



A-Neutronics[®], Inc.

PDU Utility

User Manual

Version 3.1

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1. Introduction

General

PDU (Power Distribution Unit) Utility is a PDU monitoring, management software. It is designed to provide information on power conditions, PDU status, and power environment. It is most beneficial for managing multiple PDU's or when data logging is required. It only works with A-Neutronics PDU's that support Ethernet connectivity.

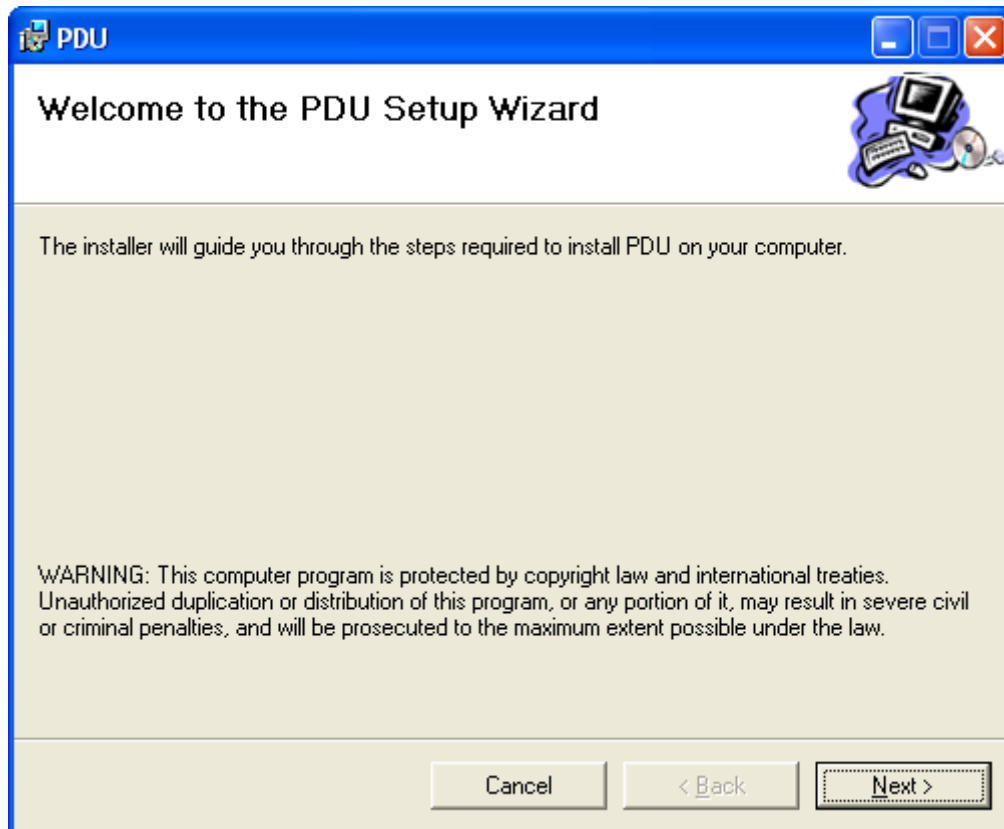
FEATURES:

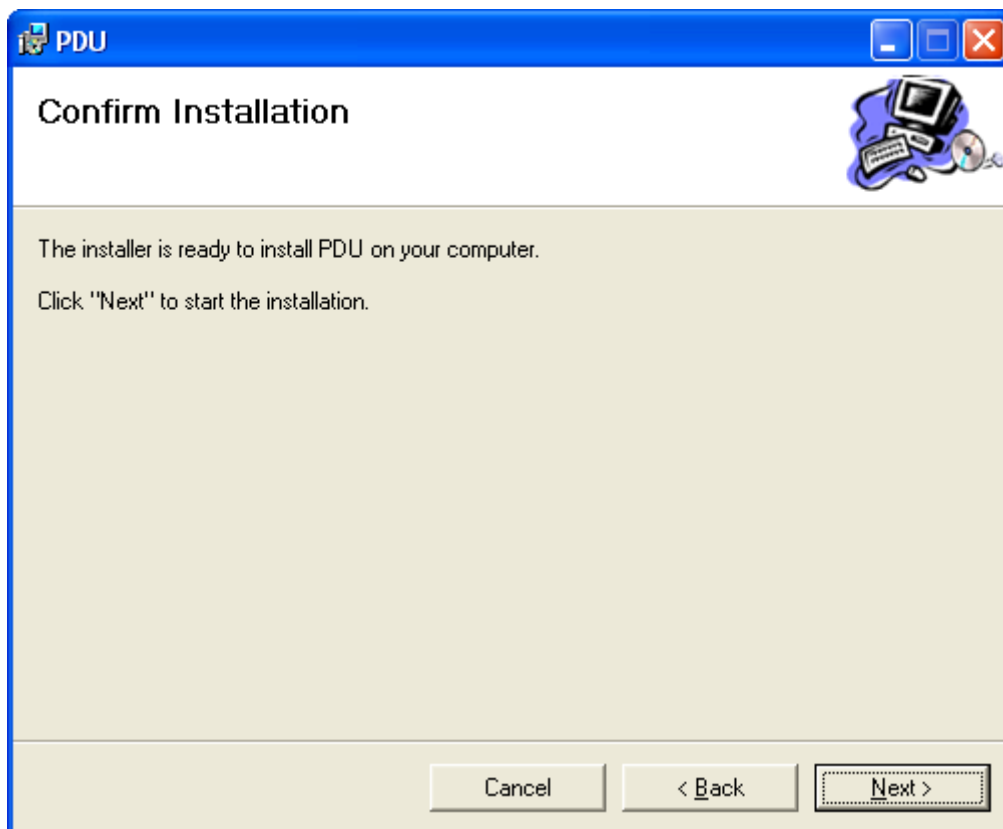
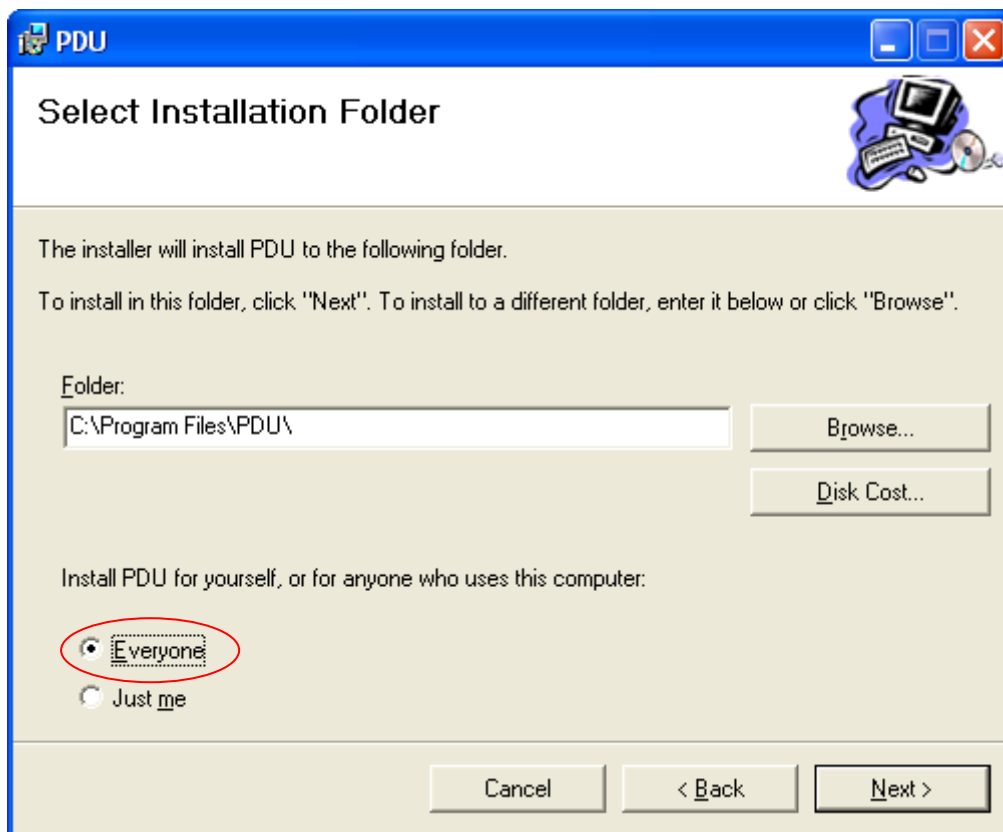
1. Monitor multiple PDU power consumption simultaneously.
2. Group Management of a large amount of the PDU.
3. Provide power consumption chart for daily monthly or user-defined period.
4. Sends email and trap information to specific account when a power event occurs.
5. Forward trap information to a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

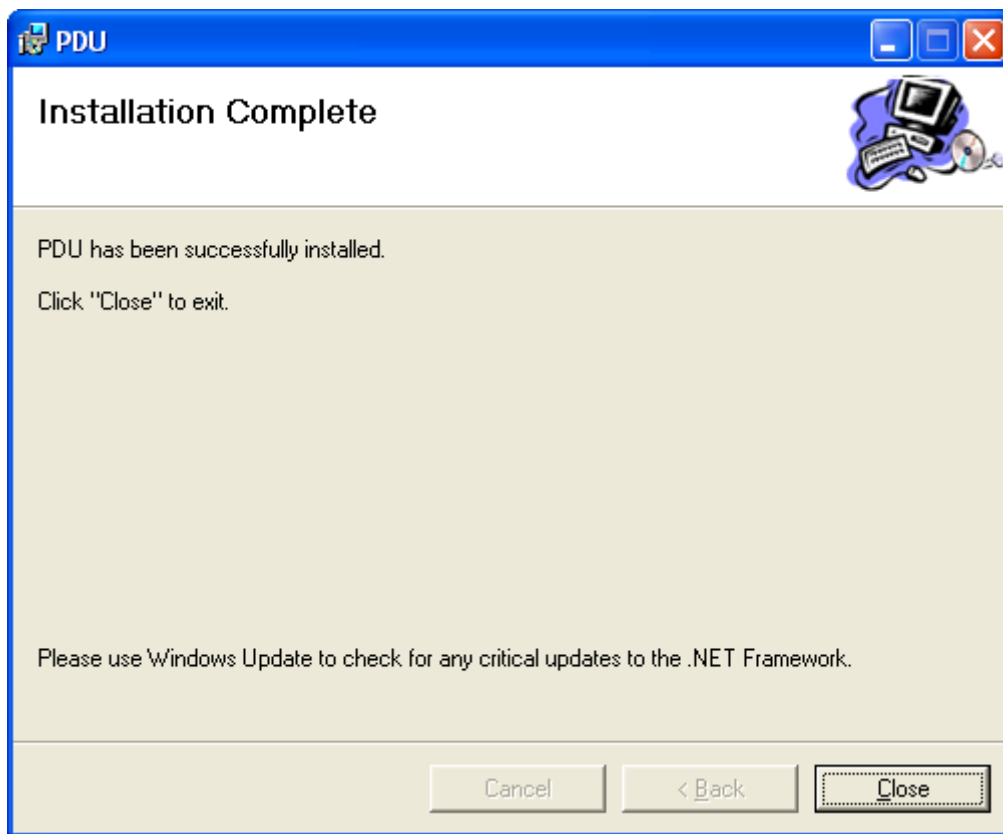
2. Installation

Install procedure:

Select "setup.exe" from the CD.



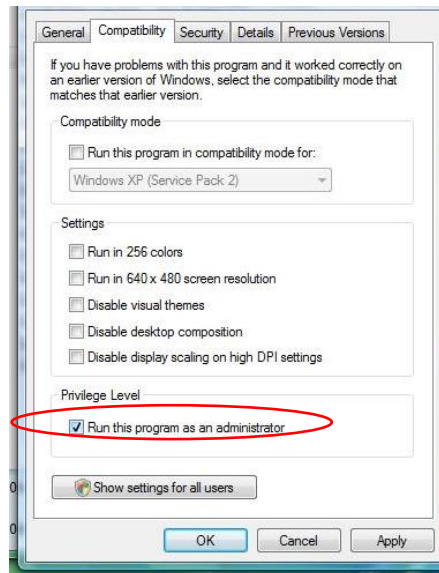


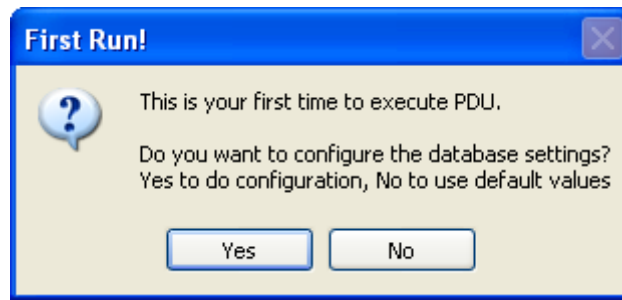


Note:

- 1. It will take several minutes if your operation system has not installed the Microsoft .NET Framework.**
- 2. It is recommended to install the PDU Utility PDU Utility to the server level of Windows operation system.**

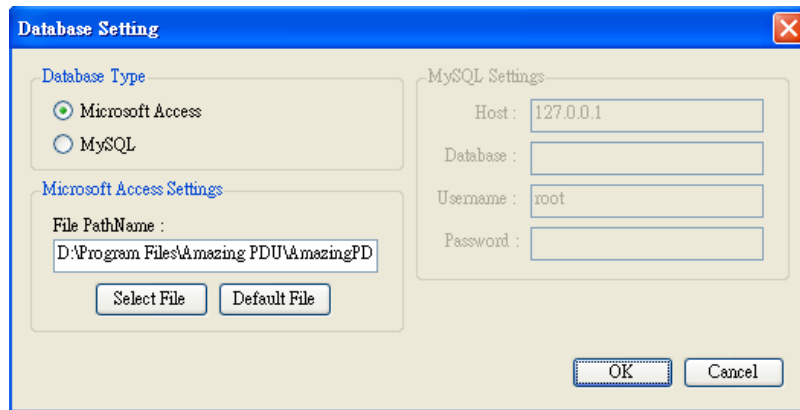
Note: if the install utility under **Windows Vista OS** does not appear, you must first go to the folder of PDU Utility PDU and select the Properties of "PDU.exe", shown as below to check the "Run this program as an administrator". Then the utility will work normally.





Upon first use of PDU Utility PDU software, you must select what kind of database that you want to record the PDU Utility PDU information.

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



3. PDU Utility Interface

Start

The Login Screen.

The default

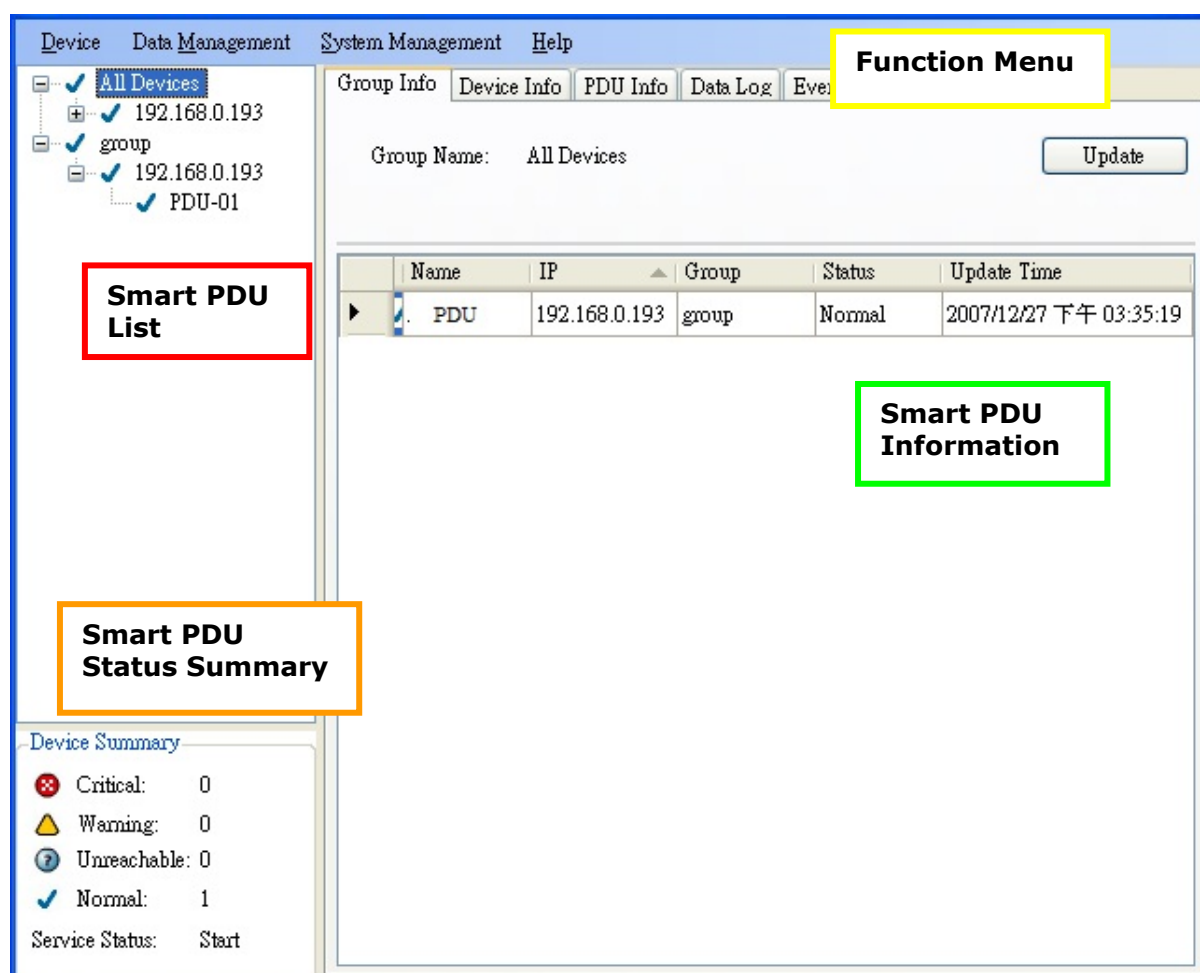
User Name: admin

Password: 1234

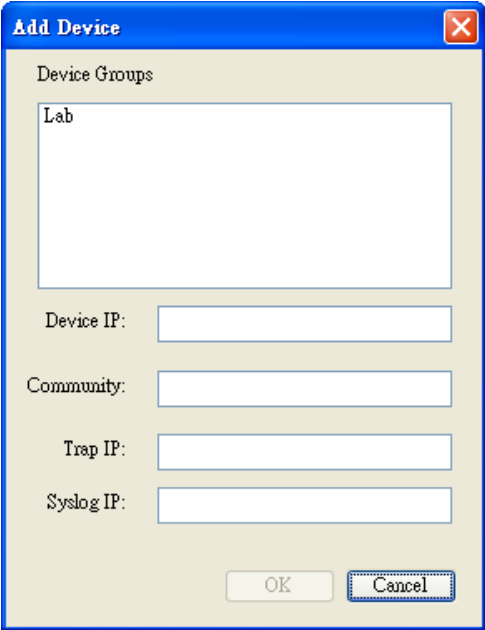


After login to the software, you will see the software interface as following, it contains four sections:

1. **Function Menu:**
PDU Utility functions bar.
2. **PDU List:**
Lists 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 detailed information about the PDU.
4. **Device Summary:**
Indicates the status of the monitored PDU in the network.



Function Menu

| Device | |
|------------|---|
| Add Device | <div>Administrator can add the PDU manually if the IP address of PDU had been setup before.</div> <div></div> <div><div>Device Group:</div><div>Select the PDU that belongs to a specific group</div><div>SNMP Community:</div><div>Set the community, it must be the same as 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.</div><div>Trap forward IP:</div><div>When event occurs, it can forward the event trap to the certain NMS.</div><div>Syslog server IP:</div><div>Forward the log to the certain Syslog server.</div></div> |

| | |
|-------------|--|
| Edit Device | Administrator can redefine the PDU information here, including |
|-------------|--|

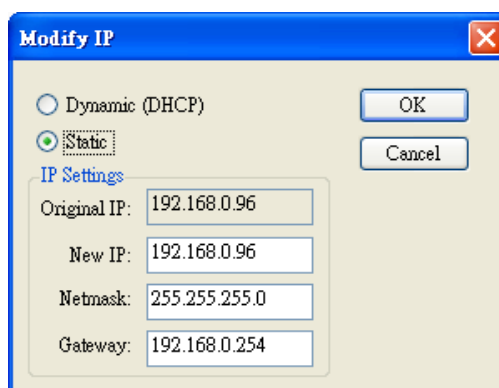
The screenshot shows the 'Device Edit' window with the following sections:

- Local Settings:**
 - Device Groups: A list box containing 'group'.
 - Community: 'private' (text input).
 - Trap Forward IP: (empty text input).
 - Syslog Server IP: (empty text input).
- SNMP Settings:**
 - Name: 'Amazing' (text input).
 - Location: 'Office' (text input).
 - Contact: 'Admin' (text input).
- Network Settings:**
 - IP Address: '192.168.0.33' (text input).
 - Modify: (button).
- Total Current Threshold Settings:**
 - Warning Current: '10.0' (text input).
 - Critical Current: '12.0' (text input).
- ENV Threshold Setting:**
 - Temperature:
 - Lower Bound: 'N/A' (text input).
 - Upper Bound: 'N/A' (text input).
 - Humidity:
 - Lower Bound: 'N/A' (text input).
 - Upper Bound: 'N/A' (text input).

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

| | |
|---------------------------------|---|
| Device Group: | Change the PDU Utility PDU that belongs to which group |
| SNMP Community: | Set the community, it must be the same as the PDU Utility 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 Utility PDU. |
| Network Settings: | Re-define the IP address of PDU Utility PDU. |
| Total Current Threshold Setting | It is only available when there is not just 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 uses to obtain the IP.



Modify IP

☐ Dynamic (DHCP)
 ☒ Static

IP Settings

Original IP: 192.168.0.96

New IP: 192.168.0.96

Netmask: 255.255.255.0

Gateway: 192.168.0.254

OK Cancel

Remove Selected Device

Delete the selected the IP address of PDU

Edit PDU Config

Modify PDU configuration.

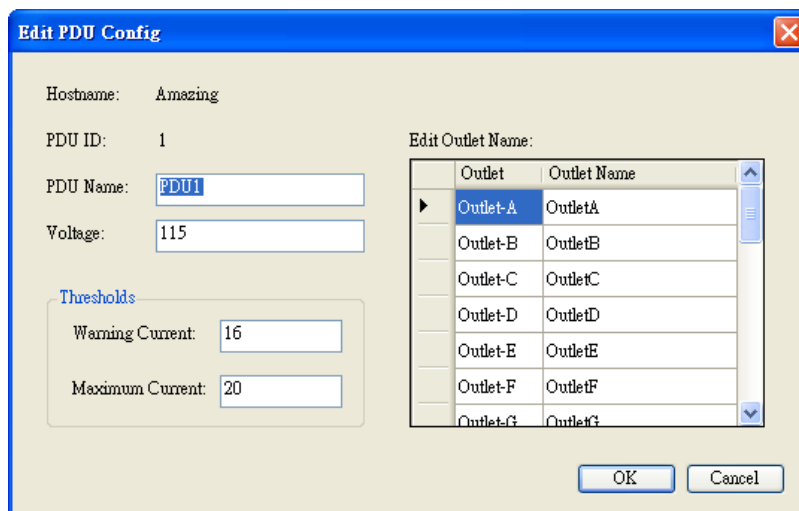
PDU Name: User defines the PDU name.

Voltage: User defines the voltage..

Threshold: PDU Threshold.

Outlet Name: User defines the outlet name.

(Option)



Edit PDU Config

Hostname: Amazing

PDU ID: 1

PDU Name: PDU1

Voltage: 115

Thresholds

Warning Current: 16

Maximum Current: 20

Edit Outlet Name:

| Outlet | Outlet Name |
|----------|-------------|
| Outlet-A | OutletA |
| Outlet-B | OutletB |
| Outlet-C | OutletC |
| Outlet-D | OutletD |
| Outlet-E | OutletE |
| Outlet-F | OutletF |
| Outlet-G | OutletG |

OK Cancel

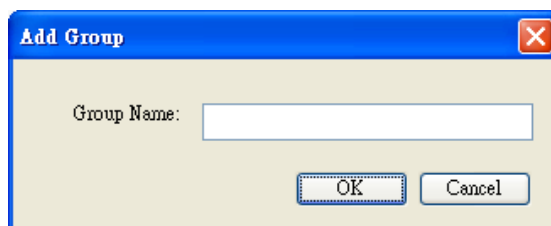
Remove Selected PDU

Update Device
Information

Update the PDU information manually.

Add Device Group

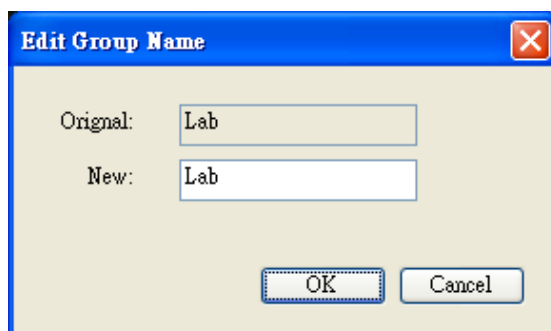
Create a new group.

A dialog box titled "Add Group" with a blue header bar and a red close button. It contains a text input field labeled "Group Name:" and two buttons at the bottom: "OK" and "Cancel".

The default group is named "Lab".

Edit Group

Rename the group

A dialog box titled "Edit Group Name" with a blue header bar and a red close button. It contains two text input fields: "Original:" with the value "Lab" and "New:" with the value "Lab". There are "OK" and "Cancel" buttons at the bottom.

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.

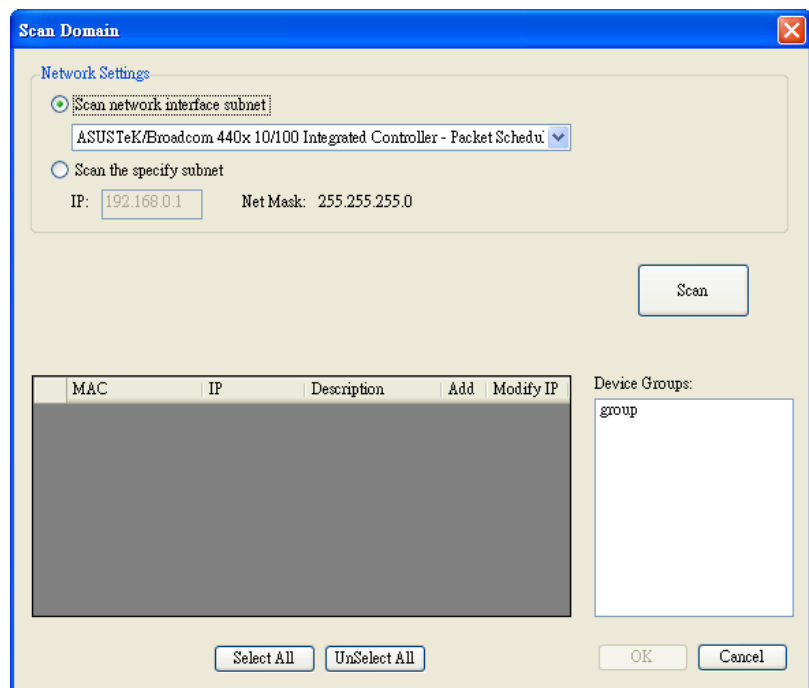
System Management

Scan Subnet

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

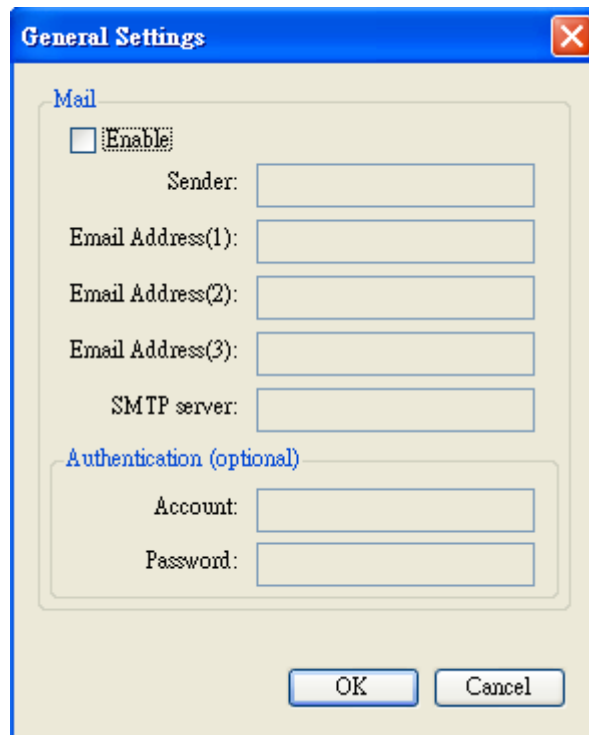
Procedure:

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. Check the box of "ADD" that you want to add to PDU Utility.
4. Select one of the groups in the "Device Group" to categorize the PDU.
5. Select "OK" to finish the procedure.



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:

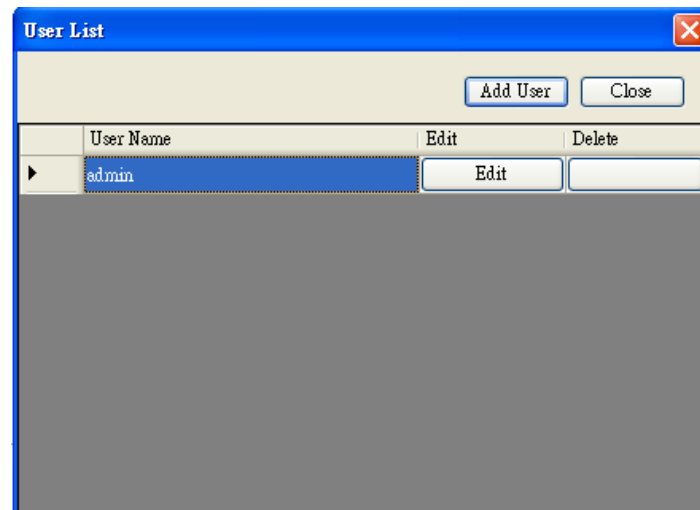
Password:

OK Cancel

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

User List

Administrator can add, delete and manage all the user privileges here.

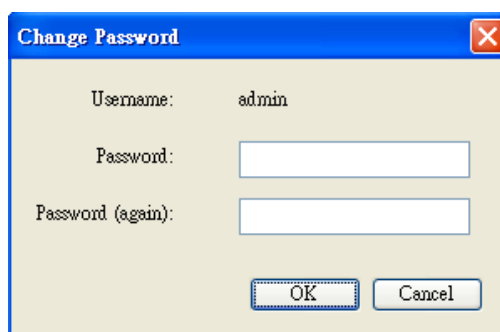


User List

Add User Close

| | User Name | Edit | Delete |
|---|-----------|------|--------|
| ▶ | admin | Edit | |

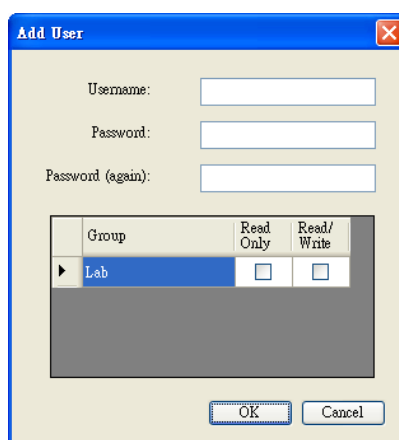
User can only change the password for the "Admin" account.



A dialog box titled "Change Password" with a close button (X) in the top right corner. It contains three input fields: "Username:" with the text "admin", "Password:" (empty), and "Password (again):" (empty). At the bottom are "OK" and "Cancel" buttons.

Add user

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

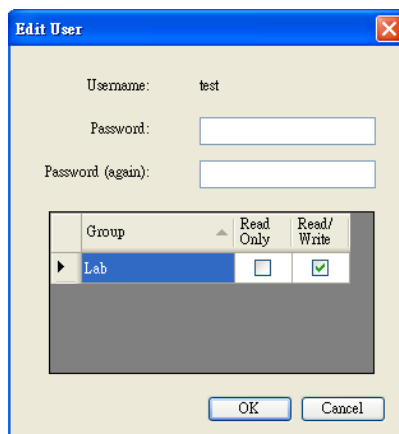


A dialog box titled "Add User" with a close button (X) in the top right corner. It contains three input fields: "Username:" (empty), "Password:" (empty), and "Password (again):" (empty). Below these is a table with columns "Group", "Read Only", and "Read/Write". The "Lab" group is selected, and both "Read Only" and "Read/Write" checkboxes are unchecked. At the bottom are "OK" and "Cancel" buttons.

| Group | Read Only | Read/Write |
|-------|--------------------------|--------------------------|
| ▶ Lab | <input type="checkbox"/> | <input type="checkbox"/> |

Edit User:

Change the password, authority for the user.

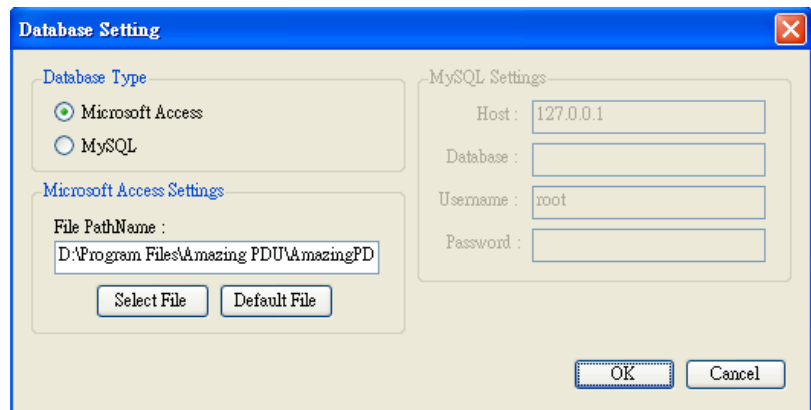


A dialog box titled "Edit User" with a close button (X) in the top right corner. It contains three input fields: "Username:" with the text "test", "Password:" (empty), and "Password (again):" (empty). Below these is a table with columns "Group", "Read Only", and "Read/Write". The "Lab" group is selected, "Read Only" is unchecked, and "Read/Write" is checked. At the bottom are "OK" and "Cancel" buttons.

| Group | Read Only | Read/Write |
|-------|--------------------------|-------------------------------------|
| ▶ Lab | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

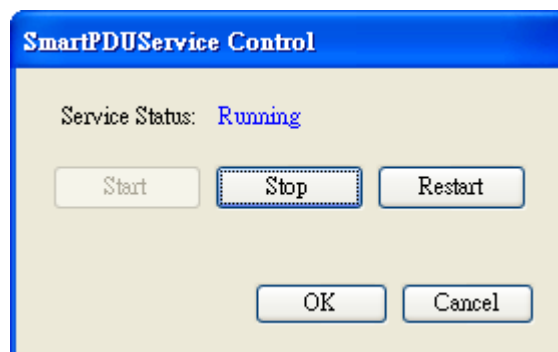
Database Setting

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.

PDU Information

Group Information:

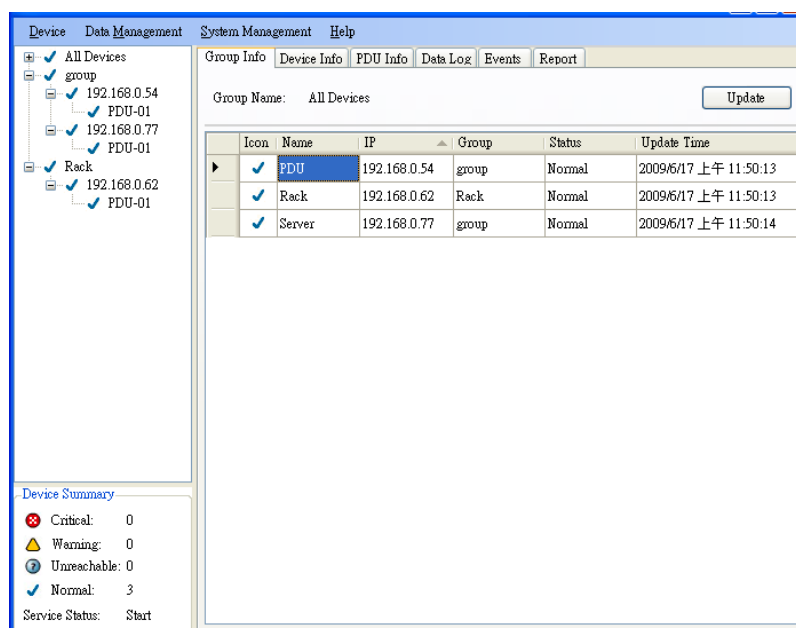
List all PDU in this table and provide some important information.

Device Summary

-  **Critical:** Indicates output power of the PDU that exceeds the setting of overload.
-  **Warning:** Indicates output power of the PDU exceeds the setting of warning.
-  **Unreachable:** Indicates that the PDU Utility can not reach the PDU.
-  **Normal:** Indicates the PDU is working normally.

Service Status PDU Utility service status.

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



Icon: Indicates the PDU status by different icon.

Name: The name of PDU.

IP: The IP address of PDU

Status: Indicates 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 updated PDU information.

Device Information:

Network Information:

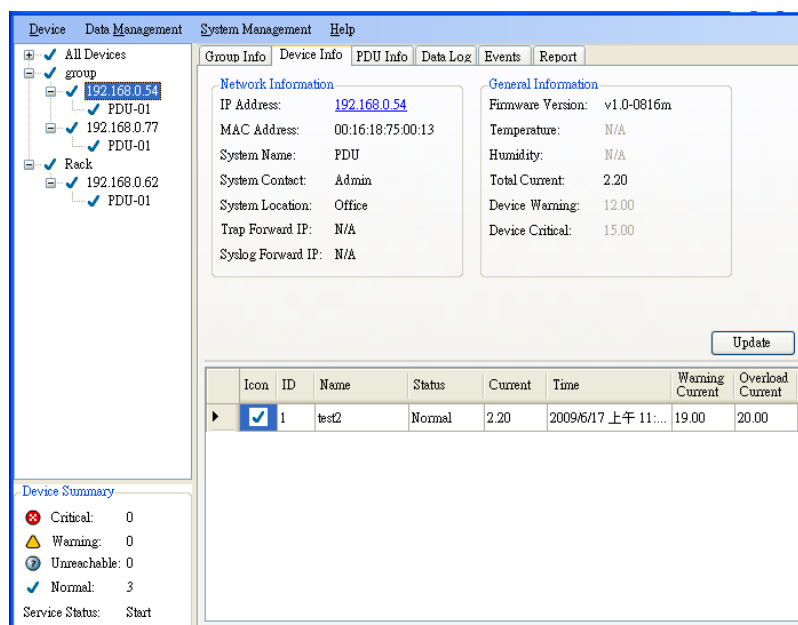
Indicates the network and system information, Including

- 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:

Indicates 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: Indicates 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.

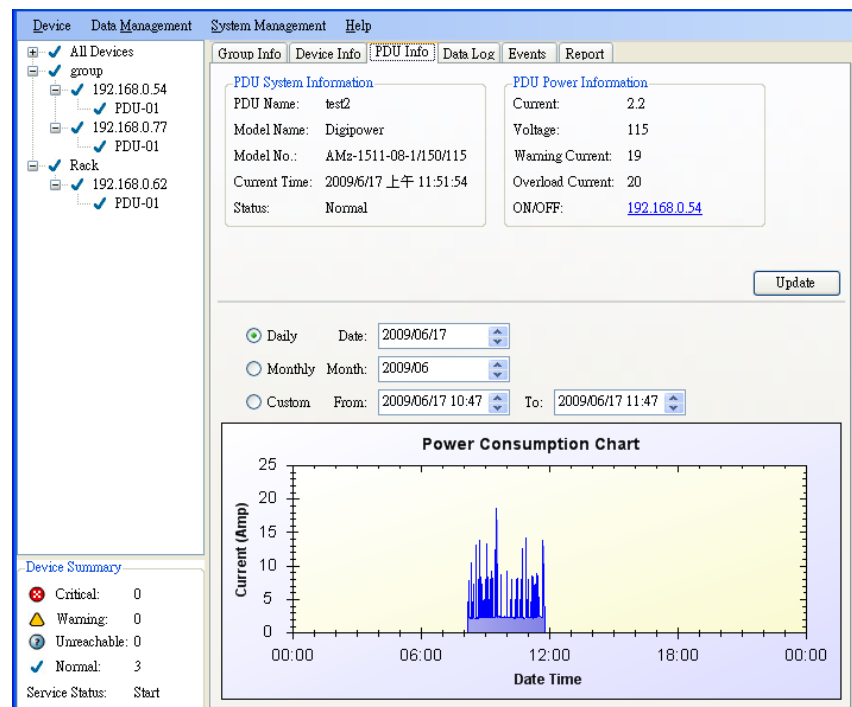
PDU Information:

PDU System Information:

Provide the PDU information and status.

PDU Power Information:

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



Power Consumption Chart:

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

Data Log:

Provides PDU current data and power record.

Device Data Management System Management Help

Group Info Device Info PDU Info Data Log Events Report

Hostname: 192.168.0.54

Log Type
☒ Current ☐ Power (kW/h)

Log Time
☒ Monthly Month: 2009/06
☐ Custom From: 2009/06/17 To: 2009/06/17
Records per page: 30

Statistics
Average Current: 3.41 Amp
Average Temperature: N/A
Average Humidity: N/A

<< < 1 / 19 > >> Update

| Date | PDU | Current | Temperature | 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 |
| 2009/06/17 11:46 | 1 | 7.10 | 0 | 0 |
| 2009/06/17 11:45 | 1 | 7.10 | 0 | 0 |
| 2009/06/17 11:44 | 1 | 13.70 | 0 | 0 |
| 2009/06/17 11:43 | 1 | 7.50 | 0 | 0 |
| 2009/06/17 11:42 | 1 | 2.30 | 0 | 0 |

Device Summary
Critical: 0
Warning: 0
Unreachable: 0
Normal: 3
Service Status: Start

Events:

Provide events log.

Device Data Management System Management Help

Group Info Device Info PDU Info Data Log Events Report

Hostname: 192.168.0.54

Monthly Month: 2009/06

Custom From: 2009/06/17 To: 2009/06/17

Events Summary

Critical: 42 Unreachable: 0

Warning: 137

Update

| Hostname | IP | Date | PDU | Event | Cure |
|----------|--------------|---------------------|-----|-------------------------------|------|
| N/A | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - add a ... | 2.2 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Warni... | 8 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Warni... | 8 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Norm... | 2.2 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Normal | 2.2 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Warni... | 9.6 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Warni... | 9.6 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Norm... | 2.3 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Normal | 2.3 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Critical | 8.4 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Critic... | 8.4 |
| Amazing | 192.168.0.54 | 2009/6/16 上午 11:... | 1 | AmazingPDUService - Norm... | 2.2 |

Device Summary

Critical: 0

Warning: 0

Unreachable: 0

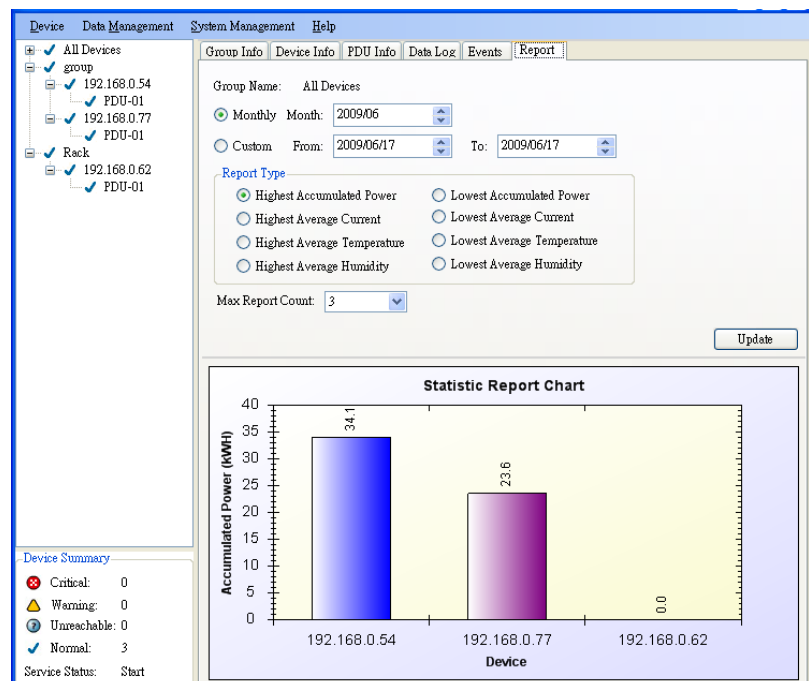
Normal: 3

Service Status: Start

Report:

Provide data analysis.

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



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END OF DOCUMENT