

# LanSafe III

*POWER MANAGEMENT SOFTWARE*

For Novell, Microsoft, and OS/2

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# BEFORE YOU BEGIN

Thank you for buying LanSafe III Version 3.6 power management software for your network. With the new LanSafe III installed and running with your UPSs, you have state-of-the-art tools for fault tolerance. LanSafe III gives you the ultimate in control over your power protection system.

## WHAT'S NEW?

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If you already know LanSafe software, you know how well it extends the usefulness of your UPS. Version 3.6 brings the following new features to the environments of Novell Netware, IBM OS/2, and Microsoft Windows 3.1x, Windows 95 and Windows NT:

- ◆ **Modem/pager capability**, enabling you to program your software to send alert condition notices to anyone, anywhere, on-site or off
- ◆ **Customizable alert responses and commands**, allowing you to program your computer to make an individual response for each kind of alert message instead of one response for all messages
- ◆ **Support for other manufacturers' UPSs**
- ◆ **Ability to export log information** to a text file you can print, edit, or save
- ◆ **Power up and power down** sequencing of load segments (when supported by UPS)
- ◆ **Weekly scheduling of UPS on and off times** (when supported by UPS)
- ◆ **Support for DEC Alpha environment** (Windows NT)



## A POWERFUL COMBINATION

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When you choose LanSafe III and your UPS to protect your sensitive computer equipment, you get the best. LanSafe III brings you timely status messages and reports whenever required, and informative power status data displays, too. If a shutdown is necessary, it is orderly and sequential. LanSafe III supports individual computer-UPS installations and UPSs supporting groups of computers. You can control all nodes in your network from one remote location, making configuration changes without restarting your network.

### YOU GET TIMELY STATUS MESSAGES AND REPORTS

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LanSafe III's Power Monitor notifies you of any significant change in your power situation.

The LanSafe III Console is always there for you to refer to any time you want to check the status of battery power, operations, and communications. Knowing how much battery time you can count on is vital after a power failure when the power returns but you can't be sure for how long. You can balance your loads as LanSafe III shows you how adding or subtracting equipment affects available battery time. You can readjust the shutdown timing of a node or a network.

### YOU HAVE A CHOICE OF DATA DISPLAYS

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For fast pictures of power status, LanSafe III graphical user interfaces are as good as they get. PowerScope provides a picture of the inner workings of the UPS so you can tell at a glance what's happening to your power. Data view puts the information in front of you in color-coded bar-graph form.

The Power Log and Battery Management Log show you exactly when a change in power occurred. You can correlate reports from the same moment.





## **YOU GET ORDERLY AND SEQUENTIAL SHUTDOWNS**

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With minimum network traffic, LanSafe III operates with your UPSs to maintain constant watch over your power situation. If a disturbance occurs, the UPS shifts to inverter power or otherwise reacts as it was designed to do.

Meanwhile, LanSafe III waits for an interval (wink time) to be sure the problem isn't momentary, then informs users so they can save their work (power failure count-down time). Finally, if the UPS remains on inverter, the orderly shutdown sequence automatically begins (unless your system is DOS-only when it requires a manual start). The shutdown sequence should be complete before the end of the user-programmed time needed to down system.

## **YOU GET INDIVIDUAL AND UPS GROUP SUPPORT**

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LanSafe III adapts to your network. LanSafe III supports single-node UPSs. It supports UPSs supporting as many as 64 network devices. LanSafe III is available for Novell Netware, Windows 3.1x, Windows 95, Windows NT, UNIX, OS/2, and Macintosh platforms. LanSafe III supports every computer function — server, domain controller, workstation — to the same degree.

## **YOU GET REMOTE ACCESS AND CONTROL**

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LanSafe III's access code system benefits you as a network administrator. From a single location, you can, if you have the proper access code, remotely control all UPSs on your network to:

- ◆ Change the operating settings for any network UPS with the same protocol without reinstalling the software or rebooting the computer
- ◆ Verify the installation and phase wiring for all workstations with multiple-phase UPSs
- ◆ Initiate one-button hardware testing for a specific node, combination of nodes, or the network
- ◆ Reboot or shut down any network node
- ◆ Unload LanSafe III on any node

# UNDERSTANDING UPS GROUPS

There are differences, albeit small ones, in the installation and operation of LanSafe III when your UPS supports one computer and when it supports two or more computers. If the computers in your system each have their own UPSs, you need not be concerned with this section.

## UPS GROUP TERMINOLOGY

When one UPS supports more than one computer, the supported computers are called a UPS group.

Only one computer in a UPS group can be attached to the UPS by means of a serial communications cable. This computer is known as the UPS group controller. Any computer in the UPS group that is not the UPS group controller is known as a UPS group member.

Figure 1-1 shows the interaction between the computers in a UPS group.

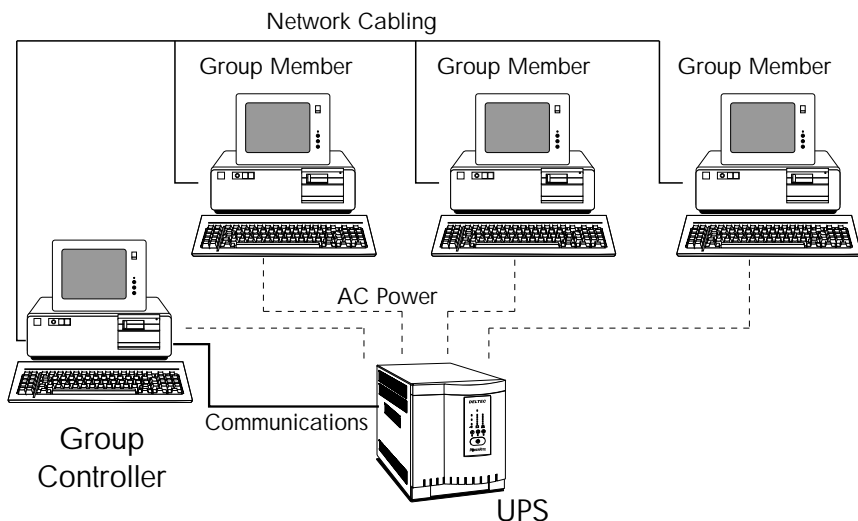


Figure 1-1. UPS Group Configuration



## UPS GROUP COMMUNICATIONS REQUIREMENT

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LanSafe III communications require that the UPS group controller be running whenever any group member is running. Otherwise, the LanSafe III UPS monitoring module, which runs on each group member, cannot obtain UPS status and alert information from the group controller. This means that UPS group members are not notified of power failures and do not perform an orderly shutdown.

## TO GET THE MOST FROM THIS MANUAL

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1. Become familiar with the features of LanSafe III by reading Section 1, Before You Begin.
2. Follow the steps outlined in Section 2, Installation, to install the UPSs and LanSafe III on your network.
3. After installation, use the LanSafe III Console functions described in Section 3, Operation, to familiarize yourself with the program.

This LanSafe III Installation and Operation Manual is intended for those with experience in hardware and software in Novell, DEC Alpha, Microsoft or IBM network environments. It is assumed you understand the basic procedures for working with such systems.



NOTES:



# INSTALLATION

To install your LanSafe III software, be sure your system meets the appropriate requirements. Then follow the general installation procedure.

## NOTE

Windows 95 Plug and Play driver users: After you install LanSafe III and restart your computer, the UPS Status icon on the taskbar becomes the Power Monitor icon. To reconfigure your UPS from your desk, access the UPS Status applet from your Windows 95 Control Panel.

## SYSTEM REQUIREMENTS

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This section includes the system requirements for installing LanSafe III in the following environments:

- ◆ OS/2 (LAN server and clients)
- ◆ Windows 95 (NetWare or Windows NT clients)
- ◆ Windows 3.1x and DOS (NetWare clients)
- ◆ Windows NT (server and workstation)
- ◆ Novell NetWare (file server)
- ◆ Novell ManageWise (file server)
- ◆ NMS Management Console Workstation



## **OS/2 (LAN SERVER AND REQUESTERS)**

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For you to install and operate LanSafe III for OS/2, your system must include the following:

- ◆ IBM OS/2, version 2.0, 2.1, 3.0 (WARP) or higher
- ◆ An RS-232 serial port for the UPS
- ◆ A dedicated RS-232 serial port, if the modem feature is used
- ◆ One mouse (optional)
- ◆ The correct cable for communications between your UPS and your computer. Consult your UPS vendor for help in choosing the right cable.

## **WINDOWS 95 (NETWARE OR WINDOWS NT CLIENTS)**

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For you to install and operate LanSafe III for Windows 95, your system must include the following:

- ◆ Microsoft Windows 95 (Windows 4.0 or higher)
- ◆ NetBEUI or IPX/SPX protocol loaded [LanSafe III requires NetBEUI in LAN Server (OS/2) and Windows NT environments, and IPX/SPX (IPXODI) in NetWare environments]
- ◆ An RS-232 serial port for the UPS
- ◆ A dedicated RS-232 serial port, if the modem feature is used
- ◆ One mouse (optional)
- ◆ The correct cable for communications between your UPS and your computer. Consult your UPS vendor for help in choosing the right cable.



## **WINDOWS 3.1X OR DOS (NETWARE CLIENTS)**

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For you to install and operate LanSafe III for Windows 3.1x or DOS, your client systems must include the following:

- ◆ Any IBM PC/AT/386/486
- ◆ IPXODI.COM must be running
- ◆ An RS-232 serial port for the UPS
- ◆ A dedicated RS-232 serial port, if the modem feature is used
- ◆ One mouse (optional)
- ◆ The correct cable for communications between your UPS and your computer. Consult your UPS vendor for help in choosing the right cable.

## **WINDOWS NT (SERVERS AND WORKSTATIONS)**

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For you to install and operate LanSafe III for Windows NT, your system must include the following:

- ◆ Windows NT, version 3.1, 3.5x, or 4.0
- ◆ Network services installed
- ◆ An RS-232 serial port for the UPS
- ◆ Operator must have administrator privileges
- ◆ A dedicated RS-232 serial port, if the modem feature is used
- ◆ One mouse (optional)
- ◆ The correct cable for communications between your UPS and your computer. Consult your UPS vendor for help in choosing the right cable.

In addition, since LanSafe III for Windows NT is a system service, you must log on as an Administrator to install it.



## **NOVELL NETWARE (FILE SERVERS)**

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For you to install and operate LanSafe III for Windows 3.1x, your system must include the following:

- ◆ NetWare 386 version 3.10 or higher
- ◆ Write access to sys:\system directory
- ◆ An RS-232 serial port for the UPS
- ◆ Log on to file server where LanSafe is being installed
- ◆ A dedicated RS-232 serial port, if the modem feature is used
- ◆ One mouse (optional)
- ◆ The correct cable for communications between your UPS and your computer. Consult your UPS vendor for help in choosing the right cable.

Install LanSafe III on a server from any Novell NetWare workstation under DOS, Windows, or Windows 95 with network access to the file server where it will be installed.

Log on to the file server being installed. Write access to sys:\system directory is required.

## **NOVELL MANAGEWISE (FILE SERVERS)**

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- ◆ Novell NetWare 3.11+ or 4.0+ installed
- ◆ Novell NetWare SNMP.NLM version 2.0 or above
- ◆ 200KB of free disk space for LanSafe III ManageWise files
- ◆ 200KB of memory for LanSafe III for ManageWise
- ◆ Operators must have Supervisor rights





## **MANAGEWISE (NMS MANAGEMENT CONSOLE WORKSTATIONS)**

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- ◆ MS-DOS 5.0 through 7.0, or Novell DR DOS 6.0 or 7.0
- ◆ Windows version 3.1 or 3.11 or Windows 95
- ◆ Novell NetWare ODI device drivers or NetWare 4.0 requester
- ◆ 45KB free disk space for LanSafe III files
- ◆ 250KB of memory
- ◆ VGA or Super VGA super graphics adapter and monitor
- ◆ One of the following: Novell NMS v. 1.15 (min. 8 MB RAM), v. 2.0 and above (min. 12 MB RAM), or ManageWise v. 1.0 through v. 2.1 (min. 16 MB RAM).
- ◆ Supervisor rights

## **INFORMATION REQUIREMENTS**

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Before you install LanSafe III, you will find it useful to have the following information:

### **FULL INSTALLATION IN STANDALONE SYSTEMS AND UPS GROUP CONTROLLERS**

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- ◆ The make and model of your UPS
- ◆ The number of the communications port to which the serial cable to the UPS is connected
- ◆ Your access code
- ◆ A machine name for your computer
- ◆ A location for your LanSafe III files if you do not choose to accept the default location which is C:\LS3



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## FULL INSTALLATION IN UPS GROUP MEMBERS

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- ◆ If installing OS/2 or Windows NT, the domain name and computer name of your UPS group controller. If installing DOS, the group controller server name and network address.
- ◆ A location for your LanSafe III files if you do not choose to accept the default location which is C:\LS3

## REMOTE SERVICES INSTALLATION

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A location for your LanSafe III files if you do not choose to accept the default location which is C:\LS3

## USING LANSAFE III WITH OTHER-VENDOR UPSs

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This applies to any UPS not listed in the UPS Model section of the Setup dialog box in the Setup or Install program. If your UPS is not listed, you have an other-vendor UPS. Contact the other UPS manufacturer and purchase a Windows NT cable with instructions. The Windows NT cable is used with LanSafe III, regardless of platform.

Install LanSafe III using this cable. When the Setup dialog box opens, select Generic Dry-Contact UPS as your UPS model. The UPS Model Configuration dialog box opens.

When prompted to configure your system [with radio buttons for AC Fail Signal, Low Battery Signal, and UPS Shutdown Signal] refer to the instructions accompanying your Windows NT cable.

Test the function as described in this manual.

### NOTE

If you do not set the radio button settings properly the first time, you must reinstall LanSafe III.

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## GENERAL INSTALLATION PROCEDURES

1. Insert the LanSafe III installation medium (floppy disk or compact disk) into your computer's disk drive. If you install from floppies, be sure you insert the disk marked for your program.
2. Using the list below, change to the correct directory for your system.

Type of computer to install	Use CD install program
DOS Workstation	NOVWIN\INSTALL.EXE
NetWare Server	NOVWIN\SETUP.EXE
Windows 3.x Workstation	NOVWIN\SETUP.EXE
Windows 95, NetWare Network Workstation	NOVWIN\SETUP.EXE
Windows 95, NT NetworkWorkstation	NTWIN\SETUP.EXE
Windows NT Workstation/Server	NTWIN\SETUP.EXE
Windows NT DEC Alpha Workstation/Server	NTALPHA\SETUP.EXE
OS/2 Requester/Server	OS2\INSTALL.EXE

3. Run the install program for your system as indicated on the list.

The Welcome to LanSafe III screen opens.

**Novell NetWare users:** If a message opens saying you must log on to a server with Supervisor rights, it is because you are not logged on to a file server or because the account you used lacks Supervisor rights. Log on again, using an account with Supervisor rights.

4. Choose Cancel to exit the installation program or Install to proceed.



## POST INSTALLATION PROCEDURES

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### 1. Start the Power Monitor.

To start the Power Monitor, do one of the following:

- ◆ All users except DOS: Double-click the Power Monitor icon
- ◆ Windows 95 users: Run LS395  
Windows 3.1x users: Run LS3.EXE  
All other users: Run LS3.EXE
- ◆ All users: If you accepted the Automatic Load option, restart your computer

### 2. Start the Console to familiarize yourself with its controls.

Do one of the following:

- ◆ Choose Run Console from the Power Monitor window
- ◆ Double-click the Console icon
- ◆ Windows users: Run LS3CONW.EXE  
Windows 95 users: Run LS3CON.95  
All other users: Run LS3CON.EXE

See Section 3, Operation, for a description of Console controls.

DOS users: The Console is not supported.

### 3. Run a hardware test.

Choose Test Hardware from the Console Maintenance menu. When the Test Hardware dialog box opens, choose Start. The test takes about 40 seconds.



## POST INSTALLATION PROCEDURES (LANSAFE III FOR MANAGEWISE)

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### Prerequisites:

- a) Successfully install the LanSafe III for ManageWise NLM on any file servers running Novell's SNMP.NLM that are protected by a UPS
- b) Successfully install and integrate the LanSafe III ManageWise Console on your management station
- c) Install and start Windows on a workstation
- d) Install the Novell ManageWise Console
- e) Install the LanSafe III for ManageWise Console
  1. Start NLM LS3NMS on any file servers where you have installed it.  
Type Load LS3NMS at the file server or from a remote RCONSOLE session.  
Repeat this step any time you install LanSafe III for ManageWise on a file server.
  2. Run the LanSafe III ManageWise Autodiscovery Tool on any management stations where LanSafe III for ManageWise has been installed.

Start the Novell NetWare Management System application from the Novell-NMS program group on your management station.

Verify that the SNMP Data Server is active after NMS startup completes.

Verify that the LanSafe III ManageWise Autodiscovery Tool is active after NMS startup completes. This tool first polls the network after it starts executing, and continues polling the network periodically to discover newly-installed LanSafe III NMS file servers and add them to your network map.

[To change the polling rate, double-click the Autodiscovery Tool icon and enter a new value for the polling rate on the dialog that subsequently appears. If necessary, you may start the LanSafe III ManageWise Autodiscovery Tool manually from the Novell-NMS program group.]



Verify that the UPS icons have been added to your network map

1. After the LanSafe III for ManageWise Autodiscovery Tool has run, open the network segment on your NMS map for each file server where LanSafe III for ManageWise has been installed.

Observe that one UPS icon appears on the network segment for each file server where LanSafe III for ManageWise is running.

Launch the LanSafe III ManageWise Console for the UPS on any file server

1. Double-click the UPS icon on the map with the same name as that of the file server you want to monitor.

## TO REINSTALL FAILSAFE III

1. Be sure your LanSafe III files are not write-protected.
2. If you have a copy of LanSafe III in the Startup folder, delete it before reinstalling.



# OPERATION

LanSafe III consists of the Power Monitor and a Console. To utilize LanSafe III, you must activate the Power Monitor. For this reason, most users accept the Auto Load on Startup default at installation.


Running in the background, the Power Monitor establishes communications with the uninterruptible power system (UPS) and provides information and services to the Console. The Power Monitor also watches the power environment and provides alert processing, orderly shutdown, and log functions. If a power emergency develops, the Power Monitor icon [a screen message if you are running LanSafe III for DOS] comes to the foreground, and beeps and blinks until you open it [or press CTRL-ESC in DOS].

After the Power Monitor establishes communications, the Console is your primary interface for monitoring and control. The Console communicates with the Power Monitor; displays power conditions, and provides menu access to dialog boxes where you can adjust program settings, conduct hardware tests, reboot or shut down the computer, and view power and battery management logs.

## THINGS TO REMEMBER ABOUT RUNNING LANSAFE III

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- ◆ For full functioning of LanSafe III, a UPS must support the node.
- ◆ Power monitoring occurs only after you start the LanSafe III Power Monitor within the appropriate operating system or environment.

- 
- ◆ If a system shutdown is necessary, LanSafe III saves only named files. To avoid loss if a power failure occurs, name any new files as soon as you open them.
  - ◆ For applications with automatic saving capability, set the autosave time to a value less than the LanSafe III power failure countdown time.
  - ◆ To reconfigure LanSafe III, it is not necessary to reinstall or reload. New configuration settings become active when you close the dialog box.
  - ◆ Control is limited to the computer on which you run the Console and remote nodes for which you enter the access code.
  - ◆ Never try to run more than one copy of LanSafe III at any one time.
  - ◆ If you run LanSafe III in an OS/2, Windows, or Windows NT operating system and want to switch to a DOS application and keep your LanSafe III protection, run DOS within that system.

If you run LanSafe III in a DOS environment and want to switch to OS/2, Windows, Windows 95, or Windows NT, close the DOS Console and unload the DOS Power Monitor.

- ◆ In LanSafe III for DOS workstations, shutdown timing consists of wink time and power failure countdown time. There is no time needed to down system.





## THINGS TO REMEMBER WHEN RUNNING LANSAFE III IN A UPS GROUP

---

- ◆ LanSafe III communications require that the UPS group controller run whenever any group member runs.
- ◆ The shutdown time for the UPS group controller must be longer than the shutdown time for any group member.
- ◆ Any group member can run a LanSafe III Console to control and configure LanSafe III for all units within the UPS group.

## THINGS TO REMEMBER ABOUT UPSS WITH DRY-CONTACT INTERFACES


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- ◆ UPSs with dry-contact interfaces support only limited Console information.
- ◆ UPSs with dry-contact interfaces do not support hardware tests and preventive maintenance.
- ◆ UPSs with dry-contact interfaces do not support the Battery Management Log.

## THINGS TO KNOW ABOUT RUNNING LANSAFE III FOR MANAGEWISE

---

- ◆ LanSafe III for ManageWise provides the following enhancements to the NMS management console: Autodiscovery Tool, MIB browser profiles, NetWork UPS Hardware Test Tool, Network UPS Preventive Maintenance Test Tool, and LanSafe III ManageWise Console.

- 
- ◆ The default LanSafe III for ManageWise Console screen is the Data view. To see the PowerScope view, click the PowerScope icon. To return to the Data view, click the Power Status icon.
  - ◆ To perform LanSafe III control operations, click the appropriate icon on the LanSafe III ManageWise Console.
  - ◆ For help with a dialog box operation, press F1 or see the Operations section of the LanSafe III Installation and Operation Manual.

## POWER MONITOR

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Except for DOS, the maximized Power Monitor window includes a menu bar and a status windows display. When DOS users activate the Power Monitor screen, they see a system prompt.

In addition, DOS users see a status message across the bottom of their screen, indicating the current power situation as LanSafe III reads it. Other users see the most recent LanSafe III messages in their status window display. For a list of messages, see appendix C.

If the latest entry indicates an abnormal power condition, run the Console and check the UPS status.

### Receiving Power Monitor Messages from Other Network Nodes

---

Whenever a change in power status occurs, LanSafe III can generate Power Monitor messages to network users with Windows, OS/2, and UNIX systems. To modify the list of users to receive broadcast messages from your system, choose Customize Alerts from the Setup menu.

Receipt of broadcast messages varies with your system, as follows:

- ◆ In OS/2 and UNIX, receipt of messages is automatic.
- ◆ In Windows 95, you must start WinPopup.

- ◆ In Windows NT, v. 4, you must either start WinPopup (NT 4.0 or higher only) or run the Alerter and Messenger services.
- ◆ In Windows 3.1x, you must start NetWare Popup (nwpopup.exe).

## To Manually Load and Unload the Power Monitor

See Table 3-1.

**Table 3-1. Manual Start and Stop of Power Monitor**

Node Type	To Start	To Shut Down
IBM OS/2	Run LS3.exe	Select File/Exit
NetWare 386 or 4.x File Server	At file server, type Load LS3	At file server, type Unload LS3
Windows Workstation	Open Power Monitor icon, or run LS3W	Choose File/Exit
Windows 95 Workstation	Open the Program folder on the Start menu and choose Power Monitor from the LanSafe III folder, or restart your computer (if you accepted the Auto Load on Startup default at installation).	Choose File/Exit
Windows NT Workstation	<b>System Service</b> Open the Services dialog box from the Program Manager Control Panel start LanSafe III System Service <b>Window</b> Open the Power Monitor icon or run LS3.EXE.	Stop service
DOS workstation	In directory where LanSafe III resides, type LS3	Type LS3OFF

If the Power Monitor does not establish communications with the UPS, see the Troubleshooting Guide, Appendix A.

## CONSOLE

The Console consists of a menu bar and a Console screen. In OS/2, Windows, Windows NT, and Windows 95, the Console opens in PowerScope view, as shown in Figure 3-1. LanSafe III for DOS does not support the Console.

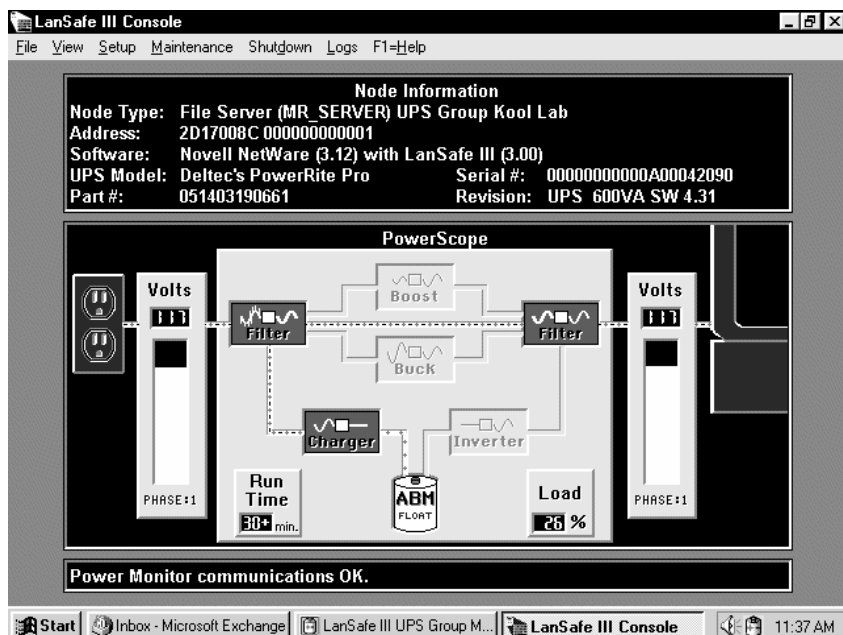


Figure 3-1. LanSafe III for Windows PowerScope View

The Console menus are File, View, Setup, Maintenance, Shutdown, Logs, and F1=Help. Each is described later in this section.



## To Run the Console

---

Do one of the following:

- ◆ Choose Run Console from the Power Monitor menu bar.
- ◆ Double-click the Console icon in the LanSafe III program group (program folder in OS/2).
- ◆ In the directory where your LanSafe III files are stored, start **LS3CON** (**LS3CONW** for Windows, **LS3CON95** for Windows 95).

For alternate methods for running the Console, see below.

## To Monitor LanSafe III on Another Node

---

Do one of the following:

- ◆ Start the Console, and select the node using the Select Node dialog box.
- ◆ In the directory with your LanSafe III files, start **LS3CON NodeName** (**LS3CONW NodeName** for Windows, **LS3CON95 NodeName** for Windows 95).

## To Control LanSafe III on Another Node

---

Do one of the following:

- ◆ Start the Console, choose Enter Access Code from the File menu, enter the other access code, and select the node using the Select Node dialog box.
- ◆ In the directory with your LanSafe III files, start **LS3CON /A=AccessCode NodeName** (**LS3CONW /A=AccessCode NodeName** for Windows, **LS3CON95/A=AccessCode NodeName** for Windows 95).



## To Control a Node in a Group Whose Access Codes Differ from Yours

---

Do one of the following:

- ◆ Start the Console, enter the access code, and select the desired node using the Select Node dialog box.
- ◆ In the directory with your LanSafe III files, start **LS3CON /A=AccessCode (LS3CONW / A=AccessCode for Windows, LS3CON95/ A=AccessCode for Windows 95)**.

## To Limit Your Build to Speed Network Polling

---

1. Create a text file in the directory where your LanSafe III files are stored listing one network segment per line.

To add a comment to a line, type # and your text. The system will not read it.

2. In the directory where your LanSafe III files are stored, start **LS3CON/Networks=MYNETS.TXT (LS3CONW/Networks=MYNETS.TXT for Windows, LS3CON95/Networks=MYNETS.TXT for Windows 95)**.

Rather than poll the entire network, LanSafe III polls only the network segments on your list.

If you do not enter a command line parameter, the Console attempts to read a file named **NETWORKS.TXT** in the LanSafe III directory. If this file does not exist, the entire network is polled.

## FILE MENU

---

Use to select a node, enter an access code, and exit the Console.

## To Select a Node

---

1. Choose Select Node from the File menu to open the Select Node dialog box.

- 
2. In the node lists, highlight the node you wish to control. The lists are labeled FileServers, Workstations, Bridges, Domain controllers, Other Servers, or Requester.

If you highlight a node in a UPS group, you must highlight the entire group.

Use the Networks list to change the lists of File Servers or Domain Controllers, Other Servers, and Workstations or Requesters. Choose Rebuild List to refresh the list.

3. Choose Select Node

### **To Enter an Access Code**

---

1. Choose Enter Access Code from the File menu to open the Enter Access Code dialog box.
2. Enter the access code.

To see the nodes on the network on the Select Node Dialog box and to monitor the power situation of a particular node, you must enter an access code. If you do not enter an access code, your access is limited to your local node. To control another network node, you must enter the correct access code for that node.

### **To Exit the Console**

---

Choose Exit from the File menu.

## **VIEW MENU**

---

Use to select your Console interface with your UPS, either PowerScope view or Data view. If your utility power is 3-phase, you can view by input and output phase.

### **NOTE**

PowerScope view and Data view are limited on UPSs with dry contact interfaces

---



## About PowerScope View and Data View

---

The PowerScope is a dynamic, functional block diagram showing the flow of power from the utility, through the UPS, and out to the load, with values for input, output, and other data. Data view shows output and input power in bar chart form, with text descriptions for battery and operation status. Data view and PowerScope share the same sections for node information and communications status.

**Node Information section.** Node information includes the node type and address, the software type and version, and the UPS model name, numbers and revision.

NOTE: UPSs with dry contact interfaces do not support all information features.

**Communications status section.** Communications status is a text message describing the state of current communications.

The PowerScope diagram reads from left to right. It includes values for input voltage, output voltage, available run time, the current battery or ABM status, and the current load %.

NOTE: UPSs with dry contact interfaces do not support the PowerScope display.


**Volts In.** The Volts In section on the left side of the screen shows the voltage of utility power and a colored bar. The color describes the power situation, either as acceptable (green), near range limits (yellow), or out-of-range (red). For the UPS to operate on utility power, the voltage must be in the green range.

NOTE: UPSs with dry-contact interfaces do not support this feature.

In case of undervoltage or overvoltage, an alarm sounds and the UPS switches to UPS battery power. The colors on the display show the input power to be in the yellow or red range. Save your work and close your files immediately, then try to analyze and resolve the problem.

If the situation persists, contact your utility.





**Volts Out.** The Volts Out section on the right side of the screen shows the output voltage of on the UPS with a colored bar. Colors have the same meaning as in the Volts In section.

NOTE: UPSs with dry contact interfaces do not support this feature.

Use the Volts Out information and the % Load value to evaluate the utilization of your UPS. If the % Load value is in the yellow or red range, your power requirements demand a UPS with a higher load capacity. If the load value is in the red range, the UPS is overloaded, and a computer shutdown will occur in one minute or less. If the load value is in the green range, you are operating safely within the load range of the UPS.

#### CAUTION

An extended red value is a cause for concern. A system shutdown will occur in one minute or less. Save your work and close your files immediately, then try to analyze and resolve the problem.

NOTE: UPSs with dry-contact interfaces do not support this feature.

### To Select Input and Output Phases for Viewing

---

1. Choose Input Phase 1, Input Phase 2, or Input Phase 3 from the View menu.
2. Choose Output Phase 1, Output Phase 2, or Output Phase 3 from the View menu.

Input and output phase numbers need not be the same.

3. Choose either Data view or PowerScope from the View menu.

### To Open a View

---

Choose either Data or PowerScope from the View menu.



## SETUP MENU

---

Use to change communications ports, reconfigure shut-down timing, set up a maintenance reminder, and change access codes for a node or a network.

It is not necessary to reinstall or reload the LanSafe III software. New configuration settings become active immediately.

### To Change Communications Ports

---

1. Choose Communications Port from the Setup menu to open the Communications Port Setup dialog box.

All users but Novell file servers Go to step 2.

Novell file servers : Go to step 6.

2. All users but Novell file servers: Choose either Standard or Custom.
3. If you choose Standard, a list of communications ports becomes active. If you choose Custom, an edit field becomes active.
4. If you selected Standard, highlight the port your computer uses for serial communications with the UPS. If you selected Custom, enter the device name. See your communications port manufacturer's hardware manual for information.
5. Choose OK to close the dialog box. (Skip steps 6-9) Changes take effect at once.
6. Novell file servers : Choose either COM1 IRQ4 Addr=03F8, COM2 IRQ3 Addr=02F8, or Custom.
7. If you selected COM1 IRQ4 Addr=03F8 or COM2 IRQ3 Addr=02F8, choose OK to close the dialog box.
8. If you selected Custom, the IRQ field and Addr edit field become active and require you to make entries. See your communications port manufacturer's hardware manual for information.
9. Choose OK to close the dialog box. Changes take effect at once.

## To Reconfigure Shutdown Timing

1. Choose Shutdown Timing from the Setup menu.

If your selected node is a standalone, the Shutdown Timing Setup dialog box opens. If your selected node is a UPS group, the UPS Group Shutdown Timing Setup dialog box (Figure 3-2) opens.

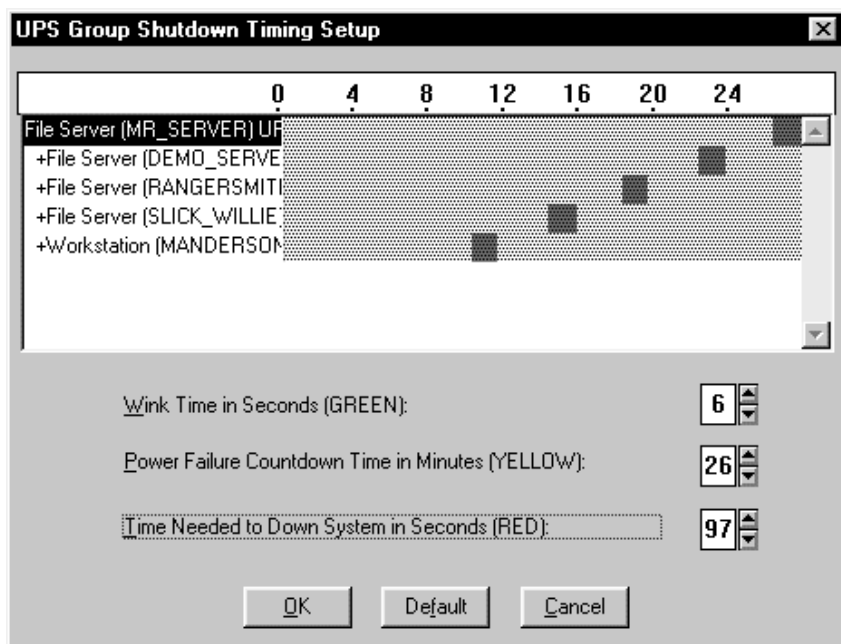



Figure 3-2. UPS Group Shutdown Timing Setup dialog box

Each UPS group controller is listed. Below each UPS group controller are the names of the group member nodes preceded by a plus sign.

2. Enter values for wink time, power failure countdown time, and time needed to down system.

Wink time eliminates nuisance messages from brief power interruptions. Choose any integer between 1 and 999 (the default value is 5 seconds).



Power failure countdown time gives you time to finish your work and save your files. Each minute, you are informed of the time remaining until shutdown. Choose any integer from 1 to 999 (the default value is 5 minutes).

Time needed to down system allows the Power Monitor to log off users, terminate any applications that are still running, and close all files in the computer's file system. The time may be any integer from 1 to 999 (the default value is 90 seconds).

Note that if you are configuring a UPS group shutdown time you cannot set the shutdown time for the UPS group controller at a value less than the shutdown time for any group member. To reduce the shutdown time for the UPS group controller to a value less than the shutdown time for a group member, you must first reduce the shutdown time for the member.

3. Choose OK to close the dialog box.

Changes take effect at once.

### **Things to Remember About Shutdown Timing**

- ◆ The length of battery protection increases as the load on the UPS decreases.
- ◆ After a power outage, another outage could occur before the UPS batteries fully charge. For complete system fault tolerance, set the countdown time at a value small enough to allow battery reserve for at least two shutdowns.
- ◆ It is extremely important that the UPS not shut off until all applications are terminated and all files in the file system are closed. Set the time needed to down the system at a value large enough to assure that the Power Monitor software has time to shut down a worst-case computer environment.

### **To Set Up a Maintenance Reminder Schedule**

---

1. Choose Maintenance Schedule from the Setup menu to open the Maintenance Schedule Setup dialog box.
2. Choose Enabled to set a schedule or Disabled if you do not want a reminder to appear in the Power Log at set intervals.

3. If you choose Enabled, the Days Between Runs field become active. Use the arrow keys to specify the interval (in days) between maintenance reminders. This may be any number between 30 and 999 (the default is 90).

## To Customize Alerts

The Customize Alerts feature enables you to change the text for alert messages and to cause a particular alert to execute a command or send a message to another system such as a pager.

In all cases, the basic procedure is as follows:

1. Choose Customize Alerts from the Setup menu to open the Customize Alerts dialog box (Figure 3-3).

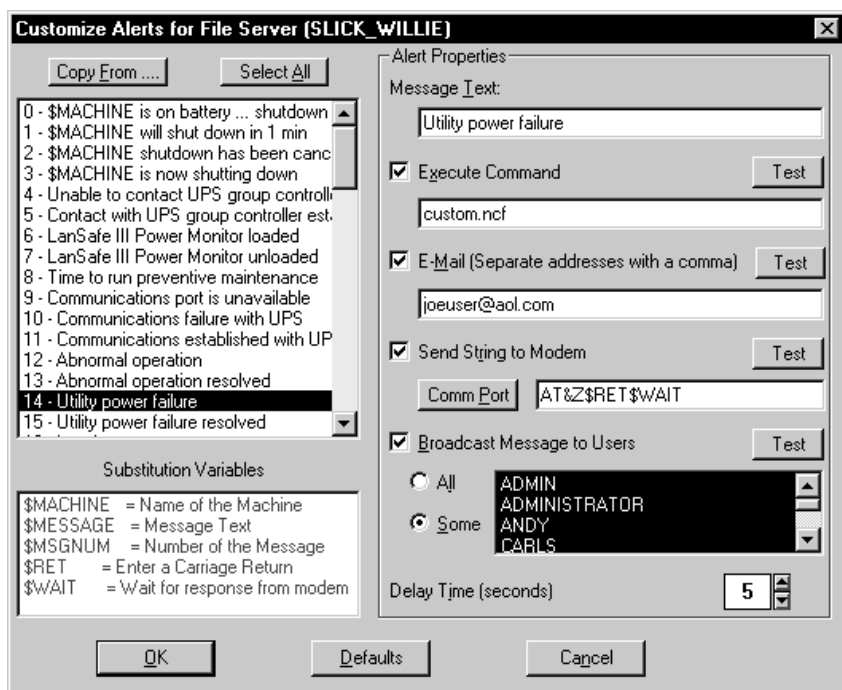


Figure 3-3. Customize Alerts Dialog Box



2. Select one or more messages from the scroll list at the left side of the box, or choose Select All.

If you select only one message, or if all selected messages have the same text, a customizable message for a selected alert appears in the Message Text list.

3. Follow the procedure for the customization you wish to make (see below).
4. Choose OK to enter the change, Defaults to return the settings to their default position, or Cancel to close the dialog box.

### **To Change the Text for a Message**

Enter a new message in the Message Text list, or translate the message to another language. For a list of alert messages, see appendix C.

### **To Execute a Command when an Alert Occurs**

1. Put a check in the Execute Command box.
2. Click the Execute Command edit field.
3. Enter a fully qualified path name for the command and any parameters, using the variables that appear in the Substitution Variables box.

If you selected multiple alerts and the alerts do not all execute the same command, the check box and field are gray. To set multiple alerts to execute the same command, select the alerts and complete this field.

To change the action the system takes in an alert situation, choose a message and type a new command in the Execute Command edit field. If the command is a DOS executable or batch file, you must include the extension, for example, EXECUTE.EXE for a DOS executable or FILE.BAT for a batch file. For help in writing a DOS command or a batch file, see your DOS documentation or on-line help.

To test operation of this command in real time, choose the Test button.



## To Send E-Mail

### NOTE

To receive e-mail, a Windows 3.1x node or a Windows 95 node in a Novell network must run a messaging application program interface (MAPI)-capable messaging software program such as MS Exchange (indigenous to Windows 95) or MS Mail. An OS/2 node must install vendor independent messaging (VIM) software such as Lotus CC:Mail. The CC:Mail Post Office must be level 6 or above, and you must add a mailbox named lansafe with the password lansafe.

---

1. Select a message in the message list.
2. Check the E-mail box.
3. In the text edit field, type the e-mail addresses of the persons to whom you want this message sent should it be necessary to send it. Separate multiple addresses by commas.

If multiple alerts are selected, the check box is gray unless all the alerts send e-mail to the same destinations.

To set multiple alerts to send e-mail to the same users, select the alerts and enter their names in this field.


4. Choose OK to enter the message or Cancel to close the dialog box without changing the system.

### CAUTION

Choose Defaults only to return all messages and strings (including saved messages and strings) to their factory settings.

---

The e-mail recipient receives the message via the recipient's mail system. The sender may send e-mail by a different mail system. Recipients should be sure their systems are set up to receive e-mail from all potential senders. See documentation for the specific systems for details.



To test operation of this command in real time, choose the Test button for E-Mail.

### To Send a String to a Modem

1. Put a check in the Send String to Modem check box.
2. Specify the modem port by choosing Comm Port to open the Communications Port dialog box.
3. Click the text field.
4. Using the variables that appear in the Substitution Variables box, enter a string to be sent. See Creating a Modem String.

If you select multiple alerts, the check box and text field are blank unless all the alerts send the same string to the modem.

To set multiple alerts to send the same string to the modem, select the alerts and enter the string.

To test operation of this command in real time, choose the Test button.

### Creating a modem string

Exact instructions for creating a modem string vary from carrier to carrier. However, the following example, which assumes SkyPage and the Windows Terminal program, should provide the essential details for you to create a modem string in a system other than SkyPage and Windows, if necessary. After creating your modem string, be sure to test it.

Characters in **bold** are commands from the software and characters in UNDERLINED-ITALIC are responses from the remote services.

#### NOTE

If your service does not handle alphanumeric messages, check with your service.

**ATZ (Return & Wait)**

OK

**ATDT918007599673 (Return & Wait)**

CARRIER 2400

PROTOCOL: LAP-M





COMPRESSION: NONE

CONNECT 2400/ARQ (Return & Wait)

SKYTEL REMOTE TERMINAL

PAGER ID: 3024258 (Return)

FUNCTION: (Return)

ENTER ALPHA MESSAGE: TEXT HERE (Return)

SEND ? : (Return)

FUNCTION: 99 (Return)

In this case the dialing string would be as follows:

ATZSRET\$WAIT\$ATDT18007599673\$SRET\$WAIT\$SRET\$WAIT12345678\$SRET\$TEXT  
HERE\$SRET\$SRET99\$SRET

The following table shows definitions of the string and variables:

String	Variables
ATZ	Soft reset modem and restore active profile 0*.
\$RET	Carriage Return (Enter).
\$WAIT	Wait for any string to return from other modem.
ATDT	Dial in touch-tone mode (Always followed by the phone number with any necessary prefixes or suffixes). i.e. 918005551212. 9, to get an outside line, 1 for long distance and 8005551212 is the area code and phone number of the modem/service you wish to call.
TEXT HERE	Pertinent text should be inputted exactly as you would like it to display on the pager. You can use one of the wild cards listed below to substitute from data collected from the connected CPU.
\$MSGNUM	The actual number of the alarm from list or manual.
\$MACHINE	The name given to the CPU (Not by LanSafe III or FailSafe III software).
\$MESSAGE	Repeat the message string set up in the "Message Text" window. Can change language and include variables also.
\$MINUTES	Minutes remaining until shutdown.

\*Profile should be pre-configured for your service (bits, parity, stop bits, and baud rate (that is, 8, none, 1, 2400).



## To Set a Delay Time for an Alert Message

When alert situations are resolved, notification is immediate, but when an alert situation occurs, you can set a message delay. If the situation is resolved before the delay time (usually a few seconds) expires, you are not interrupted. If delay time applies to the selected message (message 4 and all even-numbered messages from 10 to 70), the Delay Time (seconds) edit field becomes active.

1. Use the up and down arrows to select a delay time.

For message 14, Utility Power Failure, the Delay Time is the same as Wink time which you set under the Shutdown Timing dialog box.

## To Send Broadcast Messages to Logged-On Users

### NOTE

This feature is not available in Windows 95.

1. Put a check in the Broadcast Message to Users check box.
2. Choose the users to receive broadcast messages, using the All radio button to send a message to all users or the Some radio button to send a broadcast message to those you specify in the list box.

If you select multiple alerts, the check box is gray unless the alerts send broadcast messages to the same users.


3. To set multiple alerts to send broadcast messages to the same users, select those alerts and complete the information in this area.

To test operation of this command in real time, choose the Test button. Users who are not logged in at the time of the alert do not receive a message.

## To Configure Load Segments for Load Shedding

### NOTE

This feature is supported only by certain UPSs. See your UPS manual for details.



Use load shedding to set a shorter shutdown delay time or a later restart time for non-essential peripherals, extending the run time of your computer. If you do not enable load shedding, your computer and all peripherals attached to your UPS shut down at the end of power failure countdown time and restart immediately after a power failure when power is restored.

To enable load shedding, attach your computer and peripherals to the numbered load segment receptacle groups on the rear of your UPS, and configure the loads in your software.

### **To Configure Load Segments in Your Software**

1. Choose Load Segment Configuration from the Setup Menu. The Load Segment Configuration dialog box opens.
2. In the Load Segment/Computer List with icons for Entire UPS, your computer, Load Segment 1 and Load Segment 2, drag the icon for your computer to the Load Segment to which it is physically attached on the back of your UPS. Your non-essential peripherals should be physically attached to the other Load Segment on back of the UPS.

### **To Shorten a Shutdown Delay for Non-Essential Peripherals**

1. In the Load Segment Configuration dialog box, choose the Load Segment for the devices other than your computer.
2. Set a Power Failure Run Time, using the Power Failure Run Time scroll list.

### **To Vary Device Restart**

1. In the Load Segment Configuration dialog box, choose the Load Segment for the devices other than your computer.
2. Set a Restart Delay, using the Restart Delay [seconds] scroll list.



## NOTE

You can also set this delay by using the Restart Delay dialog box. Choose Restart Delay from the Setup menu.

---

### To Set a Restart Delay

---

This feature is supported only by certain UPSs. See your UPS manual for details.

Specify a restart delay for any load segment with equipment you do not need immediately upon reboot. Servers or your computer can be left with a zero restart delay (the default), while workstations or peripherals can be programmed with a later restart delay.

## NOTE

Restart delay occurs only when the system restarts after LanSafe III shuts down the UPS in a power outage. Restart delay does not occur when you use LanSafe III to reboot the system.

---

### To Delay Restart of Non-Essential Peripherals

1. Choose Restart Delay from the Setup Menu. The Restart Delay dialog box opens.
2. Select the Load Segment to which your computer is attached.

The computer name appears in the Attached Computers box.

3. Set a restart delay, using the Restart Delay [seconds] scroll list.

## NOTE

You can also set this delay by using the Load Segment Configuration dialog box. Choose Load Segment Configuration from the Setup menu.

---



---

## To Change the Access Code for a Node

---

1. Choose Access Code from the Setup menu to open the Configure UPS Access Code dialog box.
2. Enter the new access code.
3. Verify the new access code.

This code change applies to the node whose name and address appear in the Node Information section of your Console display.

## To Change the Access Code for a Network

---

1. Choose Access Code for Network from the Setup menu to open the Configure UPS Access Code for Network dialog box.
2. Use the Networks list and the Files Servers and Workstations check boxes to compile a list of nodes (Power Monitors For Access Code Change) to which the new access code is to apply.
3. Enter the new access code.
4. Verify the new access code.

## To Configure the Network UPS Access Code for a UPS Group

When you open the Configure Network UPS Access Code dialog box, the list box shows UPS group members. The new access code applies to the group controller and its members.

---

## MAINTENANCE MENU

---

Use to activate UPS testing and preventive maintenance routines.

## To Test Hardware for the Selected Node

---

1. Choose Test Hardware from the Maintenance menu to open the Test Hardware dialog box.
2. Choose Start.



## NOTE

UPSs with dry-contact interfaces do not support hardware tests.

The test places the UPS on battery for several seconds. During this time, the UPS verifies the battery and internal circuit operation. It displays the current testing status.

To close the dialog box without starting a test, choose Exit. To close the Test Hardware dialog box during a test, start the test and choose Exit. The test continues.

### To Test Hardware for Network

1. Choose Test Hardware for Network from the Maintenance menu to open the Test Hardware for Network dialog box.
2. Use the Networks list and File Servers and Workstations check boxes to create a List of Power Monitor Nodes to Test.
3. Choose Start.

A message lets you know how much time has passed and when testing finishes.

To close the dialog box without testing, choose Exit. To close the Test Hardware dialog box during a test, start the test and choose Exit. The test continues.


### To Run Preventive Maintenance

1. Choose Preventive Maintenance from the Maintenance menu to open the Preventive Maintenance dialog box.
2. Choose Start.

## NOTE

UPSs with dry-contact interfaces do not support preventive maintenance.

The test places the UPS on battery for several seconds. During this time, the UPS verifies the battery and internal circuit operation. It displays the current testing status.



To close the dialog box without starting a test, choose Exit. To close the Preventive Maintenance dialog box during a test, start the test and choose Exit. The preventive maintenance continues.

### **To Run Preventive Maintenance for Network**

---

1. Choose Preventive Maintenance for Network from the Maintenance menu to open the Preventive Maintenance for Network dialog box.
2. Use the Networks list and File Servers and Workstations check boxes to create a List of Power Monitor Nodes to Test.
3. Choose Start.

A message lets you know how much time has passed and when preventive maintenance finishes.

To close the dialog box without testing, choose Exit. To close the Preventive Maintenance dialog box during maintenance, start the run and choose Exit. The preventive maintenance continues.

### **SHUTDOWN MENU**

---

Use to shut down the selected Power Monitor node, and unload the Power Monitor program at the selected node.

#### **NOTE**

Exercise extreme caution in using the Shut-down menu. If a server is shut down from the LanSafe III Console, all users on the server are forcibly logged out, and work in progress may be lost.

---



## To Unload the Power Monitor

---

Choose Unload Power Monitor from the Shutdown menu.

When a UPS group member chooses Unload Power Monitor from the Shutdown menu, the UPS Group Unload dialog box opens. You can unload UPS group members, but if you unload the UPS group controller you automatically unload the entire group.

## To Shut Down and Reboot the System

---

1. Choose Shutdown/Reboot System from the Shutdown menu to open the Shutdown/Reboot dialog box.
2. For an automatic reboot after shutdown, choose Reboot. For a shutdown of a specific length, choose Timed. For a system shutdown until the UPS is restarted, choose Permanent.
3. Choose Shutdown.

## To Shut Down a Load Segment on a Scheduled Basis

---

This feature is supported only by UPSs supporting load shedding.

1. Choose Weekly Schedule from the Shutdown menu. The Weekly Shutdown Schedule dialog box opens.
2. Use the <<==Day and Day==>> controls to change to the desired day of the week.
3. Select Entire UPS or the Load Segment to which the shutdown should apply.
4. Click the hour or half-hour for Entire UPS or a Load Segment when you want the shutdown to start. Boxes are numbered for a 24-hour clock system.
5. Click the hour or half-hour for Entire UPS or a Load Segment when you want the shutdown to end, and all boxes in between.





## LOGS MENU

---

Use to view or clear the Power Log and Battery Management Log for the selected node, and to export the log text to an ASCII file which you can print.

### To Access the Power Log

---

Choose View/Clear Power Event Log from the Logs menu.

Choose Clear Log to delete all entries in the log. The log is not cleared until you answer a prompt confirming the selection. One new entry is inserted indicating the date and time that the log file was cleared.

Choose Go To Battery Log to open the Battery Management log. To open the log at an entry close in time to a Power Log entry, highlight the Power Log entry before selecting Go To Battery Log.

Choose Export to copy the Power Log to an ASCII text file which you can open in a text or word processor program for printing and saving.

### To Access the Battery Management Log

---

Choose View/Clear Battery Management Log from the Logs menu.

#### NOTE

UPSs with dry-contact interfaces do not support the Battery Management Log.

Choose Clear Log to delete all entries in the log. The log is not cleared until you answer a prompt confirming the selection. One new entry is inserted indicating the date and time that the log file was cleared.

Choose Go To Power Log to open the Power log. To open the log at an entry close in time to a Battery Management Log entry, highlight the Battery Management Log entry before selecting Go To Power Log.

Choose Export to copy the Battery Management Log to an ASCII text file which you can open in a text or word processor program for printing and saving.



## **F1 = HELP MENU**

---

Use to access on-line help and see the version of the software and the copyright.

### **To Access On-Line Help**

---

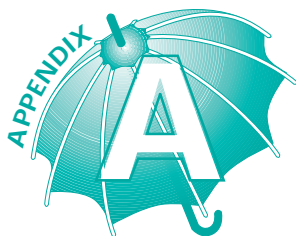
Choose General Usage from the Help menu (or press F1).

### **To Check the Software Version**

---

Choose About from the Help menu to open the About LanSafe III dialog box.

The dialog box contains information about the version of the software and the copyright. Choose OK to leave the About dialog Box.



# TROUBLESHOOTING

If LanSafe III fails to perform as it should, here is a list of things to check:

1. Review the lists in Running LanSafe III, Things To Remember When Running LanSafe III in a UPS Group in Section 3, Operations.
2. Review the system requirements for file servers and workstations in Section 2, Installation.
3. Be sure the communication port used on your computer is the one selected under the Setup menu.
4. Be sure only one copy of the Power Monitor is running.
5. Be sure you have logged on to your network in accordance with the correct procedures.
6. See Table A-1.

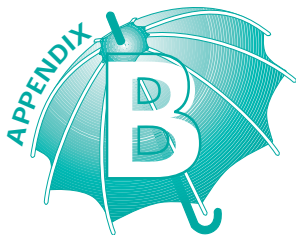
To reinstall, see Section 2, Installation.

**Table A-1. Troubleshooting LanSafe III for Novell NetWare**

Problem	Possible Cause	Solution
Message: Must log on to server with SUPERVISOR rights	You are not logged into a file server	Log on, using account with SUPERVISOR rights
	Account you logged on to lacks SUPERVISOR rights	Log on, using account with SUPERVISOR rights
I do not see file server I want to install on list displayed by LanSafe III diskette	You are not logged on or attached to file server	Log on or attach to server, using account with SUPERVISOR rights
	The account you are logged or attached to does not have SUPERVISOR rights	Log in or attach to server you want to install, using account with SUPERVISOR rights



Problem	Possible Cause	Solution
Message: Configuration file error	Installation unsuccessful  User installed for LanSafe III lacks SUPERVISOR rights	Re-install  Assign SUPERVISOR rights to user
Installation successful, but Console can't see node	Power Monitor not loaded after installation	Start Power Monitor
Message: Unable to Contact Power Monitor	Software not running	Start Power Monitor
Message: Cannot contact UPS Group Controller	Group Controller not running LanSafe III	Start LanSafe III on Group Controller node
Message: Comm port unavailable	Another hardware device configured with same IRQ or I/O address as LanSafe III	Reconfigure LanSafe III and communication port hardware with different addresses
Communications error message; or, power failure or low battery messages despite no apparent failure; or, no messages when power failure is simulated	LanSafe III and interface cables configured on different communication ports	Reconfigure communications port
	Interface cable not connected, secure, or properly installed	See UPS Hardware installation manual



# GLOSSARY

This glossary defines LanSafe III terms and other technical terms as used in LanSafe III. For definitions of more general terms, see a standard computer reference.

## **ABM™**

The abbreviation for Advanced Battery Management, and a trademark of Deltec Electronics. ABM is a proprietary, microprocessor-based, state-of-the-art system for monitoring and managing UPS batteries, with such features as quick recharging, doubled battery life, and up to 60 days of early warning before your batteries need replacement. ABM prevents overcharging and accelerated battery aging by not constantly charging the battery.

## **ACCESS CODE**

A means of facilitating the use of LanSafe III software, and of preventing unauthorized shutdowns and disabling.

## **AUTODISCOVERY TOOL**

A LanSafe III for ManageWise background operation, it adds the File Server/UPS identification to the icon node line of network hardware on the Ethernet logical map. Executed at NMS startup. To display the LanSafe III ManageWise Console, double-click the File Server/UPS node icon.

## **BATTERY MANAGEMENT LOG**

A record of ABM or Battery status whenever the ABM or battery changes state. Records include log started, charging, discharging, floating (meaning battery is receiving only a nominal charge), log stopped, and log cleared. ABM systems include a “resting” message when the battery is receiving no charge. This ABM feature reduces battery wear.



## **BLACKOUT**

A complete loss of utility power to the UPS.

## **BOOST AND BUCK**

A proprietary line regulation process used when an overvoltage or undervoltage situation occurs in the UPS. Undervoltage is boosted to make it greater and overvoltage is bucked to reduce it, thus reducing reliance on the battery.

## **BROWNOUT**

A condition where the utility power voltage drops below the lower limit of the UPS, causing a switch to battery power via the inverter.

## **BYPASS CIRCUITRY**

A feature of some UPSs which causes your system load to be powered directly from the UPS input. See your hardware manual for details.

## **CHARGER**

See Rectifier/Charger.

## **CONSOLE**

Your primary interface with the UPS through LanSafe III. It allows you to view and control the power environment of every node where the Power Monitor is running.

## **CONSOLE (LANSAFE III FOR MANAGEWISE)**

Primary interface for viewing and controlling the UPS power environment. Requires ManageWise be launched and the SNMP Data Server be initialized. UPS power environment viewing is through the Power Status and PowerScope icons to the right of the Console. Control is through the Configuration Information, Test Hardware, Preventive Maintenance, Node Shutdown, and Unload Software icons. Further information is available through the Power Log, Battery Log, and About icons.



## **DATA VIEW**

A Console display of colored bar graphs and text to give you a concise but comprehensive overview of the UPS hardware and the utility power situation. Values are updated at various intervals of less than 30 seconds to reflect a current picture of the environment. See PowerScope.

## **DOMAIN**

In Windows NT, a group of computers with its own name, database, and security policy. The computers are classified as the domain controller, other servers (when used), and workstations.

## **DOMAIN CONTROLLER**

In Windows NT, the server that maintains the domain's security policy and master database, and authenticates domain logons. Domain controllers run Windows NT Advanced Server. A domain may include other servers which receive copies of the domain's security policy and databases.

## **EMERGENCY SHUTDOWN**

An automatic feature in the event of a UPS low battery or overload condition. The Power Monitor begins to shut down applications and files. Shutdown time is UPS-specified and depends on your UPS. Refer to your UPS manual. See also Orderly Shutdown.

## **FILTERS**

The UPS components that prevent corruption of system data by helping to ensure that transients and high frequency noise are reduced or eliminated.

## **HARDWARE TEST**

Places the UPS on battery power for several seconds to verify proper operation of the hardware.

## **INVERTER**

The UPS component that converts DC from your UPS battery to AC for powering your system.



## **LOAD SHEDDING**

A UPS feature enabling users to remove connected devices from the load. Load shedding extends the power of your UPS battery.

## **MIB BROWSER PROFILES**

A LanSafe III for ManageWise feature providing data on UPS operating characteristics including battery, alarm, power, and configuration. Select any file to open a data window. Each profile begins with the same identifier.

## **NETWORK UPS HARDWARE TEST TOOL**

A LanSafe III for ManageWise tool for testing network UPS hardware. Accessed through the Test Hardware icon on the Console.

## **NETWORK UPS PREVENTIVE MAINTENANCE TEST TOOL**

A LanSafe III for ManageWise tool for running preventive maintenance on network file servers. Accessed through the Console Preventive Maintenance icon.

## **OTHER SERVER**

In Windows NT and Lan Server, the computer that receives a copy of the domain's security policy and domain databases, and authenticates network logons. Other servers are distinguished from the domain controller which maintains the domain's security policy and master database. Other servers run Windows NT Advanced Server.

## **ORDERLY SHUTDOWN**

The LanSafe III process, activated after a utility power failure, which protects users and file systems from lost or corrupted data. LanSafe III saves work in progress and shuts down your system in accordance with the shutdown timing you specify.

## **% LOAD**

A percentage of the UPS's calculated full load capacity.





## **POWER FAILURE COUNTDOWN TIME**

The time in minutes after the end of wink time that the LanSafe III software waits before starting a shutdown sequence. Use this time to save your work and log out before your computer goes down.

## **POWER LOG (POWER EVENT LOG)**

A record of significant power events, including power outages, low battery and overload indications, hardware self-test results, software loads and unloads, serial communication connections and failures, and preventive maintenance reminders.

## **POWER MONITOR**

The LanSafe III software component that communicates with your UPS to monitor the status of the input utility power, output load and condition of the UPS hardware. The Power Monitor also watches the power environment and provides alert processing, orderly shutdown, and logging functions.

In Windows NT, the Power Monitor consists of a Windows NT system service and window. The system service communicates with your UPS and provides alert processing, orderly shutdown of your file system, and logging functions. In the event of a utility power failure or other significant power event, the icon for the window appears on top of your currently active window and beeps until you open it. If a shutdown is necessary, the window shuts down your applications.

## **POWERSCOPE**

A full-system diagram with a full color display of your power. It is a View menu option on Consoles. Values are updated at various intervals of less than 30 seconds to reflect a current picture of the power environment.

## **PREVENTIVE MAINTENANCE**

A procedure by which the UPS is placed on battery power for several seconds to verify proper operation of your hardware. If your UPS does not support preventive maintenance, a hardware test is run.



## **RECTIFIER/CHARGER**

In some UPSs, a rectifier converts AC to DC. In others, a charger which includes a rectifier converts AC to DC.

## **REQUESTER**

A computer running OS/2. See Workstation.

## **RESTART DELAY**

A control of the Load Segment Configuration and Restart Delay dialog boxes used to bring up a server before workstations, or to bring up peripherals after a workstation or workstations have been brought up.

## **RUN TIME**

Maximum battery time available to support your system until inverter shutdown, based on current load and UPS conditions.

## **SURGE CONDITION**

A situation in which utility power voltage exceeds the upper limit of the UPS, causing a switch to battery power.

## **TIME NEEDED TO DOWN SYSTEM**

The time in seconds from when LanSafe III begins to shut down your system until the power from the UPS shuts off.

## **UPS**

Uninterruptible power system.

## **UPS GROUP–GROUP CONTROLLER–GROUP MEMBERS**

When one UPS supports more than one computer (either servers or workstations), the configuration is called a UPS group. The one computer in the UPS group that is physically attached to the UPS communications cable is called the UPS group controller. All other computers powered by the UPS are called group members.

## **WINK**

A brief interruption of utility power caused either by a blackout, a brownout, or a surge condition.



### **WINK TIME**

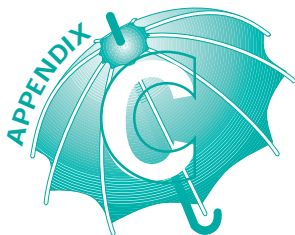
The number of seconds after a utility power failure that the LanSafe III software waits to inform you that the system will be shutting down. This delay eliminates nuisance messages from brief power interruptions.

### **WORKSTATION**

A computer running DOS, Windows, Windows 95, Windows NT or OS/2. In Windows NT, the domain controller and other servers run Windows NT Advanced Server. See Requester.




NOTES:



# CUSTOMIZABLE ALERTS

- 0 \$MACHINE is on battery ... shutdown in \$MINUTES mins
- 1 \$MACHINE will shut down in 1 min
- 2 \$MACHINE shutdown has been cancelled
- 3 \$MACHINE is now shutting down
- 4 Unable to contact UPS group controller
- 5 Contact with UPS group controller established
- 6 LanSafe III Power Monitor loaded
- 7 LanSafe III Power Monitor unloaded
- 8 Time to run preventive maintenance
- 9 Communications port is unavailable
- 10 Communications failure with UPS
- 11 Communications established with UPS
- 12 Abnormal operation
- 13 Abnormal operation resolved
- 14 Utility power failure
- 15 Utility power failure resolved
- 16 Low battery
- 17 Low battery resolved
- 18 Bypass condition
- 19 Bypass condition resolved
- 20 Battery disconnect
- 21 Battery disconnect resolved
- 22 Backfeed contact failure
- 23 Backfeed contact failure resolved
- 24 Abnormal battery discharge
- 25 Abnormal battery discharge resolved
- 26 Battery fuse failure
- 27 Battery fuse failure resolved
- 28 Abnormally low battery
- 29 Abnormally low battery resolved
- 30 DC overvoltage
- 31 DC overvoltage resolved

- 
- 32 Bypass fuse failure
  - 33 Bypass fuse failure resolved
  - 34 Abnormal battery charge
  - 35 Abnormal battery charge resolved
  - 36 Battery failure
  - 37 Battery failure resolved
  - 38 Cabinet overtemperature
  - 39 Cabinet overtemperature resolved
  - 40 High utility frequency
  - 41 High utility frequency resolved
  - 42 Low utility frequency
  - 43 Low utility frequency resolved
  - 44 Utility ground failure
  - 45 Utility ground failure resolved
  - 46 Inverter fuse failure
  - 47 Inverter fuse failure resolved
  - 48 Inverter overvoltage
  - 49 Inverter overvoltage resolved
  - 50 Inverter overtemperature
  - 51 Inverter overtemperature resolved
  - 52 Inverter undervoltage
  - 53 Inverter undervoltage resolved
  - 54 Inverter power off
  - 55 Inverter power off resolved
  - 56 Oscillator failure
  - 57 Oscillator failure resolved
  - 58 UPS overload
  - 59 UPS overload resolved
  - 60 Rectifier power off
  - 61 Rectifier power off resolved
  - 62 Rectifier fuse failure
  - 63 Rectifier fuse failure resolved
  - 64 Rectifier overtemperature
  - 65 Rectifier overtemperature resolved
  - 66 Static switch overtemperature
  - 67 Static switch overtemperature resolved
  - 68 Disabled UPS condition
  - 69 Disabled UPS condition resolved
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  - 71 High utility voltage resolved



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