PDU Utility

User Manual

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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.

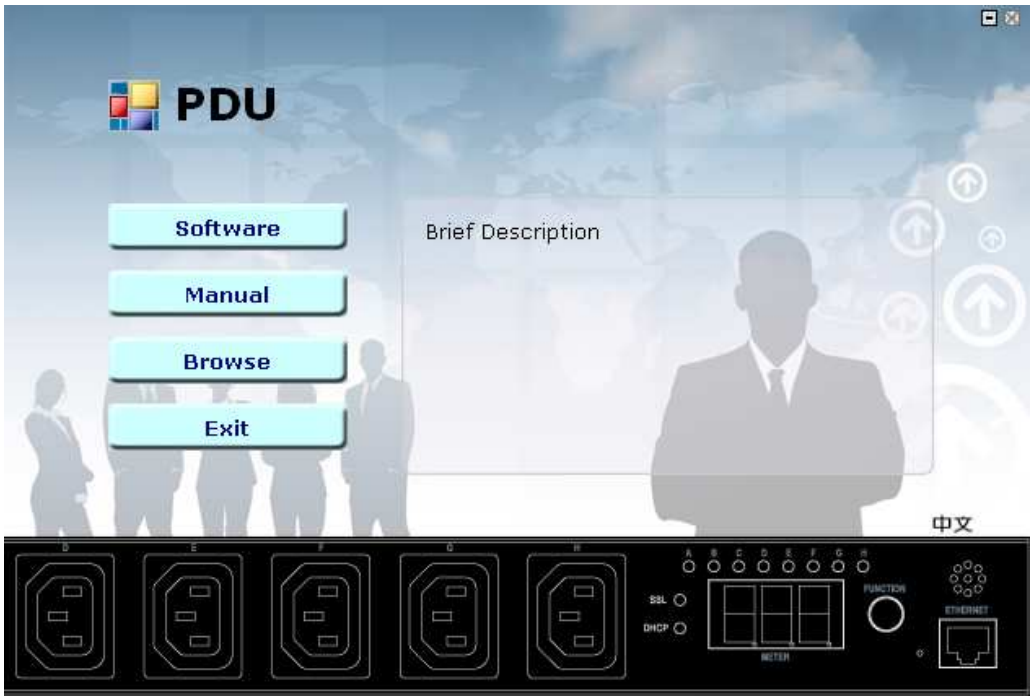
Its functions have

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

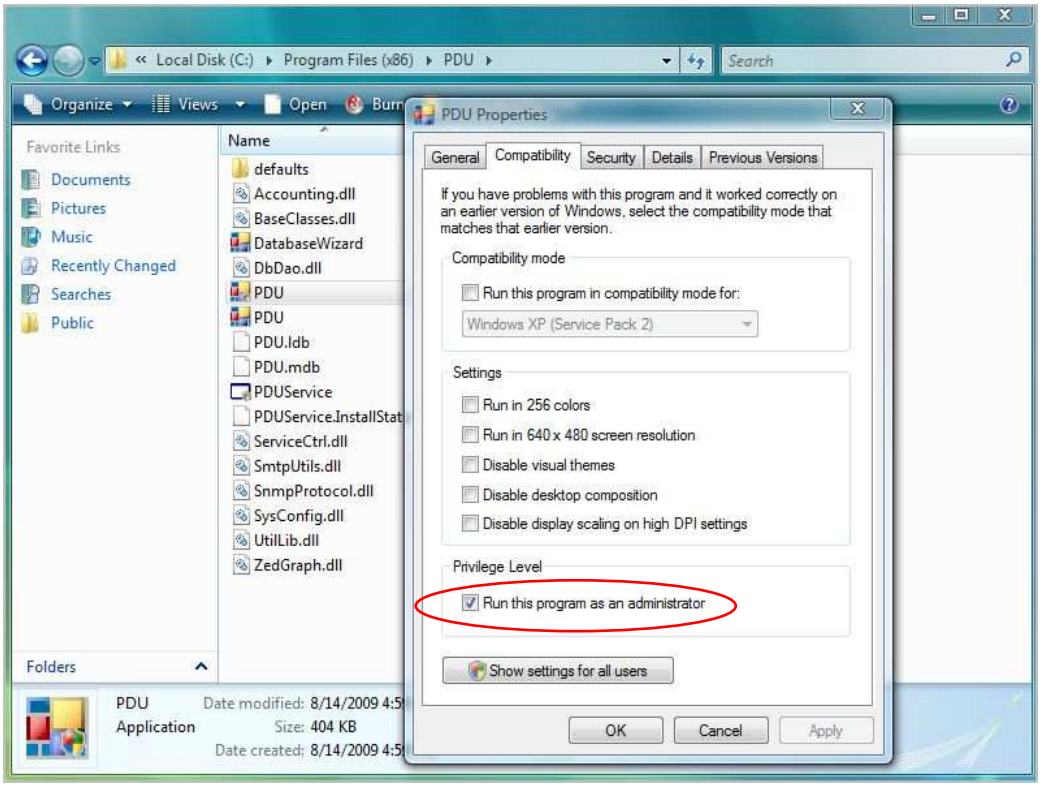
Install procedure:

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



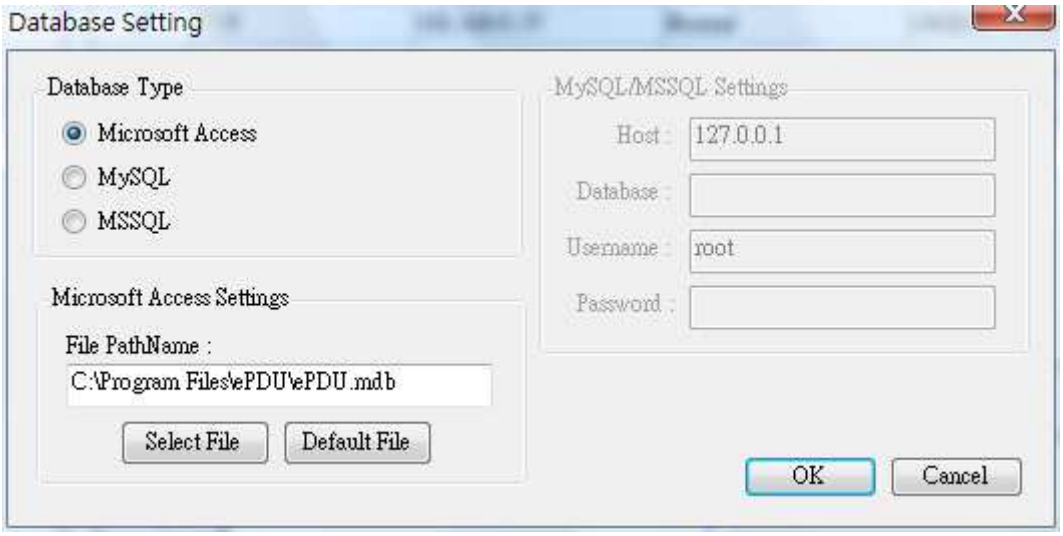
Note:

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 and Win 7, 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.**



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 http://www.mysql.org
- Please note that MS-SQL are verified for MS SQL 2005.



3. PDU Utility Interface

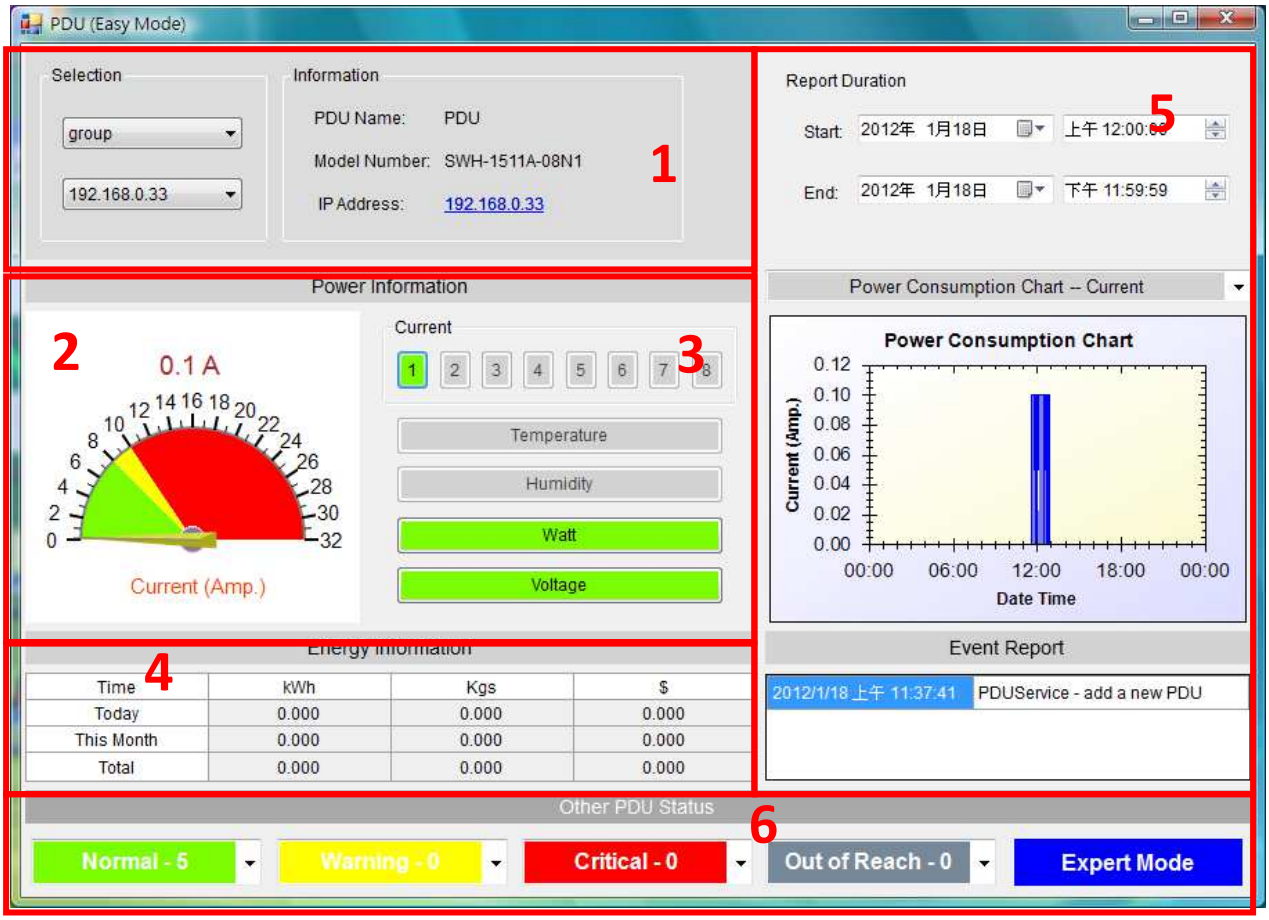
Start

The Login Screen.

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

Easy Mode: Display all power information by graphic interface.

Note: If it is the first time to use the PDU utility, please enter "Expert Mode" to setup the utility in advance.



System Information:

1. User can choose the PDU that want to monitor by "Selection". It will display PDU name, Model Number and this PDU IP address.

Power Information:

2. Graphic display for the PDU information.
3. Selection area, use can monitor PDU by selecting Current, Temperature, Humidity, Watt and Voltage when the button light with green color.

Energy Information:

4. Provide quick look by selecting “Today”, “This Month” and “Total” for the following information.

a. Main Energy that unit is kWh.

b. Carbon Emission Data that unit is kg.

c. Rate unit is $ for Reference.

Data Log and Report:

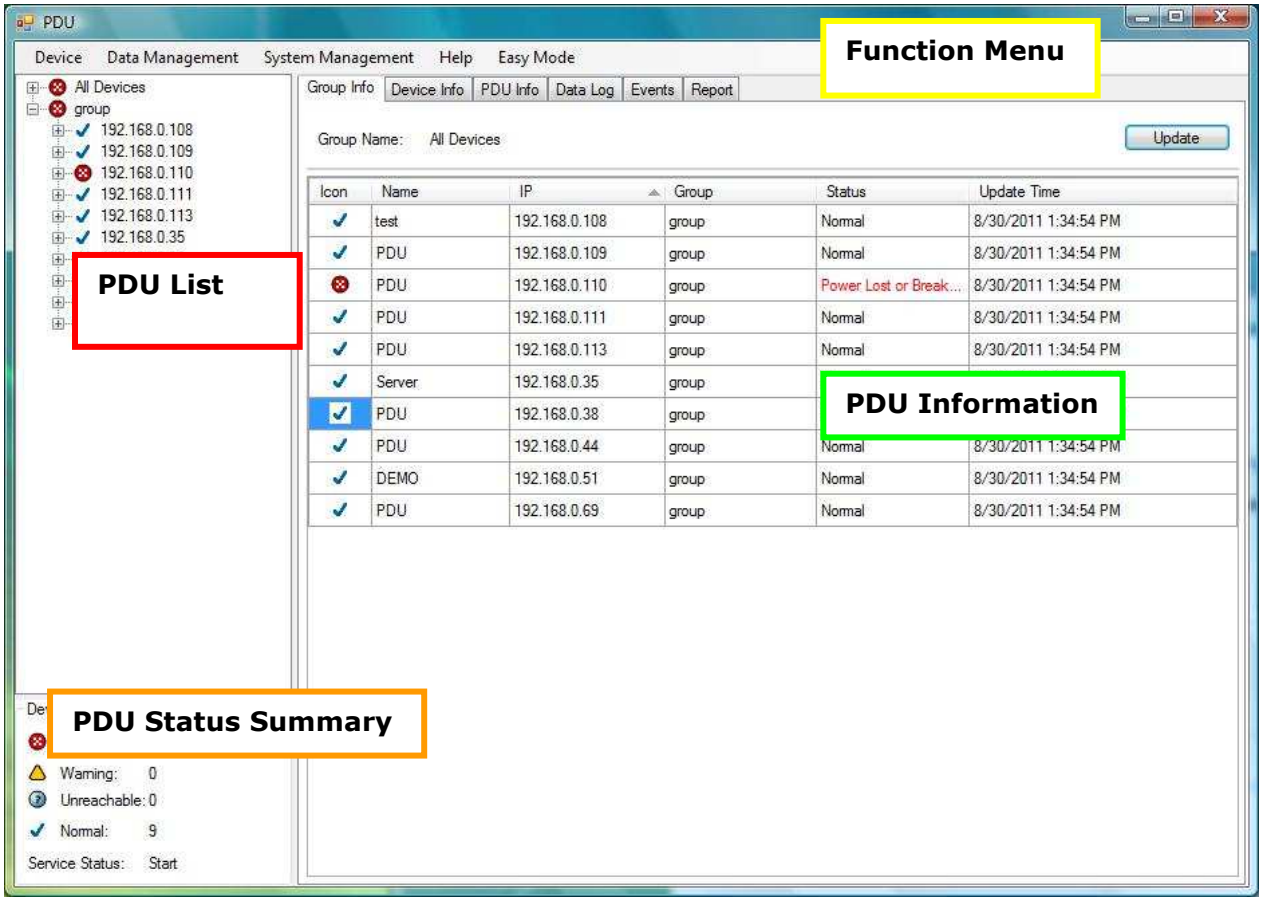
5. Provide Data and Event log. Data log provide 3 different charts- Current, kWh and Voltage.

PDU Status:

6. Provide all PDU status that monitored by PDU utility, included Normal, Warning, Overload, Out of Reach.

   Expert Mode: Click to enter Expert Mode.

Expert Mode: Display all power information by table and txt interface. Provide more detail information.



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.

Function Menu

Device

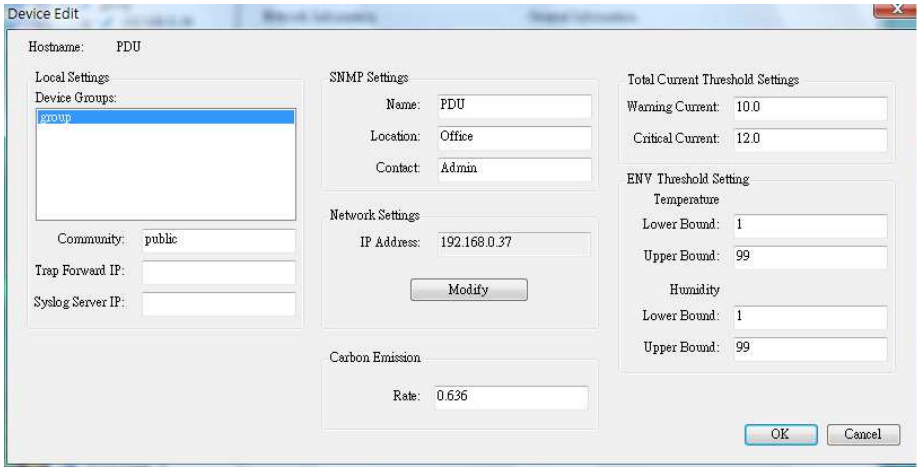
Add Device

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

Device Group:	Select the PDU belongs to which group
SNMP Community:	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.

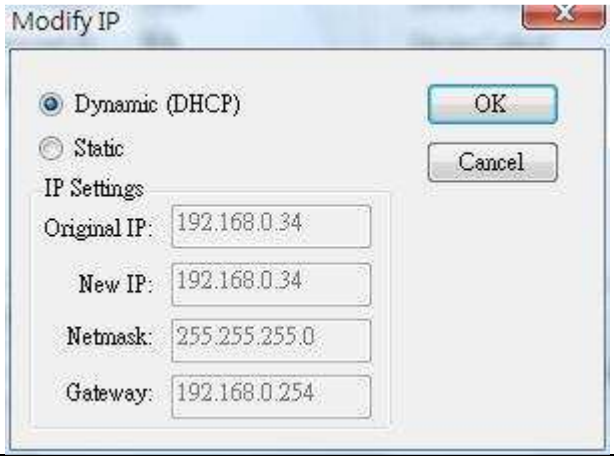
Edit Device

Administrator can redefine the PDU information here, including

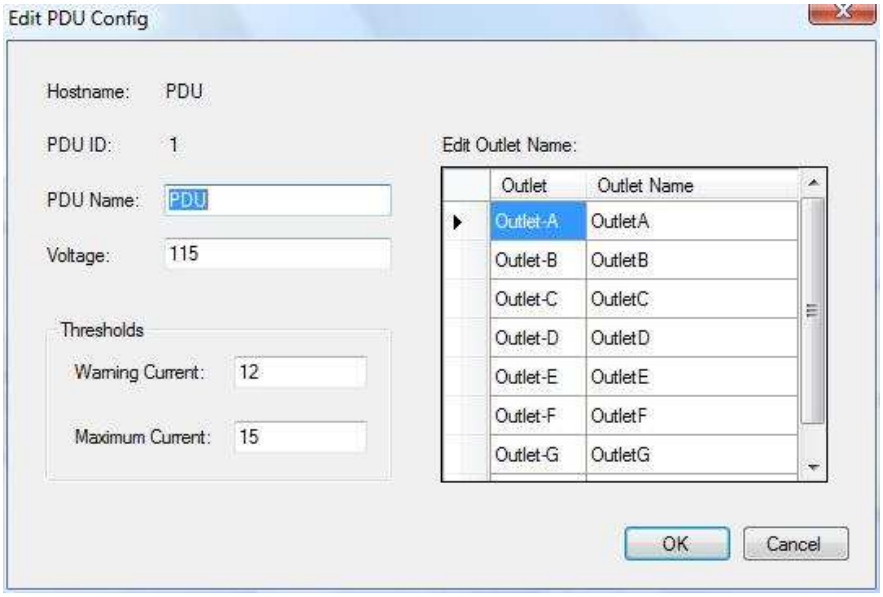


Device Group:	Change the PDU belongs to which group
SNMP Community:	Set the community, it must the same with the PDU. **Note:** This community is set for the authority of "WRITE".
Trap forward IP:	Change the trap receiver IP.
Syslog server IP:	Change the Syslog server IP.
SNMP Settings:	Modify the SNMP 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.

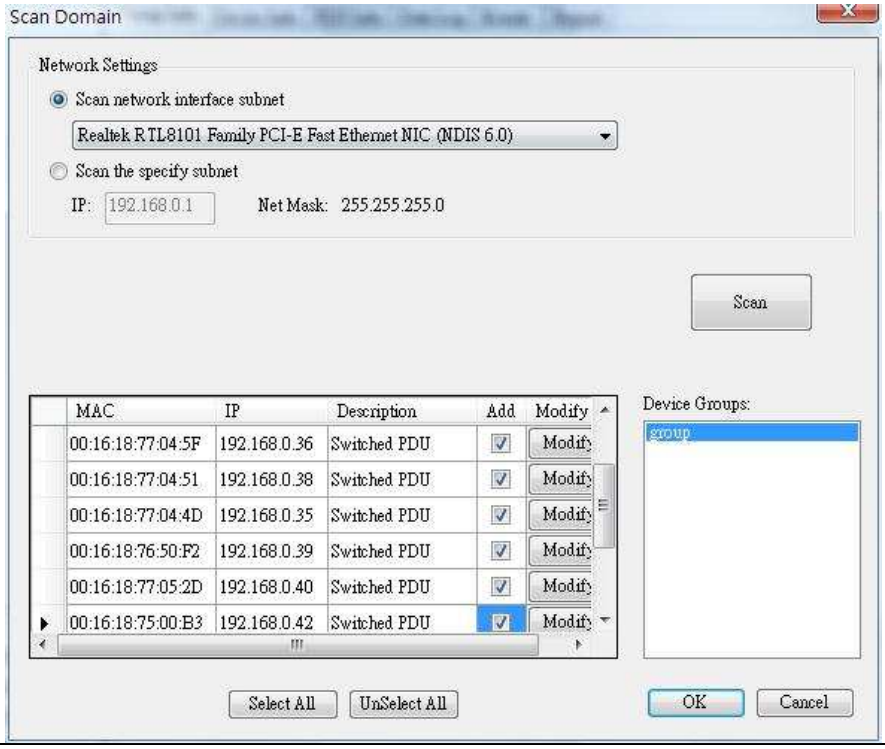


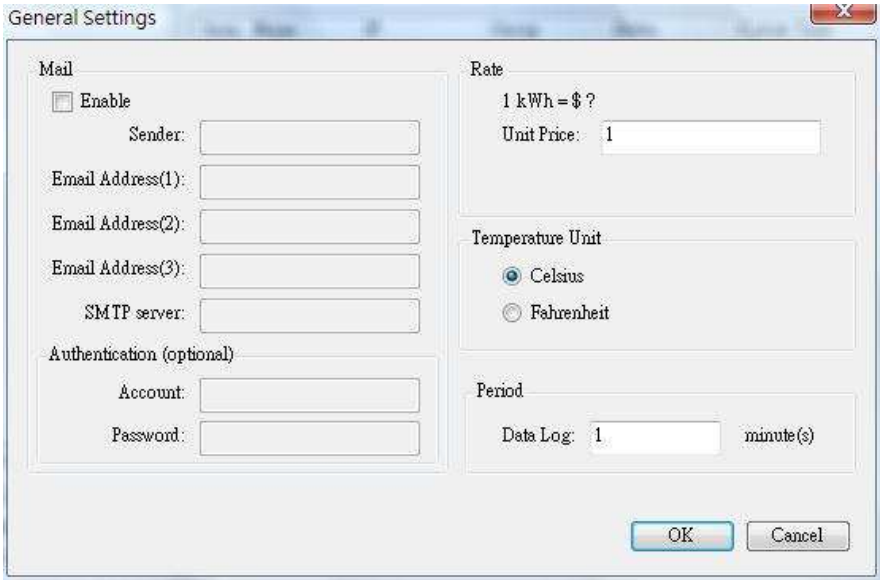
Remove Selected Device	Delete the selected the IP address of PDU
Edit PDU Config	Modify PDU configuration. PDU Name: User defines the PDU name. Voltage: User defines the voltage.. Threshold: PDU Threshold. Outlet Name: User defines the outlet name. (Option)



Remove Selected PDU	Delete the selected PDU
Update Device	Update the PDU information manually.

Information	
Add Device Group	Create a new group. The default group is named “Lab”.
Edit Group	Rename the group
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: 1. 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. 
General Setting	This setting contains two functions.



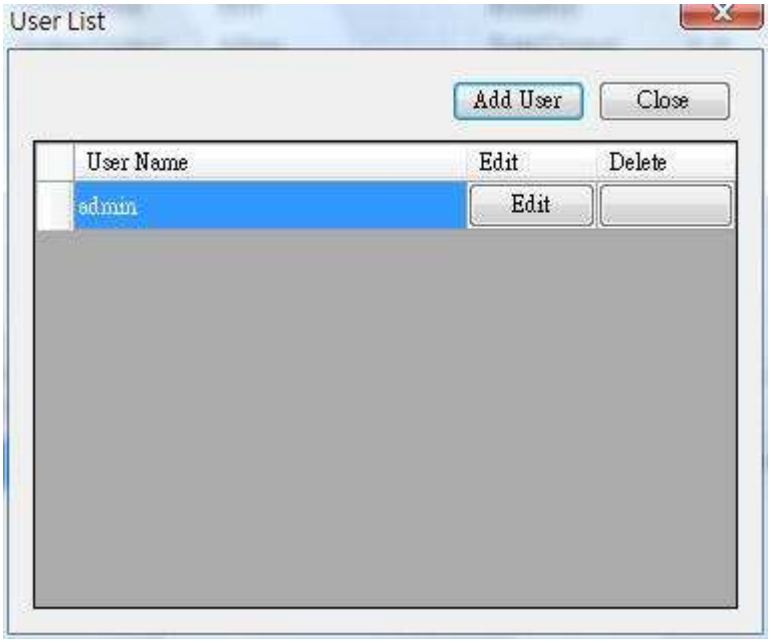
Mail:
When the event occurs, PDU Utility can send out the email message to the pre-defined account.

Rate:
User can input the electricity rate to calculate the bill for reference.

Temperature Unit:
Switch the temperature unit between Celsius and Fahrenheit.

Period:
Change the interval of log.

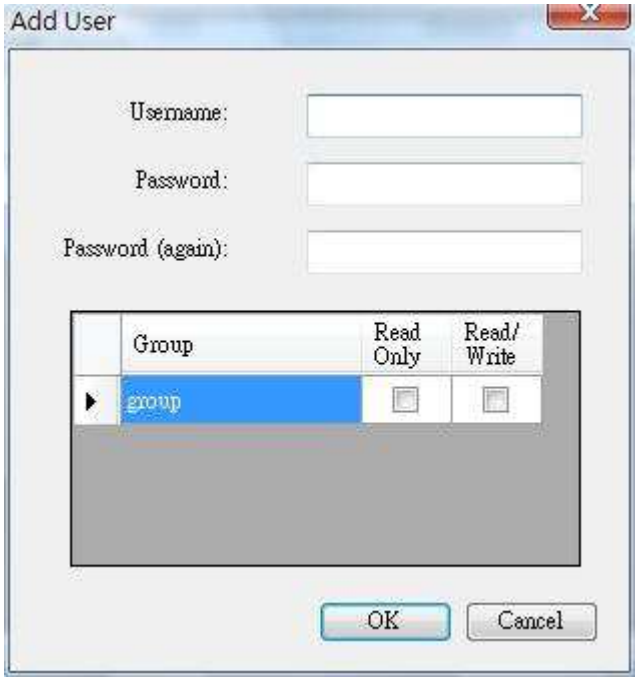
User List	Administrator can add, delete and manager all the user privilege here.



User can only change the password for the “Admin” account.

Add user

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

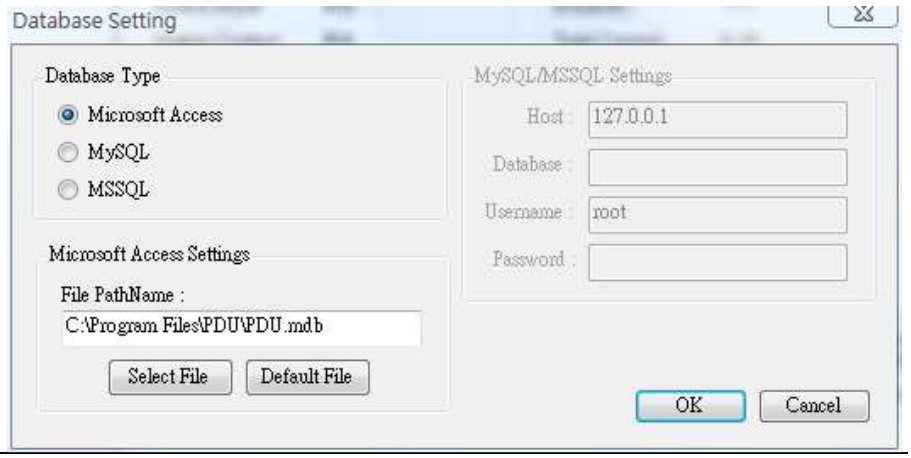


Edit User:

Change the password, authority for the user.

Database Setting

Modify the database setting.



Service Control

Service control.

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.

Easy Mode

Shift to Graphic interface to monitor PDU.

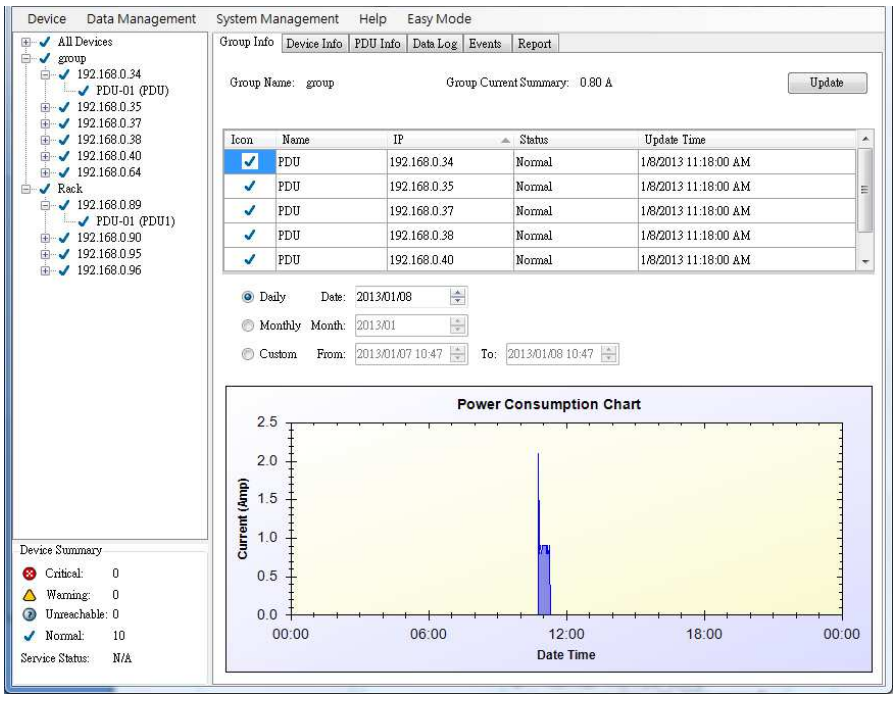
PDU Information

Group Information:	

Provide PDU information and the summary chart under group.

Device Summary

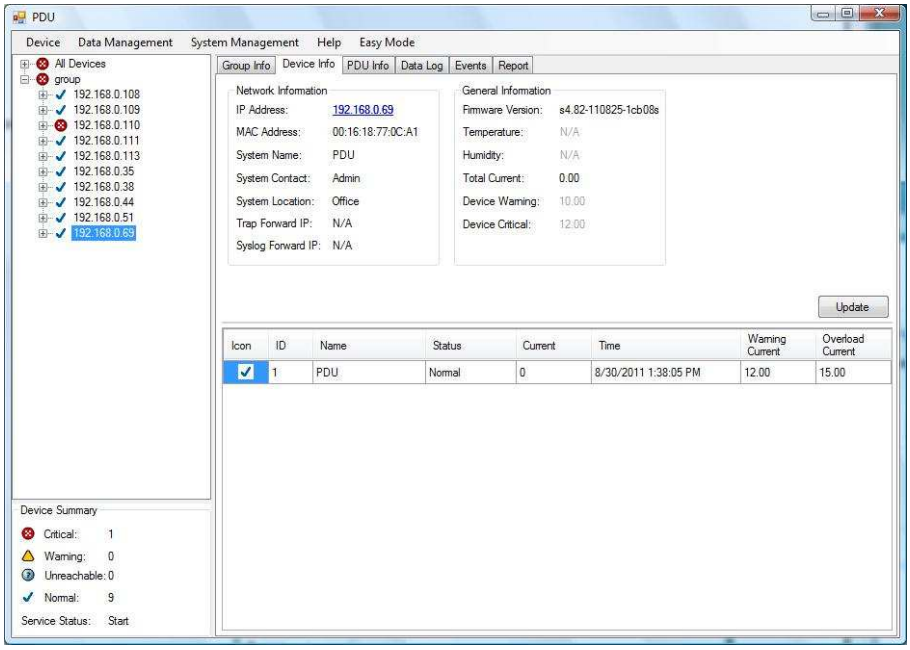
Critical:	Indicate output power of the PDU exceeds the setting of overload.
Warning:	Indicate output power of the PDU exceeds the setting of warning.
Unreachable:	Indicate that PDU Utility can not reach the PDU.
Normal:	Indicate the PDU is working normally.
Service Status	PDU Utility service status. When indicates "Stopped" , please go to System Management> Service Control to "Start" the service.



Icon:	Indicate the PDU status by different icon.
Name:	The name of PDU.
IP:	The IP address 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.
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.



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.

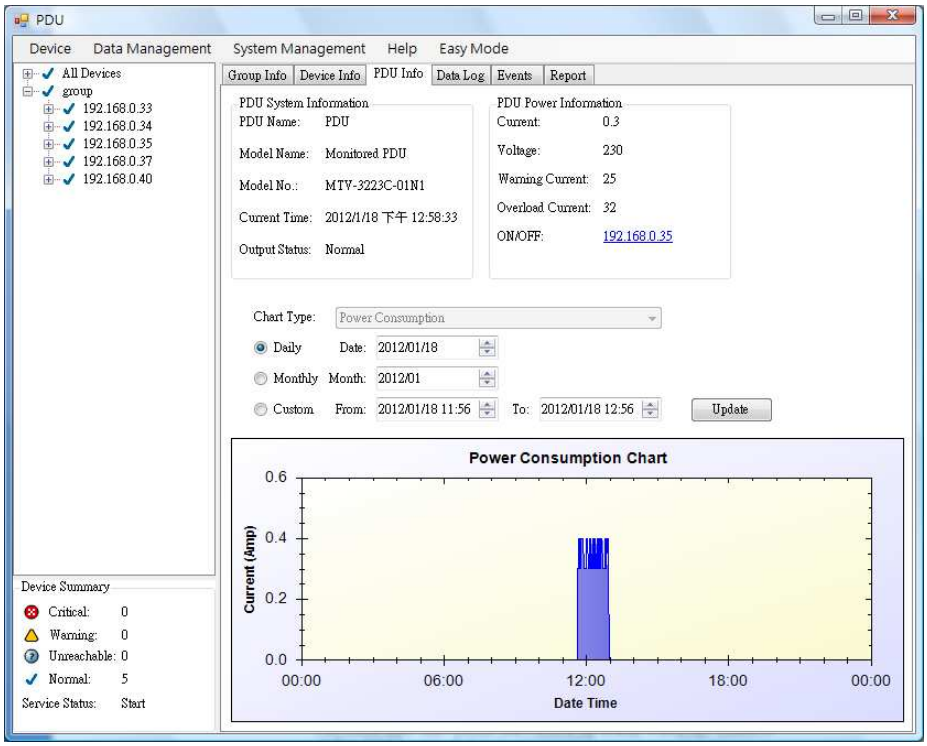
PDU Information:

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.

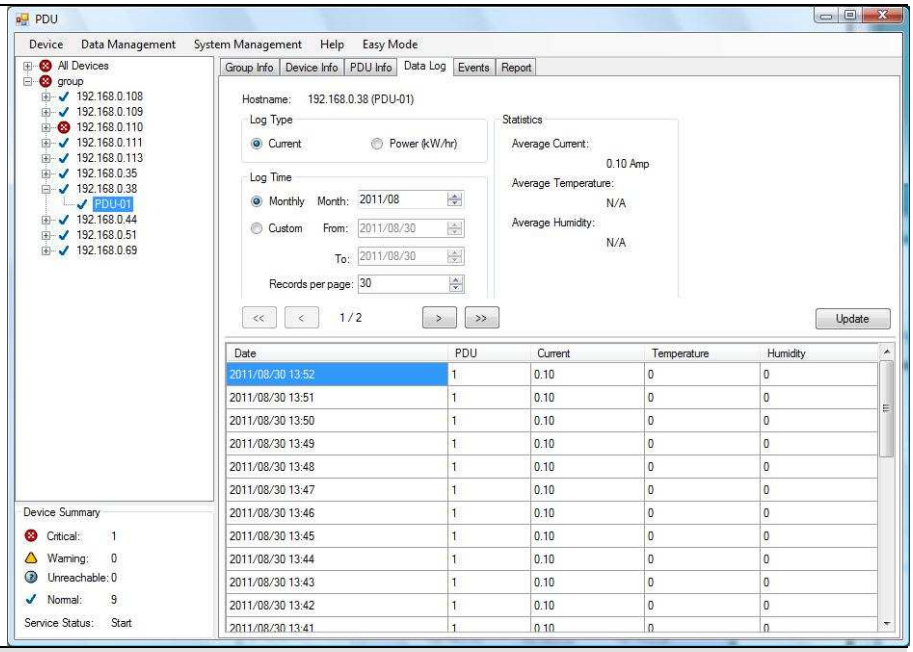


History Consumption Chart:

Provide the chart for the PDU power consumption record, temperature and humidity. Administrator can check the record by Daily, Monthly, Custom-defined time period.

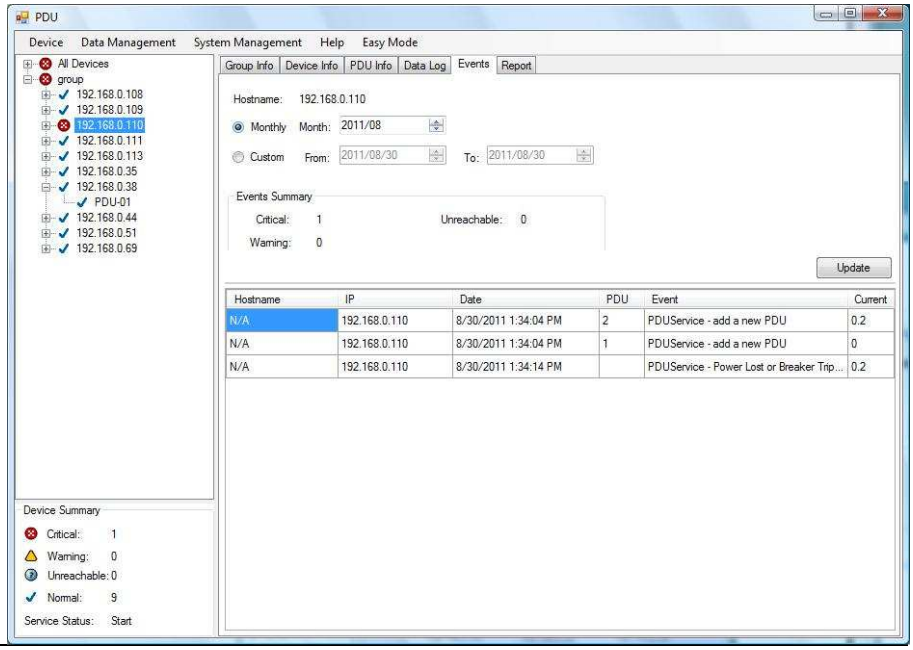
Data Log:

Provide PDU current data and power record.

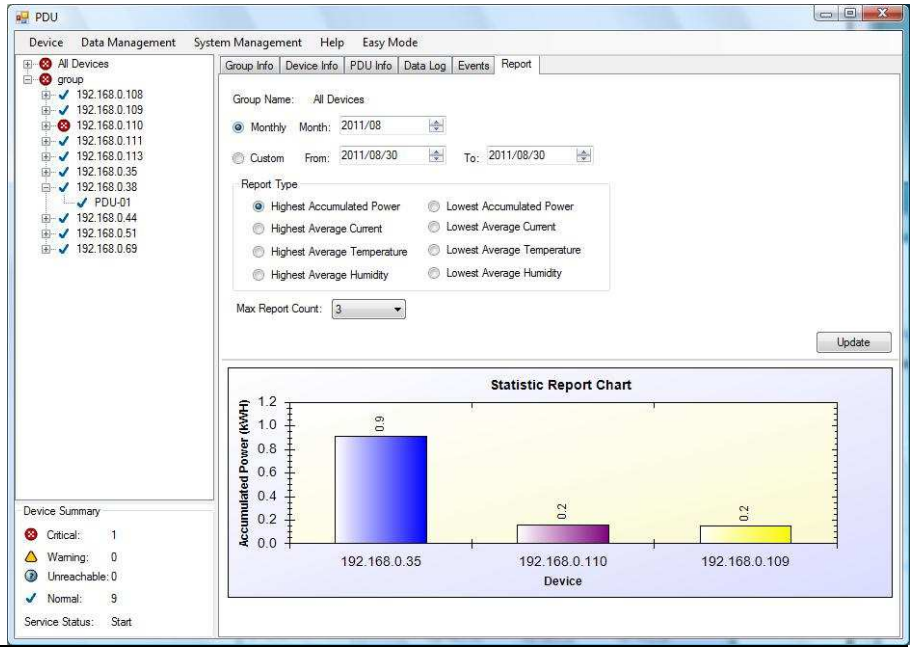


Events:

Provide events log.



Report:

Provide data analysis.

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