

UPSMON PRO Linux --- User Manual

Version : 2.1

*Attention : root authority is necessary to execute at Linux here

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AA. UPSMON PRO Install

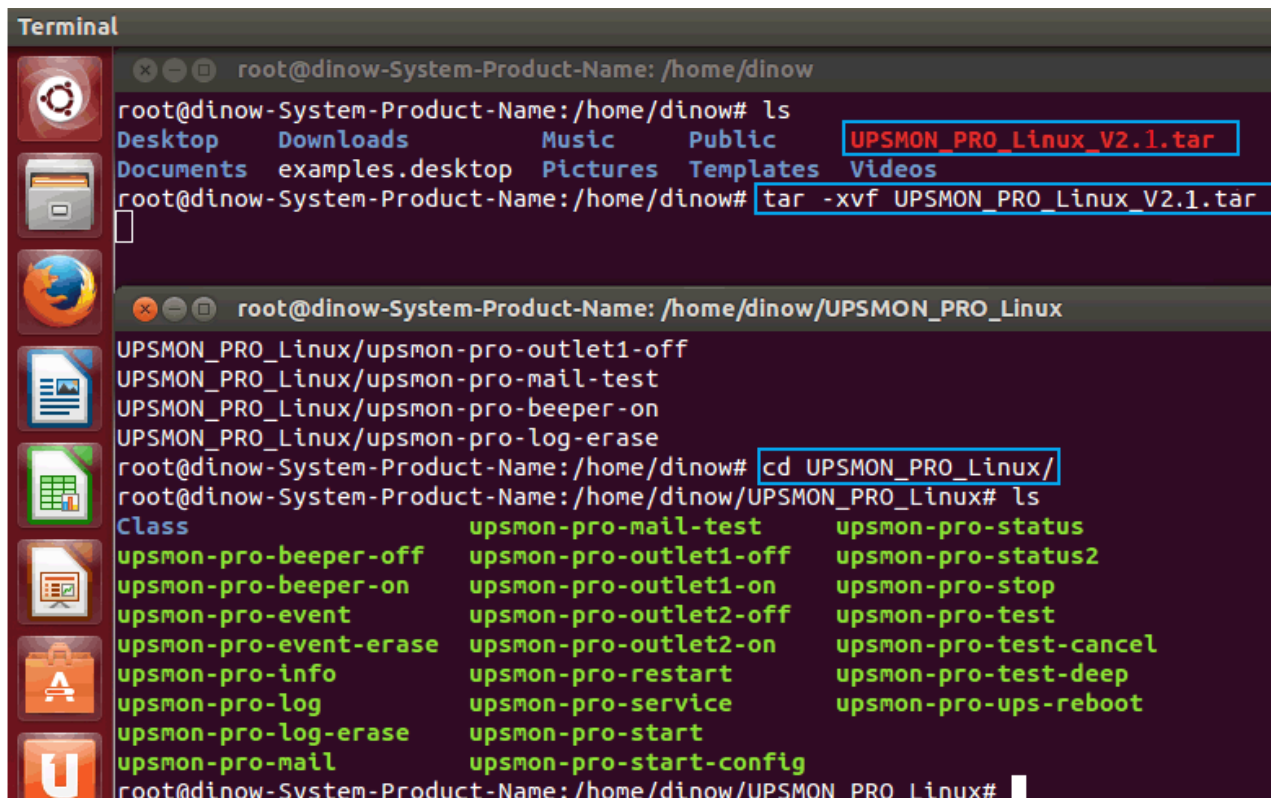
A.1. Command : `cp UPSMON_PRO_Linux.tar /home/user`

A.2. Command : `tar -xvf UPSMON_PRO_Linux.tar`

A.3. Command : `cd UPSMON_PRO_Linux`

==> These command will copy and uncompressed this ups monitoring software

==> And the package contains executable files about ups monitoring, configuration, and control



```
Terminal
root@dinow-System-Product-Name: /home/dinow
root@dinow-System-Product-Name:/home/dinow# ls
Desktop  Downloads  Music  Public  UPSMON_PRO_Linux_V2.1.tar
Documents  examples.desktop  Pictures  Templates  Videos
root@dinow-System-Product-Name:/home/dinow# tar -xvf UPSMON_PRO_Linux_V2.1.tar
root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux
UPSMON_PRO_Linux/upsmon-pro-outlet1-off
UPSMON_PRO_Linux/upsmon-pro-mail-test
UPSMON_PRO_Linux/upsmon-pro-beeper-on
UPSMON_PRO_Linux/upsmon-pro-log-erase
root@dinow-System-Product-Name:/home/dinow# cd UPSMON_PRO_Linux/
root@dinow-System-Product-Name:/home/dinow/UPSMON_PRO_Linux# ls
Class                upsmon-pro-mail-test    upsmon-pro-status
upsmon-pro-beeper-off upsmon-pro-outlet1-off  upsmon-pro-status2
upsmon-pro-beeper-on upsmon-pro-outlet1-on   upsmon-pro-stop
upsmon-pro-event     upsmon-pro-outlet2-off upsmon-pro-test
upsmon-pro-event-erase upsmon-pro-outlet2-on  upsmon-pro-test-cancel
upsmon-pro-info      upsmon-pro-restart     upsmon-pro-test-deep
upsmon-pro-log       upsmon-pro-service     upsmon-pro-ups-reboot
upsmon-pro-log-erase upsmon-pro-start
upsmon-pro-mail      upsmon-pro-start-config
root@dinow-System-Product-Name:/home/dinow/UPSMON_PRO_Linux#
```

Diagram : UPSMON PRO Install (Ubuntu)

BB. UPSMON PRO Start

B.1. Command : **upsmon-pro-start**

==> It will ask you the basic information and then auto start ups monitoring service

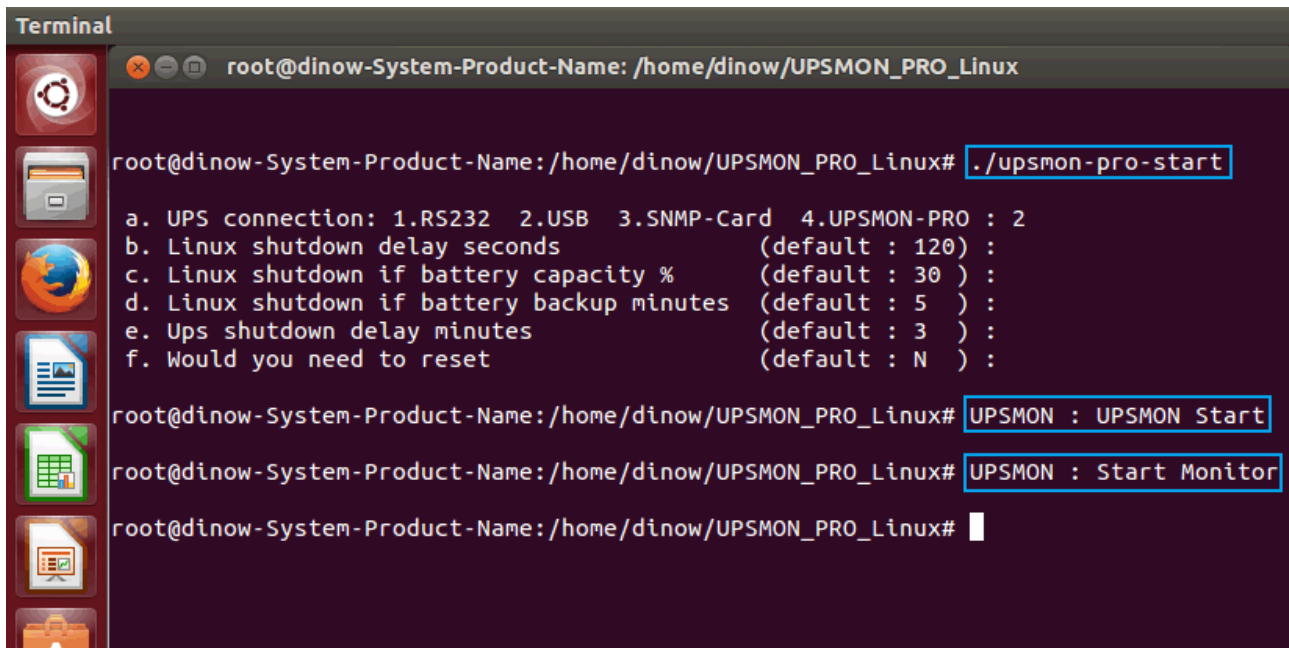
- **a. UPS Connection** : 1.RS232 2.USB 3.SNMP-Card 4.UPSMON-PRO
- **b. Linux shutdown delay seconds** : When power failure occurs, Linux will act shutdown after this count down seconds
- **c. Linux shutdown if battery capacity** : Linux act shutdown at once if battery descend to this level
- **d. Linux shutdown if battery backup minutes** : Linux act shutdown at once if battery estimated backup time descend to this minutes
- **e. Ups shutdown delay minutes** : Once Linux commit shutdown, ups will sustain power for these minutes

==> **UPSMON : UPSMON Start**

==> It means the program successfully execute

==> **UPSMON : Start Monitor**

==> It means the program successfully get ups connection



```
Terminal
root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux

root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux# ./upsmon-pro-start

a. UPS connection: 1.RS232 2.USB 3.SNMP-Card 4.UPSMON-PRO : 2
b. Linux shutdown delay seconds (default : 120) :
c. Linux shutdown if battery capacity % (default : 30 ) :
d. Linux shutdown if battery backup minutes (default : 5 ) :
e. Ups shutdown delay minutes (default : 3 ) :
f. Would you need to reset (default : N ) :

root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux# UPSMON : UPSMON Start

root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux# UPSMON : Start Monitor

root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux#
```

Diagram : USB Connection

```
dinow@linux-s9bl:~/Desktop
File Edit View Terminal Tabs Help

linux-s9bl:/home/dinow/UPSMON_PRO_Linux # ./upsmon-pro-start

a. UPS connection: 1.RS232  2.USB  3.SNMP-Card  4.UPSMON-PRO : 1
b. Name and path of serial port      (ex:/dev/ttyS0) : /dev/ttyS0
c. Linux shutdown delay seconds     (default : 120) : 90
d. Linux shutdown if battery capacity % (default : 30 ) :
e. Linux shutdown if battery backup minutes (default : 5 ) :
f. Ups shutdown delay minutes       (default : 3 ) : 2
g. Would you need to reset          (default : N ) :

linux-s9bl:/home/dinow/UPSMON_PRO_Linux # UPSMON : UPSMON Start

linux-s9bl:/home/dinow/UPSMON_PRO_Linux # UPSMON : Start Monitor
```

Diagram : RS232 Connection (SuSe)

```
dinow@localhost:/home/dinow/UPSMON_PRO_Linux
File Edit View Search Terminal Help

[root@localhost UPSMON_PRO_Linux]# ./upsmon-pro-start

a. UPS connection: 1.RS232  2.USB  3.SNMP-Card  4.UPSMON-PRO : 3
b. SNMP-Card IP address      : 10.192.136.236
c. Linux shutdown delay seconds (default : 120) : 180
d. Linux shutdown if battery capacity % (default : 30 ) :
e. Linux shutdown if battery backup minutes (default : 5 ) :
f. Ups shutdown delay minutes       (default : 3 ) : 5
g. Would you need to reset          (default : N ) :

[root@localhost UPSMON_PRO_Linux]# UPSMON : UPSMON Start

[root@localhost UPSMON_PRO_Linux]# UPSMON : Start Monitor

[root@localhost UPSMON_PRO_Linux]# █
```

Diagram : SNMP-Card Connection (CentOS)

B.2 Command : **upsmon-pro-stop**

==> It will stop ups monitoring service

B.3 Command : **upsmon-pro-service**

==> This command directly start ups monitoring without any information query
([Add this within start daemon](#))

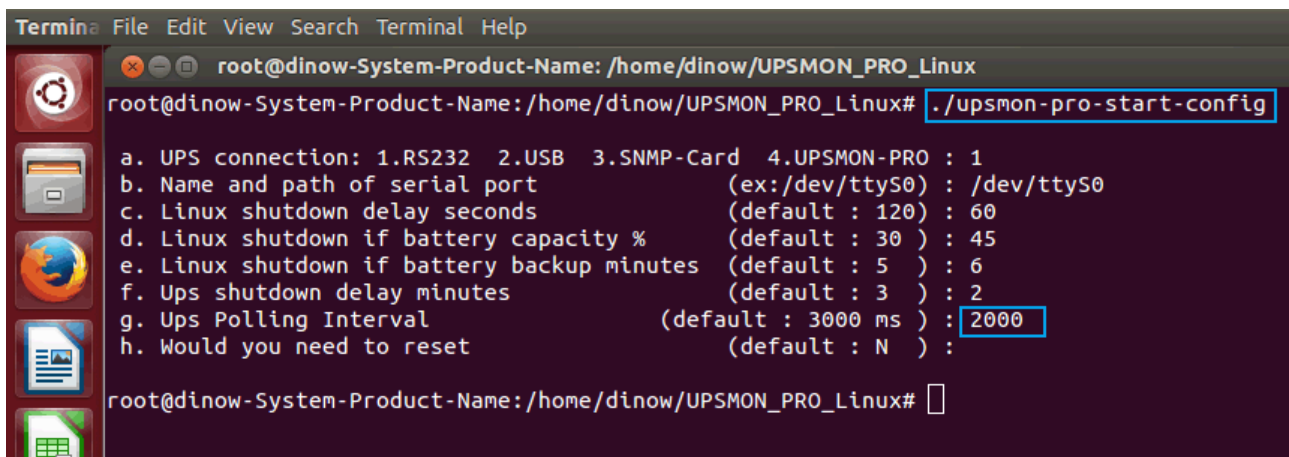
B.4 Command : **upsmon-pro-restart**

==> This command will restart the ups monitoring

B.5. Command : **upsmon-pro-start-config**

==> This command will reset ups connection and shutdown condition

==> **Polling Interval** : The application query interval to ups (milli second)



```
Terminal File Edit View Search Terminal Help
root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux
root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux# ./upsmon-pro-start-config
a. UPS connection: 1.RS232 2.USB 3.SNMP-Card 4.UPSMON-PRO : 1
b. Name and path of serial port (ex:/dev/ttyS0) : /dev/ttyS0
c. Linux shutdown delay seconds (default : 120) : 60
d. Linux shutdown if battery capacity % (default : 30 ) : 45
e. Linux shutdown if battery backup minutes (default : 5 ) : 6
f. Ups shutdown delay minutes (default : 3 ) : 2
g. Ups Polling Interval (default : 3000 ms ) : 2000
h. Would you need to reset (default : N ) :
root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux#
```

Diagram : Start Config

CC. UPSMON PRO Status

C.1 Command : **upsmon-pro-status**

==> It will repeatedly poll you current ups status until Ctrl-C pressing

- **Power Status** : Battery Power / Utility Power
- **Input Voltage** : To display utility power voltage
- **Input Frequency** : To display utility power frequency
- **Output Voltage** : To display ups output voltage
- **Output Power** : To display ups output power
- **UPS Status** : Normal / Bypass / AVR Boost / AVR Buck / UPS Failed
- **UPS Load** : To display total capacity of loads
- **UPS Temperature** : To display ups inside temperature
- **UPS Beeper** : ON / OFF
- **Battery Status**: Normal/ Charge/ Discharge / Battery Test / Low Battery / Battery Failed
- **Battery Capacity** : To display battery percentage level
- **Battery Voltage** : To display battery its voltage
- **Battery Backup Time** : To display battery estimated backup time in battery mode
- **Battery Test Times** : Accumulated times that ups made battery test
- **Battery Last Test** : The last time this ups made battery test
- **Battery Test Result** : Normal / Battery Failed / Low Battery
- **Battery Power Times** : Accumulated times that ups output power supply from batteries
- **Battery Power Start** : The last time ups switch power from its battery
- **Battery Power End** : The last time ups switch power to utility
- **Battery Age** : The age of ups batteries have used
- **Ambient Temperature** : The sense of environmental temperature
- **Ambient Humidity** : The sense of environmental humidity
- **Upsmon Pro Linux** : This ups monitoring software version
- **Upsmon Pro Status** : Monitoring / Disconnect
- **Upsmon Pro Data Update** : The data update time
- **Upsmon Pro is going to shutdown after XXX seconds** : Blackout and shutdown mode

```

root@dinow-System-Product-Name: /home/dinow/UPSMON_PRO_Linux
Power Status           : AC Utility Power
Input Voltage          : 110 Volts
Input Frequency        : 60 Hz
Output Voltage         : 120 Volts
Output Power           : 34 Watt
Ups Status             : Normal
Ups Load               : 3 Percent
Ups Temperature        : 32 C
Ups Beeper             : OFF
Battery Status         : Normal
Battery Capacity       : 100 Percent
Battery Voltage        : 22.0 Volts
Battery Test Times     : 3 Times
Battery Last Test      : 11:43:51 2015/06/01
Battery Test Result    : Battery Normal
Battery Power Times    : 3 Times
Battery Power Start    : 11:46:16 2015/06/01
Battery Power End      : 11:46:44 2015/06/01
Battery Age            : 1 Month
Ambient Temperature    : 28 C
Ambient Humidity       : 45 Percent
Upsmon Pro Linux      : V1.22
Upsmon Pro Status      : Monitoring
Upsmon Pro Update      : 13:32:37 2015/06/01

```

Diagram : UPS Status

C.2 Command : **upsmon-pro-info**

==> To display ups service / devices information / and configuration.

- **Ups Company** : The manufacture of the ups
- **Ups Model** : The ups model name
- **Ups Firmware** : The ups firmware version
- **Rating Input Volt** : Rating Input Voltage
- **Rating Output Volt** : Rating Output Voltage
- **Upsmon Pro Connect** : RS232 / USB / SNMP-Card / UPSMON-PRO
- **Upsmon Pro RS232 Port Name and Path** : Serial port path (ex : /dev/ttyS0)
- **Upsmon Pro Master IP** : The IP address of Upsmon Pro Master (RS232 or USB)
- **Snmp Card IP** : The IP address of snmp card
- **Snmp Card firmware** : The firmware version of snmp card
- **Snmp Card Community** : The community of snmp card
- **Upsmon Pro Usb VID & PID** : Usb vendor ID and Usb product ID
- **Upsmon Pro Usb Type** : Driver for usb/hid ups equipment
- **Polling Interval** : The query interval to ups
- **Linux shutdown delay seconds** : When power failure occurs, Linux will act shutdown after this count down seconds
- **Linux shutdown if battery capacity** : Linux act shutdown at once if battery descend to this level
- **Linux shutdown if battery backup minutes** : Linux act shutdown at once if ups estimated battery backup time descend to this minutes
- **Ups shutdown delay minutes** : Once Linux commit shutdown, ups will sustain power for these minutes

```
dinow@linux-s9bl:~/Desktop
File Edit View Terminal Tabs Help
linux-s9bl:/home/dinow/UPSMON_PRO_Linux # ./upsmon-pro-info
Ups Company                : POWERCOM
Ups Model                   : VGS-1000
Ups Firmware                : Ver 1XP0.3
Rating Input Voltage        : 120 Volts
Rating Output Voltage       : 120.0 Volts
Rating Battery Voltage      : 36.00 Volts
Rating Frequency            : 60.0 Hz
Upsmon Pro Connect         : SNMP-Card
SNMP-Card IP               : 210.202.53.134
SNMP-Card firmware         : 2.44.BT506
SNMP-Card Community        : public
Upsmon Pro Polling Interval : 2000 ms
Linux shutdown delay seconds : 120 Seconds
Linux shutdown if battery capacity % : 30 Percent
Linux shutdown if battery backup minutes : 5 Minutes
Ups Shutdown Delay         : 3 Minutes
```

Diagram : UPS Information

C.3 Command : **upsmon-pro-log**

==> To list the ups data log

C.4 Command : **upsmon-pro-log-erase**

==> To erase the ups data log

==> To avoid data conflict, please execute this command without upsmon pro service running

C.5 Command : **upsmon-pro-event**

==> To list the ups event

C.6 Command : **upsmon-pro-log-erase**

==> To erase the ups event

==> To avoid data conflict, please execute this command without upsmon pro service running

DD. UPSMON PRO Config

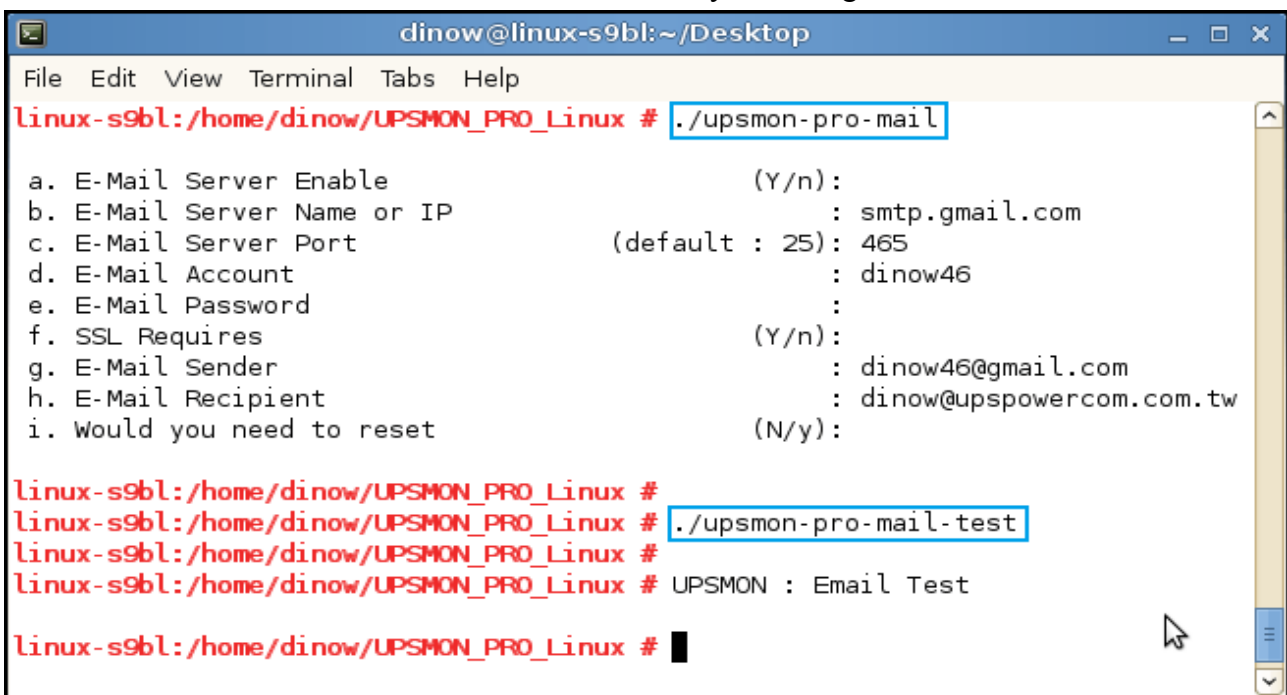
D.1 Command : **upsmon-pro-mail**

==> This configuration will help you to get email notification once ups events occurs

- **a. E-Mail Server Enable** : Y / n
- **b. E-Mail Server Name or IP** : Email server address
- **c. E-Mail Server Port** : 25 (default)
- **d. E-Mail Account** : The account of this email server
- **e. E-Mail Password** : The password of this email account
- **f. SSL Requires** : This mail server requires an secure connection
- **g. E-Mail Sender** : The email address of this account
- **h. E-Mail Recipient** : The recipient who needs to get email notification

D.2 Command : **upsmon-pro-mail-test**

==> This command will send a test mail to make sure your configuration is success or not

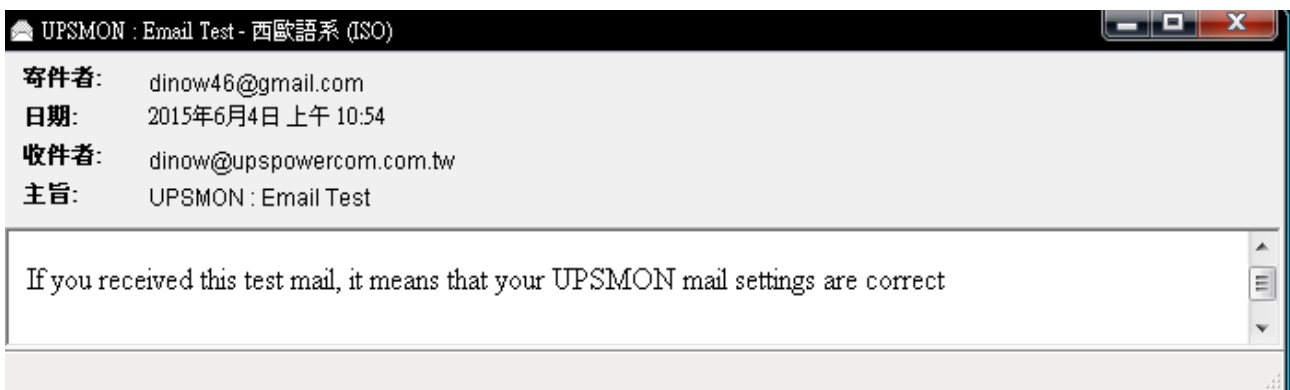


```
dinow@linux-s9bl:~/Desktop
File Edit View Terminal Tabs Help
linux-s9bl:/home/dinow/UPSMON_PRO_Linux # ./upsmon-pro-mail

a. E-Mail Server Enable (Y/n):
b. E-Mail Server Name or IP : smtp.gmail.com
c. E-Mail Server Port (default : 25): 465
d. E-Mail Account : dinow46
e. E-Mail Password :
f. SSL Requires (Y/n):
g. E-Mail Sender : dinow46@gmail.com
h. E-Mail Recipient : dinow@upspowercom.com.tw
i. Would you need to reset (N/y):

linux-s9bl:/home/dinow/UPSMON_PRO_Linux #
linux-s9bl:/home/dinow/UPSMON_PRO_Linux # ./upsmon-pro-mail-test
linux-s9bl:/home/dinow/UPSMON_PRO_Linux #
linux-s9bl:/home/dinow/UPSMON_PRO_Linux # UPSMON : Email Test

linux-s9bl:/home/dinow/UPSMON_PRO_Linux # █
```



```
UPSMON : Email Test - 西歐語系 (ISO)
寄件者: dinow46@gmail.com
日期: 2015年6月4日 上午 10:54
收件者: dinow@upspowercom.com.tw
主旨: UPSMON : Email Test

If you received this test mail, it means that your UPSMON mail settings are correct
```

EE. UPSMON PRO Set

E.1 Command : **upsmon-pro-test**

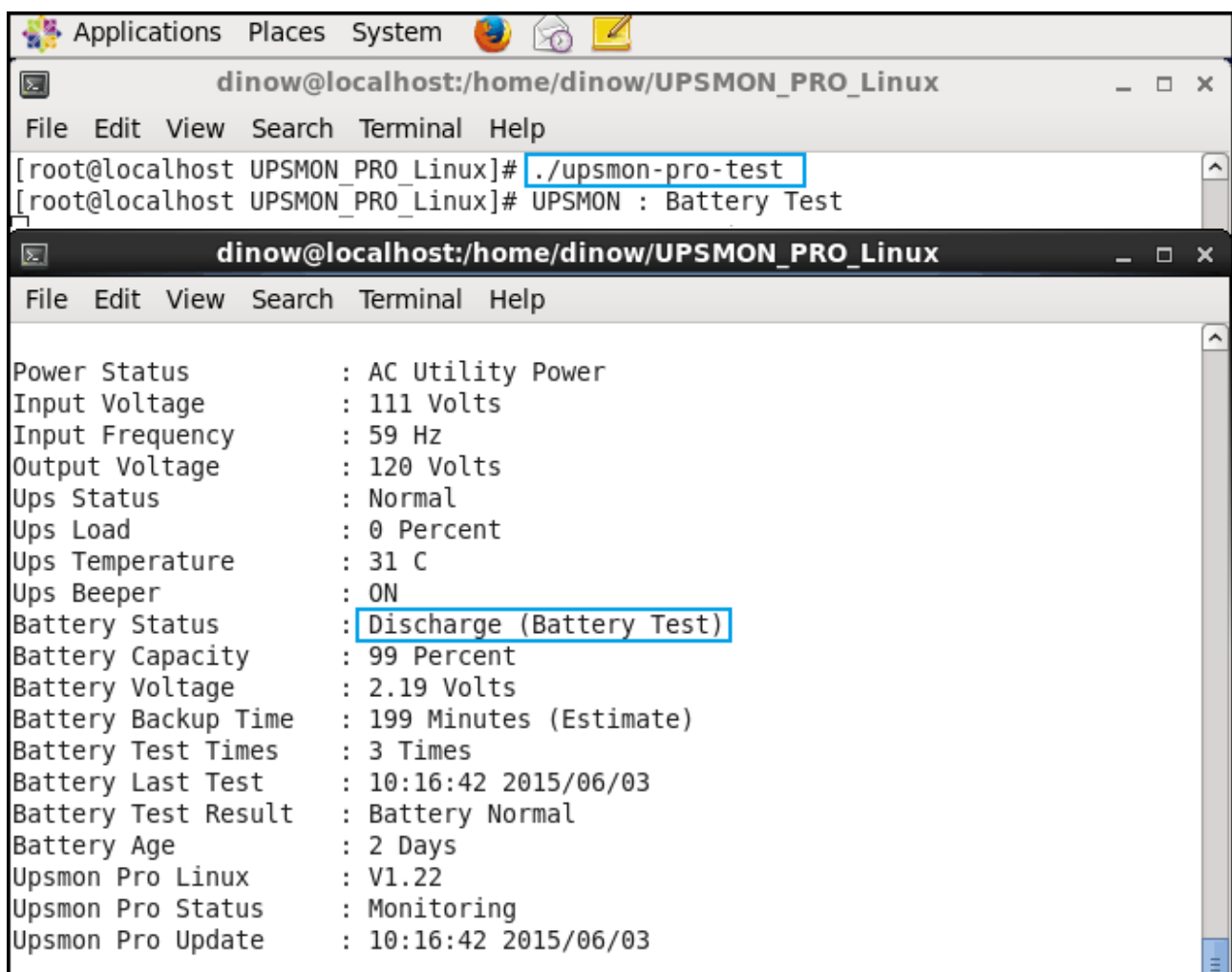
==> To check the battery health, ups will supply the power shortly from its battery

E.2 Command : **upsmon-pro-test-deep**

==> To simulate battery capability, ups will supply battery power for its limits

E.3 Command : **upsmon-pro-test-cancel**

==> With this command, it will cease deep battery power test



The image shows a terminal window titled 'dinow@localhost:/home/dinow/UPSMON_PRO_Linux'. The terminal displays the command `./upsmon-pro-test` being executed, which results in the output `UPSMON : Battery Test`. Below this, a detailed status report is shown, with the 'Battery Status' field highlighted in blue. The report includes the following information:

```
Power Status      : AC Utility Power
Input Voltage     : 111 Volts
Input Frequency   : 59 Hz
Output Voltage    : 120 Volts
Ups Status        : Normal
Ups Load          : 0 Percent
Ups Temperature   : 31 C
Ups Beeper        : ON
Battery Status    : Discharge (Battery Test)
Battery Capacity  : 99 Percent
Battery Voltage   : 2.19 Volts
Battery Backup Time : 199 Minutes (Estimate)
Battery Test Times : 3 Times
Battery Last Test  : 10:16:42 2015/06/03
Battery Test Result : Battery Normal
Battery Age       : 2 Days
Upsmon Pro Linux  : V1.22
Upsmon Pro Status : Monitoring
Upsmon Pro Update : 10:16:42 2015/06/03
```

Diagram : UPS Batter Test

E.4 Command : **upsmon-pro-beeper-on**

==> Ups alarm for ups warning condition

E.5 Command : **upsmon-pro-beeper-off**

==> Ups silence for ups warning condition

E.6 Command : **upsmon-pro-ups-reboot**

Description : Shutdown Linux and reboot ups after XX minutes

- **a. Ups reboot after minutes (default : 2)** : Ups reboot its power after this minutes
- **b. Commit ups reboot (Y / n)** :

E.7 Command : **upsmon-pro-outlet1-off**

==> It will turn ups outlet1 OFF at once

E.8 Command : **upsmon-pro-outlet1-on**

==> It will turn ups outlet1 ON at once

E.9 Command : **upsmon-pro-outlet2-off**

==> It will turn ups outlet2 OFF at once

E.10 Command : **upsmon-pro-outlet2-on**

==> It will turn ups outlet2 ON at once

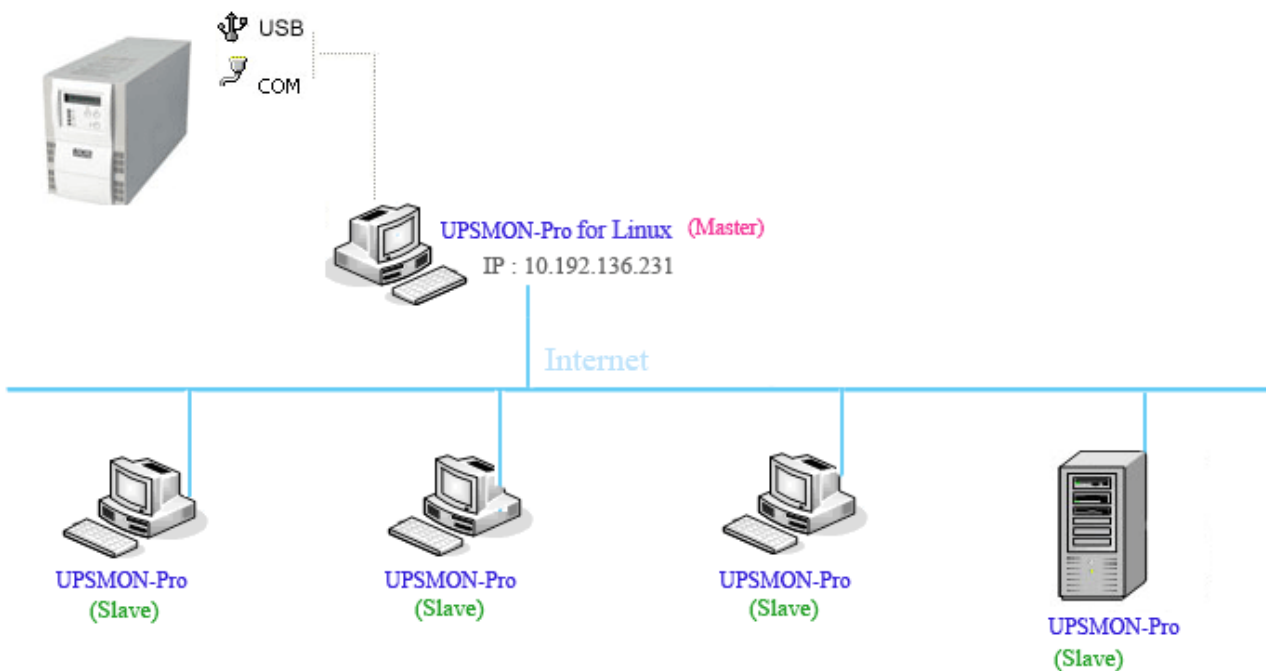
==> ups outlets control is specific for certain ups

FF. UPSMON PRO Multi-Connect

==> The UPSMON PRO can play the role as Master or Slave

F.1 UPSMON PRO Master

- UPSMON PRO Master : The Linux who physically connects UPS via RS232 or USB
- UPSMON PRO Master : It can share UPS status to the other UPSMON PRO Slaves
- EX : UPSMON PRO Master : 10.192.136.231 (IP Address)



F.2 UPSMON PRO Linux Slave

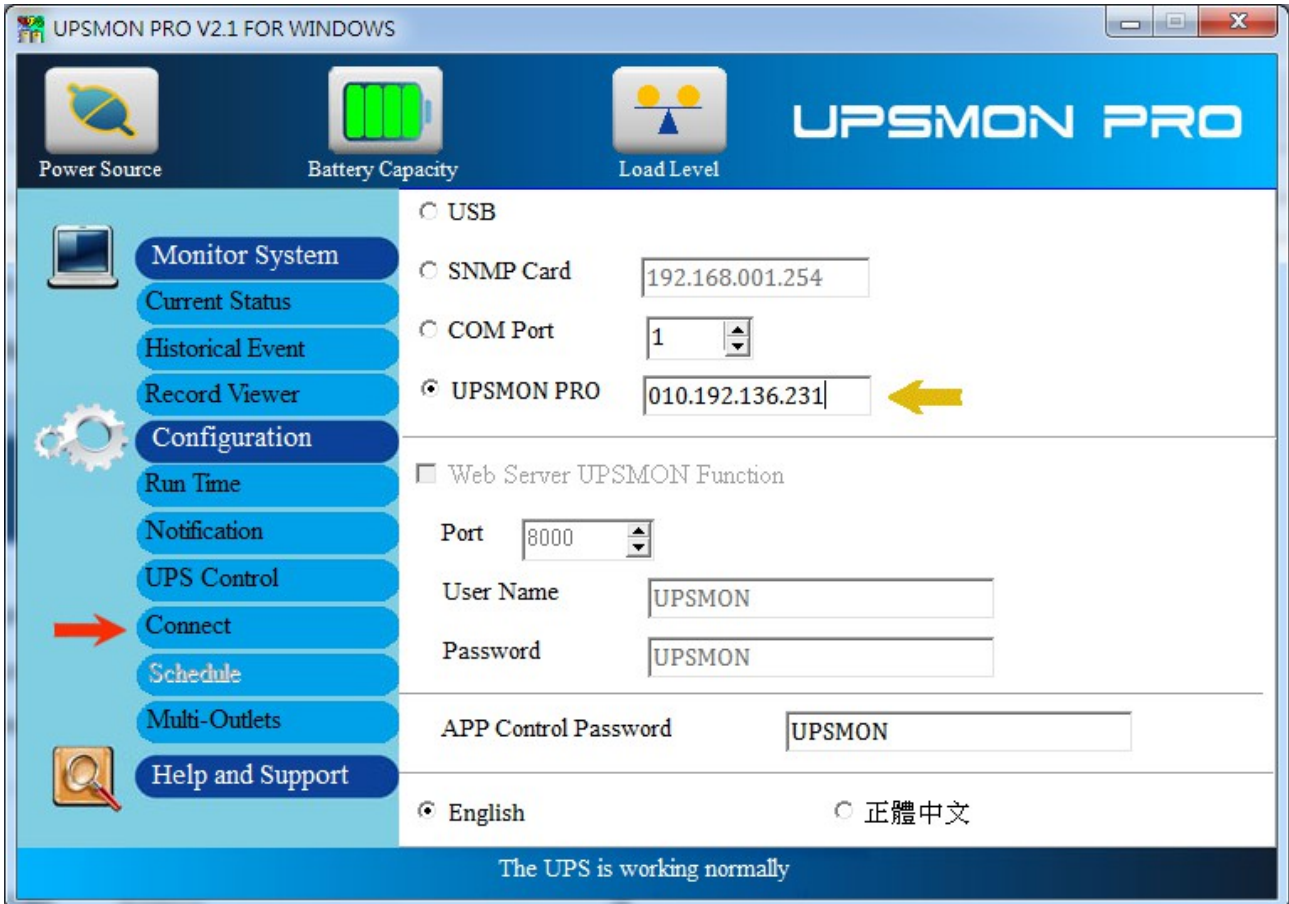
- UPSMON PRO Slave : The Linux who connect to UPSMON PRO Master via net
- UPSMON PRO Slave : Execute upsmmon-pro-start with 4 upsmmon-pro parameter

```
Applications Places System [Globe] [Mail] [Calendar]
dinow@localhost:/home/dinow/UPSMON_PRO_Linux
File Edit View Search Terminal Help
[root@localhost UPSMON_PRO_Linux]# ./upsmmon-pro-start
a. UPS connection: 1.RS232 2.USB 3.SNMP-Card 4.UPSMON-PRO : 4
b. UPSMON-PRO IP address : 10.192.136.231
c. Linux shutdown delay seconds (default : 120) :
d. Linux shutdown if battery capacity % (default : 30 ) :
e. Linux shutdown if battery backup minutes (default : 5 ) :
e. Would you need to reset (default : N ) :

[root@localhost UPSMON_PRO_Linux]# UPSMON : UPSMON Start
[root@localhost UPSMON_PRO_Linux]# UPSMON : Start Monitor
```

F.3 UPSMON PRO Windows Slave

- UPSMON PRO Slave : The Windows who connect to UPSMON PRO Master via net
- UPSMON PRO Slave : Connect : Choose UPSMON PRO



GG. UPSMON PRO Auto Start

G.1 Command : / path / UPSMON_PRO_Linux / **upsmon-pro-service**

==> To have a daemon start every time Linux reboot, please add above script into beginning procedures. Typically this script locate in “/etc/rc.d/” or “/etc/rc.d/rc.local” or “/etc/init.d/rc.local”. However the name and path vary by the distribution

HH. Q and A

H.1 Supported Operating Systems

- CentOS
- Debian
- Fedora
- RedHat
- SuSE
- Ubuntu

H.2 Linux usb connect Fail :

Command : `sudo apt-get install lib32bz2-1.0` (Debian)
Command : `sudo apt-get install lib32z1` (Ubuntu / Mint)
Command : `yum install glibc.i686` (Fedora / CentOS)

H.3 Linux Display Fail :

Command : `sudo apt-get install default-jre`
Command : `cd UPSMON_PRO_Linux / EXT`
Command : `java Display`