

UPS & USB: íà äääèì ñèñòàíà óíàðàòü.

Ðàçääë : Ñèñòàíà. Äàìèèèñòðèðíààíèá

Îíóáèèèîââîî [Solnechnyi_z](#) [19/07/2009]

Â äàííé ñàòòüà ïèññüàààðñý ïðèàì ïäèèð÷àíèý ÈÁÍ ÷àðäç usb-ïðò, à òàé æà ðàðáíèá íàèíòüðü òðóáííòàé.

×àñòü I.

Äèý ñ÷àñòèèèâüð íàéääàòàèèé ÈÁÍ òèðü APC äíñòàòü÷íí ñèà÷àòü è óñòàííàòü ñèääóðùèá ïàèâòü:

<http://open-suse.ru/repo/opensuse11.1/i586/apcupsd-3.14.6-1.su111.i586.rpm>

<http://open-suse.ru/repo/opensuse11.1/i586/apcupsd-gapcmon-3.14.6-1.su111.i586.rpm>

<http://open-suse.ru/repo/opensuse11.1/i586/apcupsd-multimon-3.14.6-1.su111.i586.rpm>

Äèý íà÷àèà ïæíí ïíðíáíàòü GUI-óòèèèòó **gapcmon** (apcupsd-gapcmon-3.14.6-1.su111.i586.rpm):

Îñííââà íèí

Îèí ñ ïàðàìàððàèè UPS

Óàì, ó èíâí ñòèèò ñèñòàííúé ïíèèòð **conky**, âíçíæíí ïðèâèèèñý âòò ýòòò èííðèâ, íàèñíàíúé ïíé:

```
 ${apcupsd localhost 3551}UPS: ${color FFFFCB}${alignr}APC ${apcupsd_model}
```

```
 (${apcupsd_cable})${color}
```

```
 Status:${color FFFFCB}${alignr}${apcupsd_status}${color}
```

```
 Timeleft:${color FFFFCB}${alignr}${apcupsd_timeleft} min${color}
```

```
 Battery charge:${color FFFFCB}${alignr}${apcupsd_charge BAT1} %${color}
```

```
 Load:${color FFFFCB}${alignr}${apcupsd_load} %${color}
```

```
 ${apcupsd_loadbar 4}
```

Èñàíâü (âúïèíýðòñý ñ ïðàâàèè root):

apcupsd - çàíóñè äàííà

apcaccess - âúââè èíðíðíàòèè í èáí:

```
# apcaccess
```

```
APC : 001,038,1011
```

```
DATE : Sat Jul 18 23:26:54 OMSST 2009
```

```
HOSTNAME : home_SuSE_linux
```

```
VERSION : 3.14.6 (16 May 2009) suse
```

UPSNAME : home_SuSE_linux
CABLE : USB Cable
MODEL : Back-UPS ES 525
UPSMODE : Stand Alone
STARTTIME: Sat Jul 18 12:16:11 OMSST 2009
STATUS : ONLINE
LINEV : 231.0 Volts
LOADPCT : 43.0 Percent Load Capacity
BCHARGE : 100.0 Percent
TIMELEFT : 27.6 Minutes
MBATTCHG : 5 Percent
MINTIMEL : 3 Minutes
MAXTIME : 0 Seconds
SENSE : Medium
LOTRANS : 195.0 Volts
HITRANS : 255.0 Volts
ALARMDEL : Always
BATTV : 13.6 Volts
LASTXFER : Unacceptable line voltage changes
NUMXFERS : 1
XONBATT : Sat Jul 18 23:25:37 OMSST 2009
TONBATT : 0 seconds
CUMONBATT: 5 seconds
XOFFBATT : Sat Jul 18 23:25:42 OMSST 2009
SELFTTEST : NO
STATFLAG : 0x07000008 Status Flag
SERIALNO : 4B0829P10471
BATTDATE : 2008-07-18
NOMOUTV : 230 Volts
NOMINV : 230 Volts
NOMBATTV : 12.0 Volts
NOMPOWER : 300 Watts
FIRMWARE : 851.t3.I USB FW:t3
APCMODEL : Back-UPS ES 525
END APC : Sat Jul 18 23:26:56 OMSST 2009

apctest - òãñòèðíâàíèà ñèñòàìù:

apctest

2009-07-19 05:36:22 apctest 3.14.6 (16 May 2009) suse

Checking configuration ...

Attached to driver: usb

sharenets.type = DISABLE

cable.type = USB_CABLE

You are using a USB cable type, so I'm entering USB test mode

mode.type = USB_UPS

Setting up the port ...

apctest FATAL ERROR in device.c at line 71

Unable to create UPS lock file.

If apcupsd or apctest is already running,
please stop it and run this program again.
apctest error termination completed

✘ñòü II.

Äëý òãð, ó êíáí èíáðõñý íáêíòíðúá ïðíáèáíú ñ ïíäêëð÷áíèáí ÈÁÍ.

1. Äëý íà÷àèà ñèà÷èáááí èñòíáíúá êíáú ïðíáðáííú è óñòáíááèèáááí áá á ñèñòáíó, íè÷ááí íáíáú÷ííáí íá ýòí ðááá íáð, ïíýòíó áúííèíýðõñý íáú÷íúá ïðíáááóðú:

```
wget http://eu1.networkupstools.org/source/2.2/nut-2.2.1.tar.gz  
tar -xvzf ./nut-2.2.1.tar.gz  
cd ./nut-2.2.1.tar.gz  
./configure && make && make install
```

Ííñèá óñòáííáèè ïíýáèýðõñý ñèááóðùèá èàðàèíáè (/usr/local/ups/):

bin - èàðàèíá ñ äðáèááðáèè ïíá ïðáááèáííúá ïíááèè UPS'íá
etc - òáèèú êííðèááðáèè ááíííá, íáñòðíéèè ïíäêëð÷áíèý è ups
sbin - ñèñòáííúá ááííí, ááííí ïíèòíðèíáá, è áúá
html, cgi-bin, include, lib è share - á íèð íè÷ááí ïðááèòú íá ïðèááòñý, òáè ÷òí èð ïíèñúáàòú íá íáçàðáèúíí

2. Äëý íà÷àèà, èòí ááèááð ýòí áíáðáúá, íóæíí ïðáááèèòúñý ñ UPS, ïíäêëð÷áí èè íí, áèáèò èè ááí ýáðí. áíñííèüçóáíñý óðèèèòíé èç ïàèáòà usbutils:

lsusb

áúáíá ïíèáæáð, èáèèá usb-óñòðíéñòáá áñòú á ñèñòáíá, áñèè áú ááí íá àèèèòá.

3. Ááèáá á èàðàèíáá ñ èñòíáííúè êíááè, áñòú ïíèáèòáèíá data, á íáí áñòú ñíèñíè ïíáááðæèááííáí íáíðóáííáíèý - **driver.list**, òáí ïíæíí íáèòè ïíáááðæèááòñý èè áàø UPS è èáèíé äðáèááð ïíáííáèò áëý íááí.

Òáíáðú êíááá ïðáááèèèèñú ñ ïíááèùð ups è äðáèááðíí, ïíæíí ïðèñòóíàòú è íáñòðíéèá êííðèáíá.

Ðáááèòèðóáí /usr/local/ups/etc/ups.conf

```
user = nobody  
[usbhid]  
driver = usbhid-ups  
port = /dev/hiddev0
```

Á íáúáí, ñòðíèá **user** ïíèáçúúááò íò êíáí áóááò çáíóñèáòúñý äðáèááð, ïí çáíóñèááòñý ñ ïðáááèè nobody è ïíýòíó á íà÷àèá íá ïíæáò ïíèó÷èòú áíñòóíá è íáèíòíðúí ðáñòðíáí (á èàðàèíáá /dev/, íá ïíæáò ñíçáàòú .pid è

ĩđĩ÷ãã)

[usbhid] － èìÿ íàøããĩ UPS, ðãéĩĩáíáóp çãĩĩíèòü, ĩđĩĩó ÷òĩ áúã ïðèãĩãèòñÿ;
driver － äðãéããð äëÿ íàøããĩ UPS, ðãñĩĩèããããòñÿ á èàòãéĩãã ups/bin;
port － ìãñòĩ ããã äãĩĩí áóããò àçãèĩĩããéñòãĩããòü ñ ups (ã íãéĩòĩđũõ äëñòðèãáóòèããð, ĩóòü ĩĩããò èìãòü àèã /dev/usb/hiddev0);

Ĩðèìã÷ãíèã: áĩĩáúã á èàòãéĩãã /bin áñòü ïðããéũĩúé äðãéããð äëÿ UPS'ía òèòĩü ÅÐÑ, èñĩĩéũçóãòñÿ usbhid-ups, ĩđĩĩó èãé UPS ĩĩãéëp÷ãĩ ÷ãðãç USB.

4. ĩãðãã çãĩóñèĩ ðãéĩĩáíáóp ïðèđũòü á ïðããéũĩĩ íéíã tail -f /var/log/messages, äããũ ĩđĩĩìãòðèããòü ñèñòãĩĩúã ñĩĩáúãíèÿ, áúãĩãèĩúã äãĩĩãè.

Äãéãã çãĩóñèããĩ upsdrcvctl äëÿ ñĩããéĩãíèÿ ñ UPS:

ups/bin/upsdrcvctl start usbhid

Ãĩò óóò èãé ðãç è óéãçũãããì èìÿ íàøããĩ UPS - usbhid, òãé ĩü ÿãĩĩ óéãçũãããì ÷òĩ íóãéĩ èñĩĩéũçĩããòü ñãéòèp [usbhid].

Ãĩĩáúã ó upsdrcvctl áñòü 2 ĩĩéãçĩũõ ïãðãìãòðã, -t - òãñòĩãũé ðãæèì, upsdrcvctl áúãĩãèò ïã ÿéðãĩ òĩ ÷òĩ áú ĩĩ äãéãé, áĩ áðãĩÿ ĩĩđĩãéũĩĩãĩ çãĩóñèã; è -D - ïðèããĩ÷ĩúé çãĩóñè (debug).

Ñĩĩòðèì á messages áñã èè ĩĩđĩãéũĩĩ, áñèè íãò, òĩ ðãçãéðããĩñÿ á ĩðè÷éĩãð, áñèè äã èããì äãéũøã.

5. ĩðããèì /usr/local/ups/etc/upsd.conf è /usr/local/ups/etc/upsd.users: á òãééã **upsd.conf** íãñòðãèããòñÿ ĩðããã äĩñòóĩã è upsd:

ACL all 0.0.0.0/0
ACL localhost 127.0.0.1/32

ACCEPT localhost
REJECT all
LISTEN 127.0.0.1 3493

Ã òãééã **upsd.users** íãñòðãèããòñÿ ĩĩéũçĩããòãéè èĩãpùèã äĩñòóĩ è upsd:

[upsmon]
password = usbhidpassword
allowfrom = localhost
upsmon master

Äãéãã ñ ĩðãããè äĩñòóĩã ïã òãééũ è äèðãéòĩðèè, ó ìãĩÿ ÷ãñòĩ áúéãçèèè ñĩĩáúãíèÿ ÷òĩ ïã ðããòããò ĩðãã äĩñòóĩã è èãèè òĩ òãééãì, ĩĩÿòĩĩó ĩðèøéĩñũ ĩãĩĩãĩ èõ ĩĩĩãĩÿòü, òĩÿ ñ òĩ÷èè çðãĩèÿ áãçĩĩãñĩñòè ÿòĩ ïã òĩđĩòĩ:

chmod 666 /dev/hiddev0 - óéãçãíèã user = root á ups.conf, ïã ĩĩĩãéĩ èçããæãòü ĩđĩãéãĩũ äĩñòóĩã, è hiddev0

chmod 777 /var/state/upsd - òàì upsd íá ìîã ñîçääòü .pid òàéé
chmod 640 ups/etc/upsd.conf

Óãíãðü çàíóñèääì upsd è â ñéó÷ãã óñíãðíîã çàíóñèää ïðíããðýãì ñíããéíáíèã ñ UPS:

ups/sbin/upsd
ups/bin/upsc usbhid@localhost

óñíãðíóé áúãíã äíèæáí áúòü ïðèíãðíí ñèããóðùèè...

```
battery.charge: 100
battery.charge.low: 10
battery.charge.warning: 50
battery.date: 2001/09/25
battery.mfr.date: 2007/06/12
battery.runtime: 7177
battery.runtime.low: 120
battery.type: PbAc
...
ups.status: OL
ups.test.result: No test initiated
ups.vendorid: 051d
```

Óãíãðü íãñòðãèãããì upsmon äëý òíãí, ÷òíáú ñèããèòü çà òãì êíããã ðãçðýãèèñý
ããðãðãý è áúèèð÷èòü íãðó íãèíó. Ðãããèèèèðãì **/usr/local/ups/etc/upsmon.conf**:

*Íðèíãð ïíèíñòüð áçýð èç ñòãòüè ñ opennet, ÷òí íãííãí íãèãã÷èèí ííã
æèçíü. Íí íã çããúãããì ïíãíýòü èíý UPS'à è ïãðíèü íã ñãíè (ñãíãý ïãðããý
ñòðíèã).*

```
MONITOR usbhid@localhost 1 upsmon usbhidpassword master
NOTIFYCMD /usr/local/sbin/callwall
NOTIFYFLAG ONLINE SYSLOG+EXEC
NOTIFYFLAG ONBATT SYSLOG+EXEC
NOTIFYFLAG LOWBATT SYSLOG+EXEC
MINSUPPLIES 1
SHUTDOWNCMD "/sbin/shutdown -h +0"
POLLFREQ 5
POLLFREQALERT 2
HOSTSYNC 15
DEADTIME 15
POWERDOWNFLAG /etc/killpower
RBWARNTIME 43200
NOCOMMWARNTIME 300
FINALDELAY 5
```

Âñã, òãíãðü çàíóñèääì upsmon è è ãñèè çàíóñè ïðíããè óñíãðíí ïíæíí
ïðíããñèèðíããòü íãðó ðããíóó - áúããðãèããíèãì ðíóðã ïèòãíèý èç ñãðè.

Íðeíá-áíeá: çàíóñòèèèñú èè ïðíóáññú ïíæíí ïðíááðèòù ÷áðáç ps, ñéááópùèì
íáðàçíí: **ps ax | grep ups**
ups/sbin/upsmon

Òàèæá ïðíááðèòù, èàè ïñòàíáèèèááòñý ñèñòàíà ïíæíí, ñéàçàâ upsd, ÷òí UPS
ïíéó÷èè ñéáíáé áúèèþ÷áíèý ïèòàíèý:
upsmon -c fsd

P.S. Á ñòàòùá èñïíéúçíááíú ïàòáðèàéú ñ ñàéòà <http://www.opennet.ru/>.