User's Guide

PowerAlert Software Version 12.04.0048

Note: PowerAlert is not required to operate your UPS system.
For the latest PowerAlert updates, go to www.tripplite.com/software.

1111 West 35th Street, Chicago, IL 60609 USA
www.tripplite.com/support

1. Pre-Installation Instructions

Tripp Lite's PowerAlert software family is separated into three distinct editions. **Do not install more than one edition on a single computer.** Before installing PowerAlert, decide which edition is best for your purposes by reading the descriptions below and referring to the feature comparison in Figure 1.1, the PowerAlert component interaction chart in Figure 1.2 and the PowerAlert network topology example in Figure 1.3. If you are installing PowerAlert on multiple computers, you may decide to install more than one edition, but the limit of one edition per computer still applies.

- **PowerAlert Local:** This edition is best for typical home and small business users. PowerAlert Local allows your computer to communicate with your UPS system through a serial or USB cable connection (or a RS232 cable for LINUX). You can use it to monitor power conditions, control your UPS system and enable automatic computer shutdown during power failures. PowerAlert Local also allows your UPS system to appear as an SNMP-manageable device on your network, enabling remote monitoring and control via PowerAlert Network Management System software or a third-party Network Management System. If you have two UPS systems connected to your computer to provide redundant backup power, PowerAlert Local can manage both UPS systems. PowerAlert Local requires the free Java Runtime Environment.

- **PowerAlert Network Shutdown Agent:** This edition is best for computers that can't access your UPS system's communication port(s) directly, such as multiple computers supported by a single UPS system. It's also useful for users who cannot install Java because of computer resource limitations or IT department restrictions. PowerAlert Network Shutdown Agent monitors an SNMP-enabled device over your network and shuts down your computer when it detects a signal (typically an "on battery" event) from the monitored device. You can monitor several types of Tripp Lite devices, including UPS systems with an SNMPWEBCARD*, UPS systems that appear on the network via PowerAlert Local (or previous versions of PowerAlert*) and network-enabled PDUs*.

- **PowerAlert Network Management System:** This edition should be installed by advanced users only. PowerAlert Network Management System can monitor and control up to 250 SNMP-enabled devices, including UPS systems with an SNMPWEBCARD*, UPS systems that appear on the network via PowerAlert Local (or previous versions of PowerAlert*) and network-enabled PDUs*. All the functions available through PowerAlert Local will be available for the remote devices and also for the host computer, including monitoring and controlling UPS systems connected to the host computer via local USB and/or serial connections. PowerAlert Network Management System requires the free Java Runtime Environment. **Warning: Only one copy of PowerAlert Network Management System can be used per IP network subnet. Obtain the approval of your network administrator before installation.**

*Software or firmware version 12.04.0019 and above (for LINUX: 12.04.0040 and above).

Figure 1.1: Feature Comparison for PowerAlert Version 12.04.0048

Feature	Power Alert Local	Power Alert Network Shutdown Agent	Power Alert Network Management System	SNMPWEBCARD Firmware
Manage local UPS systems via USB and/or serial cable	Y	N	Y	N
Manage multiple local UPS systems from one computer	Y	N	Y	N
Manage UPS system (or PDU) via accessory slot	N	N	N	Y
Unattended computer operating system shutdown	Y	Y[1]	Y	N
Unattended UPS system shutdown	Y	N	Y	Y[2]
Data logging	Y	N	Y	Y[2]
Event logging	Y	N	Y	Y
Notification via e-mail	Y	N	Y	Y
Notification via SNMP traps	Y	N	Y	Y
Built-in SNMP agent	Y	N	Y	Y
Execute command script on event	Y	Y	Y	Y
Execute UPS system control commands	Y	N	Y	Y
Password security	N	N	N	Y
Web interface	N	N	N	Y
Telnet interface	N	N	N	Y
Outlet control	Y	N	Y	Y
Requires Java Runtime Environment (free)	Y	N	Y	N
Environmental probe (optional)	N	N	N	Y
Manage multiple UPS systems on the network	N	N	Y[3]	N
Mass configuration	N	N	Y[4]	N
Autodiscovery of local devices	Y	N	Y	Y
Autodiscovery of SNMP-enabled devices	N	Y[5]	Y[5]	N
SNMP discoverable	Y	N	Y	Y

1: Must monitor SNMPWEBCARD or PowerAlert Local for shutdown signal
2: Logs store 250 entries.
3: Manages up to 250 SNMP-enabled UPS systems or PDUs
4: Allows mass configuration of PowerAlert Local software or SNMPWEBCARD firmware (version 12.04.0040 and above)
5: Discovers SNMPWEBCARD firmware and PowerAlert Local software (version 12.04.0040 and above)
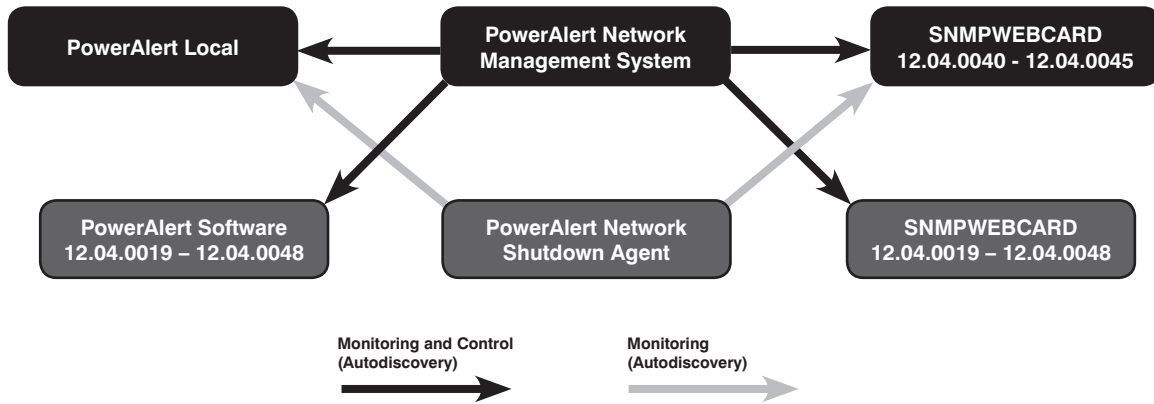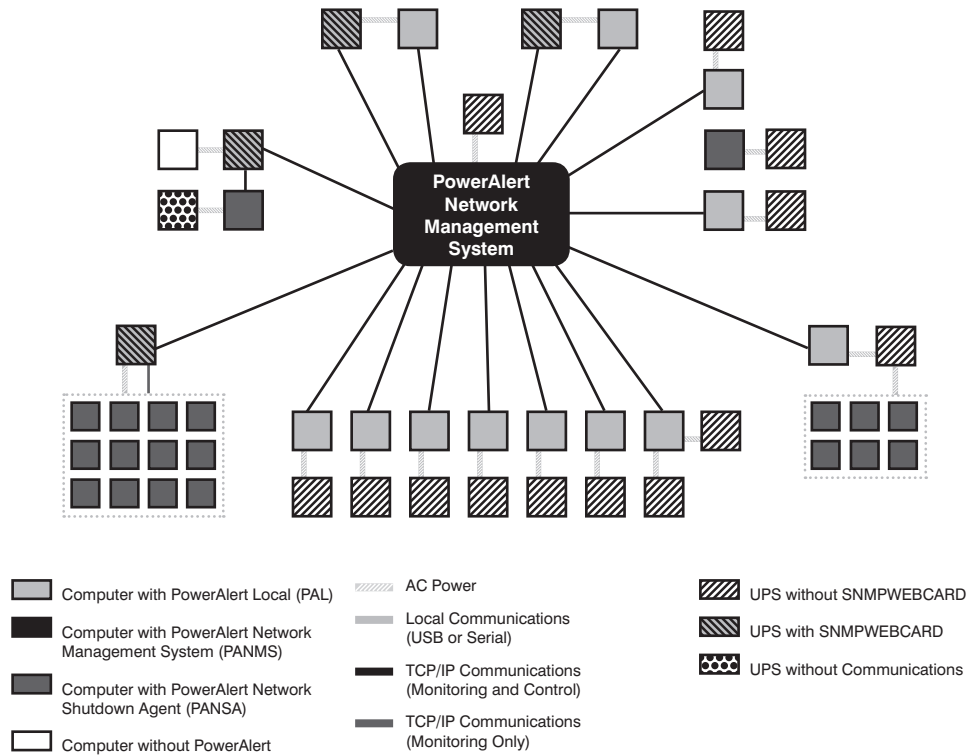
Figure 1.2: PowerAlert Component Interaction

PowerAlert Local	**PowerAlert Network Management System**	**SNMPWEBCARD 12.04.0040 - 12.04.0045**
PowerAlert Software 12.04.0019 – 12.04.0048	**PowerAlert Network Shutdown Agent**	**SNMPWEBCARD 12.04.0019 – 12.04.0048**

Monitoring and Control (Autodiscovery) →

Monitoring (Autodiscovery) →

Figure 1.3: PowerAlert Network Topology Example

Computer with PowerAlert Local (PAL)

Computer with PowerAlert Network Management System (PANMS)

Computer with PowerAlert Network Shutdown Agent (PANSA)

Computer without PowerAlert

AC Power

Local Communications (USB or Serial)

TCP/IP Communications (Monitoring and Control)

TCP/IP Communications (Monitoring Only)

UPS without SNMPWEBCARD

UPS with SNMPWEBCARD

UPS without Communications

2. System Requirements

2.1 PowerAlert Local

For Windows (2000, XP, Server 2003, Vista (32-bit)):

- Pentium 4 CPU
- 256 MB RAM
- Java Runtime Environment 1.6.0_3 or above
- Available USB or serial port
- TCP/IP network connection (required if you want your UPS system to appear on the local network as an SNMP-manageable device)

For LINUX:

- Fedora 8 or OpenSUSE 11
- Java Runtime Environment 1.6.0_3 or above
- Supported RS232 UPS (If you require USB support, please visit the Network UPS Tools (NUT)* website: http://eul.networkupstools.org/)
- Available TTY port
- Open 3664 and 3665 ports (any firewall)
- Root user (required for installation)
  *Not supported by Tripp Lite.

2.2 PowerAlert Network Shutdown Agent

For Windows (XP, Server 2003 R2 (32-bit), Vista (Business or Enterprise)):

- Pentium 4 CPU
- 256 MB RAM
- TCP/IP network connection.

For LINUX:

- Fedora 8 or OpenSUSE 11
- Tripp Lite SNMPWEBCARD or supported PowerAlert Local system (12.04.0040 and above)
- Available TTY port
- Open 3664 and 162 ports (any firewall)
- Root user (required for installation)

2.3 PowerAlert Network Management System

For Windows (XP, Server 2003 R2 (32-bit), Vista (Business or Enterprise)):

- Pentium 4 CPU
- 256 MB RAM
- Java Runtime Environment 1.6.0_4 or above
- TCP/IP (IPv4) network connection
- Available USB or serial port (optional)

For LINUX:

- Fedora 8 or OpenSUSE 11
- Tripp Lite SNMPWEBCARD or supported PowerAlert Local system (12.04.0040 and above)
- Open 3664, 3665 and 162 ports (any firewall)
- Root user (required for installation)
- Supported local UPS with an RS232 interface (optional)

3. Installation

3.1 Windows Installation

STEP 1 Cable Connection

If you will be installing PowerAlert Local, connect a communication port of the UPS system to a corresponding communication port of the computer using a USB or serial (DB9) cable. The UPS system may include the appropriate cable. If not, you must supply it. If your computer will be backed up by redundant UPS systems, repeat the cable connection for the second UPS system. *Note: The cable connection is optional if you will be installing PowerAlert Network Management System; it is not required if you will be installing PowerAlert Network Shutdown Agent.*

STEP 2 Java Software Installation

If you will be installing PowerAlert Local or PowerAlert Network Management System, you must install Java Runtime Environment 6 or above for any version before 12.04.0045. A Java software installer is included on the PowerAlert CD-ROM (bundled with select UPS systems); the latest version and installation instructions are available at www.java.com. Java is not required for PowerAlert Network Shutdown Agent.

STEP 3 Network Shutdown Agent Pre-Configuration

If you will be installing PowerAlert Network Shutdown Agent, open UDP ports 161, 162, 3664 and 3665 on your computer's firewall software and disable the Windows SNMP trap service. The host computer for the device that PowerAlert Network Shutdown Agent will be monitoring must also have UDP ports 161, 162, 3664 and 3665 open on its firewall software. If PowerAlert Network Shutdown Agent will be configured to monitor an SNMPWEBCARD, enable the card's SNMP access with read/write permission and define a read/write community string. (The default community string for firmware version 12.04.0040 and above is "tripplite." For prior versions, enable read/write SNMP access.) *Note: The computer that PowerAlert Network Shutdown Agent is installed on should have a static IP address; if the address is dynamic, PowerAlert Network Shutdown Agent must be reconfigured each time it changes.*

STEP 4 CD-ROM Insertion or Installer Download

If your UPS system includes a PowerAlert CD-ROM, insert the CD-ROM into your computer's compatible optical drive. If you do not have a PowerAlert CD-ROM, download the latest PowerAlert installer from www.tripplite.com/software/. Downloading the PowerAlert installer guarantees that you have the newest available version of PowerAlert, which may be newer than the version on the CD-ROM.

STEP 5 PowerAlert Software Installation

The PowerAlert installer setup menu will launch automatically after you insert the PowerAlert CD-ROM. (If AutoPlay is disabled, double-click the CD-ROM icon.) Follow the on-screen prompts to install the Java Runtime Environment (not required for PowerAlert Network Shutdown Agent) and the edition of PowerAlert you selected after reading the Pre-Installation Instructions. If you downloaded PowerAlert, first install the Java Runtime Environment (not required for PowerAlert Network Shutdown Agent), then double-click the PowerAlert installer and follow the on-screen prompts. The PowerAlert installer will attempt to uninstall previous versions of PowerAlert, but Tripp Lite recommends uninstalling previous versions manually prior to installation.

Warning: Do not install more than one edition of PowerAlert on a single computer. Do not install PowerAlert Network Management System without first obtaining the approval of your network administrator.

3.2 LINUX Installation

STEP 1 File Installation

Copy the appropriate software file to your local machine and enter the following as its root: **rpm -i <rpm-file-name> [--nodeps]**. Use the RPM main page to help you through any installation issues.

STEP 2 Daemon/Service Installation

PowerAlert will install to the directory **/var/tripplite/poweralert**, and will locate the daemon/service process for each software version within **/var/tripplite/poweralert/engine**:

Software Version	Daemon/Service Name
PowerAlert Local	pald
PowerAlert Network Shutdown Agent	pasdad
PowerAlert Network Management System	panmsd

To control the status parameters and actions of each daemon/service, type **./[_DAEMON/SERVICE NAME]** from the **/etc/init.d** directory.

STEP 3 Java Console Installation

The Java consoles for PowerAlert Local, PowerAlert Network Management System and PANSA will be located in **/var/tripplite/poweralert/console** as

3. Installation *(continued)*

Note: Uninstalling software requires root access.

- To uninstall any application using Fedora, enter -e pal, -e panms or -e pasda into RPM.
- To uninstall any application using OpenSUSE, enter -e opensuse-pal, -e opensuse-panms or -e opensuse-pasda into RPM.

4. PowerAlert Local

4.1 Introduction

PowerAlert Local allows you to monitor and control a single UPS system or multiple UPS systems connected to your computer via USB or serial communications cabling. During a loss of utility power, PowerAlert Local detects that your UPS system is operating from battery power and directs your computer's operating system to save any open files and shut down gracefully, avoiding data loss and operating system errors. The shutdown settings can be tailored to fit your preferences (see **4.2 Initial Configuration**).

PowerAlert Local also acts as an SNMP proxy, allowing your UPS system to appear on the local TCP/IP network as an SNMP-manageable device that can be monitored and controlled via PowerAlert Network Management System or a third-party Network Management System such as HP OpenView (see **Section 6 – PowerAlert Network Management System**). The SNMP proxy also allows PowerAlert Network Shutdown Agent to monitor the UPS system for "on battery" events and other information (see **Section 5 – PowerAlert Network Shutdown Agent**).

4.2 Initial Configuration

After installation, PowerAlert Local will detect your UPS system automatically. (If your UPS system is not detected, refer to **Section 8. Troubleshooting** for possible solutions.)

Notable default settings for PowerAlert Local are shown below. If you want to change any of these default settings, refer to the indicated section for configuration instructions.

Setting	Default Value	Configuration Instructions
On Battery Event	Not Configured	**4.11 Settings > Events**
Low Battery Event	Shut Down Computer 15 Seconds After Event Shut Down UPS System 2 Minutes After Event	**4.11 Settings > Events**
E-mail Notification Settings	Not Configured	**4.12 Settings > Contacts**
SNMP Trap Settings	Not Configured	**4.12 Settings > Contacts**
User Level (Scheme)	Depends on UPS System Detected	**4.14 Settings > Schemes**
Ramp/Shed	Remain Off/Remain On	**4.10 Load Ramping and Shedding Actions Menu**
SYSLOG	Not Configured	**4.13 Settings > System**

4.3 PowerAlert Status Icons (System Tray)

(Available for PowerAlert Local: Windows XP, 2003, 2008. Available for PowerAlert Network Shutdown Agent: Windows XP, 2003, 2008, Vista, Linux.)

The PowerAlert status icons reside in the Windows system tray and provide a convenient visual notification of power status. During normal conditions, a light bulb icon will be shown in the system tray. If you place the mouse pointer over the icon, a tooltip will display text to explain the meaning of the icon, as shown in Figure 4.3.1. If you right-click the icon, a pop-up menu will list several options, including launching the PowerAlert Console. The PowerAlert Console allows you to access the complete monitoring and control features of PowerAlert Local.

The system tray icon and tooltip text will change to indicate corresponding changes in power status, battery charge levels and UPS system detection. The range of possible PowerAlert status icons is shown in Figure 4.3.2.
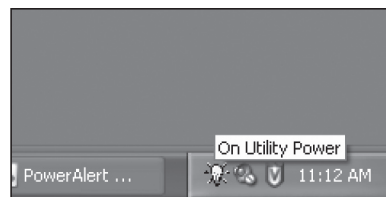
Figure 4.3.1: PowerAlert Status

Figure 4.3.2: PowerAlert Local Status Icons

4.4 PowerAlert Console

The PowerAlert Console is PowerAlert Local's primary user interface. It displays information about your UPS system and power conditions, provides a direct UPS system control interface and allows you to configure automatic responses to changes in conditions (such as automatic shutdown of your computer during power failures). The PowerAlert Console window is divided into several sections, identified in Figure 4.4.1.

Clicking the Tripp Lite logo **A** in the header opens Tripp Lite's Web site in a new browser window. The header also contains the menu buttons and submenu buttons **B**, which are the main navigational elements of the PowerAlert Console. The menu buttons are larger than the submenu buttons. Clicking a menu button selects that menu section and reveals the corresponding submenu buttons. When you select a menu button, the text changes from white to green. When you select a submenu button, the text changes from white to green and the background changes from blue to gray.

The left-hand side of the PowerAlert Console window **C** contains several informational fields. The two uppermost fields display the IP address that PowerAlert Local is using for SNMP proxy purposes (identical to your computer's current IP address) and the device name for the UPS system that is currently selected. If you have more than one UPS system connected to your computer, you can choose which UPS system will be active in the PowerAlert Console window by selecting a device name from the drop-down menu. The device names are user-definable. The next three fields display the manufacturer, model name and location of your UPS system. The manufacturer and model name are dependent on the UPS system connected, but the location field is user-definable. (See **4.9 Settings > Device** for instructions on changing user-definable fields.) The last three fields display alarm information. These fields will be blank when there is a green check mark by the Alarm Status heading. They will change only if there is an alarm, such as an "on battery" event during a power failure. The green check mark will change to a different icon that indicates the type of alarm, and the informational fields will display information about the UPS system affected by the alarm, the cause of the alarm and the automatic or recommended response to the alarm. (See **4.11 Settings > Events** for a list of alarm types and their corresponding icons.) Clicking the "Device" button will display information about the device that is experiencing the alarm condition. Clicking the "Log" button will open the PowerAlert event log (see **4.15 Logs > Events** for more information).

The remainder of the PowerAlert Console window **D** contains information and/or controls that change with each menu and submenu selected. The information and controls you see on your computer will differ slightly from what you see here. Some information is dependent on environmental conditions and some UPS systems will have more information and controls available than others. In addition, there are two user-level settings in PowerAlert Local that will change the complexity of the user interface. This guide shows all the controls and information available in the Business Device Management Scheme, which is the setting for more advanced users. (See **4.14 Settings > Schemes** for instructions on changing the user-level setting. The default user level setting depends on the UPS system that is detected by PowerAlert.)

Figure 4.4.1: PowerAlert Console Window

4. PowerAlert Local *(continued)*

4.5 Status > Summary

Click the "Status" menu button and the "Summary" submenu button to display the Status > Summary window. PowerAlert Local will display information about environmental and operating conditions. Four additional buttons within the window allow you to select input information (Figure 4.5.1), output information (Figure 4.5.2), battery information (Figure 4.5.3) and miscellaneous information that doesn't fit in the other categories (Figure 4.5.4). Information such as input voltage is updated periodically. PowerAlert continually queries the device for status information and updates the console as changes are reported. When you activate an information category, the button for that category will turn blue. The buttons for the other categories will be white. Each button also has a status indicator, which is the small "ear" that protrudes from the upper right part of the button. If the ear is green, all functions within that category are operating within normal parameters. If the ear changes color, one of the variables in that category is outside normal parameters.

Figure 4.5.1: Status > Summary > Input Window

Figure 4.5.2: Status > Summary > Output Window
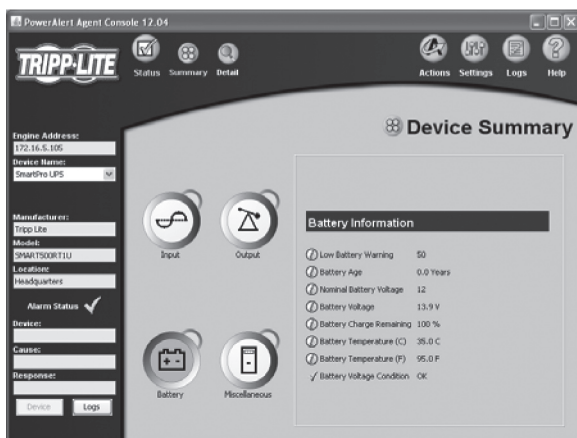

Figure 4.5.3: Status > Summary > Battery Window

Figure 4.5.4: Status > Summary > Miscellaneous Window

4.6 Status > Detail (Available in Business Scheme Only)

Click the "Status" menu button and the "Detail" submenu button to display the Status > Detail window (Figure 4.6.1). The Status > Detail window consolidates the information contained in the four Status > Summary information categories. It may also display additional information categories, depending on your UPS system. Two gauges display the input voltage and battery charge level for convenient reference. Right-click either gauge to display a pop-up menu that shows a list of variables. Select an alternate variable from the menu to change the information displayed on the gauge (available with select UPS systems only).

Figure 4.6.1: Status > Detail Window

4.7 Actions > Control (Available in Business Scheme Only)

Click the "Actions" menu button and the "Control" submenu button to display the Actions > Control window. Click the "Control List" tab (Figure 4.7.1) to see UPS system and computer commands that you can execute immediately or schedule for automatic execution. To execute a command immediately, select it from the drop-down menu and press the "Execute Command" button. To schedule a command, select it from the drop-down menu, set the desired time and frequency parameters and press the "Add Event" button.

If the command you select from the drop-down menu has operational parameters that you can change to suit your requirements, they will be shown in the "Parameters" area. You can click the editable variables and type new values to change the settings for the command. If you plan to change the command parameters, you should change them before you execute the command or add it to the command schedule.

Available commands include Operating System Shutdown, Operating System Restart, Cancel Shutdown, Reboot UPS, Initiate Self-Test, Cycle All Loads, Cycle Load, Turn Load Off, Turn Load On, Turn All Loads Off, and Turn All Loads On. For a complete list of commands available for your UPS system, refer to the drop-down menu.

Click the "Control Schedule Summary" tab (Figure 4.7.2) to see a list of scheduled commands for the device that is currently selected. To remove a command from the schedule, highlight it and press the "Remove Event" button. The maximum number of scheduled commands is 64.

Economy Mode (available on select UPS systems) configures an online UPS to function as an online, line-interactive UPS. When the UPS system is in Economy Mode, it operates at increased efficiency levels, thereby saving money by reducing the operating cost of the UPS while AC utility power is available and switches to battery power if AC utility power is interrupted or out of the acceptable range.

To put a Tripp Lite Online UPS System into Economy Mode, go to the "Actions" menu button and the "Control" submenu button of the PowerAlert Local software or SNMPWEBCARD Web interface. Select either "Enable Economy Mode" or "Set Economy Mode", depending on the UPS. If the UPS has "Set Economy Mode", enter a "2" in the "Parameters-Value" field and then click the "Execute Command" button. On the front panel of the UPS system, the "LINE" and "LOAD" LEDs will illuminate green and the "BYPASS" LED will illuminate a solid yellow when the UPS system is in Economy Mode.

Figure 4.7.1: Actions > Control Window > Control List Tab

Figure 4.7.2: Actions > Control Window > Schedule Summary Tab

4.8 Actions > Loads (Available in Business Scheme Only)

Click the "Actions" menu button and the "Loads" submenu button to display the Actions > Loads window (Figure 4.8.1). You can control the outlets of the UPS system by pressing the appropriate "On," "Off" or "Cycle" button. The load of the equipment attached to the UPS system is displayed as a percentage of maximum capacity, allowing you to see whether additional equipment can be added to the UPS system safely. (Load fluctuates with the power demands of connected equipment. It is prudent to limit the load to approximately 80% of the UPS system's maximum capacity in order to accommodate higher startup power demands and other increased power needs.) The main control buttons affect all outlets.

If your UPS system has switchable load banks, additional buttons allow you to control each load bank. You can use the "Description" field to label the banks for easy reference. If the load bank(s) are non-switchable, the control buttons will be greyed out.

Warning: The load controls start or stop the flow of electricity to your UPS system's outlets. Make sure you know which equipment is connected to each load bank before attempting to use these controls. Check the outlet labels and/or test the load banks by plugging a circuit tester or small light into each outlet and observing the effects of the controls.

Figure 4.8.1: Actions > Loads Window

4.9 Settings > Device

Click the "Settings" menu button and the "Device" submenu button to display the Settings > Device window (Figure 4.9.1). You can edit the device variables for the UPS system, including "Location," "Region," "Device Name," "Date Installed," "Serial Number" and "Low Battery Warning." "Device Name" and "Region" are displayed in the left-hand portion of the PowerAlert Console window. The device variables are especially useful for remote management. *Note: Some UPS systems have fewer device variables; some have more. Some UPS systems will fill the "Serial Number" field automatically. The "Low Battery Warning" field is tied to the "Battery Below Warning Level" event. "Battery Age" (above threshold) is based on either the "Battery Install Date" entered on the Settings > Device screen or the last "Battery Install Date" set in the UPS. If "Battery Install Date" is not available, use "Set Last Battery Install Date" under the Action > Control menu to enter the last "Battery Install Date."*

Click the "Scan For New Devices" button to initiate local device autodiscovery and detect connected UPS systems that haven't already been detected. If your UPS system is still not detected, try to add it manually. Click the "Add Device" button and select the communication port in the Add Device window (Figure 4.9.2). The communication port setting refers to the computer port that is connected to the communications cable. Next, select the communication protocol used by your UPS system. After you have selected the port and protocol, click the "OK" button. If your UPS system is still not detected, restart your computer to ensure that the UPS system has been recognized by your computer's operating system. You may also need to modify the port and/or protocol you selected. Contact Tripp Lite for more information about manual device configuration.

If the selected device is inactive, you can click the "Delete Device" button to remove it from the device list.

See **4.10 Load Ramping and Shedding** for information about the "Ramp Settings" and "Shed Settings" tabs.
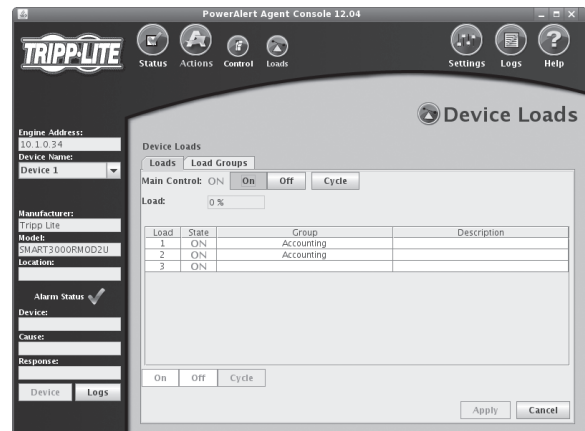
Figure 4.9.1: Settings > Device Window
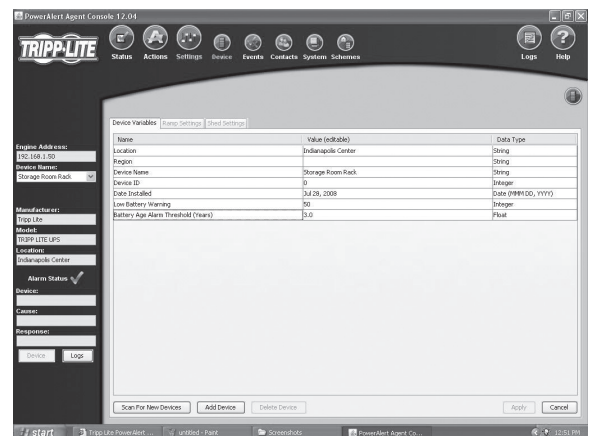
Figure 4.9.2: Add Device Window
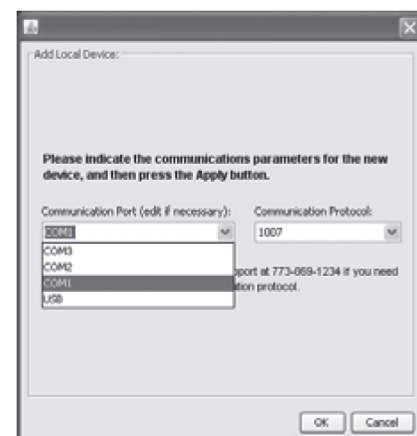
4.10 Load Ramping and Shedding

Click the "Settings" menu button and the "Device" submenu button in the PowerAlert console window to display the Settings > Device window. If the selected device supports load ramping and shedding, the "Ramp Settings" and "Shed Settings" tabs will be available (Figure 4.10.1).

The "Ramp Settings" and "Shed Settings" tabs each contain a table that shows the numbered load segments available for the selected device. Each load segment has a "Device Description" field, an "Action" field and a "Delay" field. The "Device Description" field allows you to enter a note about the equipment connected to the load segment. The "Action" field allows you to configure the load ramping or shedding behavior by choosing from the possible actions listed on the pop-up menu. The "Delay" field allows you to enter the delay (in seconds) before the specified action is performed. After entering the desired values, click the "Apply" button to make the values active for the selected device. Load ramping sequences are applied when AC input power is switched on. Load shedding sequences are applied when AC input power is lost, increasing the battery backup runtime available for supported equipment.

Figure 4.10.1: Settings > Device Window > Ramp Settings Tab

Load ramping and load shedding require a Tripp Lite UPS system or PDU with switchable load banks (outlets that can be switched on and off remotely). A device that has switchable load banks can be classified as an autonomous device or a non-autonomous device, which determines its load ramping and load shedding characteristics (Figure 4.10.2).

Figure 4.10.2: Autonomous and Non-Autonomous Device Characteristics

	Custom Load Ramping		Custom Load Shedding	
	Configuration	*Execution*	*Configuration*	*Execution*
Autonomous Device	Requires SNMPWEBCARD or PowerAlert.	Functions without SNMPWEBCARD or PowerAlert.	Requires SNMPWEBCARD or PowerAlert.	Functions without SNMPWEBCARD or PowerAlert.
Non-Autonomous Device	Not supported.	Not supported.	Requires SNMPWEBCARD.	Requires SNMPWEBCARD.

An autonomous device can execute stored load shedding and load ramping configurations independent of an SNMPWEBCARD or PowerAlert. Configuration of an autonomous UPS system requires PowerAlert or an SNMPWEBCARD (disconnect the SNMPWEBCARD network cable before attempting to use an autonomous UPS system's RS-232 serial port). Configuration of an autonomous PDU requires an SNMPWEBCARD (the card is pre-installed in "NET" models). Figure 4.10.3 lists autonomous devices that are currently available.

Non-autonomous devices require an SNMPWEBCARD for configuration and execution of a custom load shedding sequence. Non-autonomous devices do not support custom load ramping. UPS systems that have switchable load banks are non-autonomous devices unless they are listed in Figure 6.4.1.

Figure 4.10.3: Sample List of Autonomous Devices

Part Number	Series Number
PDUMH15AT	All
PDUMH15ATNET	All
PDUMH15HVNET	All
PDUMH20AT	All
PDUMH20ATNET	All
PDUMH20HVNET	All
PDUMH30HVNET	All
PDUMH30NET	All
PDUMV15NET	All
PDUMV20HVNET	All
PDUMV20NET	All
PDUMV30HVNET	All
PDUMV30NET	All
SMART1500CRMXL	All
SMART2200RMXL2U	AGSM5389
SMX2200RMXL2U	AGSM5392
SMART3000RMOD2U	All
SMART3000RM2U	AGSM6908
SU3000RTXL2U	All
SUINT3000RTXL3U	All

4.11 Settings > Events

Click the "Settings" menu button and the "Events" submenu button to access the Settings > Events window. The appearance of the Settings > Events window depends on whether you have the Home Device Management Scheme or the Business Device Management Scheme enabled. (See **4.14 Settings > Schemes** for more information about choosing schemes.)

If the Home Scheme is active, the Settings > Events window is simplified (Figure 4.11.1). Several controls allow you to choose how your computer will respond when your UPS system is operating from battery power. The computer can shut down after a user-defined period of time, after battery reserves drop to a user-defined percentage, after a low battery alarm is detected, or not at all. You can also choose whether to receive broadcast notification of these battery events.

If the Business Scheme is active, the Settings > Events window displays a more complex set of controls (Figure 4.11.2) that allow you to configure responses to changes in UPS system operating conditions and environmental conditions.

Events are divided into five categories: Critical, Warning, Status, Info and Offline. Each event category has an icon associated with it that will be displayed in the left-hand Alarm Status section of the PowerAlert Console window (along with other event information) when an event of that category occurs.

You can configure settings for several event types, including "On Battery," "Battery Low," "Battery Capacity Below Warning Level," "Communications Lost," "Temperature High," "Self Test Failed," "Output Off" and "Battery Over 3 Years Old." For each event, you can configure several settings categories, including "Broadcasting," "Shutdown," "Contact Notification," "SNMP Notification," "Execute Command Script," "Logging" and "Set OID Event Raise/Clear." Check the "Status" box by the settings category to enable the event setting.

Each settings category has several parameters that you can configure for the selected event type. For example, to configure the shutdown settings for an "On Battery" event, you first highlight "On Battery" and then highlight "Shutdown" and click the "Settings…" button. A new window will appear (Figure 4.11.3) that allows you to set the "On Battery" event shutdown settings for your computer's operating system and your UPS system. If you experience a utility power failure, your UPS system will tell your computer that it's operating from battery, and these settings will determine how soon each will shut down if utility power is not restored beforehand.

You can also choose to have alarms forwarded to a pre-selected contact via email or SNMP traps (See Figures A, B and C).

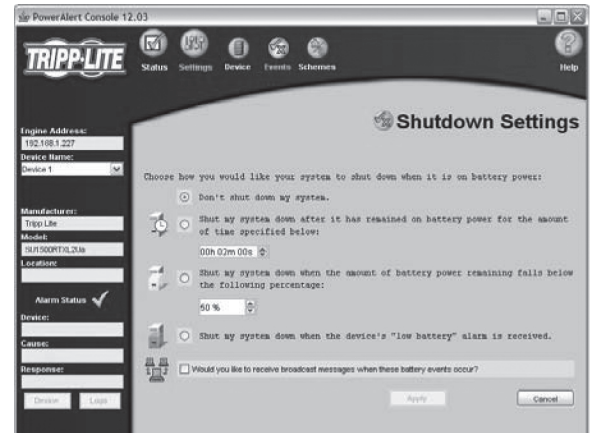*Figure 4.11.1: Settings > Events Window (Home Scheme)*

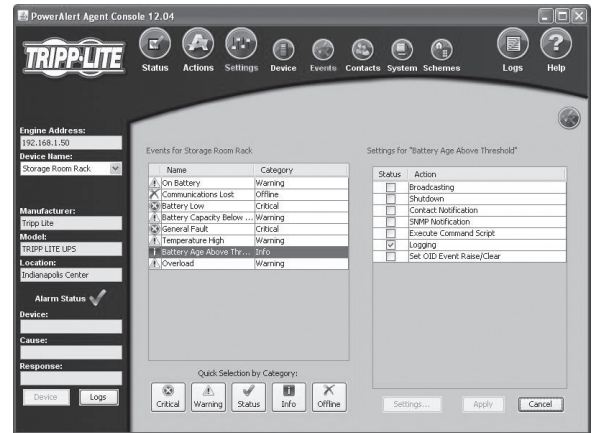*Figure 4.11.2: Settings > Events Window (Business Scheme)*

Figure 4.11.3: On Battery Event Shutdown Settings Window

4.12 Settings > Contacts (Available in Business Scheme Only)

Click the "Settings" menu button and the "Contacts" submenu button to display the Settings > Contacts window.

The "E-mail" tab (Figure 4.12.1) shows a table of configured e-mail contacts. Before PowerAlert can send e-mail notifications, you must enter e-mail server information and add at least one e-mail contact. Click the "SMTP Settings" button to enter the settings for your local mail server in the SMTP Settings window (Figure 4.12.2). If you do not know the correct settings, contact your network administrator. Add a new e-mail contact by clicking the "New" button and entering the information requested in the pop-up window (Figure 4.12.3).

The "SNMP" tab (Figure 4.12.4) shows a table of configured SNMP contacts. Before PowerAlert can send an SNMP trap to an IP address, you must add at least one SNMP contact. Add a new SNMP contact by clicking the "New" button and entering the information requested in the pop-up window (Figure 4.12.5). Before configuring SNMP traps or SNMP sets for an event, SNMP trap and/or SNMP set destinations must be added here first. For SNMP trap destinations, use port 162. For SNMP set destinations, use port 161. If you do not know the correct settings, contact your network administrator.

*Note: You also need to configure and enable each event setting through the Settings > Events window (see **4.11 Settings > Events**) before notifications can be sent to your contacts.*

Note: If adding a SNMP contact to be used with a SNMP Set Notification, use port 161 or the port number that the remote SNMP device can be accessed on.

Figure 4.12.1: Settings > Contacts Window > E-mail Tab

Figure 4.12.2: SMTP Settings Window

Figure 4.12.3: Edit E-mail Contact Window
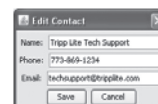
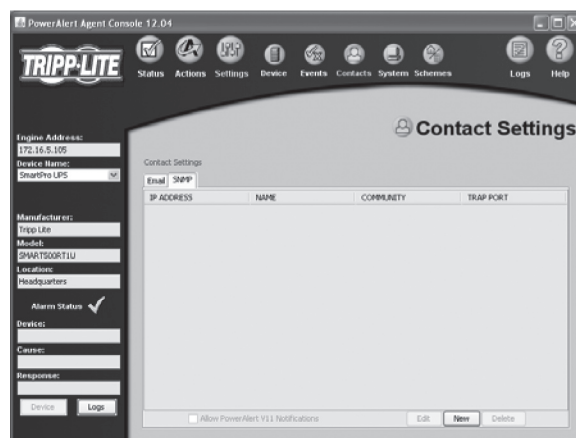
Figure 4.12.4: Settings > Contacts Window > SNMP Tab

Figure 4.12.5: SNMP Contact Window

4.13 Settings > System (Available in Business Scheme Only)

Click the "Settings" menu button and the "System" submenu button to display the Settings > System window. Click the "Write Config File" button to create a file that contains all the settings defined through the PowerAlert Console. You can use the configuration file as a backup or to aid the configuration of additional workstations. The configuration file is saved to C:\Program Files\ TrippLite\PowerAlert\ by default.

The Configuration tab (Figure 4.13.1) contains the option to set an automatic update trap to a PowerAlert Network Management System that is monitoring the network in which the concurrent PowerAlert Local System is installed. The Discovery option allows the user to define if PowerAlert should search for newly connected local devices at startup.

The "Shutdown Settings" tab (Figure 4.13.2) determines whether your computer will hibernate or shut down completely. (Hibernation also must be enabled through your computer's operating system.) Additional settings apply if you have multiple UPS systems connected to your computer. The "Discovery Settings" tab (Figure 4.13.3) allows you to define when PowerAlert should try to find new UPS systems.

Figure 4.13.1: Settings > System Window > Configuration Tab

Figure 4.13.2: Settings > System Window > Shutdown Tab
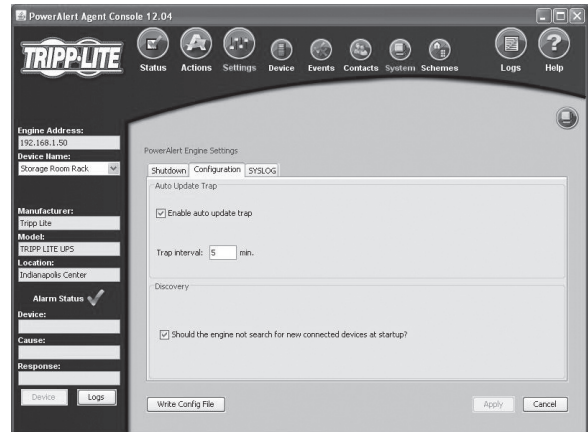
Figure 4.13.3: Settings > System > Syslog
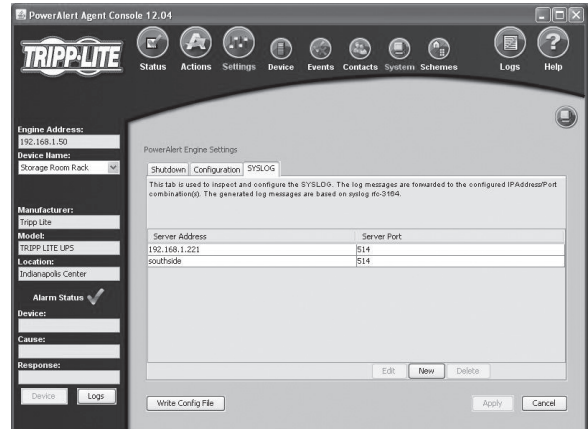
SYSLOG

SYSLOG is a protocol that allows a machine to send event notification messages across IP networks to event message collectors (also known as SYSLOG servers). Up to 4 SYSLOG servers may be defined by either IP address or Hostname. Hostnames require a DNS (Domain Name System) server be configured on the TCP/IP tab. Once configured, any event will trigger a message to be sent to the SYSLOG server for logging.

4.14 Settings > Schemes

Click the "Settings" menu button and the "Schemes" submenu button to display the Settings > Schemes window (Figure 4.14.1). PowerAlert Local has two user level settings: the "Home Device Management Scheme" and the "Business Device Management Scheme." The home scheme is the more basic setting. Several PowerAlert Console windows are hidden when the home scheme is active, including the Status > Detail window, the Settings > Contacts window, the Settings > System window and all windows for Actions and Logs. In addition, the Settings > Events window is simplified (see **4.11 Settings > Events**).

The default scheme depends on the UPS system detected: simpler UPS systems default to the home scheme and more complex UPS systems default to the business scheme. You can switch between schemes at any time, but some settings may be lost in the transition. If a UPS is connected via a USB cable, it may default to the home scheme even with more sophisticated UPS systems.

Figure 4.14.1: Settings > Schemes Window

4.15 Logs > Events (Available in Business Scheme Only)

Click the "Logs" menu button and the "Events" submenu button to display the Logs > Events window (Figure 4.15.1). To view the event log, set your preferences and then click the "Retrieve Records" button. Each event displays an icon that identifies its category: "Normal," "Critical," "Warning," "Info" or "Offline."

To save the event log to a text file, click the "Options" button, select your preferences in the pop-up window and then click the "Save" button. By default, the event log file will be saved to:

Windows: C:\Program Files\TrippLite\PowerAlert\data\paelog.txt

Linux: \var\TrippLite\PowerAlert\data\paelog.txt

Event log information will also be available in the Windows event log. To access the Windows event log, go to "Control Panels," double-click "Administrative Tools" and then double-click the "Event Viewer." Log entries will appear in the "Application" section, along with entries from other Windows applications and components.

Figure 4.15.1: Logs > Events Window

4.16 Logs > Data (Available in Business Scheme Only)

Click the "Logs" menu button and the "Data" submenu button to display the Logs > Data window (Figure 4.16.1). To view a table of logged data, set your preferences, select "Table" and then click the "Display Records" button. You can drag and drop the column headings to rearrange the display order. To view a graph of logged data, select "Graph," choose the graphing parameters from the drop-down menu and then click the "Display Records" button. You will be able to graph input voltage, battery voltage, battery capacity (percentage) or output load (percentage).

To save the data log to a comma-delimited text file, click the "Options" button, select your preferences in the pop-up window and then click the "Save" button. You can also set the data-logging interval. The data log file will be saved to

Windows: C:\Program Files\TrippLite\PowerAlert\data\padlog#.txt

Linux: \var\TrippLite\PowerAlert\data\padlog#.txt

*Figure 4.16.1: Logs > Data Window*
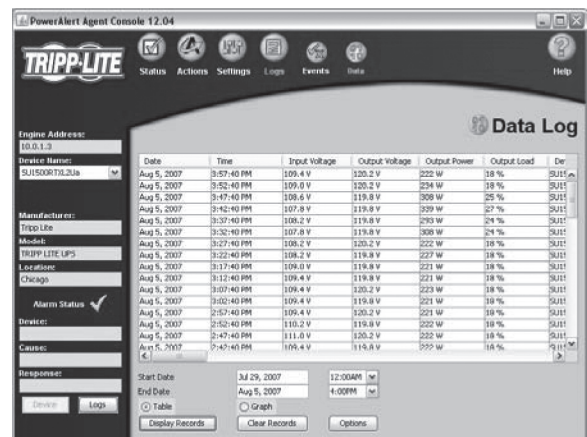
4.17 Help

Click the "Help" menu button and the "About" submenu button to display the Help > About window (Figure 4.17.1). The Help > About window displays information about the software version and also includes various legal statements.

Click the "Help" menu button and the "Help" submenu button to open a separate Help window in your Web browser.

Figure 4.17.1: Help > About Window
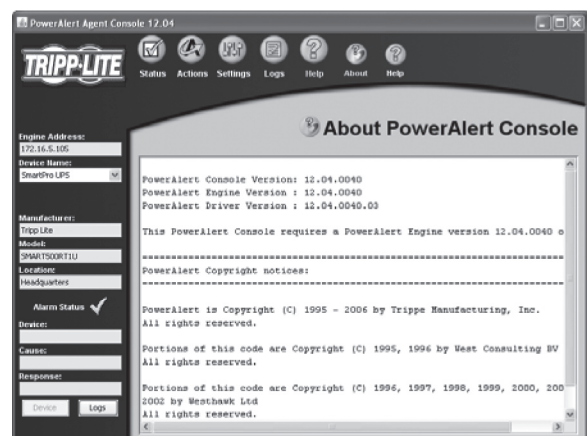
5. PowerAlert Network Shutdown Agent

5.1 Introduction

PowerAlert Network Shutdown Agent provides automatic shutdown for a computer that is receiving battery backup protection from a Tripp Lite UPS system, but is unable to connect directly to the UPS system via USB or serial cabling. PowerAlert Network Shutdown Agent is able to "listen" to an SNMP-capable device on the local network that is directly connected to the UPS system, allowing you to configure your computer to shut down when specific power events are detected. PowerAlert Network Shutdown Agent does not require the Java Runtime Environment, so it is also useful for users who cannot install Java because of computer resource limitations or IT department restrictions. PowerAlert Network Shutdown Agent can monitor several types of SNMP-capable Tripp Lite devices, including UPS systems with an SNMPWEBCARD*, UPS systems that appear on the network via PowerAlert Local* and network-enabled PDUs*.

*Software or firmware version 12.04.0040 and above (for LINUX: 12.04.0040 and above).

5.2 Pre-Installation Configuration

For Windows and LINUX:

Note: PowerAlert Network Shutdown Agent requires pre-installation configuration of firewall software settings and/or SNMPWEBCARD settings.

• You should open UDP ports 161, 162, 3664 and 3665 on your computer's firewall software and disable the Windows SNMP trap service.

• The host computer for the device that PowerAlert Network Shutdown Agent will be monitoring must also have UDP ports 161, 162, 3664 and 3665 open on its firewall software.

• If PowerAlert Network Shutdown Agent will be configured to monitor an SNMPWEBCARD, enable the card's SNMP access and define a read/write community string. (The default community string for firmware version 12.04.0040 and above is "tripplite." For prior versions, enable read/write SNMP access.)

5.3 Post-Installation Configuration

For LINUX:

Configuring PANSA Through Configuration File

1. Copy the **sample_paconfig.ini** file in the **/var/tripplite/poweralert/engine** directory and rename as **paconfig.ini**.
2. Edit **paconfig.ini** and modify the following:
   a. [PA_Remote]
      i. Server = IP address of remote system
      ii. SNMPCommunity = **tripplite** (This default may only be changed if the same R/W community has been defined on the remote SNMPWEBCARD. Remote PowerAlert Local systems require a tripplite community.)
      iii. SNMPPort = 3664 (Change to 161 if connecting to SNMPWEBCARD)
   b. [RemoteEvent]
      i. ShutdownEvents = On Battery (Default) (If you want the PowerAlert Network Shutdown Agent to shut down during a different event, replace this default with a new event, i.e. Battery Low/Other Event. To add additional shutdown events, type in all applicable events and separate each with a comma.) *Note: Event names must match exactly as listed in the Supported Events list.*
      ii. ShutdownDelay = 15 (seconds before operating system shutdown)
3. Save these new settings and either start the daemon/service manually or restart the system. *Note: If changes need to be made after initial configuration, you will need to 1) stop the daemon/service, 2) delete all of the files in the /var/tripplite/poweralert/data directory, 3) edit the paconfig.ini file, and 4) restart the daemon/service.*
4. To verify your configuration, access the remote agent (Web or Java console) and go to Settings>Contacts>SNMP. Make sure that the IP address matches the name PowerAlert Network Shutdown Agent.

Configuring PANSA Using the Java Console

1. Requirements: Java 1.6
2. Change to the /var/tripplite/poweralert/console directory
3. Launching to Local or Remote ID:
   Connect to **Local:** .\pansaconsole.Jar-ax.x.x.x
   Connect to **Remote:** \var\TrippLite\PowerAlert\console\.

5.4 Network Device Autodiscovery

After installation, the option to launch the shutdown console (Figure 5.4.1) is available. The shutdown console contains all the controls required to operate PowerAlert Network Shutdown Agent.

The "Monitored UPS" fields will be blank when PowerAlert Network Shutdown Agent starts up for the first time. Click the "Discover Agents" button to open the discovery settings window (Figure 5.4.2). Enter an IP address and community name ("tripplite" is the default). You must click the "Add to list" button after each entry, and you can add multiple entries if desired. You can use the asterisk character (*) as a wildcard in the IP address field. (For example, 192.168.1.* will cover 192.168.1.1 through 192.168.1.255.) If you know the specific IP address of the device you plan to monitor, enter that address. If you're unsure what information you need to enter in the discovery settings window, contact your network administrator for assistance.

Note: *PowerAlert Network Shutdown Agent attempts to discover compatible SNMPWEBCARD firmware, PowerAlert Local and previous versions of PowerAlert software, but it does not search for PowerAlert Network Management System or other PowerAlert Network Shutdown Agents on the network.*

After you enter the IP addresses and community names you want to search, press the "OK" button to initiate the network autodiscovery process. Autodiscovery will detect SNMP-enabled Tripp Lite devices on the local network that PowerAlert Network Shutdown Agent is able to monitor (Figure 5.4.4). The autodiscovery results window (Figures 5.4.3) will list compatible devices detected by the autodiscovery process. (If no devices are detected (Figure 5.4.5), confirm that the devices have been configured with the firewall and other settings discussed above.)

Select either one or two UPS systems to be monitored by PowerAlert Network Shutdown Agent, then click the "OK" button to return to the primary shutdown console window. The device or devices you selected will be displayed in the "Monitored UPS" fields. Information about each device's IP address, community name, model, location and status will be shown.

The status field shows whether the monitored device is currently accessible. If the monitored device is offline, PowerAlert Network Shutdown Agent will attempt to reconnect to the monitored device continuously for 15 minutes, then once every 15 minutes. You can add devices by running the autodiscovery process again. Devices can also be deleted from the console and PANSA will de-register with the device.
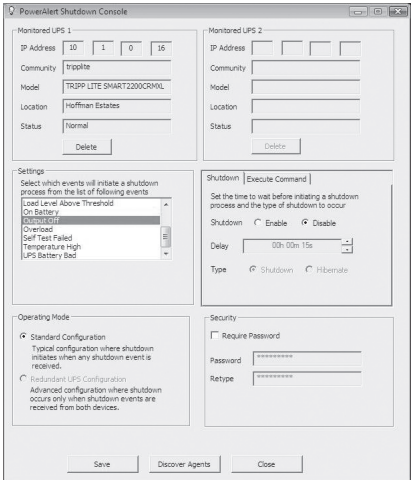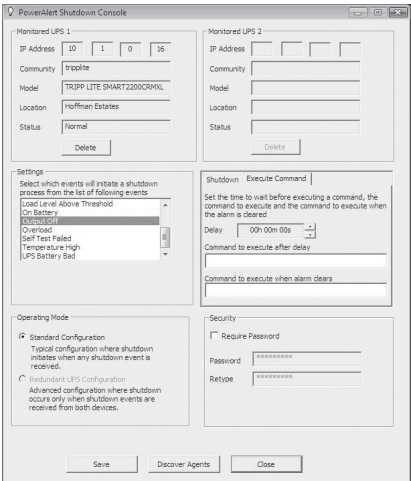

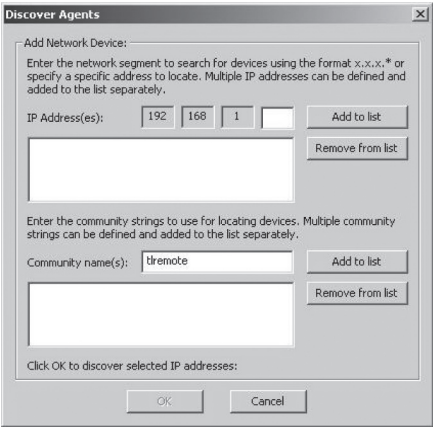*Figure 5.4.1: Shutdown Console*

Figure 5.4.2: Discovery Window

Figure 5.4.3: Shutdown Agent Autodiscovery Results

Figure 5.4.4: Successful Autodiscovery   *Figure 5.4.5: Unsuccessful Autodiscovery*
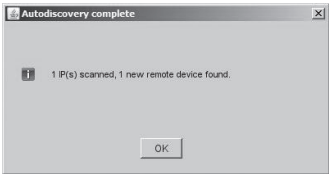
5.5 Shutdown Settings

After selecting one or two UPS systems to monitor, you should define which monitored UPS system events will prompt PowerAlert Network Shutdown Agent to shut down or hibernate your computer. The default setting is to shut down your computer 15 seconds after any event is raised. The list of possible events is dynamic. It will include events such as "Battery Low," "On Battery" and "Temperature High," as well as additional events that may be specific to the monitored device. Highlight one or more events in the list to enable shutdown or hibernate when any of them are detected. Events that are not selected will be ignored. Use the dial to the right of the event list to set the shutdown delay (in seconds). You can also choose whether to shut down your computer completely or to reduce power consumption by placing your computer in hibernation mode. "Hibernate" will be available only if the hibernation feature is supported by your computer's operating system. If the hibernation feature is supported, "Hibernate" will be the default setting.

5.6 Execute Script

Provides the ability to execute a customized script on Event Actions.

5.7 Operating Mode and Security Settings

The "Operating Mode" setting defines when your computer will shut down if PowerAlert Network Shutdown Agent is monitoring two UPS systems. If the "Standard Configuration" setting is selected, your computer will shut down when a shutdown event is received from either monitored device. If the "Redundant UPS Configuration" setting is selected, your computer will shut down only when concurrent shutdown events are received from both monitored devices. The "Security" setting determines whether a password is required to open the shutdown console. No password is required by default. The default password is **tripplite**. This setting is editable.

Note: In a redundant UPS system configuration, each UPS system must have sufficient load capacity to handle the total power requirement of all connected equipment.

5. PowerAlert Network Shutdown Agent *(continued)*

5.8 Shutdown Agent Status Icons (System Tray)

The PowerAlert Network Shutdown Agent status icons reside in the Windows system tray and provide a convenient visual notification of power status. During normal conditions, a light bulb icon will be shown in the system tray. If you place the mouse pointer over the icon, a tooltip will display text to explain the meaning of the icon, as shown in Figure 5.6.1. If you right-click the icon, a pop-up menu will list several options.

The system tray icon and tooltip text will change to indicate corresponding changes in power and UPS system status. The range of possible PowerAlert Network Shutdown Agent status icons is shown in Figure 5.6.2.

Figure 5.6.1: Shutdown Agent Status
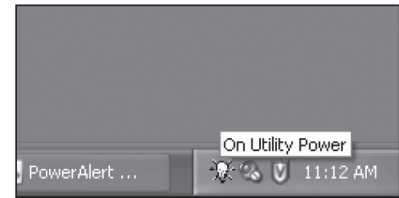
Figure 5.6.2: Shutdown Agent Status Icons
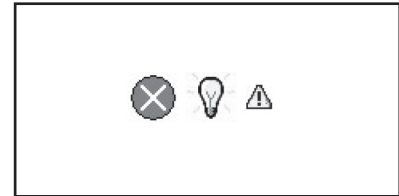
6. PowerAlert Network Management System

6.1 Introduction

PowerAlert Network Management System is for advanced users only. PowerAlert Network Management System can monitor and control up to 250 SNMP-enabled devices, including UPS systems with an SNMPWEBCARD*, UPS systems that appear on the network via PowerAlert Local (or previous versions of PowerAlert*) and network-enabled PDUs*. All the functions available through the PowerAlert Local console (see **4.4 PowerAlert Console**) will be available for the remote devices and also for local devices that are directly connected to the host computer. ***Warning: Only one copy of PowerAlert Network Management System can be used per IP network subnet.***

*Software or firmware version 12.04.0040 and above.

6.2 Management Console

PowerAlert Network Management System's primary monitoring and control interface is the management console (Figure 6.2.1), which can be viewed either as a list (Figure 6.2.2), a tree (6.2.3) or an icon view (6.2.4). All manageable devices found during the autodiscovery process (up to 250) are listed in the device table **A** . Click any of the column headings to sort the table by the data in that column; click again to reverse the sort.

The "Status" column of the device table displays an icon that represents the device status. (If the device has more than one alarm, the icon for the most serious alarm is shown.) The row's color reflects the device status: Normal=White, Critical=Red, Warning=Yellow, Information=Light Blue, Offline/Unreachable=Light Gray. Rows that change from normal to an alarm status will move to the top of the table automatically. You can right-click the device row and choose "Acknowledge Alarm" to remove the alarm status from the row and restore the previous sort order. The alarm icon will remain unchanged until the device reports that the alarm has cleared. You can see additional alarm detail about the highlighted device, including separate listings of multiple alarms, in the "Alarms" section **B** of the management console.

The "IP address" column of the device table displays the IP address assigned to the SNMPWEBCARD or the computer that is connected to the device. An SNMPWEBCARD connected to an ENVIROSENSE environmental sensor or a computer connected to two UPS systems will show two devices with the same IP address, but other devices will each have a unique IP address. Any devices connected directly to the PowerAlert Network Management System host computer will show "localhost" in the IP address column. The "Model Name" column displays model information reported by the device. The "Location" column displays editable location information reported by the device. The "Type" column displays whether the device appears on the network via SNMPWEBCARD or PowerAlert software (i.e. card or PC). The "Version" column shows the firmware or software version number. The "MAC Address" column shows the unique hardware address assigned to the SNMPWEBCARD or computer connected to the device.

Double-click any device listed in the device table to open a separate PowerAlert console for that device. (Right-clicking the device and choosing "Connect" from the pop-up menu will do the same thing.) If the device appears on the network through PowerAlert Local or a previous version of PowerAlert software, the PowerAlert console for that device will open in a subordinate console window (one Java console at a time). If the device is an SNMPWEBCARD or network-enabled PDU, a Web browser will launch and connect to the device's PowerAlert console. You can use each device's separate PowerAlert console to access all the monitoring and control features of the device.

Figure 6.2.1: Management Console Window
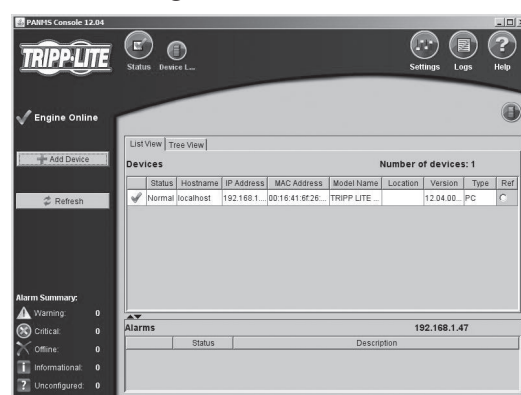

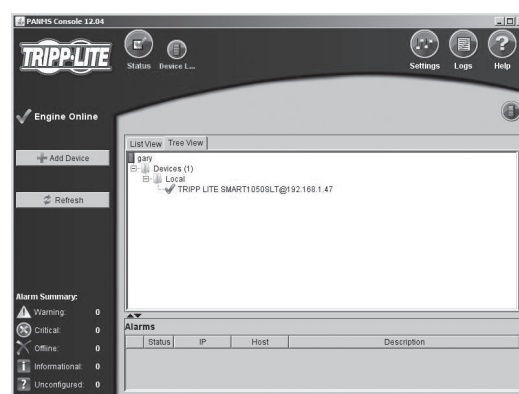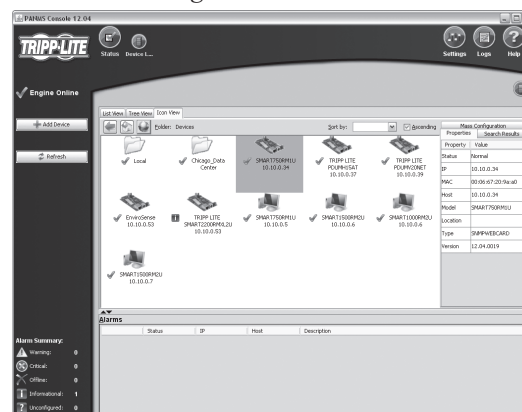*Figure 6.2.2: List View*

Figure 6.2.3: Tree View

Figure 6.2.4: Icon View

6.3 Device Addition and Removal

Delete a device from the device table by right-clicking the device row and selecting "Remove device" from the pop-up menu (Figure 6.3.1).

Add devices by clicking the "Add Device" button located in the upper left section of the management console window. Select whether you want to discover a local device or a remote device in the "Add a Device" pop-up window (Figure 6.3.2).

If you choose to discover a local device, the process is similar to PowerAlert Local (see **4.9 Settings > Device**).

If you choose to discover a remote device, the "Add Network Devices" window appears (Figure 6.3.3). Network device discovery can search the entire local subnet* if you enter an asterisk in the last octet of the IP address (192.168.1.*), or it can search specific IP addresses. Click the "Add to list" button after entering each IP address. Next, add the community strings for the SNMPWEBCARD devices that will be searched. (The default community string for SNMPWEBCARD firmware 12.04.0040 or later is "tripplite.") Click the "Add to list" button after entering each community string. After entering all the required information, initiate the discovery process by clicking the "OK" button. A progress bar and numeric display will indicate the number of nodes discovered, and newly discovered devices will be added to the device table. If you enter a specific IP address, and the device is not discoverable, you'll see a message stating that a device could not be found.

PowerAlert Network Management System searches for devices that appear on the network via SNMPWEBCARD firmware, PowerAlert Local or previous versions of PowerAlert (12.04.0019 and above), but it does not search for PowerAlert Network Shutdown Agent.

PowerAlert Network Management System automatically configures the following agents to send SNMP notifications to PowerAlert Network Management System:

- SNMPWEBCARD Firmware Version 12.04.0048
- SNMPWEBCARD Firmware Version 12.04.0045
- SNMPWEBCARD Firmware Version 12.04.0040
- PowerAlert Local 12.04.0040 and above
- PowerAlert Software 12.04.0019 and above

The following agents will be discovered, but require manual configuration to send SNMP notifications to PowerAlert Network Management System:

- SNMPWEBCARD Firmware Version 12.04.0019
- SNMPWEBCARD Firmware Version 12.04.0030
- SNMPWEBCARD Firmware Version 12.04.0032
- SNMPWEBCARD Firmware Version 12.04.0034

When PowerAlert Network Management System discovers a device that requires manual configuration, it appears in the device table with a "?" status icon, indicating an unconfigured device alarm (Figure 6.3.4). See **6.5 Clearing Unconfigured Device Alarms** for manual configuration instructions.

*Discovery searches the local IP subnet only (Class C). If the IP network is not a Class C network (192.0.0.0 through 223.255.255.255) a pop-up window will indicate that the discovery process can only performed on a class C network.
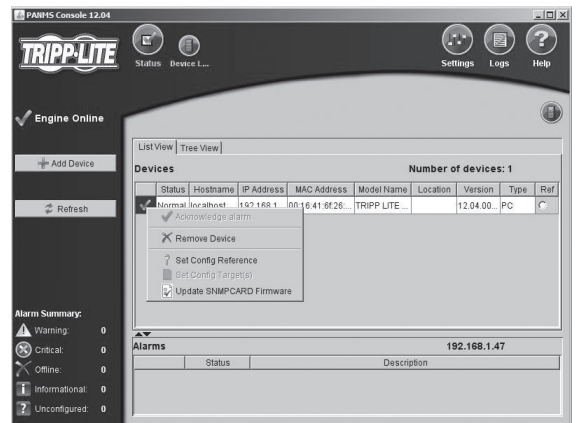
Figure 6.3.1: Right-Click Device Row Menu

Figure 6.3.2: Add a Device Window

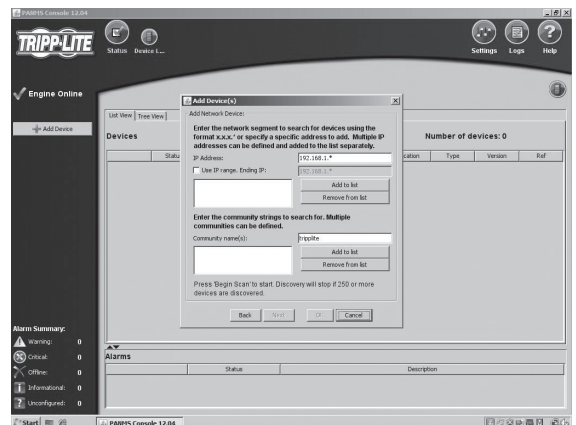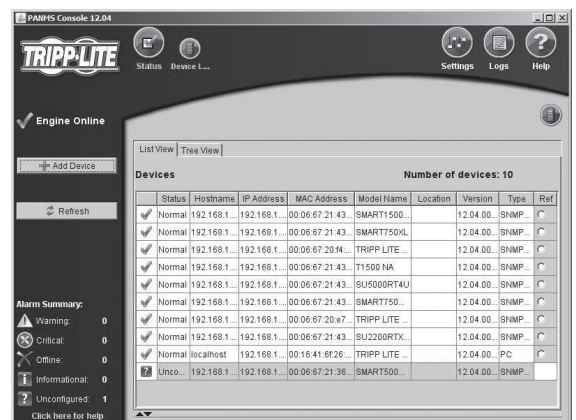*Figure 6.3.3: Add Network Devices Window*


Figure 6.3.4: Unconfigured Device Alarm

6.4 SNMPWEBCARD Firmware

Launch the Application

Right-click on the SNMPWEBCARD listed on the PANMS Console and select "Update SNMPWEBCARD Firmware" and the Update Console with automatically be launched.

NOTE: To update multiple SNMPWEBCARDs at once, hold down the Control button on the keyboard, then right-click on any of the selected cards.
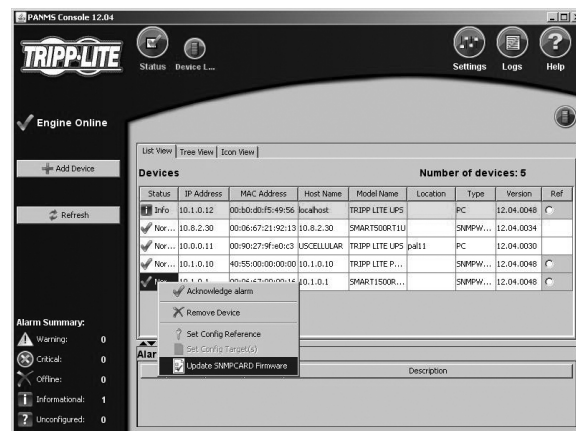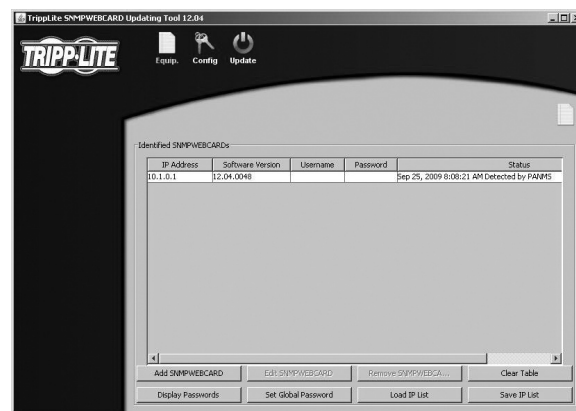
Equipment Menu

This menu displays the list of SNMPWEBCARDs that have been selected for version update.

In this menu, the user can add, edit, or remove one or more SNMPWEBCARDs. The "Set Global Password" button on this screen allows the user to set the username and password for all the SNMPWEBCARDs in one step. If each card has a different username and/or password, the user must manually edit each card to add the username and/or password info.

NOTE: The Update tool refers to these username/passwords when performing the version update. Setting the global password in this menu does not change the card login authentication. It is only used during the update process.

Configuration Menu

This menu is used for updating the administrative username and/or password for the SNMP-WEBCARDs listed on the Equipment Menu. The default username and password must be defined to begin the update process.

NOTE: Only cards of version 12.04.0048 and above support username change. All other SNMPWEBCARDs have fixed administrative user name "admin" and can only have their password updated.
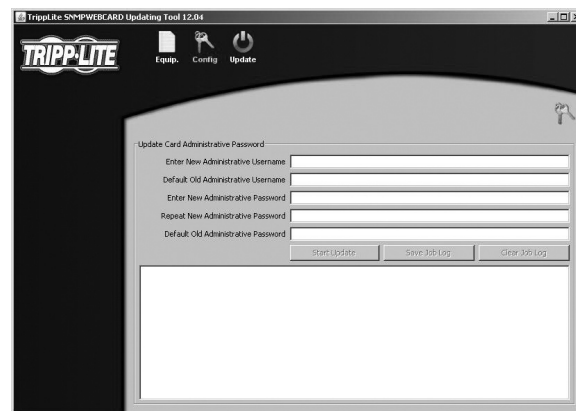
Update Menu

This menu is used for SNMPWEBCARD version updates.

Please do not rename the image file and driver file; only the original names are recognized by the application.Also make sure the image version chosen is correct. Choosing the wrong version may cause the card(s) to end in an inoperable state.

Since SNMPWEBCARD version 12.04.0048 is using the new hardware, any SNMPWE-BCARD of a version below 12.04.0048 (using original hardware), cannot be upgraded to version 048 or above. Furthermore, any SNMPWEBCARDs using the new hardware cannot be downgraded to a version below 12.04.0048.

If an SNMPWEBCARD does not have username and password on the Equipment screen, and the username and password are not defined on this menu, the default "admin" username and "admin" password will be used. If the username and password do not match the actual username and password of a SNMPWEBCARD, the SNMPWEBCARD will not be updated.

NOTE: When an SNMPWEBCARD does not have its version on the Equipment screen, the update process will try to query its version from the SNMPWEBCARD. If the query fails and the SNMPWEBCARD version cannot be determined, this SNMPWEBCARD will not be updated. After the version update process is complete, the card version on the PANMS Console will update.
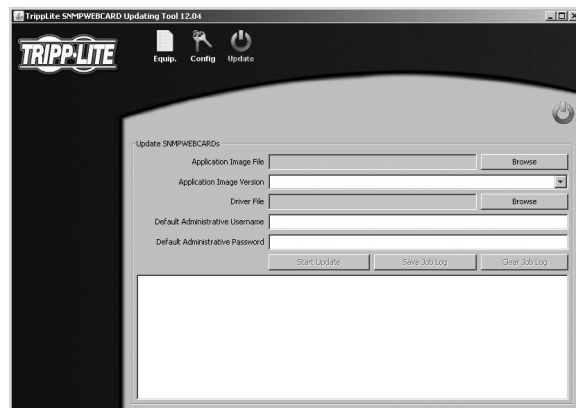
6.5 Mass Configuration

Mass configuration allows you to create a global device configuration that you can apply to all compatible devices listed in the device table. (Devices with software or firmware versions older than 12.04.0040 do not support mass configuration.)

STEP 1 Configure Reference Source

Choose a device (software or firmware version 12.04.0040 or above only) that appears in the device table to use as a reference source. The settings for the reference source will be duplicated on all the target devices for the mass configuration. Configure all settings for the reference source to match the global settings you want for mass configuration. (You can configure the reference source through the management console or any other configuration method it supports, as long it's listed in the device table.)

Configurable Items:

1. Event Settings

2. E-mail Settings

3. SNMP Trap Destinations

STEP 2 Select Configuration Reference

Highlight the reference source in the device table and right-click the row. Select "Set configuration reference" from the pop-up menu (Figure 6.5.1). The reference source's configuration will be stored in memory. (Alternative method: click the radio button in the reference column to select the reference source.) *Note: If you configured the reference source outside the management console, confirm that the IP number of the device you select in the table matches the IP number of the reference source.*

STEP 3 Choose Targets

Highlight one or more devices in the device list (Figure 6.5.2). (Use Ctrl + right-click to select multiple devices, or control + right-click if the devices are not listed side by side.) Highlighted devices will be configured to match the configuration reference. Remember that any highlighted devices must be version 12.04.0040.

STEP 4 Apply Reference Configuration

After highlighting the target devices, right-click the highlighted devices and select "Apply ref. configuration" from the pop-up menu. ("Apply ref. configuration" will not be available unless a reference source configuration has already been retrieved.) Click the "Yes" button in the confirmation window (Figure 6.5.3) if you are certain that you're ready to proceed. (Click the "No" button if you are not certain.)

STEP 5 Review Configuration Status

After you click the "Yes" button in the confirmation window, a status window (Figure 6.5.4) will show a configuration progress bar, a count of devices configured and a list of devices that shows whether each was configured successfully (Figure 6.5.5). The devices that are unconfigured will have a blue question mark next to their rows. Also, a Help menu ("Click Here for Help") will appear at the bottom left of the PANMS console.

Figure 6.5.1: Mass Configuration Set Target Window
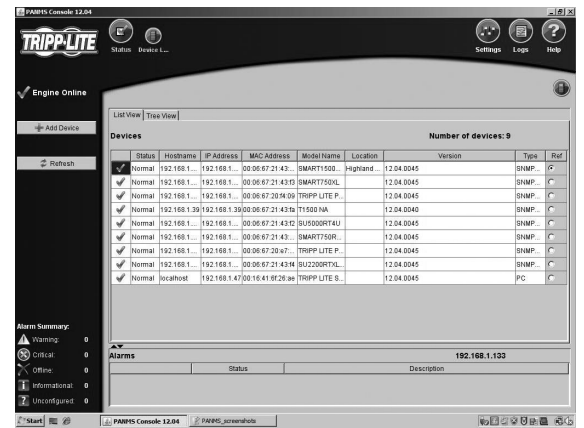

Figure 6.5.2: Set Configuration Target Window

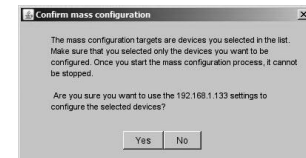*Figure 6.5.3: Confirm Mass Configuration Window*

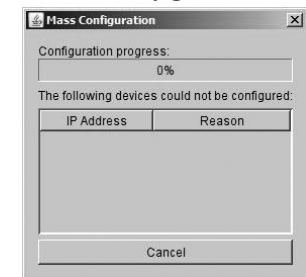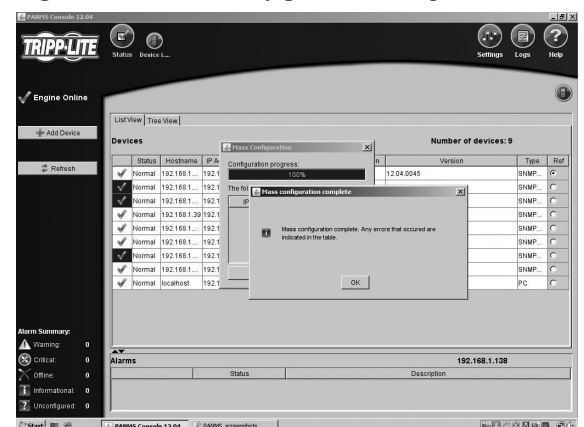*Figure 6.5.4: Mass Configuration Status Window*

Figure 6.5.5: Mass Configuration Complete Window

6. PowerAlert Network Management System *(continued)*

6.6 Clearing Unconfigured Device Alarms

PowerAlert Network Management System automatically attempts to configure discovered Tripp Lite devices. Configuration may not complete for some SNMPWEBCARD devices, which will show an "Unconfigured Device" alarm (identified by a "?" status icon). To clear an alarm, double-click the device's IP address to open its console window, then follow the steps shown below for the appropriate firmware level.

SNMPWEBCARD Firmware 12.04.0040, 12.04.0045 and 12.04.0048

An "Unconfigured Device" alarm on a 12.04.0040-12.04.0048 device indicates that a read-only SNMP community string was used to discover the device. You can clear the alarm by changing the read-only community string to read/write, or you can enter a new read/write community string, delete the IP address from the device listing and add the device again using the new community string.

SNMPWEBCARD Firmware 12.04.0034

Go to Settings > Events Window (Figure 6.6.1) and configure each event to send SNMP traps to PowerAlert Network Management System. (You must configure at least the first event in the list.) To configure an event, highlight the event name and click the "SNMP Trap Notification" check box. A pop-up window (Figure 6.6.2) will appear. Highlight the "PowerAlert Network" trap destination and click the "Save Changes" button. Verify that "SNMP Trap Notification" is enabled in the Settings > Events window and click the "Save Changes" button. Repeat for each event. (PowerAlert Network Management System will periodically check the device to see if the first event is configured to send traps. When the configuration change is detected, the "Unconfigured Device" alarm will clear.)

SNMPWEBCARD Firmware 12.04.0019-0032

1. Go to Settings > Contacts Window (Figure 6.6.3).

2. Click the "SNMP" tab.

3. Select the "PowerAlert Network Management" entry – it will have an empty IP address.

4. Click the "Edit" button and enter IP address for the PowerAlert Network Management System station.

5. Go to Settings > Events.

6. Configure all events to send SNMP traps to "PowerAlert Network Management" – you must configure at least the first event in the list.

7. When PowerAlert Network Management System detects the configuration change, it will clear the "Unconfigured Device" alarm for that device.

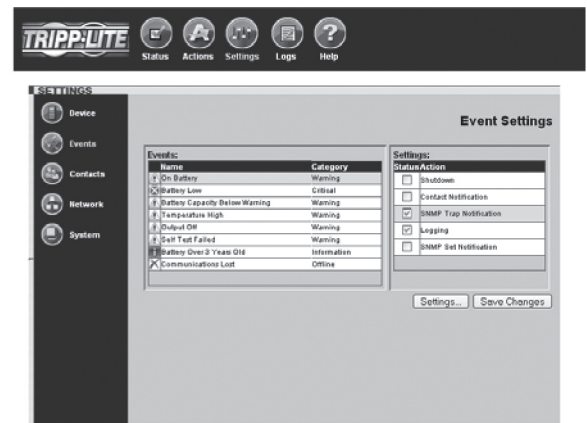
Figure 6.6.1: Settings > Events Window
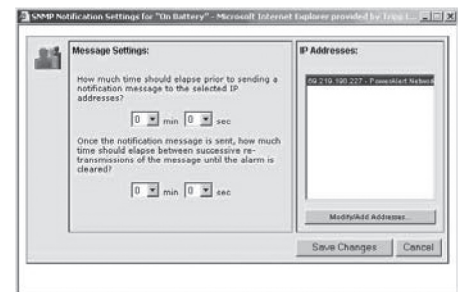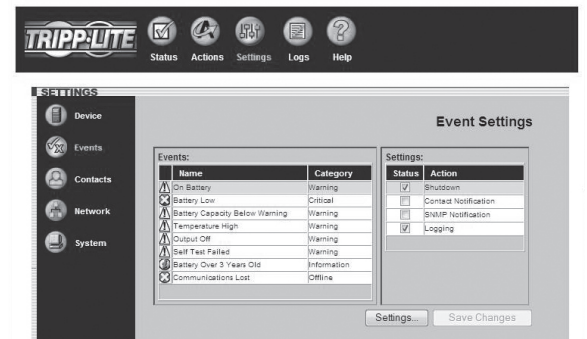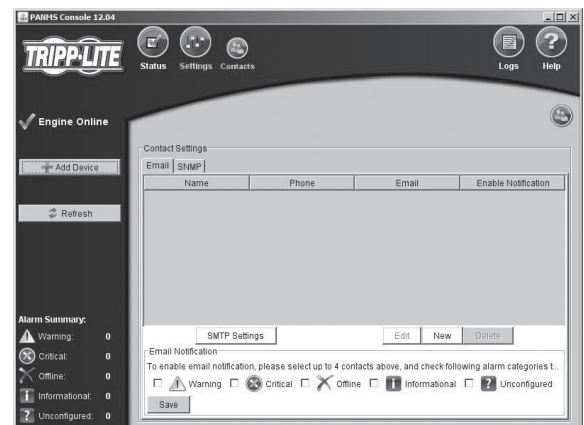

Figure 6.6.2: SNMP Settings Window

Figure 6.6.3: Settings > Contacts Window

6.7 Email/Trap Forwarding

You can set up PowerAlert Network Management System to forward your UPS system's alarm records to an e-mail or SNMP trap. Use the check boxes to select which alarm categories will be forwarded.

Figure 6.7.1: Logs Email Tab

6.8 Logging

Because events are stored internally, you can convert the event log into a text file and automatically e-mail it to pre-selected contacts periodically.
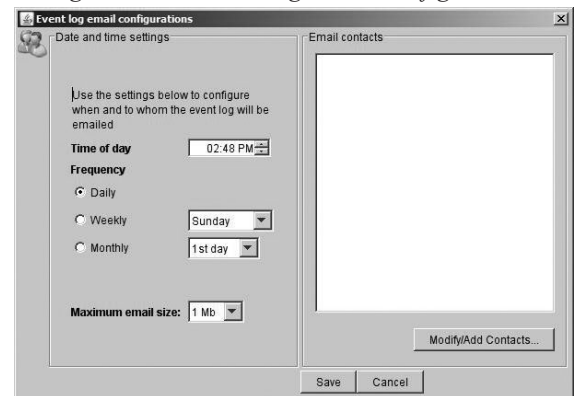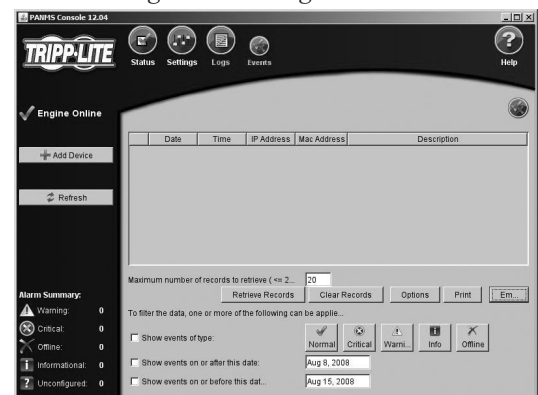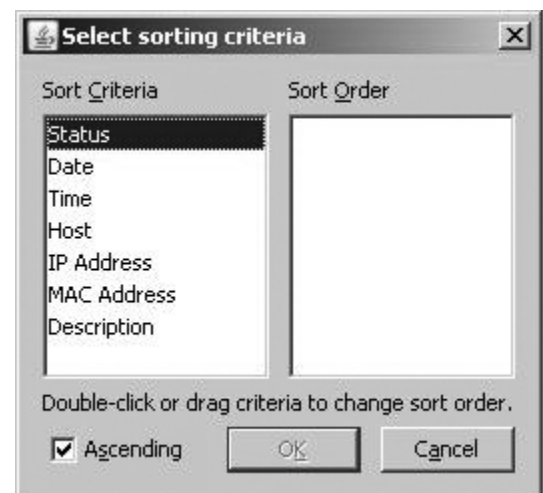
Figure 6.8.1: Event Log Email Configurations

Figure 6.8.2: Logs > Events

6.9 Event Log Sorting

Allows the event log to be displayed based upon user selected sort criteria.

7. SNMPWEBCARD Firmware

SNMPWEBCARD is an optional internal accessory card that you can install in the accessory slot of compatible UPS systems and PDUs. The card allows you to connect your UPS system to an Ethernet network and enables remote monitoring and control. The card includes an embedded system with a complete PowerAlert console and Web server, allowing you to access the PowerAlert console through a standard Web browser. You can also monitor and control the card via telnet/SSH or SNMP management software.

Figure 7.1 shows the recent firmware versions for SNMPWEBCARD and the ability of each firmware version to interact with PowerAlert Network Shutdown Agent and PowerAlert Network Management System. The firmware on your SNMPWEBCARD may be upgradable – go to www.tripplite. com/software/ for updates. Upgrade SNMPWEBCARD through PowerAlert Network Management software by right-clicking in the List View screen (this option not available in Tree View). For more information about SNMPWEBCARD, refer to the SNMPWEBCARD Quick Start Guide and SNMPWEBCARD User's Guide.

Figure 7.1: Firmware Interoperability with PowerAlert 12.04.0048	SNMPWEBCARD Firmware Version			
Feature	12.04.0019-0034	12.04.0040	12.04.0045	12.04.0048
Can be monitored by PowerAlert Network Shutdown Agent.	N	Y	Y	Y
Includes a default community name.	N	Y*	Y**	Y**
Can be monitored and controlled by PowerAlert Network Management System.	Y	Y	Y	Y
Can be mass-configured by PowerAlert Network Management System.	N	Y	Y	Y

*The default community name for SNMPWEBCARD firmware 12.04.0040 is "tripplite."
**The default community names are "tripplite" for read/write access and "public" for read only access.

8. Troubleshooting

Problems	Possible Solutions
The local UPS system is not detected by PowerAlert Local or PowerAlert Network Management System.	Check the USB or serial cable connection.
	Confirm that the UPS system is turned on.
	Confirm that the USB or serial port of the computer is functional.
	Restart your computer to ensure that your computer's operating system has recognized your UPS system.
	If the UPS system is connected through a contact closure interface, you may need to add it manually: (1) Launch the PowerAlert console; (2) Click the "Settings" button; (3) Click the "Add Device" button from the "Device" submenu; (4) Select the appropriate communication port and protocol in the Add Device window; (5) Click the "OK" button.
	See **4.9 Settings > Device** for more information about adding your UPS system manually.
PowerAlert Network Shutdown Agent is not able to discover the desired device.	Open UDP ports 161, 162, 3664 and 3665 on your computer's firewall software and disable the Windows SNMP trap service. The host computer for the device that PowerAlert Network Shutdown Agent will be monitoring must also have UDP ports 161, 162, 3664 and 3665 open on its firewall software. If PowerAlert Network Shutdown Agent will be configured to monitor an SNMPWEBCARD, enable the card's SNMP access and define a read/write community string ("tripplite" is the default for firmware version 12.04.0040 and above).
	The computer that PowerAlert Network Shutdown Agent is installed on should have a static IP address; if the address is dynamic, PowerAlert Network Shutdown Agent must be reconfigured each time it changes.
	Make sure all computers and devices are on the same network subnet and confirm that the TCP/IP network connections and local device communications are operational.
	The monitored PowerAlert software or SNMPWEBCARD firmware must be version 12.04.0019 or above.
A device shows an "Unconfigured Device" alarm in PowerAlert Network Management System.	See **6.6 Clearing Unconfigured Device Alarms** for more information.
SNMPWEBCARD firmware is updated, but the PowerAlert Network Management System console does not reflect the new version.	Use the "Refresh" button on the PowerAlert Network Management System console to update the status and version information for all devices.

9. Technical Support

Before contacting Tripp Lite Technical Support, refer to **8. Troubleshooting** for possible solutions. If you are still unable to resolve the problem, you can reach Tripp Lite Technical Support here:

E-mail

techsupport@tripplite.com

Web

The latest PowerAlert software updates are available at www.tripplite.com/software/

Technical Support Assistance

www.tripplite.com/support

Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice.

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