

Dell™ OpenManage™
Server Administrator Version 6.1
Command Line Interface
User's Guide

Notes and Cautions



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



CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

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Introduction

You can perform essential systems management tasks using Dell™ OpenManage™ Server Administrator's graphical user interface (GUI) or the command line interface (CLI).

The reporting and viewing features allow retrieval of overall health status for systems on your network. At the component level, you can view information about voltages, temperatures, fan's revolutions per minute (RPM), memory functioning, and many other critical component details. You can see a detailed account of many relevant cost of ownership (COO) facts about your system in a summary view. Version information for BIOS, firmware, operating system, and all installed software is easy to retrieve.

Configuration features allow Server Administrator to perform essential tasks described in detail in the following sections.



NOTE: You can use the CLI instead of the Server Administrator home page, and turn the Server Administrator Web server off if you have security concerns. The CLI does not use the Web server. Use the **omconfig system webserver action=stop** command to turn off the Web server. The Web server starts automatically after a reboot, so this command must be issued each time a system starts up. See "omconfig system webserver/omconfig servermodule webserver" on page 142" for more information.

What's New for Version 6.1

These are the release highlights of OpenManage Server Administrator:

- Support for configuration and display of the following BIOS setup options:
 - Core multi processing
 - Unified Extensible Firmware Interface (UEFI) boot option
 - CPU C State option
 - Embedded Video Controller
- Support for form factor and multiple slot information on modular systems
- Support for in-context launch of Server Administrator Web server
- Support for three new *xxlx* systems.
- Support for the following system components:

- Reporting presence of optional iDRAC6 Enterprise card
- Provides an option to configure reporting of more attributes on front panel LCD
- Reporting presence of iDRAC6 Enterprise and the size of storage, if present
- Reporting of new PCI devices that are part of *xx1x* systems
- Display of the CPU turbo mode
- Display of new memory types (DDR3 Registered, DDR3 Unregistered)
- Display of new slot types (PCIe Gen1/2)
- Enabling/disabling Non-Uniform Memory Architecture (Node Interleaving) during deployment
- Enabling Network Controller-Sideband Interface support on each of the LOMs on an individual basis for all LOMs
- Reporting memory operating modes (optimizer, mirror, advanced ECC)
- Support for NICS receive and transmit statistics.
- Configuring AC Power Recovery delay
- Support for configuration and reporting Serial Address Select
- Enhanced power monitoring support:
 - Reporting of power consumption values in BTU (British Thermal Unit), as well as Watts.
 - Support for Peak power headroom and instantaneous headroom
 - Support for user-definable power budget cap
 - Support for reporting of maximum potential power consumption and minimum potential power consumption
 - Support for reporting input power rating of power supply
 - Support for power profile configuration
 - Support for events alerting capability for peak power consumption

- Inclusion of Internet Protocol version 6:
- This release supports IPv6, in addition to IPv4.



NOTE: For the supported operating systems list, see the *Dell Systems Software Support Matrix* located at DVD_Drive\docs\readme\PEOSOM on the Dell-provided media or on the Dell support website at support.dell.com.



NOTE: CLI commands are not supported on systems with VMware® ESXi operating system.

Using CLI Commands from Windows Command Prompts

If you are running the Microsoft Windows® operating system, use the 32-bit command prompt to issue a Server Administrator CLI command. You can access the 32-bit command prompt by clicking the **Start** button and pointing to **Programs**→**Accessories**→**Command Prompt** shortcut, or by clicking the **Start** button, selecting **Run**, and typing `cmd.exe` in the **Run** dialog box.

Do not type `command` into the **Run** dialog box to launch a command line window; this activates the MS-DOS® emulator `command.com`, which has environment variable limitations that can cause subtle problems with the CLI.

Primary CLI Commands

The commands that carry out the functions of Server Administrator are:

- `omconfig`
- `omhelp`
- `omreport`

The `omconfig` command writes values that you assign to an object's properties. You can specify values for warning thresholds on components or prescribe what action your system is to take when a certain warning or failure event occurs. You can also use the `omconfig` command to assign specific values to your system's asset information parameters, such as the purchase price of the system, the system's asset tag, or the system's location.

The **omhelp** command displays short text help for CLI commands. The shorthand equivalent of **omhelp** is the command for which you want help followed by `-?`. For example, to display help for the **omreport** command, type one of the following commands:

```
omhelp omreport
omreport -?
```

The **omreport** command produces reports of your system’s management information.



 **NOTE:** For an overall summary of CLI commands, type `omhelp`.

Table 1-1 lists the primary CLI commands used by Server Administrator. This guide contains a section for each primary command.

Table 1-1. CLI Commands and Sections in This Guide

Primary CLI Command	Section Title	Related Sections
omconfig	"omconfig: Managing Components Using the Instrumentation Service"	"omconfig system or servermodule assetinfo: Editing Cost of Ownership Values"
omhelp	"Using the omhelp Command"	
omreport	"omreport: Viewing System Status Using the Instrumentation Service"	

 **NOTE:** **omupdate** commands are no longer supported in Server Administrator and are replaced by Dell Update Package or Server Update Utility commands. To update the different components, download the Dell Update Package and run `<package name> /s [/f]`. See the *Dell Update Packages for Microsoft Windows Operating Systems User’s Guide*, the *Dell Update Packages for Linux User’s Guide*, or the *Server Update Utility User’s Guide* on the *Dell Systems Management tools and Documentation DVD* or on the Dell Support website at support.dell.com for more information on corresponding CLI syntax.

Additional useful topics about the CLI include:

- "Working With CLI Command Results"
- "Glossary"

CLI Error Checking and Error Messages

When you type CLI commands, the CLI checks these commands for correct syntax. If you enter a command and the command is executed successfully, a message displays, stating that your command has been successful.

Success Messages

When you type a successful **omconfig** command, data for that component displays.

The following **omconfig** command examples show valid CLI commands and their success messages:

Command:

```
omconfig chassis temps index=0 warnthresh=default
```

Message:

```
Temperature probe warning threshold value(s) set successfully.
```

Command:

```
omconfig chassis biossetup attribute=speaker setting=on
```

Message:

```
BIOS setup configured successfully.
```

Command:

```
omconfig system assetinfo info=depreciation duration=6
```

Message:

```
Asset information set successfully.
```

Failure Messages

CLI failure messages provide reasons why some commands do not succeed. Some common reasons why commands fail include syntax errors and components that are not present. Many error messages provide syntax information that you can use to execute the command successfully.

If you try to execute a command for a component or feature not present in your system configuration, the error message states that the component is not present.

Command:

```
omconfig chassis volts index=3 minwarnthresh=
3.3000
```

Example message:

```
Error! Number with up to 3 digits after decimal
point expected, read 3.3000
```

```
The value given by the command specifies more than
3 digits after the decimal point. A valid minimum
warning threshold value for volts contains up to
3 digits after the decimal point.
```

Type:

```
omconfig chassis volts index=3 minwarnthresh=3.300
```

When you enter the revised command with three decimal points, you receive another error message:

```
Error! This voltage probe min warning threshold
must be between 11.400 and 12.480.
```

Revised command:

```
omconfig chassis volts index=3 minwarnthresh=
11.500
```

Message:

```
Voltage probe warning threshold(s) set
successfully.
```

Scripting and Comparing With the CLI

The Server Administrator CLI allows administrators to write batch programs or scripts to be executed by the operating system. For an enterprise with many systems, an administrator could write a configuration script that specified the warning thresholds for each major component of a system and also specified a set of actions that the administrator wants each system to take in case of

a warning or failure event. In the most critical cases, the administrator could write a script so that the system shuts down to prevent damage. The administrator could then distribute and execute the script to many managed systems at the same time. Such a scenario facilitates configuring any number of new systems acquired by a company and makes implementation of new system administration policies easier across many existing systems that require reconfiguration.

A similar scenario could be used to populate a large number of newly acquired systems with detailed asset information. Much of the information would be the same, such as the manufacturer or lessor of the system, whether support for the system is outsourced, name of the system's insurance company, method of depreciation, and so on. Any variable that is common to all systems could be scripted, sent to all managed systems, and executed. Asset information that is unique to a system could be scripted as a group and sent to that managed node for execution. For example, a script could specify values for all unique variables such as owner, primary user phone number, asset tag, and so on. Scripts to populate unique values would set all unique variables at once rather than one by one through the system's command line.

In many cases, the CLI allows a user with a very well-defined task in mind to retrieve information about the system rapidly. If a user wants to review a comprehensive summary of all system components and save that summary information to a file for comparison with later system states, the CLI is ideal.

Using CLI commands, administrators can write batch programs or scripts to execute at specific times. When these programs execute, they can capture reports on components of interest, such as fan RPMs during periods of high system usage compared with the same measurements at times of lowest system usage. Command results can be routed to a file for later analysis. Reports can help administrators gain information that can be used to adjust usage patterns, to justify purchasing new system resources, or to focus on the health of a problem component.

Command Syntax Overview

Commands vary in complexity. The simplest command has only command level 1. The `omhelp` command is a simple command. When you type `omhelp`, a list of the main CLI commands is displayed.

The next level of complexity includes commands that contain command levels 1 and 2. All of the **about** commands are examples of command level 2 complexity. The **omconfig about** and **omreport about** commands cause a very brief summary to display. The summary shows version information for the systems management software installed on your system; for example, Server Administrator 1.x.

Some commands have command level 1 and command level 2 and one name=value pair. Consider the following example command that instructs Server Administrator for more details about the environment for Server Administrator:

```
omreport about details=true
```

Command level 1 is **omreport**, command level 2 is **about**, and the name=value pair is **details=true**.

Many commands use command level 1, command level 2, and command level 3, but do not require any parameters (name=value pairs). Most **omreport** commands are of this type. For example:

```
omreport system alertaction
```

causes a list of alert actions that are configured for components on your system to be displayed.

The most complex commands have all three command levels and can have multiple name=value pairs. An example of two name=value pairs:

```
omconfig system assetinfo info=depreciation
duration=3
```

An example of nine name=value pairs:

```
omconfig system assetinfo info=acquisition
purchasecost=<n> waybill=<n> installdate=<mmdyy>
purchasedate=<mmdyy> ponum=<n> signauth=<text>
expensed=<yes | no> costcenter=<text>
```

In each section, command syntax and other information about commands is formatted with any of the following fields that apply:

command level 1	command level 2	command level 3	name=value pair 1	name=value pair 2
--------------------	--------------------	--------------------	----------------------	----------------------

Using the omhelp Command

The **omhelp** command and its equivalent, `<command> -?`, accesses the CLI's detailed help text interface. You can get help at several levels of detail.

Each fully qualified CLI command may have a variable number of distinct parts: the command (command level 1), one or more subcommands (command level 2 and command level 3, if present), and one or more name=value pair(s).

By appending `-?` (space-dash-question mark) to any command, you can get help for that command.

Example Help Commands

When you type `omconfig -?`, you get general help about the **omconfig** command. The help at this level lists the available subcommands for **omconfig**:

- about
- preferences
- chassis
- system

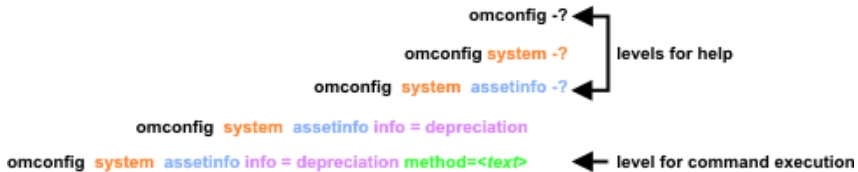
When you type `omconfig system -?`, CLI help lists all the subcommands available for **omconfig system**:

- alertaction
- alertlog
- assetinfo
- cmdlog
- esmlog
- events
- platformevents
- pedestinations
- recovery

- shutdown
- thrmshutdown
- webserver

Figure 2-1 shows the levels of help for a command.

Figure 2-1. Different Levels of Help for a Command



You can also parse the `omconfig system assetinfo` command as follows:

```

<command level 1 command level 2 command level 3>
<name=value pair 1> [name=value pair 2]
  
```

where command levels 1, 2, and 3 are represented by `omconfig system assetinfo`, name=value pair 1 is represented by `info=depreciation`, and name=value pair 2 is represented by `method=straightline`.

To set your depreciation method to straight line, type:

```

omconfig system assetinfo info=depreciation
method=straightline
  
```

The CLI responds with the following message:

```

Asset information set successfully.
  
```

When you type `omconfig system assetinfo -?`, the help that displays provides information about assigning values for the name and option fields. Partial results for the request `omconfig system assetinfo -?` are as follows:

```

assetinfo          Set asset information.
  
```


For one info value, specify one or more optional parameter(s).
Table 2-1 displays the optional parameters for **info=acquisition**:

Table 2-1. Optional Parameters

Info Value	Optional parameters
Info=acquisition	<p>purchasecost = <num> waybill = <num> installdate = <mmddy> purchasedate = <mmddy> ponum = <num> signauth = <text> expensed = <yes no> costcenter = <text> info=depreciation method = <text> duration = <num> percent = <percent> unit = <months years unknown></p>

omreport: Viewing System Status Using the Instrumentation Service

The **omreport** command allows you to see detailed information about your system components. You can retrieve summaries for many system components at one time, or you can get details about a specific component. This chapter shows you how to get reports with the level of detail that you want.

Commands documented in this chapter vary in whether they define the fields that appear in the results of a particular **omreport** command. Fields are defined only if they have a special or less familiar use.

As with all other components, you can use **omreport** to *view* component status, and **omconfig** to *manage* a component. For information on configuring components for management, see "omconfig: Managing Components Using the Instrumentation Service."

You can use **omreport** commands to get information you need to execute an **omconfig** command. For example, if you want to edit the minimum temperature for a warning event on a temperature probe, you need to know the index of the probe you want to configure. You can use **omreport chassis temps** to display a list of probes and their indexes.

Table 3-1. System Availability for the omreport Command


Command Level 1	Command Level 2	Applicable To
<i>omreport</i>	<i>modularencllosure</i>	Modular system
	<i>servermodule</i>	Modular system
	<i>mainsystem</i>	Modular system
	<i>system</i>	Non-modular system
	<i>chassis</i>	Non-modular system
	<i>preferences</i>	Modular/Non-modular system

Conventions for Parameter Tables

When listing the parameters that a command can take, the parameters are listed in alphabetical order instead of the order in which they appear in the command line interface.

The symbol |, often called *pipe*, is the logical *exclusive or* operator. For example, enable | disable means that you can enable or disable the component or feature, but you cannot simultaneously enable and disable the component or feature.

Command Summary of the `omreport` Command

 **NOTE:** Although this chapter lists all possible `omreport` commands, the commands available on your system depend on your system configuration. The results that display for the `omreport` command vary from one system to another. Data displays for installed components only.


 **NOTE:** When a system includes an external chassis, the displayed results vary by operating system. On SUSE® Linux Enterprise Server and Red Hat® Enterprise Linux® systems, `omreport` commands display external chassis information in a separate section after the main chassis information. On Microsoft® Windows® systems, data about the external chassis does not appear in the `omreport` output.

Table 3-2 is a high-level summary of the `omreport` command. The column titled "Command level 1" shows the `omreport` command at its most general. "Command level 2" shows the major objects or components that you can view using `omreport` (about, chassis, storage, and system). "Command level 3" lists the specific objects and components for which you can view reports. "User privilege required" refers to the type of privilege you need to perform the command, where U=User, P=Power User, and A=Administrator. "Use" is a very general statement about the actions that can be performed using `omreport`. More details about syntax and use of the command appear later in this section.

Table 3-2 shows the `omreport` commands available for about, system, and main system chassis. For information about viewing storage components, see "omreport: Viewing System Status Using the Instrumentation Service."

Table 3-2. Command Level 1, Level 2, and Level 3 for omreport

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
omreport				
	modularencllosure		U, P, A	Shows information for all the modular chassis.
	about		U, P, A	Shows version number and properties for Server Administrator.
		details=true	U, P, A	Displays information for all the Server Administrator programs installed.
	chassis/mainsystem		U, P, A	Shows the general status of all the main components.
		acswitch	U, P, A	Shows failover settings where redundant AC power lines are supported in a system.
		batteries	U, P, A	Shows the properties set for batteries.
		bios	U, P, A	Shows BIOS information such as manufacturer, version, and date last updated.
		biossetup	A	Shows BIOS setup properties configured during system boot.
		fancontrol	U, P, A	Shows the properties set for fan speed.

Table 3-2. Command Level 1, Level 2, and Level 3 for omreport (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		fans	U, P, A	Shows the status and thresholds for system fans.
		firmware	U, P, A	Shows firmware properties such as version, date of last update, and whether the firmware is updatable.
		frontpanel	U, P, A	Shows whether the front panel button settings, such as the Power button and/or Nonmasking Interrupt (NMI) button (if present on the system), are enabled or disabled.
		fru	U, P, A	Shows the Field Replaceable Unit (FRU) information.
		hwperformance	U, P, A	Shows the status and cause for the system's performance degradation.
		info	U, P, A	Shows a status summary for main system chassis components.
		intrusion	U, P, A	Shows the status of the system's intrusion sensor(s).

Table 3-2. Command Level 1, Level 2, and Level 3 for omreport (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		leds	U, P, A	Shows the properties you have set for light-emitting diodes to flash under various alert conditions.
		memory	U, P, A	Shows properties of your system's memory arrays.
		nicos	U, P, A	Shows the number of NICs installed in your system and displays controller and interface related details.
		ports	U, P, A	Shows the properties for your system's parallel and serial ports, such as I/O address, IRQ level, connector type, and maximum speed.
		processors	U, P, A	Shows properties of your system's processors, including speed, manufacturer, and processor family.
		pwrmanagement	U, P, A	Shows power management profiles that will provide control over power utilization.
		pwrmonitoring	U, P, A	Shows properties of power consumption.

Table 3-2. Command Level 1, Level 2, and Level 3 for omreport (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		pwrsupplies	U, P, A	Shows properties of power supplies.
		remoteaccess	U, P, A	Shows general information on remote access.
		slots	U, P, A	Shows properties of your system's expansion slots and other slot types.
		temps	U, P, A	Shows the status and thresholds for the system temperature sensors.
		volts	U, P, A	Shows the status and thresholds for the system voltage sensors.
	storage		U, P, A	See "Using the Storage Management Service."
	system/servermodule		U, P, A	Shows a high-level summary of system components.
		alertaction	U, P, A	Shows warning and failure threshold values, as well as actions configured when an essential component detects a warning or failure state.

Table 3-2. Command Level 1, Level 2, and Level 3 for omreport (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		alertlog	U, P, A	Allows the administrator to display the alert log.
		assetinfo	U, P, A	Shows the cost of ownership information for your system.
		cmdlog	U, P, A	Allows the administrator to display the command log.
		esmllog	U, P, A	Allows the administrator to display the hardware log.
		events	U, P, A	Shows the system's Simple Network Management Protocol (SNMP) event settings.
		operatingsystem	U, P, A	Shows the name and version of your operating system.
		pedestinations	U, P, A	Shows destinations where alerts for platform events are configured to be sent.
		platformevents	U, P, A	Shows the system's response for each listed platform event.

Table 3-2. Command Level 1, Level 2, and Level 3 for omreport (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		recovery	P, A	Shows how your system is configured to respond to a hung operating system.
		shutdown	P, A	Shows how the shutdown action is to be performed.
		summary	U, P, A	Shows the key facts for all system components, including main system chassis, software, and storage.
		thrmshutdown	P, A	Shows the shutdown action, if any, to be taken when a temperature warning or failure condition is detected.
		version	U, P, A	Shows a summary for all updatable components on your system.
	preferences	webserver	U, P, A	Shows the URL information of your Server Administrator Web server.

Help With the omreport Command

Use the `omreport -?` command to get a list of the available commands for `omreport`.

Use `omreport <command level 2> -?` to get help on the level 2 about, chassis, and system commands. The following information on `omreport system -?` applies also applies to get help for the `omreport chassis` command.

To see a list of valid commands for `omreport system`, type:

```
omreport system -? | more
```

omreport modularenclousure

Use the `omreport modularenclousure` command to view details of the modular system. Type:

```
omreport modularenclousure
```



NOTE: This CLI command is available when Dell OpenManage Server Administrator is installed on Dell modular systems.

Server Administrator displays information related to the modular enclosure and chassis management controller CMC (if available):



NOTE: As with all output shown in this guide, the following output is an example and may vary depending on your system configuration.

```
Modular Chassis Information
```

```
Chassis Information
```

```
Attribute      : Model
```

```
Value         : Modular Server Enclosure
```

```
Attribute      : Lock
```

```
Value         : true
```

```
Attribute      : Service Tag
```

```
Value         : 8RLNB1S
```

```
CMC Information
```

```
Attribute      : Product
```

Value : Chassis Management Controller (CMC)
Attribute : Description
Value : The system component provides a complete set of remote management functions for Dell systems.
Attribute : Version
Value : 1.0 (100)
Attribute : IP Address
Value : 101.102.103.104
Attribute : IP Address Source
Value : Dynamic
Attribute : IP Address Type
Value : IPv4
Attribute : Remote Connect Interface
Value : Launch CMC Web Interface

omreport about

Use the **omreport about** command to learn the product name and version number of the systems management application installed on your system. The following is an example output from the **omreport about** command:

```
Product name :Dell OpenManage Server Administrator
Version      :6.x.x
Copyright    :Copyright (C) Dell Inc. 1995-2009. All
              rights reserved.
Company      :Dell Inc.
```

For details about the environment for Server Administrator, type:

```
omreport about details=true
```

Server Administrator includes a number of services, each of which has a version number of its own. The **Contains** field reports version numbers for the services as well as other useful details. The output below is an example, and can change depending on your configuration and the version of Server Administrator installed on your system:

```
Contains: Instrumentation Service 6.x.x
          Storage Management Service 2.x.x
          Sun JRE - OEM Installed Version 1.x.x
          Secure Port Server 3.x.x
          Core Service 1.x.x
          Instrumentation Service Integration Layer
          1.x.x
          Storage Management Service Integration
          Layer 1.x.x
          Server Administrator 6.x.x
```

omreport chassis/omreport mainsystem Commands

Use the `omreport chassis` or `omreport mainsystem` commands to view details for the entire chassis or for a particular component.

omreport chassis/ omreport mainsystem

Type:

```
omreport chassis  
or  
omreport mainsystem
```

Server Administrator displays a general status for your main system chassis/main system components.

```
SEVERITY    : COMPONENT  
Ok          : Fans  
Critical    : Intrusion  
Ok          : Memory  
Ok          : Power Supplies  
Ok          : Temperatures  
Ok          : Voltages
```

omreport chassis acswitch/omreport mainsystem acswitch

Use the `omreport chassis acswitch` or `omreport mainsystem acswitch` command if your system has redundant AC power lines that are configured in a failover arrangement. Type:

```
omreport chassis acswitch  
or  
omreport mainsystem acswitch
```

Server Administrator displays the following output:

```
AC Failover Switch
AC Switch Redundancy
Redundancy Status      : Full
Number of devices      : 2
required for full
redundancy
Redundancy Mode        :
Redundancy
Configuration          : Input Source Line 1, upon
                        redundancy restoration,
                        return to Line 1

AC Power Lines
Status                 : Ok
Location               : AC Power Line 1
AC Present              : Power Present
Active Source          : Active
Status                 : Ok
Location               : AC Power Line 2
AC Present              : Power Present
Active Source          : Not Active
```

Server Administrator reports values for the **Redundancy Status** and **Redundancy Mode** fields.

omreport chassis batteries/omreport mainsystem batteries

Use the **omreport chassis batteries** or **omreport mainsystem batteries** command to view battery properties. Type:

```
omreport chassis batteries
or
omreport mainsystem batteries
```

Server Administrator displays the summary of the battery information for your system.

omreport chassis bios/omreport mainsystem bios

Use the `omreport chassis bios/omreport mainsystem bios` command to view the current BIOS information. Type:

```
omreport chassis bios
or
omreport mainsystem bios
```

Server Administrator displays the summary of the BIOS information for your system.

omreport chassis biossetup/omreport mainsystem biossetup

Use the `omreport chassis biossetup` or `omreport mainsystem biossetup` command to view BIOS setup parameters that are normally available only during system boot.

Type:

```
omreport chassis biossetup
or
omreport mainsystem biossetup
```

Table 3-3 displays the available BIOS setup parameters:



NOTE: All the BIOS Setup parameters are not displayed. Only those BIOS setup properties configured during system boot are displayed.

Table 3-3. BIOS Setup Parameters

Parameters	Description
Attribute	
Bootsequence	Displays the device used to boot the system.
Numlock	Displays whether the keypad can be used as number keys.
Embedded Video Controller	Displays whether the Embedded Video Controller option is enabled or disabled.
Boot Mode	Displays whether the boot mode is configured to BIOS or Unified Extensible Firmware Interface (UEFI).
CPU Execute Disable	Displays whether the Execute Disable (XD) option is enabled or disabled.
C States	Displays whether the C States option is enabled or disabled.

Table 3-3. BIOS Setup Parameters (continued)

Parameters	Description
Processor CMP	Displays the number of cores enabled per processor.
User accessible USB Ports	Displays whether the user-accessible USB port is enabled or disabled.
CPU Virtualization Technology	Displays the additional hardware capabilities provided by Virtualization Technology.
AC Power Recovery Mode	Displays the system state when input power is restored after an outage.
Embedded SATA Controller	Displays whether the embedded SATA controller is set to ATA mode, RAID mode, or is disabled.
SATA port 0	Displays the state of SATA port 0.
SATA Port 1	Displays the state of SATA port 1.
Dual NIC (1/2)	Displays whether NIC 1 and NIC 2 with PXE/iSCSI is enabled or disabled.
Dual NIC (3/4)	Displays whether NIC 3 and NIC 4 with PXE/iSCSI is enabled or disabled.
NIC 1	Displays whether the first NIC is enabled (with or without PXE/iSCSI) or disabled during system boot.
NIC 2	Displays whether the second NIC is enabled (with or without PXE/iSCSI) or disabled during system boot.
NIC 3	Displays whether the third NIC is enabled (with or without PXE/iSCSI) or disabled during system boot.
NIC 4	Displays whether the fourth NIC is enabled (with or without PXE/iSCSI) or disabled during system boot.
Trusted Platform Module (TPM) Security	Displays whether Trusted Platform Module is off, on with pre-boot measurements, or on without pre-boot measurements.
Internal USB	Displays whether internal USB is enabled or disabled.
Operating System Watchdog Timer	Displays whether the operating system watchdog timer is enabled or disabled.
Internal SD Card	Displays whether the internal SD card is enabled or disabled.

Table 3-3. BIOS Setup Parameters (continued)

Parameters	Description
Bezel	Displays whether the bezel removal intrusion check during system reboot is enabled or disabled.
Console Redirection	Displays if the BIOS screen is redirected over a particular serial port or if it is turned off.
Diskette	Displays whether the diskette is disabled, auto enabled, or read-only.
Demand Based Power Management (DBS)	Displays whether DBS is enabled or disabled on the system.
Embedded Hypervisor	Displays whether the embedded hypervisor is enabled or disabled.
IDE	Displays whether the drive is enabled or disabled.
IDE Primary Drive 0	Displays whether the device is automatically detected and enabled or if the device is disabled.
IDE Primary Drive 1	Displays whether the device is automatically detected and enabled or if the device is disabled.
Intrusion	Displays whether the intrusion check is enabled or disabled during system boot.
Mouse	Displays whether the mouse is enabled or disabled.
Optical Drive Controller	Displays whether the optical drive controller is enabled or disabled.
Parallel port address	Displays whether the address is located on LPT1, LPT2, and LPT3, or if it is disabled.
Parallel port mode	Displays the setting associated with the parallel port.
Primary SCSI	Displays whether the device is on or off.
RAID on motherboard	Displays whether RAID-on-motherboard is detected as a RAID device, a SCSI device, or if the device is disabled during system boot.
RAID Channel A	Displays whether RAID-on-motherboard Channel A is detected as a RAID device or a SCSI device.
RAID Channel B	Displays whether RAID-on-motherboard Channel B is detected as a RAID device or a SCSI device.

Table 3-3. BIOS Setup Parameters (continued)

Parameters	Description
SATA	
Serial Port 1	Displays whether serial port 1 is mapped to a COM port, a COM port 1, a COM port 3, a COM1 BMC, a BMC Serial, a BMC NIC, a BMC RAC, or is disabled.
Serial Port 2	Displays whether serial port 2 is mapped to a COM port, a COM port 2, a COM port 4, or is disabled.
Speaker	Displays whether the speaker is on or off.
USB or USBB	Displays whether the USB port is enabled or disabled.
Secondary SCSI	Displays whether the device is enabled or disabled.
Serial Communications	
Serial Communications	Displays whether COM port 1 and COM port 2 are off or on with or without console redirection.
Console Redirection After Boot	Displays whether console redirection after system reboot is enabled or disabled.
External Serial Connector	Displays whether the external serial connector is mapped to Serial Device 1 or Serial Device 2 or a Remote Access Device.
Console Redirection Failsafe Baud Rate	Displays the setting for console redirection failsafe baud rate.
Serial Address Select	Displays port address for the serial devices.

omreport chassis bmc/omreport mainsystem bmc

This command is phased-out in this release. It is replaced by the command `omreport chassis remoteaccess/omreport mainsystem remoteaccess`.

omreport chassis currents/omreport mainsystem currents

This command is no longer available through Server Administrator.

omreport chassis fans/omreport mainsystem fans

Use the **omreport chassis fans** or **omreport mainsystem fans** command to view the fan probe status and settings. Type:

```
omreport chassis fans index=n  
or  
omreport mainsystem fans index=n
```

The `index` parameter is optional. If you do not specify the index, Server Administrator displays a summary of status, readings, and thresholds set for any fan probes that might be present on your system. If you specify the index, Server Administrator displays a summary for a specific fan probe.

omreport chassis fancontrol/omreport mainsystem fancontrol

Use the **omreport chassis fancontrol** or **omreport mainsystem fancontrol** command to view the fan speed settings on your system. Fan speed can be set to optimize speed for cooling or for quiet operation. Table 3-4 shows the available settings.

Table 3-4. Fan Control Settings

name=value pair	Description
speed=quiet	Set fan speed for quiet operation.
speed=maxcool	Set fan speed for maximum cooling.

omreport chassis firmware/omreport mainsystem firmware

Use the **omreport chassis firmware** or **omreport mainsystem firmware** command to view current firmware properties. Type:

```
omreport chassis firmware  
or  
omreport mainsystem firmware
```

Server Administrator displays a summary of your system's firmware properties.

omreport chassis frontpanel/omreport mainsystem frontpanel

Use the **omreport chassis frontpanel** or **omreport mainsystem frontpanel** command to view if the front panel button control settings, such as the **Power** button and/or **Nonmasking Interrupt** (NMI) button (if present on the system), are enabled or disabled.

If the **Power** button override is present on your system, you can see whether the **Power** button override is enabled or not. If enabled, the **Power** button turns the power to the system **On** and **Off**.

If the **NMI** button is present on your system, you can see whether the **NMI** button is enabled or not. The **NMI** button can be used to troubleshoot software and device errors when using certain operating systems.

omreport chassis fru/omreport mainsystem fru

Use the **omreport chassis fru** or **omreport mainsystem fru** command to view FRU information. When you type:

```
omreport chassis fru
or
omreport mainsystem fru
```

Server Administrator displays a summary of your system's FRU information. This information is available in the Server Administrator GUI, SNMP, and Common Information Model and is primarily used to support troubleshooting activities.

omreport chassis hwperformance/omreport mainsystem hwperformance

Use the **omreport chassis hwperformance** or **omreport mainsystem hwperformance** command to view the status and cause for the system's performance degradation. When you type:

```
omreport chassis hwperformance
or
omreport mainsystem hwperformance
```

Server Administrator displays a summary of your system's hardware performance degradation information.



NOTE: This command is applicable only to selected Dell™ xx0x systems that support PMBus.

Depending on your configuration, output may resemble the following example:

```
Hardware Performance
Index                : 0
Probe Name           : System Board Power Optimized
Status               : Normal
Cause                : [N/A]
```

omreport chassis info/omreport mainsystem info

Use the **omreport chassis info** or **omreport mainsystem info** command to see a summary of installed component versions:

```
omreport chassis info index=n
or
omreport mainsystem info index=n
```

The `index` parameter specifies a chassis number and is optional. If you do not specify the index, Server Administrator displays summary chassis information for each chassis. If you specify the index, Server Administrator displays summary information for a specific chassis.

Depending on your configuration, output may resemble the following example:

```
Index                : 0
Chassis Name         : Main System
                    : Chassis
Host Name            : everglades
Baseboard Management Controller Version : 1.80
Primary Backplane Version : 1.01
Sensor Data Record Version : SDR Version 0.33
Chassis Model        : PowerEdge 1750
System Revision Name : II
```

```
Chassis Lock : Present
Chassis Service Tag : 8RLNB1S
Chassis Asset Tag :
Flash chassis indentify LED state : Off
Flash chassis indentify LED : 300
timeout value
```

omreport chassis intrusion

Use the **omreport chassis intrusion** command to find out whether the cover of your system is open or not. Server Administrator tracks chassis intrusion events because intrusions may indicate an attempt to steal a system component, or to perform unauthorized maintenance on the system. Type:

```
omreport chassis intrusion
```

A message that resembles the following displays:

```
Status : Ok
Probe Name : Main chassis intrusion
State : Chassis is closed
```

omreport chassis leds/omreport mainsystem leds

Use the **omreport chassis leds** or **omreport mainsystem leds** command to find out whether clear hard drive fault is supported and what severity level lights up the LED. Type:

```
omreport chassis leds index=n
or
omreport mainsystem leds index=n
```

The *index* parameter is optional. If you do not specify the index, Server Administrator displays a summary of LED information for chassis 0. If you specify the index, Server Administrator displays a summary for a specific chassis.

The following is an example output:

```
Flash chassis indentify LED state : Off
Flash chassis indentify LED timeout : 300
value
```

omreport chassis memory/omreport mainsystem memory

Use **omreport chassis memory** or **omreport mainsystem memory** to view details for each memory module slot in your system. If your system supports redundant memory, this command also displays the status, state, and type of memory redundancy implemented on your system. Type:

```
omreport chassis memory index=n
or
omreport mainsystem index=n
```

The `index` parameter is optional. If you do not specify the index, Server Administrator displays information for all memory modules on your system. If you specify the index, Server Administrator displays a summary for a specific memory module.

Output for an occupied memory slot may resemble the following:

```
Index          : 1
Status         : OK
Connector Name : DIMM_B
Type          : SDRAM-SYNCHRONOUS
Size          : 256 MB
```

An unoccupied memory slot still has a connector name. Output for an unoccupied memory slot may resemble the following:

```
Index          : 2
Status         : Unknown
Connector Name : DIMM_D
Type          : Not Occupied
Size          : Unknown
```


If your system supports redundant memory, the redundancy output may resemble the following:

```
Memory Redundancy
Redundancy Status           : Full
Fail Over State             : Inactive
Redundancy Configuration   : SpareBank
Attributes                   : Location
Memory Array 1              : Proprietary Add-on Card
Attributes                   : Use
Memory Array 1              : Unknown
Attributes                   : Installed Capacity
Memory Array 1              : 1536 MB
Attributes                   : Maximum Capacity
Memory Array 1              : 12288 MB
Attributes                   : Slots Available
Memory Array 1              : 12
```

omreport chassis nics/omreport mainsystem nics

Use the **omreport chassis nics** or **omreport mainsystem nics** command to view NIC properties. Type:

```
omreport chassis nics index=n
or
omreport mainsystem nics index=n
```

The **index** parameter is optional. If you do not specify the index, Server Administrator displays properties about all NICS on your system. If you specify the index, Server Administrator displays properties for a specific NIC.

Values display for the following fields: **Index** (number of the NIC card), **IP Address**, **Vendor**, **Description**, and **Connection Status**.

omreport chassis ports/omreport mainsystem ports

Use the **omreport chassis ports** or **omreport mainsystem ports** command to view properties of your system's parallel and serial ports.

Values display for the following fields: **Port Type**, **External Name**, **Base I/O Address**, **IRQ Level**, **Connector Type**, and **Maximum Speed**.

Port Type is the detailed type of each system port, from the more general serial, parallel, and USB ports to the names of ports by device type connected to it, for example, pointing device or keyboard.

External Name is the name of the port, such as serial or parallel, USB, mouse, keyboard, and so on.

Base I/O Address is the starting I/O address expressed in hexadecimal.

IRQ Level is a hardware interrupt on a system. The hardware interrupt signals the system's CPU that an event has started or ended in a peripheral component such as a modem or printer. When communicated over a peripheral component interconnect card, the **IRQ** level is a standard way to identify the type of device that is sending the interrupt request.

Connector Type refers to the type of plug or cable and plug that connects two devices together, in this case, the type of connector that attaches an external device to a system. There are many connector types, each designed to connect a different device type to a system. Examples include DB-9 Male, AT, Access Bus, PS/2, and so on.

Maximum Speed is the port speed. Port speed refers to the data transmission rate of an input/output channel, measured in numbers of bits per second. Serial ports usually have a maximum speed of 115 Kbps and USB version 1.x ports have a maximum speed of 12 Kbps.

omreport chassis processors/omreport mainsystem processors

Use the **omreport chassis processors** or **omreport mainsystem processors** command to view properties of your system's processors.

Values display for the following fields: **Connector Name**, **Manufacturer**, **Processor Family**, **Processor Version**, **Current Speed**, **External Clock Speed**, and **State**.

Connector Name refers to the name or number of the device that occupies the processor slot in the system.

Manufacturer is the business entity that sells the processor.

Processor Family refers to the type of processor made by a manufacturer such as Intel® Itanium® or Pentium® III or AMD™ Opteron™.

Processor Version refers to the model and stepping number of the processor.

Current Speed is the actual processor speed in MegaHertz at system boot time.

External Clock Speed is the speed of the processor's external clock in MegaHertz.

State refers to whether the processor slot is enabled or disabled.

Core Count refers to the number of processors integrated into one chip.

Capabilities and Cache Properties of a Specific Processor

To view the cache properties of a processor on a given connector, type:

```
omreport chassis processors index=n
or
omreport mainsystem processors index=n
```

The `index` parameter is optional. If you do not specify the index, Server Administrator displays properties for all processors. If you specify the index, Server Administrator displays properties for a specific processor.

The following fields are defined for the capabilities present on a particular microprocessor:

For Intel Processor

- 64-bit Support
- Hyperthreading (HT)
- Virtualization Technology (VT)
- Demand-Based Switching (DBS)
- Execute Disable (XD)

For AMD Processor

- 64-bit Support
- AMD-V™
- AMD PowerNow!™
- No Execute (NX)

The following fields are defined for a cache present on a particular microprocessor. If the cache is internal to the processor, the fields do not appear in the cache report:

- Speed
- Cache Device Supported Type
- Cache Device Current Type
- External Socket Name



NOTE: Due to the limitations of certain operating systems (for example, VMware® ESXi), certain features may not be available with this release of OpenManage Server Administrator.

Fields Reported for Each Cache on a Particular Processor

The following fields are displayed for each cache on a particular processor:

Status reports whether a specific cache on the processor is enabled or disabled.

Level refers to a primary or secondary cache. Primary-level cache is a memory bank built into the processor. Secondary-level cache is a staging area that feeds the primary cache. A secondary-level cache may be built into the processor or reside in a memory chipset outside the processor. The internal processor cache is referred to as a Level 1 (or L1). L2 cache is the external cache in a system with an Intel Pentium processor, and it is the second level of cache that is accessed. The names L1 and L2 are not indicative of where the cache is physically located (internal or external), but describe which cache is accessed first (L1, therefore internal).

Speed refers to the rate at which the cache can forward data from the main memory to the processor.

Max Size is the maximum amount of memory that the cache can hold in kilobytes.

Installed Size is the actual size of the cache.

Type indicates whether the cache is primary or secondary.

Location is the location of the cache on the processor or on a chipset outside the processor.

A **Write Policy** describes how the cache deals with a write cycle. In a write-back policy, the cache acts like a buffer. When the processor starts a write cycle, the cache receives the data and stops the cycle. The cache then writes the data back to the main memory when the system bus is available.

In a write-through policy, the processor writes through the cache to the main memory. The write cycle does not complete until the data is stored into the main memory.

Associativity refers to the way in which main memory content is stored on the cache.

- A fully associative cache allows any line in main memory to be stored at any location in the cache.
- A 4-way set-associative cache directly maps four specific lines of memory to the same four lines of cache.
- A 3-way set-associative cache directly maps three specific lines of memory to the same three lines of cache.
- A 2-way set-associative cache directly maps two specific lines of memory to the same two lines of cache.
- A 1-way set-associative cache directly maps a specific line of memory in the same line of cache.

For example, line 0 of any page in memory must be stored in line 0 of cache memory.

Cache Device Supported Type is the type of static random access memory (SRAM) that the device can support.

Cache Device Current Type is the type of the currently installed SRAM that the cache is supporting.

External Socket Name Silk Screen Name is the name printed on the system board next to the socket.

Error Correction Type identifies the type of error checking and correction (ECC) that this memory can perform. Examples are correctable ECC or uncorrectable ECC.

This report shows cache information for each cache present on the microprocessor.

omreport chassis pwrmanagement/omreport mainsystem pwrmanagement

Use the `omreport chassis pwrmanagement` or `omreport mainsystem pwrmanagement` command to view the power budget cap and power management profiles of your system. Type:

```
omreport chassis pwrmanagement
or
omreport mainsystem pwrmanagement
```

For each power management profile in the system, values display for the following fields:

Maximum Performance, Active Power Controller, OS Control, and Custom.

Custom attributes are:

CPU Power and Performance Management, Memory Power and Performance Management, and Fan Power and Performance Management.



NOTE: The `omreport chassis pwrmanagement` or `omreport mainsystem pwrmanagement` command is applicable only to select Dell *xx1x* systems that support Power Management Bus (PMBus.)

Power Inventory

Power Consumption

```
Attribute      : System Idle Power
Value         : 153 W
Attribute      : System Maximum Potential Power
Value         : 597 W
```

Power Budget

```
Attribute      : Enable Power Cap
Values         : Enabled
Attribute      : Power Cap
Values         : 400 W (56%)
```

omreport chassis pwrmonitoring/omreport mainsystem pwrmonitoring

Use the `omreport chassis pwrmonitoring` or `omreport mainsystem pwrmonitoring` command to view the properties of your system's power consumption. Type:

```
omreport chassis pwrmonitoring
or
omreport mainsystem pwrmonitoring
```

For each power monitoring profile in the system, values display for the following fields:

- Power Consumption Status
- Probe Name
- Reading
- Warning Threshold
- Failure Threshold
- Amperage: Location and Reading
- Power Tracking Statistics
- Energy Consumption
- Measurement Start Time
- Measurement Finish Time
- Reading
- System Peak Power
- System Peak Amperage



NOTE: The `omreport chassis pwrmonitoring` or `omreport mainsystem pwrmonitoring` command is applicable only to select Dell *xx0x* and *xx1x* systems that support PMBus.

Table 3-5. omreport chassis pwrmonitoring/omreport mainsystem pwrmonitoring

name=value pair	Description
<code>config=stats</code>	Reports power statistics in Watts.

Power Consumption Information

Power Consumption

Index : 2
Status : Ok
Probe Name : System Board
Reading : System Level
Warning Threshold : 539 W
Failure Threshold : 994 W
: 1400 W

Power Headroom

Name : System Instantaneous
Headroom
Reading : 300 W
Name : System Peak Headroom
Reading : 340 W

Amperage

Location : PS 1 Current 1
Reading : 1.2 A
Location : PS 2 Current 2
Reading : 1.0 A

Power Tracking Statistics

```
Statistics           : Energy consumption
Measurement Start Time : Thu Jun 28 11:03:20 2007
Measurement Finish    : FRI Jun 28 11:05:46 2007
Time
Reading              : 5.9 KWH
```

```
Statistics           : System Peak Power
Measurement Start Time : Mon Jun 18 16:03:20 2007
Peak Time            : Wed Jun 27 00:23:46 2007
Peak Reading         : 630 W
```

```
Statistics           : System Peak Amperage
Measured Since       : Mon Jun 18 16:03:20 2007
Read Time            : Tue Jun 19 04:06:32 2007
Peak Reading         : 2.5 A
```

omreport chassis pwrsupplies/omreport mainsystem pwrsupplies

Use the `omreport chassis pwrsupplies` or `omreport mainsystem pwrsupplies` command to view properties of your system's power supplies. Type:

```
omreport chassis pwrsupplies
or
omreport mainsystem pwrsupplies
```

For each power supply profile in the system, values display for the following fields:

- **Status**
- **Location**
- **Type**
- **Rated Input Wattage**

- Maximum Output Wattage
- Online Status
- Power Monitoring Capable

omreport chassis remoteaccess/omreport mainsystem remoteaccess

Use the `omreport chassis remoteaccess` or `omreport mainsystem remoteaccess` command to view general information on baseboard management controller or integrated Dell remote access controller (BMC/iDRAC) and remote access controller if DRAC is installed.

Type:

```
omreport chassis remoteaccess
or
omreport mainsystem remoteaccess
```



NOTE: This command is applicable to PowerEdge x8xx, x9xx, xx0x, and xx1x systems only.

The output of the `omreport chassis remoteaccess/omreport mainsystem remoteaccess` command lists each of the valid parameters. Table 3-6 shows the available settings.

Table 3-6. omreport chassis remoteaccess/omreport mainsystem remoteaccess

name=value pair	Description
config=additional	Reports the current state of IPv4 and IPv6 addresses on iDRAC6.
config=advsol	Reports advanced BMC/iDRAC6 or remote access information on a serial over local area network (LAN) connection.
config=nic	Reports BMC/iDRAC6 or remote access information for the LAN.
config=serial	Reports serial port information for BMC or remote access.
config=serialoverlan	Reports BMC/iDRAC6 or remote access information on a serial over LAN connection.
config=terminalmode	Reports terminal mode settings for the serial port.
config=user	Reports information on BMC/iDRAC6 or remote access users.

omreport chassis slots/omreport mainsystem slots

Use the **omreport chassis slots** or **omreport mainsystem slots** command to view properties of your system's slots.

Type:

```
omreport chassis slots index=n  
or  
omreport mainsystem slots index=n
```

The **index** parameter is optional. If you do not specify the index, Server Administrator displays properties for all of the slots in your system. If you specify the index, Server Administrator displays properties for a specific slot.

For each slot in the system, values display for the following fields: **Index**, **Slot ID**, **Adapter**, and **Data Bus Width**.

Index is the number of the slot in the system.

Slot ID is the silk screen name printed on your system's motherboard next to the slot. Alphanumeric text uniquely identifies each slot in the system.

Adapter refers to the name and/or type of the card that fits into the slot, for example, a storage array controller, SCSI adapter, iDRAC6 Enterprise, or HBA.

Data Bus Width is the width, in bits, of the information pathway between the components of a system. The range of the data bus width can be from 16 to 64 bits.

omreport chassis temps/omreport mainsystem temps

Use the **omreport chassis temps** or **omreport mainsystem temps** command to view properties of your system's temperature probes. Type:

```
omreport chassis temps index=n  
or  
omreport mainsystem temps index=n
```

The **index** parameter is optional. If you do not specify the index, Server Administrator displays a summary of status, readings, and thresholds set for any temperature probes that might be present on your system. If you specify the index, Server Administrator displays a summary for a specific temperature probe.

omreport chassis volts/omreport mainsystem volts

Use the **omreport chassis volts** or **omreport mainsystem volts** command to view properties of your system's voltage probes. Type:

```
omreport chassis volts index=n  
or  
omreport mainsystem volts index=n
```

The `index` parameter is optional. If you do not specify the index, Server Administrator displays a summary of status, readings, and thresholds set for any voltage probes that might be present on your system. If you specify the index, Server Administrator displays a summary for a specific voltage probe.

omreport system Commands/omreport servermodule Commands

Use the **omreport system** or **omreport servermodule** commands to view logs, threshold values, cost of ownership information, and information about how shutdown actions and recovery actions are configured.

omreport system/omreport servermodule

Use the **omreport system** or **omreport servermodule** command to see a general status of the components of your system. When you specify a level 3 command, such as **omreport system shutdown/omreport servermodule shutdown**, you can get detailed information for one system component rather than the high-level status obtained with **omreport system** or **omreport servermodule**.

Type:

```
omreport system  
or  
omreport servermodule
```

If your system has both a main system chassis/main system and at least one direct attached storage device, Server Administrator may display a summary that resembles the following example.

SEVERITY : COMPONENT
Ok : Main System Chassis
Critical : Storage

Commands for Viewing Logs

You can use the `omreport system` or `omreport servermodule` command to view logs: the alert log, the command log, and the hardware or ESM log.



NOTE: If the Alert log or Command log displays invalid XML data (such as when XML data generated for the selection is not well-formed), to clear the log and resolve the issue, `omconfig system alertlog action=clear` or `omconfig system cmdlog action=clear` resolves the issue. If you need to retain the log information for future reference, save a copy of the log before clearing. See "Commands for Clearing Logs" for more information about clearing logs.

To view the contents of the alert log, type:

```
omreport system alertlog  
or  
omreport servermodule alertlog
```

To view the contents of the command log, type:

```
omreport system cmdlog  
or  
omreport servermodule cmdlog
```

To view the contents of the ESM log, type:

```
omreport system esmlog  
or  
omreport servermodule esmlog
```

Overall Health Status of the ESM Log

When you type `omreport system esmlog` or `omreport servermodule esmlog`, the ESM log displays. The first line of the report reflects the overall health of the system hardware. For example, `Health: OK` means that less than 80 percent of the space allotted for the ESM log is occupied by messages. If 80 percent or more of the allotted space for the ESM log is occupied, the following caution appears:

```
Health: Non-Critical
```

If a caution appears, resolve all warning and critical severity conditions, and then clear the log.

omreport system alertaction/omreport servermodule alertaction

Use the `omreport system alertaction` or `omreport servermodule alertaction` command to view a summary of alert actions that have been configured for warning and failure events on your system components. Alert actions determine how Server Administrator responds when a component has a warning or failure event.

The `omreport system alertaction` or `omreport servermodule alertaction` command is useful for *viewing* which alert actions have been specified for components. To *set* an alert action for a component, use the `omconfig system alertaction` or `omconfig servermodule alertaction` command. For more information, see "omconfig: Managing Components Using the Instrumentation Service."



NOTE: Due to the limitations of certain operating systems (for example, VMware® ESXi), certain features may not be available with this release of OpenManage Server Administrator.


Components and Events for Which You Can View Alert Actions


You can view alert action properties for the following components and events, if the components/events are present on the system:

- Battery Warning
- Battery Failure
- Chassis Intrusion
- Current Probe Warning
- Current Probe Failure

- Fan Warning
- Fan Failure
- Memory Pre-failure
- Memory Failure
- System Power Probe Warning
- System Power Probe Detects a Failure
- System Peak Power
- Power Supply Warning
- Power Supply Failure
- Degraded Redundancy
- Lost Redundancy
- Temperature Warning
- Temperature Failure
- Voltage Warning
- Voltage Failure
- Processor Warning
- Processor Failure
- Hardware Log Warning
- Hardware Log Full
- Watchdog Asr
- Storage System Warning
- Storage System Failure
- Storage Controller Warning
- Storage Controller Failure
- Physical Disk Warning
- Physical Disk Failure
- Virtual Disk Warning
- Virtual Disk Failure
- Enclosure Warning
- Enclosure Failure

- Storage Controller Battery Warning
- Storage Controller Battery Failure

 **NOTE:** Storage Controller Battery Warning and Storage Controller Battery Failure events are not available on modular systems.

 **NOTE:** System Power Probe Warning is not applicable to modular systems.

omreport system assetinfo/omreport servermodule assetinfo

Use the `omreport system assetinfo` or `omreport servermodule assetinfo` command to see cost of ownership data for the system, such as acquisition, depreciation, and warranty information. To *set* any of these fields, use the `omconfig system assetinfo` or `omconfig servermodule assetinfo` command. For more information, see "omconfig system or servermodule assetinfo: Editing Cost of Ownership Values."

omreport system events/omreport servermodule events

Use the `omreport system events` or `omreport servermodule events` command to view the current enabled or disabled SNMP traps. This command displays a summary of each component in your system for which events can be generated. For each component, the report shows which severities are set to be reported and which severities are set not to be reported. The following is an example output for a few components:

```
omreport system events
```

or

```
omreport servermodule events
```

```
Current SNMP Trap Configuration
```

```
-----
```

```
System
```

```
-----
```

```
Settings
```

```
Enable: Informational, Warning and Critical
```

```
Disable: None
```



```

-----
Power Supplies
-----
Settings
Enable: Informational, Warning and Critical
Disable: None

-----
Fans
-----
Settings
Enable: Critical
Disable: Informational and Warning

```

The full report lists the settings for all components in your system for which events can be generated.

To view the status for components of a specific type, use the `omreport system events type=<component name>` or `omreport servermodule event type=<component name>` command. This command displays a summary of each component in your system for which events can be generated. Table 3-7 shows the events displayed for various component types.


 **NOTE:** Due to the limitations of certain operating systems (for example, VMware® ESXi), certain features may not be available with this release of OpenManage Server Administrator.

Table 3-7. System Events by Component Type

name=value pair	Description
type=accords	Reports events for AC power cords.
type=battery	Reports events for batteries
type=fanenclosures	Reports events for fan enclosures.
type=fans	Reports events for fans.
type=intrusion	Reports events for chassis intrusion.
type=log	Reports events for logs.
type=memory	Reports events for memory.
type=powersupplies	Reports events for power supplies.
type=redundancy	Reports events for redundancy.

Table 3-7. System Events by Component Type (continued)

name=value pair	Description
type=systempower	Reports events for system power.
type=temps	Reports events for temperatures.
type=volts	Reports events for voltages.

Example Command for an Event Type

Type:

```
omreport system events type=fans  
or  
omreport servermodule events type=fans
```

The following is an example output:

```
-----  
Fans  
-----  
Settings  
Enable: Critical  
Disable: Informational and Warning
```

omreport system operatingsystem/omreport servermodule operatingsystem

Use the `omreport system operatingsystem` or `omreport servermodule operatingsystem` command to display information about your operating system.

omreport system pedestinations/omreport servermodule pedestinations

Use the `omreport system pedestinations` or `omreport servermodule pedestinations` command to view destinations where alerts for platform events are configured to be sent. Depending on the number of destinations displayed, you can configure a separate IP address for each destination address.

Type:

```
omreport system pedestinations
```

or

```
omreport servermodule pedestinations
```

The output of the **omreport system pedestinations** or **omreport servermodule pedestinations** command lists each of the valid parameters.



NOTE: The actual number of destinations that can be configured on your system may differ.

Table 3-8 shows the available settings.

Table 3-8. Settings for the omreport system pedestinations/omreport servermodule pedestinations

Output	Attributes	Description
Destination List	Destination Number: Destination 1	destination 1: Displays the first destination.
	Destination IP Address: 101.102.103.104	101.102.103.104: IP address of the first destination.
	Destination Number: Destination 2	destination 2: Displays the second destination.
	Destination IP Address: 110.120.130.140	110.120.130.140: IP address of the second destination.
	Destination Number: Destination 3	destination 3: Displays the third destination.
	Destination IP Address: 201.202.203.204	201:202:203:204: IP address of the third destination.
	Destination Number: Destination 4	destination 4: Displays the fourth destination.
	Destination IP Address: 210.211.212.213	210.211.212.213: IP address of the fourth destination.

Table 3-8. Settings for the omreport system pedestinations/omreport servermodule pedestinations (continued)

Output	Attributes	Description
Destination Configuration Settings	attribute= communitystring	communitystring: Displays the text string that acts as a password and is used to authenticate SNMP messages sent between the BMC and the destination management station.

omreport system platformevents/omreport servermodule platformevents

Use the `omreport system platformevents` or `omreport servermodule platformevents` command to view how the system responds for each listed platform event.

omreport system recovery/omreport servermodule recovery

Use the `omreport system recovery` or `omreport servermodule recovery` command to see whether there is an action configured for a hung operating system. You can also view the number of seconds that must elapse before an operating system is considered hung.

omreport system shutdown/omreport servermodule shutdown

Use the `omreport system shutdown` or `omreport servermodule shutdown` command to view any pending shutdown actions for your system. If properties for shutdown are configured, executing this command displays these properties.



NOTE: Due to the limitations of certain operating systems (for example, VMware® ESXi), certain features may not be available with this release of OpenManage Server Administrator.

omreport system summary/omreport servermodule summary

Use the `omreport system summary` or `omreport servermodule summary` command to view a comprehensive summary of software and hardware components currently installed on your system.

Example Command Output

Type:

```
omreport system summary
or
omreport servermodule summary
```

The output that appears in your CLI window depends on the systems management software, operating system, and hardware components and options installed on your system. The following *partial* command results are unique and may not resemble the results for your system's hardware and software configuration:

```
System Summary
```

```
-----
```

```
----
```

```
Software
Profile
```

```
-----
```

```
----
```

```
System
Management
```

```
Name           : Dell OpenManage Server
                  Administrator
Version        : 6.x.x
Description    : Systems Management Software
Contains      : Instrumentation Service 6.x.x
                  Storage Management Service 3.x.x
                  Sun JRE - OEM Installed Version
                  3.x.x
                  Secure Port Server 1.x.x
                  Dell OpenManage Core Service 1.x.x
                  Instrumentation Service Integration
                  Layer 1.x.x
                  Storage Management Service
                  Integration Layer 1.x.x
```

Operating
System

Name : Microsoft Windows 2003 Server
Version : Service Pack 2 (Build 2XXX)
System Time : Fri Sep 20 18:02:52 2XXX
System Bootup Time : Wed Sep 18 18:37:58 2XXX

Server Module

Information

Host Name : svctag-dxxxxs
System Location : Please set the value
Model : PowerEdge 1955
Asset Tag : Test
Service Tag : DXXXXS
Slot Number : Slot 01-02
Form Factor : Half Height Dual Width

Processor 1

Processor Brand : Intel(R) Xeon(R) CPU
Processor Version : Model 15 Stepping 6
Voltage : 1400 mV

Processor 2

Processor Brand : Intel(R) Xeon(R) CPU
Processor Version : Model 15 Stepping 6
Voltage : 1400 mV

```
Memory
Total           : 2048 MB
Installed
Capacity
Memory         : 2048 MB
Available to
the OS
Total Maximum  : 32768 MB
Capacity
Memory Array   : 1
Count
```

The system summary hardware information includes data values for installed components of the following types present in your system:

System Attributes

- Host name
- System location

Main System Chassis/Main System

Chassis

- Chassis Model
- Chassis Service Tag
- Chassis Lock
- Chassis Asset Tag

Processor

The following are listed for each processor in the system:

- Processor Manufacturer
- Processor Family
- Processor Version
- Current Speed

- Maximum Speed
- External Clock Speed
- Voltage

Memory

- Total Installed Capacity
- Memory Available to the Operating System
- Total Maximum Capacity
- Memory Array Count

Memory Array

The following details are listed for each memory board or module in the system (for example, the system board or the memory module in a given slot number):

- Location
- Use
- Installed Capacity
- Maximum Capacity
- Slots Available
- Slots Used
- Ecc Type

BIOS

- Manufacturer
- BIOS Version
- Release Date
- BIOS Firmware Information
- Name
- BIOS Firmware Version

Firmware

- Name
- Version

Network Interface Card

The following details are listed for each NIC in the system:

- IP Address
- Subnet Mask
- Default Gateway
- MAC Address

Storage Enclosures

The following details are listed for each storage enclosure attached to the system:

- Name
- Product ID

omreport system thrmshutdown/omreport servermodule thrmshutdown

Use the **omreport system thrmshutdown** or **omreport servermodule thrmshutdown** command to view the properties configured for a thermal shutdown action.

The three properties that display for thermal shutdown are **disabled**, **warning**, or **failure**. If the CLI displays the following message, the thermal shutdown feature has been disabled:

```
Thermal protect shutdown severity: disabled
```

If the system is configured to shutdown when a temperature probe detects a warning or failure event, one of the following messages displays:

```
Thermal protect shutdown severity: warning
```

```
Thermal protect shutdown severity: failure
```

omreport system version/omreport servermodule version

Use the **omreport system version** or **omreport servermodule version** command to list the version numbers of the BIOS, firmware, systems management software, and operating system installed on your system.

Example Command Output

Type:

```
omreport system version
or
omreport servermodule version
```

The output that appears in your CLI window depends on the version of the BIOS, RAID controllers, and firmware installed on your system. The following *partial* command results are unique and may not resemble the results for your system's configuration:

```
Version Report
-----
Main System Chassis
-----

Name       : BIOS
Version    : 0.2.16

Name       : BMC
Version    : 0.26

Name       : Primary Backplane
Version    : 1.01
```

```

-----
Software
-----
Name          : Microsoft Windows Server 2003,
                Enterprise Edition

Version       : 5.2 <Build 3790: Service Pack 2><x86>

Name          : Dell Server Administrator
Version       : 6.1

```

omreport preferences Commands

Use the **omreport preferences** command to view the URL information of your Server Administrator Web server.

Table 3-9 shows the available attributes.

Table 3-9. omreport preferences webservice

name=value pair	Description
attribute=geturl	Reports the URL information of your Web server.

omconfig: Managing Components Using the Instrumentation Service

The **omconfig** command allows you to provide values that define warning events, configure alert actions, clear logs, and configure system shutdown, as well as allowing you to perform other systems management tasks.

Examples of **omconfig** capabilities include the administrator's privilege to clear command, alert, and hardware logs; the administrator's privilege to configure and execute system shutdown; power user and administrator's privilege to default or specify values for warning events on fans, voltage probes, and temperature probes; power user and administrator's privilege to set alert actions in the event of a warning or failure event from intrusion, fans, voltage probes, and temperature probes.

For information on using the **omconfig** system command to view and manage cost of ownership information (**assetinfo**), see "omconfig system or servermodule assetinfo: Editing Cost of Ownership Values."

Often, you must use the **omreport** commands to get the information you need to execute an **omconfig** command. For example, if you want to edit the minimum temperature for a warning event on a temperature probe, you need to know the index of the probe you want to configure. You can use the **omreport chassis temps** or **omreport mainsystem temp** command to display a list of probes and their indexes. For more information on using the **omreport** command, see "omreport: Viewing System Status Using the Instrumentation Service."

Table 4-1. System Availability for the omconfig Command

Command Level 1	Command Level 2	Applicable to
<i>omconfig</i>	<i>servermodule</i>	Modular system
	<i>mainsystem</i>	Modular system
	<i>system</i>	Non-modular system
	<i>chassis</i>	Non-modular system

Conventions for Parameter Tables

When listing the parameters that a command can take, the parameters are listed in alphabetical order instead of the order in which they appear in the command line interface.

The symbol |, often called *pipe*, is the logical *exclusive or* operator. For example, enable | disable means that you can enable or disable the component or feature, but you cannot simultaneously enable and disable the component or feature.

omconfig Command Summary



NOTE: Although this section lists all possible **omconfig** commands, the commands available on your system depend on your system configuration. If you try to get help or execute a command for a component not installed on your system, Server Administrator issues a message that the component or feature is not found on the system.

Table 4-2 is a high-level summary of the **omconfig** command. The columns titled "Command level 2" and "Command level 3" list the major arguments that can be used with **omconfig**. "User privilege required" refers to the type of privilege you need to perform the command, where U=User, P=Power User, and A=Administrator. "Use" is a very general statement about the actions that can be performed using **omconfig**. More details about syntax and use of the command appear later in this section.

Table 4-2. omconfig Command Level 1, Level 2, and Level 3

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
omconfig				
	about		U, P, A	Shows version number and properties for the Server Administrator program.

Table 4-2. omconfig Command Level 1, Level 2, and Level 3 (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		details=true	U, P, A	Displays information for all of the Server Administrator programs that are installed.
	preferences			
		cdvformat	A	Specifies the delimiter for separating data fields reported in custom delimited format (cdv).
		dirservice	A	Configures the Microsoft Active Directory [®] service.
		snmp	A	Sets the SNMP root password. Configures SNMP Set Operations.
		useraccess	A	Determines whether users below the administrator level are allowed to use Server Administrator or not.

Table 4-2. omconfig Command Level 1, Level 2, and Level 3 (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		webserv	A	Allows the administrator to set the encryption levels of the Web server and configure the URL launch point in the Server Administrator Web server environment.
	system/ servermodule	alertaction	P, A	Determines in advance the actions to be taken for warning or failure events on intrusion, fans, temperatures, voltages, power supplies, memory, and redundancy.
		alertlog	P, A	Allows the administrator to clear the alert log.
		assetinfo	P, A	Enters and edits cost of ownership information for your system, including values for depreciation, lease, maintenance, service, and support.

Table 4-2. omconfig Command Level 1, Level 2, and Level 3 (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		cmdlog	P, A	Allows the administrator to clear the command log.
		esmlog	P, A	Allows the administrator to clear the ESM log.
		events	P, A	Enables and disables SNMP traps.
		pedestinations	P, A	Sets IP addresses for alert destinations.
		platformevents	A	Determines the shutdown action, if any, to be taken for a specific platform event. Also, enables and disables platform events filter alert generation.
		recovery	P, A	Determines in advance how your system responds to a hung operating system.
		shutdown	A	Allows the administrator to select from several options when shutting down the system.

Table 4-2. omconfig Command Level 1, Level 2, and Level 3 (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		thrmshutdown	A	Sets the severity level at which a thermal event triggers a system shutdown.
		webserver	A	Starts or stops the Web server.
	chassis/ mainsystem	biossetup	A	Configures the behavior of specific system components controlled by the BIOS.
		bmc	A	Configures remote access information. NOTE: This command is phased-out in this release. It is replaced by the remoteaccess command.
		fans	P, A	Configures fan probe warning thresholds by default or by value. NOTE: You cannot change threshold values on embedded server management (ESM3) and Dell™ PowerEdge™ x8xx systems.

Table 4-2. omconfig Command Level 1, Level 2, and Level 3 (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		fancontrol	P, A	Allows you to optimize fan speed for maximum cooling or quiet operation.
		frontpanel	A	Configures the Power button and Nonmasking Interrupt (NMI) button if present on the system.
		info	P, A	Allows you to set an initial value, or to edit the value for, asset tag or chassis name.
		leds	P, A	Specifies when to flash a chassis fault LED or chassis identification LED, and allows you to clear the LED for the system's hard drive.
		memorymode	A	Enables or disables the spare bank and mirroring memory modes, and also specify which mode to use.

Table 4-2. omconfig Command Level 1, Level 2, and Level 3 (continued)

Command Level 1	Command Level 2	Command Level 3	User Privilege Required	Use
		pwrmanagement	P, A	Allows you to choose between maximum power economy and optimized performance of the system.
		pwrmonitoring	P, A	Configures power consumption information and thresholds.
		remoteaccess	A	Configures remote access information.
		temps	P, A	Sets warning threshold values by default or value. NOTE: You cannot change threshold values on ESM3 and PowerEdge x8xx systems.
		volts	P, A	Sets warning threshold values by default or value. NOTE: You cannot change threshold values on ESM3 and PowerEdge x8xx systems.
	storage			See "Using the Storage Management Service."

Help With the `omconfig` Command

Use the `omconfig -?` command to get a list of the available commands for `omconfig`.

Use `omconfig <command level 2> -?` to get help on the `about`, `chassis`, `preferences`, and `system`'s level 2 commands. The following information on `omconfig system -?` applies equally to getting help for the `omconfig chassis` command.

Use the `omconfig system -?` command to get a list of the available commands for `omconfig system`.

Use the `omconfig preferences -?` command to get a list of the available commands for `omconfig preferences`, such as `cdvformat`, which is the custom delimiter format (cdv). Type the following command to display the list of delimiter values for the cdv:

```
omconfig preferences cdvformat -?
```

Use a command of the form `omconfig system <command level 3> -?` to get a list of the parameters you must use to execute a particular `omconfig system` command. For example, the following commands produce a list of valid parameters for `omconfig system alertaction` and `omconfig system shutdown`:

```
omconfig system alertaction -?
```

```
omconfig system shutdown -?
```

In the case of the `omconfig system alertaction` command, you can use various options to prevent all of the command line interface (CLI) help from scrolling by before you can read it.

To scroll command output one screen at a time, type:

```
omconfig system alertaction -? | more
```

where `| more` allows you to press the spacebar to see the next screen of the CLI help output.

To make a file that contains all the help for the `omconfig system alertaction -?` command, type:

```
omconfig system alertaction -? -outa alert.txt
```

where `-outa` directs the output of the command to a file called `alert.txt`.

To read the help for the **alertaction** command on a Microsoft® Windows®, Red Hat® Enterprise Linux®, or SUSE® Linux Enterprise Server operating system, type:

```
more alert.txt
```

omconfig about

Use the **omconfig about** command to learn the product name and version number of the systems management application installed on your system. The following is an example output of the **omconfig about** command:

```
Product      : Dell OpenManage Server Administrator
name
Version      : 6.x.x
Copyright    : Copyright (C) Dell Inc. 1995-2009. All
              rights reserved.
Company      : Dell Inc.
```

For more details about the environment for Server Administrator, type:

```
omconfig about details=true
```

Server Administrator includes a number of services, each of which has a version number of its own. The **Contains** field reports version numbers for the services and provides other useful details. The output that follows is an example, and it can change depending on your configuration and the version of Server Administrator that is available:

```
Contains: Broadcom SNMP Agent 10.xx.xx
          Common Storage Module 3.x.x
          Data Engine 5.x.x
          Hardware Application Programming Interface
          5.x.x
          Instrumentation Service 6.x.x
          Instrumentation Service Integration Layer
          1.x.x
          Intel SNMP Agent 1.xx.x
          OpenManage Inventory Collector 6.x.x
```

OpenManage Tools 6.x.x
Remote Access Controller 4 Data Populator
4.x.x
Remote Access Controller 4 Managed Node
4.6.3
Secure Port Server 1.x.x
Server Administrator Framework 6.x.x
Agent for Remote Access 1.x.x
Storage Management 3.x.x
Sun Java Runtime Environment 1.x.xx

omconfig chassis/omconfig mainsystem

Use the `omconfig chassis` or `omconfig mainsystem` commands to default or to set values for fan, voltage, and temperature probes, to configure BIOS behavior during system start up, to clear memory error counts, and to enable or disable power button control features where system configuration permits.

Use the `omconfig chassis -?` or `omconfig mainsystem -?` command to view a list of all `omconfig chassis/omconfig mainsystem` commands.

omconfig chassis biossetup/omconfig mainsystem biossetup

Use the `omconfig chassis biossetup` or `omconfig mainsystem biossetup` command to configure system BIOS settings that are normally available only in your system's BIOS setup boot time settings.



CAUTION: Changing certain BIOS setup options might disable your system or require you to reinstall the operating system.



NOTE: Reboot your system for the BIOS setup options take effect.



NOTE: Not all BIOS setup options are available on every system.



NOTE: Due to the limitations of certain operating systems (for example, VMware[®] ESXi), certain features may not be available with this release of OpenManage Server Administrator.

Table 4-3 shows the name=value pairs you can use with this command.

Table 4-3. BIOS Setup Settings

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute= acpwrecovery	setting=off last on	off: System is turned off. last: System returns to previous state. on: System is turned on.
	delay=random immediate timedelay time <value>	random: System is turned on with random delay. immediate: System returns to previous state immediately. timedelay <value>: System is turned on based on user specified time delay.
attribute=bezel	setting=enabled disabled	enabled: Enables the bezel removal intrusion check during system boot. disabled: Disables the bezel removal intrusion check during system boot.
attribute= bootsequence	setting=diskettefirst hdonly devicelist cdromfirst opticaldrive	Instructs the BIOS which device is used to boot the system, and the order in which the boot routine is to check each device.
attribute= bootmode	setting=uefi bios	uefi: Enables the system to boot to operating systems that support Unified Extensible Firmware Interface (UEFI). bios: Enables the system to boot to operating systems that do not support UEFI.

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute=cstates	setting=enabled disabled	enabled: Enables the processor to go into a deep sleep state when the system is not utilized. disabled: Disables the processor to go into a deep sleep state when the system is not utilized.
attribute= conredirect	setting=enabled disabled	enabled: Redirects the BIOS screen over Serial Port 1. Keyboard and text output are redirected over Serial Port 2. disabled: Turns off the BIOS console redirection.
attribute=crab	setting=enabled disabled	enabled: Enables BIOS console redirection after system reboot. disabled: Disables BIOS console redirection. NOTE: The command crab is valid for Dell PowerEdge x9xx systems only.
attribute=cpuht	setting=enabled disabled	enabled: Enables logical processor hyperthreading. disabled: Disables logical processor hyperthreading.
attribute=cpuvt	setting=enabled disabled	enabled: Enables virtualization. disabled: Disables virtualization.

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute= cpuxdsupport	setting=enabled disabled	enabled: Enables Execute Disable (XD) support on system. disabled: Disables XD support on system.
attribute=cpucore	setting=1 2 4 all	1: Enables one core per processor. 2: Enables two cores per processor. 4: Enables four cores per processor. all: Enables the maximum cores per processor. NOTE: <code>setting=all</code> returns the maximum core count.
attribute=dbs	setting=enable disable	enable: Enables Demand Based Switching (DBS) on the system. disable: Disables DBS on the system.
attribute=diskette	setting=off auto writeprotect	off: Disables the diskette drive. auto: Auto-enables the diskette drive. writeprotect: Do not allow writes. Make the diskette drive read-only.

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute=dualnic	setting=off on pxebboth nic1pxe nic2pxe isciboth nic1iscsi nic2iscsi nic1pxenic2iscsi nic1iscinic2pxe onpxebboth onpxenone onpxenic1 onpxenic2	<p>off: Disables the Network Interface Controllers (NICs).</p> <p>on: Enables the network interface (PXE or iSCSI) is not enabled on either of the NICs).</p> <p>pxebboth: Enables PXE on both NICs.</p> <p>nic1pxe: Enables PXE on first NIC and none (No PXE or iSCSI) on second NIC.</p> <p>nic2pxe: Enables none (No PXE or iSCSI) on first NIC and PXE on second NIC.</p> <p>isciboth: Enables iSCSI on both NICs.</p> <p>nic1iscsi: Enables iSCSI on first NIC and none (No PXE or iSCSI) on second NIC.</p> <p>nic2iscsi: Enables none (No PXE or iSCSI) on first NIC and iSCSI on second NIC.</p> <p>nic1pxenic2iscsi: Enables PXE on first NIC and iSCSI on second NIC.</p> <p>nic1iscinic2pxe: Enables iSCSI on first NIC and PXE on second NIC.</p> <p>NOTE: The following options are deprecated:</p> <p>onpxebboth: Enables PXE on both NICs.</p> <p>onpxenone: PXE is not enabled on either of the NICs.</p> <p>onpxenic1: Enables PXE on NIC 1.</p> <p>onpxenic2: Enables PXE on NIC 2.</p>
attribute= embhypvisor	setting=enabled disabled	<p>enabled: Enables embedded hypervisor.</p> <p>disabled: Disables embedded hypervisor.</p>

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute= embvidectrl	setting=enabled disabled	enabled: Enables the embedded video controller to be the primary video device. disabled: Disables the embedded video controller to be the primary video device.
attribute= extserial	setting=com1 com2 rad	com1: Maps external serial connector to COM 1. com2: Maps external serial connector to COM 2. rad: Maps external serial connector to remote access device.
attribute=fbr	setting=9600 19200 57600 115200	9600: Sets the console redirection failsafe baud rate to 9600 bits per second. 19200: Sets the console redirection failsafe baud rate to 19200 bits per second. 57600: Sets the console redirection failsafe baud rate to 57600 bits per second. 115200: Sets the console redirection failsafe baud rate to 115200 bits per second.
attribute=ide	setting=on off force=true	on: Enables this device. off: Disables this device. force=true: Verification of setting change.
attribute= ideprdrv	setting=off auto	off: Disables the device. auto: Detects and enables the device automatically.

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute= intrusion	setting=enabled disabled	enabled: Enables the intrusion check during system boot. If the system also has bezel intrusion checking, then the intrusion option checks for removal of the bezel of the system. disabled: Disables the intrusion check during system boot.
attribute=intusb	setting=enabled disabled	enabled: Enables the internal USB drive. disabled: Disables the internal USB drive.
attribute=mouse	setting=on off	on: Enables the mouse. off: Disables the mouse.
attribute=nic1	setting=enabled enabledwithpxe disabled enabledonly enablednonepxe enabledwithiscsi	enabled: Enables the first NIC during system boot. enabledwithpxe: Enables the first NIC during system boot (with PXE on if the system has PXE) disabled: Disables the first NIC during system boot. enabledonly: Enables the first NIC during system boot (with PXE off if the system has PXE). enablednonepxe: Enables the first NIC during system boot (with PXE off if the system has PXE). enabledwithiscsi: Enables the first NIC during system boot (with iSCSI on if the system has iSCSI).

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute=nic2	setting=enabled enabledwithpxe disabled enabledonly enablednonepxe enabledwithiscsi	<p>enabled: Enables the second NIC during system boot.</p> <p>enabledwithpxe: Enables the second NIC during system boot (with PXE on if the system has PXE)</p> <p>disabled: Disables the second NIC during system boot.</p> <p>enabledonly: Enables the second NIC during system boot (with PXE off if the system has PXE).</p> <p>enablednonepxe: Enables the second NIC during system boot (with PXE off if the system has PXE).</p> <p>enabledwithiscsi: Enables the second NIC during system boot (with iSCSI on if the system has iSCSI).</p>
attribute=nic3	setting=enabled enabledwithpxe disabled enabledonly enablednonepxe enabledwithiscsi	<p>enabled: Enables the third NIC during system boot.</p> <p>enabledwithpxe: Enables the third NIC during system boot (with PXE on if the system has PXE)</p> <p>disabled: Disables the third NIC during system boot.</p> <p>enabledonly: Enables the third NIC during system boot (with PXE off if the system has PXE).</p> <p>enablednonepxe: Enables the third NIC during system boot (with PXE off if the system has PXE).</p> <p>enabledwithiscsi: Enables the third NIC during system boot (with iSCSI on if the system has iSCSI).</p>

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute=nic4	setting=enabled enabledwithpxe disabled enabledonly enablednonepxe enabledwithiscsi	enabled: Enables the fourth NIC during system boot. enabledwithpxe: Enables the fourth NIC during system boot (with PXE on if the system has PXE) disabled: Disables the fourth NIC during system boot. enabledonly: Enables the fourth NIC during system boot (with PXE off if the system has PXE). enablednonepxe: Enables the fourth NIC during system boot (with PXE off if the system has PXE). enabledwithiscsi: Enables the fourth NIC during system boot (with iSCSI on if the system has iSCSI).
attribute=numlock	setting=on off	on: Uses the keypad as number keys. off: Uses the keypad as arrow keys.
attribute=node interleaving	setting=enabled disabled	enabled: Enables Node Interleaving. disabled: Disables Node Interleaving.
attribute=ppaddress	setting=off lpt1 lpt2 lpt3	off: Disables the parallel port address. lpt1: Locates the device on LPT1. lpt2: Locates the device on LPT2. lpt3: Locates the device on LPT3.

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute= ppmode	setting=at ps2 ecp epp	<p>at: Sets the parallel port mode to type AT.</p> <p>ps2: Sets the parallel port mode to type PS/2.</p> <p>ecp: Sets the parallel port mode to type ECP (extended capabilities port).</p> <p>epp: Sets the parallel port mode to type EPP (enhanced parallel port).</p>
attribute= primaryscsi	setting=on off force=true	<p>CAUTION: If you modify the setting for primary scsi, romb, romba, or rombb, your system will become inoperable until you reinstall the operating system.</p> <p>on: Enables this device.</p> <p>off: Disables this device.</p> <p>force=true: Verification of setting change.</p>
attribute=romb	setting=raid off scsi force=true	<p>raid: Instructs the BIOS to detect RAID-on-motherboard as a RAID device.</p> <p>off: Disables the device during system boot.</p> <p>scsi: Instructs the BIOS to detect this device as a SCSI device.</p> <p>force=true: Verification of setting change.</p>
attribute=romba	setting=raid scsi force=true	<p>raid: Instructs the BIOS to detect RAID-on-motherboard channel A as a RAID device.</p> <p>scsi: Instructs the BIOS to detect this device as a SCSI device.</p> <p>force=true: Verification of setting change.</p>

Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute=rombb	setting=raid scsi force=true	raid: Instructs the BIOS to detect RAID-on-motherboard channel B as a RAID device. scsi: Instructs the BIOS to detect this device as a SCSI device. force=true: Verification of setting change.
attribute=sata	setting=off ata raid	off: Disables the SATA controller. ata: Sets the onboard SATA controller to ATA mode. raid: Sets the onboard SATA controller to RAID mode.
attribute=sataport (0...7) or (A...H)	setting=off auto	off: Disables the SATA port. auto: Automatically enable the SATA port.
attribute= secondaryscsi	setting=on off	on: Enables this device. off: Disables this device.
attribute= serialportaddr	setting=default alternate	default: Maps to Serial device1=COM1, Serial device2=COM2. alternate: Maps to Serial device1=COM2, Serial device2=COM1
attribute= serialcom	setting=off on com1 com2	off: Disables serial communication setting. on: Enables serial communication setting without console redirection. com1: Enables serial communication setting with console redirection via COM 1. com2: Enables serial communication setting with console redirection via COM 2.


Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute= serialport1	setting=off auto com1 com3 bmcserial bmcnic rac com1bmc	<p>off: Disables serial port 1.</p> <p>auto: Maps serial port 1 to a COM port.</p> <p>com1: Maps serial port 1 to COM port 1.</p> <p>com3: Maps serial port 1 to COM port 3.</p> <p>bmcserial: Maps serial port 1 to BMC Serial.</p> <p>bmcnic: Maps serial port 1 to the Baseboard Management Controller (BMC) NIC.</p> <p>rac: Maps serial port 1 to the Remote Access Controller (RAC).</p> <p>com1bmc: Maps serial port 1 to COM port 1 bmc.</p> <p>NOTE: This command is applicable to select <i>x8xx</i> systems.</p>
attribute= serialport2	setting=off auto com2 com4	<p>off: Disables serial port 2.</p> <p>auto: Maps serial port 2 to a COM port.</p> <p>com2: Maps serial port 2 to COM port 2.</p> <p>com4: Maps serial port 2 to COM port 4.</p>
attribute=speaker	setting=on off	<p>on: Enables the speaker.</p> <p>off: Disables the speaker.</p>
attribute= cputurbomode	setting=enabled disabled	<p>CPU turbo mode can increase the CPU frequency when your system is operating below the thermal, power, or current limits.</p> <p>enabled: Enables CPU Turbo Mode.</p> <p>disabled: Disables CPU Turbo Mode.</p>


Table 4-3. BIOS Setup Settings (continued)

name=value pair 1 attribute=	name=value pair 2 setting=	Description
attribute=uasusb	setting=on backonly off	on: Enables the user-accessible USB port(s) backonly: Enables only the user accessible USB port(s) located at the back of the system. off: Disables the user-accessible USB port(s).
attribute=usb	setting=enabled disabled	enabled: Enables the USB port(s). disabled: Disables the USB port(s). NOTE: Depending on your system's hardware, only one of the two attributes usb and usbb is available for configuring the USB port(s).
attribute=usbb	setting=enabled enabledwithbios disabled	enabled: Enables the USB port(s) during system boot, without BIOS support. enabledwithbios: Enables the USB port(s) during the system boot, with BIOS support. disabled: Disables the USB port(s) during system boot. NOTE: Depending on your system's hardware, only one of the two attributes usb and usbb is available for configuring the USB port(s).

omconfig chassis bmc/omconfig mainsystem bmc

 **NOTE:** This command is phased-out in this release. It is replaced by the `omconfig chassis remoteaccess/omconfig mainsystem remoteaccess` command.

omconfig chassis currents/omconfig mainsystem currents

 **NOTE:** This command is no longer available through Server Administrator.

omconfig chassis fans/omconfig mainsystem fans

Use the `omconfig chassis fans` or `omconfig mainsystem fans` command to set fan probe warning thresholds. As with other components, you can view both warning and failure threshold values, but you cannot set failure thresholds. Your system's manufacturer sets the minimum and maximum failure thresholds.


Valid Parameters for Fan Warning Thresholds

Table 4-4 shows the valid parameters for setting fan warning thresholds:

Table 4-4. omconfig chassis fans/omconfig chassis fans

name=value pair	Description
index=<n>	Number of the probe or probe index (must be specified).
warnthresh=default	Sets minimum and maximum warning thresholds to default .
minwarnthresh=<n>	Minimum warning threshold.
maxwarnthresh=<n>	Maximum warning threshold.

Default Minimum and Maximum Warning Thresholds

 **NOTE:** Systems that contain ESM3, ESM4, and BMC capabilities do not allow you to set warning threshold values to default values.

If you want to set both the upper and lower fan warning threshold values to the recommended default value, type:

```
omconfig chassis fans index=0 warnthresh=default  
or  
omconfig mainsystem fans index=0 warnthresh=  
default
```

You cannot default one value and set another. In other words, if you default the minimum warning threshold value, you are also selecting the default value for the maximum warning threshold value.

Specifying a Value for Minimum and Maximum Warning Thresholds

If you prefer to specify values for the fan probe warning thresholds, you must specify the number of the probe you are configuring and the minimum and/or maximum warning threshold values. In the following example, the probe that is being configured is probe 0. The first command sets only the minimum threshold; the second sets minimum and maximum thresholds:

```
omconfig chassis fans index=0 minwarnthresh=4580
or
omconfig mainsystem fans index=0 minwarnthresh=
4580

omconfig chassis fans index=0 minwarnthresh=4580
maxwarnthresh=9160
or
omconfig mainsystem fans index=0 minwarnthresh=
4580 maxwarnthresh=9160
```

When you issue the command and the system sets the values you specify, the following message appears:

```
Fan probe warning threshold(s) set successfully.
```



NOTE: Minimum and maximum warning thresholds for the fan probe cannot be set on PowerEdge x8xx and x9xx systems.

omconfig chassis fancontrol/omconfig mainsystem fancontrol

Use the `omconfig chassis fancontrol` or `omconfig mainsystem fancontrol` command to set the fan speed. You can optimize speed for cooling or for quiet operation. Table 4-5 shows the valid parameters for the command.

Table 4-5. `omconfig chassis fancontrol/omconfig mainsystem fancontrol`

name=value pair	Description
speed=quiet	Sets fan speed for quiet operation.
speed=maxcool	Sets fan speed for maximum cooling.

omconfig chassis frontpanel/omconfig mainsystem frontpanel

Use the `omconfig chassis frontpanel` or `omconfig mainsystem frontpanel` command to:

- configure the power button and the Nonmasking Interrupt (NMI) button
- configure the LCD to display:
 - no information
 - custom information
 - default system information
 - service tag, system name
 - MAC addresses of iDRAC6
 - system power
 - IP address of iDRAC6
 - ambient temperature of the system
 - IPv4 address of iDRAC6
 - IPv6 address of iDRAC6
- specify and configure the LCD line number
- view the security state report of the LCD
- configure LCD to indicate an active remote session when the Kernel-based Virtual Machine (KVM) is available



NOTE: You can configure the **Power** and **NMI** buttons only if they are present on your system.

Table 4-6 shows the valid parameters for the command.

Table 4-6. omconfig chassis frontpanel/omconfig mainsystem frontpanel

name=value pair 1	name=value pair 2	Description
lcdindex= <index>	NA	Specifies the LCD line number.
config=none default custom	NA	none: Sets the LCD text to none. default: Sets the LCD text to default. custom: Sets the LCD text to custom.
text=<custom text>	NA	Sets the custom text for LCD when config= custom.

Table 4-6. omconfig chassis frontpanel/omconfig mainsystem frontpanel (continued)

name=value pair 1	name=value pair 2	Description
nmibutton= enable disable	NA	enable: Enables the NMI button on the system. disable: Disables the NMI button on the system.
powerbutton= enable disable	NA	true: Enables the Power button on the system. false: Disables the Power button on the system.
config=sysname	NA	Displays the name of the system.
config=syspower	NA	Displays system power information.
config=serVICETag		Displays system service tag information.
config=IPv4drac		Displays IPv4 DRAC information.
config=IPv6drac		Displays IPv6 DRAC information.
config= ambienttemp	NA	Displays the system temperature in centigrade.
security=modify	NA	Allows you to modify the LCD text.
security=view	NA	Provides read-only access to the LCD text.
security=disabled	NA	Provides limited access to the LCD text.
remoteindication =true	NA	LCD flashes when the system detects an active remote session.

omconfig chassis info/omconfig mainsystem info

Use the **omconfig chassis info** or **omconfig mainsystem info** command to enter an asset tag name and a chassis name for your system. If your system is a modular one, you can enter asset tag names for modular components as well. Table 4-7 shows the valid parameters for the command.

Table 4-7. omconfig chassis info/omconfig mainsystem info

name=value pair	Description
<code>index=<n></code>	Number of the chassis whose asset tag or name you are setting.
<code>tag=<text></code>	Asset tag in the form of alphanumeric text. Letters or numbers should not exceed 10 characters.
<code>name=<text></code>	Name of the chassis.

In the following example, the asset tag for the main system chassis is being set to **buildsys**:

```
omconfig chassis info index=0 tag=buildsys
or
omconfig mainsystem info index=0 tag=buildsys
```

Index 0 always defaults to the main system chassis. The following command omits `index=n`, but accomplishes the same thing:

```
omconfig chassis info tag=buildsys
or
omconfig mainsystem info tag=buildsys
```

An acceptable command, when executed, results in the following message:

```
Chassis info set successfully.
```

For some chassis, you can assign a different name. You cannot rename the main system chassis. In the example below, the command renames chassis 2 from **storscsi1** to **storscsia**:

```
omconfig chassis info index=2 name=storscsia
or
omconfig mainsystem info index=2 name=storscsia
```

As with other commands, the CLI issues an error message if you do not have a chassis 2 (the main chassis=0). The CLI allows you to issue commands only for the system configuration you have.

omconfig chassis leds/omconfig mainsystem leds

Use the **omconfig chassis leds** or **omconfig mainsystem leds** command to specify when to flash a chassis fault LED or chassis identification LED. This command also allows you to clear the LED for the system's hard drive. Table 4-8 shows the valid parameters for the command.

Table 4-8. omconfig chassis leds/omconfig mainsystem leds

name=value pair 1	name=value pair 2	Description
index=<n>	NA	Number of the chassis where the LED resides (defaults to chassis 0, main system chassis).
led=fault	severity=warning critical	Select to flash the LED either when a warning event occurs or when a critical event occurs.
led=hdfault	action=clear	Sets the number of faults for the hard drive back to zero (0).
led=identify	flash=off on time-out=<n>	Sets the chassis identification LED to off or on. Set the time-out value for the LED to flash to a number of seconds.

omconfig chassis memorymode/omconfig mainsystem memorymode

Use the **omconfig chassis memorymode** or **omconfig mainsystem memorymode** command to specify the redundancy mode you want to use for your system's memory in case of memory errors.

Redundant memory enables a system to switch to other available memory modules if unacceptable errors are detected in the modules that the system is currently using. The **omconfig chassis memorymode** or **omconfig mainsystem memorymode** command allows you to disable redundancy; when you disable redundancy, you instruct the system not to switch to other available memory modules when the module the system is using begins to encounter errors. To enable redundancy, choose among mirror and RAID.

Spare mode disables a bank of system memory in which a correctable memory event is detected, enables the spare bank, and copies all the data from the original bank to the spare bank. Spare bank requires at least three banks of identical memory; the operating system does not recognize the spare bank.

Mirror mode switches to a redundant copy of memory when an uncorrectable memory event is detected. After switching to the mirrored memory, the system does not switch back to the original system memory until the next reboot. The operating system does not recognize half of the installed system memory in this mode.

RAID mode provides an extra level of memory checking and error recovery at the expense of some memory capacity.

Table 4-9 shows the valid parameters for the command.

Table 4-9. omconfig chassis memorymode/omconfig mainsystem memorymode

name=value pair 1	Description
index=<n>	Number of the chassis where the memory module resides (the default is chassis 0, the main system chassis).
redundancy=spare mirror disabled raid5	<p>Spare disables the memory module that has a correctable memory event and copies the failing module's data to a spare bank.</p> <p>Disabled indicates that the system is not to use other available memory modules if uncorrectable memory events are detected.</p> <p>Mirror switches the systems to a mirrored copy of the memory if the failing module has an uncorrectable memory event. In the mirror mode, the operating system does not switch back to the original module until the system reboots.</p> <p>RAID-5 is a method of system memory configuration. This is logically similar to the RAID-5 mode used in hard drive storage systems. This memory mode provides an extra level of memory checking and error recovery at the expense of some memory capacity. The RAID mode supported is RAID level 5 striping with rotational parity.</p>
opmode=mirror optimizer advecc	<p>Mirror switches the systems to a mirrored copy of the memory if the failing module has an uncorrectable memory event. In the mirror mode, the operating system does not switch back to the original module until the system reboots.</p> <p>Optimizer enables the DRAM controllers to operate independently in 64-bit mode and provide optimized memory performance.</p> <p>Advanced ECC (advecc) enables the two DRAM controllers to combine in 128-bit mode and provide optimized reliability. Memory that cannot be teamed by the controllers is not reported to the operating system.</p>

omconfig chassis pwrmanagement/omconfig mainsystem pwrmanagement


Use the `omconfig chassis pwrmanagement` or `omconfig mainsystem pwrmanagement` command to configure power cap and manage profiles that control power utilization.

Table 4-10. `omconfig chassis pwrmanagement/omconfig mainsystem pwrmanagement`

name=value pair 1	name=value pair 2	Description
config=budget	cap= <value>	Sets the threshold value for power budget.
	setting=enable disable	enable: Enables powercap settings. disable: Disables powercap settings.
	unit=watt btuphr percent	watt: Displays the unit in Watts. btuphr: Displays the unit in BTU/hr percent: Displays the unit in percentage.
config=profile	profile= maxperformance apc osctrl custom	maxperformance: Sets the processor to the highest supported processor state. It offers maximum performance mode with minimal power economy. apc: Active Power Control (apc) enables the demand-based power management controlled by BIOS. osctrl: OS Control (osctrl) enables the demand-based power management controlled by the operating system. custom: This profile allows you to configure individual BIOS settings. It offers added control by displaying the underlying BIOS settings.

Table 4-10. omconfig chassis pwrmanagement/omconfig mainsystem pwrmanagement (continued)

name=value pair 1	name=value pair 2	Description
	cpupowermode=min max systemdbpm osdbpm	<p>min: Sets the CPU power consumption to minimum.</p> <p>max: Sets the CPU power consumption to maximum.</p> <p>systemdbpm: Sets the mode to system demand based power management.</p> <p>osdbpm: Sets the mode to operating system demand based power management.</p> <p>NOTE: These options are applicable only when custom profile is selected.</p>
	memorypowermode=min 800 1067 1333 max	<p>min: Set the mode to minimum power utilization.</p> <p>800 1067 1333: Set the mode to 800, 1067, or 1333 MHz.</p> <p>max: Sets the mode to maximum performance.</p>
	fanmode=min max	<p>min: Sets the mode to minimum power utilization.</p> <p>max: Sets the mode to maximum performance.</p>

 **NOTE:** Reboot your system for the power profiles setup options to take effect.

omconfig chassis pwrmonitoring/omconfig mainsystem pwrmonitoring

Use the `omconfig chassis pwrmonitoring` or `omconfig mainsystem pwrmonitoring` command to configure power consumption information.

Table 4-11. omconfig chassis pwrmonitoring/omconfig mainsystem pwrmonitoring

name=value pair 1	name=value pair 2	Description
index=<n>	NA	Number of the probe or probe index (must be specified).
config=probe	warnthresh= settodefault	Sets minimum and maximum warning thresholds values to default .
	warnthresh=<n>	Sets a value for the warning threshold.
	unit=watt btuphr	watt : Displays the unit in Watts. btuphr : Displays the unit in BTU/hr
config=resetreading	type=energy peakpower	energy : Resets the system energy reading. peakpower : Resets the system peak power.



NOTE: This command is applicable to select Dell xx0x systems that support PMBus only.

Default Warning Thresholds



NOTE: Sensor managing capabilities vary across systems.

If you want to set both the upper and lower power consumption probe warning threshold values to the recommended default value, type:

```
omconfig chassis pwrmonitoring config=probe index=
0 warnthresh=settodefault
```

or

```
omconfig mainsystem pwrmonitoring config=probe
index=0 warnthresh=settodefault
```

You cannot default one value and set another. If you default the minimum warning threshold value, you are also selecting the default value for the maximum warning threshold value.

Specify a Value for Warning Thresholds

If you prefer to specify values for the power consumption probe warning thresholds, you must specify the number of the probe you are configuring and the warning threshold value. You can configure the values to be displayed either in BTU/hr or Watts. In the following example, the probe that is being configured is probe 4:

```
omconfig chassis pwrmonitoring config=probe index=
4 warnthresh=325 unit=watt
```

or

```
omconfig mainsystem pwrmonitoring config=probe
index=4 warnthresh=325 unit=btuphr.
```

When you issue the command and the system sets the values you specify, the following message appears:

```
Power consumption probe warning threshold(s) set
successfully.
```

omconfig chassis remoteaccess/omconfig mainsystem remoteaccess



NOTE: This command is applicable to PowerEdge x8xx, x9xx, xx0x, and xx1x systems only.

Use the `omconfig chassis remoteaccess` or `omconfig mainsystem remoteaccess` command to configure:

- Remote access on a local area network (LAN).
- The serial port for BMC or RAC, whichever is installed.
- The BMC or RAC on a serial over LAN connection.
- Terminal settings for the serial port.
- Advanced settings for a serial over LAN connection.
- Information on a BMC or RAC user.
- Information on IPv6 and IPv4 interfaces.



NOTE: You have to Enter the user ID to configure user information.

Type:

```
omconfig chassis remoteaccess
or
omconfig mainsystem remoteaccess
```

The output of the `omconfig chassis remoteaccess` or `omconfig mainsystem remoteaccess` command lists each of the available configurations. Table 4-12 shows the valid parameters:

Table 4-12. omconfig chassis remoteaccess/omconfig mainsystem remoteaccess

name=value pair 1	name=value pair 2	Description
config= additional	ipv4=enable disable ipv6=enable disable	enable: IPv4 stack will be loaded on iDRAC6 disable: IPv4 stack will be flushed on iDRAC6 enable: Enables IPv6 stack to load on iDRAC6. disable: Disables IPv6 stack to unload on iDRAC6.
config=advsol	characcuminterval= number charsendthreshold= number	number: Sets the character accumulate interval in 5 millisecond intervals. number: Sets the number of characters. BMC automatically sends a serial over LAN data packet that contains the number of characters as soon as this number of characters (or greater) has been accepted from the baseboard serial controller into the BMC.
config=nic	enable=true false nicselection= sharedwithfailoveronall nic1 teamednic1nic2 dracnic	true: Enables IPMI over LAN. false: Disables IPMI over LAN. sharedwithfailoveronall: Configures the new NIC selection option. nic1: Enables NIC 1. teamednic1nic2: Enables NIC teaming functionality. dracnic: Enables DRAC NIC if DRAC 5 is installed. NOTE: The <code>nicselection</code> option is supported only on PowerEdge x9xx systems.

Table 4-12. omconfig chassis remoteaccess/omconfig mainsystem remoteaccess (continued)

name=value pair 1	name=value pair 2	Description
config= nic (continued)	altdnsserverv6	Validates the address of the alternate DNS server for configuration.
	dnssourcev6=static auto	static: DNS source is set to static . auto: DNS source is set to auto .
	encryptkey=text	text: Text used for encryption and confirmation of encryption.
	confirmencryptkey=text	NOTE: The text option is supported only on PowerEdge x9xx systems.
	gateway=Gateway	Gateway: Sets a gateway address if you have selected static as the IP address source for the BMC LAN interface.
	gatewayv6= <value>	Validates the IPv6 gateway.
	enablenic=true false	true: Enables DRAC NIC. false: Disables DRAC NIC. NOTE: The enablenic option is supported on PowerEdge x9xx systems that have DRAC 5 installed.
	ipaddress=ip	ip: Sets the IP address if you have selected static as the IP address source for the BMC LAN interface.
	ipaddressv6= <IPv6 address>	Validates the IPv6 address for configuration.

Table 4-12. omconfig chassis remoteaccess/omconfig mainsystem remoteaccess (continued)

name=value pair 1 config=	name=value pair 2	Description
config= <i>nic</i> (continued)	ipsource=static dhcp systemssoftware	<p>static: Static if the IP address of the BMC LAN interface is a fixed, assigned IP address.</p> <p>dhcp: DHCP if the source of the IP address of the BMC LAN interface is the dynamic host configuration protocol.</p> <p>systemssoftware: System software if the source of the IP address of the BMC LAN interface is from the system software.</p> <p>NOTE: Not all commands may be supported on your system.</p>
	ipsourcev6=static auto	<p>static: IPv6 address source is set to static.</p> <p>auto: IPv6 address source is set to auto.</p>
	privilegelevel=administrator operator user	<p>administrator: Sets the maximum privilege level that can be accepted on a LAN channel to Administrator.</p> <p>operator: Sets the maximum privilege level that can be accepted on a LAN channel to Operator.</p> <p>user: Sets the maximum privilege level that can be accepted on a LAN channel to User.</p>
	prefdnsserverv6=<value>	Validates the preferred DNS server for configuration.
	subnet=Subnet	subnet: Sets a subnet mask if you have selected static as the IP address source for the BMC LAN interface.
	vlanenable=true false	<p>true: Enables the virtual LAN identification.</p> <p>false: Disables the virtual LAN identification.</p>

Table 4-12. omconfig chassis remoteaccess/omconfig mainsystem remoteaccess (continued)

name=value pair 1 config=	name=value pair 2	Description
	vlanid=number	number: Virtual LAN identification in the range of 1 to 4094.
	vlanpriority=number	number: Priority of virtual LAN identification in the range of 0 to 7.
config=serial	baudrate=9600 19200 38400 57600 115200	<p>9600: Sets the connection speed to 9600 bits per second.</p> <p>19200: Sets the connection speed to 19200 bits per second.</p> <p>38400: Sets the volatile and non-volatile connection speed to 38400 bits per second.</p> <p>57600: Sets the volatile and non-volatile connection speed to 57600 bits per second.</p> <p>115200: Sets the volatile and non-volatile connection speed to 115200 bits per second.</p> <p>NOTE: Baud rates of 9600 and 19200 are supported on PowerEdge 1800, 1850, 2800, and 2850 systems.</p> <p>Baud rates of 19200, 38400, and 57600 are supported on PowerEdge x9xx systems.</p> <p>Baud rate of 115200 is supported on certain systems that have a DRAC 5 installed.</p> <p>Baud rate of 19200, 57600, and 115200 are supported on xx0x systems that have iDRAC6 installed.</p>
	flowcontrol=none rtscts	<p>none: No control over the flow of communication through the serial port.</p> <p>rtscts: RTS is ready to send and CTS is clear to send.</p>

Table 4-12. omconfig chassis remotearchess/omconfig mainsystem remotearchess (continued)

name=value pair 1 config=	name=value pair 2	Description
config=serial (continued)	mode=directbasic directterminal directbasicterminal modembasic modemterminal modembasicterminal	<p>directbasic: Type of messaging used for IPMI messaging over a serial connection.</p> <p>directterminal: Type of messaging that uses printable ASCII characters and allows a limited number of text commands over a serial connection.</p> <p>directbasicterminal: Both basic and terminal mode messaging over a serial connection.</p> <p>modembasic: Type of messaging used for IPMI messaging over a modem.</p> <p>modemterminal: Type of messaging that uses printable ASCII characters and allows a limited number of text commands over a modem.</p> <p>modembasicterminal: Both basic and terminal messaging over a modem.</p>
	privilegelevel= administrator operator user	<p>NOTE: Not all commands may be supported on the system.</p> <p>administrator: Sets the maximum privilege level that can be accepted on a serial connection, to Administrator.</p> <p>operator: Sets the maximum privilege level that can be accepted on a serial connection, to Operator.</p> <p>user: Sets the maximum privilege level that can be accepted on a serial connection, to User.</p>
config= serialoverlan	enable=true false	<p>true: Enables serial over LAN for the BMC.</p> <p>false: Disables serial over LAN for the BMC.</p>

Table 4-12. omconfig chassis remoteaccess/omconfig mainsystem remoteaccess (continued)

name=value pair 1 config=	name=value pair 2	Description
baudrate=9600 19200 38400 57600 115200		<p>9600: Sets the volatile and nonvolatile connection speed to 9600 bits per second.</p> <p>19200: Sets the volatile and non-volatile connection speed to 19200 bits per second.</p> <p>38400: Sets the volatile and non-volatile connection speed to 38400 bits per second.</p> <p>57600: Sets the volatile and non-volatile connection speed to 57600 bits per second.</p> <p>115200: Sets the volatile and non-volatile connection speed to 115200 bits per second.</p> <p>NOTE: Baud rates of 9600 and 19200 are supported on PowerEdge 1800, 1850, 2800, and 2850 systems. Baud rates of 19200, and 57600 are supported on PowerEdge x9xx systems. Baud rate of 115200 is supported on certain systems that have a DRAC 5 installed. Baud rate of 19200, 57600, and 115200 are supported on xx0x systems that have iDRAC6 installed.</p>

Table 4-12. omconfig chassis remoteaccess/omconfig mainsystem remoteaccess (continued)

name=value pair 1 config=	name=value pair 2	Description
	newlinesequencenone crlf null cr lfcr lf	<p>none: BMC does not use a termination sequence.</p> <p>crlf: BMC uses <CR-LF> as a new line sequence when the BMC writes a new line to the console.</p> <p>null: BMC uses <Null> as a new line sequence when the BMC writes a new line to the console.</p> <p>cr: BMC uses <CR> as a new line sequence when the BMC writes a new line to the console.</p> <p>lfcr: BMC uses <LF-CR> as a new line sequence when the BMC writes a new line to the console.</p> <p>lf: BMC uses <LF> as a new line sequence when the BMC writes a new line to the console.</p>
config=user	id=number enable=true false	<p>id=number: ID (in numeric format) of the user being configured.</p> <p>enable=true: Enables user.</p> <p>enable=false: Disables user.</p>
	id=number enableserialoverlan=true false	<p>id=number: ID (in numeric format) of the user being configured.</p> <p>enableserialoverlan=true: Enables serial over LAN.</p> <p>enableserialoverlan=false: Disables serial over LAN.</p>
	id=number name=text	<p>number: ID (in numeric format) of the user being configured.</p> <p>name=text: Name of the user.</p>

Table 4-12. omconfig chassis remotearchess/omconfig mainsystem remotearchess (continued)

name=value pair 1 config=	name=value pair 2	Description
	id=number newpw=text confirmnewpw=text id=number serialaccesslevel= administrator operator user none	<p>number: ID (in numeric format) of the user being configured.</p> <p>newpw=text: New password of the user.</p> <p>confirmnewpw=text: Confirm the new password.</p> <p>id=number: ID (in numeric format) of the user being configured.</p> <p>serialaccesslevel=administrator: User with an ID has access privileges of an Administrator for the serial port channel.</p> <p>serialaccesslevel=operator: User with an ID has access privileges of an Operator for the serial port channel.</p> <p>serialaccesslevel=user: User with an ID has access privileges of a User for the serial port channel.</p> <p>serialaccesslevel=none: User with an ID does not have access privileges for the serial port channel.</p>
config=user (continued)	id=number lanaccesslevel= administrator operator user none	<p>id=number: ID number of the user being configured.</p> <p>lanaccesslevel=administrator: User with an ID has access privileges of an Administrator for the LAN channel.</p> <p>lanaccesslevel=operator: User with an ID has access privileges of an Operator for the LAN channel.</p> <p>lanaccesslevel=user: User with an ID has access privileges of a user for the LAN channel.</p> <p>lanaccesslevel=none: User with an ID does not have access privileges for the LAN channel.</p>

Table 4-12. omconfig chassis remoteaccess/omconfig mainsystem remoteaccess (continued)

name=value pair 1 config=	name=value pair 2	Description
config=user (continued)	id=user id dracusergroup=admin poweruser guest custom none	<p>id=user id: User ID of the user being configured.</p> <p>dracusergroup=admin: Enables the Administrator user privileges.</p> <p>dracusergroup=poweruser: Enables the Power User privileges.</p> <p>dracusergroup=guest: Enables the Guest user privileges.</p> <p>dracusergroup=custom: Enables the Custom User privileges.</p> <p>NOTE: See Table 4-13 for more information on the name=value pair. dracusergroup=custom.</p> <p>dracusergroup=none: Does not enable user privileges.</p>
	<p>id=user id extipmiusergroup=admin operator readonly custom none</p> <p>NOTE: extipmiusergroup user group is available only on Dell x0x modular systems.</p>	<p>id=user id: User ID of the user being configured.</p> <p>extipmiusergroup=admin: Enables the Administrator user privileges.</p> <p>extipmiusergroup=operator: Enables the Operator privileges.</p> <p>extipmiusergroup=readonly: Enables the Read Only privileges.</p> <p>extipmiusergroup=custom: Enables the Custom User privileges.</p> <p>NOTE: Dell recommends that you use the operator and readonly options for systems with iDRAC6 Enterprise.</p> <p>NOTE: See Table 4-14 for more information on the name=value pair. extipmiusergroup=custom.</p> <p>extipmiusergroup=none: Does not enable user privileges.</p>

Table 4-13. omconfig chassis remoteaccess config=user id=<user id> dracusergroup=custom/omconfig mainsystem remoteaccess config=user id=<user id> dracusergroup=custom

name=value pair 1	name=value pair 2	name=value pair 3	Description
config=user (continued)	id=user id dracusergroup= custom	loginidrac= true false configuredrac= true false configure users= true false clearlogs= true false executeservercom mands= true false accessconsoleredir = true false accessvirtualmedia = true false testalerts= true false	true/false: Enables/disables logging into DRAC. true/false: Enables/disables configuration of DRAC. true/false: Enables/disables configuration of users. true/false: Enables/disables log clearance. true/false: Enables/disables execution of server commands. true/false: Enables/disables access to console redirection. true/false: Enables/disables access to virtual media. true/false: Enables/disables test alerts.

Table 4-14. omconfig chassis remoteaccess config=user id=<user id> extipmiusergroup=custom/omconfig mainsystem remoteaccess config=user id=<user id> extipmiusergroup=custom

name=value pair 1	name=value pair 2	name=value pair 3	Description
config=user (continued)	id=user id extipmiusergroup= custom NOTE: extipmiusergroup user group is available only on Dell xx0x modular systems.	loginidrac= true false configureidrac= true false	true/false: Enables/disables logging into iDRAC6. true/false: Enables/disables configuration of iDRAC6.

omconfig chassis temps/omconfig mainsystem temps

Use the **omconfig chassis temps** or **omconfig mainsystem temps** command to set warning thresholds for temperature probes. As with other components, you can view both warning and failure threshold values, but you cannot set failure threshold values. Your system's manufacturer sets the minimum and maximum failure threshold values.



NOTE: Threshold values that you can set vary from one system configuration to another.

Valid Parameters for Temperature Warning Thresholds

Table 4-15 shows the valid parameters for setting temperature warning thresholds:

Table 4-15. omconfig chassis temps/omconfig mainsystem temps

name=value pair	Description
index=<n>	Number of the probe or probe index (must be specified).
warnthresh=default	Sets the minimum and maximum warning threshold values to default.
minwarnthresh=<n>	Sets the minimum warning threshold values (1 decimal place).
maxwarnthresh=<n>	Sets the maximum warning threshold values (1 decimal place).

Setting Minimum and Maximum Warning Threshold Values

If you want to set both the upper and lower temperature warning threshold values to the recommended default value, type:

```
omconfig chassis temps index=0 warnthresh=default
or
omconfig mainsystem temps index=0 warnthresh=
default
```

You cannot default one value and set another. In other words, if you set the minimum warning threshold value to the default value, you are also selecting the default value for the maximum warning threshold value.



NOTE: The capabilities for managing sensors vary by systems.

Specify a Value for Minimum and Maximum Warning Thresholds

If you want to specify values for the temperature probe warning thresholds, you must specify the number of the probe you are configuring and the minimum and/or maximum warning threshold value. In the following example, the probe that is being configured is probe 4:

```
omconfig chassis temps index=4 minwarnthresh=11.2
maxwarnthresh=58.7
or
omconfig mainsystem temps index=4 minwarnthresh=
11.2 maxwarnthresh=58.7
```

When you issue the command and the system sets the values you specify, the following message appears:

```
Temperature probe warning threshold(s) set
successfully.
```



NOTE: In PowerEdge *x8xx* and *x9xx* systems, warning threshold for the temperature probe can be set only for the ambient temperature.

omconfig chassis volts/omconfig mainsystem volts

Use the `omconfig chassis volts` or `omconfig mainsystem volts` command to set voltage probe warning thresholds. As with other components, you can view both warning and failure threshold values, but you cannot set failure threshold values. Your system's manufacturer sets the minimum and maximum values for the failure thresholds.

Valid Parameters for Voltage Warning Thresholds

Table 4-16 shows the valid parameters for setting voltage warning threshold values.


 **NOTE:** Threshold values that you can set vary from one system configuration to another.

Table 4-16. omconfig chassis volts/omconfig mainsystem volts


name=value pair	Description
index= <n>	Probe index (must be specified).
warnthresh=default	Sets minimum and maximum warning threshold values to default.
minwarnthresh= <n>	Sets minimum warning threshold value (3 decimal places).
maxwarnthresh= <n>	sets maximum warning threshold value (3 decimal places).

Default Minimum and Maximum Warning Threshold Values

If you want to set both the upper and lower voltage warning threshold values to the recommended default value, type:

```
omconfig chassis volts index=2 warnthresh=default  
or  
omconfig mainsystem volts index=2 warnthresh=  
default
```

You cannot default one value and set another. In other words, if you default the minimum warning threshold value, you are also selecting the default value for the maximum warning threshold value.

 **NOTE:** Systems that contain ESM3 capabilities do not allow you to set warning threshold values to default values.

Specify a Value for Minimum and Maximum Warning Thresholds

If you want to specify values for the voltage probe warning thresholds, you must specify the number of the probe you are configuring and the minimum and/or maximum warning threshold values. In the following example, the probe being configured is probe 0:

```
omconfig chassis volts index=0 minwarnthresh=1.900
maxwarnthresh=2.250
or
omconfig mainsystem volts index=0 minwarnthresh=
1.900 maxwarnthresh=2.250
```

When you issue the command and the system sets the values you specify, the following message appears:

```
Voltage probe warning threshold(s) set
successfully.
```



NOTE: Minimum and maximum warning threshold values for the voltage cannot be set on PowerEdge *x8xx* systems.

omconfig preferences

Use the **omconfig preferences** command to set system preferences. Use the command line to set the SNMP root password and specify the user levels able to access Server Administrator. You can also configure the Active Directory service and SNMP set operations.

omconfig preferences cdvformat

Use the **omconfig preferences cdvformat** to specify the delimiters for separating data fields reported in the custom delimited format. The valid values for delimiters are: exclamation, semicolon, at, hash, dollar, percent, caret, asterisk, tilde, question, colon, comma, and pipe.

The following example shows how to set the delimiter for separating data fields to asterisk:

```
omconfig preferences cdvformat delimiter=asterisk
```

omconfig preferences dirservice

Use the `omconfig preferences dirservice` command to configure the Active Directory service. The `<productname>oem.ini` file is modified to reflect these changes. If the "adproductname" is not present in the `<productname>oem.ini` file then a `<computername>-<productname>` default value is used. `<computername>` refers to the name of the computer running Server Administrator and `<productname>` refers to the name of the product defined in `omprv32.ini`. For Server Administrator, the product name is "omsa".

Therefore, for a computer named "myOmsa" running Server Administrator, the default name would be "myOmsa-omsa". This is the name of Server Administrator defined in Active Directory by using the snap-in tool. This name must match the name for the application object in Active Directory in order to find user privileges.



NOTE: This command is applicable only on systems running the Windows operating system.

Table 4-17 shows the valid parameters for the command.

Table 4-17. Active Directory Service Configuration Parameters

name=value pair	Description
prodname= <text>	Specifies the product to which you want to apply the Active Directory configuration changes. prodname refers to the name of the product defined in <code>omprv32.ini</code> . For Server Administrator, it is "omsa".
enable= <true false>	true: Enables Active Directory service authentication support and the Active Directory Login option on the login page. false: Disables Active Directory service authentication support and the Active Directory Login option on the login page. If the Active Directory Login option is not present, you can only login to the local machine accounts.
adprodname= <text>	Specifies the name of the product as defined in the Active Directory service. This name links the product with the Active Directory privilege data for user authentication.

omconfig preferences snmp

Setting the SNMP root password allows administrators to restrict access to SNMP set operations that allow important systems management interventions. You can configure the SNMP root password normally (by typing all of the parameters in one command line) or interactively.

Using the `omconfig preferences snmp` command, you can also configure SNMP set operations.



NOTE: Due to the limitations of certain operating systems (for example, VMware® ESXi), certain features may not be available with this release of OpenManage Server Administrator.



CAUTION: Interactive mode is the more secure method of setting the SNMP root password. In non-interactive mode, the values you enter for the `newpw` and `confirmnewpw` options appear on your system's monitor when you type them. In the interactive mode, the values you type for passwords are masked.

The parameters for configuring the SNMP root password are the same whether you configure it interactively or iteratively.



NOTE: If you specify `setting=rootpw` but do not specify the other name=value pair parameters, you enter interactive mode, and the command line prompts you for the remaining values.

Table 4-18 shows the valid parameters for the command.

Table 4-18. SNMP Root Password Parameters

name=value pair	Description
<code>setting=rootpw</code>	Required.
<code>oldpw= <oldpassword></code>	Enter the old SNMP root password.
<code>newpw= <newpassword></code>	Sets the new SNMP root password.
<code>confirmnewpw= <newpassword></code>	Confirms the new SNMP root password.

When you type `omconfig preferences snmp setting=rootpw`, the system prompts you to supply values for the required parameters.

When you type `omconfig preferences snmp`, you must supply all the parameters in the initial command line. For example:

```
omconfig preferences snmp setting=rootpw oldpw=
openmanage newpw=serveradmin confirmnewpw=
serveradmin
```

Table 4-19. SNMP Set Operations Parameters

name=value pair	Description
<code>setting=snmpset</code>	Required
<code>enable=true</code>	Allows SNMP set operations
<code>enable=false</code>	Disallows SNMP set operations

For example, to disallow SNMP set operations use the following command:

```
omconfig preferences snmp setting=snmpset enable=
false
```



NOTE: After executing the command to enable or disable SNMP set operations, restart services for the change to take effect. On systems running supported Microsoft Windows operating systems, restart the Windows SNMP Service. On systems running supported Red Hat Enterprise Linux and SUSE Linux Enterprise Server operating systems, restart Server Administrator services by running the `srvadmin-services.sh restart` command.

omconfig preferences useraccess

Depending on the policies of your organization, you may want to restrict the access that some user levels have to Server Administrator. The `omconfig preferences useraccess` command allows you to grant or withhold the right of users and power users to access Server Administrator.

Table 4-20 shows the valid parameters for the command.

Table 4-20. Enabling User Access for Administrators, Power Users, and Users

Command	Result	Description
omconfig preferences useraccess enable=user	Grants Server Administrator access to Users, Power Users, and Administrators.	Least restrictive form of user access.
omconfig preferences useraccess enable=poweruser	Grants Server Administrator access to Power Users and Administrators.	Excludes user level access only.
omconfig preferences useraccess enable=admin	Grants Server Administrator access to Administrators <i>only</i> .	Most restrictive form of user access.

omconfig preferences webserver

Use the `omconfig preferences webserver` command to set the encryption levels of the Server Administrator Web server and configure the URL launch point in the Server Administrator Web server environment.

Table 4-21 shows the name=value pairs you can use with this command.

Table 4-21. Configuring Webserver Preferences

name=value pair 1	name=value pair 2	Description
attribute=sslencryption	setting=<autonegotiate 128bitorhigher>	autonegotiate: Sets the encryption levels automatically based on your web browser settings. 128bitorhigher: Sets the encryption levels to 128-bit or higher.
attribute=seturl	host=<string> port=<value>	Enables you to configure the URL launch point in the Server Administrator Web server environment.

For example, to set the URL launch point use the following command:

```
omconfig preferences webserver attribute=seturl
host=<name, ip, fqdn> port=<number>
```

The host input must contain a valid IPv4 or IPv6 address, or a valid hostname.

For more information on configuring Web server preferences, see the *Dell OpenManage IT Assistant User's Guide*.

omconfig system/omconfig servermodule

Use the **omconfig system** or **omconfig servermodule** commands to clear logs, determine how various shutdown actions occur, set initial values or edit values for cost of ownership information, and determine how to respond to a hung operating system.

omconfig system alertaction/omconfig servermodule alertaction

You can use the **omconfig system alertaction** or **omconfig servermodule alertaction** command to determine how Server Administrator responds when a component has a warning or failure event.



NOTE: Due to the limitations of certain operating systems (for example, VMware® ESXi), certain features may not be available with this release of OpenManage Server Administrator.

Defining Alert Actions

An alert action is an action that you specify for your system to take when specified conditions are met. Alert actions determine in advance what actions are to be taken for warning or failure events on intrusion, fans, temperatures, voltages, power supplies, memory, and redundancy.

For example, if a fan probe on your system reads a fan RPM of 300 and your minimum warning threshold value for that fan probe is 600 RPM, then your system generates a fan probe warning. Alert action settings determine how users are notified of this event. You can also configure alert actions for temperature, voltage, and probe readings that fall within the warning or failure range.

Syntax for Setting Alert Actions

Setting an alert action requires two name=value pairs. The first name=value pair is the event type. The second name=value pair is the action to take for this event. For example, in the command:

```
omconfig system alertaction event=powersupply  
broadcast=true  
or  
omconfig servermodule alertaction event=  
powersupply broadcast=true
```

The event is a power supply failure and the action is to broadcast a message to all Server Administrator users.

Available Alert Actions

Table 4-22 shows the alert actions for each component that allows you to configure an alert action.

Table 4-22. Alert Actions You Can Set for Warning and Failure Events

Alert Action Setting	Description
alert=true false	true: Enables your system's console alert. When enabled, the monitor attached to the system from which you are running Server Administrator displays a visual alert message. false: Disables your system's console alert.
broadcast=true false	true: Enables a message or alert to be broadcast to all users who have an active terminal (or Remote Desktop) session (Windows) or to operators that have an active shell on the local system (Linux). false: Disables alert broadcasts.
clearall=true	Clears all actions for this event.
execappath=<string>	Sets the fully qualified path and file name of the application you want to execute in case of an event for the component described in this window. NOTE: On Linux systems, user/user groups upgraded to administrator/administrator groups cannot configure this alert action setting.
execapp=false	Disables the executable application.

Components and Events for Which You Can Set Alert Actions

Table 4-23 lists the components and the events for which you can set alert actions. Components are listed in alphabetical order, except that warning events always precede failure events for a component.

Table 4-23. Events for Which You Can Set Alert Actions

Event Name	Description
event=batterywarn	Sets actions when a battery probe detects a warning value.
event=batteryfail	Sets actions when a battery probe detects a failure value.
event=fanwarn	Sets actions when a fan probe detects a warning value.
event=fanfail	Sets actions when a fan probe detects a failure value.
event=hardwarelogwarn	Sets actions when a hardware log detects a warning value.
event=hardwarelogfull	Sets actions when a hardware log is full.
event=intrusion	Sets actions when a chassis intrusion event is detected.
event=memprefail	Sets actions when a memory probe detects a prefailure value.
event=memfail	Sets actions when a memory probe detects a failure value.
event=systempeakpower	Sets actions when a power consumption probe detects peak power value.
event=systempowerwarn	Sets actions when a power consumption probe detects a warning value.
event=systempowerfail	Sets actions when a power consumption probe detects a failure value.
event=powersupply	Sets actions when a power supply probe detects a failure value.
event=powersupplywarn	Sets actions when a power supply probe detects a warning value.
event=processorwarn	Sets actions when a processor probe detects a warning value.
event=processorfail	Sets actions when a processor probe detects a failure value.
event=redundegrad	Sets actions when a redundant component becomes inoperative, resulting in less than full redundancy for that component.
event=redunlost	Sets actions when one or more redundant components become inoperative, resulting in a lost or a "no redundant components working" condition for that component.

Table 4-23. Events for Which You Can Set Alert Actions (continued)

Event Name	Description
event=tempwarn	Sets actions when a temperature probe detects a warning value.
event=tempfail	Sets actions when a temperature probe detects a failure value.
event=voltwarn	Sets actions when a voltage probe detects a warning value.
event=voltfail	Sets actions when a voltage probe detects a failure value.
event=watchdogasr	Sets actions that Server Administrator performs on the next system startup after a watchdog Automatic System Recovery (ASR) is performed for a hung operating system.
event=storagesyswarn	Sets actions when a storage system detects a warning value.
event=storagesysfail	Sets actions when a storage system detects a failure value.
event=storagectrlwarn	Sets actions when a storage controller detects a warning value.
event=storagectrlfail	Sets actions when a storage controller detects a failure value.
event=pdiskwarn	Sets actions when a physical disk detects a warning value.
event=pdiskfail	Sets actions when a physical disk detects a failure value.
event=vdiskwarn	Sets actions when a virtual disk detects a warning value.
event=vdiskfail	Sets actions when a virtual disk detects a failure value.
event=enclosurewarn	Sets actions when an enclosure detects a warning value.
event=enclosurefail	Sets actions when an enclosure detects a failure value.
event= storagectrlbatterywarn	Sets actions when a storage controller battery detects a warning value.
event= storagectrlbatteryfail	Sets actions when a storage controller battery detects a failure value.



NOTE: storagectrlbatterywarn and storagectrlbatteryfail events are not available on modular systems.

Example Set Alert Action Commands

The examples below are valid example commands. For each successful command issued, the following message appears:

```
Alert action(s) configured successfully.
```

Example Current Probe Actions

To disable system console alert if a current probe detects a warning event, type:

```
omconfig system alertaction event=currentwarn  
alert=false  
or  
omconfig servermodule alertaction event=  
currentwarn alert=false
```

To enable broadcast messages if a current probe detects a failure event, type:

```
omconfig system alertaction event=currentfail  
broadcast=true  
or  
omconfig servermodule alertaction event=  
currentfail broadcast=true
```

Example Fan Probe Actions

To generate alerts when a fan probe detects a failure value, type:

```
omconfig system alertaction event=fanfail alert=  
true  
or  
omconfig servermodule alertaction event=fanfail  
alert=true
```

Example Chassis Intrusion Actions

To clear all alert actions for chassis intrusion, type:

```
omconfig system alertaction event=intrusion  
clearall=true  
or  
omconfig servermodule alertaction event=intrusion  
clearall=true
```

Commands for Clearing Logs



NOTE: For more information about alert messages, see the *Dell OpenManage Server Administrator Messages Reference Guide*.

You can use the **omconfig system** or **omconfig servermodule** command to clear three logs: the alert log, the command log, and the hardware or ESM log.

To clear the contents of the alert log, type:

```
omconfig system alertlog action=clear
or
omconfig servermodule alertlog action=clear
```



NOTE: Entering an invalid RAC user name may prevent the command log from displaying. Clearing the command log resolves this condition.

To clear the contents of the command log, type:

```
omconfig system cmdlog action=clear
or
omconfig servermodule cmdlog action=clear
```

To clear the contents of the ESM log, type:

```
omconfig system esmlog action=clear
or
omconfig servermodule esmlog action=clear
```

omconfig system pedestinations/omconfig servermodule pedestinations

Use the **omconfig system pedestinations** or **omconfig servermodule pedestinations** command to set IP addresses for alert destinations.

Table 4-24 shows the valid parameters for the command.



NOTE: You can either specify the index and IP address as parameters together or you can set the only community string as a parameter.

Table 4-24. omconfig system pedestinations/omconfig servermodule pedestinations

name=Value Pair	Description
destenable=true false	true: Enables an individual platform event filter destination after a valid IP address has been set. false: Disables an individual platform event filter.
index=number	Sets the index for the destination.
ipaddress=ipv4 ipv6 address	Sets the IP address for the destination.
communitystr=text	Sets the text string that acts as a password and is used to authenticate SNMP messages sent between the BMC and the destination management station.

omconfig system platformevents/omconfig servermodule platformevents

Use the `omconfig system platformevents` or `omconfig servermodule platformevents` command to configure shutdown action, if any, to be taken for a specific platform event. You can also enable or disable platform event filter alert generation.


 **CAUTION:** If you set a platform event shutdown action to anything other than "none" or "power reduction", your system will forcefully shutdown when the specified event occurs. This shutdown is initiated by firmware and is carried out without first shutting down the operating system or any of the applications running on your system.

Table 4-25 shows the valid parameters for the command.


 **NOTE:** Alert settings are mutually exclusive and can be set one at a time only. The action settings are also mutually exclusive and can be set one at a time only. However, alert and action settings are not mutually exclusive of each other.

Table 4-25. Parameters for Alert Action Command

Action	Description
alert=disable	Disables the SNMP alert.
alert=enable	Enables the SNMP alert to be sent.
action=none	Takes no action when the system is hung or has crashed.
action=powercycle	Turns off the electrical power to the system, pauses, turns the power on, and reboots the system.
action=poweroff	Turns off the electrical power to the system.

Table 4-25. Parameters for Alert Action Command (continued)

Action	Description
action= powerreduction	Reduces the processor speed until the power consumption comes down and reaches below the warning threshold. If the system power consumption stays below the warning threshold, increases the processor speed NOTE: This action is applicable only to non-modular systems.
action=reboot	Forces the operating system to shut down and initiates system startup, performs BIOS checks, and reloads the operating system.

Table 4-26 lists the components and the events for which you can set platform events. Components are listed in alphabetical order, except that warning events always precede failure events for a component.

Table 4-26. omconfig system platformevents

Event Name	Description
alertsenable=true false	true: Enables generation of platform event filter alerts. false: Disables generation of platform event filter alerts. NOTE: This setting is independent of the individual platform event filter alert settings. For a platform event filter to generate an alert, both the individual alert and the global event alert must be enabled.
event=batterywarn	Sets action or enables/disables alert generation when a battery device detects that the battery is pending a failure condition.
event=batteryfail	Sets action or enables/disables alert generation when a battery device detects that the battery has failed.
event=discretevolt	Sets action or enables/disables alert generation when a discrete voltage probe detects that the voltage is too low for proper operation.
event=fanfail	Sets action or enables/disables alert generation when a fan probe detects that the fan is running too slow or not at all.
event=hardwarelogfail	Enables/disables alert generation when a hardware log detects a failure value.
event=intrusion	Sets action or enables/disables alert generation when a chassis is opened.

Table 4-26. omconfig system platformevents (continued)

Event Name	Description
event=powerwarn	Sets action or enables/disables alert generation when a power device probe detects that the power supply, voltage regulator module, or DC to DC converter is pending a failure condition.
event=powerabsent	Sets action or enables/disables alert generation when a processor probe detects that the power supply is absent.
event=powerfail	Sets action or enables/disables alert generation when a power device probe detects that the power supply, voltage regulator module, or DC to DC converter has failed.
event=processorwarn	Sets action or enables/disables alert generation when a processor probe detects that the processor is running at less than peak performance or speed.
event=processorfail	Sets action or enables/disables alert generation when a processor probe detects that the processor has failed.
event=processorabsent	Sets action or enables/disables alert generation when a processor probe detects that the processor is absent.
event=redundegrad	Sets action or enables/disables alert generation when the system's fans and/or power supplies become inoperative, resulting in less than full redundancy for that component.
event=redunlost	Sets action or enables/disables alert generation when the system's fans and/or power supplies become inoperative, resulting in a lost or a "no redundant components working" condition for that component.
event=systempowerwarn	Sets actions when a power consumption probe detects a warning value.
event=systempowerfail	Sets actions when a power consumption probe detects a failure value.
event=tempwarn	Sets action or enables/disables alert generation when a temperature probe detects that the temperature is approaching the maximum high or low limits.
event=tempfail	Sets action or enables/disables alert generation when a temperature probe detects that the temperature is either too high or low for proper operation.

Table 4-26. omconfig system platformevents (continued)

Event Name	Description
event=voltfail	Sets action or enables/disables alert generation when a voltage probe detects that the voltage is too low for proper operation.
event=watchdogasr	Enables or disables alert generation configured by the ASR when the system has hung or is not responding.

omconfig system events/omconfig servermodule events

Use the `omconfig system events` or `omconfig servermodule events` command to enable and disable SNMP traps for the components on your system.



NOTE: Not all event types may be present on your system.

There are four parameters in the name=value pair component of the `omconfig system events` command:

- Source
- Type
- Severity
- Index

Source

At present, `source=snmptraps` is a required name=value pair because SNMP is currently the only supported source of event notification for your system's components.

```
omconfig system events source=snmptraps
or
omconfig servermodule events source=snmptraps
```

Type

Type refers to the name of the component(s) involved in the event. Table 4-27 shows the valid parameters for system event types.

Table 4-27. System Event Type Parameters

name=value pair	Description
type=accords	Configures events for AC power cords.
type=battery	Configures events for battery.
type=all	Configures events for all device types.
type=fanenclosures	Configures events for fan enclosures.
type=fans	Configures events for fans.
type=intrusion	Configures events for chassis intrusion.
type=log	Configures events for logs.
type=memory	Configures events for memory.
type=powersupplies	Configures events for power supplies.
type=redundancy	Configures events for redundancy.
type=systempower	Configures events for system power.
type=temps	Configures events for temperatures.
type=volts	Configures events for voltages.
type=systempeakpower	Configures events for system peak power.

Severity

In the context of configuring events, severity determines how severe an event must be before Server Administrator notifies you of the event for a component type. When there are multiple components of the same type in the same system chassis, you can specify whether you want to be notified for event severity according to the number of the component by using the `index=<n>` parameter. Table 4-28 shows the valid severity parameters.

Table 4-28. System Event Severity Parameters

Command	Result	Description
<code>omconfig system events type=<component name> severity=info</code> or <code>omconfig servermodule events type=<component name> severity=info</code>	Enables notification for informational, warning, and critical events.	Least restrictive form of event notification.

Table 4-28. System Event Severity Parameters (continued)

Command	Result	Description
<pre>omconfig system events type= <component name> severity= warning or omconfig servermodule events type=<component name> severity=warning</pre>	Enables notification for warning and critical events.	Omits informational event notification, for example, when a component returns to normal status.
<pre>omconfig system events type= <component name> severity= critical or omconfig servermodule events type=<component name> severity=critical</pre>	Enables notification for critical events only.	Restrictive form of event notification.
<pre>omconfig system events type= <component name> severity= none or omconfig servermodule events type=<component name> severity=none</pre>	Disables event notification.	No event notification.

Index

Index refers to the number of an event for a particular component. Index is an optional parameter. When you omit the index parameter, events are configured for all components of the specified type, such as all fans. For example, when a system contains more than one fan, you can enable or disable event notification for a particular fan. An example command is as follows:

```
omconfig system events type=fan index=0 severity=
critical
or
omconfig servermodule events type=fan index=0
severity=critical
```

As a result of the example command, Server Administrator sends an SNMP trap only when the first fan in the system chassis (index 0) has reached critical fan RPMs.

omconfig system webserver/omconfig servermodule webserver

Use the `omconfig system webserver` or `omconfig servermodule webserver` command to start or stop the Web server. Table 4-29 shows the valid parameters for the command.

Table 4-29. Web Server Configuration Parameters

name=value pair	Description
action=start	Starts the Web server.
action=stop	Stops the Web server.
action=restart	Restarts the Web server.

omconfig system recovery/omconfig servermodule recovery

Use the `omconfig system recovery` or `omconfig servermodule recovery` command to set the action to be taken when the operating system has hung or crashed. You can also set the number of seconds that must pass before the system is considered to have a hung operating system. Table 4-30 shows the valid parameters for the command.



NOTE: Upper and lower limits for the timer are dependent on your system model and configuration.

Table 4-30. Recovery Parameters

name=value pair	Description
action=none	Takes no action when the operating system is hung or has crashed.
action=reboot	Shuts down the operating system and initiates system startup, performing BIOS checks, and reloading the operating system.
action=poweroff	Turns off electrical power to the system.
action=powercycle	Turns off electrical power to the system, pauses, turns the power on, and reboots the system. Power cycling is useful when you want to re-initialize system components such as hard drives.
timer=<n>	Number of seconds that must pass before the operating system in a system is considered hung operating system (from 20 seconds to 480 seconds).

Example Recovery Commands

To set the action on hung operating system detection to powercycle, type:

```
omconfig system recovery action=powercycle
or
omconfig servermodule recovery action=powercycle
```

To set the amount of time that the system must be hung before a recovery action is initiated to 120 seconds, type:

```
omconfig system recovery timer=120
or
omconfig servermodule recovery timer=120
```

omconfig system shutdown/omconfig servermodule shutdown

Use the `omconfig system shutdown` or `omconfig servermodule shutdown` command to determine the way in which the system shuts down. During system shutdown, the default is to shut down the operating system before powering off the system. Shutting down the operating system first closes down the file system before powering the system down. If you do not want to shut down the operating system first, use the `osfirst=false` parameter. Table 4-31 shows the valid parameters for the command.



NOTE: Due to the limitations of certain operating systems (for example, VMware® ESXi), certain features may not be available with this release of OpenManage Server Administrator.

Table 4-31. Shutdown Parameters

name=value pair	Description
action=reboot	Shuts down the operating system and initiates system startup, performing BIOS checks and reloading the operating system.
action=poweroff	Turns off the electrical power to the system.
action=powercycle	Turns off the electrical power to the system, pauses, turns the power on, and reboots the system. Power cycling is useful when you want to re-initialize system components such as hard drives.
osfirst=true false	true: Closes the file system and exits the operating system before shutting down the system. false: Does not close the file system or shut down the operating system before shutting down the system.

Example Shutdown Commands

To set the shutdown action to reboot, type:

```
omconfig system shutdown action=reboot  
or  
omconfig servermodule shutdown action=reboot
```

To bypass operating system shutdown before the system is powered off, type:

```
omconfig system shutdown action=reboot osfirst=  
false  
or  
omconfig servermodule shutdown action=reboot  
osfirst=false
```

omconfig system thrmshutdown/omconfig servermodule thrmshutdown

Use the `omconfig system thrmshutdown` or `omconfig servermodule thrmshutdown` command to configure a thermal shutdown action. A thermal shutdown can be configured to occur when a temperature probe detects a temperature probe warning or failure event.

Table 4-32 shows the valid parameters for the command.

Table 4-32. Thermal Shutdown Parameters

name=value pair	Description
severity= disabled warning failure	disabled: Disable thermal shutdown. An administrator must intervene. warning: Perform a shutdown when a temperature warning event is detected. A warning event occurs when any temperature probe inside a chassis reads a temperature (in degrees Celsius) that exceeds the maximum temperature warning threshold value. failure: Perform a shutdown when a temperature failure event is detected. A failure event occurs when any temperature probe inside a chassis reads a temperature (in degrees Celsius) that exceeds the maximum temperature failure threshold value.

Example Thermal Shutdown Commands

To trigger a thermal shutdown when a temperature probe detects a failure event, type:

```
omconfig system thrmshutdown severity=failure  
or  
omconfig servermodule thrmshutdown severity=  
failure
```

To disable thermal shutdown so that an administrator has to initiate an **omconfig system shutdown**, type:

```
omconfig system thrmshutdown severity=disabled  
or  
omconfig servermodule thrmshutdown severity=  
disabled
```


omconfig system or servermodule assetinfo: Editing Cost of Ownership Values

Overview

The `omconfig system assetinfo` or `omconfig servermodule assetinfo` command helps you to edit a comprehensive set of parameters that make up your system's total cost of ownership. This section explains the parameters that can be reported and configured under the `omconfig system assetinfo` or `omconfig servermodule assetinfo` command.

Using the `omconfig system assetinfo` or `omconfig servermodule assetinfo` command, you can set governing values for configurable objects. Examples of `assetinfo` configuration capabilities include setting values for system owner, purchase price, details of any lease that is in effect, depreciation methods and rates, and location of the system, warranty and extended warranty duration, outsourcing details, and service level agreement.

User Level Required for Adding Asset Information

Power Users and Administrators can add and edit asset information.

Table 5-1. System Availability for the omconfig Command

Command Level 1	Command Level 2	Applicable to
<i>omconfig</i>	<i>servermodule</i>	Modular system
	<i>mainsystem</i>	Modular system
	<i>system</i>	Non-modular system
	<i>chassis</i>	Non-modular system

Adding Acquisition Information

Acquisition refers to the facts about a business entity's purchase or lease of a system. Use the `omconfig system assetinfo info=acquisition` or `omconfig servermodule assetinfo info=acquisition` command to add detailed information about the purchase or lease of a system. Table 5-2 shows the valid parameters for the command.

Table 5-2. omconfig system assetinfo info=acquisition/omconfig servermodule assetinfo info=acquisition

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info= acquisition	costcenter= <text>	The name or code for the business entity that acquired the system.
				expensed=yes no	Whether the system is charged to a specific purpose or department such as research and development or sales.
				installdate= <mmddy>	Date the system was put into service.
				ponum= <n>	Number of the document that authorized payment for the system.
				purchasecost= <n>	Price the owner paid for the system.
				purchasedate= <mmddy>	Date the owner purchased the system.

Table 5-2. omconfig system assetinfo info=acquisition/omconfig servermodule assetinfo info=acquisition (continued)

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
				signauth= <text>	Name of the person who approved the purchase or the service call on the system.
				waybill= <n>	Receipt from the carrier for the goods received.

Example Commands for Adding Acquisition Information

To provide a value for an acquisition parameter, type a command of the form: `omconfig system assetinfo info=acquisition <name=value pair 2>` or `omconfig servermodule assetinfo info=acquisition <name=value pair 2>`. For example, type:

```
omconfig system assetinfo info=acquisition
purchasedate=122101
or
omconfig servermodule assetinfo info=acquisition
purchasedate=122101
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one `omconfig system assetinfo` or `omconfig servermodule assetinfo` command at the same time, as long as all of the parameters for name=value pair 2 belong to the same name=value pair 1. For example, if you want to enter more than one parameter value for `info=acquisition`, use the following example as a syntax guide:

```
omconfig system assetinfo info=acquisition
purchasecost=5000
waybill=123456 installdate=120501 purchasedate=
050601 ponum=9999 signauth="John Smith" expensed=
yes costcenter=finance
or
omconfig servermodule assetinfo info=acquisition
```

```

purchasecost=5000
waybill=123456 installdate=120501 purchasedate=
050601 ponum=9999 signauth="John Smith" expensed=
yes costcenter=finance

```

The following message appears:

```
Asset information set successfully.
```

Adding Depreciation Information

Depreciation is a set of methods for computing the devaluation of your asset over time. For example, the depreciation of a system that is expected to have a useful life of 5 years would be 20 percent. Use the `omconfig system assetinfo info=depreciation` or `omconfig servermodule assetinfo info=depreciation` command to add details about how your system's depreciation is to be computed. Table 5-3 shows the valid parameters for the command.

Table 5-3. omconfig system assetinfo info=depreciation/omconfig servermodule assetinfo info=depreciation

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info=depreciation	duration= <n>	Number of years or months over which a system is depreciated.
				method= <text>	Steps and assumptions used to compute the system's depreciation.
				percent= <n>	Portion of 100 that an asset is devalued or depreciated.
				unit=months years	Unit is months or years.

Example Commands for Adding Depreciation Information

To provide a value for a depreciation parameter, type a command of the form:
omconfig system assetinfo info=depreciation <name=value pair 2> or
omconfig servermodule assetinfo info=depreciation <name=value pair 2>.
For example, type:

```
omconfig system assetinfo info=depreciation
method=straightline
or
omconfig servermodule assetinfo info=depreciation
method=straightline
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one **omconfig system assetinfo** or **omconfig servermodule assetinfo** command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding Extended Warranty Information

Use the **omconfig system extwarranty** or **omconfig servermodule extwarranty** command to assign values for extended warranty information. A warranty is a contract between the manufacturer or dealer and the purchaser of a system. The warranty identifies the components that are covered for repair or replacement for a specified length of time or usage. The extended warranty comes into force after the original warranty expires. For details on how to edit warranty values, see "Adding Warranty Information."

Table 5-4 shows the valid parameters for the command.

Table 5-4. omconfig system assetinfo info=extwarranty/omconfig servermodule assetinfo info=extwarranty

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info=	extwarranty	
			cost=	<cost>	Cost of the extended warranty service.
			enddate=	<enddate>	Date the extended warranty agreement ends.
			provider=	<provider>	Business entity that provides the extended warranty service.
			startdate=	<startdate>	Date the extended warranty service begins.

Example Command for Adding Extended Warranty Information

To provide a value for an extended warranty parameter, type a command of the form: **omconfig system assetinfo info=extwarranty <name=value pair 2>** or **omconfig servermodule assetinfo info=extwarranty <name=value pair 2>**.

For example, type:

```
omconfig system assetinfo info=extwarranty
enddate=012503
or
omconfig servermodule assetinfo info=extwarranty
enddate=012503
```

The following message appears:

```
Asset information set successfully.
```


You can enter more than one **omconfig system assetinfo** or **omconfig servermodule assetinfo** command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding Lease Information

A lease is an agreement to pay for the use of a system for a specified period of time. The lessor retains ownership of the system. Table 5-5 shows the valid parameters for the command.

Table 5-5. omconfig system assetinfo info=lease/omconfig servermodule assetinfo info=lease

Command Level 1	Command Level 2	Command Level 3	Name=Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info=lease	buyout= <amount>	Amount of money paid to purchase a system from a lessor.
				lessor= <lessor>	Business entity that is leasing the system out.
				multischedule =true false	Whether cost of leasing the system is computed by more than one rate schedule.
				ratefactor= <factor>	Factor used to calculate the lease payment.
				value = <residual>	Fair market value of the system at the end of the lease period.

Example Command for Adding Lease Information

To provide a value for a lease parameter, type a command of the form:

```
omconfig system assetinfo info=lease <name=value pair 2> or
omconfig servermodule assetinfo info=lease <name=value pair 2>.
```

For example, type:

```
omconfig system assetinfo info=lease value=4500
or
omconfig servermodule assetinfo info=lease value=
4500
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one **omconfig system assetinfo** or **omconfig servermodule assetinfo** command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding Maintenance Information

Maintenance refers to activities required to keep the system in good working order. Table 5-6 shows the valid parameters for adding maintenance information.

Table 5-6. omconfig system assetinfo info=maintenance/omconfig servermodule assetinfo info=maintenance

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info= maintenance	enddate= <enddate>	Date the extended warranty agreement ends.

Table 5-6. omconfig system assetinfo info=maintenance/omconfig servermodule assetinfo info=maintenance (continued)

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
				provider= <provider>	Business entity providing the maintenance service.
				startdate= <startdate>	Date the maintenance begins.
				restrictions= <string>	Activities not covered by the maintenance contract.

Example Command for Adding Maintenance Information

To provide a value for a maintenance parameter, type a command of the form: `omconfig system assetinfo info=maintenance <name=value pair 2>` or `omconfig system assetinfo info=maintenance <name=value pair 2>`.

For example, type:

```
omconfig system assetinfo info=maintenance
startdate=012504
```

or

```
omconfig servermodule assetinfo info=maintenance
startdate=012504
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one `omconfig system assetinfo` or `omconfig servermodule assetinfo` command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding Outsource Information

Outsourcing is the practice of contracting with another business to maintain the system in good working order. Table 5-7 shows the valid parameters for adding outsource information.

Table 5-7. omconfig system assetinfo info=outsourced/omconfig servermodule assetinfo info=outsourced

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig					
	system/server				
	module				
		assetinfo			
			info=		
			outsourced		
				levels= <n>	Levels of service that the provider offers.
				problemcomponent = <component>	System component that requires maintenance.
				providerfee= <providerfee>	Amount of money charged for maintenance.
				servicefee= <servicefee>	Amount of money charged for service.
				signauth= <name>	Person who signed or authorized the service.

Example Command for Adding Outsource Information

To provide a value for an outsource parameter, type a command of the form:
omconfig system assetinfo info=outsource <name=value pair 2> or
omconfig servermodule assetinfo info=outsource <name=value pair 2>.
 For example, type:

```
omconfig system assetinfo info=outsource
providerfee=75
or
omconfig servermodule assetinfo info=outsource
providerfee=75
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one **omconfig system assetinfo** or **omconfig servermodule assetinfo** command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding Owner Information

The owner is the party that holds legal property title to the system. Table 5-8 shows the valid parameters for adding owner information.

Table 5-8. omconfig system assetinfo info=owner/omconfig servermodule assetinfo info=owner

Command Level 1	Command Level 2	Command Level 3	Name=Value Pair 1	Name=Value Pair 2	Description
omconfig	system/server module	assetinfo	info=	owner	
				insuranceco	Name of the insurance company that insures the system.
				=	
				<company>	

Table 5-8. omconfig system assetinfo info=owner/omconfig servermodule assetinfo info=owner (continued)

Command Level 1	Command Level 2	Command Level 3	Name=Value Pair 1	Name= Value Pair 2	Description
				ownername = <business>	Business entity that owns the system.
				type=owned leased rented	Whether the user of the system owns, leases, or rents the system.

Example Command for Adding Owner Information

To provide a value for an owner parameter, type a command of the form: `omconfig system assetinfo info=owner <name=value pair 2>` or `omconfig servermodule assetinfo info=owner <name=value pair 2>`.

For example, type:

```
omconfig system assetinfo info=owner type=rented
or
omconfig servermodule assetinfo info=owner type=rented
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one `omconfig system assetinfo` or `omconfig servermodule assetinfo` command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding Service Contract Information

A service contract is an agreement that specifies fees for preventive maintenance and repair of the system. Table 5-9 shows the valid parameters for adding contract information.

Table 5-9. omconfig system assetinfo info=service/omconfig servermodule assetinfo info=service

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info= service	renewed= true false	Whether the service agreement has been renewed.
				type= <string>	Type of service that the contract covers.
				vendor= <business>	Business entity that offers service on the system.

Example Command for Adding Service Information

To provide a value for a service parameter, type a command of the form:
 omconfig system assetinfo info=service <name=value pair 2> or
 omconfig system assetinfo info=service <name=value pair 2>.

For example, type:

```
omconfig system assetinfo info=service vendor=
fixsystemco
or
omconfig servermodule assetinfo info=service
vendor=fixsystemco
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one `omconfig system assetinfo` or `omconfig servermodule assetinfo` command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding Support Information

Support refers to technical assistance that the system user can seek when the user seeks guidance on the proper use of a system to perform tasks. Table 5-10 shows the valid parameters for adding support information.

Table 5-10. omconfig system assetinfo info=support/omconfig servermodule assetinfo info=support

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info=support	automaticfix=	Name of any <programname> application used to fix a problem automatically.
				helpdesk=	The help desk name or contact information such as a phone number, e-mail address, or website address.
				<text>	

Table 5-10. omconfig system assetinfo info=support/omconfig servermodule assetinfo info=support (continued)

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
				outsourced=true false	Whether an external business entity provides technical support or the system owner's employees provide technical support.
				type=network storage	Whether support is for network attached devices or for storage devices.

Example Command for Adding Support Information

To provide a value for a support parameter, type a command of the form:
omconfig system assetinfo info=support <name=value pair 2> or
omconfig servermodule assetinfo info=support <name=value pair 2>.

For example, type:

```
omconfig system assetinfo info=support outsourced=
true
or
omconfig servermodule assetinfo info=support
outsourced=true
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one **omconfig system assetinfo** or **omconfig servermodule assetinfo** command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding System Information

System information includes the primary user of the system, the phone number for the primary user, and the location of the system. Table 5-11 shows the valid parameters for adding system information.

Table 5-11. omconfig system assetinfo info=system/omconfig servermodule assetinfo info=system

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info=system	location= <text>	Location of the system.
				primaryphone= <n>	Phone number of the system's primary user.
				primaryuser= <user>	Primary user of the system.

Example Command for Adding System Information

To provide a value for a system parameter, type a command of the form: **omconfig system assetinfo info=system <name=value pair 2>** or **omconfig servermodule assetinfo info=system <name=value pair 2>**.

For example, type:

```
omconfig system assetinfo info=system location=
firstfloor
or
omconfig servermodule assetinfo info=system
location=firstfloor
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one `omconfig system assetinfo` or `omconfig servermodule assetinfo` command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Adding Warranty Information

Use the `omconfig system warranty` or `omconfig servermodule warranty` command to assign values for warranty information. A warranty is a contract between the manufacturer or dealer and the purchaser of a system. The warranty identifies the components that are covered for repair or replacement for a specified length of time or usage. For details on editing extended warranty values, see "Adding Extended Warranty Information." Table 5-12 shows the valid parameters for adding warranty information.

Table 5-12. omconfig system assetinfo info=warranty/omconfig servermodule assetinfo info=warranty

Command Level 1	Command Level 2	Command Level 3	Name= Value Pair 1	Name= Value Pair 2	Description
omconfig	system/server module	assetinfo	info=warranty	cost= <cost>	Cost of the warranty service.
				duration= <duration>	Number of days or months that the warranty is in force.
				enddate= <enddate>	Date the warranty agreement ends.
				unit=days months	Whether the number for duration refers to days or months.

Example Command for Adding Warranty Information

To provide a value for a warranty parameter, type a command of the form:
omconfig system assetinfo info=warranty <name=value pair 2> or
omconfig servermodule assetinfo info=warranty <name=value pair 2>.

For example, type:

```
omconfig system assetinfo info=warranty unit=days  
or  
omconfig servermodule assetinfo info=warranty  
unit=days
```

The following message appears:

```
Asset information set successfully.
```

You can enter more than one **omconfig system assetinfo** or **omconfig servermodule assetinfo** command at the same time, as long as all the parameters for name=value pair 2 belong to the same name=value pair 1. For an example, see "Example Commands for Adding Acquisition Information."

Using the Storage Management Service

The CLI of Storage Management enables you to perform all of Storage Management's reporting, configuration, and management functions from an operating system command shell. The Storage Management CLI also enables you to script command sequences.

The Storage Management CLI provides expanded options for the Dell™ OpenManage™ Server Administrator **omreport** and **omconfig** commands. This chapter only documents the **omreport** and **omconfig** commands that apply to Storage Management. For more information, see the *Dell OpenManage Installation and Security User's Guide*. See the Storage Management online Help or the *Dell OpenManage Server Administrator Storage Management User's Guide* for more information on Storage Management.

CLI Command Syntax

Like all Server Administrator commands, the **omreport** and **omconfig** command syntax consists of specifying command “levels.” The first command level is the command name: **omreport** or **omconfig**. Subsequent command levels provide a greater degree of specification regarding the type of object on which the command operates or the information that the command will display.

For example, the following **omconfig** command syntax has three levels:

```
omconfig storage pdisk
```

Table 6-1 describes these command levels.

Table 6-1. Example Command Levels

Command level 1	Command level 2	Command level 3	Use
omconfig			Specifies the command
	storage		Indicates the Server Administrator service (in this case, Storage Management) that implements the command
		pdisk	Specifies the type of object on which the command operates

Following the command levels, the **omreport** and **omconfig** command syntax may require one or more name=value pairs. The name=value pairs specify exact objects (such as a specific physical disk) or options (such as “blink” or “unblink”) that the command implements.

For example, the following **omconfig** command syntax for blinking a physical disk has three levels and three name=value pairs:

```
omconfig storage pdisk action=blink controller=id  
pdisk=<PDISKID>
```

where PDISKID=<connector:enclosureID:portID | connector:targetID>

In this example, the *id* in controller=id is the controller number such that controller 1 would be specified as controller=1.

Syntax for Required, Optional, and Variable Command Elements

The **omreport** and **omconfig** commands have multiple name=value pairs. These name=value pairs may include required, optional, and variable parameters. Table 6-2 describes the syntax used to indicate these parameters.

Table 6-2. Syntax For Name=Value Pairs For Parameters

Syntax	Description
<code>controller=id</code>	Indicates the controller ID as reported by the omreport storage controller command. To obtain these values, enter <code>omreport storage controller</code> to display the controller IDs and then enter <code>omreport storage pdisk controller=id</code> to display the IDs for the physical disks attached to the controller. For example, the controller=id parameter might be specified as controller=1 .
<code>connector=id</code>	Indicates the connector ID as reported by the omreport command. To obtain this value, enter <code>omreport storage controller</code> to display the controller IDs and then enter <code>omreport storage connector controller=id</code> to display the IDs for the connectors attached to the controller. For example, the connector=id parameter might be specified as connector=2 .
<code>vdisk=id</code>	Indicates the virtual disk ID as reported by the omreport command. To obtain this value, enter <code>omreport storage controller</code> to display the controller IDs and then enter <code>omreport storage vdisk controller=id</code> to display the IDs for the virtual disks on the controller. For example, the vdisk=id parameter might be specified as vdisk=3 .
<code>enclosure= <ENCLOSUREID ></code>	Indicates a particular enclosure by specifying either enclosure= connector or enclosure=connector:enclosureID . To obtain these values, enter <code>omreport storage controller</code> to display the controller IDs and then enter <code>omreport storage enclosure controller=id</code> to display the IDs for the enclosures attached to the controller.
<code>pdisk= <PDISKID></code>	Indicates a particular physical disk by specifying either connector:targetID or connector:enclosureID:portID . To obtain the values for the connector, enclosure, and physical disk (targetID or portID), enter <code>omreport storage controller</code> to display the controller IDs and then enter <code>omreport storage pdisk controller=id</code> to display the IDs for the physical disks attached to the controller.

Table 6-2. Syntax For Name=Value Pairs For Parameters (continued)

Syntax	Description
battery=id	Indicates the battery ID as reported by the omreport command. To obtain this value, enter <code>omreport storage controller</code> to display the controller IDs and then enter <code>omreport storage battery controller=id</code> to display the ID for the controller battery.
< >	The caret symbols (< >) enclose variable elements that you must specify. For example, the name=<string> parameter might be specified as name=VirtualDisk1 .
[]	The bracket symbols ([]) indicate optional elements that you can choose whether or not to specify. For example, when creating a virtual disk, the [name=<string>] parameter indicates that you have the option of specifying the virtual disk name. If you omit this parameter from the syntax, then a default name for the virtual disk is chosen for you.
	The pipe symbol () separates two or more options from which one only must be selected. For example, when creating a virtual disk, the cachepolicy=d c indicates that the cache policy must be specified as either cachepolicy=d or cachepolicy=c .

User Privileges for omreport storage and omconfig storage

Storage Management requires Administrator privileges to use the **omconfig storage** command. User and Power User privileges are sufficient to use the **omreport storage** command.

omreport Command

The following sections provide the **omreport** command syntax required to display the status of various storage components.

omreport Storage Help

Table 6-3 provides the **omreport storage** command syntax.

Table 6-3. omreport storage help

Command Level 1	Command Level 2	Command Level 3	Use
omreport	storage		Displays a list of storage components for which omreport commands are available.
		pdisk	Displays a list of the omreport storage pdisk parameters for displaying physical disk information.
		vdisk	Displays a list of omreport storage vdisk parameters for displaying virtual disk information.
		controller	Displays a list of the omreport storage controller parameters for displaying controller information.
		enclosure	Displays a list of the omreport storage enclosure parameters for displaying enclosure information.
		connector	Displays a list of the omreport storage connector parameters for displaying connector information.
		battery	Displays a list of the omreport storage battery parameters for displaying battery information.
		globalinfo	Displays a list of the omreport storage globalinfo parameters for displaying global storage property information.

omreport Controller Status

Table 6-4 describes the syntax for the **omreport Controller Commands**.

Table 6-4. omreport Controller Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs	Use
omreport storage controller		Displays property information for all controllers attached to the system.
	controller=id where <i>id</i> is the controller number. For example: controller=0	Displays the specified controller and all attached components such as enclosures, virtual disks, physical disks, and so on.

omreport Global Information (Smart Thermal Shutdown Status, Hot Spare Protection Policy)

Table 6-5 describes the syntax for the **omreport Global Information Commands**.

Table 6-5. omreport Global Information Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs	Use
omreport storage globalinfo		Displays whether smart thermal shutdown is enabled or disabled. See the " omconfig Global Enable Smart Thermal Shutdown " command for more information.
		Displays the hot spare protection policy that you have set. See the <i>Dell OpenManage Server Administrator Storage Management User's Guide</i> for more information on setting hot spare protection policy.

omreport Battery Status

Table 6-6 describes the syntax for the **omreport Battery Commands**.

Table 6-6. omreport Battery Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs	Use
omreport storage battery		Displays all batteries present on all controllers on the system. (Some controllers do not have batteries).
	<code>controller=id</code> where <i>id</i> is the controller number. For example: <code>controller=0</code>	Displays the battery on the specified controller.

omreport Connector Status

Table 6-7 describes the syntax for the **omreport Connector Commands**.

Table 6-7. omreport Connector Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs	Use
omreport storage connector		Displays all connectors present on all controllers on the system. NOTE: This command works only when the controller ID is specified.
	<code>controller=id</code> where <i>id</i> is the controller number. For example: <code>controller=0</code>	Displays the connector on the specified controller.
	<code>controller=id</code> where <i>id</i> is the controller number. For example: <code>controller=0</code>	Displays information for the specified connector on the controller. NOTE: When the connectors are connected to the enclosure in redundant path mode, the Name of the connector is displayed as Logical Connector .
	<code>connector=id</code> where <i>id</i> is the connector number. For example: <code>connector=0</code>	

omreport Enclosure Status

Table 6-8 describes the syntax for the **omreport Enclosure** Commands.

Table 6-8. omreport Enclosure Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs	Use
omreport storage enclosure		Displays property information for all enclosures attached to the system.
	<code>controller=id</code> <code>enclosure=<ENCLOSUREID></code> where <i>id</i> is the controller number and <code><ENCLOSUREID></code> is the enclosure ID. Example for SCSI controllers: <code>controller=0 enclosure=2</code> . Example for SAS controllers: <code>controller=0 enclosure=1:2</code> .	Displays the specified enclosure and its components.

omreport Temperature Probe Status

Table 6-9 describes the syntax for the **omreport Probe Commands**

Table 6-9. omreport Temperature Probe Commands

Required Command Levels (1, 2, 3) and name=value pair	Optional name=value pairs	Use
omreport storage enclosure	<p data-bbox="415 512 684 600">controller=id enclosure=<ENCLOSUREID> info=temps</p> <p data-bbox="415 608 684 903">where <i>id</i> is the controller number and <ENCLOSUREID> is the enclosure ID. Example for SCSI controllers: controller=0 enclosure=2 info=temps. Example for SAS controllers: controller=0 enclosure=1:2 info=temps.</p> <p data-bbox="415 911 684 1291">controller=id enclosure=<ENCLOSUREID> info=temps index=n</p> <p data-bbox="415 1015 684 1291">where <i>id</i> is the controller number and <ENCLOSUREID> is the enclosure number and “n” is the number of a temperature probe. For example: controller=0 enclosure=2 info=temps index=1</p>	<p data-bbox="695 408 1006 496">Displays property information for all enclosures attached to the system.</p> <p data-bbox="695 512 1006 600">Displays the temperature probes for the specified enclosure.</p> <p data-bbox="695 911 1006 1007">Displays the temperature probes for the specified enclosure.</p>

omreport Fan Status

Table 6-10 describes the syntax for the **omreport Fan** Commands

Table 6-10. omreport Fan Status

Required Command Levels (1, 2, 3) and name=value pair	Optional name=value pairs	Use
omreport storage enclosure	<p>controller=id enclosure=<ENCLOSUREID> info=fans</p> <p>where id is the controller number and ENCLOSUREID is the enclosure number. For example: controller=0 enclosure=2</p> <p>NOTE: For SCSI controllers, the ID specified in enclosure=<ENCLOSUREID> is the connector number and for Serial Attached SCSI (SAS) controllers, ID is the connectorNumber:EnclosureIndex.</p> <p>controller=id enclosure=<ENCLOSUREID> info=fans index=n</p> <p>where id is the controller number and ENCLOSUREID is the enclosure number and “n” is the number of a fan. For example: controller=0 enclosure=2 info=fans index=1</p>	<p>Displays property information for all enclosures attached to the system.</p> <p>Displays the fans for the specified enclosure.</p> <p>Displays the specified fan.</p>

omreport Power Supply Status

Table 6-11 describes the syntax for the omreport Power Supply Commands

Table 6-11. omreport Power Supply Commands

Required Command Levels (1, Optional name=value pairs 2, 3) and name=value pair	Use
omreport storage enclosure	Displays property information for all enclosures attached to the system.
controller=id enclosure=<ENCLOSUREID> info=pwrsupplies where id is the controller number and ENCLOSUREID is the enclosure number. For example: controller=0 enclosure=2	Displays the power supplies for the specified enclosure.
controller=id enclosure=<ENCLOSUREID> info=pwrsupplies index=n where id is the controller number and ENCLOSUREID is the enclosure number and “n” is the number of a power supply. For example: controller=0 enclosure=2 info=pwrsupplies index=1	Displays the specified power supply.

omreport EMM Status


 **NOTE:** The status of the EMMs is displayed as degraded if there is a mismatch between the EMM firmware.

Table 6-12 describes the syntax for the **omreport EMM Commands**

Table 6-12. omreport EMM Commands

Required Command Levels (1, 2, 3) and name=value pair	Optional name=value pairs	Use
omreport storage enclosure	<p>controller=id enclosure=<ENCLOSUREID> info=emms</p> <p>where id is the controller number and ENCLOSUREID is the enclosure number. For example: controller=0 enclosure=2</p>	<p>Displays property information for all enclosures attached to the system.</p> <p>Displays the enclosure management modules (EMMs) for the specified enclosure.</p>
	<p>controller=id enclosure=<ENCLOSUREID> info=emms index=n</p> <p>where id is the controller number and ENCLOSUREID is the enclosure number and “n” is the number of an EMM. For example: controller=0 enclosure=2 info=emms index=1</p>	<p>Displays the specified EMMs.</p>

omreport Physical Disk Status

Table 6-13 describes the syntax for the **omreport Physical Disk Commands**

Table 6-13. omreport Physical Disk Commands

Required Command Levels (1, 2, 3) and name=value pair	Optional name=value pairs	Use
omreport storage pdisk	<p>controller=id where <i>id</i> is the controller number. For example: controller=0</p> <p>connector=id where <i>id</i> is the connector number. For example: connector=1</p> <p>vdisk=id where <i>id</i> is the virtual disk number. For example: vdisk=1</p> <p>pdisk=connectorID : targetID connectorID : enclosureID : slotID where <i>connectorID:targetID</i> is the connector number and the physical disk number and <i>connectorID:enclosureID:s</i> <i>lotID</i> is the connector number, enclosure number, and slot number. For example: pdisk=0:2 or pdisk=0:1:2</p>	<p>Displays all physical disks attached to the specified controller.</p> <p>NOTE: If a physical disk was replaced by another disk as part of the replace member operation, the state of the physical disk is displayed as Replacing.</p> <p>Displays all physical disks attached to the specified connector on the controller.</p> <p>Displays all physical disks included in the specified virtual disk on the controller.</p> <p>Displays the specified physical disk on the specified connector on the controller.</p>

omreport Virtual Disk Status

Table 6-14 describes the syntax for the **omreport Virtual Disk Commands**

Table 6-14. omreport Virtual Disk Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs	Use
omreport storage vdisk		Displays property information for all virtual disks on all controllers.
	controller=id where <i>id</i> is the controller number. For example: controller=0.	Displays all virtual disks on the specified controller.
	controller=id vdisk=id where <i>id</i> is the controller number and the virtual disk number. For example: controller=0 vdisk=1.	Displays the specified virtual disk on the controller.

omconfig Global Commands

The following sections provide the **omconfig** command syntax required to execute the global commands. When executed, these commands apply to all controllers. These global commands also correspond to the global tasks provided by the Storage tree view object's **Information/Configuration** subtab.

Table 6-15. omconfig Global Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs
omconfig storage globalinfo	 action=enablests action=disablests action=globalrescan action=setprotectionpolicies type=ghs or dhs

omconfig Global Enable Smart Thermal Shutdown

By default, the operating system and server shut down when the PV220S and PV221S enclosures reach a critical temperature of 0 or 50° Celsius. However, if you have implemented connector redundancy on the PV220S and PV221S enclosures you can specify that only the enclosure and not the operating system and server be shut down when the enclosure reaches a critical temperature of 0 or 50° Celsius. Specifying that only the enclosure be shut down during excessive temperatures is known as Smart Thermal Shutdown. See the *Dell OpenManage Online Help* for more information about Smart Thermal Shutdown.

Use the following **omconfig** command syntax to enable smart thermal shutdown.

Complete Syntax

```
omconfig storage globalinfo action=enablests
```

Example Syntax

The **omconfig** command syntax for enabling thermal shutdown does not require that you specify a controller or enclosure ID. To enable thermal shutdown, enter the following:

```
omconfig storage globalinfo action=enablests
```



NOTE: You can use the **omreport storage globalinfo** command to determine whether smart thermal shutdown is currently enabled or disabled. The status of smart thermal shutdown is also displayed by the Server Administrator graphical user interface (GUI). To locate this status, select the **Storage** object and the **Information/Configuration** tab.

omconfig Global Disable Smart Thermal Shutdown

If you have previously enabled smart thermal shutdown using the **omconfig** command, you can disable smart thermal shutdown and return the system to its default setting. When smart thermal shutdown is disabled, the operating system and the server shuts down when the PV220S and PV221S enclosures reach a critical temperature of 0 or 50° Celsius.

Use the following **omconfig** command syntax to disable smart thermal shutdown for all controllers.

Complete Syntax

```
omconfig storage globalinfo action=disablests
```

Example Syntax

The **omconfig** command syntax for disabling thermal shutdown does not require that you specify a controller or enclosure ID. To disable thermal shutdown, enter the following:

```
omconfig storage globalinfo action=disablests
```



NOTE: You can use the **omreport storage globalinfo** command to determine whether smart thermal shutdown is currently enabled or disabled. The status of smart thermal shutdown is also displayed in the GUI of Server Administrator. To locate this status, select the **Storage** object and the **Information/Configuration** tab.

omconfig Global Rescan Controller

Use the following **omconfig** command syntax to rescan all controllers on the system. See the *Dell OpenManage Online Help* for more information about Global Rescan Controller.

Complete Syntax

```
omconfig storage globalinfo action=globalrescan
```

Example Syntax

The **omconfig** command syntax for rescanning all controllers on the system does not require that you specify a controller ID. To do a global rescan of all controllers, enter the following:

```
omconfig storage globalinfo action=globalrescan
```



NOTE: Global rescan is not supported on non-RAID SCSI and SAS controllers. Reboot the system for the configuration changes on non-RAID SCSI controllers to be visible.

omconfig Set Hot Spare Protection Policy

Use the following **omconfig** command syntax to set the Hot Spare Protection Policy for dedicated or global hot spares. See the *Dell OpenManage Server Administrator Storage Management User's Guide* for more information on setting hot spare protection policy.

Complete Syntax

For dedicated hot spare protection policy, type:

```
omconfig storage globalinfo action=  
setprotectionpolicies type=dhs raid=<r1 | r5 | r6 |  
r10 | r50 | r60 | all> hscount=<1-16> warnlevel=<0-3>
```

where `hscount` is the number of hot spares to be assigned to the virtual disk and `warnlevel` is the severity level you want to assign to the generated alert, if this policy is violated. Use `hscount=0 warnlevel=0` to reset the dedicated hot spare protection policy for the RAID level.

For global hot spare protection policy, type:

```
omconfig storage globalinfo action=  
setprotectionpolicies type=ghs hscount=<1-16>  
warnlevel=<0-3> includeghsinvdstate=<yes | no>
```

where `hscount` is the number of hot spares to be assigned to the virtual disk and `warnlevel` is the severity level you want to assign to the generated alert, if this policy is violated. Use `hscount=0 warnlevel=0` to reset the global hot spare protection policy for the RAID level.

omconfig Controller Commands

The following sections provide the `omconfig` command syntax required to execute controller tasks.


 **CAUTION: The `omconfig storage controller action=resetconfig controller=id` resets the controller configuration. Resetting the controller configuration permanently destroys all data on all virtual disks attached to the controller. System or boot partition residing on these virtual disks will be destroyed.**

Table 6-16. omconfig Controller Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs
<code>omconfig storage controller</code>	<code>action=rescan controller=id</code> <code>action=enablealarm controller=id</code> <code>action=disablealarm controller=id</code>

Table 6-16. omconfig Controller Commands (continued)

Required Command Levels (1, 2, 3)	Optional name=value pairs
	action=quietalarm controller=id
	action=testalarm controller=id
	action=resetconfig controller=id [force=yes]
	action=createvdisk controller=id raid=<c> r0 r1 r1c r5 r6 r10 r50 r60> size=<number max min> pdisk=<PDISKID> [stripesize=< 2kb 4kb 8kb 16kb 32kb 64kb 128kb>] [cachepolicy=<d c>] [diskcachepolicy=<d e>] [readpolicy=<ra nra ara rc nrc>] [writepolicy=<wb wt wc nwc fwb>] [name=<string>] [spanlength=<n>]
	NOTE: For RAID 10 on SAS controllers with firmware version 6.1 and later, <code>spanlength</code> is an optional parameter (default=2).
	action=setrebuildrate controller=id
	rate=<0 to 100>
	action=setbgirate controller=id
	rate=<0 to 100 >
	action=setreconstructrate controller=id
	rate=<0 to 100>
	action=setcheckconsistency controller=id
	rate=<0 to 100>
	action=exportlog controller=id
	action=importforeignconfig controller=id
	action=importrecoverforeignconfig controller=id
	action=clearforeignconfig controller=id
	action=setpatrolreadmode controller=id
	mode=manual auto disable
	action=startpatrolread controller=id
	action=stoppatrolread controller=id

Table 6-16. omconfig Controller Commands (continued)

Required Command Levels (1, 2, 3)	Optional name=value pairs
omconfig storage controller (continued)	action=setchangecontrollerproperties controller=<id> abortcheckconsistencyonerror=<enabled/disabled> allowreplacemember=<enabled/disabled> loadbalance= <auto/disabled> autoreplacememberonpredictivefailure= <enabled/disabled> bgrate=<rate> reconstructrate=<rate> rebuildrate=<rate> checkconsistencyrate=<rate> clearedundantpath=disabled action=discardpinnedcache controller=id force=e d
omconfig storage vdisk	action=replacememberdisk controller=id vdisk=id source= <PDISKID> destination=<PDISKID>

omconfig Rescan Controller

Use the following **omconfig** command syntax to rescan a controller. See Dell OpenManage Online Help for more information about Rescan Controller.

Complete Syntax

```
omconfig storage controller action=rescan
controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To rescan controller 1, enter:

```
omconfig storage controller action=rescan
controller=1
```



NOTE: The rescan controller is not supported on non-RAID SCSI and SAS controllers. Reboot the system for the configuration changes on non-RAID SCSI controllers to be visible.

omconfig Enable Controller Alarm

Use the following **omconfig** command syntax to enable the controller alarm. See the *Dell OpenManage Online Help* for more information about Enable Controller Alarm.

Complete Syntax

```
omconfig storage controller action=enablealarm  
controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To enable the alarm on controller 1, enter:

```
omconfig storage controller action=enablealarm  
controller=1
```

omconfig Disable Controller Alarm

Use the following **omconfig** command syntax to disable the controller alarm. See the *Dell OpenManage Online Help* for more information about Disable Controller Alarm.

Complete Syntax

```
omconfig storage controller action=disablealarm  
controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To disable the alarm on controller 1, enter:

```
omconfig storage controller action=disablealarm  
controller=1
```


omconfig Quiet Controller Alarm

Use the following **omconfig** command syntax to silence an activated controller alarm. See the *Dell OpenManage Online Help* for more information about Quiet Controller Alarm.

Complete Syntax

```
omconfig storage controller action=quietalarm  
controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To quiet the alarm on controller 1, enter:

```
omconfig storage controller action=quietalarm  
controller=1
```

omconfig Test Controller Alarm

Use the following **omconfig** command syntax to test the functionality of the controller alarm. The alarm will sound for about two seconds. See the *Dell OpenManage Online Help* for more information about Test Controller Alarm.

Complete Syntax

```
omconfig storage controller action=testalarm  
controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To test the alarm on controller 1, enter:

```
omconfig storage controller action=testalarm  
controller=1
```

omconfig Reset Controller Configuration

Use the following `omconfig` command syntax to reset the controller configuration.

⚠ CAUTION: Resetting a configuration permanently destroys all data on all virtual disks attached to the controller. System or boot partition residing on these virtual disks will be destroyed. You may receive a warning message if this command results in deleting the system or boot partition. However, this warning message is not generated in all circumstances. Ensure that you are not deleting the system or boot partition or other vital data when using this command.

Complete Syntax

```
omconfig storage controller action=resetconfig  
controller=id
```

where *id* is the controller ID as reported by the `omreport storage controller` command.

In some circumstances, you may receive a warning message if this command deletes the system or boot partition. You can override this warning by using the `force=yes` parameter. In this case, the syntax is as follows:

```
omconfig storage controller action=resetconfig  
controller=id force=yes
```

Example Syntax

To reset the configuration on controller 1, enter:

```
omconfig storage controller action=resetconfig  
controller=1
```

omconfig Create Virtual Disk

The *Dell OpenManage Online Help* provides additional information about creating virtual disks.

The `omconfig` syntax for creating a virtual disk has several parameters. You must specify the following parameters:

- Controller (`controller=id`)
- RAID level (`raid=<c| r0| r1| r1c| r5|r6| r10| r50|r60>`)
- Size (`size=<number | max | min>`)

Physical disk is specified as either:

For SCSI, SATA, and ATA Controllers

```
pdisk=connector:enclosureID:portID
```

where *connector:enclosureID:portID* is the connector number, enclosure number, and port number.

For example *pdisk=0:1:2*

For SAS Controllers

```
pdisk=connector:targetID
```

where *connectorID:targetID* is the connector number and the physical disk number.

For example: *pdisk=0:2*

Storage Management supplies default values for any of the other parameters that you do not specify.

Complete Syntax

```
omconfig storage controller action=createvdisk
controller=id raid=<c| r0| r1| r1c| r5| r6| r10| r50
|r60> size=<number | max | min> pdisk=<PDISKID>
[stripesize=< 2kb| 4kb| 8kb| 16kb| 32kb| 64kb|
128kb>] [cachepolicy=<d | c>] [diskcachepolicy=<d |
e>][readpolicy=<ra | nra | ara | rc| nrc>]
[writepolicy=<wb| wt| wc| nwc | fwb>] [name=<string>]
[spanlength=<n>]
```



NOTE: If you are configuring RAID for SAS controllers with firmware version 6.1 and later, *spanlength* is an optional parameter (default=2). *spanlength* should be an even number and should be lesser than or equal to half the number of physical disks specified in *size*.

Parameter Specification for Create and Reconfigure Virtual Disk

The following sections indicate how to specify the **omconfig storage controller action=createvdisk** parameters.

controller=id Parameter (Required)

raid=<c| r0| r1| r1c| r5| r6| r10| r50| r60> Parameter (Required)

size=<number | max | min> Parameter (Required)

pdisk=<connector:targetID,connector:targetID,.....> Parameter (Required)

[stripesize=< 2kb| 4kb| 8kb| 16kb| 32kb| 64kb| 128kb>] Parameter (Optional)

[cachepolicy=<d | c>] Parameter (Optional)

[readpolicy=<ra| nra| ara| rc| nrc>] Parameter (Optional)

[writepolicy=<wb| wt| wc| nwc| fwb>] Parameter (Optional)

[name=<string>] Parameter (Optional)

[spanlength=<n>] Parameter (Optional)

controller=id Parameter (Required)

Specify the controller ID as reported by the **omreport storage controller** command. For example:

```
controller=2
```

raid=<c| r0| r1| r1c| r5| r6| r10| r50| r60> Parameter (Required)

Use the **raid=<c| r0| r1| r1c| r5| r6| r10| r50| r60>** parameter to specify concatenation or a RAID level for a virtual disk. Different controllers support different RAID levels. See the *Dell OpenManage Online Help* for more information about RAID levels a controller supports and for general information about RAID levels and concatenation. Table 6-17 indicates how to specify the **raid=n** parameter for each RAID level and concatenation.

Table 6-17. Raid Level and Concatenation

RAID Level or Concatenation	raid=n Parameter Specification
RAID-0	raid=r0
RAID-1	raid=r1
RAID-5	raid=r5
RAID-6	raid=r6
RAID-10	raid=r10
RAID-50	raid=r50
RAID-60	raid=r60
RAID-1-concatenated	raid=r1c
Concatenation	raid=c

size=<number | max | min> Parameter (Required)

Table 6-18 indicates how to specify the **size=<number | max | min>** parameter.

Table 6-18. Size Parameter

size=<number max min> Parameter Specification	Description
size=<n>	Use this specification to indicate a specific size for the virtual disk. The virtual disk size may be specified in b (bytes), m (megabytes), or g (gigabytes). For example, size=500m indicates that the virtual disk should be 500 MB.
size=max	To create a virtual disk that is the maximum size possible, specify size=max . When creating a RAID-50 virtual disk, this parameter must be specified as size=max .
size=min	To create a virtual disk that is the minimum size possible, specify size=min .

PDISKID=<connector:enclosureID:portID | connector:targetID>

Use this parameter to specify the physical disks to included in the virtual disk. When reconfiguring a virtual disk, you must specify all physical disks to be included in the reconfigured virtual disk. The physical disk specification applies to physical disks in the original virtual disk and will continue to be in the reconfigured virtual disk and to any new physical disks being added to the reconfigured virtual disk. Some controllers allow you to remove a physical disk from a virtual disk. In this case, do not specify the physical disk to be removed.

The **pdisk=<PDISKID>** parameter indicates a physical disk by specifying either **connector:enclosureID:portID** or **connector:targetID**.

```
stripesize=< 2kb| 4kb| 8kb| 16kb| 32kb| 64kb|  
128kb>] Parameter (Optional)
```

Different controllers support different stripe sizes. See the *Dell OpenManage Online Help* for more information on stripe sizes supported for a controller. All stripe sizes are specified in kilobytes. For example, when specifying 128 KB as the stripe size, enter:

```
stripesize=128kb
```

[cachepolicy=<d | c>] Parameter (Optional)

Different controllers support different cache policies. Table 6-19 indicates how to specify the [cachepolicy= <d | c>] parameter for each of the cache policies.

Table 6-19. Cache Policy Parameters

Cache Policy	cachepolicy=d c Parameter Specification
Direct I/O	cachepolicy=d
Cache I/O	cachepolicy=c

[diskcachepolicy=<d|e>] Parameter (Optional)

Different controllers support different disk cache policies. The following table indicates how to specify the [diskcachepolicy= <d | e>] parameter for each of the cache policies.

Disk Cache Policy	diskcachepolicy=d e Parameter Specification
Disabled	diskcachepolicy=d
Enabled	diskcachepolicy=e

[readpolicy=<ra| nra| ara| rc| nrc>] Parameter (Optional)

Different controllers support different read policies. Table 6-20 indicates how to specify the [readpolicy= <ra | nra | ara | rc | nrc>] parameter for each of the read policies.

Table 6-20. Read Policy Parameters

Read Policy	readpolicy=ra ara nra rc nrc Parameter Specification
Read ahead	readpolicy=ra
Adaptive read ahead	readpolicy=ara
No read ahead	readpolicy=nra
Read cache	readpolicy=rc
No read cache	readpolicy=nrc

[writepolicy=<wb| wt| wc| nwc>] Parameter (Optional)

Different controllers support different write policies. Table 6-21 indicates how to specify the [writepolicy=<wb| wt| wc| nwc| fwb>] parameter for each of the write policies.

Table 6-21. Write Policy Parameters

Write Policy	writepolicy=wb wt wc fwb nwc Parameter Specification
Write-back cache	writepolicy=wb
Write-through cache	writepolicy=wt
Write cache	writepolicy=wc
Force write back	writepolicy=fwb
No write cache	writepolicy=nwc

[name=<string>] Parameter (Optional)

Use this parameter to specify a name for the virtual disk. For example:

```
name=VirtualDisk1
```



NOTE: The CERC SATA 1.5/2s controller does not allow you to specify a virtual disk name. The virtual disk will be created with a default name.

[spanlength=<n>] Parameter (Required for RAID 50 and RAID 60 and optional for RAID 10)

Use this parameter to specify the number of physical disks to be included in each stripe. This parameter only applies to RAID-50 virtual disks. If you are not creating a RAID-50 virtual disk, do not specify this parameter. For example:

```
spanlength=3
```

For RAID 10 on SAS controllers with firmware version 6.1 and later, `spanlength` is optional. Also, you can now specify the `spanlength` as an even number with a maximum of 8 spans with 32 physical disks each. For example,

```
omconfig storage controller action=createvdisk controller=1 raid=r10 size=min pdisk=1:1:0,1:1:1,1:1:3,1:1:4,1:1:6,1:1:7,1:1:8,1:1:9 spanlength=4
```

Example Syntax

For example, you may want to create a RAID-5 virtual disk on a PERC 3/QC controller. See the *Dell OpenManage Online Help* for information on read, write, and cache policies are supported by this controller. For example, to create a virtual disk with the following read, write, and cache policy:

- Read-ahead
- Write-through caching
- Cache I/O

The virtual disk will be 500 MB with a stripe size of 16 KB. The name of the virtual disk will be `vd1` and it will reside on connector 0 of controller 1. Because the virtual disk will be a RAID-5, it requires at least three physical disks. In this example, you specify four physical disks. These are physical disks 0 through 3.

To create the virtual disk described in this example, enter:

```
omconfig storage controller action=createvdisk
controller=1 raid=r5 size=500m pdisk=
0:0,0:1,0:2,0:3 stripesize=16kb cachepolicy=c
readpolicy=ra writepolicy=wt
```

The only parameters that require specification are for the controller, RAID level, virtual disk size, and physical disk selection. Storage Management supplies default values for all other unspecified parameters.

omconfig Set Controller Rebuild Rate

Use the following `omconfig` command syntax to set the controller rebuild rate:

Complete Syntax

```
omconfig storage controller action=setrebuildrate
controller=id rate=<0 to 100>
```

where `id` is the controller ID as reported by the `omreport storage controller` command.

Example Syntax

To set the rebuild rate to 50 on controller 1, enter:

```
omconfig storage controller action=setrebuildrate  
controller=1 rate=50
```

omconfig Set Background Initialization Rate

Use the following **omconfig** command syntax to set the background initialization rate.

Complete Syntax

```
omconfig storage controller action=setbgirate  
controller=id rate=<0 to 100>
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To set the background initialization rate to 50 on controller 1, enter:

```
omconfig storage controller action=setbgirate  
controller=1 rate=50
```

omconfig Set Reconstruct Rate

Use the following **omconfig** command syntax to set the reconstruct rate.

Complete Syntax

```
omconfig storage controller action=  
setreconstructrate controller=id  
  
rate=<0 to 100>
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To set the reconstruct rate to 50 on controller 1, enter:

```
omconfig storage controller action=
setreconstructrate controller=1
rate=50
```

omconfig Set Check Consistency Rate

Use the following **omconfig** command syntax to set the check consistency rate.

Complete Syntax

```
omconfig storage controller action=
setcheckconsistency controller=id
rate=<0 to 100>
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To set the check consistency rate to 50 on controller 1, enter:

```
omconfig storage controller action=
setcheckconsistency controller=1
rate=50
```

omconfig Export the Controller Log

Use the following **omconfig** command syntax to export the controller log to a text file. See the *Dell OpenManage Online Help* for more information about the exported log file.

Complete Syntax

```
omconfig storage controller action=exportlog
controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To export the log on controller 1, enter:

```
omconfig storage controller action=exportlog  
controller=1
```

By default, the log file is exported to **C:\WINNT** or **C:\Windows** on Microsoft® Windows® systems (based on the Windows version used) and **/var/log** on all Linux systems.

Depending on the controller, the log file name will either be **afa_<mmdd>.log** or **lsi_<mmdd>.log** where **<mmdd>** is the month and date. See the *Dell OpenManage Online Help* for more information on the controller log file.



NOTE: The export log file command is not supported on the PERC 2/SC, 2/DC, 4/IM, CERC ATA 100/4ch, and CERC SATA 1.5/2s controllers.

omconfig Import Foreign Configuration

Use the following **omconfig** command syntax to import all virtual disks that reside on physical disks newly attached to the controller.

Complete Syntax

```
omconfig storage controller action=  
importforeignconfig controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.



NOTE: This command is supported only in firmware version 5.0.x.

Example Syntax

To import foreign configurations on controller 1, enter:

```
omconfig storage controller action=  
importforeignconfig controller=1
```

omconfig Import/Recover Foreign Configuration

Use the following **omconfig** command syntax to import and recover all virtual disks that reside on physical disks newly attached to the controller.

Complete Syntax

```
omconfig storage controller action=  
importrecoverforeignconfig controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.



NOTE: This command is supported only in firmware version 5.1.1.

Example Syntax

To import and recover foreign configurations on controller 1, enter:

```
omconfig storage controller action=  
importrecoverforeignconfig controller=1
```

omconfig Clear Foreign Configuration

Use the following **omconfig** command syntax to clear or delete all virtual disks that reside on physical disks newly attached to the controller.

Complete Syntax

```
omconfig storage controller action=  
clearforeignconfig controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To clear foreign configurations on controller 1, enter:

```
omconfig storage controller action=  
clearforeignconfig controller=1
```

omconfig Set Patrol Read Mode

Use the following **omconfig** command syntax to set the patrol read mode for the controller.

Complete Syntax

```
omconfig storage controller action=  
setpatrolreadmode controller=id  
  
mode>manual|auto|disable
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To set the patrol read on controller 1 to manual mode, enter:

```
omconfig storage controller action=  
setpatrolreadmode controller=1  
  
mode>manual
```

omconfig Start Patrol Read

Use the following **omconfig** command syntax to start the patrol read task on the controller.

Complete Syntax

```
omconfig storage controller action=startpatrolread  
controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To start the patrol read task on controller 1, enter:

```
omconfig storage controller action=startpatrolread  
controller=1
```



NOTE: To be able to start patrol read, the current patrol read mode should be set to Manual.

omconfig Stop Patrol Read

Use the following **omconfig** command syntax to stop the patrol read task on the controller.

Complete Syntax

```
omconfig storage controller action=stoppatrolread  
controller=id
```

where *id* is the controller ID as reported by the **omreport storage controller** command.

Example Syntax

To stop the patrol read task on controller 1, enter:

```
omconfig storage controller action=stoppatrolread  
controller=1
```



NOTE: To be able to stop patrol read, the current patrol read mode should be set to Manual.

omconfig Change Controller Properties

Use the following **omconfig** command to change any or all of the following controller properties.

Complete Syntax

```
omconfig storage controller action=  
setchangecontrollerproperties controller=<id>  
abortcheckconsistencyonerror=<enabled/disabled>  
allowreplacemember=<enabled/disabled> loadbalance=  
<auto/disabled> autoreplacememberonpredictivefailure=  
<enabled/disabled> bgirate=<rate> reconstructrate=  
<rate> rebuildrate=<rate> checkconsistencyrate=<rate>  
clearredundantpath=disabled
```

Example Syntax

To enable replace member operation, enter:

```
omconfig storage controller action=  
setchangecontrollerproperties allowreplacemember=  
enabled
```

omconfig Storage Virtual Disk

Use the following **omconfig storage** command syntax to replace a physical disk that is part of a virtual disk with another physical disk.

Complete Syntax

```
omconfig storage vdisk action=replacememberdisk controller=id vdisk=id  
source=<PDISKID> destination=<PDISKID>
```

where PDISKID is specified as:

```
pdisk=connector:enclosureID:portID
```

Example Syntax

To replace physical disk (PD1) with another physical disk (PD2), enter:

```
omconfig storage vdisk action=replacememberdisk  
controller=0 vdisk=1 source=PD1 destination=PD2
```

omconfig Storage Controller

Use the following **omconfig storage** command syntax to discard the pinned cache on the controller.

Complete Syntax


```
omconfig storage controller action=discardpinnedcache  
controller=id force=enabled/disabled
```

If you set `force=enabled`, the cache is discarded irrespective of whether the controller detects a foreign or an offline virtual disk.

Example Syntax

To discard the pinned cache, enter:

```
omconfig storage controller action=discardpinnedcache  
controller=id force=enabled
```

 **CAUTION:** Discarding the pinned cache can result in data loss. Dell recommends that you run this command using the `force=disabled` option.

omconfig Virtual Disk Commands

The following sections provide the `omconfig` command syntax required to execute virtual disk tasks.

⚠ CAUTION: The `omconfig storage vdisk action=deletevdisk controller=id vdisk=id` command deletes a virtual disk. Deleting a virtual disk destroys all information including file systems and volumes residing on the virtual disk.

Table 6-22. omconfig Manage Virtual Disk Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs
<code>omconfig</code>	
<code>storage vdisk</code>	
	<code>action=checkconsistency controller=id vdisk=id</code>
	<code>action=cancelcheckconsistency controller=id vdisk=id</code>
	<code>action=pausecheckconsistency controller=id vdisk=id</code>
	<code>action=resumecheckconsistency controller=id vdisk=id</code>
	<code>action=blink controller=id vdisk=id</code>
	<code>action=unblink controller=id vdisk=id</code>
	<code>action=initialize controller=id vdisk=id</code>
	<code>action=fastinit controller=id vdisk=id</code>
	<code>action=slowinit controller=id vdisk=id</code>
	<code>action=cancelinitialize controller=id vdisk=id</code>
	<code>action=cancelbginitialize controller=id vdisk=id</code>
	<code>action=restoresegments controller=id vdisk=id</code>
	<code>action=splitmirror controller=id vdisk=id</code>
	<code>action=unmirror controller=id vdisk=id</code>
	<code>action=assigndedicatedhotspare controller=id vdisk=id pdisk=<PDISKID> assign=<yes no></code>
	<code>action=deletevdisk controller=id vdisk=id [force=yes]</code>
	<code>action=format controller=id vdisk=id</code>
	<code>action=reconfigure controller=id vdisk=id raid=<c r0 r1 r1c r5 r10> size=<size> pdisk=<PDISKID></code>
	<code>action=changepolicy controller=id vdisk=id [readpolicy=<ra nra ara rc nrc> writepolicy=<wb wt wc nwc fw> cachepolicy=<d c>]</code>
	<code>action=rename controller=id vdisk=id</code>

omconfig Blink Virtual Disk

Use the following **omconfig** command syntax to blink the physical disks included in a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=blink controller=id  
vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To blink the physical disks in virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=blink controller=1  
vdisk=4
```

omconfig Unblink Virtual Disk

Use the following **omconfig** command syntax to unblink the physical disks included in a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=unblink controller=  
id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To blink the physical disks in virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=unblink controller=1  
vdisk=4
```

omconfig Initialize Virtual Disk

Use the following **omconfig** command syntax to initialize a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=initialize  
controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To initialize virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=initialize  
controller=1 vdisk=4
```

omconfig Cancel Initialize Virtual Disk

Use the following **omconfig** command syntax to cancel the initialization of a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=cancelinitialize  
controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To cancel the initialization of virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=cancelinitialize  
controller=1 vdisk=4
```

omconfig Fast Initialize Virtual Disk

Use the following **omconfig** command syntax to fast initialize a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=fastinit controller=  
id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To fast initialize virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=fastinit controller=1  
vdisk=4
```

omconfig Slow Initialize Virtualize Disk

Use the following **omconfig** command syntax to slow initialize a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=slowinit controller=  
id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To slow initialize virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=slowinit controller=  
1 vdisk=4
```

omconfig Cancel Background Initialize

Use the following **omconfig** command syntax to cancel the background initialization process on a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=cancelbginitialize  
controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To cancel background initialization on virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=cancelbginitialize  
controller=1 vdisk=4
```

omconfig Restore Dead Segments

Use the following **omconfig** command syntax to recover data from a RAID-5 virtual disk that has been corrupted. This task attempts to reconstruct data from a corrupt portion of a physical disk included in a RAID-5 virtual disk.

Complete Syntax

```
omconfig storage vdisk action=restoresegments  
controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To restore segments on virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=restoresegments  
controller=1 vdisk=4
```

omconfig Split Mirror

Use the following **omconfig** command syntax to separate mirrored data originally configured as a RAID 1, RAID-1–concatenated, or RAID-10 virtual disk. Splitting a RAID-1 or RAID-1–concatenated mirror creates two concatenated non-redundant virtual disks. Splitting a RAID-10 mirror creates two RAID-0 (striped) non-redundant virtual disks. Data is not lost during this operation.

Complete Syntax

```
omconfig storage vdisk action=splitmirror  
controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To initiate a split mirror on virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=splitmirror  
controller=1 vdisk=4
```

omconfig Unmirror

Use the following **omconfig** command syntax to separate mirrored data and restore one half of the mirror to free space. Unmirroring a RAID-1 or RAID-1–concatenated virtual disk results in a single, non-redundant concatenated virtual disk. Unmirroring a RAID-10 virtual disk results in a single, non-redundant RAID-0 (striped) virtual disk. Data is not lost during this operation. See the *Dell OpenManage Online Help* for more information about Unmirror.

Complete Syntax

```
omconfig storage vdisk action=unmirror controller=  
id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To unmirror virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=unmirror controller=1  
vdisk=4
```

omconfig Assign Dedicated Hot Spare

Use the following **omconfig** command syntax to assign one or more physical disks to a virtual disk as a dedicated hot spare.



NOTE: The PERC 2/SC, 2/DC, and CERC SATA 1.5/2s controllers do not support dedicated hot spares.

Complete Syntax

```
omconfig storage vdisk action=  
assigndedicatedhot spare controller=id vdisk=id  
pdisk=<PDISKID> assign=yes
```

where *id* is the controller ID and virtual disk ID. The **<PDISK>** variable specifies the physical disk.

To obtain the values for the controller, virtual disk, and physical disk, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** and **omreport storage pdisk controller=ID** to display the IDs for the virtual disks and physical disks attached to the controller.

Example Syntax

In this example, you are assigning physical disk 3 on connector 0 of controller 1 as a dedicated hot spare to virtual disk 4. On a Serial Attached SCSI (SAS) controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To assign the dedicated hot spare described in this example, enter:

```
omconfig storage vdisk action=  
  assignededicatedhotspare controller=1 vdisk=4  
  pdisk=0:3 assign=yes
```

Example for SAS Controllers

To assign the dedicated hot spare described in this example, enter:

```
omconfig storage vdisk action=  
  assignededicatedhotspare controller=1 vdisk=4  
  pdisk=0:2:3 assign=yes
```

omconfig Unassign Dedicated Hot Spare

Use the following **omconfig** command syntax to unassign one or more physical disks previously assigned as a hot spare to a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=  
  assignededicatedhotspare controller=id vdisk=id  
  pdisk=<PDISKID> assign=no
```

where *id* is the controller ID and virtual disk ID. The <PDISK> variable specifies the physical disk.

To obtain the values for the controller, virtual disk, and physical disk, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** and **omreport storage pdisk controller=ID** to display the IDs for the virtual disks and physical disks attached to the controller.

Example Syntax

In this example, you are unassigning physical disk 3 on connector 0 of controller 1 as a dedicated hot spare to virtual disk 4. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To unassign the dedicated hot spare described in this example, enter:

```
omconfig storage vdisk action=
assignededicatedhot spare controller=1 vdisk=4
pdisk=0:3 assign=no
```

Example for SAS Controllers

To unassign the dedicated hot spare described in this example, enter:

```
omconfig storage vdisk action=
assignededicatedhot spare controller=1 vdisk=4
pdisk=0:2:3 assign=no
```

omconfig Check Consistency

Use the following **omconfig** command syntax to initiate a check consistency on a virtual disk. The check consistency task verifies the virtual disk's redundant data.

Complete Syntax

```
omconfig storage vdisk action=checkconsistency
controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To run a check consistency on virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=checkconsistency
controller=1 vdisk=4
```


omconfig Cancel Check Consistency

Use the following **omconfig** command syntax to cancel a check consistency while in progress.

Complete Syntax

```
omconfig storage vdisk action=  
cancelcheckconsistency controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To cancel a check consistency on virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=  
cancelcheckconsistency controller=1 vdisk=4
```

omconfig Pause Check Consistency

Use the following **omconfig** command syntax to pause a check consistency while in progress. See the *Dell OpenManage Online Help* for more information about Pause Check Consistency.

Complete Syntax

```
omconfig storage vdisk action=  
pausecheckconsistency controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To pause a check consistency on virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=  
pausecheckconsistency controller=1 vdisk=4
```

omconfig Resume Check Consistency

Use the following **omconfig** command syntax to resume a check consistency after it has been paused.

Complete Syntax

```
omconfig storage vdisk action=
resumecheckconsistency controller=id vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.


Example Syntax

To resume a check consistency on virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=
resumecheckconsistency controller=1 vdisk=4
```

omconfig Delete Virtual Disk

Use the following **omconfig** command syntax to delete a virtual disk.

 **CAUTION: Deleting a virtual disk destroys all information including file systems and volumes residing on the virtual disk. You may receive a warning message if you attempt to delete the system or boot partition. However, this warning message is not generated in all circumstances. Ensure that you are not deleting the system or boot partition or other vital data when using this command.**

Complete Syntax

```
omconfig storage vdisk action=deletevdisk
controller=id vdisk=id
wvon=deletevdisk controller=1 vdisk=4
```

omconfig Format Virtual Disk

Use the following **omconfig** command syntax to format a virtual disk.

Complete Syntax

```
omconfig storage vdisk action=format controller=id  
vdisk=id
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To format virtual disk 4 on controller 1, enter:

```
omconfig storage vdisk action=format controller=1  
vdisk=4
```

omconfig Reconfiguring Virtual Disks

You can reconfigure a virtual disk to change the virtual disk's RAID level or increase its size by adding physical disks. On some controllers, you can also remove physical disks.

Complete Syntax

```
omconfig storage vdisk action=reconfigure  
controller=id vdisk=id raid=<c| r0| r1| r1c| r5|  
r6| r10> size=<size> pdisk=<PDISK>
```

Example Syntax

To reconfigure virtual disk 4 to a size of 800 MB, use RAID-5 and physical disks 0 through 3 on connector 0 of controller 1. On a SAS controller, the physical disks reside in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

In this example, enter:

```
omconfig storage vdisk action=reconfigure
controller=1 vdisk=4 raid=r5 size=800m pdisk=
0:0,0:1,0:2,0:3
```

Example for SAS Controllers

In this example, enter:

```
omconfig storage vdisk action=reconfigure
controller=1 vdisk=4 raid=r5 pdisk=
0:2:0,0:2:1,0:2:2,0:2:3
```

omconfig Change Virtual Disk Policy

Use the following **omconfig** command syntax to change a virtual disk's read, write, or cache policy.

Complete Syntax

```
omconfig storage vdisk action=changepolicy
controller=id vdisk=id [diskcachepolicy=
<enabled|disabled> | readpolicy=<ra| nra| ara|
rc|nrc> | writepolicy=<wb| wt| wc| nwc> |
cachepolicy=<d | c>]
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

See the *Dell OpenManage Online Help* for more information about the controller-specific diskcache, read, write, and cache policy. For information on specifying these parameters using the **omconfig** command, see the following:

- [readpolicy=<ra| nra| ara| rc| nrc>] Parameter (Optional)
- [writepolicy=<wb| wt| wc| nwc | fwb>] Parameter (Optional)
- [cachepolicy=<d | c>] Parameter (Optional)
- [diskcachepolicy=<enabled|disabled>] Parameter (Optional)

Example Syntax

To change the read policy of virtual disk 4 on controller 1 to no-read-ahead, enter:

```
omconfig storage vdisk action=changepolicy
controller=1 vdisk=4 readpolicy=nra
```

omconfig Rename Virtual Disk

Use the following **omconfig** command syntax to rename a virtual disk.



NOTE: On a CERC SATA 1.5/2s controller, you cannot change the default name of a virtual disk.

Complete Syntax

```
action=rename controller=id vdisk=id name=<string>
```

where *id* is the controller ID and virtual disk ID as reported by the **omreport** command and *<string>* is the new name for the virtual disk. To obtain the values for controller ID and virtual disk ID, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage vdisk controller=ID** to display the IDs for the virtual disks attached to the controller.

Example Syntax

To rename virtual disk 4 on controller 1 to vd4, enter:

```
omconfig storage vdisk action=rename controller=1
vdisk=4 name=vd4
```

omconfig Physical Disk Commands

The following sections provide the **omconfig** command syntax required to execute physical disk tasks.

Table 6-23. omconfig Physical Disk Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs
--------------------------------------	---------------------------

omconfig storage pdisk

action=blink controller=id pdisk=<PDISKID>

action=unblink controller=id pdisk=<PDISKID>

action=remove controller=id pdisk=<PDISKID>

Table 6-23. omconfig Physical Disk Commands (continued)

Required Command Levels (1, 2, 3)	Optional name=value pairs
	action=initialize controller=id pdisk=<PDISKID>
	action=offline controller=id pdisk=<PDISKID>
	action=online controller=id pdisk=<PDISKID>
	action=assignglobalhotspare controller=id pdisk= <PDISKID> assign=<yes no>
	action=rebuild controller=id pdisk=<PDISKID>
	action=cancelrebuild controller=id pdisk=<PDISKID>
	action=removedeadsegments controller=id pdisk= <PDISKID>
	action=clear controller=id pdisk=<PDISKID>
	action=cancelclear controller=id pdisk=<PDISKID>
	action=cancelreplacemember controller=id pdisk= <PDISKID>

omconfig Blink Physical Disk

You can blink the light (light emitting diode or LED display) on one or more physical disks attached to a controller. Use the following **omconfig** command syntax to blink one or more physical disks.

Complete Syntax

```
action=blink controller=id pdisk=<PDISKID>
```

where *id* is the controller ID. The <PDISK> variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to blink physical disk 0 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To blink the physical disk described in this example, enter:

```
omconfig storage pdisk action=blink controller=1
pdisk=0:0
```

Example for SAS Controllers

To blink the physical disk described in this example, enter:

```
omconfig storage pdisk action=blink controller=1
pdisk=0:2:0
```

omconfig Unblink Physical Disk

You can unblink the light (light emitting diode or LED display) on one or more physical disks attached to a controller. Use the following **omconfig** command syntax to unblink one or more physical disks.

Complete Syntax

```
omconfig storage pdisk action=unblink controller=
id pdisk=<PDISKID>
```

where *id* is the controller ID. The **<PDISK>** variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to unblink physical disk 0 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To unblink the physical disk described in this example, enter:

```
omconfig storage pdisk action=unblink controller=1
pdisk=0:0
```

Example for SAS Controllers

To unblink the physical disk described in this example, enter:

```
omconfig storage pdisk action=unblink controller=1
pdisk=0:2:0
```

omconfig Prepare to Remove Physical Disk

Use the following **omconfig** command syntax to prepare a physical disk for removal:

Complete Syntax

```
omconfig storage pdisk action=remove controller=id
pdisk=<PDISKID>
```

where *id* is the controller ID. The **<PDISKID>** variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to prepare physical disk 3 on connector 0 of controller 1 for removal. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To prepare to remove the physical disk described in this example, enter:

```
omconfig storage pdisk action=remove controller=1
pdisk=0:3
```

Example for SAS Controllers

To prepare to remove the physical disk described in this example, enter:

```
omconfig storage pdisk action=remove controller=1
pdisk=0:2:3
```

omconfig Initialize Physical Disk

Use the following **omconfig** command syntax to initialize a physical disk.

Complete Syntax

```
omconfig storage pdisk action=initialize
controller=id pdisk=<PDISKID>
```

where *id* is the controller ID. The <PDISKID> variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to initialize physical disk 3 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To initialize the physical disk described in this example, enter:

```
omconfig storage pdisk action=initialize
controller=1 pdisk=0:3
```

Example for SAS Controllers

To initialize the physical disk described in this example, enter:

```
omconfig storage pdisk action=initialize  
controller=1 pdisk=0:2:3
```

omconfig Offline Physical Disk

Use the following **omconfig** command syntax to offline a physical disk:

Complete Syntax

```
omconfig storage pdisk action=offline controller=  
id pdisk=connectorID:targetID
```

where *id* is the controller ID and *connectorID:targetID* is the connector number and physical disk number as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

To offline physical disk 3 on connector 0 of controller 1, enter:

```
omconfig storage pdisk action=offline controller=1  
pdisk=0:3
```

omconfig Offline Physical Disk

Use the following **omconfig** command syntax to offline a physical disk:

Complete Syntax

```
omconfig storage pdisk action=offline controller=  
id pdisk=<PDISKID>
```

where *id* is the controller ID. The **<PDISKID>** variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to offline physical disk 3 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To offline the physical disk described in this example, enter:

```
omconfig storage pdisk action=offline controller=1
pdisk=0:3
```

Example for SAS Controllers

To offline the physical disk described in this example, enter:

```
omconfig storage pdisk action=offline controller=1
pdisk=0:2:3
```

omconfig Online Physical Disk

Use the following **omconfig** command syntax to bring an offline physical disk back online.

Complete Syntax

```
omconfig storage pdisk action=online controller=id
pdisk=<PDISKID>
```

where *id* is the controller ID. The **<PDISKID>** variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to bring physical disk 3 on connector 0 of controller 1 back online. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To bring the physical disk described in this example back online, enter:

```
omconfig storage pdisk action=online controller=1
pdisk=0:3
```

Example for SAS Controllers

To bring the physical disk described in this example back online, enter:

```
omconfig storage pdisk action=online controller=1
pdisk=0:2:3
```

omconfig Assign Global Hot Spare

Use the following **omconfig** command syntax to assign a physical disk as a global hot spare.

Complete Syntax

```
omconfig storage pdisk action=assignglobalhotspare
controller=id pdisk=<PDISKID> assign=yes
```

where *id* is the controller ID. The **<PDISKID>** variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to assign physical disk 3 on connector 0 of controller 1 as a global hot spare. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To assign the physical disk described in this example as a global hot spare, enter:

```
omconfig storage pdisk action=assignglobalhotspare
controller=1 pdisk=0:3 assign=yes
```

Example for SAS Controllers

To assign the physical disk described in this example as a global hot spare, enter:

```
omconfig storage pdisk action=assignglobalhotspare
controller=1 pdisk=0:2:3 assign=yes
```

omconfig Unassign Global Hot Spare

Use the following **omconfig** command syntax to unassign a physical disk as a global hot spare.

Complete Syntax

```
omconfig storage pdisk action=assignglobalhotspare  
controller=id pdisk=<PDISKID> assign=no
```

where *id* is the controller ID. The <PDISK> variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to unassign physical disk 3 on connector 0 of controller 1 as a global hot spare. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To unassign the physical disk described in this example as a global hot spare, enter:

```
omconfig storage pdisk action=assignglobalhotspare  
controller=1 pdisk=0:3 assign=no
```

Example for SAS Controllers

To unassign the physical disk described in this example as a global hot spare, enter:

```
omconfig storage pdisk action=assignglobalhotspare  
controller=1 pdisk=0:2:3 assign=no
```

omconfig Rebuild Physical Disk

Use the following **omconfig** command syntax to rebuild a failed physical disk. Rebuilding a disk may take several hours. If you need to cancel the rebuild, use the **Cancel Rebuild** task. See the *Dell OpenManage Online Help* for more information about Rebuild Physical Disk.

Complete Syntax

```
omconfig storage pdisk action=rebuild controller=  
id pdisk=<PDISKID>
```

where *id* is the controller ID. The **<PDISK>** variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to rebuild physical disk 3 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To rebuild the physical disk described in this example, enter:

```
omconfig storage pdisk action=rebuild controller=1  
pdisk=0:3
```

Example for SAS Controllers

To rebuild the physical disk described in this example, enter:

```
omconfig storage pdisk action=rebuild controller=1  
pdisk=0:2:3
```

omconfig Cancel Rebuild Physical Disk

Use the following **omconfig** command syntax to cancel a rebuild that is in progress. If you cancel a rebuild, the virtual disk remains in a degraded state. See the *Dell OpenManage Online Help* for more information about Cancel Rebuild Physical Disk.

Complete Syntax

```
omconfig storage pdisk action=cancelrebuild  
controller=id pdisk=<PDISKID>
```

where *id* is the controller ID. The <PDISK> variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to cancel the rebuild of physical disk 3 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To cancel the rebuild of the physical disk described in this example, enter:

```
omconfig storage pdisk action=cancelrebuild  
controller=1 pdisk=0:3
```

Example for SAS Controllers

To cancel the rebuild of the physical disk described in this example, enter:

```
omconfig storage pdisk action=cancelrebuild  
controller=1 pdisk=0:2:3
```

omconfig Remove Dead Segments

Use the following **omconfig** command syntax to recover unusable disk space. See the *Dell OpenManage Online Help* for more information about Removing Dead Segments.

Complete Syntax

```
omconfig storage pdisk action=removedeadsegments  
controller=id pdisk=<PDISKID>
```

where *id* is the controller ID. The <PDISK> variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to remove dead disk segments on physical disk 3 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SCSI, SATA, and ATA Controllers

To remove dead segments on the physical disk described in this example, enter:

```
omconfig storage pdisk action=removedeadsegments
controller=1 pdisk=0:3
```

Example for SAS Controllers

To remove dead segments on the physical disk described in this example, enter:

```
omconfig storage pdisk action=removedeadsegments
controller=1 pdisk=0:2:3
```

omconfig Clear Physical Disk

Use the following **omconfig** command to clear data or a configuration from a physical disk.

Complete Syntax

```
omconfig storage pdisk action=clear controller=id
pdisk=<PDISKID>
```

where *id* is the controller ID. The **<PDISK>** variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to clear physical disk 3 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SAS Controllers

To clear the physical disk described in this example, enter:

```
omconfig storage pdisk action=clear controller=1
pdisk=0:2:3
```

omconfig Cancel Clear Physical Disk

Use the following **omconfig** command to cancel a clear operation in progress on a physical disk.

Complete Syntax

```
omconfig storage pdisk action=cancelclear
controller=id pdisk=<PDISKID>
```

where *id* is the controller ID. The **<PDISKID>** variable specifies the physical disk.

To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage pdisk controller=ID** to display the IDs for the physical disks attached to the controller.

Example Syntax

In this example, you want to cancel the clear of physical disk 3 on connector 0 of controller 1. On a SAS controller, the physical disk resides in enclosure 2.

Example for SAS Controllers

To cancel the clear of the physical disk described in this example, enter:

```
omconfig storage pdisk action=cancelclear
controller=1 pdisk=0:2:3
```

omconfig Cancel Replace Member

Use the following **omconfig** command syntax to cancel a replace member operation.

Complete Syntax

```
action=cancelreplacemember controller=id pdisk=  
<PDISKID>
```

where *id* is the physical disk IDs as reported by the **omreport** command.

Example Syntax

To cancel replace member operation on disk 0:0:1 which is connected to controller 0, enter:

```
omconfig storage pdisk action=cancelreplacemember  
controller=0 pdisk=0:0:1
```

omconfig Battery Commands

The following sections provide the **omconfig** command syntax required to execute battery tasks.

Table 6-24. omconfig Battery Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs
omconfig storage battery	action=recondition controller=id battery=id action=startlearn controller=id battery=id action=delaylearn controller=id battery=id days=d hours=h

omconfig Recondition Battery

Use the following **omconfig** command to recondition a controller battery. See the *Dell OpenManage Online Help* for more information on batteries and the recondition process.

Complete Syntax

```
omconfig storage battery action=recondition  
controller=id battery=id
```

where *id* is the controller ID and battery ID as reported by the **omreport** command. To obtain this value, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage battery controller=ID** to display the ID for the controller battery.

Example Syntax

To recondition the battery on controller 1, enter:

```
omconfig storage battery action=recondition
controller=1 battery=0
```

omconfig Start Battery Learn Cycle

Use the following **omconfig** command to start the battery learn cycle.

Complete Syntax

```
omconfig storage battery action=startlearn
controller=id battery=id
```

where *id* is the controller ID and battery ID as reported by the **omreport** command. To obtain this value, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage battery controller=ID** to display the ID for the controller battery.

Example Syntax

To start the learn cycle on controller 1, enter:

```
omconfig storage battery action=startlearn
controller=1 battery=0
```

omconfig Delay Battery Learn Cycle

Use the following **omconfig** command to delay the battery learn cycle for a specified period of time. The battery learn cycle can be delayed for a maximum of seven days or 168 hours.

Complete Syntax

```
omconfig storage battery action=delaylearn
controller=id battery=id

days=d hours=h
```

where *id* is the controller ID and battery ID as reported by the **omreport** command. To obtain this value, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage battery controller=ID** to display the ID for the controller battery.

Example Syntax

To delay the learn cycle for three days and 12 hours on controller 1, enter:

```
omconfig storage battery action=delaylearn
controller=1 battery=0
days=3 hours=12
```

omconfig Connector Commands


The following sections provide the **omconfig** command syntax required to execute connector tasks.

Table 6-25. omconfig Connector Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs
omconfig storage connector	action=rescan controller=id connector=id

omconfig Rescan Connector

Use the following **omconfig** command to rescan a controller connector. This command rescans all connectors on the controller and is therefore similar to performing a controller rescan.

 **NOTE:** This command is not supported on SAS controllers.

Complete Syntax

```
omconfig storage connector action=rescan
controller=id connector=id
```

where *id* is the controller ID and the connector ID as reported by the **omreport** command. To obtain these values, enter **omreport storage controller** to display the controller IDs and then enter **omreport storage connector controller=ID** to display the IDs for the connectors attached to the controller.

Example Syntax

To rescan connector 2 on controller 1, enter:

```
omconfig storage connector action=rescan  
controller=1 connector=2
```

omconfig Enclosure Commands

The following sections provide the **omconfig** command syntax required to execute enclosure tasks.

Table 6-26. omconfig Enclosure Commands

Required Command Levels (1, 2, 3)	Optional name=value pairs
omconfig storage enclosure	
	action=enablealarm controller=id enclosure= <ENCLOSUREID>
	action=disablealarm controller=id enclosure= <ENCLOSUREID>
	action=setassettag controller=id enclosure= <ENCLOSUREID> assettag=<string>
	action=setassetname controller=id enclosure= <ENCLOSUREID> assetname=<string>
	action=settempprobes controller=id enclosure= <ENCLOSUREID> index=id minwarn=n maxwarn=n
	action=resettempprobes controller=id enclosure= <ENCLOSUREID> index=id
	action=setalltempprobes controller=id enclosure=<ENCLOSUREID> minwarn=n maxwarn=n
	action=resetalltempprobes controller=id enclosure=<ENCLOSUREID>
	action=blink controller=id enclosure=<ENCLOSUREID>

omconfig Enable Enclosure Alarm

Use the following **omconfig** command syntax to enable the enclosure alarm:

Complete Syntax

```
omconfig storage enclosure action=enablealarm  
controller=id enclosure=<ENCLOSUREID>
```

where *id* is the controller ID. The <ENCLOSUREID> variable specifies the enclosure.

Example for SCSI, SATA, and ATA Controllers

To enable the alarm on the enclosure attached to connector 2 on controller 1, enter:

```
omconfig storage enclosure action=enablealarm  
controller=1 enclosure=2
```

Example for SAS Controllers

To enable the alarm on enclosure 2 attached to connector 1 on controller 1, enter:

```
omconfig storage enclosure action=enablealarm  
controller=1 enclosure=1:2
```

omconfig Disable Enclosure Alarm

Use the following **omconfig** command syntax to disable the enclosure alarm.

Complete Syntax

```
omconfig storage enclosure action=disablealarm  
controller=id enclosure=<ENCLOSUREID>
```

where *id* is the controller ID. The <ENCLOSUREID> variable specifies the enclosure.

Example for SCSI, SATA, and ATA Controllers

To disable the alarm on the enclosure attached to connector 2 on controller 1, enter:

```
omconfig storage enclosure action=disablealarm
controller=1 enclosure=2
```

Example for SAS Controllers

To disable the alarm on enclosure 2 attached to connector 1 on controller 1, enter:

```
omconfig storage enclosure action=disablealarm
controller=1 enclosure=1:2
```

omconfig Set Enclosure Asset Tag

Use the following **omconfig** command syntax to specify the enclosure's asset tag:

Complete Syntax

```
omconfig storage enclosure action=setassettag
controller=id enclosure=<ENCLOSUREID> assettag=
<string>
```

where *id* is the controller ID. The <ENCLOSUREID> variable specifies the enclosure.

In this syntax, <string> is a user-specified alphanumeric string.

Example for SCSI, SATA, and ATA Controllers

To specify the asset tag to encl20 on the enclosure attached to connector 2 on controller 1, enter:

```
omconfig storage enclosure action=setassettag
controller=1 enclosure=2 assettag=encl20
```

Example for SAS Controllers

To specify the asset tag to encl20 on enclosure 2 attached to connector 1 on controller 1, enter:

```
omconfig storage enclosure action=setassettag
controller=1 enclosure=1:2 assettag=encl20
```

omconfig Set Enclosure Asset Name

Use the following **omconfig** command syntax to specify the asset name for an enclosure.

Complete Syntax

```
omconfig storage enclosure action=setassetname  
controller=id enclosure=<ENCLOSUREID> assetname=  
<string>
```

where *id* is the controller ID. The **<ENCLOSUREID>** variable specifies the enclosure.

In this syntax, **<string>** is a user-specified alphanumeric string.

Example for SCSI, SATA, and ATA Controllers

To specify the asset name to encl43 for the enclosure attached to connector 2 on controller 1, enter:

```
omconfig storage enclosure action=setassetname  
controller=1 enclosure=2 assetname=encl43
```

Example for SAS Controllers

To specify the asset name to encl43 for enclosure 2 attached to connector 1 on controller 1, enter:

```
omconfig storage enclosure action=setassetname  
controller=1 enclosure=1:2 assetname=encl43
```

omconfig Set Temperature Probe Thresholds

Use the following **omconfig** command syntax to set the minimum and maximum warning temperature thresholds for a specified temperature probe.



NOTE: This command is not supported on SAS controllers.

Complete Syntax

```
omconfig storage enclosure action=settemprobes  
controller=id enclosure=<ENCLOSUREID> index=id  
minwarn=n maxwarn=n
```


where *id* is the controller ID and the temperature probe ID. The `<ENCLOSUREID>` variable specifies the enclosure.

In this syntax, “n” is a user-specified value for the temperature in Celsius.

Example Syntax

For example, you may want to specify the minimum and maximum warning thresholds for temperature probe 3 to 10 and 40° Celsius.

Example for SCSI, SATA, and ATA Controllers

In this example, temperature probe 3 resides in the enclosure attached to connector 2 on controller 1. To set the temperature probe thresholds to 10 and 40° Celsius, enter:

```
omconfig storage enclosure action=settempprobes
controller=1 enclosure=2 index=3 minwarn=10
maxwarn=40
```

omconfig Reset Temperature Probe Thresholds

Use the following `omconfig` command syntax to reset the minimum and maximum warning temperature thresholds back to their default values.



NOTE: This command is not supported on SAS controllers.

Complete Syntax

```
omconfig storage enclosure action=resettempprobes
controller=id enclosure=<ENCLOSUREID> index=id
```

where *id* is the controller ID and the temperature probe ID. The `<ENCLOSUREID>` variable specifies the enclosure.

Example Syntax

For example, you may want to reset the thresholds for temperature probe 3 to the default values.

Example for SCSI, SATA, and ATA Controllers

In this example, temperature probe 3 resides in the enclosure attached to connector 2 on controller 1. To reset the thresholds for temperature probe 3 to the default values, enter:

```
omconfig storage enclosure action=resettempprobes  
controller=1 enclosure=2 index=3
```

omconfig Set All Temperature Probe Thresholds

Use the following **omconfig** command syntax to set the minimum and maximum warning temperature thresholds for all temperature probes in the enclosure.



NOTE: This command is not supported on SCSI RAID controllers.

Complete Syntax

```
omconfig storage enclosure action=setalltempprobes  
controller=id enclosure=<ENCLOSUREID> minwarn=n  
maxwarn=n
```

where *id* is the controller ID. The **<ENCLOSUREID>** variable specifies the enclosure.

Example Syntax

For example, you may want to specify the minimum and maximum warning thresholds for all temperature probes to 10 and 40° Celsius.

Example for SAS Controllers

In this example, the temperature probes reside in enclosure 3 attached to connector 2 on controller 1. To set the thresholds for all temperature probes to 10 and 40° Celsius, enter:

```
omconfig storage enclosure action=setalltempprobes  
controller=1 enclosure=2:3 minwarn=10 maxwarn=40
```

omconfig Reset All Temperature Probe Thresholds

Use the following **omconfig** command syntax to reset the minimum and maximum warning temperature thresholds back to their default value for all temperature probes in the enclosure.



NOTE: This command is not supported on SCSI RAID controllers.

Complete Syntax

```
omconfig storage enclosure action=
resetalltemp probes controller=id enclosure=
<ENCLOSUREID>
```

where *id* is the controller ID. The <ENCLOSUREID> variable specifies the enclosure.

Example Syntax

For example, you may want to reset the thresholds for all temperature probes in enclosure 2 on controller 1.

Example for SAS Controllers

In this example, the temperature probes reside in enclosure 3 attached to connector 2 on controller 1. To reset the thresholds for all temperature probes, enter:

```
omconfig storage enclosure action=
resetalltemp probes controller=1 enclosure=2:3
```

omconfig Blink

Use the following **omconfig** command to blink the light-emitting diodes (LEDs) on the enclosure.

Complete Syntax

```
omconfig storage enclosure action=blink
controller=id enclosure=<ENCLOSUREID>
```

where *id* is the controller ID. The <ENCLOSUREID> variable specifies the enclosure.

Example for SCSI, SATA, and ATA Controllers

To blink the LEDs for the enclosure attached to connector 2 on controller 1, enter:

```
omconfig storage enclosure action=blink  
controller=1 enclosure=2
```

Example for SAS Controllers

To blink the LEDs for enclosure 3 attached to connector 2 on controller 1, enter:

```
omconfig storage enclosure action=blink  
controller=1 enclosure=2:3
```

Working With CLI Command Results

Server Administrator Command Line Interface (CLI) users can use the command output in various ways. This section explains how to save command output to a file and how to select a format for your command results that fits different objectives.

Table 7-1. System Availability for the omreport Command

Command Level 1	Command Level 2	Applicable To
<i>omreport</i>	<i>modularenclosure</i>	Modular system
	<i>servermodule</i>	Modular system
	<i>mainsystem</i>	Modular system
	<i>system</i>	Non-modular system
	<i>chassis</i>	Non-modular system

Output Options for Command Results

CLI command output displays to standard output on your system in a command window, in an X-terminal, or on a screen, depending on the type of your operating system.

You can redirect command results to a file instead of displaying them to standard output. Saving command output to a file allows you to use the command output for later analysis or comparison.

Whether you display command results to standard output or have the command results written to a file, you can format the results. The format you select determines the way the command output is displayed and the way the command output is written to a file.

Controlling Command Output Display

Each operating system provides a means of controlling the way that command results display to standard output. The following is a useful command for ensuring that command results do not scroll by before you can view them. The same command syntax works for the Microsoft® Windows® command prompt, the Red Hat® Enterprise Linux® terminal, and the

SUSE® Linux Enterprise Server terminal. To display command output with control over scrolling, type the CLI command and append the pipe symbol followed by `more`. For example, type:

```
omreport system summary | more
or
omreport servermodule summary | more
```

The multiscreen system summary displays the first screen. When you want to see the next screen of command output, press the spacebar.

Writing Command Output to a File

When redirecting command results to a file, you can specify a filename (and a directory path if necessary) to which you want the command results to be written. When specifying the path to which you want your file to be written, use the appropriate syntax for your operating system.

You can save command results in two ways. You can overwrite any file that has the same name as the output file you specify, or you can keep adding results of commands to a file of the same name.

Saving Command Results to a File That Can Be Overwritten

Use the `-outc` option when you want to overwrite data stored in previously written files. For example, at 11:00 A.M. you capture fan probe RPM readings for fan probe 0 on your system and write the results to a file called `fans.txt`. You type:

```
omreport chassis fans index=0 -outc fans.txt
or
omreport mainsystem fans index=0 -outc fans.txt
```

Partial results written to the file are:

```
Index                : 0
Status               : OK
Probe Name           : System Board Fan 1 RPM
Reading              : 2380RPM
Minimum Warning Threshold : 600RPM
Maximum Warning Threshold : 5700RPM
Minimum Failure Threshold : 500RPM
Maximum Failure Threshold : 6000RPM
```

Four hours later, you repeat the command. You have no interest in the 11:00 A.M. snapshot as written to **fans.txt**. You type the same command:

```
omreport chassis fans index=0 -outc fans.txt
or
omreport mainsystem fans index=0 -outc fans.txt
```

The 3:00 P.M. data overwrites the 11:00 A.M. data in the **fans.txt** file.

Fans.txt now reads as follows:

```
Index                : 0
Status               : OK
Probe Name           : System Board Fan 1 RPM
Reading              : 3001RPM
Minimum Warning Threshold : 700RPM
Maximum Warning Threshold : 5500RPM
Minimum Failure Threshold : 500RPM
Maximum Failure Threshold : 6000RPM
```

You cannot refer to the previous command results to compare the earlier fan probe 0 output with the present output because in using the **-outc** option, you overwrote the **fans.txt** file.

Append Command Results to an Existing File

Use the **-outa** option when you want to append new command results to data stored in a previously written file. For example, at 11:00 A.M. you capture fan probe RPM readings for fan probe 0 on your system and write the results to a file called **fans.txt**. If you want to compare these results with output for the same probe obtained four hours later, you can use the **-outa** command to append the new output to **fans.txt**.

Type:

```
omreport chassis fans index=0 -outa fans.txt
or
omreport mainsystem fans index=0 -outa fans.txt
```

Fans.txt now reads as follows:

```
Index                : 0
Status               : OK
Probe Name           : System Board Fan 1 RPM
Reading              : 2380RPM
Minimum Warning Threshold : 600RPM
Maximum Warning Threshold : 5700RPM
Minimum Failure Threshold : 500RPM
Maximum Failure Threshold : 6000RPM
```

```
Index                : 0
Status               : OK
Probe Name           : System Board Fan 1 RPM
Reading              : 3001RPM
Minimum Warning Threshold : 700RPM
Maximum Warning Threshold : 5500RPM
Minimum Failure Threshold : 500RPM
Maximum Failure Threshold : 6000RPM
```

You can use a text editor to insert the time that each block of data was captured. In comparing the two snapshots for fan probe 0, you can see that the second report shows several changes. The reading of fan RPM has increased by 621 RPM but is still within normal range. Someone has raised the minimum warning threshold by 200 RPM and has decreased the maximum warning threshold by 2000 RPM.

Selecting a Format for Your CLI Command Output

You can specify a format for your CLI command results. The format determines how the command output is displayed. If the command results are directed to a file, the format is captured by the file to which you write your command results.



NOTE: The **omconfig** command ignores most output format options and returns plain text messages. However, if you choose to display in an XML format, the **omconfig** command returns XML code.

The available formats include:

- List (lst)
- Semicolon-separated values (ssv)
- Table (tbl)
- Raw XML (xml)
- Custom delimited format (cdv)

The Syntax for the formatting option is:

```
<command> -fmt <format option>
```

For example, type:

```
omreport system summary -fmt tbl  
or  
omreport servermodule summary -fmt tbl
```

where **-fmt tbl** specifies table format.

You can combine the formatting option with the option to direct output to a file. For example, type:

```
omreport system summary -fmt tbl -outa summary.txt  
or  
omreport servermodule summary -fmt tbl -outa  
summary.txt
```

where **-fmt tbl** specifies table format and **-outa** specifies that you append the command results to a file called **summary.txt**.

List (lst)

The default format is **lst** or list format. Use this format when you want to optimize output for simple readability. You need to specify a format for your command output only if you want a format other than the **lst** format.

To see the following example command output in **lst** format, type:

```
omreport system summary  
or  
omreport servermodule summary
```

No special formatting option is required because list format is the default display format. The network data part of the example system summary appears as follows:

```
-----  
Network Data  
-----  
  
Network Interface Card 0 Data  
IP Address: 143.166.152.108  
Subnet Mask: 255.255.255.0  
Default Gateway: 143.166.152.1  
MAC Address: 00-02-b3-23-d2-ca
```

Table (tbl)

Use the `tbl` or `table` formatting option to have your data formatted in table rows and columns. To see the following example command output in table format, type:

```
omreport system summary -fmt tbl  
or  
omreport servermodule summary -fmt tbl
```

The example output displays as follows:

```
-----  
Network Interface Card 0 Data  
-----  
  
| ATTRIBUTE | VALUE  
| IP Address | 143.166.152.108  
| Subnet Mask | 255.255.255.0  
| Default Gateway | 143.166.152.1  
| MAC Address | 00-02-b3-23-d2-ca
```

Semicolon-separated Values (ssv)

Use the `ssv` formatting option to deliver output formatted in semicolon-separated value format. This format also allows you to import your command output results into a spreadsheet program such as Microsoft Excel, or into a database program. To see the following example command output in semicolon-separated value format, type:

```
omreport system summary -fmt ssv
or
omreport servermodule summary -fmt ssv
```

The example output displays as follows:

```
-----
Network Data
-----

Network Interface Card 0 Data
IP Address;143.166.152.108
Subnet Mask;255.255.255.0
Default Gateway;143.166.152.1
MAC Address;00-02-b3-23-d2-ca
```

Raw XML (xml)

Use the `xml` formatting option to produce output suitable for use by systems management applications or for input into other applications that use XML. To see the following example command output in raw XML format, type:

```
omreport system summary -fmt xml
or
omreport servermodule summary -fmt xml
```

The example output displays as follows:

```
<NICStatus>1</NICStatus><IPAddress>143.166.152.108</IPAddress><SubnetMask>255.255.255.0</SubnetMask><DefaultGateway>143.166.152.1</DefaultGateway><MACAddr>00-02-b3-23-d2-ca</MACAddr>
```

Custom Delimited Format (cdv)

Use the **cdv** formatting option to report exported data in custom delimited format. You can specify this option with any **omreport** command. For example, to generate a system summary in custom delimited format, type:

```
omreport system summary -fmt cdv
```

or

```
omreport servermodule summary -fmt cdv
```

You can also set preferences for the custom delimited format with the **omconfig** command. The valid values for delimiters are: exclamation, semicolon, at, hash, dollar, percent, caret, asterisk, tilde, question, colon, comma, and pipe.

The following example shows how to set the delimiter for separating data fields to asterisk:

```
omconfig preferences cdvformat delimiter=asterisk
```

Glossary

The following list defines or identifies technical terms, abbreviations, and acronyms used in Dell™ user documents.

A

Abbreviation for ampere(s).

AC

Abbreviation for alternating current.

AC power switch

A switch with two AC power inputs that provides AC power redundancy by failing over to a standby AC input in the event of a failure to the primary AC input.

Access

Refers to the actions a user can take on a variable value. Examples include read-only and read-write.

Adapter card

An expansion card that plugs into an expansion-card connector on the computer's system board. An adapter card adds some specialized function to the computer by providing an interface between the expansion bus and a peripheral device. Examples of adapter cards include network cards, sound cards, and SCSI adapters.

ADB

Abbreviation for assign database.

AGP

Abbreviation for accelerated graphics port. A high performance graphics interface available for Intel® Pentium® Pro systems.

ASCII

Acronym for American Standard Code for Information Interchange. A text file containing only characters from the ASCII character set (usually created with a text editor, such as Notepad in Microsoft® Windows®) is called an ASCII file.

ASIC

Acronym for application-specific integrated circuit.

ASPI

Advanced SCSI programming interface.

ASR

Abbreviation for automatic system recovery. ASR consists of those procedures that restore the system to running all properly configured domains after one or more domains have been rendered inactive due to software or hardware failures or due to unacceptable environmental conditions.

asset tag code

An individual code assigned to a computer, usually by a system administrator, for security or tracking purposes.

attribute

An attribute, or property, contains a specific piece of information about a manageable component. Attributes can be combined to form groups. If an attribute is defined as read-write, it may be defined by a management application.

authentication

The Server Administrator remote access (RAC) controller has two methods of authenticating user access: RAC authentication and local operating system authentication. RAC authentication is always enabled. Administrators can set up specific user accounts and passwords that allow access to the RAC.

Operating systems also require administrators to define different levels of users and user accounts; each user level has different privileges. Local operating system authentication on the RAC is an option for administrators who do not want define one set of privileges for users in the operating system and a separate set of users and accounts for the RAC. If you enable local operating system authentication for the RAC, you enable any user with Administrator status on the operating system to log into the RAC.

autoexec.bat file

The **autoexec.bat** file is executed when you start your computer (after executing any commands in the **config.sys** file). This start-up file contains commands that define the characteristics of each device connected to your computer, and it finds and executes programs stored in locations other than the active directory.

backup

A copy of a program or data file. As a precaution, back up your computer's hard drive on a regular basis. Before changing the configuration of your computer, back up important start-up files from your operating system.

baud rate

A measurement of data transmission speed. For example, modems are designed to transmit data at one or more specified baud rate(s) through the COM (serial) port of a computer.

BGA

Abbreviation for Ball Grid Array, an IC package that uses an array of solder balls, instead of pins, to connect to a PC board.

binary

A base-2 numbering system that uses 0 and 1 to represent information. The computer performs operations based on the ordering and calculation of these numbers.

BIOS

Acronym for basic input/output system. Your computer's BIOS contains programs stored on a flash memory chip. The BIOS controls the following:

- Communications between the microprocessor and peripheral devices, such as the keyboard and the video adapter
- Miscellaneous functions, such as system messages

bit

The smallest unit of information interpreted by your computer.

BMC

Abbreviation for baseboard management controller, which is a controller that provides the intelligence in the IPMI structure.

boot routine

When you start your computer, it clears all memory, initializes devices, and loads the operating system. Unless the operating system fails to respond, you can reboot (also called *warm boot*) your computer by pressing <Ctrl><Alt>; otherwise, you must perform a cold boot by pressing the reset button or by turning off the computer and then turning it back on.

bootable diskette

You can start your computer from a diskette. To make a bootable diskette, insert a diskette in the diskette drive, type `sys a:` at the command line prompt, and press <Enter>. Use this bootable diskette if your computer does not boot from the hard drive.

bpi

Abbreviation for bits per inch.

bps

Abbreviation for bits per second.

BTU

Abbreviation for British thermal unit.

bus

An information pathway between the components of a computer. Your computer contains an expansion bus that allows the microprocessor to communicate with controllers for all the various peripheral devices connected to the computer. Your computer also contains an address bus and a data bus for communications between the microprocessor and RAM.

byte

Eight contiguous bits of information, the basic data unit used by your computer.

C

Abbreviation for Celsius.

CA

Abbreviation for certificate authority.

cache

A fast storage area that keeps a copy of data or instructions for quicker data retrieval. For example, your computer's BIOS may cache ROM code in faster RAM. Or, a disk-cache utility may reserve RAM in which to store frequently accessed information from your computer's disk drives; when a program makes a request to a disk drive for data in the cache, the disk-cache utility can retrieve the data from RAM faster than from the disk drive.

capability

Refers to the actions that an object can perform, or actions that can be taken on a managed object. For example, if a card is hot-pluggable, it is capable of being replaced while the system power is turned ON.

CDRAM

Abbreviation for cached DRAM, which is a high-speed DRAM memory chip developed by Mitsubishi that includes a small SRAM cache.

CD-ROM

Abbreviation for compact disc read-only memory. CD drives use optical technology to read data from CDs. CDs are read-only storage devices; you cannot write new data to a CD with standard CD drives.

certificate authority

A certificate authority is an industry-recognized entity. A certificate authority verifies the identity of organizations requesting credentials to identify them to other systems over networks or the Internet. Before issuing a certificate to an applicant, the certificate authority requires proof of identity and other security information.

chip

A set of microminiaturized, electronic circuits designed for use as processors and memory in computers. Small chips can hold from a handful to tens of thousands of transistors. They resemble tiny chips of aluminum, no more than 1/16" square by 1/30" thick, which is where the term "chip" came from. Large chips, which can be more than a half inch square, hold millions of transistors. It is actually only the top one thousandth of an inch of a chip's surface that holds the circuits. The rest of the chip is just a base.

CIM

Acronym for Common Information Model, which is a model for describing management information from the DMTF. CIM is implementation independent, allowing different management applications to collect the required data from a variety of sources. CIM includes schemas for systems, networks, applications and devices, and new schemas to be added. It provides mapping techniques for interchange of CIM data with MIB data from simple network management protocol (SNMP) agents and management information format (MIF) data from DMI-compliant systems.

CIMOM

Acronym for common information model object manager.

CI/O

Acronym for comprehensive input/output.

cm

Abbreviation for centimeter(s).

CMC

Acronym for Chassis Management Controller.

CMOS

Acronym for complementary metal-oxide semiconductor. In computers, CMOS memory chips are often used for NVRAM storage.

COM *n*

The device names for the first through fourth serial ports on your computer are COM1, COM2, COM3, and COM4. The default interrupt for COM1 and COM3 is IRQ4, and the default interrupt for COM2 and COM4 is IRQ3. Therefore, you must be careful when configuring software that runs a serial device so that you don't create an interrupt conflict.

component

As they relate to DMI, manageable components are operating systems, computer systems, expansion cards, or peripherals that are compatible with DMI. Each component is made up of groups and attributes that are defined as relevant to that component.

config.sys file

The `config.sys` file is executed when you start your computer (before running any commands in the `autoexec.bat` file). This start-up file contains commands that specify which devices to install and which drivers to use. This file also contains commands that determine how the operating system uses memory and controls files.

controller

A chip that controls the transfer of data between the microprocessor and memory or between the microprocessor and a peripheral device such as a disk drive or the keyboard.

control panel

The part of the computer that contains indicators and controls, such as the power switch, hard drive access indicator, and power indicator.

conventional memory

The first 640 KB of RAM. Conventional memory is found in all computers. Unless they are specially designed, MS-DOS[®] programs are limited to running in conventional memory.

COO

Acronym for cost of ownership.

cooling unit

Sets of fans or other cooling devices in a system chassis.

coprocessor

A chip that relieves the computer's microprocessor of specific processing tasks. A math coprocessor, for example, handles numeric processing. A graphics coprocessor handles video rendering. The Intel Pentium microprocessor for example, includes a built-in math coprocessor.

cpi

Abbreviation for characters per inch.

CPU

Abbreviation for central processing unit. See also *microprocessor*.

CRC

Abbreviation for cyclic redundancy code, which is a number derived from, and stored or transmitted with, a block of data in order to detect corruption. By recalculating the CRC and comparing it to the value originally transmitted, the receiver can detect some types of transmission errors.

CSR

Abbreviation for certificate signing request. A complex text file generated by a Web server to identify and authenticate systems that seek connections to other systems. The digital signature that is present in every CSR contributes to secure identification of systems.

When a remote access controller is present on a system running Server Administrator, the CSR that comes with the RAC belongs to Dell. If your company wants to generate its own CSR, you can request a unique CSR from a certificate authority and overwrite the Dell CSR.

cursor

A marker, such as a block, underscore, or pointer that represents the position at which the next keyboard or mouse action will occur.

DAT

Acronym for digital audio tape.

dB

Abbreviation for decibel(s).

dBa

Abbreviation for adjusted decibel(s).

DC

Abbreviation for direct current.

device driver

A program that allows the operating system or some other program to interface correctly with a peripheral device, such as a printer. Some device drivers—such as network drivers—must be loaded from the `config.sys` file (with a `device=` statement) or as memory-resident programs (usually, from the `autoexec.bat` file). Others—such as video drivers—must load when you start the program for which they were designed.

DHCP

Acronym for dynamic host configuration protocol. A method of configuring a network in which IP addresses are issued by a server, rather than statically assigned to each system.

DIMM

Acronym for dual in-line memory module. A small circuit board containing DRAM chips that connects to the system board.

DIN

Acronym for *Deutsche Industrie Norm* which is the standards-setting organization in Germany.

A DIN connector is a connector that conforms to one of the many standards defined by DIN. DIN connectors are used widely in personal computers. For example, the keyboard connector for PCs is a DIN connector.

DIP

Acronym for dual in-line package. A circuit board, such as a system board or expansion card, may contain DIP switches for configuring the circuit board. DIP switches are always toggle switches, with an ON position and an OFF position.

display adapter

See video adapter.

DMA

Abbreviation for direct memory access. A DMA channel allows certain types of data transfer between RAM and a device to bypass the microprocessor.

DMI

Abbreviation for Desktop Management Interface. DMI enables the management of your computer system's software and hardware. DMI collects information about the system's components, such as the operating system, memory, peripherals, expansion cards, and asset tag. Information about the system's components is displayed as a MIF file.

DMTF

Abbreviation for Distributed Management Task Force, a consortium of companies representing hardware and software providers, of which Dell is a member.

dpi

Abbreviation for dots per inch.

DPMS

Abbreviation for Display Power Management Signaling. A standard developed by the Video Electronics Standards Association (VESA[®]) that defines the hardware signals sent by a video controller to activate power management states in a monitor. A monitor is said to be DPMS-compliant when it is designed to enter a power management state after receiving the appropriate signal from a computer's video controller.

DRAC

Refers to a remote management capability. See RAC.

DRAM

Acronym for dynamic random-access memory. A computer's RAM is usually made up entirely of DRAM chips. Because DRAM chips cannot store an electrical charge indefinitely, your computer continually refreshes each DRAM chip in the computer.

drive-type number

Your computer can recognize a number of specific hard drives. Each is assigned a drive-type number that is stored in NVRAM. The hard drive(s) specified in your computer's System Setup program must match the actual drive(s) installed in the computer. The System Setup program also allows you to specify physical parameters (logical cylinders, logical heads, cylinder number, and logical sectors per pack) for drives not included in the table of drive types stored in NVRAM.

DTE

Abbreviation for data terminal equipment. Any device, such as a computer system, that can send data in digital form by means of a cable or communications line. The DTE is connected to the cable or communications line through a data communications equipment (DCE) device, such as a modem.

ECC

Abbreviation for error checking and correction.

ECP

Abbreviation for Extended Capabilities Port.

EDO

Acronym for extended data output dynamic random access memory which is a type of DRAM faster than conventional DRAM. EDO RAM can start fetching the next block of memory at the same time that it sends the previous block to the CPU.

EEPROM

Acronym for electrically erasable programmable read-only memory.

EIDE

Abbreviation for enhanced integrated drive electronics. EIDE devices add one or more of the following enhancements to the traditional IDE standard:

- Data transfer rates of up to 16 MB/sec
- Support for drives other than just hard drives, such as CD drives
- Support for hard drives with capacities greater than 528 MB
- Support for up to two controllers, each with up to two devices attached

EISA

Acronym for Extended Industry-Standard Architecture, a 32-bit expansion-bus design. The expansion-card connectors in an EISA computer are also compatible with 8- or 16-bit ISA expansion cards.

To avoid a configuration conflict when installing an EISA expansion card, use the EISA Configuration Utility. This utility allows you to specify which expansion slot contains the card and obtains information about the card's required system resources from a corresponding EISA configuration file.

Embedded Hypervisor

Embedded Hypervisor enhances the virtualization capabilities of your Dell systems.

EMC

Abbreviation for Electromagnetic Compatibility.

EMI

Abbreviation for electromagnetic interference.

EMM

Abbreviation for expanded memory manager. A utility that uses extended memory to emulate expanded memory on computers with an Intel386™ or higher microprocessor.

EMS

Abbreviation for Expanded Memory Specification.

EPP

Abbreviation for Enhanced Parallel Port which provides improved bidirectional data transmission. Many devices are designed to take advantage of the EPP standard, especially devices, such as network or SCSI adapters that connect to the parallel port of a portable computer.

EPROM

Acronym for erasable programmable read-only memory.

ERA

Acronym for embedded remote access.

ERA/O

Acronym for embedded remote access option.

ESD

Abbreviation for electrostatic discharge.

ESM

Acronym for embedded server management.

expanded memory

A technique for accessing RAM above 1 MB. To enable expanded memory on your computer, use an EMM. You should configure your system to support expanded memory only if you run application programs that can use (or require) expanded memory.

expansion bus

Your computer contains an expansion bus that allows the microprocessor to communicate with controllers for peripheral devices, such as a network card or an internal modem.

expansion-card connector

A connector on the computer's system board or riser board for plugging in an expansion card.

extended memory

RAM above 1 MB. Most software that can use it, such as the Windows operating system, requires that extended memory be under the control of an XMM.

external cache memory

A RAM cache using SRAM chips. Because SRAM chips operate at several times the speed of DRAM chips, the microprocessor can retrieve data and instructions faster from external cache memory than from the RAM.

F

Abbreviation for Fahrenheit.

FAT

Acronym for file allocation table. The file system structure used by MS-DOS to organize and keep track of file storage. The Windows NT[®] operating systems (and later Windows versions) can optionally use a FAT file system structure.

FCC

Abbreviation for Federal Communications Commission.

FEPRM

Acronym for Flash Erasable Programmable Read-Only Memory. Flash memory is a kind of non-volatile storage device similar to EEPROM, but the erasing takes place only in blocks or the entire chip.

FIFO

Abbreviation for first-in, first-out. In computer programming, FIFO (first-in, first-out) is an approach to handling program work requests from queues or stacks so that the oldest request is handled next.

flash bios

A PC BIOS that is stored in a flash memory rather than in a ROM. A flash BIOS chip can be updated in place, whereas a ROM BIOS must be replaced with a newer chip.

flash memory

A type of EEPROM chip that can be reprogrammed from a utility on diskette while still installed in a computer; most EEPROM chips can only be rewritten with special programming equipment.

format

To prepare a hard drive or diskette for storing files. An unconditional format deletes all data stored on the disk.

FPBGA

Acronym for field programmable gate array, a programmable logic chip (PLD) with a high density of gates.

FRU

Acronym for field replaceable unit.

FTP

Abbreviation for file transfer protocol.

G

Abbreviation for gravities.

GB

Abbreviation for gigabyte(s). A gigabyte equals 1,024 megabytes or 1,073,741,824 bytes.

graphics coprocessor

See coprocessor.

group

As it relates to DMI, a group is a data structure that defines common information, or attributes, about a manageable component.

GUI

Acronym for graphical user interface.

h

Abbreviation for hexadecimal. A base-16 numbering system, often used in programming to identify addresses in the computer's RAM and I/O memory addresses for devices. The sequence of decimal numbers from 0 through 16, for example, is expressed in hexadecimal notation as: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, 10. In text, hexadecimal numbers are often followed by *h*.

heat sink

A metal plate with metal pegs or ribs that help dissipate heat. Most microprocessors include a heat sink.

HIP

Abbreviation for Dell OpenManage™ Hardware Instrumentation Package.

HMA

Abbreviation for high memory area. The first 64 KB of extended memory above 1 MB. A memory manager that conforms to the XMS can make the HMA a direct extension of conventional memory. See also upper memory area and XMM.

host adapter

A host adapter implements communication between the computer's bus and the controller for a peripheral device. (Hard drive controller subsystems include integrated host adapter circuitry.) To add a SCSI expansion bus to your system, you must install or connect the appropriate host adapter.

hot plug

The ability to remove and replace a redundant part while the system is being used. Also called a "hot spare."

HPFS

Abbreviation for the High Performance File System option in the Windows NT and later Windows operating systems.

HTTPS

Abbreviation for HyperText Transmission Protocol, Secure. HTTPS is a variant of HTTP used by Web browsers for handling secure transactions. HTTPS is a unique protocol that is simply SSL underneath HTTP. You need to use "https://" for HTTP URLs with SSL, whereas you continue to use "http://" for HTTP URLs without SSL.

Hz

Abbreviation for hertz.

ICES

Abbreviation for Interference-Causing Equipment Standard (in Canada).

ICU

Abbreviation for ISA Configuration Utility.

IDE

Abbreviation for Integrated Device Electronics. IDE is a computer system interface, used primarily for hard drives and CDs.

I/O

Abbreviation for input/output. The keyboard is an input device, and a printer is an output device. In general, I/O activity can be differentiated from computational activity. For example, when a program sends a document to the printer, it is engaging in output activity; when the program sorts a list of terms, it is engaging in computational activity.

ID

Abbreviation for identification.

iDRAC6

Acronym for integrated Dell Remote Access Controller.

IHV

Acronym for independent hardware vendor. IHVs often develop their own MIBs for components that they manufacture.

interlacing

A technique for increasing video resolution by only updating alternate horizontal lines on the screen. Because interlacing can result in noticeable screen flicker, most users prefer noninterlaced video adapter resolutions.

internal microprocessor cache

An instruction and data cache built in to the microprocessor. The Intel Pentium microprocessor includes a 16-KB internal cache, which is set up as an 8-KB read-only instruction cache and an 8-KB read/write data cache.

Internal USB

Internal USB flash drive is an additional storage device. Internal USB enhances virtualization capabilities.

IP

The Internet Protocol (IP) is the method or protocol by which data is sent from one computer to another on the Internet. Each computer (known as a host) on the Internet has at least one IP address that uniquely identifies it from all other computers on the Internet.

IPMI

Abbreviation for Intelligent Platform Management Interface, which is an industry standard for management of peripherals used in enterprise computers based on Intel architecture. The key characteristic of IPMI is that inventory, monitoring, logging, and recovery control functions are available independent of the main processors, BIOS, and operating system.

IPX

Acronym for internetwork packet exchange.

IRQ

Abbreviation for interrupt request. A signal that data is about to be sent to or received by a peripheral device travels by an IRQ line to the microprocessor. Each peripheral connection must be assigned an IRQ number. For example, the first serial port in your computer (COM1) is assigned to IRQ4 by default. Two devices can share the same IRQ assignment, but you cannot operate both devices simultaneously.

ISA

Acronym for Industry-Standard Architecture. A 16-bit expansion bus design. The expansion-card connectors in an ISA computer are also compatible with 8-bit ISA expansion cards.

iSCSI

Acronym for Internet SCSI. An IP based storage networking standard for linking data storage facilities. By carrying SCSI commands over IP networks, iSCSI is

used to facilitate data transfers over intranets and to manage storage over long distances.

ITE

Abbreviation for information technology equipment.

jumper

Jumpers are small blocks on a circuit board with two or more pins emerging from them. Plastic plugs containing a wire fit down over the pins. The wire connects the pins and creates a circuit. Jumpers provide a simple and reversible method of changing the circuitry in a printed circuit board.

JVM

Acronym for Java virtual machine.

K

Abbreviation for kilo-, indicating 1,000.

KB

Abbreviation for kilobyte(s), 1,024 bytes.

KB/sec

Abbreviation for kilobyte(s) per second.

Kbit(s)

Abbreviation for kilobit(s), 1,024 bits.

Kbit(s)/sec

Abbreviation for kilobit(s) per second.

Kerberos

A network authentication protocol that is designed to provide strong authentication for client/server applications by using secret-key cryptography.

key combination

A command requiring you to press multiple keys at the same time. For example, you can reboot your computer by pressing the <Ctrl><Alt> key combination.

kg

Abbreviation for kilogram(s), 1,000 grams.

kHz

Abbreviation for kilohertz, 1,000 hertz.

LAN

Acronym for local area network. A LAN system is usually confined to the same building or a few nearby buildings, with all equipment linked by wiring dedicated specifically to the LAN.

lb

Abbreviation for pound(s).

LCC

Acronym for leaded or leadless chip carrier.

LDAP

Acronym for Lightweight Directory Access Protocol. A networking protocol for querying and modifying directory services running over TCP/IP.

LIF

Acronym for low insertion force. Some computers use LIF sockets and connectors to allow devices, such as the microprocessor chip, to be installed or removed with minimal stress to the device.

LED

Abbreviation for light-emitting diode. An electronic device that lights up when a current is passed through it.

local bus

On a computer with local-bus expansion capability, certain peripheral devices (such as the video adapter circuitry) can be designed to run much faster than they would with a traditional expansion bus. Some local-bus designs allow peripherals to run at the same speed and with the same width data path as the computer's microprocessor.

LOM

Acronym for LAN on Motherboard.

LPT_n

The device names for the first through third parallel printer ports on your computer are LPT1, LPT2, and LPT3.

LRA

Acronym for local response agent.

LS drive

A drive that uses laser servo technology to read LS 120 diskettes that hold up to 120 MB of data as well as standard 3.5-inch diskettes.

LSI

Acronym for large-scale integration.

LUN

Acronym for logical unit number, a code used to select a specific device among several that share a SCSI ID.

mA

Abbreviation for milliamper(e)s.

mAh

Abbreviation for milliamper(e)-hour(s).

math coprocessor

See coprocessor.

Mb

Abbreviation for megabit.

MB

Abbreviation for megabyte(s). The term *megabyte* means 1,048,576 bytes; however, when referring to hard drive storage, the term is often rounded to mean 1,000,000 bytes.

MB/sec

Abbreviation for megabytes per second.

Mbps

Abbreviation for megabits per second.

MBR

Abbreviation for master boot record.

MCA

Abbreviation for Micro Channel Architecture, which is designed for multiprocessing. MCA eliminates potential conflicts that arise when installing new peripheral devices. MCA is not compatible with either EISA or XT bus architecture, so older cards cannot be used with it.

memory

A computer can contain several different forms of memory, such as RAM, ROM, and video memory. Frequently, the word *memory* is used as a synonym for RAM; for example, an unqualified statement such as “a computer with 16 MB of memory” refers to a computer with 16 MB of RAM.

memory address

A specific location, usually expressed as a hexadecimal number, in the computer's RAM.

memory manager

A utility that controls the implementation of memory in addition to conventional memory, such as extended or expanded memory.

memory module

A small circuit board containing DRAM chips that connects to the system board.

MHz

Abbreviation for megahertz.

MIB

Acronym for management information base. MIB is used to send detailed status/commands from or to an SNMP managed device.

microprocessor

The primary computational chip inside the computer that controls the interpretation and execution of arithmetic and logic functions. Software written for one microprocessor must usually be revised to run on another microprocessor. *CPU* is a synonym for microprocessor.

MIDI

Abbreviation for musical instrument digital interface.

MIF

Acronym for management information format. A MIF file contains information, status, and links to component instrumentation. MIF files are installed into the MIF database by the DMI service layer. The content of a MIF is defined by a DTMF working committee and is published in the form of a MIF definition document. This document identifies the groups and attributes that are relevant to DMI-manageable components.

mm

Abbreviation for millimeter(s).

modem

A device that allows your computer to communicate with other computers over telephone lines.

MOF

Acronym for managed object format, which is an ASCII file that contains the formal definition of a CIM schema.

mouse

A pointing device that controls the movement of the cursor on a screen. Mouse-aware software allows you to activate commands by clicking a mouse button while pointing at objects displayed on the screen.

MPEG

Acronym for Motion Picture Experts Group. MPEG is a digital video file format.

ms

Abbreviation for millisecond(s).

MTBF

Abbreviation for mean time between failures.

multifrequency monitor

A monitor that supports several video standards. A multifrequency monitor can adjust to the frequency range of the signal from a variety of video adapters.

mV

Abbreviation for millivolt(s).

name

The name of an object or variable is the exact string that identifies it in an SNMP Management Information Base (MIB) file, or in a DMI Management Information Format (MIF) file, or in a CIM Management Object File (MOF).

NDIS

Abbreviation for Network Driver Interface Specification.

NIC

Acronym for network interface controller.

NIF

Acronym for network interface function. This term is equivalent to NIC.

NIS

Abbreviation for Network Information System. NIS is a network naming and administration system for smaller networks. A user at any host can get access to files or applications on any host in the network with a single user identification and password.

NMI

Abbreviation for nonmaskable interrupt. A device sends an NMI to signal the microprocessor about hardware errors, such as a parity error.

noninterlaced

A technique for decreasing screen flicker by sequentially refreshing each horizontal line on the screen.

ns

Abbreviation for nanosecond(s), one billionth of a second.

NTFS

Abbreviation for the NT File System option in the Windows NT operating system and later Windows operating systems.

NuBus

Proprietary expansion bus used on Apple[®] Macintosh[®] personal computers.

NVRAM

Acronym for non-volatile random-access memory. Memory that does not lose its contents when you turn off your computer. NVRAM is used for maintaining the date, time, and system configuration information.

OEM

Abbreviation for original equipment manufacturer. An OEM is a company that supplies equipment to other companies to resell or incorporate into another product using the reseller's brand name.

OID

Abbreviation for object identifier. An implementation-specific integer or pointer that uniquely identifies an object.

online access service

A service that typically provides access to the Internet, e-mail, bulletin boards, chat rooms, and file libraries.

OSWDT

Abbreviation for Operating System Watchdog Timer. A watch dog timer is a computer hardware timing device that triggers a system reset, if the operating system is not responding.

OTP

Abbreviation for one-time programmable.

parallel port

An I/O port used most often to connect a parallel printer to your computer. You can identify a parallel port on your computer by its 25-hole connector.

parameter

A value or option that you specify to a program. A parameter is sometimes called a *switch* or an *argument*.

partition

You can divide a hard drive into multiple physical sections called *partitions* using the `fdisk` command. Each partition can contain multiple logical drives.

After partitioning the hard drive, you must format each logical drive with the `format` command.

PCI

Abbreviation for Peripheral Component Interconnect. A standard for local-bus implementation developed by Intel Corporation.

PCMCIA

Personal Computer Memory Card International Association. An international trade association that has developed standards for devices, such as modems and external hard drives, that can be plugged into portable computers.

PERC

Acronym for Expandable RAID controller.

peripheral device

An internal or external device—such as a printer, a disk drive, or a keyboard—connected to a computer.

PGA

Abbreviation for pin grid array, a type of microprocessor socket that allows you to remove the microprocessor chip.

physical memory array

The physical memory array is the entire physical memory of a system. Variables for physical memory array include maximum size, total number of memory slots on the motherboard, and total number of slots in use.

physical memory array mapped

The physical memory array mapped refers to the way physical memory is divided. For example, one mapped area may have 640 KB and the other mapped area may have between 1 megabyte and 127 megabytes.

PIC

Acronym for programmable interrupt controller.

PIP

Acronym for peripheral interchange program. A CP/M utility program that was used to copy files.

PLCC

Acronym for plastic leaded chip carrier.

Plug and Play

An industry-standard specification that makes it easier to add hardware devices to personal computers. Plug and Play provides automatic installation and configuration, compatibility with existing hardware, and dynamic support of mobile computing environments.

PME

Abbreviation for Power Management Event. A PME is a pin on a peripheral component interconnect that allows a PCI device to assert a wake event.

POST

Acronym for power-on self-test. Before the operating system loads when you turn on your computer, the POST tests various system components such as RAM, the disk drives, and the keyboard.

power supply

An electrical system that converts AC current from the wall outlet into the DC currents required by the computer circuitry. The power supply in a personal computer typically generates multiple voltages.

power unit

A set of power supplies in a system chassis.

ppm

Abbreviation for pages per minute.

PQFP

Abbreviation for plastic quad flat pack, a type of microprocessor socket in which the microprocessor chip is permanently mounted.

probe

An electronic sensor for measuring a quantity or determining system state at a particular point within a system. Server Administrator can monitor temperature, voltage, fan, memory, current and chassis intrusion probes. The probes provide a snapshot of the measured quantity (such as the temperature at a particular place and time) or state (a chassis intrusion has or has not occurred).

program diskette set

The set of diskettes from which you can perform a complete installation of an operating system or application program. When you reconfigure a program, you often need its program diskette set.

protected mode

An operating mode supported by 80286 or higher microprocessors, protected mode allows operating systems to implement:

- A memory address space of 16 MB (80286 microprocessor) to 4 GB (Intel386 or higher microprocessor)
- Multitasking
- Virtual memory, a method for increasing addressable memory by using the hard drive

The Windows NT, Windows 2000, Windows XP, OS/2[®], and UNIX[®] 32-bit operating systems run in protected mode. MS-DOS cannot run in protected mode; however, some programs that you can start from MS-DOS, such as the Windows operating system, are able to put the computer into protected mode.

provider

A provider is an extension of a CIM schema that communicates with managed objects and accesses data and event notifications from a variety of sources.

Providers forward this information to the CIM Object Manager for integration and interpretation.

PS

Abbreviation for power supply.

PS/2

Abbreviation for Personal System/2.

PXE

Abbreviation for Pre-boot eXecution Environment.

QFP

Acronym for quad flat pack.

RAC

Acronym for remote access controller. Dell OpenManage Server Administrator supports all RACs. These include the DRAC II, DRAC III, DRAC III/XT, ERA, and ERA/O.

RAID

Acronym for redundant array of independent drives.

RAM

Acronym for random-access memory. The computer's primary temporary storage area for program instructions and data. Each location in RAM is identified by a number called a *memory address*. Any information stored in RAM is lost when you turn off your computer.

RAMBUS

Acronym for Rambus[®] DRAM, a type of memory (DRAM) developed by Rambus, Inc.

RAMDAC

Acronym for random-access memory digital-to-analog converter.

Raw

Unprocessed. The term refers to data that is passed along to an I/O device without being interpreted. In contrast, *cooked* refers to data that is processed before being passed to the I/O device.

Raw often refers to uncompressed text that is not stored in any proprietary format. The term comes from UNIX, which supports cooked and raw modes for data output to a terminal.

RDRAM

Acronym for Rambus DRAM. A dynamic RAM chip technology from Rambus, Inc. Direct RDRAMs are used in computers. Direct RDRAM chips are housed in RIMM modules, which are similar to DIMMs but have different pin settings. The chips can be built with dual channels, doubling the transfer rate to 3.2 GB/sec.

read-only file

A read-only file is one that you are prohibited from editing or deleting. A file can have read-only status if:

- Its read-only attribute is enabled.
- It resides on a physically write-protected diskette or on a diskette in a write-protected drive.
- It is located on a network in a directory to which the system administrator has assigned read-only rights to you.

readme file

A text file included with a software package or hardware product that contains information supplementing or updating the documentation for the software or hardware. Typically, readme files provide installation information, describe new product enhancements or corrections that have not yet been documented, and list known problems or other things you need to be aware of as you use the software or hardware.

real mode

An operating mode supported by 80286 or higher microprocessors, real mode imitates the architecture of an 8086 microprocessor.

refresh rate

The rate at which the monitor redraws the video image on the monitor screen. More precisely, the refresh rate is the frequency, measured in Hz, at which the screen's horizontal lines are recharged (sometimes also referred to as its *vertical frequency*). The higher the refresh rate, the less video flicker can be seen by the human eye. The higher refresh rates are also noninterlaced.

RFI

Abbreviation for radio frequency interference.

RGB

Abbreviation for red/green/blue.

RIMM

Acronym for Rambus In-line Memory Module, which is the Rambus equivalent of a DIMM module.

ROM

Acronym for read-only memory. Your computer contains some programs essential to its operation in ROM code. Unlike RAM, a ROM chip retains its contents even after you turn off your computer. Examples of code in ROM include the program that initiates your computer's boot routine and the POST.

ROMB

Acronym for RAID on motherboard. When a RAID controller is integrated into a computer's system board, the system has ROMB technology.

RPM

Abbreviation for revolutions per minute.

RTC

Abbreviation for real-time clock. Battery-powered clock circuitry inside the computer that keeps the date and time after you turn off the computer.

SAS

Acronym for Serial Attached SCSI.

SCA

Acronym for single connector attachment.

schema

A collection of class definitions that describes managed objects in a particular environment. A CIM schema is a collection of class definitions used to represent managed objects that are common to every management environment, which is why CIM is called the Common Information Model.

SCSI

Acronym for small computer system interface. An I/O bus interface with faster data transmission rates than standard ports. You can connect up to seven devices (15 for some newer SCSI types) to one SCSI interface.

SDMS

Abbreviation for SCSI device management system.

sec

Abbreviation for second(s).

SEC

Abbreviation for single-edge contact.

serial port

An I/O port used most often to connect a modem to your computer. You can usually identify a serial port on your computer by its 9-pin connector.

settings

Settings are conditions of a manageable object help to determine what happens when a certain value is detected in a component. For example, a user can set the upper critical threshold of a temperature probe to 75 degrees Celsius. If the probe reaches that temperature, the setting results in an alert being sent to the management console so that user intervention can be taken. Some settings, when reached, can trigger a system shutdown or other response that can prevent damage to the system.

service tag number

A bar code label on the computer that identifies it when you call Dell for customer or technical support.

SGRAM

Acronym for synchronous graphics RAM.

shadowing

A computer's system and video BIOS code is usually stored on ROM chips. Shadowing refers to the performance-enhancement technique that copies BIOS code to faster RAM chips in the upper memory area (above 640 KB) during the boot routine.

SIMD

Abbreviation for Single Instruction Multiple Data.

SIMM

Acronym for single in-line memory module. A small circuit board containing DRAM chips that connects to the system board.

SIP

Acronym for single in-line package, which is a type of housing for electronic components in which the connecting pins protrude from one side. A SIP is also called a Single In-line Pin Package (SIPP).

SKU

Acronym for stock keeping unit.

SMART

Acronym for Self-Monitoring Analysis Reporting Technology. A technology that allows hard drives to report errors and failures to the system BIOS, which then displays an error message on the screen. To take advantage of this technology, you must have a SMART-compliant hard drive and the proper support in the system BIOS.

SMBIOS

Acronym for system management BIOS.

SMD

Acronym for surface mount device.

SMTP

Acronym for Simple Mail Transfer Protocol, a method for exchanging e-mail over the internet.

SNMP

Abbreviation for Simple Network Management Protocol. SNMP is an industry-standard interface that allows a network manager to remotely monitor and manage workstations.

SODIMM

Acronym for small outline-DIMM. A DIMM module with a thinner profile due to the use of TSOP chip packages. SODIMMs are commonly used in laptop computers.

SRAM

Abbreviation for static random-access memory. Because SRAM chips do not require continual refreshing, they are substantially faster than DRAM chips.

state

Refers to the condition of an object that can have more than one condition. For example, an object may be in the “not ready” state.

status

Refers to the health or functioning of an object. For example, a temperature probe can have the status normal if the probe is measuring acceptable temperatures. When the probe begins reading temperatures that exceed limits set by the user, it reports a critical status.

SVGA

Abbreviation for super video graphics array. VGA and SVGA are video standards for video adapters with greater resolution and color display capabilities than previous standards.

To display a program at a specific resolution, you must install the appropriate video drivers and your monitor must support the resolution. Similarly, the number of colors that a program can display depends on the capabilities of the monitor, the video driver, and the amount of video memory installed in the computer.

switch

On a computer system board, switches control various circuits or functions in your computer system. These switches are known as *DIP* switches; they are normally packaged in groups of two or more switches in a plastic case.

Two common DIP switches are used on system boards: *slide* switches and *rocker* switches. The names of the switches are based on how the settings (on and off) of the switches are changed.

syntax

The rules that dictate how you must type a command or instruction so that the computer understands it. A variable's syntax indicates its data type.

system board

As the main circuit board, the system board usually contains most of your computer's integral components, such as the following:

- Microprocessor
- RAM
- Controllers for standard peripheral devices, such as the keyboard
- Various ROM chips

Frequently used synonyms for system board are *motherboard* and *logic board*.

system configuration information

Data stored in memory that instructs a computer what hardware is installed and how the computer should be configured for operation.

system diskette

System diskette is a synonym for *bootable diskette*.

system memory

System memory is a synonym for *RAM*.

System Setup program

A BIOS-based program that allows you to configure your computer's hardware and customize the computer's operation by setting features such as password protection and energy management. Some options in the System Setup program require that you reboot the computer (or the computer may reboot automatically) in order to make a hardware configuration change. Because the System Setup program is stored in NVRAM, any settings remain in effect until you change them again.

system.ini file

A start-up file for the Windows operating system. When you start Windows, it consults the **system.ini** file to determine a variety of options for the Windows operating environment. Among other things, the **system.ini** file records which video, mouse, and keyboard drivers are installed for Windows.

Running the Control Panel or Windows Setup program may change options in the **system.ini** file. On other occasions, you may need to change or add options to the **system.ini** file manually with a text editor, such as Notepad.

table

In SNMP MIBs, a table is a two dimensional array that describes the variables that make up a managed object.

termination

Some devices (such as the last device at each end of a SCSI cable) must be terminated to prevent reflections and spurious signals in the cable. When such devices are connected in a series, you may need to enable or disable the termination on these devices by changing jumper or switch settings on the devices or by changing settings in the configuration software for the devices.

text editor

An application program for editing text files consisting exclusively of ASCII characters. Windows Notepad is a text editor, for example. Most word processors use proprietary file formats containing binary characters, although some can read and write text files.

text mode

A video mode that can be defined as x columns by y rows of characters.

threshold values

Systems are normally equipped with various sensors that monitor temperature, voltage, current, and fan speed. The sensor's threshold values specify the ranges (min and max values) for determining whether the sensor is operating under normal, noncritical, critical or fatal conditions. Dell-supported threshold values are:

- UpperThresholdFatal
- UpperThresholdCritical
- UpperThresholdNon-critical
- Normal

- LowerThresholdNon-critical
- LowerThresholdCritical
- LowerThresholdFatal

time-out

A specified period of system inactivity that must occur before an energy conservation feature is activated.

tpi

Abbreviation for tracks per inch.

TPM

Acronym for Trusted Platform Module

TQFP

Acronym for thin quad flat pack.

TSR

Abbreviation for terminate-and-stay-resident. A TSR program runs “in the background.” Most TSR programs implement a predefined key combination (sometimes referred to as a *hot key*) that allows you to activate the TSR program's interface while running another program. When you finish using the TSR program, you can return to the other application program and leave the TSR program resident in memory for later use.

TSR programs can sometimes cause memory conflicts. When troubleshooting, rule out the possibility of such a conflict by rebooting your computer without starting any TSR programs.

UART

Acronym for universal asynchronous receiver transmitter, the electronic circuit that makes up the serial port.

UEFI

Acronym for unified extensible firmware interface.

UDP

Acronym for user datagram protocol.

UL

Abbreviation for Underwriters Laboratories.

UMB

Abbreviation for upper memory blocks.

unicode

A fixed width, 16-bit world wide character encoding, developed and maintained by the Unicode Consortium.

upper memory area

The 384 KB of RAM located between 640 KB and 1 MB. If the computer has an Intel386 or higher microprocessor, a utility called a *memory manager* can create UMBs in the upper memory area, in which you can load device drivers and memory-resident programs.

UPS

Abbreviation for uninterruptible power supply. A battery-powered unit that automatically supplies power to your computer in the event of an electrical failure.

USB

Abbreviation for Universal Serial Bus. A USB connector provides a single connection point for multiple USB-compliant devices, such as mice, keyboards, printers, and computer speakers. USB devices can also be connected and disconnected while the system is running.

utility

A program used to manage system resources—memory, disk drives, or printers, for example.

UTP

Abbreviation for unshielded twisted pair.

UUID

Acronym for Universal Unique Identification.

V

Abbreviation for volt(s).

VAC

Abbreviation for volt(s) alternating current.

varbind

An algorithm used to assign an object identifier or OID. The varbind gives rules for arriving at the decimal prefix that uniquely identifies an enterprise, as well as the formula for specifying a unique identifier for the objects defined in that enterprise's MIB.

variable

A component of a managed object. A temperature probe, for example, has a variable to describe its capabilities, its health or status, and certain indexes that you can use to help you locate the right temperature probe.

VCCI

Abbreviation for Voluntary Control Council for Interference.

VDC

Abbreviation for volt(s) direct current.

VESA

Acronym for Video Electronics Standards Association.

VGA

Abbreviation for video graphics array. VGA and SVGA are video standards for video adapters with greater resolution and color display capabilities than previous standards. To display a program at a specific resolution, you must install the appropriate video drivers and your monitor must support the resolution. Similarly, the number of colors that a program can display depends on the capabilities of the monitor, the video driver, and the amount of video memory installed for the video adapter.

VGA feature connector

On some systems with a built-in VGA video adapter, a VGA feature connector allows you to add an enhancement adapter, such as a video accelerator, to your computer. A VGA feature connector can also be called a *VGA pass-through connector*.

video adapter

The logical circuitry that provides—in combination with the monitor—your computer's video capabilities. A video adapter may support more or fewer features than a specific monitor offers. Typically, a video adapter comes with video drivers

for displaying popular application programs and operating systems in a variety of video modes.

On some Dell computers, a video adapter is integrated into the system board. Also available are many video adapter cards that plug into an expansion-card connector.

Video adapters often include memory separate from RAM on the system board. The amount of video memory, along with the adapter's video drivers, may affect the number of colors that can be simultaneously displayed. Video adapters can also include their own coprocessor for faster graphics rendering.

video driver

A program that allows graphics-mode application programs and operating systems to display at a chosen resolution with the desired number of colors. A software package may include some “generic” video drivers. Any additional video drivers may need to match the video adapter installed in the computer.

video memory

Most VGA and SVGA video adapters include memory chips in addition to your computer's RAM. The amount of video memory installed primarily influences the number of colors that a program can display (with the appropriate video drivers and monitor capabilities).

video mode

Video adapters normally support multiple text and graphics display modes. Character-based software displays in text modes that can be defined as x columns by y rows of characters. Graphics-based software displays in graphics modes that can be defined as x horizontal by y vertical pixels by z colors.

video resolution

Video resolution—800 x 600, for example—is expressed as the number of pixels across by the number of pixels up and down. To display a program at a specific graphics resolution, you must install the appropriate video drivers and your monitor must support the resolution.

virtual memory

A method for increasing addressable RAM by using the hard drive. For example, in a computer with 16 MB of RAM and 16 MB of virtual memory set up on the hard drive, the operating system would manage the system as though it had 32 MB of physical RAM.

virus

A self-starting program designed to cause inconvenience. Virus programs have been known to corrupt the files stored on a hard drive or to replicate themselves until a computer or network runs out of memory.

The most common way that virus programs move from one computer to another is through “infected” diskettes, from which they copy themselves to the hard drive. To guard against virus programs, do the following:

- Periodically run a virus-checking utility on your computer's hard drive
- Always run a virus-checking utility on any diskettes (including commercially sold software) before using them

VLSI

Abbreviation for very-large-scale integration.

VLVESA

Acronym for very low voltage enterprise system architecture.

vpp

Abbreviation for peak-point voltage.

VRAM

Acronym for video random-access memory. Some video adapters use VRAM chips (or a combination of VRAM and DRAM) to improve video performance. VRAM is dual-ported, allowing the video adapter to update the screen and receive new image data at the same time.

VRM

Abbreviation for voltage regulator module.

W

Abbreviation for watt(s).

Wakeup on LAN

The ability for the power in a client station to be turned on by the network. Remote wake-up enables software upgrading and other management tasks to be performed on users' machines after the work day is over. It also enables remote users to gain access to machines that have been turned off. Intel calls remote wake-up "Wake-on-LAN."

WH

Abbreviation for watt-hour(s).

Winbind

A program that allows users in a heterogeneous network to log in using workstations that have UNIX operating systems. The program makes workstations using UNIX functional in Windows domains, by making Windows appear like UNIX to each UNIX workstation.

win.ini file

A start-up file for the Windows operating system. When you start Windows, it consults the **win.ini** file to determine a variety of options for the Windows operating environment. Among other things, the **win.ini** file records what printer(s) and fonts are installed for Windows. The **win.ini** file also usually includes sections that contain optional settings for Windows application programs that are installed on the hard drive.

Running the Control Panel or Windows Setup program may change options in the **win.ini** file. On other occasions, you may need to change or add options to the **win.ini** file manually with a text editor such as Notepad.

write-protected

Read-only files are said to be *write-protected*. You can write-protect a 3.5-inch diskette by sliding its write-protect tab to the open position or by setting the write-protect feature in the System Setup program.

XMM

Abbreviation for extended memory manager, a utility that allows application programs and operating systems to use extended memory in accordance with the XMS.

XMS

Abbreviation for eXtended Memory Specification.

ZIF

Acronym for zero insertion force. Some computers use ZIF sockets and connectors to allow devices such as the microprocessor chip to be installed or removed with no stress applied to the device.

ZIP

A 3.5-inch removable disk drive from Iomega. Originally, it provided a 100-MB removable cartridges. The drive is bundled with software that can catalog the disks and lock the files for security.

A 250-MB version of the Zip drive also reads and writes the 100-MB Zip cartridges.

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