

# Dell OpenManage™ Connection for CA Unicenter® User's Guide Version 3.2

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 **NOTE:** The glossary provides the definitions of terms, abbreviations, and acronyms.

 **NOTE:** You can obtain the latest version of this document from the Dell Support website at [support.dell.com](http://support.dell.com).

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## Notes and Notices

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

 **NOTICE:** A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

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## Glossary

### Dell OpenManage™ Connection for CA Unicenter® User's Guide Version 3.2

The following list defines or identifies technical terms, abbreviations, and acronyms used in this document.

#### **BMC**

Acronym for baseboard management controller. BMC supports the industry-standard Intelligent Platform Management Interface (IPMI) specification, enabling the remote configuration, monitoring, and recovery of systems.

#### **Business Process View (BPV)**

A tool used for grouping managed objects. The Connection creates a Business Process View called "Dell Managed Systems," which is populated with each discovered system that is running Server Administrator or Server Agent instrumentation.

The Business Process View is also a managed object. It is available to users of the 2-D maps and is stored in the Common Object Repository.

#### **Dell OpenManage Array Manager**

A storage management tool that provides a common user interface for configuring and remotely managing all host-based redundant array of independent disks (RAID) controllers, allowing administrators to use a central console to manage multiple RAID controllers in a single system and across multiple systems.

#### **Dell OpenManage IT Assistant**

A system management console program, installed on management stations, that provides configuration, monitoring, and management services for Dell™ PowerEdge™ systems, Dell Precision™ Workstations, Dell OptiPlex™ computers, and Dell Latitude™ portable computers.

#### **Dell OpenManage Server Administrator**

A one-to-one systems management solution that provides a consolidated and consistent way to monitor, configure, update, and manage Dell systems. Dell OpenManage instrumentation is also one of the prerequisites for using the Connection to discover managed systems.

#### **Dell OpenManage Server Agent**

Instrumentation that allows Dell systems to communicate with console applications, such as IT Assistant, regarding status of critical system components and other managed system information. Dell OpenManage instrumentation is also one of the prerequisites for using the Connection to discover managed systems.

#### **Dell PowerVault NAS Manager**

A tool that allows configuration of NAS appliances through a Web-based user interface.

#### **Distributed State Machine (DSM)**

The CA Unicenter component that discovers and monitors agents, as well as formats traps for agents. DSM provides the information to the WorldView tool.

#### **DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, DRAC II**

Dell Remote Access Controller 5, Dell Remote Access Controller 4, Dell Remote Access Controller/Modular Chassis, Dell Remote Access Controller III, Dell Remote Access Controller III/XT, and Dell OpenManage Remote Assistant Card II are systems management hardware and software solutions designed to provide remote management capabilities for Dell PowerEdge systems.

#### **Enterprise Management (EM)**

The tool provided for managing many enterprise functions, such as file management, tape management, and event management.

#### **ERA, ERA/O, ERA/MC**

Dell Embedded Remote Access, Dell Embedded Remote Access Optional (ERA/O), and Dell Embedded Remote Access/Modular Chassis are systems management hardware and software solutions designed to provide remote management capabilities for Dell PowerEdge systems.

#### **Event Management**

An enterprise function for managing and monitoring events.

#### **GUI**

Acronym for graphical user interface.

#### **ISV**

Abbreviation for independent software vendor.

#### **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.

#### **MIB**

Acronym for management information base. MIB is used to send detailed status/commands from or to an SNMP managed device.

#### **NAS**

Acronym for network attached storage.

#### **NSM**

Abbreviation for CA Unicenter's network and systems management product.

#### **PET**

Acronym for platform event trap. An alert, error, or system message from a server reporting an exception in a server, for example, a device failure or a threshold violation. PET is defined by the Alert Standard Format (ASF), an industry standard specification developed by the Distributed Management Task Force (DMTF) that defines methods for alerting and for remote system control, targeted for operating system absent environments.

#### **RAC**

Acronym for remote access controller. RACs are remote access solutions, such as DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA, ERA/O, and ERA/MC.

#### **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.

#### **SNMP**

Abbreviation for Simple Network Management Protocol. SNMP, a popular network control and monitoring protocol, is part of the original TCP/IP protocol suite. SNMP provides the format in which vital information about different network devices, such as network servers or routers, can be sent to a management application.

#### **Storage Management Service**

A storage management solution that is incorporated as part of Server Administrator to provide a common user interface for configuring and remotely managing storage components including RAID and non-RAID controllers and the attached channels, enclosures, and disks.

#### **trap**

An alert, error, or system message from a server reporting an exception in a server, for example, a device failure or a threshold violation.

#### **WorldView (WV)**

The CA Unicenter component that launches systems management applications and displays subsystem status. WorldView contains the Common Object Repository, where managed objects are stored.

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# Installing and Uninstalling the Connection

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## Installing the Connection

The following sections describe the requirements for the management station or remote console running Dell OpenManage Connection for Computer Associates (CA) Unicenter (hereafter referred to as the Connection).

 **NOTE:** Dell OpenManage instrumentation is not installed by the Connection. On any managed system, you must install Dell OpenManage instrumentation separately.

## Management Station or Remote Console Requirements

 **NOTE:** In this *User's Guide*, CA Unicenter refers to CA Unicenter versions 3.0, 3.1, and NSM r11.

### CA Unicenter

Supports only the Microsoft® Windows® operating system versions of CA Unicenter versions 3.0, 3.1, and NSM r11.

### Separately Launched Management Consoles

If you plan to install a RAC (DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA, ERA/MC, or ERA/O), Dell OpenManage Array Manager, and Dell OpenManage IT Assistant management consoles, ensure that you install the [versions supported by the Connection](#). See also the corresponding product documentation for the specific management consoles.

### Web Browser Support to Launch Web-Based Managed System Applications

Supported Web browsers are the same as those for Dell OpenManage Server Administrator and RAC products. See the [appropriate documentation](#) for more information.

## Installation Procedures

To install the Connection 3.2 on CA Unicenter NSM r11, perform the following steps:

1. From the Dell Support website ([support.dell.com](http://support.dell.com)), download and extract the **Dell OpenManage Connection for CA Unicenter** installation software.
2. Close all application windows before installing the Connection.
3. Run **OMCACON.exe** from the directory that you specified for downloading and extracting the installation software.  
The **Dell OpenManage Connection** window appears.
4. Click **Next** to continue or **Cancel** to exit the installation process.
5. Read the Dell Software License Agreement and click **Yes** to continue.  
The **Dell OpenManage Connection for CA readme** appears.
6. Click **Next** to continue.  
The [Select Components](#) screen appears.
7. Select the components that you want to install, and then click **Next**.  
Messages about installing the components are displayed.
8. Click **Finish** to complete the installation process.  
If you installed the Distributed State Machine (DSM) component, a message prompts you to run the **resetsdm** and **awservices start** commands.  
If you installed the Event Management (EM) component, run the **opreload** command in the EM Message Console by performing the following steps:
  - a. Click the **Start** button and select **Programs→ Unicenter→ Enterprise Management→ EM Classic**.
  - b. Double-click **Windows NT**.
  - c. Double-click **Events**.
  - d. Double-click **Console Logs**.
  - e. At the **Console Logs** command field, type **opreload**.  
RAC events are now displayed in the Console log.

## Selecting the Connection Components


The Connection consists of three major components:

- 1 DSM is installed on systems where the DSM component of CA Unicenter is installed.
- 1 WorldView (WV) is installed on systems where the Common Object Repository (COR) is installed.
- 1 EM message records are installed on systems where the EM is installed.

When you select the Connection components for installation, **OMCACON.exe** installs the relevant files in the default directories.

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## Upgrading the Connection

 **NOTE:** The upgrade procedure is not applicable if you are running CA Unicenter version NSM r11.

Connection 3.2 is an upgrade to Connection 3.0 and later. If you do not have Connection 3.0 installed, you must first install it before installing version 3.2. If you have a 2.x or older version of Connection installed, back up the `..\TNG\BIN\CAUtil.exe` file to a separate directory and then uninstall the Connection. Reboot the system, restore the `CAUtil.exe` file to `..\TNG\BIN\CAUtil.exe` and then install CA Connection 3.0 before installing CA Connection 3.2.

To upgrade the Connection on the management station, perform the following steps:


1. From the Dell Support website ([support.dell.com](http://support.dell.com)), download and extract the **Dell OpenManage Connection for CA Unicenter** installation software.
  2. Close all application windows before upgrading the Connection.
  3. Run **OMCACON.exe** from the directory that you specified for downloading and extracting the installation software.  
The **Dell OpenManage Connection** window appears.
  4. Click **Next** to continue or **Cancel** to exit the installation process.
  5. Read the Dell Software License Agreement and click **Next** to continue.  
The **Dell OpenManage Connection for CA readme** appears. Click **Yes** to proceed or **Cancel** to end the upgrade procedure.
  6. Click **Finish** to complete the upgrade process.  
A message prompts you to run the `resetsm` and `awservices start` commands.
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## Uninstalling the Connection

 **NOTE:** Dell recommends that you exit CA Unicenter before uninstalling the Connection.

To uninstall the Connection from a management station, perform the following steps:

1. Click the **Start** button and select **Programs→ Dell OpenManage Connection for CA Unicenter→ Uninstall Dell OpenManage Connection for CA Unicenter**.  
The **Uninstall Dell OpenManage Connection** window appears.  
The uninstallation procedure deletes the Connection and the associated components that were installed with the Connection.
2. Select the components that you want to uninstall and click **Next**.  
If you are uninstalling the DSM component, an information message prompts you to run the `resetsm` and `awservices start` commands.
3. If you are uninstalling the WV component, select the repository from which you want to uninstall the selected components and click **OK**.  
A message indicates that the uninstallation process is complete.
4. Click **Finish** to complete the uninstallation process.

 **NOTE:** Uninstalling the Connection version 3.2 does not roll back to any previous version of the Connection. Uninstalling the Connection will completely remove all versions of the application.

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## Introduction

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## Overview

This guide is intended for users who manage the Dell OpenManage Connection for Computer Associates (CA) Unicenter (hereafter referred to as the Connection).

The Connection is a systems management plug-in that extends the management of Dell™ PowerEdge™ systems and PowerVault™ storage systems to users of the CA Unicenter enterprise management product. It allows users to:

- 1 Integrate the management of Dell systems to make them easier to manage
- 1 Monitor Dell systems with Dell agents to provide system health status information, which can be collected from a widely-dispersed enterprise network and made available in real-time to a single CA Unicenter console
- 1 Launch and use systems management software applications such as Dell OpenManage Server Administrator, Dell OpenManage Array Manager, and Dell Remote Access Controllers

The Connection also allows systems management professionals to take corrective action on Dell systems when a Dell-specific alert is received at the enterprise. These alerts include, but are not limited to, temperature, fan speed, and chassis intrusion.

See "[What's New for the Connection Version 3.2?](#)" for a description of the new features of the Connection version 3.2.



**NOTE:** In this *User's Guide*, CA Unicenter refers to CA Unicenter versions 3.0, 3.1, and NSM r11.

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## Other Documents You Might Need

Besides this *User's Guide*, you can find the following guides either on the Dell Support website at [support.dell.com](http://support.dell.com) or on the documentation CD:

- 1 The *Dell OpenManage Server Administrator's User's Guide* and *Dell OpenManage Server Agent User's Guide* provide information about server instrumentation.
  - 1 The *Dell OpenManage Server Administrator SNMP Reference Guide* and *Dell OpenManage Server Agent SNMP Reference Guide* document the Dell SNMP MIB. The Dell SNMP MIB defines variables that extend the standard MIB to cover the capabilities of Dell systems management agents.
  - 1 The *Dell OpenManage Server Administrator Messages Reference Guide* lists the messages that are displayed in your Server Administrator home page Alert log or on your operating system's event viewer. This guide explains the text, severity, and cause of each Instrumentation Service Alert message that Server Administrator issues.
  - 1 The *Dell OpenManage Server Agent Reference Messages Guide* documents the event messages logged by Server Agent.
  - 1 The *Dell OpenManage Server Administrator Storage Management User's Guide* provides information about configuring and remotely managing storage components and includes event message and trap information.
  - 1 The *Dell OpenManage Array Manager User's Guide* is a comprehensive reference guide for configuring and managing local and remote storage attached to a system. This guide also includes information about Array Manager-specific events.
  - 1 The *Dell OpenManage IT Assistant User's Guide* provides information about IT Assistant. This guide also contains information about accessing a remote access controller (RAC) through IT Assistant.
  - 1 The *Dell Remote Access Controller Installation and Setup Guide* provides complete information about installing and configuring a DRAC III, DRAC III/XT, or an embedded remote access/optional (ERA/O) controller, configuring an ERA controller, and using a RAC to remotely access an inoperable system.
  - 1 The *Dell Remote Access Controller 4 User's Guide* provides complete information about installing and configuring a DRAC 4 controller and using a RAC to remotely access an inoperable system.
  - 1 The *Dell Remote Access Controller 5 User's Guide* provides complete information about installing and configuring a DRAC 5 controller and using a RAC to remotely access an inoperable system.
  - 1 The *Dell Remote Access Controller/Modular Chassis User's Guide* provides complete information about configuring and using the DRAC/MC to remotely manage and monitor your modular system and its shared resources through a network.
  - 1 The *Dell OpenManage Remote Assistant Card II User's Guide* provides information about installing and configuring a DRAC II.
  - 1 The Dell PowerVault Network Attached Storage (NAS) system documentation provides information about using the NAS manager to configure NAS appliances.
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## Obtaining Technical Assistance

If at any time you do not understand a procedure described in this guide or if your product does not perform as expected, help tools are available to assist you. For more information about these help tools, see "Getting Help" in your system's *Installation and Troubleshooting Guide* or the *Hardware Owner's Manual*.

Dell Enterprise Training and Certification is available now; see [www.dell.com/training](http://www.dell.com/training) for more information. This service may not be offered in all locations.

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## What's New for the Connection 3.2?

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Dell OpenManage Connection for Computer Associates (CA) Unicenter is hereafter referred to as the Connection.

### Before You Begin

- 1 Read the installation requirements to ensure that your system meets or exceeds the minimum requirements. See [installation prerequisites](#).
- 1 Read the Connection readme file, which contains the latest information about software, firmware, and driver versions, in addition to information about known issues. The file is posted to the Dell OpenManage documentation page on the Dell™ Support website at [support.dell.com](#).

### Connection Installation Prerequisites

The following are system prerequisites for installing the Connection:

- 1 Microsoft® Windows® operating system versions supported by CA Unicenter versions 3.0, 3.1, or NSM r11
- 1 CA Unicenter versions 3.0, 3.1, or NSM r11
- 1 A minimum of 30 MB of free hard-drive space

### New Features of the Connection 3.2

- 1 Added support for CA Unicenter NSM r11 on systems running Windows operating systems.
- 1 Added support for Dell OpenManage Server Administrator versions 1.6 - 5.0
- 1 Added support for Dell OpenManage Server Administrator Storage Management Service version 2.0.
- 1 Added support for Dell OpenManage Array Manager versions 3.4 - 3.7.
- 1 Added support for management of Dell Remote Access Controller (DRAC) 5 through the RAC Web console.
- 1 Added support for the Platform Event Traps (PET) from the baseboard management controller (BMC). The PET alerts are embedded with the host name of the system generating the defect.
- 1 Updated the format of the DRAC and BMC PET traps.

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### Systems Management Software Supported

**Table 1. Systems Management Software Supported**

Agent	Versions Supported
Server Administrator	1.6–5.0
Storage Management	1.0–2.0
Array Manager	3.4–3.7
DRAC II	2.4–2.5
RAC (DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA, ERA/MC, and ERA/O)	All firmware versions
DRAC/MC and ERA/MC: Support for events only	
Console	Versions Supported
DRAC II Web Console	2.4–2.5
RAC Web Console	All firmware versions
Array Manager	3.4–3.7



## Using the Connection

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### Overview

To enhance the management capabilities that you can perform on Dell™ systems, Dell OpenManage Connection for Computer Associates (CA) Unicenter® (hereafter referred to as the Connection) integrates a suite of systems management applications.

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### Connection Components

The Distributed State Machine (DSM), WorldView (WV), and Event Management (EM) Connection components perform the following tasks:

- 1 DSM: Discovers and monitor agents; formats traps for agents.
- 1 WV: Provides launch points for systems management applications and displays subsystem status.
- 1 EM: Contains message records for Remote Access Controllers (RACs).

### DSM and WV Classes

Table 1. DSM and WV Agents and Class Names

DSM Agents	DSM Class Names for Discovering and Monitoring Agents
Server Administrator	ServerAdministrator
Array Manager	ArrayManager
Server Agent	ServerAgent
Server Instrumentation Trap Handler	ServerInst
RAC	DellRemoteAccess
DRAC II	DellDrac2
NAS Manager	DellNas
WV Agents	WV Class Names for Launching Systems Management Applications and Displaying Subsystem Status
Server Administrator	ServerAdministrator.wvc
Array Manager	arrayManager.wvc
Server Agent	ServerAgent.wvc
RAC	DellRemoteAccess.wvc
DRAC II	DellDrac2.wvc
NAS Manager	DellNas.wvc

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### Discovering Dell Systems

During CA Unicenter's discovery process, systems that have Dell agents installed are discovered, but not classified. The Connection will poll all discovered systems in the Unicenter database, and those systems with Dell agents installed will respond with the health status information.

The DSM and WV components proactively poll each agent and change the color of the icon to indicate the status of the agent:

- 1 A green icon indicates a normal status.
- 1 A yellow icon indicates a warning condition, such as a voltage, current, temperature, or fan reading that has exceeded a warning threshold.
- 1 A red icon indicates a critical alarm; the device has failed or has crossed a failure threshold and may fail.
- 1 A black icon indicates that the system is unavailable.
- 1 A gray icon indicates an unknown state.

For more information on Unicenter's discovery process, see the CA Unicenter documentation.





## Managing Dell Systems


When discovered, Dell systems can be managed using the various Dell systems management applications such as the Dell OpenManage Server Administrator Web Console, Dell OpenManage IT Assistant, and Dell OpenManage Array Manager console. Dell systems are not differentiated from other systems in the Unicenter Map; however, the Dell systems management launch points are identified with unique icons in the Unispace window or the Topology Browser. See [Table 2](#). For more information on each of the related systems management applications, see your [product documentation](#).

The Connection also dynamically creates a Business Process View called "Dell Managed Systems" and populates it with each discovered system that is running the Server Administrator.

The various systems management applications can be launched from the right-click menu.

**Table 2. WV Agents: Additional Information**

Agent	Versions Supported	Applications Launched	WV Icon	CA Unicenter Explorer Icon
Server Administrator (includes Server Administrator Storage Management Service)	Server Administrator 1.6–5.0	Server Administrator Web console (Web-based from managed system)		
Array Manager	Array Manager 3.4–3.7	Array Manager console (must be installed separately); see note.		
DRACs	DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA, ERA/O, and ERA/MC (The Connection supports DRAC/MC and ERA/MC events only through EM.)	Launches RAC console (Web-based from RAC)		
DRAC II	DRAC II 2.4–2.5	DRAC II Web Console must be installed separately; see note.		
NAS (through Server Administrator)		NAS Manager 735N, 750N, or 755N (must be installed separately)		

 **NOTE:** Dell strongly recommends that you use the same versions of agents and consoles for Array Manager and DRAC II on the managed system and the management station. If doing so is not possible, use the latest version on the management station.

## Dell OpenManage Server Administrator

Server Administrator provides a comprehensive, one-to-one systems management solution from an integrated, Web browser-based GUI (the Server Administrator home page). Server Administrator is designed for system administrators to both locally and remotely manage systems and attached storage systems on a network.

The Dell OpenManage Server Administrator Storage Management Service provides storage management information in an integrated graphical view. The Storage Management Service enables you to view the status of local and remote storage attached to a monitored system. Storage Management Service obtains logical and physical information about attached storage devices from the monitored system. For more information, see the *Dell OpenManage Server Administrator's User's Guide* and the *Dell OpenManage Storage Management User's Guide*.

Connection integration points:


- 1 Discovery and status polling of the Server Administrator agent through the DSM
- 1 Trap collection and formatting of Server Administrator and Server Administrator Storage Management Service events through DSM
- 1 Application launch of the Server Administrator Web browser-based GUI through WV


## Dell OpenManage Array Manager

Array Manager instrumentation and the Array Manager console provide a comprehensive solution to storage management in an integrated graphical view. Through a common interface, Array Manager allows you to configure and manage local and remote storage attached to a system while the system is online and continuing to process requests.

Connection integration points:

- 1 Discovery and status polling of the Array Manager agent through DSM
- 1 Trap collection and formatting of the Array Manager event through DSM
- 1 Application launch of the Array Manager Console through WV

 **NOTE:** You must install Array Manager separately.

 **NOTE:** The Array Manager integration does not format traps related to the Dell PowerVault™ 660F.

## Remote Access Controllers

Remote access controllers (RACs) allow you to remotely manage and monitor your system even when the system is down. The DRAC 5, DRAC 4, DRAC/MC, DRAC III, DRAC III/XT, ERA, ERA/O, and ERA/MC are systems management hardware and software solutions designed to provide remote management capabilities for Dell PowerEdge™ systems.

Connection integration points:

- 1 Discovery and status polling through DSM and Server Administrator (does not include discovery and status polling for ERA/MC)
- 1 Trap collection and formatting through RAC EM Message Records
- 1 Application launch of the RAC Web console through WV (does not include launching DRAC/MC and ERA/MC)


## DRAC II

DRAC II Web Console supports console redirection and out-of-band status retrieval and management operations for certain PowerEdge systems through a Web-based management application.

Connection integration points:


- 1 Discovery and status polling of the DRAC II agent through DSM
- 1 Trap collection and formatting of DRAC II events through DSM (in-band events)
- 1 Trap collection and formatting of DRAC II card events through EM (out-of-band events)
- 1 Application launch of the DRAC II Web Console through WV

 **NOTE:** You must install the DRAC II Web Console separately.

 **NOTE:** Traps sent from the DRAC II out-of-band interface are formatted only by EM.

## Dell PowerVault NAS Manager


The Network Attached Storage (NAS) Manager allows you to configure NAS appliances from an integrated, Web browser-based application. The Connection provides a launch point to the application for Dell-instrumented NAS systems.

 **NOTE:** The Connection discovers only the PowerVault NAS systems, and not the NAS systems that have been converted from the PowerEdge systems.


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## Event Management

Dell instrumentation generates event traps, which update the status of a given system by changing the related systems management application icon color. See [Table 2](#). These events are displayed in the Unicenter Event Console and written to the console log, and the status change is propagated to the system icon.


 **NOTE:** Server Administrator Storage Management Service traps are logged in the System Administrator Alert log.

For PET events, the Dell instrumentation embeds the host name into the trap, so that it is appended to the event message, enabling the user to determine which system has generated the alert. See the [Event Message Formats](#) section for sample messages.

 **NOTE:** Since PET alerts come directly from the hardware and not through an agent, the system icon status color will not change and no systems management application icon is affected.

## Importing Adaptec CI/O Events Into the CA Unicenter Event Management Console

Although the Connection no longer supports Adaptec CI/O management software, these event messages can be imported into the CA Unicenter Event Management console. The following section describes the process.


 **NOTE:** If you are still using the Adaptec CI/O management software, the CI/O event messages are placed into the installation directory.


1. Open a command prompt.
2. Run the following command:

```
CAINSTALLDIR\bin\cautil.exe -f DELLINSTALLPATH\CIOEvents.txt
```

where *CAINSTALLDIR* is the location where you have installed CA Unicenter, and where *DELLINSTALLPATH* is the location where you have installed the Connection.

## Event Message Formats

 **NOTE:** DSM performs all event message formatting.

 **NOTE:** For application-specific event messages, see the appropriate documentation.

## Formatting for Server Administrator, Array Manager, and Storage Management Service Event Messages

The standard event message format for Server Administrator, Server Agent, Array Manager, and Storage Management Service traps is as follows:

```
[nodeClass, Operating System, previous state, current state, event message text, eventID]
```

The following is a sample message that Server Administrator may send to the CA Unicenter Enterprise Management Console as a result of a system board fan threshold change from warning to normal:

```
Host:Windows2000_Server Windows2000_Server ServerAdministrator Trap Agent:ServerAdministrator Warning Up Fan sensor returned to a normal value  
Sensor location: ESM MB Fan1 RPM Chassis location: Main System Chassis Previous state was: Non-Critical (Warning) Fan sensor value (in RPM):  
4740 Dell Event ID: 1102
```

The following is a sample message that Array Manager may send to the CA Unicenter Enterprise Management Console as a result of an array disk going offline:

```
Host:Windows2000_Server Windows2000_Server ArrayManager Trap Agent:ArrayManager Unknown Warning Array Disk Offline Controller ( PERC 3/Di  
Controller 0 ) : Disk ( Array Disk 0:3 ) Dell Event ID: 544
```

The standard event message format for Server Administrator, Server Agent, and Array Manager status poll change is as follows:

```
[nodeClass, Operating System, agent policy, status object name, previous state, current state, status variable name]
```

The following is a sample message that the Server Administrator DSM policy may send to the CA Unicenter Enterprise Management Console as a result of a poll change from warning to critical:

```
Host:Windows2000_Server Windows2000_Server ServerAdministrator Policy DellSerAdmGblStatus Warning Critical systemStateGlobalSystemStatus
```

The following is a sample message that the Array Manager DSM policy may send to the CA Unicenter Enterprise Management Console as a result of poll change from warning to critical:

```
Host:Windows2000_Server Windows2000_Server ArrayManager Policy DellAryMgrAryGblStatus Warning Critical arrayMgrGlobalStatus
```

## Formatting for DRAC II Event Messages

The standard event message format for the DRAC II Agent (in-band) is as follows:

```
[nodeClass, Operating System, DellDrac2 Policy, probe type, previous state, current state, probe name]
```

The following is a sample message that DRAC II may generate as a result of an ambient temperature probe change from normal to warning:

```
Host:Windows2000_Server Windows2000_Server DellDrac2 Policy DellDrac2TemProbe Up Warning ambient
```

The standard event message format for the DRAC II Card (out-of-band) is as follows:

```
[Dell DRAC2, Time, hostname, event message text]
```

The following is a sample message that DRAC II may send to the CA Unicenter Enterprise Management Console as a result of a voltage sensor warning:

```
Dell DRAC2: (01/01/22 19:34:15) UNRESOLVED - Dell DRAC2 Card: DRAC voltage sensor warning detected
```

## Formatting for RAC Event Messages

The standard event message format for RACs (out-of-band) is as follows:

```
[Dell Remote Access, Time, hostname, event message text]
```

The RAC (out-of-band) traps are also formatted by the DSM policies.

The following is a message format that RAC may send to the CA Unicenter Enterprise Management Console:

```
Dell:RemoteAccess RemoteAccess DRAC Trap Agent:DRAC Unknown <SEVERITY> <TRAP DESCRIPTION> Dell Event ID:<TRAP ID#>
```

## Formatting for PET Event Messages

The standard event message format for PET is as follows:

```
Dell:BMC BMC PET Trap Agent:BMC Unknown <SEVERITY> <TRAP DESCRIPTION> Dell Event ID:<TRAP ID#> serverHostName:<serverHostName>
```

---

## Troubleshooting

The following are types of problems that you may encounter and the solutions for them.

### Dell Agents Not Discovered

If you cannot locate Dell agents in the CA Unicenter WorldView, ensure that:

- 1 Viable network connectivity to the managed system exists by eliciting a **ping** response.
- 1 The Dell instrumentation is installed properly on the managed system.
- 1 SNMP is configured on the managed system.
- 1 The SNMP community name and security (read/write community names) are set properly on the managed system and that they correspond with that of the CA management station.
- 1 The Connection has been properly installed on the CA management station.
- 1 The **resetsdm** and **awservices start** commands have been executed from the command line.

The system should now appear in WorldView and Topology View. To confirm the presence of the system, you can also perform a discovery with IT Assistant.

## Not Receiving Alerts

If alerts are not being received by the management station, ensure that:

- 1 Viable network connectivity exists with the managed system sending the event by eliciting a **ping** response.
- 1 The Dell instrumentation is properly installed on the managed system.
- 1 The SNMP agent and trap service are started.
- 1 The Dell instrumentation services are started.
- 1 SNMP is configured on the managed system to send traps to the management station's IP address.
- 1 The SNMP community name and security (read/write community names) are set properly on the managed system and that they correspond with that of the CA management station.
- 1 The Connection has been properly installed on the CA management station.
- 1 The RAC has been properly configured to send out-of-band events.

If you are not receiving RAC alerts, you can execute the **opreload** command in the EM Message Console by performing the following steps:

1. Click the **Start** button and select **Programs→ Unicenter→ Enterprise Management→ EM Classic**.
2. Double-click **Windows NT**.
3. Double-click **Events**.
4. Double-click **Console Logs**.
5. At the Console Logs command field, type `opreload`.

RAC events are now displayed in the Console log.

If the RAC alerts are still not displayed, examine EM Message Records to ensure that the messages have been successfully imported. If no Dell Remote Access or Dell Drac2 messages exist, perform the following:

1. Open a command prompt.
2. Run the following command:


```
CAINSTALLDIR\bin\cautil.exe -f DELLINSTALLPATH\RACEvents.txt
```

3. Execute the **opreload** command in the EM Message Console per the instructions above.

## Server Administrator or Remote Access Console Not Launching

If you cannot launch Server Administrator or the Remote Access Console, ensure that:

- 1 The Dell instrumentation services are started on the managed system.
- 1 The managed systems have been discovered as Dell managed systems in WorldView and Topology View.
- 1 Proxy information for the Web browser has been set correctly.
- 1 The RAC has a network connection, is connected to a power source, and it is properly configured.

 **NOTE:** It may take up to twenty minutes after discovery for the launch points to become populated.

## Dell Systems Not Found Under Dell Managed Systems Business Process View (BPV)

The discovery of Dell systems across different subnets under the **Dell Managed Systems** BPV fails if the domain naming system (DNS) server is not present or is improperly configured.

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