

PowerPanel[®] Enterprise

Basic/ Standard/ Advanced

Rev. 5

SAVE THESE INSTRUCTIONS

Please read this manual and follow the instructions for installation and use.

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Chapter 1 Introduction

1.1 Overview

PowerPanel® Enterprise software is a centralized power monitoring software designed to monitor and manage a large number of devices in the data center. The software allows users to customize the floor map of data center, and displays the devices and their real-time information in different colors to help users spot the problems at a glance. Furthermore, PowerPanel® Enterprise provides dynamic dashboards, analytical charts and periodic reports to show comprehensive information on data center energy consumption, power usage, PUE and environmental statistics, helping users make optimal power management decisions.

1.2 System Structure

PowerPanel® Enterprise software is a web-based software system that adopts the client-server architecture, allowing users to remotely access the system through a web browser on a computer. It consists of four software components: [Web Applications](#) for users to remotely access the system through the web browser, [Dataloader](#) for collecting data from devices and checking new updates, [AlertMail](#) for sending the alarm notifications and [Upgrade Tool](#) for upgrading the software system.

1.2.1 Web Applications

PowerPanel® Enterprise software runs all web applications on the Windows Internet Information Services (IIS) and delivers the calculated data of analytical dashboards and reports to user's web browser. For IIS deployment, see "PowerPanel® Enterprise Installation Guide" for details.

1.2.2 Dataloader

PowerPanel® Enterprise has built in the SNMP OIDs of all attributes of CyberPower devices. The Dataloader program collects the values of the SNMP OIDs or the Modbus data of all devices in the system and saves the historical data of all devices in the local database. It synchronizes with the CyberPower Cloud Server to check for available software upgrades and new plugins.

(Note: If you want to receive the latest software and plugins updates, please add the following two URLs: “<https://tool.magiclen.org/ip/>” and “<http://powerpanelservice.cyberpower.com/Enterprise>” to your firewall whitelist first.)

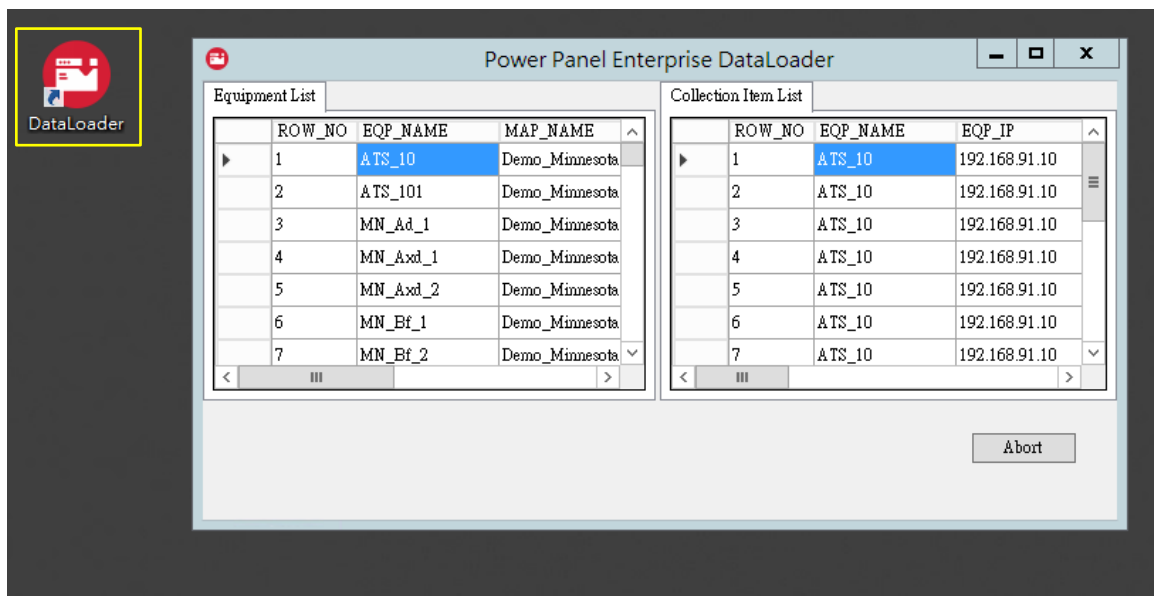


Figure 1.1 Dataloader

1.2.3 AlertMail

The system monitors all devices in the data center 24/7. If devices are abnormal, the AlertMail program will send out an E-mail to notify users of the device's problems. Before running the AlertMail program, you have to set up the SMTP server in PowerPanel® Enterprise web system. See [Alarm](#) for the detail of the alarm settings.

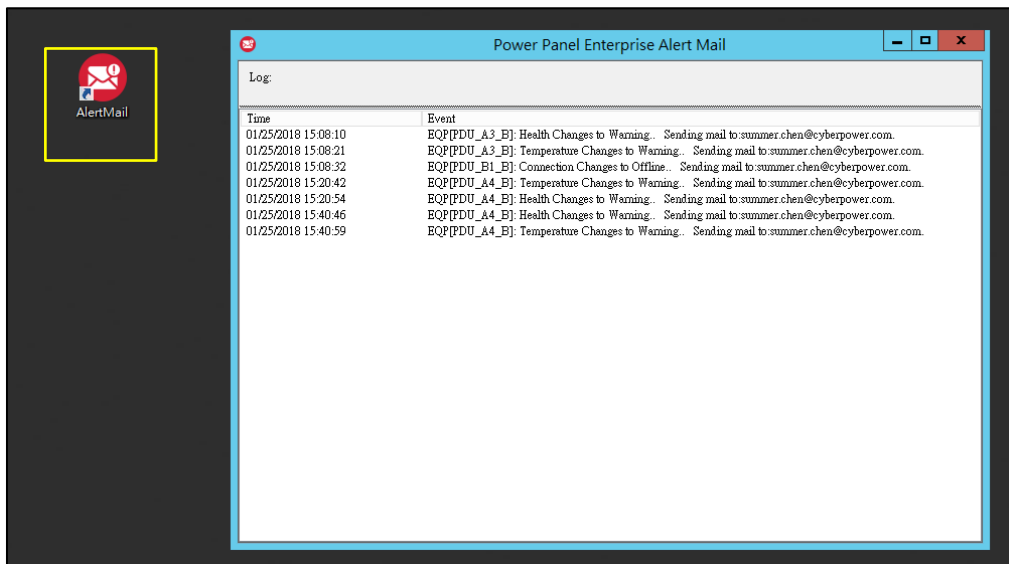


Figure 1.2 AlertMail

1.2.4 Upgrade Tool

Use your PowerPanel® Enterprise account and password to log in to Upgrade Tool (Figure 1.3). The Upgrade Tool allows users to upgrade the PowerPanel® Enterprise software, including the web applications, AlertMail and Dataloader (Figure 1.4).

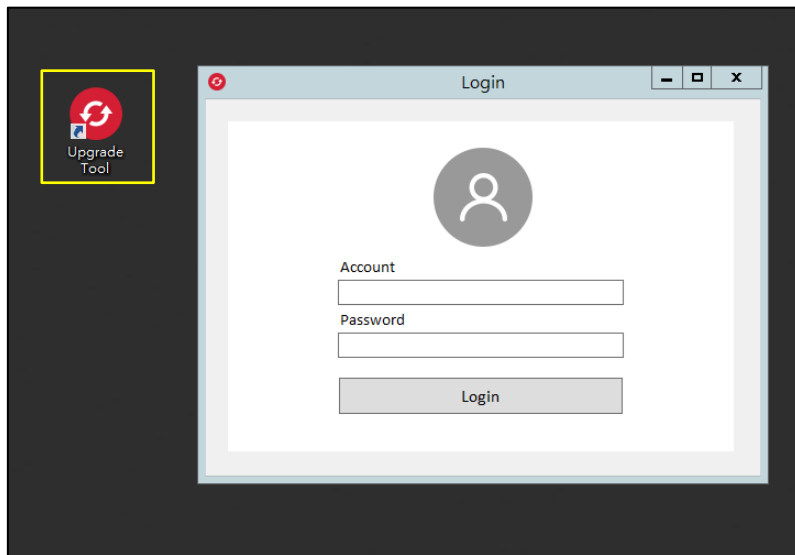


Figure 1.3 Log in to Upgrade Tool

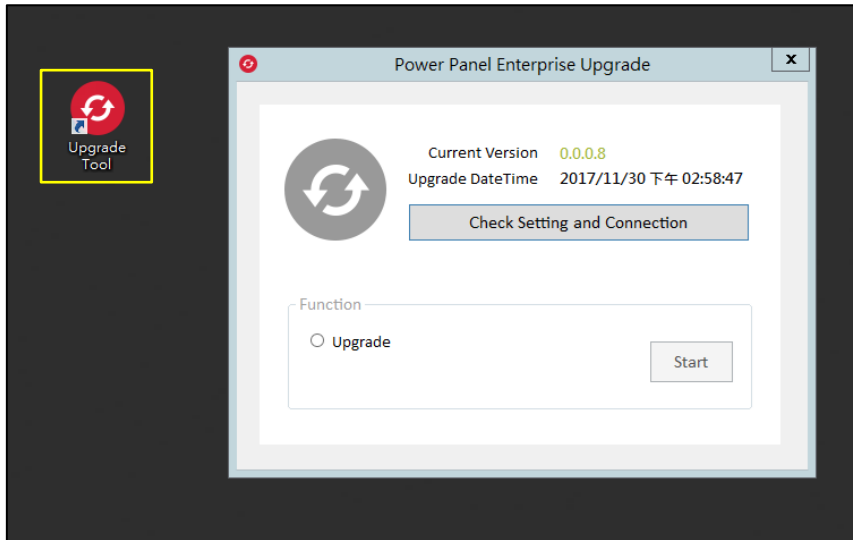


Figure 1.4 Upgrade Function

1.3 Prerequisites

The Prerequisites section describes the recommended hardware and software requirements for users to install and run the PowerPanel® Enterprise software on the server. For the detailed steps on software installation, refer to “PowerPanel® Enterprise Installation Guide”.

1.3.1 Hardware Requirements (Recommended)

The hardware requirements described in Table 1.1 are the recommended minimum for the PowerPanel® Enterprise software server.

Table 1.1 Hardware Requirements (Recommended)

Hardware	Requirement
CPU	Higher than Single core 2.4GHz-compatible CPU.
Memory	Minimum of 16GB RAM recommended; more memory generally improves responsiveness.
Hard Disk	Minimum of 500GB free space.

1.3.2 Software Requirements

Table 1.2 describes the software and operating system required to install the PowerPanel® Enterprise software, and the supported web browsers which allow users to remotely access the system.

Table 1.2 Software Requirements

Software	Requirement
Operating System	Windows Server 2012 R2 Standard 64bits, Windows Server 2016 Standard 64bits, Windows Server 2019 Standard 64bits, Windows 10
Database	Microsoft SQL Server 2012 Standard, Microsoft SQL Server 2016 Standard, Microsoft SQL Server 2017 Standard
Microsoft Office	Microsoft Office 2010 or later
Other Services	Mail Server Service (SMTP Server)
Client Web Browser	Firefox Google Chrome Microsoft Edge

1.4 Feature Specification

The supported features and specifications of PowerPanel® Enterprise Basic/ Standard/ Advanced are described in Table 1.3.

Table 1.3 Feature Specification

Software Tier Feature	PowerPanel® Enterprise Basic	PowerPanel® Enterprise Standard	PowerPanel® Enterprise Advanced
Default Device Nodes ¹	20	20	20
Login Account ²	3	20	Unlimited
Floor Map ³	3	20	Unlimited
Dashboard Templates	32	32	32
Authorization Type ⁴	Admin Only	Admin/ User/ Viewer, User-defined	Admin/ User/ Viewer, User-defined
Event Logs	Equipment Status Log, SNMP Trap Log and User Action Log		
Report Types	Weekly, Monthly, Quarterly and Yearly		
Supported Network Protocol	SNMPv1, SNMPv3 and Modbus TCP		
Supported Device Types	CyberPower devices (PDU, ATS, UPS, RMCARD, Environmental Sensor)		
Supported 3 rd -party Devices	No (CyberPower Device Only)		
Alarm Notification	E-mail		

¹ The default number of device nodes provided in the system.

² The maximum number of user accounts that you can add in the system.

³ The maximum number of floor maps that you can create in the system.

⁴ There are three types of account authorization built into the system that allows users to grant different permissions to each account. Users can define their own account authorizations in Standard and Advanced tier. For the Basic tier, only one authorization type is available, and all added accounts are automatically granted the Admin Authorization by the system. See more details in [Authorization](#).

Chapter 2 Login

Use the default account *Admin* and password *admin* to log in to PowerPanel® Enterprise, and change the default password immediately (Figure 2.1).

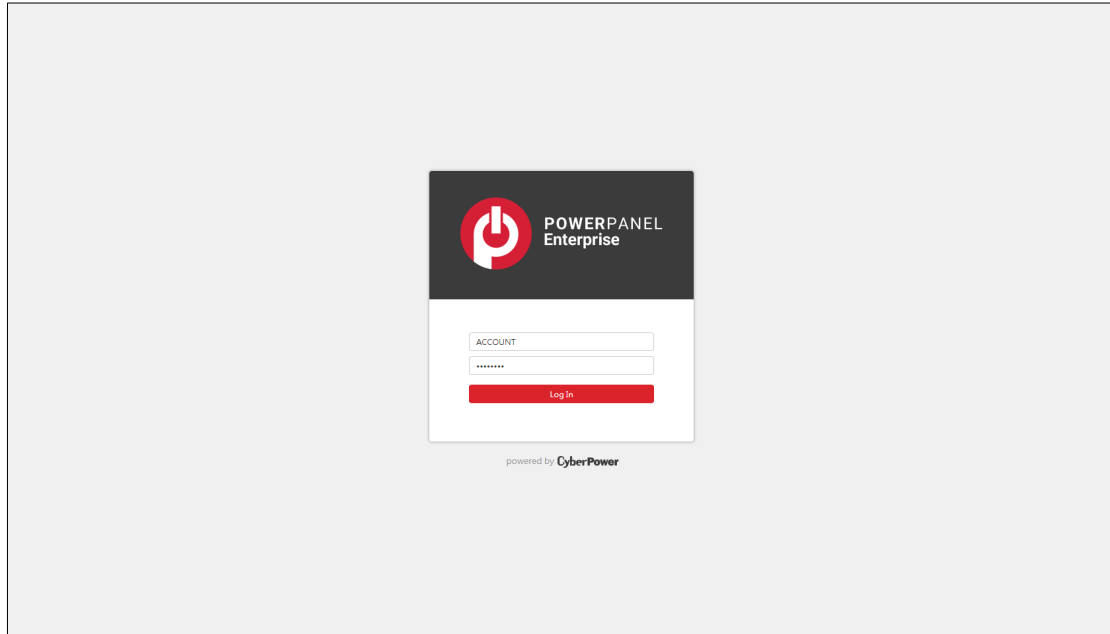


Figure 2.1 Login page

Chapter 3 Tool Bar

The Tool Bar allows users to change the system language and account password, and log out of the system (Figure 3.1, Table 3.1).

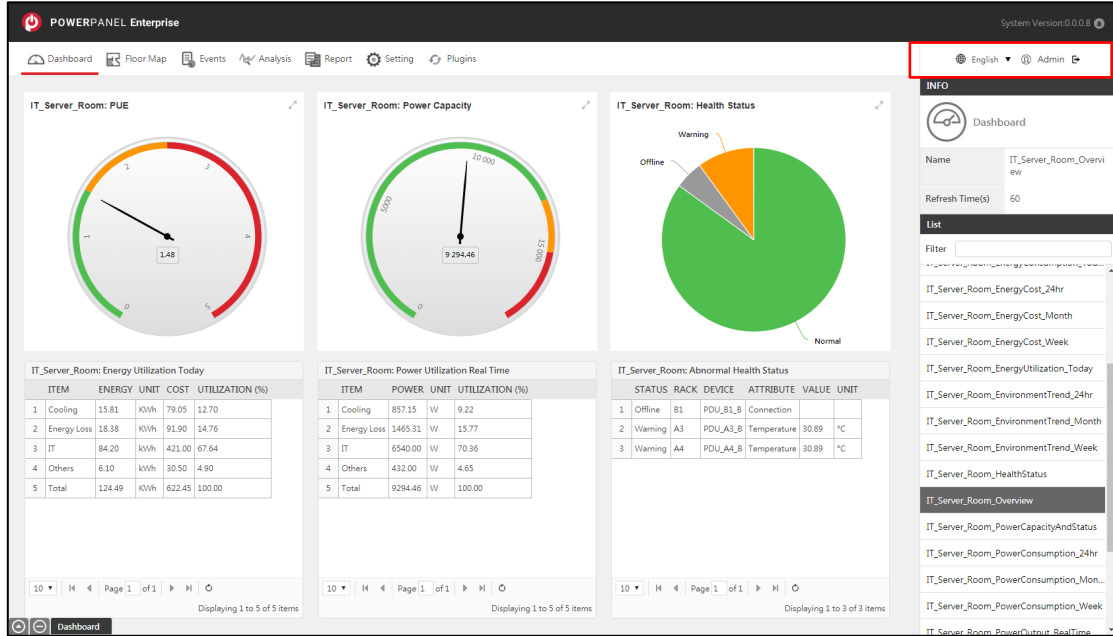





Figure 3.1 Tool Bar function

Table 3.1 Tool Bar function description

Icon	Description
	Click to change the system language.
	Click to change account password.
	Click to log out of the system.

Chapter 4 Tab Bar

The Tab Bar allows users to open the history pages, and it can display up to 15 page tabs (Figure 4.1, Table 4.1).

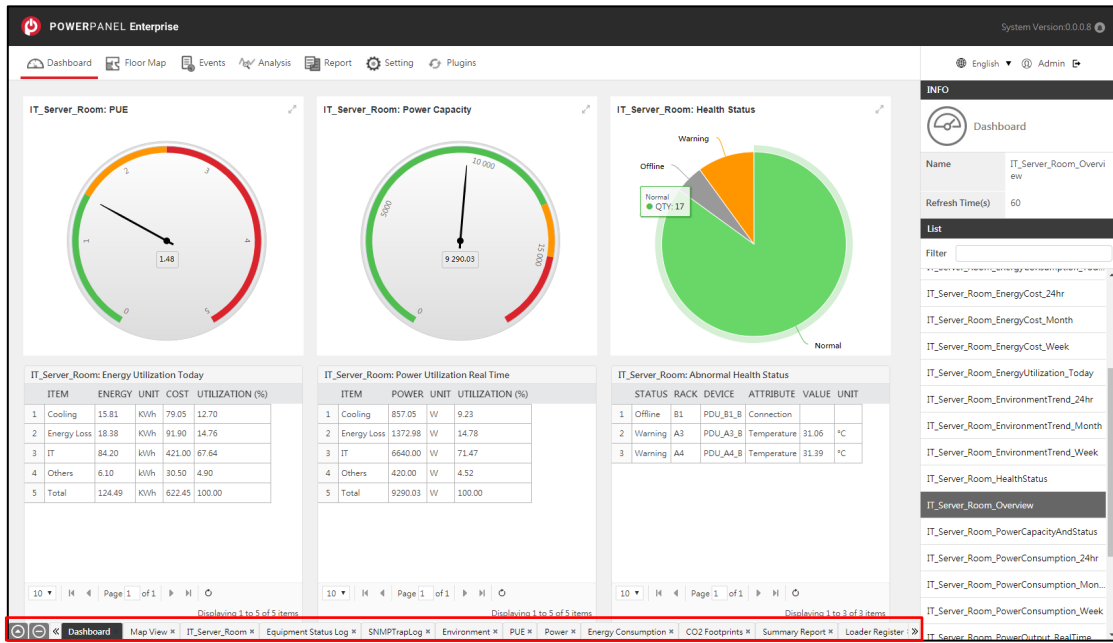


Figure 4.1 Tab Bar

Table 4.1 Tab Bar function description

Icon	Description
	Click to hide or show the Tab Bar.
	Click to close all tabs, leaving only the tab highlighted in the Tab Bar.
	Click to see the hidden tabs available on the left side or right side of the Tab Bar.

Chapter 5 Display Panel

The Display Panel displays the main data in table view, chart view, or floor map view, and the major setup operations are also displayed and completed in this area (Figure 5.1).

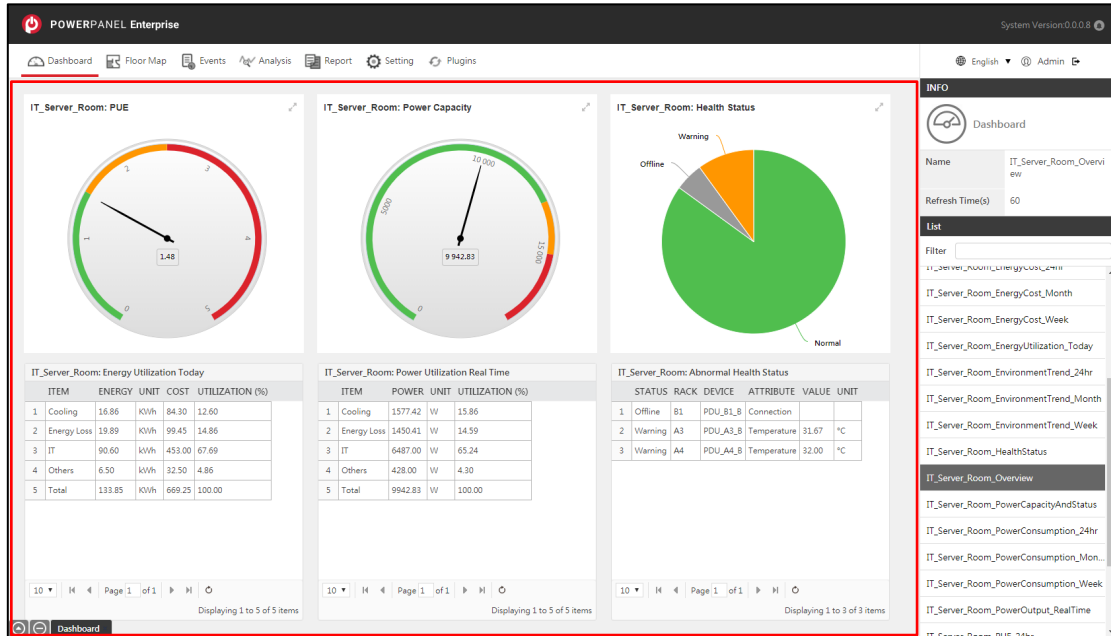


Figure 5.1 Display Panel

Chapter 6 INFO Panel

The INFO Panel displays the basic information of the page, list, real-time data of equipment or other settings (Figure 6.1).

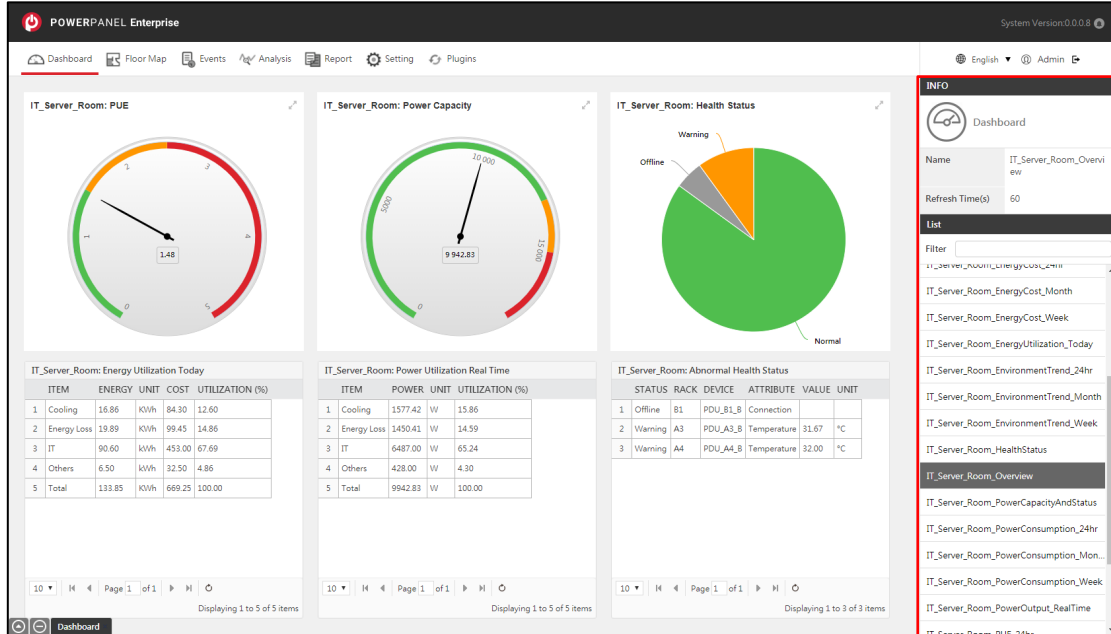


Figure 6.1 INFO Panel

Chapter 7 Dashboard

The Dashboard page is the default home page after users log in. PowerPanel® Enterprise provides 32 default dashboard templates to display the overall information and the real-time statistics of data center power, PUE, device status, environmental data, energy consumption and CO2 footprints in various analysis charts. See [Generate Template](#) for the details of creating the dashboard templates for the floor map.

The INFO Panel shows the name of current dashboard (1 in Figure 7.1), the dashboard refresh time (2 in Figure 7.1), and the list of all dashboards for each floor map (3 in Figure 7.1). Click one dashboard to view the dashboard contents in the Display Panel, or enter the keywords in “Filter” (4 in Figure 7.1) to search for the dashboard names.

Select the map from the “Floor Map” dropdown list (5 in Figure 7.1) to view the dashboards of other floor maps.

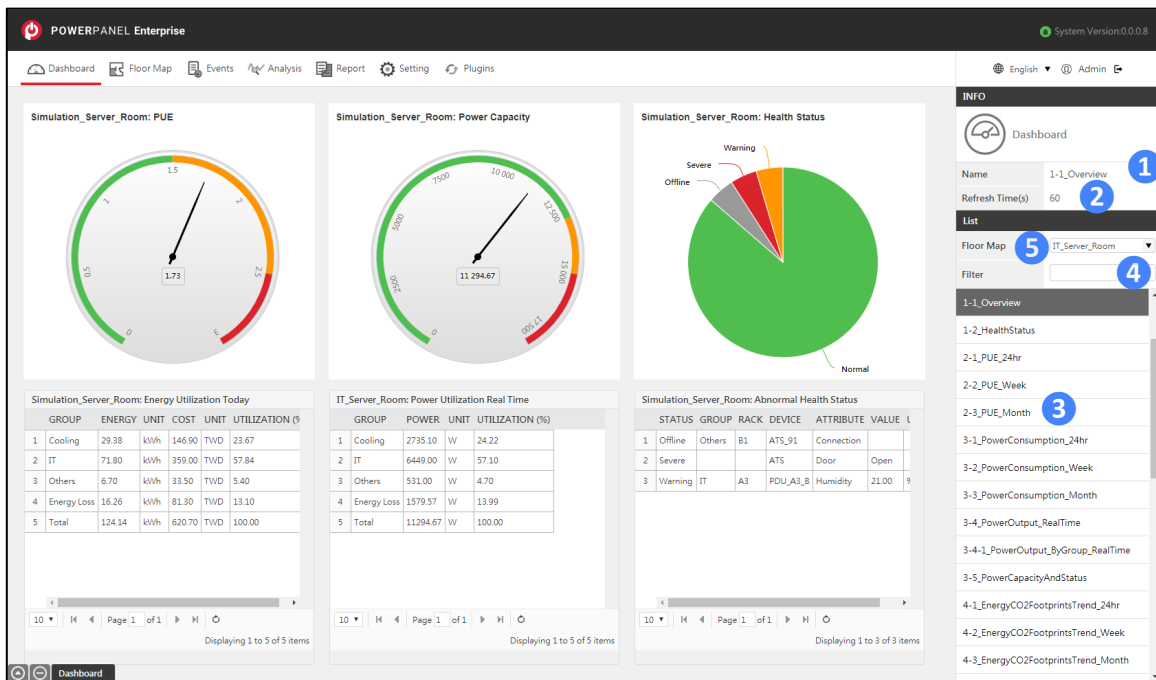


Figure 7.1 Dashboard

Chapter 8 Floor Map

The Floor Map section provides the Map View (1 in Figure 8.1) and the List View (2 in Figure 8.1) for users to monitor the status and real-time information of all equipment in the data center.

A floor map can be a data center or a server room, and the floor map can be configured from Setting, see [Floor Map](#) in Setting for details.

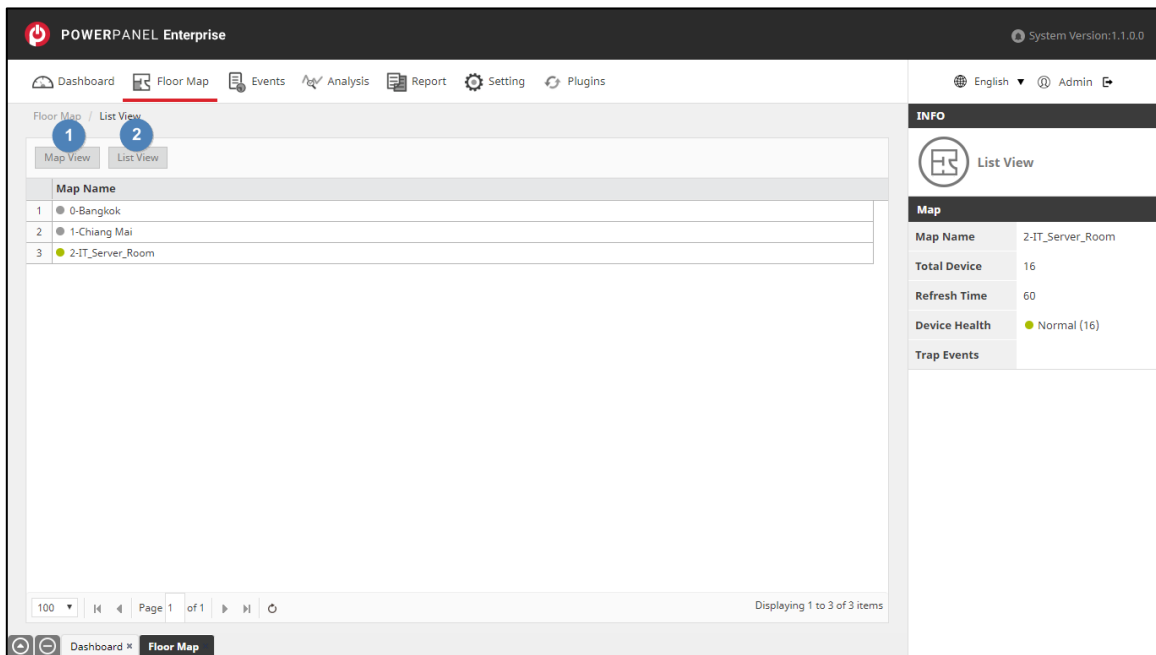


Figure 8.1 Floor Map

8.1 Map List

The Map List page shows all of the floor maps with the Map Name in the table, and users can know the overall health status of each data center by the color icon next to the map name. Click on the floor map in the table, and the real-time overall status of the floor map will be displayed on the INFO Panel (Figure 8.2).

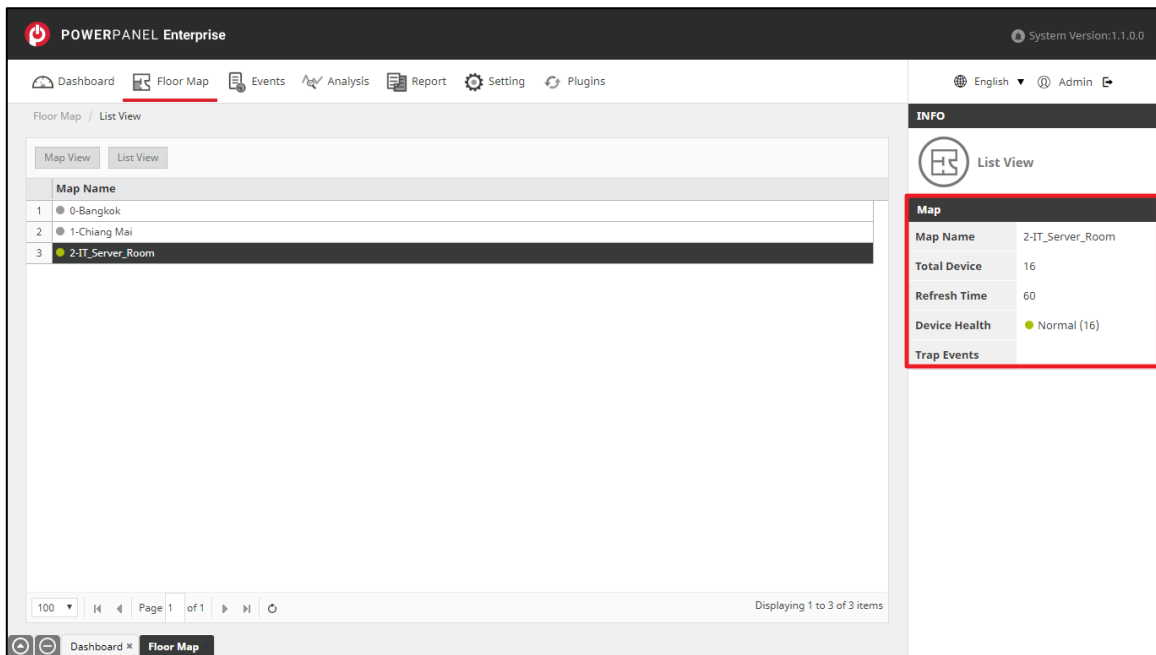


Figure 8.2 Map List

8.2 Map View

The Map View shows the plan layout of the data center and displays the status and real-time information of all equipment. Select the floor map you want to monitor in the table on the Map List page, then click “Map View” to open the selected floor map on a new page (Figure 8.3).

After opening the floor map, users can view the equipment and rack arrangements in the data center. The equipment and the rack are displayed as a color block in the floor map, and change the color in real time according to its status. When a SNMP trap event occurs, a trap icon is displayed on the equipment according to its severity. Detailed map tools are described in Table 8.1 and Figure 8.5.

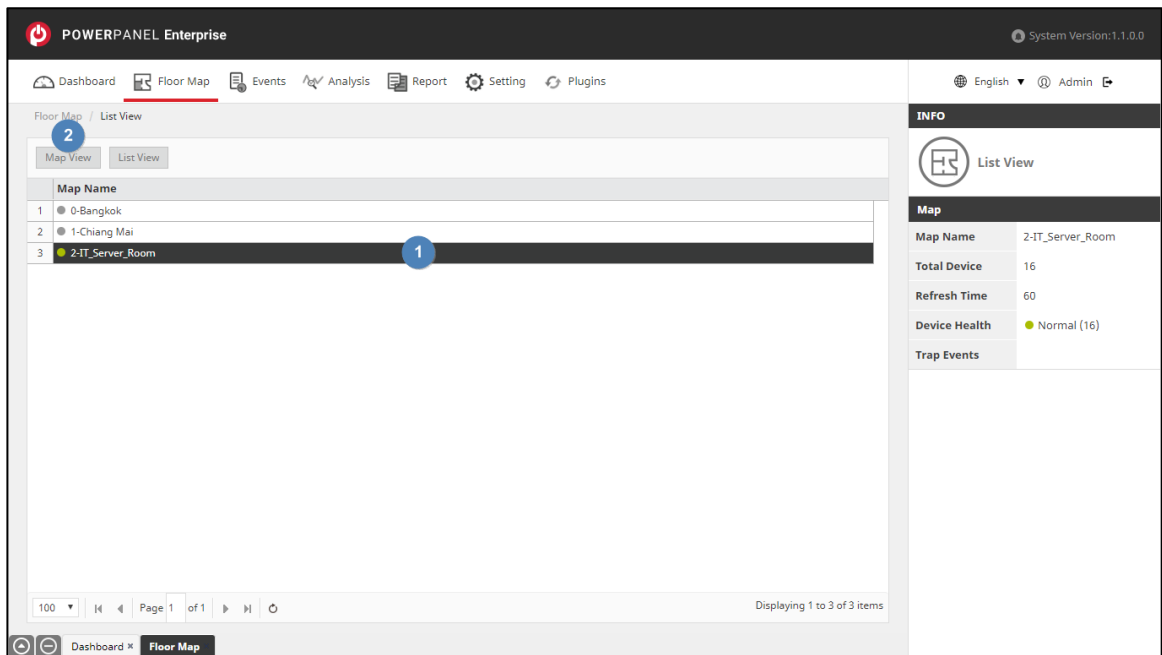


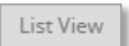

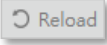
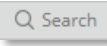






Figure 8.3 The steps of opening the floor map

Table 8.1 Floor map function description

Icon	Description
	<p>Select the attribute to change the status colors for all equipment in the floor map.</p> <p>According to different device category, there are different attributes. The default attributes are as follows:</p> <ul style="list-style-type: none"> - Health - Connection - Power - Load - Battery Capacity - Temperature - Humidity - Others...
	<p>Click to show the device groups displayed in different colors in the floor map (Figure 8.4). See Floor Map Setup in Setting for the details of device group setting.</p>
	<p>Click to monitor the floor map in List View.</p>

Icon	Description
	<p>The legend bar shows the different status colors for the equipment.</p> <p>The default device status settings are as follows:</p> <ul style="list-style-type: none"> - Green: Normal - Orange: Warning - Light brown: Disconnect (UPS is powered off) - Dark Red: Blackout (Utility power is abnormal) - Red: Severe - Dark gray: Offline - Light gray: Not Supported
	<p>Click to update the floor map information.</p>
	<p>Click to search devices on the floor map by Device Group, Category Name or Equipment Name.</p>
	<p>Click to change the site map size.</p> <ul style="list-style-type: none"> - Zoom in - Zoom out - Reset to original size
	<p>Equipment or Rack displayed as a block in different status color.</p>
 	<p>Displays the Severe or Warning trap icon on the equipment based on the severity of the SNMP trap events sent from the equipment.</p>

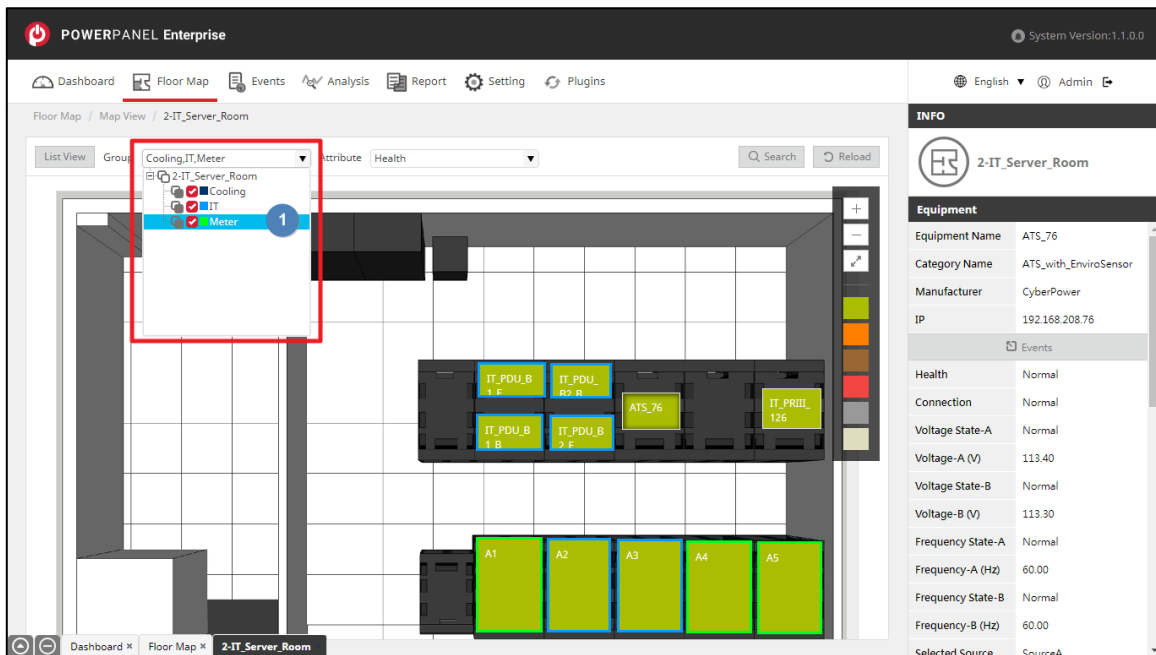


Figure 8.4 Device group in the floor map

- View real-time information of the device

Click the color block to view the real-time information of the equipment or the rack in the INFO Panel (1 in Figure 8.5). Click “Events” (2 in Figure 8.5) to view the event logs of the selected device.

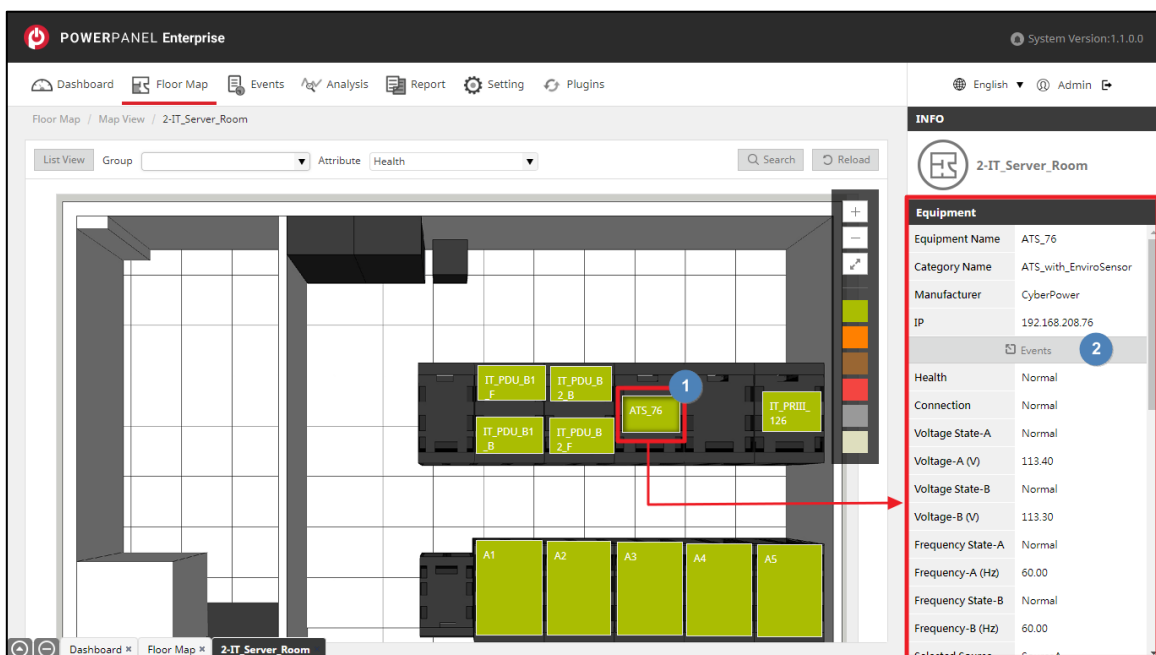


Figure 8.5 Map View - information of the equipment

- View the devices in the rack

Click “Show Rack Detail” (2 in Figure 8.6) to open the rack detail page to view all devices in the rack and the U position of each device. Click on the device to view the real-time information of the device in the INFO Panel (Figure 8.7).

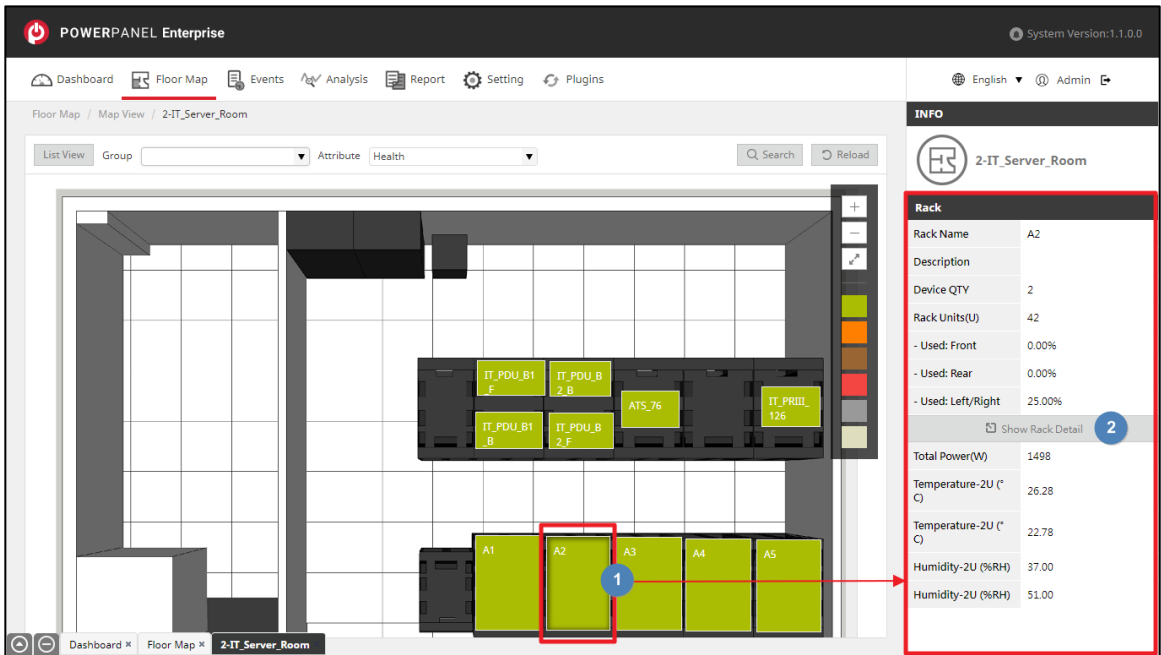


Figure 8.6 Map View - information of the rack

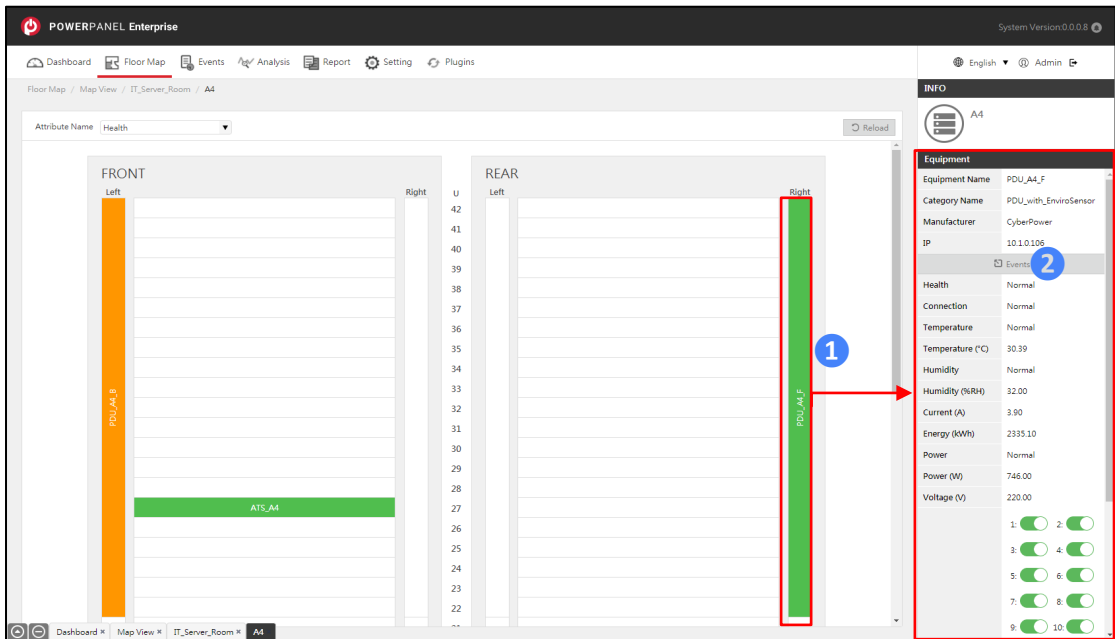


Figure 8.7 Rack detail

- View device event logs

In the INFO Panel, click “Events” (2 in Figure 8.5 or 2 in Figure 8.7) to view the latest 100 records of the device status change log and SNMP Trap log of the selected device.

The table at the top of the window shows the device status change events, and the table at the bottom shows the SNMP trap events sent from the device (Figure 8.8). Click 1 to select the status or the severity from the dropdown list to filter the event logs. Click “Clear Trap” (2 in Figure 8.8) to clear the trap icon that appears on the equipment in the floor map.

(Note: For devices on a daisy chain, all SNMP trap events sent from the host device or guest devices will only be displayed on the host device.)

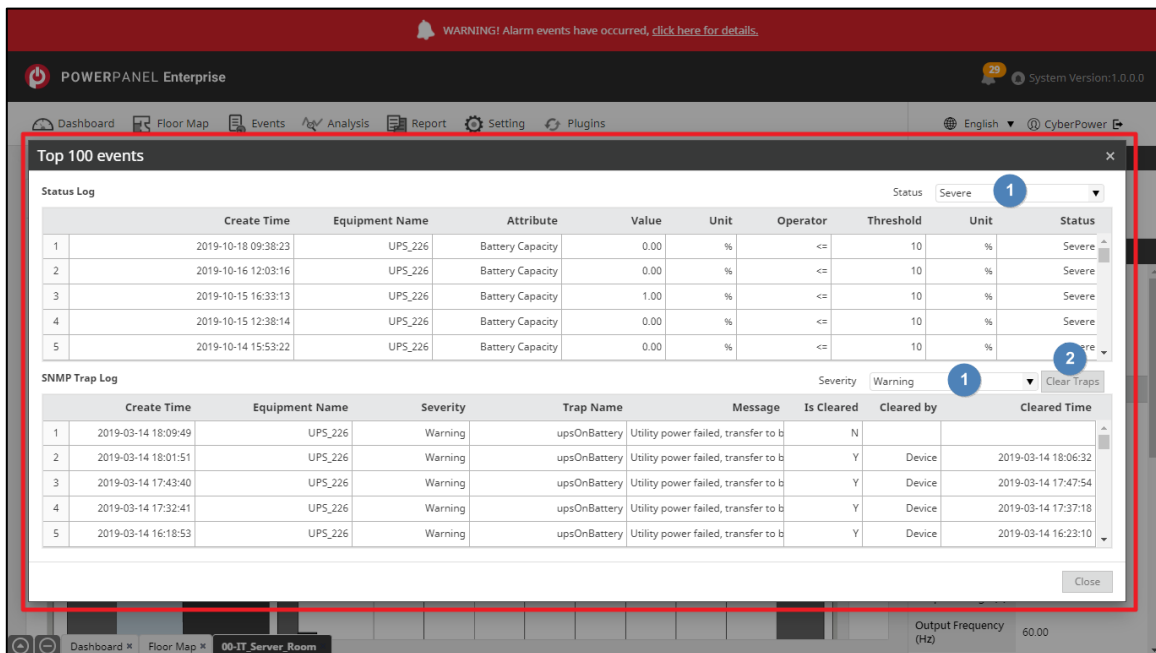


Figure 8.8 Top 100 events

- View the Daisy Chain Information

If the devices are on daisy chain, click on the device and the Daisy Chain Information will be shown in the INFO Panel (Figure 8.9 and Figure 8.10).

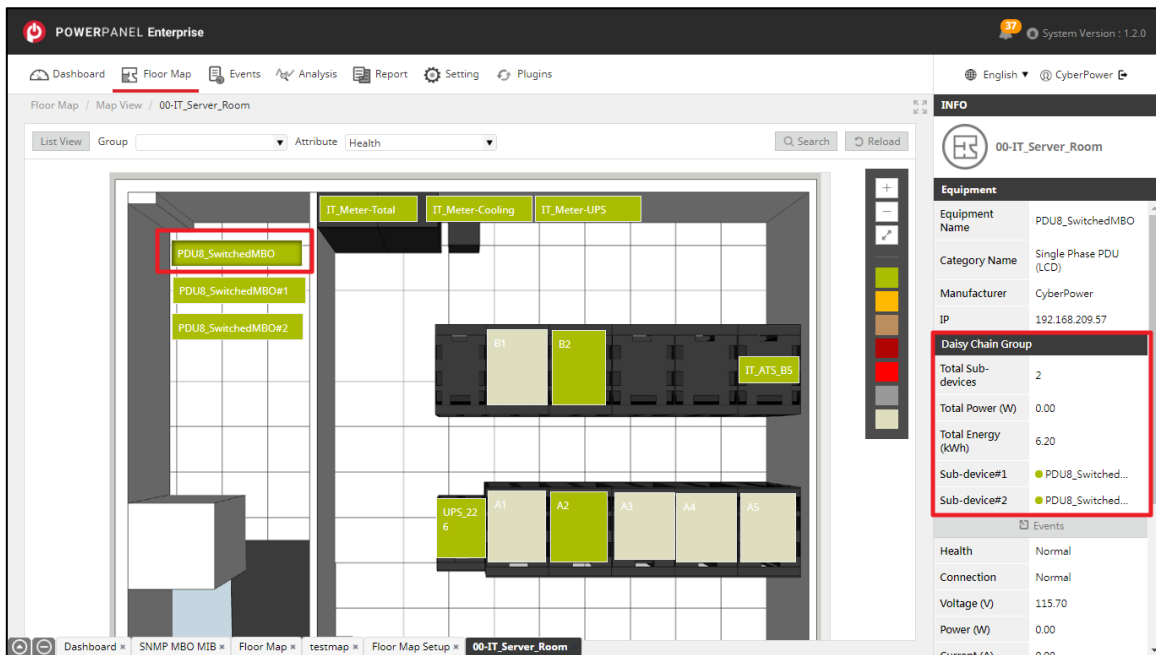


Figure 8.9 The Daisy Chain Group of the Host device

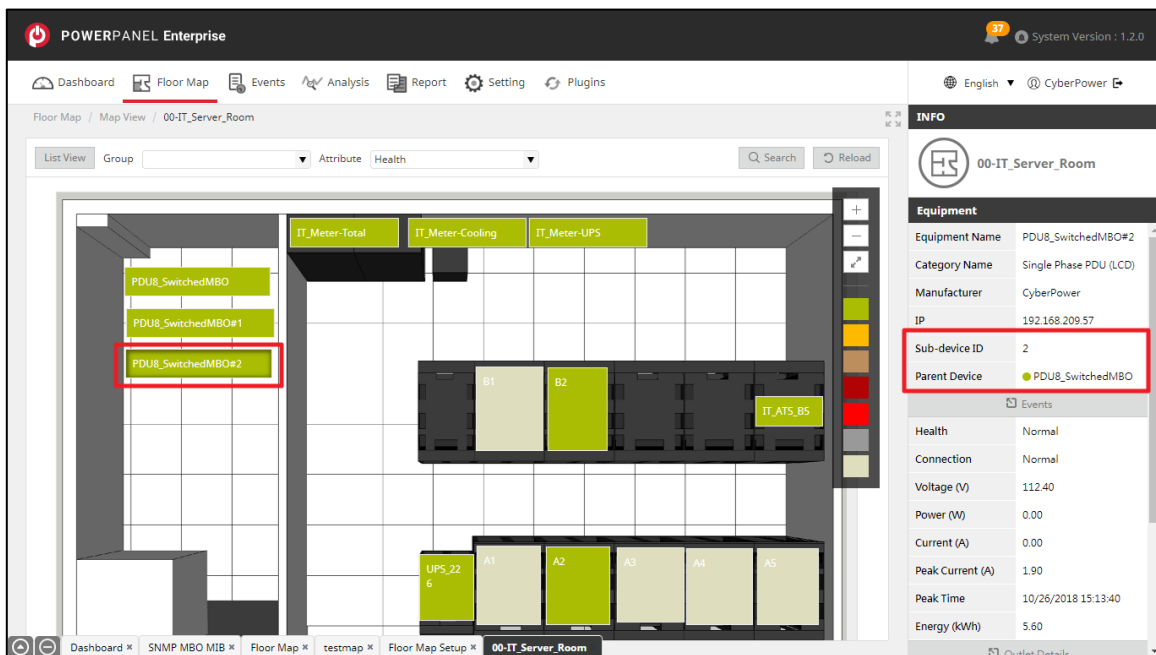


Figure 8.10 The Parent Device of the Guest device

- View the outlet details of the device

If the device supports “Metered-by-Outlet” function, click on the device and the Outlet Details information will be shown in the INFO Panel (Figure 8.11).

Click the “Outlet Details” button to view the real-time power consumption of

each outlet, and only the Admin users can turn on/ off each outlet (Figure 8.12). Admin users can select one outlet and click the “Configure” button to rename the outlet and set outlet load thresholds⁵ for each outlet (Figure 8.13).

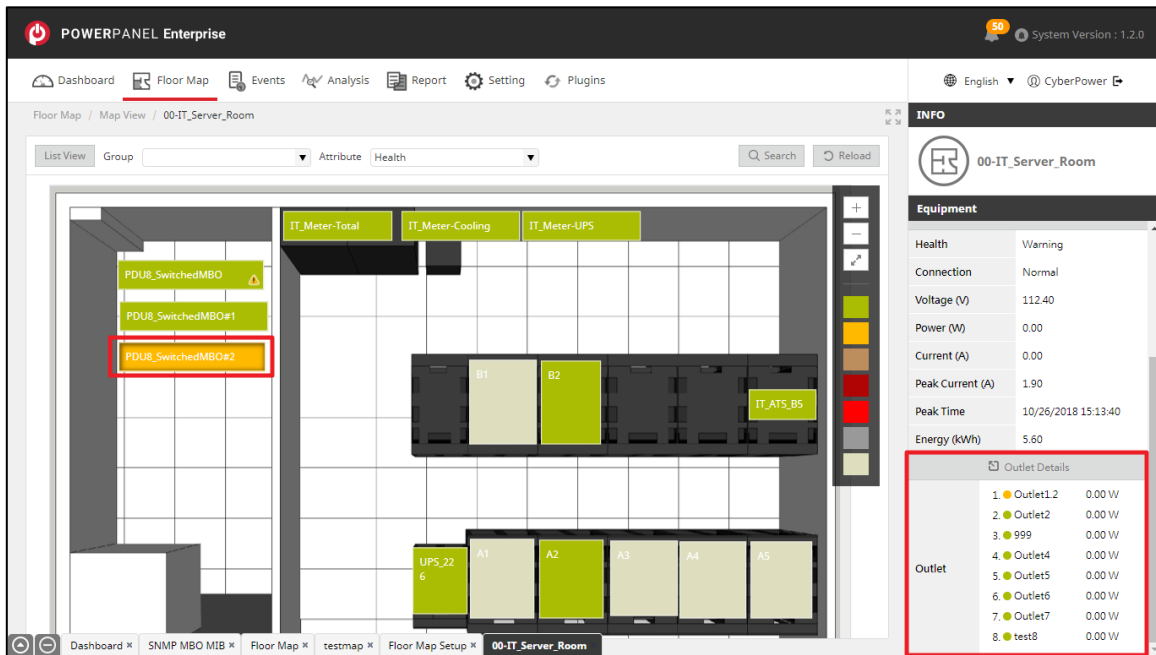
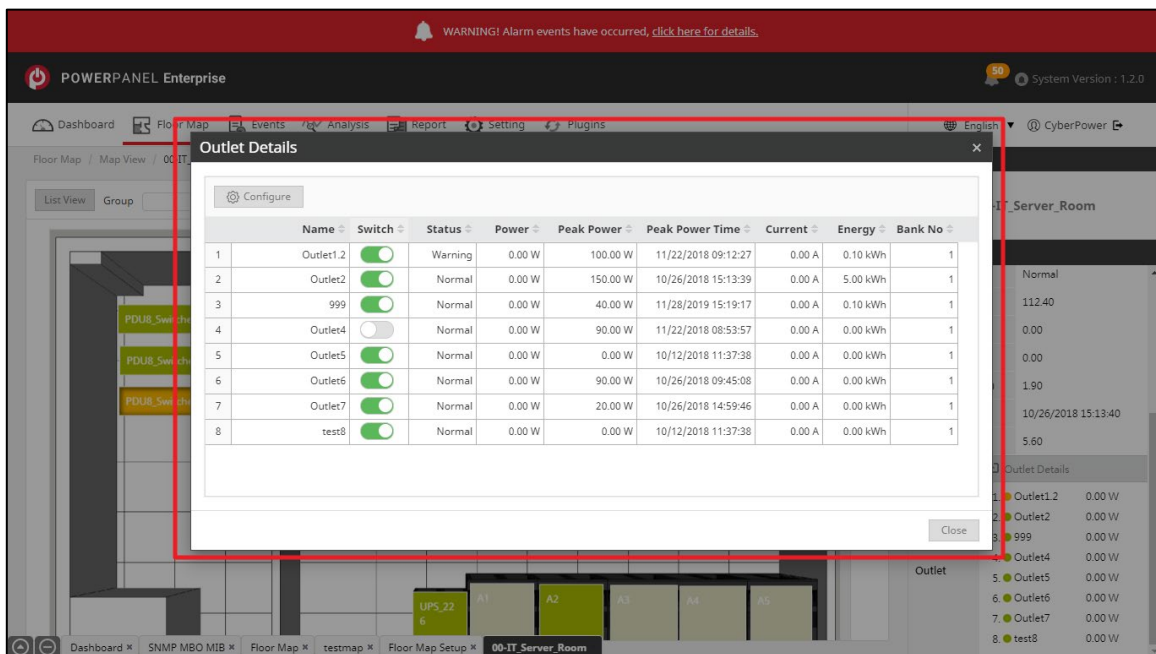


Figure 8.11 Outlet Details Information



⁵ Outlet Load Thresholds: The device has a delay buffer mechanism on the outlet load threshold to avoid frequent outlet load alerts. The delay buffer is 30 W, which means if one outlet reaches its load threshold, the actual outlet load should be less than the **threshold - 30 W**, and then the outlet status will change to “Normal”.

Figure 8.12 Outlet Details windows

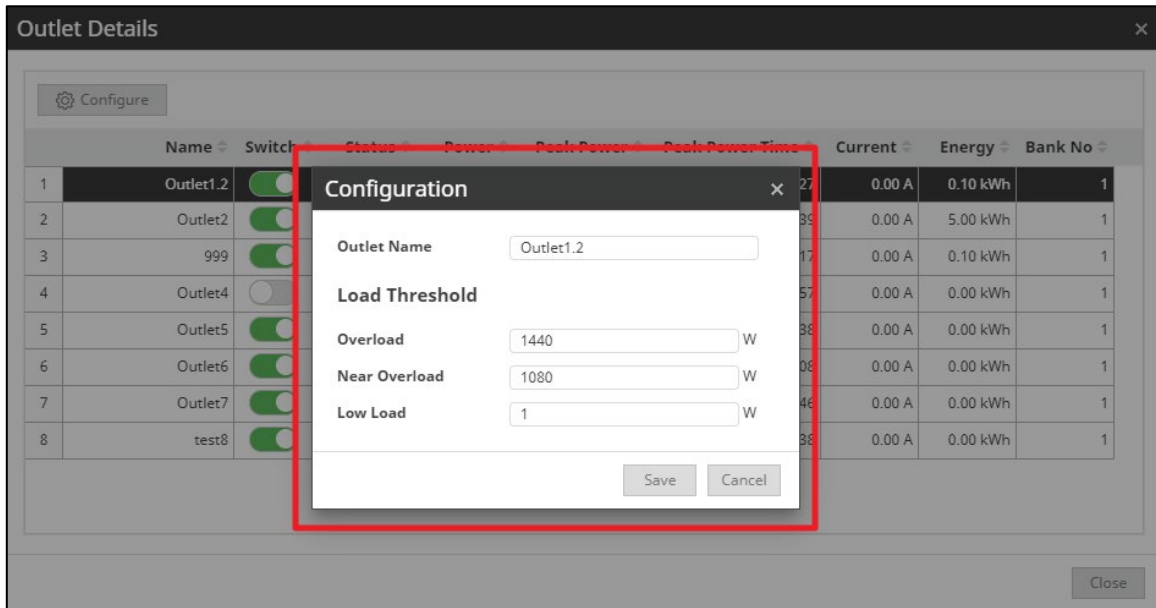


Figure 8.13 Outlet Details windows - Configuration

8.3 List View

The List View shows all equipment of the selected floor map in a list format. It is very ideal for monitoring the floor map with a large number of devices.

Select the floor map you want to monitor in the table on the Map List page, then click "List View" to open the selected floor map on a new page (Figure 8.14).

All device groups and devices of the floor map are displayed in the table. Users can monitor the real-time device status by the color icon next to the device group name or the equipment name (Figure 8.15).

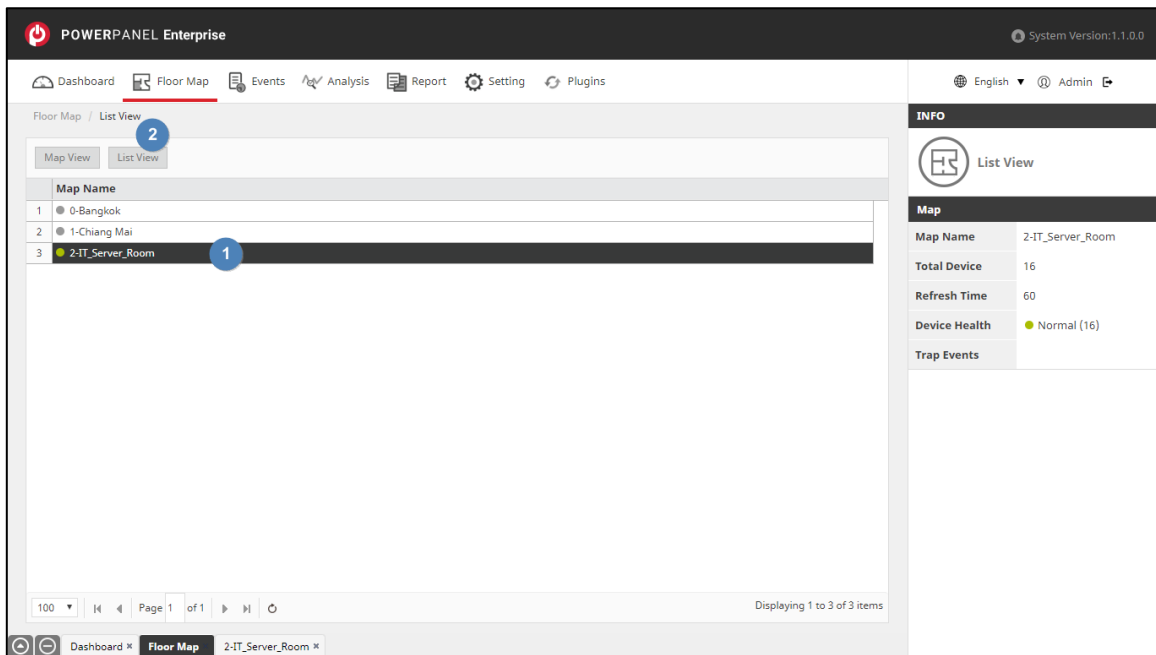


Figure 8.14 The steps of opening the floor map in List View

- View device group details

Click ▶ (1 in Figure 8.15) to show the equipment list or sub-device group list of the selected device group in a sub-table. Click on the equipment (2 in Figure 8.15) in the table to show detailed real-time information of the equipment in the INFO Panel (3 in Figure 8.15).

POWERPANEL Enterprise System Version: 1.0.0.0

Dashboard | Floor Map | Events | Analysis | Report | Setting | Plugins English | CyberPower

Floor Map / List View / 00-IT_Server_Room

Map View Search | Export

Name	Category Name	IP	Health	Connection	Trap Events
00-IT_Server_Room (10)					
Meter (1)					
IT_Meter-Total	Meter	10.1.0.105	Normal	Normal	
IT (2)					
A2 (2)					
IT_PDU_A2_B	PDU_with_EnviroSensor	10.1.0.111	Normal	Normal	
IT_PDU_A2_F	PDU_with_EnviroSensor	10.1.0.110	Normal	Normal	
Cooling (1)					
IT_Meter-Cooling	Meter	10.1.0.105	Normal	Normal	
Others (3)					
B2 (2)					
IT_ATS_B5	ATS	10.1.0.117	Normal	Normal	
ATS_76	ATS_with_EnviroSensor	192.168.208.76	Warning	Normal	Warning
IT_Meter-UPS	Meter	10.1.0.105	Normal	Normal	
UPS_226	UPS	192.168.208.226	Warning	Normal	Warning

INFO

00-IT_Server_Room

Equipment

Equipment Name: ATS_76
 Category Name: ATS_with_EnviroSensor
 Manufacturer: CyberPower
 IP: 192.168.208.76

Events

Health: Warning
 Connection: Normal
 Voltage State-A: Normal
 Voltage-A (V): 112.60
 Voltage State-B: Normal
 Voltage-B (V): 112.60
 Frequency State-A: Normal
 Frequency-A (Hz): 60.00
 Frequency State-B: Normal
 Frequency-B (Hz): 60.00

Dashboard | Floor Map | 00-IT_Server_Room

Figure 8.15 Map List

Chapter 9 Events

The Events section provides the Equipment Status Log and SNMP Trap Log (Figure 9.1) for users to track the events and traps of all equipment.

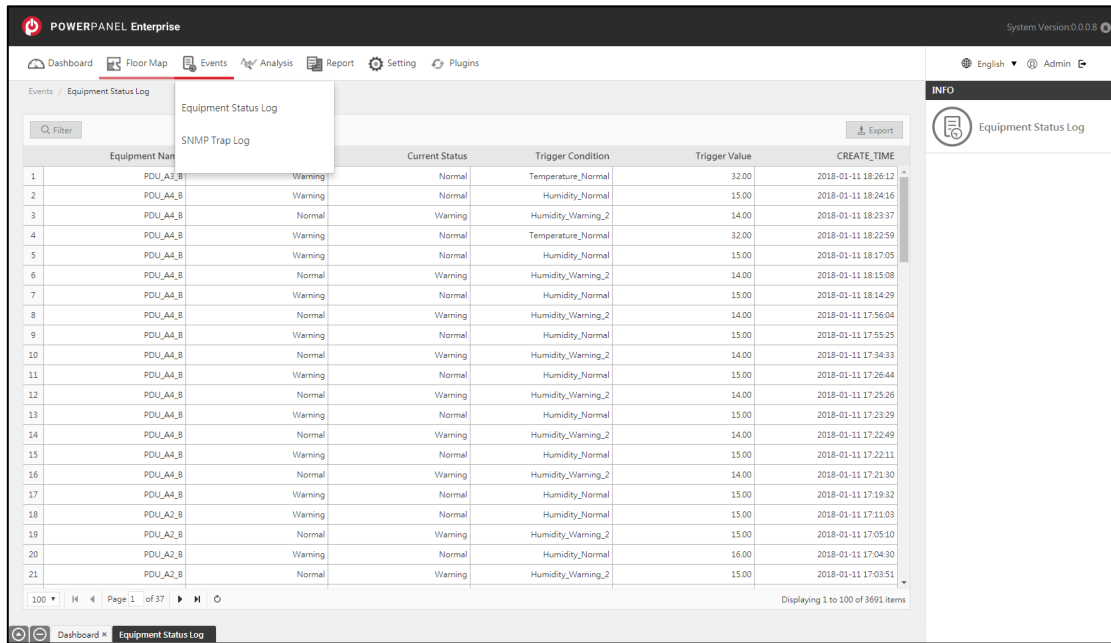


Figure 9.1 Events

9.1 Equipment Status Log

The page displays all event logs of the equipment status changes (Figure 9.2) for each floor map. System provides equipment status log filtering (1 in Figure 9.2) and sorts by log time by default. Click 2 in Figure 9.2 to export the log as an excel file. The content details are shown in Table 9.1.

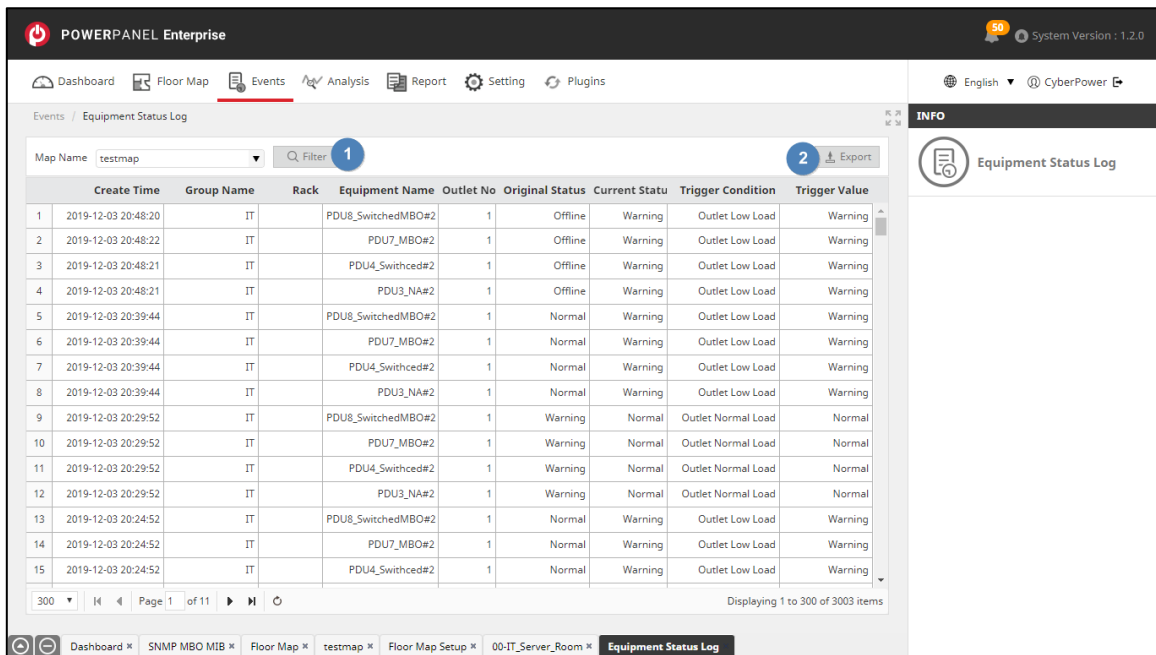


Figure 9.2 Equipment Status Log

Table 9.1 Equipment Status Log content description

Content	Description
Create Time	The time when the equipment status changed.
Group Name	The name of the device group.
Rack	The name of the rack.
Equipment Name	The name of the equipment.
Outlet No.	The outlet number of the equipment.
Original Status	The original status of the equipment.
Current Status	The current status of the equipment after the change.
Trigger Condition	The condition that triggers the change of status.
Trigger Value	The current value of the equipment.

9.2 SNMP Trap Log

The page shows all SNMP traps sent from the equipment (Figure 9.3). System provides SNMP trap log filtering (1 in Figure 9.3) and export the log as an excel file (2 in Figure 9.3). The content details are shown in Table 9.2.

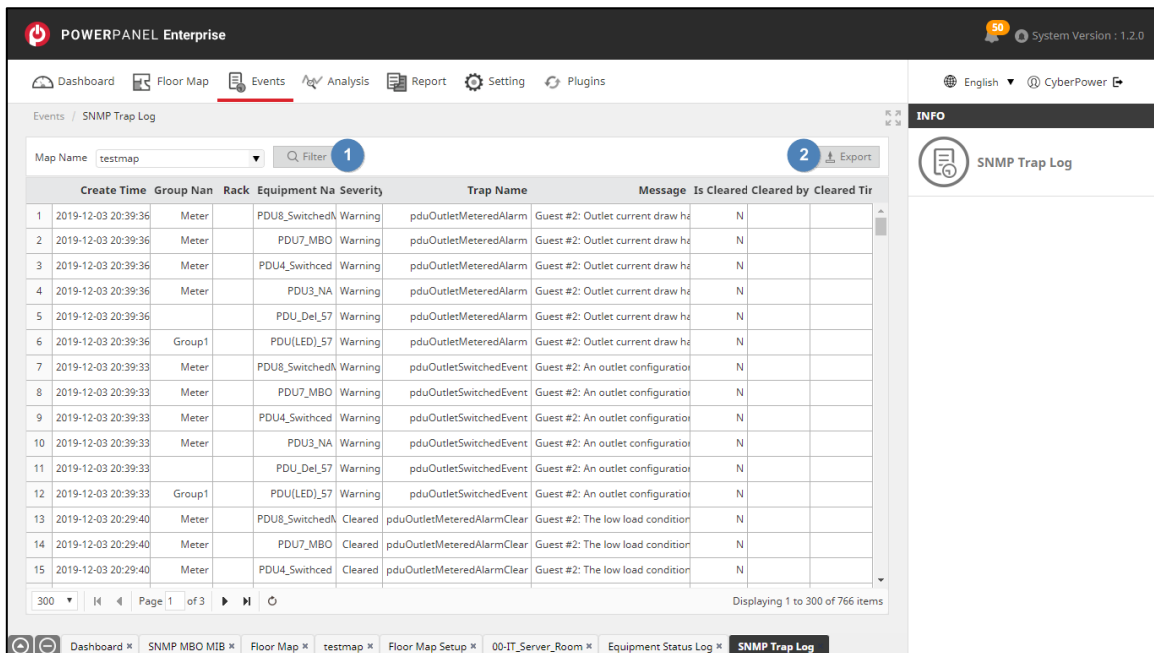


Figure 9.3 SNMP Trap Log

Table 9.2 SNMP Trap Log content description

Content	Description
Create Time	The time when the equipment sent out the SNMP trap event.
Group Name	The name of the device group.
Rack	The name of the rack.
Equipment Name	The name of the equipment.
Severity	The severity of SNMP trap event.
Trap Name	The name of the SNMP trap event.
Message	The description of the SNMP trap event.
Is Cleared	The status of the SNMP trap event. <ul style="list-style-type: none"> - Y: The SNMP trap event has been solved. - N: The SNMP trap event has not been solved.
Cleared by	The account that solved the SNMP trap event. (Note: If the event is cleared by equipment itself, "Device" will be displayed in the column.)

9.3 User Action Log

The page shows all system operations performed by the account after the account is

logged in the system (Figure 9.4). System provides user action log filtering (1 in Figure 9.4) and allows users to export the log as an excel file (2 in Figure 9.4). The content details are shown in Table 9.3.

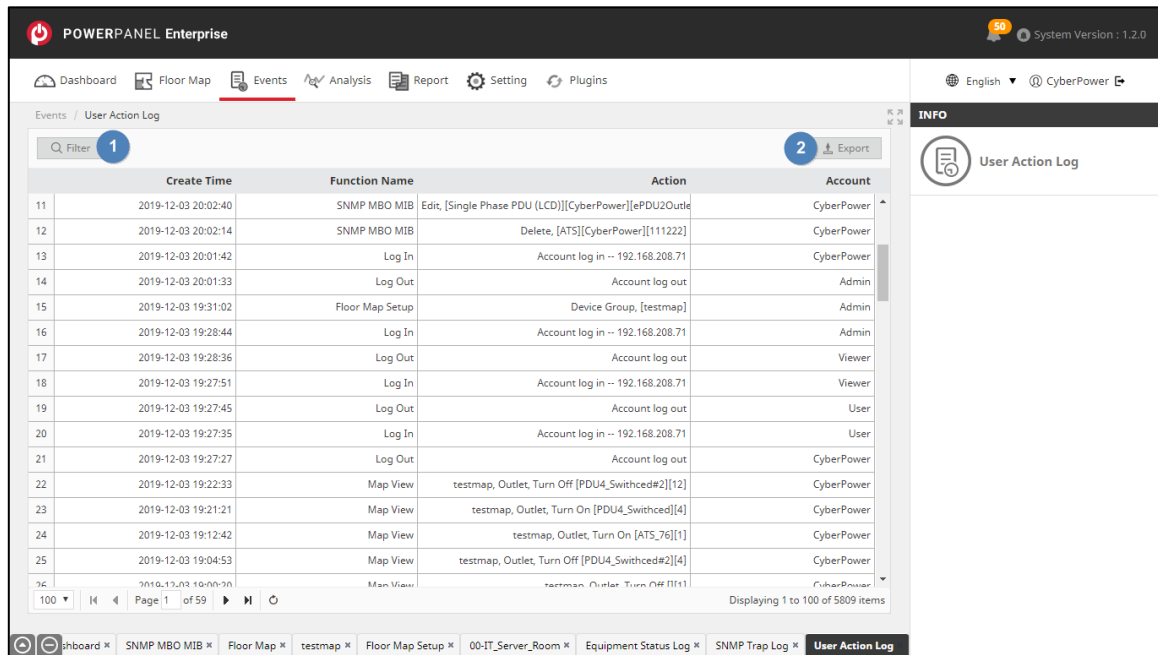


Figure 9.4 User Action Log

Table 9.3 User Action Log content description

Content	Description
Create Time	The time when the system operation occurred.
Function	The function name of the system operation.
Action	The modifications of the system operation.
Account	The account that performed the system operation.

Chapter 10 Analysis

The Analysis section provides six analysis categories: Environment, PUE, Device, Power, Energy Consumption and CO2 Footprints. It calculates the analytical data from each floor map and displays the data in different types of charts.

10.1 Environment

The Environment page displays the statistics on the temperature and humidity of each floor map (Figure 10.1).

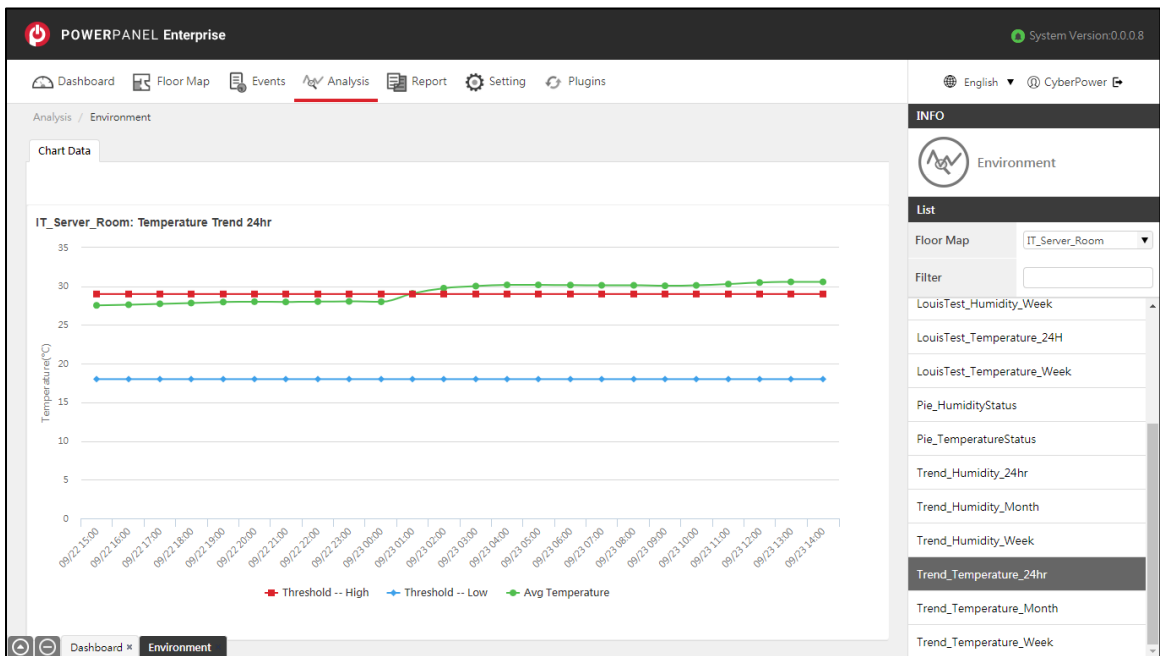


Figure 10.1 Environment

10.2 PUE

The PUE page displays the real-time PUE or the PUE trends of each floor map (Figure 10.2).

Power Usage Effectiveness (PUE) is the most important indicator of how efficiently a data center uses energy, and how much energy is used by the IT equipment.

$$PUE = \frac{\text{Total Facility Energy}}{\text{IT Equipment Energy}}$$

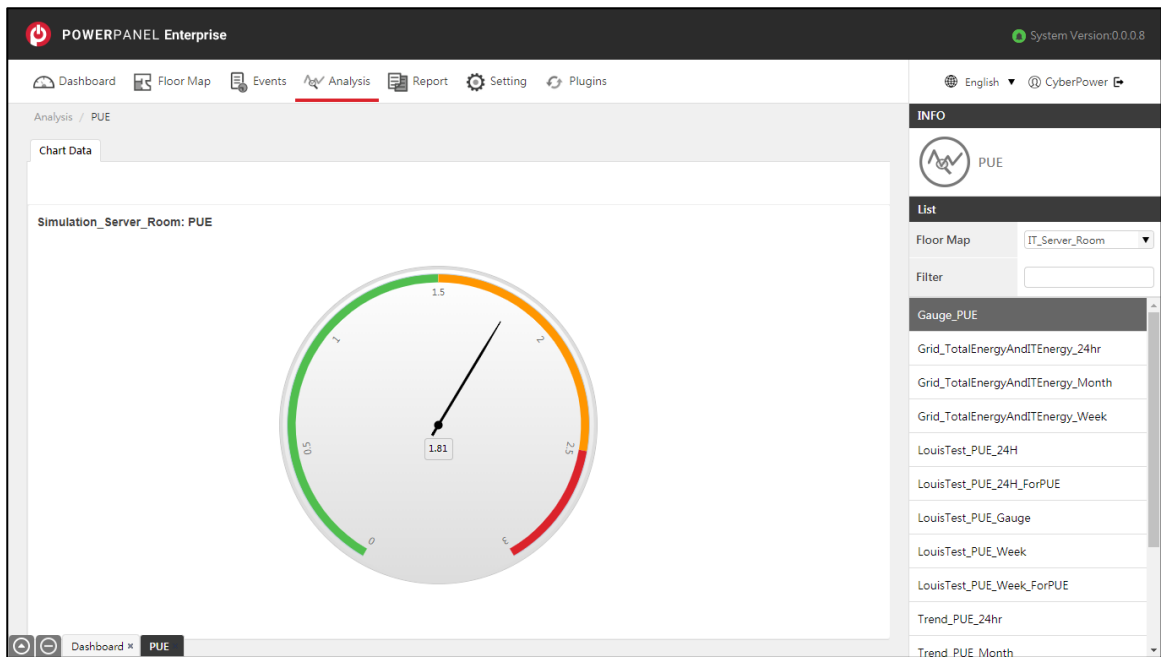


Figure 10.2 PUE

10.3 Device

The Device page displays the statistics on the equipment status, assets review and the utilization of the rack spaces of each floor map (Figure 10.3).

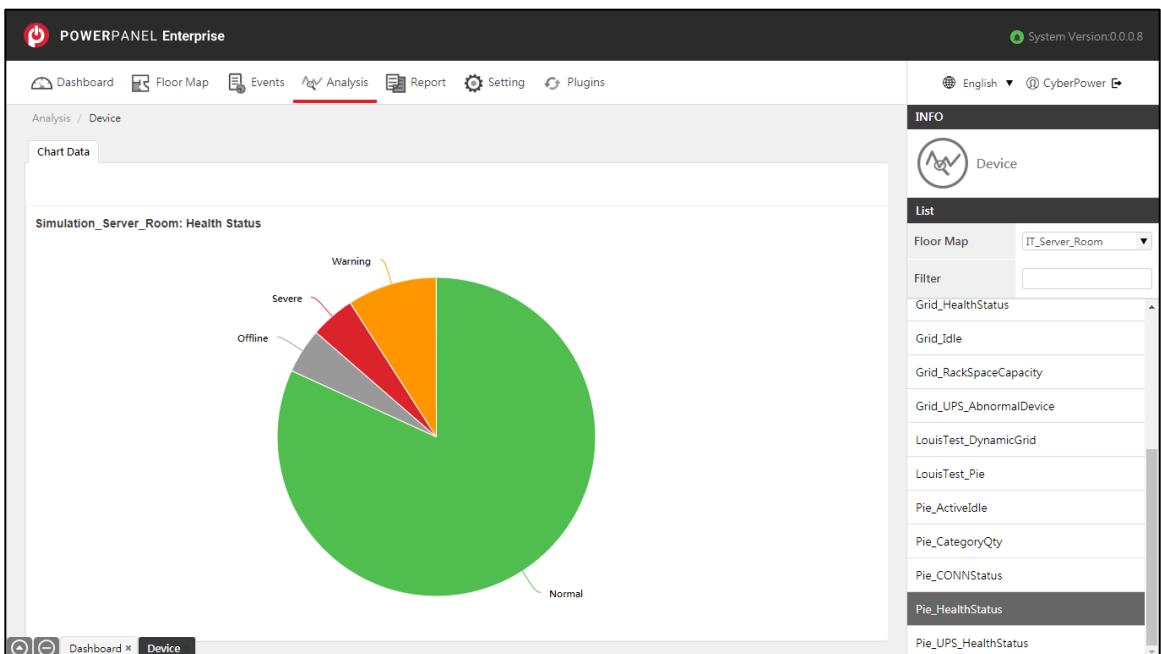


Figure 10.3 Device

10.4 Power

The Power page displays the power consumption, power capacity and power utilization of each floor map (Figure 10.4).

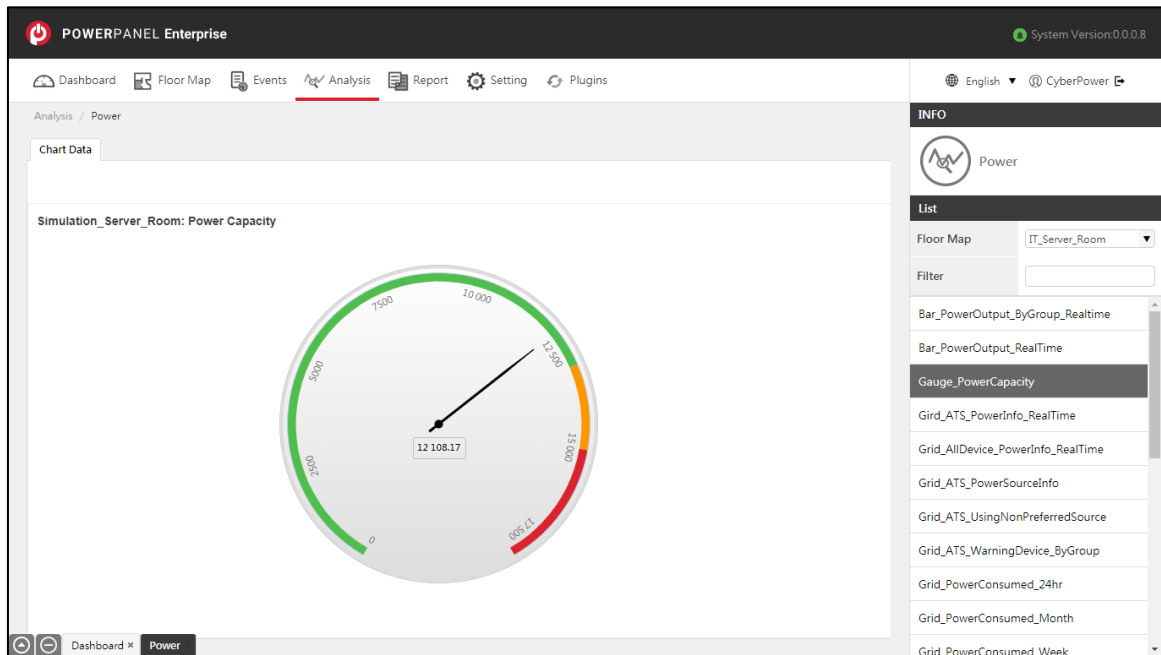


Figure 10.4 Power

10.5 Energy Consumption

The Energy Consumption page displays the energy consumption, energy utilization and energy cost of each floor map (Figure 10.5).

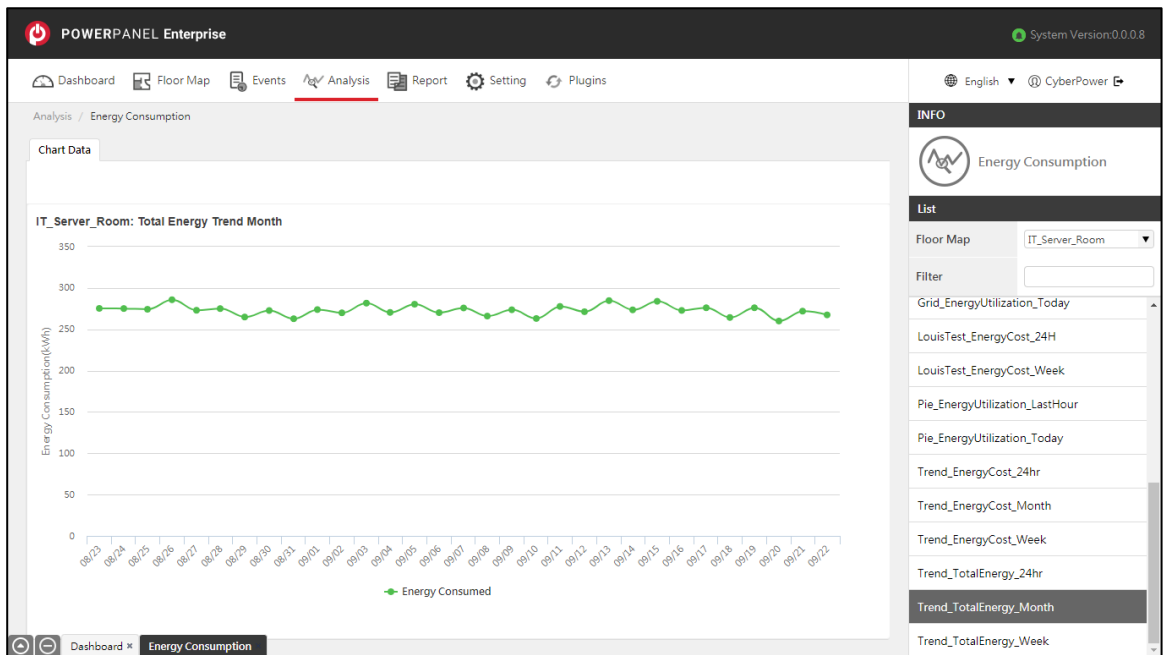


Figure 10.5 Energy Consumption

10.6 CO2 Footprints

The CO2 Footprints page displays the CO2 emissions of each floor map (Figure 10.6).

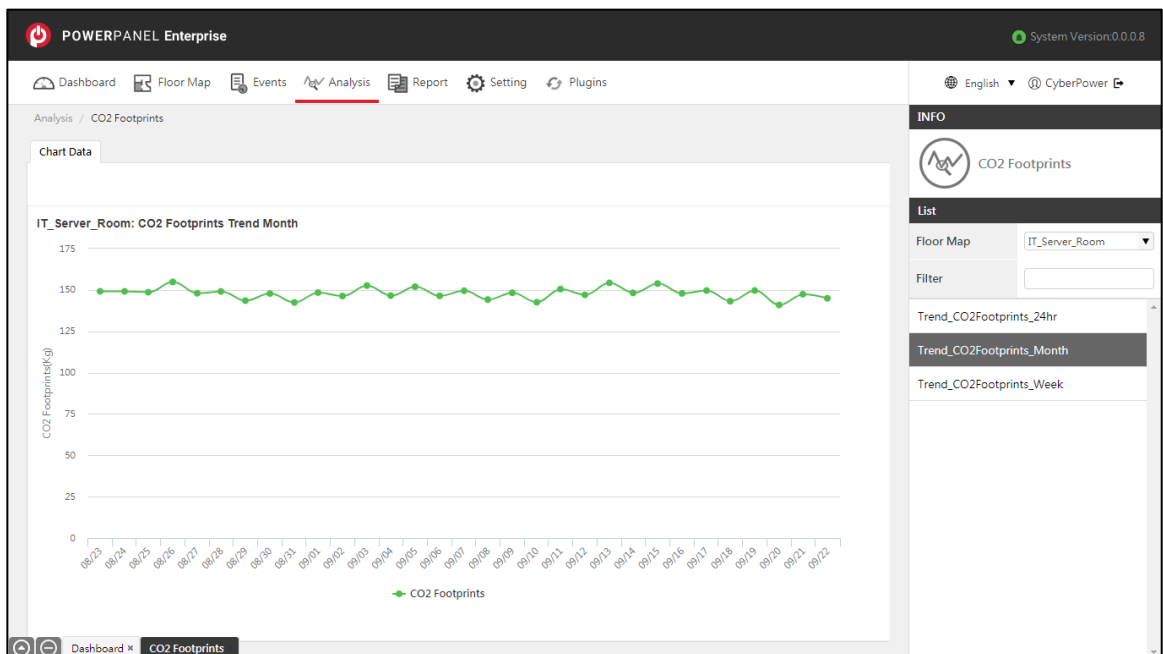


Figure 10.6 CO2 Footprints

Chapter 11 Report

The Report section provides Summary Report, Environment Report and Device Group Report that are used to calculate the analytical data of each floor map to provide an overview of the data center (Figure 11.1).

Select the “Period” (1 in Figure 11.1) and choose the “Start Date” (2 in Figure 11.1) to calculate the data. Select the floor map which you want to include in the report and click “Run Report” (3 in Figure 11.1) to display the result below.

Moreover, the report can be exported (4 in Figure 11.1) as a pdf file. The functions are described in Table 11.1.

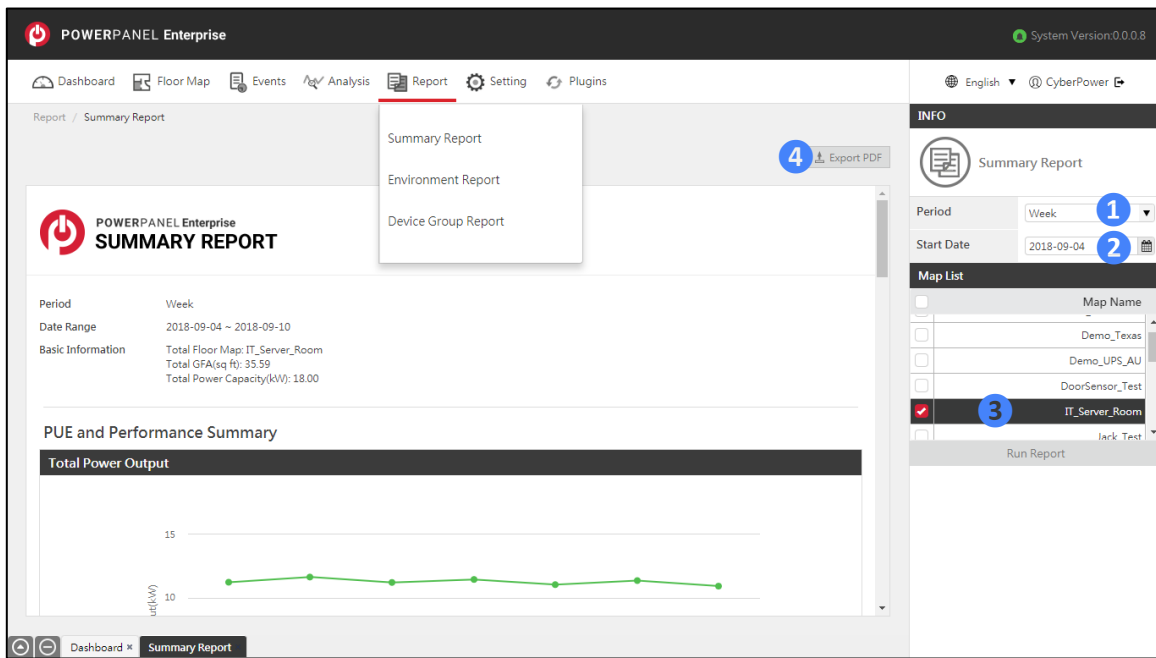


Figure 11.1 Report

Table 11.1 Report function description

Icon	Description
<p>1</p>	<p>Select the period to calculate the data. There are four period types provided as follows:</p> <ol style="list-style-type: none"> Week:
<p>2</p>	<p>Select the date to calculate the data of 7 days from the selected date.</p>

Period: Month
Start Month: 2018-01

3

Period: Quarter
Start Year: 2018
Start Quarter: Q1

4

Period: Year
Start Year: 2018

2. Month:
Select the month to calculate the data.
3. Quarter:
Select the year and quarter to calculate the data.
 - Q1: From January to March
 - Q2: From April to June
 - Q3: From July to September
 - Q4: From October to December
4. Year:
Select the year to calculate the data.

Map List	
<input type="checkbox"/>	Map Name
<input type="checkbox"/>	IT_Server_Room
<input type="checkbox"/>	TPE_Data_Center
<input type="checkbox"/>	USA_Data_Center

Select one or multiple floor maps to include in the report.

Run Report

Click to generate the report.

Export PDF

Click to export the report as a PDF file.

11.1 Summary Report

The Summary Report shows the overall information of the floor map (Figure 11.2).

The report contents are shown in Table 11.2.

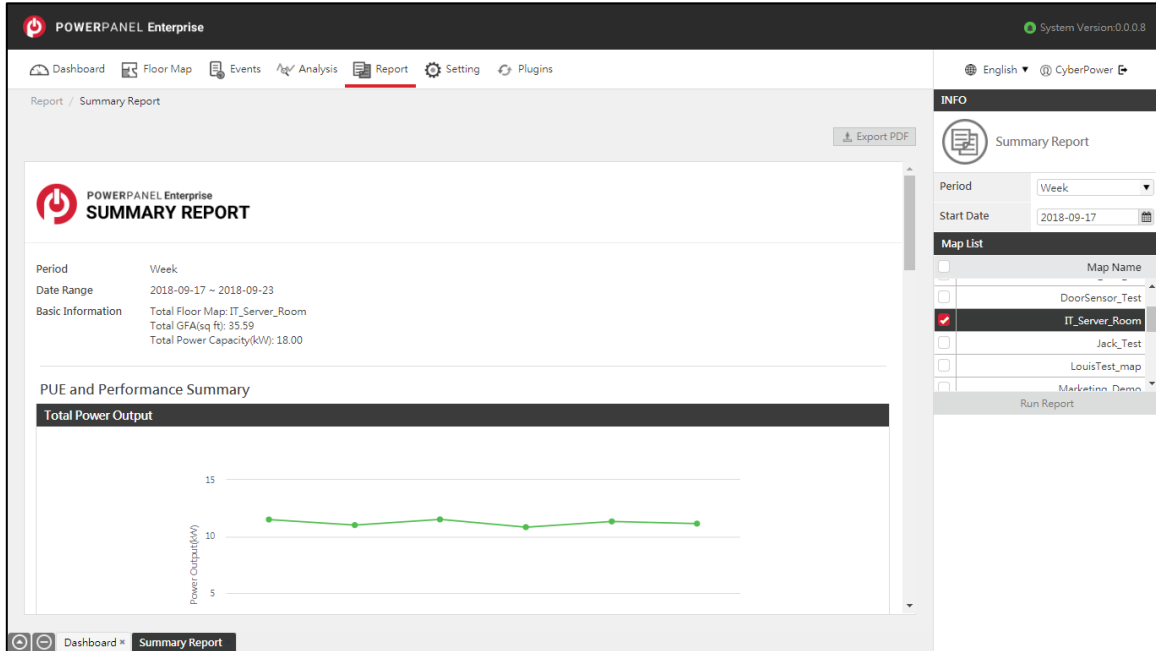


Figure 11.2 Summary Report

Table 11.2 Summary Report content description

Content	Description
Total Power Output	The power usage of each floor map, including the average/ maximum/ minimum power (kW) and power utilization (%).
Energy Consumption and Cost	The energy consumption (kWh) and the energy cost of each floor map.
Average PUE	The average daily PUE of each floor map.
PUE Comparison: This Year vs. Last Year	Compares the PUE of the selected floor maps with that of the same period last year.

11.2 Environment Report

The Environment Report shows the Temperature and Humidity information of the floor map (Figure 11.3). The report contents are shown in Table 11.3.

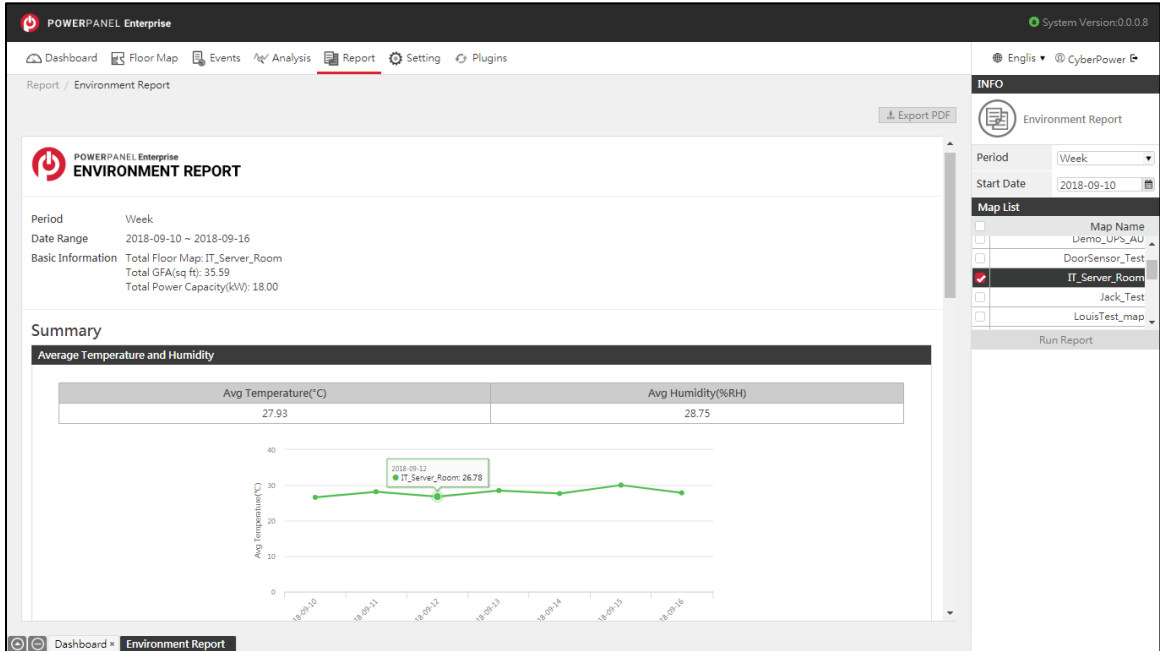


Figure 11.3 Environment Report

Table 11.3 Environment Report content description

Content	Description
Average Temperature and Humidity	The average/ maximum/ minimum temperature (°C/ °F) and the average/ maximum/ minimum humidity (%RH).
Comparison: This Year vs. Last Year	Compares the average temperature and humidity of the selected floor maps with that of the same period last year.

11.3 Device Group Report

The device group report shows the total power output and energy consumption of each device group in the selected floor map (Figure 11.4). The report contents are shown in Table 11.4.

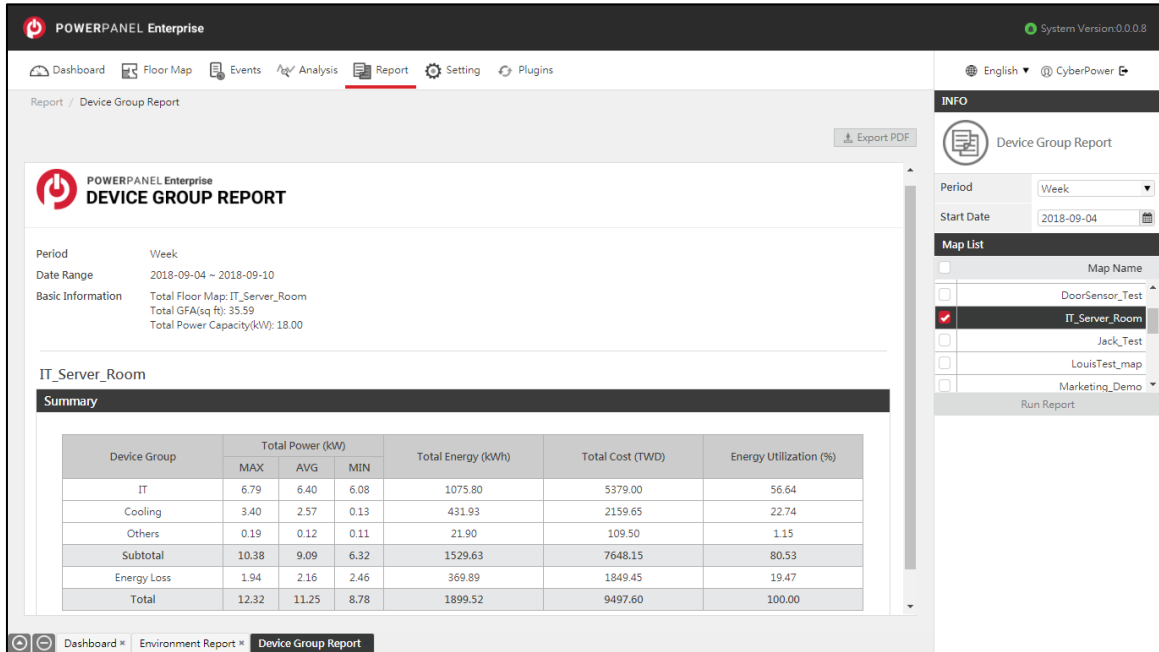


Figure 11.4 Device Group Report

Table 11.4 Device Group Report content description

Content	Description
Device Group	The device groups set by the user. For more details, see Floor Map .
Total Power (kW)	The average/ maximum/ minimum power (kW) of the device group.
Total Energy (kWh)	The energy consumption of the device group.
Total Cost	The energy cost of the device group.
Energy Utilization (%)	The energy consumed by each device group divided by the total energy consumption of the floor map.

Chapter 12 Setting

The functions described in previous chapters are for viewing the information or contents of the data center only, and they are controlled or adjusted through Setting. This chapter describes all the setting functions and how to maintain a normal operation of the data center.

12.1 System

The System section allows users to view the system license information, modify the energy consumption parameters, maintain the organization settings and manage accounts in the system (Figure 12.1).

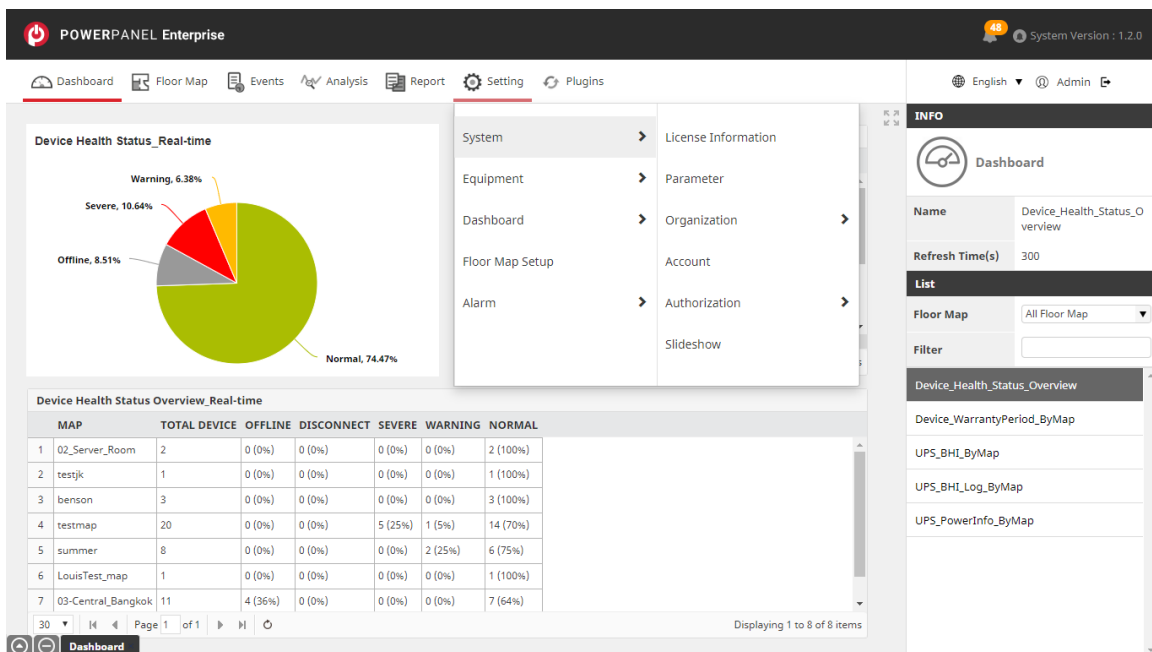


Figure 12.1 System

12.1.1 License Information

The License Information page shows the license type of the system and the maximum number of equipment allowed by the system, as well as the hardware information of the license server where the user installed the Dataloader program (Figure 12.2).

The system is preset to the Basic license and provides up to 20 free device nodes, with two methods for the license registration: CyberPower Account and License Key. If you need more device nodes, contact your service provider or CyberPower sales

representative for the license registration.

Click “Activate” (1 in Figure 12.2) to open the Activate License window (Figure 12.3, Figure 12.4). Choose one method for license registration, enter your license account credentials or license key, and the system will check the CyberPower Cloud Server to verify the license. Once the verification is successful, the license type and device node will change accordingly. The function details are described in Table 12.1 and the contents are shown in Table 12.2.

(Note: Before activating your license, you must add the following two URLs:

“<https://tool.magiclen.org/ip/>” and “<http://powerpanelservice.cyberpower.com/Enterprise>” to your firewall whitelist, and make sure the server can connect to the CyberPower Cloud Server.)

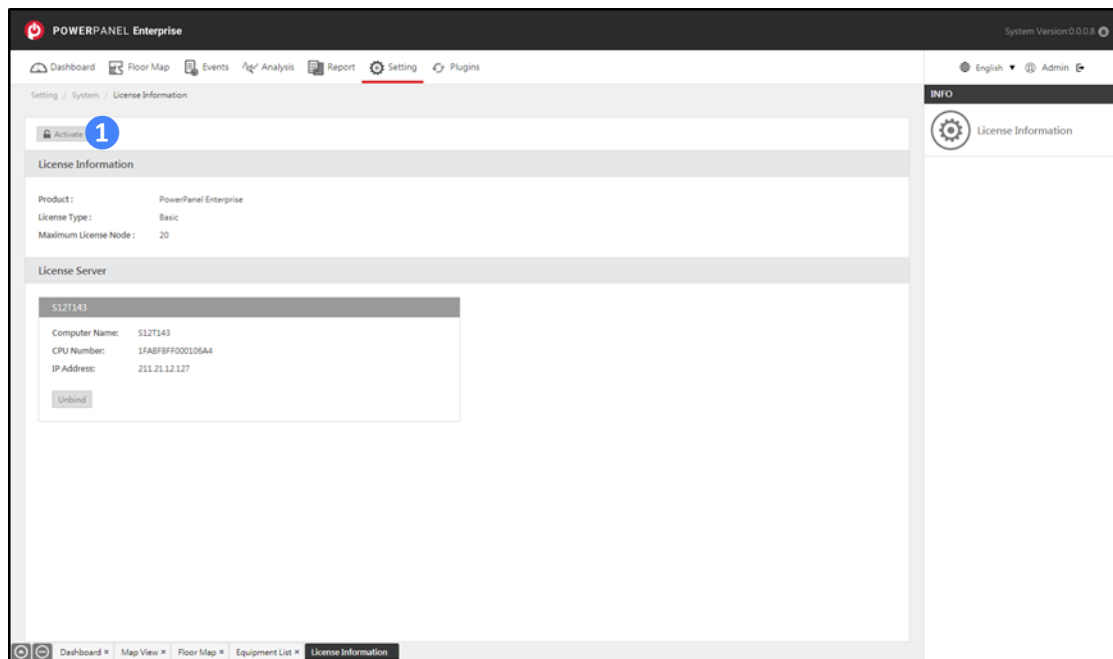


Figure 12.2 License Information

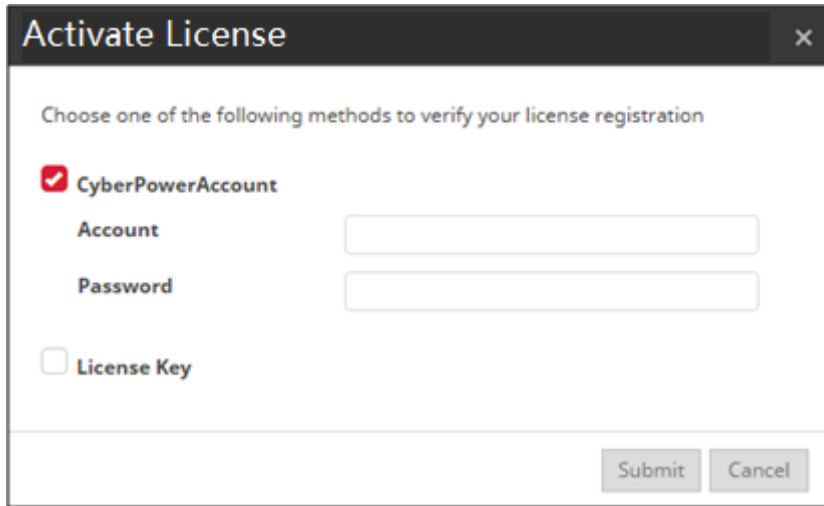


Figure 12.3 Activate License window (CyberPower Account)

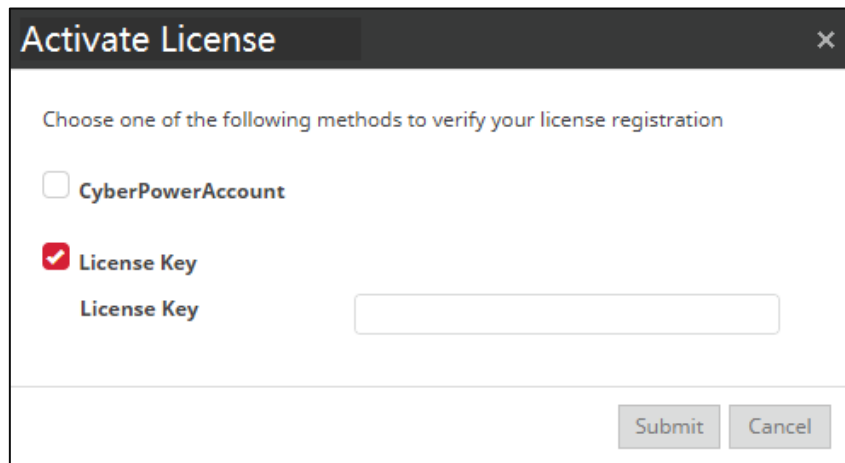
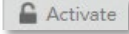
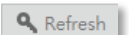
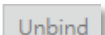


Figure 12.4 Activate License window (License Key)

Table 12.1 License Information function description

Icon	Description
	This button is only displayed when no license account is activated. Click to enter your license account and password to activate the license.
	This button is displayed when the license account was activated. Click to enter your license account and password to update the license information for more services.
	Click to stop running the Dataloader program on the license server, and stop collecting data from all equipment (Figure 12.3).

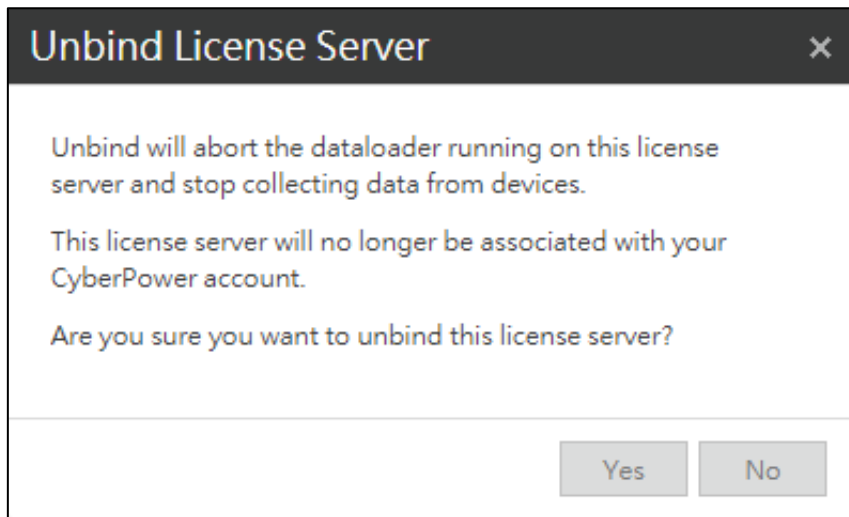


Figure 12.5 Unbind license server

Table 12.2 License Information content description

Content	Description
Product	The system name (PowerPanel Enterprise.).
License Type	The license type of installed PowerPanel Enterprise (Basic.)
Maximum License Node	The maximum number of equipment allowed for the license account.
License Registered by	The license account (Email address). (The information is only displayed when license was activated.)
Activation Date	The date the license account was activated in the system. (The information is only displayed when license was activated.)
Computer Name	The computer name of the license server where user installed the Dataloader program.
CPU Number	The CPU number of the license server.
IP Address	The IP address of the license server.

12.1.2 Parameter

The Parameter page allows users to set the rate and the currency symbol for the Energy Cost and the CO2 Emissions. Click “Save” (1 in Figure 12.6) to update the parameter

settings, and the related information displayed in the system will also be updated (Figure 12.6). The function details and the contents are shown in Table 12.3.

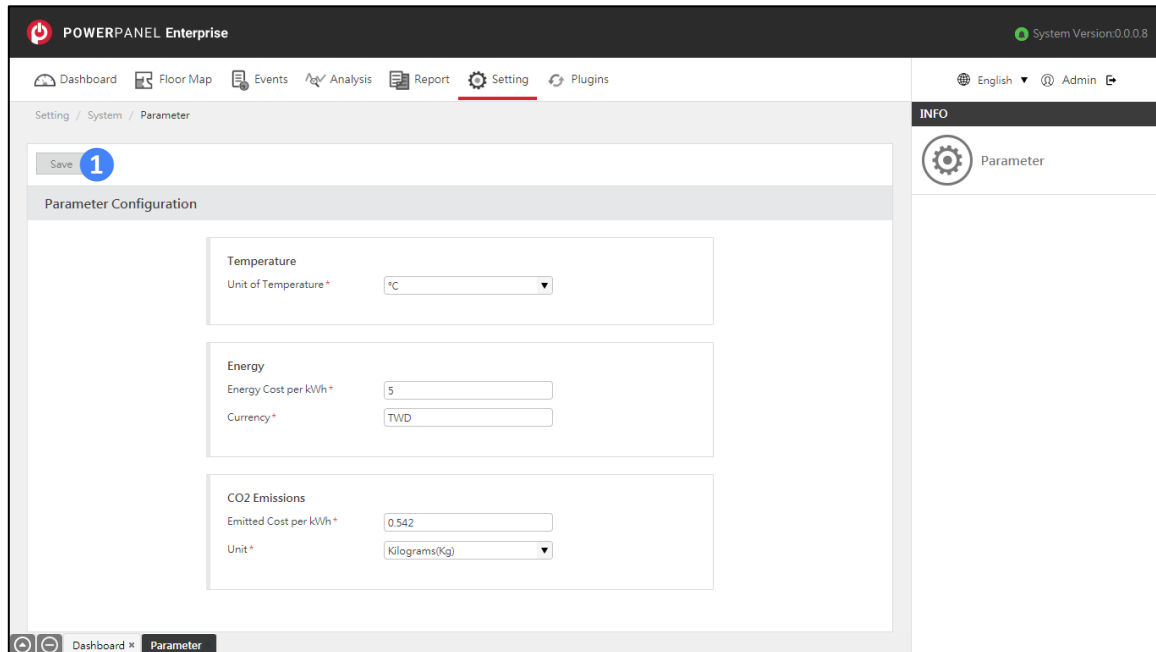


Figure 12.6 Parameter

Table 12.3 Parameter content description

Content	Description
Unit of Temperature *	°C or °F, the default unit is °C.
Energy Cost per kWh *	The rate of energy consumption.
Currency *	The currency symbol of energy cost.
Emitted Cost per kWh *	The rate of the CO2 emissions per kWh.
Unit *	The unit of the CO2 emission, the default unit is Kilograms (Kg). – Kilograms (Kg) or Pounds (lb).

12.1.3 Organization

The Organization page allows users to maintain the organization information of Department, Company, Title and Level.

- Department

The Department page displays the list of department names (Figure 12.7),

allowing users to add a new department to the organization (Figure 12.8). The function details are described in Table 12.4 and the contents are shown in Table 12.5.

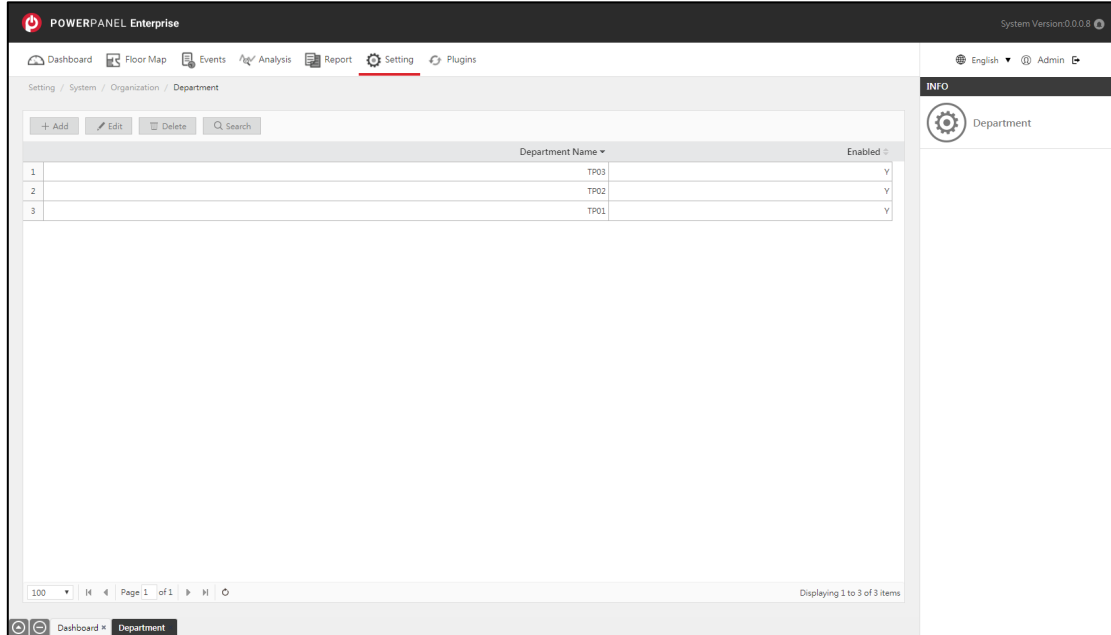


Figure 12.7 Department

Table 12.4 Department function description

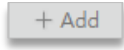
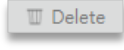


Icon	Description
	Click to add a new department in the table.
	Click to delete the selected department in the table.
	Click to edit the selected department in the table.
	Click to input the query condition to filter the data in the table.

Table 12.5 Department content description

Content	Description
Department Name *	The displayed name of the department.
Enabled	Click to activate the department.

Figure 12.8 Add a department

- Company

The Company page displays the list of company names (Figure 12.9), allowing users to add a new company (Figure 12.10). The function details are described in Table 12.6 and the contents are shown in Table 12.7.

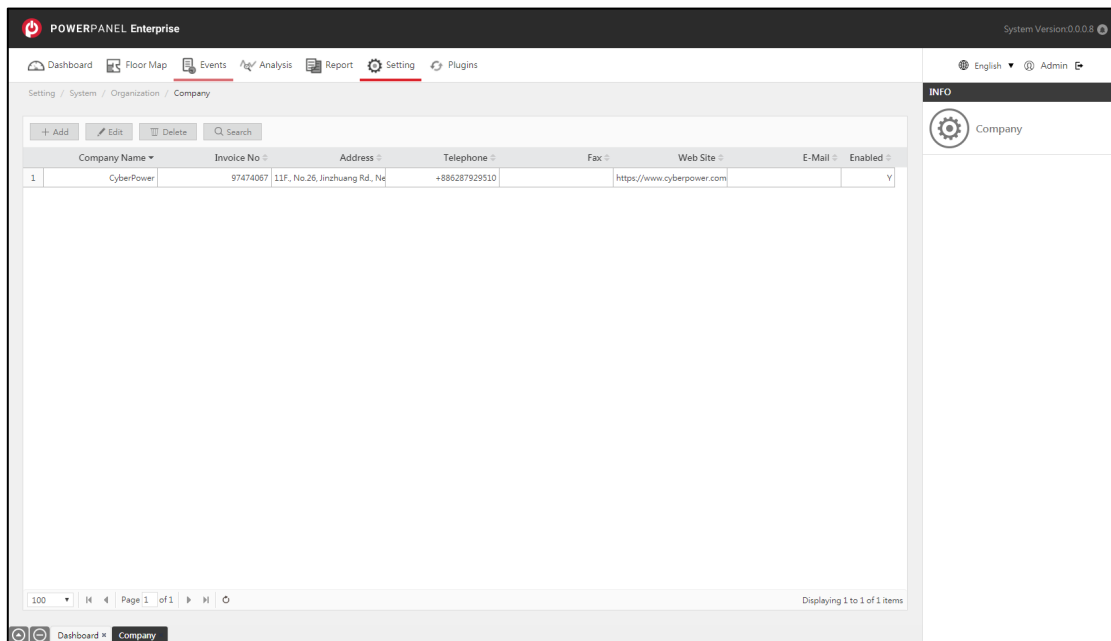
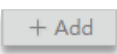


Figure 12.9 Company

Table 12.6 Company function description

Icon	Description
	Click to add a new company in the table.

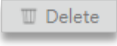
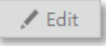
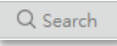
Icon	Description
	Click to delete the selected company in the table.
	Click to edit the selected company in the table.
	Click to input the query condition to filter the data in the table.

Table 12.7 Company content description

Content	Description
Company Name *	The displayed company name.
Invoice No	The invoice number of the company.
Address	The address of the company.
Telephone	The phone number of the company.
Fax	The fax number of the company.
Web Site	The website link of the company.
E-Mail	The contact email address of the company.
Enabled	Click to activate the company.

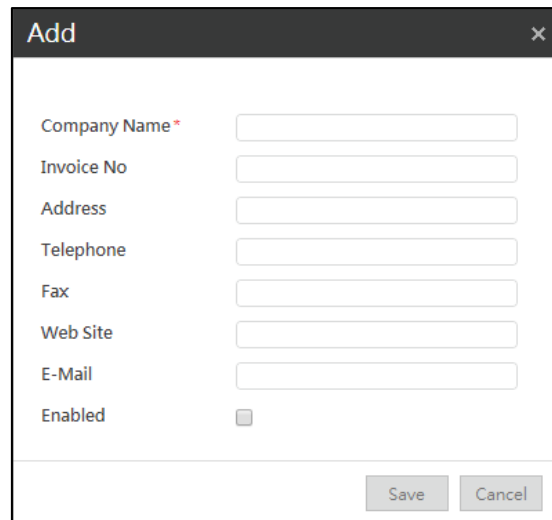


Figure 12.10 Add a company

- Title

The Title page displays the list of job titles (Figure 12.11), allowing users to add a

new job title (Figure 12.12). The function details are described in Table 12.8 and the contents are shown in Table 12.9.

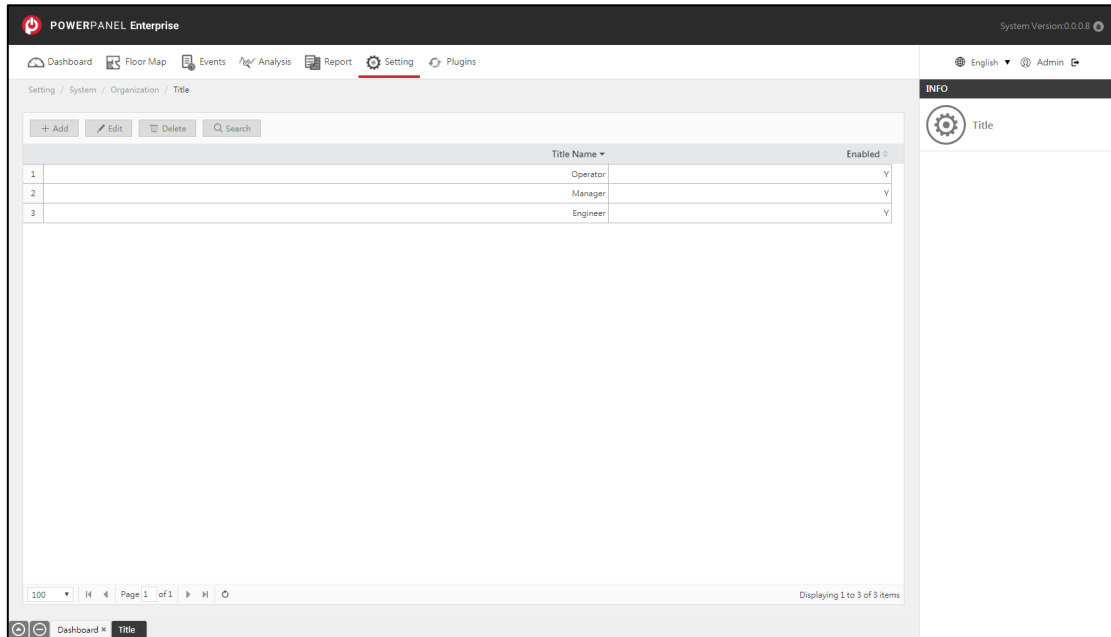


Figure 12.11 Title

Table 12.8 Title function description

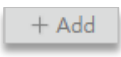
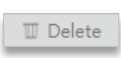
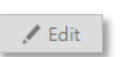
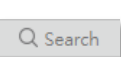
Icon	Description
	Click to add a new job title in the table.
	Click to delete the selected job title in the table.
	Click to edit the selected job title in the table.
	Click to input the query condition to filter the data in the table.

Table 12.9 Title content description

Content	Description
Title Name *	The displayed name of the job title.
Enabled	Click to activate the job title.

Figure 12.12 Add a title

- Level

The Level page displays the list of job levels (Figure 12.13), allowing users to add a new job level (Figure 12.14). The function details are described in Table 12.10 and the contents are shown in Table 12.11.

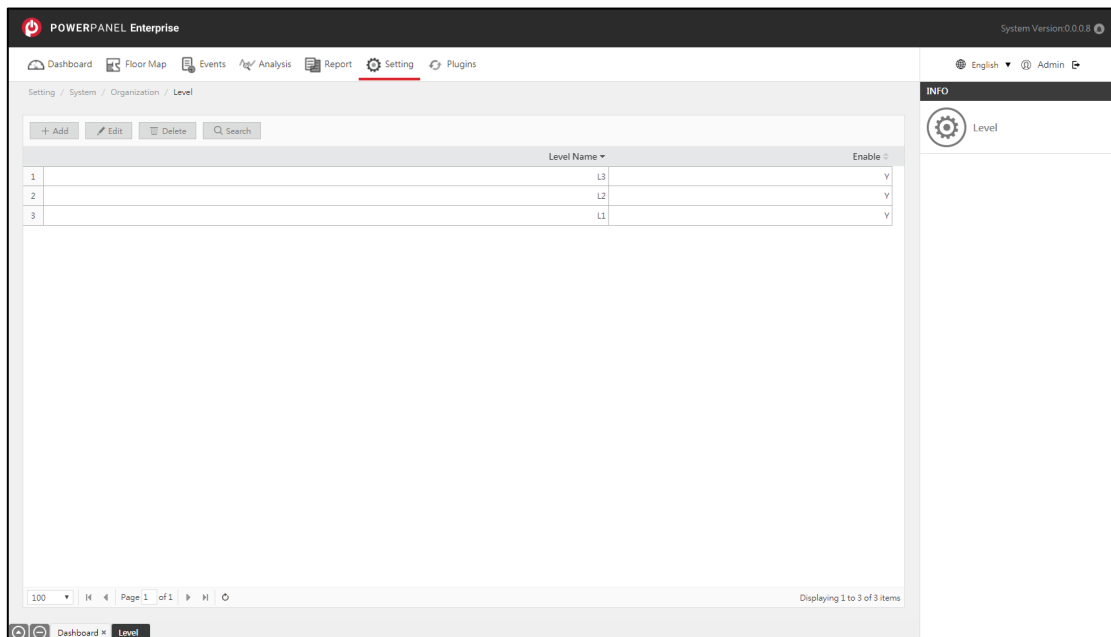


Figure 12.13 Level

Table 12.10 Level function description

Icon	Description
	Click to add a new job level in the table.
	Click to delete the selected job level in the table.

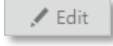
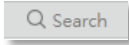
Icon	Description
	Click to edit the selected job level in the table.
	Click to input the query condition to filter the data in the table.

Table 12.11 Level content description

Content	Description
Level Name *	The displayed name of the job level.
Enabled	Click to activate the job level.

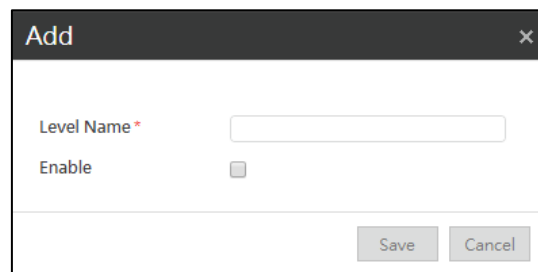


Figure 12.14 Add a level

12.1.4 Account

The Account page displays the account list and the account details (Figure 12.15)

The System uses Account to manage account authorization and it is managed by the system administrator. The system administrator can add a new account and set the default password for the new user to log in to the system.

PowerPanel® Enterprise Basic provides only one type of account authorization, and each account has administrator privileges. PowerPanel® Enterprise Standard/Advanced provide three types of account authorizations (Admin/ User/ Viewer) by default, and allow users to define their own account authorizations.

The function details are described in Table 12.12 and the contents are shown in Table 12.13.

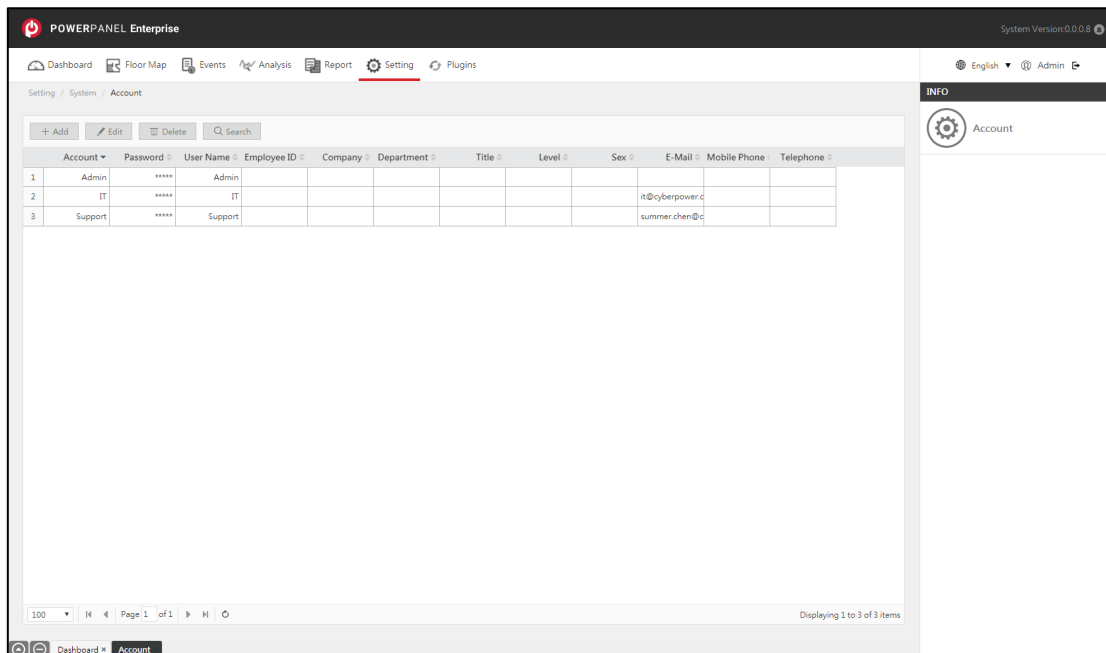


Figure 12.15 Account

Table 12.12 Account function description

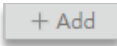
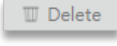
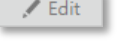

Icon	Description
	Click to add a new account in the table (Figure 12.16).
	Click to delete the selected account in the table.
	Click to edit the selected account in the table.
	Click to input the query condition to filter the data in the table.

Table 12.13 Account content description

Content	Description
Account*	The account used to log in to PowerPanel® Enterprise.
Password*	The password of the account.
User Name*	The displayed name of the account.
Employee ID	The ID of the account
Comapny	The company of the account.
Department	The department of the account.

Content	Description
Title	The job title of the account.
Level	The job level of the account.
Sex	The gender of the account.
E-Mail*	The email address of the account.
Mobile Phone	The mobile phone number of the account.
Telephone	The office telephone number of the account.

The screenshot shows a dialog box titled "Add" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Account* (text input)
- Password* (text input)
- User Name* (text input)
- Employee ID (text input)
- Company (dropdown menu)
- Department (dropdown menu)
- Title (dropdown menu)
- Level (dropdown menu)
- Sex (dropdown menu)
- E-Mail (text input)
- Mobile Phone (text input)
- Telephone (text input)

At the bottom right of the dialog, there are two buttons: "Save" and "Cancel".

Figure 12.16 Add an account

12.1.5 Authorization

The Authorization Section is only available in PowerPanel® Enterprise Standard/Advanced. It allows the system administrators to create new account authorization types, and manage the authorization for each account in the system. (Figure 12.17)

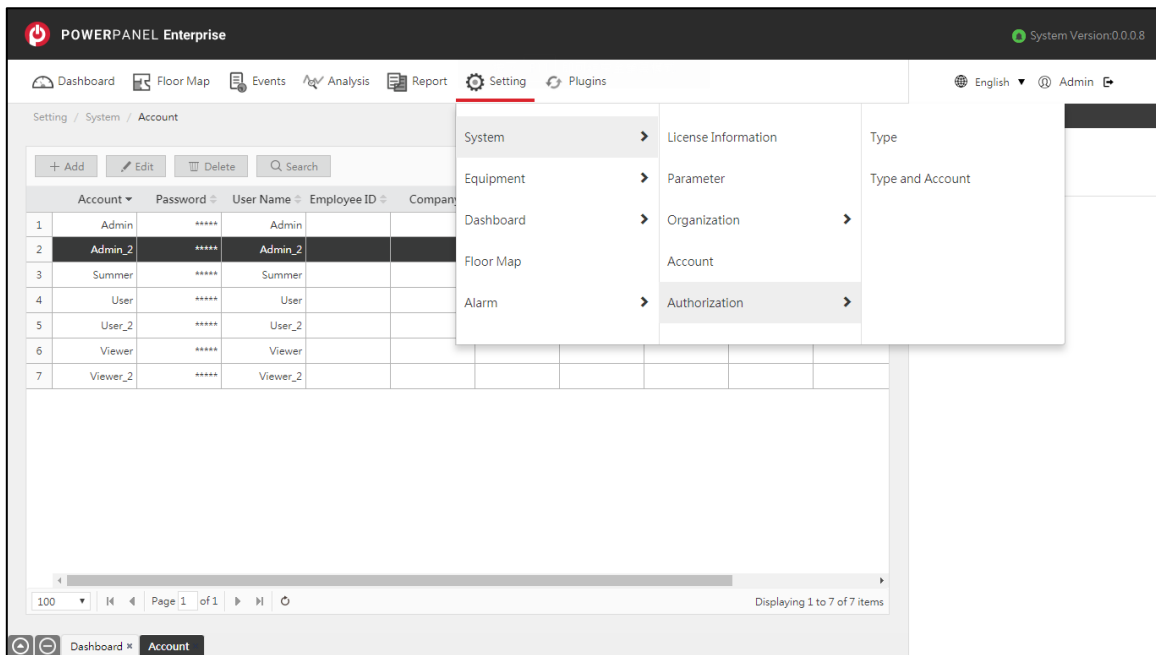


Figure 12.17 Authorization

- Type

The Type page displays the list of authorization types (Figure 12.18).

Click “Add” (1 in Figure 12.18) to create a new authorization type to set visible pages and function buttons in the system (Figure 12.19). The function details are described in Table 12.14 and the contents are shown in Table 12.15.

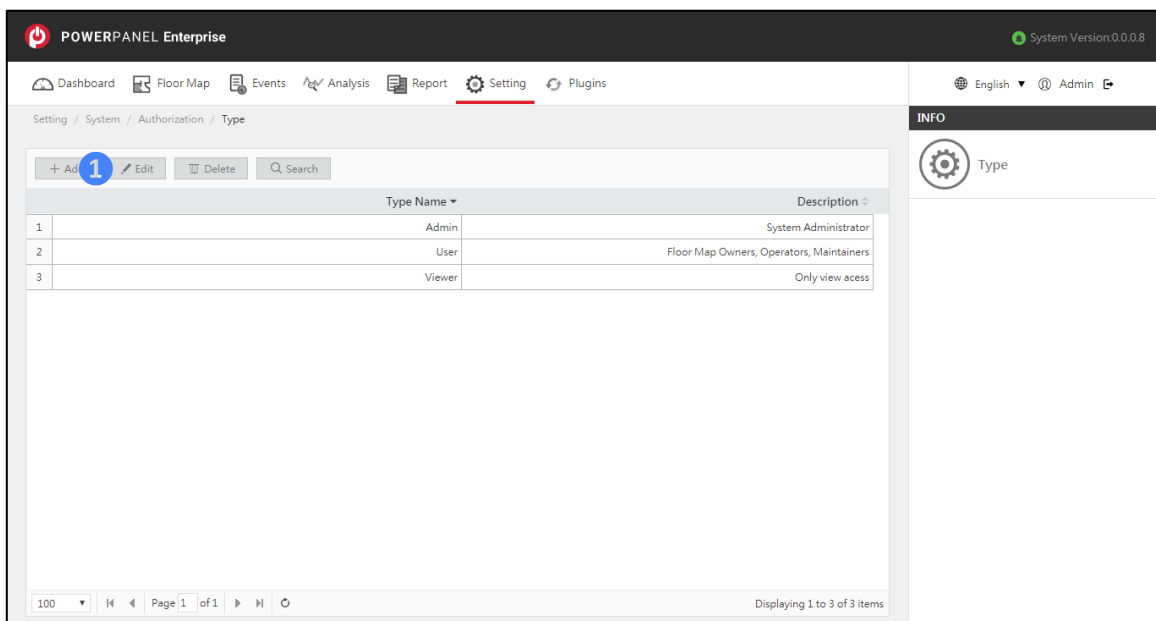


Figure 12.18 Type

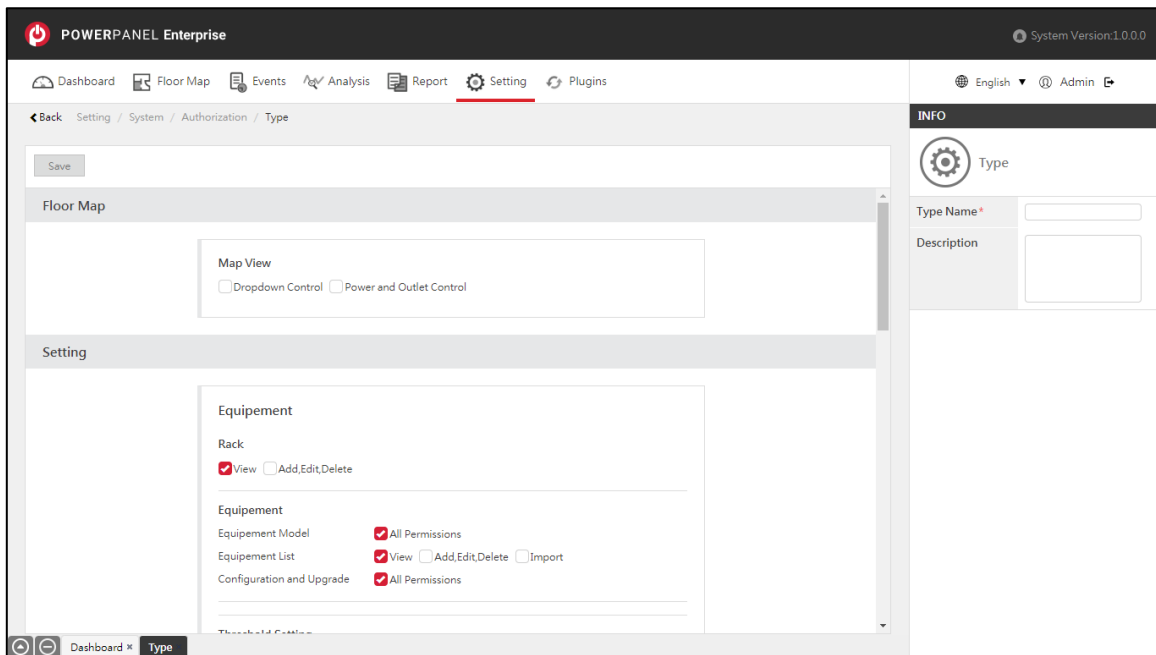


Figure 12.19 Add an Authorization Type

Table 12.14 Type function description

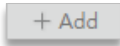
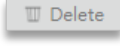
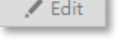

Icon	Description
	Click to add a new authorization type in the table.
	Click to delete the selected authorization type in the table.
	Click to edit the selected authorization type in the table.
	Click to input the query condition to filter the data in the table.

Table 12.15 Type content description

Content	Description
Type Name *	The name of the authorization type.
Description	Any note or the description of the authorization type.

- Type and Account

The Type and Account page allows users to manage authorization for each account, assigning different authorization types to the account.

There are two main windows on this page, the top window displaying the “Type” table and the bottom window displaying the “Account” table (Figure 12.20).

Firstly, select one type in the top window and the accounts of the selected Authorization Type will be displayed in the bottom window (1 in Figure 12.20).

Secondly, click the button in the middle of the bottom window to assign or remove the account for the Authorization Type (2 in Figure 12.20).

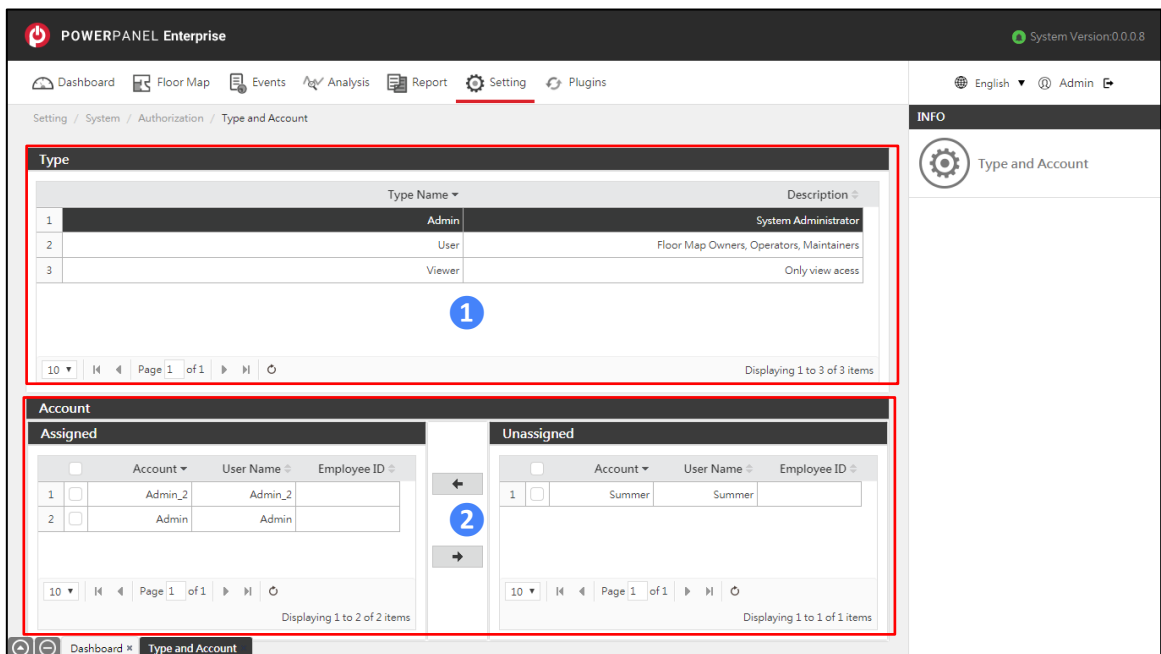


Figure 12.20 Type and Account

12.1.6 Slideshow

The Slideshow page allows users to enter the interval time (in seconds), and the system will automatically display all opened tabs in order at intervals (Figure 12.21).

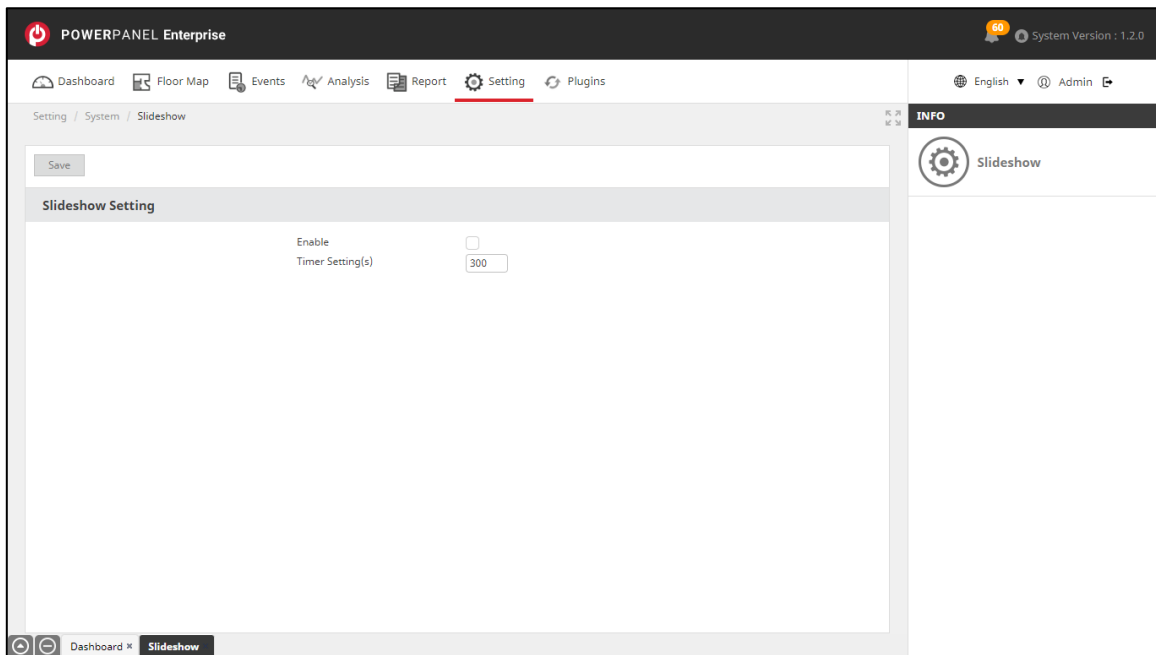


Figure 12.21 Slideshow

12.2 Equipment

The Equipment section allows users to manage equipment parameters and rack configurations, set the thresholds for each equipment status, and add new equipment by auto-discovery function (Figure 12.22).

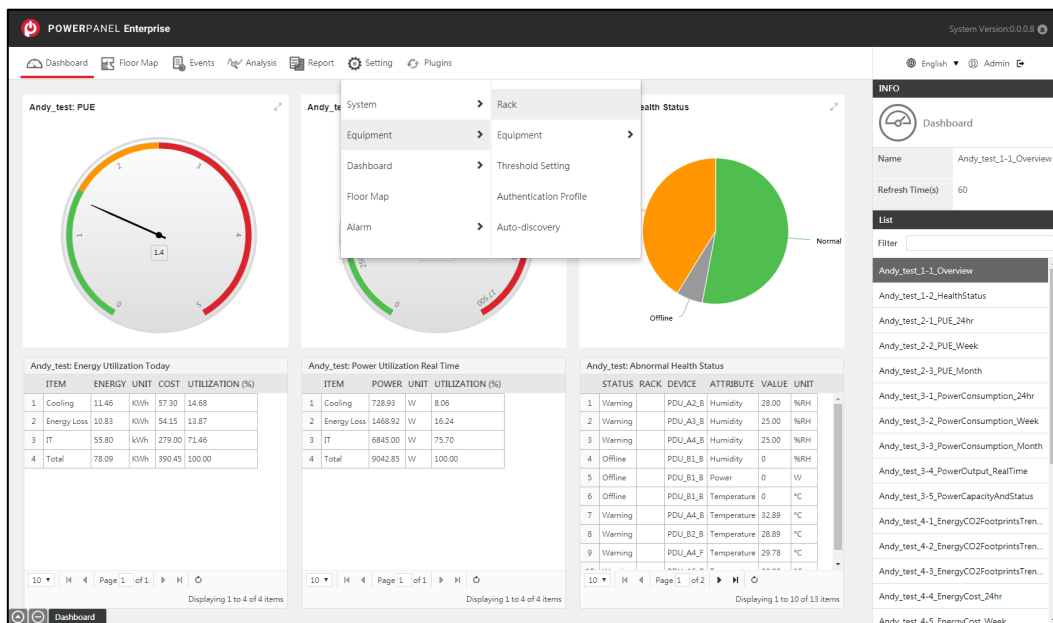


Figure 12.22 Equipment

12.2.1 Rack

The Rack page displays the rack list and the rack details in the table. Users can click to add a rack or edit the rack configurations (Figure 12.23). The function details are described in Table 12.16. The method of adding a new rack is described in Figure 12.24 ~ Figure 12.27 and Table 12.17.

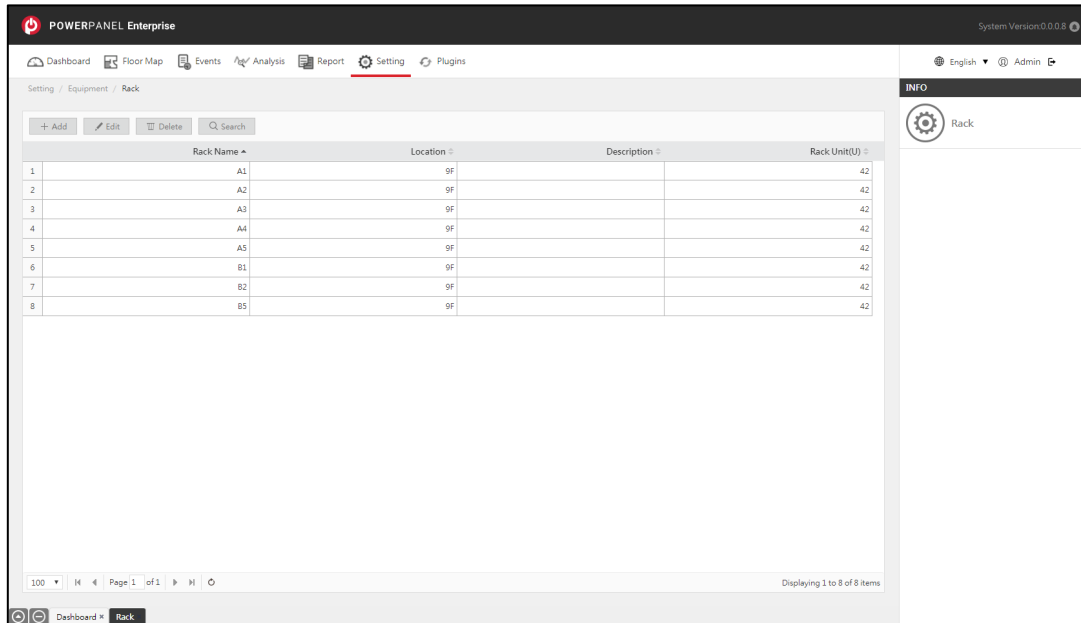
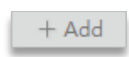
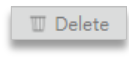




Figure 12.23 Rack

Table 12.16 Rack function description

Icon	Description
	Click to add a new rack in the table.
	Click to delete the selected rack in the table.
	Click to edit the selected rack in the table.
	Click to input the query condition to filter the data in the table.

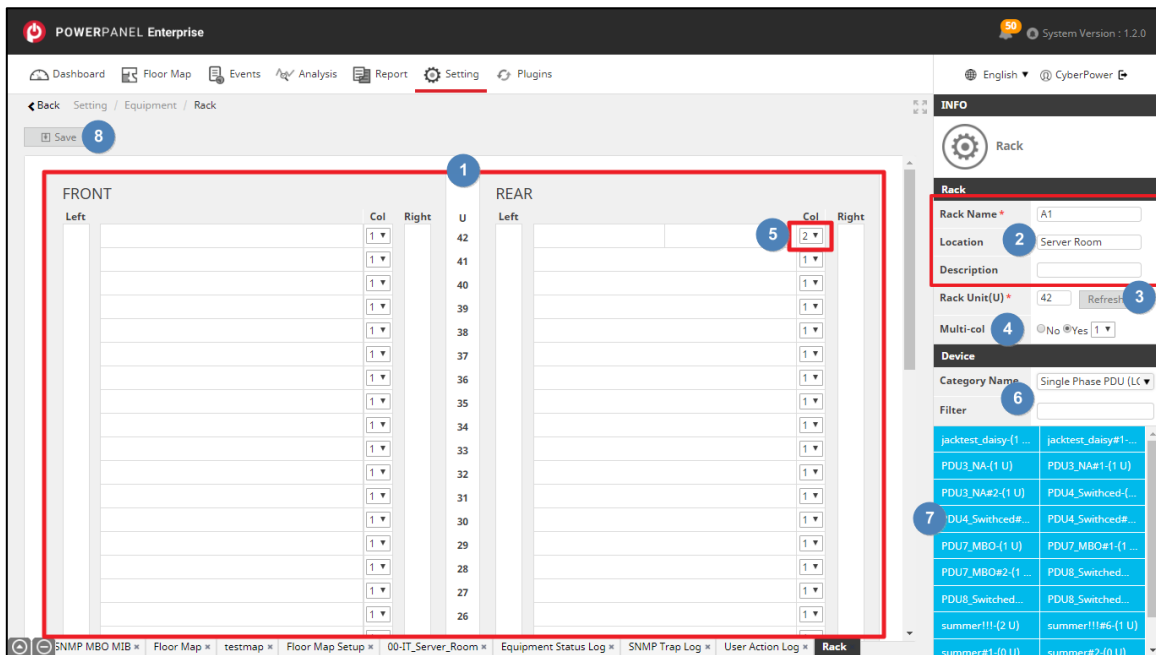


Figure 12.24 The steps of adding a rack

Table 12.17 The steps description

Step	Description
1	Displays the rack space on the front and back of the rack (Figure 12.24).
2	Enter the basic information of the rack in the INFO Panel (Table 12.18).
3	Enter the total rack units of the rack, and click “Refresh” to update the rack space in the Display Panel. (Table 12.18).
4	Set the “Multi-col” field to determine how to use each U space of the rack. <ul style="list-style-type: none"> Click “No” to use the entire U space to put the device. Click “Yes” to select the number from the dropdown list to split each U space in the rack (The maximum is 3). After setting the “Multi-col” field, click “Refresh” to update the rack space in the Display Panel. See Figure 12.25 and Figure 12.26 for details.
5	Click to change the number of partitions for the selected U space.
6	Select the category from the dropdown list to filter the device list displayed below.
7	Drag & drop the device to add or remove devices from the floor map in the Display Panel. See Figure 12.27 for details.
8	Save the rack.

Table 12.18 Rack content description

Content	Description
Rack Name *	The rack name.
Location	The location of the rack.
Description	Any notes or descriptions of the rack.
Rack Unit (U) *	The number of total U space of the rack. The default rack unit is set to 42 (U).
Multi-col	The space usage for each U space of the rack.

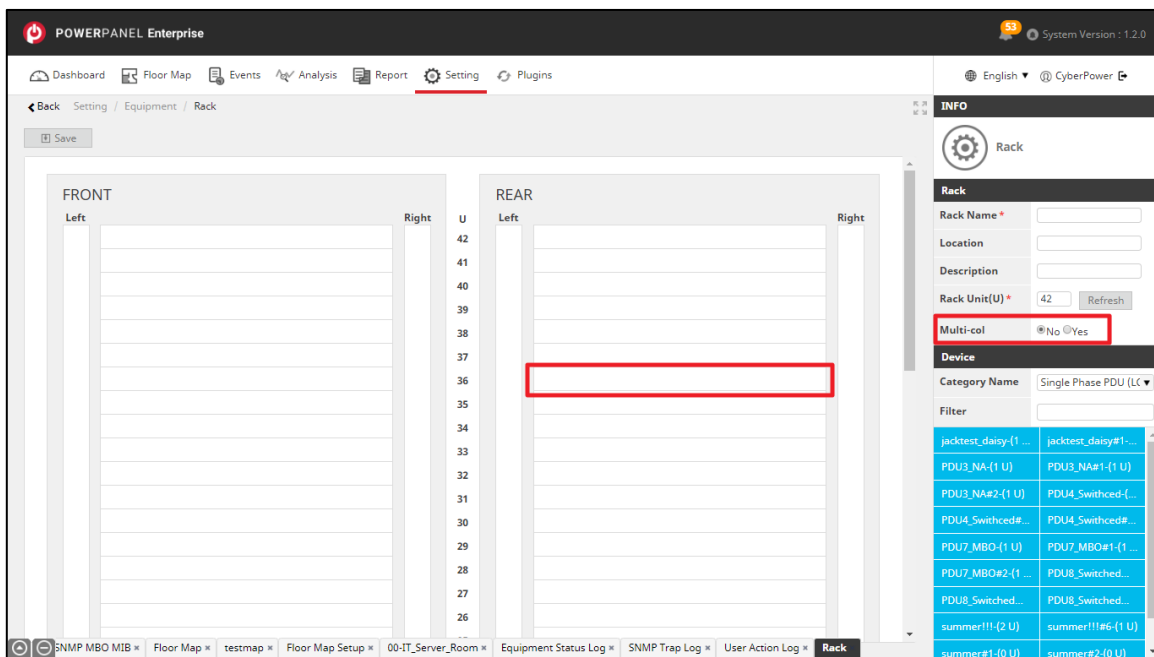


Figure 12.25 Set the Multi-col to use entire U space

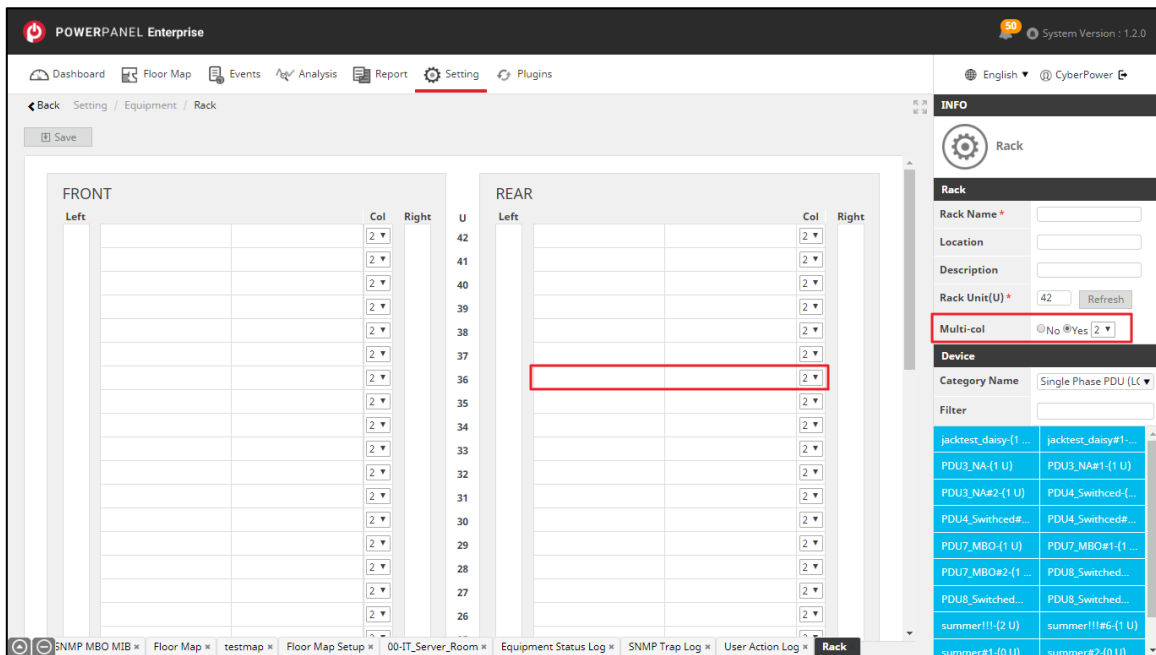


Figure 12.26 Set the Multi-col to split the U space

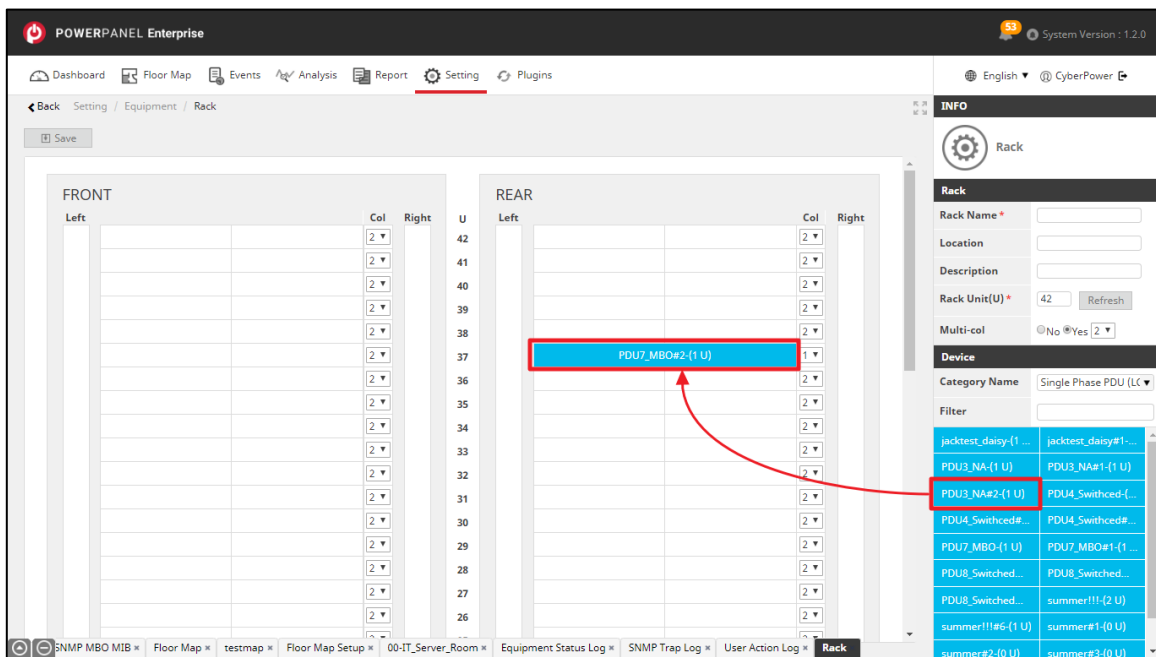


Figure 12.27 Drag & drop the device to the rack

12.2.2 Equipment

The Equipment section allows users to add equipment and manage the equipment model library, and perform the mass firmware and configuration updates for the SNMP devices in the system (Figure 12.28).

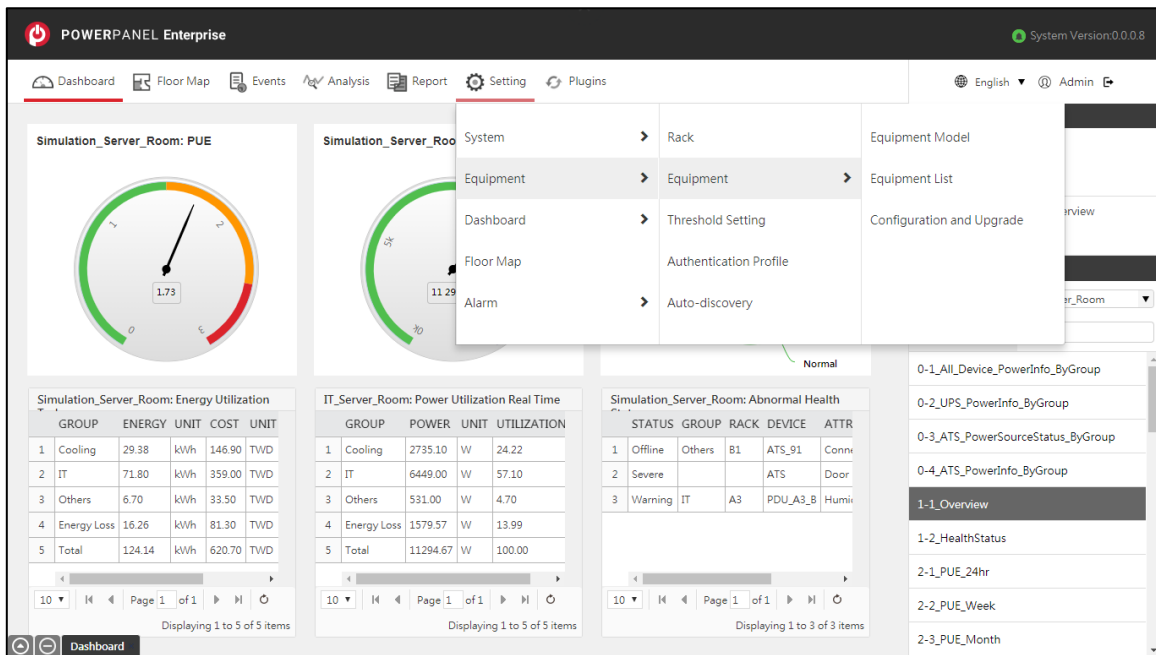


Figure 12.28 Equipment

- Equipment Model

The Equipment Model page shows the system built-in equipment model list in the table. Users can click to add a new equipment model (Figure 12.29).

The function details are described in Table 12.19 and the equipment model contents are shown in Table 12.20 ~ Table 12.23.

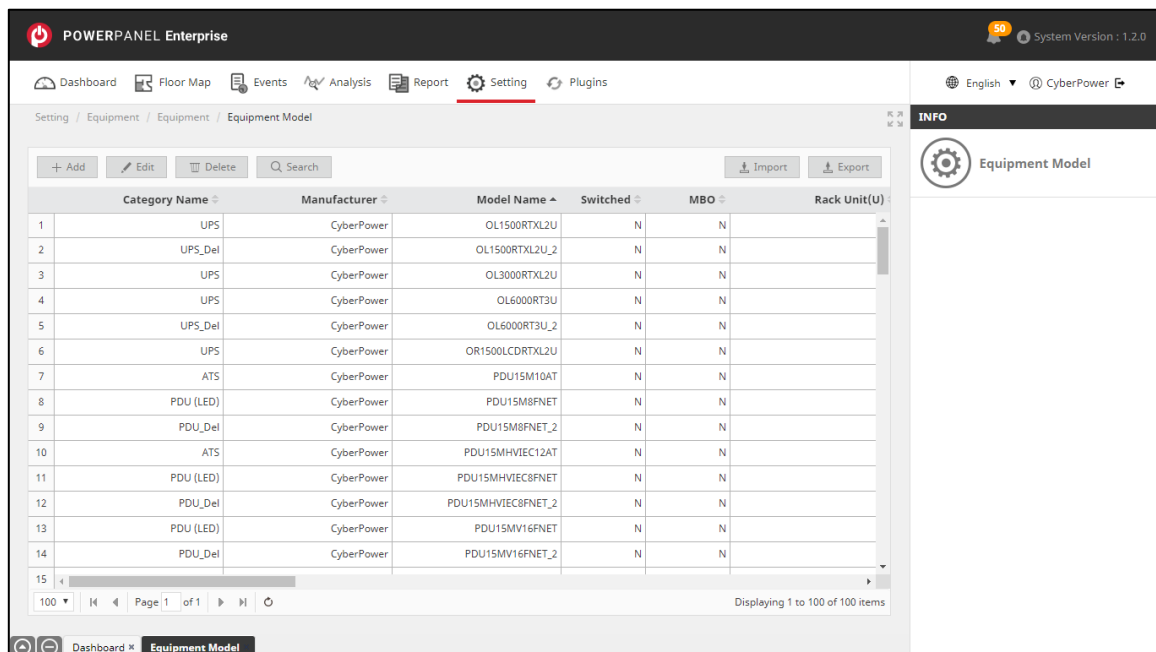
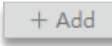

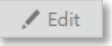
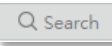


Figure 12.29 Equipment Model

Table 12.19 The Equipment Model function description

Icon	Description
	Click to open a new page for adding new equipment model in the table. See Figure 12.30 for the details.
	Click to delete the selected equipment model in the table. (Note: The system built-in equipment model cannot be deleted by users.)
	Click to open a new page for editing the selected equipment model in the table. (Note: The system built-in equipment model cannot be edited by users.)
	Click to input the query condition to filter the data in the table.

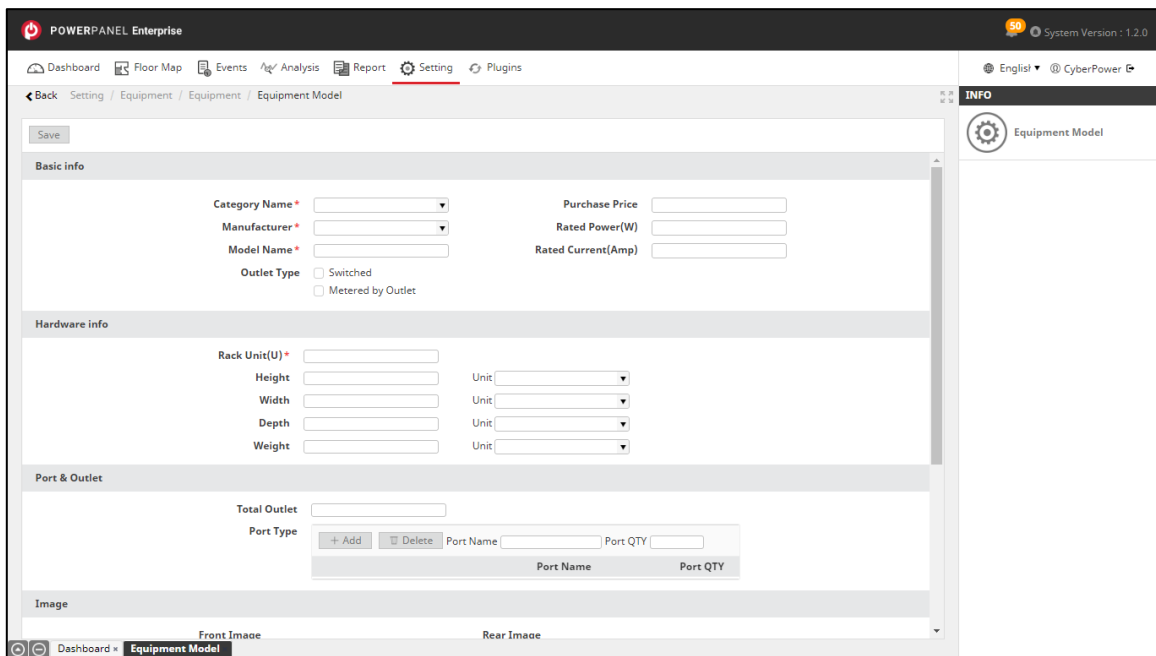


Figure 12.30 Add new equipment model

Table 12.20 The Basic info content description

Content	Description
Category Name *	<p>The dropdown list of the categories, built-in by system. The system provides five types of default device categories:</p> <ol style="list-style-type: none"> PDU (LED): PDU with LED panel Single Phase PDU (LCD): Single Phase PDU with LCD panel, supporting the Daisy Chain feature.

Content	Description
	3. 3-Phase PDU (LCD): 3-Phase PDU with LCD panel, supporting the Daisy Chain feature. 4. ATS 5. UPS
Manufacturer *	The default manufacturer is set to CyberPower.
Model Name *	The name of the equipment model.
Outlet Type	The remote outlet control and outlet metering functions supported by the equipment model. - Switched: remote control of each outlet. - Metered-by-Outlet: measure the power consumption of each outlet.
Purchase Price	The price of the equipment model.
Rated Power (w)	The power rating of the equipment model.
Rated Current (Amp)	The current rating of the equipment model.

Table 12.21 The Hardware info content description

Content	Description
Rack Units (U)	The occupied Rack Unit of the equipment model.
Height	The physical height of the equipment model.
Width	The physical width of the equipment model.
Depth	The physical depth of the equipment model.
Weight	The physical weight of the equipment model.
Total Outlet	The total outlets of the equipment model.
Port Type	The port list of the equipment model (Table 12.22)

Table 12.22 The Port & Outlet function description

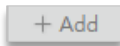
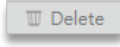
Icon	Description
	Click to add the port name and port QTY to the “Port Type” table.
	Click to delete the selected port in the “Port Type” table.

Table 12.23 The Image content description

Content	Description
Front Image	The front image of the equipment model.
Rear Image	The rear image of the equipment model.

- Equipment List

The Equipment List page displays the list of all equipment in the table, allowing users to add new equipment or maintain the information of the equipment (Figure 12.31). The function details are described in Table 12.24 and the contents are shown in Table 12.25 ~ Table 12.28.

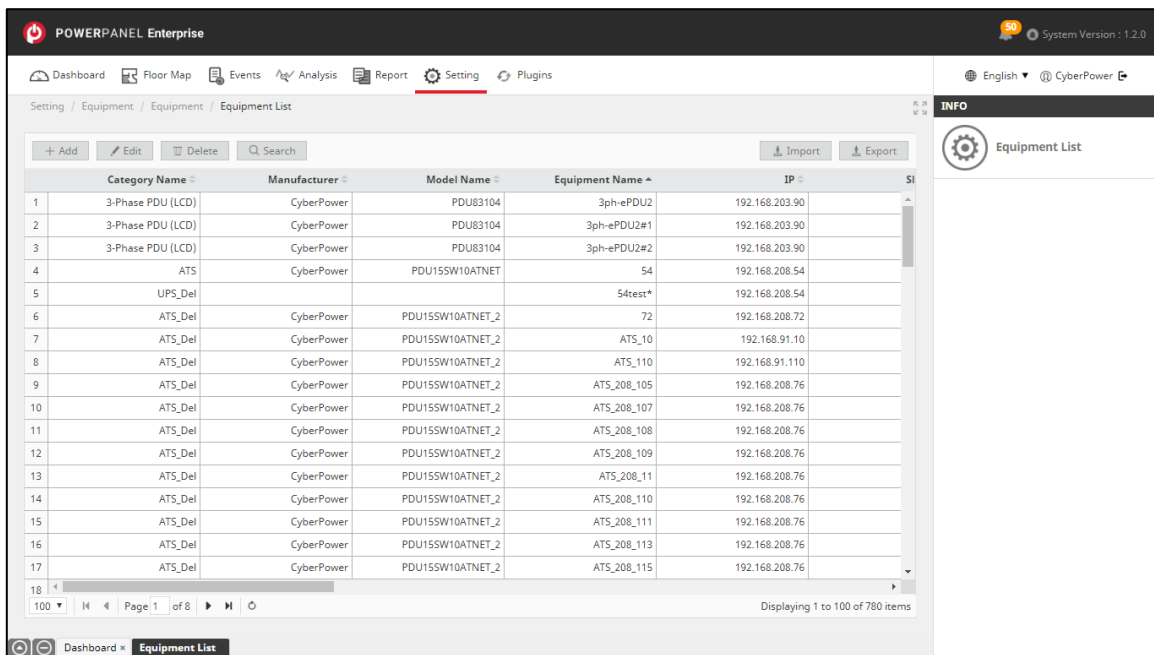
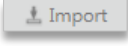
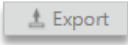


Figure 12.31 Equipment List

Table 12.24 The Equipment List function description

Icon	Description
	Click to open a new page for adding new equipment in the table. See Figure 12.32 for the details.
	Click to delete the selected equipment in the table.
	Click to open a new page for editing the selected equipment in the table.
	Click to input the query condition to filter the data in the table.

Icon	Description
	Click to import an Excel file to update the data in the table.
	Click to export the table as an Excel file.

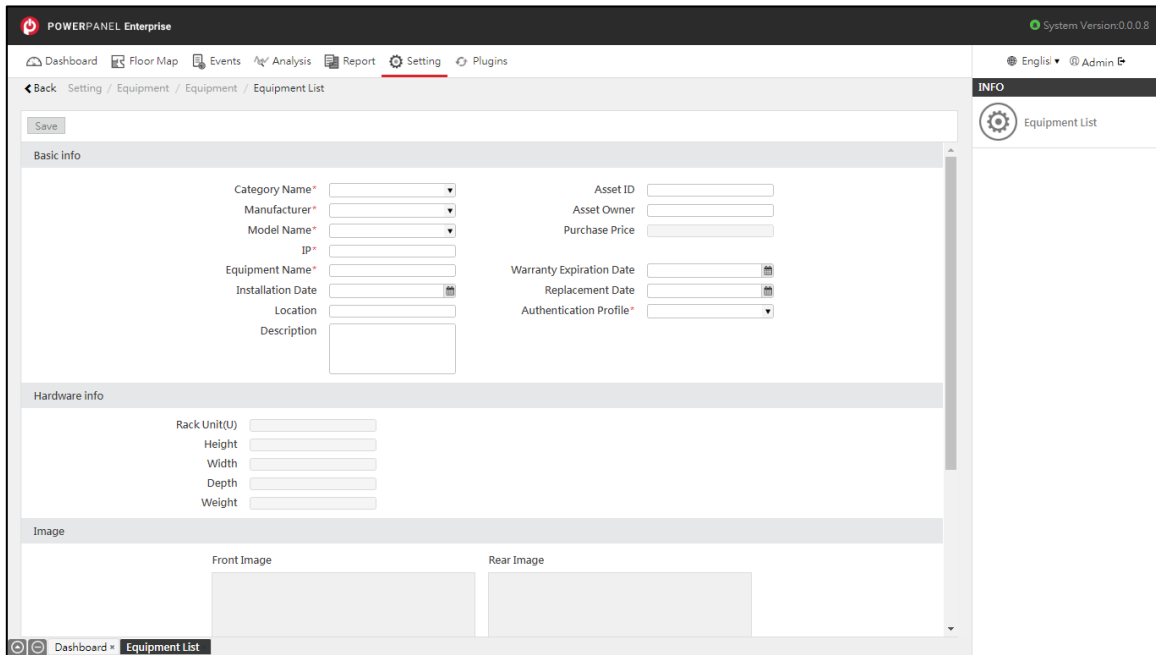


Figure 12.32 Add new equipment

Table 12.25 The Basic info content description

Content	Description
Category Name *	<p>The dropdown list of the equipment categories, built-in by system. The system provides five types of default categories:</p> <ul style="list-style-type: none"> - PDU (LED): PDU with LED panel - Single Phase PDU (LCD): Single Phase PDU with LCD panel, supporting the Daisy Chain feature. - 3-Phase PDU (LCD): 3-Phase PDU with LCD panel, supporting the Daisy Chain feature. - ATS - UPS
Manufacturer *	The dropdown list of the manufacturer, built-in by system.

Content	Description
	Currently, PowerPanel® Enterprise supports CyberPower own brand devices only, and the default manufacturer is set to CyberPower.
Model Name *	The dropdown list of the equipment models, built-in by system. It can be updated by users in Equipment Model or via Plugins. See Equipment Model and Plugins for the details.
Installation Date	The installation date of the equipment.
Equipment Name *	The equipment name. It cannot be duplicated.
IP *	The IP address of the equipment.
Total Sub-devices *	The field is for the device category of Single Phase PDU (LCD) and 3-Phse PDU (LCD) , which support Daisy Chain function. This field is only available for host devices on a daisy chain. The default value is 0. The Users can enter the total number of guest devices (sub-devices) connected to the host device on the daisy chain, and then click "Save". The system will automatically generate all guest devices and name them by a sub-device ID.
Sub-device ID	The field is for the device category of Single Phase PDU (LCD) and 3-Phse PDU (LCD) , which support Daisy Chain function. The sub-device ID represents the order of the device on the daisy chain. <ul style="list-style-type: none"> - 0: Host device. (The first device on the daisy chain with network connection) - 1: Guest#1 device. (The second device on the daisy chain) - 2: Guest#2 device. (The third device on the daisy chain) - 3: Guest#3 device. (The fourth device on the daisy chain)
Location	The location of the equipment.
Description	Any notes or descriptions of the equipment.
Asset ID	The asset number of the equipment.
Asset Owner	The asset keeper of the equipment.
Purchase Price	The price of the equipment.
Warranty Expiration Date	The expiration date of the equipment warranty. Users can set an email reminder to track the date. See Assets Reminder for the details.
Replacement Date	The replacement date of the equipment. Users can set an email reminder to track the date. See Assets Reminder for the details.
Authentication Profile *	The dropdown list of authentication methods. Apply SNMP authentication to the equipment, allowing the system to obtain

Content	Description
	SNMP data from the equipment. The system provides two default authentication profiles: <ul style="list-style-type: none"> - SNMP - See Authentication Profile for the details.

Table 12.26 The Hardware info content description

Content	Description
Rack Units (U)	The occupied Rack Unit of the equipment model.
Height	The physical height of the equipment model.
Width	The physical width of the equipment model.
Depth	The physical depth of the equipment model.
Weight	The physical weight of the equipment model.

Table 12.27 The Image content description

Content	Description
Front Image	The front image of the equipment model.
Rear Image	The rear image of the equipment model.

Table 12.28 The Port & Outlet content description

Content	Description
Total Outlet	The number of total outlets of the equipment model.
Port Name	The ports supported by the equipment model.
Port QTY	The number of total ports of the equipment model.

- Configuration and Upgrade

The Configuration and Upgrade page allows users to perform the firmware upgrades (1 in Figure 12.33) or configuration updates (2 in Figure 12.33) for devices in bulk. The function details are described in Table 12.29 and the contents are shown in Table 12.30.

Click “Action Log” (3 in Figure 12.33) to view the historical update logs

(Figure 12.36), the contents are described in Table 12.33.

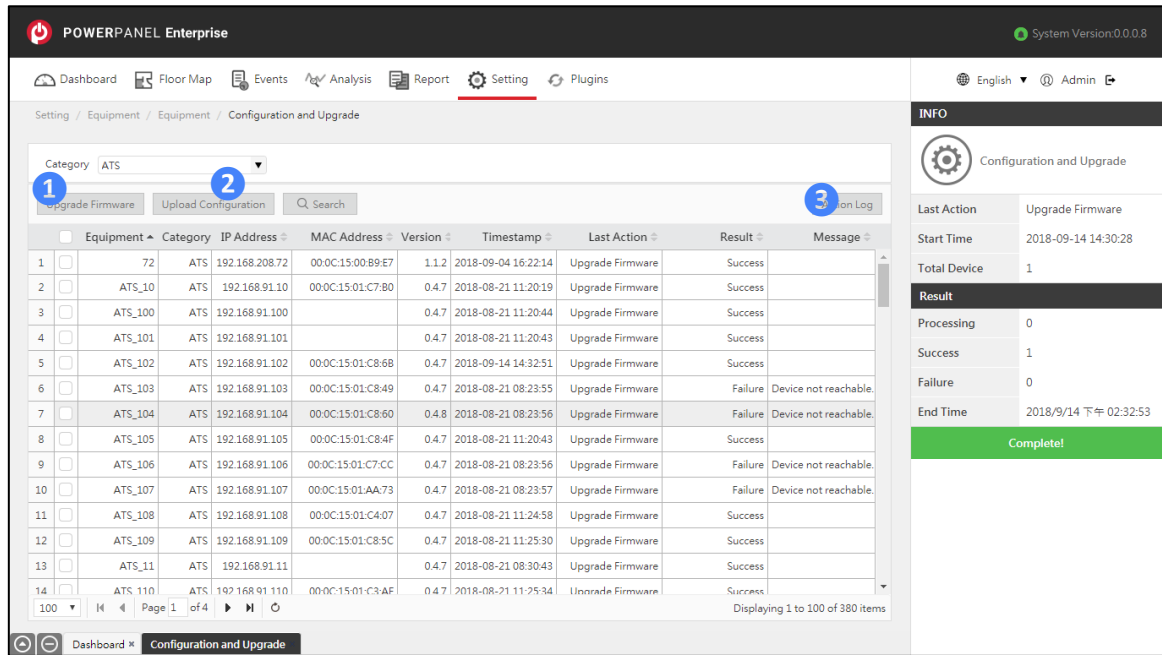


Figure 12.33 Configuration and Upgrade

Table 12.29 Configuration and Upgrade function description

Icon	Description
Category <input type="text" value="72"/>	Select the device category from the dropdown list to filter the equipment in the table.
	Click to perform the firmware updates for the selected devices. See Figure 12.34 and Table 12.31 for the operation steps.
	Click to perform the configuration updates for the selected devices. See Figure 12.35 and Table 12.32 for the operation steps.
	Click to display the historical update logs.
	Click to input the query condition to filter the data in the table.

Table 12.30 Configuration and Upgrade content description

Content	Description
Equipment	The name of the equipment.

Category Name	The device category of the equipment.
IP Address	The IP address of the equipment.
MAC Address	The MAC Address of the equipment.
Version	The current firmware version of the equipment.
Timestamp	The last update time of the equipment.
Last Action	The last operation that was performed by the equipment.
Result	The result of last operation.
Message	The error message or detailed description of the result.

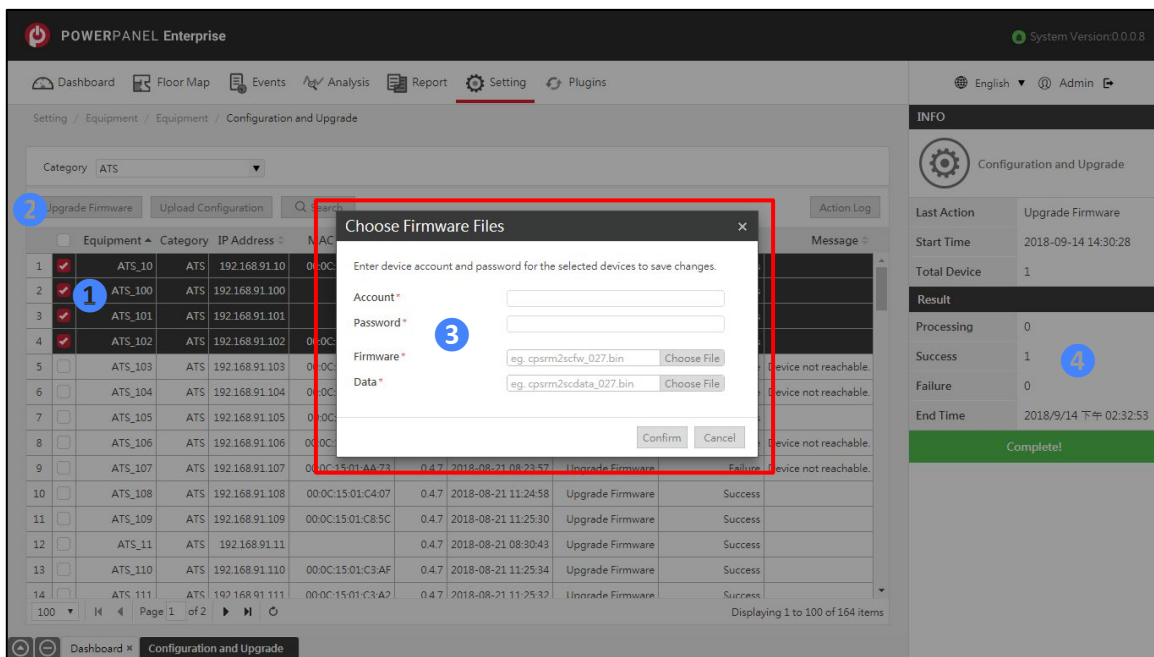


Figure 12.34 Upgrade Firmware

Table 12.31 The steps of firmware update

Step	Description
1	Select the devices which you want to update the firmware. (Note: The selected devices should be the same device category.)
2	Click “Upgrade Firmware” button.
3	<ul style="list-style-type: none"> - Enter the device login “Account” and “Password”. - Upload the firmware bin files. - Click “Confirm” to start updating firmware for all selected devices.
4	<ul style="list-style-type: none"> - During the update, you can check the update progress in the INFO Panel, and the status is refreshed every 20 seconds.

Step	Description
	<ul style="list-style-type: none"> You can close the tab page during the update process. The update will continue to run. When it is finished, you will see the Complete message.

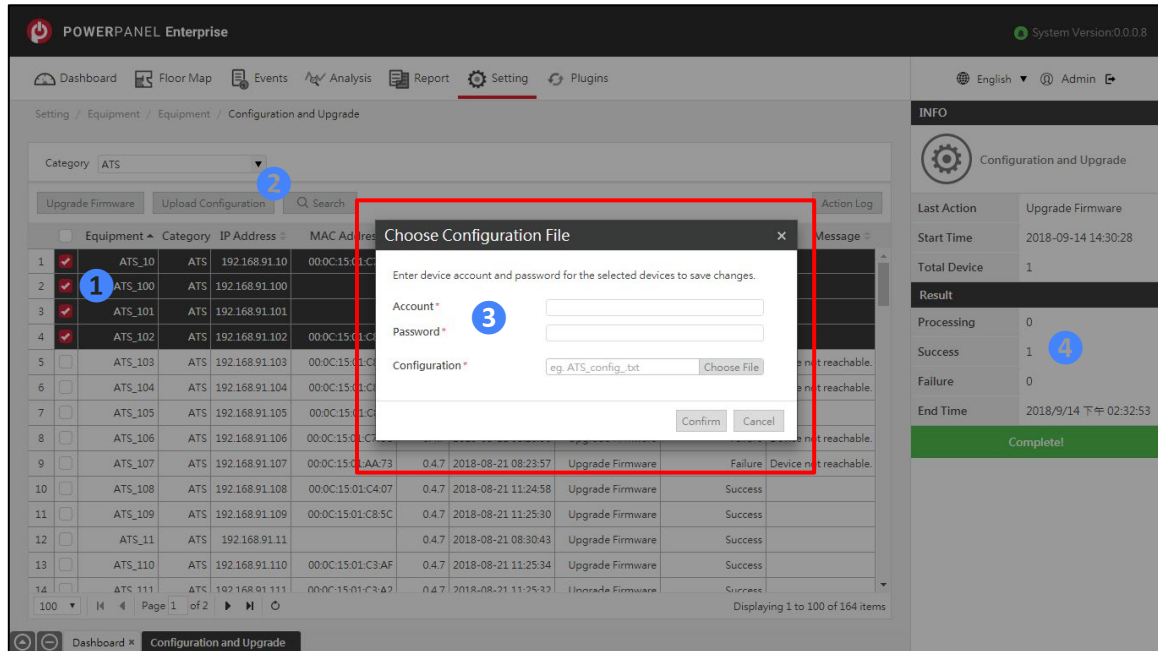


Figure 12.35 Upload Configuration

Table 12.32 The steps of configuration update

Step	Description
1	Select the devices which you want to update the device configuration. (Note: The selected device should be the same device category.)
2	Click “Upload Configuration” button.
3	<ul style="list-style-type: none"> Enter the device login “Account” and “Password”. Upload the device configuration txt file. (Note: You can download the file from the Remote Management Web Interface of the device.) Click “Confirm” to start updating configuration for all selected devices.
4	<ul style="list-style-type: none"> During the update, you can check the update progress in the INFO Panel, and the status is refreshed every 20 seconds You can close the tab page during the update process. The update will continue to run. When it is finished, you will see the Complete message.

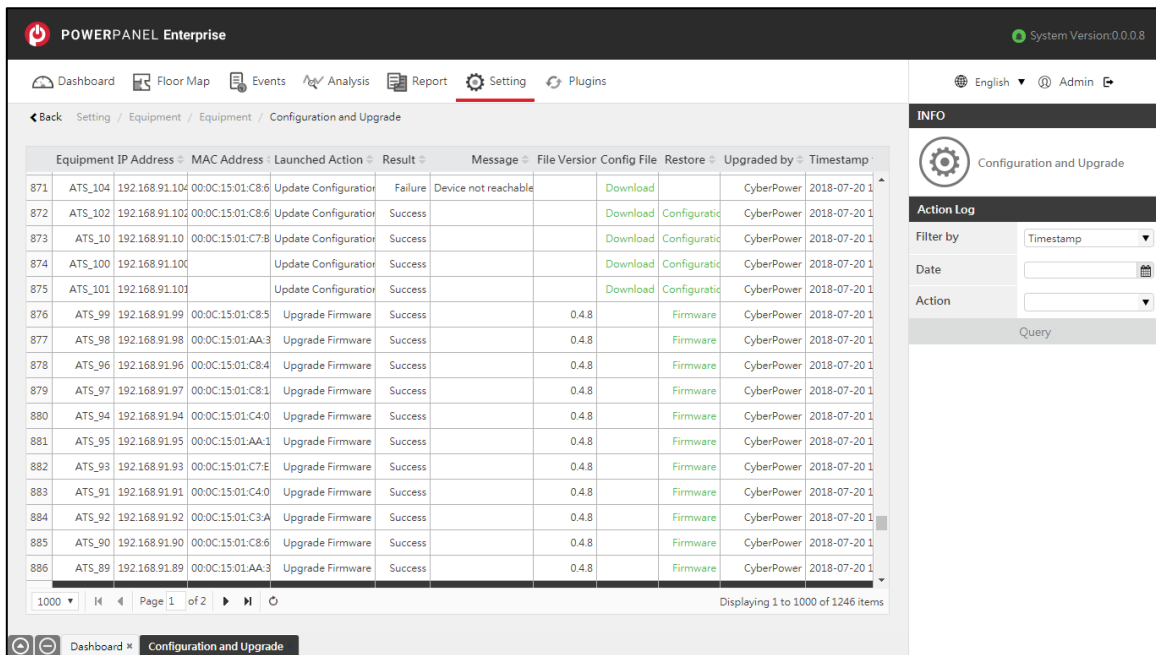


Figure 12.36 Action Log

Table 12.33 Action Log content description

Content	Description
Equipment	The name of the equipment.
IP Address	The IP address of the equipment.
MAC Address	The MAC address of the equipment.
Launched Action	The operation that was performed by the equipment.
Result	The result of the operation.
Message	The error message or detailed description of the result.
File Version	The firmware version.
Config File	Click to open the webpage to display the content of the device configuration.
Restore	Click to restore the firmware of the equipment or configuration to the selected file version.
Upgraded by	The account performed the operation.
Timestamp	The time the operation was performed.
Filter by	Select “Timestamp” or “Equipment” to filter the logs in the table.
Date	Click to select the date to filter the logs in the table.
Action	Select “Update Configuration” or “Upgrade Firmware” to filter the logs in the table.

12.2.3 Threshold Setting

The Threshold Setting page displays the list of the default threshold rules built-in by the system, allowing users to change the threshold value for the status of each attribute to trigger the status changes (Figure 12.37). The function details are described in Table 12.34 and the contents are shown in Table 12.35.

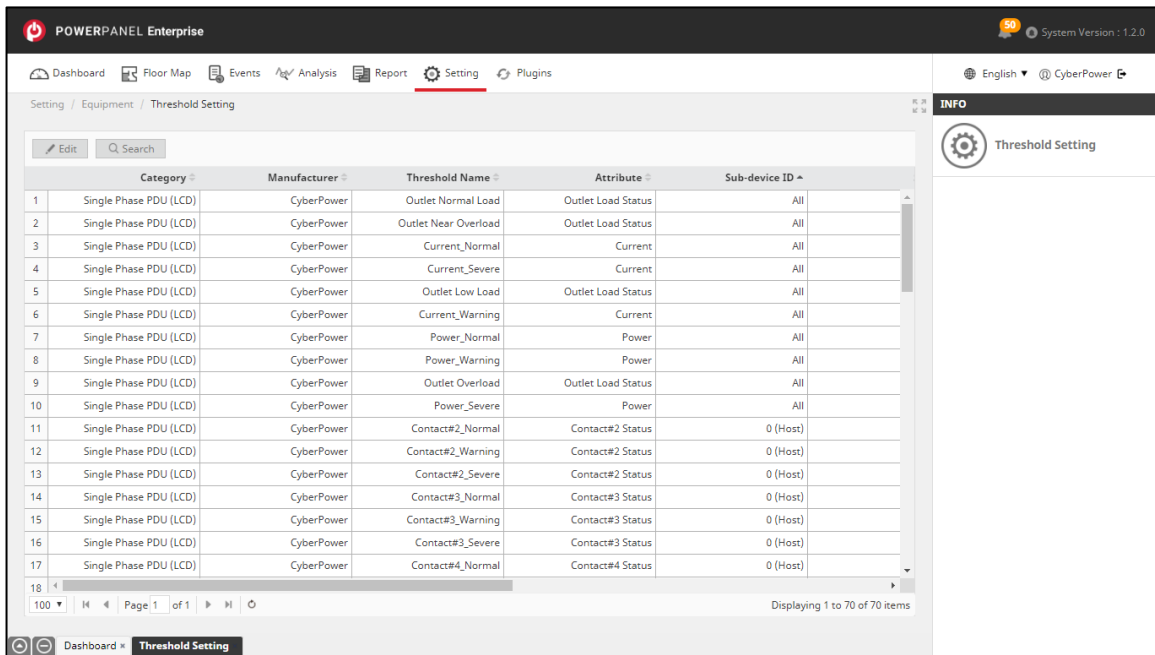


Figure 12.37 Threshold Setting

Table 12.34 The Threshold Setting function description


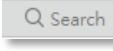
Icon	Description
	Click to edit the value of the selected threshold rule in the table (Figure 12.38).
	Click to input the query condition to filter the data in the table.

Table 12.35 The Threshold Setting content description

Content	Description
Category Name	The equipment category to which the threshold rule applies.
Manufacturer	The manufacturer to which the threshold rule applies.

Sub-device ID	<p>This field is used for devices on the daisy chain and represents the order of the device on the daisy chain.</p> <p>The system provides the following sub-device IDs by default. Users can click the Enable checkbox to apply threshold rules to specific devices on the daisy chain.</p> <ul style="list-style-type: none"> - All: all devices on daisy chain (host/ guest devices). - 0: Host device. (The first device on the daisy chain with network connection) - 1: Guest#1 device. (The second device on the daisy chain) - 2: Guest#2 device. (The third device on the daisy chain) - 3: Guest#3 device. (The fourth device on the daisy chain)
Threshold Name	The name of the threshold rule.
Attribute	<p>The equipment attribute of the threshold rule.</p> <p>The system built in the default attributes for each equipment category, see Table 12.36 for the details.</p>
Target Status	<p>The attribute status of the threshold rule.</p> <p>The system built in the default status for each equipment attribute, see Table 12.37 for the detail.</p>
Operator	The operator (=, <, >, ≥, ≤ or ≠) of the threshold rule.
Threshold Value *	The threshold value that triggers the status change.
Duration Time (s)	<p>The duration of the attribute value remaining under the threshold condition.</p> <p>When the duration defined by the threshold condition is reached, the status changes to the target status.</p> <ul style="list-style-type: none"> - For example: <p>When door sensor detects “Open” (threshold=2) for more than 300 seconds, the door status is changed to “Severe” (Figure 12.39).</p>
Enable	Click to apply the threshold rule in the system.

Edit

Category Name: Single Phase PDU (LCD)

Manufacturer: CyberPower

Sub-device ID: All

Threshold Name: Power_Warning

Attribute: Power

Description:

Target Status: Warning

Operators: ≥

Threshold Value *: 2464

Duration Time (s):

Enable:

Save Cancel

Figure 12.38 Edit the threshold value

Edit

Category Name: Single Phase PDU (LCD)

Manufacturer: CyberPower

Sub-device ID: 0 (Host)

Threshold Name: Contact#1_Severe

Attribute: Contact#1 Status

Description: The sensor has been in an abnormal state for a long time (the default Duration Time is 300 seconds).

Target Status: Severe

Operators: =

Threshold Value *: 2

Duration Time (s): 300

Enable:

Save Cancel

Figure 12.39 Duration example of a connected sensor (eg. door sensor)

Table 12.36 The default equipment attributes of the status

Attributes		Description
PDU (LED)	Health	The overall status of all attributes, and it shows the worst status detected by the system.

Attributes	Description
	Connection The network connection of the equipment, detected by the system.
	Power The power output (W) of the equipment.
	Current The current (A) of the equipment.
	Humidity The humidity (%RH) of the environment, detected by the environmental sensor connected to the PDU equipment.
	Temperature The temperature (°C/°F) of the environment, detected by the environmental sensor connected to the equipment.
	Contact Status#1-4 The status of the dry contact#1-4 on the environmental sensor connected to the equipment.
Single Phase PDU (LCD)	Health The overall status of all attributes, and it shows the worst status detected by the system.
	Connection The network connection of the equipment, detected by the system.
	Power The power output (W) of the equipment.
	Current The current (A) of the equipment.
	Outlet Load Status The load status of each outlet.
	Humidity The humidity (%RH) of the environment, detected by the environmental sensor connected to the equipment.
	Temperature The temperature (°C/°F) of the environment, detected by the environmental sensor connected to the equipment.
	Contact Status#1-4 The status of the dry contact#1-4 on the environmental sensor connected to the equipment.
3-Phase PDU (LCD)	Health The overall status of all attributes, and it shows the worst status detected by the system.
	Connection The network connection of the equipment, detected by the system.
	Power The power output (W) of the equipment.
	Power-A The L1 power output (W).
	Power-B The L2 power output (W).
	Power-C The L3 power output (W).
	Current The current (A) of the equipment.
	Current-A The L1 current (A).
	Current-B The L2 current (A).
	Current-C The L3 current (A).

Attributes		Description
	Outlet Load Status	The load status of each outlet.
	Humidity	The humidity (%RH) of the environment, detected by the environmental sensor connected to the equipment.
	Temperature	The temperature (°C/ °F) of the environment, detected by the environmental sensor connected to the equipment.
	Contact Status#1-4	The status of the dry contact#1-4 on the environmental sensor connected to the equipment.
ATS	Health	The overall status of all attributes, and it shows the worst status detected by the system.
	Connection	The network connection of the equipment, detected by the system.
	Voltage State-A/ B	The status of the real-time input voltage of the equipment. 1: Normal 2: Warning (under/ over Voltage-A or Voltage-B)
	Frequency State-A/B	The status of the real-time input frequency of the equipment. 1: Normal 2: Warning (under/ over Frequency-A or Frequency-B)
	Power	The power output (W) of the equipment.
	Humidity	The humidity (%RH) of the environment, detected by the environmental sensor connected to the equipment.
	Temperature	The temperature (°C/ °F) of the environment, detected by the environmental sensor connected to the equipment.
	Contact Status#1-4	The status of the dry contact#1-4 on the environmental sensor connected to the equipment.
UPS	Health	The overall status of all attributes, and it shows the worst status detected by the system.
	Connection	The network connection of the equipment, detected by the system.
	Input Status	The status of input power source of the UPS. - 1: Normal - 2: Over Voltage - 3: Under Voltage - 4: Frequency Failure - 5: Blackout If the value is not equal to 1, the input status will show as

Attributes	Description
	Blackout.
Input Voltage	The status of the input voltage of the UPS. If the value is equal to 0, the status will shows as Blackout.
Output Mode	The UPS output status. <ul style="list-style-type: none"> - 1: Severe (Unknown) - 2: Normal (On line mode) - 3: Warning (On battery mode) - 4: Warning (On boost mode) - 5: Warning (On sleep mode) - 6: Disconnect (UPS is power off) - 7: Warning (Ups is rebooting)
Load	The power output of the equipment shown as a percentage (%).
Battery Capacity	The battery capacity of the equipment shown as a percentage (%).
Battery Temperature	The UPS battery temperature in Celsius.
BHI	The battery health indicator of the UPS shown as a percentage (%), and only supported in some special device models.
Time on Battery	The UPS wasted battery time (in minutes) since the UPS has transferred to backup mode.
Last Test Result	The result of the battery test. <ul style="list-style-type: none"> - 1: Normal (OK) - 2: Normal (In progress) - 3: Warning (Invalid) - 4: Severe (Failed)
Humidity	The humidity (%RH) of the environment, detected by the environmental sensor connected to the equipment.
Temperature	The temperature (°C/ °F) of the environment, detected by the environmental sensor connected to the equipment.
Contact Status#1-4	The status of the dry contact#1-4 on the environmental sensor connected to the equipment.

Table 12.37 The default status

Status	Description
Offline	The network connection failure, detected by the system.
Severe	The threshold value should be set greater than the upper limit of the warning threshold.
Blackout	The proprietary status of the UPS device used to detect utility failures or anomalies. Users can monitor the status by setting the threshold of the “Input Status” attribute.
Disconnect	The proprietary status of the UPS device used to detect if the UPS is powered on or off. Users can monitor the status by setting the threshold of the “Output Mode” or “Output Status” attribute.
Warning	The threshold value should be set greater than the upper limit of the normal threshold or less than the lower limit of the normal threshold.
Normal	The value of the normal threshold.
Not Support	The equipment does not support the equipment attribute, detected by the system.

12.2.4 Authentication Profile

The Authentication Profile page allows users to set the configurations of the SNMP authentication and the Modbus port (Figure 12.40).

The authentication profile can be applied to the individual equipment (Figure 12.45).

The function details are described in Table 12.38 and the contents are shown in Table 12.39.

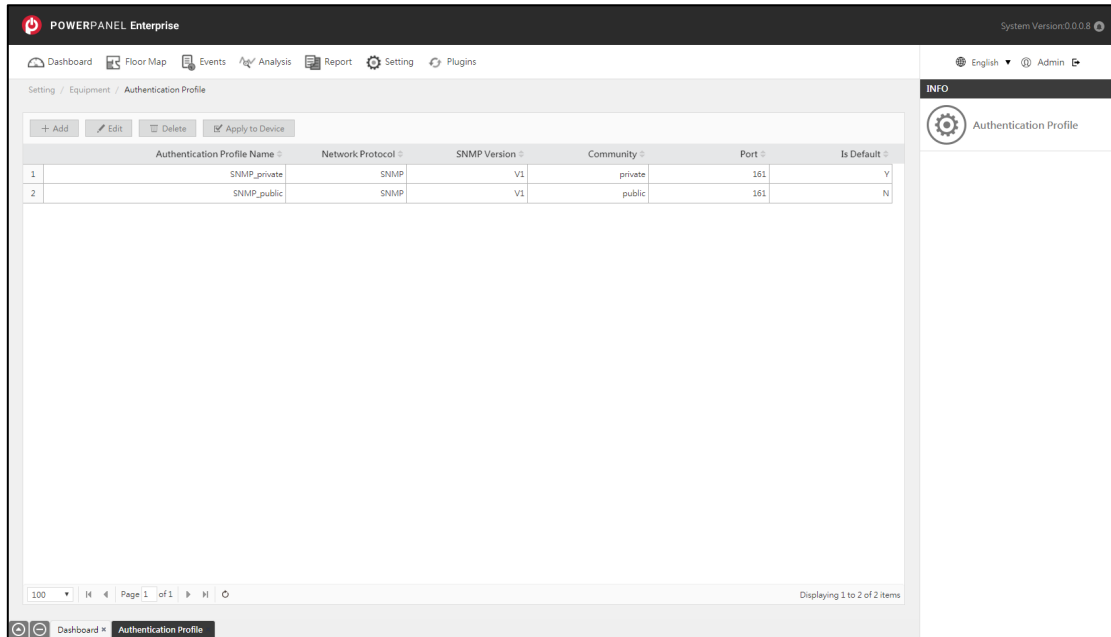


Figure 12.40 Authentication Profile

Table 12.38 The authentication profile function description

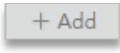

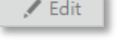
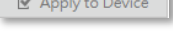
Icon	Description
	Click to add new authentication profile in the table. See Figure 12.41 ~ Figure 12.44 for the detail.
	Click to delete the selected authentication profile in the table.
	Click to edit the selected authentication profile in the table.
	Click to open a new page to choose and apply the selected authentication to the equipment (Figure 12.45).

Table 12.39 The authentication profile content description

Content	Description
Authentication Profile Name *	The name of the authentication profile.
Network Protocol *	Supports SNMP and Modbus TCP protocol.
SNMP Version	Supports SNMP V1 and SNMP V3
Port *	The port number of the protocol used. - Modbus default port: 502

Content	Description
	- SNMP default port: 161
Timeout *	The timeout (ms) of the data polling.
Retry *	The number of retries.
Is Default	Enable to apply the profile to newly added equipment.

Figure 12.41 Add an authentication profile

Figure 12.42 Select the SNMP V1

Add

Authentication Profile Name *

Network Protocol * **SNMP**

SNMP Version **V3**

Port *

Authentication

User Name *

Authentication Type **None**

Authentication Password

Timeout *

Retry *

Is Default

Save Cancel

Figure 12.43 Select SNMP V3

Add

Authentication Profile Name *

Network Protocol * **Modbus**

Port *

Timeout *

Retry *

Is Default

Save Cancel

Figure 12.44 Select Modbus

POWERPANEL Enterprise

System Version: 0.0.8

Dashboard Floor Map Events Analysis Report Setting Plugins

Back Setting / Equipment / Authentication Profile

Category Name Vendor Name

Authentication Profile Name: SNMP_private

Apply 2 of 18

	Equipment Name	IP	Authentication Profile Name	Description
1	ATS_S4	192.168.208.64	SNMP_private	
2	ATS_A4	10.1.0.118	SNMP_private	
3	ATS_A5	10.1.0.114	SNMP_private	
4	ATS_B5	10.1.0.117	SNMP_private	
5	PDU_A1_B	10.1.0.112	SNMP_private	
6	PDU_A1_F	10.1.0.113	SNMP_private	
7	PDU_A2_B	10.1.0.111	SNMP_private	
8	PDU_A2_F	10.1.0.110	SNMP_private	
9	PDU_A3_B	10.1.0.108	SNMP_private	
10	PDU_A3_F	10.1.0.109	SNMP_private	
11	PDU_A4_B	10.1.0.107	SNMP_private	
12	PDU_A4_F	10.1.0.106	SNMP_private	
13	PDU_A5_B	10.1.0.115	SNMP_private	
14	PDU_A5_F	10.1.0.116	SNMP_private	
15	PDU_B1_B	10.1.0.121	SNMP_private	
16	PDU_B1_F	10.1.0.122	SNMP_private	
17	PDU_B2_B	10.1.0.119	SNMP_private	
18	PDU_B2_F	10.1.0.120	SNMP_private	

100 Page 1 of 1

Displaying 1 to 18 of 18 items

INFO Authentication Profile

Figure 12.45 Apply the authentication to devices

12.2.5 Auto-discovery

The Auto-discovery section allows users to search the SNMP devices within the specific IP range by running a Discovery Job (Figure 12.48, Table 12.43). All discovered devices will show in “Unassigned devices” table, click the device in the table and fill in the fields in INFO Panel to add it to the system directly (Figure 12.46). The function details are described in Table 12.40 and the contents are shown in Table 12.41 and Table 12.42.

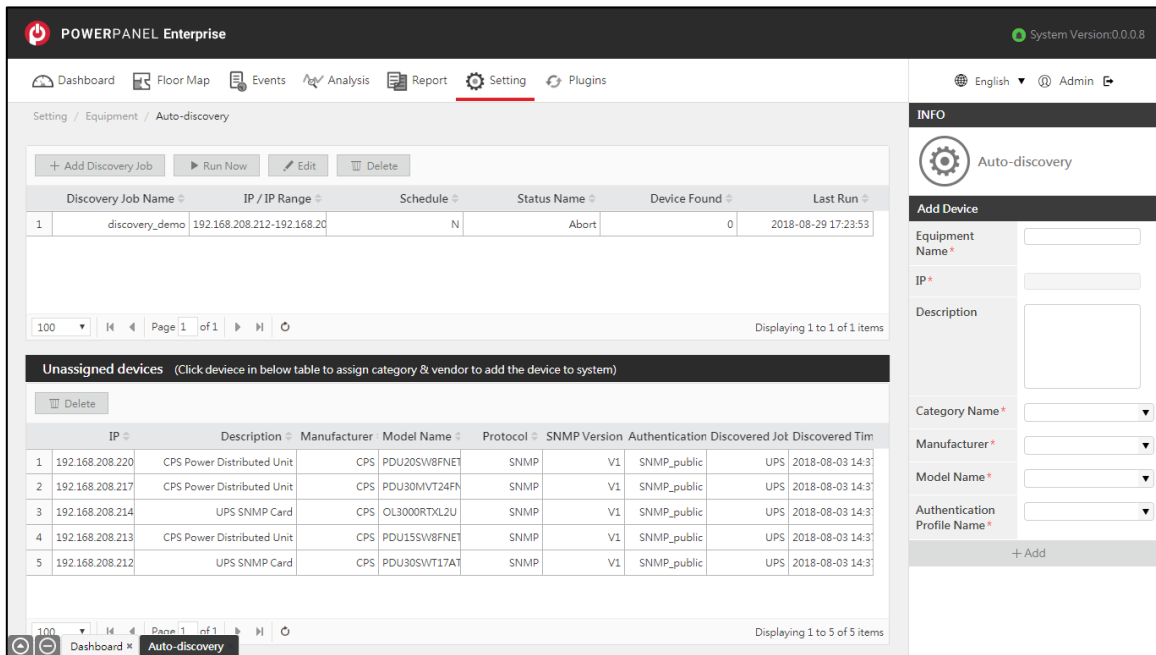


Figure 12.46 Auto-discovery

Table 12.40 The Auto-discovery function description

Icon	Description
	Click to open a new page for adding a new discovery job in the “discovery job table.” (Figure 12.47)
	Click to run the selected discovery job in the “discovery job table.” See Figure 12.48, Table 12.43 for the details.
	Click to delete the selected discovery job in the “discovery job” table. Click to remove the device from the “Unassigned devices” table.
	Click to edit the selected discovery job in the “discovery job” table.

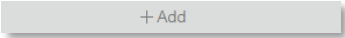
Icon	Description
	Click to add the selected unassigned devices to the system.

Table 12.41 The discovery job table content description

Content	Description
Discovery job Name *	The name of the discovery job.
IP/ IP Range *	The IP range of the discovery job.
Schedule	<ul style="list-style-type: none"> - Y: At least one schedule for the discovery job. - N: No schedule for the discovery job.
Status	<p>The latest status of the discovery job execution.</p> <ul style="list-style-type: none"> - Idle: Has not yet been executed. - Abort: Executed but was suspended by the user. - Finished: Complete the execution. - Running: The execution is in progress.
Device Found	The number of devices found in the last discovery job execution.
Last Run	The last time the discovery job was executed.

Table 12.42 The Unassigned devices table content description

Content	Description
IP	The IP address of the device.
Description	The value of sysDescr OID returned by the device.
Manufacturer	The value of manufacturer OID returned by the device.
Model Name	The value of model OID returned by the device.
Protocol	The protocol used to communicate with the device.
SNMP Version	The version of SNMP protocol.
Authentication Profile	The authentication profile applied to the device.
Discovery Job Name	The discovery job that found the device.
Discovered Time	The time the device was found.

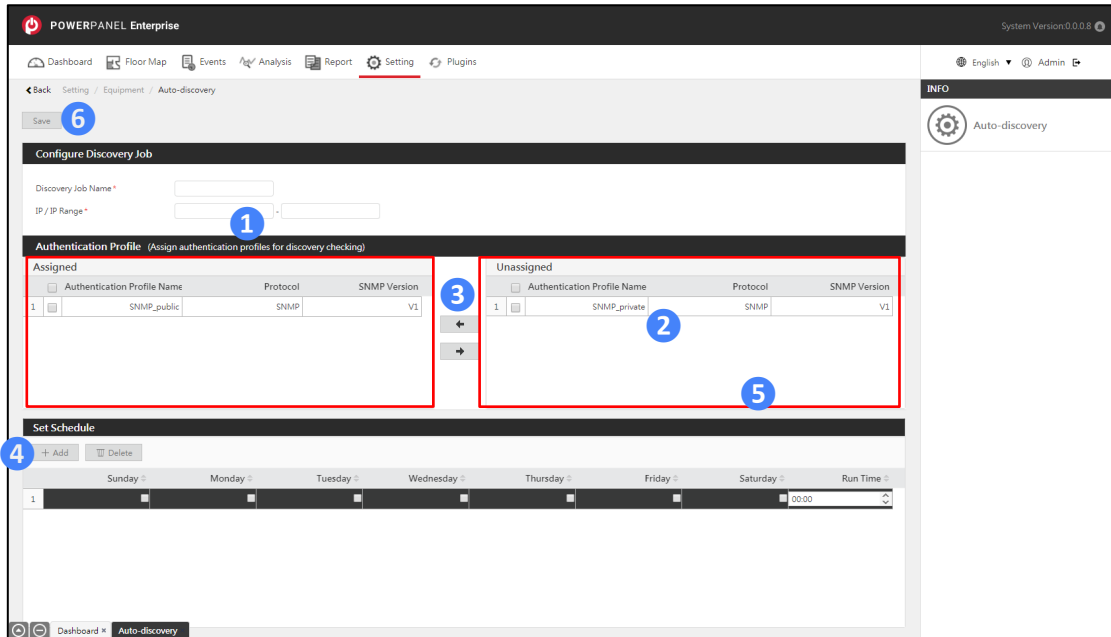


Figure 12.47 Add a discovery job

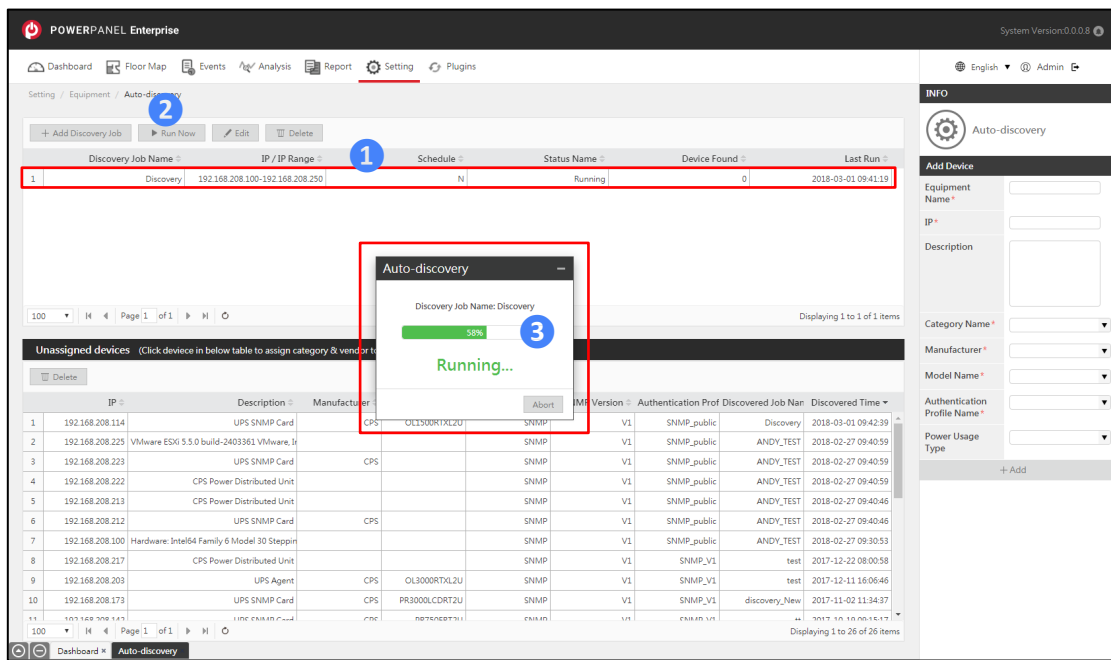


Figure 12.48 The steps of running a discovery job

Table 12.43 The steps of running a discovery job description

Step	Description
1	Select the discovery job.

2 Run the discovery job.

3 The “Auto-discovery” window opens, showing the progress bar of the device discovery. The required time of the discovery job depends on the amount of the IP addresses within the IP range. Click “Abort” to stop the discovery (Figure 12.49).

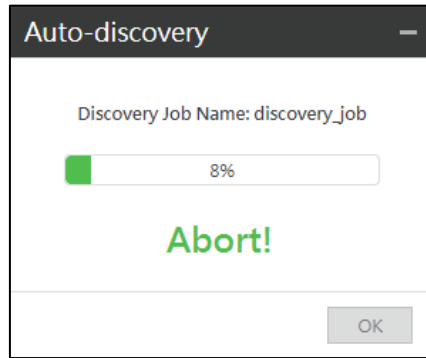


Figure 12.49 Abort the discovery

12.3 Dashboard

The Dashboard section allows users to generate and remove the dashboard templates of all floor maps (Figure 12.50).

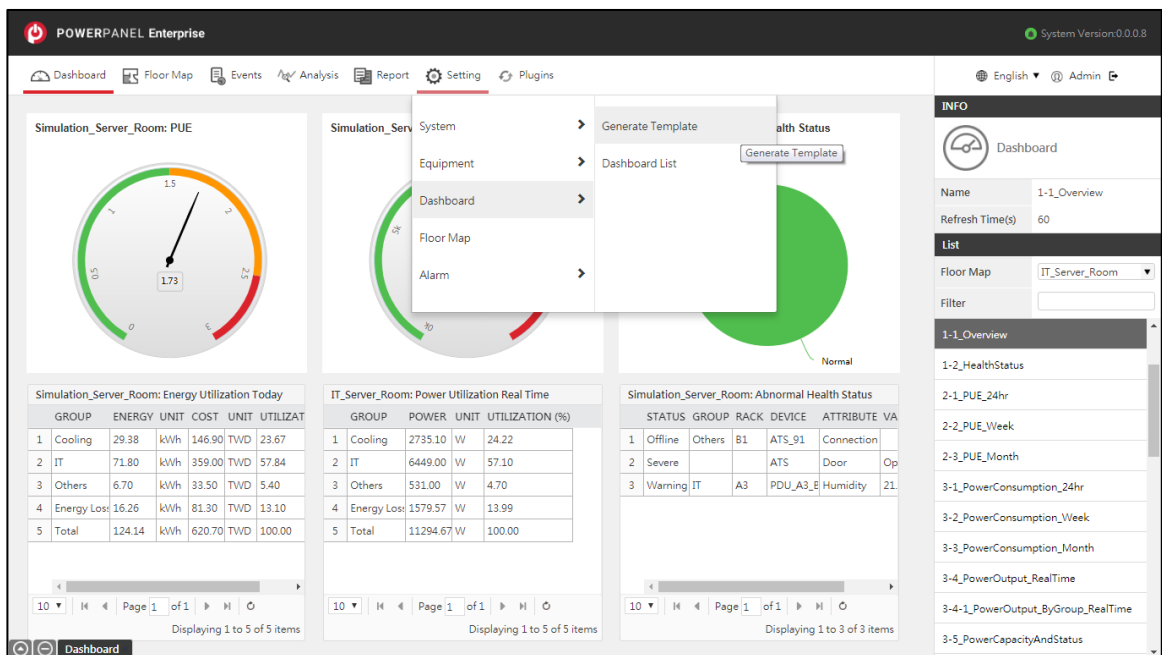


Figure 12.50 Dashboard

12.3.1 Generate Template

The Generate Template page allows users to generate the default dashboard templates for all floor maps (Figure 12.51, Table 12.44).

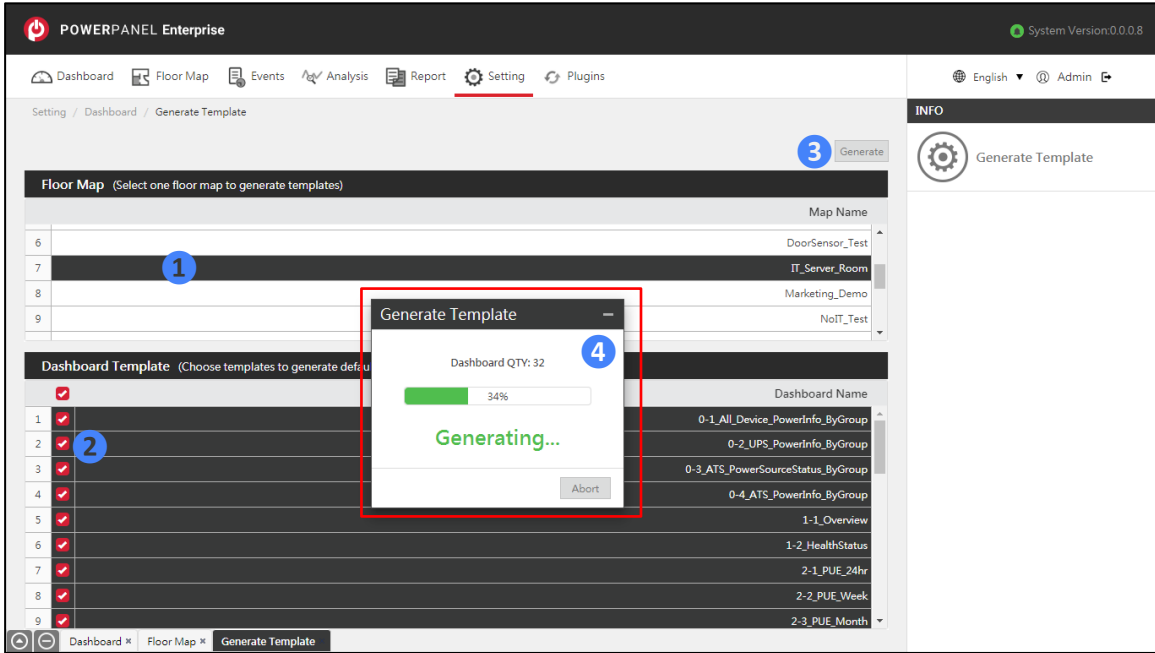


Figure 12.51 Generate Template

Table 12.44 The steps of generating template

Step	Description
1	Select the floor map in the Floor Map table.
2	Select the dashboard templates which you want to generate in the template table.
3	Click “Generate” to generate the templates for the selected floor map.
4	The “Generate Template” window opens to show the progress. After finish generating the template, click “Dashboard” to view the dashboards.

12.3.2 Dashboard List

The Dashboard List page displays a list of all dashboard templates generated by users. User can click to edit or delete the selected dashboard templates (Figure 12.52). The function and contents are described in Table 12.45 and Table 12.46.

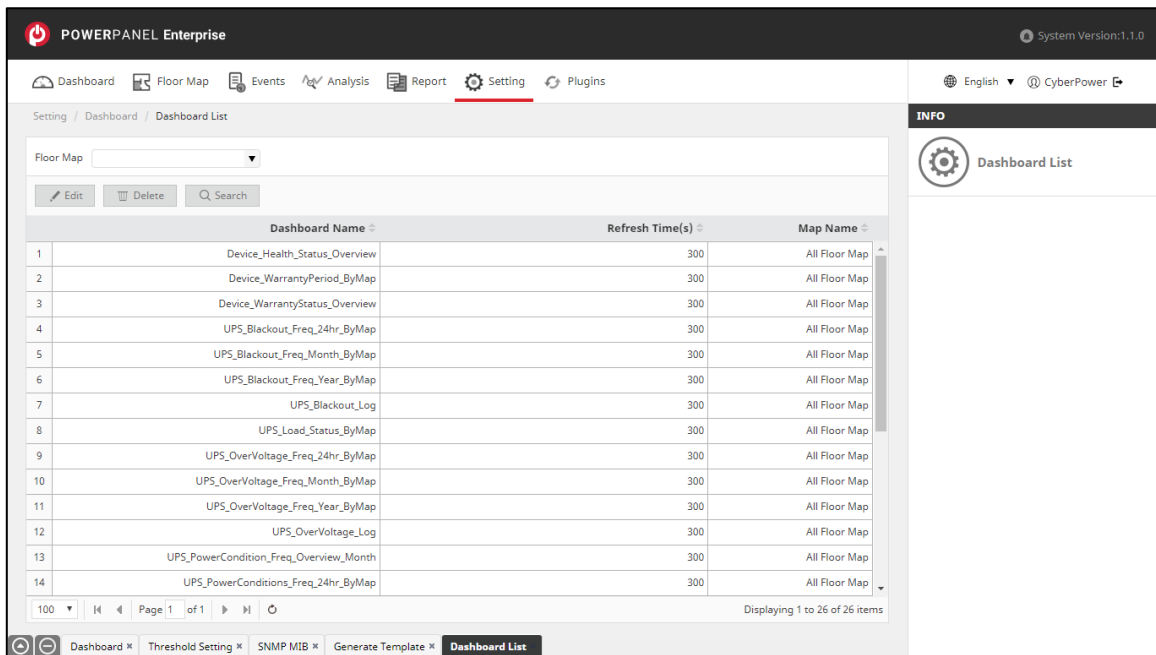
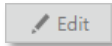




Figure 12.52 Dashboard List

Table 12.45 The dashboard list function description

Icon	Description
	Click to open the edit window to change the refresh time of the dashboard template (Figure 12.53).
	Click to delete the selected dashboard template in the table.
	Click to input the query condition to filter the data in the table.

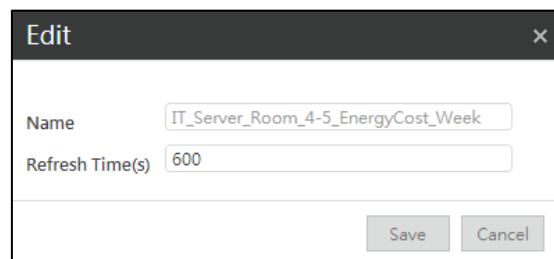


Figure 12.53 Edit the dashboard template

Table 12.46 The dashboard list content description

Content	Description
Dashboard Name	The dashboard name displayed in the list usually begins with the floor map name followed by the default template name.
Refresh Time (s)	The time interval for the dashboard to update data.

12.4 Floor Map Setup

The Floor Map page displays a list of the floor maps. Users can click to edit the details of the floor map or add a new one (Figure 12.54). The method of adding a new floor map is described in Figure 12.55 ~Figure 12.59. The functions are described in Table 12.47.

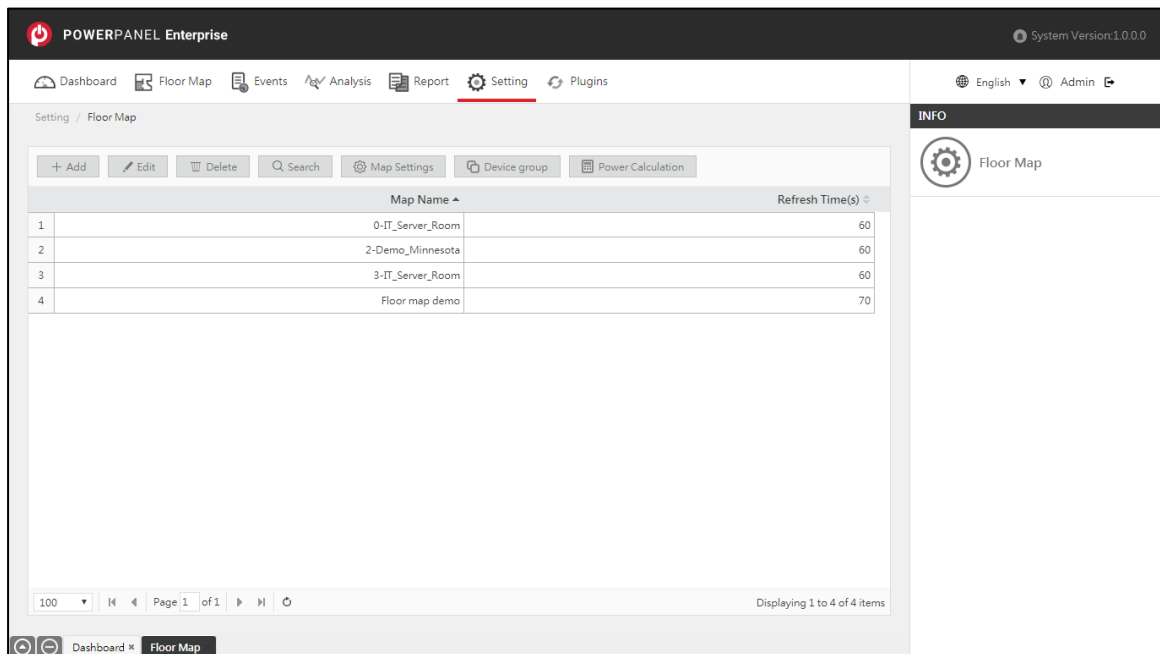


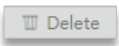
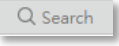
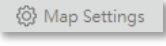
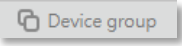
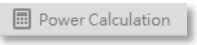



Figure 12.54 Floor Map

Table 12.47 Floor Map function description

Icon	Description
	Click to add a new floor map in the table.
	Click to edit the selected floor map in the table.

	<p>Click to delete the selected floor map in the table.</p>
	<p>Click to input the query condition to filter the data in the table.</p>
	<p>Click to set the map thresholds for the selected floor map in the table (Figure 12.60, Table 12.50). The parameters set here are used in reports and dashboards to evaluate the PUE and power capacity, and display analysis charts with threshold ranges.</p>
	<p>Click to set or add device groups for the selected floor map in the table (Figure 12.61, Table 12.51). The system provides the following default device groups for the PUE calculation (Figure 12.61).</p> <ul style="list-style-type: none"> - Meter: for the power meters which are used to measure the total energy consumption of the floor map. - IT: for the power equipment which are used to supply the electricity for IT devices. - Cooling: for the power equipment or power meters which are used to measure the total energy consumption of cooling units.
	<p>Click to set the total power output and total energy consumption for each device group, and the system will only calculate the electricity consumption of the selected equipment (Figure 12.63).</p>
	<p>This feature is used to add a floor map with a large number of devices or to add multiple floor maps at the same time. Click to open the Excel File Import window (Figure 12.64), then download the excel template. Follow the instructions in the excel file to configure the map structure and the device list, then upload the edited excel file to the system. After a successful upload, the newly added floor maps will appear in the map list.</p>

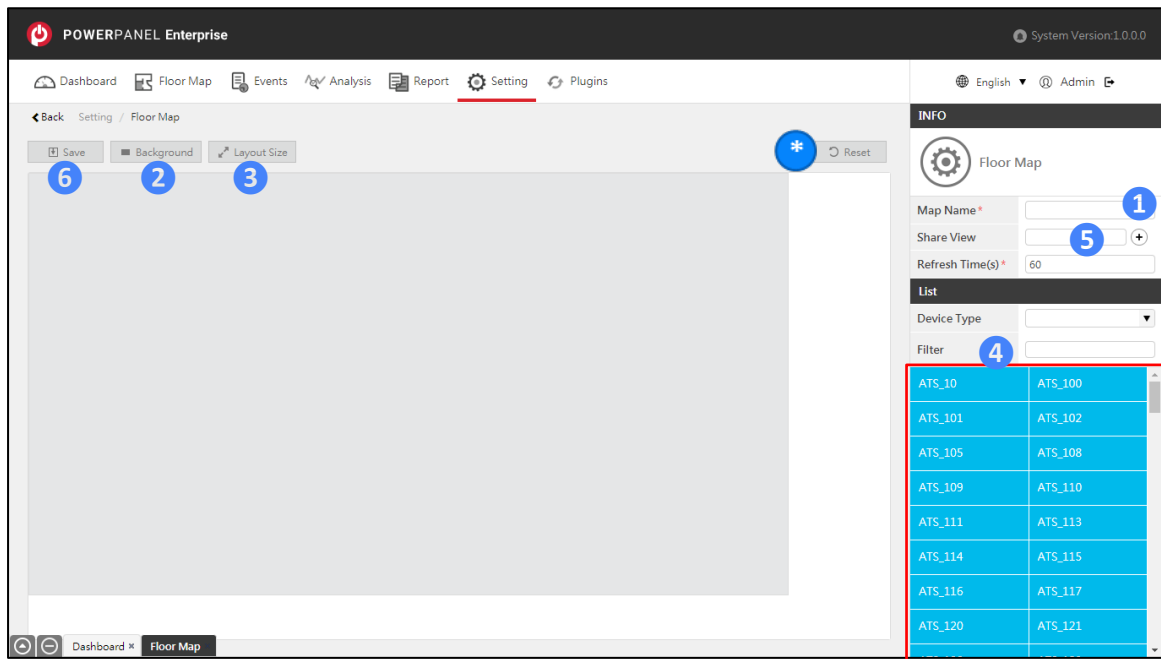


Figure 12.55 The steps of adding a map

Table 12.48 The steps of adding a map description

Step	Description
1	Enter the basic information of the floor map in the INFO Panel (Table 12.49).
2	Upload the background image or the floor plan. The image format must be .PNG or .JPEG files (Figure 12.56).
3	Adjust the layout size of the floor map (Figure 12.57).
4	Drag & drop the device from the list to the floor map in the Display Panel. See Figure 12.58, Figure 12.59 for the details.
5	Click to set a list of accounts that are allowed to view this floor map and its related information, including the dashboards and reports of this floor map (Figure 12.62).
6	Save the map. Go to the floor map list page, and you can see the new map name in the table
*	Reset the map.

Table 12.49 Basic information content

Content	Description
Map Name *	Enter a floor map name.

Share View *	Select the accounts that are allowed to view this floor map and its related information (Figure 12.62).
Refresh Time(s) *	The time interval for data reload.



Figure 12.56 Background Image Upload



Figure 12.57 Layout Size

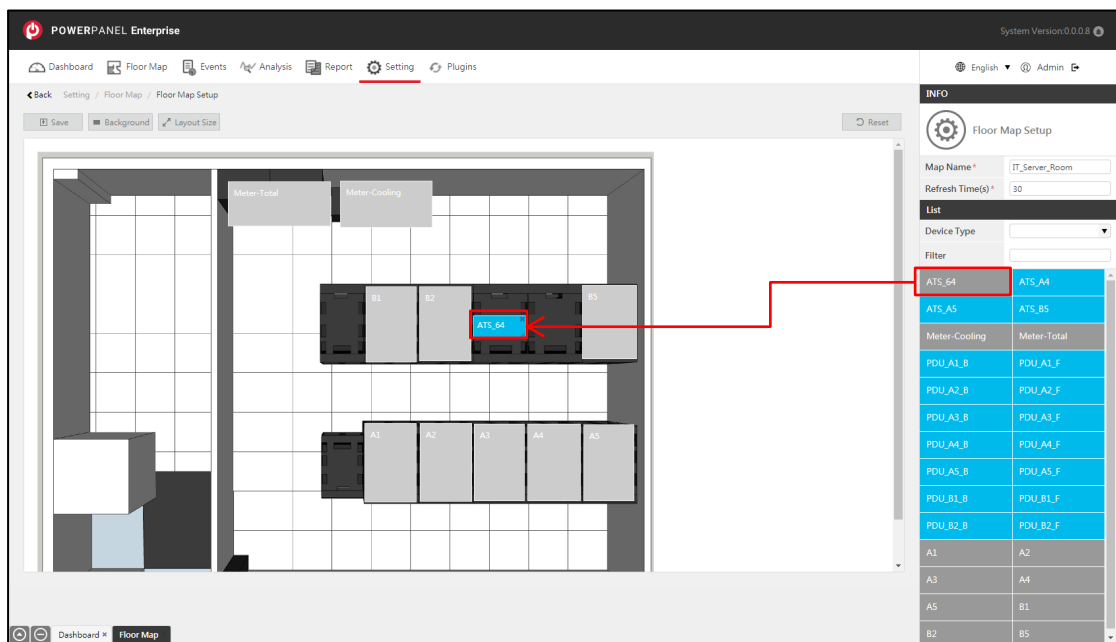


Figure 12.58 Drag & drop the device

(Note: In the list, the device that has been placed in the floor map will turn gray, while available devices are blue.)



Figure 12.59 Remove the device from the floor map

Map Settings ✕

Map Name: IT_Server_Room

Power Capacity

Rated Power(W) *

Normal Range * ~

Warning Range * ~

Severe Range * ~

PUE

Normal Range * ~

Warning Range * ~

Severe Range * ~

Environment

Temperature (°C or °F)

Normal Range * ~

Humidity (RH%)

Normal Range * ~

Facility Utilization

Gross Floor Area (GFA) * (sq.ft.)

Power consumption of Active Rack * (W)

Normal Range * ~

Warning Range * ~

Severe Range * ~

Figure 12.60 Map Setting

Table 12.50 Map Setting content description

Content		Description
Power Capacity	Rated Power (w) *	Set the maximum power rating of the floor map.
	Normal Range *	Set the range of the output power values for "Normal", "Warning" and "Severe" status.
	Warning Range *	
	Severe Range *	
PUE	Normal Range *	Set the range of PUE values for "Normal",

Content		Description
	Warning Range *	"Warning" and "Severe" status. (Note: According to DCOI requirement, for the existing data center, the PUE <= 1.5; for the new data center, the PUE <= 1.4.)
	Severe Range *	
Environment	Temperature (°C) Normal Range *	Set the normal range of the temperature values for the floor map.
	Humidity (%RH) Normal Range *	Set the normal range of the humidity values for the floor map.
Facility Utilization	Gross Floor Area (GFA) (sq ft.) *	Set the total area of the floor map. The information will be used in reports.
	Power consumption of active rack (w) *	Set the threshold values for the minimum power consumption of an active rack.
	Normal Range *	Set the range of facility utilization values for "Normal", "Warning" and "Severe" status.
	Warning Range *	
	Severe Range *	

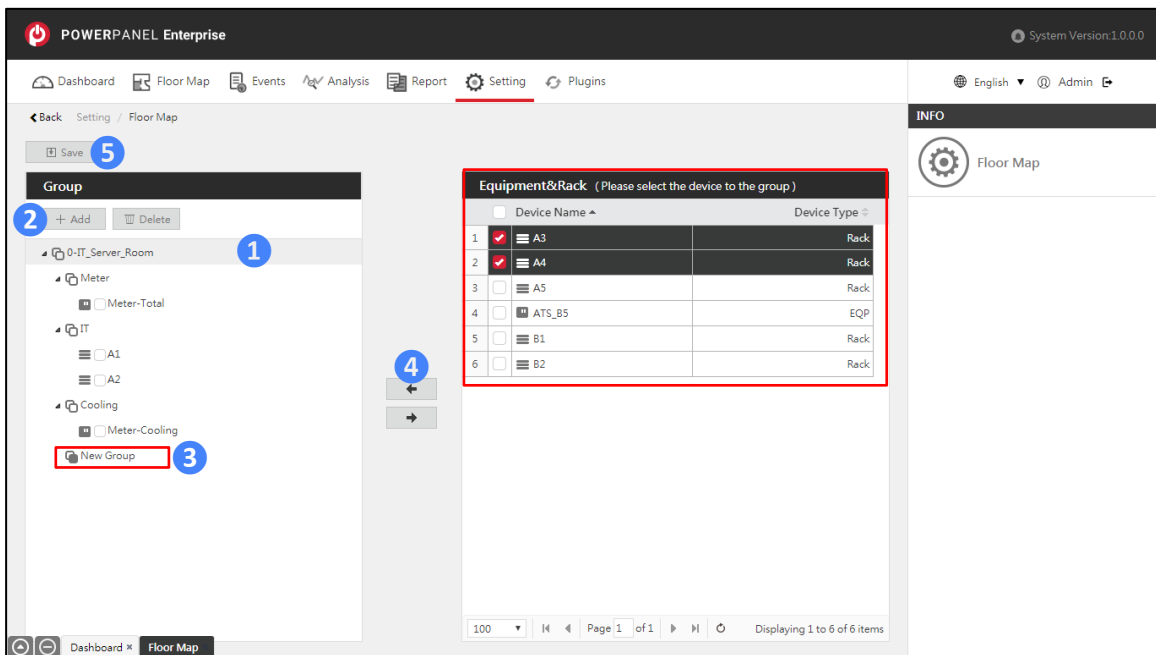


Figure 12.61 Device Group

Table 12.51 The steps of adding a device group

Step	Description
1	Click the floor map.
2	Click “Add” to create a “New Group” under the floor map.
3	Click the group to rename the device group.
4	<ul style="list-style-type: none"> - Select the device in the right table and add it to the selected device group in the left table. - Select the device in the left table and remove it from the device group to the right table.
5	<p>Save the device group setting.</p> <p>Go to “Floor Map” page, and select the device group from the dropdown list to show the device of the different groups in different colors.</p>

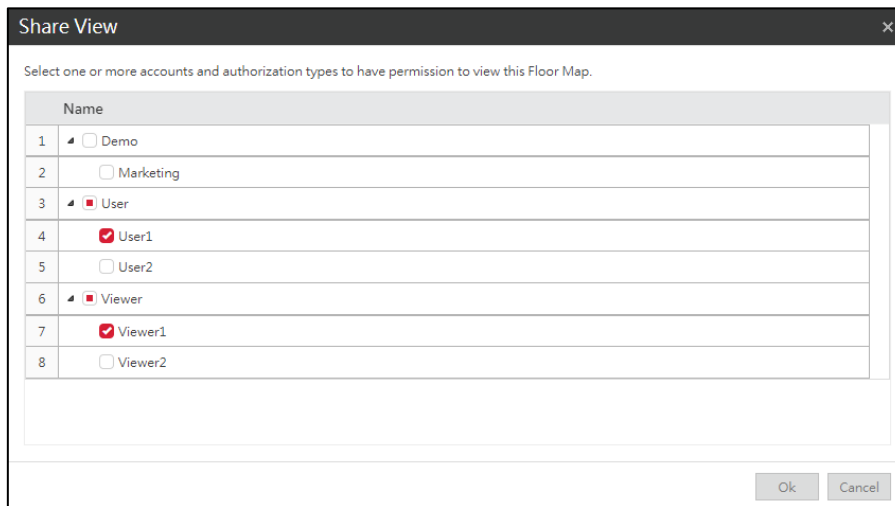


Figure 12.62 Set up the Share View

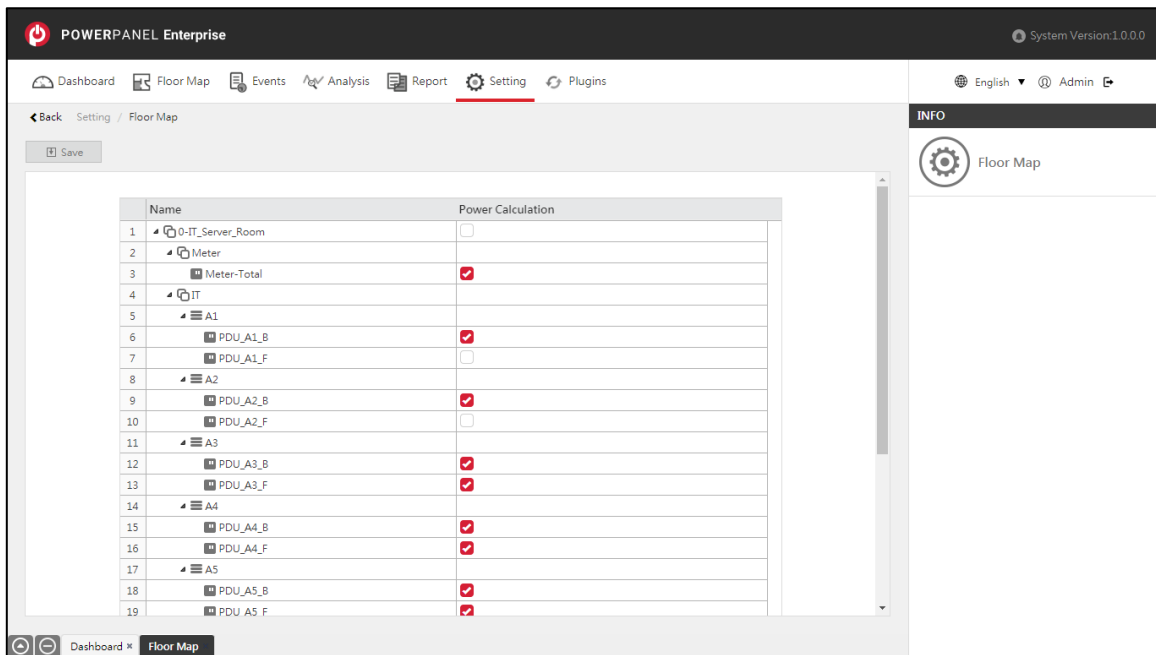


Figure 12.63 Power Calculation



Figure 12.64 Import Map

12.5 Alarm

The Alarm section allows users to configure the alarm events and the asset reminder for the equipment. When an event occurs, the alarm recipients will be notified via E-mail (Figure 12.65).

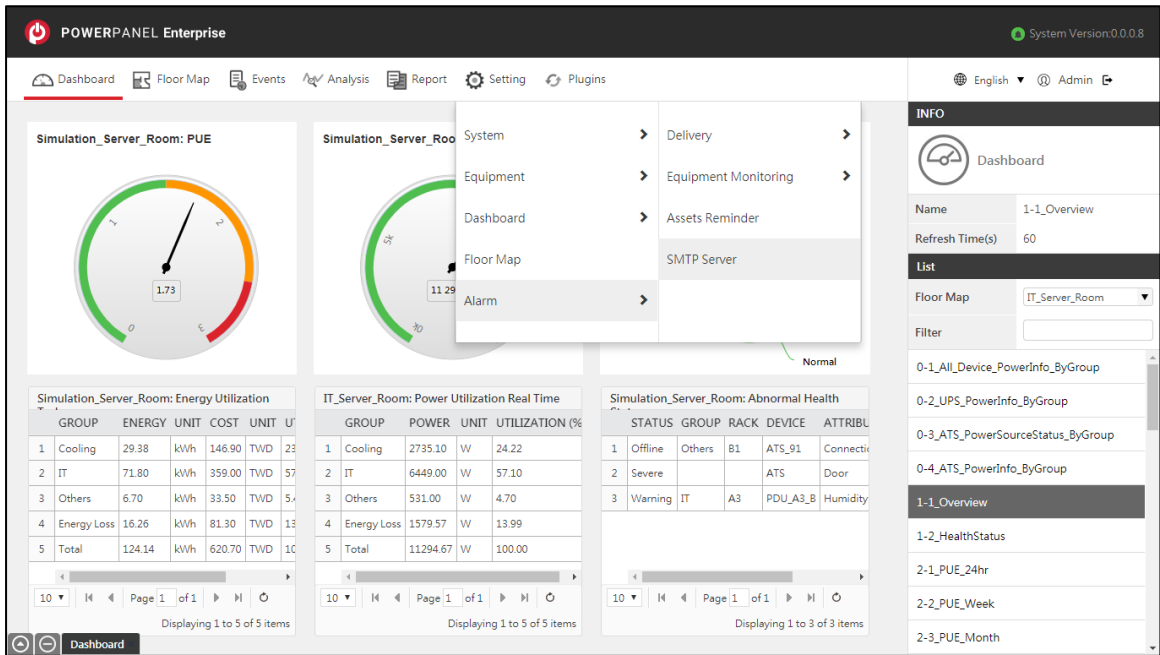


Figure 12.65 Alarm

12.5.1 Delivery

The Delivery section allows users to manage the alarm group and the recipients in each alarm group (Figure 12.66).

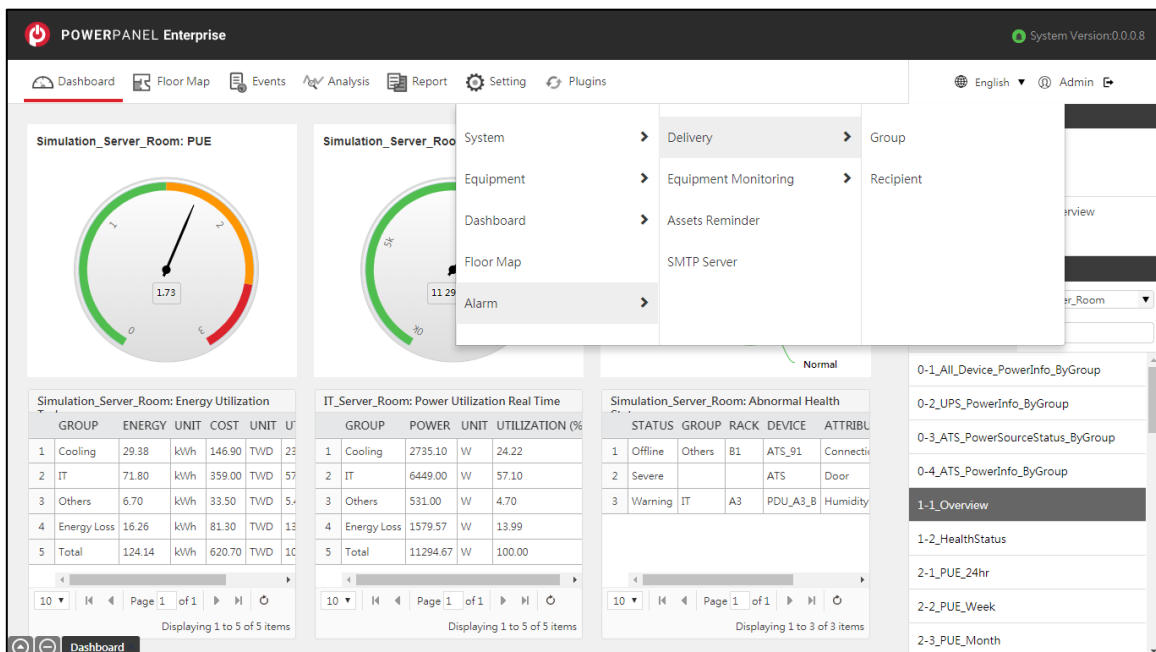


Figure 12.66 Delivery

- Group

The Group page displays the list of the alarm group, allowing users to add a new group in the table (Figure 12.67). The “Alarm_Group” is the default group built-in by the system. The function details are described in Table 12.52 and the contents are shown in Table 12.53.

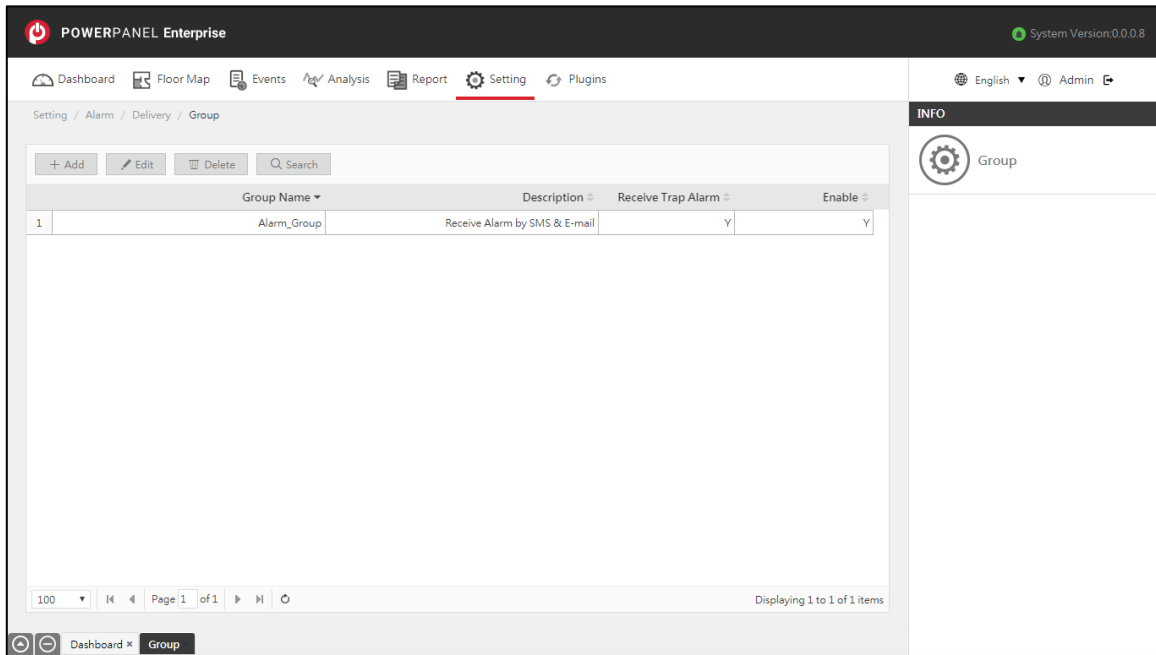


Figure 12.67 Group

Table 12.52 Group function description

Icon	Description
	Click to add a new group in the table (Figure 12.68).
	Click to delete the selected group in the table.
	Click to edit the selected group in the table.
	Click to input the query condition to filter the data in the table.

Table 12.53 Group content description

Content	Description
Group Name *	Enter a group name.

Description	The description of the group.
Receive Trap Alarm	Click to receive the SNMP Trap Alert Email.
Enable	Click to activate the group in the system.

The image shows a dialog box titled "Add" with a close button (X) in the top right corner. Inside the dialog, there are four main sections:

- Group Name ***: A text input field with a red asterisk indicating it is required.
- Description**: A larger text area for entering a description.
- Receive Trap Alarm**: A checkbox that is currently unchecked.
- Enable**: A checkbox that is currently unchecked.

 At the bottom right of the dialog, there are two buttons: "Save" and "Cancel".

Figure 12.68 Add a group

- Recipient

The Recipient page allows users to manage the account list for each alarm group. When an alarm event occurs, all of the accounts in the alarm group will be notified.

There are two main windows on this page, the top window displaying the “Group” table and the bottom window displaying the “Account” table (Figure 12.69). Firstly, select the group table in the top window and the accounts of the selected group will be displayed in the bottom window (1 in Figure 12.69). Secondly, click the button in the middle of the bottom window to assign or remove the account for the group (2 in Figure 12.69), and the assigned accounts of the group can get the alarm notification.

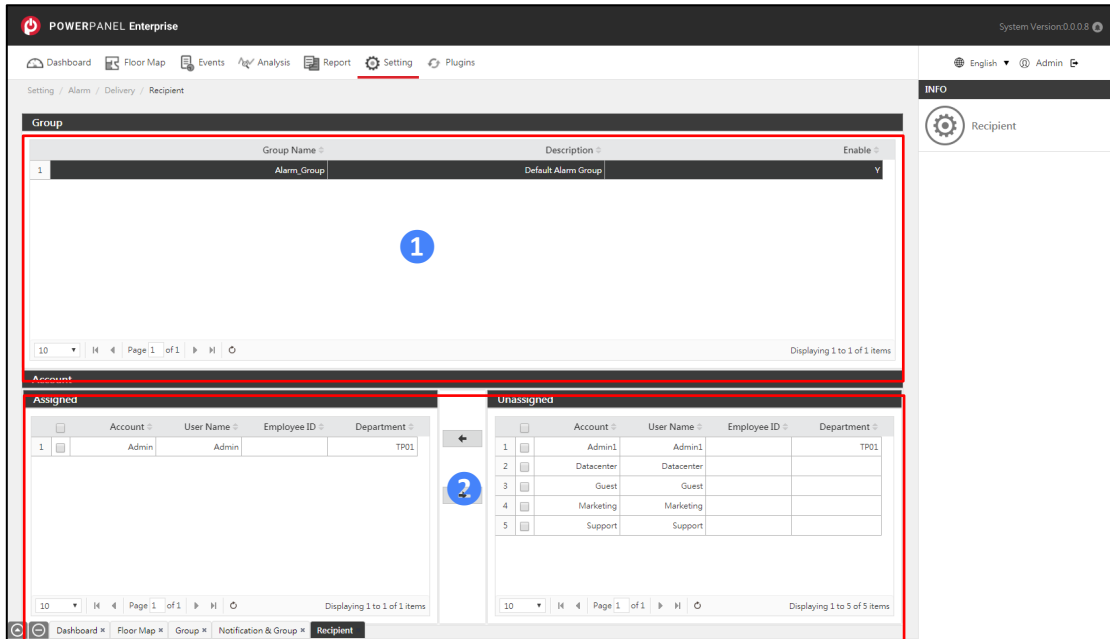


Figure 12.69 Recipient

12.5.2 Equipment Monitoring

The Equipment Monitoring section displays the list of all system built-in status alarms, allowing users to assign the status alarms to each equipment category to trigger E-mail notifications when equipment status changes (Figure 12.70).

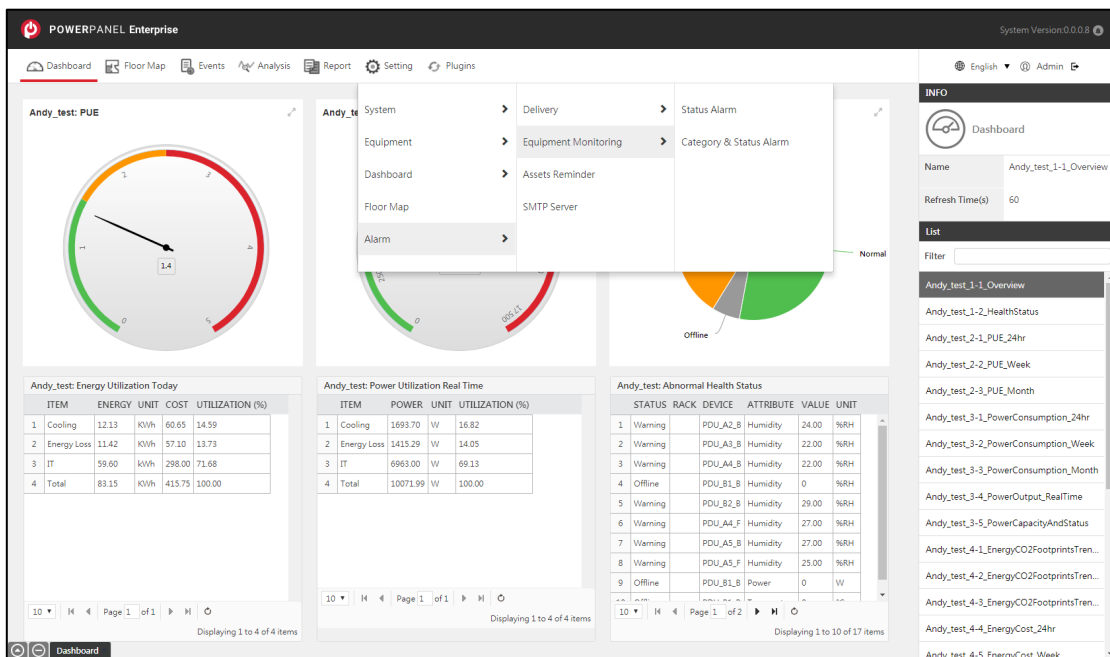


Figure 12.70 Equipment Monitoring

- Status Alarm

The Status Alarm page displays a list of the alarm rules in the table. The status alarm is the alarm rule that defines the Alarm Type, Monitor Status and the Alarm Group. When the equipment status changes to the monitor status, the status alarm will be triggered and the status alarm E-mail will be sent to the alarm group (Figure 12.71). The function details are described in Table 12.54 and the contents are shown in Table 12.55.

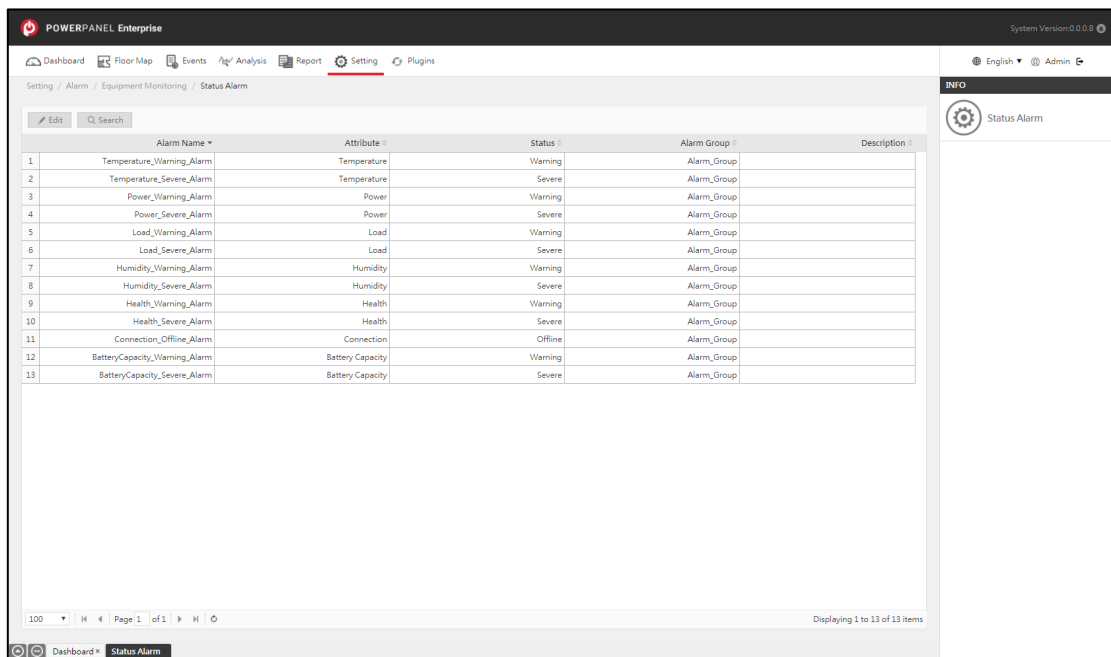


Figure 12.71 Status Alarm

Table 12.54 Status Alarm function description

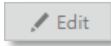
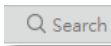
Icon	Description
	Click to edit the selected group in the table (Figure 12.72).
	Click to input the query condition to filter the data in the table.

Table 12.55 Status Alarm content description

Content	Description
Alarm Name	The alarm name.
Attribute	The equipment attribute of the alarm.
Monitor Status	The status of the alarm.
Alarm Group	The alarm group to send out the alarm notification.
Description	The description of the alarm.

Figure 12.72 Edit a status alarm

- Category & Status Alarm

The Category & Status Alarm page allows users to apply the status alarm to the equipment category.

There are two main windows on this page, the top window displaying the “Category” table and the bottom window displaying the “Status Alarm” table (Figure 12.73). Firstly, select the category table in the top window and the status alarms of the selected category will be displayed in the bottom window (1 in Figure 12.73). Secondly, click the button in the middle of the bottom window to assign or remove the status alarm for the category (2 in Figure 12.73), and the assigned status alarm of the category can trigger the alarm notification when the equipment status changes.

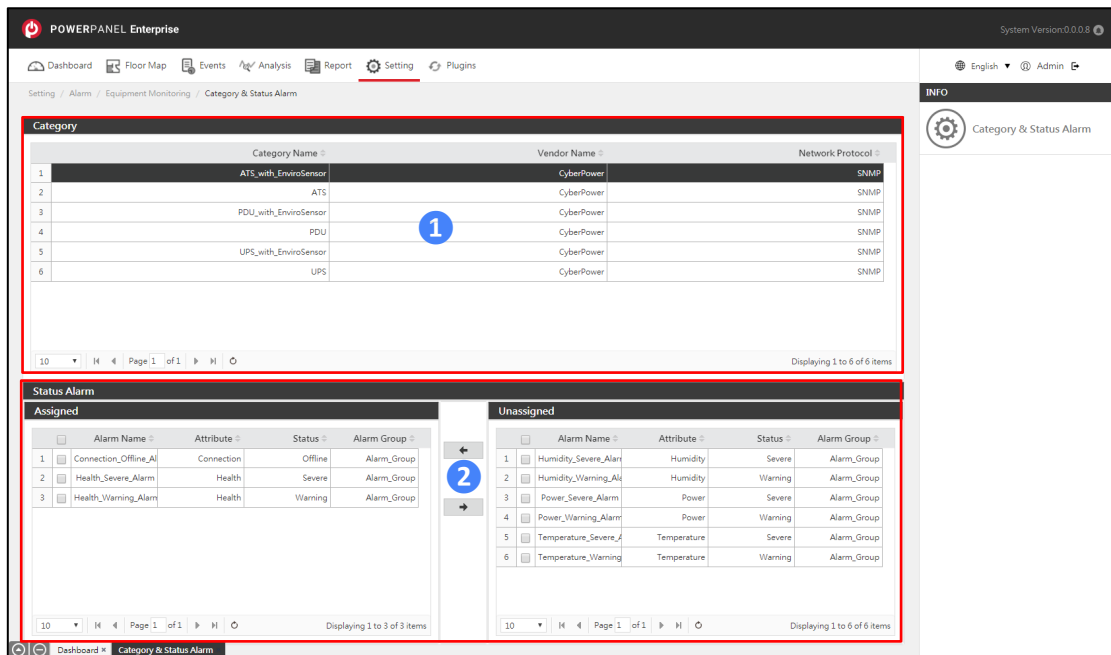


Figure 12.73 Category & Status Alarm

12.5.3 Alarm Center Setup

The Alarm Center Setup page allows users to set up alarm event settings for all devices and upload an alert audio file to the system (Figure 12.74).

When the system detects alarm events, the alarm banner will appear at the top of the current web page and the alert audio will be played at the same time to notify the administrators to solve problems immediately (Figure 12.75).

Users can click on the banner (1 in Figure 12.75) or click on the bell icon (2 in Figure 12.75) to view all alarm events in the Alarm Center window (Figure 12.76).

The system provides two kinds of alarm events: System Alarm (1 and in Figure 12.76) and Equipment Alarm (2 in Figure 12.76).

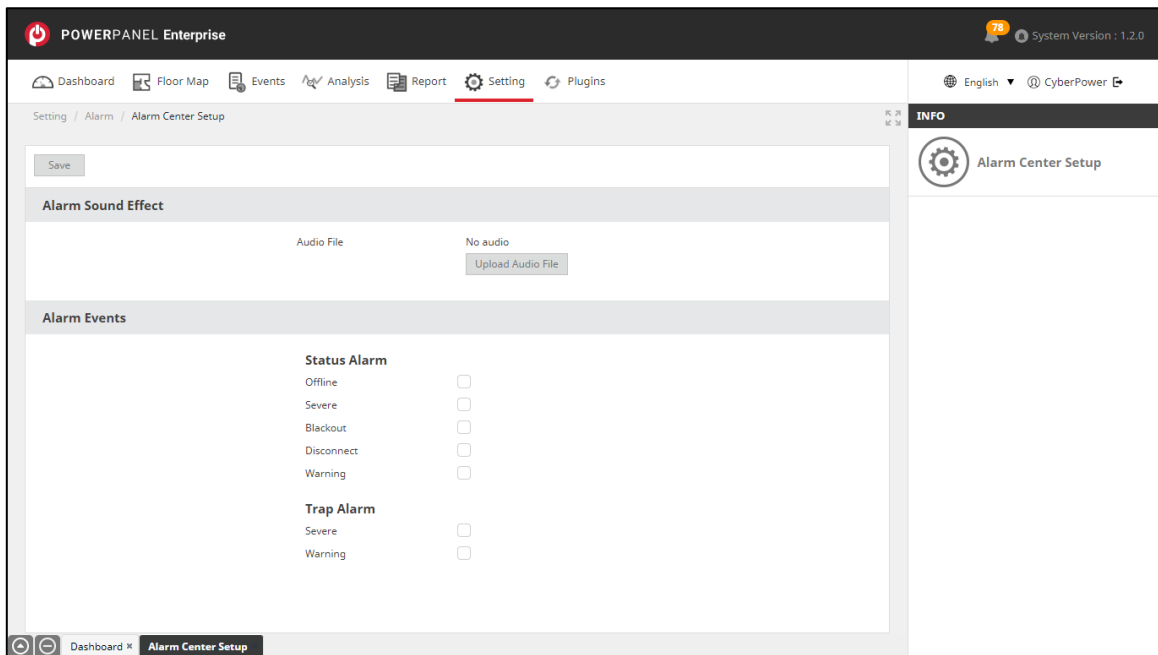


Figure 12.74 Alarm Center Setup

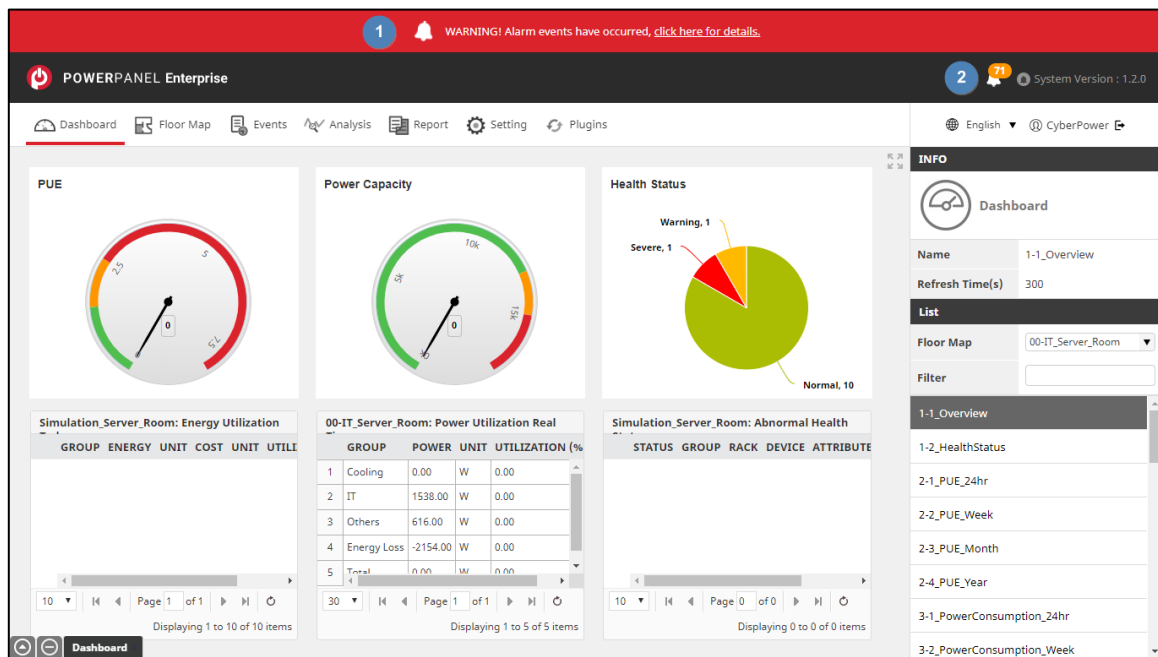


Figure 12.75 Alarm banner

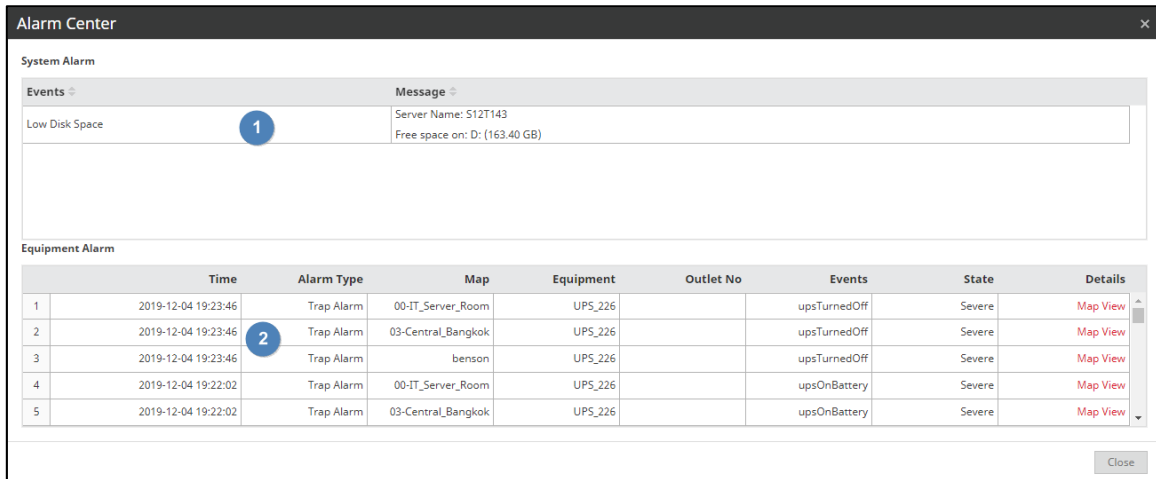


Figure 12.76 Alarm Center window

- System Alarm

The system provides the System Alarms of Low Disk Space Alarm. It is detected by the system automatically. Users can set up the thresholds for system to send out alerts, and the alerts will be sent to all Admin account users. See [Low Disk Space Alarm](#) for the details.

- Equipment Alarm

The system provides two types of Equipment Alarms: Status Alarm and Trap Alarm. Users can set up the Equipment Alarm based on the severity of the device status or the severity of device trap events on the Alarm Center Setup page (Figure 12.74), and the system will issue equipment alarms via the alarm banner.

12.5.4 Assets Reminder

The Assets Reminder page allows users to set the E-mail notification to remind the recipients of the equipment warranty expiration date and the equipment replacement date, along with the equipment list (Figure 12.77). The function details are described in Table 12.56 and the contents are shown in Table 12.57.

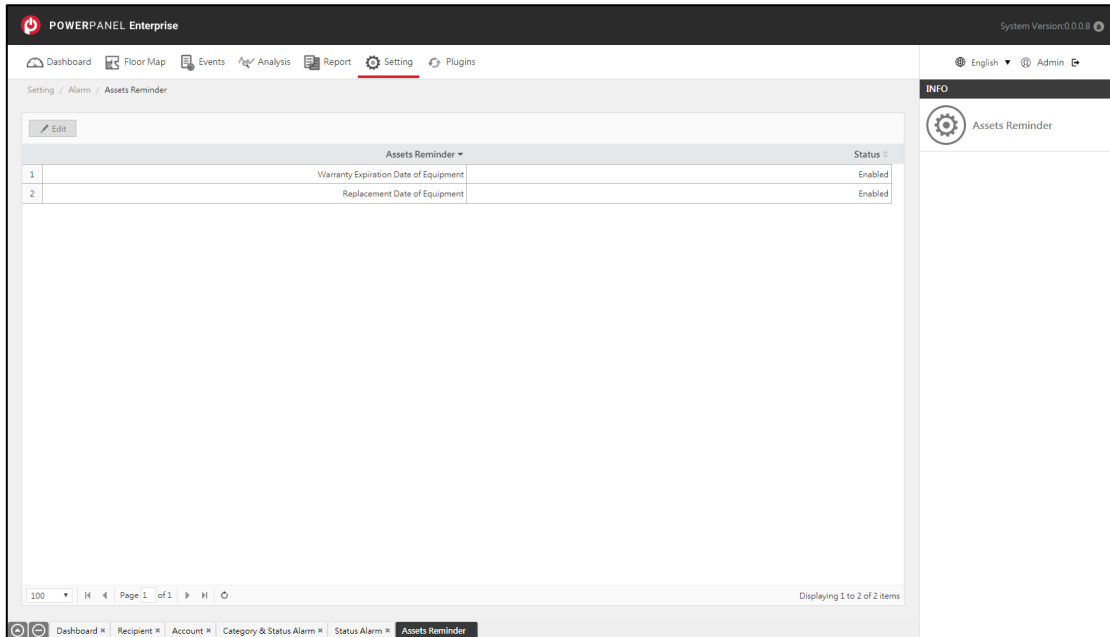


Figure 12.77 Asset Reminder

Table 12.56 Assets Reminder function description

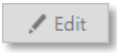
Icon	Description
	Click to edit the selected reminder in the table (Figure 12.78, Table 12.58).

Table 12.57 Assets Reminder content description

Content	Description
Assets Reminder	The reminder type name. <ul style="list-style-type: none"> - Warranty expiration date of the equipment - Replacement date of the equipment
Status	The activation status of the reminder. <ul style="list-style-type: none"> - Enabled - Disabled

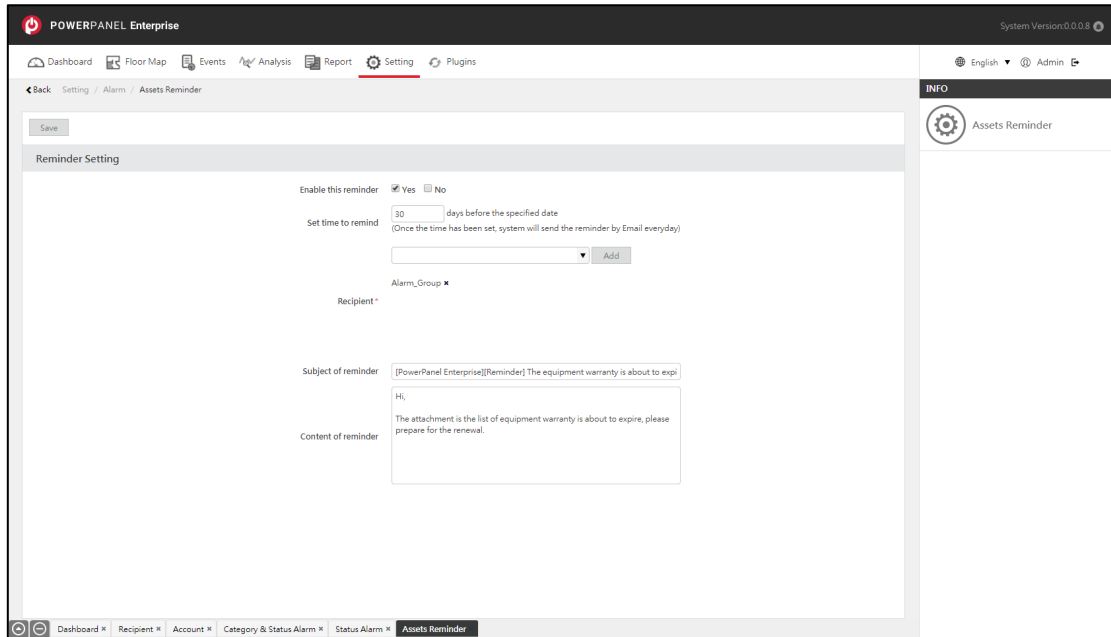


Figure 12.78 Reminder Setting

Table 12.58 Reminder Setting content description

Content	Description
Enable this reminder *	Click “Yes” to enable the reminder, and the system will run the schedule to check the warranty expiration date or replacement date for all equipment.
Set time to remind *	Enter the number of days ahead of the warranty expiration date and replacement date to send the reminder. The E-mail will be sent out every day.
Recipients *	Select the account or the group from the dropdown list.
Subject of reminder	Modify the default subject of the E-mail and save. The subject will be changed.
Content of reminder	Modify the default content of the E-mail and save. The content will be changed.

12.5.5 SMTP Server

The SMTP Server page allows users to enter the information of the SMTP server for AlertMail and Dataloader program to send the email alters and asset reminders (Figure 12.79). The contents are described in Table 12.59.

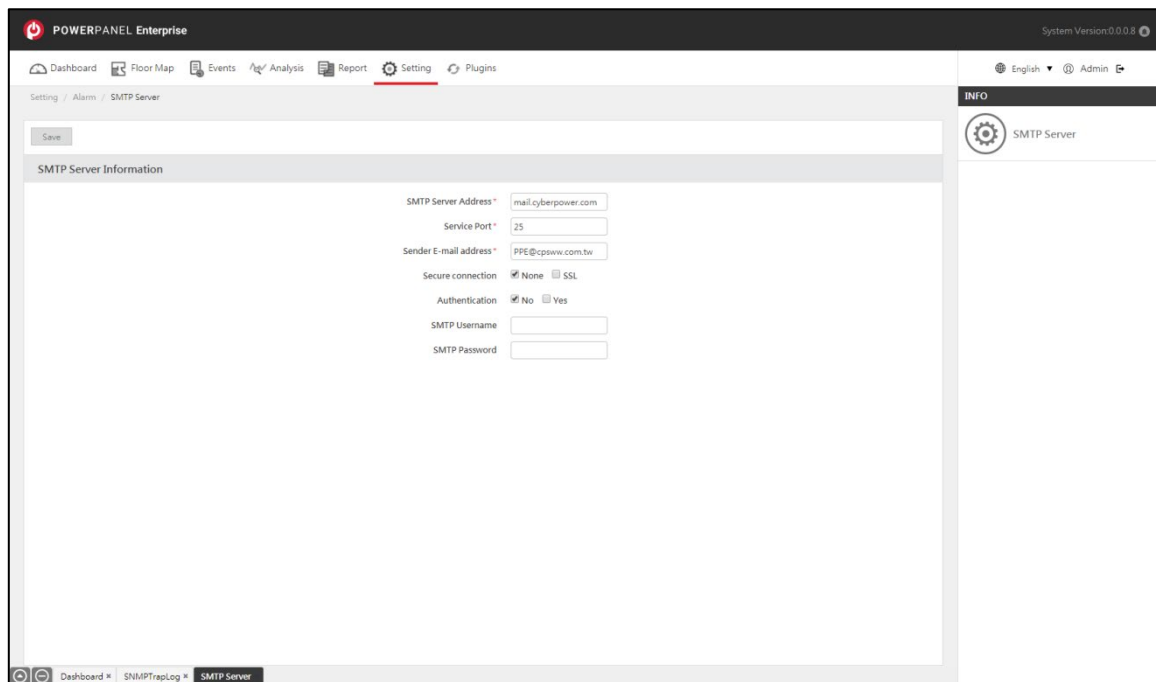


Figure 12.79 SMTP Server

Table 12.59 The SMTP Server content description

Content	Description
SMTP Server Address *	Enter the host name of the SMTP server.
Service Port *	Enter the port number. (Note: The Service Port 465 is not supported by the system. It's recommended to set the service port to 25 or 587.)
Sender E-mail Address *	Enter the displayed e-mail address.
Secure Connection	Select the secure connection method. - None - SSL
Authentication	Select the authentication method to access the SMTP server. - Yes - No
SMTP Username	Enter the username to log in to the SMTP server.
SMTP Password	Enter the password to log in to the SMTP server.

12.5.6 Low Disk Space Alarm

The system provides the low disk space alerts to help users monitor the hard disk usage of the PowerPanel Enterprise Server (Figure 12.80, Figure 12.81) and send out the Low Disk Space Alarm E-mail to all Admin accounts (Figure 12.86). User can set the low disk space thresholds through AlertMail's configuration file. See Table 12.60 for the steps.

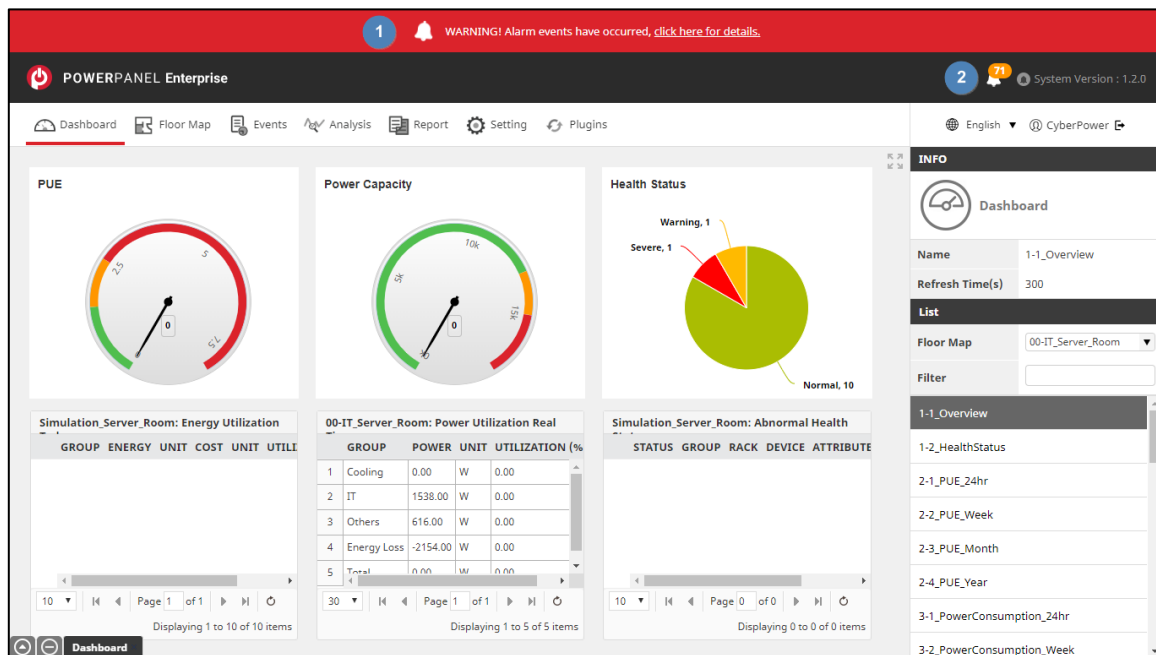


Figure 12.80 Alarm banner

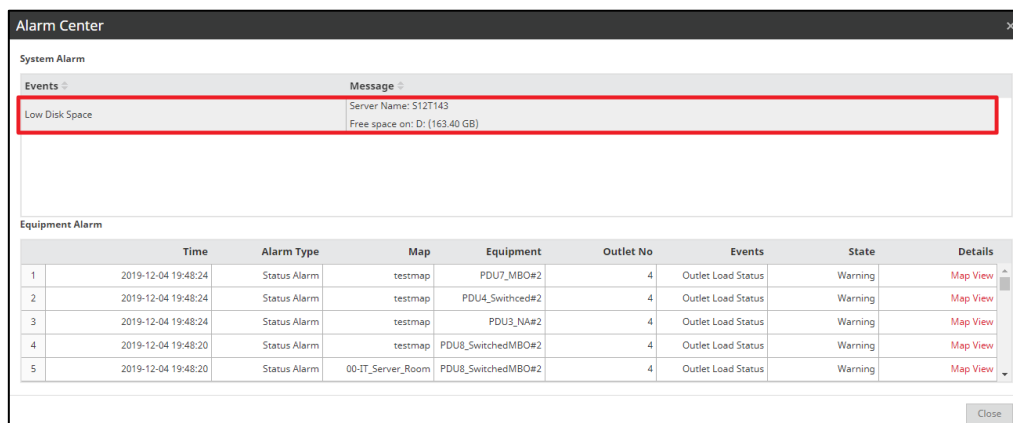


Figure 12.81 Alarm Center - Low disk space alarm

Table 12.60 The steps of setting low disk space threshold

Step	Description
1	Log in to your PowerPanel Enterprise Server and find the installation folder of “ PowerPanelEnterprise_AlertMail “ (Figure 12.82).
2	<p>Edit the configuration file of “ PowerPanelEnterprise_AlertMail.exe “ and enter the value of “ LowDiskSpaceThresholdPercent “ to set the free disk space threshold.</p> <p>You can also change the frequency of sending the low disk space alert E-mails by setting the value of “ DiskSpaceAlertMailFrequencyHours “ (Figure 12.83).</p>

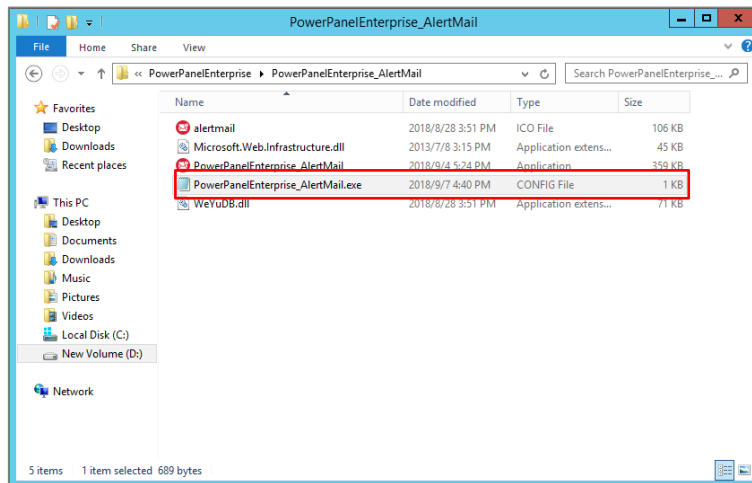


Figure 12.82 PowerPanelEnterprise_AlertMail folder

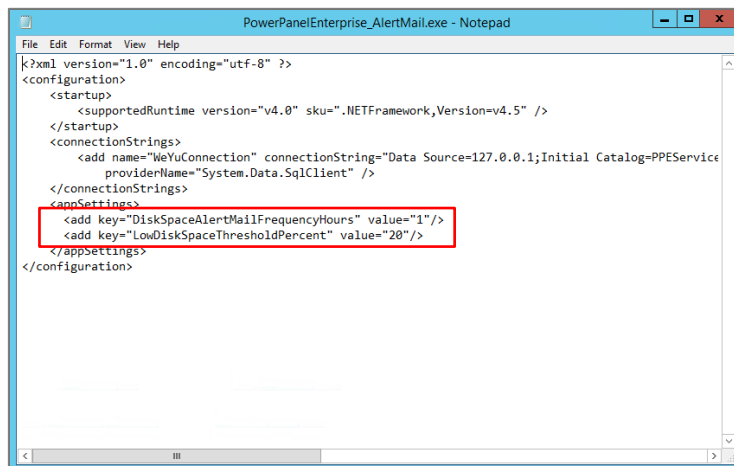


Figure 12.83 Edit PowerPanelEnterprise_AlertMail.exe Config file

12.5.7 Alarm E-mail

The following pictures (Figure 12.84 ~ Figure 12.86) show the E-mail content of Status Alarm E-mail, Trap Alarm E-mail and Low Disk Space Alarm E-mail.

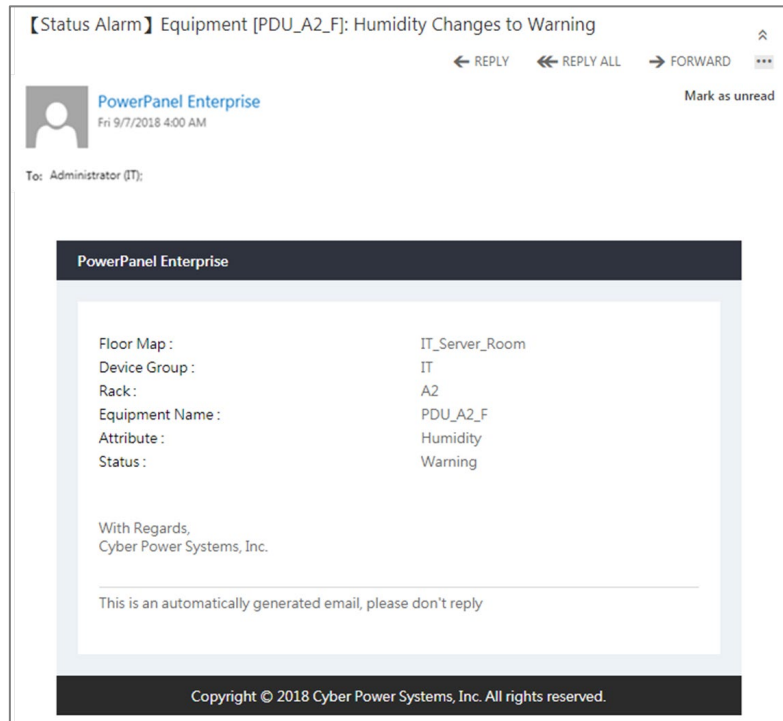


Figure 12.84 Status Alarm E-mail

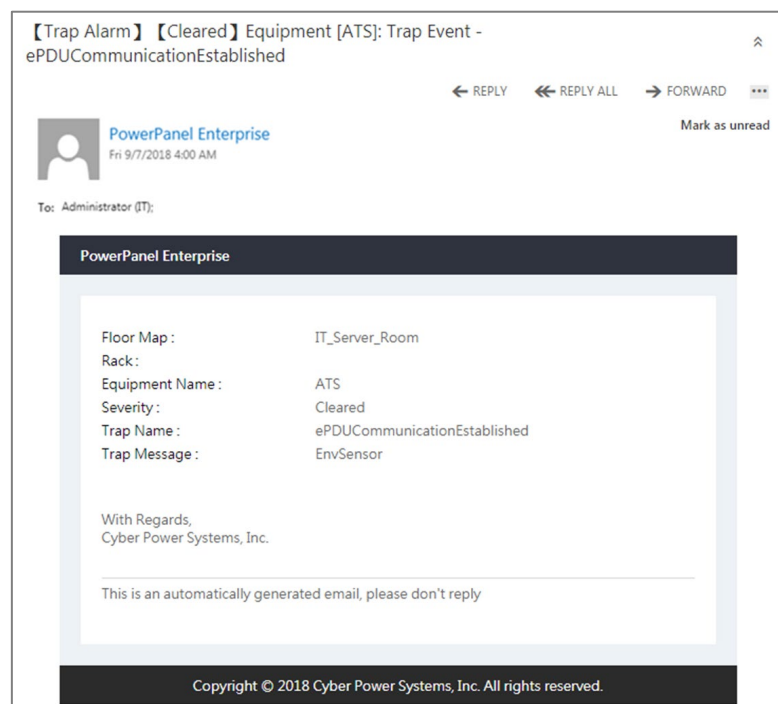


Figure 12.85 Trap Alarm E-mail

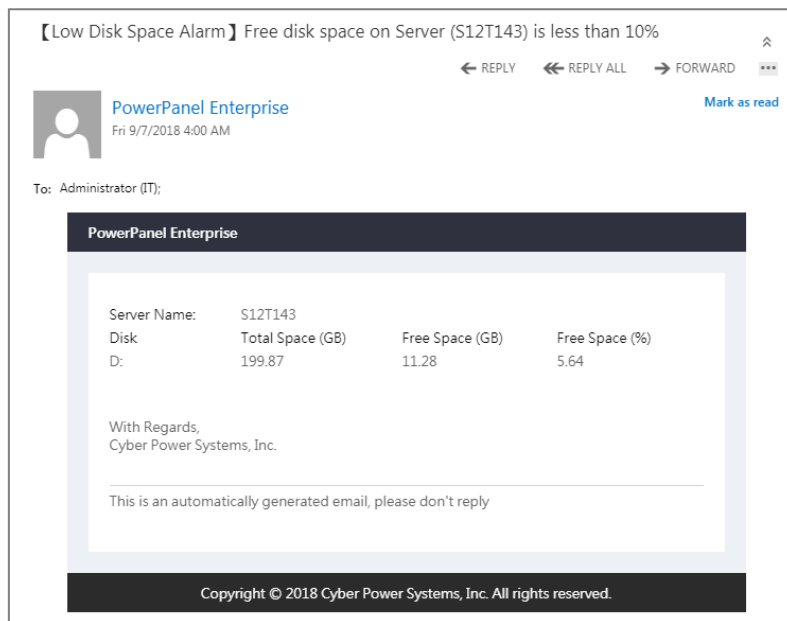


Figure 12.86 Low Disk Space Alarm E-mail

Chapter 13 Plugins

The Plugins section provides the system scalability, allowing users to install plugins to support more equipment categories, new dashboard templates and charts.

This page displays the list of new plugins in the top window, and the installed plugins in the bottom window. Users can select the new plugins in the top window (1 in Figure 13.1), and update it to the system (2 in Figure 13.1). The contents are shown in Table 13.1.

(Note: If you want to install the latest plugins updates, please add the following two URLs: “<https://tool.magiclen.org/ip/>” and “<http://powerpanelservice.cyberpower.com/Enterprise>” to your firewall whitelist first.)

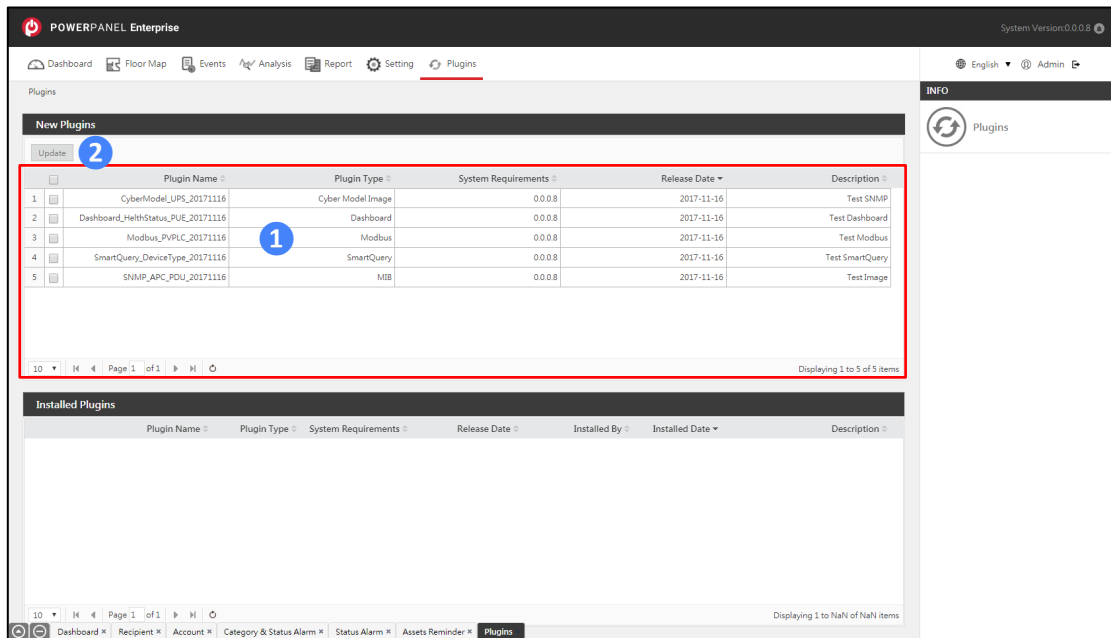


Figure 13.1 Plugins

Table 13.1 Plugins content description

Content	Description
Plugin Name	The name of the plugin.
Plugin Type	There are five types of plugins provided by the system: <ul style="list-style-type: none"> - SNMP MIB: Add OIDs to support new equipment attributes or new equipment. - Modbus: Add Modbus tables to support Modbus devices.

Content	Description
	<ul style="list-style-type: none"> - SmartQuery: Add new analysis charts. - Dashboard: Add new dashboard templates. - Equipment Model: Add new equipment models.
System Requirements	The supported system version of the plugin.
Release Date	The release date of the plugin.
Installed By	The name of the account who installed the plugin.
Installed Date	The installation date of the plugin.
Description	The description of the plugins.

Chapter 14 System Version

The System Version section displays the current version of the system in the upper right corner of the screen (Figure 14.1). When a new system version is available, the version icon turns green to remind users to upgrade (Figure 14.2). Users can use the [Upgrade Tool](#) on the PowerPanel® Enterprise server to upgrade the system. The function details are described in Table 14.1 and the content are shown in Table 14.2.

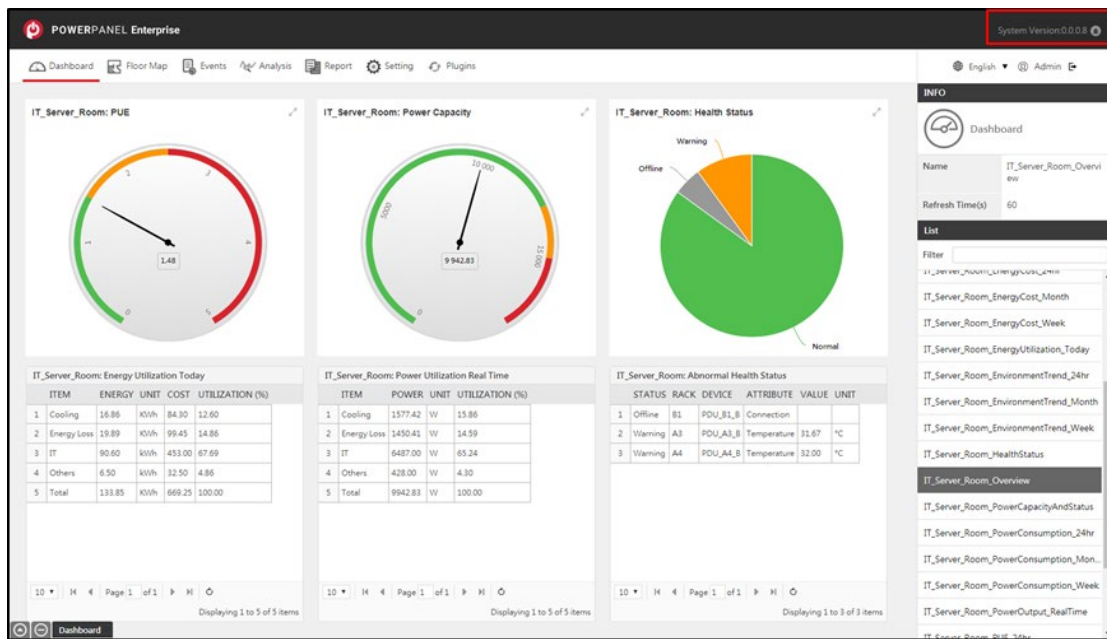


Figure 14.1 System Version

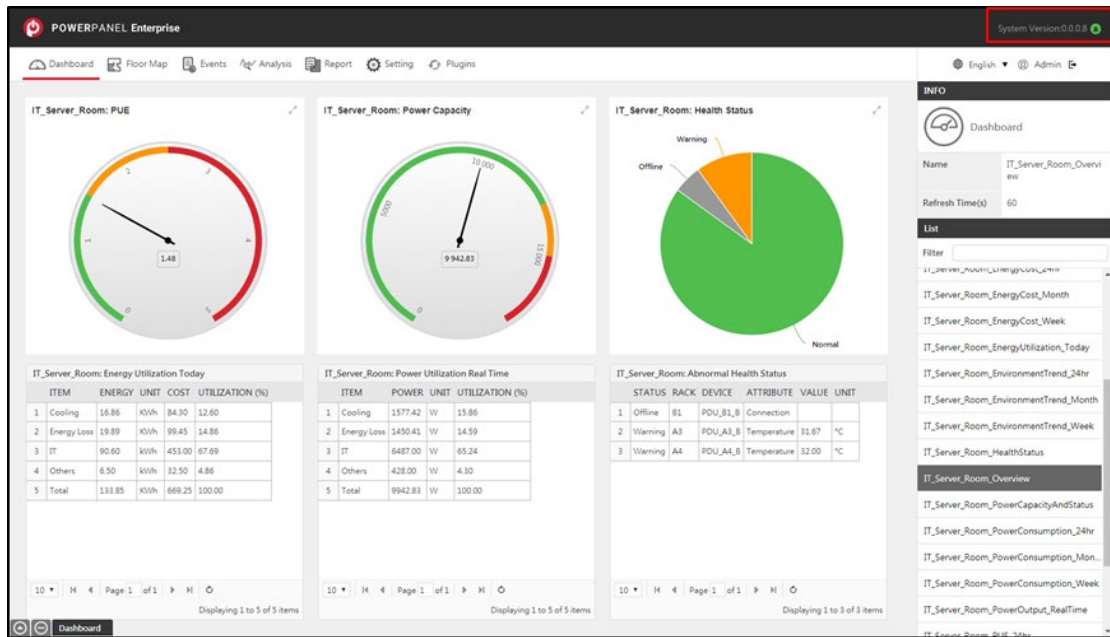




Figure 14.2 New system version is available

Table 14.1 System Version function description

Icon	Description
	The icon indicates your system is up to date. Click to view the detailed information (Figure 14.3).
	The icon indicates new system version is available. Click to view the detailed information of new version (Figure 14.4).

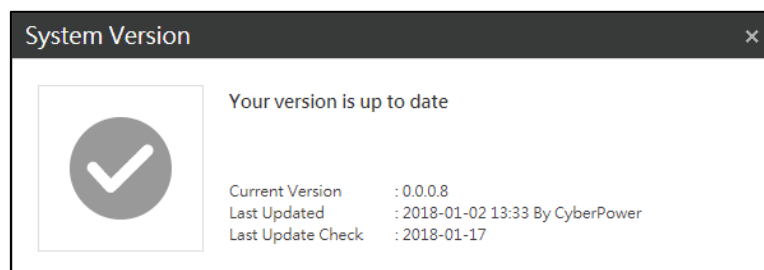


Figure 14.3 Your version is up to date

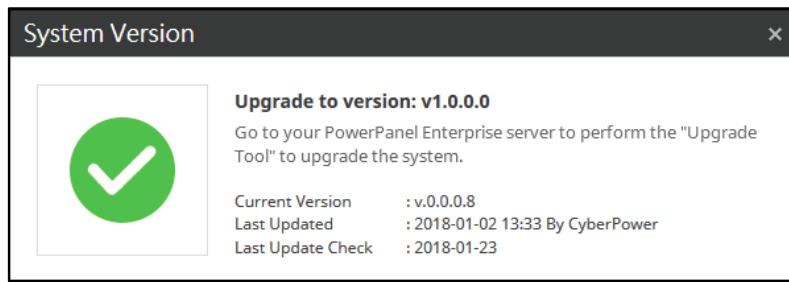


Figure 14.4 Upgrade to new system version

Table 14.2 System Version content description

Content	Description
Current Version	The current system version of PowerPanel® Enterprise.
Last Updated	The last time the system was upgraded and upgraded by whom.
Last Update Check	The last time the system checked for the new version.

CyberPower

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