

# **PDU Utility**

## **User Manual**

# 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.

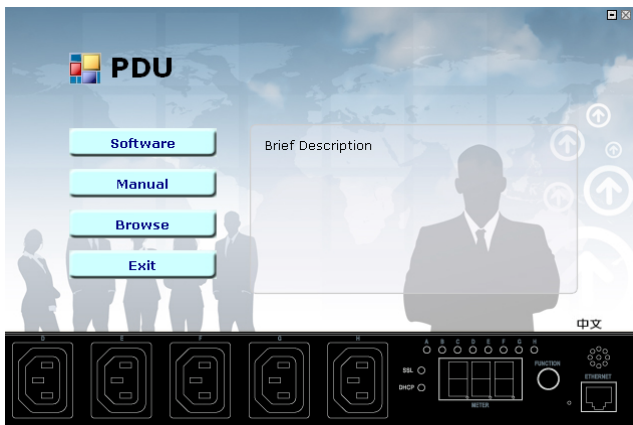
Its functions have

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.

# Install Software

CD Auto play screen.

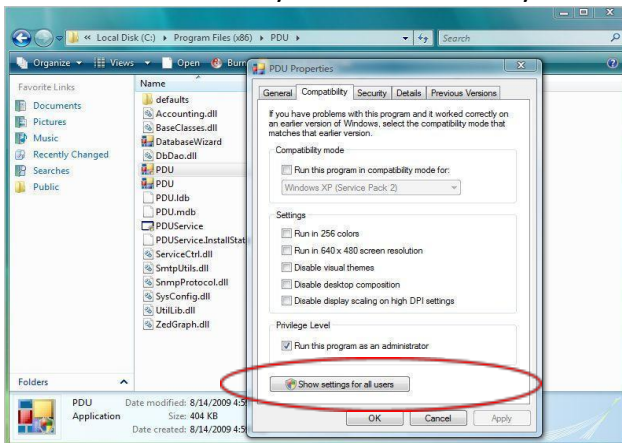
Please install the software step by step.



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.

The screenshot shows a 'Database Setting' dialog box with a title bar containing a close button. The dialog is divided into two main sections. The left section, titled 'Database Type', contains three radio buttons: 'Microsoft Access' (which is selected), 'MySQL', and 'MSSQL'. Below this is a section titled 'Microsoft Access Settings' containing a label 'File PathName :' and a text input field with the value 'C:\Program Files\PDUE\PDUE.mdb'. There are two buttons, 'Select File' and 'Default File', below the text field. The right section, titled 'MySQL/MSSQL Settings', contains four text input fields: 'Host' (with '127.0.0.1'), 'Database', 'Username' (with 'root'), and 'Password'. At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

Database Setting

Database Type

☒ Microsoft Access

☐ MySQL

☐ MSSQL

MySQL/MSSQL Settings

Host : 127.0.0.1

Database :

Username : root

Password :

Microsoft Access Settings

File PathName :

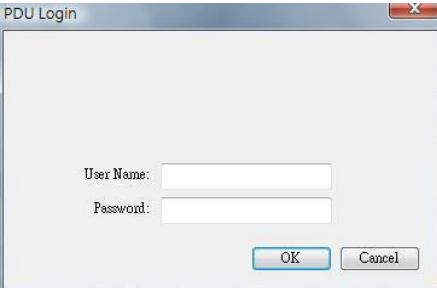
C:\Program Files\PDUE\PDUE.mdb

Select File Default File

OK Cancel

# Login

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



A screenshot of a 'PDU Login' dialog box. The window has a title bar with 'PDU Login' and a close button. Inside, there are two text input fields. The first is labeled 'User Name:' and the second is labeled 'Password:'. Below the fields are two buttons: 'OK' and 'Cancel'.

PDU Login

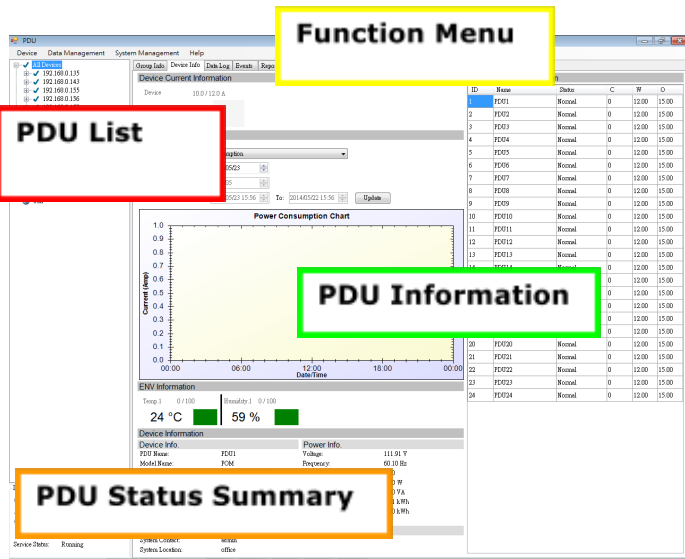
User Name:

Password:

OK Cancel

# Interface:

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



## Function Menu:

PDU Utility functions bar.

**PDU List:**

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

**PDU Information:**

This area provides all detail information about the PDU. Including all outlet current consumption

**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.



The image shows a Windows-style dialog box titled "Add Device". It contains a "Device Groups" section with a text input field containing the word "group". Below this are four labeled input fields: "Device IP:", "Community:", "Trap IP:", and "Syslog IP:". At the bottom right are "OK" and "Cancel" buttons.

Add Device	
Device Groups	
<input type="text" value="group"/>	
Device IP:	<input type="text"/>
Community:	<input type="text"/>
Trap IP:	<input type="text"/>
Syslog IP:	<input type="text"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

**Device Group:**

Select the PDU belongs to which group

**SNMP Community:**

Set the community, it must be 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

The screenshot shows a 'Device Edit' window with the following sections:

- Local Settings:**
  - Hostname: PDU
  - Device Groups: A list box containing 'group'.
  - Community: public
  - Trap Forward IP: (empty field)
  - Syslog Server IP: (empty field)
- SNMP Settings:**
  - Name: PDU
  - Location: Office
  - Contact: Admin
- Network Settings:**
  - IP Address: 192.168.0.37
  - Modify button
- Carbon Emission:**
  - Rate: 0.636
- Total Current Threshold Settings:**
  - Warning Current: 10.0
  - Critical Current: 12.0
- ENV Threshold Setting:**
  - Temperature:
    - Lower Bound: 1
    - Upper Bound: 99
  - Humidity:
    - Lower Bound: 1
    - Upper Bound: 99

At the bottom right are 'OK' and 'Cancel' buttons.

### Device Group:

Change the PDU belongs to which group

### SNMP Community:

Set the community, it must be 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.

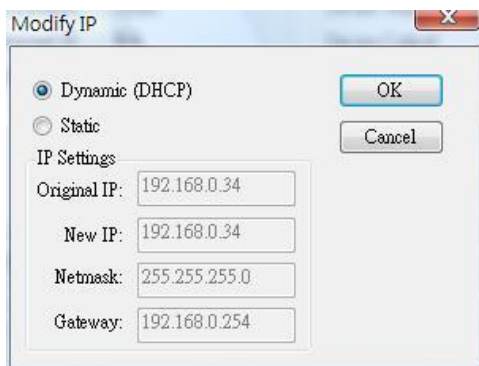
### **SNMP Settings:**

Modify the SNMP information for the PDU.

### **Network Settings:**

Redefine the IP address of PDU.

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



### **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.

### **Remove Selected Device**

Delete the selected the IP address of PDU

### **Edit PDU Config**

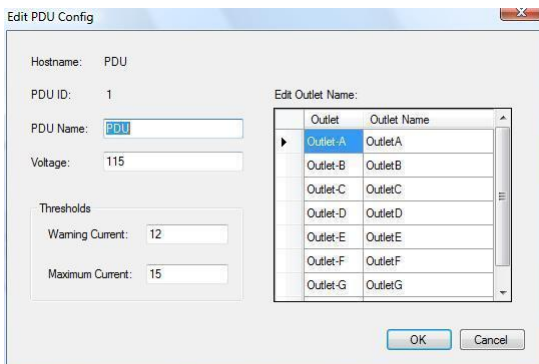
Modify PDU configuration.

PDU Name: User defines the PDU name.

Voltage: User defines the voltage..

Threshold: PDU Threshold.

Outlet Name: (Option) User defines the outlet name.



The 'Edit PDU Config' dialog box contains the following fields and sections:

- Hostname: PDU
- PDU ID: 1
- PDU Name: PDU
- Voltage: 115
- Thresholds section:
  - Warning Current: 12
  - Maximum Current: 15
- Edit Outlet Name table:

Outlet	Outlet Name
Outlet-A	OutletA
Outlet-B	OutletB
Outlet-C	OutletC
Outlet-D	OutletD
Outlet-E	OutletE
Outlet-F	OutletF
Outlet-G	OutletG
- Buttons: OK, Cancel

## Remove Selected PDU

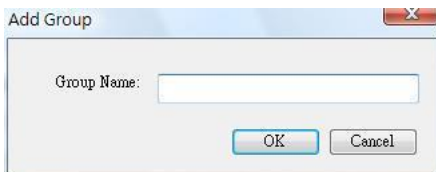
Delete the selected PDU

## Update Device Information

Update the PDU information manually.

## Add Device Group

Create a new group.



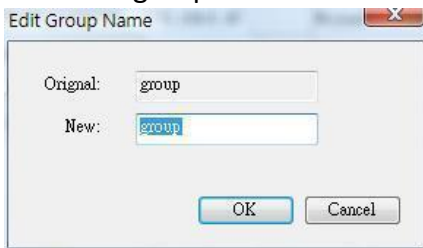
The 'Add Group' dialog box contains the following fields and buttons:

- Group Name: [Text Input Field]
- Buttons: OK, Cancel

The default group is named “Group”.

## Edit Group

Rename the group



## Remove Device Group

Delete an existing group. All PDU listed under this group must be removed first.

# Data Management

Provide data management. Logs can be export and remove from database.

**Export kW\*hr Account to CSV**

**Export Data Log to CSV**

**Export Events to CSV**

**Remove kW\*hr Account Records**

**Remove Data Log Records**

**Remove Event Records**



# System Management

## Scan Subnet

Search all IP addresses of PDU that had being connected under the same subnet.

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.

Scan Domain

Network Settings

☒ Scan network interface subnet

Realtek RTL8101 Family PCI-E Fast Ethernet NIC (NDIS 6.0)

☐ Scan the specify subnet

IP: 192.168.0.1 Net Mask: 255.255.255.0

Scan

MAC	IP	Description	Add	Modify
00:16:18:77:04:5F	192.168.0.36	Switched PDU	<input checked="" type="checkbox"/>	Modify
00:16:18:77:04:51	192.168.0.38	Switched PDU	<input checked="" type="checkbox"/>	Modify
00:16:18:77:04:4D	192.168.0.35	Switched PDU	<input checked="" type="checkbox"/>	Modify
00:16:18:76:50:F2	192.168.0.39	Switched PDU	<input checked="" type="checkbox"/>	Modify
00:16:18:77:05:2D	192.168.0.40	Switched PDU	<input checked="" type="checkbox"/>	Modify
00:16:18:75:00:B3	192.168.0.42	Switched PDU	<input checked="" type="checkbox"/>	Modify

Select All UnSelect All

Device Groups:

PDU

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 (optional)

Account:

Password:

Rate

1 kWh = \$ ?

Unit Price: 1

Temperature Unit

☒ Celsius

☐ Fahrenheit

Period

Data Log: 1  minute(s)

OK Cancel

**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:**

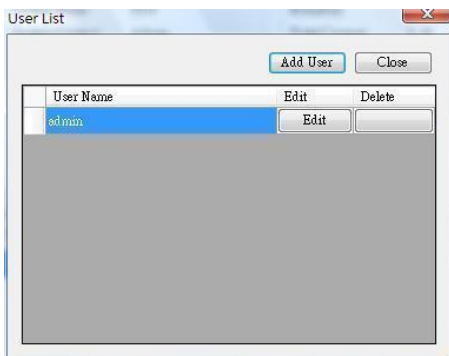
Switch the temperature unit between Celsius and Fahrenheit.

**Period:**

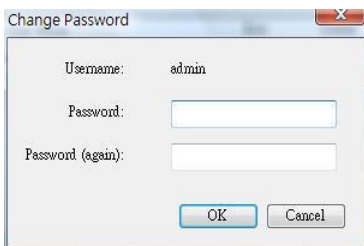
Change the interval of log.

## User List

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



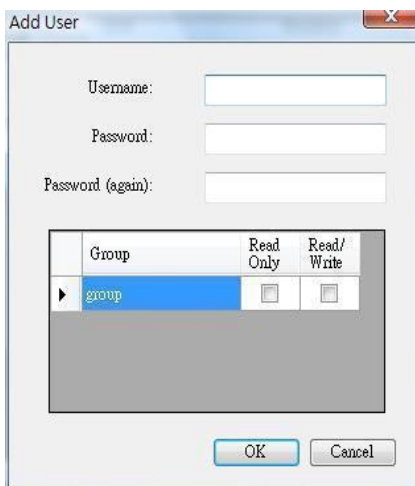
User can only change the password for the “Admin” account.



## Add user

User can be assigned to the authority of Read

only or Read/Write.



The 'Add User' dialog box contains three text input fields for 'Username:', 'Password:', and 'Password (again):'. Below these is a table with columns 'Group', 'Read Only', and 'Read/Write'. The 'group' entry is selected, and both 'Read Only' and 'Read/Write' checkboxes are unchecked. 'OK' and 'Cancel' buttons are at the bottom.

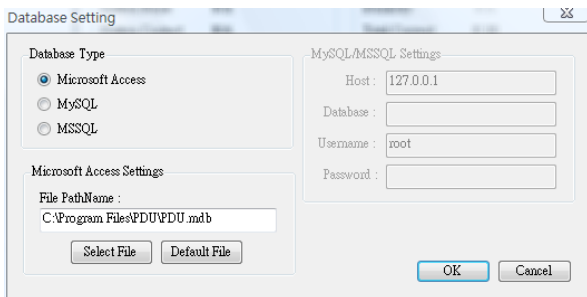
Group	Read Only	Read/Write
▶ group	<input type="checkbox"/>	<input type="checkbox"/>

## Edit User:

Change the password, authority for the user.

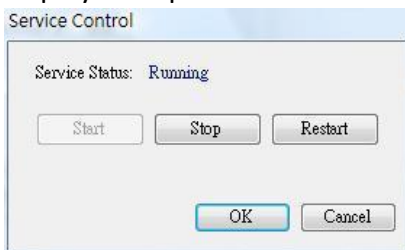
## Database Setting

Modify the database setting.



## Service Control

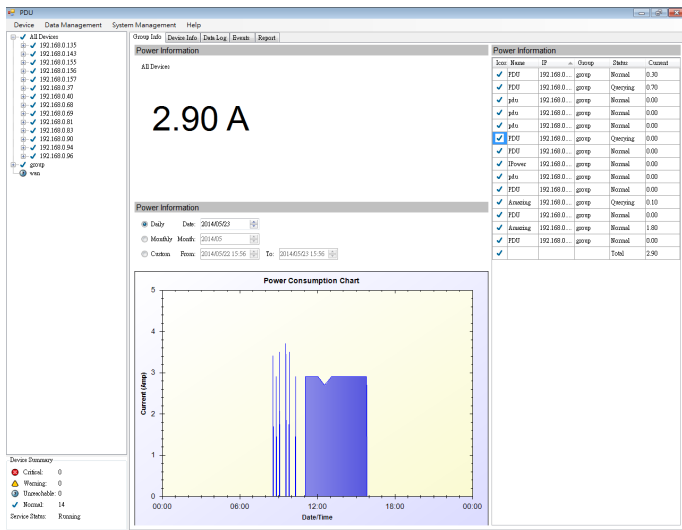
Display the operation status of PDU utility



### Note:

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

# Group Info.



## All Devices:

Display total current consumption in this group.

## Power Consumption Chart

Summarize and display all PDU current consumption in this group.

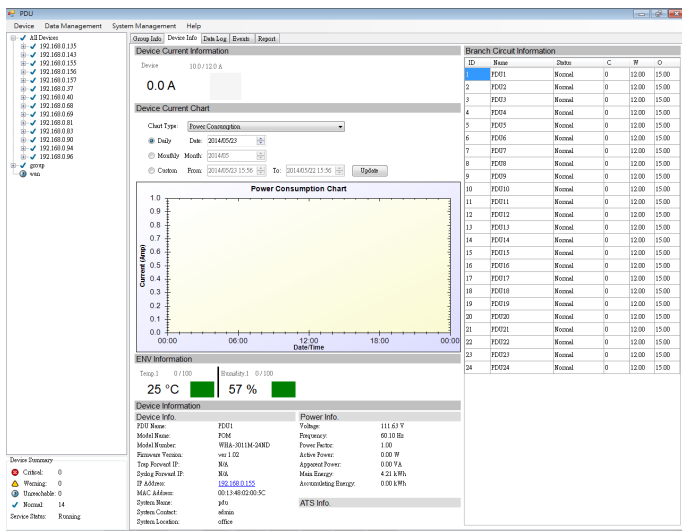
## **Power information**

Display each PDU current consumption in this group.



# Device Info.

Provide PDU information.



## Device Current Information:

Display PDU current consumption information.

## **Device Current Chart:**

Display individual PDU current chart.

## **ENV information**

Display temperature and humidity information when ENV probe was plugged to PDU

## **Device information**

Indicate the device information, Including

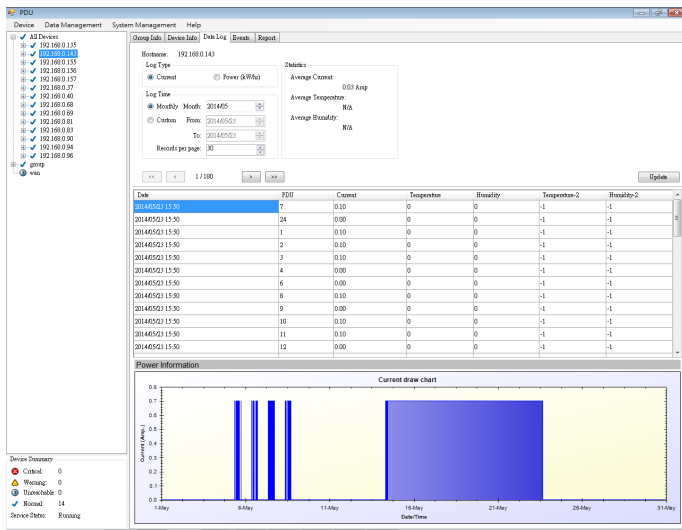
- PDU name
- Model Name
- Model Number
- Firmware Version
- Trap Forward IP
- Syslog Forward IP
- SNMP
- MAC address
- other power information, including kWh, Voltage, VA, W, Hz

## **Branch Circuit information**

Display each PDU current consumption in this group.

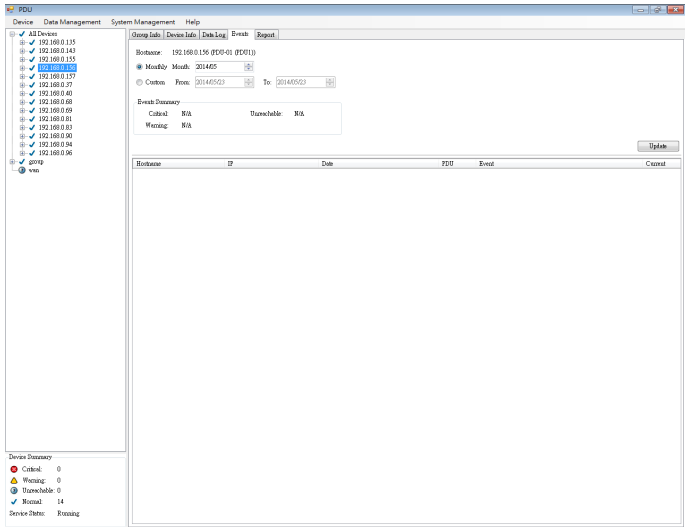
## Data Log

Provide PDU current data and power record.



# Event Log:

Provide events log.



# Report:

Provide data analysis.

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

