**Introducing Tripp Lite’s PowerAlert Network Management Software**

**What Can It Do For You?**

- Improve the accuracy and efficiency of the network operations staff in the context of power and environmental management
- Increase the overall availability of the network by simplifying configuration and quickly identifying and fixing network problems related to power and environmental conditions
- Deliver these benefits while enjoying lower acquisition and operating costs through standardization on Tripp Lite UPS systems, PDUs and environmental monitoring products

Many large organizations manage network assets, including UPS systems, by utilizing SNMP and Third-Party Network Management Systems (NMS) such as HP OpenView, CA Unicenter, etc. These are excellent and powerful tools for many organizations, and yet the approach is neither perfect nor complete with respect to power management. While Tripp Lite's SNMP communications integrate well with any Third-Party NMS, many customers benefit greatly from a more tightly integrated management tool. A Cisco router can be managed via SNMP, and yet Cisco offers CiscoWorks for a better user experience. Similarly, Tripp Lite offers PowerAlert Network Management Software (PANMS). PANMS delivers additional functionality that speeds access to devices, simplifies installation and configuration changes and can complement any Third-Party NMS.

For organizations of any size, and especially those with limited IT staffs, PANMS is a compelling solution that will benefit anyone looking to install, monitor and maintain a wide range of UPS systems, power distribution and environmental sensors. A Third-Party NMS requires complex MIBs for each device to be loaded, understood, traps parsed and alarms configured. In contrast, PANMS presents a simplified, consolidated and graphical view from which you can monitor, configure and control all Tripp Lite UPS systems, PDUs and environmental assets, as well as many competitor UPS systems.

This document gives an overview of some of the key benefits available via Tripp Lite PANMS, which ultimately allows any IT department to maintain a comprehensive view of its network assets without unnecessary distraction of staff or waste of money.
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Auto-Discovery of Devices

Why PowerAlert Network Management Software (PANMS)?

PowerAlert Network Management Software has a built-in discovery process that will scan your entire subnet with little information provided by the user. All that is needed to discover Tripp Lite SNMPWEBCARDS or PowerAlert Local Software is an IP range and community name. Once these two items have been added, all devices on the defined subnet will be added to the PowerAlert Network Management console automatically, without any further user intervention. Multiple subnets can be scanned at once to aggregate all networked power devices into one console.

What are limitations of a Third-Party Network Management Server (NMS)?

When using a Third-Party Network Management Server such as HP OpenView, IBM Tivoli, OpenNMS and so on, the user will have to add each and every device s/he wishes to monitor to the NMS manually. This is a much slower process than the one enabled by PANMS.
Alert Types and Contact Setup

Why PowerAlert Network Management Software?

Having easily discovered and connected multiple devices into the PANMS console, it is important to enter contact information for support resources that will respond to events. PowerAlert Network Management Software has a simple interface which allows the user quickly to add or edit the email and/or SNMP contacts which will receive notifications for defined events (i.e. Warning=On Battery, Critical=Low Battery, Offline=Communications Lost, Informational=Battery Age Above Threshold). Importantly, email authentication is supported to simplify notifications and ensure that they are made.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS will have the ability to display an alarm collectively on its interface. That said, a Third-Party NMS will not have such an elegant capability to send email upon a particular alarm event or forward SNMP notifications to another NMS.
Installation and Configuration Benefits

**Mass-Configuration**

Why PowerAlert Network Management Software?

The PANMS console features the ability remotely to configure any or all connected devices with predefined settings. This greatly simplifies installation so that all devices, or just the devices you wish, will have common settings. Imagine installing 10 UPS systems equipped with SNMPWEBCARD accessories for management via Ethernet. The desired operational, alarm and other characteristics of each UPS are likely identical. To speed installation time, just one of the UPS systems can be set up to your desired settings, then marked as a “config reference” whose settings can then be instantly implanted onto the remaining nine UPS systems as “config targets.” By configuring just one UPS, all the desired settings are applied to all selected devices (i.e. Contacts, Shutdowns events, Alarm notifications, etc.). With PANMS, any device configuration can be pushed to any or all remote devices monitored by PANMS.

The benefits of time savings and installation consistency are large – 10 times over – when contrasted with manual configuration of a type of device that most employees do not encounter every day, understand well or are terribly interested in.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS does not have the ability to configure Tripp Lite devices remotely. If the user were to use a Third-Party NMS and would like each Tripp Lite device to have custom settings, s/he would have to interact manually with each device, which could take hours, and is something PANMS can do in moments.
Battery and Environmental Monitoring

Why PowerAlert Network Management Software?

When any device alarm reaches the warning (yellow) or critical (red) status, the device entry within the PANMS console becomes colored and the device rises to the top of the list of monitored devices, based on those priorities. When these events are UPS battery related, they should be configured to trigger email and/or SNMP notifications. To investigate the details remotely requires only clicking on the device in the PANMS console, launching the status screen of the UPS with the suspect battery. When that UPS is selected, the battery status is visible immediately upon selection of the battery button (shown above). All critical developments, including battery conditions, are automatically elevated on the PANMS screen, with details just a click away. UPS battery testing can be automated per a desired schedule or initiated by direct command. These same management techniques apply to Tripp Lite ENVIROSENSE modules, which can monitor changes in temperature and humidity, as well as rack door status, fire, smoke, water and other factors detectable by dry-contact sensors.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS has the ability to view an SNMP trap with the battery information of a Tripp Lite device, however, the user will have to look at each piece of Battery Information (i.e. Battery Age, Battery Voltage, Battery Charge Remaining, etc.) independently. Also, when Battery Information is viewed via a Third-Party NMS, the information is not provided in real time as it is via PANMS.
**Overload Prevention**

A valuable attribute that can be monitored is load level. To ensure adequate runtime from a UPS, its load should be understood and should remain relatively stable. To prevent overload of a PDU or UPS, or detect unplanned or unauthorized use of IT power supplies, a Load Level Threshold can be set up for a Tripp Lite power device. Monitored centrally by PANMS, such a configuration will allow the IT staff to be alerted in the event that the load increases beyond a user-defined threshold. This allows users to take action proactively to ensure that network assets remain configured appropriately.

**What are limitations of a Third-Party Network Management Server (NMS)?**

A Third-Party NMS may be configured to display a load level event on its interface once the traps have been adequately parsed. That said, a Third-Party NMS will not have the ability to send emails upon a particular alarm event or forward SNMP notifications to another NMS.
Unauthorized Use

Why PowerAlert Network Management Software?

However well-intentioned, unauthorized use of IT power can lead to overloads and critical downtime. Using PANMS as a conduit, a user can access and configure the receptacles of Tripp Lite Switched PDUs and all UPS systems that feature receptacle control. By electronically turning off unused receptacles or receptacle groups, power outlets can be locked off by IT staff, with no way to defeat the measure locally at the device.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS has the ability to utilize the Tripp Lite MIB to initiate a set command on a Tripp Lite device, but this is a far more difficult task than simply using PANMS.
Power Consumption Awareness

Why PowerAlert Network Management Software?

Via the PANMS console, a user has the ability to select any device listed and view the power consumption for that device. Power consumption is always one click away.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS has the ability to view the Power Consumption of a device connected to a Tripp Lite device, however, the user will have to use the Tripp Lite MIB interface to do so. Also, when power consumption information is viewed via an NMS, the information is not provided in real time as it is with PANMS.
Power Quality Events

Why PowerAlert Network Management Software?

PANMS has a simple way to view power quality events that have happened to devices monitored by PANMS. As power quality events such as On Battery, Low Battery, Overload and On Utility occur throughout the monitored device population, they are immediately logged in PANMS. The user can filter by event types and dates and can even have scheduled emailing of the event log.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS does not have an easy solution to filter through events the way PANMS does. The Third-Party Network Management Servers that Tripp Lite has tested do not offer emailing of the event log.
**Monitoring and Control Benefits**

*Remote Reboot of Operating System, On Command or On Schedule*

With PANMS, a remote reboot is just a few clicks away. A user can reboot any remotely connected device at any given time, allowing full control of connected devices. Also, if the user is monitoring PowerAlert Local, there is an added bonus which allows the user gracefully to restart the computer without having to perform a hard shutdown. This can be beneficial for unattended systems, for periodic cleaning of memory and processor resources, and can occur on command or per an automated schedule.

*Remote Reboot of UPS and Attached Loads*

*Why PowerAlert Network Management Software?*

A Third-Party NMS has the ability to utilize the Tripp Lite MIB to initiate a reboot of a device, but this represents a far more difficult task than simply using PANMS.

*What are limitations of a Third-Party Network Management Server (NMS)?*
Scheduled On/Off

Why PowerAlert Network Management Software?

PANMS has the ability remotely to connect to devices and schedule each device to perform a timely shutdown and restart. By adding a custom delay between shutdown and restart, a UPS can effectively be turned off for an extended period of time and restarted per a defined schedule. Some applications include automated power savings on nights and weekends or during other periods of "off hours" where appropriate. This is a feature that users can utilize to cut down on energy costs during regular or forecast down time.

Note: This feature only applies to Tripp Lite hardware devices that support this feature.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS has the ability to utilize the Tripp Lite MIB to schedule On/Off cycles, but this represents a far more difficult task than simply using PANMS.
Scheduled Economy Mode

Why PowerAlert Network Management Software?

Most Tripp Lite SmartOnline™ UPS systems can be placed in an online-on-demand state of operation, significantly boosting electrical efficiency. When Economy Mode is enabled per a command or per an automated schedule, approximately 10% savings in UPS power consumption can be achieved. This is a feature that can be enabled or scheduled using PANMS.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS does not have the ability to schedule the enabling and disabling of the Economy Mode feature found in most Tripp Lite SmartOnline UPS systems.
Scheduled Load Shedding/Reboots

Why PowerAlert Network Management Software?

Using PANMS to connect remotely to a Tripp Lite device, the user has the capability to schedule Load Shedding/Reboots. This feature can be utilized to shut down devices powered by Tripp Lite UPS/ATS/PDU products.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS does not have the ability to schedule Load Shedding/Reboots.
**Firmware Upgrades**

Why PowerAlert Network Management Software?

As Tripp Lite improves the underlying firmware of its primary network UPS management accessory (SNMPWEBCARD) and its intelligent Power Distribution Units, it can be attractive for users to upgrade to new firmware. The PANMS console is equipped with a user-friendly interface which allows the user to select some or all SNMPWEBCARDs and PDUs to be upgraded with the latest firmware. PANMS pushes the firmware to targeted devices very efficiently. It should also be noted that PANMS is able to monitor a diverse device population with many different firmware versions simultaneously.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS does not have the ability to perform a firmware upgrade of Tripp Lite SNMPWEBCARDs.
Alert Types and Contact Changes

Why PowerAlert Network Management Software?

Have you ever had an employee leave, or added a new employee? Have you restructured the support resources for your hardware in a way that should drive changes to your alarm notification strategy? Of course, for any IT department, the answer is “Yes!”. Imagine if all changes to contacts had to be made one by one, within each individual UPS or PDU. The simple fact is that in such cases, the contacts don’t get updated and your network visibility degrades. The unseen is, by definition, unmanaged. Given the critical nature of the power devices in question here, tools should be adopted that are so easy to use that they actually get used!

Within the PANMS console, a user can, at any time, make quick modifications to his/her email and/or SNMP contacts. In addition, alarm notifications can also be changed when necessary. To the extent that additional notifications directly from UPS systems or PDUs are desired, PANMS can mass-configure multiple devices to that end.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS will have the ability to display an alarm collectively on its interface. That said, a Third-Party NMS will not have the ability to send emails upon an alarm event or forward SNMP notifications to another NMS.
Why PowerAlert Network Management Software?

When a UPS, PDU, or ENVIROSENSE configuration setting requires a change, due to mistake or new needs, the user can simply make the desired change to the device and push those changes to all required devices.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS does not have the ability to configure Tripp Lite devices remotely. If the user were to use a Third-Party NMS and would like each Tripp Lite device to have custom settings, s/he would have to interact manually with each device, which could take hours, and is something PANMS can do in moments.
Battery Replacement

Why PowerAlert Network Management Software?

Both SNMPWEBCARD and PowerAlert Local interfaces allow for the user to add a Battery Age Above Threshold date. This allows one proactively to define a battery age at which replacement is desired, rather than waiting for an alert from the UPS that the battery has failed. A UPS detecting an aged battery will send an information event alarm that will be reflected in PANMS. This event alarm warns the user that the battery for that device needs replacing. With a double-click, the PANMS console also launches the device's management screen for easy reset of the next replacement date.

What are limitations of a Third-Party Network Management Server (NMS)?

A Third-Party NMS will display the Battery Age Above Threshold, however, if the user is not looking for that particular alarm, this could be easily missed among the high trap density of the typical NMS.
Frequently Asked Questions

How many devices can PowerAlert Network Management System monitor?

One instance of PowerAlert NMS will support a combination of 250 UPS systems and Power Distribution Units, as well as up to 250 additional attached ENVIROSENSE modules. Each ENVIROSENSE module reports temperature, humidity and the status of up to three dry contacts (door, smoke, water, etc). As such, a single PANMS installation could receive simultaneous status reports on up to 250 power devices, 250 temperature and humidity readings and 750 dry contacts (250 x 3 per ENVIROSENSE).

What if I have more than 250 power devices?

There are several ways in which a user can manage hundreds or even thousands of power devices discoverable by PANMS. Here are a couple of solutions which we recommend:

1) Multi-Server – A user with more than 250 devices can install PANMS on two separate servers. This will now allow him/her to monitor, control and manage up to 500 power devices. If more than 500 devices are to be managed by PANMS, s/he can install it on as many servers as necessary. Use each PANMS to discover and manage separate subnets.

2) Virtual environment – Virtual environments such as VMware ESXi, Microsoft HyperV and Citrix XenServer are becoming more common. They make it easier, quicker and less expensive for the customer to bring a new server online. This is a great solution for environments in which a customer needs to monitor more than 250 devices. S/he can simply bring a new virtual machine environment online and install PANMS to discover and manage 250 devices.

What is the cost of PowerAlert NMS?

Today, PANMS remains free as part of Tripp Lite’s integrated PowerAlert power management suite. Additional elements within the suite are PowerAlert Local, PowerAlert Network Shutdown Agent and PowerAlert firmware, which drives the Tripp Lite SNMPWEBCARD and its intelligent PDUs.

How can I obtain PowerAlert NMS?

Go to www.tripplite.com.