UPSMON PRO Windows User Manual

Using UPSMON-PRO Monitoring Software

With this UPS monitoring software, you can :

- Get UPS connection from serial port, usb port, or snmp agent
- Monitor UPS status, battery capacity , output voltage, load level, ...etc
- Record and review historical UPS events
- Record and review UPS information by line chart
- Set up countdown seconds between power failure - OS shutdown / OS shutdown - UPS Off
- Set up e-mail notification (ex : power outages, low battery, disconnect, ...etc)
- Set up UPS features (ex : silence ,battery test , no load shutdown, outlets control, ... etc)
- Share UPS status to the other UPSMON-PRO (Multi-Windows / Linux)
- Start web portal for remote monitoring

  NOTE : We strongly recommend you logged in as an administrator to install the UPSMON-PRO

Opening UPSMON-PRO Monitoring Software

To start the software :

- Double-click the UPSMON-PRO icon in the system tray

- Click Start on the taskbar - choose All Programs - UPSMON PRO - UPSMON PRO
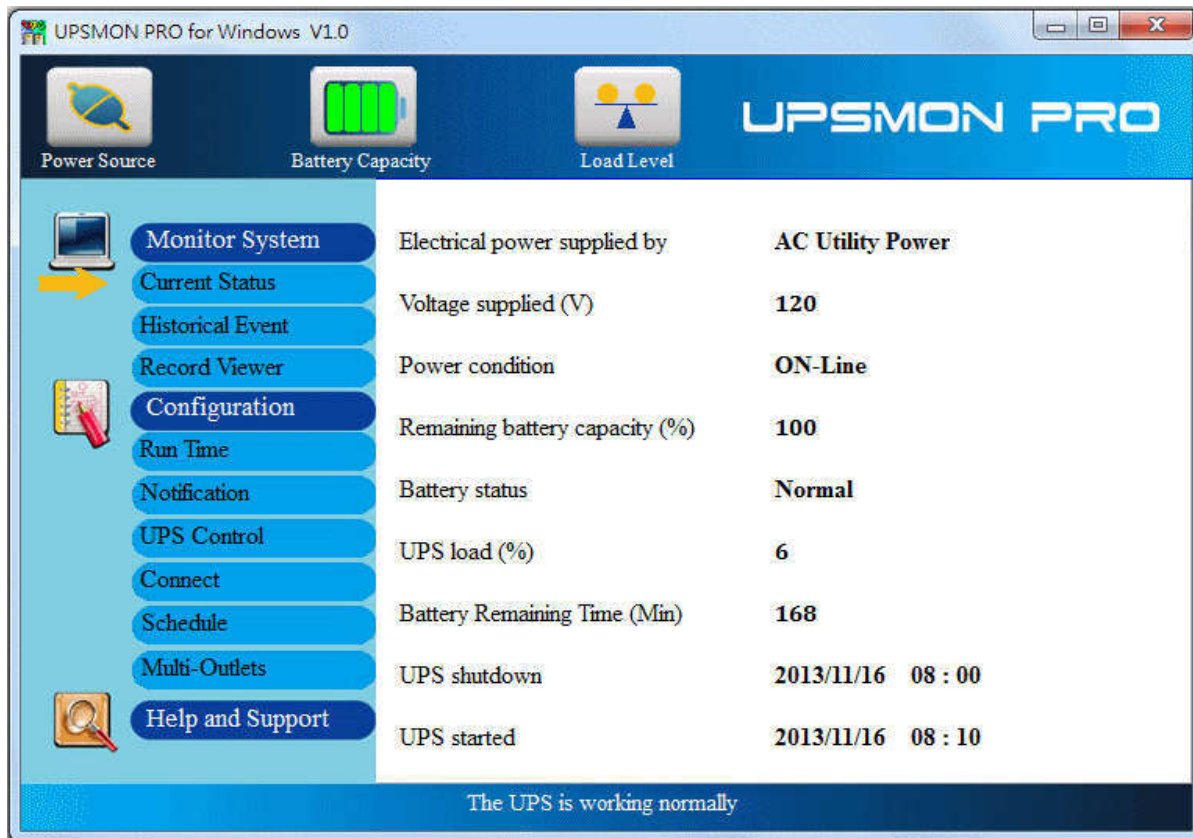
Connecting UPS

To start the connection :

- Button : Connect
- Choose the interface which way UPSMON connect to UPS : USB Port (**a**) / SNMP Card (**b**) / COM Port (**c**) / UPSMON PRO (**d**)

# UPSMON-PRO buttons and indicators

- Button : Current Status

Indicator	Function
	Power Source : Utility Normal Power and the battery is charging
	Power Source : Utility Power Failed and the battery is discharging
	Battery Capacity : 100% full and healthy
	Battery Capacity : 75% full
	Battery Capacity : 50% remains
	Battery Capacity : 25 % and battery capacity is almost exhausted
	Load Level : Balance load
	Load Level : Half percent load

	Load Level: Full load
Electrical Power supplied	AC Utility Power / Battery Power
Voltage Supplied (V)	Output voltage from the UPS outlets
Power Condition	ON-Line / Bypass / Normal / Boost / Buck
Remaining Battery Capacity	The percentage of remaining capacity
Battery Status	Normal / Testing / Failed
UPS Load	The percentage of the UPS load
Battery Remaining Time	Estimated battery remaining minutes for discharging

Setting up Shutdown Configuration

Once the power failure occurs, it helps you to automatically shutdown the Windows and UPS :

1. Button : Run Time
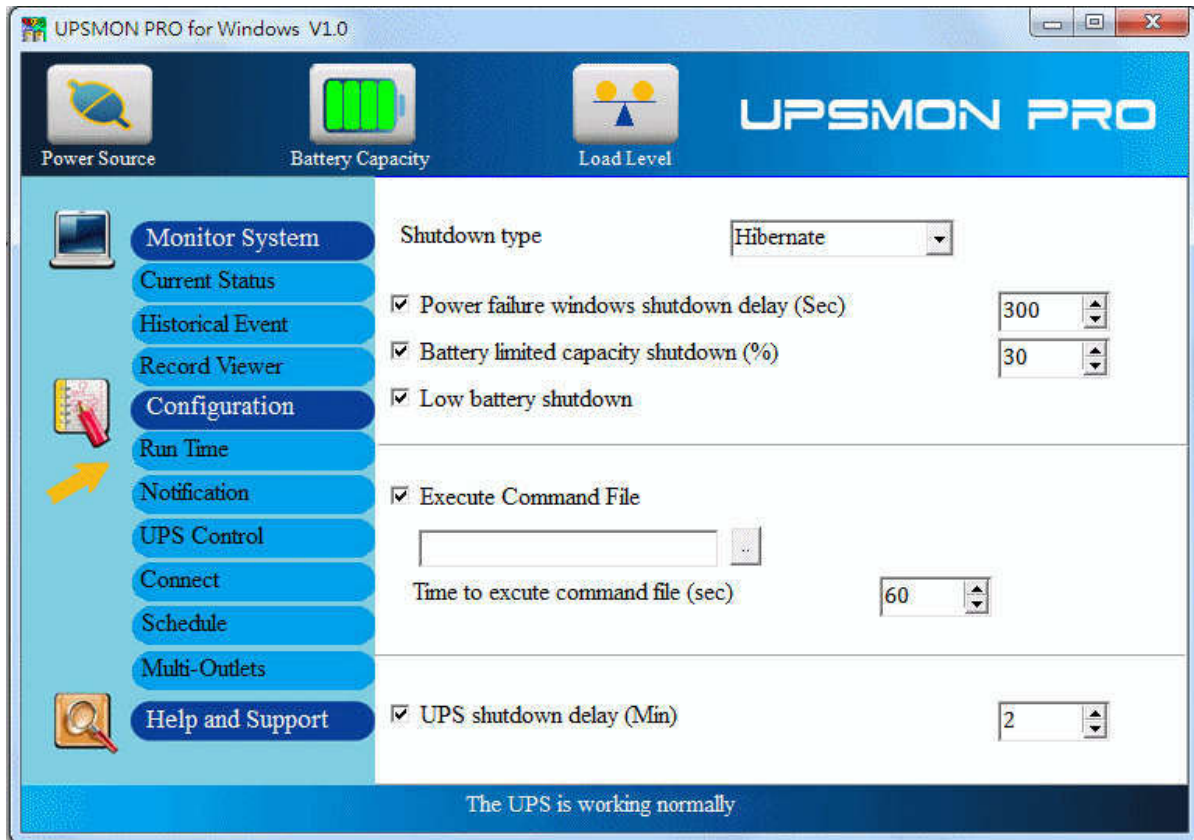
2. **(a)**

2. 1 Hibernate : power-saving state and puts your open documents and programs on your hard disk

2. 2 Shut Down : completely running out of the procedures to save the programs to the hard disk

2. 3 None : no any reaction for the windows

NOTE : In Windows 2003 and XP ==> You also have to enable the hibernate in *Power Options Properties* to support OS Hibernate

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3. **(b)** "Power Failure Windows Shutdown Delay" : after this period of time, OS start to act shutdown - **(1)**

4. **(c)** "Battery limited capacity shutdown" : once the battery is declining to this level, OS start to act shutdown - **(1)**

5. **(d)** "Low battery shutdown" : if the status of the battery is declining to low level, this OS immediately act shutdown - **(1)**

Any one of the (1)item-conditions is fulfilled, UPSMON execute shutdown / hibernate at once

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6. **(f)** "UPS shutdown Delay" : this duration is affording to completely shutdown the PC - **(2)**

NOTE : The total time span between power failure, PC shutdown, and UPS OFF depends on UPS load and the battery capacity, ...etc

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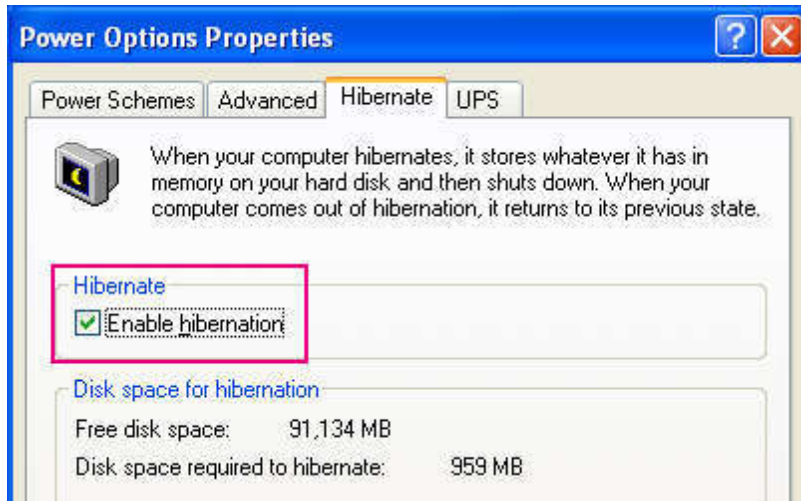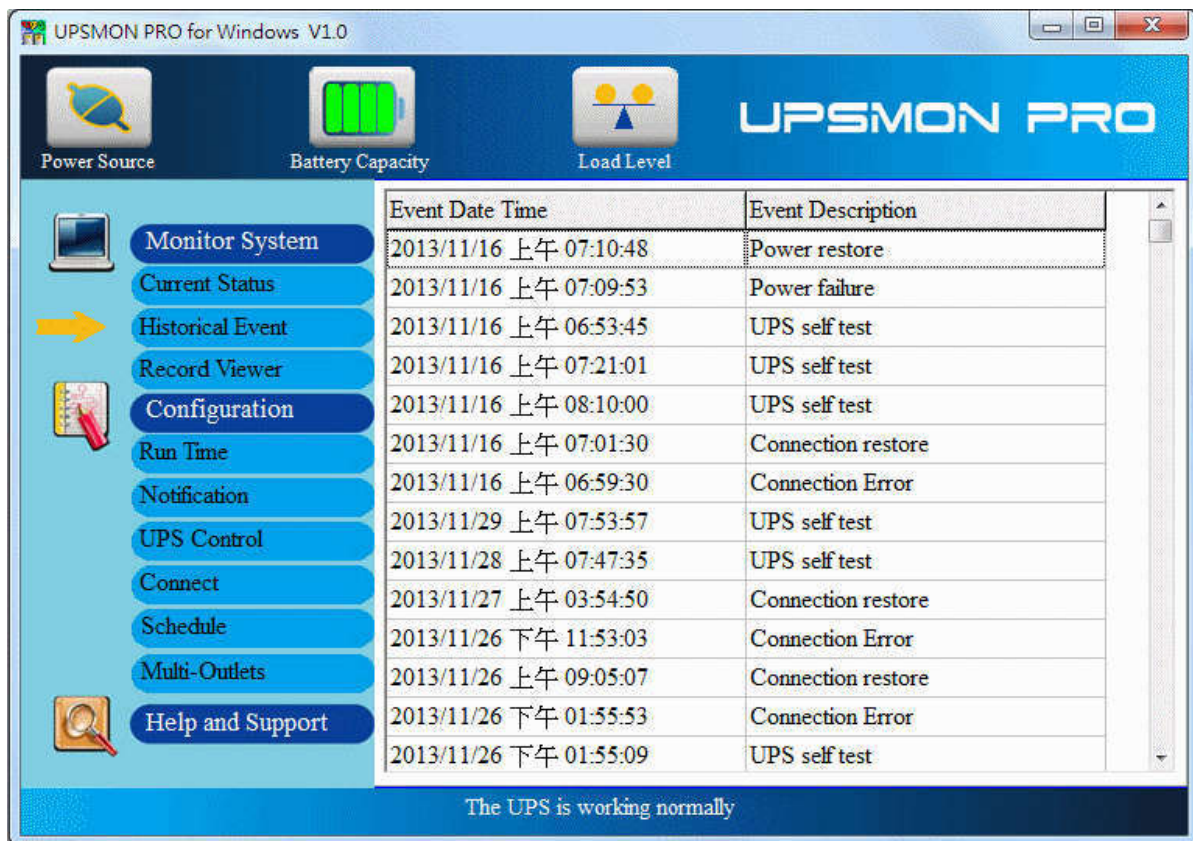

7. **(e)** "Execute Command File" : when the **(1)** seconds runs out, it will start to act your designate command
7.1 "Time to Execute Command File(sec)" : your command have such more seconds to run. And then UPSMON commit OS shutdown

Checking Event List

It displays all UPS events which have taken place

- Button : Historical Event

Checking Data Graph

1. Button : Record View

2. It records and actively shows UPS information : I/P Voltage, I/P Frequency, O/P Voltage, and Battery

3. As well you can check up the historical records by the calendar **(a)**
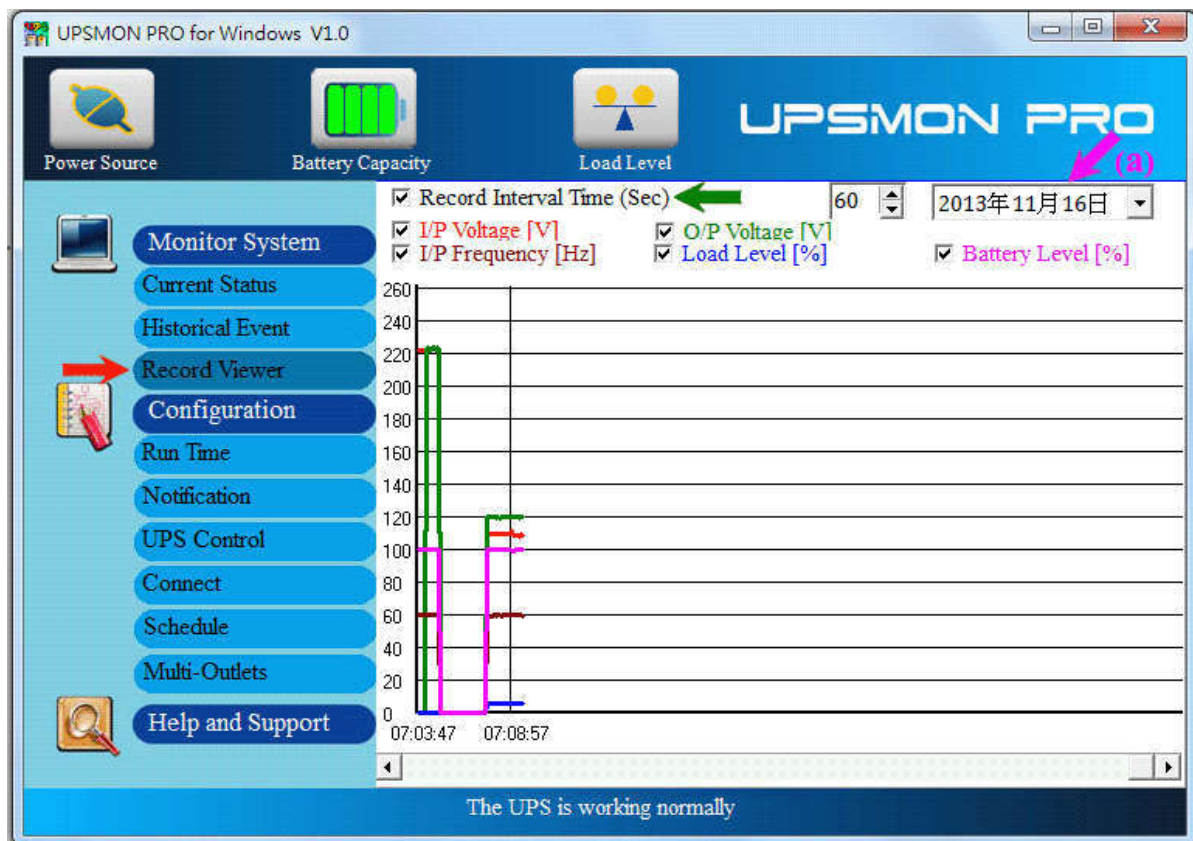
Configure E-mail notification feature

It supplies an active E-Mail notification

1. Button : Notification
2. Enable this function
3. Enter your SMTP Mail server's information (ex : SMTP Server, User name, Port, Authentication, Sender's mail, Receiver's mail)
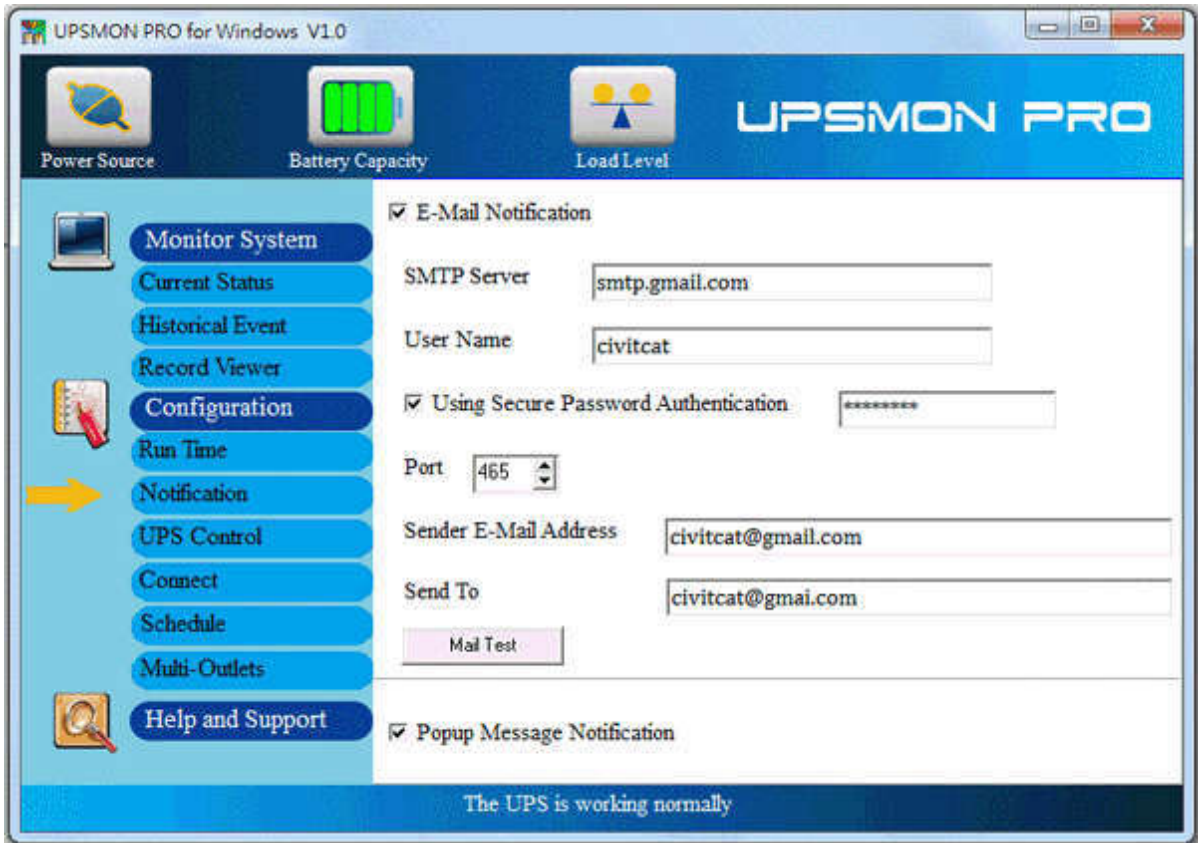
4. With Mail Test button, it can check your mail configuration and connection

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NOTE : This feature requires your e-mail account support SMTP Server
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UPS Control

Battery Test / Green Mode / Silence / Outlet Control

1. Battery Test : It is important to perform UPS self tests to assure that the UPS and batteries are working properly to protect your PC and connected peripheral devices

- 10 Seconds Test : the UPS output will change to exhaust the battery power for a brief period
- Test For Specified Time Period (Min) : exhaust the battery capacity for this period of time

- Test Until Battery Low : exhaust the battery capacity to battery low condition
- Cancel Test : Stop battery testing

2. Green Mode

- Green Mode ON : Once the blackout occurs and load is low, the UPS automatically turn its off
- Green Mode OFF : UPS will sustain the power to its limit

3. Silence

- Click the button : Enable Power Failure UPS Sound Control
- Sound ON : It beeps when power failure occurs
- Sound OFF : It keeps silence even power failure occurs
- Sound OFF : UPS have a specific time span to stop beeping
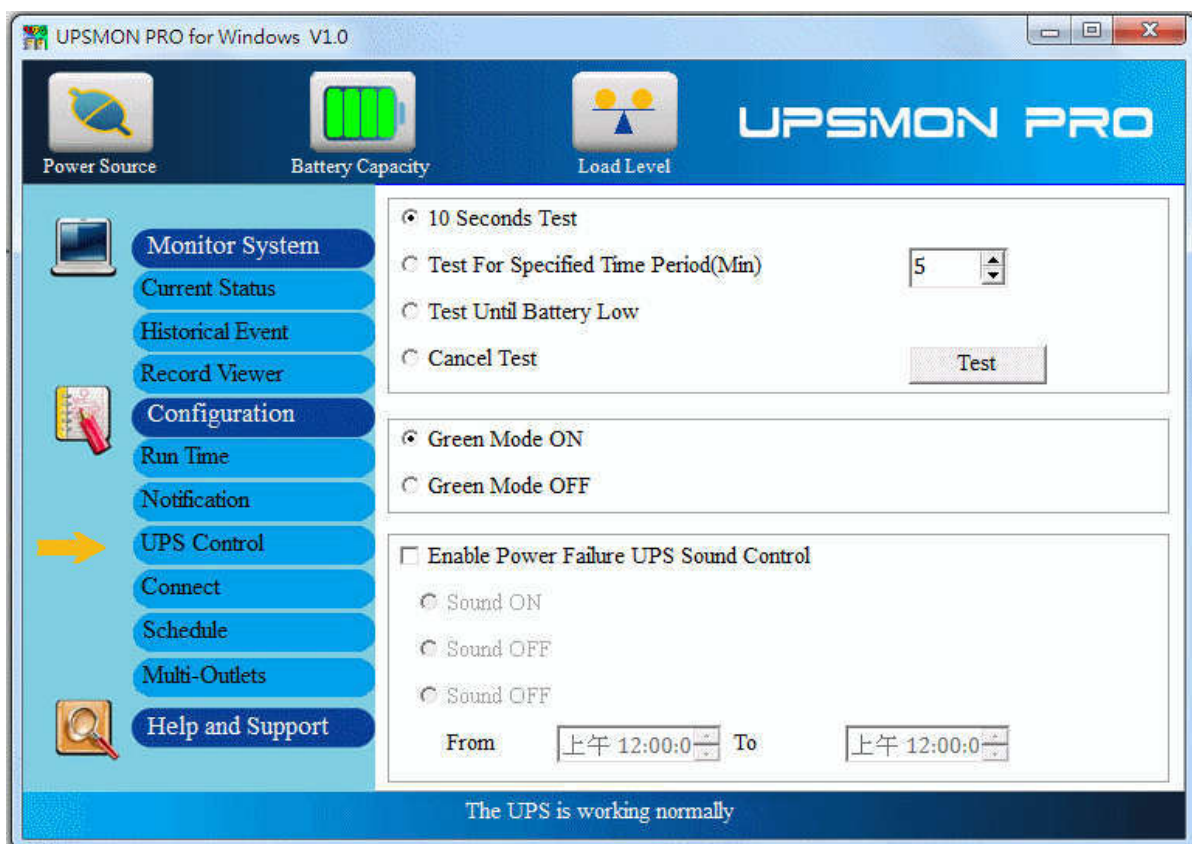
Multi Outlets Control

1. Button : Multi - Outlets
2. Turn ON/OFF the outlets power directly
3. Set up the UPS-Outlet shutdown sequence for blackout condition
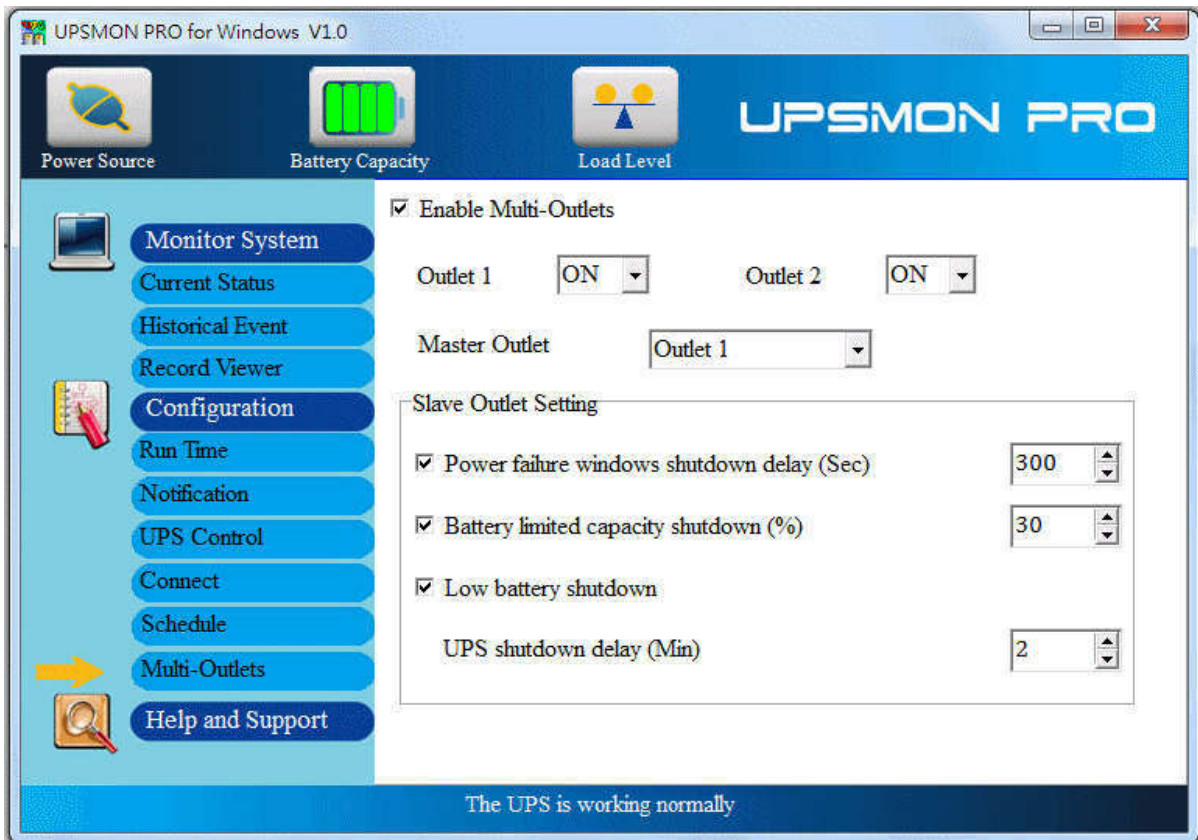
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NOTE: This feature requires the specific UPS to support
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Multi OS Connect

The UPSMON-PRO can play the role as Master or Slave

1. UPSMON-PRO Master

- The PC who physically connects to UPS via RS232/USB plays the role as Master
- Master can share the UPS status to the other Slaves
- Ex : 10.192.136.231 (Master's PC IP address)
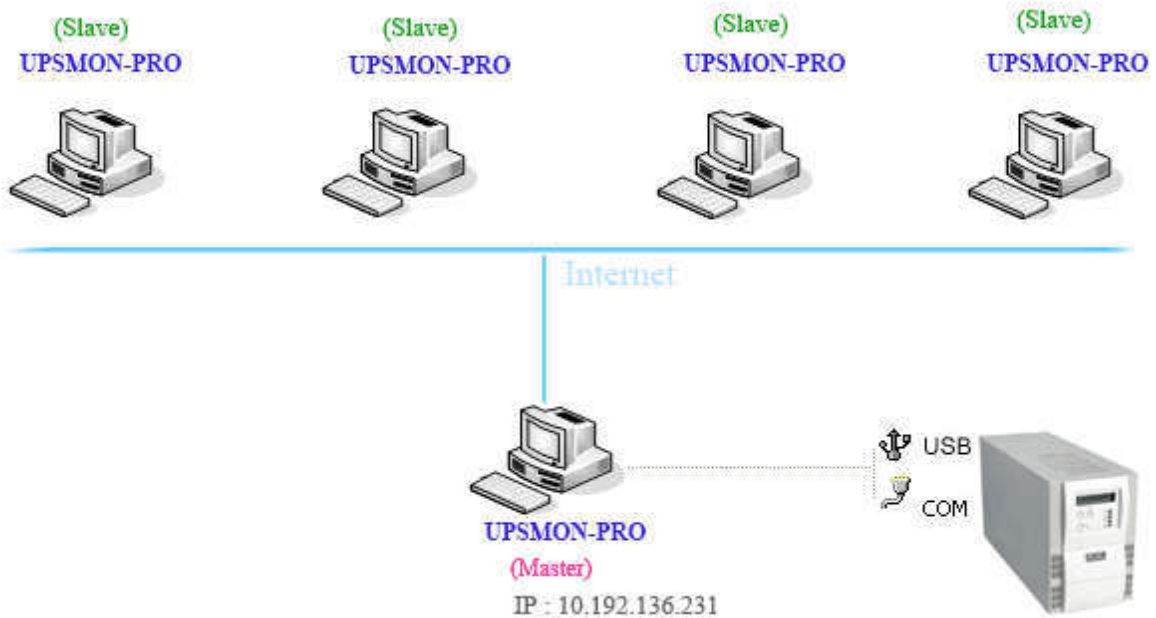
2. UPSMON-PRO **Slave**

- By ways of the Internet / Intranet and UPSMON-PRO Master
- All the other PC get the connection from UPSMON-PRO Master
- And the UPSMON-PRO Slaves can do any behavior like Master (Ex : Shutdown Slave-PC)

- Choose UPSMON-PRO with Master IP address

And then you would get the status of UPS
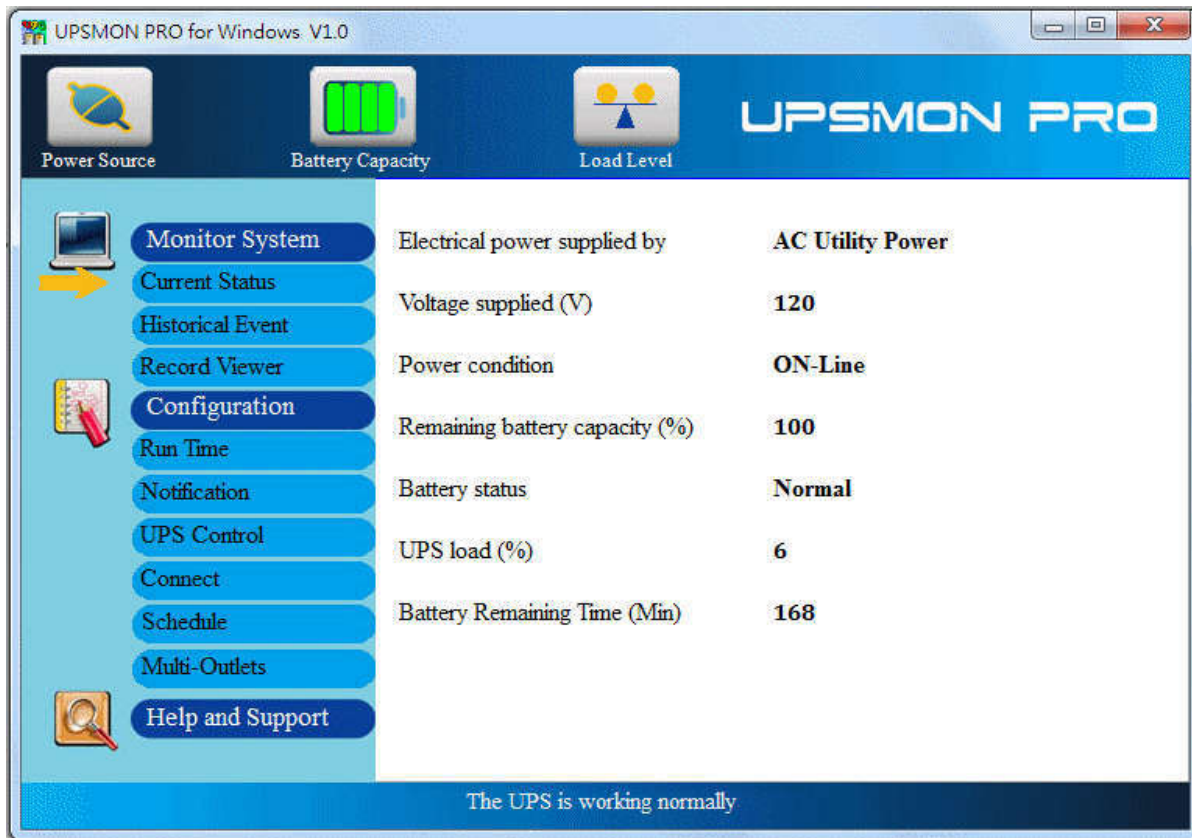
3. UPSMON-PRO-for-Linux **Slave**

- By ways of the Internet / Intranet and UPSMON-PRO Master
- All the other PC get the connection from UPSMON-PRO Master

- Execute the UPSMON-PRO-for-Linux application : **./upsmon**
- Choose UPSMON-PRO with Master IP address
- UPSMON : Start Monitor ==> It means the connection is successful

- You can check the UPS status with X-Windows by executing display application : **./display**
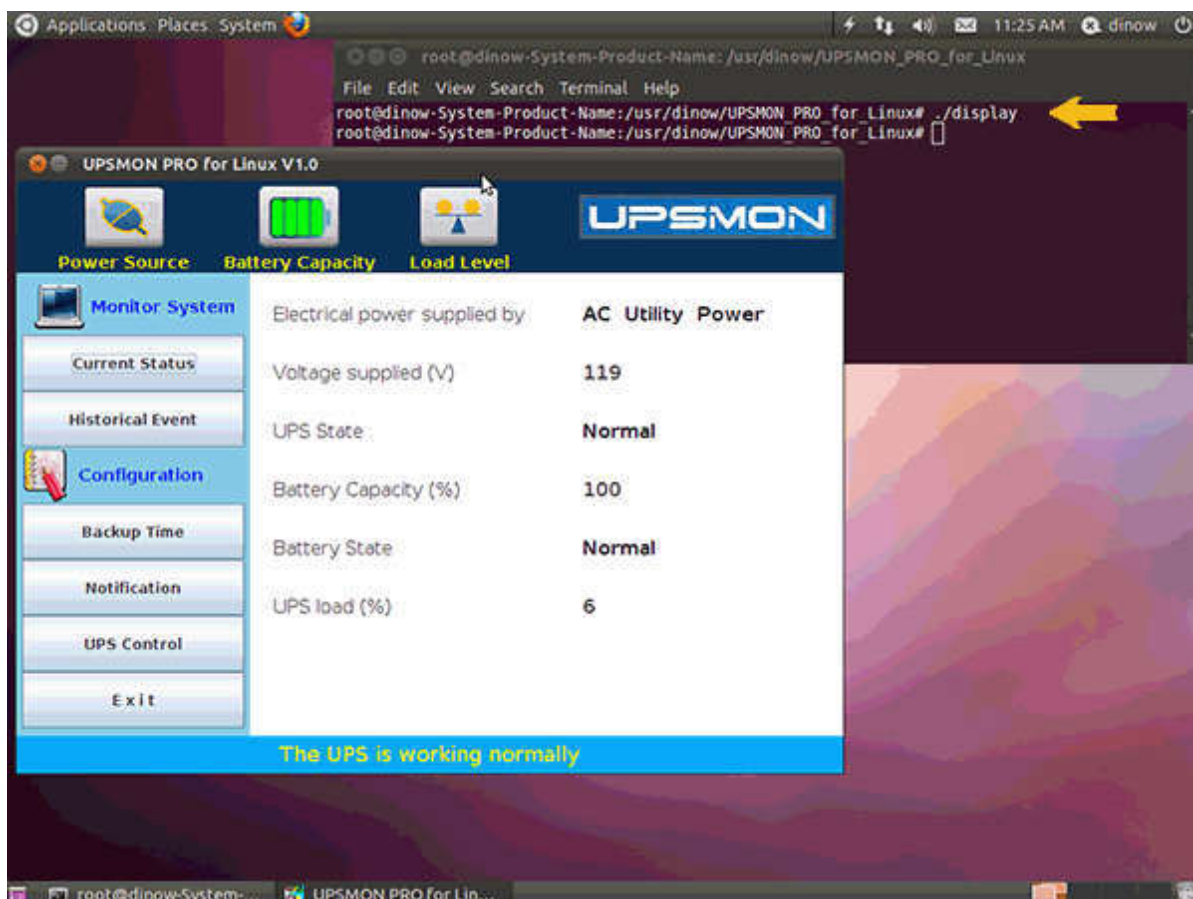
NOTE : Mutually network connection is necessary for this function
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UPS Schedule

It helps you to have an automatic UPS OFF / ON / Battery self test
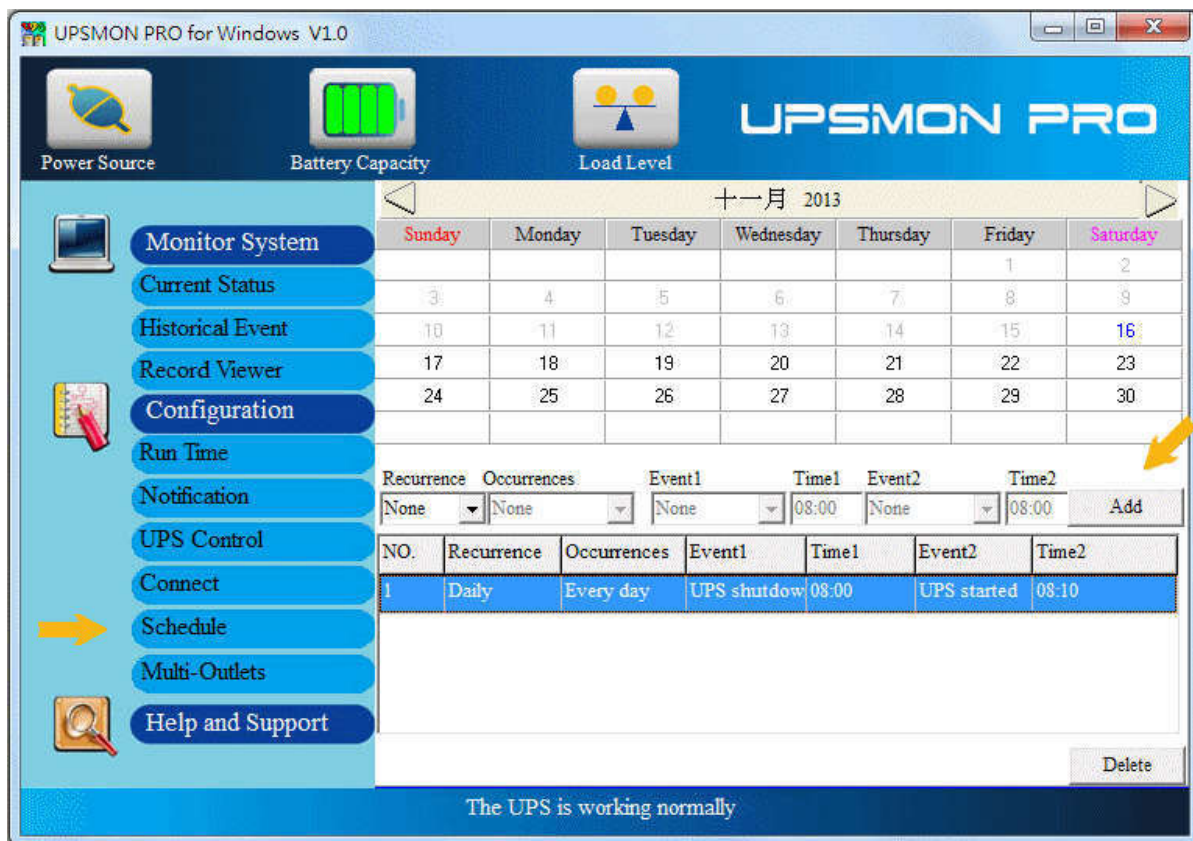
1. Button : Schedule
2. Recurrence & Occurrences : Once / Daily / Weekly / Monthly
3. Event : UPS shutdown / UPS start / Battery Test
4. If you set up the UPS shutdown, all the other UPSMON-Slaves will execute OS shutdown earlier **30** seconds than UPSMON-Master
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   NOTE : The time of UPS shutdown must be earlier than UPS start
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5. You can check the last UPS schedule for the current status
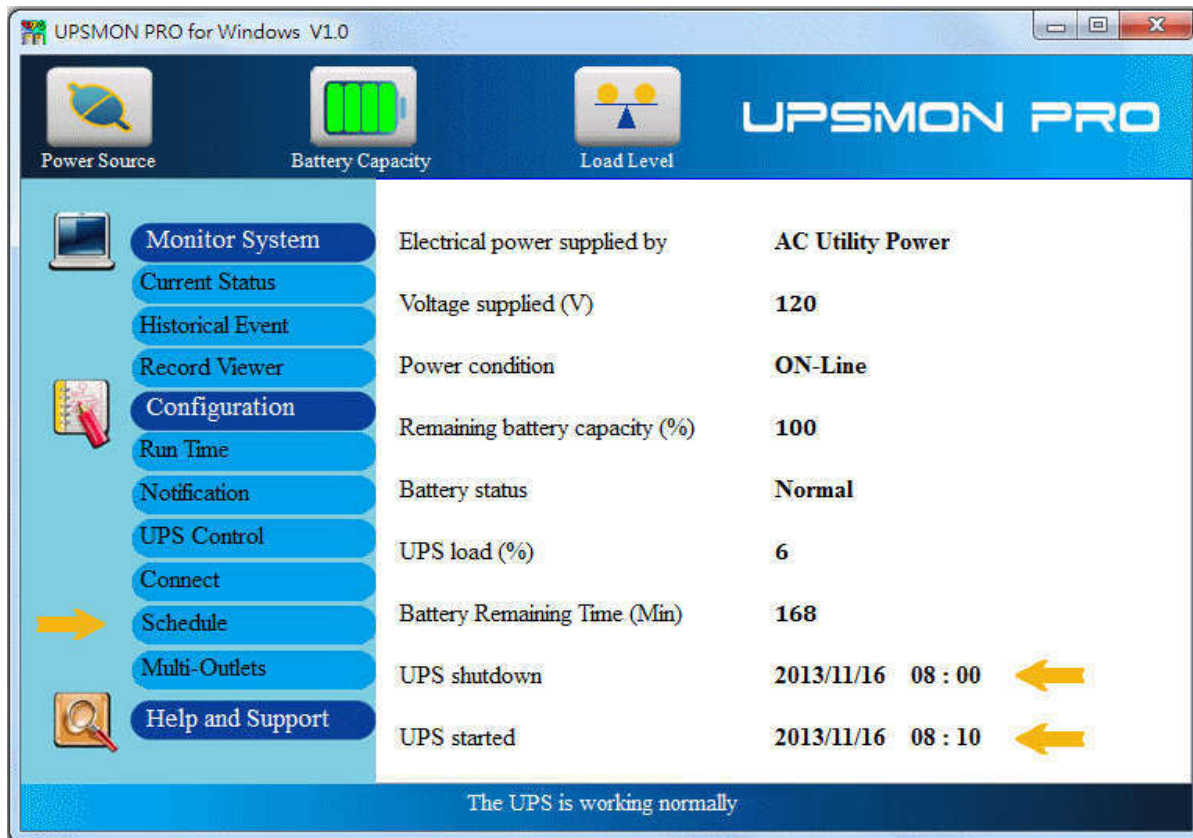
<EX> UPS down time : 2013 / 11 / 16 08:00 ---- UPS start time : 2013 / 11 / 16 08 : 10

1. 2013/11/16 -- 07 : 59 : 30 ==> Pop up 30 seconds count down message
   2013/11/16 -- 07 : 59 : 30 ==> All the other UPSMON-PRO Slaves start to shutdown OS

2. 2013/11/16 -- 08 : 00 : 00 ==> UPSMON-PRO Master start to shutdown OS

3. After "(f) UPS shutdown Delay" minutes ==> UPS stop supplying power

4. 2013/11/16 -- 08 : 10 : 00 ==> UPS start to supply the power

UPS Web Portal

Remotely monitoring the UPS via browser :

1. Button : Connect

2. (a) Enable Web Server UPSMON Function

3. IP Address : Make sure this Windows has a IP address (ex : 10.192.136.231)

4. (b) Port : 8000 default

5. (c) User Name : UPSMON default

6. (d) Password : UPSMON default

   NOTE: This feature requires your Windows have a connectable IP address
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Example : Google Chrome
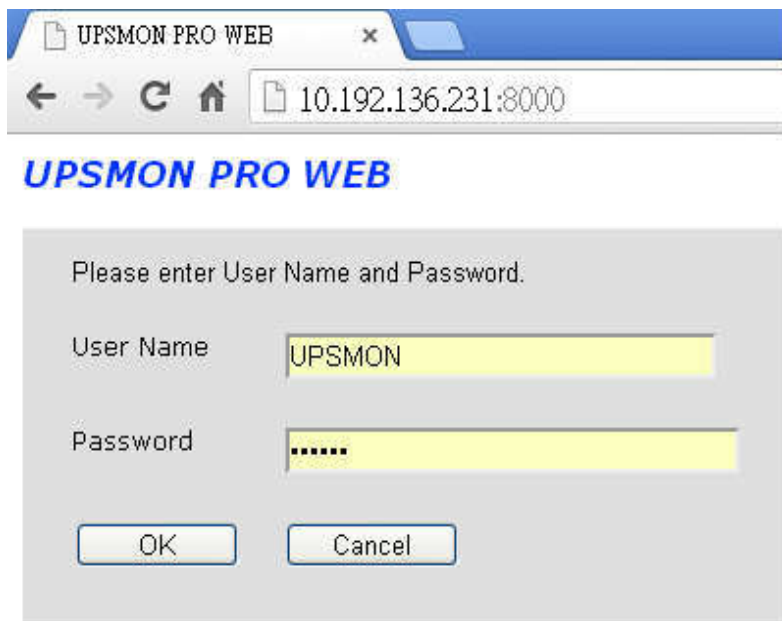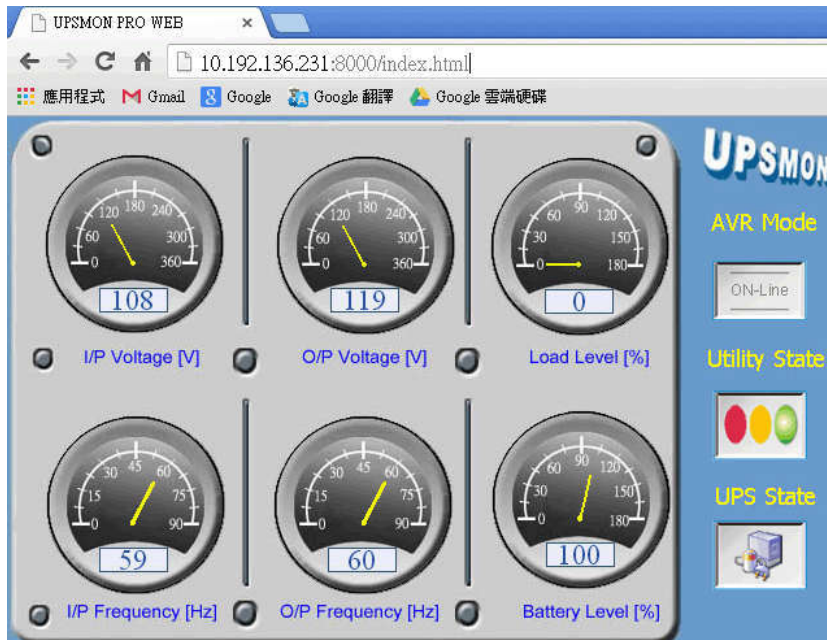
Setting PC BIOS to enable Windows start-up

Your PC BIOS needs to be set up to a Power On state to support automatically PC start-up. Basically, you need to enter the PC BIOS Setup screen and then select the Power On setting to be the default. :

1. Restart your PC
2. When the PC brand logo screen appears, press the correct key on your keyboard to open to the BIOS Setup window. For general PCs, press the **delete** key
3. Use your arrow keys on the keyboard to select the correct power option
4. Select the correct setting to enable PC power always on. For general PCs, use your arrow keys to **enable** "Restore on AC Power Loss"
5. Save your changes

NOTE: Each PC varies in how to enter and make changes to the BIOS settings
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UPSMON PRO Linux --- User Manual

AA. UPSMON PRO Install
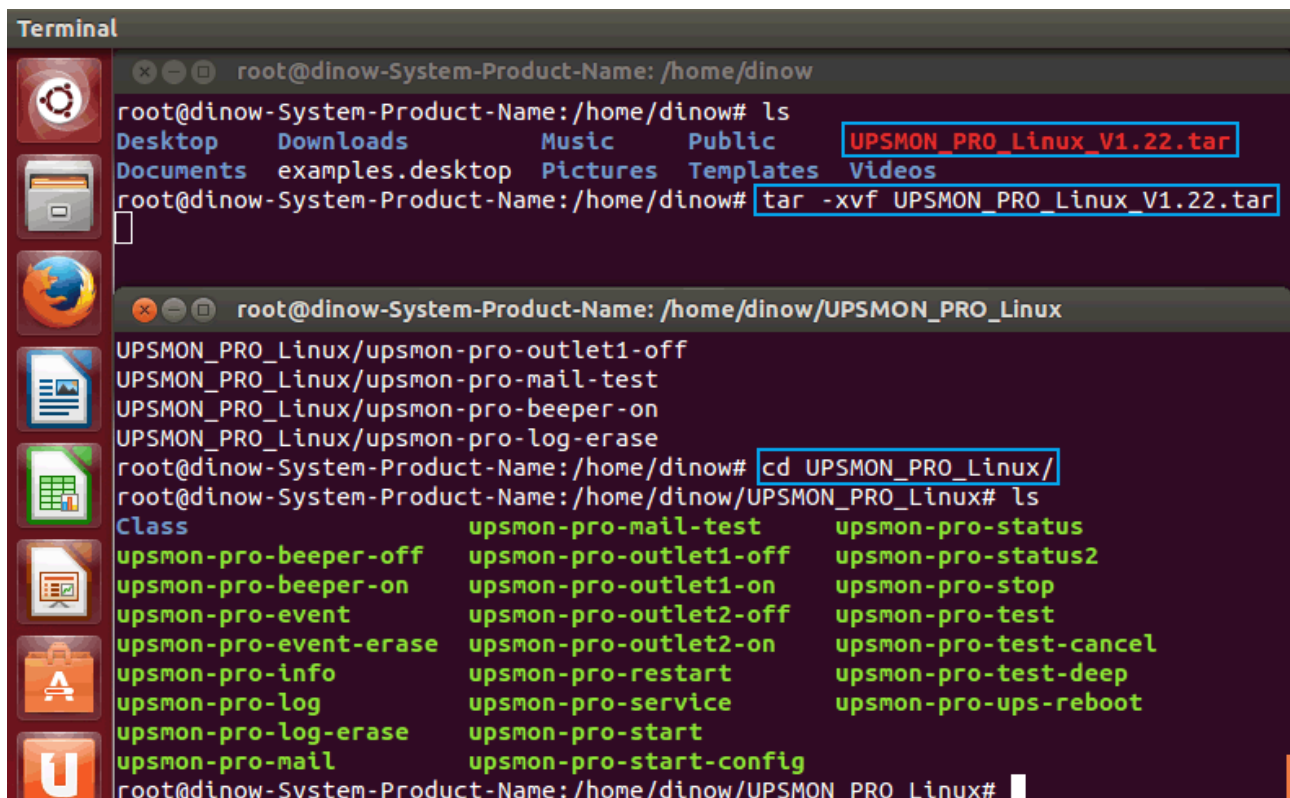
A.1. Command : cp   UPSMON_PRO_Linux.tar   /home/user
A.2. Command : **tar -xvf   UPSMON_PRO_Linux.tar**
A.3. Command : cd   UPSMON_PRO_Linux

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

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

Diagram : UPSMON PRO Install (Ubuntu)

BB. UPSMON PRO Start

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

==> It will ask you the basic information and then <u>auto start</u> ups monitoring service
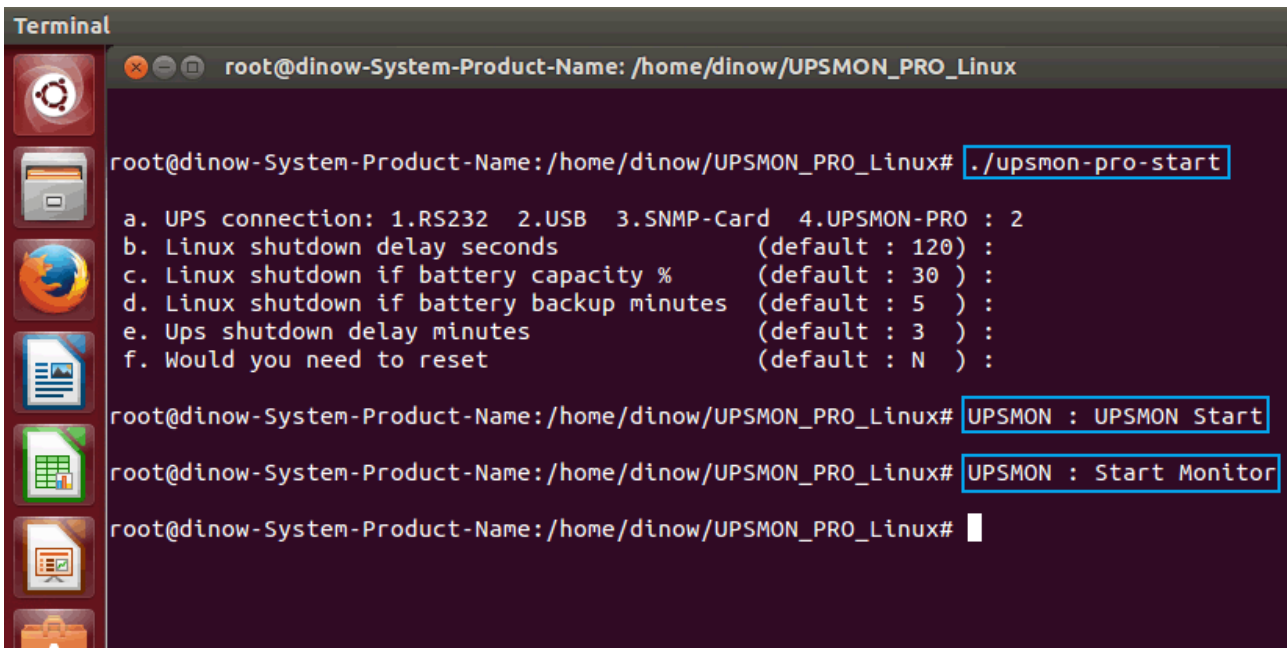
- **a. UPS Connection :** 1.RS232   2.USB 3.SNMP-Card 4.UPSMON-PRO

- **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

Diagram : USB Connection

Diagram : RS232 Connection (SuSe)

Diagram : SNMPCard 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
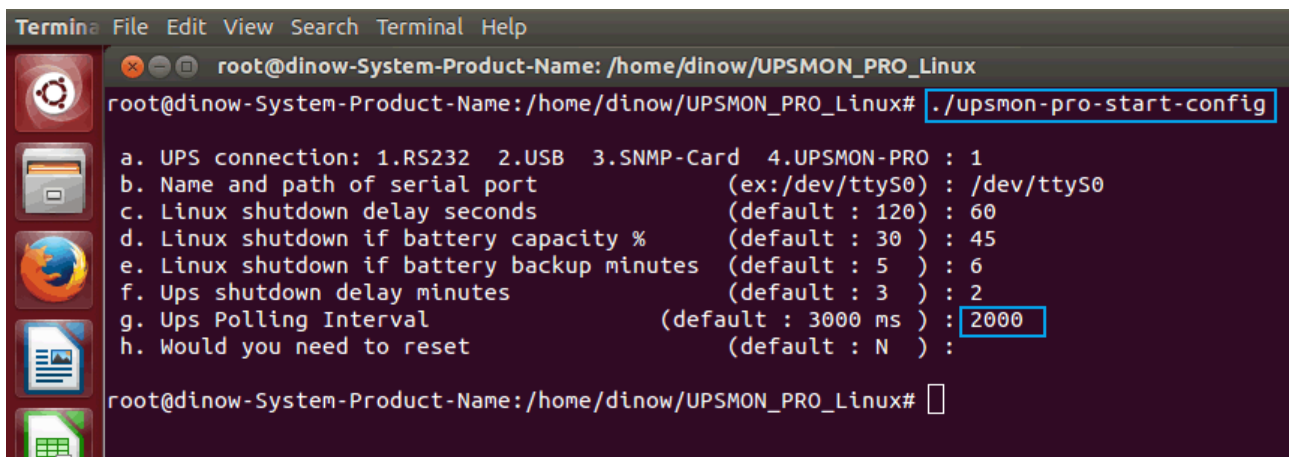(Add this within start daemon)

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)


```
Termina  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

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** : Ratting Input Voltage
- **Rating Output Volt** : Ratting 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

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
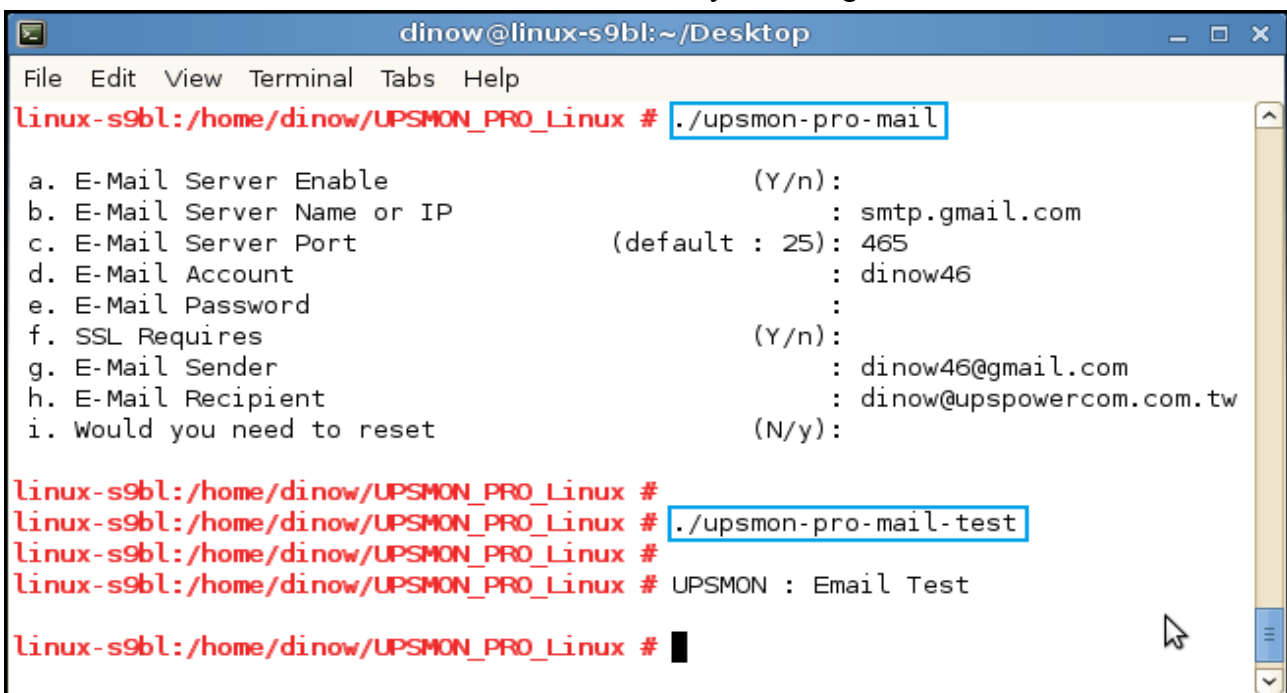
DD. UPSMON PRO Config

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
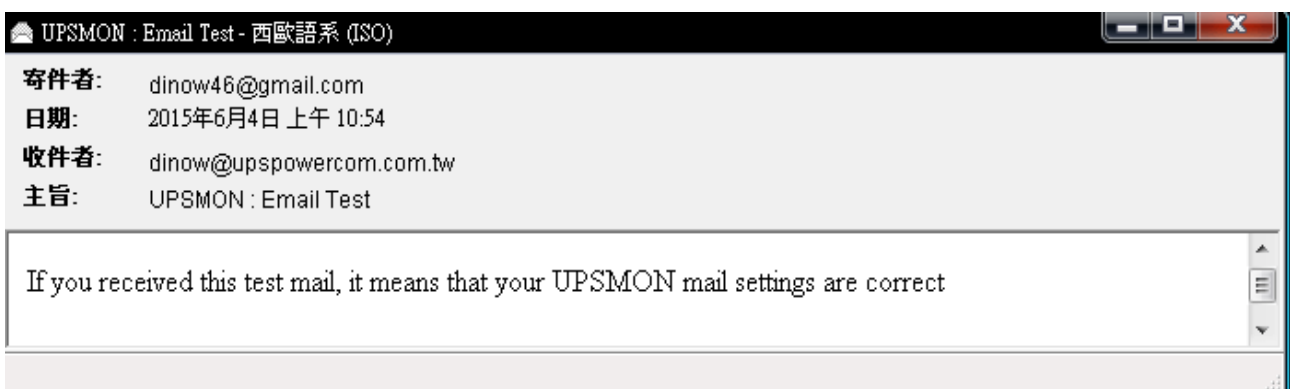
EE. UPSMON PRO Set
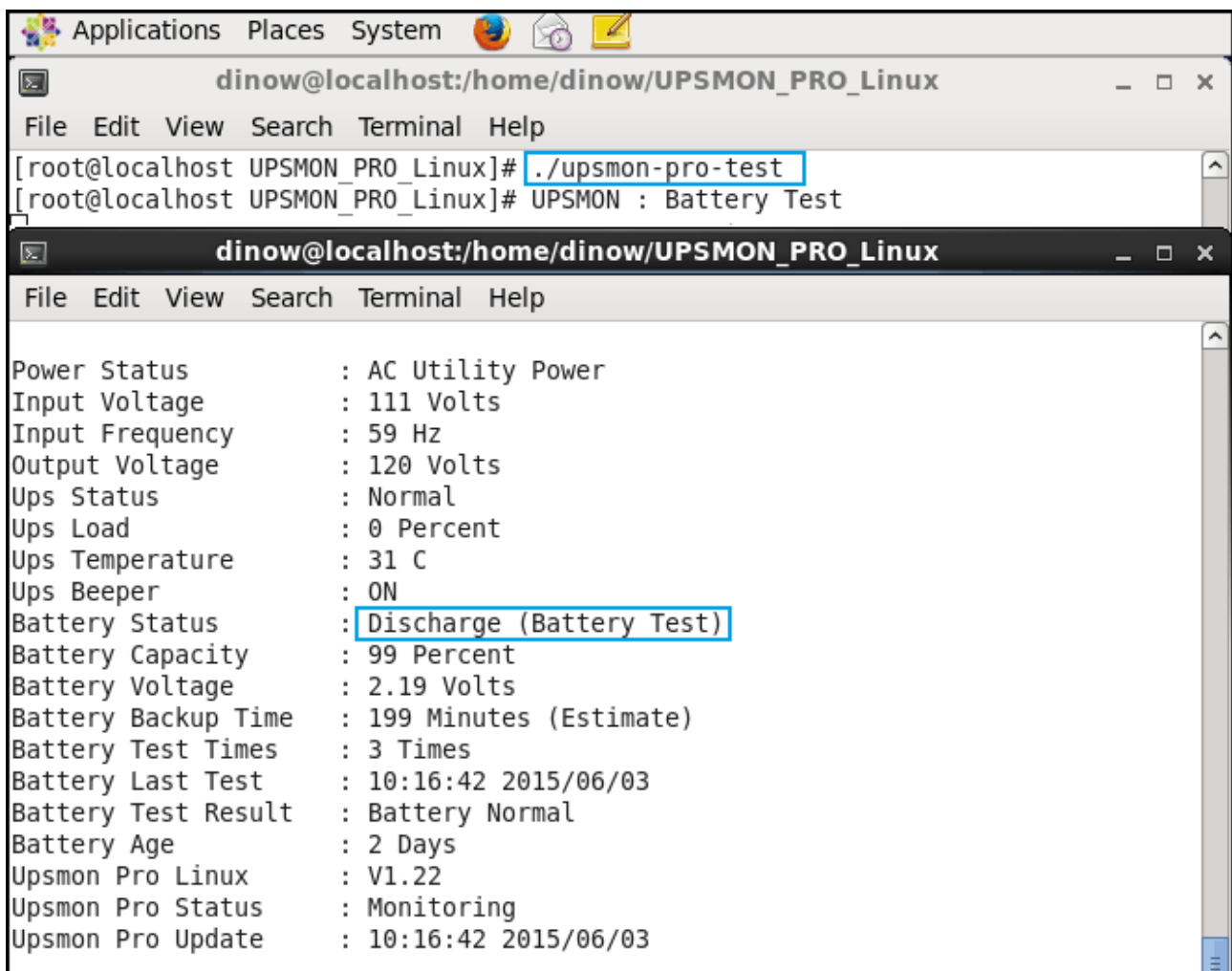
E.1 Command **: upsmon-pro-test**

==> 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

```
Applications  Places  System

dinow@localhost:/home/dinow/UPSMON_PRO_Linux           _ □ ×
File  Edit  View  Search  Terminal  Help
[root@localhost UPSMON_PRO_Linux]# ./upsmon-pro-test
[root@localhost UPSMON_PRO_Linux]# UPSMON : Battery Test

dinow@localhost:/home/dinow/UPSMON_PRO_Linux           _ □ ×
File  Edit  View  Search  Terminal  Help

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   (defaut : 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)
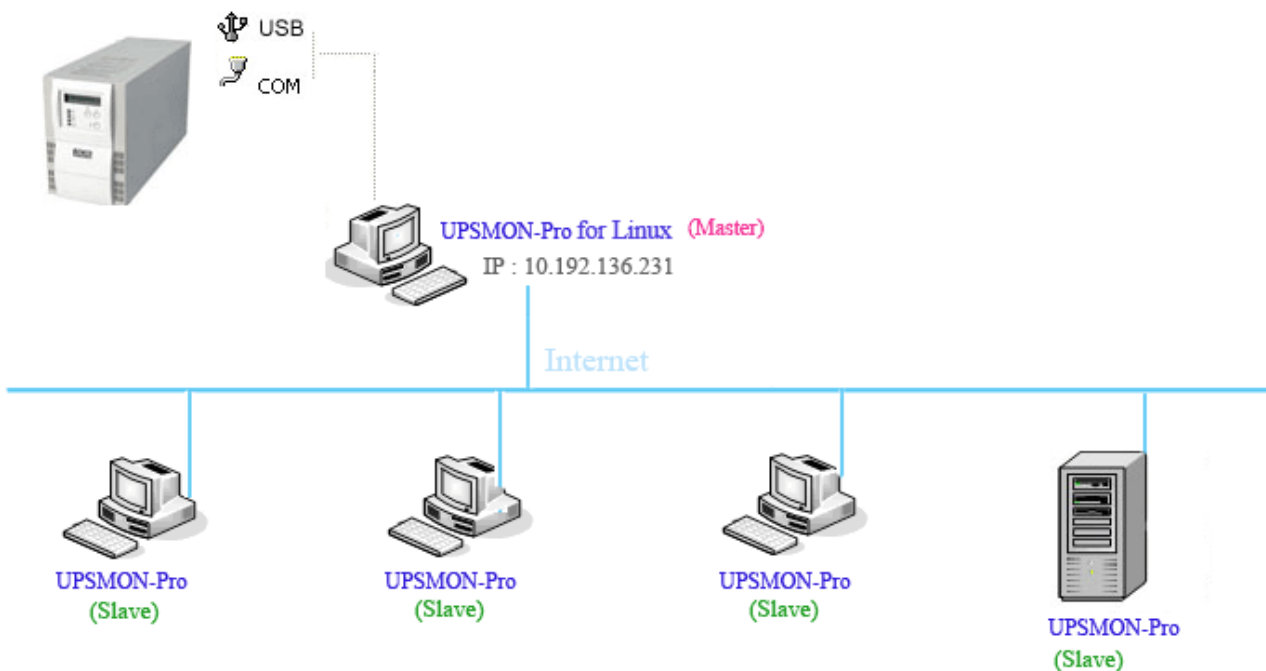
F.2 **UPSMON PRO Linux Slave**

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

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 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.2 Linux Display Fail :
Command : sudo   apt-get install   default-jre
Command : cd   UPSMON_PRO_Linux / EXT
Command : java   Display