CyberPower®

Intelligent PDU Web Interface

User's Manual

K01-E0000002-00

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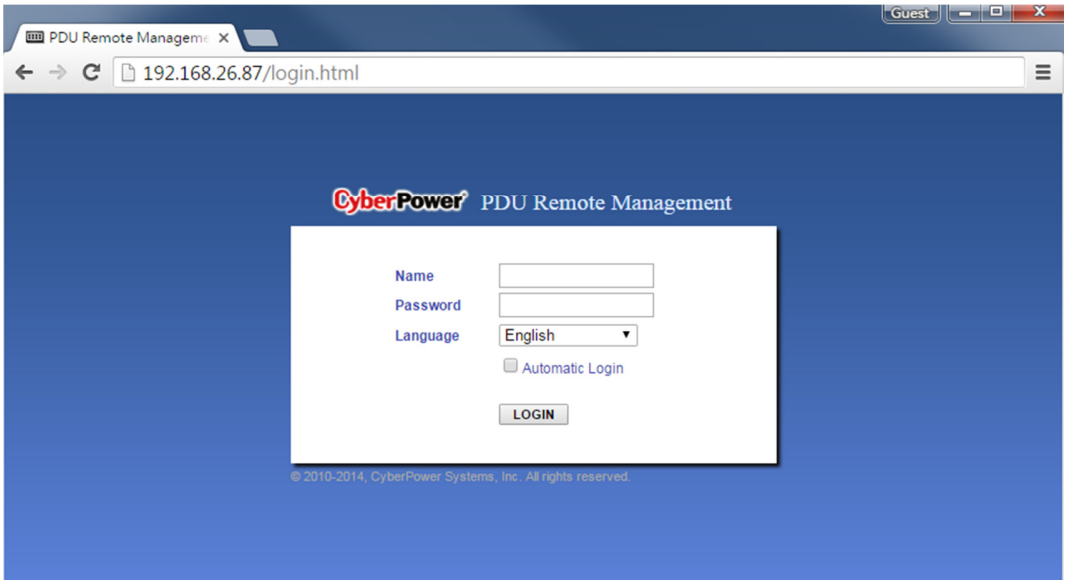
1. Introduction

1.1 Brief Introduction to Web Interfaces

The CyberPower Power Distribution Unit Web Interface gives users all the features they need to configure, manage, and monitor the PDU via a Web browser. With this easy-to-navigate interface, users can monitor the load level, manage the outlets, set power alerts, and complete many other tasks in an intuitive manner.

1.2 How to Log In



1. Open a Web browser.
2. Enter the IP address of the CyberPower PDU in the Browser Address Bar, and then press ENTER.
   Note: For the IP address, users can refer to the LCD screen of the PDU.
3. Enter the information for the **User Name** and **Password** fields.
   There are two types of user accounts.

Account Type	Default User Name	Default Password	Authorization
Administrator	cyber	cyber	View, access, and control all the settings, including enabling/disabling the Viewer account.
Viewer	device	cyber	View all the settings.

4. In the **Language** field, select **English** or **French**, and click **LOGIN** to open the **Summary Tab**.

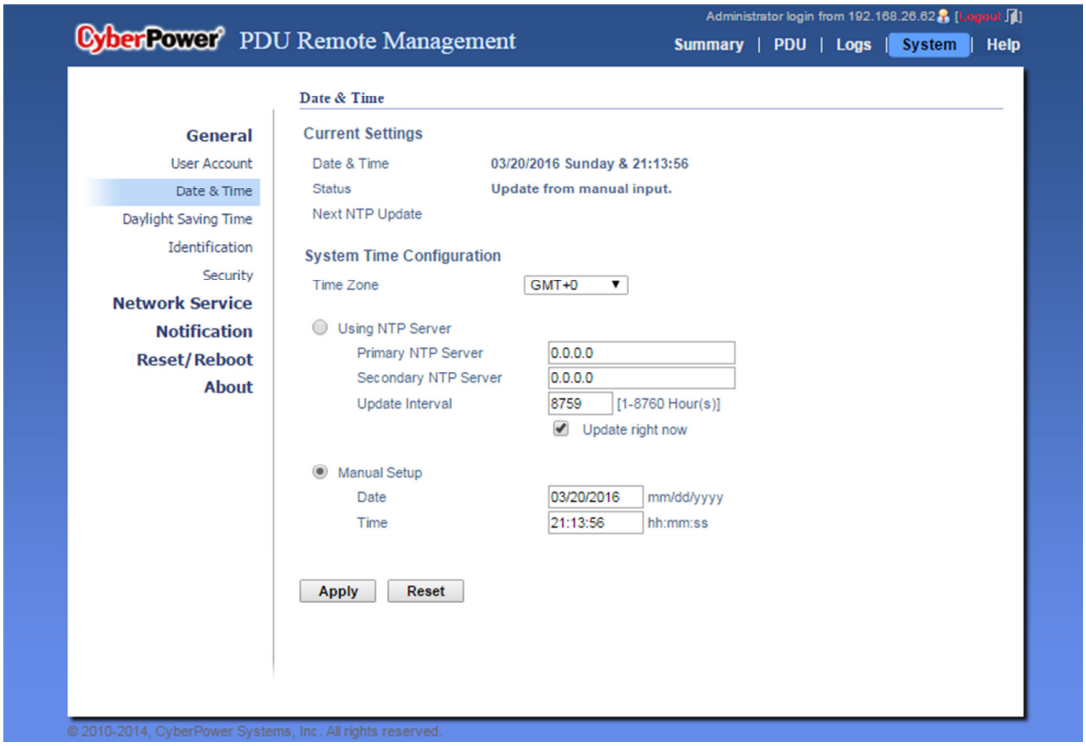
1.3 General Setting

These are the basic settings for the PDU.

1.3.1 Date and Time Setting

The date and time can be set manually or synchronized with a NTP (Network Time Protocol) server. All time-related configurations are based on this setting. See **System Tab > General > Date & Time**.

System Tab > General > Date & Time



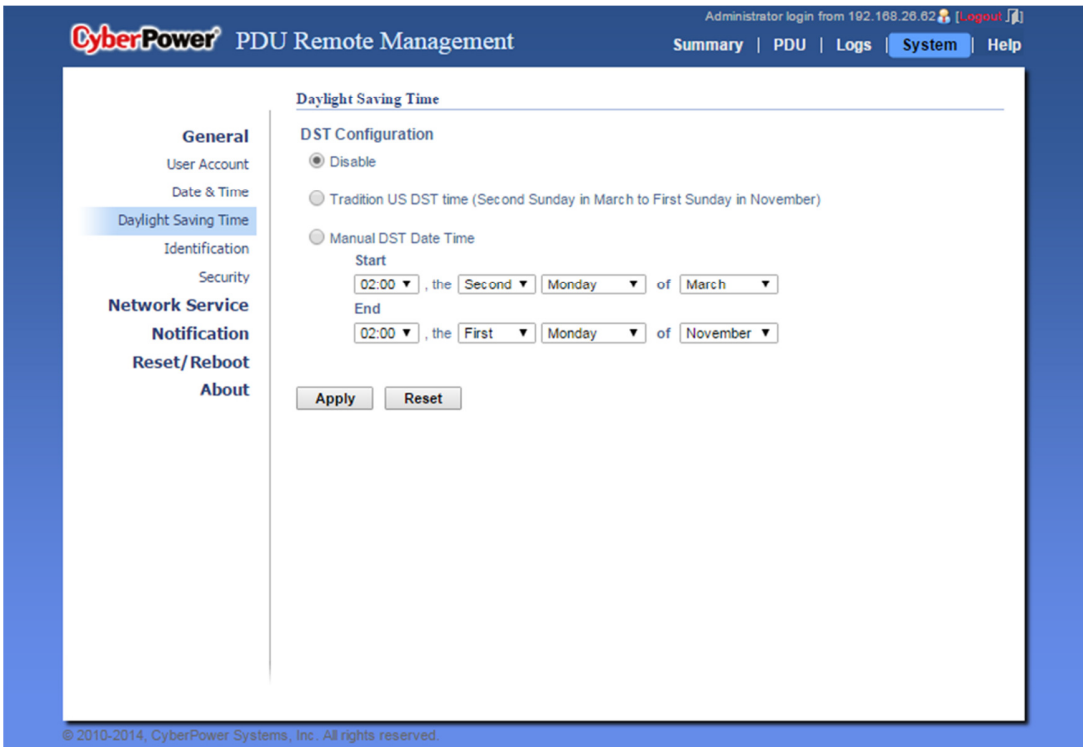
Item	Definition
Current Settings	
Date & Time	The current date and time.
Status	Whether the date and time setting is updated by manual input or by the NTP (Network Time Protocol) server.
Next NTP Update	Synchronizes with ***Update Interval***.
System Time Configuration	
Time Zone	The options for the time zone.
Using NTP Server	***Primary NTP Server**: Users enter the IP address/domain name of the NTP server and choose local time zone based on their

Item	Definition
	location. ***Secondary NTP Server**: Users enter the IP address/domain name of the NTP server and choose local time zone based on their location. ***Update Interval**: The frequency for updating the date and time from the NTP server. Select the **Update right now** option to update immediately.
Manual Setup	***Date**: Enter the date in the designated format. ***Time**: Enter the time in the designated format.

1.3.2 Daylight Saving Time

Users adjust the clock daylight saving time according to their location. See **System Tab > General > Daylight Saving Time.**

System Tab > General > Daylight Saving Time



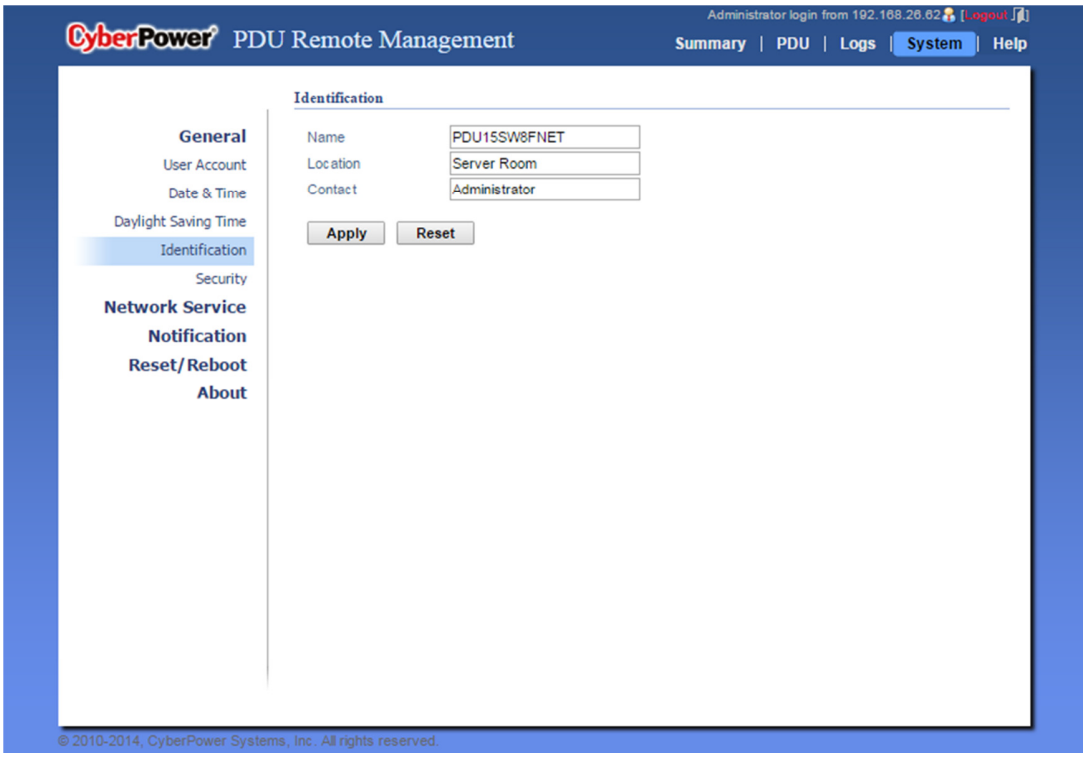
Item	Definition
DST Configuration	
Disable	Disable the DST function.

Item	Definition
Traditional US DST Time	Start from the second Sunday in March to the first Sunday in November.
Manual DST Date Time	Select the start/ end time using the dropdown menu.

1.3.3 Device Identification

Users assign the device's name, location, and the person to contact about issues. See **System Tab > General > Identification**.

System Tab > General > Identification

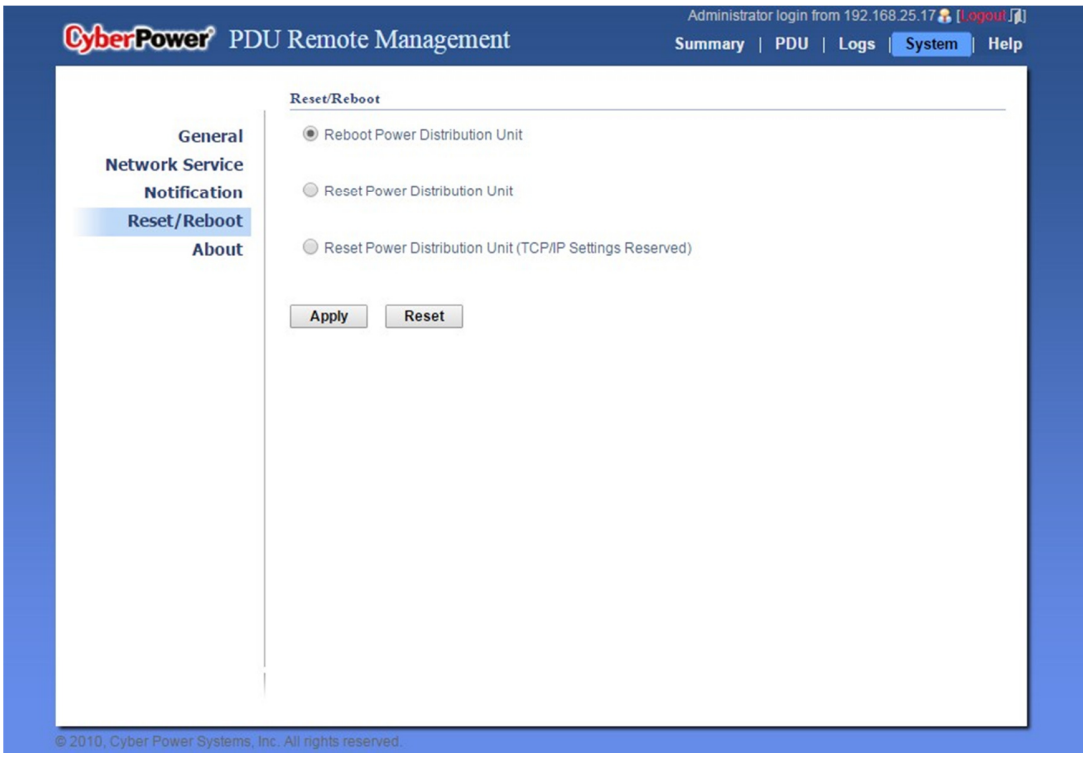


Item	Definition
Name	The name entered by the user to identify the PDU.
Location	The PDU location entered by the user.
Contact	The person to be contacted about issues. Entered by the user.

1.3.4 Device Reset/Reboot

Users can reboot the PDU or reset all the settings to defaults. See **System Tab > Reset/Reboot**.

System Tab > Reset/Reboot



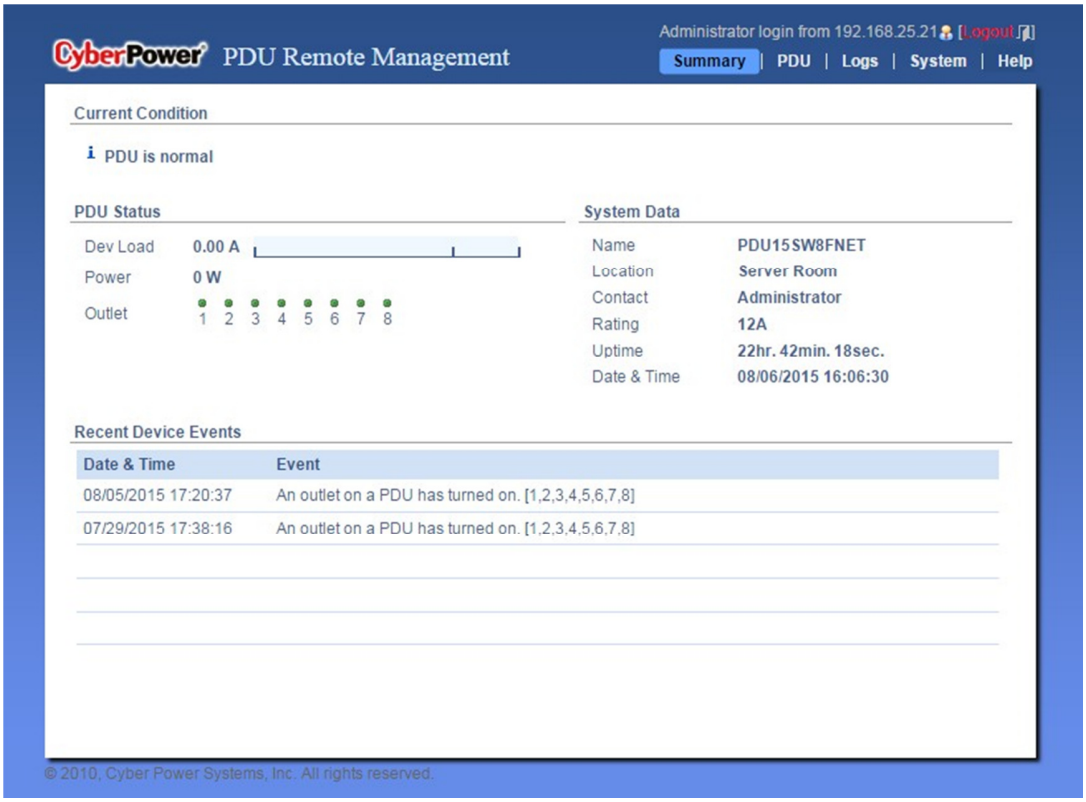
Item	Definition
Reboot Power Distribution Unit	Restart the PDU without changing the outlet state.
Reset Power Distribution Unit	Reset the PDU to its factory default setting and restart it. This action does not change the outlet state.
Reset Power Distribution Unit (TCP/IP Settings Reserved)	Reset the PDU to its factory default setting while reserving the TCP/IP settings, and restart the PDU. This action does not change the outlet state.

2. Advanced Power Management

2.1 Remote Monitoring

Users can see real-time readings of PDU vitals such as device load, power consumption, and outlet status for an overview of the current PDU status. See **Summary Tab** and **PDU Tab > Status**.

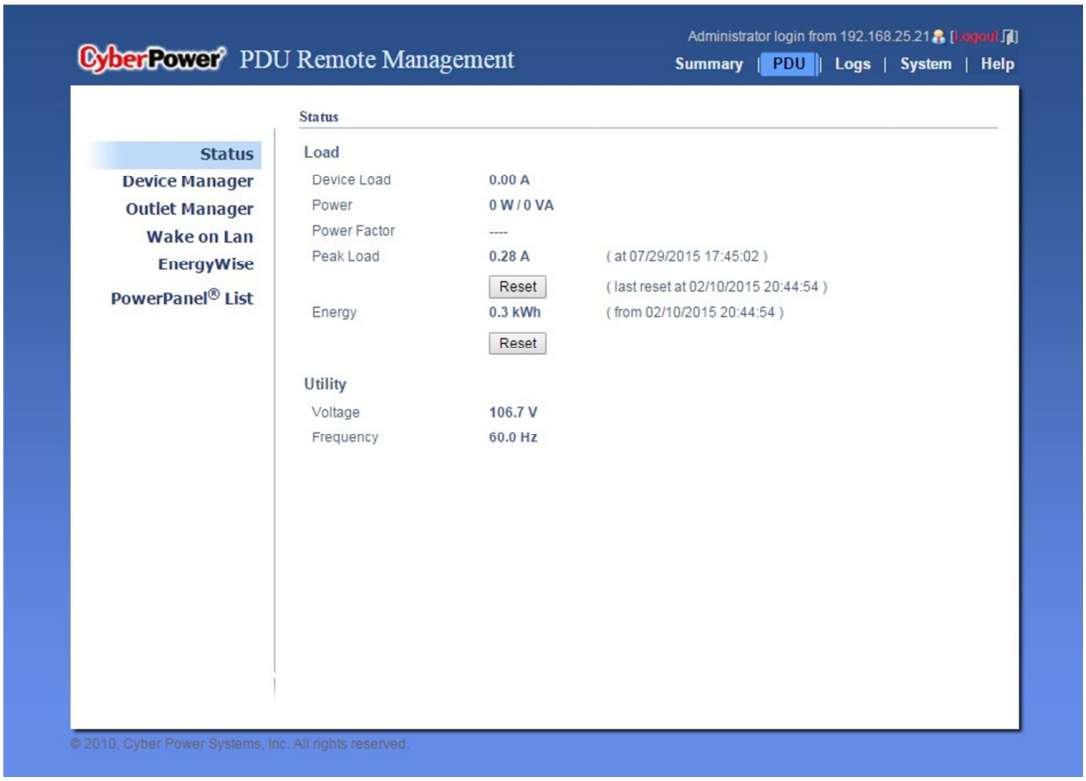
Summary Tab



Item	Definition
Current Condition	Operating condition of the PDU.
PDU Status	
Dev Load	Load current of the device, measured in Amps.
Power	Load power of the device, measured in Watts.
Outlet	The on/off status of each outlet. The green light icon indicates that the outlet is on and providing power. This light will go off when the outlet turns off.
System Data	
Name	The name entered by the user to identify the PDU. See **System > General > Identification**.

Item	Definition
Location	The location of the PDU, entered by user. See **System > General > Identification**.
Contact	The person accountable for the maintenance of the PDU. Entered by the user. See **System > General > Identification**.
Rating	Current rating of the PDU, measured in Amps.
Uptime	The amount of time the system has been working since it was turned on.
Date & Time	System time of the PDU. For configuration settings, see **System > General > Date & Time**.
Recent Device Events	A list of the most recent five device events. All events are related to the configuration change.

PDU Tab > Status



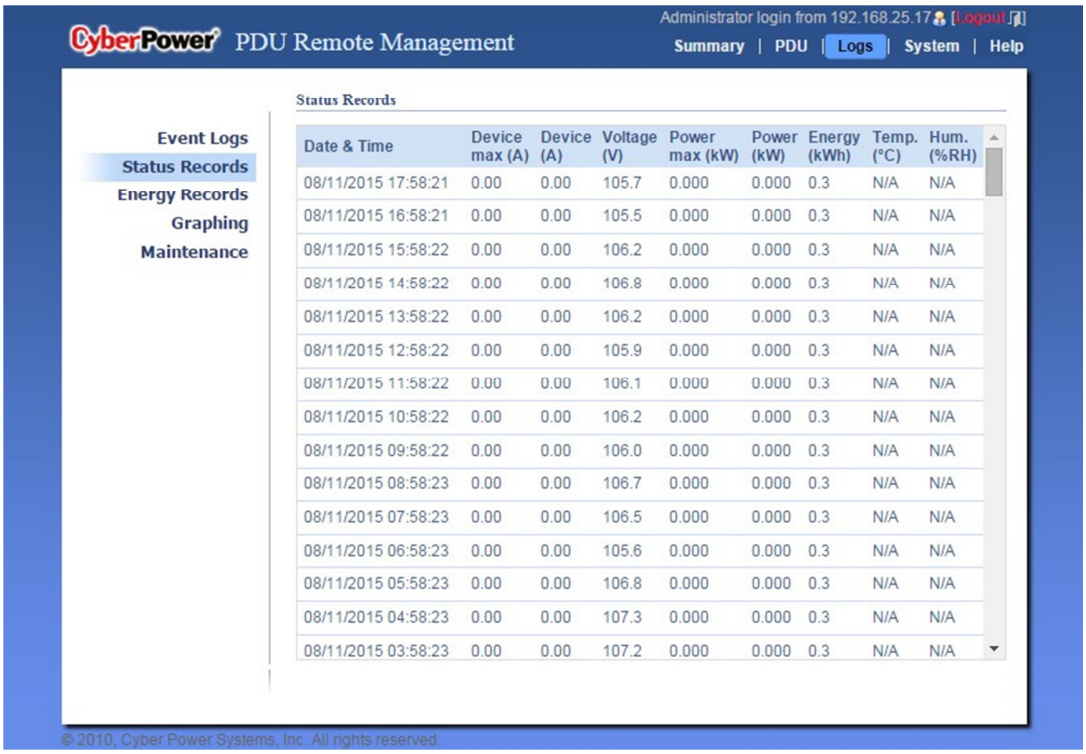
Item	Definition
Load	
Device Load	Load current of the connected device(s), measured in Amps.
Bank Load**	Load current of the bank, measured in Amps.
Power	Load power of the connected device(s), measured in Watts and Volt-Amperes.
Power Factor	Load power factor of the connected device(s).
Peak Load	Maximum load current recorded and the time of occurrence. Click **Reset** to set the value to zero.
Energy	Total energy consumed by the connected device(s) from the reset date, measured in kWh. Click **Reset** to set the value to zero.
Utility	
Voltage	Voltage of the utility power.
Frequency	Frequency of the utility power.

**Only available for some models.

2.2 Visible Power Consumption

With comprehensive energy measurement data, users can gain more visibility to the total power usage of a power strip, as well as estimate the energy cost and CO2 emissions. The energy-trend report also helps users analyze their power utilization and to review the history of power conditions. See **Logs Tab > Status Records**, **Logs Tab > Graphing**, **Logs Tab > Energy Records**, and **Logs Tab > Maintenance**.

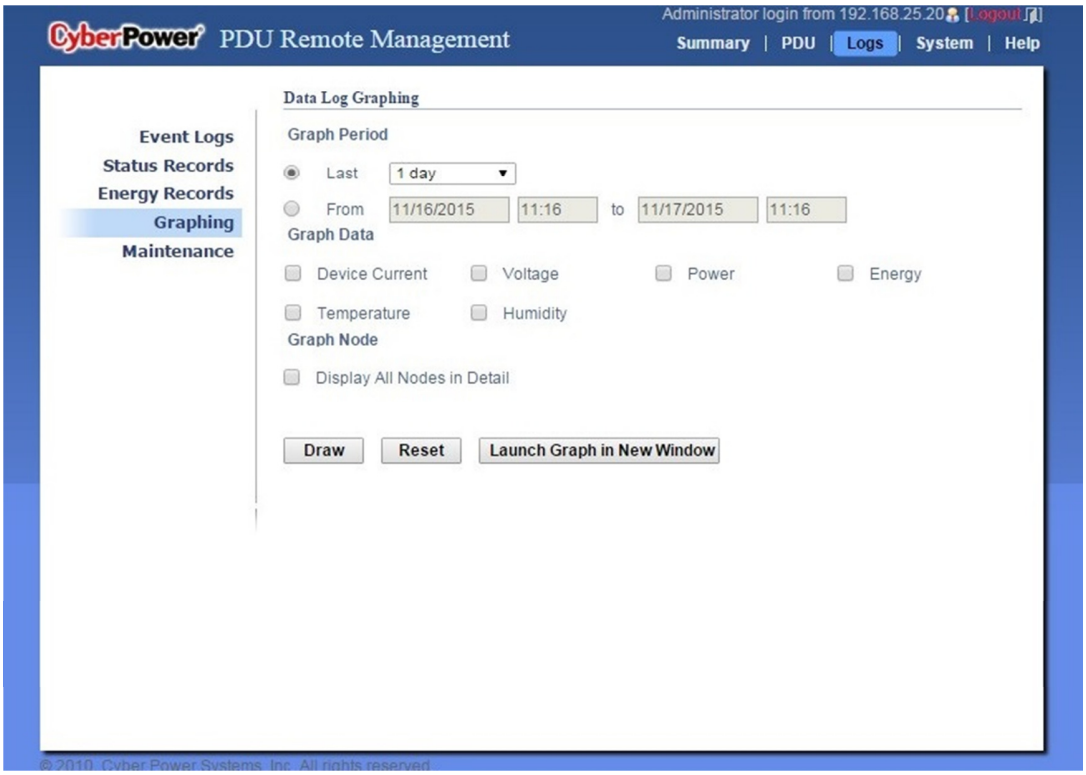
Logs Tab > Status Records



Item	Definition
Device Max (A)	The maximum load current of the connected device(s) or bank during a specific time interval, measured in Amps. This interval can be set in **Logs Tab > Maintenance**.
Device (A)	Load current of the connected device(s) or bank, measured in Amps.
Voltage (V)	Voltage of the utility power.
Power max (kW)	Maximum load power of the connected device(s) during a specific time interval, measured in kW. The interval can be set in **Logs Tab > Maintenance**.
Power (kW)	Load power of the connected device(s), measured in kW.
Energy (kWh)	Total energy consumed by the connected device(s) during a specific time interval, measured in kWh. This interval can be set in **Logs Tab > Maintenance**.

Item	Definition
Temp. (°C/°F)	The temperature detected by the Environment Sensor, measured in °C or °F.
Hum. (%RH)	The humidity detected by the Environment Sensor, measured as a percentage of relative humidity.

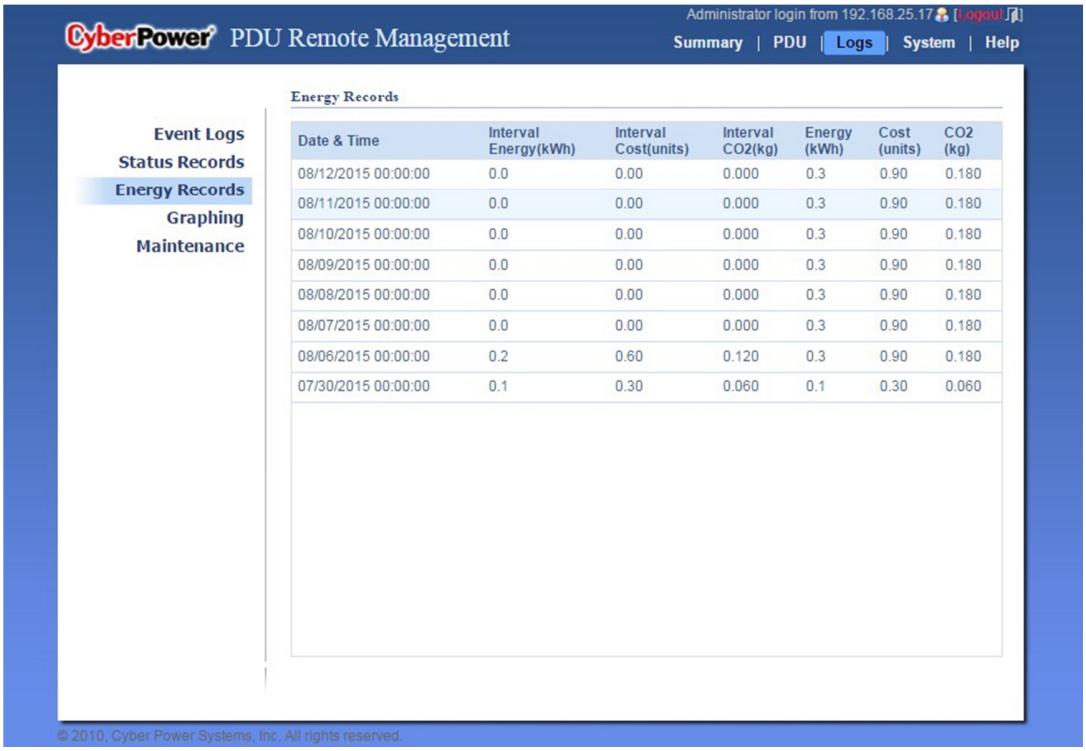
Logs Tab > Graphing



Item	Definition
Graph Period	The time period is used to create a retroactive graph of the status records. A large time period will require more time to render the graph.
Graph Data	The data is used to create a graph of the status records. Up to five data points can be selected. A large number of data selected will require more time to render the graph.
Graph Node	Select the **Display All Nodes in Detail** option to display the selected data points along the graph. When the cursor is moved to an individual data point, information about that point will be shown. If this option is not selected, the graph will show only the line (without the points), so less time is needed to render.

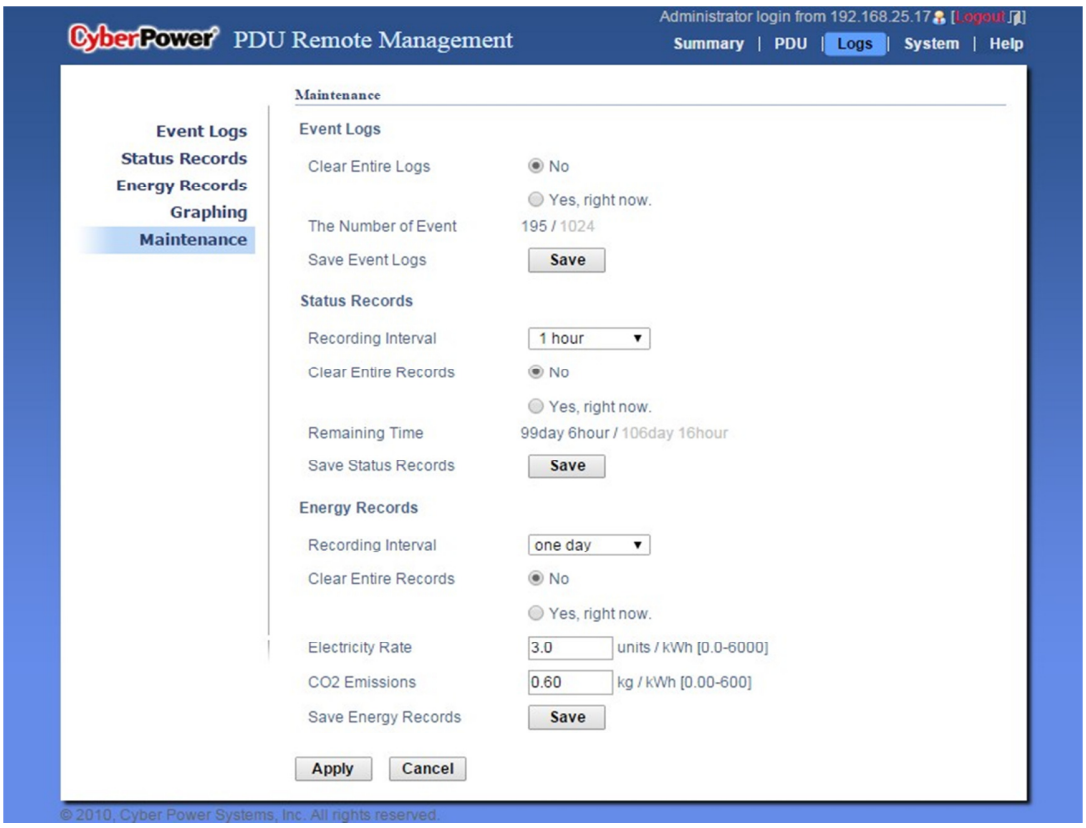
Item	Definition
Launch Graph in New Window	A detailed view of the graph opens in a new browser window.

Logs Tab > Energy Records



Item	Definition
Interval Energy (kWh)	Energy consumed by connected device(s) during a specific time interval, measured in kWh. This interval can be set in **Logs Tab > Maintenance**.
Interval Cost (units)	Cost of the energy consumed by the connected device(s) during a specific time interval, equal to *Electricity Rate* multiplied by *Interval Energy*. This interval can be set in **Logs Tab > Maintenance**.
Interval CO2 (kg)	Equivalent CO2 emission of the connected device(s) during a specific time interval, equal to *CO2 Emissions* multiplied by *Interval Energy*. This interval can be set in **Logs Tab > Maintenance**.
Energy (kWh)	Accumulated *Interval Energy* since the last reset.
Cost (units)	Accumulated *Interval Cost* since the last reset.
CO2 (kg)	Accumulated *Interval CO2* since the last reset.

Logs Tab > Maintenance



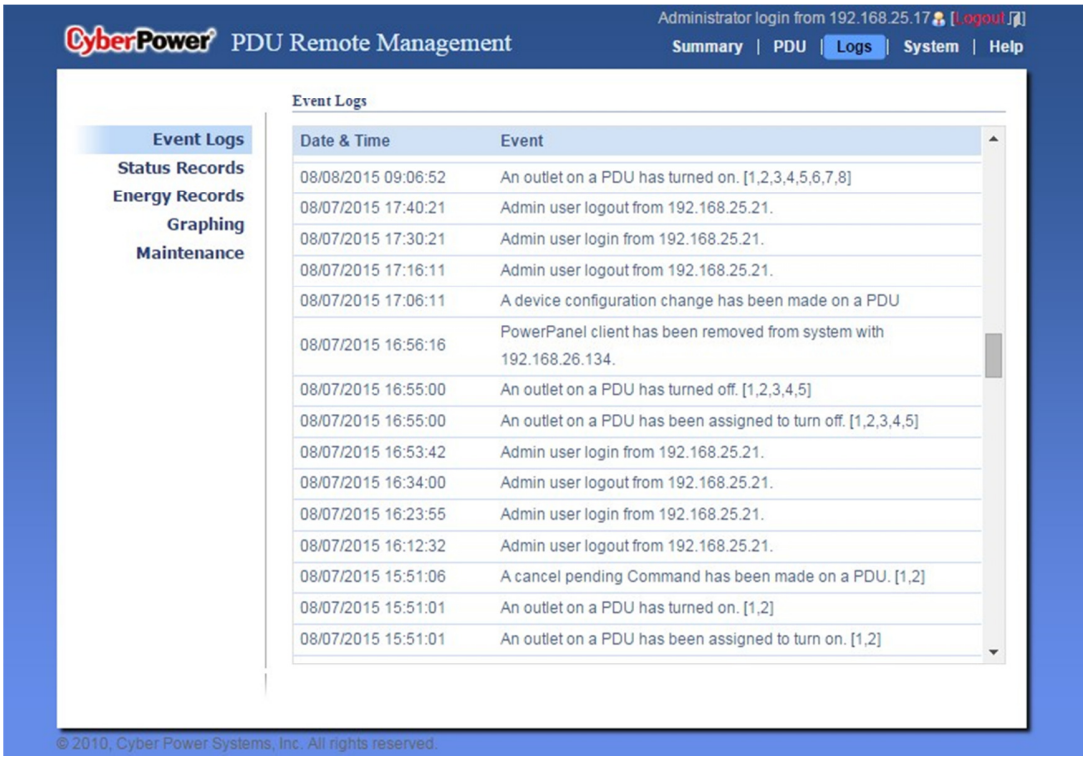
Item	Definition
Event Logs	
Clear Entire Logs	Clear the existing event logs.
The Number of Event	The number of the existing event logs and the maximum number of the event logs that can be recorded.
Save Event Logs	Save the existing event logs as a text file.
Status Records	
Recording Interval	The frequency to record the status data. A smaller interval will provide more recordings, but the recordings are overwritten in a shorter period of time. A larger interval will provide fewer recordings, but the recordings are overwritten in a longer period of time.
Clear Entire Records	Clear the existing status records.
Remaining Time	The time that records have been kept. A smaller recording interval leads to less remaining time while a larger recording interval leads to more remaining time.

Item	Definition
Save Status Records	Save the status records as a text file.
Energy Records	
Recording Interval	The frequency to record the energy data.
Clear Entire Records	Clear the existing energy records.
Electricity Rate	The cost (units) of energy per unit of energy consumed (kWh). Unit is a monetary value.
CO2 Emissions	The equivalent CO2 emission (kg) per unit of energy consumed (kWh).
Save Energy Records	Save the existing energy records as a text file.

2.3 Event Logging

Users can view all the events, including log in/out records and configuration changes. The timestamp is recorded in a 24-hour format. Users can clear the existing event logs in **Logs Tab > Maintenance**. See **Logs Tab > Event Logs**.

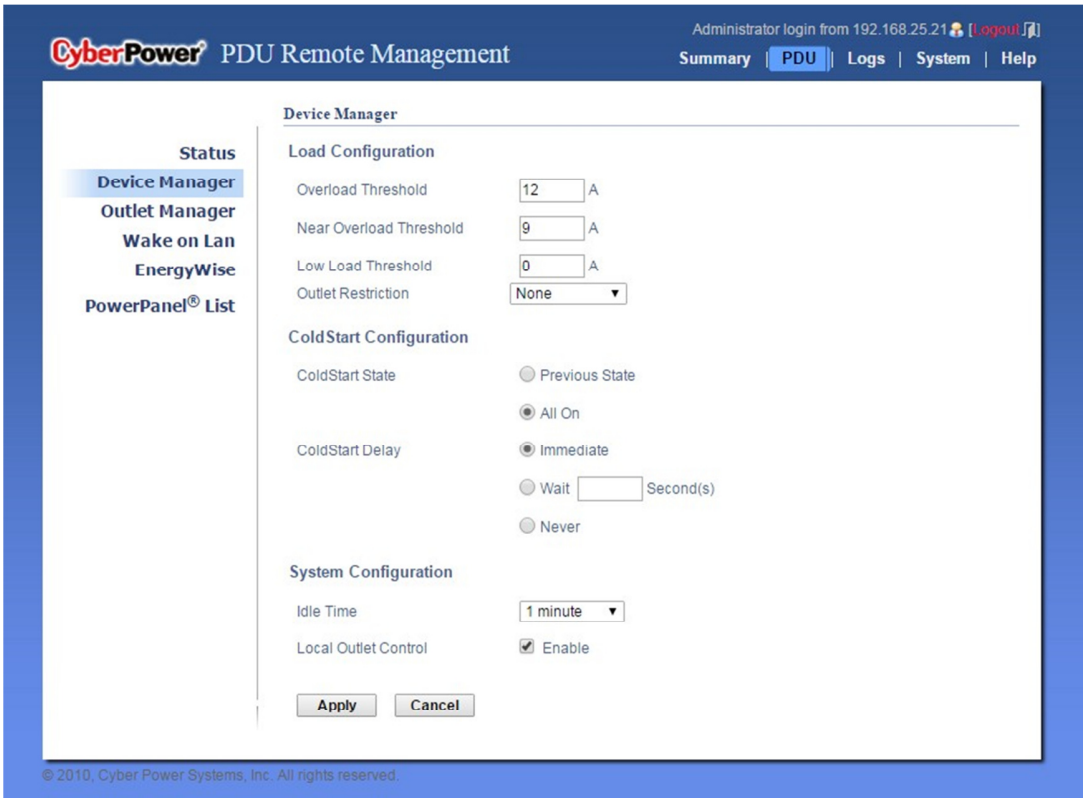
Logs Tab > Event Logs



2.4 Power Protection

The configurable load threshold can be set to prevent an overload condition. Coldstart and system configurations are also offered for different user needs. See **PDU Tab > Device Manager**.

PDU Tab > Device Manager



Item	Definition
Load Configuration	
Overload Threshold	Set the value for the total current placed on the PDU that will signal an overload warning. Must be higher than *Near Overload Threshold* and lower than the PDU *Rating* in the **Summary Tab**.
Near Overload Threshold	Set the value for the total current placed on the PDU that will signal a near overload warning. Must be higher than *Low Load Threshold* and lower than *Overload Threshold*.
Low Load Threshold	Set the value for the total current placed on the PDU that will signal a low load warning. Must be lower than *Near Overload Threshold*.

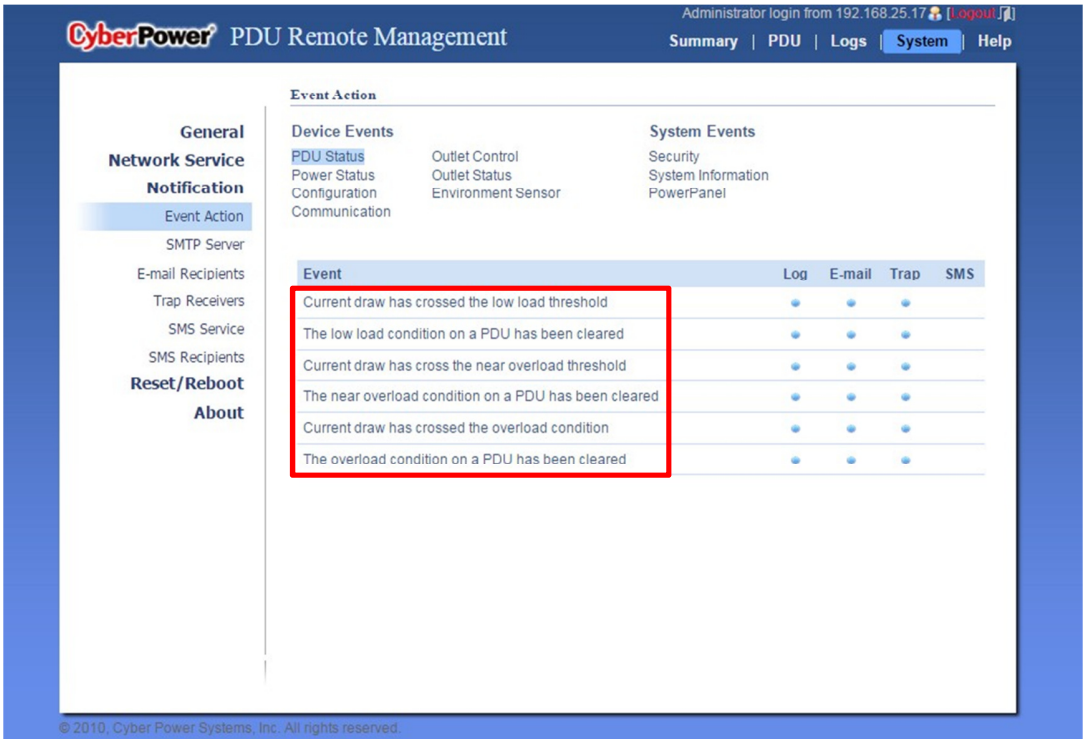
Item	Definition
Outlet Restriction**	When current load exceeds the corresponding threshold, no outlets will be allowed to turn on. ***None**: Users can turn on an outlet even if the device is in Near Overload or Overload state. ***On Near Overload**: Users cannot turn on an outlet when the device is in Near Overload or Overload state. ***On Overload**: Users cannot turn on an outlet when the device is in Overload state.
ColdStart Configuration	
ColdStart State	***Previous State**: Outlets will return to the same state (on or off) they were in prior to the PDU turning off. The *ColdStart Delay* setting will apply when the PDU resumes power. ***All On**: All outlets will turn on when power is restored to the PDU and adhere to the configured *ColdStart Delay* setting.
ColdStart Delay	***Immediate**: Outlets will be turned on immediately when power is restored to the PDU. ***Wait**: Outlets will be turned on according to each outlet's *Power On Delay* (as shown in **PDU Tab > Outlet Manager > Configuration**) when power is restored to the PDU. Valid values are within the range of 1 to 300 seconds. ***Never**: The outlet(s) will not turn on when power is restored to the PDU.
System Configuration	
Idle Time	The PDU LCD screen will turn off automatically after it remains idle for the selected period of time.
Local Outlet Control	Enable or disable local outlet control function that turns on/off the outlet via the PDU LCD screen.

**For some models, the Outlet Restriction only shows in the Bank Manager Window.

2.5 Event Action Notification

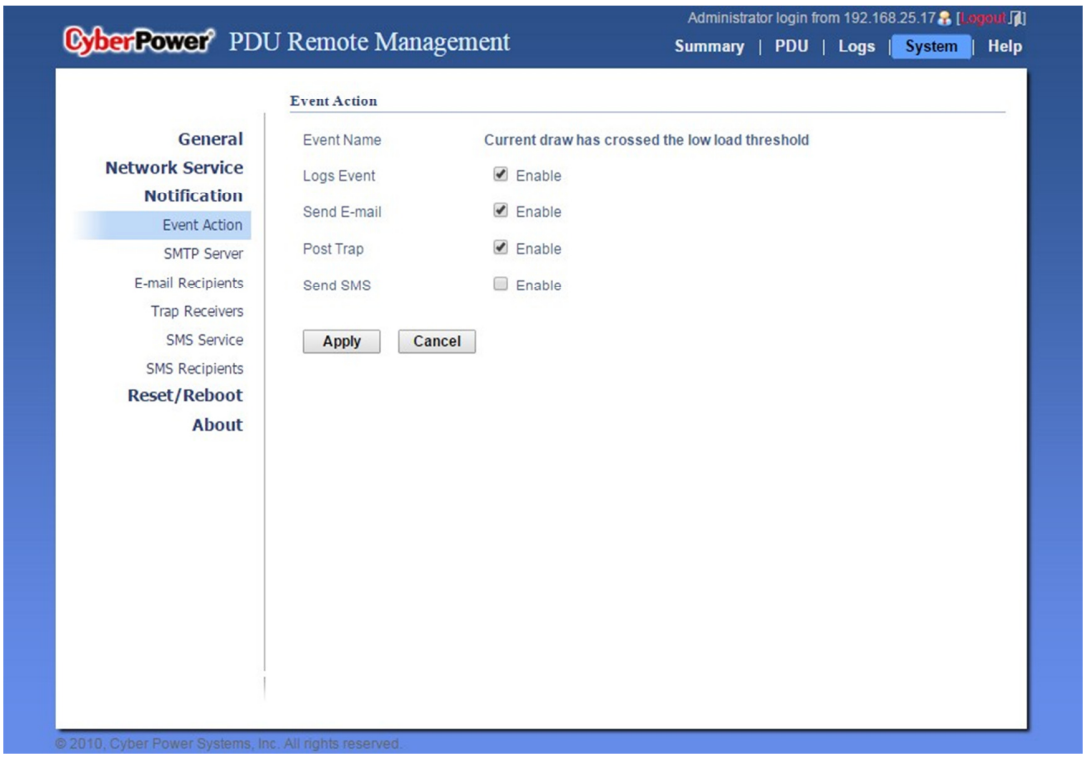
Users decide the event actions for which they receive notifications. When a certain event happens, an automatic notification will be sent to users so that they can make timely decisions to prevent potential problems. See **System Tab > Notification**.

System Tab > Notification > Event Action



Click the **Event** field to open the Event Action Window.

Event Action Window



The Event Action Window enables users to modify the notification method.

Item	Definition
Logs Event	Record the device event in the *Event Logs* in **Logs Tab > Maintenance**.
Send E-mail	Send an email to a specific user. An available SMTP server is necessary.
Post Trap	Send a SNMP trap to a specific IP address.
Send SMS	Send a short message to a specific mobile phone number. An available Short Message Service (SMS) provider is needed.

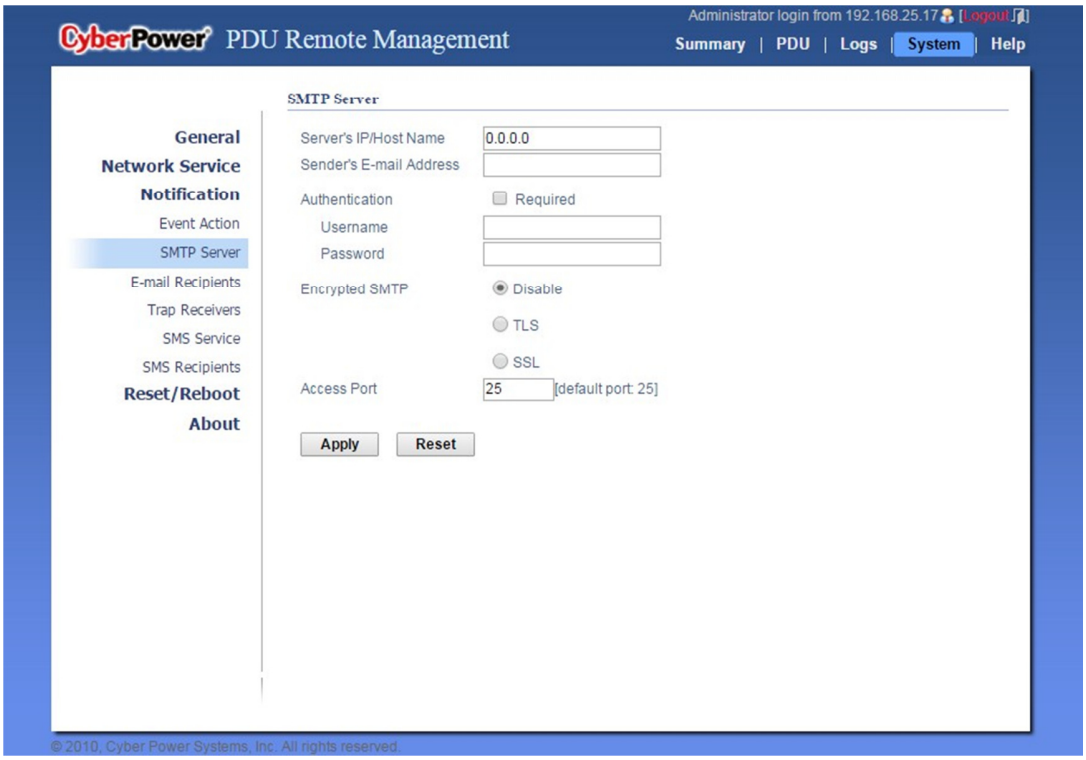
2.5.1 Event Action Recipient Settings

The following provides notification receiver configurations.

2.5.1.1 E-mail Notification

Set the proper SMTP server settings so that users can receive an email when a specific event occurs. See **System Tab > Notifications > SMTP Server**.

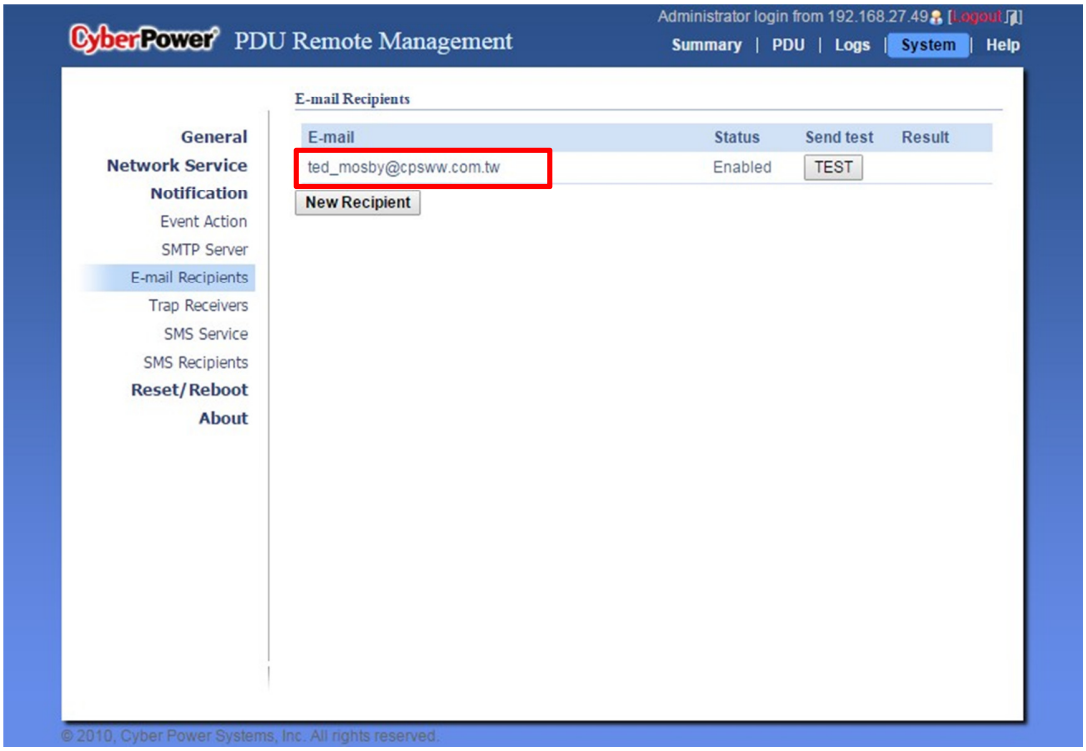
System Tab > Notification > SMTP Server



Item	Definition
Server's IP/Host Name	The IP or Host Name of SMTP server used to notify users by E-mail.
Sender's E-mail Address	The **From** field shown in the e-mail message.
Authentication	Select this option if the SMTP server requires Authentication.
Username	Username used for Authentication.
Password	Password used for Authentication.
Encrypted SMTP	Enable/Disable TLS or SSL to encrypt the SMTP connection.
Access Port	The port number that PDU uses to communicate with SMTP server.

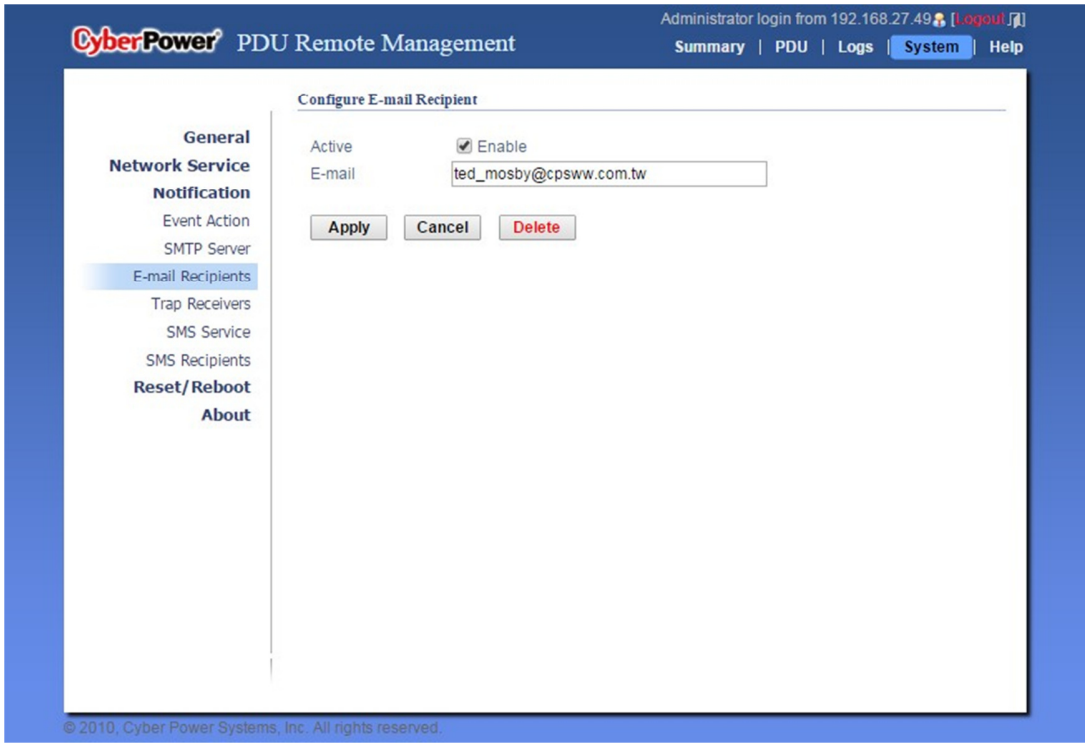
Users can set up to five e-mail recipients in designated email address format. See **System > Notifications >E-mail Recipients**.

System > Notifications > E-mail Recipients

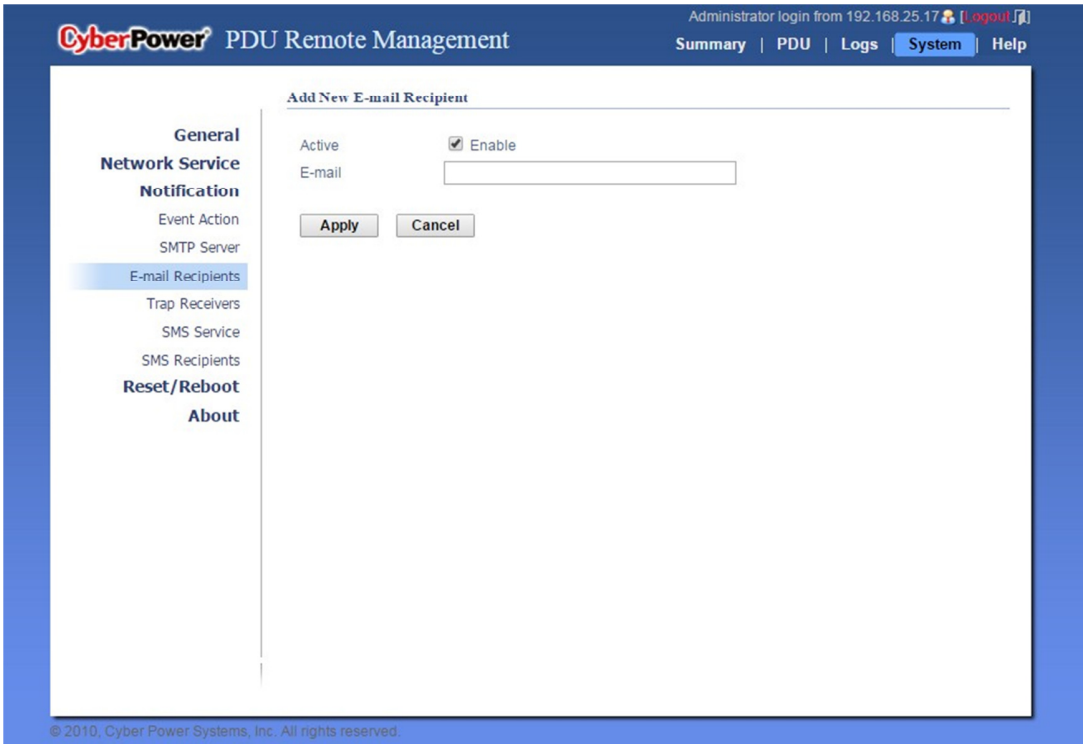


Item	Definition
E-mail	Click the e-mail address of the recipient to open the Configure E-mail Recipient Window. Users can modify the e-mail address, change its status, and delete an existing recipient.
TEST	Click this button to check if the SMTP setting and the email recipients are set correctly.
New Recipient	Click this button to open the Add New E-mail Recipient Window. Users can add a new recipient.

Configure E-mail Recipient Window



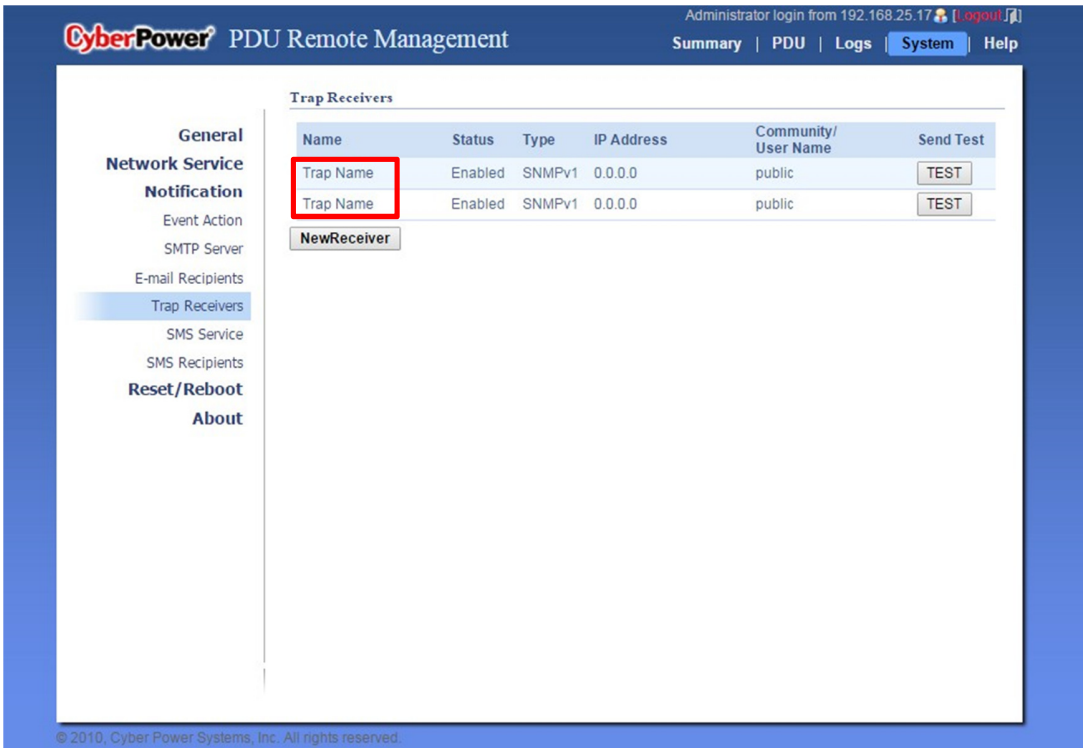
Add New E-mail Recipient Wind



2.5.1.2 SNMP Trap Notification

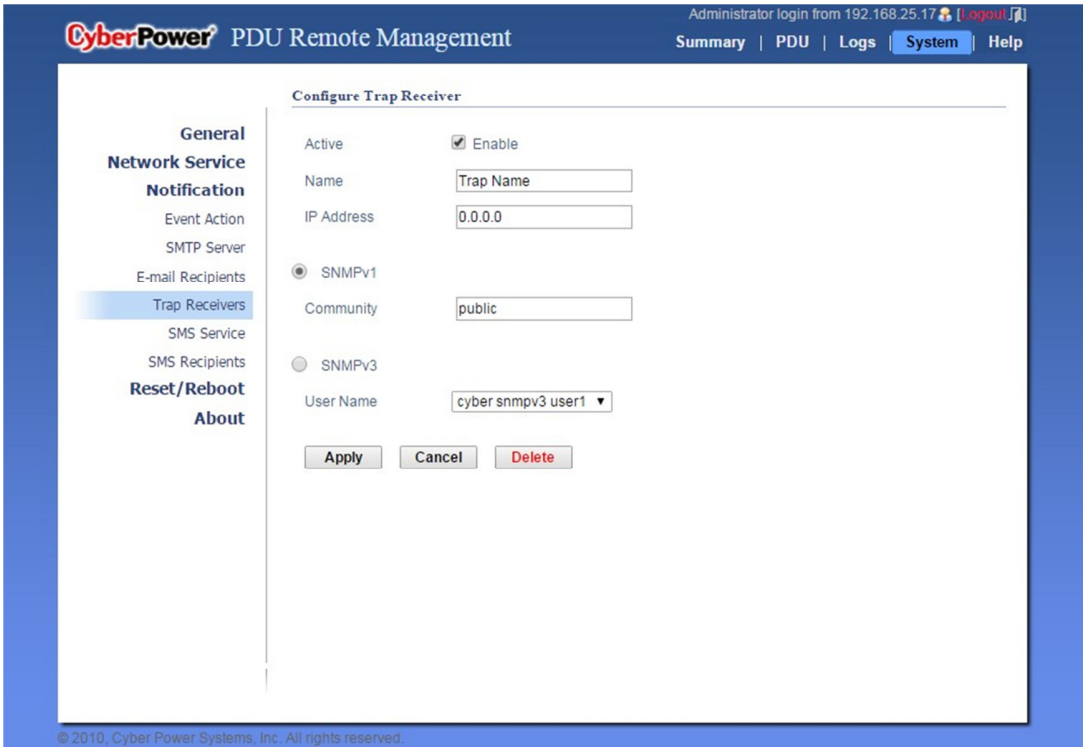
Set up to 10 SNMP trap receivers to be notified when an event occurs. See **System > Notifications > Trap Receivers**.

System > Notifications > Trap Receivers

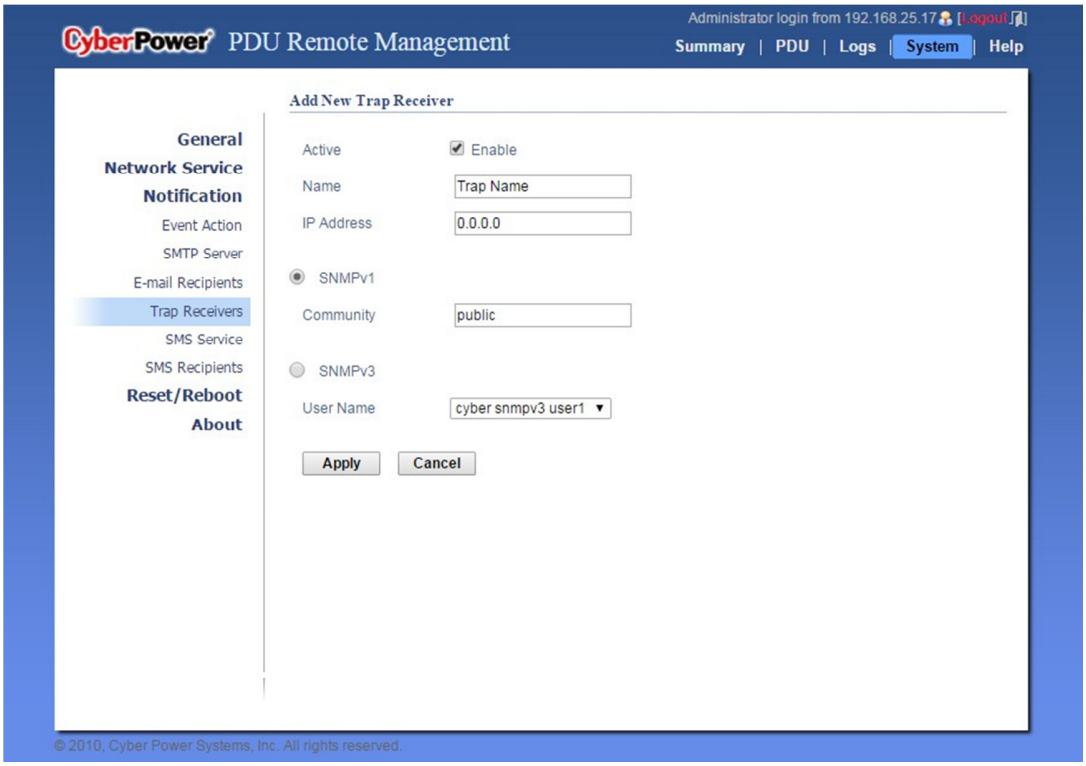


Item	Definition
Name	Click on the trap name to open the Configure Trap Receiver Window. Users can modify or delete an existing receiver.
TEST	Click this button to verify if the trap can be sent.
New Receiver	Click this button to open the Add New Trap Receiver Window. Users can add a new recipient.

Configure Trap Receiver Window



Add New Trap Receiver Window

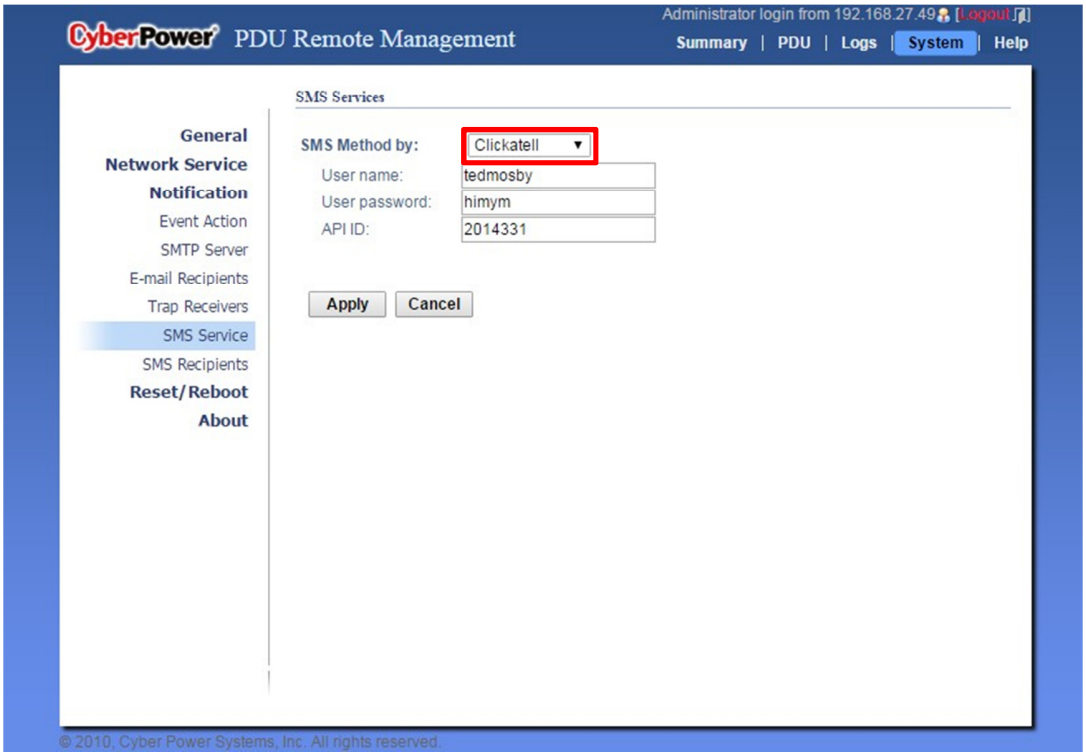


Item	Definition
Name	The name of trap receiver.
IP Address	The IP address of the trap receiver.
SNMPv1	If choosing the **SNMPv1** option as the trap type for a trap receiver, select the corresponding community. See **System Tab > Network Service > SNMPv1 Service**.
SNMPv3	If choosing the **SNMPv3** option as the trap type for a trap receiver, select the corresponding user name. See **System Tab > Network Service > SNMPv3 Service**.

2.5.1.2 SMS Notification

Short Message Service (SMS) is used by mobile communication systems to send a short message to a specific mobile phone number. Standardized communication protocols allow the exchange of short text messages between mobile devices. The system provides four methods for users to choose how they want to send a message. See **System > Notifications > SMS Service**.

System > Notifications > SMS Service

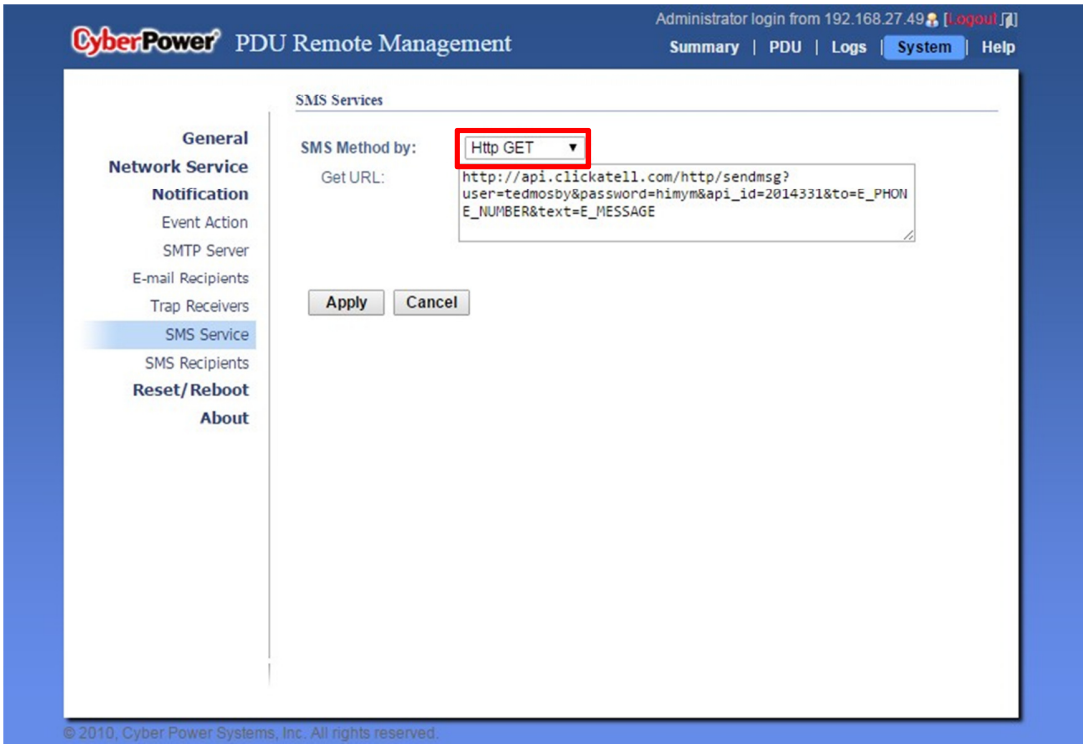


Clickatell method:

Clickatell is one of the supported SMS service providers. Go to the Clickatell website to sign up and get an API ID.

Item	Definition
User name	The account username created on Clickatell website.
User password	The user password created on Clickatell website.
API ID	The API ID acquired on Clickatell website.

System > Notifications > SMS Service



HTTP GET method:

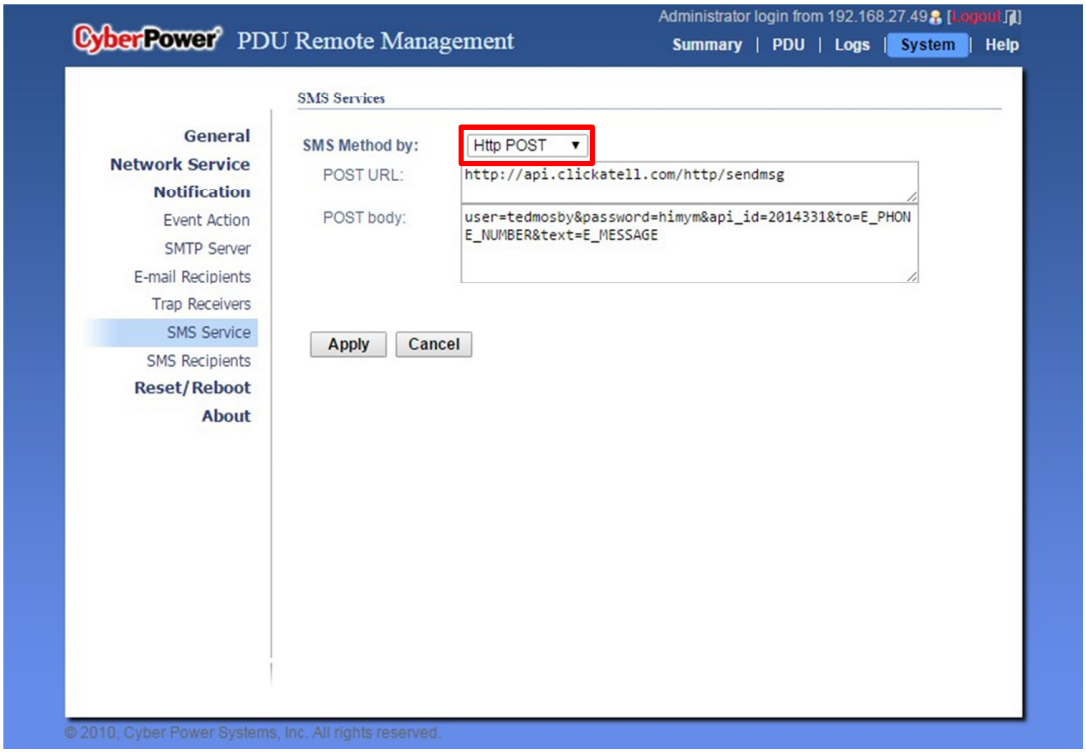
Use the example where Clickatell is the SMS provider.

The basic form of URL using the HTTP GET method is:

http://api.clickatell.com/http/sendmsg?user=tedmosby&password=himym&api_id=2014331&to=E_PHONE_NUMBER&text=E_PHONE_MESSAGE

Query String in the URL	Definition
user=tedmosby	Replace “tedmosby” with the user name created at the Clickatell website.
password=himym	Replace “himym” with the password created at the Clickatell website.
api_id=2014331	Replace “2014331” with the API ID acquired at the Clickatell website.
to=E_PHONE_NUMBER	Do not replace this information. It refers to the receiver phone number entered in **System Tab > Notifications > SMS Recipients**.
text=E _MESSAGE	Do not replace this information. It refers to the event action sent by the SMS service provider. For configurations, see **System Tab > Notification**.

System > Notifications > SMS Service



HTTP POST method:

Use the example where Clickatell is the SMS provider.

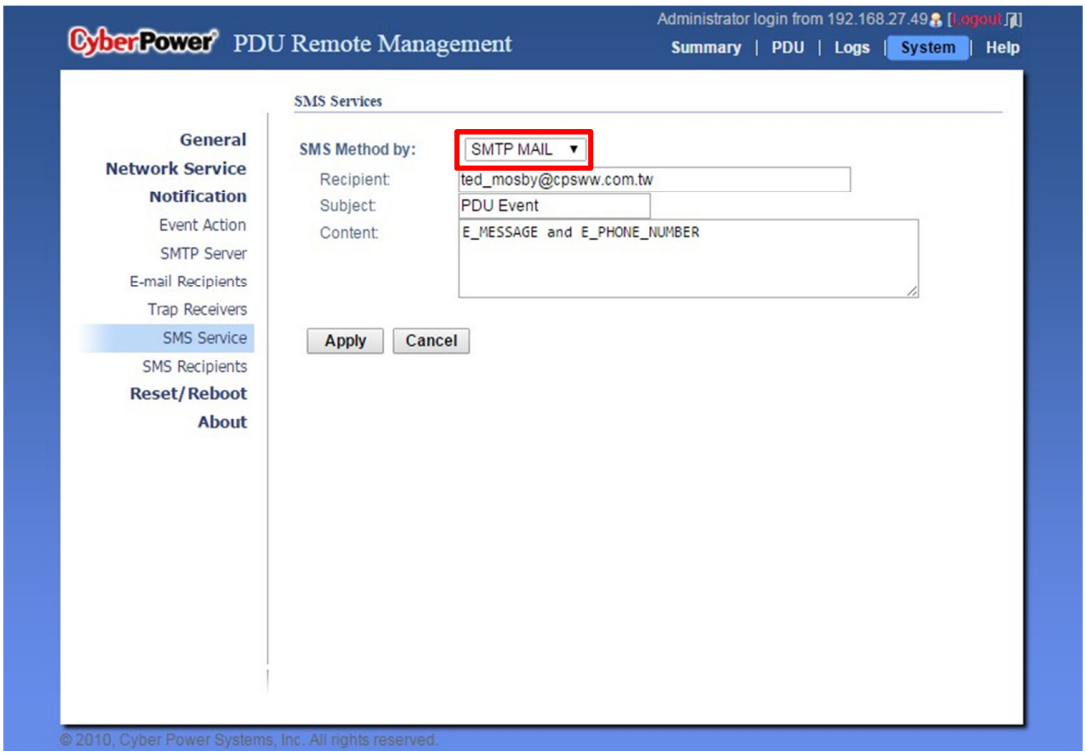
The basic form of URL is: http://api.clickatell.com/http/sendmsg

The basic form of body is:

user=tedmosby&password=himym&api_id=2014331&to=E_PHONE_NUMBER&text=E_ MESSAGE

Query String in Body	Definition
user=tedmosby	Replace “tedmosby” with the user name created at the Clickatell website.
password=himym	Replace “himym” with the password created at the Clickatell website.
api_id=2014331	Replace “2014331” with the API ID acquired at the Clickatell website.
to=E_PHONE_NUMBER	Do not replace this information. It refers to the receiver phone number entered in **System Tab > Notifications > SMS Recipients**.
text=E_ MESSAGE	Do not replace this information. It refers to the event action sent by SMS service provider. For configurations, see **System Tab > Notification**.

System > Notifications > SMS Service



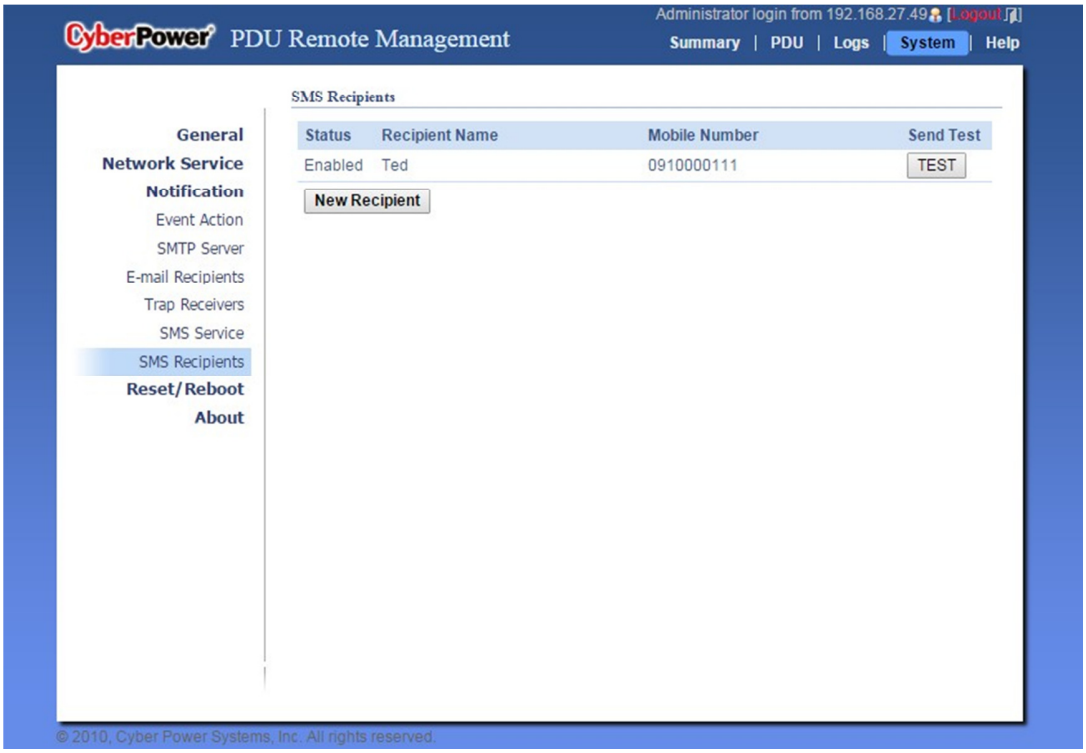
SMTP Mail method:

Users set the SMTP server in **System Tab > Notifications > SMTP Server** first, and then enter the following information.

Item	Definition
Recipient	Enter the e-mail of the recipient.
Subject	The **Subject** field shown in the e-mail message, entered by user.
Content	
E_ MESSAGE	Do not replace this information. It refers to the event action sent by SMS service provider. For configurations, see **System Tab > Notification**.
E_PHONE_NUMBER	Do not replace this information. It refers to the receiver phone number entered in **System Tab > Notifications > SMS Recipient**.

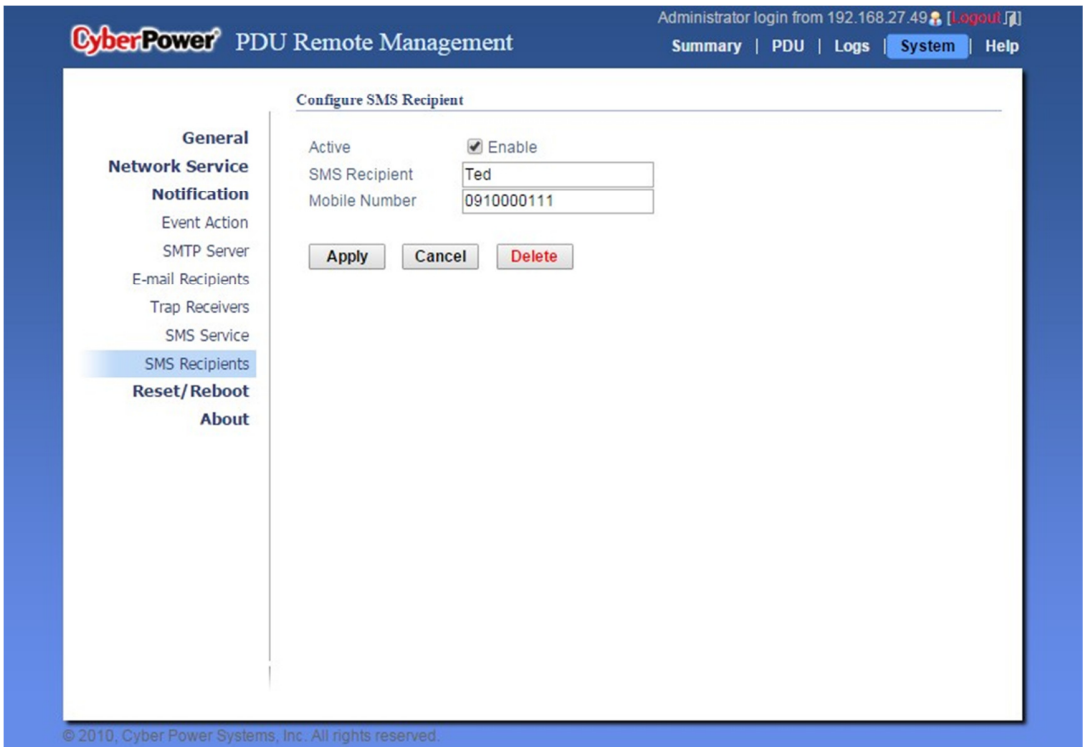
Users can set up to 10 mobile phone numbers as SMS recipients who will receive a short message notification when a specific event occurs. See **System Tab > Notifications > SMS Recipients**.

System Tab > Notifications > SMS Recipients

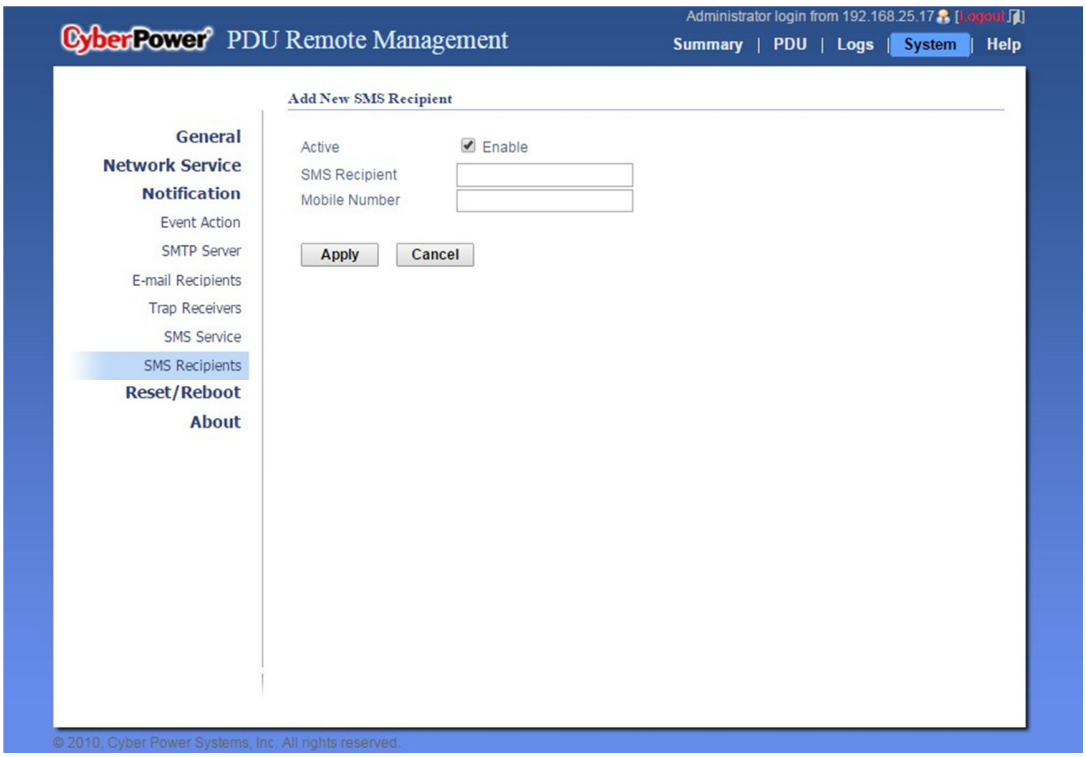


Item	Definition
Recipient Name/ Mobile Phone	Click the name or mobile number of the recipient to open the Configure SMS Receiver Window. Users can modify or delete an existing receiver.
TEST	Click this button to check whether the test message is correctly sent.
New Recipient	Click this button to open the Add New SMS Receiver Window. Users can add a new recipient.

Configure SMS Receiver Window



Add New SMS Receiver Window



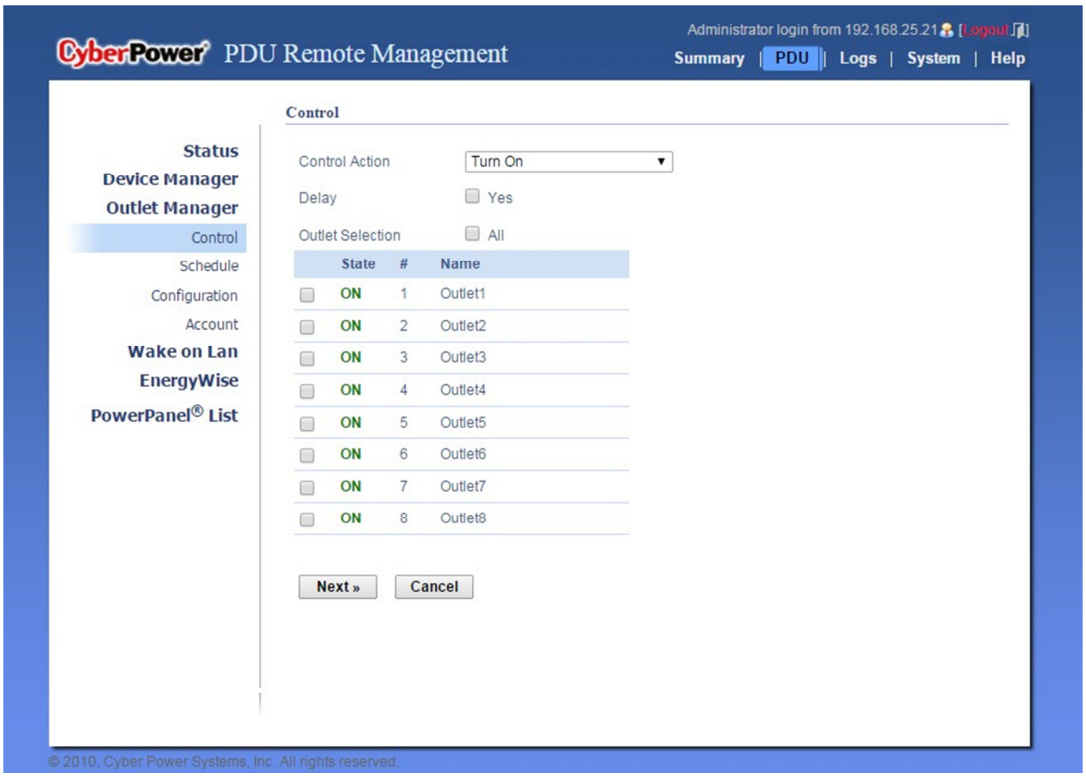
3. Outlet Management

The following provides the outlet configurations to meet different application conditions.

3.1 Remote Outlet On/Off/Reboot

Users can turn on, turn off, or reboot outlets. See **PDU Tab > Outlet Manager > Control.** (For Switched PDU models only.)

PDU Tab > Outlet Manager > Control



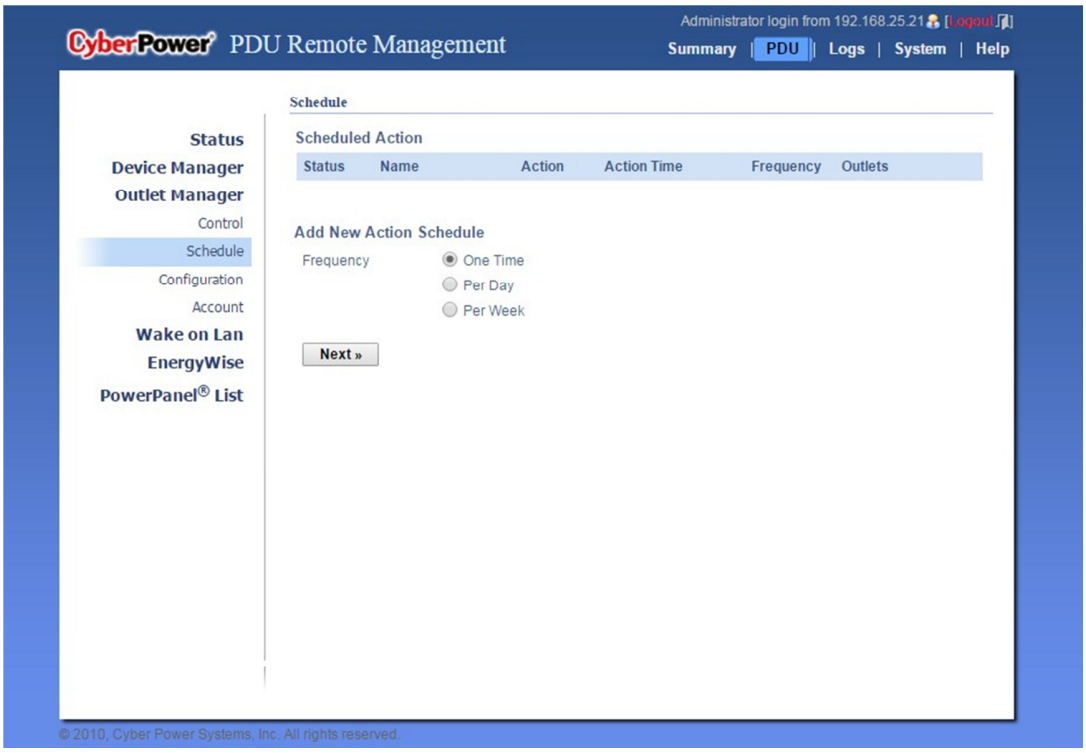
Item	Definition
Control Action	
Turn On	Selected outlets will be immediately turned on.
Turn On + Delay	Selected outlets will be turned on according to each outlet's *Power On Delay* in **PDU Tab > Outlet Manager > Configuration**.
Turn Off	Selected outlets will be immediately turned off.
Turn Off + Delay	Selected outlets will be turned off according to each outlet's *Power Off Delay* in **PDU Tab > Outlet Manager > Configuration**. This action could signal the PC to shut down, if PowerPanel Business Edition Client software is installed on it.

Item	Definition
Reboot	Selected outlets will be immediately turned off and then be turned on again according to each outlet's *Reboot Duration* in **PDU Tab > Outlet Manager > Configuration**.
Reboot + Delay	Selected outlets will be turned off in sequence according to each outlet's *Power Off Delay*. Then they will be synchronized with the longest *Power Off Delay* and the longest *Reboot Duration* of the selected outlets. They will be turned on in sequence according to each outlet's *Power On Delay* in **PDU Tab > Outlet Manager > Configuration**.
Cancel Pending Command	Any pending commands of the selected outlet(s) will be cancelled. Any outlet in a pending command state will be notated with an (*) asterisk.
Outlet Selection	Outlets selected for action.

3.2 Scheduled Outlet On/Off/Reboot

Outlets can be set to automatically turn on, turn off, or reboot at scheduled times. See **PDU Tab > Outlet Manager > Schedule**. (For Switched PDU models only.)

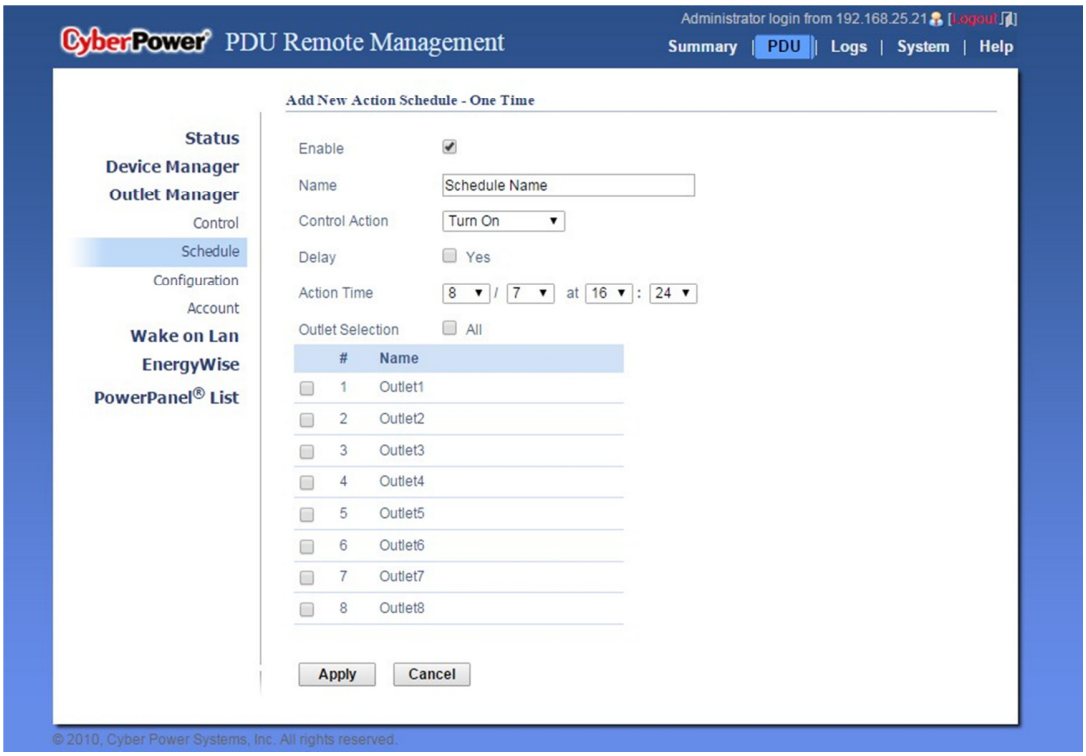
PDU Tab > Outlet Manager > Schedule



Select the **One Time**, **Per Day** or **Per Week** option, and then click the **Next** button to open the Add New Action Schedule Window.

Item	Definition
Frequency	
One Time	Scheduled action takes place once at the configured date and time.
Per Day	Scheduled action takes place daily at the configured time.
Per Week	Scheduled action takes place once a week for the configured day and time.

Add New Action Schedule Window



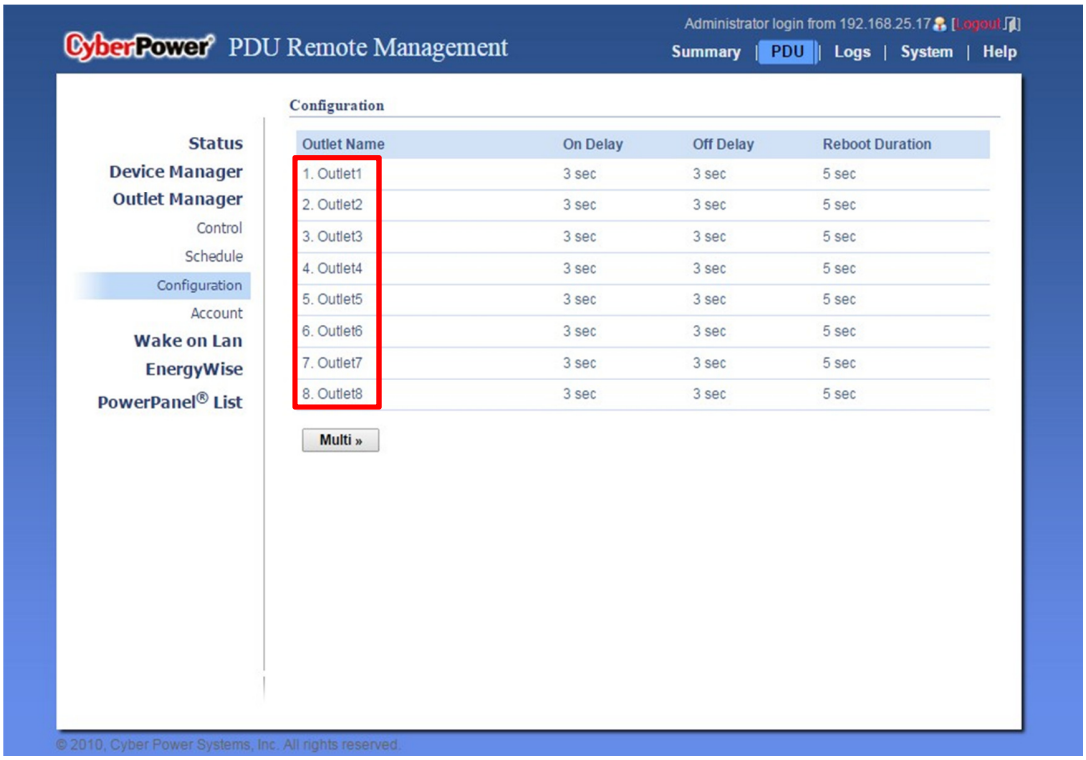
Up to 10 scheduled settings are allowed.

Item	Definition
Enable	Check this box to activate the scheduled shutdown function.
Name	The name entered by the user to identify the specific scheduled event.
Control Action	The action will be performed when the scheduled event takes place.
Action Time	The time at which the scheduled event takes place.
Outlet Selection	Outlets selected for the scheduled event.

3.3 Sequencing Power On/Off

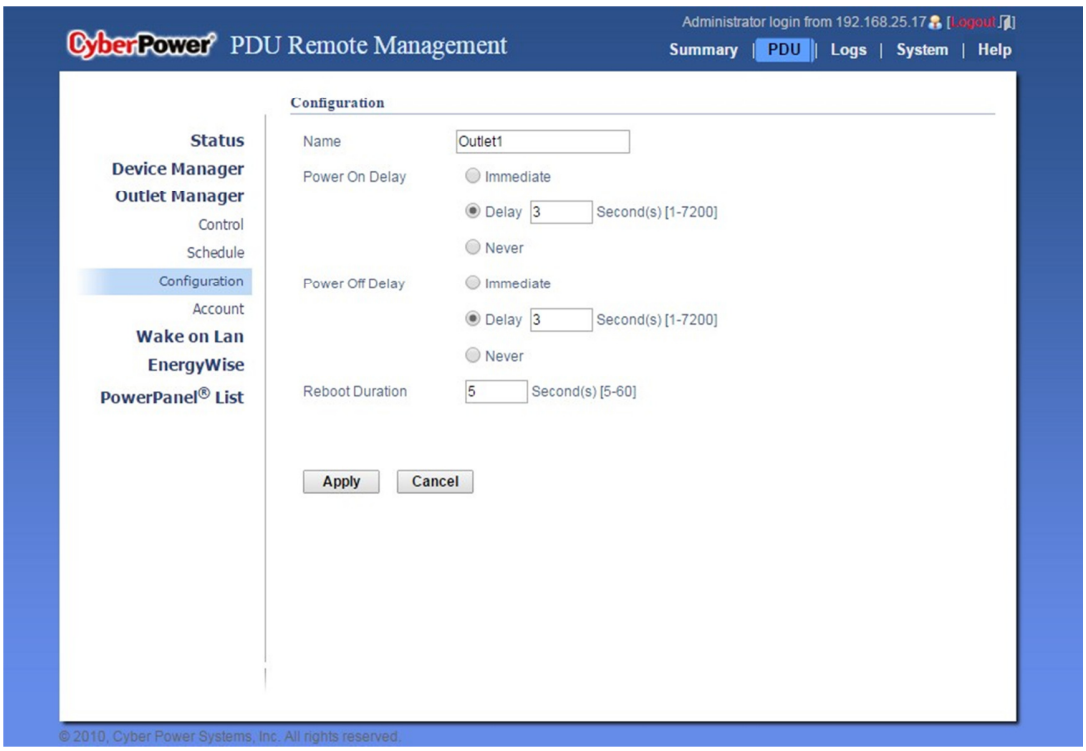
Enable users to turn on, turn off, or reboot the outlets in sequence. When powering on the connected devices, the sequential power-on method is recommended to avoid high inrush current. (For Switched PDU models only.) See **PDU Tab > Outlet Manager > Configuration**.

PDU Tab > Outlet Manager > Configuration

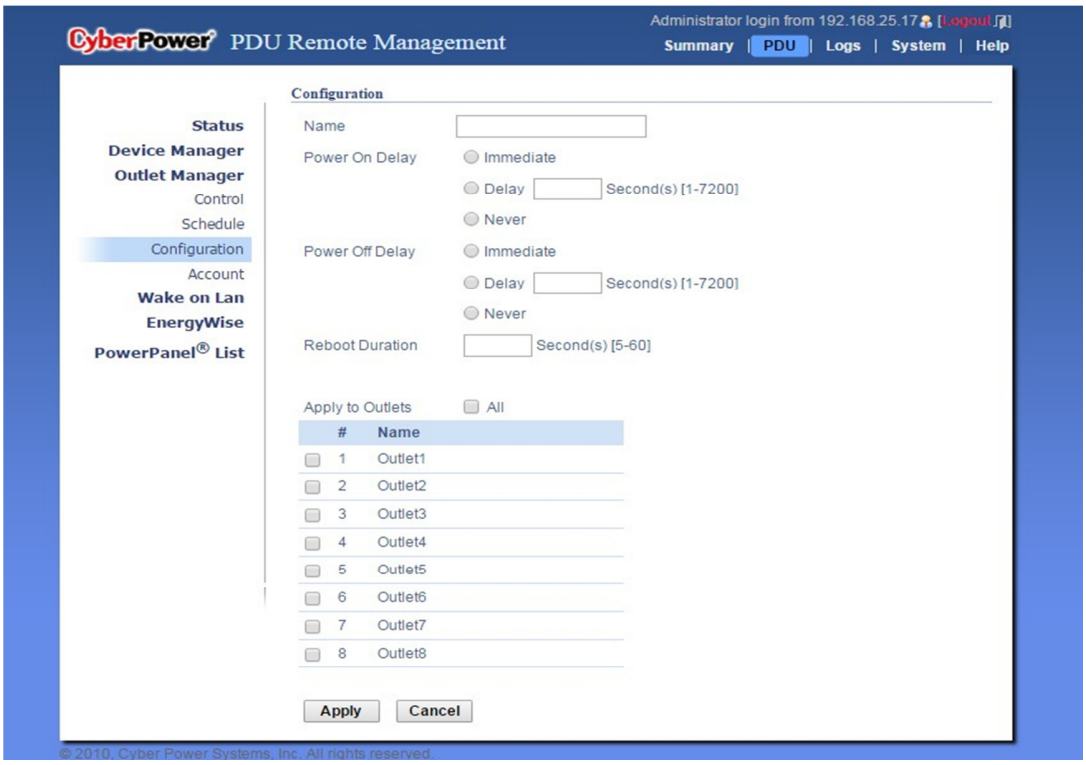


Click the **Outlet Name** field to open the Each Outlet Configuration Window and configure the delay duration setting. Or click **Multi >>** to open the Multiple Outlet Configuration Window and configure the mutual time setting for the selected multiple outlets.

Each Outlet Configuration Window



Multiple Outlet Configuration Window

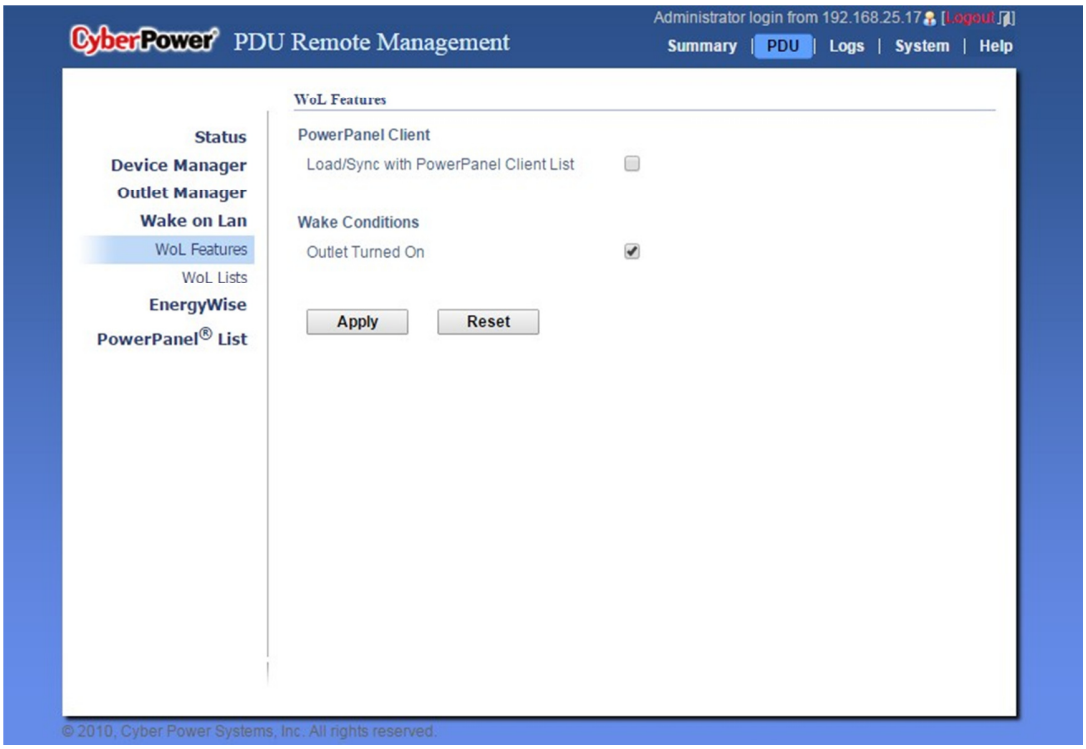


Item	Definition
Name	The name entered by the user to identify the selected outlet or multiple outlet configuration.
Power On Delay	*__Immediate__: Turn on the outlet immediately. *__Delay__: Delay time before turning on the outlet. Valid values are within the range of 1 to 7,200 seconds. *__Never__: Do not turn on the outlet.
Power Off Delay	Delay time before turning off the outlet. Valid values are within the range of 1 to 7,200 seconds.
Reboot Duration	Duration time the outlet will remain off during a Reboot action. Valid values are within the range of 5 to 60 seconds.
Apply to Outlets	Outlets selected for the scheduled event.

3.4 Wake on Lan (WoL)

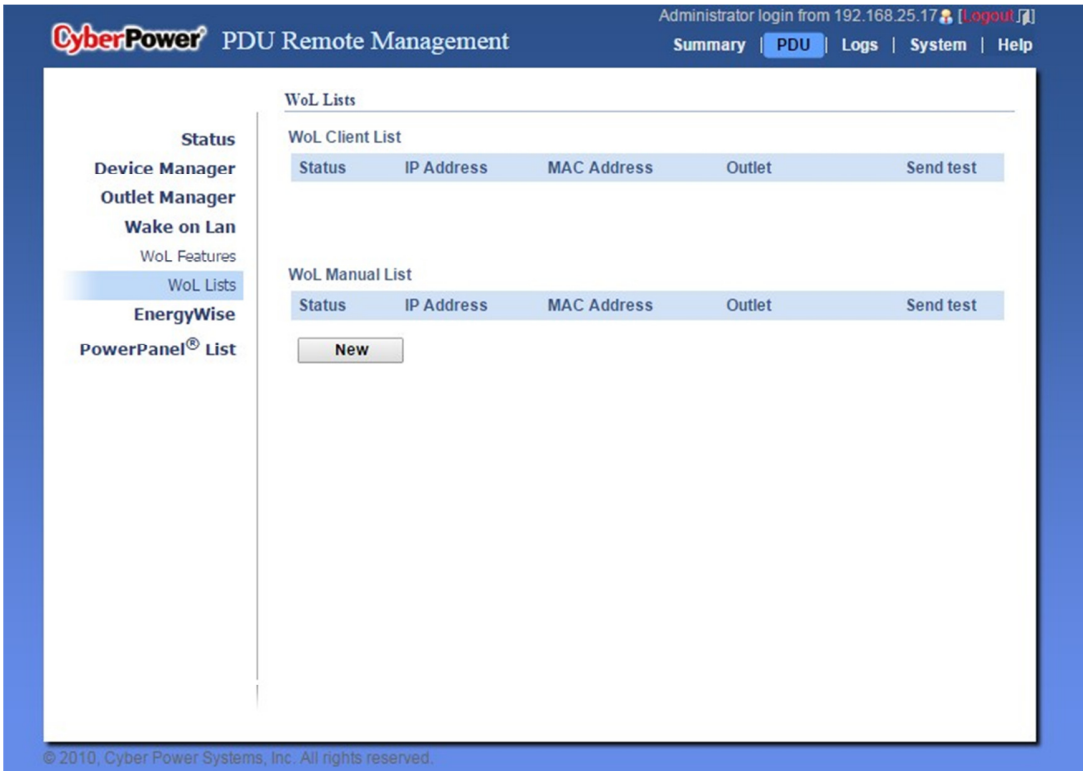
When turning on an outlet, the connected computer can be sent a Wake on LAN packet via the network. Make sure the computer supports this function and is configured as "Enable" in its BIOS settings. See **PDU Tab > Wake on Lan > WoL Features** and **PDU Tab > Wake on Lan > WoL Lists**. (For Switched PDU models only.)

PDU Tab > Wake on Lan > WoL Features



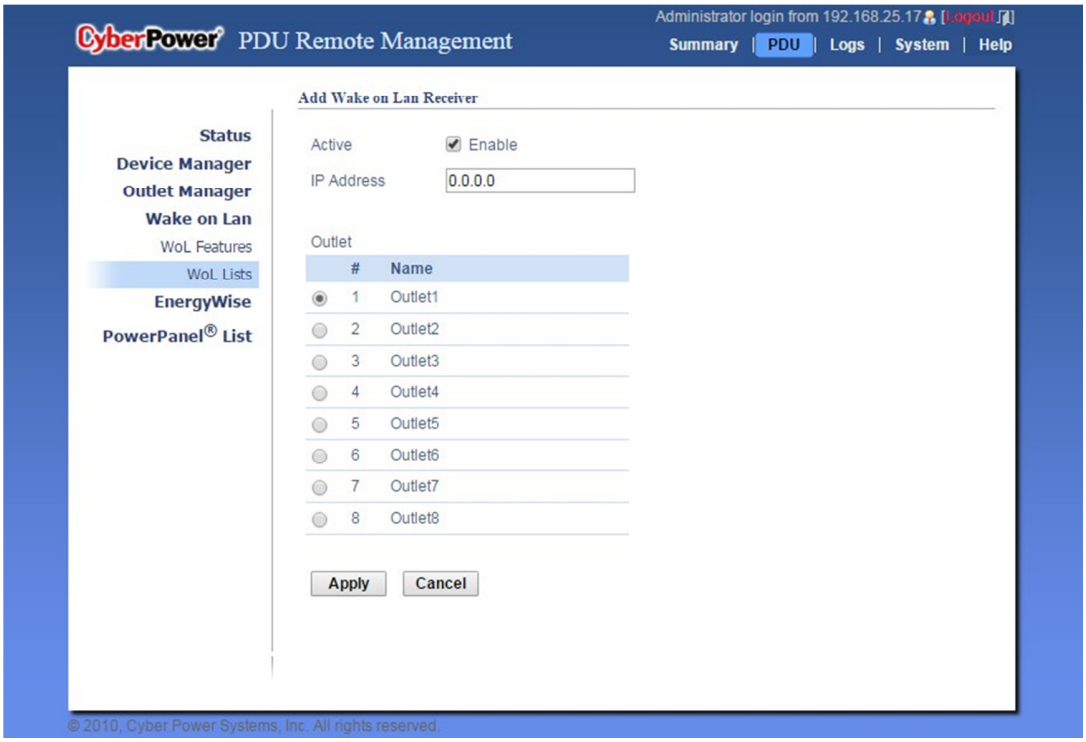
Item	Definition
PowerPanel Client	Synchronize with PowerPanel Client List. To achieve synchronization, make sure PDU has established communication with PowerPanel Business software. See **System > General > Security.**
Wake Conditions	Enable or disable the **Wake on Lan** function.

PDU Tab > Wake on Lan > WoL Lists



Item	Definition
WoL Client List	If the **PowerPanel Client** option in **PDU Tab > Wake on Lan > WoL Features** is selected, the PowerPanel® List will be automatically added to the WoL Client list.
WoL Manual List	Click **New** to open the Add Wake on Lan Receiver Window. Users can add another WoL receiver.

Add Wake on Lan Receiver Window



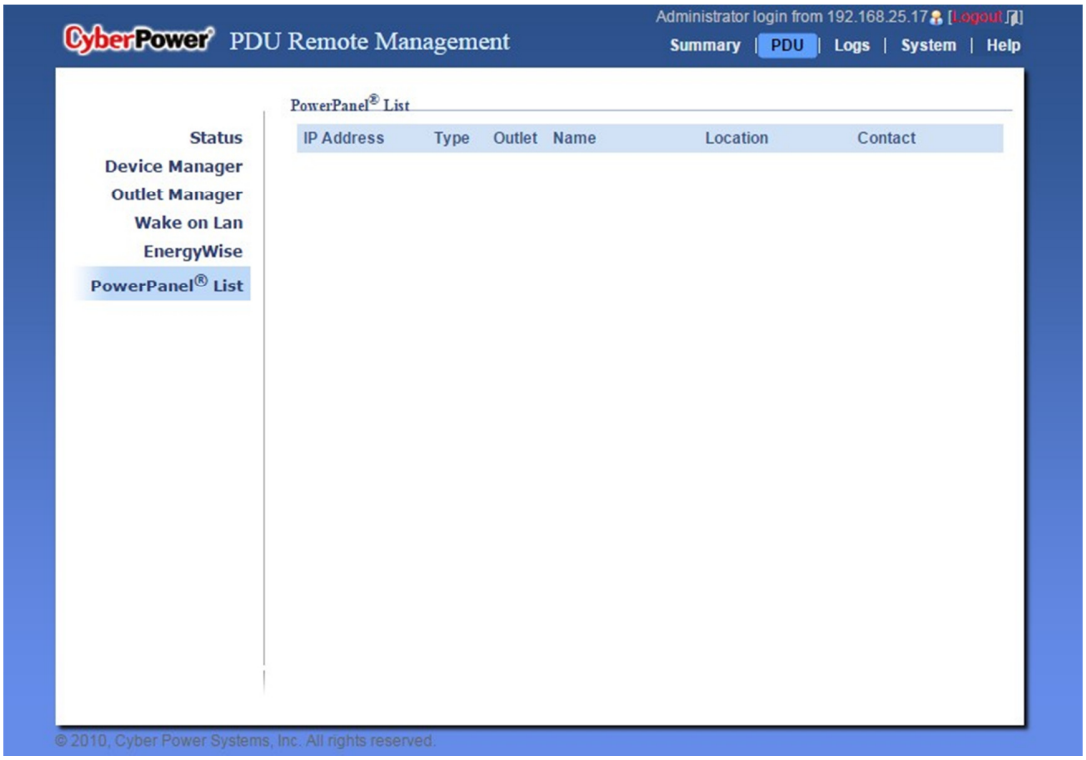
Item	Definition
Active	Enable/Disable the Wake on Lan function.
IP Address	The IP address of the computer. This IP must be in the same subnet with the PDU. Up to 50 IP addresses can be added.
Outlet	Select the outlet that provides power to the computer.

3.5 Graceful Computer Shutdown

After the connected computer is installed with PowerPanel Business Edition Client or Center and establishes communication with the PDU, its IP address will be automatically displayed in the PowerPanel List shown below. This computer can perform a graceful shutdown before the outlet powering the computer turns off, thus avoiding data loss. To achieve communication between the computer and PDU, see **System > General > Security**.

Up to 50 computers having PPBE Client or Center installed can be listed. A Client or Center computer will be removed when it has been disconnected from the PDU for one hour. See **PDU Tab > PowerPanel® List**. (For Switched PDU models only.)

PDU Tab > PowerPanel® List

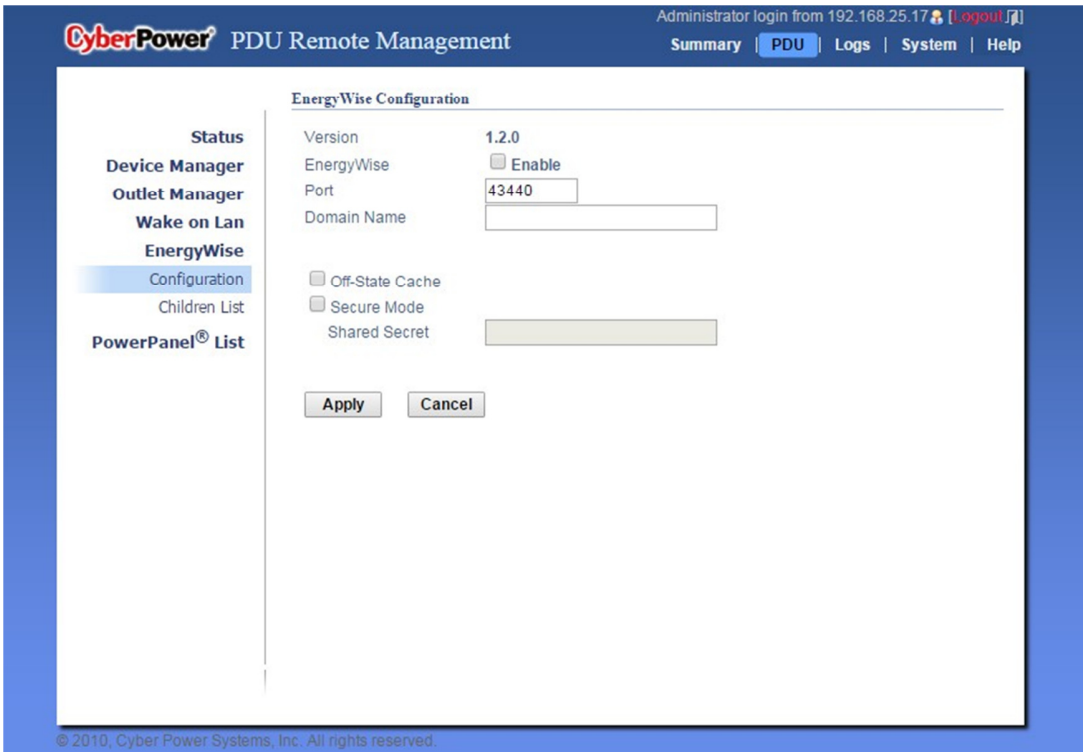


Click the IP address of a client to access configuration settings.

3.6 Cisco EnergyWise

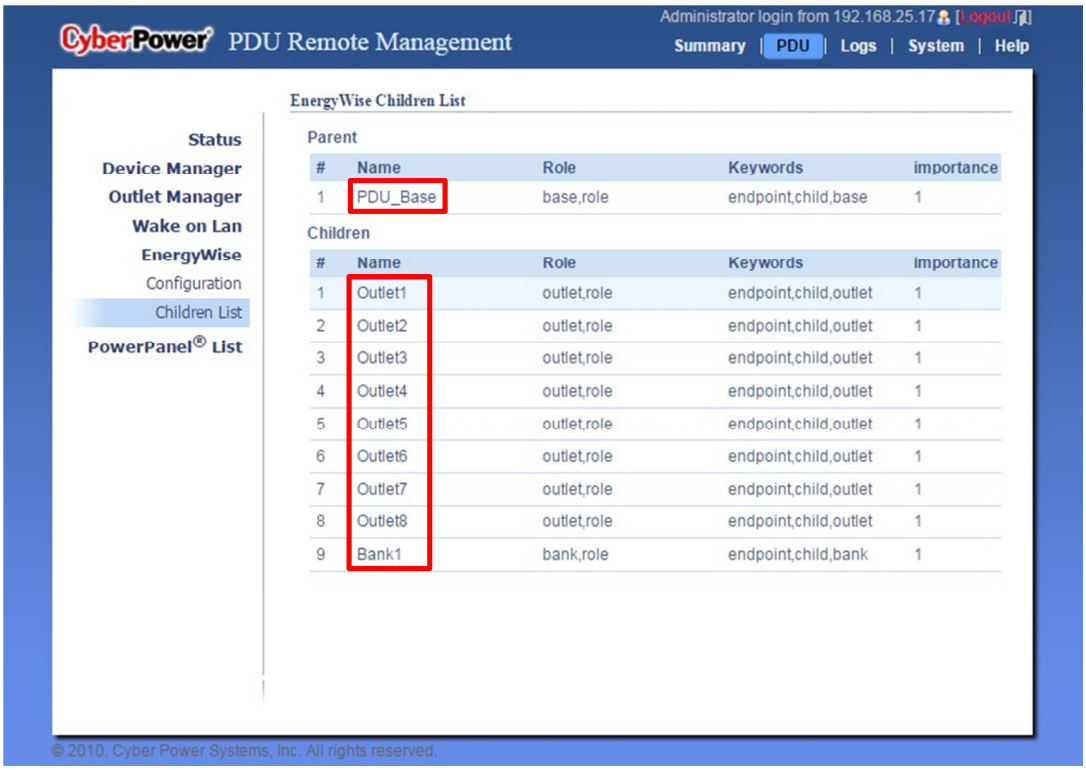
Users can manage and control all Cisco EnergyWise entities and configure settings. See **PDU Tab > EnergyWise > Configuration** and **PDU Tab > EnergyWise > Children List**.

PDU Tab > EnergyWise > Configuration



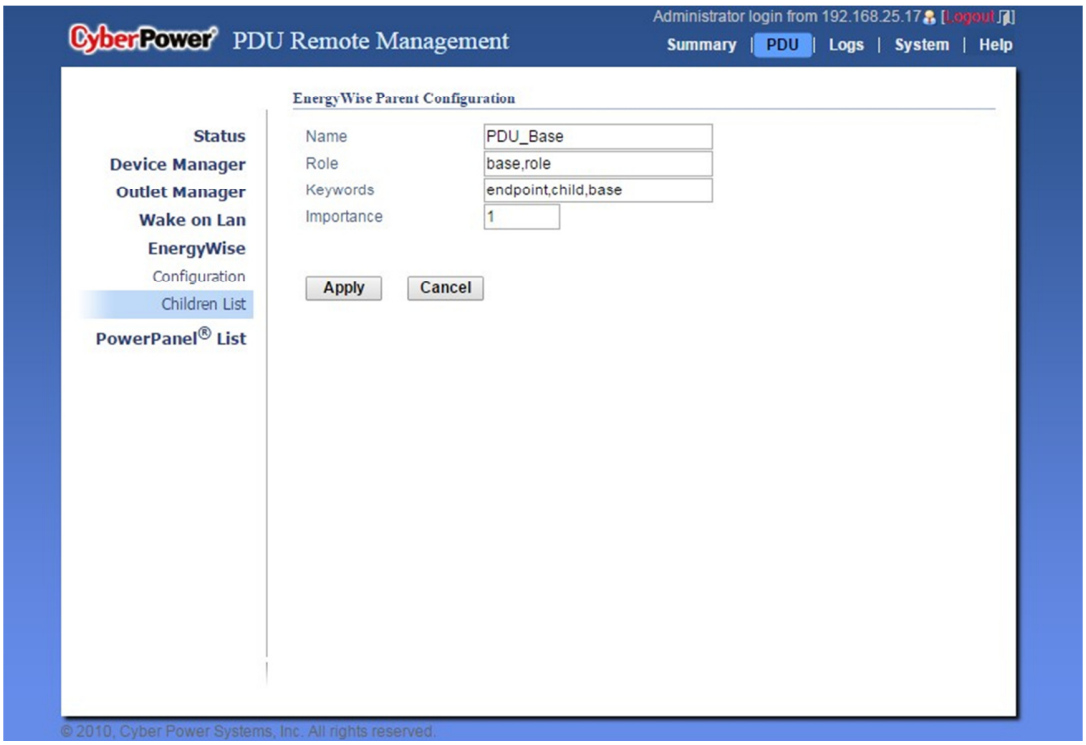
Item	Definition
Version	The version of EnergyWise.
EnergyWise	Enable/Disable EnergyWise support.
Port	The port number is used to communicate with EnergyWise. This number must be the same as that of a Cisco switch that the PDU connects to.
Domain Name	The EnergyWise domain name. This must be the same as that of a Cisco switch that the PDU connect to.
Off-State Cache	Enable/Disable endpoint to cache EnergyWise list in the Cisco switch after the PDU has rebooted.
Secure Mode	Enable EnergyWise use of a shared secret.
Shared Secret	The secret for the EnergyWise domain.

PDU Tab > EnergyWise > Children List

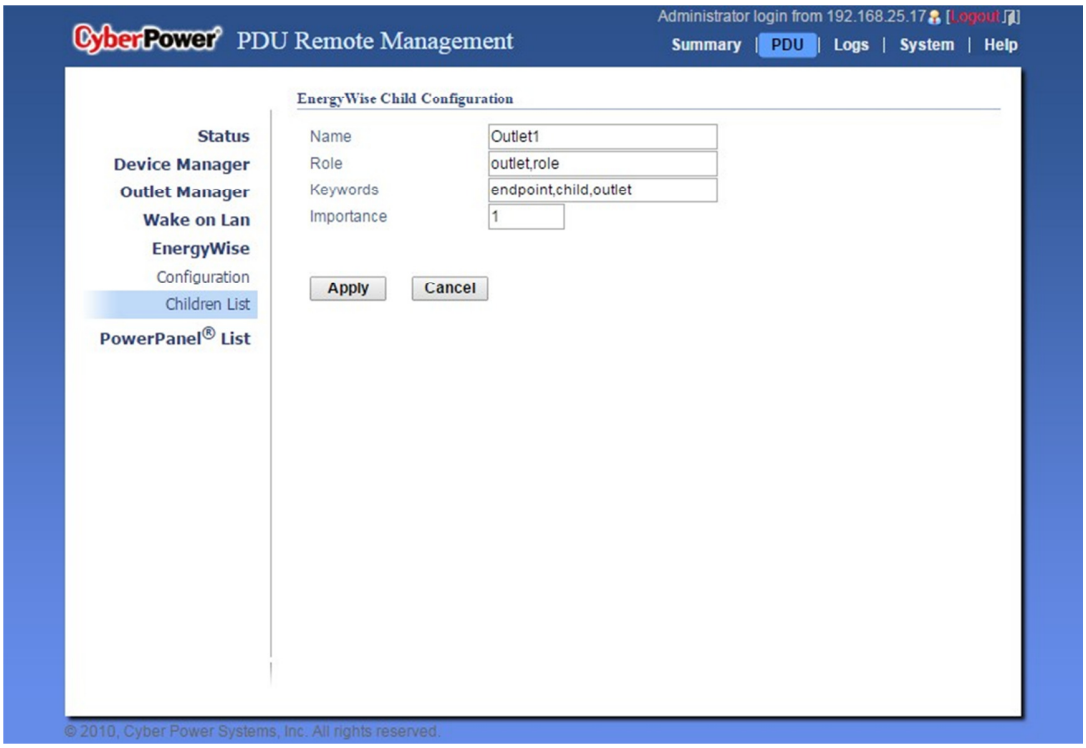


Click the **Name** field in parent and/or children list to open the EnergyWise Parent Configuration Window and EnergyWise Child Configuration Window.

EnergyWise Parent Configuration Window



EnergyWise Child Configuration Window



Item	Definition
Name	The name entered by the user to identify an EnergyWise entity.
Role	This parameter is a string entered by the user to describe the function of the entity. Maximum length is 31 characters.
Keywords	This parameter is a string entered by the user to describe the entity. Maximum length is 31 characters.
Importance	This parameter, entered by the user, shows the value of an entity importance and must be between 1 and 100.

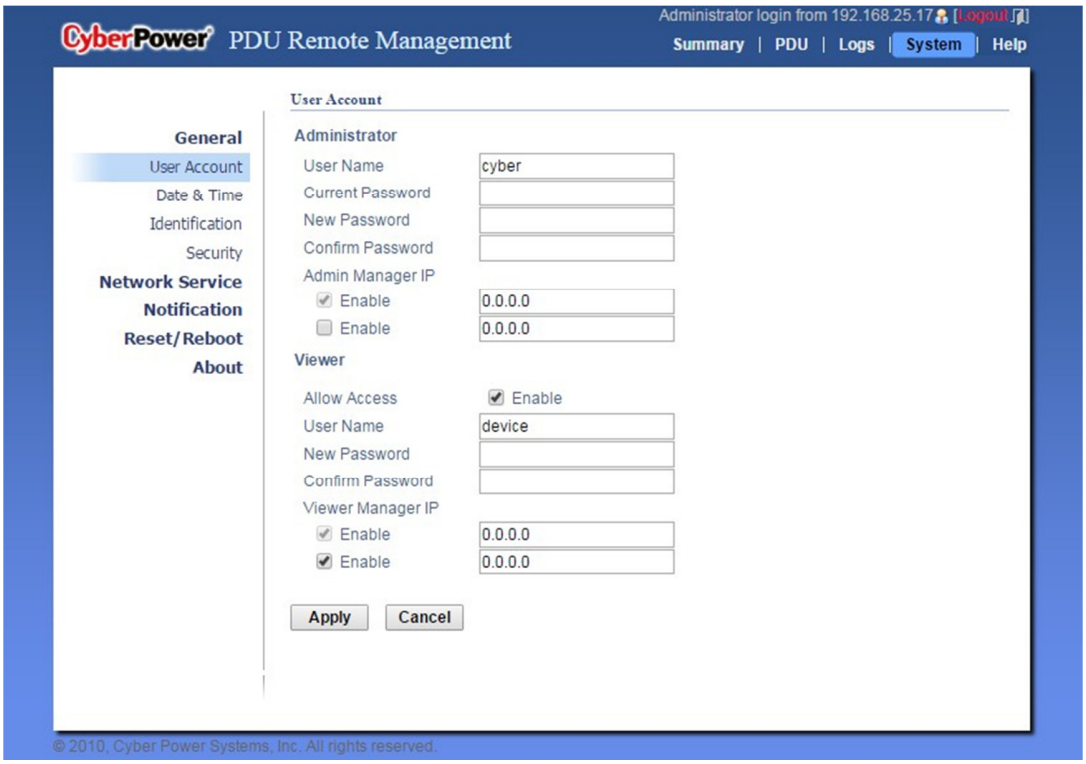
4. Security

Account configurations protect against unauthorized entry.

4.1 User Account

Configure the login account. Only one user at a time may log in to the web interface. See **System Tab> General > User Account**.

System Tab > General > User Account



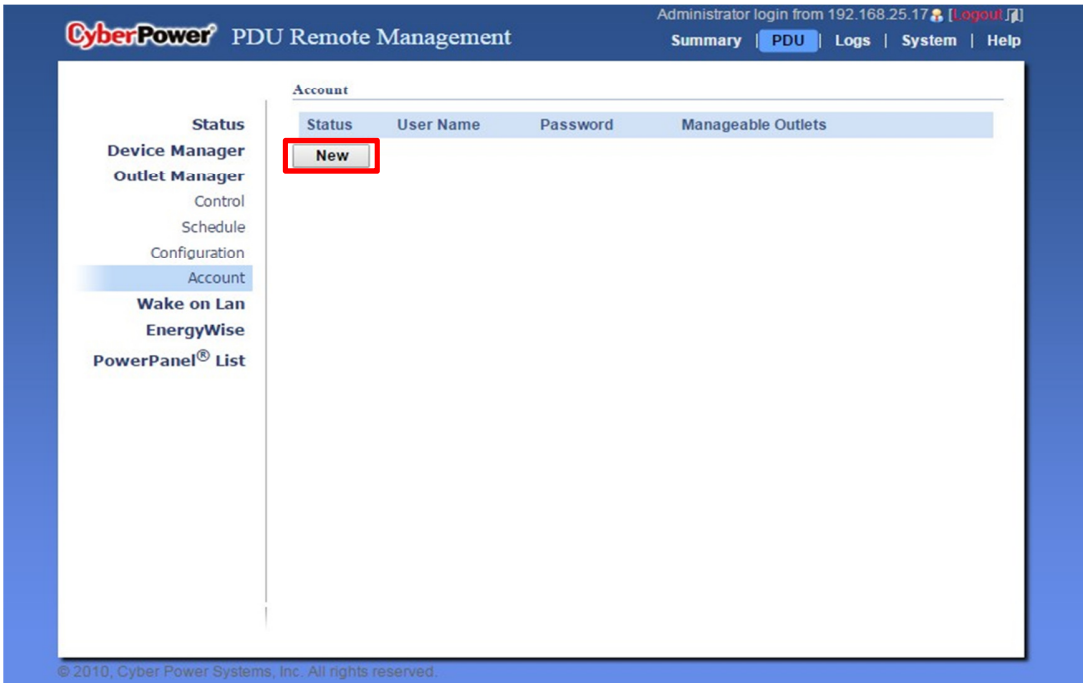
Item	Definition
Administrator	The administrator can access all functions, including Enable/Disable the Viewer account.
User Name	Enter the new user name.
Current Password	Enter the current password for authentication.
New Password	Enter the new password.
Confirm Password	Enter the new password again to confirm it.
Admin Manager IP (optional)	Set the Admin IP which is allowed access. If you want access from any IP address, you can set one of them as 0.0.0.0 or 255.255.255.255.

Item	Definition
Viewer	The viewer can view the settings but cannot control or change any settings.
Viewer Manager IP(optional)	Set the Viewer IP which is allowed access. If you want access from any IP address, you can set one of them as 0.0.0.0 or 255.255.255.255.

4.2 Outlet Account

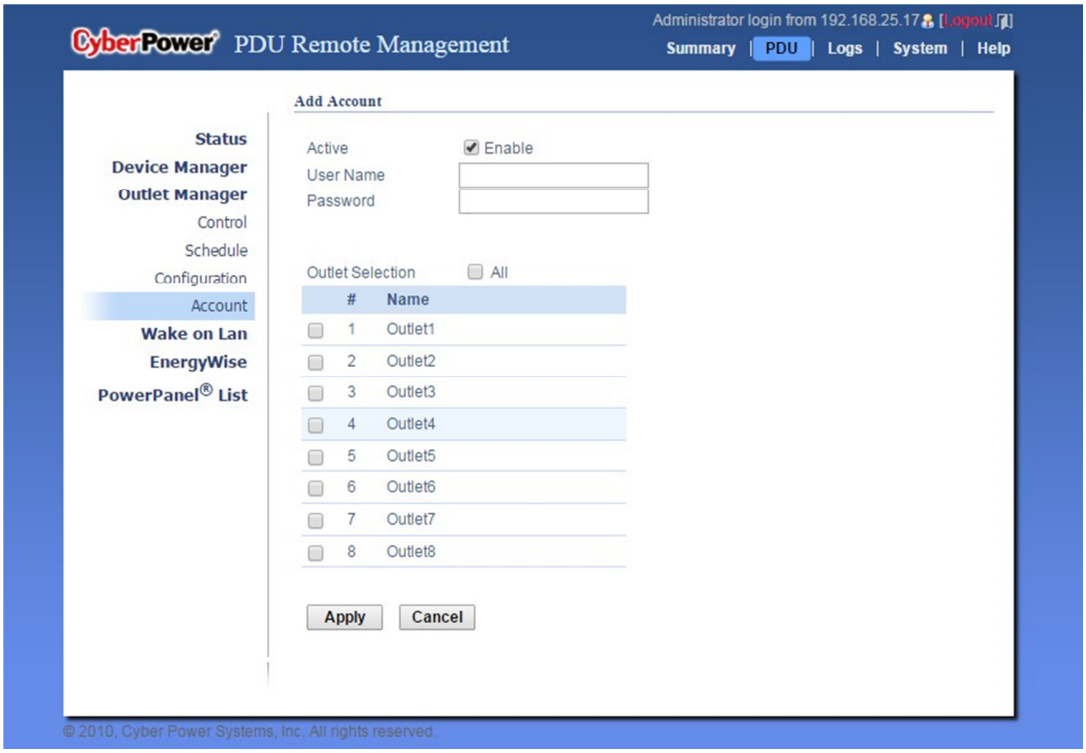
With the given account and password, users are only allowed to control assigned outlets. See **PDU Tab > Outlet Manager > Account**. (For Switched PDU models only.)

PDU Tab > Outlet Manager > Account



Click **New** to open the Add Account Window.

Add Account Window

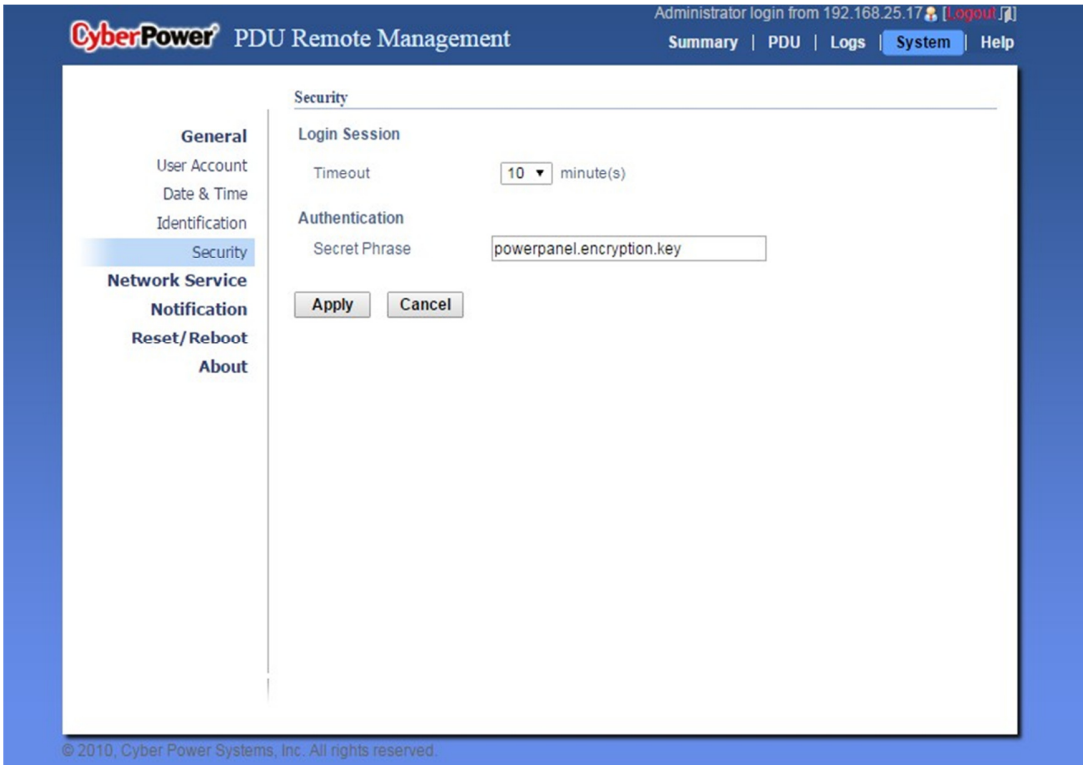


Item	Definition
Active	Enable or disable the user account.
User Name	Set a name for the user account.
Password	Set the user password.
Outlets Selection	Outlets that the user can access.

4.3 Timeout Setting

Configure the idle login sessions and authentication phrase. See **System > General > Security**.

System > General > Security



Item	Definition
Login Session	
Timeout	The minutes that the system waits before automatically logging off.
Authentication	
Secret Phrase	The authentication phrase is used to communicate with PowerPanel Business Edition software. This phrase should be the same as **Secret Phase** field on PowerPanel Business Edition software interface.

5. Network Service

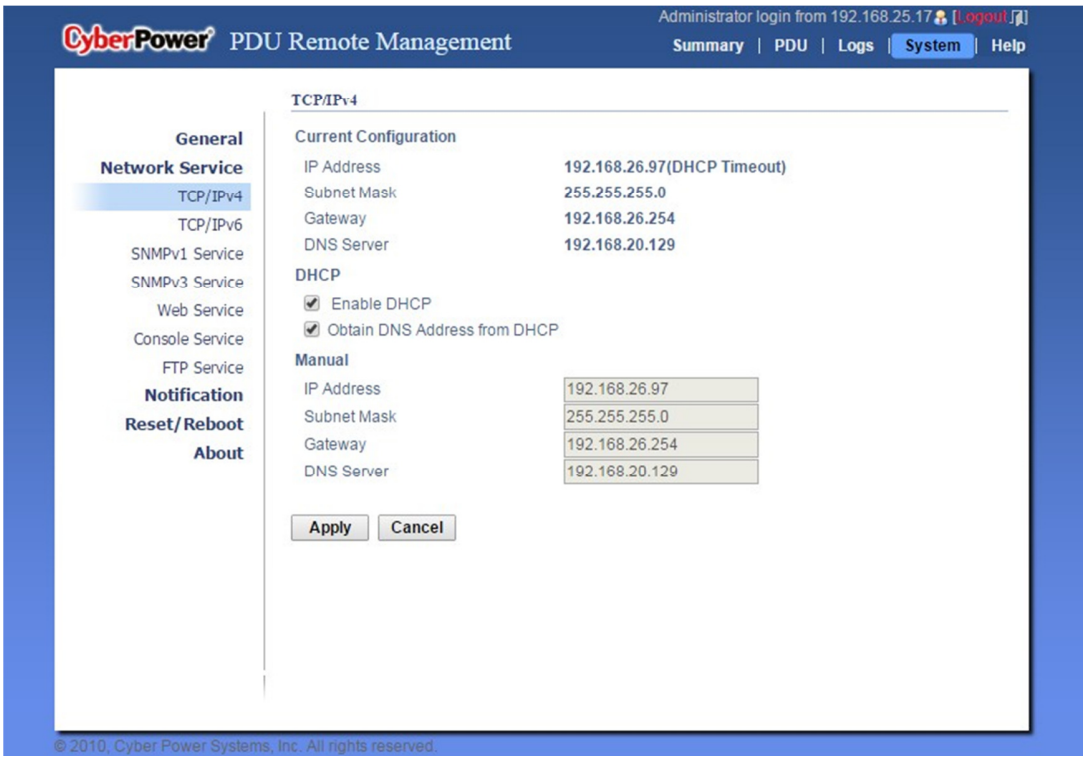
The following provides the network configurations.

5.1 TCP/IPv4 Setting

Display the current TCP/IPv4 settings and allow users to select the option to obtain TCP/IP settings by DHCP.

See **System > Network Service > TCP/IPv4**.

System > Network Service > TCP/IPv4

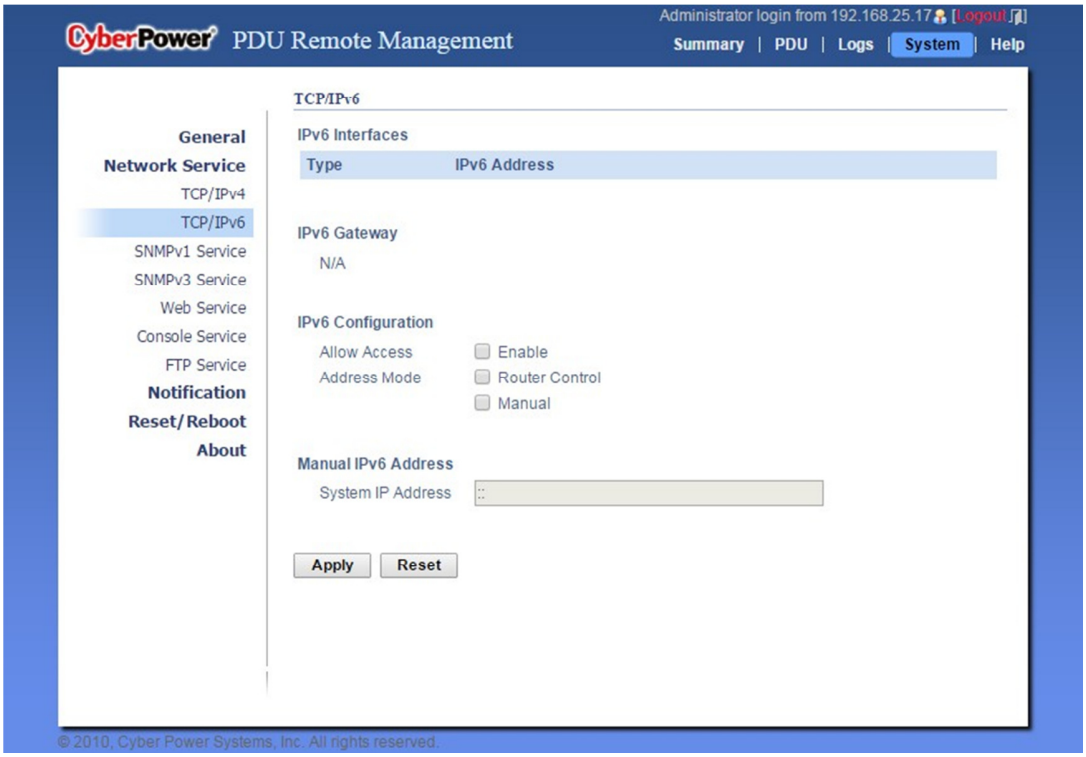


Item	Definition
Current Configuration	Display the current TCP/IP settings: IP Address, Subnet Mask, Gateway, and DNS server.
DHCP	*__Enable DHCP__: Select this option to get IP address, Subnet Mask, and Gateway from DHCP. *__Obtain DNS Address from DHCP__: Select this option to get DNS by DHCP if DHCP is enabled.
Manual	Enter the TCP/IP settings manually and click **Apply**.

5.2 TCP/IPv6 Setting

Display the current TCP/IPv6 settings and allow users to assign the IPv6 address either by router control or manually. See **System > Network Service > TCP/IPv6**.

System > Network Service > TCP/IPv6

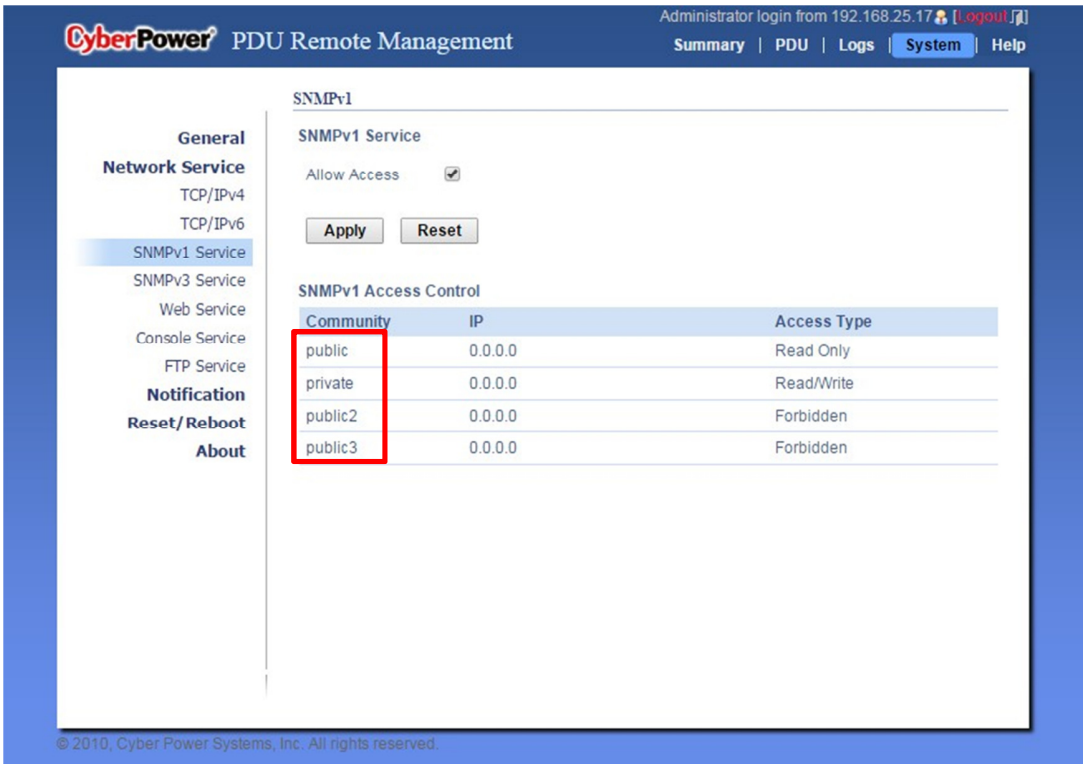


Item	Definition
IPv6 Interface	Displays the current IPv6 address.
IPv6 Gateway	Displays the current IPv6 gateway.
IPv6 Configuration	
Allow Access	Enable/Disable IPv6 service.
Address Mode: Router Control	The IPv6 address is assigned through the method (Stateless Address Auto configuration, Stateless DHCPv6, or Stateful DHCPv6) determined by the router's configuration.
Address Mode: Manual	The IPv6 address is assigned manually.
Manual IPv6 Address	Enter the IPv6 address manually and click **Apply** when the **Address Mode: Manual** option is selected.

5.3 SNMPv1 Service Setting

Allow users to perform SNMPv1 configurations. See **System Tab > Network Service > SNMPv1 Service**.

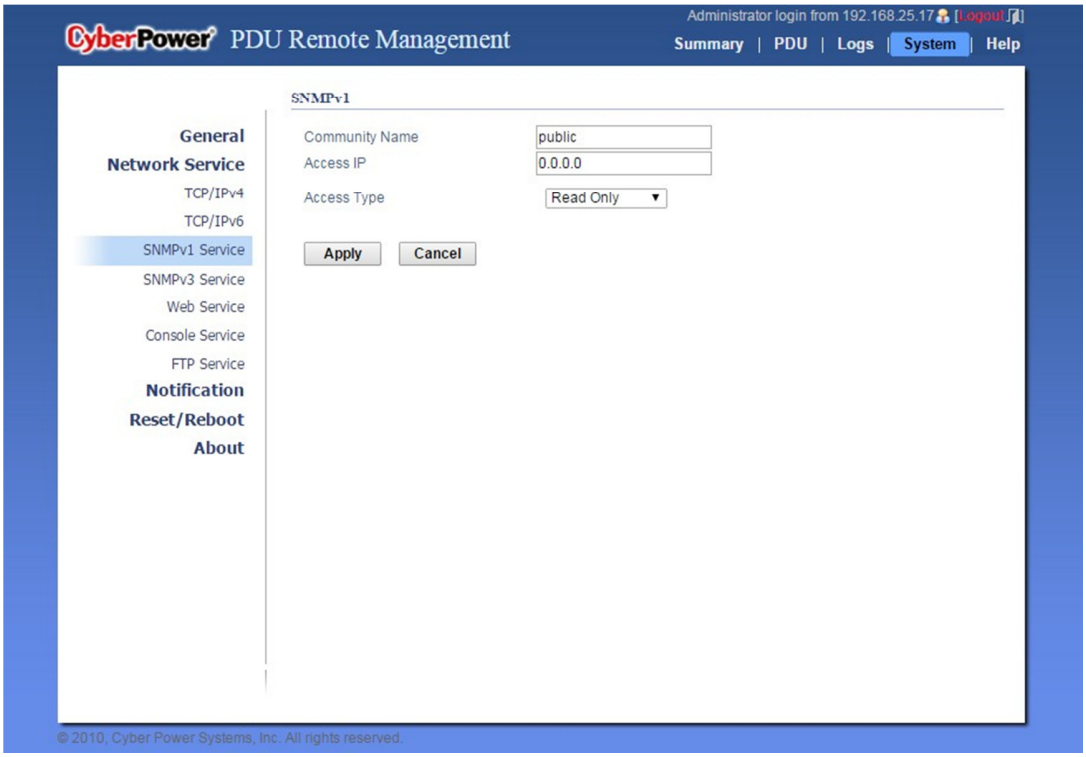
System Tab > Network Service > SNMPv1 Service



Item	Definition
SNMPv1 Service	
Allow Access	Enable or disable the SNMPv1 service.

Click the **Community** field to open the SNMPv1 Window. Users can configure the SNMPv1 settings.

SNMPv1 Window

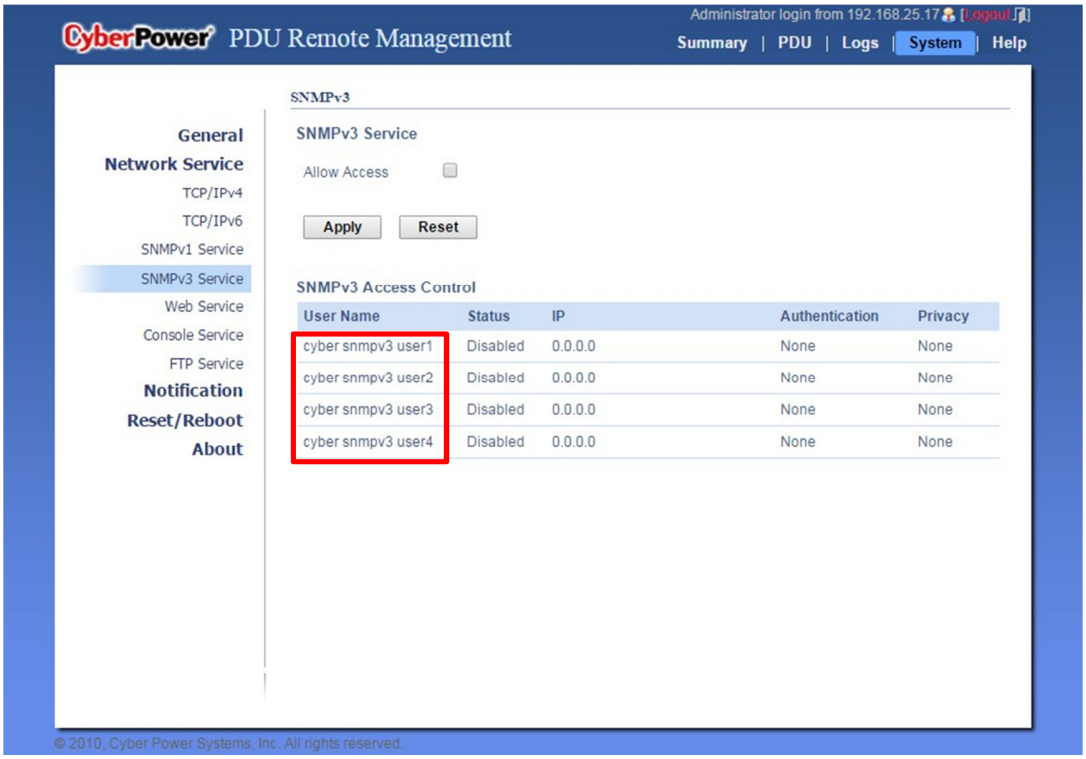


Item	Definition
Community Name	The name is used to access the SNMP community from a Network Management System (NMS). Its maximum length is 15 characters.
Access IP (IPv6 Support)	The IP address or IP address mask can be accessed by the NMS. A specific IP address only allows access by the NMS with the specified IP Address. The “255” is regarded as the subnet mask and the rules are as follows: *__192.168.20.255__: Access only by an NMS on the 192.168.20.0 segment. *__192.255.255.255__: Access only by an NMS on the 192.0.0.0 segment. *__0.0.0.0__ (the default setting) or 255.255.255.255: Access by any NMS on any segments.
Access Type	The allowable action for the NMS through the community and IP address. *__Read Only__: *GET* at anytime but cannot *SET*. *__Write/Read__: *GET* at anytime. *SET* at anytime unless someone logs in the Web interface. *__Forbidden__: No *GET* or *SET*.

5.4 SNMPv3 Service Setting

Users can perform SNMPv3 configurations. Authentication type or privacy type are provided to strengthen security. See **System Tab > Network Service > SNMPv3 Service**.

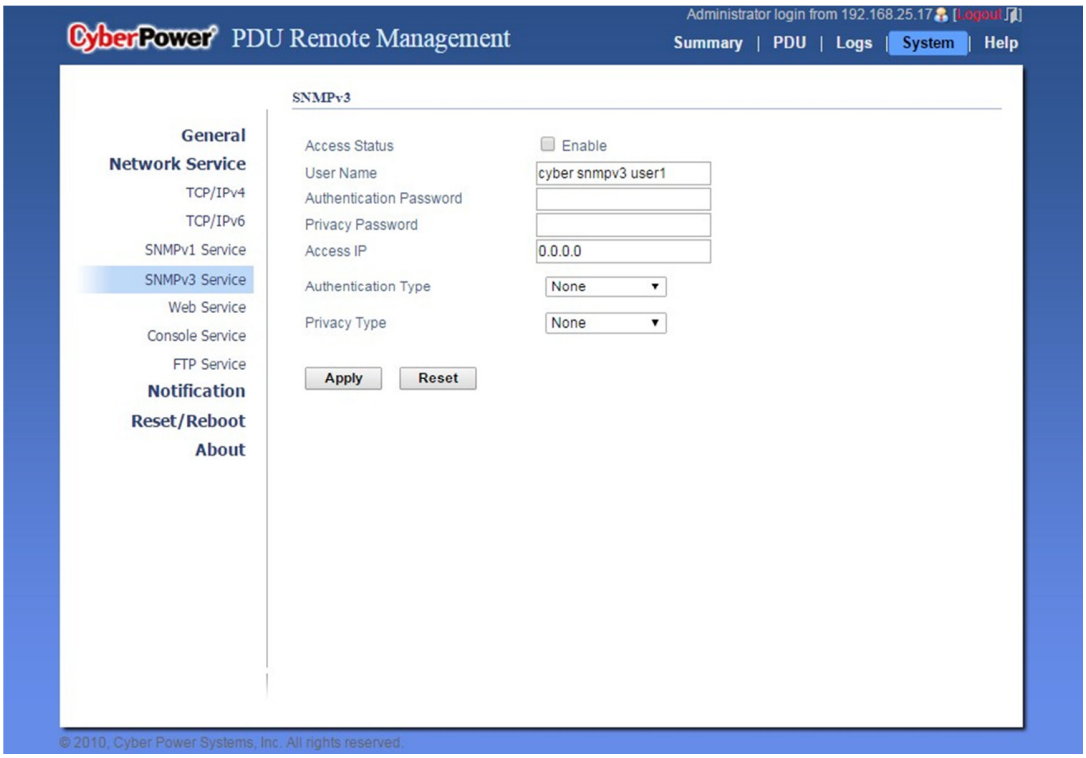
System Tab > Network Service > SNMPv3 Service



Item	Definition
SNMPv3 Service	
Allow Access	Enable or disable the SNMPv3 service.

Click the **User Name** field to open the SNMPv3 Window. Users can configure SNMPv3 settings.

SNMPv3 Window



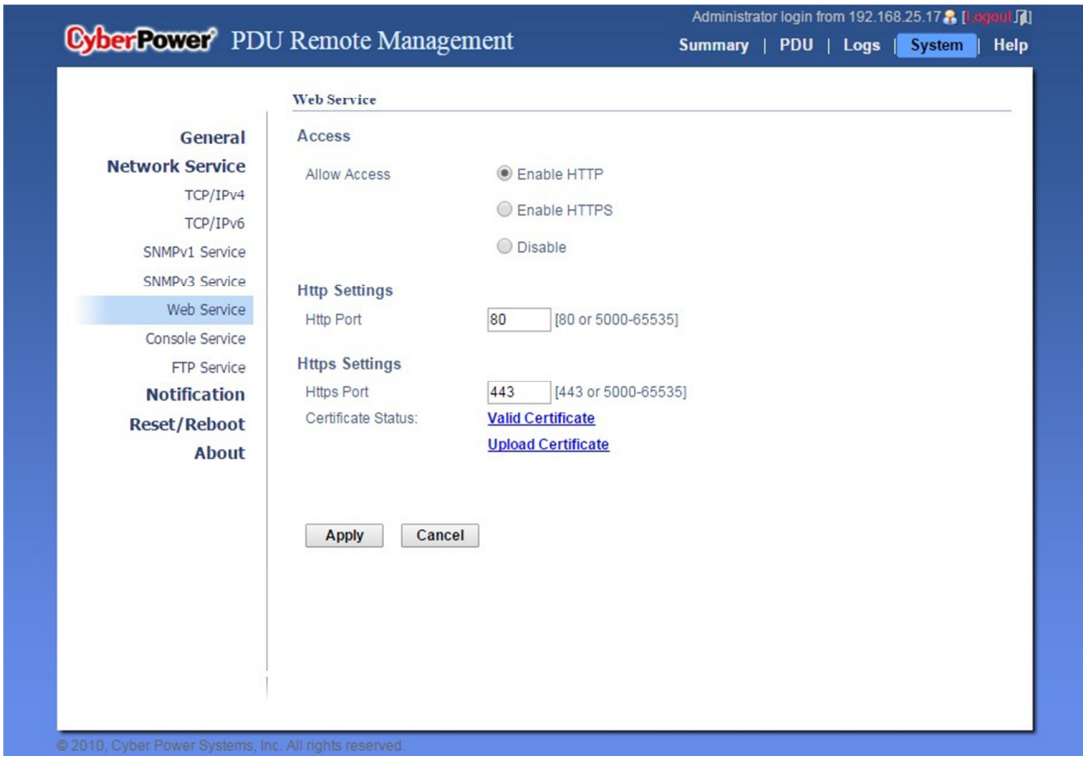
Item	Definition
Access Status	Enable or disable the SNMPv3 service.
User Name	The name that identifies the SNMPv3 user. It must be 1 to 31 characters long.
Authentication Password	The password used to generate the key for authentication. It must be 16 to 31 characters long.
Privacy Password	The password used to generate the key for encryption. It must be 16 to 31 characters long.
Access IP (IPv6 Support)	The IP address or IP address mask that can be accessed by the NMS. A specific IP address only allows access by the NMS with the specified IP Address. The “255” is regarded as the subnet mask and the rules are as follows: *__192.168.20.255__: Access only by an NMS on the 192.168.20.0 segment. *__192.255.255.255__: Access only by an NMS on the 192.0.0.0 segment. *__0.0.0.0__ (the default setting) or 255.255.255.255: Access by any NMS on any segments.
Authentication Type	The hash type for authentication.
Privacy Type	The privacy type for encrypting and decrypting data.

5.5 Web Service

Select the **Enable HTTP** option to access the HTTP/HTTPS Service and configure HTTP/HTTPS port settings.

See **System Tab > Network Service > Web Service**.

System Tab > Network Service > Web Service

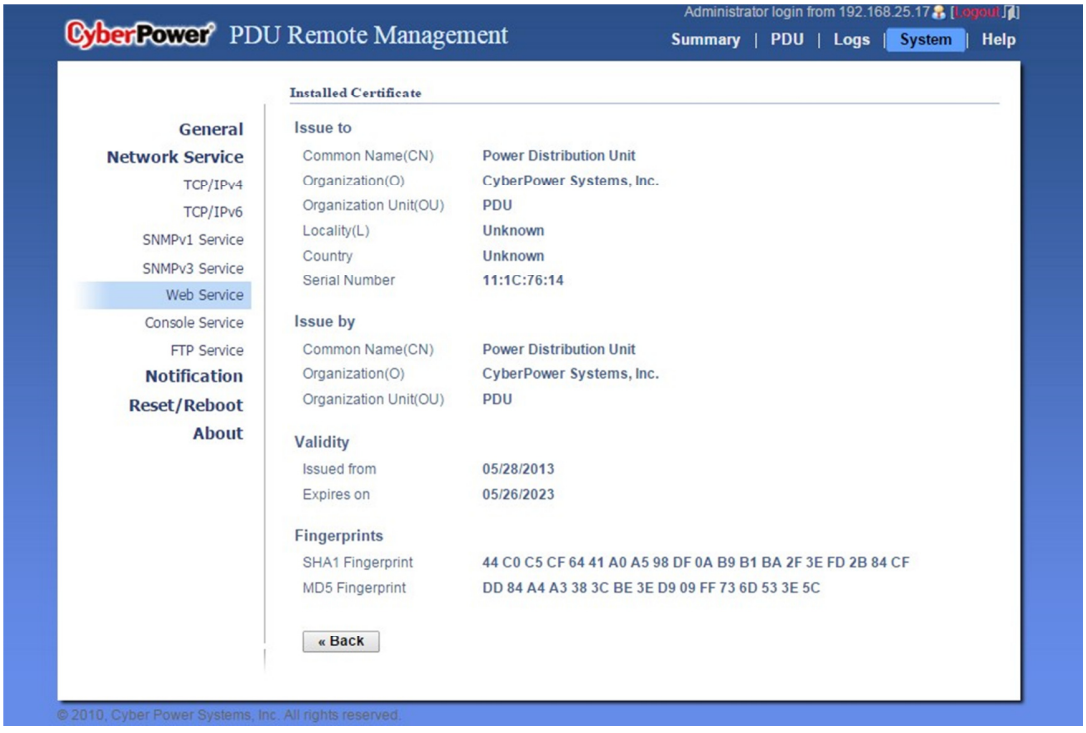


Item	Definition
Access	
Allow Access	Enable or disable HTTP/HTTPS service. HTTPS supports the following encryption algorithms: ● AES (256/128 bits) ● Camellia (256/128 bits) ● 3DES (168 bits) ● DES (168 bits) ● RC4 SHA (128) ● RC4 MD5 (128)
Http Settings	
HTTP Port	The TCP/IP port of the Hypertext Transfer Protocol (HTTP); 80 is the default value. Users can also change the port setting to any unused port from 5000 to 65535 to

Item	Definition
	enhance security.
Https Settings	
Https Port	The TCP/IP port of the Hypertext Transfer Protocol Secure (HTTPS); 443 is the default value. Users can also change the port setting to any unused port from 5000 to 65535 to enhance security.
Certificate Status	*__Valid Certificate__: Display the detailed certificate information. *__Upload Certificate__: Upload the certificate and replace the current one. The certificate must be uploaded in standard PEM (Privacy Enhanced Mail) format.

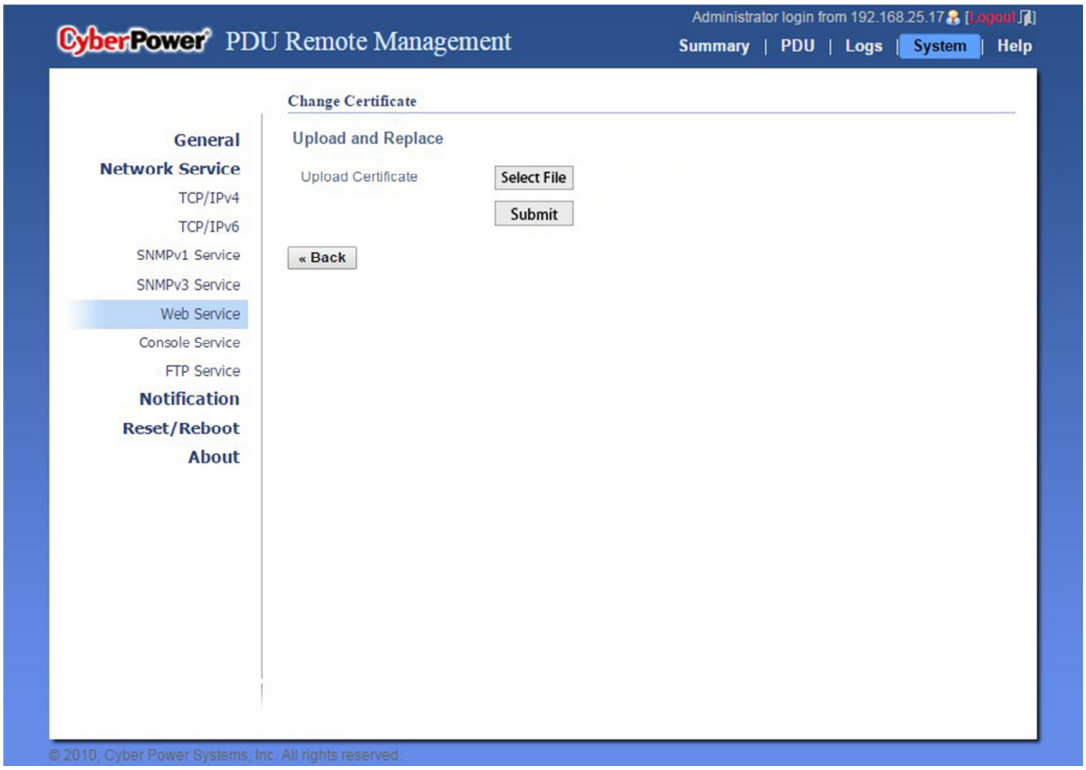
Click the **Valid Certificate** link, and the Installed Certificate Window will appear.

Installed Certificate Window



Click the **Upload Certificate** link, and the Change Certificate Window will appear.

Change Certificate Window

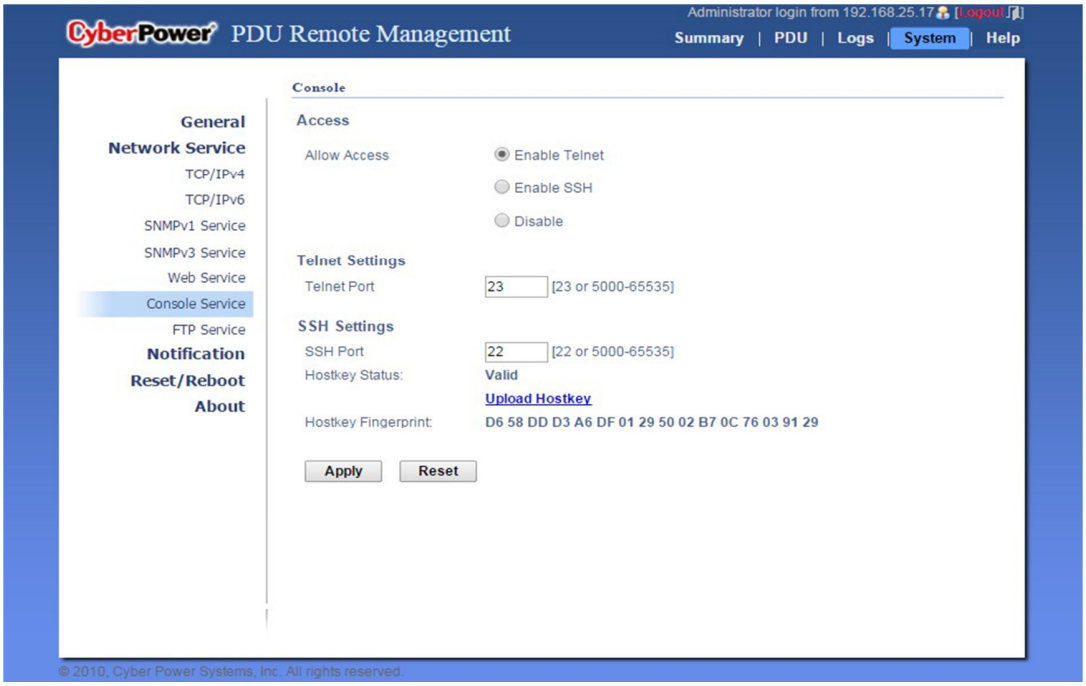


5.6 Console Service

Select the **Enable** options to allow access using Telnet/SSH service and configure Telnet/SSH port settings.

See **System Tab > Network Service > Console Service**.

System Tab > Network Service > Console Service



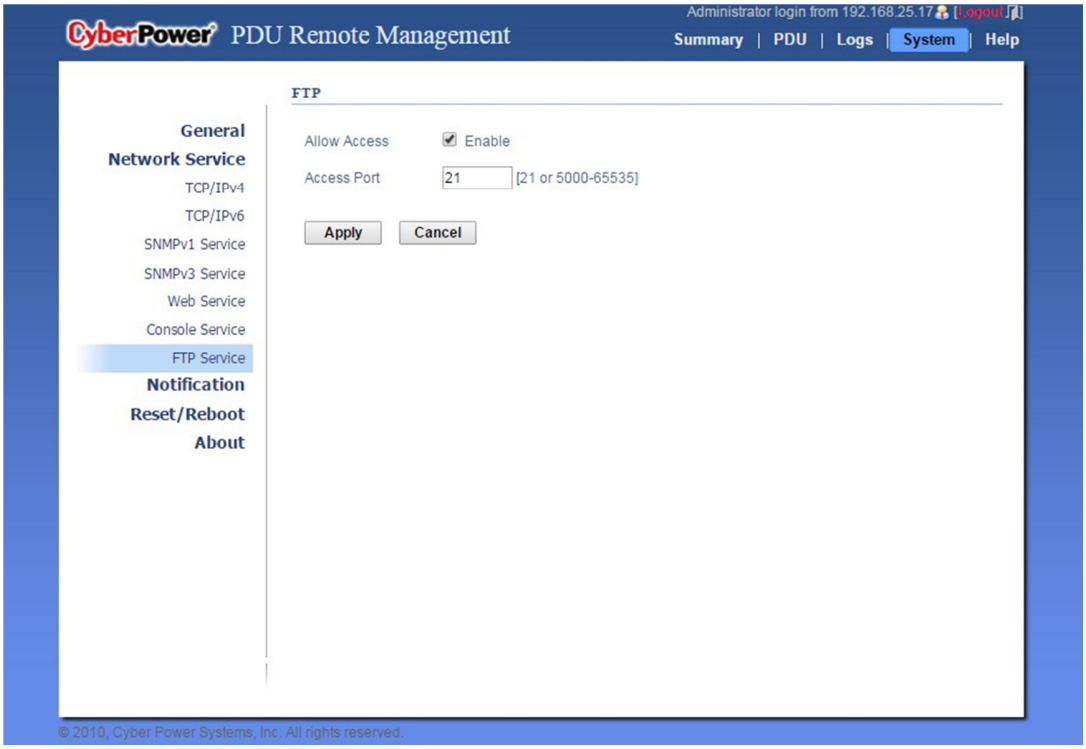
Item	Definition
Access	
Allow Access	Enable access using Telnet or SSH version 2, which transmits user names, passwords, and data in an encrypted format.
Telnet Settings	
Telnet Port	The TCP/IP port that Telnet uses to communicate; 23 is the default value. Users can change the port setting to any unused port from 5000 to 65535 to enhance security. **Note**: Telnet clients require users to enter a space and the port number after the PDU IP address on the command line to access the control console.
SSH Settings	
SSH Port	The TCP/IP port that SSH uses to communicate; 22 is the default value. Users can change port setting to any unused port from 5000 to 65535 to enhance security.
Hostkey Status	Display the status of hostkey fingerprint to show whether it is valid or invalid.

Item	Definition
Hostkey Fingerprint	The hostkey fingerprint uploaded by users will be displayed in this field.

5.7 FTP Service

Allow users to enable/disable the FTP server service and configure the TCP/IP port of the FTP server. The FTP server is used for upgrading Firmware. **See System Tab > Network Service > FTP Service**.

System Tab > Network Service > FTP Service

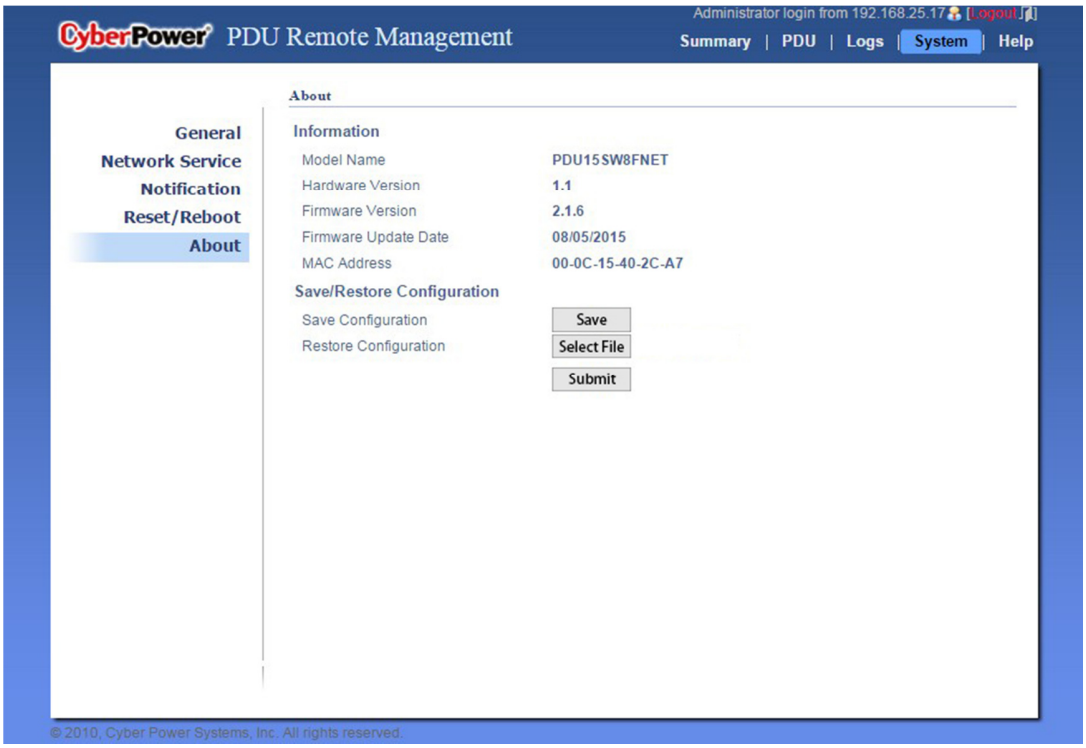


Item	Definition
Allow Access	Enable FTP server access.
Access Port	The TCP/IP port of the FTP server; 21 is the default value.

6. PDU Information

Display the system information of the PDU. See **System > About**.

System > About



Item	Definition
Information	
Model Name	Model name of the PDU.
Hardware Version	The hardware version of the PDU.
Firmware Version	The version number of the current firmware installed on the PDU.
Firmware Updated Date	The date the firmware was last updated.
MAC Address	MAC address of the PDU. **Note**: The MAC address is shown on the label on the back of the PDU .
Save/Restore Settings	
Save Configuration	Click **Save** to save the configuration file to local computer. The text file will have a default format of YYYY_MM_DD_HHMM.txt.
Restore Configuration	To restore a configuration that has been saved earlier. Click **Select File** to import an existing file and then click **Submit**.