

UPSMON PRO V1.29

UPS Monitoring Software

User's Manual

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AA. UPSMON PRO Install

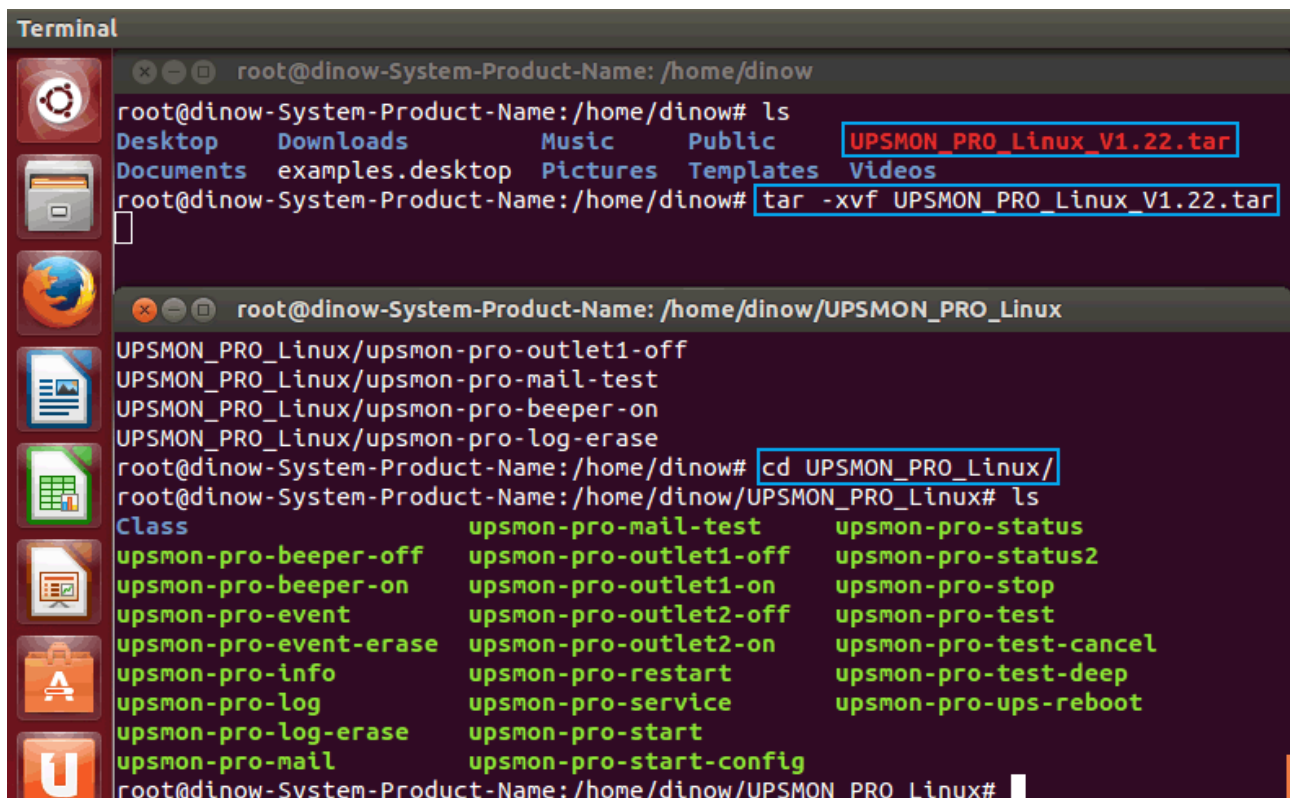
A.1. Command : `cp UPSMON_PRO_Linux.tar /home/user`

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_V1.22.tar
Documents    examples.desktop  Pictures     Templates     Videos
root@dinow-System-Product-Name:/home/dinow# tar -xvf UPSMON_PRO_Linux_V1.22.tar
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

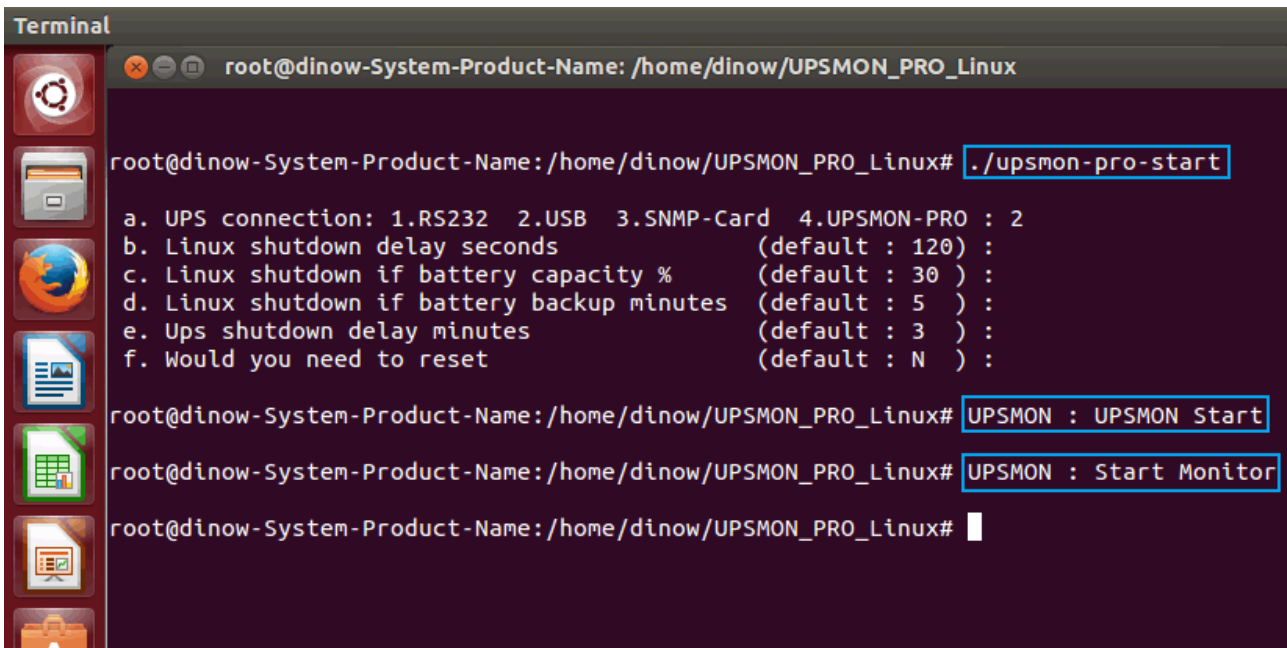
- **a. UPS Connection** : 1.RS232 2.USB 3.SNMP-Card 4.UPSMON-PRO
- **b. Linux shutdown delay seconds** : When power failure occurs, Linux will act shutdown after this count down seconds
- **c. Linux shutdown if battery capacity** : Linux act shutdown at once if battery descend to this level
- **d. Linux 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 : SNMPCard Connection (CentOS)

B.2 After you get the description “UPSMON:Start Monitor”, please command immediately with “**upsmon-pro-status**” to make sure the connection and ups condition is all right

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](#))

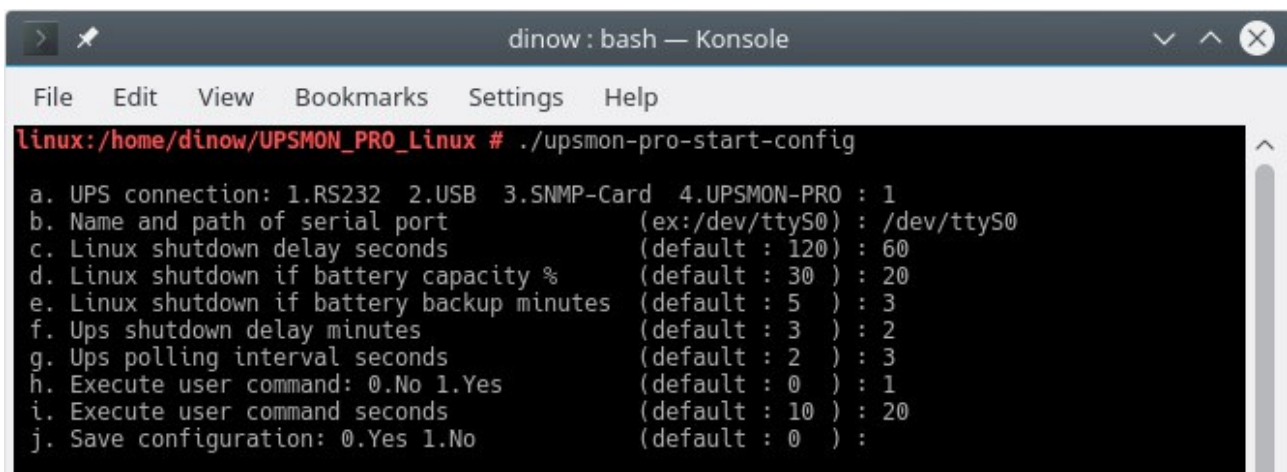
B.4 Command : **upsmon-pro-restart**

==> 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 (second)



```
dinow : bash — Konsole
File Edit View Bookmarks Settings Help
linux:/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 ) : 20
e. Linux shutdown if battery backup minutes (default : 5 ) : 3
f. Ups shutdown delay minutes (default : 3 ) : 2
g. Ups polling interval seconds (default : 2 ) : 3
h. Execute user command: 0.No 1.Yes (default : 0 ) : 1
i. Execute user command seconds (default : 10 ) : 20
j. Save configuration: 0.Yes 1.No (default : 0 ) :
```

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

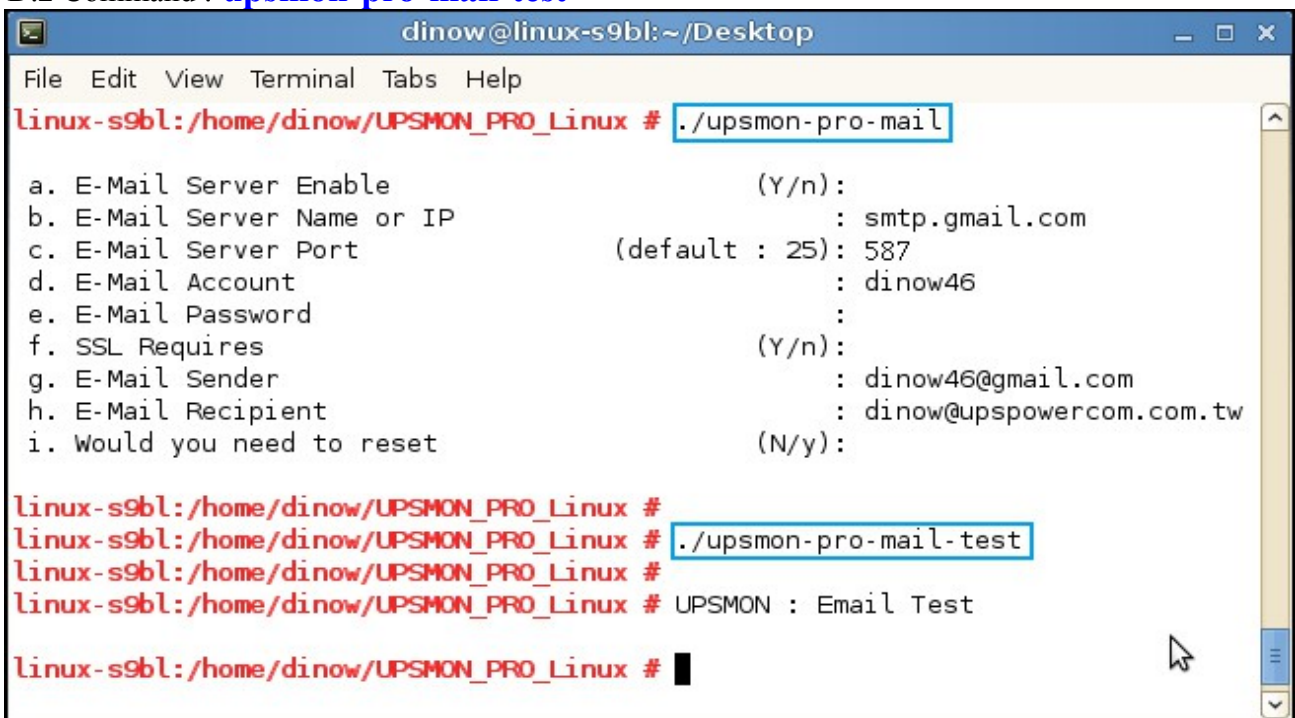
DD. UPSMON PRO Config

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**



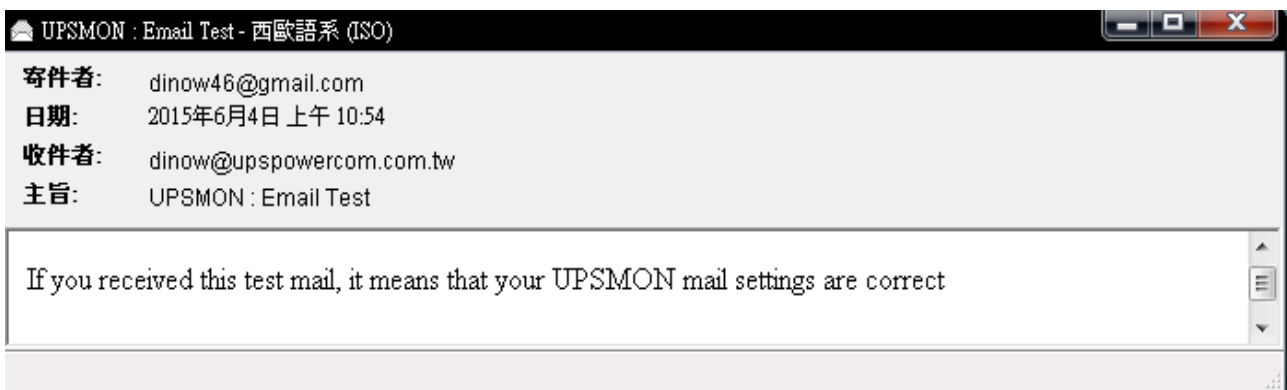
```
dinow@linux-s9bl:~/Desktop
File Edit View Terminal Tabs Help
linux-s9bl:/home/dinow/UPSMON_PRO_Linux # ./upsmon-pro-mail

a. E-Mail Server Enable (Y/n):
b. E-Mail Server Name or IP : smtp.gmail.com
c. E-Mail Server Port (default : 25): 587
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 # █
```

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



```
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**

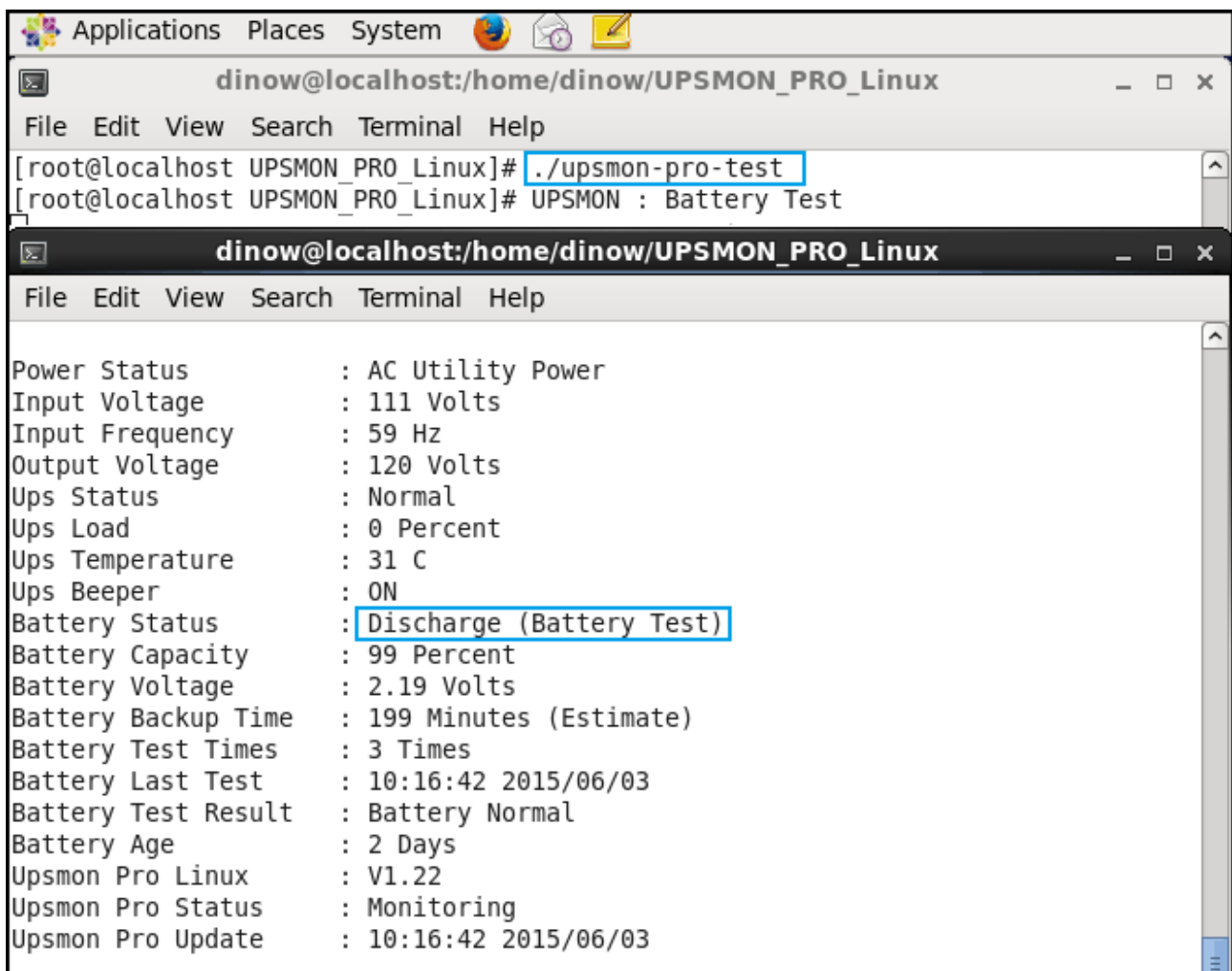
==> To check the battery health, ups will supply the power shortly from its battery

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 second terminal window shows the detailed output of the command, listing various UPS parameters such as Power Status, Input Voltage, Output Voltage, and Battery Status. The 'Battery Status' is highlighted as 'Discharge (Battery Test)'.

```
[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 (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

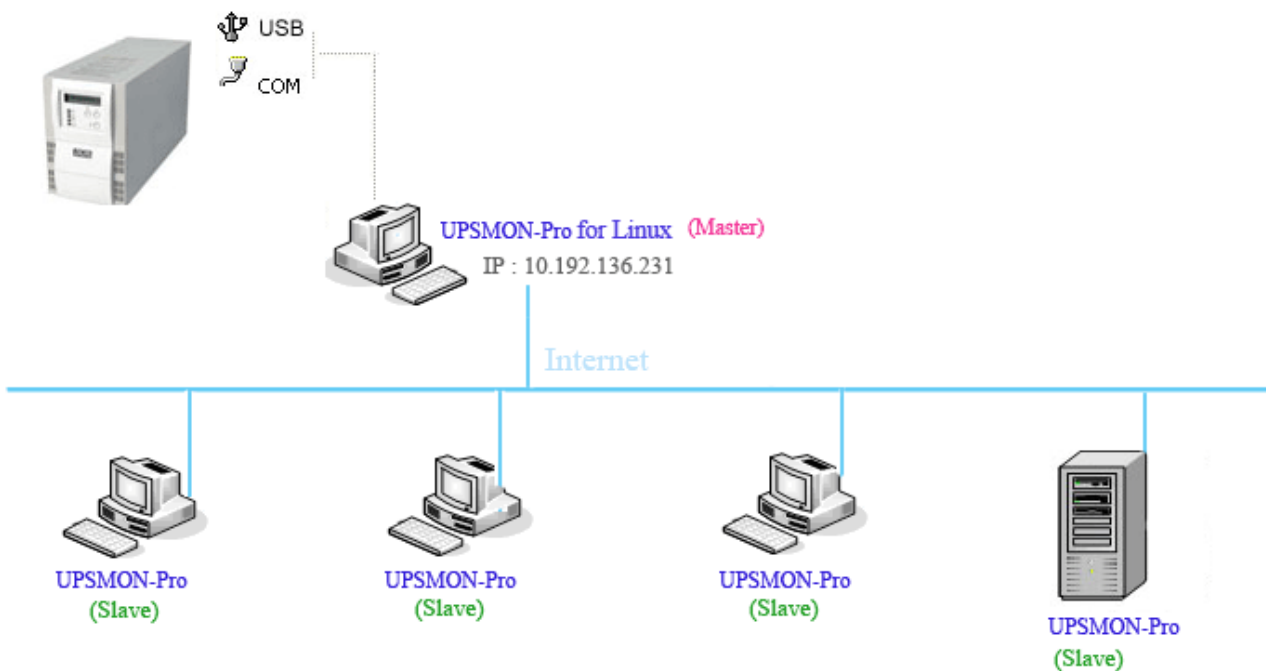
==> ups outlets control is specific for certain ups

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

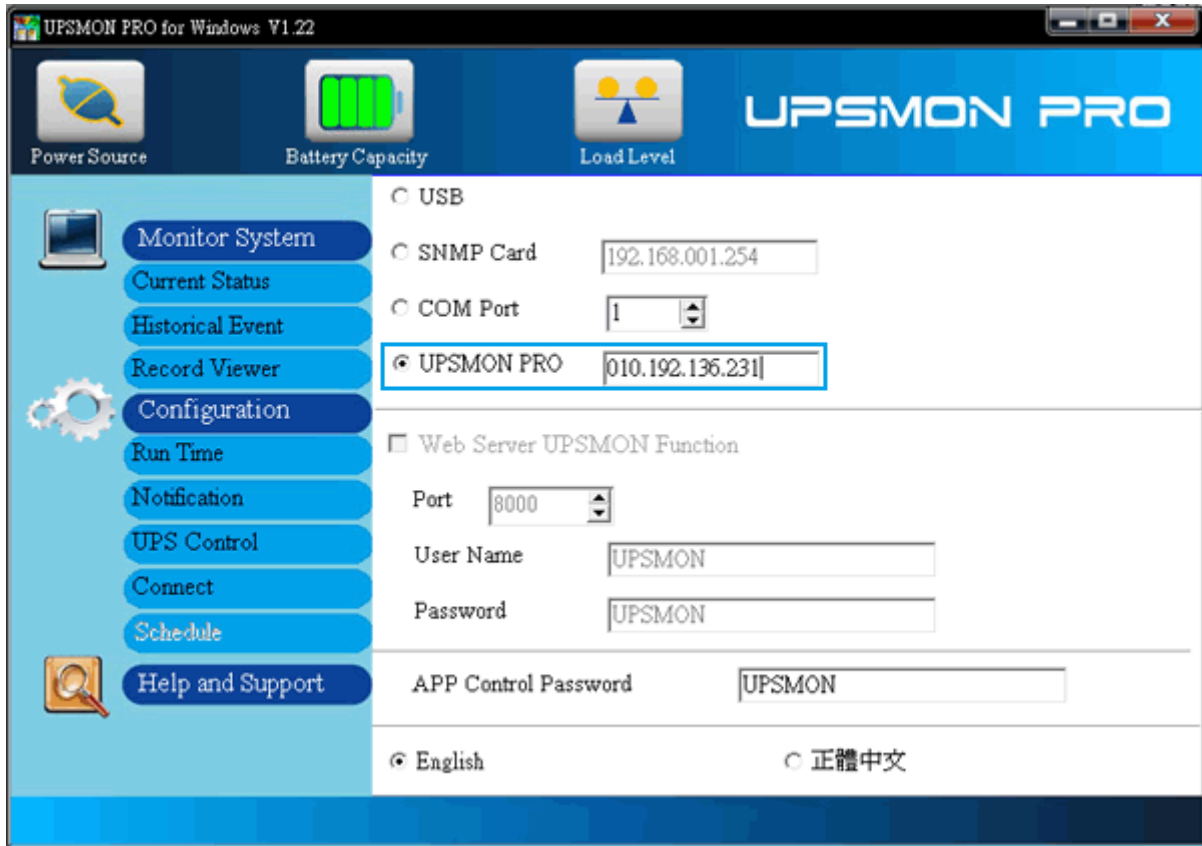
- UPSMON PRO Slave : The Linux who connect to UPSMON PRO Master via net
- UPSMON PRO Slave : Execute upsmmon-pro-start with 4 upsmmon-pro parameter

```
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

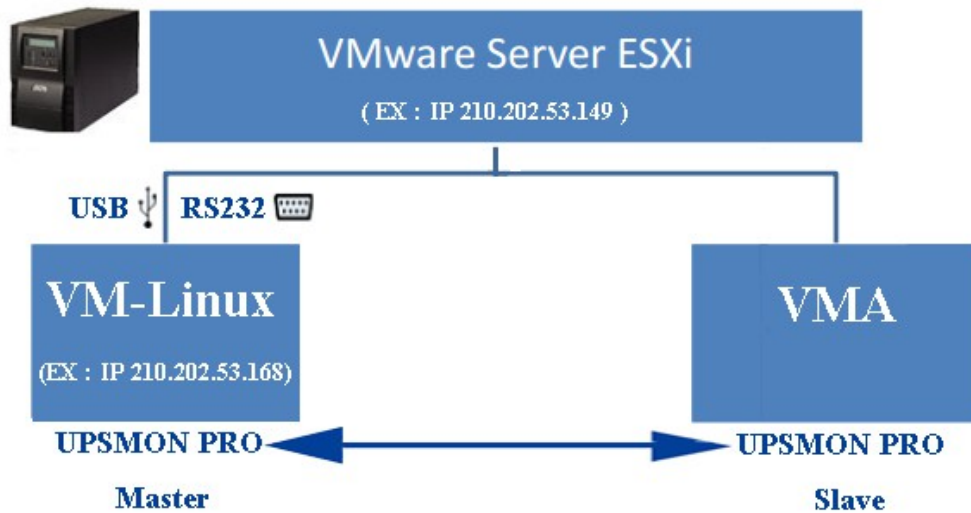


GG. UPSMON PRO Auto Start

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. VMWare Support

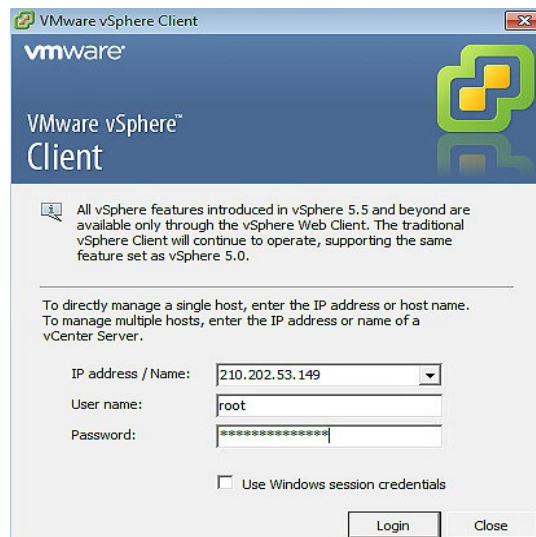


H.1 Get ups monitoring on vm-linux

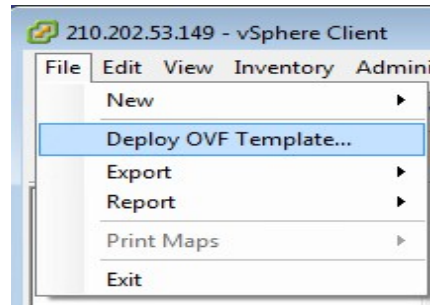
1. UPSMON PRO installed on vm-linux (Refer [AA](#))
2. UPSMON PRO get ups monitoring via **usb-port** or **com-port**
3. UPSMON PRO now play the role as **master**

H.2 VMA Install ([vSphere Management Assistant](#))

1. VMWare web site ==> <https://www.vmware.com/support/developer/vima/>
2. Download the **VMA**



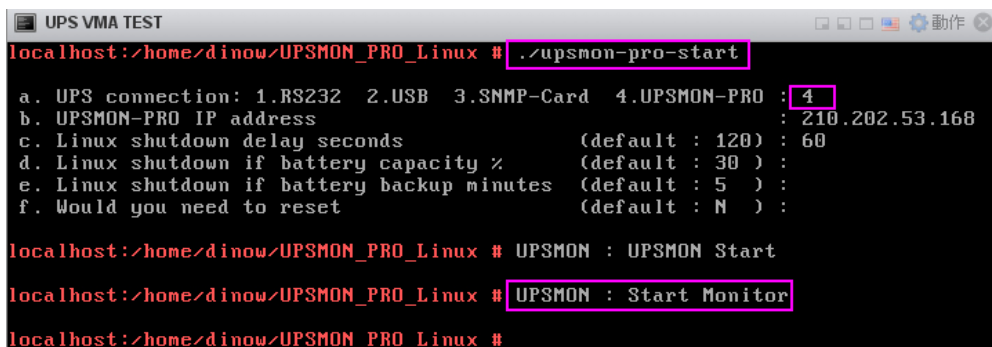
3. Start the **VMware vSphere Client**
4. Select “File” > “Deploy OVF Template”. Click the browse button and select the OVF document.



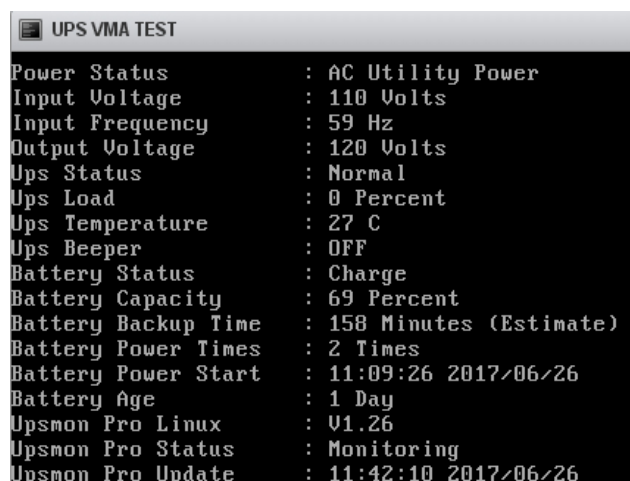
5. Execute VMA and the default user name is **vi-admin**. Set the password before first login

H.3 UPSMON PRO Install and start monitoring on VMA

1. Command : **cp UPSMON_PRO_Linux.tar /home/user**
2. Command : **tar -xvf UPSMON_PRO_Linux.tar**
3. Command : **cd UPSMON_PRO_Linux**
4. Command : **./upsmon-pro-start**
5. UPSMON-PRO : **4**
6. UPSMON-PRO-Master IP Address
7. Count down seconds



8. Command : **./upsmon-pro-status**



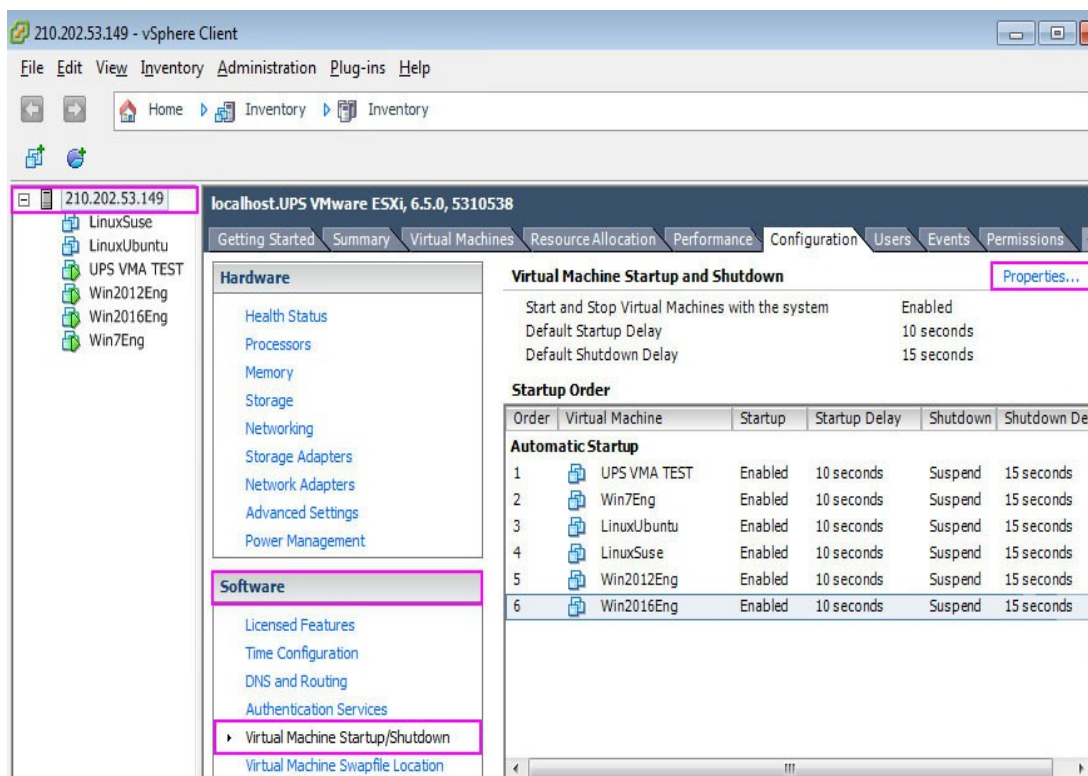
H.4 UPSMON PRO VMWare shutdown configuration

1. Command : **upsmon-pro-vmware**
2. Filled in your Vmware Esxi **IP / root (administrator) / password**

```
localhost:/home/dinow/UPSMON_PRO_Linux # ./upsmon-pro-vmware
a. VMWare Server Shutdown          (Y/n):
b. VMWare Server IP                 : 210.202.53.149
d. VMWare Root Account              (default : root):
e. VMWare Root Password             :
i. Would you need to reset          (N/y):
```

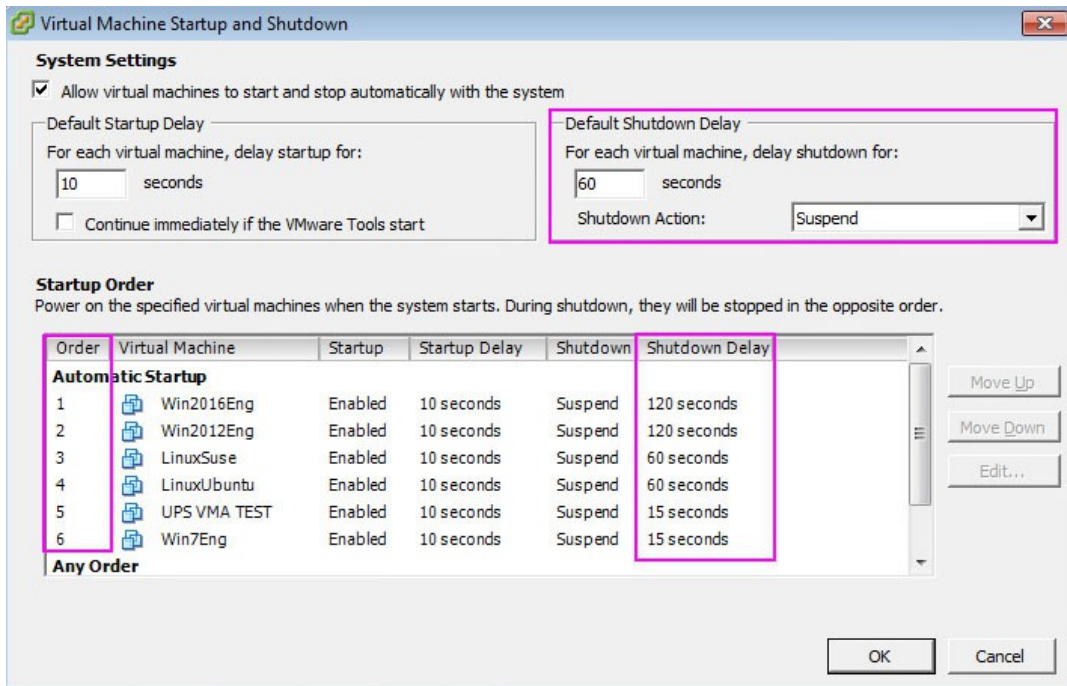
H.5 Configure startup/shutdown **automatically** with VMware ESXi

1. Vmware host >> Software >> Virtual Machine Startup / Shutdown >> Properties



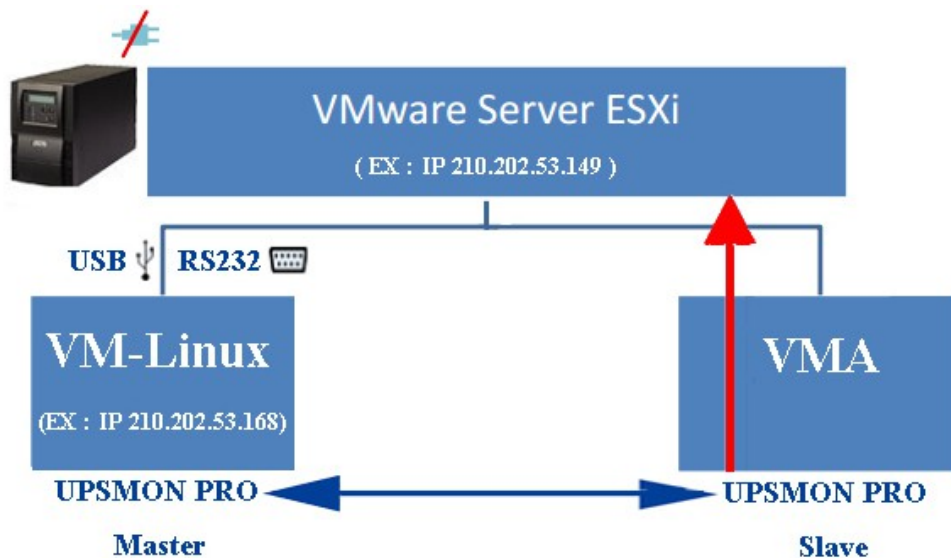
2. This windows is allowed you to setup :

shutdown type / shutdown delay / shutdown order / startup order



Ex : In above example : Win7Eng shutdown **first** / Win2016Eng shutdown **last**

H.6 Power failure and the vmware shutdown as sequence



```
localhost:/home/dinow/UPSMON_PRO_Linux # UPSMON : Power Failure
UPSMON : Linux count down 60 seconds

UPSMON : Power Failure and Linux is going to shutdown

UPSMON : Linux count down 60 seconds

UPSMON : Linux count down 30 seconds

UPSMON : Linux count down 10 seconds

UPSMON : Execute VMWare Shutdown
```

210.202.53.149 - vSphere Client

File Edit View Inventory Administration Plug-ins Help

Name	Target	Status	Details	Initiated by	Requested Start Time	Start Time
Suspend virtual machi...	Win2016Eng	22%		root	6/16/2017 9:38:30 PM	6/16/2017 9:38:30 PM
Suspend virtual machi...	Win2012Eng	62%		root	6/16/2017 9:38:15 PM	6/16/2017 9:38:15 PM
Suspend virtual machi...	LinuxSuse	45%		root	6/16/2017 9:38:00 PM	6/16/2017 9:38:00 PM
Suspend virtual machi...	LinuxUbuntu	Completed		root	6/16/2017 9:37:46 PM	6/16/2017 9:37:46 PM
Suspend virtual machi...	UPS VMA TEST	Completed		root	6/16/2017 9:37:31 PM	6/16/2017 9:37:31 PM
Suspend virtual machi...	Win7Eng	Completed		root	6/16/2017 9:37:16 PM	6/16/2017 9:37:16 PM
Auto powerOff	210.202.53.149	Completed		root	6/16/2017 9:37:16 PM	6/16/2017 9:37:16 PM
Initiate host shutdown	210.202.53.149	Completed		root	6/16/2017 9:37:16 PM	6/16/2017 9:37:16 PM

H.7 Configuration to auto start up VMwareESXi

Command : / path / UPSMON_PRO_Linux / **upsmon-pro-service**

==> To have a daemon start every time vma reboot, please add above script into beginning procedures. Typically this script locate in “/etc/rc.d/rc3.d” and “/etc/rc.d/rc5.d”. However the name and path vary by the distribution

```
localhost:/etc/rc.d/rc3.d # cat S14upsmon
/home/dinow/UPSMON_PRO_Linux/upsmon-pro-service
localhost:/etc/rc.d/rc3.d # cd ../rc5.d
localhost:/etc/rc.d/rc5.d # cat S14upsmon
/home/dinow/UPSMON_PRO_Linux/upsmon-pro-service
localhost:/etc/rc.d/rc5.d # _
```

II. Q and A

H.1 Supported Operating Systems

- CentOS
- Debian
- Fedora
- RedHat
- Suse
- OpenSuse
- Ubuntu
- Mint

H.2 Linux usb connect Fail :

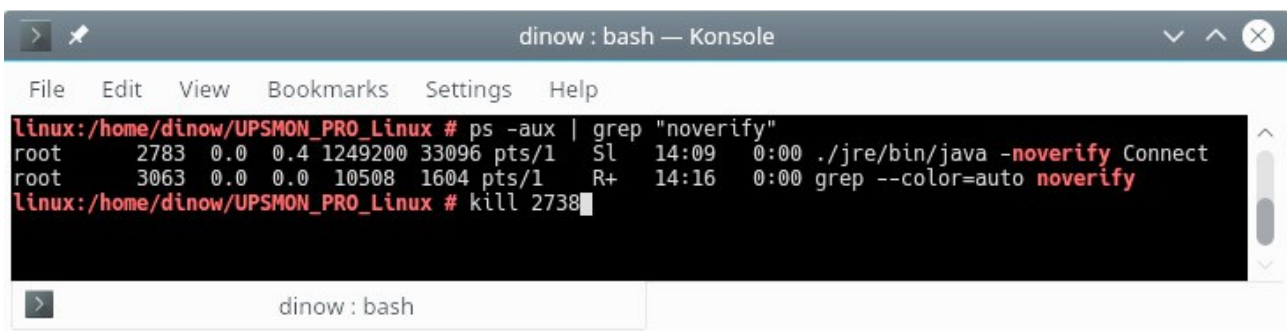
Command : `sudo apt-get install lib32bz2-1.0` (Debian)
Command : `sudo apt-get install lib32z1` (Ubuntu / Mint)
Command : `yum install glibc.i686` (Fedora / CentOS)

H.3 Linux Display Fail :

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

H.4 Stop the service with command

Command : `ps -aux | grep "noverify"`
Command : PID



```
dinow : bash — Konsole
File Edit View Bookmarks Settings Help
linux:/home/dinow/UPSMON_PRO_Linux # ps -aux | grep "noverify"
root      2783  0.0  0.4 1249200 33096 pts/1    Sl   14:09   0:00 ./jre/bin/java -noverify Connect
root      3063  0.0  0.0  10508  1604 pts/1    R+   14:16   0:00 grep --color=auto noverify
linux:/home/dinow/UPSMON_PRO_Linux # kill 2738
```

H.5 Former ups and its usb connection :

Command : `cd Class/EXT`
Command : `vi UPS_USB_2400.txt ./UPS_USB_1200.txt`