
# PowerPanel® for Linux Software
# User's Manual

Rev. 1

2010/08/26

# Table of Contents

## Getting Help

```
pwrstat -help
```

Listing help contents with each direction and options for **pwrstat** command.

The other way, you can get more information about **pwrstat** and **pwrstatd** man page helps as below:

```
man pwrstat
man pwrstatd
```

## Getting the UPS Status

```
pwrstat -status
```

Listing current UPS properties and status as following.

```
Properties:
        Model Name..... UPS CP585
        Rating Voltage..... 120 V
        Rating Power..... 515 VA (335 Watt)

Current UPS status:
        State..... Normal
        Power Supply by..... Utility Power
        Utility Voltage..... 111 V
        Load..... 0 %
        Remaining Runtime..... 60 min.
        Battery Capacity..... 100 %
```

***Note:*** *These display items depends on UPS specification.*

## Getting the Daemon Settings

```
pwrstat -config
```

Listing current daemon settings as following.

```
Daemon Configuration:
Alarm..... On
Action for Power Failure:
        Delay time since Power Failure..... 60 sec.
        Run script command..... On
        Path of script command..... /etc/pwrstatd-powerfail.sh
        Duration of command running..... 1 sec
        Enable shutdown system..... on
```

Action for Battery Low:

Delay time since Battery Low..... 5 sec.

Run script command..... On

Path of script command..... /etc/pwrstatd-lowbatt.sh

Duration of command running..... 1 sec

Enable shutdown system..... on

## Setup the UPS and Daemon

### Setup Action for Power Failure as Example

```
pwrstat -pwrfail -delay 60 -active on -cmd /etc/pwrstatd-powerfail.sh -duration 1 -shutdown on
```

As above setting, it will take 1 second to run a shell script named **/etc/pwrstatd-powerfail.sh** and shutdown system since utility power has failure for 1 minute.

### Setup Action for Low Battery as Example

```
pwrstat -lowbatt -delay 5 -active on -cmd /etc/pwrstatd-lowbatt.sh -duration 1 -shutdown on
```

As above setting, it will take 1 second to run a shell script named **/etc/pwrstatd-lowbatt.sh** and shutdown system since UPS's battery capacity has low then a threshold for 5 seconds.

***Note:***

1. *The battery capacity Threshold can be changed in file **/etc/pwrstatd.conf**.*
2. *The parameter **-pwrfail** and **-lowbatt** are exclusively.*
3. *The unit of option **-delay** is second.*
4. *Both shell script **/etc/pwrstatd-powerfail.sh** and **/etc/pwrstatd-lowbatt.sh** were copied during installation procedure.*
5. *At least one of parameters **-delay**, **-active**, **-cmd**, **-duration** or **-shutdown** is necessary.*
6. *The option of **-cmd** can be any shell script in system, but it will be run by root authority.*
7. *The default action setting for both of **-pwrfail** and **-lowbatt** are same as above setting of example.*

### Turn UPS’s Alarm On and Off

```
pwrstat -alarm on
pwrstat -alarm off
```

To turn UPS's alarm on or off.

### Mute UPS’s Alarm Temporary

```
pwrstat -mute
```

To mute UPS's alarm for this power event until next one.

### Request UPS to Do A Battery Test

```
pwrstat -test
```

To verify the UPS will work well in battery power.

## Daemon Configuration

The daemon's configuration file is located at **/etc/pwrstatd.conf**.

## Daemon Event Log

The daemon will record the power event in **pwrstatd.log** log file, which can be found on **/var/log** directory.

## Troubleshooting

1. **What kind of UPS is supported by PowerPanel for Linux?**
   a. The **pwrstatd** support USB port and Serial port to monitor UPS.
   b. A UPS is designed under architecture of USB HID/Power Class; A UPS has DB-9 connector for RS-232 or Dry-Contact communication.
2. **Cannot establish communication with UPS.**
   a. Ensure UPS type is supported by PowerPanel for Linux.
   b. Ensure USB or Serial cable is connected between UPS and computer. Directly connect computer and UPS without USB Hub is helpful to solve if which have communication problem.
   c. Try to unplug and plug the USB cable with UPS.
   d. Ensure hid device can be found at directory of **/dev/hiddev**, **/dev/usb/hiddev**, **/dev/usb/hid/hiddev** such as **hiddev0** if UPS is connected by USB cable. Ensure hid device can be found at directory of **/dev** such as *ttyS0* if UPS is connected by serial cable.
   e. Ensure Linux kernel version is more than 2.4.22 or 2.6. Ensure kernel module **usbhid.ko** is loaded on system in kernel 2.4 and **hid.o** in kernel 2.6.
3. **Cannot installation or un-installation**
   a. Ensure user account is root, because the installation/un-installation needs **root** privilege to setup system.
   b. The target Linux may not work with our installation procedure, please refer to file **doc/deploy-guide** to get more detail information.
4. **pwrstat have no function.**
   a. Ensure **pwrstatd** is working.
   b. Ensure *prohibit-client-access* option is set as **no** in pwrstatd configuration file.
5. **The pwrstatd daemon cannot detect the UPS which has H2C USB adapter.**

a. Ensure Linux system have libusb library. It can be found at **/usr/lib** directory.
b. Ensure the libusb so name is libusb-0.1.so.4.
c. If libusb soname version is less than libusb-0.1.so.4, please go to **rpmfind** or **sourceforge** web site download the libusb rpm package and install it. The *rpmfind* and *sourceforge* download web site are shows as below:

- *rpmfind* web site, http://rpmfind.net
- *sourceforge* web site, http://sourceforge.net