *Dell OpenManage Systems Management CD* versions 3.0 through 4.3.

 **NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management CD* has been replaced by the *Dell™ PowerEdge™ Installation and Server Management CD*. References in this guide to the *Systems Management CD* are for Dell OpenManage releases 3.0 through 4.2.

The *Dell PowerEdge Installation and Server Management CD* (or the *Systems Management CD*) supports both Dell OpenManage Server Administrator (OMSA) and Server Agent. For more information about applications and systems supported by Server Agent, see "Server Agent Supported Applications and Systems." Server Agent is referred to as the Instrumentation Service starting with *Systems Management CD* 4.x. The Instrumentation Service is also called Hardware Instrumentation Package (HIP) on older releases.

 **NOTE:** The *Systems Management CD* version 3.0 and later does not fully support the following Dell PowerEdge systems: 1300, 2100, 2200, 2300, 4100, 4200, 4300, 4350, 6100, 6300, and 6350.

 **NOTE:** The *Systems Management CD* version 3.2.1 was not released.

## Version Number Information

All software supporting the Dell PowerEdge servers and PowerVault™ NAS systems are delivered in Dell OpenManage “stack releases” that include the complete group of programs and that are fully tested for the supported platforms. An example is the Dell OpenManage 3.4.2 release of the Dell OpenManage software that supports most Dell servers from February 1998 through June 2003. The version of the software is significant. In this example, the first number (3) represents the major version number. You should upgrade your software any time Dell delivers a new major version. The second number (4) is the release number. A new release may have some minor features and fixes associated with it. You do not need to upgrade to the latest release unless that release is enabling your specific hardware or solving an issue you may be experiencing. You may skip releases as needed. The last number is the hardware “platform refresh” number (2). This indicates that the software has been updated to support a new server. If you have older servers running version 3.4.1, there is no need to upgrade for a platform refresh.

## Compatible Systems and Applications by Systems Management CD Version

Table 4-1 shows compatible applications and Dell systems for the *Installation and Server Management* CD (version 4.3).

**Table 4-1. Compatible Dell Systems and Applications for Installation and Server Management CD Version 4.3.**

<b>Installation and Server Management CD Version</b>	<b>4.3</b>
PowerEdge systems	350
(* Indicates new systems for the given version of the CD)	500SC
	600SC
	650
	700
	750
	800
	1400
	1500SC
	1550
	1600SC
	1650
	1750
	1800
	1850
	1855
	1655MC
	2400
	2450
	2500
	2550
	2600
	2650
	2800
	2850
	4400
	4600
	6400
	6450
	6600
	6650
	6800*
	6850*
	8450
	750N
	755N
	770N
	775N

**Table 4-1. Compatible Dell Systems and Applications for Installation and Server Management CD Version 4.3. (continued)**

<b>Installation and Server Management CD Version</b>	<b>4.3</b>
Supported operating systems	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003  Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server, and Windows 2000 SBS)  Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)  Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes)  Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)
Server Administrator <sup>a</sup>	2.0
Managed Node Framework (MNF)	1.9.x
Instrumentation Service: Server Agent	5.3

**Table 4-1. Compatible Dell Systems and Applications for Installation and Server Management CD Version 4.3. (continued)**

<b>Installation and Server Management CD Version</b>	<b>4.3</b>
Diagnostic Service	3.2
Server Administrator Core	2.0
IT Assistant	7.0
Storage Management Service: Array Manager	3.7
Enhanced Storage Management Service	1.1
<b>RAC Firmware</b>	
DRAC 4	1.1
DRAC/MC	1.1
DRACIII, ERA, ERA/O, ERA/XT	3.21
RAC firmware: DRAC II	NA
ERA/MC	1.44
BMC Firmware Version	1.0.1
a. The Update Service discontinues support with Server Administrator 2.0.	

Table 4-2 shows compatible applications and Dell systems for *Systems Management CD* version 4.1.3 to 4.2.

**Table 4-2. Compatible Dell Systems and Applications for Systems Management CD Versions 4.1.3 to 4.2.**

<b>Systems Management CD Version</b>	<b>4.1.3</b>	<b>4.1.4</b>	<b>4.2</b>
PowerEdge systems (* Indicates new systems for the given version of the CD)	1855*	1855	350 500SC 600SC 650 700 750 800 1400 1500SC 1550 1600SC 1650 1750 1800 1850 1855* 1655MC 2400 2450 2500 2550 2600 2650 2800 2850 4400 4600 6400 6450 6600 6650 8450 750N 755N 770N 775N

**Table 4-2. Compatible Dell Systems and Applications for Systems Management CD Versions 4.1.3 to 4.2. (continued)**

<b>Systems Management CD Version</b>	<b>4.1.3</b>	<b>4.1.4</b>	<b>4.2</b>
Supported operating systems	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003 (supported by PowerEdge 2800 only)	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003 (supported by PowerEdge 2800 only)	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003
	Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server	Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server	Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server, and Windows 2000 SBS)
	Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)	Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)	Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)
			<b>NOTE:</b> Netware is not supported on the PowerEdge 650 system.

**Table 4-2. Compatible Dell Systems and Applications for Systems Management CD Versions 4.1.3 to 4.2. (continued)**

<b>Systems Management CD Version</b>	<b>4.1.3</b>	<b>4.1.4</b>	<b>4.2</b>
	Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes)	Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes)	Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes) <b>NOTE: Netware is not supported on the PowerEdge 650 system.</b>
	Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)	Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)	Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)
Server Administrator	1.9.1	1.9.1	1.9.2
Managed Node Framework (MNF)	1.9	1.9	1.9
Instrumentation Service: Server Agent	5.2	5.2	5.2
Diagnostic Service	3.1.1	3.1.1	3.1
Update Service	1.9.	1.9.2	1.9.1
Server Administrator Core	See "MNF" in this table.	See "MNF" in this table.	See "MNF" in this table.
IT Assistant	6.5.3	6.5.3	6.5.3
Storage Management Service: Array Manager	NA	NA	3.6
Enhanced Storage Management Service	1.0	1.0.1	1.0
<b>RAC Firmware</b>			
DRAC 4	1.0	1.1	1.1
DRAC/MC	1.0	NA	NA

**Table 4-2. Compatible Dell Systems and Applications for Systems Management CD Versions 4.1.3 to 4.2. (continued)**

<b>Systems Management CD Version</b>	<b>4.1.3</b>	<b>4.1.4</b>	<b>4.2</b>
DRACIII, ERA, ERA/O, ERA/XT	NA	NA	3.21
RAC firmware: DRAC II	NA		NA <b>NOTE:</b> The DRAC II software is no longer included on the Systems Management CD, but can be obtained from earlier releases or <a href="http://support.dell.com">support.dell.com</a> .
ERA/MC	NA	NA	1.44
BMC Firmware Version	1.0	1.0.1	1.0.1

Table 4-3 shows compatible applications and Dell systems for *Systems Management CD* version 4.0.1 to 4.1.2.

**Table 4-3. Compatible Dell Systems and Applications for Systems Management CD Versions 4.0.1 to 4.1.2.**

<b>Systems Management CD Version</b>	<b>4.0.1</b>	<b>4.1</b>	<b>4.1.1</b>	<b>4.1.2</b>
PowerEdge systems (* Indicates new systems for the given version of the CD)	1850* 2800* 2850*	350 500SC 600SC 650 700 750 1400 1500SC 1550 1600SC 1650 1750 1850 1655MC 2400 2450 2500 2550 2600 2650 2800 2850 4400 4600 6400 6450 6600 6650 8450 750N 755N 770N 775N	1800*	800*

**Table 4-3. Compatible Dell Systems and Applications for Systems Management CD Versions 4.0.1 to 4.1.2. (continued)**

<b>Systems Management CD Version</b>	<b>4.0.1</b>	<b>4.1</b>	<b>4.1.1</b>	<b>4.1.2</b>
Supported operating systems	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003 (supported by PowerEdge 2800 only)	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003
	Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server	Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server, and Windows 2000 SBS)	Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server, and Windows 2000 SBS)	Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server, and Windows 2000 SBS)
	Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)	Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)	Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)	Novell NetWare 5.1 (Support Pack 7 or later plus hot fixes)
		<b>NOTE:</b> Netware is not supported on the PowerEdge 650 system.		

**Table 4-3. Compatible Dell Systems and Applications for Systems Management CD Versions 4.0.1 to 4.1.2. (continued)**

<b>Systems Management CD Version</b>	<b>4.0.1</b>	<b>4.1</b>	<b>4.1.1</b>	<b>4.1.2</b>
	Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes)	Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes)	Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes)	Novell NetWare 6.5 (Support Pack 1 or later plus hot fixes)
		<b>NOTE:</b> Netware is not supported on the PowerEdge 650 system.		
	Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)	Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)	Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)	Red Hat Enterprise Linux AS and ES (version 2.1) and AS, ES, and WS (version 3)
Server Administrator	1.8.1	1.9	1.9	1.9
Managed Node Framework (MNF)	1.8.1	1.9	1.9	1.9
Instrumentation Service: Server Agent	5.1.1	5.2	5.2	5.2
Remote Access Service SW	4.0.0	3.30 (DRAC III) 4.0.0 (DRAC 4)	NA	NA
BMC Firmware Version	1.0	1.0.1	1.0.1	1.0.1
Diagnostic Service	3.0.1	3.1	3.1	3.1
Update Service	1.9	1.9.1	1.9.1	1.9.1
Server Administrator Core	See "MNF" in this table.	See "MNF" in this table.		
IT Assistant	6.5.2	6.5.3	6.5.3	6.5.3
Storage Management Service: Array Manager	3.5	3.6	3.6	3.6
Enhanced Storage Management Service	NA	1.0	1.0	1.0

**Table 4-3. Compatible Dell Systems and Applications for Systems Management CD Versions 4.0.1 to 4.1.2. (continued)**

<b>Systems Management CD Version</b>	<b>4.0.1</b>	<b>4.1</b>	<b>4.1.1</b>	<b>4.1.2</b>
<b>RAC Firmware</b>				
DRAC 4	1.0	1.0	NA	NA
RAC firmware: DRAC II	NA	NA	NA	NA
		<b>NOTE:</b> The DRAC II software is no longer included on the Systems Management CD, but can be obtained from earlier releases or <a href="http://support.dell.com">support.dell.com</a> .		
RAC firmware: DRAC III	NA	3.12	NA	NA
RAC firmware: DRAC III/XT	NA	3.12	NA	NA
RAC firmware: ERA	NA	3.12	NA	NA
RAC firmware: ERA/O	NA	3.12	NA	NA

**Table 4-4. Compatible Dell Systems and Applications for Systems Management CD Versions 3.5 Through 3.8**

<b>Systems Management CD Version</b>	<b>3.5</b>	<b>3.6</b>	<b>3.7</b>	<b>3.8</b>
PowerEdge systems	350	350	350	350
(* Indicates new systems for the given version of the CD)	500SC	500SC	500SC	500SC
	600SC	600SC	600SC	600SC
	650	650	650	650
	1400	1400	1400	700*
	1500SC	1500SC	1500SC	750*
	1550	1550	1550	1400
	1600SC	1600SC	1600SC	1500SC
	1650	1650	1650	1550
	1750	1750	1750	1600SC
	1655MC	1655MC	1655MC	1650
	2400	2400	2400	1750
	2450	2450	2450	1655MC
	2500	2500	2500	2400
	2550	2550	2550	2450
	2600	2600	2600	2500
	2650	2650	2650	2550
	4400	4400	4400	2600
	4600	4600	4600	2650
	6400	6400	6400	4400
	6450	6450	6450	4600
	6600	6600	6600	6400
	6650	6650	6650	6450
	8450	8450	8450	6600
				6650
				8450

**Table 4-4. Compatible Dell Systems and Applications for Systems Management CD Versions 3.5 Through 3.8 (continued)**

<b>Systems Management CD Version</b>	<b>3.5</b>	<b>3.6</b>	<b>3.7</b>	<b>3.8</b>
Supported operating systems	Microsoft® Windows® Server 2003	Windows Server 2003 family	Windows Server 2003 family	Windows Server 2003 family (includes Web, Standard, and Enterprise editions) and Microsoft Windows Small Business Server [SBS] 2003
	Windows 2000 Server family (SP3 recommended)	Windows 2000 Server family (SP3 recommended)	Windows 2000 Server family (SP3 recommended)	Windows 2000 Server family (includes Windows 2000 Server, Windows 2000 Advanced Server, and Windows 2000 SBS)
	Novell® NetWare® 5.1 (SP4 or later)	NetWare 5.1 (SP5 or later)	Novell NetWare 5.1 (Support Pack 6 or later)	Novell NetWare 5.1 (Support Pack 6 or later)
	NetWare 6.0 (SP1 or later)	NetWare 6.5	Novell NetWare 6.5 (Support Pack 1 or later)	Novell NetWare 6.5 (Support Pack 1 or later)
	RedHat Linux Advanced Server 2.1	Red Hat Enterprise Linux AS (version 2.1)	Red Hat Enterprise Linux AS and ES (version 2.1 and 3), and WS (version 3)	Red Hat Enterprise Linux AS (version 2.1) and AS, ES, and WS (version 3)
	Red Hat Linux 9	Red Hat Linux 9	Red Hat Linux 9	NA
Server Administrator	1.5	1.6	1.7	1.8
Managed Node Framework (MNF)	1.5	1.6	1.7	1.8
Instrumentation Service: Server Agent	4.10.0	4.11	4.12	5.1
Diagnostic Service	2.5	2.6	2.7	3.0

**Table 4-4. Compatible Dell Systems and Applications for Systems Management CD Versions 3.5 Through 3.8 (continued)**

<b>Systems Management CD Version</b>	<b>3.5</b>	<b>3.6</b>	<b>3.7</b>	<b>3.8</b>
Update Service	1.6	1.7	1.8	1.9
Server Administrator Core	See "MNF" in this table.	See "MNF" in this table.	See "MNF" in this table.	See "MNF" in this table.
IT Assistant	6.4.4	6.5	6.5	6.5
Storage Management Service: Array Manager	3.4	3.5	3.5	3.5
<b>RAC Firmware</b>				
Remote Access Service (RAS)	2.5	3.0	3.10	3.20
RAC firmware: DRAC II	2.5	2.5	2.5	2.5
RAC firmware: DRAC III	2.5	3.0	3.10	3.10
RAC firmware: DRAC III/XT	2.5	3.0	3.10	3.10
RAC firmware: ERA	2.5	3.0	3.10	3.10
RAC firmware: ERA/O	2.5	3.0	3.10	3.10

Table 4-5 shows compatible applications and Dell systems for *Systems Management CD* versions 3.2.3 through 3.4.

**Table 4-5. Compatible Dell Systems and Applications for Systems Management CD Versions 3.2.3 Through 3.4**

<b>Systems Management CD Version</b>	<b>3.2.3</b>	<b>3.3</b>	<b>3.3.3</b>	<b>3.4</b>
PowerEdge systems	300	300	300	300
(* Indicates new systems for the given version of the CD)	350	350	350	350
	500SC	500SC	500SC	500SC
	600SC	600SC	600SC	600SC
	1300	1300	650*	650
	1400	1400	1300	1300
	1500SC	1500SC	1400	1400
	1550	1550	1500SC	1500SC
	1600SC	1600SC	1550	1550
	1650	1650	1600SC	1600SC
	1655MC*	2300	1650	1650
	2300	2400	1750*	1750
	2400	2450	1655MC	1655MC
	2450	2500	2300	2300
	2500	2550	2400	2400
	2550	2600	2450	2450
	2600	2650	2500	2500
	2650	4300	2550	2550
	4300	4350	2600	2600
	4350	4400	2650	2650
	4400	4600	4300	4300
	4600	6300	4350	4350
	6300	6350	4400	4400
	6350	6400	4600	4600
	6400	6450	6300	6300
	6450	6600	6350	6350
	6600	6650	6400	6400
	6650	8450	6450	6450
	8450		6600	6600
			6650	6650
			8450	8450

**Table 4-5. Compatible Dell Systems and Applications for Systems Management CD Versions 3.2.3 Through 3.4 (continued)**

<b>Systems Management CD Version</b>	<b>3.2.3</b>	<b>3.3</b>	<b>3.3.3</b>	<b>3.4</b>
Supported operating systems	Microsoft Windows 2000 Server Family (SP3 recommended)	Microsoft Windows NT® 4.0 Server family (SP6a or later)	Windows NT 4.0 Server family (SP6a or later)	Windows Server 2003
	NetWare 5.1 (SP2 or later)	Windows 2000 Server family (SP3 recommended)	Windows 2000 Server family (SP3 recommended)	Windows 2000 Server family (SP3 recommended)
	NetWare 6.0 (SP1 or later)	NetWare 5.1 (SP2 or later)	NetWare 5.1 (SP2 or later)	NetWare 5.1 (SP2 or later)
	Red Hat Enterprise Linux Advanced Server 2.1	NetWare 6.0 (SP1 or later)	NetWare 6.0 (SP1 or later)	NetWare 6.0 (SP1 or later)
	Red Hat Linux 7.3 (with the 2.4.18-4smp kernel)	Linux Advanced Server 2.1	Linux Advanced Server 2.1	Linux Advanced Server 2.1
		Linux 7.3 (with the 2.4.18-4smp kernel)	Linux 7.3 (with the 2.4.18-4smp kernel)	Linux 8.0 and Linux 9
	Linux 8.0 (with the 2.4.18-14smp kernel)	Linux 8.0 (with the 2.4.18-14smp kernel)		
Server Administrator	1.2.3	1.3	1.3.4	1.4
Managed Node Framework (MNF)	1.2.3	1.3	1.3	1.4
Instrumentation Service: Server Agent	4.7.2	4.8	4.8.1	4.9
Remote Access Service (RAS)	1.3.1	2.0	2.1	2.2
RAC firmware: DRAC II	2.5	2.5	2.5	2.5
RAC firmware: DRAC III	1.3	2.0	2.0	2.2
RAC firmware: DRAC III/XT	NA	2.0	2.0	2.2

**Table 4-5. Compatible Dell Systems and Applications for Systems Management CD Versions 3.2.3 Through 3.4 (continued)**

<b>Systems Management CD Version</b>	<b>3.2.3</b>	<b>3.3</b>	<b>3.3.3</b>	<b>3.4</b>
RAC firmware: ERA	1.2	2.0	2.1	2.2
RAC firmware: ERA/O	1.2	2.0	2.0	2.2
Diagnostic Service	2.2.1	2.3	2.3.1	2.4
Update Service	1.3	1.4	1.4.3	1.5
Server Administrator Core	See "MNF" in this table.	See "MNF" in this table.	See "MNF" in this table.	See "MNF" in this table.
IT Assistant	6.4.2	6.4.3	6.4.3	6.4.4
Storage Management Service: Array Manager	3.3	3.3	3.4	3.4

Table 4-6 shows supported elements for *Systems Management* CD versions 3.0 through 3.2.2.

**Table 4-6. Compatible Dell Systems and Applications for Systems Management CD Versions 3.0 Through 3.2.2**

<b>Systems Management CD Version</b>	<b>3.0</b>	<b>3.0.1</b>	<b>3.0.2</b>	<b>3.1</b>	<b>3.2</b>	<b>3.2.2</b>
PowerEdge systems	300 350	300 350	300 350	300 350	300 350	300 350
(* Indicates new systems for the given version of the CD)	500SC 1300 1400 1500SC 1550 2300 2400 2450 2500 2550 4300 4350 4400 6300 6350 6400 6450 8450	500SC 1300 1400 1500SC 1550 1650* 2300 2400 2450 2500 2550 4300 4350 4400 4600* 6300 6400 6450 8450	500SC 1300 1400 1500SC 1550 1650 2300 2400 2450 2500 2550 2650* 4300 4350 4400 4600 6300 6400 6450 6600* 6650* 8450	500SC 1300 1400 1500SC 1550 1650 2300 2400 2450 2500 2550 2650 4300 4350 4400 4600 6300 6400 6450 6600 6650 8450	500SC 600SC* 1300 1400 1500SC 1550 1650 2300 2400 2450 2500 2550 2600* 2650 4300 4350 4400 4600 6300 6400 6450 6600 6650 8450	500SC 600SC 1300 1400 1500SC 1550 1600SC* 1650 2300 2400 2450 2500 2550 2600 2650 4300 4350 4400 4600 6300 6400 6450 6600 6650 8450


**Table 4-6. Compatible Dell Systems and Applications for Systems Management CD Versions 3.0 Through 3.2.2 (continued)**

<b>Systems Management CD Version</b>	<b>3.0</b>	<b>3.0.1</b>	<b>3.0.2</b>	<b>3.1</b>	<b>3.2</b>	<b>3.2.2</b>
Supported operating systems	Windows NT 4.0 with SP4	Windows NT 4.0 Server family (SP6a or later)	Windows NT 4.0 Server family (SP6a or later)	Windows NT 4.0 Server family (SP6a or later)	Windows NT 4.0 Server family (SP6a or later)	Windows NT 4.0 Server family (SP6a or later)
	Windows 2000 Server family	Windows 2000 Server family (hot fixes rec. for SNMP)	Windows 2000 Server family (hot fixes rec. for SNMP)	Windows 2000 Server family (hot fixes rec. for SNMP)	Windows 2000 Server family (SP3 rec.)	Windows 2000 Server family (SP3 rec.)
	Novell NetWare 4.x, 5.x, or 6.x	NetWare 5.1 (SP2 or later)	NetWare 5.1 (SP2 or later)	NetWare 5.1 (SP2 or later)	NetWare 5.1 (SP2 or later)	NetWare 5.1 (SP2 or later)
	Linux 7.1	NetWare 6.0 (SP1 or later)	NetWare 6.0 (SP1 or later)	NetWare 6.0 (SP1 or later)	NetWare 6.0 (SP1 or later)	NetWare 6.0 (SP1 or later)
	Linux Advanced Server 2.1	Linux 7.1 (with latest ucd-snmp package)	Linux 7.1 (with latest ucd-snmp package)	Linux 7.1 (with latest ucd-snmp package)	Linux Advanced Server 2.1 Linux 7.3 (with the 2.4.18-4smp kernel)	Linux Advanced Server 2.1 Linux 7.3 (with the 2.4.18-4smp kernel)
Server Administrator	1.0	1.0.1	1.0.2	1.1	1.2	1.2.2
Managed Node Framework	NA	NA	NA	NA	1.2	1.2.2
Instrumentation Service: Server Agent	4.5.1	4.5.1 4.5.2	4.5.1 4.5.2	4.6	NA	1.2.1
Remote Access Service (RAS)	NA	NA	NA	NA	4.7	4.7.1
RAC firmware: DRAC II	2.4.1	2.4.1	2.5	2.5	NA	1.3

**Table 4-6. Compatible Dell Systems and Applications for Systems Management CD Versions 3.0 Through 3.2.2 (continued)**

<b>Systems Management CD Version</b>	<b>3.0</b>	<b>3.0.1</b>	<b>3.0.2</b>	<b>3.1</b>	<b>3.2</b>	<b>3.2.2</b>
RAC firmware: DRAC III	NA	1.1	1.1	1.2	2.5	2.5
RAC firmware: DRAC III/XT	NA	NA	NA	NA	1.3	1.3
RAC firmware: ERA	NA	NA	1.05	1.05	NA	1.0
RAC firmware: ERA/O	NA	NA	NA	1.1	1.07	1.2
Diagnostic Service	2.0	2.0.1	2.0.2	2.1	1.2	1.2
Update Service	1.1	1.1	1.1	1.2	1.2	1.2.1
Server Administrator Core	NA	NA	NA	1.10	1.3	1.3
IT Assistant	6.2	6.2	6.2	6.3	1.2	See "MNF" in this table.
Storage Management Service: Array Manager	3.1.1	3.1.2	3.1.2	3.1.3	3.2	3.3

## Device Drivers and Red Hat Enterprise Linux Kernel Support

 **NOTE:** The "Supported Operating Systems" section of Table 4-4, Table 4-5, and Table 4-6 include Red Hat Enterprise Linux kernel versions. Updated or later versions of Red Hat Enterprise Linux may require the use of dynamic kernel support (see "Installing Server Administrator" in the *Server Administrator User's Guide* for an explanation of this feature).

The Instrumentation Service provides device drivers for the precompiled kernels listed in Table 4-4, Table 4-5, and Table 4-6. When the Instrumentation Service detects that none of its prebuilt device drivers supports the running kernel, it attempts to build a device driver for that kernel. This feature of Server Administrator is called dynamic kernel support. Server Administrator's dynamic kernel support builds a device driver when needed during the Instrumentation Service installation or start-up.

# Server Agent Supported Applications and Systems

This section provides information on instrumentation, applications, and systems that are supported by *Dell OpenManage Applications* CD versions 2.0 through 2.2. The Dell OpenManage™ Server Agent was supported concurrently with the Hardware Instrumentation Package (HIP) by *Applications* CD versions 1.3 through 1.7.

For more information about applications and systems supported by HIP, see "Hardware Instrumentation Package Supported Applications and Systems."

For more information about Server Administrator supported applications and systems, see "Server Administrator Supported Applications and Systems."



**NOTE:** The *Applications* CD version 2.0.1 and later does not fully support the following Dell™ PowerEdge™ systems: 1300, 2100, 2200, 2300, 4100, 4200, 4300, 4350, 6100, 6300, and 6350.

Table 5-1 shows compatible applications and PowerEdge systems for each *Applications* CD, versions 2.0 through 2.2.

**Table 5-1. Server Agent Versions, Applications, and Dell Systems**

<b>Applications CD Version</b>	<b>2.0</b>	<b>2.0.1</b>	<b>2.0.2</b>	<b>2.1</b>	<b>2.2</b>
PowerEdge systems	300 350	300SC 350	350 500SC*	300 350	300 350
(* Indicates new systems for the given version of the CD)	1300 1400 1550 2300 2400 2450 2500*	1400SC 1550 2400 2450 2500SC 2550	1550	500SC 1300 1400 1550 2300 2400 2450	500SC 1300 1400 1500SC* 1550 2300 2400
	2550* 4300 4350 4400 6300 6350 6400 6450 8450	4400 6400 6450 8450		2500 2550 4300 4350 4400 6300 6350 6400 6450 8450	2450 2500 2550 4300 4350 4400 6300 6350 6400 6450 8450
Supported operating systems	Microsoft® Windows NT® 4.0 with SP4 or later	Windows NT 4.0 with SP4 or later	Windows NT 4.0 with SP4 or later	Windows NT 4.0 with SP 4 or later	Windows NT 4.0 with SP4 or later
	Windows® 2000 Server family	Windows 2000 Server family	Windows 2000 Server family	Windows 2000 Server family	Windows 2000 Server family
	Novell® NetWare® 4.x or 5.x	NetWare 4.x or 5.x	NetWare 4.x or 5.x	NetWare 4.x or 5.x	NetWare 4.x or 5.x
	Red Hat® Linux 7.0 (kernel version: 2.2.16)	Linux 7.0 (kernel version: 2.2.16)	Linux 7.0 (kernel version: 2.2.16)	Linux 7.0	Linux 7.0
Instrumentation Service: Server Agent	4.3	4.3	4.4	4.4.1	4.5

**Table 5-1. Server Agent Versions, Applications, and Dell Systems (continued)**

<b>Applications CD Version</b>	<b>2.0</b>	<b>2.0.1</b>	<b>2.0.2</b>	<b>2.1</b>	<b>2.2</b>
Remote Access Service: DRAC II	2.3.2	2.3.3	2.3.3	2.4	2.4
Remote Access Service: DRAC III	NA	NA	NA	NA	NA
Online Diagnostics	1.1	1.1	1.1	1.1.1	1.1.2
IT Assistant	6.0	6.0	6.0	6.0	6.0
Storage Management Service: Array Manager	2.7	3.0	3.0	3.0	3.1



## Hardware Instrumentation Package Supported Applications and Systems

This section provides information about instrumentation, applications, and systems that are supported by the *Dell OpenManage Applications* CD versions 1.1 through 1.7. Both Dell OpenManage™ Hardware Instrumentation Package (HIP) and the Dell OpenManage Server Agent are supported by the *Applications* CD versions 1.3 through 1.7.

For more information about applications and systems supported by Server Agent, see "Server Agent Supported Applications and Systems."

Table 6-1 shows compatible applications and Dell™ PowerEdge™ systems for the *Applications* CD versions 1.1 through 1.7.

**Table 6-1. HIP Versions, Applications, and Dell PowerEdge Systems**

<b>Applications CD Version</b>	<b>1.1</b>	<b>1.2</b>	<b>1.3</b>	<b>1.4</b>	<b>1.5</b>	<b>1.6</b>	<b>1.7</b>
PowerEdge systems	1300	1300	1300	1300	1300	300*	300
(* Indicates new systems for the given version of the CD)	2100	2100	2100	2100	1400*	1300	350*
	2200	2200	2200	2200	2100	1400	1300
	2300	2300	2300	2300	2200	1550*	1400
	2400	2400	2400	2400	2300	2300	1550
	2450	2450	2450	2450	2400	2400	2300
	4100	4100	4100	4100	2450	2450	2400
	4200	4200	4200	4200	4100	4300	2450
	4300	4300	4300	4300	4200	4350	4300
	4350	4350	4350	4350	4300	4400	4350
	4400	4400	4400	4400	4350	6300	4400
	6100	6100	6100	6100	4400	6350	6300
	6300	6300	6300	6300	6100	6400	6350
	6350	6350	6350	6350	6300	6450	6400
	6400	6400	6400	6400	6350	8450	6450
	6450	6450	6450	6450	6400		8450
	8450	8450	8450	8450	6450		
					8450		


**Table 6-1. HIP Versions, Applications, and Dell PowerEdge Systems (continued)**


<b>Applications CD Version</b>	<b>1.1</b>	<b>1.2</b>	<b>1.3</b>	<b>1.4</b>	<b>1.5</b>	<b>1.6</b>	<b>1.7</b>
Supported operating systems	Microsoft® Windows NT® 4.0 with SP3 or later	Windows NT 4.0 with SP3 or later	Windows NT 4.0 with SP4 or later	Windows NT 4.0 with SP4 or later	Windows NT 4.0 with SP4 or later	Windows NT 4.0 with SP4 or later	Windows NT 4.0 with SP4 or later
			Windows® 2000 Server family	Windows 2000 Server family	Windows 2000 Server family	Windows 2000 Server family	Windows 2000 Server family
	Novell® NetWare® 4.11 with SP5 or later	NetWare 4.11 with SP5 or later					
	NetWare 5.0	NetWare 5.0	NetWare 4.x or 5.x	NetWare 4.x or 5.x	NetWare 4.x or 5.x	NetWare 4.x or 5.x	NetWare 4.x or 5.x
Instrumentation Service: HIP	3.5.2	3.5.2	3.5.2	3.5.2	3.5.2	3.5.2	3.5.2
Instrumentation Service: Server Agent	NA	NA	4.0	4.0	4.0	4.2.1	4.2.2
Remote Access Service: DRAC II	2.2.1	2.2.1	2.3	2.3	2.3	2.3.1	2.3.1
Online Diagnostics	NA	NA	NA	NA	NA	NA	1.0
IT Assistant	5.1	5.1	5.1	5.2	6.0	6.0	6.0
Storage Management Service: Array Manager	1.5	1.5	2.0	2.0	2.5	2.5	2.7

# BIOS Update Requirements

## Overview

Prior to Dell OpenManage™ version release 4.3 Dell OpenManage Server Administrator 2.0 (OMSA 2.0), you could update BIOS, firmware, and driver components from the **Update** tab in OMSA. With OMSA 2.0, you cannot update components from within OMSA. With Dell OpenManage 4.3, you can now update components using Server Update Utility (SUU) and Dell Update Packages (DUP). You can download SUU and DUP from [support.dell.com](http://support.dell.com).


 **NOTE:** The information in this section is for historical purposes only and applies only to releases before OMSA 2.0.

 **NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management* CD has been replaced by the *Dell™ PowerEdge™ Installation and Server Management* CD. References in this guide to the *Systems Management* CD are for Dell OpenManage releases 3.0 through 4.2.

The Server Administrator Update Service provides the ability to update your system's BIOS remotely from within the Server Administrator GUI. The Update Service also provides interfaces for updating many firmware and driver packages. The remote BIOS update capability does not require that you be logged in directly to the system whose BIOS you are updating. If the target system has the minimum required BIOS version installed, you can update the BIOS to the latest version *remotely*. The purpose of this section is to help you to identify the minimum prerequisite BIOS version to update to the latest available BIOS for each supported Dell™ PowerEdge™ system.

## Minimum Requirements for BIOS Update Support

This section lists the minimum BIOS requirements for upgrading to the latest BIOS version available for each Dell PowerEdge system supported by Server Administrator. You can download the latest BIOS versions from the Dell Support website at [support.dell.com](http://support.dell.com).

 **NOTE:** This guide is updated only once per business quarter. To ensure that you have the latest BIOS version available, always download the latest BIOS versions from the Dell Support website at [support.dell.com](http://support.dell.com).

To locate the BIOS update files that you want, perform the steps in the following subsections.

### Downloading the Latest BIOS Packages

- 1 Go to the Dell Support website at [support.dell.com](http://support.dell.com).
- 2 Register to login if you have not logged in before.


- 3 Click **log in**.
- 4 Specify your system either by entering your Service Tag or by selecting the product model. Click **Go**.
- 5 Under **File Library**, select **Downloads**.
- 6 Under **Select Your Download Category**, select **Flash BIOS Updates**.
- 7 Under **Select an Operating System**, select **Not Applicable**.
- 8 Under **Select an Operating System Language**, select **English**.
- 9 Click **Submit**.

The download page for your system's FlashBIOS appears.

- 10 Under **Select a Device**, select the device you want to update.
- 11 Continue to select the BIOS device until you reach the page where you select the format for the FlashBIOS file you want to download.

Select a format that fits your intended installation method: floppy disk or operating system format.

- 12 Select download by **HTTP** or **FTP**.

 **NOTE:** It is strongly recommended that you print out and follow the detailed installation instructions for your BIOS provided on this Web page.

The Export Compliance Disclaimer appears.

- 13 Click **I agree** to continue.

The **File Download** window appears.

- 14 Specify where you want to save your FlashBIOS file and click **OK**.

A download complete popup appears.

- 15 Follow the installation instructions (appropriate for your file format) that appear on the **Download and Install** page.

## Latest Available BIOS and Minimum Required BIOS for Update by System

Table 7-1 lists the latest available BIOS version for each system that Server Administrator supports. Table 7-1 also lists the minimum version of the BIOS that must be installed on each system for the latest flash BIOS package to be applied by remote update.

**Table 7-1. PowerEdge Systems and Minimum BIOS Versions Required for Remote Flash Update**

<b>PowerEdge System</b>	<b>Minimum BIOS Required for Remote Flash Update</b>	<b>Latest Available BIOS Version for System</b>
300	A00	A03
350	BIOS update is not supported for PowerEdge 350 systems.	
500SC	A05	A07
600SC	A00	A09
650	A01	A05
700	A00	A03
750	A00	A03
800	Go to the Dell support site at <a href="http://support.dell.com">support.dell.com</a> for the latest BIOS information.	
1300	A04	A12
1400/1400SC	A00	A09
1500SC	A04	A06
1550	A01	A09
1600SC	A00	A10
1650	A05	A12
1655MC	A00	A02
1750	A05	A10
1800	A00	A02
1850	A00	A02
1855	A00	A00
2300	A09	A15
2400	A01	A09
2450	A02	A09
2500/2500SC	A00	A07
2550	A06	A09
2600	A01	A13
2650	A00	A20
2800	Go to the Dell support site at <a href="http://support.dell.com">support.dell.com</a> for the latest BIOS information.	
2850	A00	A02


**Table 7-1. PowerEdge Systems and Minimum BIOS Versions Required for Remote Flash Update (continued)**

<b>PowerEdge System</b>	<b>Minimum BIOS Required for Remote Flash Update</b>	<b>Latest Available BIOS Version for System</b>
4300	A06	A12
4350	A03	A06
4400	A04	A11
4600	A00	A13
6300	A08	A13
6350	A08	A13
6400	A01	A14
6450	A01	A14
6600	A08	A16
6650	A08	A16
6800	Go to the Dell support site at <a href="http://support.dell.com">support.dell.com</a> for the latest BIOS information.	
6850	Go to the Dell support site at <a href="http://support.dell.com">support.dell.com</a> for the latest BIOS information.	
8450	A06	A06

# RAID Controller Supported Servers, Operating Systems, Firmware, and Driver Versions

## Overview

In Dell OpenManage™ versions 4.1 through 4.3 (and later), Dell OpenManage Server Administrator (OMSA) offers two storage products. The basic Storage Service that has been a part of Server Administrator still allows you to view your attached storage devices from within Server Administrator. The enhanced Storage Service allows you to configure and manage your storage devices from within Server Administrator.


 **NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management* CD has been replaced by the *Dell™ PowerEdge™ Installation and Server Management* CD. References in this guide to the *Systems Management* CD are for Dell OpenManage releases 3.0 through 4.2.


Most versions of the *Systems Management* CD support management of RAID controllers in the form of PERC cards, and some systems management releases also support CERC IDE and SATA controllers. Systems administrators responsible for monitoring the compatibility of their systems' storage devices with their latest installed operating system or *Dell PowerEdge Installation and Server Management* CD (or *Systems Management* CD) need a clear matrix that shows the elements that are compatible with a particular storage controller. Each storage controller version in turn supports a specific array of elements, including:


- Version of the Storage Management Service
- Dell™ PowerEdge™ system
- Firmware version number required for a particular controller
- Supported operating systems, where each operating system requires a specific driver

The current release of Server Administrator provides two versions of the Storage Management Service: basic Storage Management Service and enhanced Storage Management Service.

The basic Storage Management Service is similar to the Storage Management Service available from the Server Administrator GUI in earlier releases of Server Administrator.

 **NOTE:** The basic Storage Management Service is not available on systems running Red Hat® Enterprise Linux operating systems.


 **NOTE:** The Red Hat Enterprise Linux operating system provides drivers for some of the RAID controllers listed in this section. However, when the basic Storage Management Service is installed on a Red Hat Enterprise Linux operating system, the Linux drivers do not report data to the Storage Management Service.

 **NOTE:** The enhanced Storage Management Service is not available on systems running Novell® NetWare® operating systems.

See the *Dell OpenManage Server Administrator User's Guide* for more information on basic and enhanced Storage Management Service.

Four types of RAID controllers are included in this section:

- The RAID controller card group contains the following controllers: PERC 2, PERC 2/SC, PERC 2/DC, PERC 3/SC, PERC 3/DC, PERC 3/DCL, PERC 3/QC, PERC 4/SC, PERC 4/DC, PERC 4e/Di, PERC 4e/Si, CERC ATA 100/4 Channel, CERC SATA 4/2s and CERC SATA 1.5/6 Channel.
- The RAID on motherboard (ROMB) group includes the following controllers: PERC 2/Si, PERC 3/Si, PERC 3/Di, PERC 4/Di, and CERC SATA 1.5/2S.
- The internal mirroring group, provided through the system BIOS, includes the PERC 4/IM controller.
- The LSI 1020/1030 embedded SCSI controller.

 **NOTE:** The firmware and drivers listed in this section refer to the minimum supported version for these controllers. Later versions of the firmware and drivers may also be supported. For the most recent driver and firmware requirements, refer to the readme.txt file for either the basic or extended Storage Service.

## Version of Storage Management Service in RAID Controller Tables

The left column in each RAID controller table is labeled either Array Manager or OpenManage Storage Management (OMSM). Versions 2.7 to 3.7 are for Array Manager (basic Storage Management service). Version 1.1 is for OMSM, also known as the Enhanced Storage Management Service. There is one table carrying supported elements for OMSM 1.0.1 (the PERC 4/IM on the Dell PowerEdge 1855).

## Key to Table Footnotes

Some drivers in the following tables are marked with two or three asterisks and are referred back to these paragraphs.

### Operating System and Driver Discrepancies \*\*

Some drivers display as one driver number in Array Manager and another driver number in Microsoft Windows Server 2000 and 2003. The Array Manager standalone install and the Server Administrator silent install require driver version 2.8.0.6076 or higher. The Array Manager Utilities display this driver as 2.8.0.6076. The Device Manager for Microsoft Windows 2000 and Microsoft Windows Server 2003, however, display driver version 2.8.0.6076 as 2.8.0.6085.

### Linux Driver Included in RPM \*\*\*

The 1.1.4 Linux driver is included in RPM 2302 (Red Hat Package Manager 2302).

## PERC 2/SC

The PERC 2/SC supports the following PowerEdge systems: 2300, 4300, 4350, 6300, 6350, 6400, and 8450. When installed on a PowerEdge 8450 system running Array Manager 3.1.2 or 3.1.3, the PERC 2/SC requires drivers that differ from the other supported systems.


 **NOTE:** The PERC 2/SC does not support Novell® NetWare® on PowerEdge x300 systems.

Table 8-1 and Table 8-2 show the other elements supported by the PERC 2/SC.

**Table 8-1. Array Manager Supported Elements: PERC 2/SC**

Array Manager Version*	PERC Firmware Version	Microsoft® Windows NT® 4.0 Driver	Windows® 2000 Driver	Windows Server 2003 Driver	Novell NetWare 4.2 Driver	NetWare 5.x Driver	NetWare 6.x Driver
2.7	3.13	2.32	2.62	NA	2.06	NA	NA
3.0.1	3.13	4.07	2.62	NA	3.08-j	NA	NA
3.1.1	3.13	4.11	2.62	NA	3.11-a	NA	NA
3.1.1 (for PowerEdge 8450)	3.13	4.11	2.68	NA	3.12	NA	NA
3.1.3	3.13	2.32	2.68	NA	2.06	NA	NA
3.1.3 (for PowerEdge 8450)	3.13	4.11	2.68	NA	3.12	NA	NA
3.2	3.13	2.32	2.68	NA	2.06	2.06	Native
3.2 (for PowerEdge 8450)	3.13	4.15	2.68	NA	3.12	6.01r	Native
3.3	3.13	2.32	2.68	NA	2.06	2.06	Native
3.3 (for PowerEdge 8450)	3.13	4.17.2	2.68	NA	3.12	6.02a	6.02a
3.4	3.13	2.32	2.68	6.32.2.32	NA	2.06	6.02
3.4 (for PowerEdge 8450)	3.13	4.18	2.68	6.32.2.32	NA	7.01n	Native
3.5	3.13	2.32	2.68	6.41.2.32	NA	2.06	6.02

**Table 8-1. Array Manager Supported Elements: PERC 2/SC (continued)**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft® Windows NT® 4.0 Driver</b>	<b>Windows® 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.5 (for PowerEdge 8450)	3.13	4.21	2.68	6.41.2.32	NA	6.02	6.02
3.6	3.13	2.32	2.68	6.41.2.32	NA	2.06	6.02
3.6 (for PowerEdge 8450)	3.13	4.21	2.68	6.41.2.32	NA	6.02	6.02
3.7	3.13	NA	2.68	6.35.2.32	NA	<b>NOTE:</b> NetWare is not supported on PowerEdge x300 systems with a PERC 2/SC.	
3.7 (for PowerEdge 8450)	3.13	NA	2.68	6.35.2.32	NA	(Native)	(Native)

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-2. OMSM Supported Elements: PERC 2/SC**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	3.13	2.68	6.35.2.32	1.18	NA

## PERC 2/DC

The PERC 2/DC supports the following PowerEdge systems: 2400, 2450, 4300, 4400, 6300, 6400, 6450, and 8450.

Table 8-3 and Table 8-4 show the other elements supported by the PERC 2/DC.

**Table 8-3. Array Manager Supported Elements: PERC 2/DC Supported Elements**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
2.7	1.01	2.32	2.68	Ns	2.06	2.06	NA
3.0	1.04	4.07	2.68	NA	3.08-j	3.08-j	NA
3.0.1	1.04	4.07	2.68	NA	3.08-j	3.08-j	NA
3.1	1.04	4.11	2.68	NA	3.11-a	3.11-a	NA
3.1.1	1.04	4.11	2.68	NA	3.11-a	3.11-a	NA
3.1.2	1.06	2.32	2.68	NA	2.06	2.06	6.01e
(for PowerEdge x300)							
3.1.2	1.06	4.15	2.68	NA	3.12	3.12	6.01e
(for PowerEdge x400)							
3.1.3	1.06	2.32	2.68	NA	2.06	2.06	6.01e
(for PowerEdge x300)							
3.1.3	1.06	4.11	2.68	NA	3.12	3.12	6.01e
(for PowerEdge x400)							
3.2	1.06	2.32	2.68	NA	2.06	2.06	NA
(for PowerEdge x300)							
3.2	1.06	4.15	2.68	NA	3.12	6.01r	6.01r
(for PowerEdge x400)							
3.3	1.06	2.32	2.68	NA	2.06	2.06	NA
(for PowerEdge x300)							

**Table 8-3. Array Manager Supported Elements: PERC 2/DC Supported Elements (continued)**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.3 (for PowerEdge x400)	1.06	4.17.2	2.68	NA	3.12	6.02a	6.02a
3.4 (for PowerEdge x300)	1.06	2.32	2.68	6.32.2.32	NA	2.06	NA
3.4 (for PowerEdge x400)	1.06	4.18	2.68	6.32.2.32	NA	7.01n	Native
3.5 (for PowerEdge x300)	1.06	2.32	2.68	6.41.2.32	NA	2.06	NA
3.5 (for PowerEdge x400)	1.06	4.21	2.68	6.41.2.32	NA	6.02	6.02
3.6	1.06	2.32	2.68	6.41.2.32	NA	2.06	6.02
3.6 (for PowerEdge 8450)	1.06	4.21	2.68	6.41.2.32	NA	6.02	6.02
3.7 (for PowerEdge x300)	1.06	NA	2.68	6.35.2.32	NA	2.06	NA
3.7 (for PowerEdge x400)	1.06	NA	2.68	6.35.2.32	NA	Native	Native

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-4. OMSM Supported Elements: PERC 2/DC**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	1.06	2.68	6.35.2.32	1.18	NA

## PERC 4/DC

The PERC 4/DC supports the following PowerEdge systems: 650, 1650, 1750, 2500, 2550, 2600, 2650, 4600, 6400, 6450, 6600, 6650, and 8450.

Table 8-5 and Table 8-6 show the other elements supported by the PERC 4/DC.

**Table 8-5. Array Manager Supported Elements: PERC 4/DC**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x and 6.0 Driver</b>	<b>NetWare 6.5 Driver</b>
3.4	3.28	4.21	5.42	6.35.2.32	NA	7.01q	7.01q
3.5	3.41	4.21	5.46	6.41.2.32	NA	7.01v	7.01v
3.6	3500	4.21	5.46	6.41.2.32	NA	7.01z	7.01z
3.7	3500	NA	5.46	6.41.2.32	NA	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-6. OMSM Supported Elements: PERC 4/DC**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Linux 3 Driver</b>
1.1	3500	5.46	6.41.2.32	2.10.7	2.10.7

## PERC 4 e/DC

The PERC 4 e/DC supports the PowerEdge 1800, 1850, 2800 and 2850.

Table 8-7 and Table 8-8 show the other elements supported by the PERC 4e/DC.

**Table 8-7. Array Manager Supported Elements: PERC 4/e DC**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.7	513T	NA	5.46	6.41.2.32	NA	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-8. OMSM Supported Elements: PERC 4/e DC**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	513T	5.46	6.41.2.32	2.10.7	2.10.7

## PERC 3/SC

The PERC 3/SC supports the PowerEdge 1400SC and 1500SC.

Table 8-9 and Table 8-10 show the other elements supported by the PERC 3/SC.

**Table 8-9. Array Manager Supported Elements: PERC 3/SC**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.1	1.63	4.11	5.22.1	NA	3.12	3.12	NA
3.1.1	1.63	4.11	5.22.1	NA	3.12	3.12	NA
3.1.2	1.63	4.11	5.22.1	NA	3.12	3.12	NA
3.2	1.72	4.15	5.32	NA	3.12	6.01r	6.01r
3.3	1.74	4.17.2	5.35.2	NA	3.12	6.02a	6.02a

**Table 8-9. Array Manager Supported Elements: PERC 3/SC (continued)**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.4	1.79	4.18	5.39	6.32.2.32	NA	7.01n	7.01n
3.5	196T	4.21	5.46	6.41.2.32	NA	7.01v	7.01v
3.6	1970	4.21	5.46	6.41.2.32	NA	7.01z	7.01z
3.7	1970	NA	5.46	6.41.2.32	NA	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-10. OMSM Supported Elements: PERC 3/SC**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	1970	5.46	6.41.2.32	2.10.7	2.10.7

## PERC 3/DC

The PERC 3/DC supports the following PowerEdge systems: 1650, 2400, 2450, 2500, 2550, 2600, 2650, 4400, 4600, 6400, 6600, 6650, 7150, and 8450.

Table 8-11 and Table 8-12 show the other elements supported by the PERC 3/DC.

**Table 8-11. Array Manager Supported Elements: PERC 3/DC**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
2.7	1.57	4.07	5.22	NA	NA	NA	NA
3.0	1.57	4.07	5.22	NA	3.08-j	3.08-j	NA
3.0.1	1.57	4.07	5.22	NA	3.08-j	3.08-j	NA
3.1	161j	4.11	5.22	NA	3.12	3.12	NA
3.1.1	161j	4.11	5.22	NA	3.12	3.12	NA
3.1.2	161j	4.11	5.22.1	NA	3.12	3.12	NA

**Table 8-11. Array Manager Supported Elements: PERC 3/DC (continued)**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.1.3	161N	4.11	5.22.2	NA	3.12	3.12	6.01e
3.2	1.72	4.15	5.32	NA	3.12	6.01r	6.01r
3.3	1.74	4.17.2	5.35.2	NA	3.12	6.02a	6.02a
3.4	1.79	4.18	5.39	6.32.2.32	NA	7.01n	7.01n
3.5	196T	4.21	5.46	6.41.2.32	NA	7.01v	7.01v
3.6	1970	4.21	5.46	6.41.2.32	NA	7.01z	7.01z
3.7	1970	NA	5.46	6.41.2.32	NA	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-12. OMSM Supported Elements: PERC 3/DC**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	1970	5.46	6.41.2.32	2.10.7	2.10.7

## PERC 3/DCL

The PERC 3/DCL supports the following PowerEdge systems: 1400, 1400SC, and 1550.

Table 8-13 and Table 8-14 show the other elements supported by the PERC 3/DCL.

**Table 8-13. Array Manager Supported Elements: PERC 3/DCL**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
2.7	1.57	4.07	5.22	NA	NA	NA	NA
3.0	1.57	4.07	5.22	NA	3.08-j	3.08-j	NA
3.0.1	1.57	4.07	5.22	NA	3.08-j	3.08-j	NA
3.1	161j	4.11	5.22	NA	3.12	3.12	NA
3.1.1	161j	4.11	5.22	NA	3.12	3.12	NA
3.1.2	161j	4.11	5.22.1	NA	3.12	3.12	NA

**Table 8-13. Array Manager Supported Elements: PERC 3/DCL (continued)**

Array Manager Version*	PERC Firmware Version	Microsoft Windows NT 4.0 Driver	Windows 2000 Driver	Windows Server 2003 Driver	Novell NetWare 4.2 Driver	NetWare 5.x Driver	NetWare 6.x Driver
3.1.3	161N	4.11	5.22.2	NA	3.12	3.12	6.01e
3.2	1.72	4.15	5.32	NA	3.12	6.01r	6.01r
3.3	1.74	4.17.2	5.35.2	NA	3.12	6.02a	6.02a
3.4	1.79	4.18	5.39	6.32.2.32	NA	7.01n	7.01n
3.5	196T	4.21	5.46	6.41.2.32	NA	7.01v	7.01v
3.6	1970	4.21	5.46	6.41.2.32	NA	7.01z	7.01z
3.7	1970	NA	5.46	6.41.2.32	NA	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-14. OMSM Supported Elements: PERC 3/DCL**

OMSM	PERC Firmware Version	Windows 2000 Driver	Windows Server 2003 Driver	Red Hat Enterprise Linux 2.1 Driver	Red Hat Enterprise Linux 3 Driver
1.1	1970	5.46	6.41.2.32	2.10.7	2.10.7

## PERC 3/QC

The PERC 3/QC supports the following PowerEdge systems: 2400, 2450, 2500, 2550, 2650, 4400, 4600, 6400, 6450, 6600, 6650, 7150, and 8450.

Table 8-15 and Table 8-16 show the other elements supported by the PERC 3/QC.

**Table 8-15. Array Manager Supported Elements: PERC 3/QC**

Array Manager Version*	PERC Firmware Version	Microsoft Windows NT 4.0 Driver	Windows 2000 Driver	Windows Server 2003 Driver	Novell NetWare 4.2 Driver	NetWare 5.x Driver	NetWare 6.x Driver
2.7	1.57	4.07	5.22	NA	NA	NA	NA
3.0	1.57	4.07	5.22	NA	3.08-j	3.08-j	NA
3.0.1	1.57	4.07	5.22	NA	3.08-j	3.08-j	NA
3.1	161j	4.11	5.22	NA	3.12	3.12	NA

**Table 8-15. Array Manager Supported Elements: PERC 3/QC**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.1.1	161j	4.11	5.22	NA	3.12	3.12	NA
3.1.2	161j	4.11	5.22.1	NA	3.12	3.12	NA
3.1.3	161N	4.11	5.22.2	NA	3.12	3.12	6.01e
3.2	1.72	4.15	5.32	NA	3.12	6.01r	6.01r
3.3	1.74	4.17.2	5.35.2	NA	3.12	6.02a	6.02a
3.4	1.79	4.18	5.39	6.32.2.32	NA	7.01n	7.01n
3.5	196T	4.21	5.46	6.41.2.32	NA	7.01v	7.01v
3.6	1970	4.21	5.46	6.41.2.32	NA	7.01z	7.01z
3.7	1970	NA	5.46	6.41.2.32	NA	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-16. OMSM Supported Elements: PERC 3/QC**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	1970	5.46	6.41.2.32	2.10.7	2.10.7

## PERC 4/Di

The PERC 4/Di supports PowerEdge 1750 and 2600 systems.

Table 8-17 and Table 8-18 show the other elements supported by the PERC 4/Di.

**Table 8-17. Array Manager Supported Elements: PERC 4/Di**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.2	2.01	4.15	5.32	NA	NA	6.01r	6.01r
3.3	2.01	4.17.2	5.35.2	NA	NA	6.02a	6.02a

**Table 8-17. Array Manager Supported Elements: PERC 4/Di**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.4 on PowerEdge 2600	2.24	4.18	5.39	6.32.2.32	NA	7.01n	7.01n
3.4 on PowerEdge 1750	4.04	NA	5.39	6.32.2.32	NA	NA	NA
3.5 on PowerEdge 2600	2.48	4.21	5.46	6.41.2.32	NA	7.01v	7.01v
3.5 on PowerEdge 1750	412W	4.21	5.46	6.41.2.32	NA	7.01v	7.01v
3.6 on PowerEdge 1750	412W	4.21	5.46	6.41.2.32	NA	7.01z	7.01z
3.6 on PowerEdge 2600	2.48	4.21	5.46	6.41.2.32	NA	7.01z	7.01z
3.7 on PowerEdge 1750	4130	NA	5.46	6.41.2.32	NA	7.02c	7.02c
3.7 on PowerEdge 2600	2.500	NA	5.46	6.41.2.32	NA	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-18. OMSM Supported Elements: PERC 4/Di**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1 on a PowerEdge 1750	4130	5.46	6.41.2.32	2.10.7	2.10.7
1.1 on a PowerEdge 2600	2.500	5.46	6.41.2.32	2.10.7	2.10.7

## CERC ATA 100 4/CH

The CERC ATA 100 4/CH supports the following PowerEdge systems: 500SC, 600SC, and 1400SC.

Table 8-19 and Table 8-20 show the other elements supported by the CERC ATA 100 4/CH.

**Table 8-19. Array Manager Supported Elements: CERC ATA 100 4/CH**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
2.7	NA	NA	NA	NA	NA	NA	NA
3.0	NA	NA	NA	NA	NA	NA	NA
3.1	NA	NA	NA	NA	NA	NA	NA
3.1.1	NA	NA	NA	NA	NA	NA	NA
3.1.2	500SC: H661 1400SC: H661	NA	5.26	NA	NA	6.01h	NA
3.1.3	500SC: H661 1400SC: H661	NA	5.26	NA	NA	6.01h	NA
3.2	6.61	4.15	5.32	NA	NA	6.01r	6.01r
3.3	6.62	4.17.2	5.35.2	NA	NA	6.02a	6.02a
3.4	6.62	4.18	5.39	6.32.2.32	NA	7.01n	7.01n

**Table 8-19. Array Manager Supported Elements: CERC ATA 100 4/CH**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.5	6.62	4.18	5.46	6.41.2.32	NA	7.01v	7.01v
3.6	6.62	4.21	5.46	6.41.2.32	NA	7.01z	7.01z
3.7	6.62	NA	5.56	6.41.2.32	NA	7.01v	7.01v

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-20. OMSM Supported Elements: CERC ATA 100 4/CH**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	6.62	5.46	6.41.2.32	2.10.1	Native

## PERC 2

The PERC 2 supports the following PowerEdge systems: 2300, 2400, 2450, 4300, 4350, 4400, 6300, 6350, 6400, 6450, and 8450.

Table 8-21 and Table 8-22 show the other elements supported by the PERC 2.

**Table 8-21. Array Manager Supported Elements: PERC 2**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
2.7	3073	2988	3070	NA	3070	2987	NA
3.0	3073	2988	3070	NA	3070	2987	NA
3.0.1	3073	2988	3070	NA	3070	2987	NA
3.1	3116	4892	4892	NA	3499	3506	NA
3.1.1	3116	4892	4892	NA	3499	3506	NA
3.1.2	3153	4933	4933	NA	NA	3546	NA
3.1.3	3153	4933	4933	NA	NA	3546	3546
3.2	3153	4933	4933	NA	NA	3546	3546
3.3	3170	4944	4944	NA	NA	3564	3564

**Table 8-21. Array Manager Supported Elements: PERC 2 (continued)**

Array Manager Version*	PERC Firmware Version	Microsoft Windows NT 4.0 Driver	Windows 2000 Driver	Windows Server 2003 Driver	Novell NetWare 4.2 Driver	NetWare 5.x Driver	NetWare 6.x Driver
3.4	3170	4944	4944	4944	NA	3564	3564
3.5	6082	6075	6076	6076	NA	6075	6075
3.6	6089	6075	6085	6085	NA	6075	6075
3.7	2.8.0.6089	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075

\*This controller is supported for both the basic and enhanced Storage Management Service.

\*\*See "Key to Table Footnotes."

**Table 8-22. OMSM Supported Elements: PERC 2**

OMSM	PERC Firmware Version	Windows 2000 Driver	Windows Server 2003 Driver	Red Hat Enterprise Linux 2.1 Driver	Red Hat Enterprise Linux 3 Driver
1.1	2.8.0.6089	2.8.0.6085**	2.8.0.6085**	1.1.4***	1.1.4***

\*\*/\*\*\*\*\*See "Key to Table Footnotes."

## PERC 2/Si

The PERC 2/Si supports PowerEdge 2400 systems.

Table 8-23 and Table 8-24 show the other elements supported by the PERC 2/Si.

**Table 8-23. Array Manager Supported Elements: PERC 2/Si**

Array Manager Version*	PERC Firmware Version	Microsoft Windows NT 4.0 Driver	Windows 2000 Driver	Windows Server 2003 Driver	Novell NetWare 4.2 Driver	NetWare 5.x Driver	NetWare 6.x Driver
2.7	2991	2988	3070	NA	2987	2987	NA
3.0	2991	2988	3070	NA	2987	2987	NA
3.0.1	2993	2988	3070	NA	2987	2987	NA
3.1	3506	4892	4892	NA	3499	3506	NA
3.1.1	3506	4892	4892	NA	3499	3506	NA
3.1.2	3546	4933	4933	NA	NA	3546	NA
3.1.3	3552	4933	4933	NA	NA	3546	3546

**Table 8-23. Array Manager Supported Elements: PERC 2/Si (continued)**

Array Manager Version*	PERC Firmware Version	Microsoft Windows NT 4.0 Driver	Windows 2000 Driver	Windows Server 2003 Driver	Novell NetWare 4.2 Driver	NetWare 5.x Driver	NetWare 6.x Driver
3.2	3552	4933	4933	NA	NA	3546	3546
3.3	3571	4944	4944	NA	NA	3564	3564
3.4	3571	4944	4944	4944	NA	3564	3564
3.5	6082	6075	6076	6076	NA	6075	6075
3.6	6089	6075	6085	6085	NA	6075	6075
3.7	2.8.0.6089	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075

\*This controller is supported for both the basic and enhanced Storage Management Service.

\*\*See "Key to Table Footnotes."

**Table 8-24. OMSM Supported Elements: PERC 2/Si**

OMSM	PERC Firmware Version	Windows 2000 Driver	Windows Server 2003 Driver	Red Hat Enterprise Linux 2.1 Driver	Red Hat Enterprise Linux 3 Driver
1.1	2.8.0.6089	2.8.0.6085**	2.8.0.6085**	1.1.4***	1.1.4***

\*\*/\*\*See "Key to Table Footnotes."

## PERC 3/Si

The PERC 3/Si supports the PowerEdge 2400 and 2450 systems.

Table 8-25 and Table 8-26 show the other elements supported by the PERC 3/Si.

**Table 8-25. Array Manager Supported Elements: PERC 3/Si**

Array Manager Version*	PERC Firmware Version	Microsoft Windows NT 4.0 Driver	Windows 2000 Driver	Windows Server 2003 Driver	Novell NetWare 4.2 Driver	NetWare 5.x Driver	NetWare 6.x Driver
2.7	2991	2988	3070	NA	2991	2991	NA
3.0	2991	2988	3070	NA	2987	2987	NA
3.0.1	2993	2988	3070	NA	2987	2987	NA
3.1	3506	4892	4892	NA	3506	3506	NA

**Table 8-25. Array Manager Supported Elements: PERC 3/Si**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.1.1	3506	4892	4892	NA	3506	3506	NA
3.1.2	3546	4933	4933	NA	3546	3546	NA
3.1.3	3546	4933	4933	NA	3546	3546	3546
3.2	3546	4933	4933	NA	NA	3546	3546
3.3	3571	4944	4944	NA	NA	3564	3564
3.4	3571	4944	4944	4944	NA	3564	3564
3.5 on PowerEdge 2400	6077	6075	6076	6076	NA	6075	6075
3.5 on PowerEdge 2450	6082	6075	6076	6076	NA	6075	6075
3.6	6089	6075	6085	6085	NA	6075	6075
3.7	2.8.0.6092	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075

\*This controller is supported for both the basic and enhanced Storage Management Service.

\*\*See "Key to Table Footnotes."

**Table 8-26. OMSM Supported Elements: PERC 3/Si**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	2.8.0.6089	2.8.0.6085**	2.8.0.6085**	1.1.4***	1.1.4***

\*\*/\*\*See "Key to Table Footnotes."

## PERC 3/Di

The PERC 3/Di supports the following PowerEdge systems: 1650, 2500, 2550, 2650, 4400, and 4600.

Table 8-27 and Table 8-28 show the other elements supported by the PERC 3/Di.

**Table 8-27. Array Manager Supported Elements: PERC 3/Di**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
2.7	2991	2988	3070	NA	2987	2987	NA
3.0	2991	2988	3070	NA	2987	2987	NA
3.0.1	2993	2988	3070	NA	2987	2987	NA
3.1	2500: 3116 2550: 3506 4400: 3506 4600: 3116	4892	4892	NA	3499	3506	NA
3.1.1	2550: 3506 4400: 3506 4600: 3116	4892	4892	NA	3499	3506	NA
3.1.2	1650: 3153 2500: 3153 2550: 3546 2650: 3153 4400: 3546 4600: 3153	4933	4933	NA	NA	3546	NA
3.1.3	1650: 3153 2500: 3153 2550: 3546 2650: 3153 4400: 3546 4600: 3153	4933	4933	NA	NA	3546	3546
3.2 for the PowerEdge 1650	3153	4933	4933	NA	NA	3546	3546
3.2 for the PowerEdge 2500	3153	4933	4933	NA	NA	3546	3546
3.2 for the PowerEdge 2550	3546	4933	4933	NA	NA	3546	3546
3.2 for the PowerEdge 2650	3157	4933	4933	NA	NA	3546	3546

**Table 8-27. Array Manager Supported Elements: PERC 3/Di (continued)**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.2 for PowerEdge 4400	3546	4933	4933	NA	NA	3546	3546
3.2 for PowerEdge 4600	3153	4933	4933	NA	NA	3546	3546
3.3 for PowerEdge 1650	3170	4944	4944	NA	NA	3564	3564
3.3 for PowerEdge 2500	3170	4944	4944	NA	NA	3564	3564
3.3 for PowerEdge 2550	3571	4944	4944	NA	NA	3564	3564
3.3 for PowerEdge 2650	3170	4944	4944	NA	NA	3564	3564
3.3 for PowerEdge 4400	3571	4944	4944	NA	NA	3564	3564
3.3 for PowerEdge 4600	3170	4944	4944	NA	NA	3564	3564
3.4 for PowerEdge 1650	3170	4944	4944	4944	NA	3564	3564
3.4 for PowerEdge 2500	3170	4944	4944	4944	NA	3564	3564
3.4 for PowerEdge 2550	3571	4944	4944	4944	NA	3564	3564
3.4 for PowerEdge 2650	3170	4944	4944	4944	NA	3564	3564

**Table 8-27. Array Manager Supported Elements: PERC 3/Di (continued)**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.4 for PowerEdge 4400	3571	4944	4944	4944	NA	3564	3564
3.4 for PowerEdge 4600	3170	4944	4944	4944	NA	3564	3564
3.5 for PowerEdge 1650	6082	6075	6076	6076	NA	6075	6075
3.5 for PowerEdge 2500	6082	6075	6076	6076	NA	6075	6075
3.5 for PowerEdge 2550	6082	6075	6076	6076	NA	6075	6075
3.5 for PowerEdge 2650	6082	6075	6076	6076	NA	6075	6075
3.5 for PowerEdge 4400	6082	6075	6076	6076	NA	6075	6075
3.5 for PowerEdge 4600	6082	6075	6076	6076	NA	6075	6075
3.6	6089	6075	6085	6085	NA	6075	6075
3.7 for PowerEdge 1650	2.8.0.6092	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075
3.7 for PowerEdge 2500	2.8.0.6092	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075
3.7 for PowerEdge 2550	2.8.0.6092	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075

**Table 8-27. Array Manager Supported Elements: PERC 3/Di (continued)**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 4.2 Driver</b>	<b>NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.7 for PowerEdge 2650	2.8.0.6092	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075
3.7 for PowerEdge 4400	2.8.0.6092	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075
3.7 for PowerEdge 4600	2.8.0.6092	NA	2.8.0.6085**	2.8.0.6085**	NA	6075	6075

\*This controller is supported for both the basic and enhanced Storage Management Service.

\*\*See "Key to Table Footnotes."

**Table 8-28. OMSM Supported Elements: PERC 3/Di**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1 on a PowerEdge 1650	2.8.0.6092	2.8.0.6085	2.8.0.6085	1.1.4***	1.1.4***
1.1 on a PowerEdge 2500	2.8.0.6092	2.8.0.6085	2.8.0.6085	1.1.4***	1.1.4***
1.1 on a PowerEdge 2550	2.8.0.6092	2.8.0.6085**	2.8.0.6085**	1.1.4***	1.1.4***
1.1 on a PowerEdge 2650	2.8.0.6092	2.8.0.6085**	2.8.0.6085**	1.1.4***	1.1.4***
1.1 on a PowerEdge 4400	2.8.0.6092	2.8.0.6085**	2.8.0.6085**	1.1.4***	1.1.4***
1.1 on a PowerEdge 4600	2.8.0.6092	2.8.0.6085**	2.8.0.6085**	1.1.4***	1.1.4***

**Table 8-28. OMSM Supported Elements: PERC 3/Di**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
***See "Key to Table Footnotes."					

## PERC 4/IM

The PERC 4/IM is supported by PowerEdge 1655MC and 1855 systems.

Table 8-29, Table 8-30, and Table 8-31 show the other elements supported by the PERC 4/IM.

**Table 8-29. Array Manager Supported Elements: PERC 4/IM**

<b>Array Manager Version</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>NetWare 6.x Driver</b>
3.4 on PowerEdge 1655MC	1.00.12.00	1.08.06	1.08.06	1.08.18	NA	NA
3.4 PERC 4/im	1.02.09.00	1.08.19	1.08.19	1.08.18	3.01.00	3.01.00
3.5 on PowerEdge 1655MC	1.00.12.00	NA	1.08.06	1.08.18 Native	NA	NA
3.6	1.00.12.00	NA	1.08.06	1.08.18 Native	NA	NA
3.7	1.00.12.00 (1.00.0c.00 Hex)	NA	1.08.06	1.08.18 Native	NA	NA



**NOTE:** This card is supported for the enhanced Storage Management Service only.

**Table 8-30. OMSM Supported Elements: PERC 4/IM**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1 on PowerEdge 1655MC	1.00.12.00 1.00.0c.00 Hex	1.08.06	1.08.18 (Native)	NA	NA
1.0.1 on PowerEdge 1855	1.03.23.90	1.09.11	1.09.11	Native	Native

**Table 8-31. OMSM Supported Elements: PERC 4/IM**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.0.1 on a PowerEdge 1855	1.03.23.00	1.09.11	1.09.11	Native	Native

## PERC 4/SC

The PERC 4/SC is supported by the following PowerEdge systems: 500SC, 600SC, 1400, 1400SC, 1500SC, 1600 SC, and PE640.

Table 8-32 and Table 8-33 show the other elements supported by the PERC 4/SC.

**Table 8-32. Array Manager Supported Elements: PERC 4/SC**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>Novell NetWare 6.x Driver</b>
3.4	3.17	4.18	5.39	6.32.2.32	7.01n	7.01n
3.5	3.41	4.21	5.46	6.41.2.32	7.01v	7.01v
3.6	3500	4.21	5.46	6.41.2.32	7.01z	7.01z
3.7	3500	NA	5.46	6.41.2.32	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-33. OMSM Supported Elements: PERC 4/SC**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	3500	5.46	6.41.2.32	2.10.7	2.10.7

## CERC SATA 1.5/6 Channel

The CERC SATA 1.5/6 Channel supports the following PowerEdge systems: 700, 750, 800, and 1800.

Table 8-34 and Table 8-35 show the other elements supported by the CERC SATA 1.5/6 Channel.

**Table 8-34. Array Manager Supported Elements: CERC SATA 1.5/6 Channel**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>Novell NetWare 6.x Driver</b>
3.5	4.1.0.7028	NA	4.1.0.7010	4.1.0.7010	4.1.0.7131	4.1.0.7131
3.6	4.1.0.7028	NA	4.1.0.7010	4.1.0.7010	4.1.0.7131	4.1.0.7131
3.7	2.8.0.7403	NA	2.8.0.7010	2.8.0.7010	7031	7031

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-35. OMSM Supported Elements: CERC SATA 1.5/6 Channel**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	2.8.0.7403	2.8.0.7010	2.8.0.7010	1.1.4***	1.1.4***

\*\*\*See "Key to Table Footnotes."

## PERC 4e/Di

The PERC 4e/Di supports the following PowerEdge systems: 2800 and 2850.

Table 8-36 and Table 8-37 show the other elements supported by the PERC 4e/Di.

**Table 8-36. Array Manager Supported Elements: PERC 4e/Di**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>Novell NetWare 6.x Driver</b>
3.5 on PowerEdge 2800	3150	NA	5.46	6.41.2.32	7.01z	7.01z
3.5 on PowerEdge 2850	3150	NA	5.46	6.41.2.32	7.01z	7.01z
3.6 on PowerEdge 2800	3150	NA	5.46	6.41.2.32	7.01z	7.01z
3.6 on PowerEdge 2850	3150	NA	5.46	6.41.2.32	7.01z	7.01z
3.7	5130	NA	5.46	6.41.2.32	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-37. OMSM Supported Elements: PERC 4e/Di**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	5130	5.46	6.41.2.32	2.10.7	2.10.7

## PERC 4e/Si

The PERC 4e/Si supports the following PowerEdge system: 1850.

Table 8-38 and Table 8-39 show the other elements supported by the PERC 4e/Si.

**Table 8-38. Array Manager Supported Elements: PERC 4e/Si**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>Novell NetWare 6.x Driver</b>
3.5	3150	NA	5.46	6.41.2.32	7.01z	7.01z
3.6	3150	NA	5.46	6.41.2.32	7.01z	7.01z

**Table 8-38. Array Manager Supported Elements: PERC 4e/Si**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>Novell NetWare 6.x Driver</b>
3.7	5130	NA	5.46	6.41.2.32	7.02c	7.02c

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-39. OMSM Supported Elements: PERC 4e/Si**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	5130	5.46	6.41.2.32	2.10.7	2.10.7

## CERC SATA 1.5/2S

The CERC SATA 1.5/2s supports the following PowerEdge systems: 800 and 1800.

Table 8-40 and Table 8-41 show the other elements supported by the CERC SATA 1.5/2S.

**Table 8-40. Array Manager Supported Elements: CERC SATA 1.5/2S**

<b>Array Manager Version*</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>Novell NetWare 6.x Driver</b>
3.6	NA	NA	6.00.044	6.00.044	6.00.045	6.00.045
3.7	NA	NA	6.00.050	6.00.050	6.00.049	6.00.049

\*This controller is supported for both the basic and enhanced Storage Management Service.

**Table 8-41. OMSM Supported Elements: CERC SATA 1.5/2S**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1	NA	6.00.048	6.00.048	1.1.4***	NA

\*\*\*See "Key to Table Footnotes."

## LSI 1020/1030 Embedded SCSI Controller

This embedded SCSI controller is an onboard chip. It supports the following systems: 1600SC, 1750, 1800, 1850, 2600, 2650, 2800, 2850, 6800, 6850, and 7250.

Table 8-42 through Table 8-45 show the other elements supported by the LSI 1020/1030.

**Table 8-42. Array Manager Supported Elements: LSI 1020**

<b>Array Manager Version</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>Novell NetWare 6.x Driver</b>
3.7 on a PowerEdge 1600SC	1.03.04.00	NA	1.08.19	1.08.18 (Native)	NA	3.03

**Table 8-43. OMSM Supported Elements: LSI 1020**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1 on a PowerEdge 1600SC	1.03.04.00	1.08.19	1.08.18 (Native)	NA	NA

**Table 8-44. Array Manager Supported Elements: LSI 1030**

<b>Array Manager Version</b>	<b>PERC Firmware Version</b>	<b>Microsoft Windows NT 4.0 Driver</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Novell NetWare 5.x Driver</b>	<b>Novell NetWare 6.x Driver</b>
3.7 on a PowerEdge 1750	1.01.061.00	NA	1.08.19	1.08.18 (Native)	NA	3.03
3.7 on a PowerEdge 2600	1.01.061.00	NA	1.08.19	1.08.18 (Native)	NA	3.03

**Table 8-45. OMSM Supported Elements: LSI 1030**

<b>OMSM</b>	<b>PERC Firmware Version</b>	<b>Windows 2000 Driver</b>	<b>Windows Server 2003 Driver</b>	<b>Red Hat Enterprise Linux 2.1 Driver</b>	<b>Red Hat Enterprise Linux 3 Driver</b>
1.1 on PowerEdge 1750	1.01.61.00	1.08.19	1.08.18 (Native)	NA	NA
1.1 on PowerEdge 2600	1.01.61.00	1.08.19	1.08.18 (Native)	NA	NA




# Network Interface Controllers and Supported Operating Systems

## Overview

The drivers that are required for a particular Network Interface Card (NIC) depend on the operating system that is installed on your system.

Table 9-1 shows the relationship between NICs supported by Server Administrator and the drivers that they require on each supported operating system.

For a list of Server Administrator supported operating systems, see "Introduction."

 **NOTE:** Starting with Dell OpenManage 4.3, the *Dell OpenManage Systems Management* CD has been replaced by the *Dell™ PowerEdge™ Installation and Server Management* CD. References in this guide to the *Systems Management* CD are for Dell OpenManage releases 3.0 through 4.2.

## NIC Drivers and Operating Systems

To determine required drivers for NIC systems management, locate your NIC manufacturer in Table 9-1 and the operating system that is installed on your system.

In Table 9-1, "NA" indicates that the driver is supplied by the operating system rather than by the manufacturer of the NIC.

**Table 9-1. NIC Manufacturers and Drivers Required for Supported Operating Systems**


NIC Product Name	Microsoft® Windows® 2000	Novell® NetWare®	Red Hat® Enterprise Linux
3COM® 3C98x Family of Adapters	NA	2.0	NA
Alteon ACEnic Copper Gigabit	2.3.13	2.3.13	NA
Broadcom NetXtreme Family of Adapters	6.0 (A00)	6.0	6.0
Intel® EtherExpress® Family of Adapters	6.0	6.0 (A00)	NA




# Update Service Availability and Supported Operating Systems


## Overview

Prior to Dell OpenManage™ version release 4.3, or Dell OpenManage Server Administrator 2.0, (OMSA 2.0), you could update BIOS, firmware, and driver components from the **Update** tab in OMSA. With OMSA 2.0, you cannot update components from within OMSA. With Dell OpenManage 4.3, you can now update components using Server Update Utility (SUU) and Dell Update Packages (DUP). Download SUU and DUP from the Dell support website at [support.dell.com](http://support.dell.com).

 **NOTE:** The information in this section is for historical purposes only and applies only to releases before OMSA 2.0.

 **NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management* CD has been replaced by the *Dell™ PowerEdge™ Installation and Server Management* CD. References in this guide to the *Systems Management* CD are for Dell OpenManage releases 3.0 through 4.2.

## Updating of Components

 **NOTE:** The information in the following sections is for historical purposes only and applies only to releases before OMSA 2.0.

The Update Service provides up-to-date version control and valuable change management tools for performing BIOS, firmware, and NIC driver updates on your local system. You can view the current version and perform updates for the system BIOS and firmware, RAID controller firmware, RAC firmware, other system component firmware, and NIC drivers. Device driver updates are available for RAID controllers.

## Operating Systems That Support Update Services

All updates require Server Administrator and a supported Microsoft® Windows® Server 2003 or Windows® 2000 operating system.

## Required Drivers

For information about operating system and driver requirements for RAID controllers, see "RAID Controller Supported Servers, Operating Systems, Firmware, and Driver Versions."

## Update Service Exceptions for System BIOS

BIOS updates are supported on the both Dell PowerEdge™ 500SC and 1650 systems if the BIOS revision is A05 or later. The BIOS update is supported for PowerEdge 2550 systems if the BIOS revision is A06 or later.

BIOS updates are not supported for PowerEdge 350 and 8450 systems.

## Update Service Exceptions for Firmware

Firmware updates are not supported for PowerEdge 1500SC, 1550, and 8450 systems.

## Devices That Can Be Updated Using Dell OpenManage™ Server Administrator Update Services

The following is a comprehensive list of devices that you can update using the Server Administrator Update Service (prior to OMSA version 2.0). If you want to update a device that is not in this list, see the Dell Support website at [support.dell.com](http://support.dell.com) for alternative update methods such as a diskette.

- BIOS
- System Firmware — ESM2, ESM3, and ESM4, and ESM5 (BMC, backplane)
- Remote Access Controllers — DRAC II, DRAC III, ERA, ERA/O, and DRAC III/XT, DRAC 4
- RAID Controllers — PERC 2, PERC 2/SC driver, PERC 2/DC driver, PERC 3/Si, PERC 3/Di, PERC 3/DC, PERC 3/DCL, PERC 3/QC, PERC 3/SC, PERC 4/Di, PERC 4/SC firmware and driver, PERC 4/DC firmware and driver, PERC 4/IM driver, PERC 4e firmware and driver, CERC, and CERC SATA 1.5/6 channel firmware and driver, CERC SATA2s driver.
- Network Interface Cards — Intel™ NIC driver and Broadcom NIC driver

# Remote Access Service Availability

## Overview

Although all supported operating systems for Server Administrator support remote access, remote access availability is system dependent. The Remote Access Service is supported on the following Dell™ PowerEdge™ systems only: 700 SC, 750, 1600SC, 1650, 2600, 2650, 4600, 6600, and 6650.

The only special operating system requirement applies to multiprocessor systems running Novell® NetWare® 6.0. When using NetWare 6.0 on multiprocessor systems, you must use SP2. Single-processor systems running NetWare 6.0 do not require a support pack.

The Server Administrator GUI does not display any services on your system that are not available for that system or that system configuration.



**NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management* CD has been replaced by the *Dell™ PowerEdge™ Installation and Server Management* CD. References in this guide to the *Systems Management* CD are for Dell OpenManage releases 3.0 through 4.2.

## RAC Types

The remote access controller (RAC) cards that are available for specific PowerEdge systems are the DRAC III, DRAC III/XT, DRAC 4/I (for Dell PowerEdge 1850, 2800, and 2850), DRAC 4/P (for Dell PowerEdge 1800), ERA, and ERA/O. The DRAC III is unique among the RACs. The DRAC III occupies a PCI slot, and has a modem, a battery, and an external AC power connection unlike the other RACs.

## Availability of RACs on Specific PowerEdge Systems

Table 11-1 shows the RACs that are available on specific PowerEdge systems.



**NOTE:** The ERA/MC is supported on PowerEdge 1655MC systems.

**Table 11-1. RACs Availability on Specific PowerEdge Systems**

PowerEdge System	DRAC III	ERA	ERA/O	DRAC III/XT	DRAC 4	DRAC/MC
700SC				X		
750				X		
800					X	

**Table 11-1. RACs Availability on Specific PowerEdge Systems (continued)**

PowerEdge System	DRAC III	ERA	ERA/O	DRAC III/XT	DRAC 4	DRAC/MC
1600SC				X		
1650	X		X			
1750			X			
1800					X	
1850					X	
1855						X
2600			X			
2650		X				
2800					X	
2850					X	
4600	X					
6600	X					
6650	X					
6800					X	
6850					X	

## RAC Firmware Versions

Table 11-2 shows the firmware version required for each RAC that is offered on the corresponding *Systems Management CD*.

**Table 11-2. RAC Firmware Version by Systems Management CD Version**

Systems Management CD Version	Firmware Version				
	DRAC III	ERA	ERA/O	DRAC III/XT	DRAC 4
3.0	1.10	NA	NA	NA	NA
3.0.1	1.10	NA	NA	NA	NA
3.0.2	1.10	1.05	NA	NA	NA
3.1	1.20	1.05	1.10	NA	NA
3.1.1	1.20	1.05	1.20	NA	NA
3.2	1.30	1.07	1.20	NA	NA
3.2.2	1.30	1.07	1.20	1.30	NA

**Table 11-2. RAC Firmware Version by Systems Management CD Version (*continued*)**

Systems Management CD Version	Firmware Version				
	DRAC III	ERA	ERA/O	DRAC III/XT	DRAC 4
NA	NA	1.21	NA	NA	NA
3.3	2.0	2.0	2.0	2.0	NA
3.4	2.2	2.2	2.2	2.2	NA
3.5	2.5	2.5	2.5	2.5	NA
3.6	3.0	3.0	3.0	3.0	NA
3.7	3.10	3.10	3.10	3.10	NA
3.8	3.12	3.12	3.12	3.12	NA
4.0.1	NA	NA	NA	NA	1.0
4.1	3.14	3.14	3.14	3.14	1.0
4.1.1	NA	NA	NA	NA	1.0
4.1.2	NA	NA	NA	NA	1.0
4.1.3	NA	NA	NA	NA	1.0
4.1.4	NA	NA	NA	NA	NA
4.2	3.20	3.20	3.20	3.20	1.1
4.3	3.20	3.20	3.20	3.20	1.1




# Diagnostic Service Supported Devices and Operating Systems

## Overview


This section lists devices that can be tested using the Server Administrator Diagnostic Service. "Diagnostics for Dell-Supplied Devices" provides a general list of devices supported by the Server Administrator Diagnostic Service.


Diagnostics are supported on the following operating systems: Microsoft® Windows® or Red Hat® Linux. The Diagnostic Service is not currently offered for systems running the Novell® NetWare® operating system.

For information about how to run diagnostic tests, see the *Server Administrator User's Guide* and/or the *Server Administrator Command Line Interface User's Guide*.

 **NOTE:** Starting with Dell OpenManage 4.3, the *Systems Management* CD has been replaced by the *Dell™ PowerEdge™ Installation and Server Management* CD. References in this guide to the *Systems Management* CD are for Dell OpenManage releases 3.0 through 4.2.

## Diagnostics for Dell-Supplied Devices

 **NOTE:** Dell OpenManage™ Array Manager version 3.5 (or later) or Server Administrator Storage Management Service 1.0 (or later) is required to diagnose RAID controllers and attached devices when using the Server Administrator Diagnostic Service. If Array Manager version 3.5 or Server Administrator Storage Management Service version 1.0 is not installed, the diagnostics for RAID controllers and attached devices will not be available.

 **NOTE:** You must install Dell-qualified device drivers in order to run diagnostics on devices like tape drives, tape autoloaders, tape libraries and NIC. See the documentation that came with your device, or access the latest drivers from the Dell Support website at [support.dell.com](http://support.dell.com).

Server Administrator specifically supports diagnostics for the following Dell-supplied hardware devices:

- CD drives
- DVD drives
- CD-RW/DVD combination drives
- Diskette

- Network Interface Cards (NIC)
- Modems
- SCSI controllers
- Hard drives
- Memory (DIMMs)
- CMOS
- RAID controllers
- Parallel ports
- Serial ports
- PCI buses
- Remote Access Controller (RAC)
- Tape Drives
- Universal Serial Bus (USB) Controllers
- Auto Loaders
- Libraries

## Diagnostics for Tape Drives, Autoloaders, and Libraries

Server Administrator diagnostics support the following Dell-supplied hardware devices.

### Tape Drives

Server Administrator supports diagnostics for the following tape drives:

- Dell™ PowerVault™ 100T Travan TR-5/Travan 40 (IDE tape drives) (supported only on systems running Windows)
- PowerVault 100T DDS4 (supported only on systems running Windows 2000, Windows 2003, and Red Hat Linux Advanced Server version 2.1)
- PowerVault 100T DAT72 (supported only on systems running Windows 2000, Windows 2003, and Red Hat Linux Advanced Server version 2.1)
- PowerVault 110T DLT1
- PowerVault 110T VS80
- PowerVault 110T VS160
- PowerVault 110T SDLT220
- PowerVault 110T SDLT320
- PowerVault 110T-LTO2
- PowerVault 132T-LTO2


- PowerVault136T-LTO2 (drive-only)
- All drives in supported arrays, autoloaders, and libraries (See "Tape Arrays, Autoloaders, and Libraries.")

### **Tape Arrays, Autoloaders, and Libraries**


Server Administrator supports diagnostics for the following tape arrays, tape autoloaders, and tape libraries:

- PowerVault 122T VS80
- PowerVault 122T SDLT320
- PowerVault 128T SDLT320 (supports diagnostics for tape drives only)
- PowerVault 132T SDLT320
- PowerVault 136T SDLT220 (supports diagnostics for tape drives only)
- PowerVault 136T SDLT320 (supports diagnostics for tape drives only)

## **Diagnostics for RAID Controllers, SCSI Controllers, and Attached Hard Drives**

 **NOTE:** For a list of firmware requirements that are required for each controller, see "RAID Controller Supported Servers, Operating Systems, Firmware, and Driver Versions."

This section lists Diagnostic Service support by operating system for RAID and SCSI controllers as well as for hard drives that are attached to RAID, SCSI, and IDE controllers. With the exception of the CERC ATA 100/4 Channel RAID controllers (IDE RAID controllers), all RAID controllers are SCSI RAID controllers.

 **NOTE:** Server Administrator does not support diagnostics for IDE controllers.

### **RAID, SCSI, and IDE Controllers and Attached Hard Drives**

Server Administrator supports diagnostics for the following RAID and SCSI controllers as well as for the hard drives that are attached to the RAID, SCSI, and IDE controllers, depending on the installed operating system.

#### **Diagnostics Supported on Systems Running Microsoft Windows**

Server Administrator supports diagnostics for the following RAID controllers as well as for hard drives that are attached to the following RAID controllers, on systems running Windows:

- PERC 2/DC
- PERC 2/QC
- PERC 2/Si
- PERC 3/Si

- PERC 3/Di
- PERC 3/QC
- PERC 3/DC
- PERC 3/DCL
- PERC 3/SC
- PERC 4/Di
- PERC 4/SC
- PERC 4/DC
- PERC 4/IM
- PERC 4e/DC
- PERC 4e/Di
- PERC 4e/Si
- CERC ATA 100/4 Channel (IDE RAID)
- CERC SATA 1.5/6 Channel

### **Diagnostics Supported on Systems Running Red Hat Linux**

Server Administrator supports diagnostics for the following RAID controllers, as well as for hard drives that are attached to the following RAID controllers, on systems running Red Hat Linux operating systems.

- PERC 2/DC
- PERC 2/QC
- PERC 2/Si
- PERC 3/Si
- PERC 3/Di
- PERC 3/QC
- PERC 3/DC
- PERC 3/DCL
- PERC 3/SC
- PERC 4/Di
- PERC 4/SC
- PERC 4/DC
- PERC 4/IM
- PERC 4e/DC
- PERC 4e/Di

- PERC 4e/Si
- CERC ATA 100/4 Channel (IDE RAID)
- CERC SATA 1.5/6 Channel



# Historical Release Information for Legacy Systems

## Overview

The following sections contain historical information about releases of the Dell OpenManage™ Server Agent running on supported Microsoft® Windows®, Red Hat® Enterprise Linux, and Novell® NetWare® operating systems. The following excerpts from previous **readme.txt** files show a record of features and resolved issues for releases of Server Agent only. For the complete text of **readme.txt** files, see the Dell Support website at [support.dell.com](http://support.dell.com).

You can find additional information on more recent systems management applications in the Server Administrator **readme.txt** found on the *Systems Management* CDs, version 3.0 or later.

## Server Agent 4.5

The following subsections contain requirements, features, and open issues for Server Agent version 4.5.

Release date: October 2001

### Requirements

Supported systems: Dell™ PowerEdge™ 1500SC

### Operating Systems

- Microsoft Windows NT® Server 4.x with SP 4 or later
- Microsoft Windows 2000 Server family (includes Windows 2000 Server and Windows 2000 Advanced Server)
- Novell NetWare 5.x
- Red Hat Linux 7.1



**NOTE:** Server Agent is not supported on a PowerEdge 1500SC system running either the Red Hat Linux 7.0 operating system or the Novell NetWare 4.x operating system.

### New in Server Agent Version 4.5

Support was added for the PowerEdge 1500SC system.

## Server Agent 4.4.1

The following subsections contain requirements, features, and open issues for Server Agent version 4.4.1.

Release date: September 2001

### Requirements

Supported systems: Dell PowerEdge 300, 350, 500SC, 1300, 1400, 1550, 2300, 2400, 2450, 2500, 2550, 4300, 4350, 4400, 6300, 6350, 6400, 6450, 8450

### Operating Systems

- Microsoft Windows NT Server 4.x with SP 4 or later
- Microsoft Windows 2000 Server family (includes Windows 2000 Server and Windows 2000 Advanced Server)
- Novell NetWare 4.x or 5.x
- Red Hat Linux 7.0



**NOTE:** Server Agent is not supported on a PowerEdge 500SC system running the Red Hat Linux 7.0 operating system.

### New in Server Agent Version 4.4.1

This release contains the following new features and changes:

- Support for Red Hat Linux 7.1 SBE (Kernels 2.4.3-6 and 2.4.3-12) with prebuilt device drivers
- Dynamic Kernel Support for Red Hat Linux
- Removal of support for the DMI management protocol
- In the Server Agent MIB file `10892.mib`, replacement of "Dell" by "Server" in the annotation TYPE field for each trap
- In the Server Agent event configuration file `10892evt.cfg`, the changing of the `OID_ALIAS` value from "Dell\_Server3\_Baseboard\_Agent" to "Server\_Agent," and replacement of "Dell" by "Server" in the `Short Descr` field for each event

## Server Agent 4.4.0

The following subsections contain requirements, features, and open issues for Server Agent version 4.4.0.

Release date: July 2001

### Requirements

Supported systems: Dell PowerEdge 350, 500SC, 1550

## Operating Systems

- Microsoft Windows NT Server 4.x with SP 4 or later
- Microsoft Windows 2000 Server family (includes Windows 2000 Server and Windows 2000 Advanced Server)
- Novell NetWare 4.x or 5.x
- Red Hat Linux 7.0; Kernel version: 2.2.16; Red Hat Linux SNMP agent: ucd-snmp version 4.1.2-8smux

## New in Server Agent Version 4.4.0

This release adds support for the following Dell systems and features:

- PowerEdge 500SC
- PowerEdge 1550 with the Intel® Pentium® III microprocessor
- PowerEdge 350 watchdog support

## Server Agent 4.3.0

Version 4.3.0 is the first release of Server Agent that combines supported operating systems for Microsoft Windows, Novell NetWare, and Red Hat Linux. All of these supported operating systems are documented in this [readme.txt](#) file.

Release date: March 2001

## Requirements

Supported systems: Dell PowerEdge 300, 350, 1300, 1400, 1550, 2300, 2400, 2450, 2500, 2550, 4300, 4350, 4400, 6300, 6350, 6400, 6450, 8450

## Operating Systems

- Microsoft Windows NT Server 4.x with SP 4 or later
- Microsoft Windows 2000 Server family (includes Windows 2000 Server and Windows 2000 Advanced Server)
- Novell NetWare 4.x or 5.x
- Red Hat Linux 7.0; Kernel version: 2.2.16; Red Hat Linux SNMP agent: ucd-snmp version 4.1.2-8smux

## New in Server Agent Version 4.3.0

This release adds support for the following Dell systems:

- PowerEdge 2500
- PowerEdge 2550

## Server Agent 4.3.0 Resolved Issues

- Hung server alerts for PowerEdge 8450 systems  
When you configure the hung server action for a Dell PowerEdge 8450 system, the system either performs a system reset or a recycle system power action.
- PowerEdge 350 issues  
This release addressed the following Dell PowerEdge 350 issues that were originally addressed by Dell OpenManage Server Agent 4.2.0 Update 1:
  - Changes thresholds for the -12 volt (V) voltage probe on the system board. These new thresholds prevent erroneous probe failures and warnings.
  - Corrects erroneous fan failure reports in the event log.
  - Corrects system crashes at start-up caused by incorrect event log record length.
  - Disables the chassis identification feature.
- Dell™ PowerVault™ 2xxS SCSI disk systems and SNMP  
This release addresses the following PowerVault 2xxS SCSI disk system issue that was originally addressed by Server Agent 4.2.0 Update 1:
  - Allows Dell PowerEdge systems attached to the PowerVault 2xxS SCSI disk system to respond to SNMP requests for information. Under certain rare circumstances, some Dell systems with PowerVault 2xxS attached were not responding to SNMP requests.

## Server Agent 4.2.2

The following subsections contain requirements, features, and open issues for Server Agent version 4.2.2.

Release date: February 2001

### Requirements

Supported systems: Dell PowerEdge 300, 350, 1300, 1400, 1550, 2300, 2400, 2450, 4300, 4350, 4400, 6300, 6350, 6400, 6450, 8450

### Operating Systems

- Microsoft Windows NT Server 4.x with SP 4 or later
- Microsoft Windows 2000 Server family (includes Windows 2000 Server and Windows 2000 Advanced Server)
- Novell NetWare 4.x or 5.x

## New and Resolved Issues in Server Agent Version 4.2.2

Dell OpenManage Server Agent 4.2.2 now supports the Dell PowerEdge 350 system. In addition, Dell OpenManage Server Agent 4.2.2 resolves the following issues:

- Incorrect current sensor data
  - In rare circumstances Dell OpenManage Server Agent incorrectly reported data for current (amperage) sensors. Incorrect amperage readings may have been reported for the following PowerEdge systems: 4300, 4350, 4400, 6300, 6350, 6400, and 6450.
- SNMP time-outs with PowerVault 2xxS SCSI disk systems
  - In rare circumstances the Dell OpenManage Server Agent SNMP interface stops responding when a Dell PowerVault 2xxS storage system is attached to a system. The DMI and CIM interfaces may also stop responding.

## Server Agent 4.2.1

The following subsections contain requirements, features, and open issues for Server Agent version 4.2.1.

Release date: December 2000

### Requirements

Supported systems: Dell PowerEdge 1300, 1400, 1550, 2300, 2400, 2450, 4300, 4350, 4400, 6300, 6350, 6400, 6450, 8450

### Operating Systems

- Microsoft Windows NT Server 4.x with SP 4 or later
- Microsoft Windows 2000 Server family (includes Windows 2000 Server and Windows 2000 Advanced Server)
- Novell NetWare 4.x or 5.x

### New in Server Agent Version 4.2.1

Added support for PowerEdge 1550 system

### Resolved Issues for Server Agent Version 4.2.1

**Table 13-1. Resolved Issues for Server Agent Version 4.2.1**

<b>Problem</b>	<b>Solution</b>
IT Assistant is unable to perform a remote flash BIOS update for the PowerEdge 300 system.	Server Agent 4.2.1 enables IT Assistant to perform a remote flash BIOS update for the PowerEdge 300 system.

**Table 13-1. Resolved Issues for Server Agent Version 4.2.1 (continued)**

<b>Problem</b>	<b>Solution</b>
Server Agent reports an error message that values are incorrect for CPU voltage threshold values for the PowerEdge 8450 system on systems with a CPU speed of 700 MHz and higher.	Server Agent 4.2.1 reports correct CPU voltage threshold values.
Server Agent 4.0 did not implement the %ALERT parameter correctly in the local response agent.	Server Agent 4.2.1 correctly parses the %ALERT parameter. The %ALERT parameter can now be located anywhere in the command line and can optionally be enclosed in double quotes when the user wants to pass the alert message to the command line as a single string.
Intermittent incorrect fan probe readings of zero RPMs cause faulty alerts to be generated. Invalid fan probe readings also compromise the usability of Server Agent.	Server Agent 4.2.1 prevents false alerts for fan probes based on incorrect readings of fan RPM values. This update also addresses usability issues caused by these incorrect fan RPM values. The incorrect fan RPM readings originate on PowerEdge systems that report systems management information to the management console using Server Agent version 4.0.
Seven-character service tags display incorrectly.	Formerly, certain combinations of characters and numbers in the seven-character service tag either did not display correctly or did not display at all. Server Agent 4.2.1 displays service tags correctly.
False power supply fan readings. Server Agent reports high power supply fan RPM readings. The readings exceed the upper failure threshold and are reported as failures.	Server Agent 4.2.1 corrects the problem of false fan probe alerts.

## Server Agent 4.2.0

The following subsections contain requirements, features, and open issues for Server Agent version 4.2.0.

Release date: December 2000

### Requirements

Supported systems: Dell PowerEdge 300, 1300, 1400, 1550, 2300, 2400, 2450, 4300, 4350, 4400, 6300, 6350, 6400, 6450, 8450

### Operating Systems

- Red Hat Linux 7.0 (Kernel version: 2.2.16), Red Hat Linux SNMP agent: ucd-snmp version 4.1.2-8smux or later