

User Manual

BTH UPS SNMP MONITOR v 11.05

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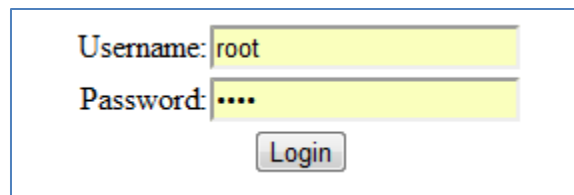
1 Install

Please see "README.TXT".

2 Users

There are three kinds of users, *viewer*, *admin* and *root*. Only one build-in *root* is allowed, they could control everything. *Root* is the special one from *admin* group as *root* has all the power of *admin* and other important authority. *Anyone* will be mentioned and it means any kind, any one of the users.

3 Login



A login form with two input fields: "Username:" containing the text "root" and "Password:" containing four dots. Below the fields is a "Login" button.

Anyone should login to manage or view system.

The default password for *root* is *root*. Three more uses: *admin1*, *admin2* and *user1*. Their default passwords are the same as the usernames.

Please change it after logged in.

4 Display Overview

There are three areas: LOGO, MENU and Main Display.



A screenshot of the "BLEKINGE TEKNISKA SKOLA UPS MONITOR" web interface. The interface has a header with the school name and "LOGO". On the left is a "MENU" sidebar with links: Home, Devices/Status, OIDs/Thresholds, Attached Servers, Users, View Errors, Change Password, Change Email, About, and Logout. The main content area is titled "UPSNMP MONITOR" and "Version 11.06". It displays system information: Server Time (2011-05-29 23:33:57), System Devices (Owned/Total: 2/2), and System Status (Total: All devices are OK). Below this is a "Main Display" section showing "Monitor Status: STOPPED" in red. It includes buttons for "Run it", "Run test", and "Stop it", with a note "to test only data sample, run test (200 samples)". There is a "Sample Interval (sec): 1" field with an "Ok" button. At the bottom, a red warning message reads "!!!! OBS !!!! INITIALIZE SYSTEM DANGEROUS".

5 Menu

5.1 Home (restricted authority)

UPSNMP MONITOR
Version 11.06

System Summary

Server Time: 2011-05-29 23:40:27
System Devices (Owned/Total): 2/2
System Status (Total): All devices are OK.

Monitor Status: STOPPED

Monitor Control (root)

Run it Run test Stop it
to test only with sample, not test (100 samples)

Sample Interval (sec): Ok

System Recovery (root)

!!! CBS !!! INITIALIZE SYSTEM DANGEROUS

5.1.1 System Summary (restricted authority)

At home, anyone could see *System Summary*. *System Devices* now showing: 2/2 which means there are 2 devices in the system, and this logged-in user could control all of them as this user is *root*. Normally, it would be 1/2 or 3/5 etc. For *viewer*, it should be 0/2 or 0/5.

The *System Status* usually is “All devices are OK.” If there are some problems, it would be:

Server Time: 2011-05-30 00:23:35
System Devices (Owned/Total): 1/2
System Status (Total): **ERROR: 192.168.184.10 (UPS5). Admin: SunnyBingoMe@gmail.com** I've solved problems of this device.
ERROR: 192.168.184.11 (UPS6). Admin: SunnyBoyMe@gmail.com

where anyone could see the *ERROR: device ip (Device Name) Admin's email*. of all devices, but only *admin* who own this device or *root* could click the url to see what happened in *Details of Device* window. The *admin* or *root* also could reset this flag after they solved problems. To make sure the problems will be noticed, the flag should be reset manually.

5.1.2 Monitor Control (root only)

Though *anyone* could see the status of monitor, only *root* could stop or start the background perl monitor. The probe/sample interval will be configured by *root* here, too.

5.1.3 System Recovery (root only)

You could initialize the whole system via this button. Take care to use it because all history and the operations/actions will be gone, while only the demo users, devices, OIDs and attached servers will stay.

5.2 Devices and Status (admin only)

5.2.1 Devices Table

ID	Device IP	Device Name	Snmp Config	Status	Select to Delete
1	192.168.184.10	UPS5	2c : public	ERROR	<input type="checkbox"/>

Total number of device records: 1
All info in monitor system about the deleted devices will be gone.

Select None Delete Selected

Add New Device

Device IP

Device Name (NO Special Character)

SNMP Version

SNMP Community

Admin's Email SunnyBingoMe@gmail.com

No. of Oids 0

No. of Statistic Oids 0

Reset Add

The *admins* and *root* could add or delete devices whose OIDs would be monitored by SNMP here. One device could be seen only by the *admin* who added it or the *root*.

The *Status* could be *ERROR* or *OK*, a user could click to see the details in *Details of Device* window.

5.2.2 Details of Device window


<div>Home</div> <div>Devices/Status</div> <div>OIDs/Thresholds</div> <div>Attached Servers</div> <div>Users</div> <div>View Errors</div> <div>View an OID</div> <div>Change Password</div> <div>Change Email</div> <div>About</div> <div>Logout</div>	Details of Device: 192.168.184.10 (UPS5) <div>View Errors</div>							
	ID	OID	OID Name	Last: 2011-05-28 23:33:28	Status	Statistic	History	Select to Delete
	1	1.3.6.1.2.1.1.3.0	SystemUpTime_10ms	154378280	OK	N	N/A	<input type="checkbox"/>
	2	1.3.6.1.4.1.318.1.1.1.2.1.1.0	BatteryStatus	2	OK	N	N/A	<input type="checkbox"/>
	3	1.3.6.1.4.1.318.1.1.1.4.2.1.0	OutputVoltage	231	OK	Y View/Edit Threshold QuarterHour Day Week Month		<input type="checkbox"/>
	4	1.3.6.1.4.1.318.1.1.1.2.2.3.0	BatteryRemaining_10ms	150000	OK	Y View/Edit Threshold QuarterHour Day Week Month		<input type="checkbox"/>
	83	1.3.6.1.2.1.1.1.0	Description	APC Web-SNMP Management Card (MB-v3.8.6 PF-v3.5.5)	OK	N	N/A	<input type="checkbox"/>
	85	1.3.6.1.4.1.318.1.1.1.5.1.2.1.2.1	AttachedDevice_1	Device 1	OK	N	N/A	<input type="checkbox"/>
	86	1.3.6.1.4.1.318.1.1.1.5.1.2.1.2.2	AttachedDevice_2	Device 2	OK	N	N/A	<input type="checkbox"/>
	87	1.3.6.1.4.1.318.1.1.1.5.1.2.1.2.3	AttachedDevice_3	Device 3	OK	N	N/A	<input type="checkbox"/>
	89	1.3.6.1.4.1.318.1.1.1.2.2.1.0	BatteryRemaining_percent	100	OK	Y View/Edit Threshold QuarterHour Day Week Month		<input type="checkbox"/>
	90	1.3.6.1.4.1.318.1.1.1.2.2.2.0	Temperature_C	21	OK	Y View/Edit Threshold QuarterHour Day Week Month		<input type="checkbox"/>
	93	1.3.6.1.4.1.318.1.1.1.3.2.1.0	InputVoltage	231	OK	Y View/Edit Threshold QuarterHour Day Week Month		<input type="checkbox"/>
	95	1.3.6.1.4.1.318.1.1.1.4.2.3.0	OutputLoad_percent	26	OK	Y View/Edit Threshold QuarterHour Day Week Month		<input type="checkbox"/>
	97	1.3.6.1.4.1.318.1.1.1.1.2.1.0	FirmwareRevision	662.6.1	OK	N	N/A	<input type="checkbox"/>
	99	1.3.6.1.2.1.1.6.0	Location	NPL	OK	N	N/A	<input type="checkbox"/>
	101	1.3.6.1.4.1.318.1.1.1.1.1.1.0	BasicModel	Smart-UPS 2200 RM	OK	N	N/A	<input type="checkbox"/>
	103	1.3.6.1.4.1.318.1.1.1.1.1.2.0	UpIdName	UPS_5	OK	N	N/A	<input type="checkbox"/>
	105	1.3.6.1.4.1.318.1.1.1.5.2.4.0	AlarmCondition	1	OK	N	N/A	<input type="checkbox"/>
	107	1.3.6.1.4.1.318.1.1.1.5.2.5.0	AlarmTimer	0	OK	Y View/Edit Threshold QuarterHour Day Week Month		<input type="checkbox"/>
109	1.3.6.1.2.1.1.5.0	SystemName	UPS5	OK	N	N/A	<input type="checkbox"/>	
Total number of oids records: 19								
If there is oid deleted, all history log in monitor system about this device will be deleted.								
							<div>Select 5.2.2.4 Selected OIDs</div>	

Here, a user could know the details of one device.

5.2.2.1 Current Values and Status

NOTE: If the *Status* of one device is *ERROR*, but the *statuses* of all *OIDs* of the same device are *OK*, it usually means *No response from remote host* when the monitor query this device. A user could click *View Errors* on the top to view the latest 1000 errors of this device.

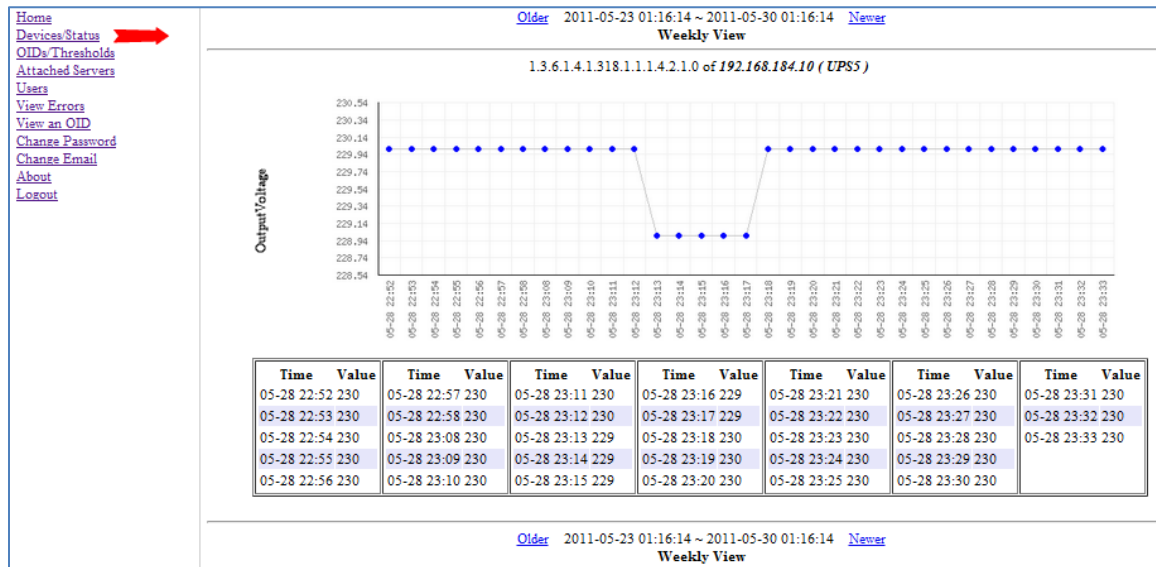
5.2.2.2 Thresholds

Home Devices/Status  OIDs/Thresholds Attached Servers Users View Errors View an OID Change Password Change Email About Logout	<div>Config Thresholds of OID: <i>OutputVoltage</i> for Device: 192.168.184.10 (UPS5)</div> <div> <div>Threshold 1 <input checked="" type="radio"/> Don't Use <input type="radio"/> Use It</div> <div>Threshold 2 <input type="radio"/> Don't Use <input checked="" type="radio"/> Use It</div> <div> If OutputVoltage > <input type="text" value="250"/> then <input checked="" type="radio"/> Email Administrator <input type="radio"/> Shutdown Attached Servers <div>Output Voltage of UPS5 is higher than 250.</div> </div> </div> <div>NOTE: If the threshold of the value (which is about time) smaller than sample interval, we can not handle the threshold correctly.</div> <div>OK</div>
--	---

For a *Statistic OID* (see 5.3), a user could configure the thresholds for it. There are two thresholds for each *OID* at most. The alarm email could be sent or the *Attached Servers* (see 5.4) will be shut down when the battery is low or the voltage is too high etc. The *ERROR FLAG* will be set which the user could see in *Home* window or *Device and Status* window.

NOTE: Only one email will be sent for each device if the user does not reset the *ERROR FLAG* for the specific device.

5.2.2.3 History



A user could view the history of each OID by one of four *View Types*: Quarter-hourly, Daily, Weekly or Monthly. The resolution of Quarter-hourly view is 15 seconds (but not higher than the sample resolution) at most and only the last 1 hour is available. The resolutions of the other three are 1 hour at most. In the last three *View Types*, the user could click the specific time slot on the graph to see details and the data will be stored for 5 months.

5.2.2.4 Delete OIDs

A user could select some OIDs and *Delete Selected OIDs* (To add OIDs, see 5.3.1).

5.3 OIDs and Thresholds (admin only)

Add or Delete Oids for Devices

ID	Device IP	Device Name	Admin Email	No. of Statistic OID / Total	Select to Add Oids
1	192.168.184.10	UPS5	SunnyBingoMe@gmail.com	7 / 19 View/Edit Details/Thresholds	<input type="checkbox"/>
2	192.168.184.11	UPS6	SunnyBoyMe@gmail.com	7 / 19 View/Edit Details/Thresholds	<input type="checkbox"/>

Total number of device records: 2

Please type in new numeric oids here, separate them by newline ("Enter").(Max 50 characters for each oid.)

5.3.1

[Add to Selected](#)

An *admin* could add OIDs here and *root* could configure the *OID Names*.

5.3.1 Add OID(s)

Add or Delete Oids for Devices

ID	Device IP	Device Name	Admin Email	No. of Statistic OID / Total	Select to Add Oids
1	192.168.184.10	UPS5	SunnyBingoMe@gmail.com	7 / 19 View/Edit Details/Thresholds	<input checked="" type="checkbox"/>
2	192.168.184.11	UPS6	SunnyBoyMe@gmail.com	7 / 19 View/Edit Details/Thresholds	<input checked="" type="checkbox"/>

Total number of device records: 2

Please type in new numeric oids here, separate them by newline ("Enter").(Max 50 characters for each oid.)

1.3.6.1.4.1.318.1.1.1.5.1.2.1.2.1
1.3.6.1.4.1.318.1.1.1.2.2.0

Type in numeric OIDs here.

5.3.1

[Add to Selected](#)

Type in the numeric OIDs which would be monitored and *Add to Selected* devices above.

Please config each oid.

Numeric OID	Assign a Name*
1.3.6.1.4.1.318.1.1.1.5.1.2.1.2.1	<input type="text" value="AttactedDevice_1"/>
1.3.6.1.4.1.318.1.1.1.2.2.0	<input type="text" value="Temperature_C(STATISTIC)"/>

*The name will affetc the graphic view, please be careful.
**Statistic means this oid's value is a dynamic number and need a graphic view of history.

Total number of new oids: 2

[Reset](#) [OK](#)

5.3.1

When ask to assign a name to each numeric OID, choose the suitable name.

NOTE: Only the one with a *Statistic OID Name* will have the history graphs and values to view.

5.3.2 OID Names

Root could add/delete/change OID names here, just like what could be done in the *Details of Device* window. As the *OID Names* will affect the whole system, *admin* shall apply to *root* to add/delete/change OID names if needed.

NOTE: 1. When deleting an *OID Name*, all OIDs with the name will be deleted. 2. Every device could not have the same numeric OID or *OID Name* more than once.

5.4 Attached Servers (admin only)

[Home](#)
[Devices/Status](#)
[OIDs/Thresholds](#)
[Attached Servers](#)
[Users](#)
[View Errors](#)
[View an OID](#)
[Change Password](#)
[Change Email](#)
[About](#)
[Logout](#)

Attached Servers

ID	Device IP	Device Name	Admin Email	No. of Servers
1	192.168.184.10	UPS5	SunnyBingoMe@gmail.com	1 View/Add/Delete
2	192.168.184.11	UPS6	SunnyBoyMe@gmail.com	2 View/Add/Delete

Total number of device records: 2


An *admin* could only choose one of the devices owned by the *admin*-self to configure the attached servers to shutdown (should be configured in thresholds, see 5.2.2.2).

Home Devices/Status OIDs/Thresholds Attached Servers Users View Errors View an OID Change Password Change Email About Logout	Details of 192.168.184.10 (UPS5) <table><tr><th>ID</th><th>Server IP</th><th>Server Name</th><th>Port</th><th>Secret</th><th>Message</th><th>Select to Delete</th></tr><tr><td>9</td><td>194.47.147.46</td><td>sia</td><td>9999</td><td>shutdown</td><td></td><td><input type="checkbox"/></td></tr></table> Total number of servers records: 1 If there is server deleted, all its thresholds will be deleted. <div>Select NoneDelete Selected</div>	ID	Server IP	Server Name	Port	Secret	Message	Select to Delete	9	194.47.147.46	sia	9999	shutdown		<input type="checkbox"/>
ID	Server IP	Server Name	Port	Secret	Message	Select to Delete									
9	194.47.147.46	sia	9999	shutdown		<input type="checkbox"/>									
	Add New Servers <table><tr><td>Server IP</td><td><input type="text"/></td></tr><tr><td>Server Name (NO Special Character)</td><td><input type="text" value="newHpServer"/></td></tr><tr><td>Shutdown Port Number (of Shutdown Daemon)</td><td><input type="text" value="9999"/></td></tr><tr><td>Secret Message (for Shutdown Daemon) (NO Special Character/Space)</td><td><input type="text" value="newSecretMessage"/></td></tr><tr><td>Reset</td><td>OK</td></tr></table>	Server IP	<input type="text"/>	Server Name (NO Special Character)	<input type="text" value="newHpServer"/>	Shutdown Port Number (of Shutdown Daemon)	<input type="text" value="9999"/>	Secret Message (for Shutdown Daemon) (NO Special Character/Space)	<input type="text" value="newSecretMessage"/>	Reset	OK				
Server IP	<input type="text"/>														
Server Name (NO Special Character)	<input type="text" value="newHpServer"/>														
Shutdown Port Number (of Shutdown Daemon)	<input type="text" value="9999"/>														
Secret Message (for Shutdown Daemon) (NO Special Character/Space)	<input type="text" value="newSecretMessage"/>														
Reset	OK														

An *admin* could delete/add new servers.

NOTE: To shut down the attached servers when an UPS going down, a daemon perl script (*shut.pl* in the folder *monitor*) should running on the *Shutdown Port Number* of the servers and the main monitor should have the permission to create a socket to send *Secret Message* to the specific *Shutdown Port Number* of the attached servers.


5.5 Users (root only)

Home Devices/Status OIDs/Thresholds Attached Servers Users  View Errors View an OID Change Password Change Email About Logout	<table border="1"> <thead> <tr> <th>ID</th> <th>Username</th> <th>User Type</th> <th>Email</th> <th>Select to Delete</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>admin1</td> <td>Administrator</td> <td>SunnyBingoMe@gmail.com</td> <td><input type="radio"/></td> </tr> <tr> <td>7</td> <td>admin2</td> <td>Administrator</td> <td>SunnyBoyMe@gmail.com</td> <td><input type="radio"/></td> </tr> <tr> <td>12</td> <td>root</td> <td>Administrator</td> <td>Me@SunnyBoy.Me</td> <td>Undeletable.</td> </tr> <tr> <td>8</td> <td>user1</td> <td>Viewer</td> <td>BinSun@mail.com</td> <td><input type="radio"/></td> </tr> </tbody> </table> <p>Total number of user records: 4</p> <p>After deleted, handover devices and permission to:</p> <p>admin1 : SunnyBingoMe@gmail.com <input type="text"/></p> <p><input type="button" value="Select None"/> <input type="button" value="Delete Selected"/></p> <hr/> <p>Add New User</p> <p>Username (NO Special Character) <input type="text" value="root"/></p> <p>Password <input type="password" value="...."/></p> <p>Confirm Password <input type="password"/></p> <p>Email (Important) <input type="text"/></p> <p>User Type <input checked="" type="radio"/> Viewer <input type="radio"/> Administrator</p> <p><input type="button" value="Reset"/> <input type="button" value="Add"/></p>	ID	Username	User Type	Email	Select to Delete	1	admin1	Administrator	SunnyBingoMe@gmail.com	<input type="radio"/>	7	admin2	Administrator	SunnyBoyMe@gmail.com	<input type="radio"/>	12	root	Administrator	Me@SunnyBoy.Me	Undeletable.	8	user1	Viewer	BinSun@mail.com	<input type="radio"/>
ID	Username	User Type	Email	Select to Delete																						
1	admin1	Administrator	SunnyBingoMe@gmail.com	<input type="radio"/>																						
7	admin2	Administrator	SunnyBoyMe@gmail.com	<input type="radio"/>																						
12	root	Administrator	Me@SunnyBoy.Me	Undeletable.																						
8	user1	Viewer	BinSun@mail.com	<input type="radio"/>																						

Root could add/delete users here (except the *root*-self).

NOTE: When deleting a user, the authority and devices of the user should be handover to an already-exist *admin*.

5.6 View Errors (root only)

[Home](#)
[Devices/Status](#)
[OIDs/Thresholds](#)
[Attached Servers](#)
[Users](#)
[View Errors](#) 
[View an OID](#)
[Change Password](#)
[Change Email](#)
[About](#)
[Logout](#)


1 ~ 3 / 3

ID	Time Stamp	Device IP	Description
2886	2011-05-28 22:51:58	192.168.184.10	No response from remote host "192.168.184.10"
2885	2011-05-28 22:51:53	192.168.184.10	No response from remote host "192.168.184.10"
2884	2011-05-28 22:51:48	192.168.184.10	No response from remote host "192.168.184.10"

1 ~ 3 / 3


Root could see all errors of the whole system here without any restrict to specific devices owned (all devices are owned by *root*).

5.7 View an OID (anyone)

Home Devices/Status OIDs/Thresholds Attached Servers Users View Errors View an OID  Change Password Change Email About Logout	<div>IP: <input type="text"/></div> <div>OID Name: <input type="text" value="AlarmCondition"/></div> <div>View Type: <input type="text" value="Quarter-hourly"/></div> <div><input type="button" value="OK"/></div>
--	---

Anyone could view the history graph and values if they know the IP of the device.

5.8 Change Password (anyone)

Home Devices/Status OIDs/Thresholds Attached Servers Users View Errors View an OID Change Password  Change Email About Logout	<div>Username: <input type="text" value="root"/></div> <div>Old password: <input type="password"/></div> <div>New password: <input type="password"/></div> <div>Confirm New password: <input type="password"/></div> <div><input type="button" value="Reset"/> <input type="button" value="OK"/></div>
--	--

Anyone could change the password for themselves. All passwords will be encrypted by MD5.

5.9 Change Email (anyone)

Anyone could change the email for themselves.

5.10 About (anyone)

Anyone could find the information about the system here.

5.11 Logout (anyone)

Please logout on time to keep system and data in safe (Though the web session may expire after 24 minutes if there is not any operation).