



**eco DC**  
**Energy & DCIM Management Web GUI**  
**User Manual**

## User Information

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### Online Registration

Be sure to register your product at our online support center:

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International	<a href="http://eservice.aten.com">http://eservice.aten.com</a>
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### Telephone Support

For telephone support, call this number:

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International	886-2-8692-6959
China	86-400-810-0-810
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988 1-949-428-1111

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### User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

### PE Device Safety Notice



- ◆ Set the maximum permissible breaker protection in the building circuitry to the current rating specified on the rating plate. Observe all national regulations and safety codes as well as deviations for breakers.
- ◆ Only connect the PE Device to a grounded power outlet or a grounded system!
- ◆ Make sure that the total current input of the connected systems does not exceed the current rating specified on the rating plate of the PE Device.
- ◆ There is a risk of explosion if the battery is replaced with an incorrect type. Dispose of used batteries according to the relevant instructions.

# Contents

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User Information . . . . .	ii
Online Registration . . . . .	ii
Telephone Support . . . . .	ii
User Notice . . . . .	ii
PE Device Safety Notice . . . . .	ii
<b>Chapter 1.</b>	
<b>Introduction</b>	
Overview . . . . .	1
Features . . . . .	3
Requirements . . . . .	5
Sensors . . . . .	5
Supported ATEN Devices . . . . .	6
<b>Chapter 2.</b>	
<b>Installation</b>	
Before You Begin . . . . .	7
Installing eco DC . . . . .	7
Post-installation Check . . . . .	11
Desktop Service Check . . . . .	12
<b>Chapter 3.</b>	
<b>First-time Setup</b>	
Logging In . . . . .	13
The Web Browser Main Page . . . . .	14
Page Components . . . . .	15
Toolbar . . . . .	16
Settings . . . . .	17
. . . . .	17
Quick Step-by-Step Setup . . . . .	18
<b>Chapter 4.</b>	
<b>Energy</b>	
Overview . . . . .	19
Dashboard . . . . .	20
Widgets . . . . .	21
Quick View Color Scale . . . . .	21
Device . . . . .	22
Available Power Capacity . . . . .	22
Current . . . . .	23
Door Status . . . . .	25
Power Usage Efficiency . . . . .	26

RCI For All Room Distribution . . . . .	27
RTI For All Room Distribution . . . . .	28
Rack Power Threshold . . . . .	29
Voltage . . . . .	30
Power . . . . .	31
Power Consumption . . . . .	31
Heat Load Density . . . . .	32
Thermal . . . . .	33
Inlet-Outlet Temperature Rise . . . . .	33
Rack Inlet Temperature . . . . .	34
Rack Outlet Temperature . . . . .	35
Thermal Status . . . . .	36
Pressure . . . . .	37
Inlet Differential Pressure . . . . .	37
Pressure Status . . . . .	38
Humidity . . . . .	39
Cold Inlet Dew Point Temperature . . . . .	39
Cold Inlet Relative Humidity . . . . .	40
Humidity Status . . . . .	41
All Widgets . . . . .	42
Charts . . . . .	43
Export . . . . .	44
Settings . . . . .	46
Delete . . . . .	46
Lock / Unlock . . . . .	47
Hide . . . . .	47
Maximize Window . . . . .	48
Power Control . . . . .	49
Sensors . . . . .	49
Banks . . . . .	49
Outlet Status . . . . .	49
Group Control . . . . .	50
Analysis . . . . .	51
Generate . . . . .	51
Power / Thermal . . . . .	52
Billing . . . . .	53
Reports . . . . .	55
Schedule . . . . .	56
Daily . . . . .	56
Weekly . . . . .	57
Yearly . . . . .	57

## **Chapter 5.**

### **User**

Overview . . . . .	59
Accounts . . . . .	60



Selecting an Account . . . . .	61
Groups . . . . .	65
Add User Group . . . . .	65
User Group . . . . .	66
Domain Group . . . . .	67
Authentication Services . . . . .	69
External Authentication . . . . .	70
Sessions . . . . .	73

## **Chapter 6.**

### **Device**

Overview . . . . .	75
Installation . . . . .	76
Adding Devices . . . . .	76
Devices . . . . .	77
Device . . . . .	77
Bank . . . . .	78
Outlet . . . . .	79
Shutdown Methods . . . . .	79
Sensor . . . . .	81
POP . . . . .	82
UPS . . . . .	83
Battery . . . . .	83
Layout . . . . .	84
Adding Layout . . . . .	85
Adding Racks . . . . .	86
Data Group . . . . .	89
Firmware Upgrade . . . . .	91
Run Upgrade Task Now . . . . .	92
Power Meter . . . . .	93
Tools . . . . .	94
Search & Recovery . . . . .	94
Bulk Configuration . . . . .	94

## **Chapter 7.**

### **System**

Overview . . . . .	97
General . . . . .	97
Server . . . . .	97
Device . . . . .	98
SNMP trap . . . . .	99
SMTP . . . . .	100
SMTP . . . . .	100
Email Notification . . . . .	101
Syslog . . . . .	102

License .....	102
Security .....	103
Certificate .....	104
Miscellaneous .....	106
Health .....	107
Database .....	108
Access .....	108
Maintenance .....	109
Events .....	110
Settings .....	111

## **Chapter 8.**

### **Log**

Overview .....	113
System Log .....	113
Device Log .....	114

### **Appendix**

Technical Support .....	115
International .....	115
North America .....	115
Trusted Certificates .....	116
Overview .....	116
ecoDC Utility .....	117
System Settings .....	118
Backup .....	119
Config Backup .....	119
Database Backup .....	120
Restore .....	122
View License .....	123
Database Migration Tool .....	124
SSO HTML .....	125
SSO HTML Sample Codes .....	125

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# Chapter 1

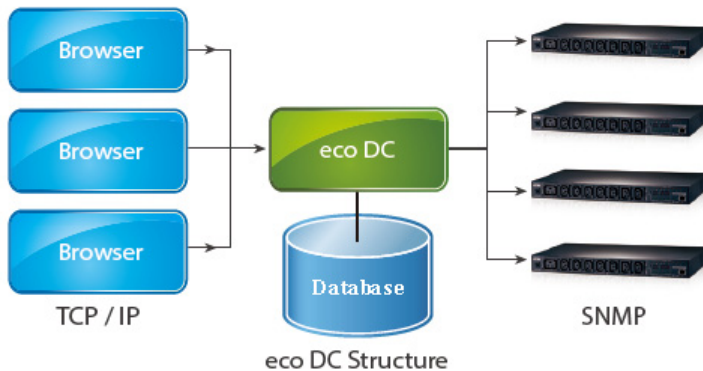
## Introduction

### Overview

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The ATEN eco DC Web GUI has been developed to work with ATEN's new generation of ATEN PE series green energy power distribution units (PDUs) to effectively increase the efficiency of data center's power usage. Eco DC is a Web-based GUI allowing users to manage and control PDUs through a web browser. There is no additional software to install or setup steps needed to manage all your ATEN PDUs. The Eco DC runs under any OS platform allowing users to easily manage the power consumption of a data center through intuitive interface with easy to read graphics.

With the use of dynamic Rack Cooling Index (RCI) and Return Temperature Index (RTI) by room, floor, and building, the eco DC web GUI, in conjunction with sensor-enabled eco PDUs\*, gives you the means to assess, diagnose and estimate how much energy you can save. Following the suggestions generated by the sensor-enabled system allows you to optimize energy usage to save energy without harming your IT equipment's reliability. The ATEN eco DC web GUI provides secure and centralized (single portal, single login) access, administration and management of up to 3000 PE devices over the network – local and worldwide – anywhere and anytime.



Because ATEN eco DC offers a single, integrated web-based GUI to manage all your devices, users no longer need to learn the interface for each individual device or remember every device's IP addresses, making system management easier and more efficient.

By consolidating the management of your ATEN devices, eco DC allows every device to be accessed and controlled by means of a single login. Manage all outlets in different ATEN devices, making eco DC ideal for the power management of large data centers and branch office server rooms located in several remote locations within the same intranet.

ATEN eco DC is able to automatically discover all ATEN devices within the same intranet and has the ability to monitor/manage these devices. The web GUI provides monitoring/managing of PE device outlet power ON/OFF/ Reboot, sequential ON/OFF of outlet, current / kWh / environmental monitoring at PDU/outlet level, name of outlet, current / kWh / environment sensor threshold setting/alert, etc. through SNMP. Threshold exceed alerts are also available through Syslog/SMTP.

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\* See *Supported ATEN Devices*, page 6, for a list of compatible ATEN sensor-enabled eco PDUs.

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ATEN's eco DC offers the full functionality capable of managing the PDUs through SNMP. This allows multiple users to log to the web GUI concurrently to manage PDUs in different authorized room, floors, or buildings, making distributed PDU management much more efficient under one centralized environment. With two levels of authorized user accounts and permissions, users can be configured to monitor and manage different functions of each PDU. Having this new web-based version allows data centers to optimize their performance and centralize their management.

## Features

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- ◆ Automatic discovery of all ATEN devices within the same intranet
- ◆ Remote real-time power measurement and monitoring
  - ◆ PDU level current / voltage / power dissipation / power consumption
  - ◆ Outlet ON / OFF / Recycle status
  - ◆ Circuit breaker status monitoring
- ◆ Windows pop-out to easily monitor the data center's status'
- ◆ Remote real-time power outlet management\*
  - ◆ Power outlet ON / OFF / Cycle switching by outlet or user-defined group
  - ◆ Power outlet ON / OFF / Cycle switching with pre-defined schedule
  - ◆ User-defined outlet level delays for sequential power up
  - ◆ Current / Voltage / Power Dissipation / Power Consumption threshold level setting
  - ◆ User access assignment for every outlet
  - ◆ Name assignment to individual outlets
- ◆ Remote real-time environment sensor monitoring
  - ◆ Temperature / Temperature + Humidity reading
  - ◆ Temperature and Humidity threshold level setting
- ◆ Plotting/Monitoring of all PE devices
  - ◆ Add data center server racks
  - ◆ Add PE devices for each server rack
  - ◆ Manage device/device outlet status for each plot
- ◆ Essential indices including Rack Intake Temperature, Rack Exhaust Temperature, Rack Equipment, Temperature Difference, RCI (Rack Cooling Index), RTI (Return Temperature Index)
- ◆ Power analysis report for optimizing data center energy management – including power usage, power load, power cost, CO2 cost, power capacity and trends
- ◆ Exceed threshold alert through SMTP and Syslog
- ◆ Syslog provision
- ◆ Two-level password security
- ◆ Strong security features include password protection and advanced encryption technologies – 128 bit SSL

- ◆ Supports online UPS and SNMP Card
- ◆ Real-time status charts for Current / Voltage / Wattage remote monitoring

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**Note:** Not all functions are supported by all ATEN eco PDU PE models.  
Please see *Supported ATEN Devices*, page 6, and your eco PDU PE User Manual for further details.

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## Requirements

Systems that the eco DC web GUI will be installed on should meet the following requirements:

	Server Version	Client Version
Operating System	Windows 7 / Windows Server 2008 and above	
CPU	2.5 GHz Quad Core	2.0 GHz Dual Core
Resolution	Larger than 1440 x 900	
Memory	8 GB	4 GB
Disk	1 TB	NA
Network	1 Gbps Ethernet	

## Sensors

For complete energy management of an instrumented data center with the use of the ATEN eco PDU and eco DC web GUI, you should install 4 sensors for each of the racks in your data center in order to generate a complete energy-efficient data chart. Higher sensor installation density is helpful to generate more accurate data. 8-port models have 2 sensor ports. In this case, Sensor 1 needs to be installed at the intake of the rack (EA1140 or EA1240) and sensor 2 needs to be placed at the exhaust of the IT equipment of the rack (EA1140 or EA1240) or the floor (EA1340).

To get the most complete eco DC web GUI data, the recommended 2 eco PDU unit per rack sensor setup is show in the table, below:

eco PDU	Port	Location	Part Number	Sensor
eco PDU 1	Sensor 1	Intake	EA1240	Temperature / Humidity
	Sensor 2	Floor	EA1340	Differential Pressure / Temperature
eco PDU 2	Sensor 1	Intake	EA1240	Temperature / Humidity
	Sensor 2	Exhaust	EA1240	Temperature / Humidity

## Supported ATEN Devices

Model	Outlets	Metering Level
PE1108A / B / G	NEMA 5-15R / IEC C13	PDU
PE1208A / B / G	NEMA 5-20R / IEC C13 / C19	
PE3108A / B / G	NEMA 5-15R / IEC C13	Outlet
PE3208A / B / G	NEMA 5-20R / IEC C13 / C19	
PE52220sA / B / G	NEMA 5-15R / IEC C13	Bank
PE5312sGR / GL	UK BS1363	Bank
PE5340sB / J / G	IEC 320 C13	Bank
PE6108A / B / G	NEMA 5-15R / IEC C13	PDU
PE6208A / B / G	NEMA 5-20R / IEC C13 / C19	
PE8108A / B / G	NEMA 5-15R / IEC C13	Outlet
PE8208A / B / G	NEMA 5-20R / IEC C13 / C19	
PE5216 / 6216	IEC 320 C19 + IEC 320 C13	Bank x 1
PE5324 / 6324		Bank x 2
PE7216 / 8216 / 9216		Outlet
PE7324 / 8324 / 9324		Outlet
PE7328B / J / G	IEC 60320 C13 / IEC 60320 C19	PDU / 2 x Bank / Outlet
PE5324kJA	NEMA 5-15R Twist Lock	Bank
PE7324kJA	NEMA 5-15R Twist Lock	PDU / 2 x Bank / Outlet
PE8121kJ	IEC 320 C13 with lock	PDU / 1 x Bank / Outlet
PE8316G	IEC 320 C19 + IEC 320 C13	PDU / 2 x Bank Outlet
PE8324A / JA	NEMA 5-15R	PDU / 2 x Bank Outlet
PE9222B / G	IEC320 C13 / IEC320 C19	Outlet
PE9330B / J / G	IEC 60320 C13 / IEC 60320 C19	PDU / 2 x Bank / Outlet
EC1000 / EC2004	Depends on PDU models attached – PE1216 / PE1324	Bank x 1/2

**Note:** For detailed outlet information as well as the complete specifications of an individual model, please reference the respective user manual.

# Chapter 2 Installation

## Before You Begin

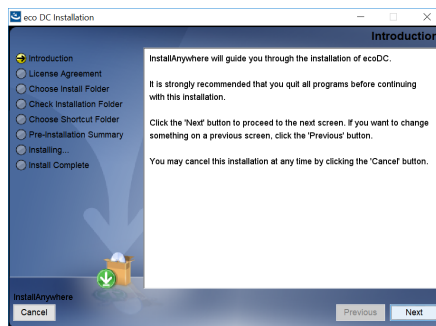
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The eco DC Web GUI can be downloaded from the ATEN website. The package requires a product key to complete the installation. Once you have downloaded and saved the installation file, follow the instructions below:

## Installing eco DC

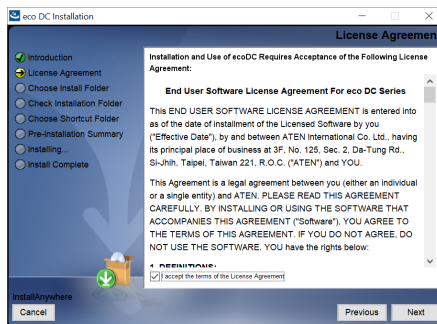
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1. Double click on the eco DC setup file to open the installer. The Introduction window appears:



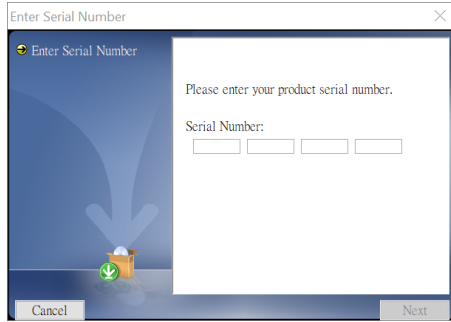
Click **Next** to continue.

2. The *License Agreement* window appears:



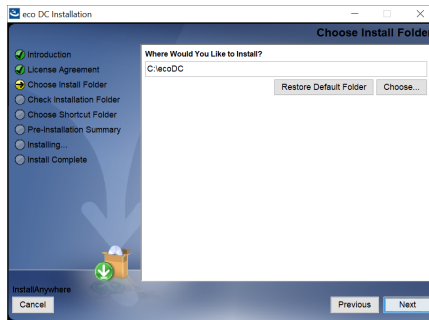
Enable the “I accept the terms of the license agreement” radio button, and then click **Next** to continue.

3. The *Serial Number* window appears:



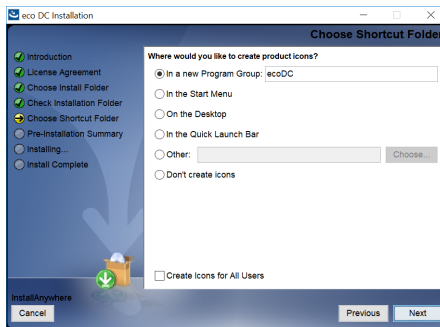
Enter your serial number and click **Next** to continue.

4. The *Choose Installation Folder* window appears:



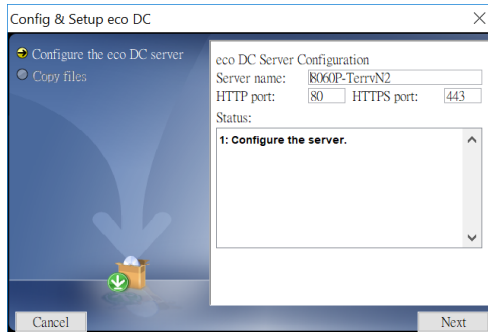
Use the default directory or click **Choose** to browse to a location on your computer. Click **Next** to continue.

5. The *Choose Folder Shortcut* window appears:



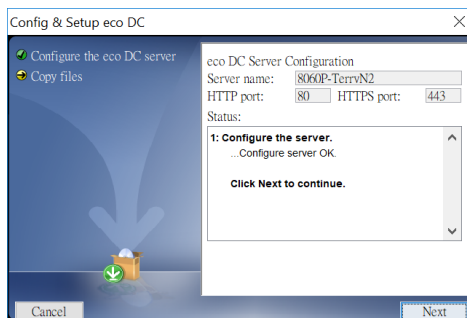
Choose the where you would like eco DC shortcut icons to be installed. Click **Next** to continue.

6. The *Configure & Setup* window appears:

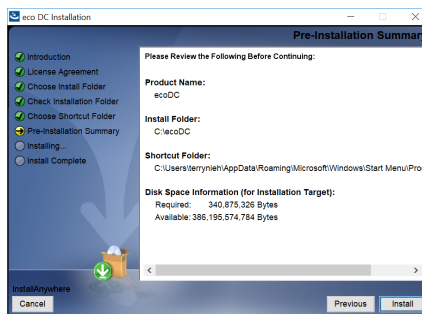


Key in the eco DC Server name, HTTP port, and HTTPS port, or use the default settings, and click **Next** to continue.

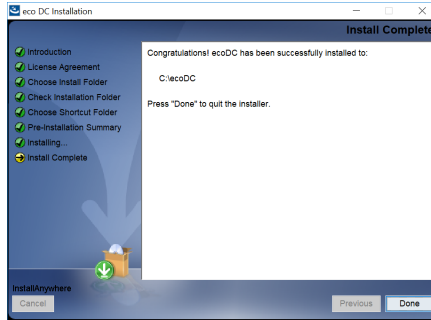
7. Two more windows will appear informing you that the configuration and server installation is OK. Click **Next**, and then **Continue**.



8. The *Pre-Installation Summary* window appears, review the setup information and click **Install** to continue.



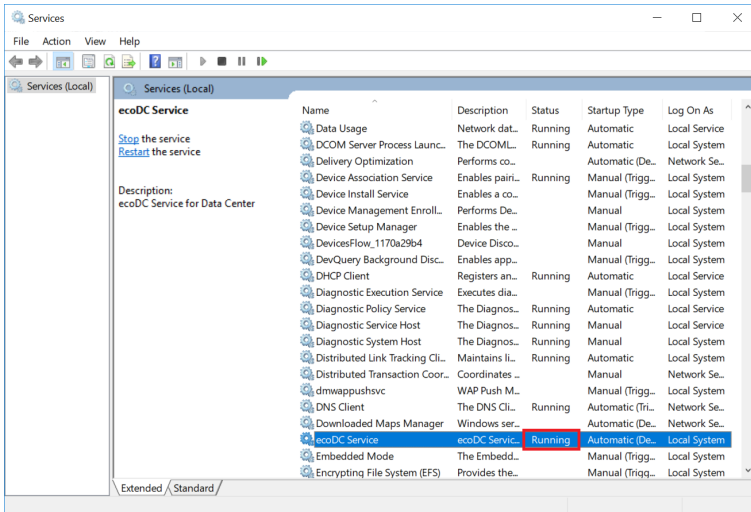
9. When the installation is finished, the *Installation Complete* window appears. Click **Done** to exit.



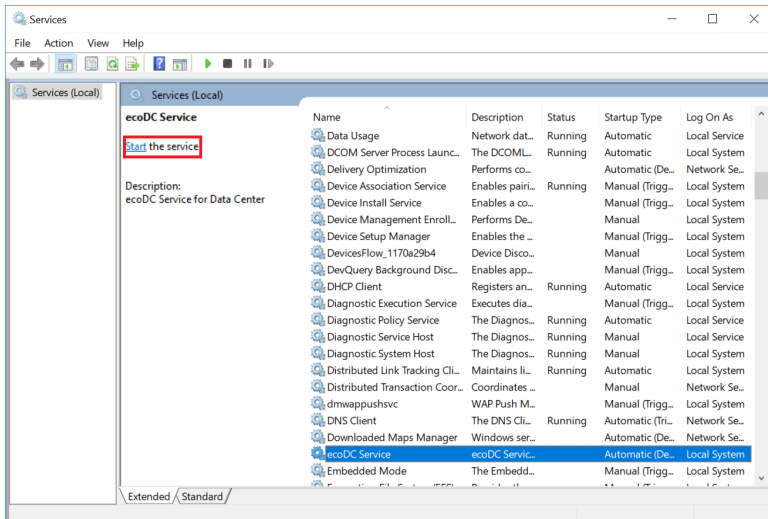
## Post-installation Check

After the installation, the eco DC program starts automatically (and starts automatically with every bootup).

To check that the eco DC has started, go to the Services desktop app (shown in *Desktop Service Check* on page 12) and see if *Running* is shown under the Status column.



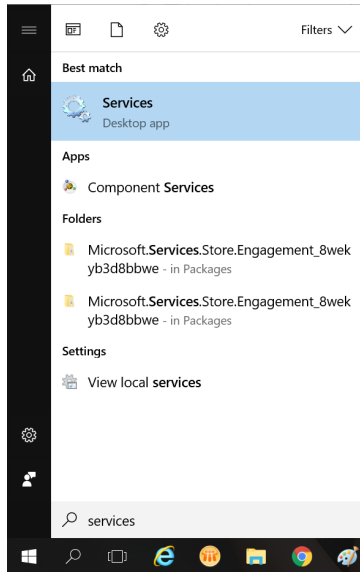
If *Running* is not shown, you can click *Start* to start the service.



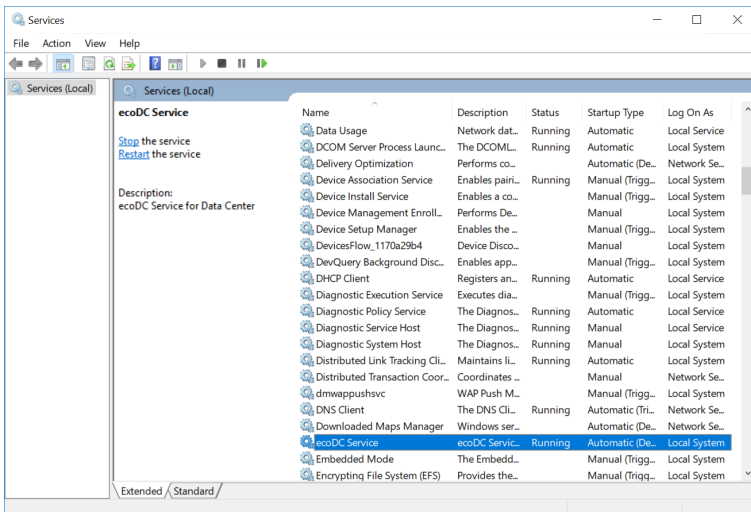
## Desktop Service Check

Follow the steps below to go to the Service desktop application:

1. On your windows desktop, search for the keyword *Services* and click to start this desktop app.



2. Scroll down the list to find the eco DC service.





# Chapter 3

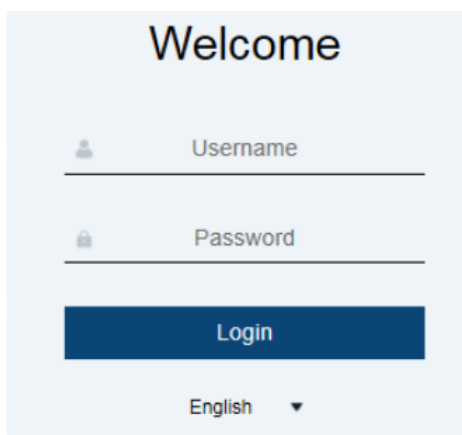
## First-time Setup

### Logging In

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To log in to the eco DC, do the following:

1. Open a web browser and type the following address: 127.0.0.1
2. The eco DC Login screen appears:



1. Provide a valid Username and Password.

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**Note:** If this is the first time you are logging in, use the default Username: *administrator*; and the default Password: *password*. For security purposes, the system will prompt you to change the password.

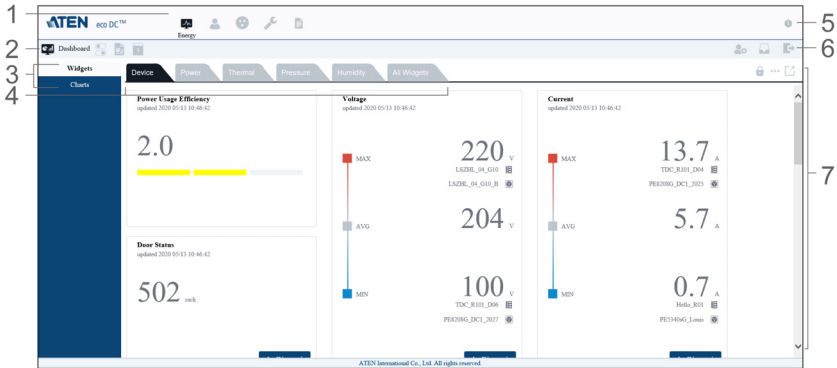
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2. Use the drop-down menu to select the language.
3. Click **Login** to bring up the Main Page.

## The Web Browser Main Page

Once you have successfully logged in, the eco DC user interface Main Page appears. Each of the interfaces is described in the sections that follow. The look of the page varies slightly, depending on which user account is used to log in.

After users log in and are authenticated, the *Web Browser Main Page* comes up, with the Device - Dashboard page displayed:



Page components are discussed on the next page.






## Page Components

The web page screen components are described in the table below:

No.	Item	Description
1	Toolbar	The toolbar contains the eco DC main operation categories. The items that appear here are determined by the user's type, and the authorization options that were selected when the user's account was created.
2	Sub-toolbar	The sub-toolbar contains operational sub-categories that pertain to the item selected in the toolbar. The items that appear in the sub-toolbar are determined by the user's type, and the authorization options that were selected when the user's account was created.
3	Menu	The menu section is another sub-category of the sub-toolbar. It determines which tabs are available.
4	Tabs	Various tabs are available that can be selected for interactive information/details.
5	About	About provides information regarding the switch's current firmware version.
6	Settings	Click these buttons to select options relevant to the current session.
7	Interactive Display Panel	This is your main work area. The screens that appear reflect your toolbar, sub-toolbar, menu and tab choices.




## Toolbar

The number and type of icons that appear on the toolbar at the top of the page are determined by the user's type (Administrator or User) and the permissions assigned when the user's account was created. The functions associated with each of the icons are explained in the table below:

Icon	Function
 Energy	<b>Energy:</b> This page is used to view and capture information about your PDU and data center's energy use. This page is available to all users.
 User	<b>User:</b> This page is used to create and manage Users and Groups. It can also be used to assign devices to them. This tab is available to Administrators who have been given User Management permission. The tab doesn't appear for other users.
 Device	<b>Device:</b> The Device Management page is used to add devices and configure the overall operation of the data center. This page is only available to Administrators who have been given Device Management permission. The tab doesn't appear for other and users.
 System	<b>System:</b> This page is used to manage various system options which help manage the overall operation of the eco DC web GUI. This page is available to Administrators who have been given System Management permission. The tab doesn't appear for other and users.
 Logs	<b>Logs:</b> This page is used to view contents of the log file. This page is available to Administrators who have been given Log permission. The tab doesn't appear for other and users.

## Settings

The *Settings* icons appear for all users. There are three icons that appear on the right end of the sub-toolbar. The functions associated with each of the icons are explained in the table below:

Icon	Function
	<p><b>Preference:</b> This icon opens a window allowing you to set personal settings for the current user.</p> <ul style="list-style-type: none"> <li>◆ <b>Idle Timeout:</b> Sets the amount of time that can pass before the user is automatically logged out of the web session.</li> <li>◆ <b>Max Notifications:</b> Sets the maximum number of notifications that can appear when the Notification icon is clicked. You can set which notifications are shown here (see <i>Events</i>, page 110).</li> <li>◆ <b>Preferred Page For Energy Tab:</b> Use the drop-down menu to select the default sub-toolbar to be displayed for the Energy Toolbar.</li> <li>◆ <b>Password:</b> Use these settings to create a new password by checking <b>Reset password</b> and then key in the old password, new password, and confirm password.</li> <li>◆ <b>Discard:</b> Click to exit without saving changes.</li> <li>◆ <b>Save:</b> Click to save changes.</li> </ul>
	<p><b>Notifications:</b> This icon is used to view and delete notifications that have been setup. Clicking the icon reveals options to view, delete, mark as read and clear all notifications. To select which notifications are received, see <i>Events</i>, page 110.</p>
	<p><b>Exit:</b> Click this icon to log out of the eco DC web session.</p>

## Quick Step-by-Step Setup

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Once you have logged in, you need to define your data center and configure various parameters before you can begin to use ATEN eco DC to monitor and manage your devices. You will need to: add PDUs and configure their threshold settings; setup the layout; add racks, and then add PDUs to the racks.

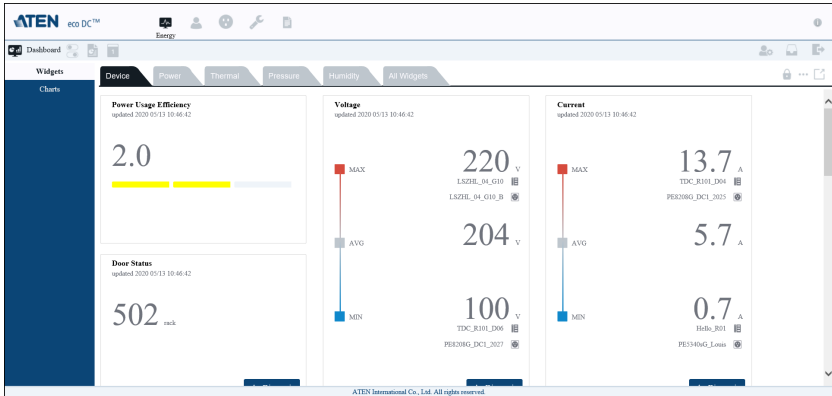
The steps below provide a quick reference to the sections of the user manual you can refer to in order to do this successfully.

1. Go to *Device - Installation*, and under the **Device** tab add ATEN PDUs (see *Adding Devices*, page 76).
2. Go to *Device - Installation*, and under the **Device** tab select PDUs in the sidebar and configure the *Threshold Settings* for each device (see *Devices*, page 77).
3. Go to *Device - Installation*, and under the **Layout** tab setup the data center by adding a: *Data Center, Building, Floor*, and then *Room* (see *Layout*, page 84).
4. Go to *Device - Installation*, and under the **Layout** tab, select a room and add racks to it, and then add the PDUs to the racks (see *Adding Racks*, page 86).
5. Once you have completed these steps, please proceed to *Energy*, page 19.

# Chapter 4 Energy

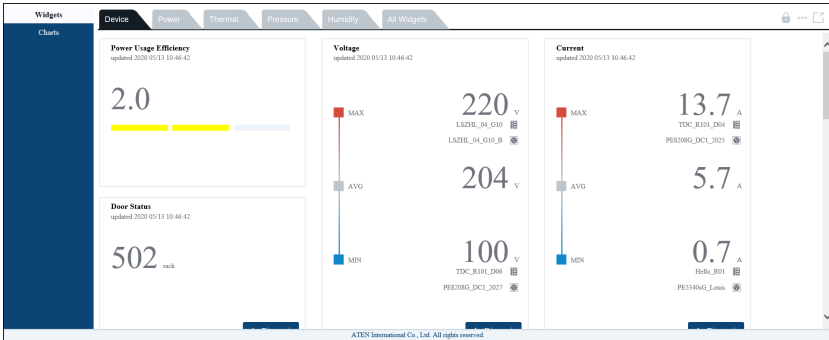
## Overview

The *Energy* toolbar provides four sub-toolbar options: *Dashboard* to view real-time power measurements and environment monitoring; *Power Control* to manage the power of PDUs and outlets; *Analysis* to generate energy usage reports; and *Schedule* to create group control tasks.

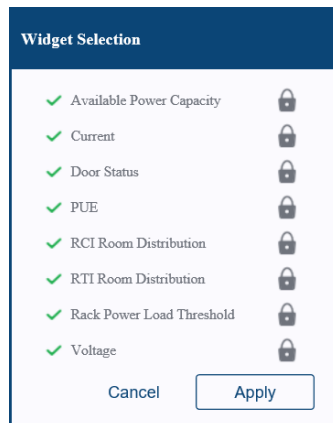


## Dashboard

The *Dashboard* features Widgets and Charts in the Menu. They show the overall energy and environmental information collected about your data center. The Tabs of the interactive display panel lists different tabs depending on your Menu selection. The Widgets menu lists five categories for viewing related data in the main panel: Device, Power, Thermal, Pressure, and Humidity. The Charts menu lists Current, VA, and Wattage. Each tab can be selected to display different types of information about your data center.



In the top right corner are three icons: **Lock/Unlock** to lock/unlock the position of all widgets on the page; **Widget Settings** (shown below) allow you to add/remove widgets and lock their position on the page; and **Maximize Window** to pop open a new window to display the current data.

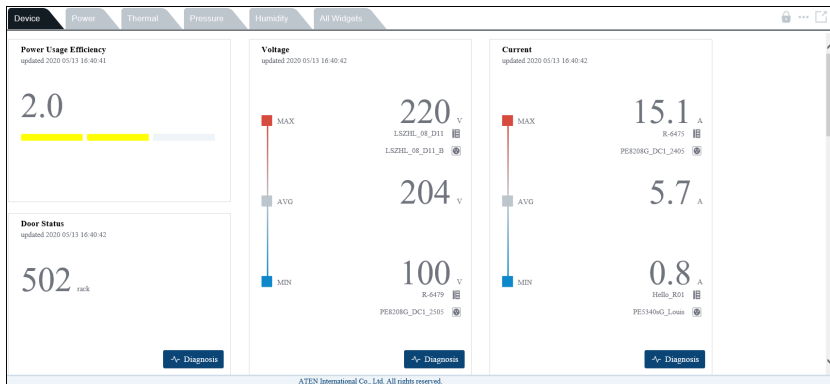


Check the widgets listed in *Widget Settings* to add/remove them from the Dashboard page and click **Apply** to save.



## Widgets

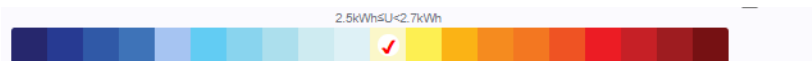
Widgets on the Dashboard display information about different parts of your data center energy and environmental usage. You can position widgets anywhere on the page by drag-and-drop, after the window has been unlocked using the **Lock** icon in the top right corner. You can remove widgets from the page by clicking the **X** in the top right corner of its window.



Clicking the **Diagnosis** button opens a new window with detailed information about the data, as discussed in the sections that follow. The pages that follow discuss each of the widgets that can be added to Dashboard for monitoring. In the Diagnosis window use the left sidebar to select a room to view its data.

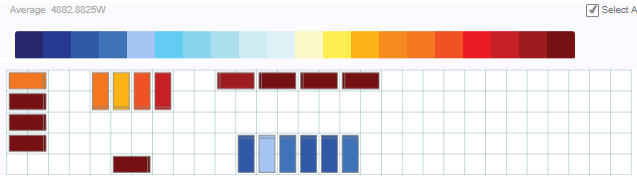
### Quick View Color Scale

The Diagnosis sections of Widgets use the same color scale, but with different units for each reading. For example, the *Power Consumption* page, under the **Power**, displays a scale from 0.7–4.3 kWh, as shown below:



Selecting a color in the scale highlights the racks with that particular reading.

Check **Select All** to view each rack in a color according to its reading. The racks are displayed in a color related to their status on the various scales.

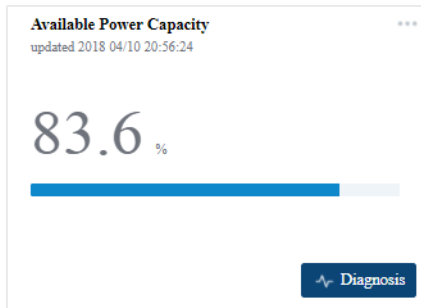


## **Device**

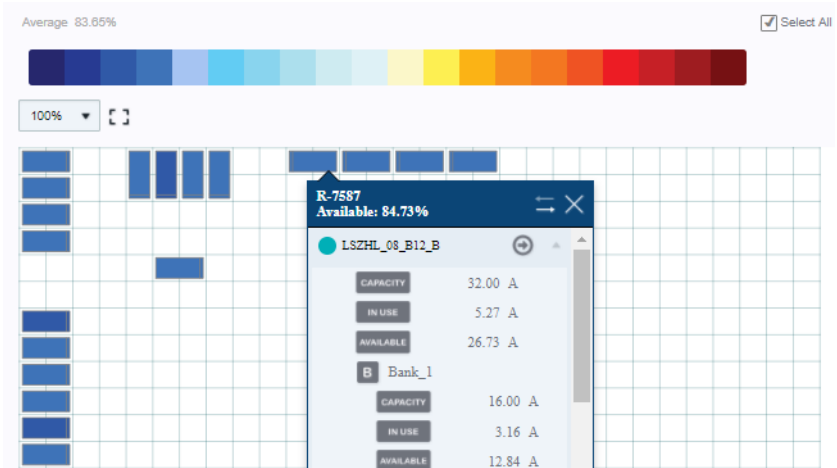
### **Available Power Capacity**


Displays the Average % of available power for all the racks. The *Available Power Capacity* uses a standard formula for rack devices:

Total Power Capacity (KWh) - Power in Use (KWh) = Available Power Capacity (KWh).



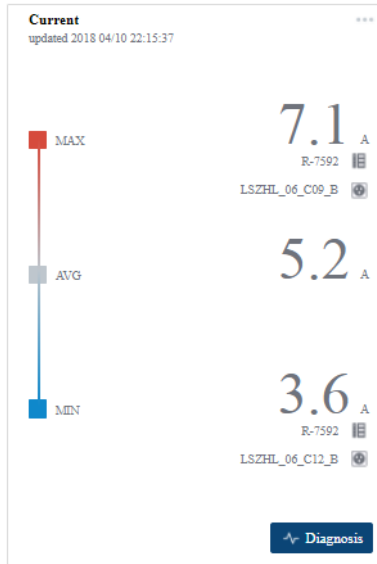
Click **Diagnosis** to open a window with options to view additional rack data:



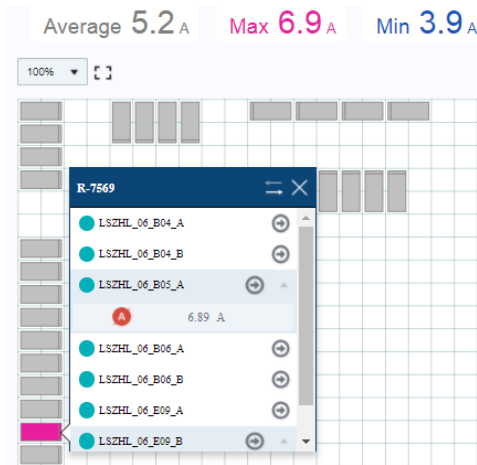
You can click each rack to display the percentage of available power for that rack. The colors represent the available power capacity for each rack displayed in 5% increments. Uncheck **Select All** and click a color to view the racks which are recording data within that 5% range. Use  to jump to a device's Power Control page.


## Current

Displays the real-time measurement of the two devices with the minimum and maximum *Current*, and the average *Current* measurement of all devices.



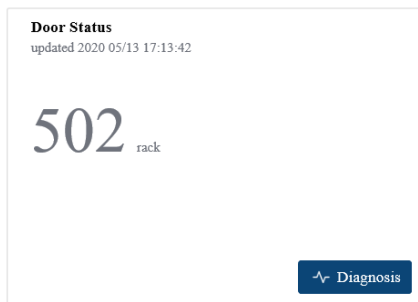
Click **Diagnosis** to open a window with options to view additional rack data:



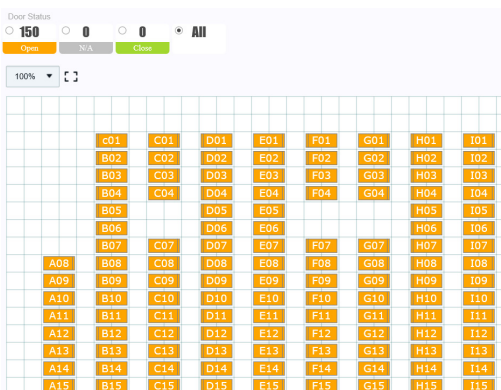
You can click each rack to display the *Current* reading for that rack. The colors represent the average, maximum, and minimum *Current* readings. Use  to jump to a device's Power Control page.


## Door Status

Door Open displays the open/close status of each cabinet door installed with a door sensor (EA1440, EA1441, or EA1442). GREEN: Rack Door is Closed. GRAY: No Door Sensor Installed. ORANGE: Rack Door is Open.



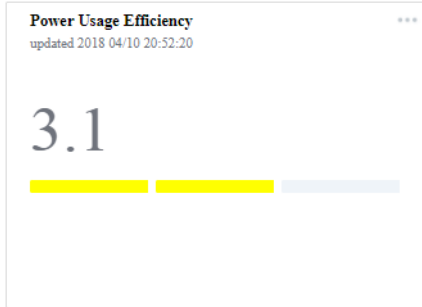
Click **Diagnosis** to open a window with options to view additional rack data:



You can click the Open, N/A, or Close radio buttons to display the racks with that reading. The colors represent the data shown readings above. After selecting a rack, use  to jump to a device's Power Control page.

## Power Usage Efficiency

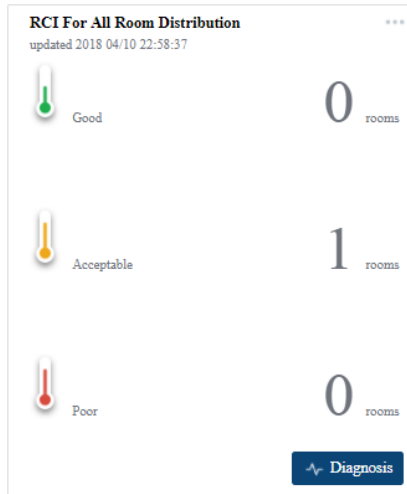
The PUE is the ratio of the total energy used by the data center to the energy delivered to connected equipment. PUE is the inverse of data center infrastructure efficiency (DCIE).



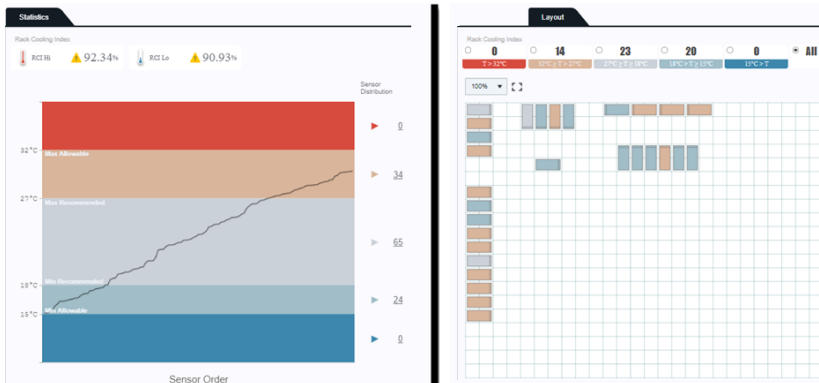
PUE Reading	DCIE	Level of Efficiency
3.0 or higher	33%	Very Inefficient
2.5	40%	Inefficient
2.0	50%	Average
1.5	67%	Efficient
1.2	83%	Very Efficient


## RCI For All Room Distribution

This displays the Rack Cooling Index (RCI). RCI is a measure of how effectively equipment racks are cooled and maintained within industry temperature guidelines and standards, and functions as a useful cooling performance metric. A graphical representation provides the number of rooms with a Good, Average and Poor RCI rating.



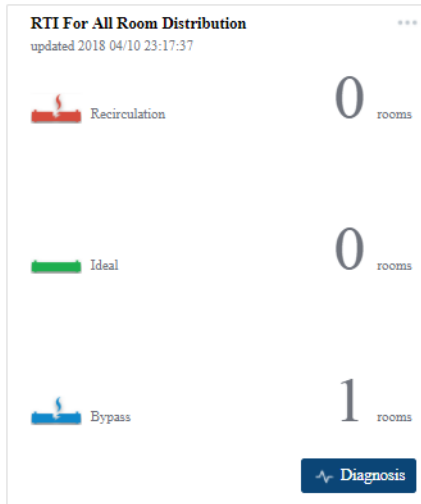
Click **Diagnosis** to open a window with options to view additional rack data:



You can click each rack to display the reading for that rack. The colors represent the readings and the number of racks at different temperatures. Use the radio buttons to highlight a temperature range. After clicking a rack, use  to jump to a device's Power Control page.


## RTI For All Room Distribution

This displays the Return Temperature Index (RTI). RTI is a measure of the performance of the air-management system, and functions as a useful airflow performance metric. A graphical representation provides the number of rooms with a Recirculation, Ideal, and Bypass rating.



Click **Diagnosis** to open a window with options to view additional rack data:

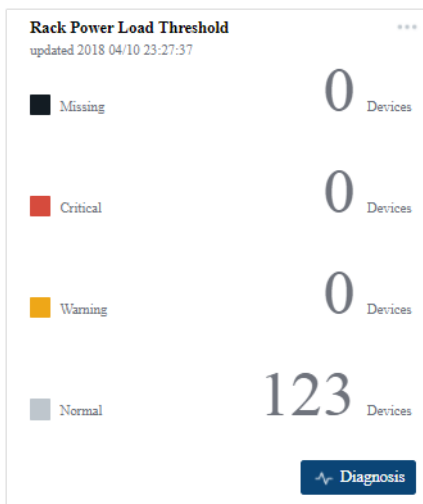


You can click each rack to display the reading for that rack. The colors represent the number of racks at different readings, as shown above. Use the drop-down menus to change the **Ideal Recirculation** and **Bypass** rates. Use the radio buttons to highlight racks at each reading. After clicking a rack, use  to jump to a device's Power Control page.

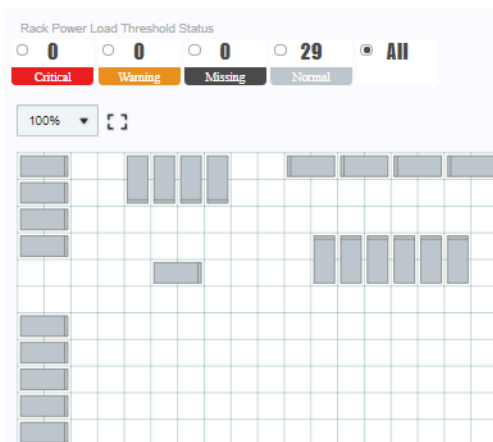


## Rack Power Threshold

This displays the power threshold levels of each rack in four categories: Critical, Warning, Missing, and Normal.



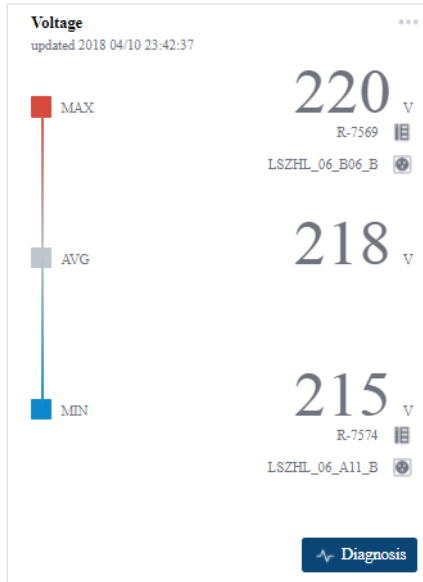
Click **Diagnosis** to open a window with options to view additional rack data:



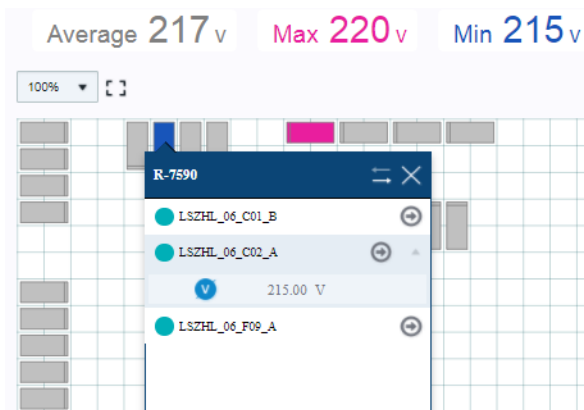
You can click each device in a rack to display all reading for that device. The colors represent the number of racks at different readings, as shown above. Use the radio buttons to highlight racks at each reading. After clicking a rack, use to jump to a device's Power Control page.


## Voltage

Displays the real-time measurement of the two devices with the minimum and maximum *Voltage*, and the average *Voltage* measurement of all devices.



Click **Diagnosis** to open a window with options to view additional rack data:



You can click each rack to display the *Voltage* reading for that rack. The colors represent the average, maximum, and minimum *Voltage* readings. Use  to jump to a device's Power Control page.

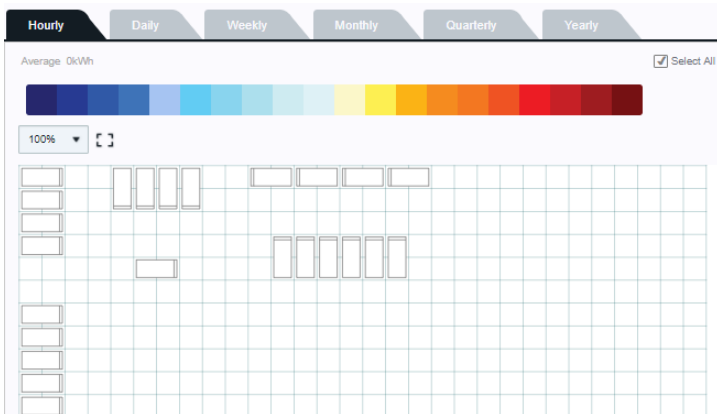
## Power


### Power Consumption

Displays the real-time measurement of the two devices with the minimum and maximum *Power Consumption*, and the average *Power Consumption* measurement of all devices.



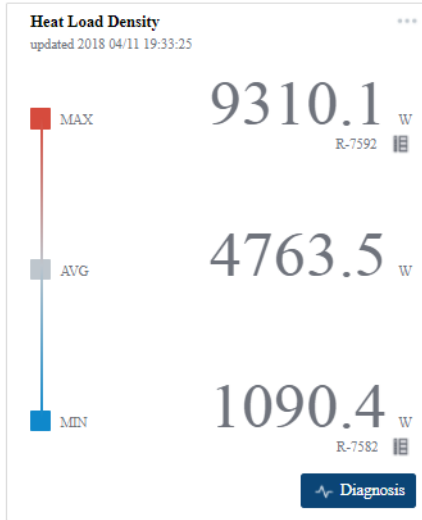
Click **Diagnosis** to open a window with options to view additional rack data:



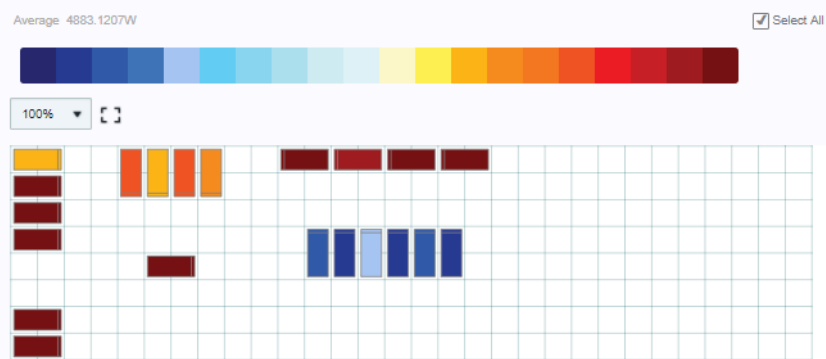
You can click each rack to display the *Power* reading for that rack. The colors represent *Power* readings ranges. Select a tab to view *Power Consumption* by a particular time range. Use  to jump to a device's Power Control page.


## Heat Load Density

Displays the real-time measurement of the two racks with the minimum and maximum *Heat Load Density*, and the average *Heat Load Density* measurement of all racks.



Click **Diagnosis** to open a window with options to view additional rack data:

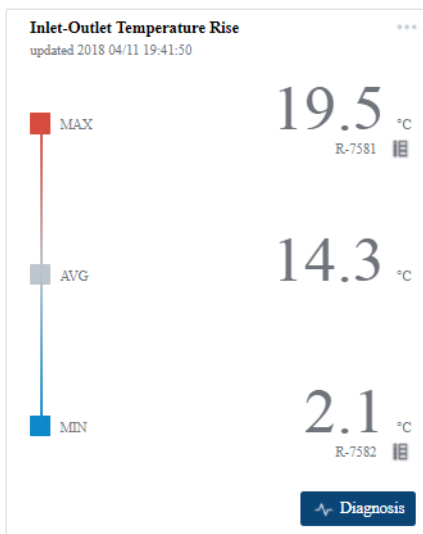


You can click each rack to display the *Heat Load Density* reading for that rack. The colors represent *Heat Load Density* ranges. Use  to jump to a device's Power Control page.

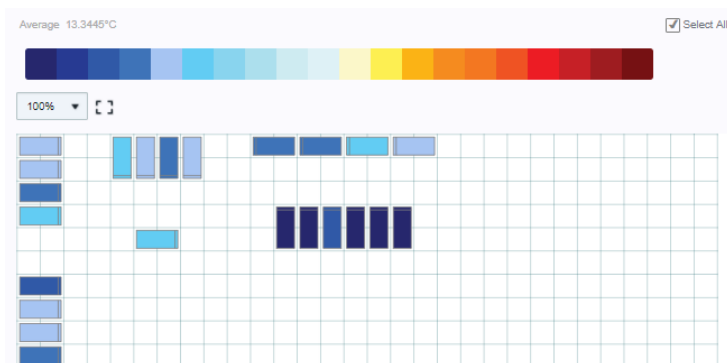
## Thermal


### Inlet-Outlet Temperature Rise

This page displays the real-time inlet-outlet temperature rise values, at the minimum, maximum and the average reading. The color scale displays a range from 2–20 °C.



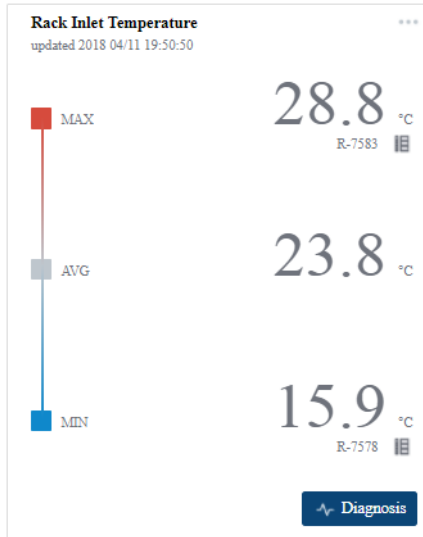
Click **Diagnosis** to open a window with options to view additional rack data:



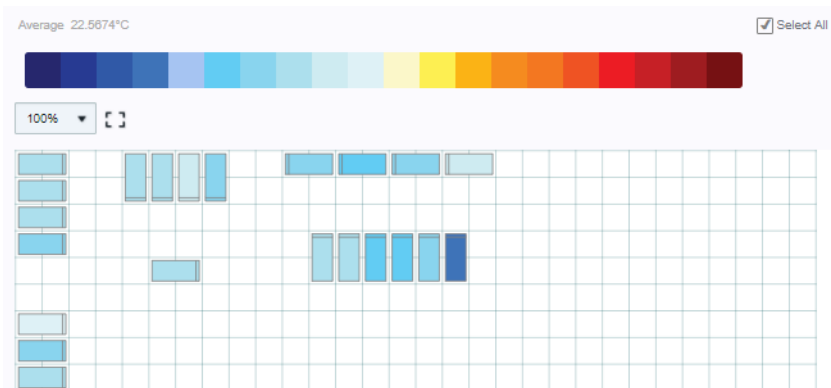
You can click each rack to display the *Inlet-Outlet Temperature Rise* reading for that rack. The colors represent *Inlet-Outlet Temperature Rise* ranges. Use  to jump to a device's Power Control page.


## Rack Inlet Temperature

This page displays the real-time rack inlet temperature values, at the minimum, maximum and average reading. The color scale displays a range from 10–45°C.



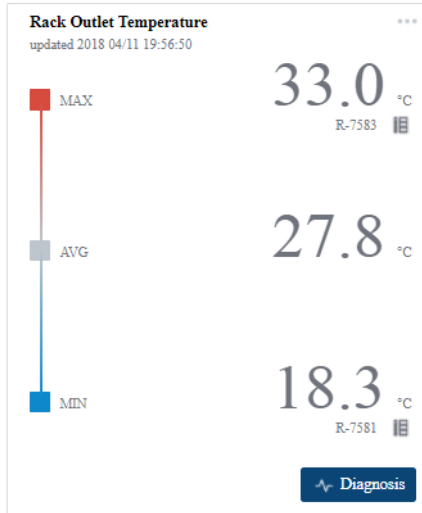
Click **Diagnosis** to open a window with options to view additional rack data:



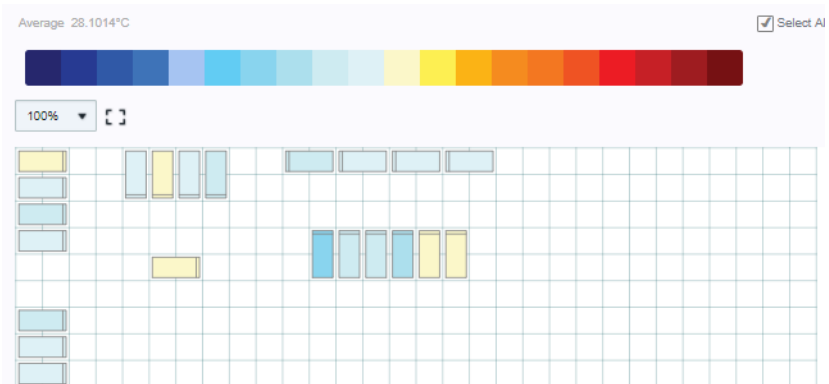
You can click each rack to display the *Rack Inlet Temperature* reading for that rack. The colors represent *Rack Inlet Temperature* ranges. Use  to jump to a device's Power Control page.


## Rack Outlet Temperature

This page displays the real-time rack outlet temperature values, at the minimum, maximum, and average reading. The color scale displays a range from 10–45°C.



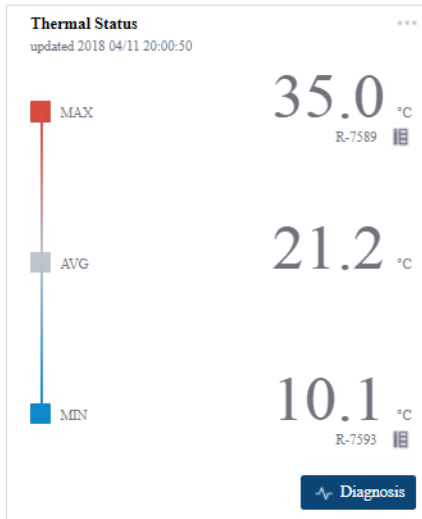
Click **Diagnosis** to open a window with options to view additional rack data:



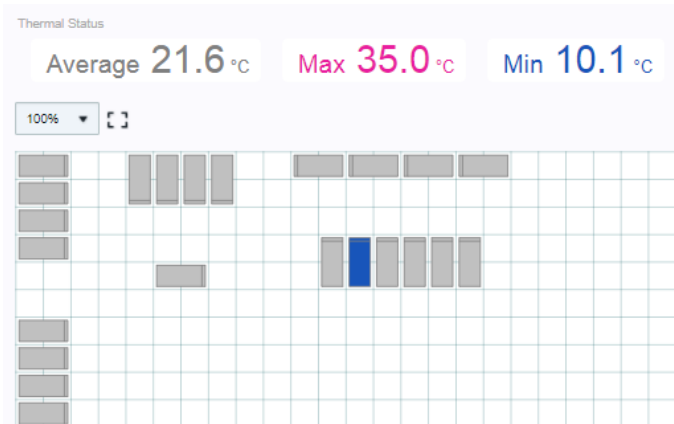
You can click each rack to display the *Rack Outlet Temperature* reading for that rack. The colors represent *Rack Outlet Temperature* ranges. Use  to jump to a device's Power Control page.


## Thermal Status

This page displays the real-time thermal status values, at the minimum, maximum, and average reading. The color scale displays a range from 10–45°C.



Click **Diagnosis** to open a window with options to view additional rack data:



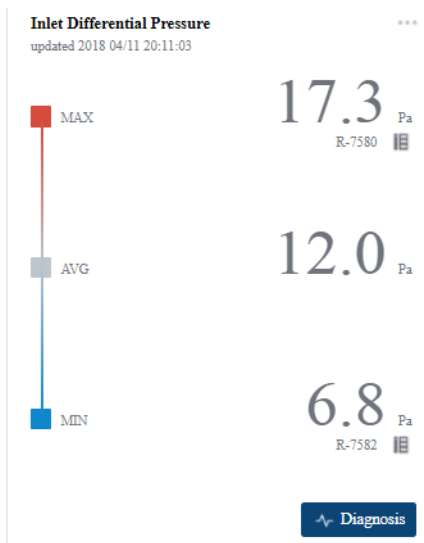
You can click each rack to display the *Thermal* reading for that rack. The colors represent the average, maximum, and minimum *Thermal* readings. Use  to jump to a device's Power Control page.



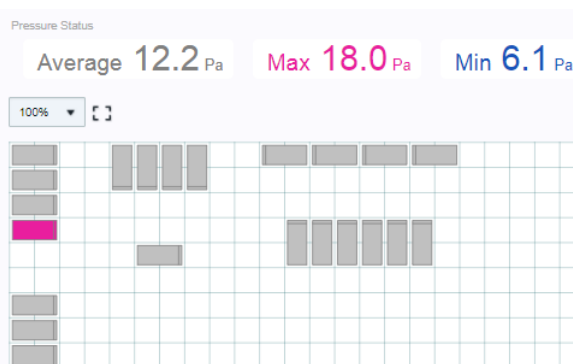
## Pressure


### Inlet Differential Pressure

This page displays the real-time inlet differential pressure values, at the minimum, maximum, and average readings. The color scale displays a range from 0–200 Pa.



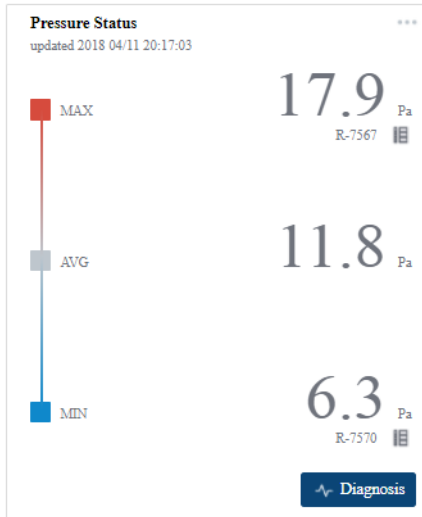
Click **Diagnosis** to open a window with options to view additional rack data:



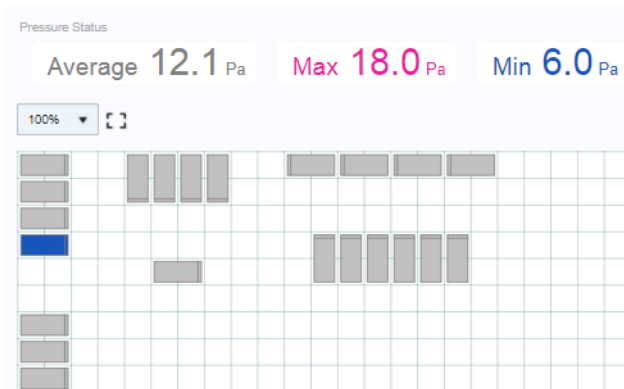
You can click each rack to display the *Inlet Differential Pressure* reading for that rack. The colors represent the average, maximum, and minimum *Inlet Differential Pressure* readings. Use  to jump to a device's Power Control page.


## Pressure Status

This page displays the real-time pressure values, at the minimum, maximum, and average reading. The color scale displays a range from 0–200 Pa.



Click **Diagnosis** to open a window with options to view additional rack data:

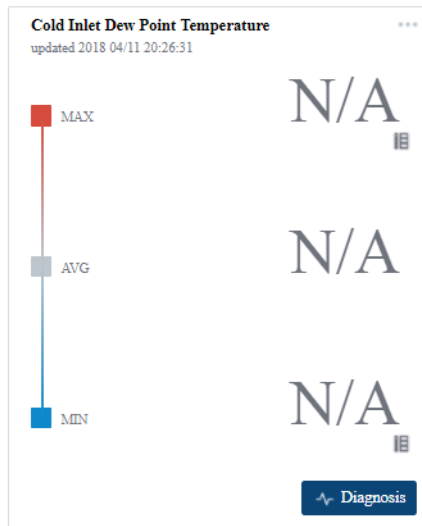


You can click each rack to display the *Pressure Status* reading for that rack. The colors represent the average, maximum, and minimum *Pressure Status* readings. Use  to jump to a device's Power Control page.

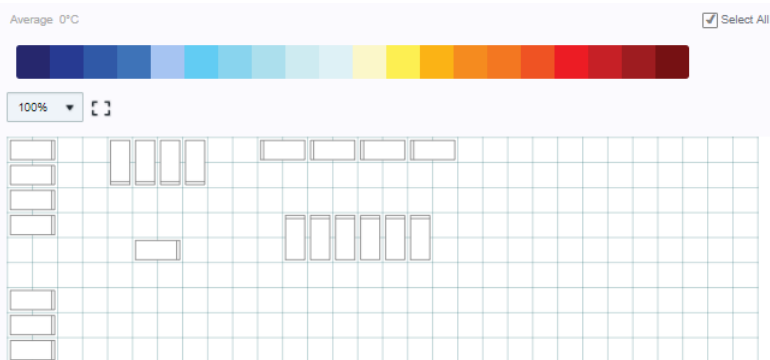
## Humidity


### Cold Inlet Dew Point Temperature

This page displays the real-time cold inlet dew point temperature values, at the minimum, maximum, and average reading. The color scale displays a range from 0–15 °C.



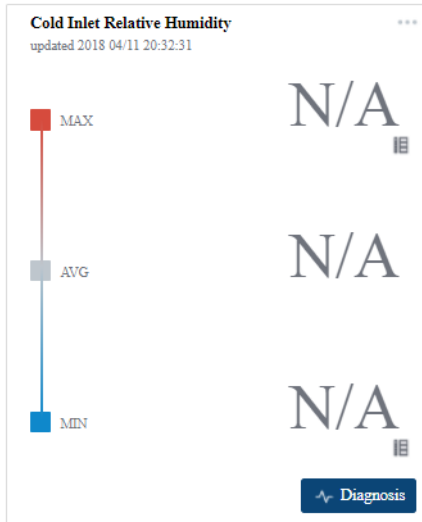
Click **Diagnosis** to open a window with options to view additional rack data:



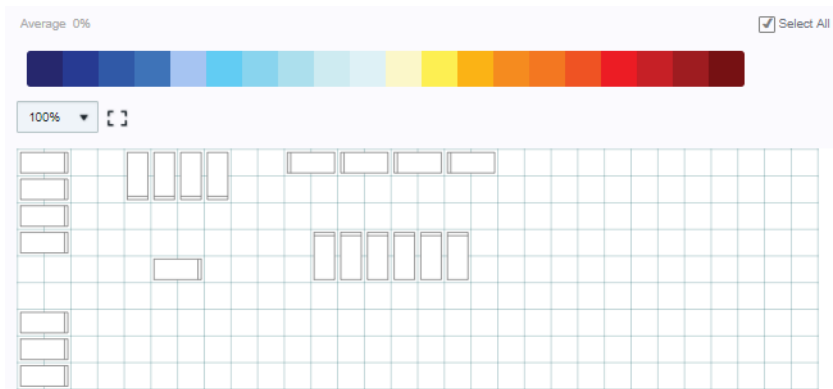
You can click each rack to display the *Cold Inlet Dew Point Temperature* reading for that rack. The colors represent *Cold Inlet Dew Point Temperature* ranges. Use  to jump to a device's Power Control page.


## Cold Inlet Relative Humidity

This page displays the real-time cold inlet relative humidity values, at the minimum, maximum, and average reading. The color scale displays a range from 10–90%.



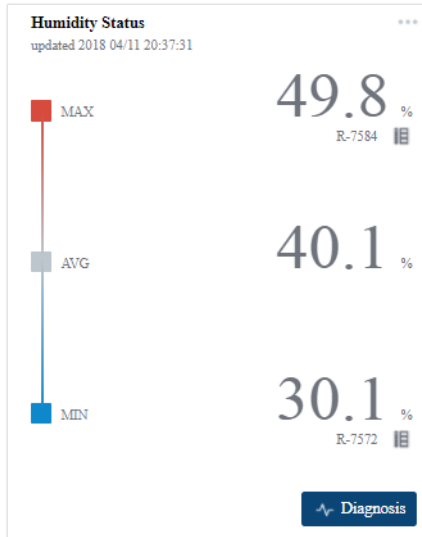
Click **Diagnosis** to open a window with options to view additional rack data:



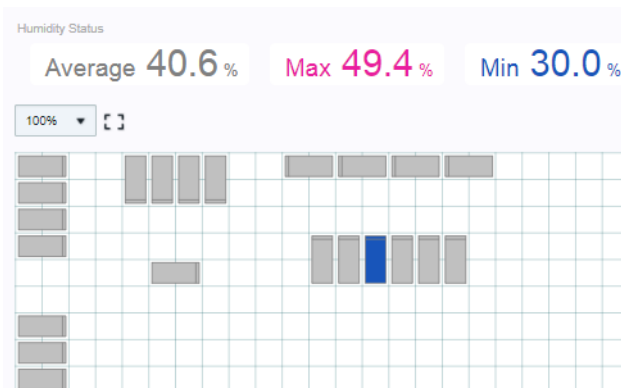
You can click each rack to display the *Cold Inlet Relative Humidity* reading for that rack. The colors represent *Cold Inlet Relative Humidity* ranges. Use  to jump to a device's Power Control page.


## Humidity Status

This page displays the real-time humidity values, at the minimum, maximum, and average reading. The color scale displays a range from 0–90%.



Click **Diagnosis** to open a window with options to view additional rack data:



You can click each rack to display the *Humidity Status* reading for that rack. The colors represent the average, maximum, and minimum *Humidity Status* readings. Use  to jump to a device's Power Control page.

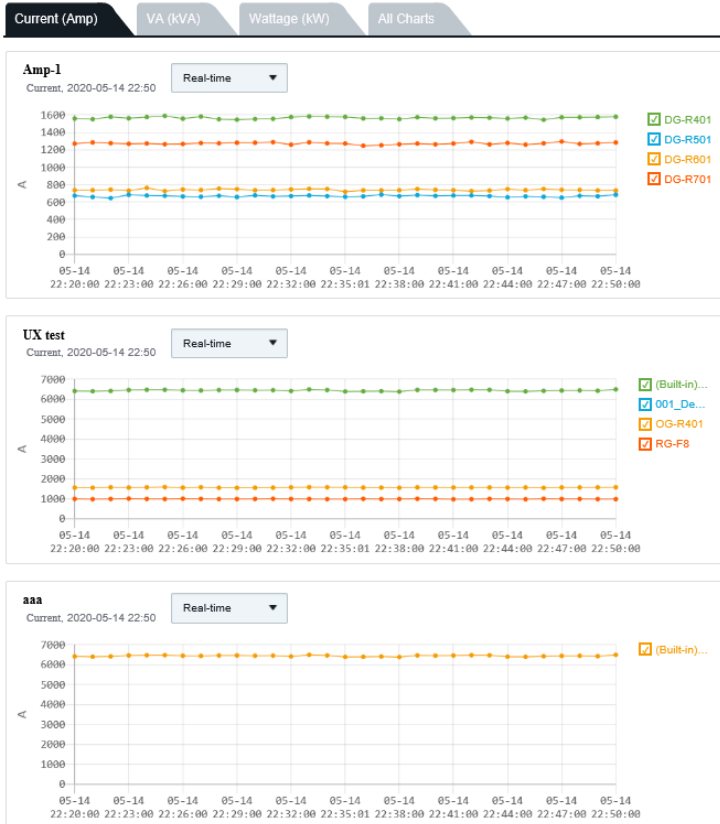
## **All Widgets**

The *All Widgets* page displays widgets from every category listed in the tabs.

## Charts

The Charts menu lets you put data group information against time into a chart. The data group information available are Current, VA and Wattage. Use the tabs to choose which particular information chart(s) is displayed.

You can place up to 4 data group's information into a single chart for comparison, and create up to 32 charts. An example is shown:

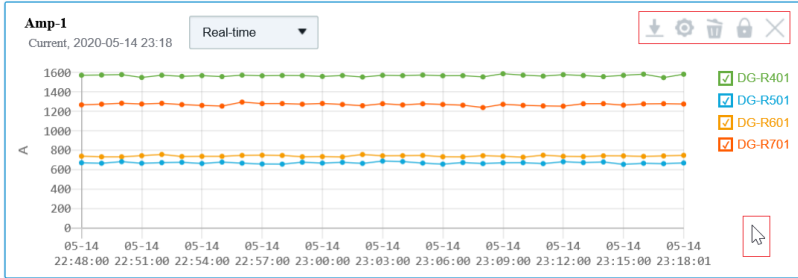


4 data group's current information is shown in the top-most chart while only 1 data group's is shown in the bottom-most chart.

The button "Real-time" is a drop-down menu button. Click the menu for a list of available time periods the information is to be displayed, and click to select your option:



When you move your mouse over a chart, the chart's border becomes blue and extra options become available (top right corner). An example is shown:



## Export

When you click the Export icon, a pop-up window appears. An example is shown:

A pop-up window titled "Export Options" with a close button in the top right corner. It contains the following fields and sections:

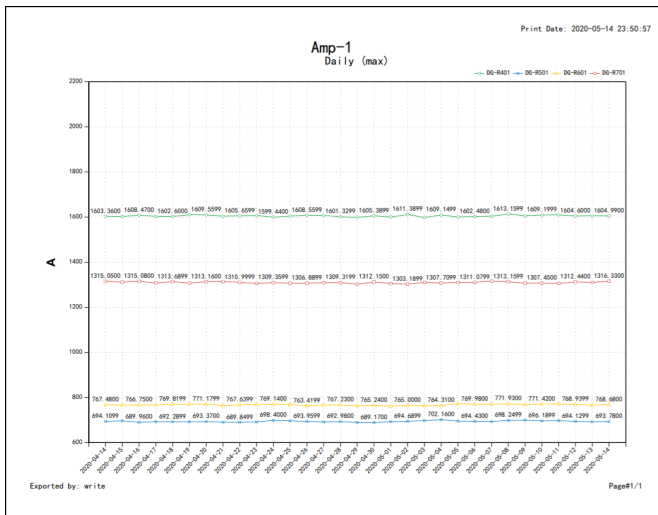
- Author:** A text input field containing "Author".
- End time:** A text input field containing "2020-05-14 23:34".
- Report types:** A section with five checkboxes: "Real-time", "Hourly (max)", "Daily (max)", "Monthly (max)", and "Quarterly (max)".
- Groups involved:** A section with four checkboxes, all of which are checked: "DG-R401", "DG-R501", "DG-R601", and "DG-R701".
- Buttons:** "Cancel" and "Apply" buttons at the bottom.



To get a report,

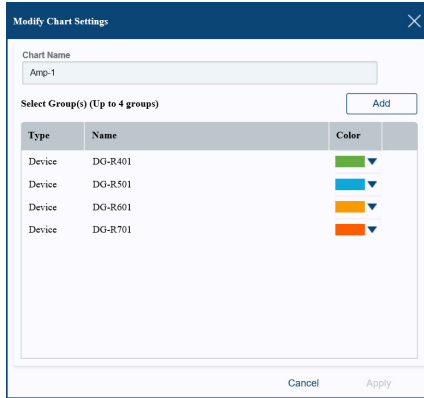
1. Enter a name for the Author field.
2. Click the End time field to select the date and time the data collection ends.
3. Click to check/uncheck the Report types (multiple selection available).
4. Click to check/uncheck the Groups involved.
5. Click **Apply**.

The report will be a pdf file. Choose a way you wish to open the file. An example of the report is shown:



## Settings

When you click the Settings icon, a pop-up window appears for you to modify the chart's settings. An example is shown:

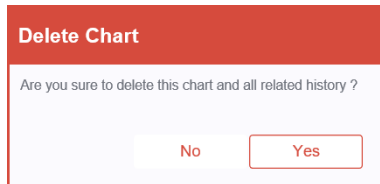


Type	Name	Color
Device	DG-R401	Green
Device	DG-R501	Blue
Device	DG-R601	Yellow
Device	DG-R701	Orange

After your modifications, click **Apply** to save the changes.

## Delete

If you wish to delete the chart, click the Delete icon. A system confirmation message will pop-up as shown:



**Delete Chart**


Are you sure to delete this chart and all related history ?

No Yes

## Lock / Unlock


When you click this icon, you can toggle this chart between locked and unlocked. When unlocked, you can drag the chart around to re-arrange its position. The chart at the chart position you wish to drag to must also be unlocked. An example of moving a chart is shown:

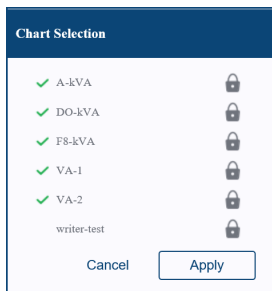


If you wish to unlock/lock all the charts, click the lock icon  on the top right corner of the interactive panel.

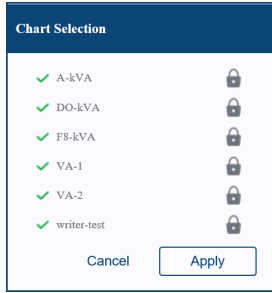
## Hide

If you wish to hide the chart from displaying, click this icon.

To unhide the hidden charts, click the Chart Selection icon  on the top right corner of the interactive panel for a list of charts. An example is shown:

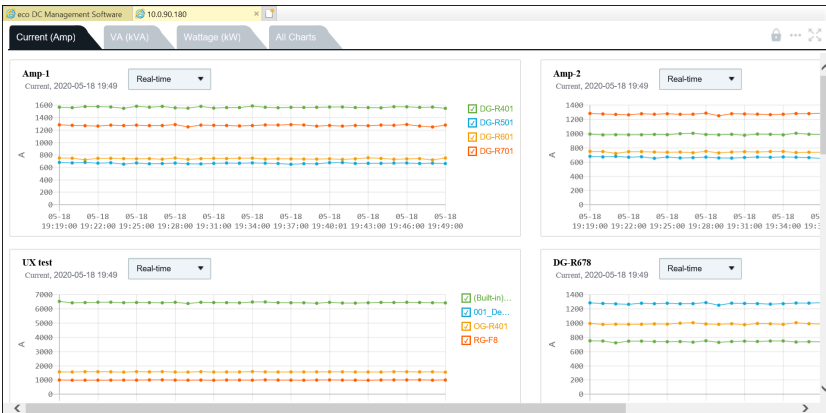



Check the chart you wish to unhide and click **Apply** to bring it back.



## Maximize Window

Click this icon to expand the current interactive panel to view the charts.



Interactions are exactly the same except the page is bigger and that there's a Full Screen icon  to expand the interactive panel into full screen.

## Power Control

The *Power Control* sub-toolbar selection allows you to perform manual power management at the device or outlet level and displays detailed energy and environmental information about your data center.

**Note:** Not all eco PDU PE models support outlet level power management. Please see *Supported ATEN Devices*, page 6, and your User Manual for further details.

Click on a device in the side bar and its page appears with the Voltage, Current, Power, Power Dissipation information displayed at the PDU, Bank and Outlet level:

The screenshot shows the Power Control interface for device LSZH\_06\_A08\_A. The top bar displays the device name, IP address (127.0.0.194), and status (Online), along with ON, OFF, and Reboot buttons. The main content area is divided into three sections: Sensors, Banks, and Outlets.

**Sensors**

ID	Humidity	Temperature	Pressure
#1	N/A	27.78	N/A
#2	N/A	N/A	N/A
#3	42.02	22.63	N/A
#4	N/A	13.91	7.18

**Banks**

	Name	Voltage	Current	Power	Power Dissipation	
#1	Bank_1 (Outlet: 1 - 6)	215.25	2.12	456.33	13409.493	ON OFF Reboot
#2	Bank_2 (Outlet: 9 - 16)	215.25	2.74	589.785	13409.337	ON OFF Reboot

**Outlets**

	Name	Voltage	Current	Power	Power Dissipation	
#1	Outlet_1	215.25	0.15	32.2875	1676.1859	ON OFF Reboot
#2	Outlet_2	215.25	0.31	66.7275	1676.1881	ON OFF Reboot
#3	Outlet_3	215.25	0.19	40.8975	1676.1884	ON OFF Reboot
#4	Outlet_4	215.25	0.2	43.05	1676.192	ON OFF Reboot
#5	Outlet_5	215.25	0.49	105.4725	1676.1857	ON OFF Reboot
#6	Outlet_6	215.25	0.1	21.525	1676.1884	ON OFF Reboot
#7	Outlet_7	215.25	0.2	43.05	1676.185	ON OFF Reboot

The top bar on the page displays the PDU name, IP address, online status, and the ON, OFF and Reboot options to manually power manage the device.

### Sensors

This section is view only and provides status information about the sensors.

### Banks

Use the ON, OFF and Reboot options to manually power manage the banks.

### Outlet Status

Use the ON, OFF and Reboot options to manually power manage the individual outlet.

## Group Control

The *Group* tab allows you to perform simultaneous manual power management at the outlet level on data groups that you have already created.

- Note:**
1. See *Data Group*, page 89, for details about creating groups for power management control.
  2. Not all models support outlet level power management. Please see *Supported ATEN Devices*, page 6, and your User Manual for further details.

Click on a group in the side bar and its page appears, as below:

The screenshot shows the 'Power Control' web interface for the 'BUILTIN\_RACK' group. The top bar includes 'ON', 'OFF', and 'Reboot' buttons. The main area contains a table of outlets with columns for No., Name #, Outlet #, Path #, and power status. The sidebar on the left lists various groups like BUILTIN\_DEVICE, BUILTIN\_OUTLET, Device Group, Outlet Group, and Rack Group.

No.	Name #	Outlet #	Path #			
1	Outlet_1	1	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
2	Outlet_2	2	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
3	Outlet_3	3	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
4	Outlet_4	4	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
5	Outlet_5	5	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
6	Outlet_6	6	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
7	Outlet_7	7	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
8	Outlet_8	8	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
9	Outlet_9	9	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
10	Outlet_10	10	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
11	Outlet_11	11	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
12	Outlet_12	12	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
13	Outlet_13	13	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
14	Outlet_14	14	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
15	Outlet_15	15	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
16	Outlet_16	16	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E17_B	ON	OFF	Reboot
17	Outlet_1	1	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E06_A	ON	OFF	Reboot
18	Outlet_2	2	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E06_A	ON	OFF	Reboot
19	Outlet_3	3	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E06_A	ON	OFF	Reboot
20	Outlet_4	4	ATEN SvrBuilding A\Floor 9\Tech Room 5/R-7567LS2H_00_E06_A	ON	OFF	Reboot

The sidebar provides predefined groups that can be selected to manage outlets that are grouped together. Use ON, OFF and Reboot on the top bar to reboot outlet groups; or use the same power options listed next to the outlets in the main panel to manage the power of individual outlets.

## Analysis

The *Analysis* page allows you to create Power, Thermal and Billing reports to better understand energy use, environmental factors and costs associated with your data center.

### Generate

The *Generate* tab allows you to establish the parameters and schedule for the reports that you want to create. Select a report type in the sidebar and then click **Add Task** to begin configuring the report.



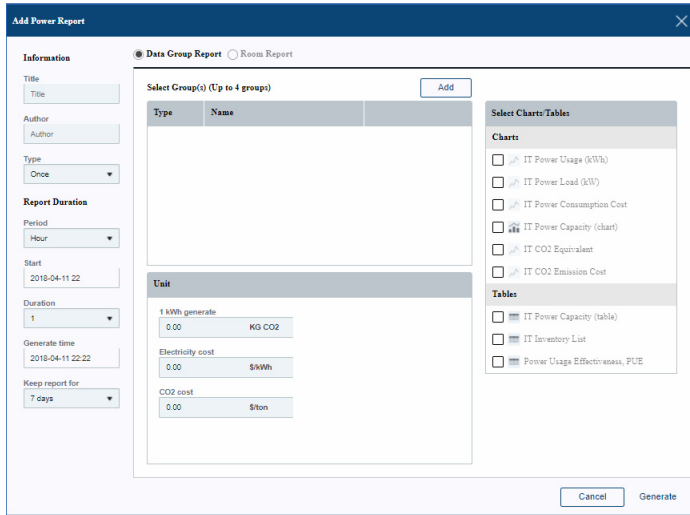
The Generate Report fields are explained in detail in the following table:

Field	Explanation
Menu	The menu provides three options to generate reports: <ul style="list-style-type: none"> <li>◆ <b>Power</b> – to create reports based on power usage.</li> <li>◆ <b>Thermal</b> – to create reports based on temperature.</li> <li>◆ <b>Billing</b> – to create reports based on costs.</li> </ul>
Add Task	Clicking <b>Add Task</b> opens a window that provides options to generate custom reports about your data center's energy and environmental usage.
Modify	Check boxes in the main panel to select tasks then click <b>Modify</b> to make changes to them.
Delete	Check boxes in the main panel to select tasks then click <b>Delete</b> to remove it from the list.
Stop	Click <b>Stop</b> if you want to stop a task that's in the process of being generated.

Field	Explanation
Generate Now	Select a task in the main panel by checking its box and then click <b>Generate now</b> to create the report. Once completed, the report will appear in the <i>Completed Reports</i> tab.

## Power / Thermal

After you click **Add Task** a window opens to configure the report parameters:



The *Power* and *Thermal* fields are explained in the following table:

Field	Explanation
Report Type	Use the radio buttons to select a report type: <ul style="list-style-type: none"> <li>◆ <b>Data Group Report</b>– to create a report based on groups of devices.</li> <li>◆ <b>Room</b> – to create a report based on all devices in a room.</li> </ul>
Information	Use the <i>Title</i> and <i>Author</i> fields to enter information about the custom report. Use the <i>Type</i> drop-down menu to select how often to generate a report: Once, Daily, Weekly, Monthly, or Yearly.
Report Duration	Allows you to generate the report based on a time frame. Enter the <i>Start / Generate</i> (when you want the report to begin/end), the <i>Period</i> (options are hour, day, week, month, or quarter) and the <i>Duration</i> (1–24), then use the <i>Keep Report For</i> drop-down menu to select the amount of time to pass before the report is deleted. Select <b>Permanent</b> to keep the report indefinitely.



Field	Explanation
Add	Click <b>Add</b> to add up to four device groups or rooms for which the report will be generated about.
Unit	When Data Group (Power reports only) is selected you need to configure these three parameters to generate customized reports related to your data center's energy costs.
Select Charts / Tables	Use the check boxes to select the type(s) of information you want to collect for the report. The more options that are selected the longer the report will take to generate.
Generate	After entering the parameters, click <b>Generate</b> to add the report to the list.

## Billing

After you click **Add Task** a window opens to configure the Billing parameters:

The *Billing* fields are explained in the following table:

Field	Explanation
Add	Click <b>Add</b> to add up to four device groups for which the billing report will be generated about.
Information	Use the <i>Title</i> and <i>Author</i> fields to enter information about the custom report. Use the <i>Type</i> drop-down menu to select how often to generate a report: <i>Once</i> , or <i>Monthly</i> .

Field	Explanation
Report Duration	Select the month to run the report and the time to generate the report. Use the <i>Keep Report For</i> drop-down menu to select the amount of time to pass before the report is deleted. Select <b>Permanent</b> to keep the report indefinitely.
Billing Rates	Use the radio button to select the type of rate: <ul style="list-style-type: none"><li>◆ <b>Single Rate</b> – to create a report based on a single dollar figure. Use the <i>Billing Type</i> drop-down menu to select:<ul style="list-style-type: none"><li>◆ Total: a report based on all rack devices.</li><li>◆ Rack: a report based per rack with a subtotals.</li></ul></li><li>◆ <b>Dual-Rate</b> – to create a report based on two different figures: Peak and Non-peak rates. Enter the time Peak rates start and the number of hours that the peak rate runs. Use the <i>Billing Type</i> drop-down menu to select:<ul style="list-style-type: none"><li>◆ Total: a report based on all rack devices.</li><li>◆ Rack: a report based per rack with a subtotals.</li></ul></li></ul>
Generate	After entering the parameters, click <b>Generate</b> to add the report to the list.

## Reports

The *Reports* tab allows you to view or save reports that you've created.

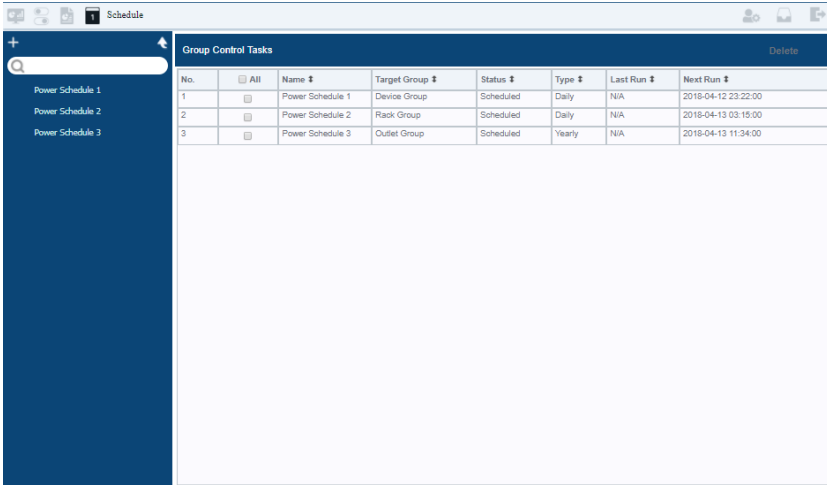
Select a report type in the sidebar, check the box of the report(s) you want to view or save, and click **Open** or **Save as** to respectively begin viewing the report in a new window (the browser's pop-up blocker must be disabled) or export the report as a PDF or Excel file.

The screenshot shows the 'Reports' tab in the software interface. The left sidebar has 'Power' selected, with 'Thermal' and 'Billing' options below it. The main area displays a table titled 'IT Power Report' with columns for No., checkboxes, Title, Author, Completed Date & Time, Keep Until, and Relative Folder. At the bottom right, there are 'Open' and 'Save As' buttons.

No.	<input type="checkbox"/>	All	Title	Author	Completed Date & Time	Keep Until	Relative Folder
1	<input type="checkbox"/>		Test-DailyReport_AS	S	2020-05-19 00:30:41	2020-05-26 00:30:41	dataReport158873441529011
2	<input type="checkbox"/>		heero-daily-report	Heero	2020-05-19 00:30:35	2020-05-26 00:30:35	dataReport158873435138252
3	<input type="checkbox"/>		Daily Report	daily	2020-05-19 00:30:34	2020-05-19 00:30:34	dataReport158873434851537
4	<input type="checkbox"/>		allDaily	1234	2020-05-19 00:30:28	2020-05-26 00:30:28	dataReport15887342885598
5	<input type="checkbox"/>		Test-DailyReport	S	2020-05-19 00:30:12	2020-05-26 00:30:12	dataReport158873412826933
6	<input type="checkbox"/>		test	Heero	2020-05-18 00:31:17	2020-05-25 00:31:17	dataReport1588787077783833
7	<input type="checkbox"/>		weekly report	Heero	2020-05-18 00:31:17	2020-05-25 00:31:17	dataReport1588787077238707
8	<input type="checkbox"/>		Test-DailyReport	S	2020-05-18 00:31:17	2020-05-25 00:31:17	dataReport1588787077117657
9	<input type="checkbox"/>		Weekly	weekly	2020-05-19 00:31:11	2020-05-19 00:31:11	dataReport158878707164948
10	<input type="checkbox"/>		test	Heero	2020-05-18 00:31:04	2020-05-25 00:31:04	dataReport1588787064669311
11	<input type="checkbox"/>		Daily Report	daily	2020-05-18 00:30:40	2020-06-18 00:30:40	dataReport1588787040669752

## Schedule

The *Schedule* page allows you to schedule group tasks to power on and power off outlets at regular intervals. The sidebar provides a list of scheduled tasks which can be selected to modify the settings.



In the sidebar, click the **+** icon and the *Group Control Task* window appears. Select the **Type** and different options appear to configure the schedule:

### Daily

Enter the task *Name*, Click **Browse** to choose a *Target Group*. Check **On Time** to enter a time for the outlet(s) to power on. Check **Off Time** to enter a time for the outlet(s) to power off. This task will run daily.

## Weekly

The screenshot shows the 'Add Group Control Task' dialog box. The 'Task Information' section has a 'Name' field containing 'Task 4'. The 'Type' is set to 'Weekly'. The 'Target Group' is 'Rack Group', and there is a 'Browse...' button. The 'Scheduling' section contains a table with columns for 'On Time' and 'Off Time' for each day of the week. All 'On Time' checkboxes are checked, and all 'Off Time' checkboxes are unchecked.

	<input type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Monday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Tuesday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Wednesday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Thursday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Friday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Saturday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Sunday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time

Enter the task *Name*. Click **Browse** to choose a *Target Group*. For each day of the week you want to run the task, check **On Time** to enter a time for the outlet(s) to power on, and check **Off Time** to enter a time for the outlet(s) to power off. This task will run on the days of the week that are selected.

## Yearly

The screenshot shows the 'Add Group Control Task' dialog box. The 'Task Information' section has a 'Name' field containing 'Task 4'. The 'Type' is set to 'Yearly'. The 'Target Group' is 'Rack Group', and there is a 'Browse...' button. The 'Scheduling' section has two tabs: 'Regular' and 'Exception'. The 'Regular' tab is active, showing a table with columns for 'On Time' and 'Off Time' for each day of the week. All 'On Time' checkboxes are checked, and all 'Off Time' checkboxes are unchecked.

	<input type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Monday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Tuesday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Wednesday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Thursday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Friday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Saturday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time
Sunday	<input checked="" type="checkbox"/>	On Time	<input type="checkbox"/>	Off Time

Enter the task *Name*. Click **Browse** to choose a *Target Group*. For each day of the week you want to run the task, check **On Time** to enter a time for the outlet(s) to power on, and check **Off Time** to enter a time for the outlet(s) to power off. This task will run on the days of the week that are selected. Use the **Exception** tab to add dates and times when the schedule needs to change.

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# Chapter 5 User

## Overview

When you select *User* from the toolbar the **Accounts** screen appears. eco DC supports two types of user accounts: Administrator and User. There are four sub-toolbar selections available from the User's tab: *Accounts*, *Authentication Services*, and *Sessions*.

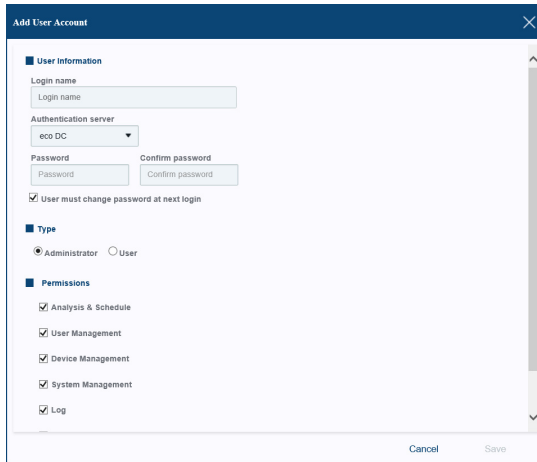
The screenshot displays the ATEN eco DC Accounts screen. The interface includes a top navigation bar with the ATEN logo and 'eco DC™' text. Below the navigation bar, there are icons for 'Accounts' and 'User'. The main content area is titled 'User Information' and features a search bar with the placeholder text 'Enter keyword'. A 'Delete' button is located in the top right corner of the main area. The central part of the screen is a table listing user accounts. The table has columns for 'No.', 'Name', 'User Type', 'Status', 'Group Name', and 'Authentication Server'. The 'Name' column includes a checkbox for selection. The table lists 24 rows of user accounts, with the first 23 rows being Administrators and the last row being a User. The 'Group Name' column shows 'Group User' for some entries. The 'Authentication Server' column consistently shows 'eco.DC'. A 'Lock' button is located in the bottom right corner of the main area. The footer of the screen contains the text 'ATEN International Co., Ltd. All right reserved.'

No.	<input type="checkbox"/> All	Name	User Type	Status	Group Name	Authentication Server
1	<input type="checkbox"/>	administrator	Administrator			eco.DC
2	<input type="checkbox"/>	0	Administrator			eco.DC
3	<input type="checkbox"/>	1	Administrator		Group User	eco.DC
4	<input type="checkbox"/>	2	Administrator			eco.DC
5	<input type="checkbox"/>	3	Administrator			eco.DC
6	<input type="checkbox"/>	4	Administrator			eco.DC
7	<input type="checkbox"/>	5	Administrator			eco.DC
8	<input type="checkbox"/>	6	Administrator			eco.DC
9	<input type="checkbox"/>	7	Administrator			eco.DC
10	<input type="checkbox"/>	8	Administrator			eco.DC
11	<input type="checkbox"/>	9	Administrator			eco.DC
12	<input type="checkbox"/>	10	Administrator			eco.DC
13	<input type="checkbox"/>	11	Administrator			eco.DC
14	<input type="checkbox"/>	12	Administrator			eco.DC
15	<input type="checkbox"/>	13	Administrator			eco.DC
16	<input type="checkbox"/>	16	Administrator			eco.DC
17	<input type="checkbox"/>	17	Administrator			eco.DC
18	<input type="checkbox"/>	18	Administrator			eco.DC
19	<input type="checkbox"/>	22	User			eco.DC
20	<input type="checkbox"/>	33	User			eco.DC
21	<input type="checkbox"/>	234	Administrator			eco.DC
22	<input type="checkbox"/>	1234	User		Group User	eco.DC
...		1234567890123456789012...	...			...

## Accounts

To add an account, do the following:

1. Click **+**. The *Add New User Account* page appears:



2. In the *User Information* section, key in a Login name and Password, and select the Authentication Server. This screen is the same as when the account is selected from the sidebar.
3. In the *Type* section, select the user type. Options are: *Administrator* and *User*.

---

**Note:** Administrators have full access rights by default; users have, by default, no access rights apart from “View Only” where they only have access to the Energy toolbar. If they are assigned group permission, on the other hand, they can access almost everything (see *Selecting an Account*, page 61).

---

4. In the *Access Permissions* section, set the permissions of Administrator accounts. To set the device-by-device permissions for an account, open the user’s page from the sidebar and select the Device Access tab.
5. Click *Save* to save your settings.

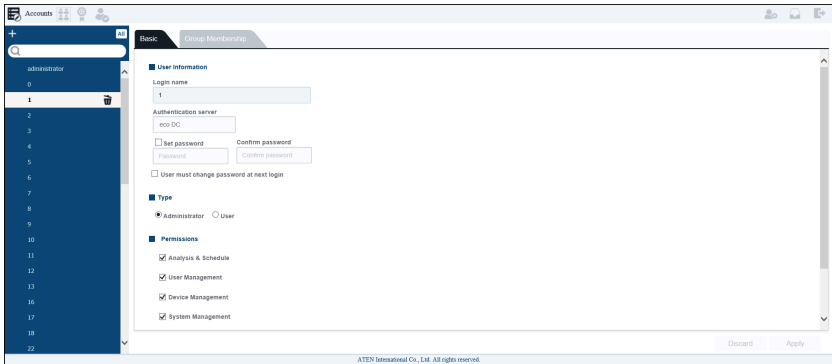


## Selecting an Account

The *Basic*, *Group Membership* and *Device Access* tabs appears when you select a user account from the Menu. Use these tabs to edit this account's permission to view and manage devices and groups. The *Device Access* tab do not appear for Administrator accounts as they have full permissions.

### ◆ Basic

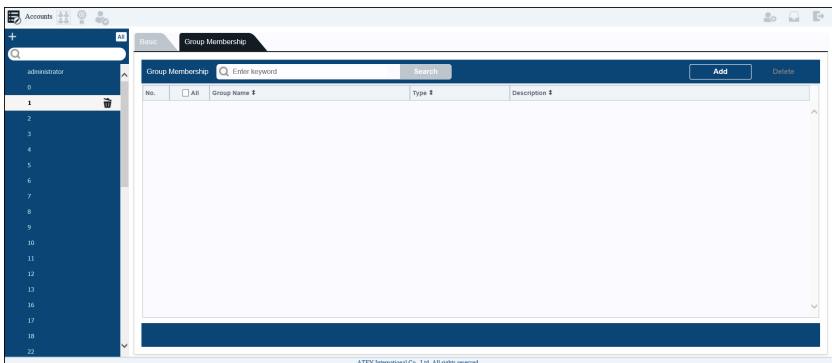
This tab lets you configure the user information, type and permission. An example is shown below:



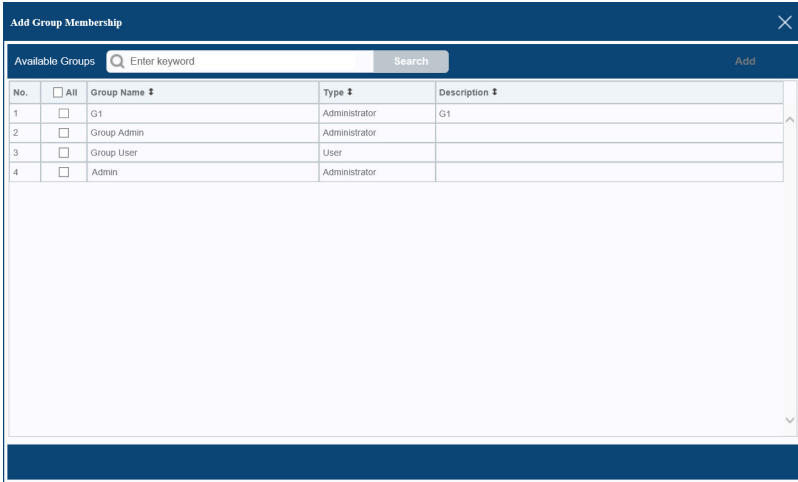
Click **Apply** if you wish to apply the changes you've made.

### ◆ Group Membership

This tab displays the group(s) the user account belongs to. An example is shown:

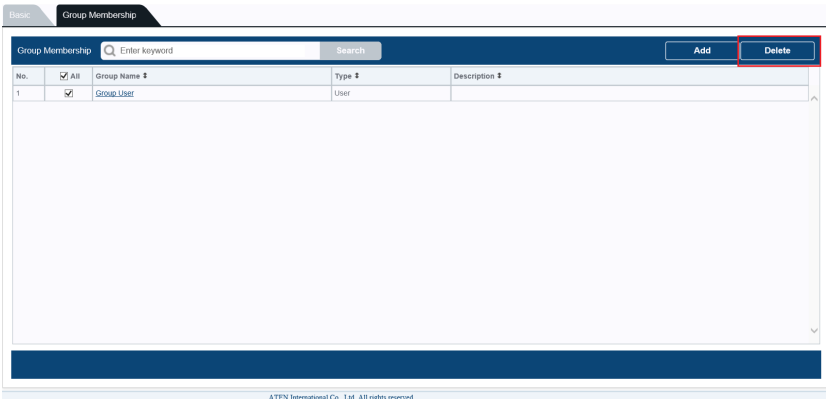


If you wish to add this user to a particular group, click **Add** on the top right corner. A list of available groups will be displayed in the dialog box as shown in the example below:



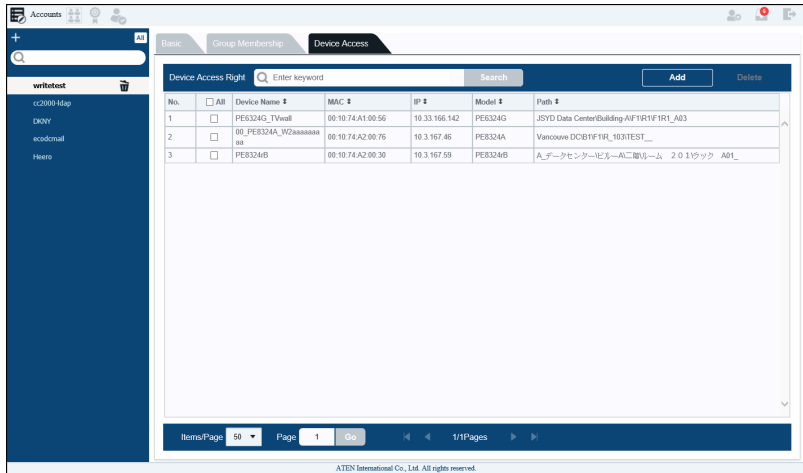
Check the box(es) you wish to add the user account to and click **Add**.

If you wish to delete the user from the group, check the box on the Group Membership tab and click **Delete**.



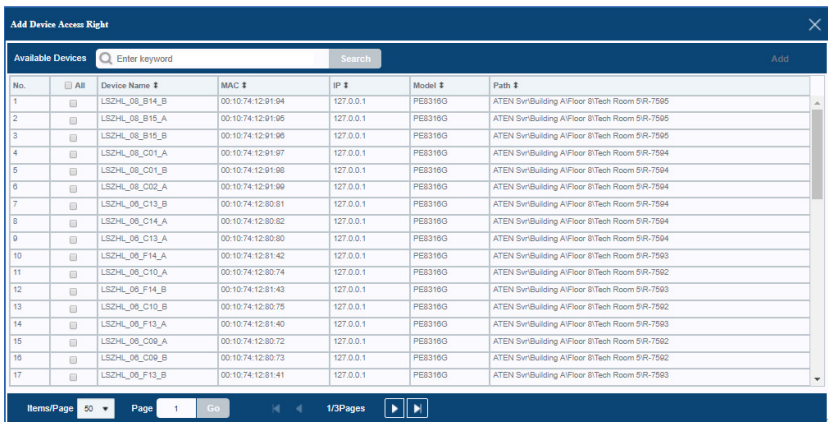
## ◆ Device Access

This tab displays the device(s) the user account has access to. An example is shown:



To add device access for the account individually, do the following:

1. Click **Add** on the top right corner. The *Add Device Access Rights* dialog window appears:



2. In the *All* column, check the boxes of the devices you want to allow the user to access. When the user logs in, these devices will appear in the sidebar.

---

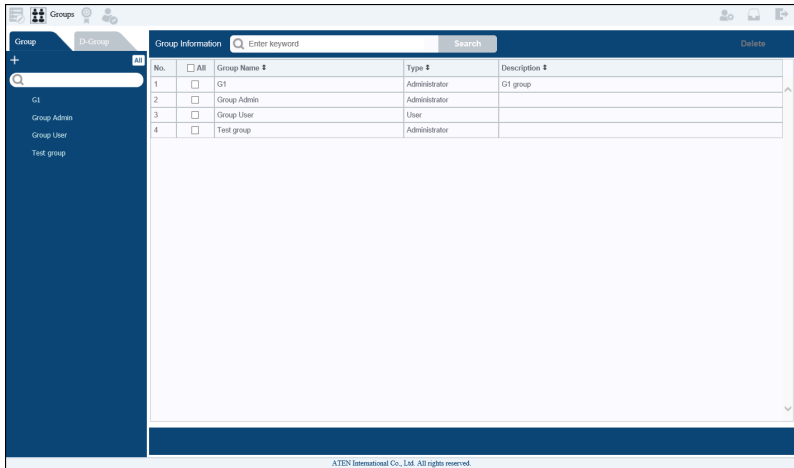
**Note:**

- ◆ If a user is given more access rights via Group Membership, the accessible devices will appear in **Energy > Power Control > Device** tab.
  - ◆ Administrators have full access rights by default; users have no device or group access rights by default. User accounts only have access to the Energy tab with view status and power control options.
- 

3. Click **Add**. When you are finished, click **X**.
4. After adding devices they appear listed on the Device Access tab.

## Groups

This page displays the user groups you have previously created.



In the menu, you can also choose the “Domain Group” tab to show the groups according to the domain.

## Add User Group

To add a user group, click the + icon above the menu:

The 'Add Group' dialog box is shown with the following fields and options:

- Group Information**
  - Name:
  - Description:
- Type**
  - Administrator  User
- Permissions**
  - Analysis & Schedule
  - User Management
  - Device Management
  - System Management
  - Log
  - View Only

Buttons: Cancel, Save

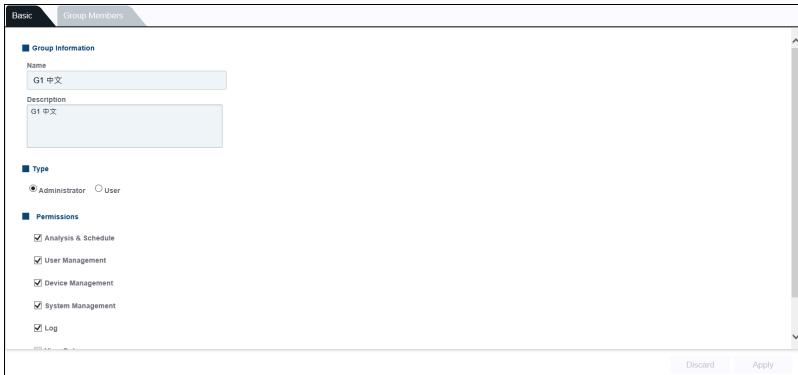
Enter the appropriate information and click **Save**.

## User Group

2 tabs will be shown (Groups and Group Members) in the interactive display panel after clicking a user group in the menu.

### ◆ Basic

You can configure the group's information, type and permissions in this tab. An example is shown:

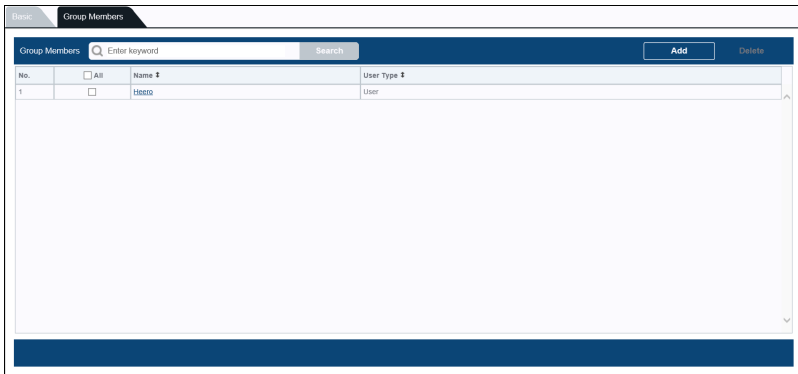


The screenshot shows the 'Basic' tab of the 'Group Members' configuration page. It contains three main sections: 'Group Information', 'Type', and 'Permissions'. The 'Group Information' section has input fields for 'Name' (containing 'G1 中文') and 'Description' (containing 'G1 中文'). The 'Type' section has radio buttons for 'Administrator' (selected) and 'User'. The 'Permissions' section has checkboxes for 'Analysis & Schedule', 'User Management', 'Device Management', 'System Management', and 'Log', all of which are checked. At the bottom right, there are 'Discard' and 'Apply' buttons.

Click **Apply** if you wish to apply the changes you've made.

### ◆ Group Members

This tab displays all the group members of this group. An example is shown:

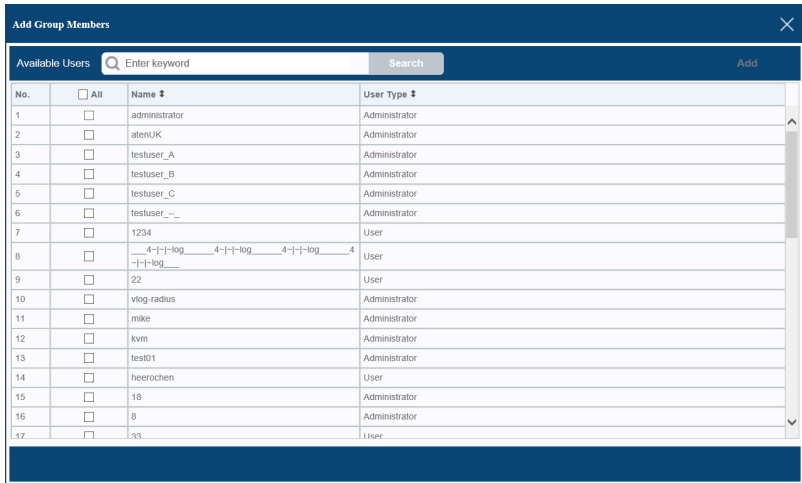


The screenshot shows the 'Group Members' tab of the configuration page. It features a search bar with the text 'Enter keyword' and a 'Search' button. Below the search bar are 'Add' and 'Delete' buttons. A table displays the group members with columns for 'No.', 'All', 'Name', and 'User Type'. The table contains one row with the number '1', an unchecked checkbox, the name 'tseto', and the user type 'user'.

No.	All	Name	User Type
1	<input type="checkbox"/>	tseto	user

To delete the user from the group, check the box on the Group Members page and click **Delete**.

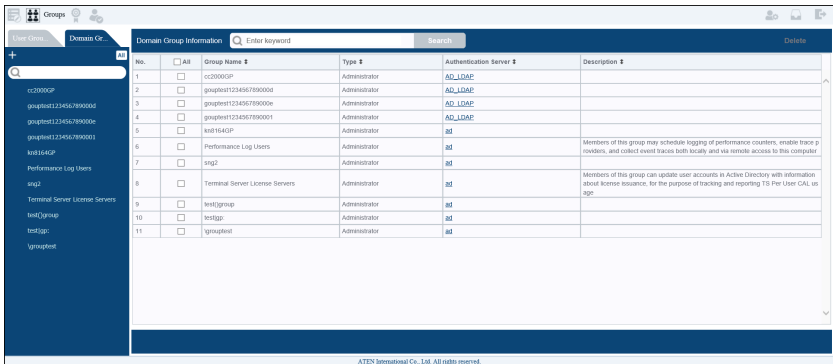
If you wish to add group members, click **Add** for the dialog window shown below:



Check the box of the users you wish to add and click **Add**.

## Domain Group

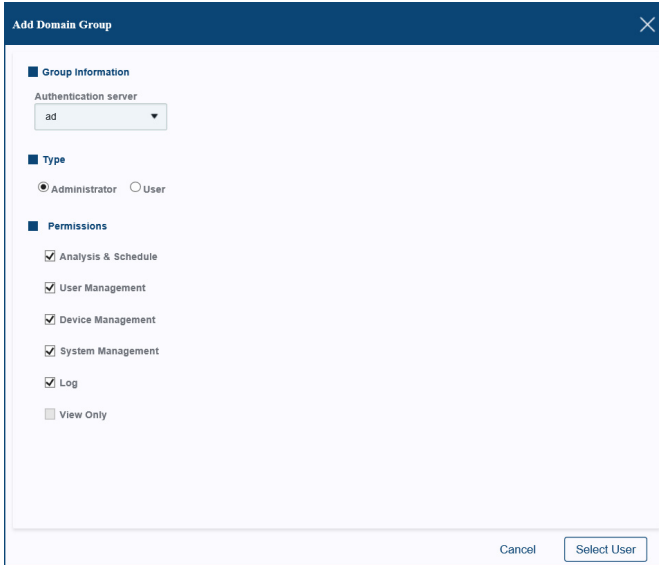
The page below is an example of the Domain Group:



To delete a domain group, check the group's box and click **Delete**.

## ◆ Add Domain Group

To add a domain group, click the + icon for the dialog window below:

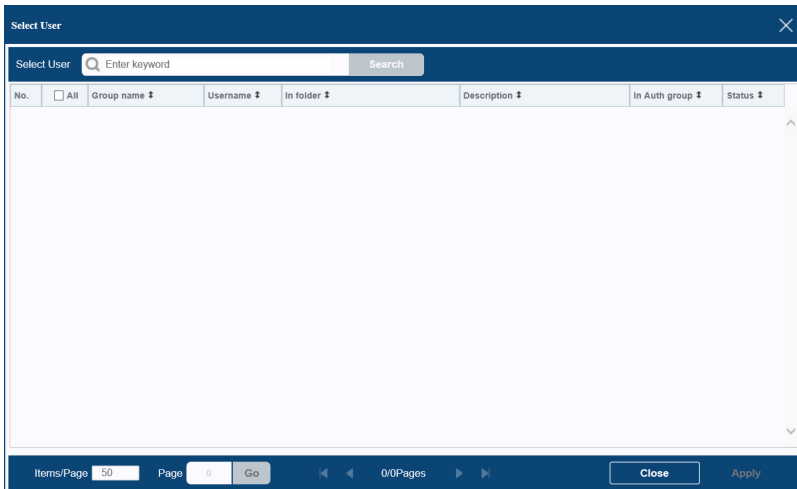


The 'Add Domain Group' dialog window is shown with the following configuration:

- Group Information:** Authentication server is set to 'ad'.
- Type:** 'Administrator' is selected with a radio button.
- Permissions:** 'Analysis & Schedule', 'User Management', 'Device Management', 'System Management', and 'Log' are checked. 'View Only' is unchecked.

Buttons at the bottom right: 'Cancel' and 'Select User'.

Select the Authentication Server, check/uncheck the group's type and permissions and click **Select User**.



The 'Select User' dialog window displays a search interface with the following elements:

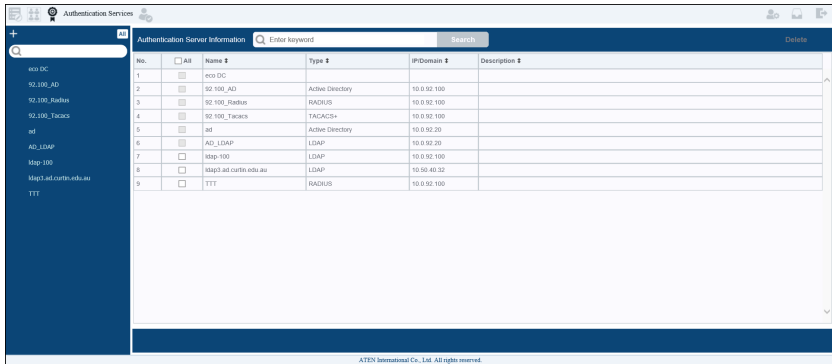
- Search bar: 'Enter keyword' with a 'Search' button.
- Table with columns: No.,  All, Group name, Username, In folder, Description, In Auth group, Status.
- Footer: 'Items/Page' set to 50, 'Page' navigation, 'Go' button, '0/0 Pages', 'Close' button, and 'Apply' button.

Select the user you wish to add by checking the box and click **Apply**.



## Authentication Services

Clicking the *Authentication Services* sub-toolbar brings you to the information list. An example is shown:



Clicking one of the servers in the menu allows you to configure the external authentication server's information or the password policy of the eco DC. By default, the **eco DC** authentication service appears in the menu and cannot be deleted.

Click **eco DC** in the menu and the *Password Policy* page appears:

**■ Password Policy**

Minimum username length (1 ~ 64) Minimum password length (1 ~ 32)

Password expires after (1 ~ 999) Enforce password history (0 ~ 9)

days

Passwords must contain uppercase letters.

Passwords must contain lowercase letters.

Passwords must contain numbers.

Passwords must contain symbols.

Minimum username length (1-64)	Enter the minimum number of characters required for usernames.
Minimum password length (1-32)	Enter the minimum number of alpha/numeric characters required for passwords.
Password expires after (1-999)	Enter the number of days that can pass before users are forced to create a new password.

Enforce password history (0-9)	Enter the number of unique passwords that must be used before an old password can be used again.
Password must contain upper letters	Check this box to require users to have at least one uppercase letter in their password.
Password must contain lower letters	Check this box to require users to have at least one lowercase letter in their password.
Password must contain numbers	Check this box to require users to have at least one number in their password.
Password must contain symbols	Check this box to require users to have at least one symbol (!, @, #, \$, %, ^, &, *) in their password.

## External Authentication

Click any of the external authentication servers in the menu and the configuration page for the server will be shown in the interactive display panel. The page corresponds to the page shown in the *Add Authentication Server* page below.

To add an authentication server, do the following:

1. Click **+**. The Add New Authentication Server page appears:

2. In the *Basic Information* section, key in a Server name and Description, and select a **Server Type**:

◆ *Active Directory*

The screenshot shows the 'Active Directory Connection Settings' dialog box. It has a 'Connect' button at the top right. Below it are three input fields: 'IP/Domain' (containing 'IP/Domain'), 'Port (1 - 65535)' (containing '389'), and 'Base DN'. Under the 'SSL Mode' section, the 'Do not use SSL' radio button is selected. Under the 'Browsing Method' section, the 'Browse with user credentials' radio button is selected, and there are 'Username' and 'Password' input fields below it. At the bottom, there is an option 'User must input credentials when browsing' which is not selected.

Fill in the **IP address**, **Port** and **Base DN**.

Select *Use SSL in Trust All Mode* or *Do not use SSL*.

Select *Browse with user credentials* and enter the **Username** and **Password**; or *User must input credentials when browsing*.

◆ **LDAP**

The screenshot shows the 'LDAP Connection Settings' dialog box. It has a 'Connect' button at the top right. Below it are three input fields: 'IP/Domain' (containing 'IP/Domain'), 'Port (1 - 65535)' (containing '389'), and 'Base DN'. Under the 'SSL Mode' section, the 'Do not use SSL' radio button is selected. Under the 'LDAP User Schema' section, there are three input fields: 'Key attribute' (containing 'Key attribute'), 'Object class' (containing 'Object class'), and 'Full name attribute' (containing 'Full name attribute'). Under the 'Browsing Method' section, the 'Browse with user credentials' radio button is selected, and there are 'User RDN' (containing 'User RDN'), 'Username', and 'Password' input fields below it. At the bottom, there is an option 'User must input credentials when browsing' which is not selected.

Fill in the **IP/Domain**, **Port** and **Base DN**.

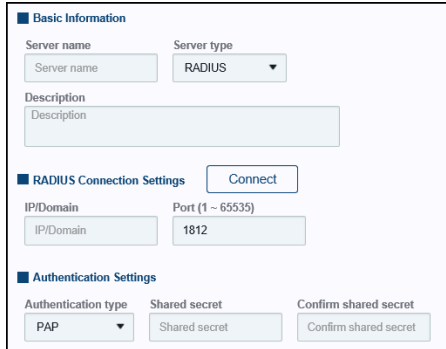
Select *Use SSL in Trust All Mode* or *Do not use SSL*.

Fill in the **Key attribute**, **Object class**, **Full name attribute**.

Fill the **User RDN**.

Select *Browse with user credentials* and enter the **Username** and **Password**; or *User must input credentials when browsing*.

## ◆ RADIUS



■ Basic Information

Server name  Server type

Description

■ RADIUS Connection Settings

IP/Domain  Port (1 ~ 65535)

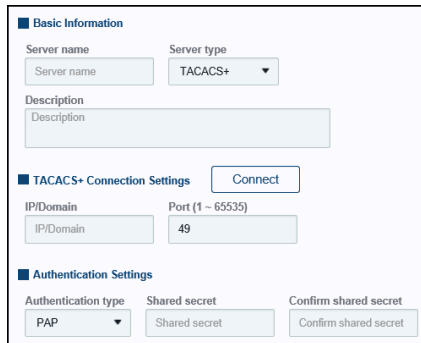
■ Authentication Settings

Authentication type  Shared secret  Confirm shared secret

Fill in the **IP/Domain**, and **Port**.

Select the *Authentication type* and fill in the **Shared secret** and **Confirmed shared secret**.

## ◆ TACASC+



■ Basic Information

Server name  Server type

Description

■ TACACS+ Connection Settings

IP/Domain  Port (1 ~ 65535)

■ Authentication Settings

Authentication type  Shared secret  Confirm shared secret

Fill in the **IP/Domain**, and **Port**.

Select the *Authentication type* and fill in the **Shared secret** and **Confirmed shared secret**.

3. Click **Save** to save your settings.

## Sessions

The *Session* page lets the administrator see at a glance which users are currently logged into the eco DC, and provides information about each of their sessions.

No.	<input type="checkbox"/> All	Username	Client IP	Login Time	Idle Time
1	<input type="checkbox"/>	administrator	10.3.41.138	2020/06/03 10:20:36	00:00:01

- Note:**
1. The Session page isn't available for ordinary users.
  2. The sort order of the information displayed can be changed by clicking the column headings.

The meanings of the headings at the top of the page are fairly straightforward. The *Client IP* heading refers to the IP address that the user has logged in from; the *Login Time* tells you when the user logged in, and the *Idle* heading lists how long the account has been inactive.

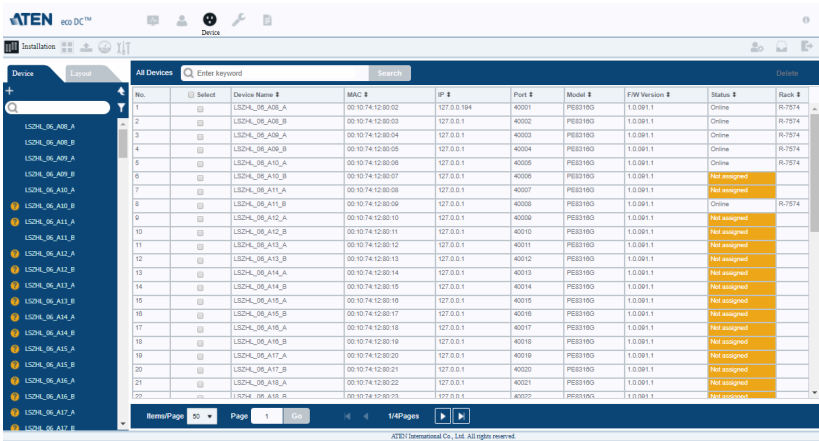
This page also gives the administrator the option of forcing a user logout by selecting the username and clicking **End Session** at the top right corner of the main panel.

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# Chapter 6 Device

## Overview

The *Device* tab allows you to configure each device and define your data center by *Data Center*, *Building*, *Floor*, *Room*, and *Rack*. You can also define detailed parameters, such as Device Threshold Settings, at the PDU and outlet level and eco Sensors settings. See the following sections for more detailed information.



The screenshot displays the ATEN eco DC™ Device management interface. The main area shows a table of devices with columns for No., Select, Device Name #, MAC #, IP #, Part #, Model #, FW Version #, Status #, and Rack #. The table lists 22 devices, with some marked as 'Not assigned' and others as 'Online'. The interface includes a search bar, a sidebar with a tree view of device categories, and a footer with 'ATEN International Co., Ltd. All rights reserved.'

No.	Select	Device Name #	MAC #	IP #	Part #	Model #	FW Version #	Status #	Rack #
11	<input type="checkbox"/>	LED4_SE_A08_A	00:10:74:12:80:02	127.0.0.184	40001	PE03190	1.0.091.1	Online	R-7574
2	<input type="checkbox"/>	LED4_SE_A08_B	00:10:74:12:80:03	127.0.0.1	40002	PE03190	1.0.091.1	Online	R-7574
3	<input type="checkbox"/>	LED4_SE_A09_A	00:10:74:12:80:04	127.0.0.1	40003	PE03190	1.0.091.1	Online	R-7574
4	<input type="checkbox"/>	LED4_SE_A09_B	00:10:74:12:80:05	127.0.0.1	40004	PE03190	1.0.091.1	Online	R-7574
5	<input type="checkbox"/>	LED4_SE_A10_A	00:10:74:12:80:06	127.0.0.1	40005	PE03190	1.0.091.1	Online	R-7574
6	<input type="checkbox"/>	LED4_SE_A10_B	00:10:74:12:80:07	127.0.0.1	40006	PE03190	1.0.091.1	Not assigned	
7	<input type="checkbox"/>	LED4_SE_A11_A	00:10:74:12:80:08	127.0.0.1	40007	PE03190	1.0.091.1	Not assigned	
8	<input type="checkbox"/>	LED4_SE_A11_B	00:10:74:12:80:09	127.0.0.1	40008	PE03190	1.0.091.1	Online	R-7574
9	<input type="checkbox"/>	LED4_SE_A12_A	00:10:74:12:80:10	127.0.0.1	40009	PE03190	1.0.091.1	Not assigned	
10	<input type="checkbox"/>	LED4_SE_A12_B	00:10:74:12:80:11	127.0.0.1	40010	PE03190	1.0.091.1	Not assigned	
11	<input type="checkbox"/>	LED4_SE_A13_A	00:10:74:12:80:12	127.0.0.1	40011	PE03190	1.0.091.1	Not assigned	
12	<input type="checkbox"/>	LED4_SE_A13_B	00:10:74:12:80:13	127.0.0.1	40012	PE03190	1.0.091.1	Not assigned	
13	<input type="checkbox"/>	LED4_SE_A14_A	00:10:74:12:80:14	127.0.0.1	40013	PE03190	1.0.091.1	Not assigned	
14	<input type="checkbox"/>	LED4_SE_A14_B	00:10:74:12:80:15	127.0.0.1	40014	PE03190	1.0.091.1	Not assigned	
15	<input type="checkbox"/>	LED4_SE_A15_A	00:10:74:12:80:16	127.0.0.1	40015	PE03190	1.0.091.1	Not assigned	
16	<input type="checkbox"/>	LED4_SE_A15_B	00:10:74:12:80:17	127.0.0.1	40016	PE03190	1.0.091.1	Not assigned	
17	<input type="checkbox"/>	LED4_SE_A16_A	00:10:74:12:80:18	127.0.0.1	40017	PE03190	1.0.091.1	Not assigned	
18	<input type="checkbox"/>	LED4_SE_A16_B	00:10:74:12:80:19	127.0.0.1	40018	PE03190	1.0.091.1	Not assigned	
19	<input type="checkbox"/>	LED4_SE_A17_A	00:10:74:12:80:20	127.0.0.1	40019	PE03190	1.0.091.1	Not assigned	
20	<input type="checkbox"/>	LED4_SE_A17_B	00:10:74:12:80:21	127.0.0.1	40020	PE03190	1.0.091.1	Not assigned	
21	<input type="checkbox"/>	LED4_SE_A18_A	00:10:74:12:80:22	127.0.0.1	40021	PE03190	1.0.091.1	Not assigned	
22	<input type="checkbox"/>	LED4_SE_A18_B	00:10:74:12:80:23	127.0.0.1	40022	PE03190	1.0.091.1	Not assigned	

- Note:**
1. At least one rack must be installed and defined for eco DC to work.
  2. Not all functions (such as outlet level monitoring) are supported by all models. Please see *Supported ATEN Devices*, page 6, and your eco PDU User Manual for details





## Devices

The *Devices* tab lists all the PDUs in your data center. You can select devices to configure the settings by selecting them in the sidebar, or by double-clicking the devices in the main panel. When a device is selected, its first tab appears:

### Device

The screenshot shows the configuration page for a device. At the top, there are five tabs: Device, Bank, Outlet, Sensor, and POP. The 'Device' tab is selected. Below the tabs, there are several sections:

- Device Info:** Contains fields for Name (LSZH\_08\_408\_A), IP/Domain (127.0.0.194), Model (PE80100), and Rack (R-7574).
- SNMP Agent Settings:** Includes Port (1 - 62535) set to 40001, Timeout (100 - 5000) set to 500 ms, and Retry (1 - 5) set to 2. It also has a dropdown for SNMP version (v1) and a text field for Write community (administrator).
- Threshold Settings:** Has a checkbox for 'Apply to same Model'. It contains four rows of min-max settings:
  - Aggregate current (min - max): A, 35.0, A (0.0 - 36.0)
  - Voltage (min - max): 210.1, V, 220.0, V (90.0 - 260.0)
  - Aggregate power (min - max): W, 0000.0, W (0.0 - 9999.9)
  - Aggregate power dissipation (min - max): kWh, 00000.0, kWh (0.0 - 99999.0)
- Sensor Location Type:** Has four dropdown menus for Sensor 1 (Intake), Sensor 2 (Intake), Sensor 3 (Exhaust), and Sensor 4 (Floor).
- Door Sensor Type:** Has a dropdown menu for Door sensor 1 (Inductive Proximity (EA1441)).

At the bottom right, there are 'Discard' and 'Apply' buttons.

Device Info	This section displays the <i>Name</i> , <i>IP/Domain</i> , <i>Model</i> and <i>Rack</i> information for configuration.
SNMP Agent Settings	Configure the SNMP Agent settings here.
Threshold	Set the device threshold settings (min.–max), using the parameters provided, for: <ul style="list-style-type: none"> <li>◆ Aggregate Current</li> <li>◆ Voltage</li> <li>◆ Aggregate Power</li> <li>◆ Aggregate Power Dissipation</li> </ul> <p>Note: For these settings to appear click the <b>Advanced Settings</b> radio button.</p>
Sensor Location Type	Select the sensors' locations from the drop-down menus.
Door Sensor Type	Select the door sensor type from the drop-down menu.
Apply	Click <b>Apply</b> to save the settings.

## Bank

**■ Device Info**

Name:  IP/Domain:  Model:  Rack:

**■ Threshold Settings**  Apply to all Banks

Banks:  Bank name:

Current (min - max):  A -  A (0.0 ~ 18.0)

Voltage (min - max):  V -  V (90.0 ~ 260.0)

Power (min - max):  W -  W (0.0 ~ 9999.9)

Power dissipation (min - max):  kWh -  kWh (0.0 ~ 99999.0)

<b>Device Info</b>	This section displays the device <i>Name</i> , <i>IP/Domain</i> , <i>Model</i> and <i>Rack</i> information.
<b>Threshold</b>	<p>Enter the bank <i>Name</i>, and use the drop-down menu to configure multiple banks individually, or check <i>Apply to all banks</i> to configure all banks with the same settings. Set the outlet threshold settings (min.–max), using the parameters provided, for:</p> <ul style="list-style-type: none"> <li>◆ Current</li> <li>◆ Voltage</li> <li>◆ Power</li> <li>◆ Power Dissipation</li> </ul> <p><b>Note:</b> Depending on your device, not all these options may be available.</p>
<b>Apply</b>	Click <b>Apply</b> to save the settings.

## Outlet

Device Info	This section displays the device <i>Name</i> , <i>IP/Domain</i> , <i>Model</i> and <i>Rack</i> information.
Threshold	Use the Outlets drop-down menu to select the outlet to configure, or use Apply to all outlets to configure the same settings for all outlets. Set the outlet threshold settings (min.–max), using the parameters provided, for: <ul style="list-style-type: none"> <li>◆ Aggregate Current</li> <li>◆ Voltage</li> <li>◆ Aggregate Power</li> <li>◆ Aggregate Power Dissipation</li> <li>◆ Select one of the three choices for the <i>Shutdown Method</i> from the drop-down menu – see <i>Shutdown Methods</i>, page 79, for details.</li> <li>◆ Set MAC address and Delay Time On/Off for the selected method.</li> </ul>
Apply	Click <b>Apply</b> to save the settings.

### Shutdown Methods

The three available shutdown methods are explained in detail below:

- ◆ **Kill the Power** – If this option is selected, the device waits for the amount time set in the *Power Off Delay* field, and then turns the Outlet's power Off. Turning the power off performs a cold (non-safe) shutdown.
- ◆ **Wake on LAN** – This is a Safe Shutdown and Restart option. If this is selected, when an Outlet is turned Off, the device first sends a message to the computer telling it to prepare for a shutdown; it then waits for the

amount time set in the *Power Off Delay field* to give the OS time to close down before the computer is powered down to standby mode.

Likewise, when the Outlet is turned On, the device waits for the amount time set in the *Power On Delay field*, then sends an Ethernet message to the computer connected to the Outlet telling the computer to turn itself On.

---

**Note:** For Safe Shutdown and Restart, the computer must be running Windows (Windows 98 or higher), and the *Safe Shutdown* program (available by download from our website), must be installed and running on the computer.

---

- ◆ **System after AC Back** – This is a Safe Shutdown and Restart option. If this is selected, when an Outlet is turned Off, the Device first sends a message to the computer telling it to prepare for a shutdown; it then waits for the amount time set in the *Power Off Delay field* to give the OS time to close down before the computer is powered down.

When the Outlet is turned On, the device waits for the amount time set in the *Power On Delay field*, then sends power to the server. When the server receives the power, it turns itself on.

---

**Note:** For Safe Shutdown and Reboot, the computer must be running Windows (Windows 98 or higher), and the *Safe Shutdown* program (available by download from our website), must be installed and running on the computer.

---

## Sensor

■ **Device Info**

Name	IP/Domain	Model	Rack
LSZHL_06_A08_A	127.0.0.194	PE8318G	R-7574

■ **Threshold Settings**  Apply to same Model

Sensor 1

Temperature (min - max):	-19.9 °C	-	59.9 °C	(-20.0 ~ 60.0)
Humidity (min - max):	15.1 %	-	94.9 %	(15.0 ~ 95.0)
Pressure (min - max):	-249.0 Pa	-	249.0 Pa	(-250.0 ~ 250.0)

Sensor 2

Temperature (min - max):	-19.9 °C	-	59.9 °C	(-20.0 ~ 60.0)
Humidity (min - max):	15.1 %	-	94.9 %	(15.0 ~ 95.0)
Pressure (min - max):	-249.0 Pa	-	249.0 Pa	(-250.0 ~ 250.0)

Sensor 3

Temperature (min - max):	-19.9 °C	-	59.9 °C	(-20.0 ~ 60.0)
Humidity (min - max):	15.1 %	-	94.9 %	(15.0 ~ 95.0)
Pressure (min - max):	-249.0 Pa	-	249.0 Pa	(-250.0 ~ 250.0)

Sensor 4

Temperature (min - max):	-19.9 °C	-	59.9 °C	(-20.0 ~ 60.0)
Humidity (min - max):	15.1 %	-	94.9 %	(15.0 ~ 95.0)
Pressure (min - max):	-249.0 Pa	-	249.0 Pa	(-250.0 ~ 250.0)

Discard    Apply

Device Info	This section displays the device <i>Name</i> , <i>IP/Domain</i> , <i>Model</i> and <i>Rack</i> information for configuration.
Threshold Settings	This section provides the threshold settings for Sensors 1-4. Check <i>Apply to same Model</i> to use the same settings for all sensors connected to the same PDU model as the one you are configuring. Set the sensor threshold settings (min.–max), using the parameters provided, for: <ul style="list-style-type: none"> <li>◆ Temperature</li> <li>◆ Humidity</li> <li>◆ Pressure</li> </ul>
Apply	Click <b>Apply</b> to save the settings.

## POP

Depending on the ATEN PDU model, this tab may or may not appear, and different options will be available. Please refer to the user manual of the ATEN PDU selected for instructions on the available options.

■ **Device Info**

Name:  IP/Domain:  Model:  Rack:

■ **POP (Proactive Overload Protection) Settings**

Enable Outlet POP

Enable Bank POP LIFO Mode

Enable Bank POP Priority Mode

Bank POP Priority List

Bank 1	
Priority	Outlet
1	Outlet-1 ▼
2	Outlet-2 ▼
3	Outlet-3 ▼
4	Outlet-4 ▼
5	Outlet-5 ▼
6	Outlet-6 ▼
7	Outlet-7 ▼
8	Outlet-8 ▼

Device Info	This section displays the device <i>Name</i> , <i>IP/Domain</i> , <i>Model</i> and <i>Rack</i> information for configuration.
POP (Proactive Overload Protection) Settings	This section provides the settings to configure Proactive Overload Protection for outlets. Check the <i>Enable POP modes</i> to use these feature. See the user manual of the selected PDU for details of the POP features and how to configure the settings.
Apply	Click <b>Apply</b> to save the settings.

## UPS

If you choose a UPS device, this tab will appear.

**Device Info**

Name: ups-91.22    IP/Domain: 10.0.91.22    Model: OL1000LV    Rack: R-7588    UPS F/W version: VESFW91574.04

**SNMP Agent Settings**

Port (1 - 65535): 161    Timeout (100 - 5000) ms: 200    Retry (1 - 9): 3

SNMP version: v3    Username: user01

Security level: Auth.Priv

Auth protocol: MD5     Set auth password    Auth password:

Privacy protocol: DES     Set privacy password    Privacy password:

**UPS Rated Information**

Rated VA (VA)	Rated output voltage (V)	Rated output current (A)	Rated output frequency (Hz)	Rated battery voltage (V)
1000.0	110.0	9.0	60.0	24.0

**Alarm Control**

On     Off

Device Info	This section displays the device <i>Name</i> , <i>IP</i> , <i>Model</i> , <i>Rack</i> and <i>UPS F/W version</i> information.
SNMP Agent Settings	For fields that can be entered, enter a parameter between the specified range. For fields that have drop-down menu, select from the available options.
Apply	Click <b>Apply</b> to save the settings.

## Battery

The battery tab allows you to do battery self-test for the UPS.

**Device Info**

Name: ups-91.22    IP/Domain: 10.0.91.22    Model: OL1000LV    Rack: R-7588

**Battery Self-test**

Battery test type:

10-second self-test

Deep discharge test

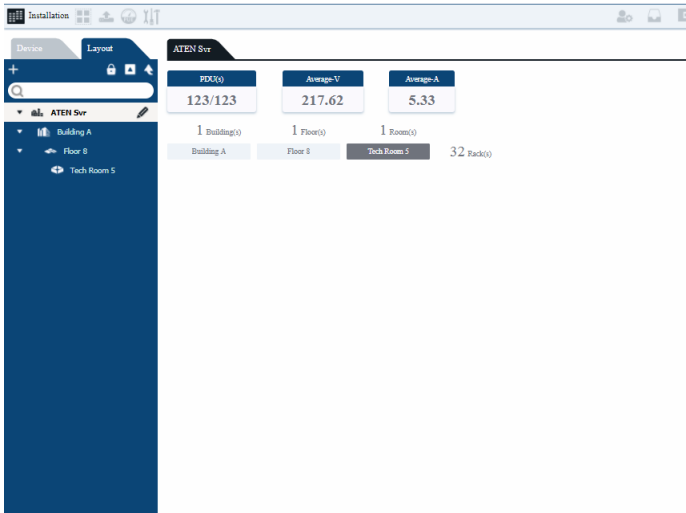
Minute self-test    1    Min(s)

Device Info	This section displays the device <i>Name</i> , <i>IP</i> , <i>Model</i> , and <i>Rack</i> information.
Battery Self-test	Select the test type and click <b>Start</b> to start the test.

## Layout

The *Layout* tab is for configuring the layout of your data center. The sidebar provides a tree-view list of the data center and its building(s), floor(s), and room(s).



Each level of the layout provides energy and basic information about that level of the data center. This information includes the number of PDUs, the average voltage, average aggregate power, and the number of buildings, floors, rooms and racks.



## Adding Layout

There is a hierarchy which must be followed when adding the layout, meaning you must add one before the other, in this order: **Data Center - Building - Floor - Room**. You can add multiple Data Centers with multiple buildings, floors and rooms. At the room level you can configure the racks which contain the PDUs.

To add a layout, do the following:

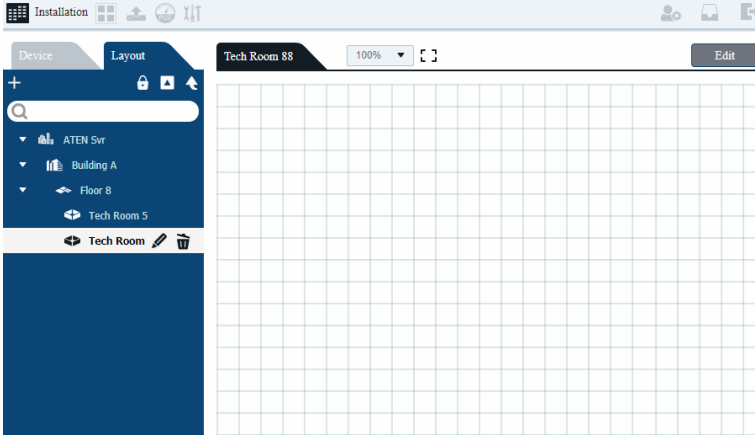
1. On the menu, click +. The *Create Data Center Layer* window appears:

2. Use the drop-down menu to select the *Type*: **Data Center**. Key in the Name, Country, City and Address. Click **Apply**.
3. In the menu, select the *Data Center* and click + again. Use the Type drop-down menu and select **Building**. Key in the Name, Country, City and Address. Click **Apply**.
4. In the menu, select the *Building* and click + again. Use the Type drop-down menu and select **Floor**. Key in the Name, Country, City and Address. Click **Apply**.
5. In the menu, select the *Floor* and click + again. Use the Type drop-down menu and select **Room**. Key in the Name, Country, City and Address. Click **Apply**.
6. You can add additional buildings, floors and rooms at each level. Once the Rooms have been added, you can select them to add racks to your data center.

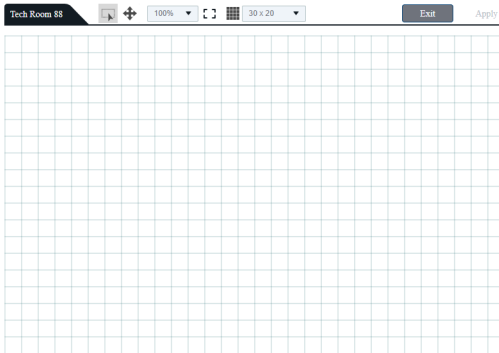
## Adding Racks

To add racks to a room, do the following:

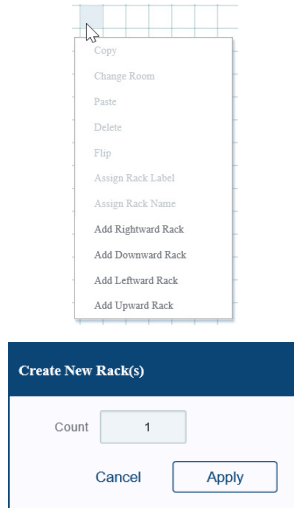
1. In the sidebar, select a Room. A grid appears:



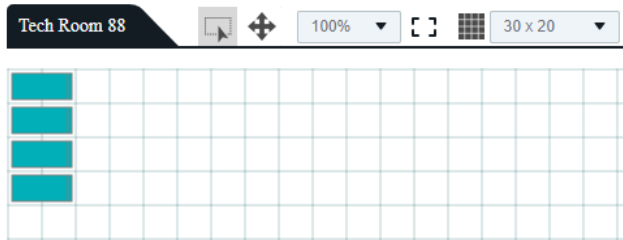
2. Click **Edit**. A page appears to add racks to the room. Use the bar options to Select and Change, Zoom and Pan, Auto Fit, and set the Layout's grid size.



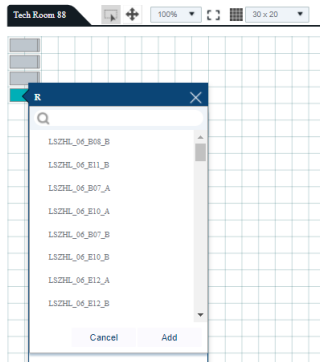
3. Right-click on a square and how the rack is to be positioned:



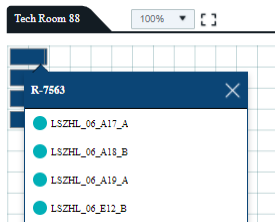
4. Enter the number of racks to add, and click **Apply**. The racks appear in the position that you selected. You can drag-and-drop, delete, copy, and paste racks. Add racks until you've completed the design of your data center.



5. To add devices, double-click a rack and click **+**.

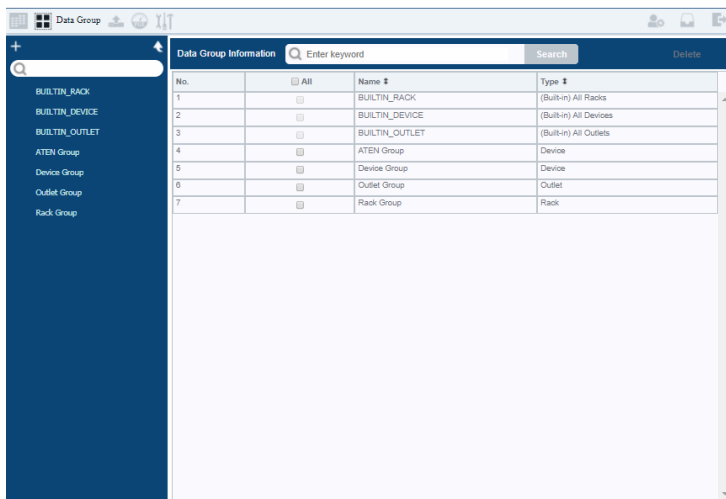


6. Select the device(s) and click **Add**.
7. After adding all the devices to each rack, click **Exit**.
8. On the Room page, click racks to view the list of devices. Racks without devices appear gray.



## Data Group

The *Data Group* sub-toolbar option allows you to create groups of racks, devices or outlets for power management control. The menu and the main panel *lists* groups that have been created. The first three groups (BUILTIN\_RACK, BUILTIN\_DEVIC, BUILTIN\_OUTLET) contain all units in their Group Unit and cannot be deleted.



To define a group, do the following:

1. On the sidebar, click +. The *Add Data Group* page appears:

The 'Add Data Group' dialog box contains the following fields:

- Group name:
- Group unit:

At the bottom are 'Cancel' and 'Save' buttons.

2. Key in the *Group Name* and select the *Group Unit*: **Rack, Device, or Outlet.**
3. Click **Save.**

- The Group appears in the menu, and opens to the page where you can add Racks, Devices, or Outlets.
- Click Add. The *Add Data Group Member* page appears:

**Add Data Group Member**

Data Center Building Floor Room Rack Device Outlet

Available List  Search

No.	<input type="checkbox"/> All	Data Center Name	Path
1	<input type="checkbox"/>	ATEN Svr	

Items/Page 50 Page 1 Go 1/1Pages Apply

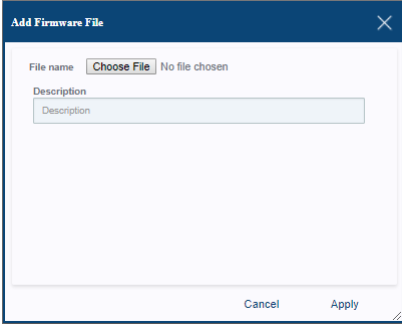
- Use the tabs to find racks, devices, or outlets to add to the group. The tabs that appear depend on the *Group Unit* type that was selected.
- Click **Apply**.

## Firmware Upgrade

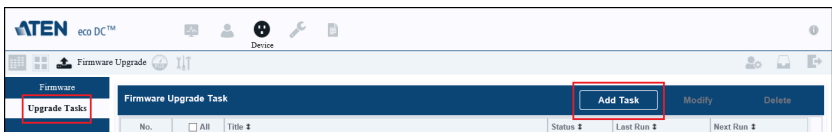
The *Firmware Upgrade* sub-toolbar option allows you to add firmware upgrade files and then create tasks to apply the update to the appropriate devices.

To add a firmware file and schedule an upgrade task, do the following:

1. On the main bar, click **Add**. The *Add Firmware File* page appears:



2. Key in the *Description* and click **Choose File** and browse to select the firmware upgrade file.
3. Click **Apply**.
4. On the menu, select *Upgrade Tasks*.



5. Click **Add Task**. The Firmware Upgrade Task page appears:

6. Key in the *Task Name*, select the Firmware File from the drop-down menu and click Scheduling to choose a date/time to run the task.
7. Select **Check Firmware Version** to have the upgrade check the devices firmware version before it installs. If the current firmware on the device is more up-to-date than the one being applied, the firmware will not be installed.
8. Click **Apply** to save the scheduled firmware upgrade.

## Run Upgrade Task Now

If you want to run a firmware upgrade straight away, check the task and click **Run Now** on the bottom right corner of the page. An example is shown below:

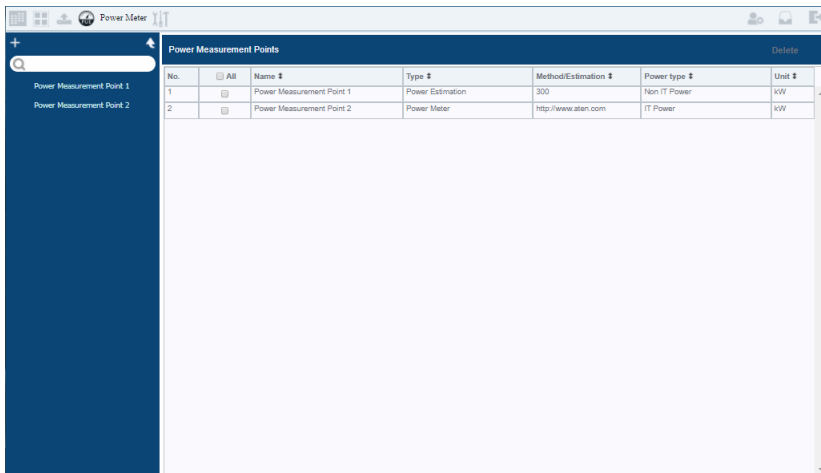
Firmware Upgrade Task							Add Task	Modify	Delete
No.	<input type="checkbox"/> All	Title	Status	Last Run	Next Run				
1	<input checked="" type="checkbox"/>	PE_7_8_9_1.4.132_FWUpgrade_test	Scheduled	N/A	2025-01-31 17:50:00				

Stop **Run Now**



## Power Meter

The *Power Meter* sub-toolbar option lets you create Power Measurement Points. Power Measurement Points allow you to use Non IT Facility Energy data to compare to the data center's IT Power data obtained from the ATEN PDUs. This information is used to calculate the PUE. You can obtain Non IT Facility Energy data from third-party power meters via URL: `https://IP:Port/PowerMeter.json?`, or a simple power estimation.

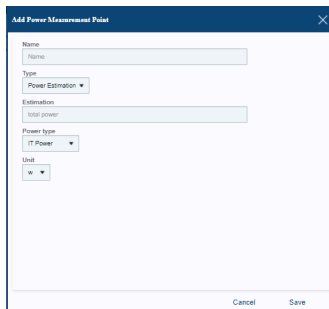


The screenshot shows the 'Power Meter' application window. On the left is a sidebar with a search bar and two items: 'Power Measurement Point 1' and 'Power Measurement Point 2'. The main area is titled 'Power Measurement Points' and contains a table with the following data:

No.	All	Name	Type	Method/Estimation	Power type	Unit
1	<input type="checkbox"/>	Power Measurement Point 1	Power Estimation	300	Non IT Power	kW
2	<input type="checkbox"/>	Power Measurement Point 2	Power Meter	http://www.aten.com	IT Power	kW

To create a Power Measurement Point, do the following:

1. On the sidebar, click **+**. The *Add Power Measurement Point* page appears:



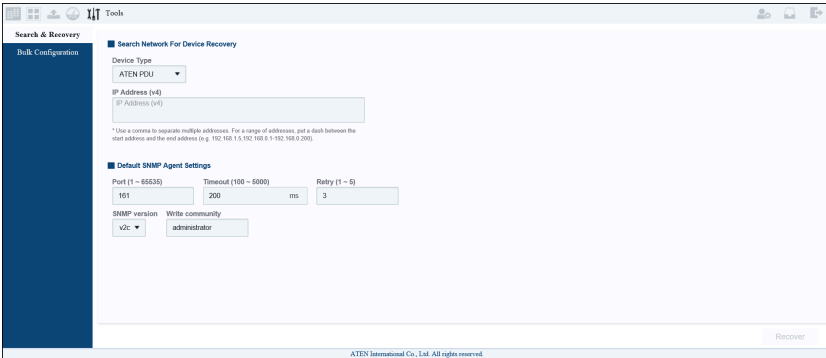
The 'Add Power Measurement Point' dialog box contains the following fields and controls:

- Name:** A text input field.
- Type:** A dropdown menu with 'Power Estimation' selected.
- Estimation:** A text input field with 'total power' entered.
- Power type:** A dropdown menu with 'IT Power' selected.
- Unit:** A dropdown menu.
- Buttons:** 'Cancel' and 'Save' buttons at the bottom.

2. Key in the *Name* and *Estimation* (amount), select the **Type**, **Power Type**, and **Unit**.
3. Click **Save**.

# Tools

The *Tools* sub-toolbar options includes two menu functions: *Search & Recovery* and *Bulk Configuration*.

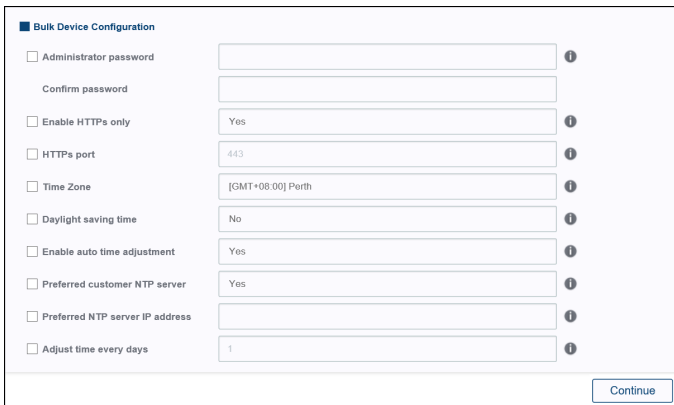


## Search & Recovery

This tool searches the desired network and recover offline devices if possible. It will scan the specified IP address(es) to find matched device(s) that was offline and update its network settings (IP, port, SNMP parameters, etc.) to bring it online.

## Bulk Configuration

If you wish to configure certain settings in a bulk, use this menu.

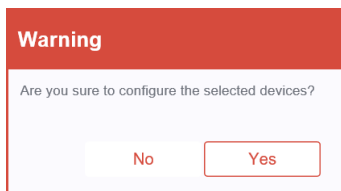


To bulk configure:

1. Check the checkbox of the setting you wish to bulk configure and alter the setting (drop-down menu or enter information into the field).
2. Click **Continue**. The system will display a list of devices for bulk configuration.

No.	Select	Device Name	Location	IP/Domain	Model	F/W Ver	Result
1	<input type="checkbox"/>	LSZHL_08_E11_B	JSYD Data Center/Building-A/FB/Room-801LSZHL_08_E11	10.0.90.180	PE8316G	1.0.091.1	
2	<input type="checkbox"/>	LSZHL_08_E11_A	JSYD Data Center/Building-A/FB/Room-801LSZHL_08_E11	10.0.90.180	PE8316G	1.0.091.1	
3	<input type="checkbox"/>	LSZHL_08_E10_B	JSYD Data Center/Building-A/FB/Room-801LSZHL_08_E10	10.0.90.180	PE8316G	1.0.091.1	
4	<input type="checkbox"/>	LSZHL_08_E10_A	JSYD Data Center/Building-A/FB/Room-801LSZHL_08_E10	10.0.90.180	PE8316G	1.0.091.1	
5	<input type="checkbox"/>	LSZHL_08_E09_B	JSYD Data Center/Building-A/FB/Room-801LSZHL_08_E09	10.0.90.180	PE8316G	1.0.091.1	
6	<input type="checkbox"/>	LSZHL_08_E09_A	JSYD Data Center/Building-A/FB/Room-801LSZHL_08_E09	10.0.90.180	PE8316G	1.0.091.1	
7	<input type="checkbox"/>	LSZHL_08_E08_B	JSYD Data Center/Building-A/FB/Room-801LSZHL_08_E08	10.0.90.180	PE8316G	1.0.091.1	
8	<input type="checkbox"/>	LSZHL_05_E04_A	JSYD Data Center/Building-A/F5/Room-501LSZHL_05_E04	10.0.90.180	PE8316G	1.0.091.1	
9	<input type="checkbox"/>	LSZHL_04_H07_B	JSYD Data Center/Building-A/F4/Room-401LSZHL_04_H07	10.0.90.180	PE8316G	1.0.091.1	
10	<input type="checkbox"/>	LSZHL_04_H07_A	JSYD Data Center/Building-A/F4/Room-401LSZHL_04_H07	10.0.90.180	PE8316G	1.0.091.1	
11	<input type="checkbox"/>	LSZHL_05_E04_B	JSYD Data Center/Building-A/F5/Room-501LSZHL_05_E04	10.0.90.180	PE8316G	1.0.091.1	
12	<input type="checkbox"/>	LSZHL_04_H08_B	JSYD Data Center/Building-A/F4/Room-401LSZHL_04_H08	10.0.90.180	PE8316G	1.0.091.1	
13	<input type="checkbox"/>	LSZHL_04_H08_A	JSYD Data Center/Building-A/F4/Room-401LSZHL_04_H08	10.0.90.180	PE8316G	1.0.091.1	
14	<input type="checkbox"/>	LSZHL_05_E03_B	JSYD Data Center/Building-A/F5/Room-501LSZHL_05_E03	10.0.90.180	PE8316G	1.0.091.1	
15	<input type="checkbox"/>	LSZHL_04_H05_B	JSYD Data Center/Building-A/F4/Room-401LSZHL_04_H05	10.0.90.180	PE8316G	1.0.091.1	
16	<input type="checkbox"/>	LSZHL_04_H06_B	JSYD Data Center/Building-A/F4/Room-401LSZHL_04_H06	10.0.90.180	PE8316G	1.0.091.1	

3. Check the checkbox of the devices you wish to bulk configure and click **Apply**. The system will ask if you would like to continue.



4. Click **Yes** to complete bulk configuration.

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## Overview

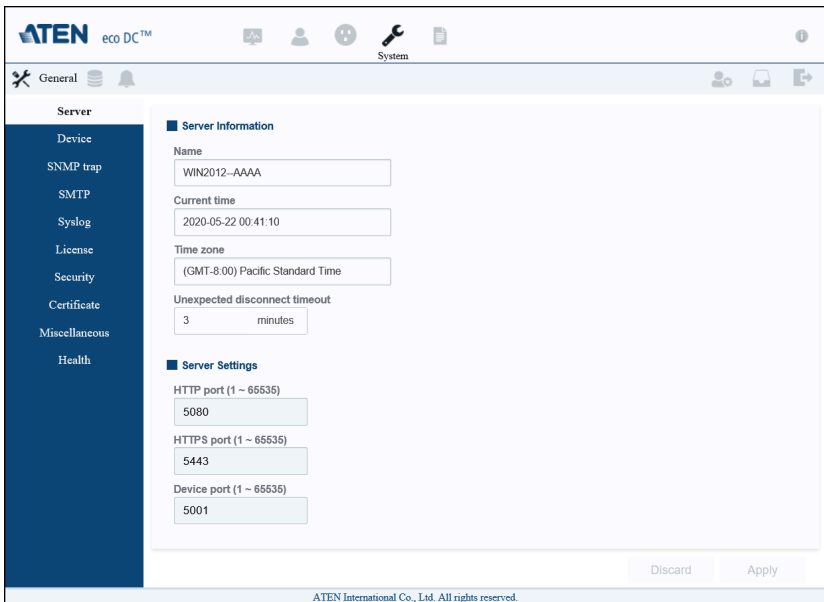
---

The *System* tab allows you to set system, database and events settings for the eco DC software.

## General

---

This *General* sub-toolbar selection allows you to configure various system parameters:



## Server

Allows you to view and configure basic eco DC server settings.

- ◆ Provides the *Server Information*: Name, Current Time, and Timezone.
- ◆ *Unexpected disconnect timeout* shows how long the eco DC will wait when a user loses connectivity before ending the session.
- ◆ Configure the *Server Settings*: HTTP Port, HTTPS Port, Device Port.

## Device

Allows you to configure the default settings related to eco DC's relationship with devices it connects to.

**■ Device Access**

Allow remote outlet control

Enable alert for Neutral Leakage Current

Synchronize device & outlet name

Treat ATEN smart PDU as IT Power

**■ Default SNMP Agent Settings**

Port (1 ~ 65535)      Timeout (100 ~ 5000)      Retry (1 ~ 5)

161      200 ms      3

SNMP version      Write community

v2c      administrator

**■ Energy Box Voltage**

Custom (90 ~ 260)      123 V

Link to the device      Browse... ▾

Link to a random device

**■ PDU Offline Detection**

Enable dedicated PDU offline detection

Detection periods (3 ~ 30)

20 seconds

- ◆ Use the check boxes to:
  - ◆ Allow remote outlet control.
  - ◆ Enable alert for Neutral Leakage Current.
  - ◆ Synchronize device and outlet name.
  - ◆ Treat ATEN smart PDU as IT power. Checking this option means all the power from ATEN PDUs will be treated as IT Equipment Energy when calculating the data center's PUE.
- ◆ Set the Default SNMP Agent Settings: Port, Timeout, Retry (1~5), SNMP version, and Write Community.
- ◆ Use the *Energy Box Voltage* radio button to select a voltage:
  - ◆ Custom (90~260) – enter a custom voltage number.
  - ◆ Link to the device – click browse and select a energy box.
  - ◆ Link to a random device – an energy box is selected for you.
- ◆ Use the *PDU Offline Detection* to configure the function.
  - ◆ Check the **Enable dedicated PDU offline detection** to enable the function.

- ◆ Enter the detection period in the field (3~30)
- ◆ Click **Apply** to save the settings.

## **SNMP trap**

This section sets the SNMP trap server settings.

The screenshot displays the configuration interface for two SNMP Managers. Each manager has an 'Enable' checkbox, an 'IP' field, a 'Port (1 ~ 65535)' field, an 'SNMP version' dropdown menu, and a 'Community' text field. The 'IP' and 'Port' fields contain the values 'jP' and '162' respectively. The 'SNMP version' dropdown is set to 'v1'. The 'Community' field contains the text 'Community'. At the bottom right of the form, there are 'Discard' and 'Apply' buttons.

- ◆ *SNMP Manager I* – Check **Enable** to configure the first SNMP server:
  - ◆ Enter the IP address, Port SNMP version and key in the Community.
  - ◆ Click **Test** to attempt a connection.
- ◆ *SNMP Manager II* – Check **Enable** to configure the second SNMP server:
  - ◆ Enter the IP address, Port SNMP version and key in the Community.
  - ◆ Click **Test** to attempt a connection.
- ◆ Click **Apply** to save the settings.

## SMTP

Use these settings to have the eco DC email reports from an SMTP server.

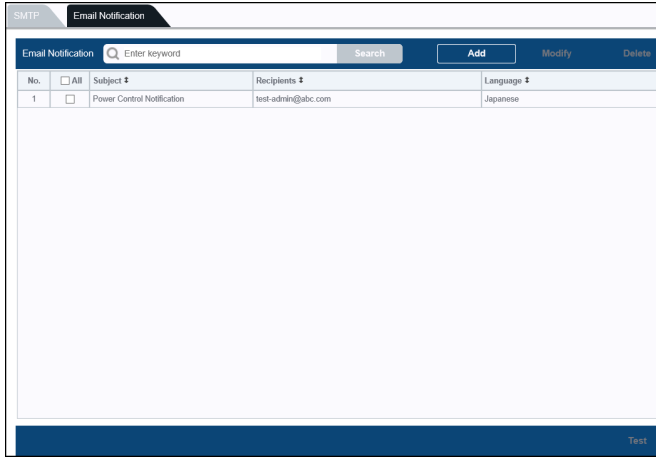
### SMTP

The screenshot shows the SMTP configuration window. At the top, there are two tabs: 'SMTP' (selected) and 'Email Notification'. Below the tabs, there is a section for 'Report From SMTP Server' with an 'Enable' checkbox and a 'Test' button. Underneath, there are several configuration options: a checkbox for 'This server requires a secure connection(SSL)' which is checked, a 'Server' field containing '10.0.92.116', a 'Port (1 ~ 65535)' field containing '465', a 'Send from' field containing 'kvmmail@smtp2016.com', a checkbox for 'This server requires authentication' which is checked, an 'Account name' field containing 'kvmmail@smtp2016.com', and a 'Set password' checkbox which is unchecked, followed by a 'Password' field.

- ◆ If required, check *This server requires a secure connection (SSL)*
- ◆ Check **Enable** to receive reports from the SMTP server.
  - ◆ Enter the IP address, Port, and Send from (e-mail address).
  - ◆ If required, check *This server requires authentication* and key in the **account name** and **password**.
- ◆ Click **Test** to attempt a connection.
- ◆ Click **Apply** to save the settings.

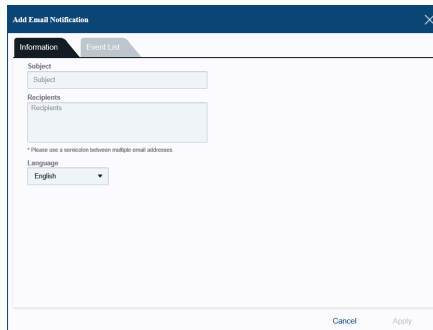


## Email Notification



This tab allows you to setup email notifications.

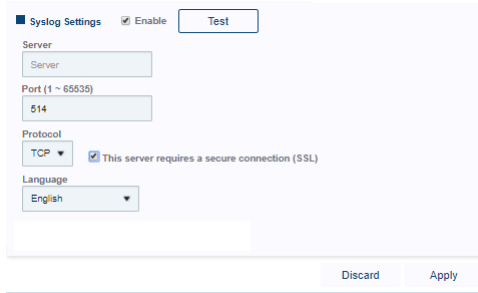
- ◆ Click **Add** for the email notification configuration window:



- ◆ Enter the subject, recipients (multiple recipients option available) and language in the Information tab.
- ◆ Check the checkbox of the notification events you wish the system to notify in the Event List tab.
- ◆ Click **Apply** to add this notification to the system.
- ◆ Check the checkbox of a current notification and click **Modify** to modify the configuration. Click **Apply** to save the configuration.
- ◆ Check the checkbox of a current notification(s) and click **Delete** to delete.
- ◆ Check the checkbox of any current notification and click **Test** (bottom right corner) to test if the system sends the notification.

## **Syslog**

Use these settings configure the Syslog server settings.



The screenshot shows a configuration window titled "Syslog Settings". At the top left, there is a blue square icon followed by the text "Syslog Settings". To its right is a checked checkbox labeled "Enable" and a "Test" button. Below this, there are four input fields: "Server" (text input), "Port (1 ~ 65535)" (text input with "514" entered), "Protocol" (dropdown menu with "TCP" selected), and "Language" (dropdown menu with "English" selected). A checkbox labeled "This server requires a secure connection (SSL)" is checked. At the bottom right, there are "Discard" and "Apply" buttons.

- ◆ *Syslog Server* – Check **Enable** to use a Syslog server.
  - ◆ Enter the Server, Port, and select the Protocol and Language.
  - ◆ When TCP protocol is selected (if needed), check *This server requires authentication*.
- ◆ Click **Test** to attempt a connection.
- ◆ Click **Apply** to save the settings.

## **License**

This page displays license information about the eco DC software.

## Security

Use these settings configure the eco DC security settings.

**Lockout Policy**

Lockout users after invalid login attempts

Maximum login failures (1 ~ 100)

5

Require manual unlock

Unlock after (1 ~ 1000) 1 minutes

**Single Sign On Settings**

Enable single sign on

Username field

ecoDC\_SSO\_user

Password field

ecoDC\_SSO\_pass

- ◆ *Lock Out Policy* – sets the user login policy. To use this feature, check *Lockout users after invalid login attempts*.
  - ◆ Key in the *Maximum login failures (1~100)* that users are allowed before their account is locked out.
  - ◆ If you want to require the administrator to unlock a user’s account, select *Require manual unlock*.
  - ◆ If you want a user’s account to unlock after a specific amount of time, select *Unlock after (1~1000)* and key the number of minutes.
- ◆ *Single Sign On Settings* – Check *Enable single sign on* if you wish to enable this function (allow users from another web application to log in eco DC automatically through a form-based authentication).
  - ◆ Key in the *Username field identification string* and *Password field identification string* for the single sign on account.
  - ◆ To integrate, please refer to *SSO HTML* on page 125.
- ◆ Click **Apply** to save the settings.

## Certificate

This section provides information and allows you to update the certificates.

**■ Certificate Information**

Subject  
CN=Aabel

Issuer  
CN=Aabel

Validity period  
三月 29, 2018 - 三月 29, 2028

Serial number  
5ABDA51E

SHA-1 thumbprint  
6994 D67D 1D81 9537 7685 CF5C 9B41 9282 CF50 2DAB

- ◆ *Certificate Information*– provides information about the certificate: Subject, Issuer, Validity Period, Serial Number and SHA-1 thumb print.
- ◆ Click **Get CSR** to save the certificate file (csr.cer) to a convenient location on your computer. This is the file that you give to the third party CA to apply for their signed SSL certificate.
- ◆ Click **Update** to import a certificate.

**Update Server Certificate** ✕

Create a new self-signed SSL server certificate

Key length  
2048 ▼

Common name  
Common name

Organization  
Organization

Organizational unit  
Organizational unit

City or location  
City or location

State or Province  
State or Province

Country  
Afghanistan ▼

Import a signed SSL server certificate

Certificate  No file chosen

Import private key and certificate

Private key  No file chosen

Private certificate  No file chosen

1. There are three types of certificates to select from:
  - ◆ *Create a new self-signed SSL server certificate:*  
Select the Key Length.  
  
Enter the Organization, City or Location, State and Country information.
  - ◆ *Import a signed SSL server certificate:*  
Certificate – click **Choose File** to upload the file.
  - ◆ *Import Private Key and Certificate:*  
Private Key – click **Choose File** to upload the file.  
  
Private Certificate – click **Choose File** to upload the file.
2. Click **Apply**.

## Miscellaneous

This section configures default options for the eco DC interface.

The screenshot shows a configuration window titled "System Preference" with the following sections and controls:

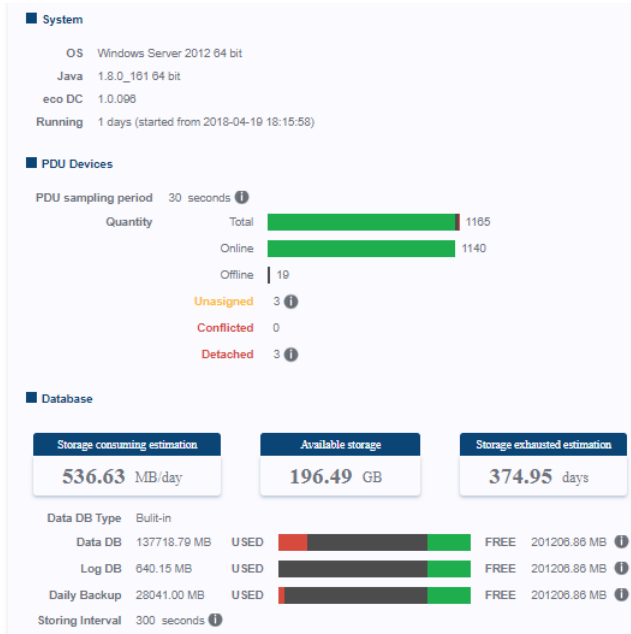
- System Preference:** Radio buttons for "Celsius" (selected) and "Fahrenheit". A "Currency" dropdown menu is set to "\$".
- Default Unit For Report:** Three input fields: "1kWh generate CO2" (1.8 KG CO2), "Electricity cost" (16.0 \$/kWh), and "CO2 cost" (28.0 \$/ton).
- Default Rate For Billing:** Radio buttons for "Single-Rate" (selected) and "Dual-Rate". The "Single-Rate" section has a "Rate" input field set to 123.0 \$/kWh. The "Dual-Rate" section has two input fields: "Peak from" (Duration 1-23) and "Non-Peak rate" (Non-Peak rate \$/kWh).
- Data Group Option For Charts:** A checked checkbox with the text "Keep corresponding history data for charts, even if the data group has been changed".

At the bottom right, there are "Discard" and "Apply" buttons.

- ◆ *System Preferences* – sets the default Temperature Unit and Currency. You can choose “User defined currency” from the *Currency* drop-down menu and enter the unit into the field the follows.
- ◆ *Default unit for report* – sets the default 1kWh generate CO2, Electricity cost, and CO2 cost units to use for generating reports.
- ◆ *Default rate for billing* – sets the default Single and Dual-Rate units for generating custom reports.
- ◆ *Data Group Option For Charts* – check the checkbox under this option to keep historical data for charts.
- ◆ Click **Apply** to save the settings.

## Health

This section provides System, Device and Database information.



- ◆ *System* – displays information about the local operating system, Java version, and eco DC version.
- ◆ *PDU Devices* – displays the PDU sampling period, and information about devices the eco DC is currently managing.
- ◆ *Database* – displays statistics about the database the eco DC is managing, including the storing estimations, available storage, storage location, daily backup and disk space used. Details about the Database are provided in the next section.

## Database

This *Database* sub-toolbar selection allows you to configure settings related to the data stored by the eco DC.

### Access

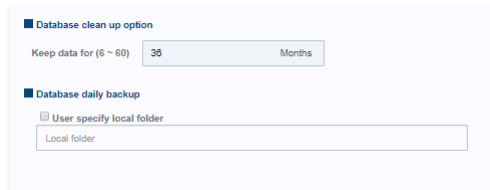
The *Access* section, shown above, configures how the data is managed.

- ◆ Use the *PDU sample rate* drop-down menu to select how fast the eco DC collects data about devices.
- ◆ *Desired space consumption* – use the drop-down menu to select, on average, how much disk space you want to utilize for data.
- ◆ *Use built-in database* – select this option to save eco DC data on the local computer's disk drive. By default, the eco DC will choose its own directory to save database files, or you can check *User specified local folder* to choose your own location to save the data.
- ◆ *Use MySQL database* – select this option to use an SQL database to save eco DC data. Check *IP for remote database* and key in the IP address, Port, Username and Password.
- ◆ Click **Apply** to save the settings.



## Maintenance

Use *Maintenance* to configure how the database is maintained.



The screenshot shows a configuration window titled "Database clean up option" and "Database daily backup". Under "Database clean up option", there is a label "Keep data for (6 - 60)" followed by a text input field containing the number "36" and the word "Months". Under "Database daily backup", there is a checkbox labeled "User specify local folder" which is checked. Below the checkbox is a text input field containing the text "Local folder".

- ◆ *Database clean up option* – enter the number of months you want the eco DC to save data before it begins deleting old data. Key a number between 6 and 60.
- ◆ *Database daily backup* – to create a backup of that day’s eco DC data, check *User specify local folder* and key in the directory. If no location is entered the backup will be saved to the default directory:  
C:\ecoDC\data\EcoDC\_dailyBackup

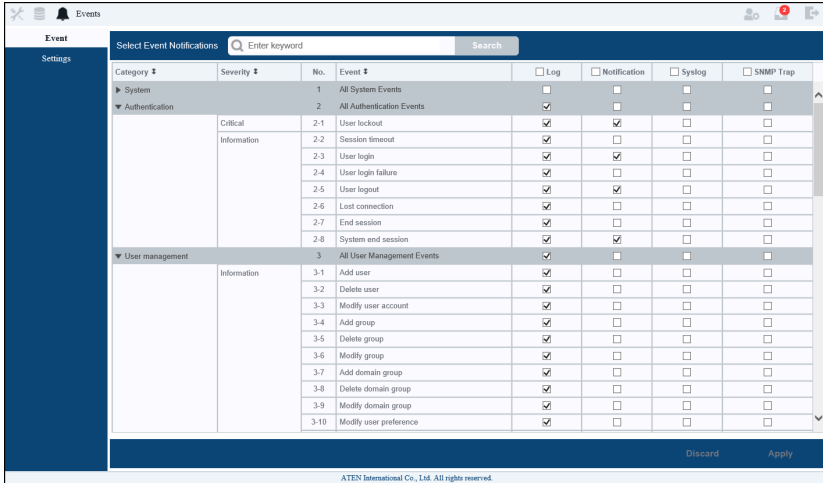
---

**Note:** It is strongly recommended that you use the same directory for daily backup and the database backup (see *Database Backup* on page 120). If any of the data is backed up to a different location, you may lose this bit of data when restoring the database.

---

## Events

The *Events* sub-toolbar selection allows you to set which system messages to use and where to save them.



- ◆ In the main panel use the check boxes to select which **Event** type to save and where to send them, options are:
  - ◆ *Log* – saves the events to the eco DC’s System Log which can be viewed on the Logs toolbar option.
  - ◆ *E-mail* – sends the events that are checked to the e-mail address specified under SMTP settings (see *SMTP*, page 100).
  - ◆ *Notification* – sends the events that are checked to the notification panel which can be found on the sub-toolbar by clicking the Notification icon (see *Settings*, page 17).
  - ◆ *Syslog* – sends the events to the Syslog server specified under *System - General* settings (see *Syslog*, page 102).
  - ◆ *SNMP Trap* – sends the events to the SNMP server specified under *System - General* settings (see *SNMP trap*, page 99).
  - ◆ Click **Apply** to save the settings.

## Settings

Use the event Settings to configure how events are managed.

**Maintenance**

Keep days (7 ~ 1096)  
365

**SNMP Trap Receiver**

Port (1 ~ 65535)  
162

Receive SNMPv1 & SNMPv2c trap  
Community  
Community

Receive SNMPv3 trap  
Username  
Username

Security level  
Authentication & Privacy

Auth protocol  Set auth password  
MD5  
Auth password

Privacy protocol  Set privacy password  
AES  
Privacy password

- ◆ *Maintenance* – key in the number of days you want the system to keep event logs for before they are deleted, Options are 7 to 1096 days.
- ◆ *SNMP Trap Receiver* – to use an SNMP Trap Receiver to receive device logs from PDUs, enter the required server information.
- ◆ Click **Apply** to save the settings.

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## Overview

The eco DC keeps a record of transactions that take place on its installation. The *System Log* and *Device Log* pages provide an array of filters and functions that allow you to view and export the log file data. To set the number of days the event log stores, see *Settings*, page 111.

No.	Date/Time	Category	Severity	Event	Description
1	2018-04-15 09:17:01	System task	Information	Complete task	Task (Name: Task 4, Type: Power Control) has completed successfully.
2	2018-04-15 09:17:01	System task	Information	Start task	Task (Name: Task 4, Type: Power Control) has been started successfully.
3	2018-04-15 09:10:01	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:73, IP: 127.0.0.1, Device Name: LS2H_06_C02_B) was online.
4	2018-04-15 09:09:38	Authentication	Information	User login	User (Name: administrator, IP: 127.0.0.1) logged in successfully.
5	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:81:93, IP: 127.0.0.1, Device Name: LS2H_06_B14_A) was online.
6	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:81:92, IP: 127.0.0.1, Device Name: LS2H_06_B13_B) was online.
7	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:81:91, IP: 127.0.0.1, Device Name: LS2H_06_B13_A) was online.
8	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:81:90, IP: 127.0.0.1, Device Name: LS2H_06_C18_B) was online.
9	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:88, IP: 127.0.0.1, Device Name: LS2H_06_C18_A) was online.
10	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:86, IP: 127.0.0.1, Device Name: LS2H_06_C16_B) was online.
11	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:87, IP: 127.0.0.1, Device Name: LS2H_06_C16_A) was online.
12	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:84, IP: 127.0.0.1, Device Name: LS2H_06_C14_B) was online.
13	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:83, IP: 127.0.0.1, Device Name: LS2H_06_C14_A) was online.
14	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:85, IP: 127.0.0.1, Device Name: LS2H_06_C15_B) was online.
15	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:85, IP: 127.0.0.1, Device Name: LS2H_06_C15_A) was online.
16	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:91, IP: 127.0.0.1, Device Name: LS2H_06_E01_B) was online.
17	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:90, IP: 127.0.0.1, Device Name: LS2H_06_E01_A) was online.
18	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:89, IP: 127.0.0.1, Device Name: LS2H_06_E02_B) was online.
19	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:80:89, IP: 127.0.0.1, Device Name: LS2H_06_E02_A) was online.
20	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:81:88, IP: 127.0.0.1, Device Name: LS2H_06_B12_A) was online.
21	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:81:88, IP: 127.0.0.1, Device Name: LS2H_06_B12_B) was online.
22	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:81:87, IP: 127.0.0.1, Device Name: LS2H_06_B11_A) was online.
23	2018-04-15 09:09:02	System	Information	Device online	Device (Type: PE83195, MAC: 00:10:74:12:81:87, IP: 127.0.0.1, Device Name: LS2H_06_B11_B) was online.

## System Log

- Clicking the **System Log** sub-toolbar button refreshes the log list with the latest events.
- Recent Logs* – key in search terms and click **Search** to find specific events.
- Items/Page* – this drop-down menu at the lets you set the number of events to display per page. Choose between 25 to 400 events.
- Page* – depending on the items per page selected, this box allows you to key in a number and jump to that page. Click **Go** to jump to the page.
- First Page / Last Page* – these two buttons on the bottom bar allow you to skip to the first and last log page. Between these buttons shows the page displayed and the total number of pages.

- ♦ *Previous / Next* – these two buttons on the bottom bar allow you to move backward and forward to view event log pages. Between these buttons shows the page displayed and the total number of pages.
- ♦ *Save* – click to save a `system_log.csv` files which contains a list of the logs currently being displayed in the main panel. Check **Save all pages** to save all of the events currently logged by the eco DC.

## **Device Log**

The *Device Log* lists events sent from the devices added to the eco DC. The features and functions of the Device Log are essentially the same as the System log, as described above. See *System Log*, page 113 for details.

## Technical Support

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### International

- ◆ For online technical support – including troubleshooting, documentation, and software updates: <http://eservice.aten.com>
- ◆ For telephone support, see *Telephone Support*, page ii.

### North America

Email Support		<a href="mailto:support@aten-usa.com">support@aten-usa.com</a>
Online Technical Support	Troubleshooting Documentation Software Updates	<a href="http://eservice.aten.com">http://eservice.aten.com</a>
Telephone Support		1-888-999-ATEN ext 4988 1-949-428-1111

When you contact us, please have the following information ready beforehand:

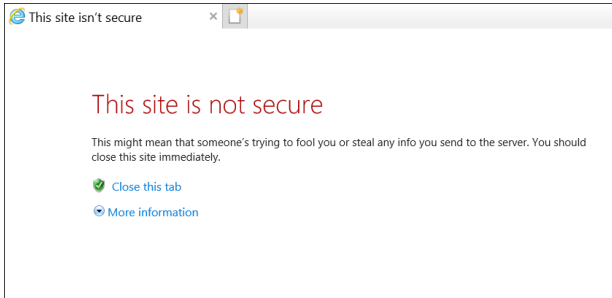
- ◆ Product model number, serial number, and date of purchase.
- ◆ Your computer configuration, including operating system, revision level, expansion cards, and software.
- ◆ Any error messages displayed at the time the error occurred.
- ◆ The sequence of operations that led up to the error.
- ◆ Any other information you feel may be of help.

# Trusted Certificates

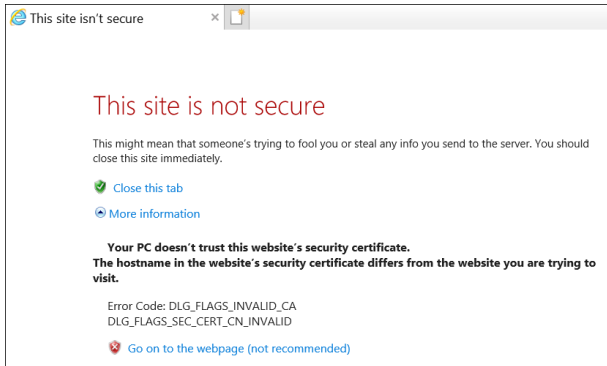
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## Overview

When you try to log in to the device from your browser, a Security Alert message appears to inform you that the device's certificate is not trusted, and asks if you want to proceed.



The certificate can be trusted, but the alert is triggered because the certificate's name is not found on the Microsoft list of Trusted Authorities.



You can ignore the warning, click **More information** and click **Yes** to go on.

---

**Note:** To avoid users having to go through the certificate acceptance prompt each time they log in, you can use a third party certificate authority (CA) to obtain a signed certificate. Refer to *Import a signed SSL server certificate.*, page 105 under *Certificate*, page 104 for more details.

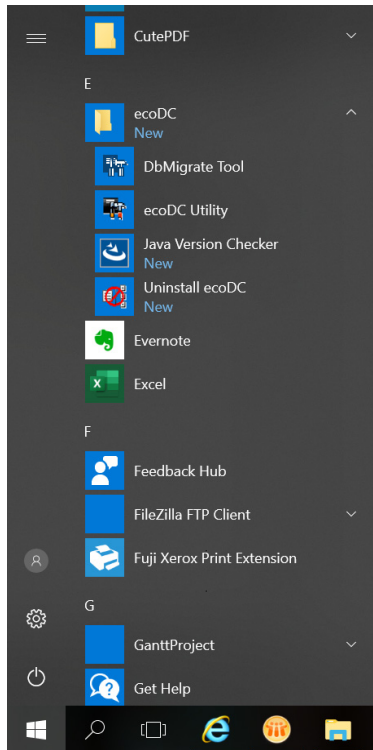
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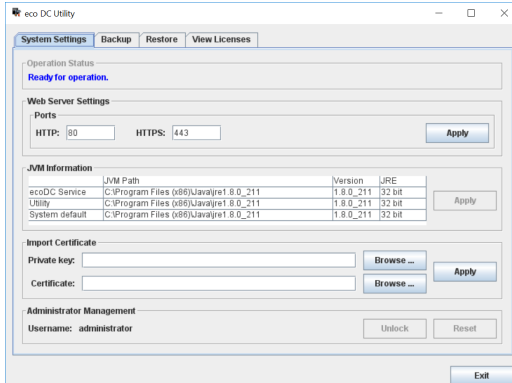
## ecoDC Utility

The ecoDC Utility gets installed as part of the eco DC installation procedure. It allows you to configure a number of the eco DC's parameters from the desktop of the computer that the eco DC runs on, without having to invoke the browser GUI.

To run the program in Windows, click the *Start* menu, navigate to the ecoDC entry, and select **ecoDC Utility**:



When you run the program, a screen similar to the one below appears:



The Utility offers four tabs: *System Settings*, *Backup*, *Restore* and *View Licenses*. Each of the tabs is described in the sections that follow.

## **System Settings**

Apache Tomcat is the program that serves the eco DC's web pages. The eco DC's installation programs asks you to specify the ports that Apache Tomcat listens on for web requests.

- ◆ The *HTTP* port is the regular port that Apache Tomcat listens on. The default is 80. If you use a different port, users must specify the port number in the URL of their browsers.
- ◆ The *HTTPS* port is the secure port that Apache Tomcat listens on. The default is 443. If you use a different port, users must specify the port number in the URL of their browsers.

If a port conflict occurs with the ports that you have set and prevents the web page from opening, you can use this utility to change the port settings.

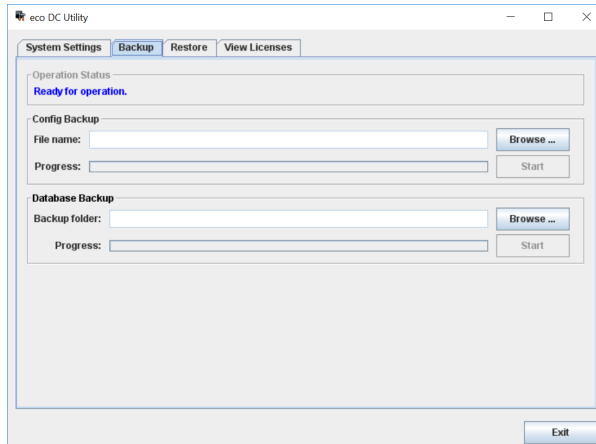
After making your settings, click **Apply** to save the changes.

If you wish to import private key or certificate, click **Browse** in the *Import Certificate* section, select the file and click **Apply**.

In the *Administrator Management* section, click **Reset** to return the administrator's account to the default settings. Click **Unlock** if the account was previously locked.

## Backup

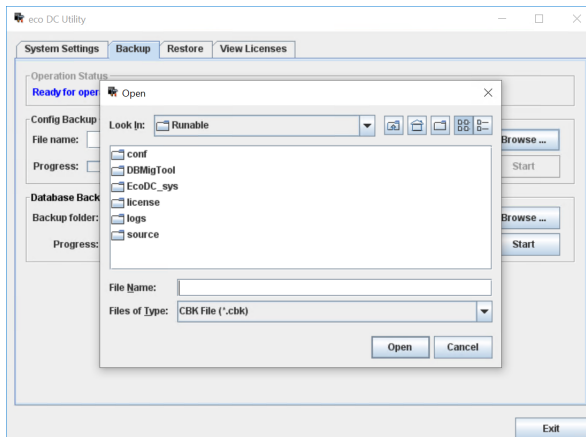
The Backup tab lets you backup current configuration or database.



### Config Backup

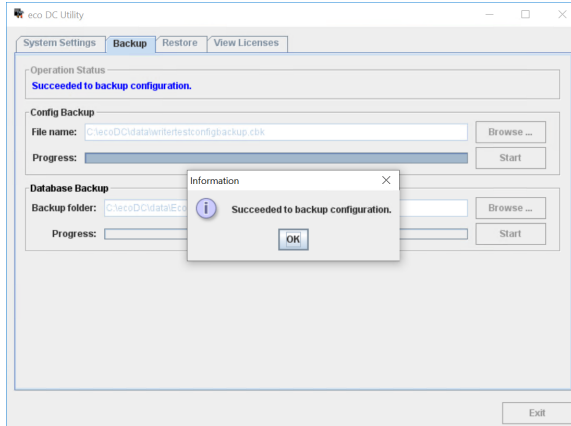
Enter a config file name in the *File name:* field. Backed up file will be stored in the *C:\ecoDC\Runnable* directory by default.

Alternatively, you can click **Browse** for a file dialog box, find a location you wish to store the backup file in, enter a name and click **Open** to return to the utility page.



Click **Start** to start the backup and the progress status will be shown in the progress bar.

When completed, a success message will be shown:



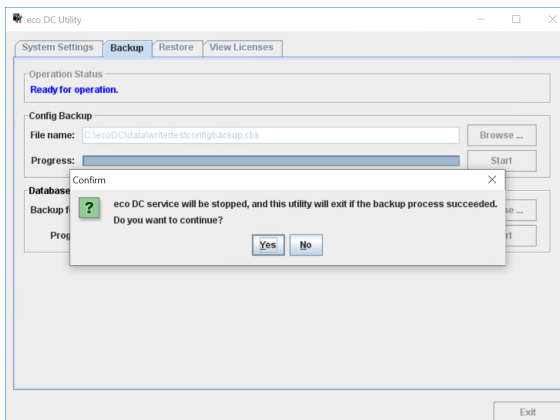
## Database Backup

Enter a database folder name in the *Backup folder:* field. Backed up folder will be stored in the *C:\ecoDC\Runnable* directory by default.

Alternatively, you can click **Browse** for a file dialog box, find a location you wish to database backup and click **Open**.

**Note:** It is strongly recommended that you use the same directory for daily backup (see *Maintenance* on page 109) and the database backup. If any of the data is backed up to a different location, you may lose this bit of data when restoring the database.

Click **Start** to start the database backup and a warning will pop up.

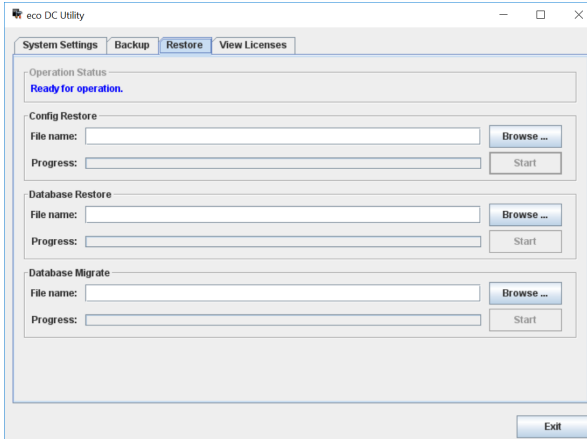


Click **Yes** and the progress status will be shown in the progress bar.

When completed, the utility will be closed and the eco DC service will restart.

## Restore

The Restore tab lets you restore configuration or database, or migrate a database to the eco DC service.



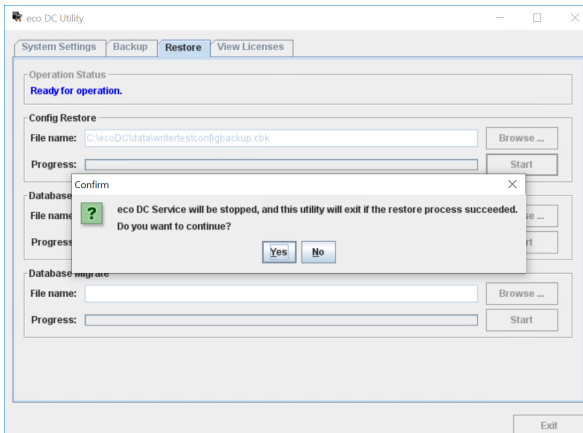
Click **Browse** (Config Restore, Database Restore, Database Migrate) and locate the file/folder you wish to restore/migrate and click **Start**.

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**Note:** When restoring database, make sure your daily backup files (see *Maintenance* on page 109) and the database backup files (see *Database Backup* on page 120) are in the same folder as both backup file types contribute to a full database.

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A warning will pop up as shown:

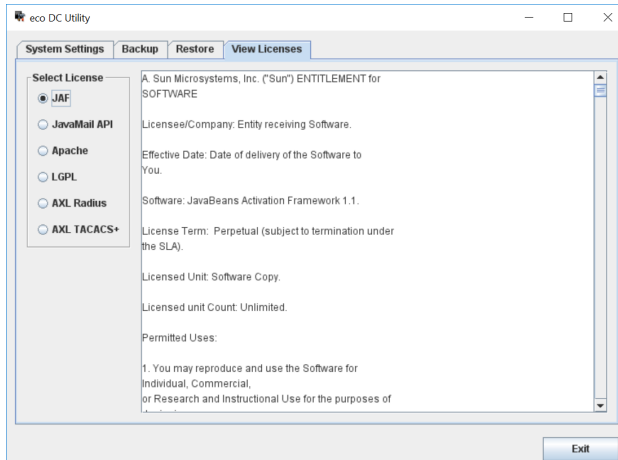


Click **Yes** and the progress status will be shown in the progress bar.

When completed, the utility will be closed and the eco DC service will restart.

## **View License**

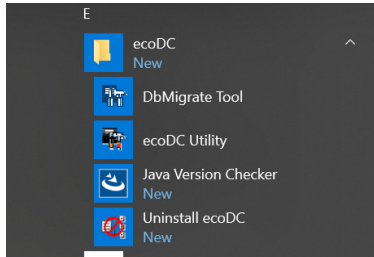
The View Licenses tab lets you view the licenses that are related to the eco DC package. To view a license, click its radio button.



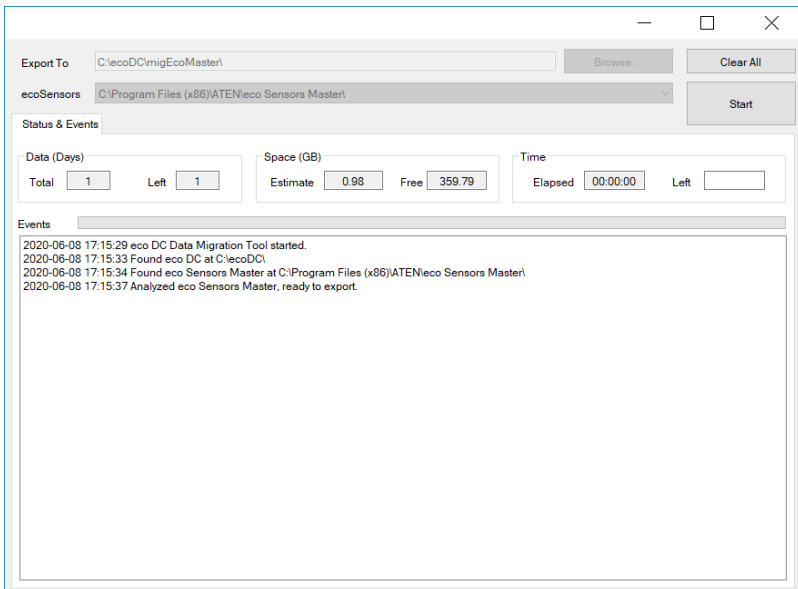
## Database Migration Tool

If you have eco Sensors installed previously, you can migrate data information from the eco Sensors to the eco DC using the Database Migration Tool.

To run the program in Windows, click the *Start* menu, navigate to the ecoDC entry, and select **DbMigrate Tool**:



The diagram below is an example of the migration tool.



To start the migration, click **Start**. When completed, a success message will be shown in the message box.





