Dell UPS Management Software: Activating redundancy and virtualization modules

This Dell Technical Information Note describes how to eliminate a common error message that occurs when implementing shutdown with redundant power sources in virtualized environments using Dell UPS Management Software Release 2.

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Scope of this document

This document provides guidance when activating redundancy and virtualization modules in Dell's Multi-UPS Management Console (MUMC) software. The information in this document pertains to Release 2 of Dell UPS Management Software (01.04.0010, A02, announced July 2012).

This guide is designed for readers who have knowledge and experience of operating systems supported by the Dell MUMC software (referred to in this document as the Dell UPS console). It is intended to complement the detailed User's Guide that comes with the UPS management software.

For full information about the Dell UPS Management Software suite — such as hardware and software prerequisites and details about activating, configuring and using UPS monitoring and management functions — refer to the complete User's Guides for the software components, available on support.dell.com.

The two components of Dell UPS Management Software

The Dell UPS power management suite — compatible with all Dell single-phase UPS products — includes two complementary and integrated offerings, both managed through a single, Web-based interface:

The Dell UPS Local Node Manager (ULNM):

- Acts as a local shutdown agent on local computers using traditional operating systems, for graceful, unattended UPS shutdown and restart

- Acts as a local shutdown agent in virtualized environments, for virtualization host Hypervisor Agent and vMA Agent type[1]

- Provides a local interface to view UPS power status, events and configurations

- Is remotely managed by the Dell UPS supervisory console for simultaneous, centralized configuration and management of multiple ULNM agents

The Dell Multi-UPS Management Console (MUMC):

- Discovers and supervises Dell UPSs and Dell intelligent power distribution units (PDUs) connected to the network.

- Provides a central control point for configuring, monitoring and reporting actions relating to UPS and PDU events.

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[1] Hypervisor Agent type: A host on which applications can be directly installed (such as Win2k8).
vMA Agent type: A host on which applications cannot be directly installed and instead use a management assistant to load applications (such as vMA).
For more information on Dell ULNM and MUMC interaction with virtualized hypervisors, contact your local Dell representative or refer to the appropriate User's Guide at dellups.com/soft-tech-doc.asp.
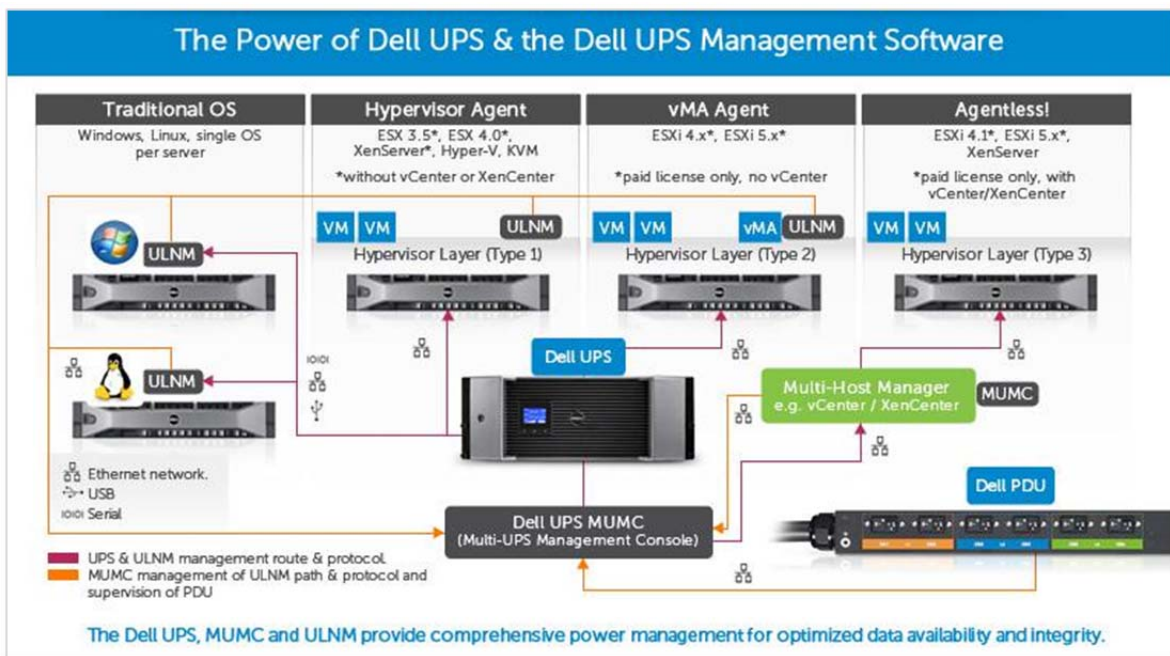
- Provides mass configuration and firmware update for Dell UPS Network Management Cards (NMCs). The NMC is recommended for remote management and is required for managing UPSs in virtualized IT environments.

- Provides centralized management of Dell UPS Local Node Manager applications running on remote traditional (Windows/Linux) or virtualized servers (Microsoft®, VMware®, Citrix® and Red Hat®).

- Provides an agentless method for managing multiple hosts in clusters using VMware vCenter™ or Citrix XenCenter®.

The Dell Multi-UPS Management Console (MUMC) <u>does not</u>:

- Control virtual machine behavior. This is managed by the host and configured through vCenter or other host management interface.

- Assume responsibility for VM startup/shutdown/hibernation/VM Migration. This is managed by the host management interface.

- Replace a user's need to understand VM behavior responding to a host entering maintenance mode or shutting down.

- Explain all possible scenarios according to the various virtualization vendors, license types and feature sets.
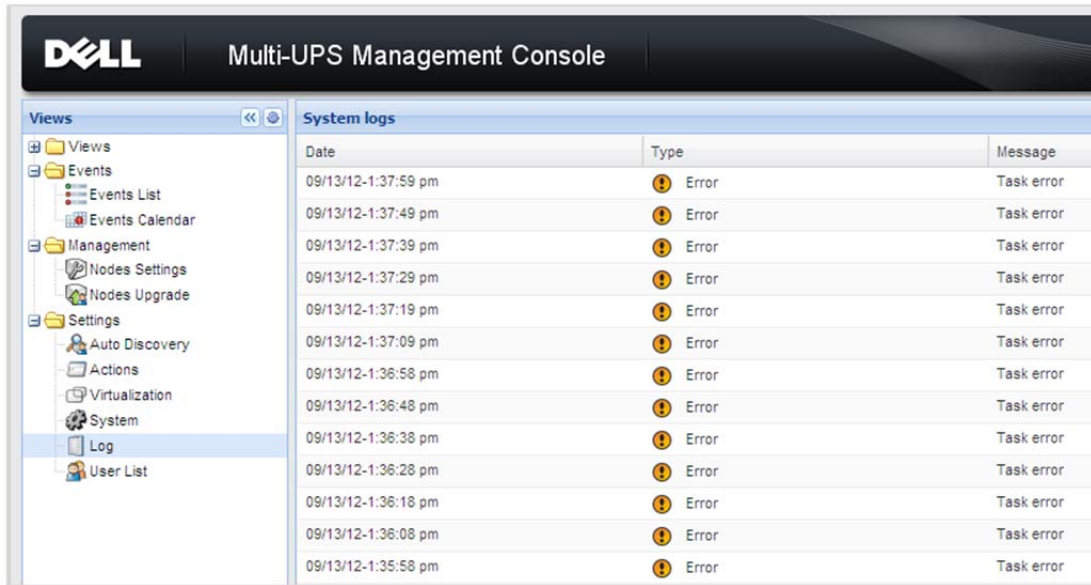
Figure 1.   Dell UPS management software connectivity scenarios
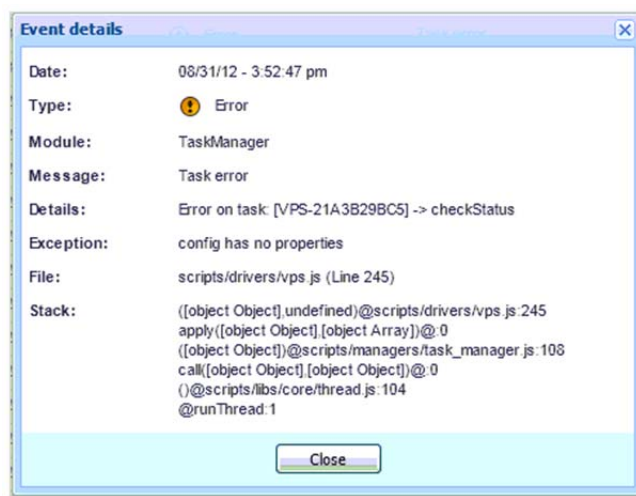
The issue: Erroneous error messages

Dell UPS Management Software, Release 2, 01.04.0010 (A02), announced July 2012, has the capability to manage redundant (multiple) UPSs, known as virtual power sources (VPS), along with virtualization support for leading virtualization solutions. Following the steps in this Technical Information Note will alleviate erroneous messages as shown in figures 2 and 3, which are caused by activating the Redundancy module and the Virtualization module at the same time.

Figure 2.   MUMC system logs with erroneous error message

If you click one of the error messages, you will see the more detailed message shown in Figure 3.

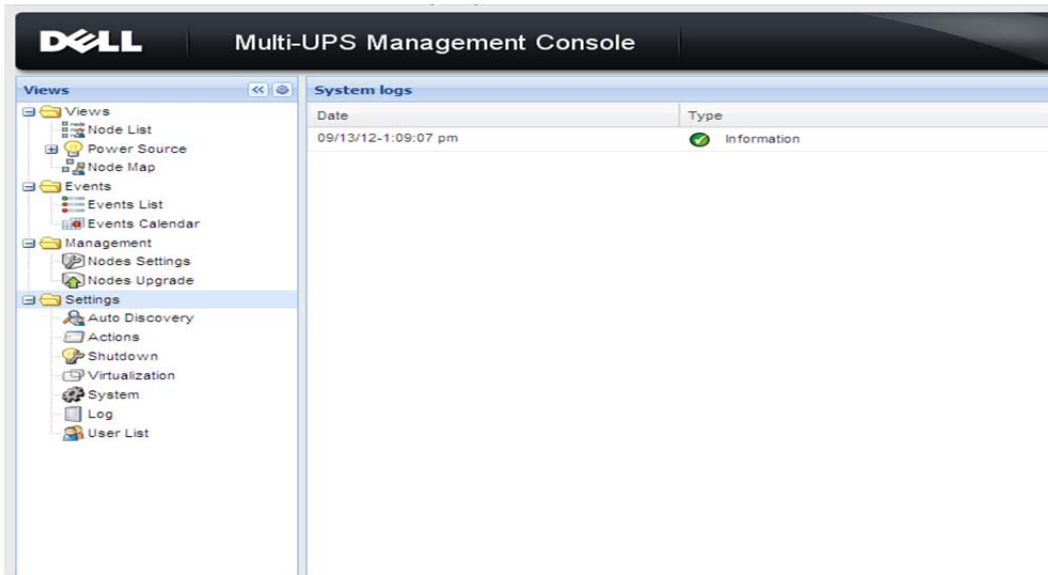Figure 3.   MUMC error event details

The fix: Enabling the Shutdown module

To properly configure the Dell MUMC software to eliminate this erroneous error message:
When the Virtualization and Redundancy modules are activated, the **Shutdown module** needs to be activated in the **Module Settings** as well. The following procedure shows how to successfully activate the **Shutdown module** and eliminate these unnecessary error messages.
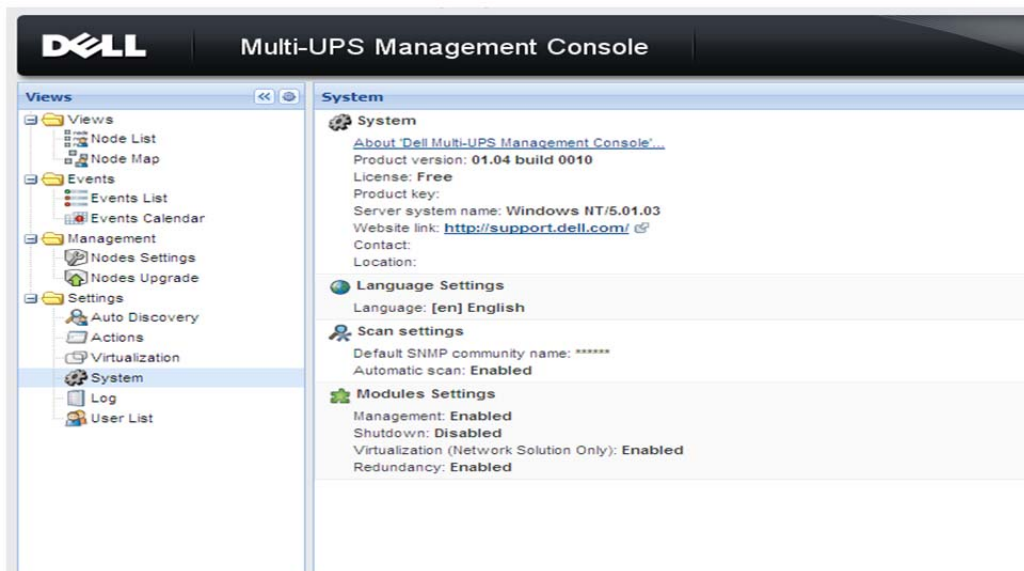
1. Log into the MUMC software, and go the "Settings" menu.
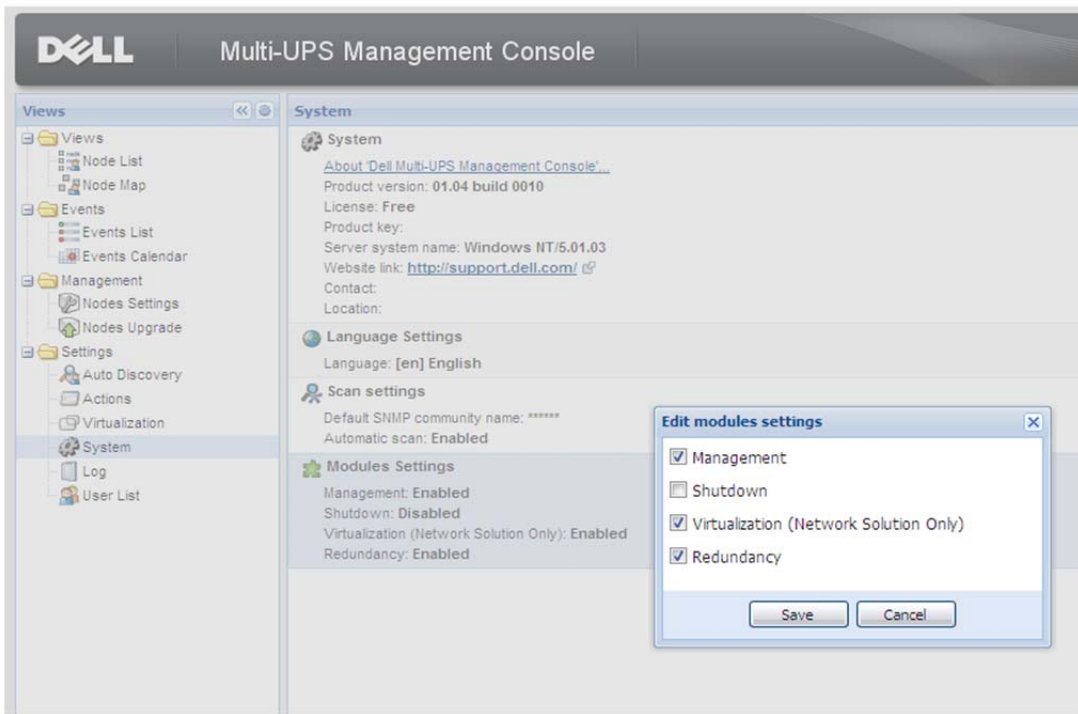
Figure 4.   MUMC Settings ➲ System logs

2. Click "System" under the "Settings" menu to navigate to the System page.

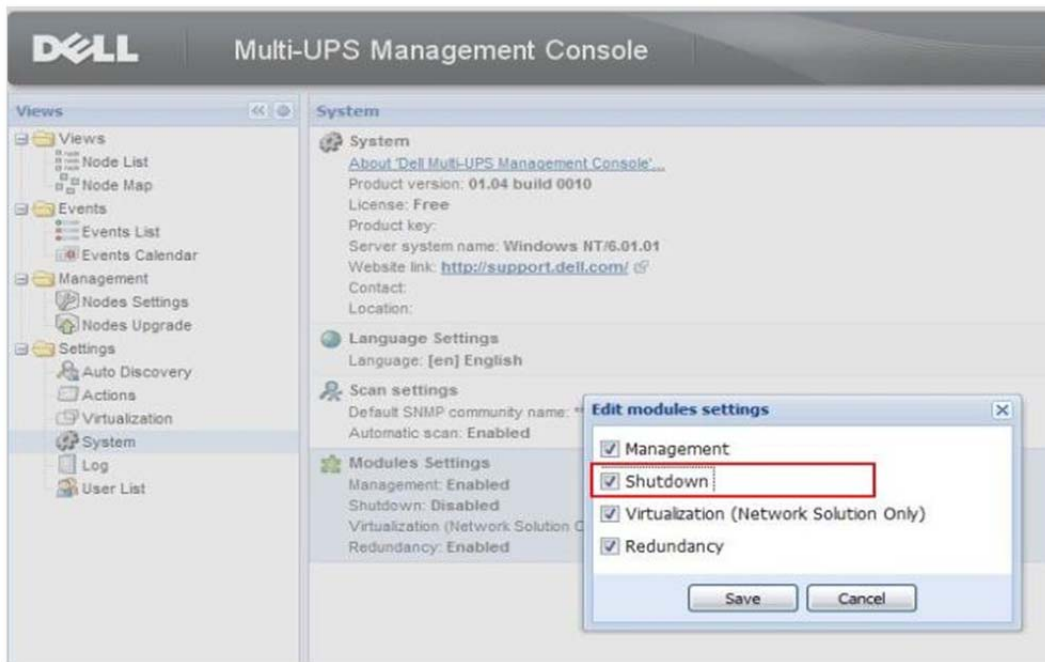Figure 5.   MUMC Settings ➲ System information

3. Double-click "Modules Settings." The "Edit modules setting" box will appear as shown below, with Management, Virtualization and Redundancy settings checked (enabled).

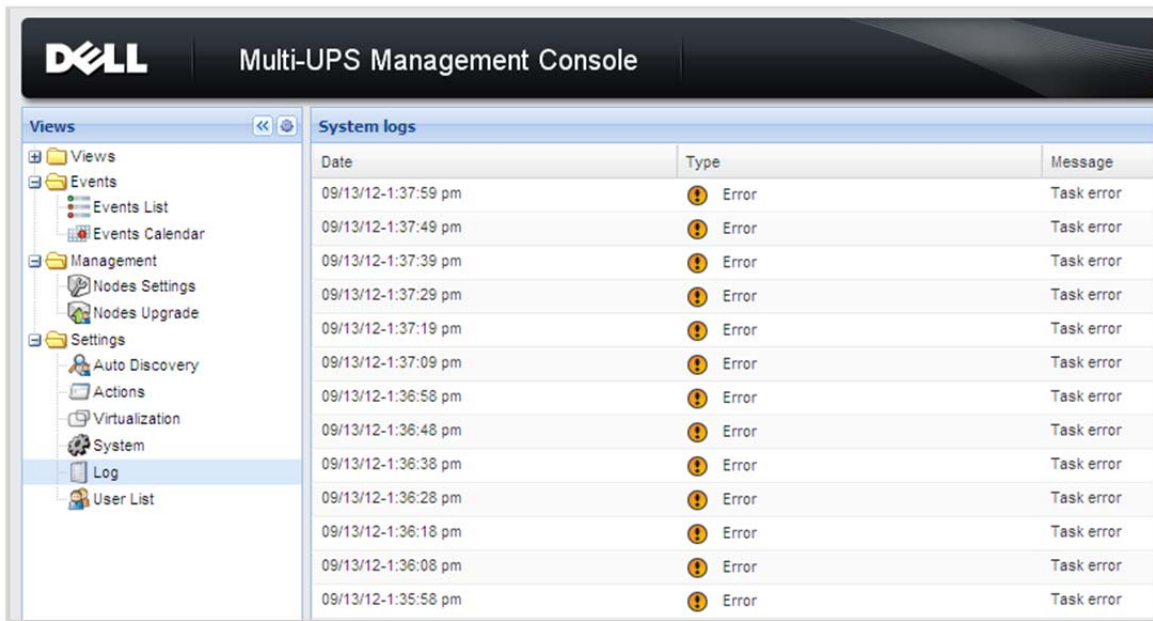Figure 6.   MUMC ➲ System ➲ Modules Settings ➲ Edit modules settings

4. Check the box next to "Shutdown" to enable the shutdown module, and click "Save."

Figure 7.   MUMC ➲ System ➲ Modules settings ➲ Edit modules settings ➲ Shutdown
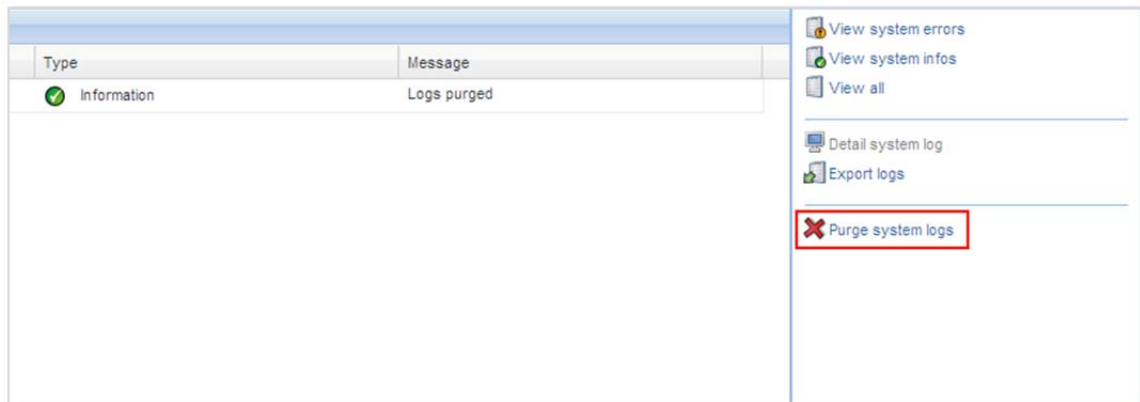
5. Check the "Log" page, and you will see that the alarms are no longer being generated.

Figure 8.   MUMC ➲ Settings ➲ Log ➲ System logs

6. If desired, delete the existing log entries by clicking "Purge system logs" in the menu to the right, as shown in the following figure.

Figure 9.   MUMC ➲ Settings ➲ Log ➲ Purge system logs

Activating redundancy and virtualization modules is now complete.

Summary

Activating Redundancy and Virtualization modules in the Dell UPS software management console (MUMC) enables redundant power management and control of Dell UPS in a variety of applications. However, if the Shutdown module is not also enabled, the system will generate error messages. Eliminating these error messages is as easy as clicking a checkbox in the Modules Settings to enable the Shutdown module.

References

Dell UPS Technical Information Notes:

Available at dellups.com ➲ Software and Technical Documentation ➲ Support FAQ

- VMware vCenter Shutdown Scenarios
- Implementing Shutdown on VMware vMA 5.0.0.1 and 5.0.0.2
- Common Software Installation Scenarios
- Understanding Windows® Event Log Scripts

Dell Publications:

Available at dellups.com ➲ Software and Technical Documentation ➲ User Manuals and Publications

- Dell Multi-UPS Management Console Installation and Configuration User's Guide
- Dell UPS Local Node Manager Installation and Configuration User's Guide