PDU Utility

User Manual

Table of Contents

1.	Introduction	. 1
2.	Installation	. 2
3.	PDU Utility Interface	.4

1. Introduction

General

PDU Utility is PDU monitoring, management software. It has been designed to provide information about power conditions and status of PDU and power environment.

Its functions have

- 1. Monitor a large amount of PDU power consumption simultaneously.
- 2. Group Management of a large amount of the PDU.
- 3. Provide power consumption chart for daily monthly or the user-defined period report.
- 4. Send the email and trap to the specific account when the power event occurs.
- 5. Forward the trap to the user-defined account.
- 6. Events can be logged and exported to the Syslog server.

2. Installation

Install procedure:

CD Auto play screen. Please install the software step by step.

PDU	
Software	Brief Description
Manual	
Browse	
Exit	

Note:

- 1. It will take several minutes if your operation system had not been installed Microsoft .NET Framework yet.
- 2. Recommend that install the PDU Utility to the server level of Windows operation system.
- 3. If install utility under Windows Vista OS, you must first go to the folder of PDU and select the Properties of "PDU.exe", shown as below to check the "Run this program as an administrator". Then the utility will work normally.

Favorite Links Documents File Pictures Recently Changed Searches Public	ws Copen & Burn Name defaults Accounting.dll BaseClasses.dll DatabaseWizard DbDao.dll DDDao.dll DDD.ab PDU.mdb PDU.mdb PDUService PDUService.InstallStat ServiceCtrl.dll SmtpUtils.dll SysConfig.dll Util.ib.dll ZedGraph.dll	PDU Properties X General Compatibility Security Details Previous Versions If you have problems with this program and it worked correctly on an earlier version of Windows, select the compatibility mode that matches that earlier version. If you have problems with this program and it worked correctly on an earlier version. Compatibility mode Run this program in compatibility mode for: Windows XP (Service Pack 2) Settings Run in 640 x 480 screen resolution Disable visual themes Disable visual themes Disable desktop composition Disable display scaling on high DPI settings Privilege Level If nut this program as an administrator	
Folders /	x	M Show settings for all users	

First time to use PDU software, you must select what kind of database that you want to record the PDU information.

- The default database is set to Microsoft Access.
- If you want to use MySQL database, you may download it from <u>http://www.mysql.org</u>

Database Setting	
Database Type Microsoft Access MySQL Microsoft Access Settings File PathName : F\Program Files\PDU\PDU.mdb Select File Default File	MySQL Settings Host: 127.0.0.1 Database: Username: root Password:

3. PDU Utility Interface

Start

The Login Screen.

The default User Name is **admin**, Password is **1234**.

PDU Login	×
User Name:	
Password:	
	OK Cancel

After login to the software, you will see the software interface as following, it contains four sections:

1. Function Menu:

PDU Utility functions bar.

2. PDU List:

List all the PDU in the network; user can define the group to easily manage a large amount of the PDU.

3. PDU Information:

This area provides all detail information about the PDU.

4. Device Summary:

Indicate the status of the monitored PDU in the network.

🔞 All Devices	System M						
B group	Group Im		Device Info PL)U Info 🛛 Data Log	Events Report		
 IP2.168.0.132 IP2.168.0.148 IP2.168.0.37 	Group N	∛am	e: All Devices	:			Update
	Ic	on	Name	IP 🔺	Group	Status	Update Time
192 168 0 39		~	PDU	192.168.0.132	group	Normal	2010/7/13 下午 01:50:45
PDU List	1	~	Server	192.168.0.148	group	Normal	2010/7/13 下午 01:50:45
		✓	111	192.168.0.37	group	Normal	2010/7/13 下午 01:50:44
		1	PDU	192.168.0.38	group	Normal	2010/7/13 下午 01:50:44
		1	PDU	192.168.0.39	group	PDU In	formation 44
		1	PDU	192.168.0.51	group	Norma	2010/112 01.20.45
		1	PDU	192.168.0.52	group	Normal	2010/7/13 下午 01:50:45
		1	PDU	192.168.0.85	group	Normal	2010/7/13 下午 01:50:44
		1	PDU	192.168.0.87	group	Normal	2010/7/13 下午 01:50:45
	1	1	PDU	192.168.0.88	group	Normal	2010/7/13 下午 01:50:45
		1	PDU	192.168.0.90	group	Normal	2010/7/13 下午 01:50:45
		1	PDU	192.168.0.91	group	Normal	2010/7/13 下午 01:50:45
PDU Status S		-		192.168.0.99	group	Power Lost or B	2010/7/13 下午 01:50:45

Function Menu

Device

Add Device

Administrator can add the PDU by manually if the IP address of PDU had been setup before.

Add Device	
Device Group:	s
Lab	
Device IP:	
Community:	
Trap IP:	
Syslog IP:	
	OK Cancel

Device Group:	Select the PDU belongs to which group
SNMP Communit	y: Set the community, it must the same with the PDU in order to communicate with it. Default setting is "private"
	Note1: This community is set for the authority of "WRITE".
	Note2: The "READ" community is set to "public", and user can not change.
Trap forward IP:	When event occurs, it can forward the event trap to the certain NMS.
Syslog server IP:	Forward the log to the certain Syslog server.

Edit Device

Administrator can redefine the PDU information here, including

Local Settings	SNMP Settings		Total Current Thre	shold Settings
Device Groups: [group	Name:	PDU	Warning Current:	10.0
(gio up	Location:	Office	Critical Current:	12.0
	Contact:	Admin	ENV Threshold Se	tting
	Network Settings		Temperature	
Community: public	IP Address:	192.168.0.132	Lower Bound:	10
Trap Forward IP:	II HUUICSS.	192.100.0.192	Upper Bound:	40
	_	Modify	Humidity	
Syslog Server IP:			Lower Bound:	10
			Upper Bound:	80

Device Group:	Change the PDU belongs to which group
SNMP Community:	Set the community, it must the same with the PDU.
	Note: This community is set for the authority of "WRITE".
Trap forward IP:	Change the trap receiver IP.
Syslog server IP:	Change the Syslog server IP.
SNMP Settings:	Modify the SNMP information for the PDU.
Network Settings:	Re-defined the IP address of PDU.
Total Current Threshold Setting	It is only available when there is not only one PDU under this IP address.
	User can input the current threshold to prevent total PDUs' power consumption exceed the facility capacity.
ENV Threshold Setting	When the temperature or humidity exceeds the pre-setting, utility will send mail to notify manager.

Manager can change the method that PDU Utility to get the IP.

Modify IP		D
O Dynamic Static	(DHCP)	OK Cancel
Original IP:	192.168.0.96	
New IP:	192.168.0.96	
Netmask:	255.255.255.0	
Gateway:	192.168.0.254	

 Remove Selected Device
 Delete the selected the IP address of PDU

 Edit PDU Config
 Modify PDU configuration.

 PDU Name:
 User defines the PDU name.

PDU Name.	User defines the PDU fiame.
Voltage:	User defines the voltage
Threshold:	PDU Threshold.
Outlet Name:	User defines the outlet name.
(Option)	

Hostname:	PDU				
PDU ID:	1	Edit C)utlet Name	:	
PDU Name:	PDU1		Outlet	Outlet Name	-
TDO Mane.		•	Outlet-A	OutletA	
Voltage:	230		Outlet-B	OutletB	
			Outlet-C	OutletC	
-Thresholds-			Outlet-D	OutletD	
Warning (Current: 12		Outlet-E	OutletE	
Maximum	Current: 16		Outlet-F	OutletF	
			Outlet-G	OutletG	1

Remove Selected PDU	
Update Device Information	Update the PDU information manually.
Add Device Group	Create a new group.

Add Group		X
Group Name:		
	OK Cancel	

The default group is named "Lab".

Edit Group	Rename the group
	Edit Group Name
	Orignal: Lab New: Lab OK Cancel
Remove Device Group	Delete an existing group. All PDU listed under this group must be removed first.
Data Management	
Export kW*hr Account to CSV	Export power data with CSV format.
Export Data Log to CSV	Export current data log with CSV format.
Export Events to CSV	Export events data with CSV format
Remove kW*hr Account Records	Delete power consumption data.
Remove Data Log Records	Delete current data log.
Remove Event Records	Delete event log.
System Management	
Scan Subnet	Search all IP addresses of PDU that are connected under the same subnet. Procedure:
	 Select the way to scan the PDU in the network.

- Scan network interface subnet
- Scan the specify subnet
- 2. Press the "Scan" Button to search all PDU devices under this subnet.
- 3. Checked the box of "ADD" that you want to add to PDU Utility.
- 4. Select one of the groups in the "Device Group" to category the PDU.
- 5. Select "OK" to finish the procedure.

can Domain				D
Network Settings				1
Scan the specify IP: 192.168.0.1	subnet	100 Integrated Controll fask: 255,255,255,0	er - Packet Schedu. 🚩	
				Scan
MAC	IP	Description	Add Modify IP	Device Groups: group
	Select	All UnSelect All		OK Cancel

General Setting

This setting contains two functions.

General Settings	
_Mail	
Enable	
Sender:	
Email Address(1):	
Email Address(2):	
Email Address(3):	
SMTP server:	
Authentication (opti	onal)
Account:	
Password:	
	OK Cancel

Mail:

privilege here.

When the event occurs, PDU Utility can send out the email message to the pre-defined account.

message to the pre-defined account.

Administrator can add, delete and manager all the user

User List

 Add User
 Close

 User Name
 Edit

 ødmin
 Edit

User can only change the password for the "Admin" account.

User List

Change Password	×
Usemame:	admin
Password:	
Password (again):	
	OK Cancel

Add user

User can be assigned to the authority of Read only or Read/Write.

Add User						×
	Username: Password:	[
Passwo	rassworu. ord (again):	[
	Group			Read Only	Read/ Write	
	Lab					
	_	-	_			
				OK	Can	icel



Change the password, authority for the user.

Edit User	:				
	Username:	test			
	Password:				
Passwo	ord (again):				
	Group	≜ F	Read Only	Read/ Write	
Þ	Lab			v	
)K	Cano	el

Database Setting

Modify the database setting.

F:\Program Files\PDU\PDU.mdb Select File Default File		QL Settings- Host : 127.0.0.1 tabase : mame : root ssword :		
---	--	---	--	--

Service Control

Service control.

Service Control	
Service Status:	Running
Start	Stop Restart
	OK Cancel

Note:

If the service can not start, it could be the SNMP port had been used by the other program in the Windows OS. Please close the program and then restart PDU.

PDU Information

Group Information:

List all PDU in this table and provide some important information.

Device Summary

🔕 Critical:	Indicate output power of the PDU exceeds the setting of overload.
🛆 Warning:	Indicate output power of the PDU exceeds the setting of warning.
Ourreachable:	Indicate that PDU Utility can not reach the PDU.
🥑 Normal:	Indicate the PDU is working normally.
Service Status	PDU Utility service status.
	When indicates "Stopped", please go

When indicates "Stopped", please go to System Management> Service Control to "Start" the service.

🕀 🖌 All Devices	Grou	p Info	Device Info	PDU Info Data	Log Events	Report			
☐ ✓ group ☐ ✓ 192.168.0.54 ↓ PDU-01	Gro	Group Name: All Devices Update							
■ ✓ 192.168.0.77 ✓ PDU-01	Icon Name IP A Group Status Update Tr								
🖃 🧹 Rack	•	1	PDU	192.168.0.54	group	Normal	2009/6/17 上午 11:50:13		
IP2.168.0.62 PDU-01		1	Rack	192.168.0.62	Rack	Normal	2009/6/17 上午 11:50:13		
• 100 01		1	Server	192.168.0.77	group	Normal	2009/6/17 上午 11:50:14		
Device Summary Critical: 0 Warning: 0 Unreachable: 0 Normal: 3 Service Status: Start									
③ Critical: 0 ▲ Warning: 0 ④ Unreachable: 0 ✓ Normal: 3 Service Status: Start			Indic icon.	ate the	PDU s	tatus k	by different		
S Critical: 0 ▲ Warning: 0 ③ Unreachable: 0 ✓ Normal: 3			icon.	ate the name of		tatus k	by different		

Indicate the communication status

Status:

with PDU Utility. Normal: The PDU Utility communicates with PDU normally. Querying: The PDU Utility is requesting data from the PDU. Communication Lost: The PDU Utility can not get data from the PDU. Warning: The power consumption of PDU exceeds the threshold of warning. Overload: The power consumption of PDU exceeds the threshold of overload. Update Time: The last time of update PDU information.

Device Information:

Network Information:

Indicate the network and system information, Including

- IP Address
- MAC Address
- System Name
- System Contact
- System Location
- Trap Forward IP: Utility can forward the trap coming from the PDU to the given IP.
- Syslog Forward IP: Utility can send the log to the given IP which is syslog server.

General Information:

Indicate the detected information from total PDU device and attached device, Including

- Firmware Version
- Temperature
- Humidity
- Total Current: If this IP lists more than one PDU, utility can provide the function to accumulate all the current consumption under this IP.
- Device Warning: The warning threshold for all the current consumption under this IP.
- Device Critical: The critical threshold for all the current consumption under this IP.

<u>D</u> evice Data <u>M</u> anagement	System Mana,	gement	t <u>H</u> elp						
All Devices group 192.168.0.54 PDU-01	Group Info Network I IP Addres	nforms		Data Log	Events F General In Firmware		v1.0-0816m		
■ ✓ 192.1680.77	MAC Address: 00:16:18:75:00:13 System Name: PDU System Contact: Admin System Location: Office Trap Forward IP: N/A Syslog Forward IP: N/A			00:13	Temperature: Humidity: Total Current: Device Warning: Device Critical:		N/A N/A 2.20 12.00 15.00		
	Icon	ID	Name	Status	Current	Time		Warning Current	Update Overload Current
	▶ ✓	1	test2	Normal	2.20	2009/6/1	7 上午 11:	19.00	20.00
-Device Summary Critical: 0 Warning: 0 Unreachable: 0									

The connected PDU information included:

Icon:	Indicate the PDU status by different icon.
ID:	The identification of PDU.
Name:	The name of PDU
Status:	 Indicate the communication status with PDU Utility. Normal: The PDU Utility communicates with PDU normally. Querying: The PDU Utility is requesting data from the PDU. Communication Lost: The PDU Utility can not get data from the PDU. Warning: The power consumption of PDU exceeds the threshold of warning. Overload: The power consumption of PDU exceeds the threshold of overload.
Current:	The PDU power consumption.
Time:	The current time.
Warning Current	Display the setting of PDU for warning threshold.
Overload Current	Display the setting of PDU for overload threshold.

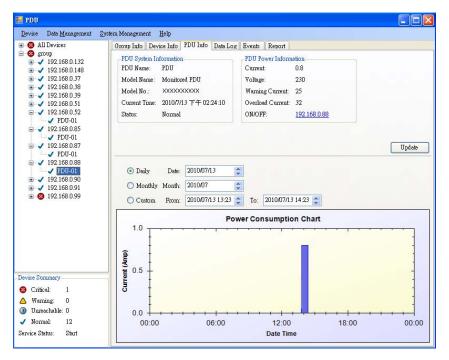
PDU Information:

PDU System Information:

Provide the PDU information and status.

PDU Power Information:

Provide PDU power information; if the PDU support outlet control, you can click the hyperlink and enter to the PDU web page to control the outlet.



Power Consumption Chart:

Provide the chart for the PDU power consumption record. Administrator can check the record by Daily, Monthly, Customdefined time period.

Data Log:

Provide PDU current data and power record.

Device Data Management	System Management Help Group Info Device Info PDU In	to Data Log Rug	nta Panart		
group 192.168.0.54	Hostname: 192.168.0.54	IO DULLOS EVE	nis Kepon		
	Log Time ● Monthly Month: 2009 ○ Custom From: 2009	Power (kW/hx) A06 (06/17 (06/17 (0) (0) (0) (0) (0) (0) (0) (0)	Statistics Average Current: 3 41 Amp Average Temperature: N/A Average Humidity: N/A		
	<< < 1/19	> C	>> Current Tempera	Update ture Humidity	•
	► 2009/06/17 11:51	1	2.30 0	0	
	2009/06/17 11:50	1	2.20 0	0	
	2009/06/17 11:49	1	2.20 0	0	-
	2009/06/17 11:48	1	2.20 0	0	
	2009/06/17 11:47	1	8.00 0	0	
Device Summary	2009/06/17 11:46	1	7.10 0	0	
S Critical: 0	2009/06/17 11:45	1	7.10 0	0	
Warning: 0 O Unreachable: 0	2009/06/17 11:44	1	13.70 0	0	
 Vormal: 3 	2009/06/17 11:43	1	7.50 0	0	

Events:

Provide events log.

🗉 🔞 All Devices 🛛 🔥	Group Info Device In	fo PDU Info Data	Log Events Report			
♥ group ● ✓ 192.168.0.132 ● ✓ PDU-01 ● ✓ PDU-02 ● ✓ PDU-03 ● ✓ PDU-04 ● ✓ PDU-05 ● ✓ PDU-06 ● ✓ PDU-08 ● ✓ PDU-08 ● ✓ PDU-08 ● ✓ PDU-08	Hostname: 192.16 Monthly Month: Custom From: Events Summary Critical: 4 Warning: 6	2010/07	 To: 2010/07/13 Unreachable: 0 	<. N		11-1-1-
→ ✓ PDU-01 → ✓ 192.168.0.38	Hostname	IP	Date	PDU	Event	Update Curren
→ PDU-01	▶ N/A	192.168.0.39	2010/7/13 下午 01:48:04	1	PDUService - add a new PDU	4.8
✓ PDU-01	PDU	192.168.0.39	2010/7/13 下午 01:48:24		PDUService - Taotal Current Warn	12.9
□ ✓ 192.168.0.51	PDU	192.168.0.39	2010/7/13 下午 01:48:25		PDUService - Warning	12.9
✓ PDU-02	PDU	192.168.0.39	2010/7/13 下午 01:48:34		PDUService - Normal	4.7
✓ PDU-03 ✓ PDU-04	PDU	192.168.0.39	2010/7/13 下午 01:50:34		PDUService - Taotal Current Warn	14.9
- 🗸 PDU-05	PDU	192.168.0.39	2010/7/13 下午 01:50:34	1	PDUService - Warning	14.9
✓ PDU-06 ✓ PDU-07	PDU	192.168.0.39	2010/7/13 下午 01:50:44		PDUService - Normal	10.9
- V PDU-08	PDU	192.168.0.39	2010/7/13 下午 01:55:55		PDUService - Critical	16.9
Device Summary	PDU	192.168.0.39	2010/7/13 下午 01:55:55	-	PDUService - Taotal Current Critical	16.9
	PDU	192.168.0.39	2010/7/13 下午 01:56:05		PDUService - Normal	4.6
			2010/7/13 下午 01:56:25		PDUService - Taotal Current Critical	15.6
S Critical: 1	PDU	192.168.0.39	2010///15 1-1-01.50.25			
 Critical: 1 Warning: 0 Umreachable: 0 	PDU PDU	192.168.0.39 192.168.0.39	2010/7/13 下午 01:56:26		PDUService - Critical	15.6
S Critical: 1					PDUService - Critical PDUService - Normal	15.6 4.7

Report:

Provide data analysis.

- 1. Accumulated Power
- 2. Average Current
- 3. Average Temperature
- 4. Average Humidity

