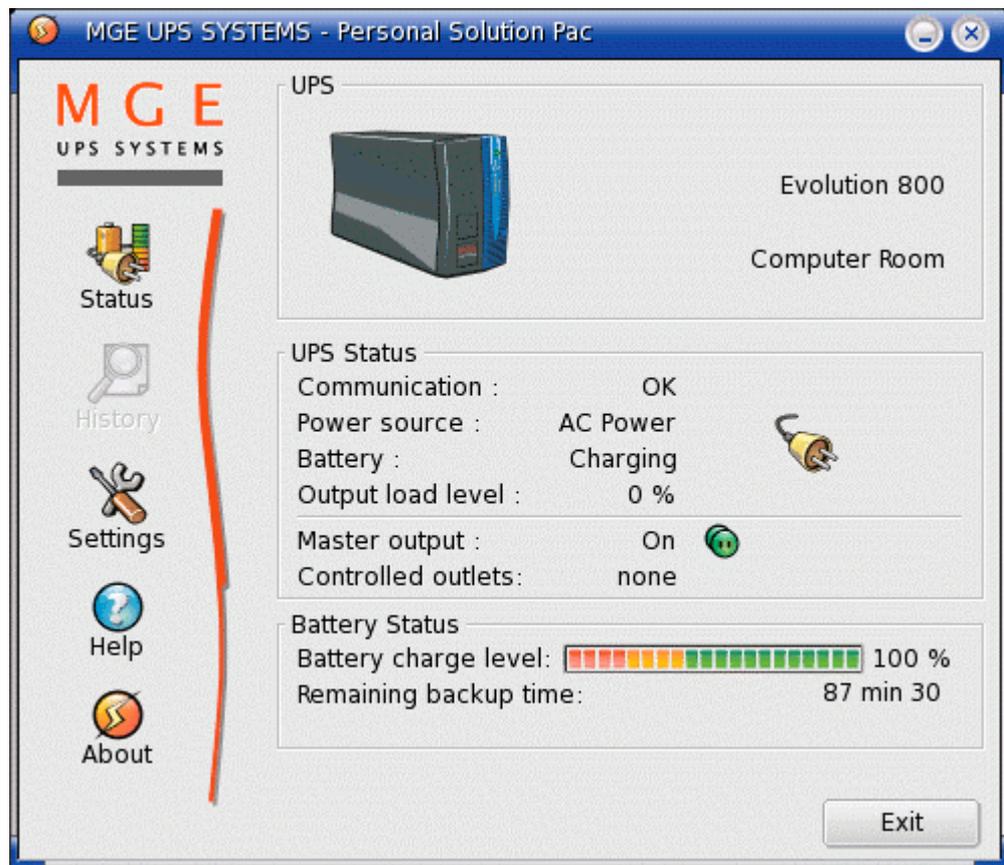


# Personal Solution Pac for Linux

User's Guide



## Table of Contents

1	Introduction .....	3
1.1	Features.....	3
1.2	System compatibility .....	3
1.3	MGE UPS SYSTEMS Partnerships and certifications .....	3
1.4	Support and feedback .....	4
2	Installation and initial configuration procedure .....	4
2.1	Installation Prerequisites .....	4
2.2	Installation Procedure.....	4
2.2.1	Debian GNU/Linux .....	4
2.2.2	Mandrakelinux / Mandriva Linux.....	4
2.2.3	SUSE / Novell.....	5
2.2.4	RedHat / Fedora Core .....	6
2.2.5	Others / not listed .....	6
2.3	Initial configuration procedure .....	7
2.3.1	Debian GNU/Linux .....	7
2.3.2	Mandrakelinux / Mandriva Linux.....	7
2.3.3	SUSE / Novell.....	7
2.3.4	RedHat / Fedora Core .....	7
2.3.5	Others / not listed .....	7
2.4	Updating the product .....	8
2.4.1	Debian GNU/Linux .....	8
2.4.2	Mandrakelinux / Mandriva Linux.....	8
2.4.3	SUSE / Novell.....	8
2.4.4	RedHat / Fedora Core .....	8
2.5	Uninstalling the Product.....	9
2.5.1	Debian GNU/Linux .....	9
2.5.2	Mandrakelinux / Mandriva Linux.....	9
2.5.3	SUSE / Novell.....	9
2.5.4	RedHat / Fedora Core .....	9
2.5.5	Others / not listed .....	9
3	Using Personal Solution Pac for Linux .....	10
3.1.1	Auto discovery and auto configuration .....	10
3.1.2	Testing.....	10
3.1.3	Viewing UPS status.....	11
3.1.4	Launching PSP in verbose mode.....	12
3.1.5	Modifying the protection settings.....	12
4	Frequently asked questions .....	16
4.1.1	General problems and questions .....	16
4.1.2	Debian GNU/Linux .....	16
4.1.3	Mandrakelinux .....	17
4.1.4	SUSE.....	17
4.1.5	RedHat / Fedora Core .....	17
5	Acknowledgements.....	18

## 1 Introduction

**MGE Personal Solution Pac for Linux is the new offering for point to point protection.**  
This document describes the steps to install and use "Personal Solution Pac for Linux".

### 1.1 Features

Personal Solution Pac offers the following features:

- ▶ Easy installation, upgrade and removal,
- ▶ UPS auto detection and software auto configuration,
- ▶ Support all MGE UPS SYSTEMS devices (serial and USB),
- ▶ Support any Xwindow graphical system,
- ▶ Graphical view for UPS status, configuration and help,
- ▶ System tray icon for a synthesis view, with support for Gnome and KDE (optionally for WindowMaker and XFCE),
- ▶ Based upon opensource technologies.

### 1.2 System compatibility

This application is packaged for any majors Linux distributions, including:

- ▶ Debian GNU/Linux Sarge/Sid (and compatible derived distribution), and higher,
- ▶ Mandrakelinux / Mandriva Linux 10.1 and higher,
- ▶ RedHat Linux Fedora Core 3 and equivalent ES/AS/IS version, and higher,
- ▶ SuSE 9.2, Novell Linux Desktop 9 and equivalent SLES / OES version, and higher,

If you run a Linux distribution that is not listed above, please refer to the § 2.2.5.

### 1.3 MGE UPS SYSTEMS Partnerships and certifications

	<a href="#">Debian Partner</a>
	<a href="#">Mandriva Technology partner</a>
	<a href="#">Redhat Ready partner</a>
	<a href="#">Novell / SuSE Silver Technology partner</a>

## 1.4 Support and feedback

If you need support to use the beta release of Personal Solution Pac, or if you want to make feedback, please contact:

[beta.support@mgeups.com](mailto:beta.support@mgeups.com)

In case you need support, you will need to provide some information, as described in § 3.1.4.

## 2 Installation and initial configuration procedure

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### 2.1 Installation Prerequisites

Personal Solution Pac for Linux has been developed with Opensource technologies, and has the following requirements, which will be installed automatically without needing to care about:

- ▶ GlibMM library, version 2.4.4
- ▶ GtkMM library, version 2.4.5
- ▶ Network UPS Tools, version 2.0.1
- ▶ Pango library, version 1.4.1
- ▶ Sigc++ library, version 2.0.3
- ▶ Gksuui library, version 1.0.3

### 2.2 Installation Procedure

#### 2.2.1 Debian GNU/Linux

MGE UPS SYSTEMS distributes the PSP package for Debian GNU/Linux through the APT method.

For more information about setting up APT, have a look at:

<http://www.debian.org/doc/user-manuals#apt-howto>

To install Personal Solution Pac, add the following line in the “/etc/apt/sources.list”

- ▶ deb <http://opensource.mgeups.com/debian> binary/

[K]Ubuntu users must replace the above line with:

- ▶ deb <http://debian.cri74.org/ubuntu-cri> hoary extra

Then, type the following commands, in a console as root:

- ▶ apt-get update
- ▶ apt-get install mgeups-psp

Note that you can also use the graphical method through Synaptic, Kynaptic and Kpackage. Now you can follow the “Initial configuration procedure” in § 2.3.

#### 2.2.2 Mandrakelinux / Mandriva Linux

MGE UPS SYSTEMS distributes its PSP package for Mandrakelinux through the URPMI method. For more information about setting up URPMI, have a look at:

<http://easyurpmi.zarb.org/>

<http://qa.mandrakesoft.com/twiki/bin/view/Main/UrpmiResources>

To install Personal Solution Pac, type the following commands, in a console as root:

- ▶ urpmi.addmedia mgeups http://opensource.mgeups.com/mdklinux/ with hdlist.cz
- ▶ urpmi mgeups-bsp

Note that you can also use the graphical method through Gurpmi, drakrpm and Kpackage.

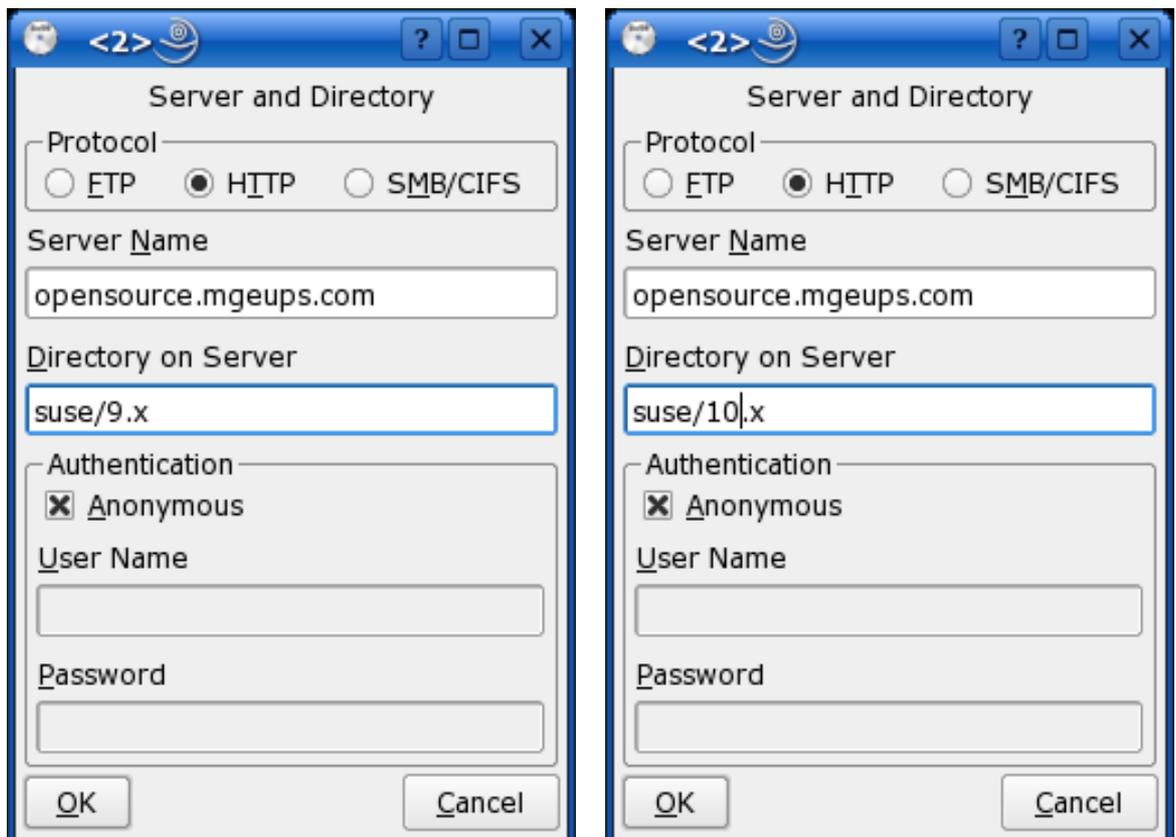
Now you can follow the “Initial configuration procedure” in § 2.3.

### 2.2.3 SUSE / Novell

MGE UPS SYSTEMS distributes its PSP package for SuSE / Novell Linux through YaST installation source.

To install Personal Solution Pac, open YaST, from the System menu.

In the Software section, select “Change Source of Installation”, and add an HTTP source with the values as below:



For SuSE 9.x and Novell Linux Desktop, the Directory on Server is “suse/9.x”.

For SuSE 10.x and more recent releases, the Directory on Server is “suse/10.x”.

Then, validate these settings using the OK button, and select “Install and Remove Software”.

Search for mgeups-bsp, check the package found and click the Accept button. YaST might prompt for installing other packages.

Now you can follow the “Initial configuration procedure” in § 2.3.

## 2.2.4 RedHat / Fedora Core

MGE UPS SYSTEMS distributes its PSP package for Red Hat / Fedora Core through the YUM method. For more information about setting up YUM, have a look at: <http://fedora.redhat.com/docs/updates/>

To install Personal Solution Pac, create the file “/etc/yum.repos.d/mgeups.repo” with the content:

```
[mgeups]
name=MGE UPS SYSTEMS
baseurl=http://opensource.mgeups.com/rhfc/
gpgcheck=0
```

Then, type the following commands, in a console as root:

- ▶ yum check-update
- ▶ yum install mgeups-bsp

Now you can follow the “Initial configuration procedure” in § 2.3.

## 2.2.5 Others / not listed

If you run a Linux distribution, or a \*BSD, system that is not supported, either:

- ▶ contact us at [opensource@mgeups.com](mailto:opensource@mgeups.com) for getting help to package Personal Solution Pac, if your system supports a packaging mechanism,
- ▶ or simply get PSP source package from <http://opensource.mgeups.com/projects/mgeups-bsp.htm>, and do a “configure; make; make install” as usual.

## 2.3 Initial configuration procedure

When the installation is done, you just need to start a first time Personal Solution Pac so that it can auto detect your UPS, and auto configure the protection of your system. To do so, follow your distribution specific information presented below.

### 2.3.1 Debian GNU/Linux

Launch Personal Solution Pac from the menu "System".  
Enter the root password when prompted.

### 2.3.2 Mandrakelinux / Mandriva Linux

Launch Personal Solution Pac from the Mandrakelinux -> System -> Monitoring".  
Enter the root password when prompted.

### 2.3.3 SUSE / Novell

Launch Personal Solution Pac from the menu "System".  
Enter the root password when prompted.

### 2.3.4 RedHat / Fedora Core

Launch Personal Solution Pac from the menu " Applications -> System tools".  
Enter the root password when prompted.

### 2.3.5 Others / not listed

Soon to come...

## 2.4 Updating the product

Update of the Personal Solution Pac for Linux is handled smoothly through the native packaging mechanism. So if a new release is available, it will be installed during the system upgrade.

However, if you want to force the update of PSP, follow the below instructions for your system.

### 2.4.1 Debian GNU/Linux

To upgrade Personal Solution Pac, or check if a new release is available, type the following commands, in a console as root:

- ▶ apt-get update
- ▶ apt-get install mgeups-bsp

### 2.4.2 Mandrakelinux / Mandriva Linux

To upgrade Personal Solution Pac, or check if a new release is available, type the following commands, in a console as root:

- ▶ urpmi.update mgeups
- ▶ urpmi mgeups-bsp

### 2.4.3 SUSE / Novell

To upgrade Personal Solution Pac, or check if a new release is available, open YaST from the System menu. In the "Software -> Change Source of Installation" section, select the "MGE UPS SYSTEMS PSP" source. Then select Edit -> Refresh.

Then go to "Install and Remove Software", and search for mgeups-bsp. Select the package found and right click on it to select Update. Note that you can check if a new release is available in the "Technical Data" tab of the same screen.

### 2.4.4 RedHat / Fedora Core

To upgrade Personal Solution Pac, or check if a new release is available, type the following commands, in a console as root:

- ▶ yum check-update
- ▶ yum update mgeups-bsp

## 2.5 Uninstalling the Product

### 2.5.1 Debian GNU/Linux

To remove Personal Solution Pac, type the following commands, in a console as root:

- ▶ `apt-get remove mgeups-bsp`

### 2.5.2 Mandrakelinux / Mandriva Linux

To remove Personal Solution Pac, type the following commands, in a console as root:

- ▶ `urpme mgeups-bsp`

### 2.5.3 SUSE / Novell

To remove Personal Solution Pac, open YaST from the System menu. Go to “Install and Remove Software”, and search for mgeups-bsp. Select the package found and right click on it to select Delete.

### 2.5.4 RedHat / Fedora Core

To remove Personal Solution Pac, type the following commands, in a console as root:

- ▶ `yum remove mgeups-bsp`

### 2.5.5 Others / not listed

To remove Personal Solution Pac, type the following command, from the source build directory, and in a console as root:

- ▶ `make uninstall`

## 3 Using Personal Solution Pac for Linux

### 3.1.1 Auto discovery and auto configuration

Upon its first startup after installation, Personal Solution Pac will automatically discover your local MGE unit, and will then automatically configure the Network UPS Tools framework.

### 3.1.2 Testing

When PSP starts, an icon is displayed by default in the task bar, if you're running Gnome or KDE. It can indicate one of the following status conditions:



AC power



Utility failure / load on battery



Communication failure

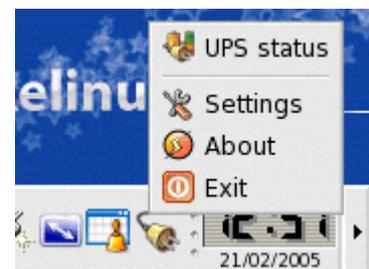


Battery fault

- ▶ The installation is in correct running order when the AC power icon is displayed.
- ▶ If the Utility failure / load on battery icon is displayed, check the power cable for the UPS. Note that this is the normal display if the AC-input power has failed.
- ▶ If the Communication failure icon is displayed, wait an instant, then check that the communication cable between the computer and the UPS is correctly connected.
- ▶ If the Battery fault icon is displayed, contact the MGE UPS SYSTEMS support department or your dealer to check battery connections or replace worn batteries

Right click the icon in the task bar to access:

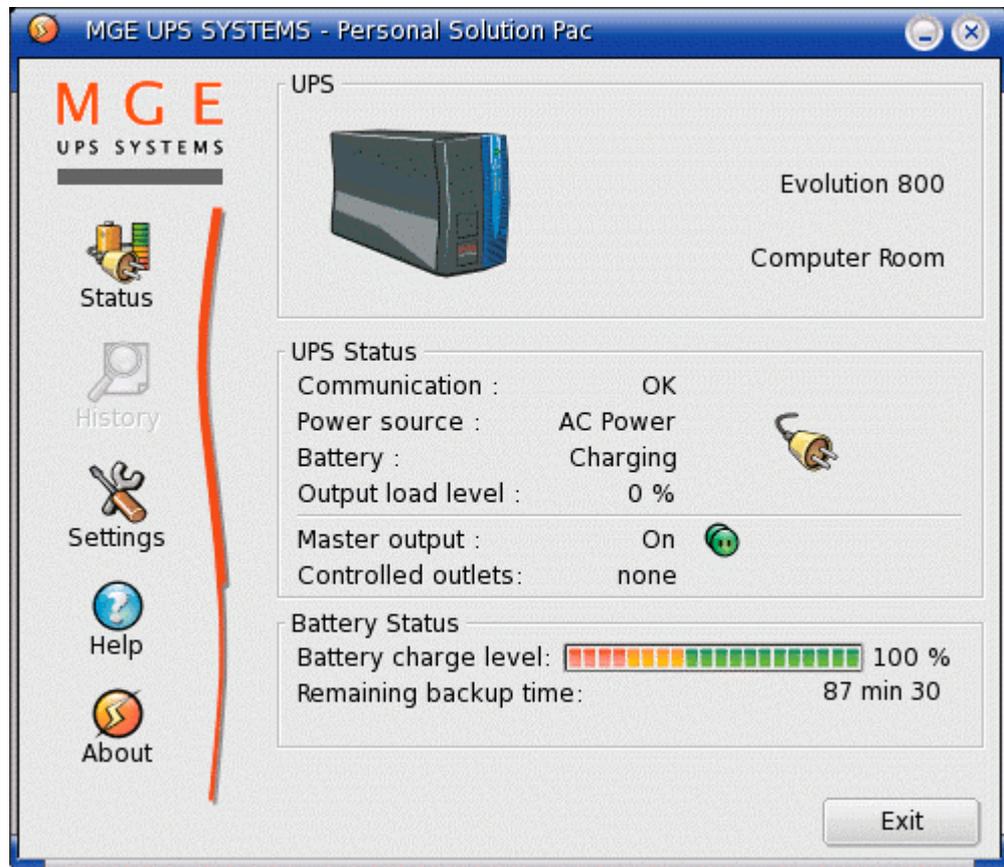
- ▶ the UPS viewer,
- ▶ the UPS history (functionality not yet available),
- ▶ the configuration tool,
- ▶ the product version and information.



Remark:

- ▶ A simple-click on the icon in the task bar shows or hide the UPS viewer.

### 3.1.3 Viewing UPS status



Click the icon in the task bar to display UPS viewer.

When communication with the UPS is OK, the viewer displays:

- ▶ the name and an image of the connected UPS,
- ▶ UPS status information (communication status, power source, battery charge indication),
- ▶ battery information (remaining backup time and battery level).

In all cases, the system displays:

- ▶ an icon indicating one of the following status conditions:



AC power



Utility failure / load on battery



Communication failure



#### Battery fault

- ▶ a "Settings" button to run the configuration tool,
- ▶ a "History" button to view the UPS history (functionality not yet available),
- ▶ a "Help" button to view the PSP documentation,
- ▶ an "About" button to access information on the product.

### 3.1.4 Launching PSP in verbose mode

For debugging and support purpose, more information can be obtained from both Personal Solution Pac and from the NUT framework.

To launch PSP in verbose mode, open a terminal emulator, and type "psp -d".

For NUT, some information are provided in /var/log/messages (search for the words "upsd", "upsmon" and your driver name, as indicated in PSP About page).

You can also launch NUT in debug mode. To do so:

- ▶ first stop the NUT services manually (ie "/etc/init.d/ups stop"),
- ▶ then start upsd by typing "upsd -DDDDD" in the terminal,
- ▶ finally launch the driver, as indicated in PSP About page. As an example, for newhidups on Mandrake, type:

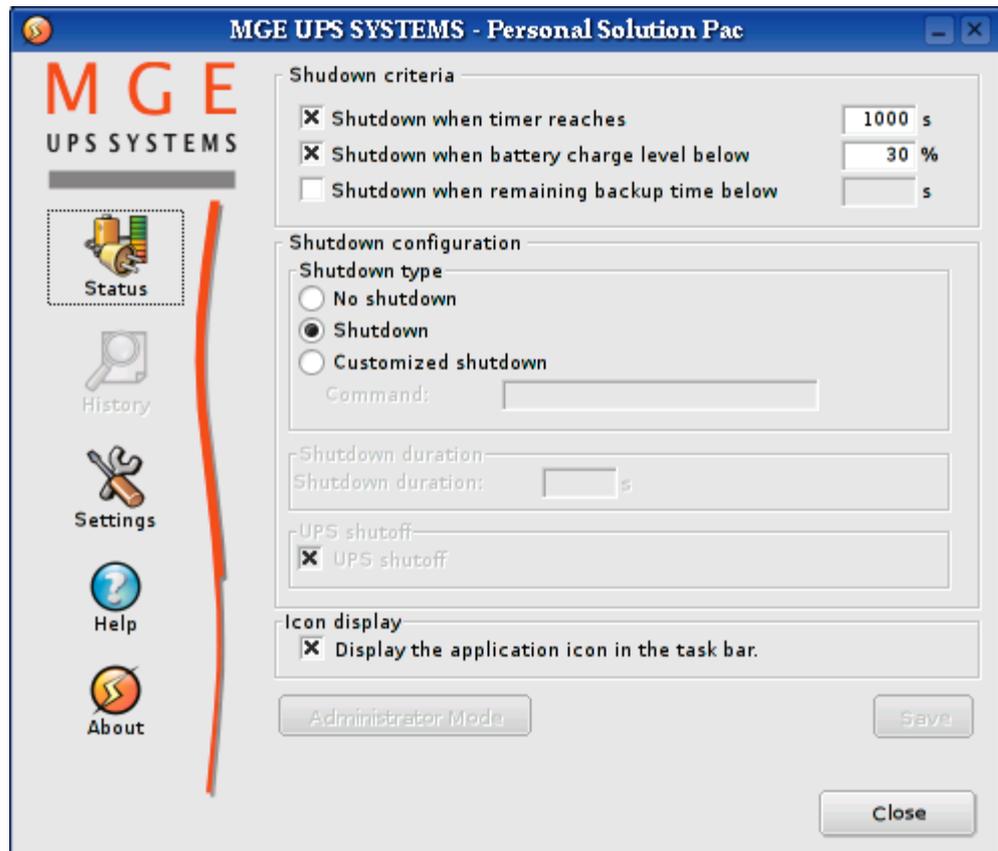
```
"/sbin/newhidups -DDDDD -a mgeups"
```

### 3.1.5 Modifying the protection settings

Once the auto configuration step has been done, you will be able to change some settings in Personal Solution Pac.

As these actions need system access, you will need to click on the "Administrator Mode" button, in the Settings view. As for the initial configuration, you will be prompted for the root password.

Once you are done with the settings changes, just click the Save button to store the new values.



### 3.1.5.1 Shutdown criteria

Three criteria determine when the shutdown procedure is launched. If two or more are activated, the shutdown procedure is launched as soon as any one of the criteria is fulfilled.

#### 3.1.5.1.1 Delay before shutdown

This is the time in seconds that the system waits following failure of AC power before initiating the system-shutdown procedure.

This value must be selected to provide users with enough time to close their applications and disconnect, but within the battery backup time provided by the UPS.

See the UPS manual for information on the backup time.

If another criterion occurs before the end of the shutdown timer, the shutdown procedure is immediately run.

Possible values : 0 to 999999

Default value : this criterion for system shutdown is not enabled

Unit : second

#### 3.1.5.1.2 Battery level to trigger system shutdown

Following an AC-power outage, PSP monitors the UPS data and when it detects that the battery level has dropped below the set threshold, it starts the shutdown procedure.

Possible values : 0 to 100  
 Default value : 20 (may depend on the UPS)  
 Unit : Percentage

### 3.1.5.1.3 Remaining backup time to trigger system shutdown

Following an AC-power outage, PSP monitors the UPS data and when the remaining backup time reaches the set-point, PSP launches the shutdown procedure.

Possible values : 0 to 999999  
 Default value : option not activated, no default value  
 Unit : Second

### 3.1.5.2 Shutdown configuration

This screen groups all the settings required to configure shutdown.

**CAUTION:** Care must be taken in configuring system shutdown because it is decisive in ensuring the ultimate protection of your computer. Once configuration has been completed, the Test your shutdown configuration button is available to check the settings.

**IMPORTANT.** Depending on the shutdown configuration selected, the test will in fact shut down your computer and the UPS. The default shutdown duration is 120 seconds. It is necessary to restart the UPS before restarting the computer.

#### Conditions required to restart the computer :

If you want the computer to restart as soon as AC power returns, the **UPS shutoff** option must be activated. Note that this option is validated by default, and is not yet available.

Where possible, the system must be configured to automatically restart when AC power returns. This function depends on the OS and the configuration of the BIOS. On most recent computers, this is a standard feature in the BIOS. If it is available, activate this feature.

### 3.1.5.2.1 Shutdown type

Select the shutdown setting required for the installation. There are three options:

#### 3.1.5.2.1.1 No shutdown, i.e. shutdown of the computer is disabled

Caution, this option is reserved for special configurations (e.g. systems where the computer is not supplied via the UPS).

#### 3.1.5.2.1.2 Shutdown

If shutdown is selected, your applications and the system will be shuts down as usual.

#### 3.1.5.2.1.3 Customized shutdown

This option is reserved for expert users. You can specify a custom shutdown command, such as `suspend2` (Linux equivalent to MS Windows hibernate) or any other command / script.

### 3.1.5.2.2 *Shutdown duration*

**Note that this option is not enabled yet.**

Use this section to indicate the time required by the computer to shut down. This parameter ensures complete shutdown (all applications and system) before the end of the battery backup time provided by the MGE UPS. PSP uses this parameter for the delayed shutoff order.

The value of the parameter is expressed in seconds.  
Value range : 0 ... 9999999 s  
Default value : 120 s

### 3.1.5.2.3 *UPS shutoff*

**Note that this option is not available yet, but is enabled by default.**

This section may be used to disable UPS shutoff. Click the "UPS shutoff" option to disable it. In this configuration, maximum backup time is increased, but battery service life may be shortened.

**IMPORTANT:** It is preferable to leave the UPS shutoff option enabled (the default selection) because it maintains battery service life and makes possible system restart when AC power returns.

### 3.1.5.3 *Icon display*

By default, an icon is displayed in the KDE / Gnome task bar. It informs the user whether AC power is available and on the status of communication between the computer and the UPS. It also allows quick access to the main PSP functions.

It is possible to remove the icon from the task bar by deselecting this option.

**Important note for Gnome users:** you need to read 4.1.1.3 and apply this procedure to have PSP launched automatically upon login.

## 4 Frequently asked questions

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This section lists the common problems users might encounter when installing or using Personal Solution Pac. Some of these problems are distribution specific, others are general.

If you don't find an answer to your problem, please contact us with as much information as possible, including your platform name and version (ie Debian Sarge), NUT version and driver (as indicated in PSP About page), and a detailed description of your problem. You should also try the procedure on § 3.1.4 to obtain more information.

### 4.1.1 General problems and questions

#### 4.1.1.1 Does PSP work with Ubuntu and Kubuntu?

Yes, as Ubuntu and Kubuntu are Debian GNU/Linux based.

Thanks to Nicolas Bocquet from CRI (<http://www.cri74.org/>) who rebuild the needed packages and provided a specific APT repository.

To install PSP on these, simply type in a terminal "sudo su -", enter your user's password (or root's one according to your configuration) and follow the standard Debian procedure as described in 2.2.1.

#### 4.1.1.2 I'm running WindowMaker or XFCE. Can I use the PSP system tray?

Yes, you can use the systray icon, using:

- ▶ wmsystray (<http://freshmeat.net/projects/wmsystray/>) for WindowMaker,
- ▶ xfce4-systray for XFCE.

#### 4.1.1.3 How to use PSP system tray with Gnome?

Contrary to KDE, there is currently no way to automate PSP launch minimized to the tray on login on Gnome. To do so manually :

- ▶ Open up your GNOME menu,
- ▶ Select Preferences followed by Sessions. Switch to the Startup programs tab,
- ▶ Click Add and enter "psp --start-hidden" as the startup command,
- ▶ Click OK and you're done.

To stop PSP from loading upon login, simply remove its entry from the startup programs listing.

### 4.1.2 Debian GNU/Linux

#### 4.1.2.1 I can't install PSP because of the error "<package XX> or <library YY> can't be installed"

Some package on your system or installation source are too old or unavailable.

To solve this problem:

- ▶ configure at least the APT repository for « main » and "contrib" sources as described in 2.2.1,

Note that installing the « netselect-apt » package and calling the command with the same name will do it automatically for you.

- update your system using the “apt-get update” command,
- and restart PSP installation as described in 2.2.1.

### 4.1.3 Mandrakelinux

#### 4.1.3.1 *I can't install PSP because of the error “libatkmm-1.6.so.1 can't be installed”*

Some package on your system or installation source are too old or unavailable.  
To solve this problem:

- add at least the URPMI “contrib” repository as described in 2.2.2,  
Note that latest Mandriva Linux packages repository provided by MGE contains the necessary Gtkmm, so the above point shouldn't be needed anymore.
- update your system (optional) using the “urpmi.update” command,
- and restart PSP installation as described in 2.2.2.

### 4.1.4 SUSE

Some version, like SuSE 9.2 seems to have problem when retrieving repository information (ie declaring 4 blank lines). In this case, you can retrieve and install manually the needed packages from this address: <http://opensource.mgeups.com/suse/RPMS/i586/>

### 4.1.5 RedHat / Fedora Core

No FAQ for the moment.

## 5 Acknowledgements

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### ▶ **Personal Solution Pac**

PSP is based on several Opensource project, and mostly use the Network UPS Tools project. MGE UPS SYSTEMS wants to thank all these projects, listed below, and to do so, PSP is distributed under the terms of the GNU General Public License.

The project page is located at: <http://opensource.mgeups.com/projects/mgeups-bsp.htm>

### ▶ **Network UPS Tools**

NUT is distributed under the terms of the GNU General Public License.

The project page is located at: <http://eu1.networkupstools.org/>

### ▶ **GtkMM, GlibMM and Sigc++ libraries**

These are distributed under the terms of the GNU General Public License.

The projects page are located at: <http://www.gtkmm.org/>

### ▶ **Pango library**

Pango is distributed under the terms of the GNU General Public License.

The project page is located at: <http://pango.org/>

### ▶ **Gksu and Gksuui libraries**

Gksu and Gksuui libraries are distributed under the terms of the GNU General Public License.

The projects page are located at: <http://www.nongnu.org/gksu/>

The full text of the GNU GPL is available at: <http://www.gnu.org/licenses/licenses.html#GPL>