



APC's Integration with Neon Software's LANsurveyor®

Abstract

LANsurveyor is easy to use network and desktop management software, providing four essential functions in one application: automatic network maps, asset management reports, network monitoring, and remote administration and distribution. For small and medium businesses, LANsurveyor represents a cost-effective approach for end-to-end IT management including servers, switches, and even APC network-critical physical infrastructure. LANsurveyor has built-in support for APC's InfraStruXure™ products; this application note demonstrates how one can take advantage of this integration.

Summary

LANsurveyor makes it easy to map, monitor, and report on your entire network, including any Simple Network Management Protocol (SNMP)-enabled APC InfraStruXure products. APC's InfraStruXure is an innovative architecture for network-critical physical infrastructure, fully integrating power, cooling, rack, management, and services while providing a seamless and secure foundation upon which to build your entire IT environment.

"Neon Software's extensive field experience has shown that APC's InfraStruXure is the ideal architecture for growing businesses. The modularity, flexibility and scalability of InfraStruXure allow growing businesses to scale up as they need more power and runtime, without the large up-front investment"
Craig Isaacs, President of Neon Software.

LANsurveyor's built-in APC InfraStruXure support provides the following capabilities:

- Automatic discovery and mapping of SNMP-enabled APC devices
- Detailed Uninterruptible Power Supply (UPS) information
- APC device status via SNMP traps and alerts
- Direct access to APC devices for detailed management via web browser
- Integration with APC's InfraStruXure Manager

For LANsurveyor to discover an APC UPS, the UPS must have an APC Network Management Card™ (APC Part number AP9617, AP9618, or AP9619) installed. The APC Network Management Card provides management of an individual UPS by connecting the UPS directly to the network with a dedicated IP address. Additional information on selecting the correct APC UPS and management card can be found on the APC web site at www.apcc.com/products

Automatic Discovery & Mapping of APC devices

Using industry standard identification and discovery methods (including ping/ICMP and SNMP), LANsurveyor scans a given IP address range to automatically discover and map all IP-based network hardware, including desktops, servers, printers, hubs, switches, routers, and APC InfraStruXure products, such as UPSs, Power Distribution Units (PDU) and Computer Room Air Conditioners (CRAC).

LANsurveyor then compiles the information into an easy to view network map with lines representing network connectivity, and each node represented by an icon, as shown in Figure 1 below.

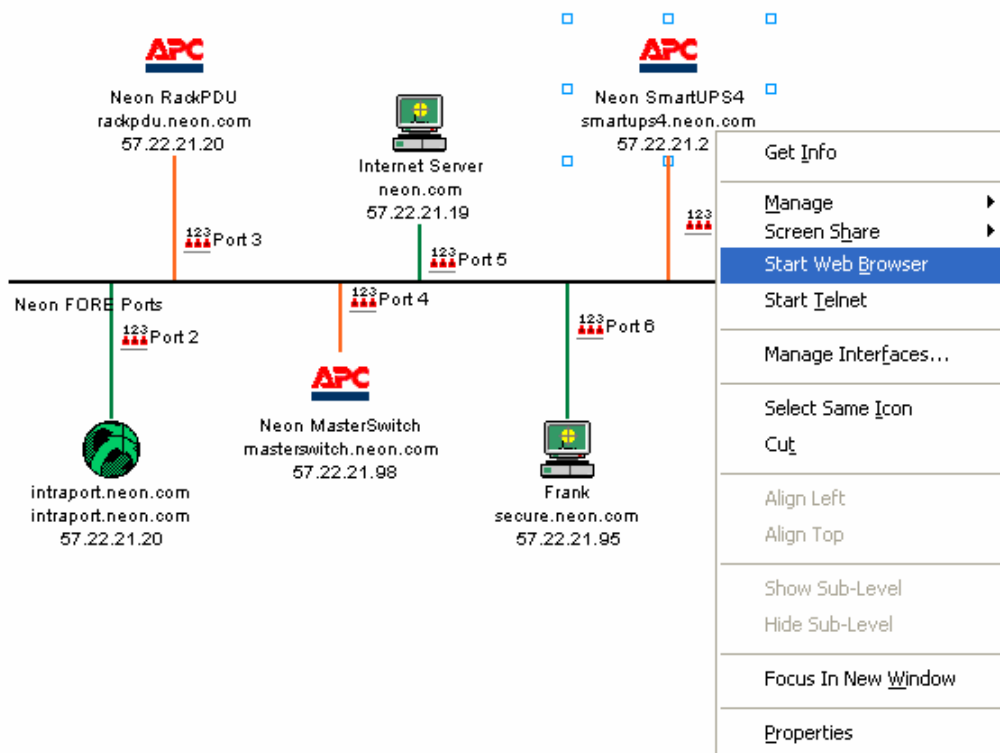


Figure 1 – Sample of LANsurveyor network map showing APC devices

A right mouseclick on any device gives a list of actions, including launching the device's browser-based interface and options to view device information. Figure 2 below shows detailed information that LANsurveyor can present for an APC UPS.

Custom Reports

To quickly and accurately determine the status of all of APC UPS batteries, LANsurveyor provides custom reports on any of the 11 APC UPS Stats shown in Figure 2 below. The saved report can then be scheduled to run at any time for any or all of your APC UPS devices.

The screenshot shows the LANsurveyor interface with a tree view on the left and a detailed view of APC UPS Stats on the right. The tree view includes categories like Neon Responder, SNMP Data, Retrospect Client, and SIP Data. The detailed view, titled 'Info Type: APC UPS Stats', lists various metrics and their values.

Info Type: APC UPS Stats	
Battery Health	None Needs Replacing
Runtime (Minutes)	0 days, 0 hours, 44 minutes, 0 seconds
Low Battery Condition	Battery Normal
% Capacity	100
% Load	22
Last Self-Test Status	OK
Utility Power Status	Online
Model Number	Smart-UPS 750
Manufacture Date	01/10/05
Battery Replaced Date	01/10/05
Serial Number	Q50503141381

Figure 2 APC UPS information available through LANsurveyor

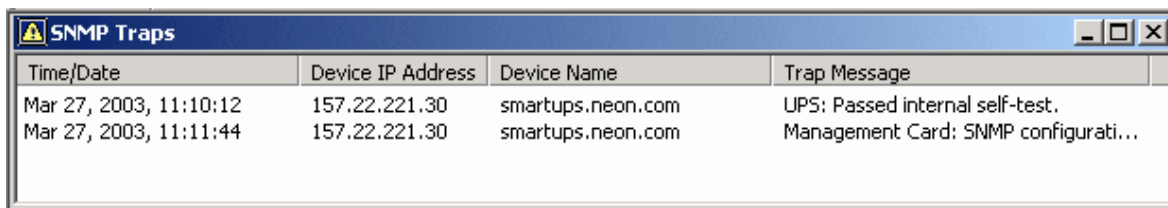
APC Event Notification via SNMP Traps

To ensure notification of any critical power or cooling events, LANsurveyor acts as a SNMP trap receiver and sends alerts based on the receipt of any SNMP trap. For example, if the UPS fails its internal battery self-test, LANsurveyor receives that trap from the UPS and sends an automatic and instant notification of the bad battery. Notification options include e-mail, a “net send” message, an SMS message, and more.

Correct configuration of the APC UPS Network Management Card is required to use this feature. Configuration consists of setting the IP address of the trap receiver to the IP address of the machine running LANsurveyor and setting the community string to be sent with the trap to “public”. Selecting the events for which the trap will be generated completes the configuration. More information on configuring trap receiver settings can be found in the APC UPS Network Management Card User’s Manual.

The integration between LANsurveyor and APC’s InfraStruXure allows auto-discovery of InfraStruXure Manager, which acts as a trap receiver for all APC InfraStruXure devices, and forwards those traps to LANsurveyor.

Figure 3 below shows a log of two APC UPS generated traps, and Figure 4 shows the SNMP trap details of the “Last Self Test Status” trap.



Time/Date	Device IP Address	Device Name	Trap Message
Mar 27, 2003, 11:10:12	157.22.221.30	smartups.neon.com	UPS: Passed internal self-test.
Mar 27, 2003, 11:11:44	157.22.221.30	smartups.neon.com	Management Card: SNMP configurati...

Figure 3 – APC Smart-UPS traps

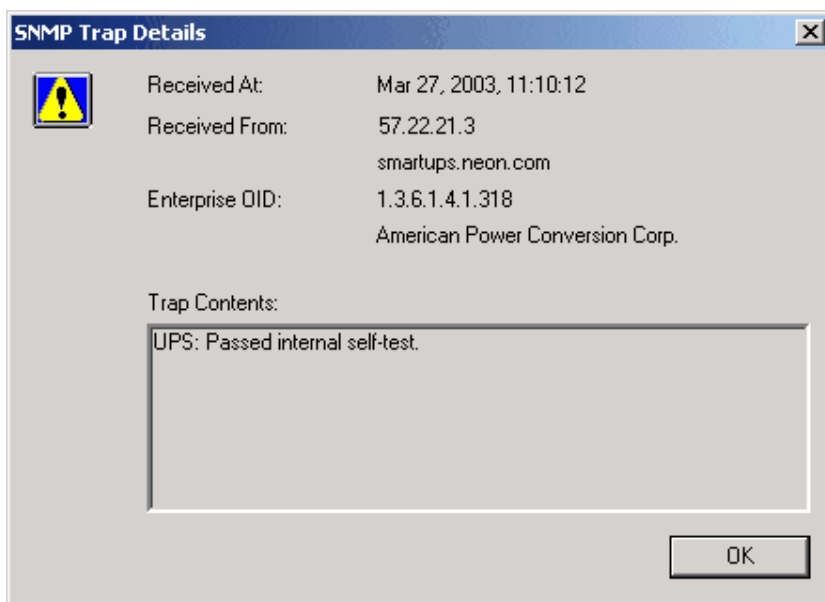


Figure 4 – SNMP Trap detail of “Last Self Test Status” for the APC UPS

Direct Access to APC Management Interface

LANsurveyor makes it easy to directly manage your APC InfraStruXure devices. Right-click on any APC map icon to launch that device’s browser-based interface. Launching this interface enables managing and monitoring of the device, whether it is a UPS, a PDU, or a CRAC unit. All of the information that is available from those devices, such as UPS battery health, input power quality, or the temperature and humidity of the datacenter, is available through this interface.

Figures 5 and 6 below are just two examples of an APC device web interface launched through LANsurveyor. They show the web interface of an APC Rack PDU and the web interface of an APC Network Air FM CRAC system, respectively.

The screenshot displays the web interface for an APC Switched Rack PDU. The browser window title is "APC | Rack PDU - Mozilla Firefox" and the address bar shows "http://159.215.12.51/". The interface includes a navigation menu on the left with options like "Switched Rack PDU", "Events", "Data", "Network", "System", "Logout", "Help", and "Links". The main content area shows the following information:

- Status:** Device Status, Load: 0.5A (indicated by a green progress bar).
- Outlet Status:** A table listing 8 outlets, all of which are "On".
- Switched Rack PDU Parameters:**

Name: RackPDU	Date: 10/12/2005
Contact: SM 444-1000	Time: 14:30:09
Location: NC DC ZE SR	User: Administrator
Rating: 1ø, 12A	UpTime: 84 Days 20 Hours 6 Minutes

Figure 5 APC Rack PDU web interface



Figure 6 APC Network Air FM web interface

InfraStruXure Manager Integration

LANsurveyor also integrates with APC's InfraStruXure Manager Appliance, our browser-accessible, user friendly tool for managing your entire APC network-critical physical infrastructure. LANsurveyor provides direct access to information about the InfraStruXure Manager Appliance, including application and MIB version, as well as the ability to launch the web-interface for InfraStruXure Manager. Once launched, InfraStruXure Manager provides features which complement LANsurveyor, such as analysis and reporting features, mass firmware upgrades, and mass configuration. For example, figure 7 below shows a power flow diagram with a graphical representation of an individual power zone. More information on APC's InfraStruXure Manager can be found on www.apcc.com.

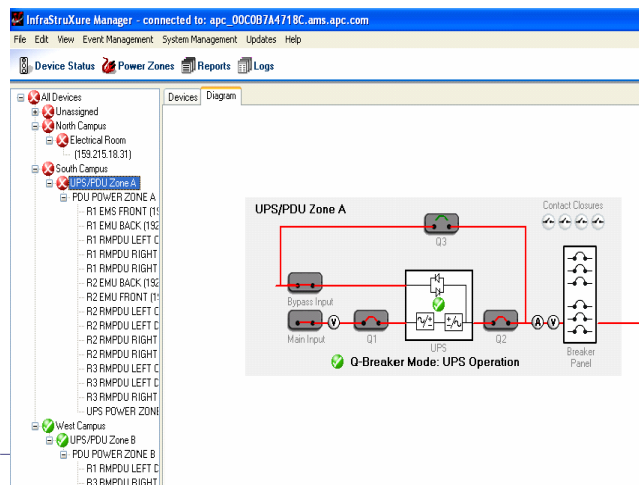


Figure 7 Power Flow Diagram as shown in APC InfraStruXure Manager

Conclusion:

LANsurveyor is an ideal tool for end-to-end management of an entire network in Small to Medium Business environments. LANsurveyor's exclusive built-in APC support enables you to map and monitor APC InfraStruXure products from the same application you use to monitor your network itself. The discovery and network mapping is fast and accurate, and the features that LANsurveyor offers, such as reporting and alerting, are quickly and easily configured. By using LANsurveyor in conjunction with APC's InfraStruXure Manager, APC and Neon's mutual customers can monitor all of their network in a unified, easy to use and comprehensive fashion.