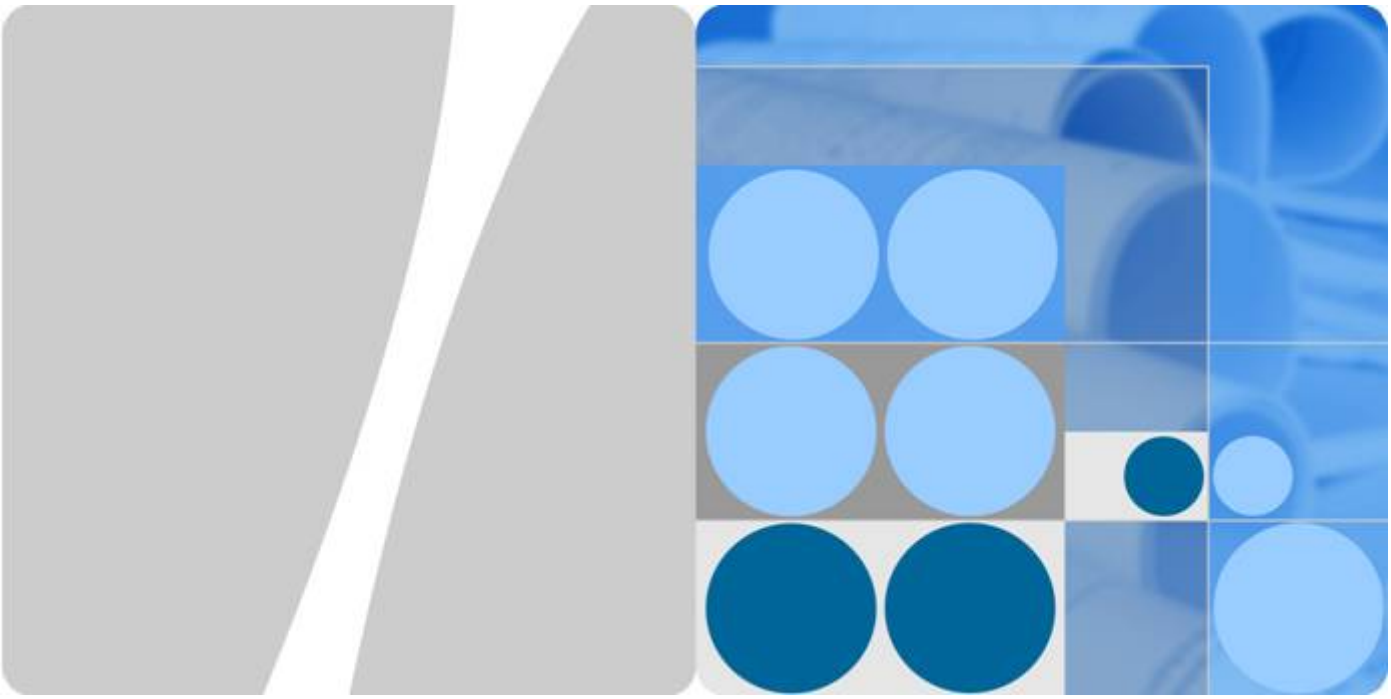

iManager NetEco 1000S

V100R001C01

User Manual

Issue 01

Date 2014-09-03

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About This Document

Purpose

This document describes the installation, function, maintenance, and troubleshooting methods of the iManager NetEco 1000S V100R001C01SPC210 monitoring software.

Intended Audience

This document is intended for:

- Inverter maintenance personnel
- Electronic technicians with related aptitude

Product Models

This document describes how to use the following inverter monitoring software:

- SUN2000
- SUN8000

Symbol Conventions

The symbols that may be found in this document are defined as follows:

Symbol	Description
	Indicates a hazard with a high level or medium level of risk which, if not avoided, could result in death or serious injury.
	Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

Symbol	Description
 CAUTION	Indicates a potentially hazardous situation that, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results.
NOTE	Provides additional information to emphasize or supplement important points in the main text.

Change History

Changes between document issues are cumulative. The latest document issue contains all the changes made in earlier issues.

Issue 01 (2014-09-03)

This is the first official release.

Issue Draft B (2014-01-20)

This is draft B of V100R001C01.

Issue Draft A (2013-11-20)

This is draft A of V100R001C01.

Contents

1 Precautions

During NetEco 1000S installation, operation, and maintenance, read the following precautions carefully:

- Operating system patches must be updated on the PC where the NetEco 1000S is installed in a timely manner.
- Professional firewalls and antivirus software must be available on the PC where the NetEco 1000S is installed, and the antivirus software must be updated in a timely manner.
- The PC where the NetEco 1000S is installed must be used only for system monitoring. Do not install the software for other purposes such as entertainment, multimedia, and communication.
- Services that are unnecessary or have potential security risks must be disabled.
- The system administrator account must be renamed and avoid being used.
- A system operator account must be allocated for the system administrator for installing and upgrading the NetEco 1000S.

  NOTE

  Only the system operator who installs the NetEco 1000S can access and operate the installation directory of the NetEco 1000S.

2 Overview

About This Chapter

2.1 Positioning

iManager NetEco 1000S can run on the Windows operating system and can be accessed through a web browser. The iManager NetEco 1000S enables you to monitor the key performance indicators (KPIs) and alarms of the inverters in real time. In addition, it enables you to remotely control and manage the inverters. This increases the centralized management and remote operation and maintenance capabilities for the inverters.

You can also access the iManager NetEco 1000S using a mobile phone to view information about the PV plants, inverter, generated powers, and benefits.

2.2 Architecture

Software Architecture

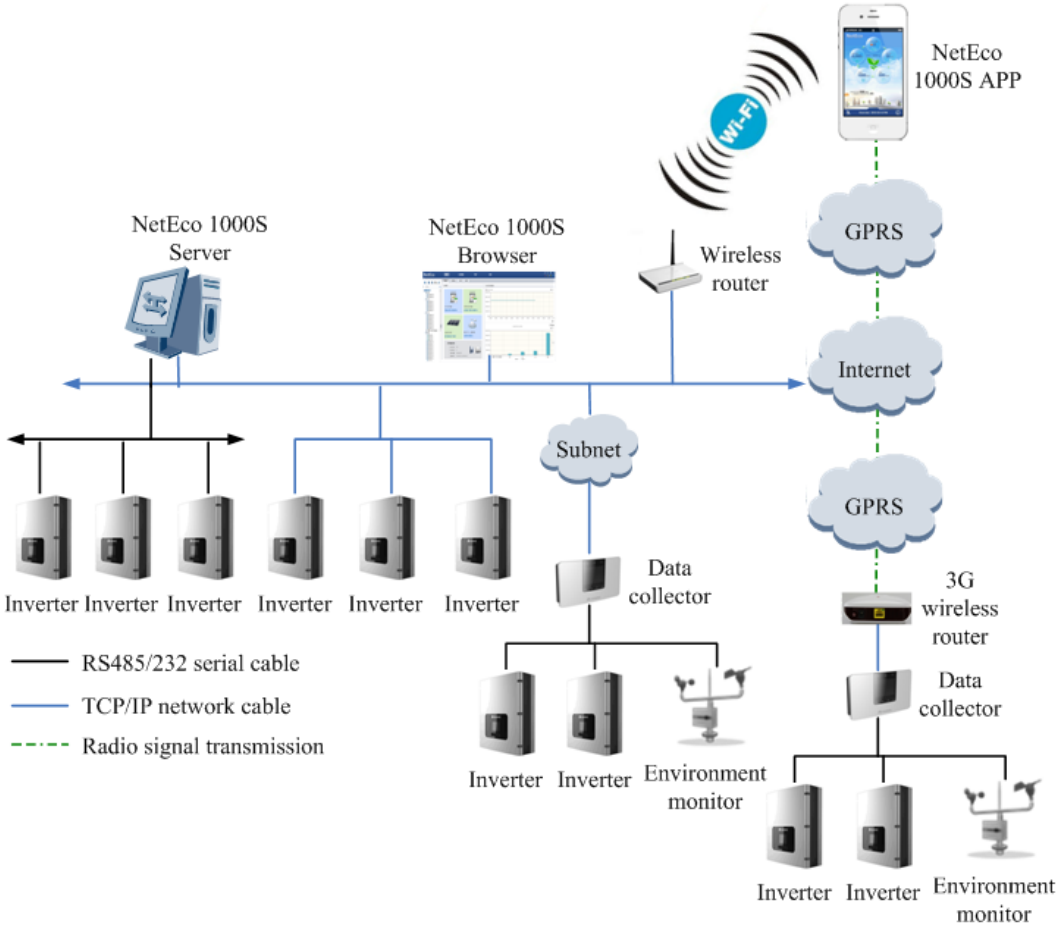
Figure 2-1 shows the software architecture of NetEco 1000S.

Figure 2-1 Software Architecture

Networking Scheme

Figure 2-2 shows the networking schemes of the NetEco 1000S.

Figure 2-2 Networking schemes of the NetEco 1000S



NetEco 1000S is deployed on a monitoring host where Ethernet ports and serial ports are configured.

NetEco 1000S adopts the B/S architecture. Any computer on the Ethernet monitoring network can access the NetEco 1000S server using a web browser and monitor inverter.

You can also install the NetEco 1000S application on the mobile phone, and access the NetEco 1000S server by logging in to the mobile phone client to view details about PV plants, devices, power generated by PV plants, and income.

2.3 Benefits

NetEco 1000S provides the following functions:

- Easy and fast installation.

  The NetEco 1000S can be installed on a PC running Windows 7.
- You can log in to the NetEco 1000S using a web browser or mobile phone client. A maximum of 100 concurrent connections are supported.
- Inverter search and automatic configuration.

  The NetEco 1000S can quickly access inverters and start monitoring.

NOTE

A maximum of 1500 devices can be connected to the NetEco 1000S.

- PV plant management

  The NetEco 1000S allows users to browse key device information by PV plant for easy operation and maintenance.

- PV plant performance data dump

  The NetEco 1000S dumps PV plant performance data saved for more than one month at 01:00 each day, and saves 5-minute period performance data into the 15-minute period performance data table. In this way, the maximum value of performance data among the three values of 5-minute period performance data is saved into the 15-minute period performance data table.

- Real-time monitoring

  The NetEco 1000S monitors inverters in real time, such as their power generation efficiency, total power generated and power factors.

- The NetEco 1000S displays performance data of PV plants and devices in DST format.

- Device performance data dump

  The NetEco 1000S dumps device performance data saved for more than one month at 01:00 each day.

- Adjustment of the period for collecting device performance data.

- Device historical performance data synchronization

  - After a device is reconnected to the NetEco 1000S within 6 hours after the disconnection, the NetEco 1000S automatically obtains historical performance data of the device during the disconnection.
  - After a device is disconnected from the NetEco 1000S for more than 6 hours, the NetEco 1000S enables users to manually create a historical performance data synchronization task to synchronize historical performance data of the device to the NetEco 1000S.

- Remote management and upgrade

  The NetEco 1000S allows users to remotely configure and upgrade inverters that support remote configuration.

- Historical data query

  The NetEco 1000S allows users to query various historical data and alarm logs of inverters. The data can be exported and displayed on multiple pages.

- Historical alarm record dump

  When the number of historical alarm records reaches 800,000, the NetEco1000S automatically dumps 200,000 records at 01:00 the next day.

- Inverter operation log obtain

  The NetEco 1000S can remotely obtain operation logs of inverters for technical support engineers to quickly learn running status of inverters.

- User management

  The NetEco 1000S supports operations such as adding, modifying, and deleting a user, and can assign different operation rights to users as required.

- System operation logs query

The NetEco 1000S allows users to query historical operation records and login records of all users.

- Various remote alarm notification functions

  The NetEco 1000Scan send alarm information to users through short messages or emails based on user requirements.

- Remote report notification function

  After users set remote report notification parameters, the NetEco1000S sends emails to users each day to notify users of daily power and total power generated by the PV plant based on user requirements.

3 Hardware Installation

Direct Connection Using the RS232 Cable

Direct connection using the RS232 cable: It is applicable to local inverter monitoring. In this case, you can search inverters based on serial port addresses.

You can connect the RS485 serial port on the inverters to the idle RS232 serial port on the PC by using the RS232 cable (RS485 needs to be converted to RS232 through the signal converter). You can also connect multiple inverters to one RS485 bus which is connected to the PC serial port.

- The serial port number is the one used for connecting the monitoring PC and a device.
- The address of the RS485 bus is the **RS485 Com Address** of the inverter. For details about how to obtain this address, see the corresponding User Manual on the monitored device side.

  Contact Huawei technical support engineers to obtain the User Manual on the monitored device side.

NOTE

It is recommended that no more than six inverters be connected to the bus for better monitoring performance.

If new physical or logical serial ports are added on the PC on which the NetEco 1000S is running, you need to restart the NetEco 1000S. Otherwise, the newly added ports cannot be automatically identified by the NetEco 1000S.

Connection by Using Network Cables

Connection by using network cables: It is applicable to remote inverter monitoring. In this case, you can search inverters based on IP addresses.

The following two ways are available for the connection using network cables:

- Direct connection using the network cables： Connect the inverter to the monitoring PC directly through an IP network.

  The IP address is that of the inverter. For details about how to obtain the IP address, see the corresponding User Manual on the monitored device side.

  Contact Huawei technical support engineers to obtain the User Manual on the monitored device side.

- Connection using the data collector: Connect the inverter to the data collector and then connect the data collector to the monitoring PC through an IP network.

  The IP address is that of the data collector. For details about how to obtain the IP address, see the corresponding *SmartLogger1000 User Manual*.

  Contact Huawei technical support engineers to obtain the *SmartLogger1000 User Manual*.

4 NetEco 1000S Software Installation

Preinstallation Check

Before installing the NetEco 1000S software, check whether the PC meets the requirements listed in **Table 4-1**.

Table 4-1 Preinstallation check items

Check Item	Description
Software package	Contacted Huawei technical support engineers to obtain the software package iManagerNetEco1000SV100R001C01SPC210.zip. To obtain the software package, Huawei technical support engineers can choose **SUPPORT** > **Software Download** > **Network Energy** > **UPS and Inerter** > **Inverter** > **iManager NetEco 1000S** > **V100R001C01SPC210** at **http://www.huawei.com/en/**. You can check the integrity of the software package by referring to **7.2 How Do I Check the Integrity of Software Packages?**.
Hardware	PC: One that runs Windows 7.
	Memory: 4 GB or above.
	Hard disk space: 80 GB or above.
	CPU: quad-core 3.2 GHz, 1 GB cache.
Software	Operating system: Windows 7.
	Web browser: Internet Explorer 8.0 or Firefox 3.6.
	The antivirus software that can be updated properly must be installed on the PC.
	You are not advised to install other applications.
	You are not allowed to install the MySQL database.

Procedure

Step 1 After the software package is decompressed, navigate to the generated folder. Decompress **iManagerNetEco1000SV100R001C01SPC210.rar** and double-click **setup.vbs** in the folder.

The **Select Installation Language** window is displayed.

Step 2 Choose **English**, and click **OK**.

Step 3 Click **Next**.

The **Copyright Notice** window is displayed.

Read the terms of the copyright notice in the **Copyright Notice** window.

Step 4 Select **I accept these terms**, and click **Next**.

The **Select Installation Directory** window is displayed.

The default directory is **D:\NetEco1000S**.

Step 5 Specify an installation path and click **Next**.

The **Select Software Components** window is displayed.

Step 6 Select **NetEco 1000S** for installation and click **Next**.

The **Security Configure** window is displayed.

Step 7 Select **Use Security Web Service** . Then, click **Next**.

NOTICE

- If you select **Use Security Web Service**, the NetEco 1000S will set up a secure HTTPS channel between the browser and server, which ensures that user passwords and sensitive data are transmitted securely on the network.
- If you do not select **Use Security Web Service**, the NetEco 1000S will set up an HTTP channel between the browser and server, which cannot ensure that user passwords and sensitive data are transmitted securely on the network.

The **Confirm Installation** window is displayed.

Step 8 Confirm the installation settings and click **Next**.

The **Installation Status** window is displayed.

The **Installation Completed** window is displayed after the installation process reaches 100%.

Step 9 Click **Finish**.

When the software is installed successfully, the NetEco 1000S shortcut menu is available under **Start** > **All Program**.

NOTE

During the installation, you can click **Cancel** in any window with **Cancel** on it, and the **Confirm** window is displayed.

- You can click **Yes** to quit the installation.
- You can click **No** to proceed with the installation.

----End

5 Communication Matrix

Figure 5-1 shows the port view for the NetEco 1000S. **Table 5-1** describes ports used by the NetEco 1000S.

Figure 5-1 Port view

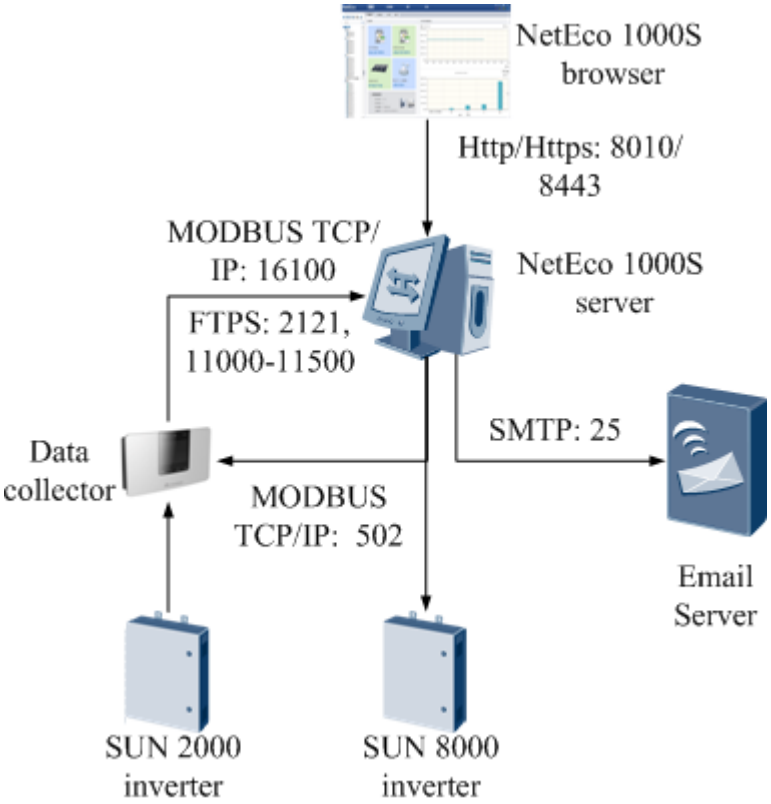


Table 5-1 Communication Matrix

Protocol Type	Source Device	Source Port Number	Target Device	Destination Port Number	Port Description	Authentication Mode	Encryption Mode
Http	Web browser	Random port	NetEco 1000S server	8010	Used as a common port for NetEco 1000S client	Username and password	None
Https	Web browser	Random port	NetEco 1000S server	8443	Used as an encrypted port for NetEco 1000S client	Username and password	SSL
MODBUS TCP/IP	Data collector	Random port	NetEco 1000S server	16100	Used as an encrypted port for the data collectorto connect to the NetEco 1000S server.	SSL certificate	SSL
FTPS	Data collector	Random port	NetEco 1000S server	2121	Used to receive files uploaded by the data collector.	Username and password	SSL
FTPS	Data collector	Random port	NetEco 1000S server	11000-11500	Used to receive files uploaded by the data collector.	Username and password	SSL
SMTP	NetEco 1000S server	Random port	Email Server	25	Port for the email server to sending emails	Username and password	None

Protocol Type	Source Device	Source Port Number	Target Device	Destination Port Number	Port Description	Authentication Mode	Encryption Mode
MODBUS TCP/IP	NetEco 1000S server	Random port	• Data collector • SUN8000 inverter	502	Port for the information exchanging between the NetEco 1000S and data collector or SUN8000 inverter.	None	None

6 Operation and Maintenance

About This Chapter

Section	Description
6.1 Logging In to the NetEco 1000S	Describes how to log in to the NetEco 1000S.
6.2 Managing the PV Plants	This section describes how to manage PV Plants. The NetEco 1000S allows you to divide a PV system into multiple PV Plants for easy management. You can create, modify, and delete PV Plants, have an overview of a PV Plant, and browse alarm information about a PV Plant.
6.3 Managing Devices	Describes how to search for devices, view the details and alarms of a device, and modify device control parameters, and remotely control devices.
6.4 Historical Data Query	Describes how to query alarm logs and performance data.
6.5 Device Maintenance	Describes how to upgrade device software and obtain device logs.
6.6 System Management	Describes how to manage users and logs, set remote notification parameters, and change system settings.
6.7 FAQs	Describes how to solve the problems that may occur during the usage of the NetEco 1000S software.

Describes how to search for devices, view the details and alarms of a device, and modify device control parameters.

6.1 Logging In to the NetEco 1000S

6.1.1 Starting NetEco 1000S Services

This section describes how to startNetEco 1000S services. Before logging in to the NetEco 1000S, you need to start NetEco 1000S services. Otherwise, the login will fail.

Procedure

Step 1 Choose **Start** > **All Program** > **NetEco 1000S** > **NetEco 1000S Service** to start the NetEco 1000Sservice in the operating system.

After being started, the NetEco 1000S service icon  is displayed in the lower right corner of the taskbar of the desktop.

----End

Related Operations

Stop NetEco 1000S services.

Right-click the NetEco 1000S service icon in the lower right corner of the taskbar of the desktop and choose **Exit** from the shortcut menu.

6.1.2 Login

This section describes how to log in to the NetEco 1000S before using NetEco 1000S services.

Prerequisites

- You have started the NetEco 1000S services. For details about how to start the services, see **6.1.1 Starting NetEco 1000S Services**.
- You have obtained the user name and password for logging in to the NetEco 1000S.

Context

The default user name and initial password are **admin** and **Changeme123** respectively.

NOTE

After user **admin** logs in to the NetEco 1000S for the first time, you need to change the password to ensure the NetEco 1000S security.

Procedure

Step 1 Choose **Start** > **All Program** > **NetEco 1000S** > **NetEco 1000S Client** in the operating system or enter http://IP address:8010 (for example, http://192.168.0.1:8010) in the address bar of the web browser (use Internet Explorer 8 or Firefox 3.6).

NOTICE

The web browser must be Internet Explorer 8.0 or Firefox 3.6.

- If the version of the web browser is earlier than Internet Explorer 8.0 or Firefox 3.6, users cannot log in to the NetEco 1000S client.
- If the version of the web browser is later than Internet Explorer 8.0 or Firefox 3.6, users can log in to the NetEco 1000S client but an exception may occur in the window.

- If you have selected **Use Security Web Service** during NetEco 1000S installation, the GUI shown in **Figure 6-1** will be displayed when you start the client.
- The **Login** window is displayed, as shown in **Figure 6-2**.

NOTE

The HTTPS secure communication channel between the NetEco 1000S browser and the server is set up to ensure that sensitive data (such as passwords) is transmitted securely. A security certificate is required when the HTTPS channel is set up. A default security certificate is provided by the NetEco 1000S, but this default certificate is not registered with the certificate issuing authority. As a result, the message "there is a problem with this website's security certificate" is displayed.

Click **Continue to this website (not recommended)** to choose the default security certificate. The **Login** window is displayed.

Figure 6-1 Website Security Certificate window

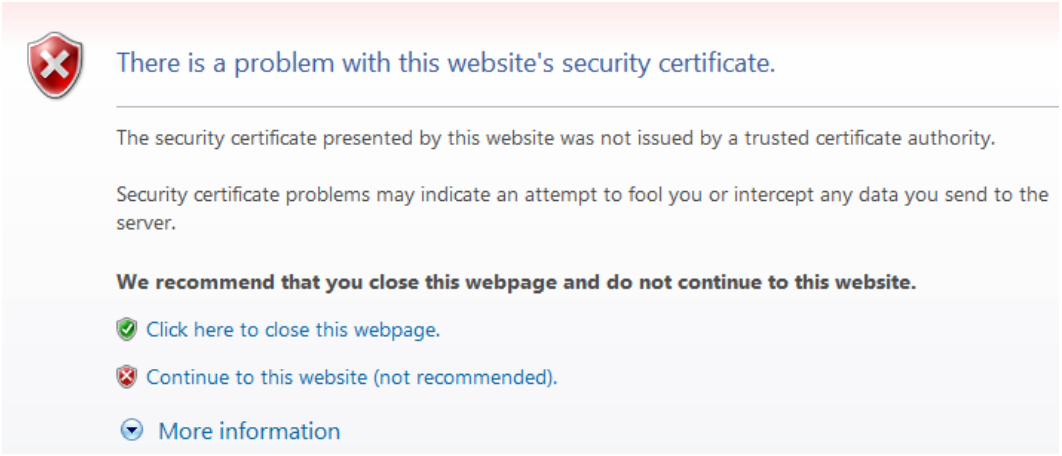
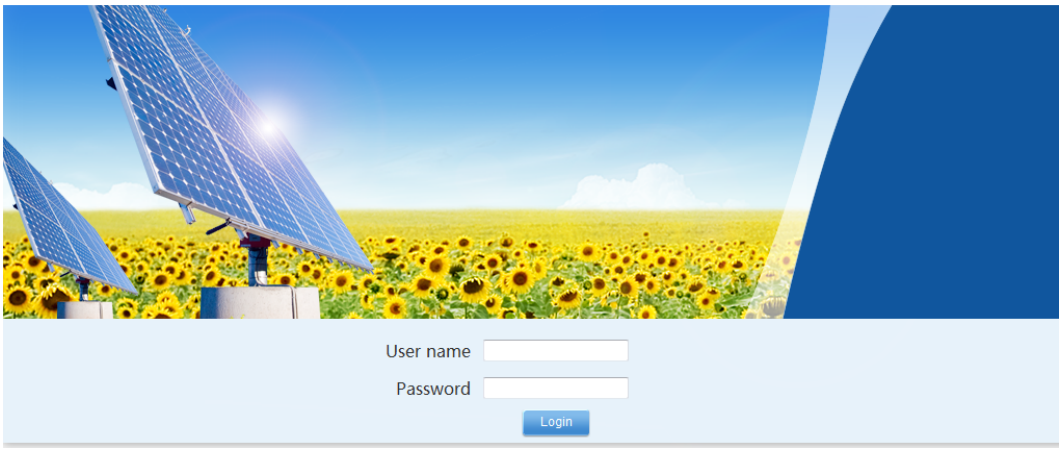


Figure 6-2 Login



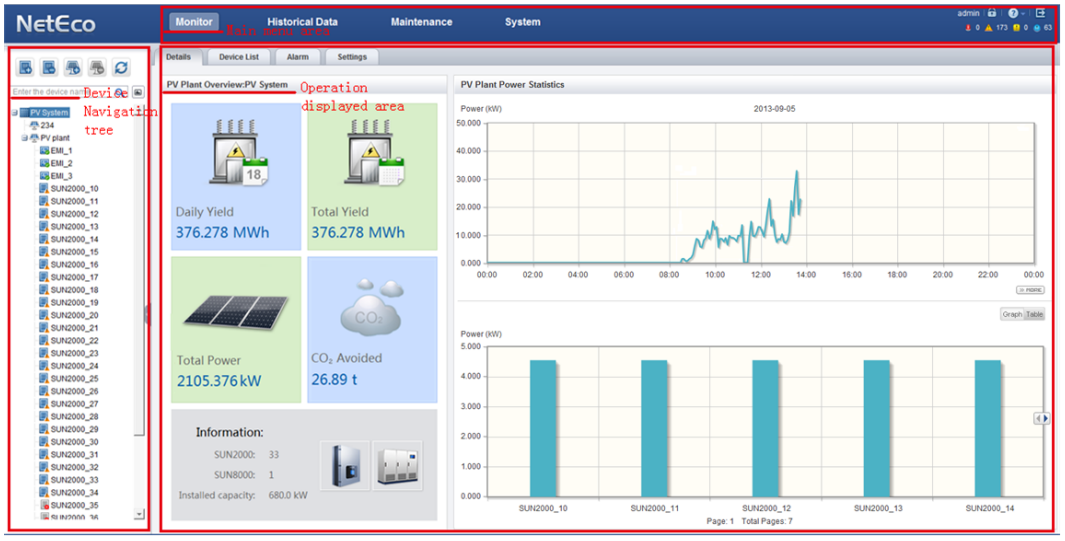
Step 2 Set User Name and Password when you log in to the NetEco 1000S for the first time, and click **Login**.

NOTE

You are recommended to change the passwords periodically (at an interval of 3 or 6 months) to improve system security.

The NetEco 1000S main window is displayed, as shown in **Figure 6-3**. This indicates that you have successfully logged in to NetEco 1000S.

Figure 6-3 NetEco 1000S Main Window



In terms of function, the NetEco 1000S main window is divided into three areas:

- Main menu area: The main menu area is used for selecting a menu.
- Device navigation tree: The device navigation tree is used for selecting devices to be operated.

NOTE

The device navigation tree is not displayed for all the menus.

- Operation display area: The operation display area is used for displaying the function of the menu.

----End

Related Operations

- Click  in the device navigation tree to view the current device status.
- Click  in the upper right corner from the main menu to log out. The **Login** page is displayed.

6.2 Managing the PV Plants

6.2.1 Creating PV Plant

This section describes how to create PV plant. After the NetEco 1000S is installed, a default PV plant is available. You can also create another PV plant as required.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

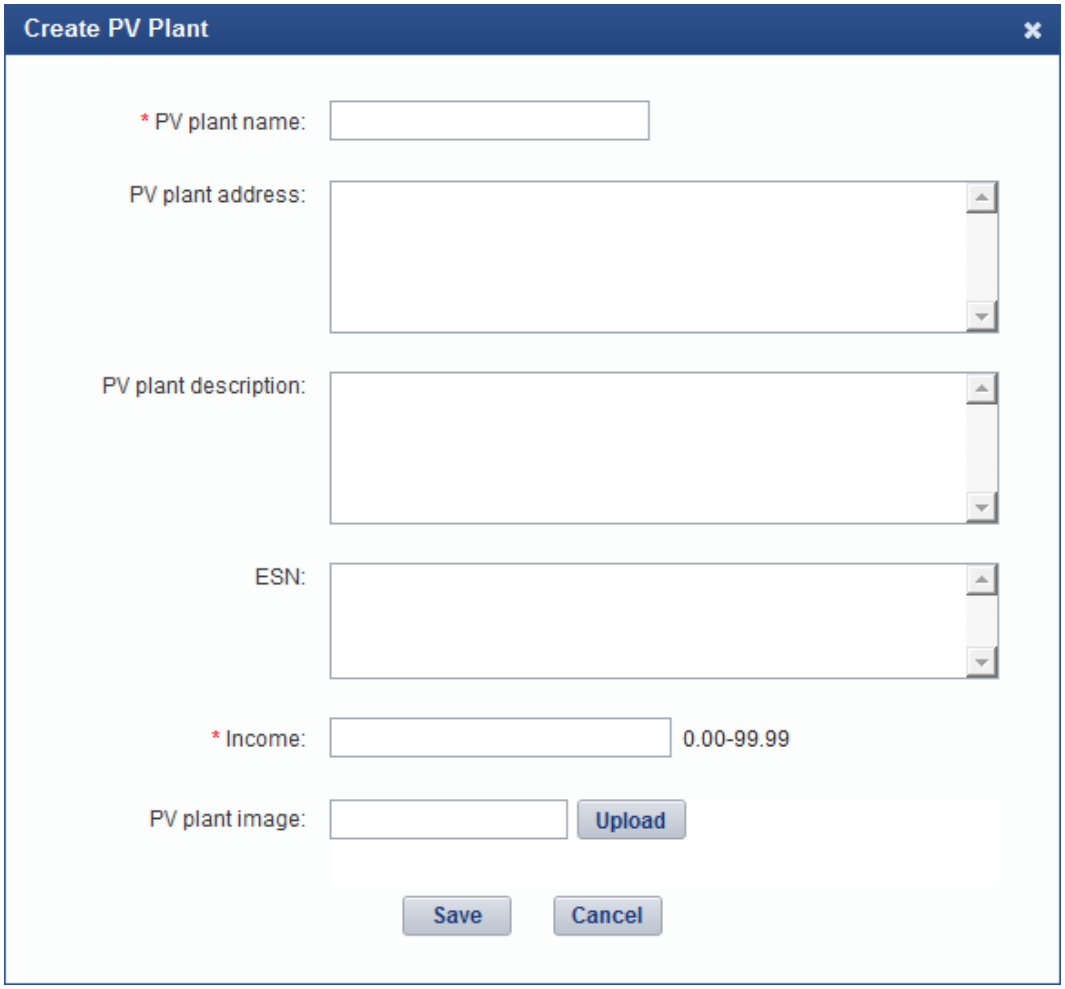
Procedure

Step 1 Choose **Monitor** from the main menu.

Step 2 Click  in the device navigation tree.

The **Create PV Plant** window is displayed, as shown in **Figure 6-4**.

Figure 6-4 Create PV Plant



Step 3 Set PV plant parameters by referring to **Table 6-1**.

Table 6-1 PV plant parameters

Parameter name	Mandatory (Yes/No)	Description
PV plant name	Yes	Name of a PV plant.
PV plant address	No	Address of a PV plant. You can set this parameter as required.
PV plant description	No	Description of a PV plant. You can enter utility information about the PV plant.

Parameter name	Mandatory (Yes/No)	Description
ESN	No	ESN of the Data collector. Multiple ESNs are separated by semicolons (;). You can enter the ESN of the Data collector. After a PV plant is created on the NetEco 1000S, the Data collector automatically mounts the Data collector and devices connected to the Data collector to the PV plant.
Income	Yes	Unit price of the power. You can set the unit in the **Income Settings** dialog box by choosing **System** > **System Settings** > **Income Settings**. Value range: 0.00-99.99
PV plant image	No	Perform the following operations to upload the PV plant image: 1. Click **Upload**. 2. Select a PV plant image and click **Open**. **NOTE** The size of the PV plant image must be less than 5 MB. Otherwise, the image fails to be uploaded.

Step 4 Click **Save**.

----End

6.2.2 Obtaining an Overview of a PV Plant

This section describes how to have an overview of a PV plant to learn about its running status, such as the power generation efficiency and cumulative generated power.

Prerequisites

You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

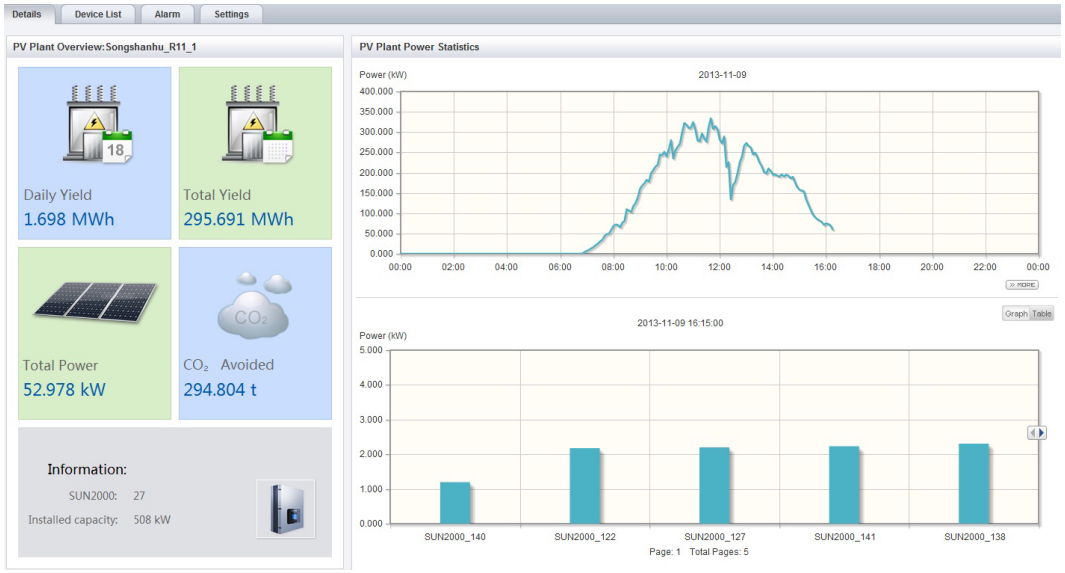
Step 1 Choose **Monitor** from the main menu.

Step 2 Choose **PV System** or a user-defined PV plant in the device navigation tree.

Step 3 Click the **Details** tabin the operation display area.

Running status information about the selected PV plant is displayed on the on the **Details** tab page, such as power generation efficiency and cumulative generated power, as shown in **Figure 6-5**.

Figure 6-5 Overview of a PV Plant



NOTE

The following conditions occur when the PC where the NetEco 1000S is installed uses the time zone with enabled daylight saving time (DST):

- When DST starts, no contents are displayed in the line chart of the PV plant power generation statistics in a certain period.
- When DST ends, duplicate lines are displayed in the line chart of the PV plant power generation statistics in a certain period.

----End

Follow-up Procedure

Perform the following operations on the **Details** tab page:

Procedure	Steps
View details about **Daily Yield**, **Total Yield**, **Total Power**, **CO Avoided**, and **Total Radiation**. **NOTE** ● **Total Radiation** is not displayed on the **Details** tab page of the PV System. ● **Total Radiation** is displayed on the **Details** tab page of the PV plant only when devices in the PV plant contain environment monitors.	The way of viewing each running information about a PV plant is the same. Viewing information about **Daily Yield** is used as an example: 1. Move the mouse pointer to the pane displaying the information about **Daily Yield**. The **View Details** link is displayed.  2. Click **View Details**. Information about **Daily Yield** for each device is displayed in the **Details** window. **NOTE** In the PV System, information about **Daily Yield** for each PV plant will be displayed.
Switch to the **Performance Data** page.	Click **MORE** on the right of **Details**.
Switch the mode for displaying power statistics.	Click **Table** or **Graph** in the lower area of the **PV Plant Power Statistics** column. ● Graph Table: The power statistics are displayed in a table. ● Graph Table: The power statistics are displayed in a line chart. **NOTE** The power statistics are displayed in a line chart by default.

6.2.3 Browsing the Device List of a PV Plant

This section describes how to browse the device list of a PV Plant to learn about the devices in the PV Plant.

Prerequisites

You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

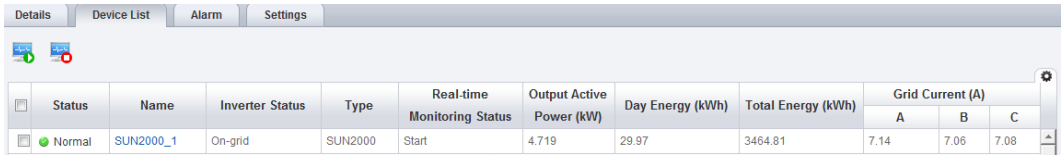
Step 1 Choose **Monitor** from the main menu.

Step 2 Choose **PV System** or a user-defined PV plant in the device navigation tree.

Step 3 Click the **Device List** tab in the operation display area.

Key information about all devices under the selected PV Plant is displayed on the **Device List** tab page, as shown in **Figure 6-6**.

Figure 6-6 Overview of Device Information

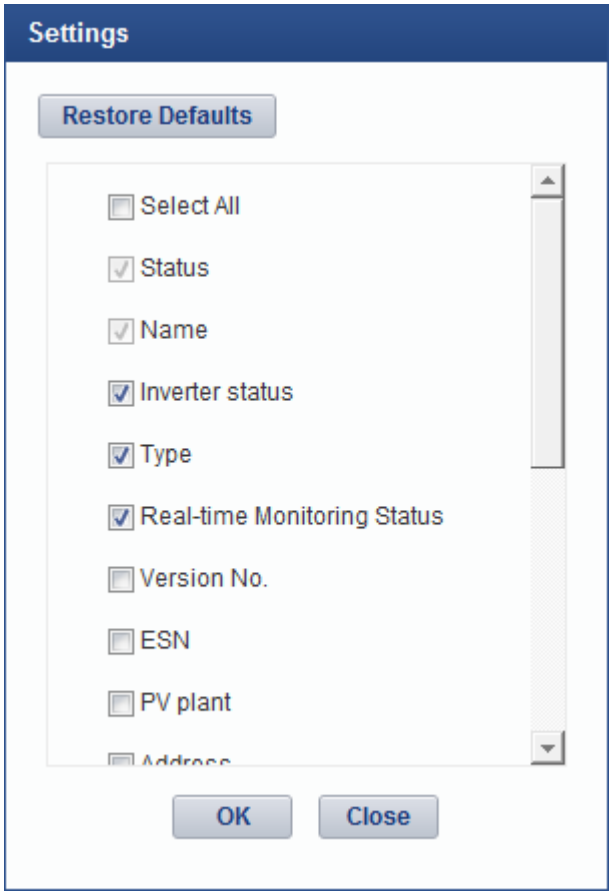


in the upper right corner provides the function of displaying only specified columns in the table on the **Device List** tab page. To display specified columns, perform the following steps:

1. Click .

   The **Settings** dialog box is displayed, as shown in **Figure 6-7**.

Figure 6-7 Settings dialog box



2. Select the names of the columns that need to be displayed. Then, click **OK**.

----End

Follow-up Procedure

System administrator and system operators can also perform the following operations on the **Device List** tab page:

Operation	Steps
Start the 1-minute real-time data collection task	1. Select one or more devices for which you want to start the 1-minute real-time data collection task. 2. Click  . 3. In the displayed dialog box, click **OK**.
Stop the 1-minute real-time data collection task	1. Select one or more devices for which you want to stop the 1-minute real-time data collection task. 2. Click  . 3. In the displayed dialog box, click **OK**.

6.2.4 Browsing Alarm Information About a PV Plant

This section describes how to browse alarm information about a PV plant to learn about the current alarms for all devices under the PV plant.

Prerequisites

You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

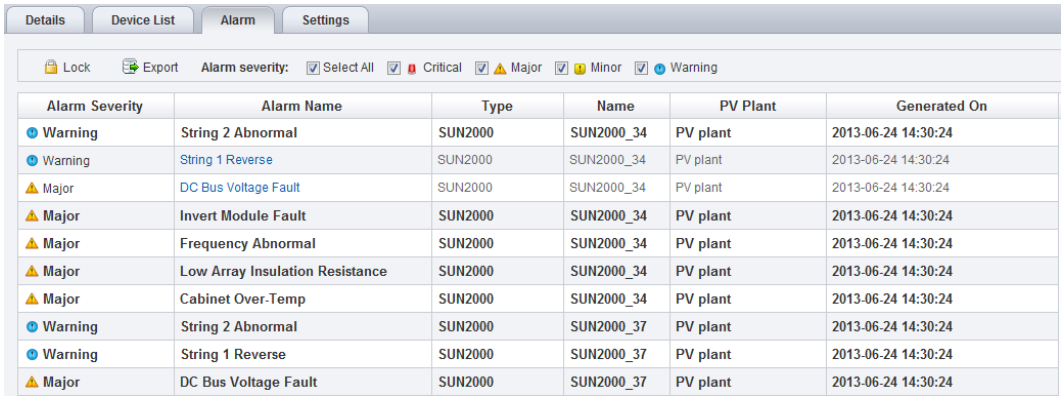
Step 1 Choose **Monitor** from the main menu.

Step 2 Choose **PV System** or a user-defined PV plant in the device navigation tree.

Step 3 Click the **Alarm** tab in the operation display area.

The current alarms for all devices under the selected PV plant is displayed on the **Alarm** tab page, as shown in **Figure 6-8**.

Figure 6-8 Overview of Alarm Information about a PV Plant



Alarm Severity	Alarm Name	Type	Name	PV Plant	Generated On
Warning	String 2 Abnormal	SUN2000	SUN2000_34	PV plant	2013-06-24 14:30:24
Warning	String 1 Reverse	SUN2000	SUN2000_34	PV plant	2013-06-24 14:30:24
Major	DC Bus Voltage Fault	SUN2000	SUN2000_34	PV plant	2013-06-24 14:30:24
Major	Invert Module Fault	SUN2000	SUN2000_34	PV plant	2013-06-24 14:30:24
Major	Frequency Abnormal	SUN2000	SUN2000_34	PV plant	2013-06-24 14:30:24
Major	Low Array Insulation Resistance	SUN2000	SUN2000_34	PV plant	2013-06-24 14:30:24
Major	Cabinet Over-Temp	SUN2000	SUN2000_34	PV plant	2013-06-24 14:30:24
Warning	String 2 Abnormal	SUN2000	SUN2000_37	PV plant	2013-06-24 14:30:24
Warning	String 1 Reverse	SUN2000	SUN2000_37	PV plant	2013-06-24 14:30:24
Major	DC Bus Voltage Fault	SUN2000	SUN2000_37	PV plant	2013-06-24 14:30:24

Step 4 (Optional) Click an alarm name in the **Alarm Name** column to view the details.

NOTE

Alarms that have not been browsed are highlighted in bold.

Step 5 (Optional) Click **Export** to export the queried alarm information into a CSV file.

----End

Follow-up Procedure

Click **Lock**. Alarms are no longer automatically updated on the **Alarm** page. In this way, you can view the alarms reported only before the lock. To enable the automatic update function again and view newly reported alarms, click **Scroll Unlock**.

NOTE

If excessive alarms are generated, these alarms are displayed on multiple pages. In this case, pages except the first one are locked and the **Scroll Unlock** button is unavailable for you to unlock those pages.

By default, the alarm lock function on the **Alarm** page is disabled.

6.2.5 Modifying the Information About a PV Plant

This section describes how to modify the information about a PV plant on the NetEco 1000S if the information is inconsistent with that about the actual PV plant.

Prerequisites

NOTE

The **Setting** tab page is unavailable in the PV System.

You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

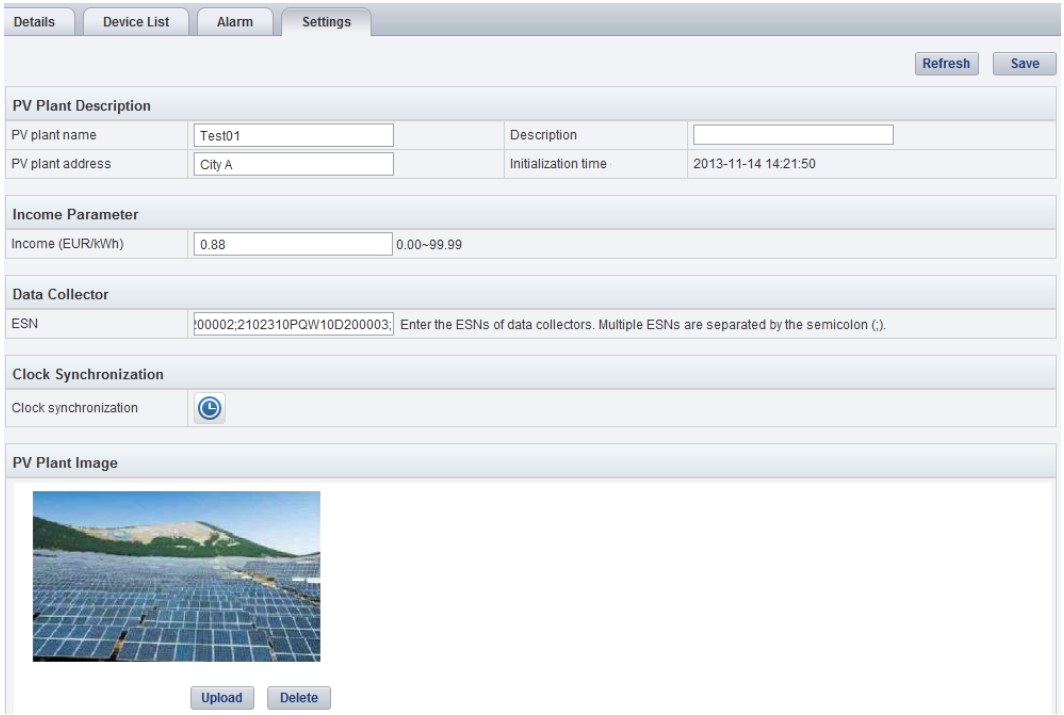
Step 1 Choose **Monitor** from the main menu.

Step 2 Select the PV plant whose information are to be changed in the device navigation tree.

Step 3 Click the **Setting** tab in the operation display area.

Information about the selected PV plant is displayed on the **Setting** tab page, as shown in **Figure 6-9**.

Figure 6-9 PV Plant Infromation



Step 4 Modify basic information about a PV plant.

NOTE

You can perform this operation only as system administrator or system operators.

1. Modify **PV plant name**, **Description**, **PV plant address**, **ESN** and **Income** as required.
2. Click **Save**.
   A dialog box containing the message **Modification succeeded** is displayed.
3. Click **OK**.

Step 5 (Optional) Click  , perform the time synchronization operation.

NOTE

You can perform this operation only as system administrator.

The NetEco 1000S performs time synchronization to synchronize time from the NetEco 1000S server to devices mounted to the PV plant.

Step 6 Modify the PV plant image.

1. Click **Upload**.
2. Select a PV plant image and click **Open**.

   NOTE

   The size of the PV plant image must be less than 5 MB. Otherwise, the image fails to be uploaded.

----End

6.2.6 Deleting PV Plants

This section describes how to delete PV plants that are created incorrectly or do not need to be managed after network adjustment from the NetEco 1000S.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

Procedure

Step 1 Choose **Monitor** from the main menu.

Step 2 Select the PV plant to be deletedin the device navigation tree.

Step 3 Click  .

A confirmation dialog box containing the message **Are you sure you want to delete?** is displayed.

NOTE

A PV plant can be deleted only when no device exists under it. Otherwise,  is dimmed.

Step 4 Click **Yes**.

A dialog box containing the message **Deletion succeeded** is displayed.

Step 5 Click **OK**.

----End

6.3 Managing Devices

Describes how to search for devices, view the details and alarms of a device, and modify device control parameters.

6.3.1 Searching Devices Based on IP Addresses

This section describes how to search devices based on IP addresses when inverters are connected to the monitoring PC using network cables. The NetEco 1000S can automatically identify and add new devices after the search.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.
- You have obtained the IP address of the device. For detailed operations, seeUser Manual on the monitored device side.

  If the device is connected to the NetEco 1000S through the data collector, the IP address is that of the data collector. The data collector and NetEco 1000S must be in the same time zone.

  If the data collector and NetEco 1000S are not in the same time zone, change the time zone of the data collector by following the instructions provided in the device user manual.
- You have configured the connection mode, IP address, and port number (16100) of the NetEco 1000S on the web user interface (WebUI) of the data collector.

  If not, configure them by following the instructions provided in the user manual of the data collector.

Context

If one of the following changes occurs on a device that has been added to the NetEco 1000S, you need to search the device again so that information about the device can be updated on the NetEco 1000S.

- The connection mode between the device and the NetEco 1000S is changed: the RS232 cable-based direct connection is changed to network cable-based connection.
- The IP address of the device is changed.

NOTE

When devices are connected to the NetEco 1000S through the Data collector, note that:

- If the NetEco 1000S or data collector is started earlier than inverter, the device list on the NetEco 1000S may be inconsistent with that on the data collector, or the device list may be incomplete. In this case, you are advised to manually search for devices on the data collector and then on the NetEco 1000S.
- In the case of device addition, device replacement, or **RS485 Com Address** change, you must manually search for devices on the data collector or restart the data collector before searching for devices on the NetEco 1000S.

Procedure

Step 1 Choose **Monitor** from the main menu.

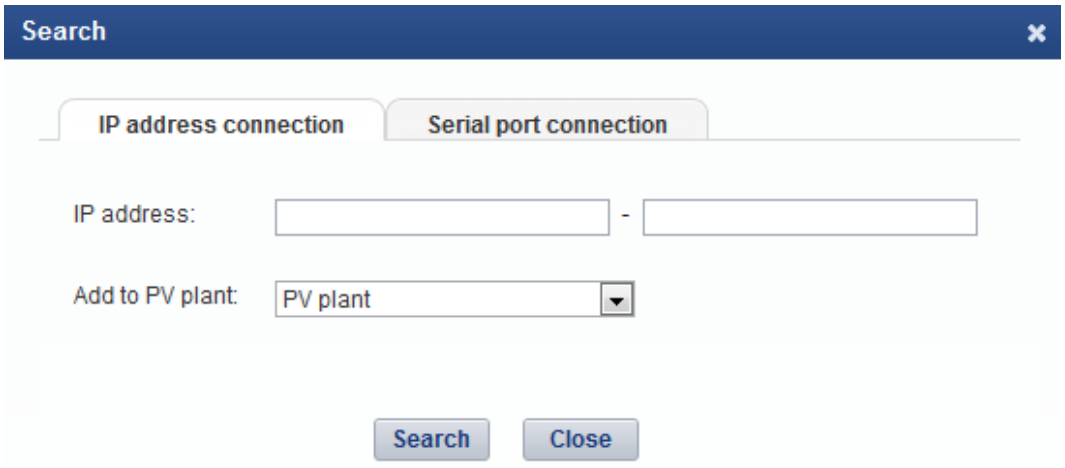
Step 2 Click  in the device navigation tree.

The **Search** dialog box is displayed.

Step 3 Click the **IP address connection** tab.

The **IP address connection** tab page is displayed, as shown in **Figure 6-10**.

Figure 6-10 IP address connection



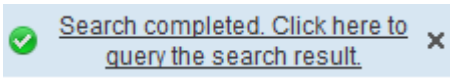
Step 4 Enter the device IP address and select the PV Plant to which the device belongs by referring to **Table 6-2**.

Table 6-2 Parameters for searching devices based on IP addresses

Parameter	Description
IP address	IP address of the inverter.
Add to PV plant	Name of the PV plant to which the inverter belongs.

Step 5 Click **Search**.

The added devices are displayed in the device navigation tree after the search.

Step 6 (Optional) Click 

to view the search result.

----End

6.3.2 Searching Devices Based on Serial Port Addresses

This section describes how to search devices based on serial port addresses when inverters are connected to the monitoring PC using serial cables. The NetEco 1000S can automatically identify and add new devices after the search.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.
- You have obtained the serial port number, start bus address, and end bus address for a device. For detailed operations, see **3 Hardware Installation**.

Context

If one of the following changes occurs on a device that has been added to the NetEco 1000S, you need to search the device again so that information about the device can be updated on the NetEco 1000S.

- The connection mode between the device and the NetEco 1000S is changed: Network cable-based connection is changed to the RS232 cable-based direct connection.
- The **RS485 Com Address** of the device is changed.

Procedure

Step 1 Choose **Monitor** from the main menu.

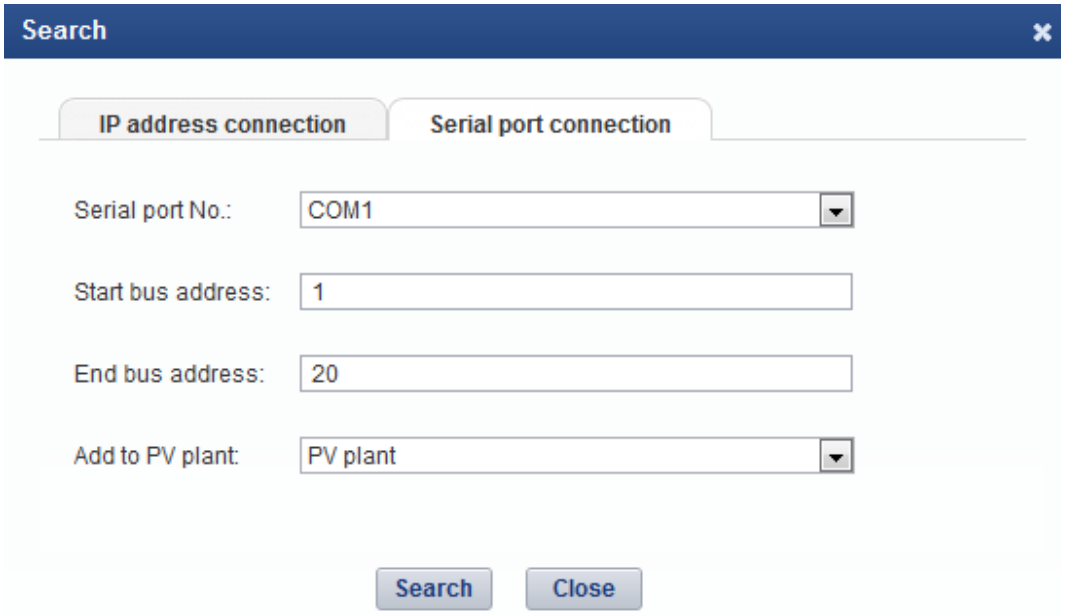
Step 2 Click  in the device navigation tree.

The **Search** dialog box is displayed.

Step 3 Click the **Serial port connection** tab.

The **Serial port connection** tab page is displayed, as shown in **Figure 6-11**.

Figure 6-11 Serial port connection



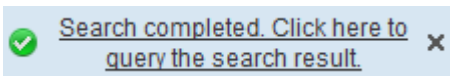
Step 4 Enter the serial port number, start bus address, and end bus address for the device and select the PV Plant to which the device belongs by referring to **Table 6-3**.

Table 6-3 Parameters for searching devices based on serial port addresses

Parameter	Description
Serial port No.	Serial port number for connecting the device to the monitoring PC.
Start bus address	Start bus address of the **RS485 Com Address**. The default value is **1**.
End bus address	End bus address of the **RS485 Com Address**. The default value is **20**.
Add to PV plant	Name of the PV Plant to which the device belongs.

Step 5 Click **Search**.

The added devices are displayed in the device navigation tree after the search.

Step 6 (Optional) Click 

to view the search result.

----End

6.3.3 Browsing the Details About a Device

This section describes how to browse the details about a device to learn about its running status, such as the power generation efficiency and cumulative generated power.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- You have added a device to the NetEco 1000S. For detailed operations, see **6.3.1 Searching Devices Based on IP Addresses** or **6.3.2 Searching Devices Based on Serial Port Addresses**.

Procedure

Step 1 Choose **Monitor** from the main menu.

Step 2 Choose an inverter in the device navigation tree.

Step 3 Click the **Details** tab in the operation display area.

Power generation efficiency and cumulative generated power of the selected device is displayed on the **Details** tab page, as shown in **Figure 6-12**.

Figure 6-12 Details about a device

NOTE

The following conditions occur when the PC where the NetEco 1000S is installed uses the time zone with enabled daylight saving time (DST):

- When DST starts, no contents are displayed in the line chart of the inverter power generation statistics in a certain period.
- When DST ends, duplicate lines are displayed in the line chart of the inverter power generation statistics in a certain period.

----End

Follow-up Procedure

System administrator and system operators can also perform the following operations on the **Details** tab page:

Operation	Steps
Startup	Click  .
Shutdown	Click  .
Start the 1-minute real-time data collection task **NOTE** You can start the 1-minute real-time data collection task when its status is  .	Click  .
Stop the 1-minute real-time data collection task **NOTE** You can stop the 1-minute real-time data collection task when its status is  .	Click  .

6.3.4 Browsing Alarm Information About a Device

This section describes how to browse alarm information about a device to learn about the current alarms for the device.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- You have added a device to the NetEco 1000S. For detailed operations, see **6.3.1 Searching Devices Based on IP Addresses** or **6.3.2 Searching Devices Based on Serial Port Addresses**.

Procedure

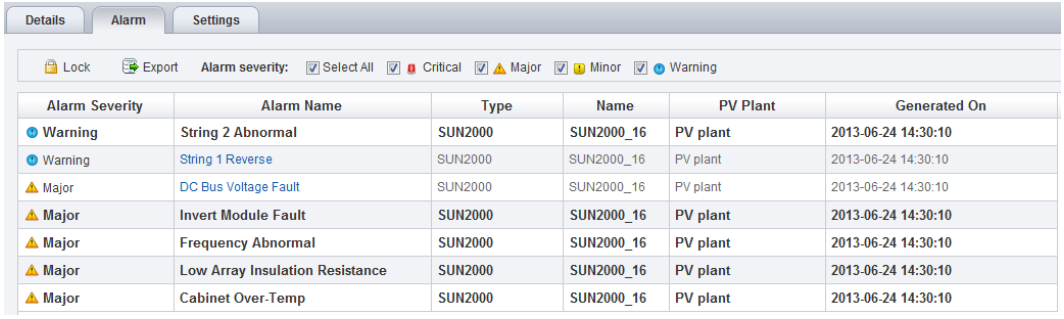
Step 1 Choose **Monitor** from the main menu.

Step 2 Choose an inverter in the device navigation tree.

Step 3 Click the **Alarm** tab in the operation display area.

The information about all the current alarms of the inverters is displayed in the **Alarm** tab page, as shown in **Figure 6-13**.

Figure 6-13 The information about all the current alarms of the inverters



Alarm Severity	Alarm Name	Type	Name	PV Plant	Generated On
Warning	String 2 Abnormal	SUN2000	SUN2000_16	PV plant	2013-06-24 14:30:10
Warning	String 1 Reverse	SUN2000	SUN2000_16	PV plant	2013-06-24 14:30:10
Major	DC Bus Voltage Fault	SUN2000	SUN2000_16	PV plant	2013-06-24 14:30:10
Major	Invert Module Fault	SUN2000	SUN2000_16	PV plant	2013-06-24 14:30:10
Major	Frequency Abnormal	SUN2000	SUN2000_16	PV plant	2013-06-24 14:30:10
Major	Low Array Insulation Resistance	SUN2000	SUN2000_16	PV plant	2013-06-24 14:30:10
Major	Cabinet Over-Temp	SUN2000	SUN2000_16	PV plant	2013-06-24 14:30:10

Step 4 (Optional) Click an alarm name in the **Alarm Name** column to view the details.

NOTE

Alarms that have not been browsed are highlighted in bold.

Step 5 (Optional) Click **Export** to export the queried alarm information into a CSV file.

----End

Follow-up Procedure

Click **Lock**. Alarms are no longer automatically updated on the **Alarm** page. In this way, you can view the alarms reported only before the lock. To enable the automatic update function again and view newly reported alarms, click **Scroll Unlock**.

NOTE

If excessive alarms are generated, these alarms are displayed on multiple pages. In this case, pages except the first one are locked and the **Scroll Unlock** button is unavailable for you to unlock those pages.

By default, the alarm lock function on the **Alarm** page is disabled.

6.3.5 Modifying the Information About a Device

This section describes how to modify device information and adjust device parameters.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- You have added a device to the NetEco 1000S. For detailed operations, see **6.3.1 Searching Devices Based on IP Addresses** or **6.3.2 Searching Devices Based on Serial Port Addresses**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

Procedure

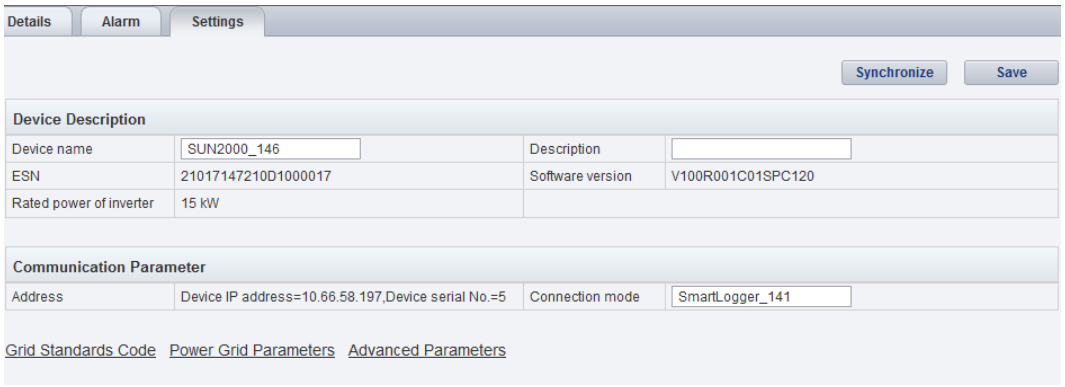
Step 1 Choose **Monitor** from the main menu.

Step 2 Choose an inverter in the device navigation tree.

Step 3 Click the **Setting** tab in the operation display area.

Configuration information about the selected device is displayed on the **Setting** tab page, as shown in **Figure 6-14**.

Figure 6-14 Device configuration information



Step 4 (Optional) Change the data collector name in the **Connection mode** text box.

The system administrator or operator can change the data collector name only when the device is connected to the NetEco 1000S through the data collector.

After the data collector name is changed on the **Setting** tab page for a device that is connected to the NetEco 1000S through the same data collector as other devices, data collector names on the **Setting** tab pages for other devices will be also changed to the new one.

Step 5 Set Grid Standards Code.

1. Click **Grid Standards Code**.
2. Enter the advanced user password for the current device. Then, click **OK**.

   The **Grid Standards Code** dialog box is displayed.
3. Select the actual Grid Standards Code of the device from the drop-down list.
4. Click **Save**.

Step 6 Set Power Grid Parameters.

1. Click **Power Grid Parameters**.
2. Enter the special user password for the current device. Then, click **OK**.

   The **Power Grid Parameters** dialog box is displayed.
3. Change the values of Power Grid Parameters as required.

   For details about the parameters, see the User Manual on the monitored device side.
4. Click **Save**.

Step 7 Set Advanced Parameters.

1. Click **Advanced Parameters**.
2. Enter the advanced user password for the current device. Then, click **OK**.

   The **Advanced Parameters** dialog box is displayed.

3. Change the values of Advanced Parameters as required.

   For details about the parameters, see the User Manual on the monitored device side.

4. Click **Save**.

Step 8 Click **Save**.

----End

6.3.6 Deleting inverters

This section describes how to delete inverters that do not need to be managed after device adjustment or inverters that are damaged from the NetEco 1000S.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- You have added a device to the NetEco 1000S. For detailed operations, see **6.3.1 Searching Devices Based on IP Addresses** or **6.3.2 Searching Devices Based on Serial Port Addresses**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

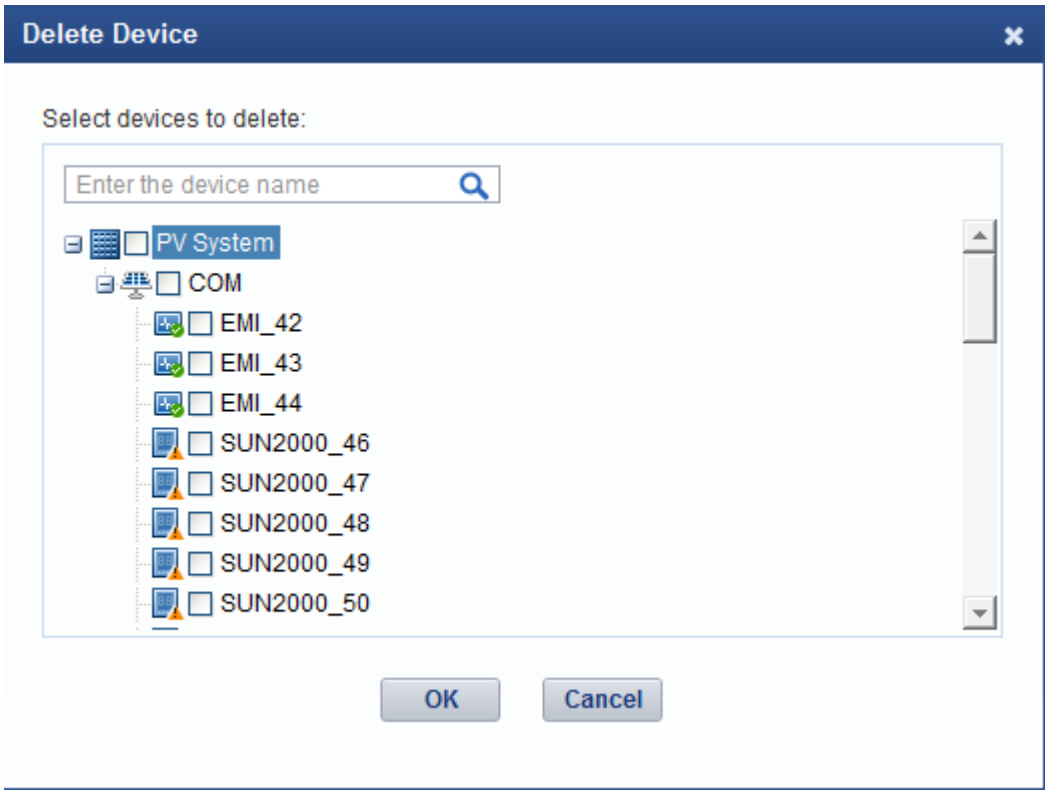
Procedure

Step 1 Choose **Monitor** from the main menu.

Step 2 Click  in the device navigation tree.

The **Delete Device** window is displayed, as shown in **Figure 6-15**.

Figure 6-15 Delete Device



Step 3 In the displayed **Delete Device** dialog box, select the inverters to be deleted.

Step 4 Click **OK**.

The message `After being deleted device cannot be recovered. Are you sure you want to delete it?` is displayed.

Step 5 Click **Yes**.

The **Deletion succeeded** dialog box is displayed.

Step 6 Click **OK**.

----End

6.4 Historical Data Query

6.4.1 Querying Alarm Logs

This section describes how to query alarm logs on the NetEco 1000S. You can set query criteria to obtain the required alarm logs.

Prerequisites

You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

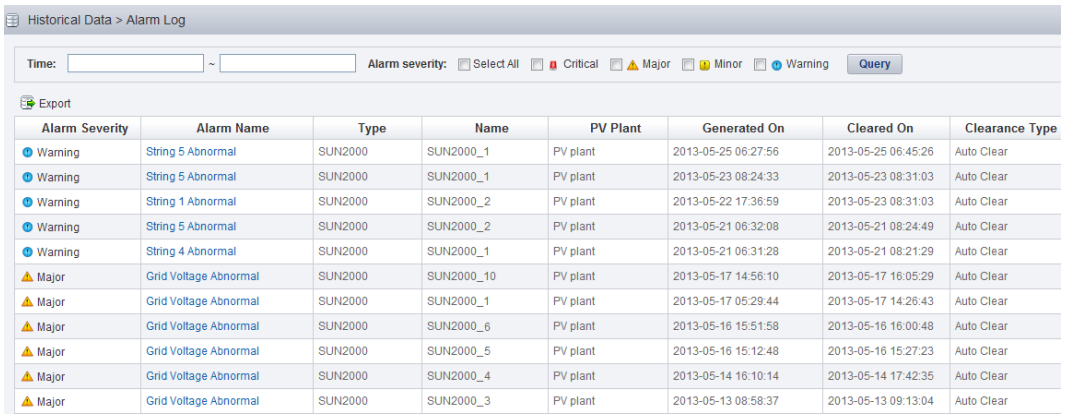
Step 1 Choose **Historical Data** > **Alarm Log** from the main menu.

Step 2 Choose an inverter to be queried in the device navigation tree.

Step 3 Set query conditions in the operation display area, and then click **Query**.

All the alarm records that meet the query conditions are displayed in one or more pages, as shown in **Figure 6-16**.

Figure 6-16 Alarm Log



Alarm Severity	Alarm Name	Type	Name	PV Plant	Generated On	Cleared On	Clearance Type
Warning	String 5 Abnormal	SUN2000	SUN2000_1	PV plant	2013-05-25 06:27:56	2013-05-25 06:45:26	Auto Clear
Warning	String 5 Abnormal	SUN2000	SUN2000_1	PV plant	2013-05-23 08:24:33	2013-05-23 08:31:03	Auto Clear
Warning	String 1 Abnormal	SUN2000	SUN2000_2	PV plant	2013-05-22 17:36:59	2013-05-23 08:31:03	Auto Clear
Warning	String 5 Abnormal	SUN2000	SUN2000_2	PV plant	2013-05-21 06:32:08	2013-05-21 08:24:49	Auto Clear
Warning	String 4 Abnormal	SUN2000	SUN2000_1	PV plant	2013-05-21 06:31:28	2013-05-21 08:21:29	Auto Clear
Major	Grid Voltage Abnormal	SUN2000	SUN2000_10	PV plant	2013-05-17 14:56:10	2013-05-17 16:05:29	Auto Clear
Major	Grid Voltage Abnormal	SUN2000	SUN2000_1	PV plant	2013-05-17 05:29:44	2013-05-17 14:26:43	Auto Clear
Major	Grid Voltage Abnormal	SUN2000	SUN2000_6	PV plant	2013-05-16 15:51:58	2013-05-16 16:00:48	Auto Clear
Major	Grid Voltage Abnormal	SUN2000	SUN2000_5	PV plant	2013-05-16 15:12:48	2013-05-16 15:27:23	Auto Clear
Major	Grid Voltage Abnormal	SUN2000	SUN2000_4	PV plant	2013-05-14 16:10:14	2013-05-14 17:42:35	Auto Clear
Major	Grid Voltage Abnormal	SUN2000	SUN2000_3	PV plant	2013-05-13 08:58:37	2013-05-13 09:13:04	Auto Clear

NOTE

Clearance Type includes **Auto Clear** and **Cleared by the system**.

- The value of **Clearance Type** for an automatically cleared alarm on the device side is **Auto Clear**
- When devices reports active alarms to the NetEco 1000S again after reporting 30,000 active alarms to the NetEco 1000S, the NetEco 1000S automatically clears the earliest 1000 alarms and **Clearance Type** of these cleared alarms is **Cleared by the system**.

Step 4 (Optional) Click **Export** to export the queried alarm records into a CSV file.

----End

6.4.2 Querying Performance Data

This section describes how to query performance data on the NetEco 1000S.

Querying the Performance Data of a PV Plant

This section describes how to query the performance data of a PV plant. You can set query criteria to obtain the required performance data.

Prerequisites

You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

Step 1 Choose **Historical Data** > **Performance Data** from the main menu.

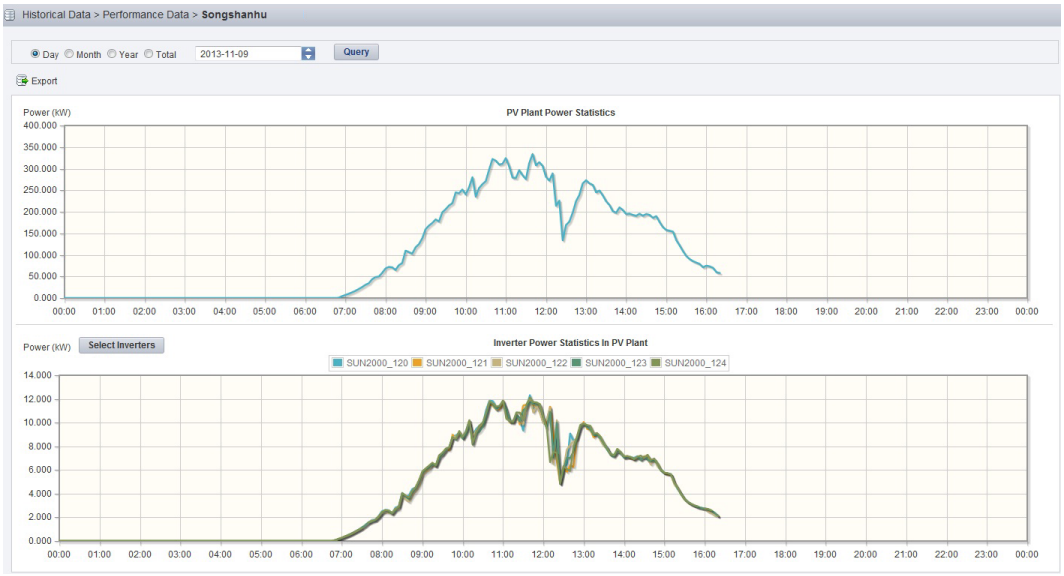
Step 2 Choose a PV plant to be queried in the device navigation tree.

Step 3 Query the performance data of a PV plant in the operation display area.

You can query performance data of a PV plant by day, by month, by year, and by total.

- Querying performance data by day

  Select **Day** in the operation display area, set the date, and then click **Query**.



NOTE

The following conditions occur when the PC where the NetEco 1000S is installed uses the time zone with enabled daylight saving time (DST):

- When users query performance data by day on a date with DST started, no contents are displayed in the line charts of the PV plant and inverter power generation statistics in a certain period.
- When users query performance data by day on a date with DST ended, duplicate lines are displayed in the line charts of the PV plant and inverter power generation statistics in a certain period.

When you query performance data by day, data of the specified day varies at different time in the line graph.

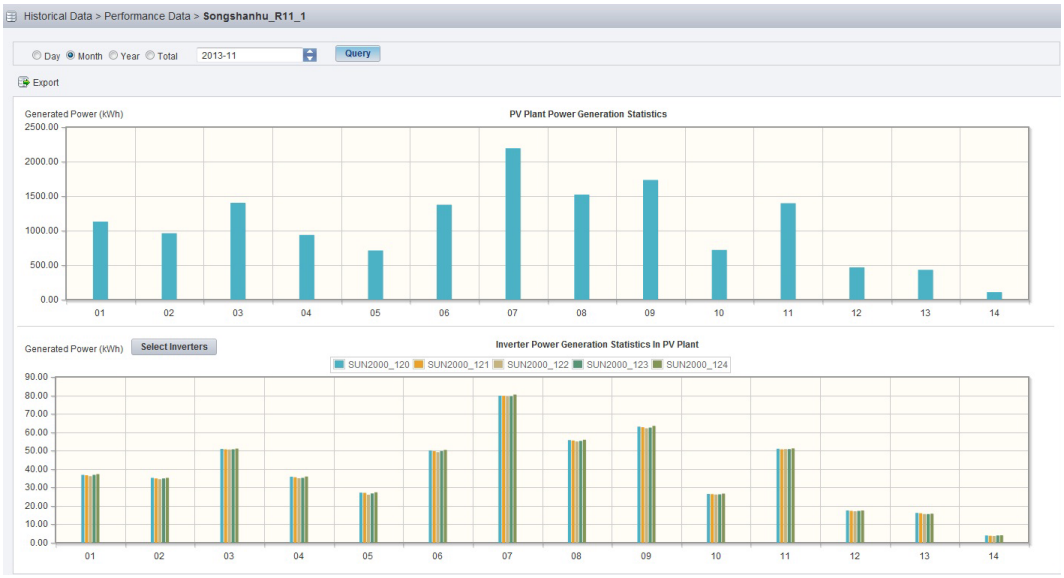
- Within one month: Data in the line graph is the 5-minute period performance data.
- Between one month and one year: Data in the line graph is the 15-minute period performance data.
- Between one year and three years: Data in the line graph is the 1-hour period performance data.

  NOTE

  After the 15-minute period performance data is stored for one year, the maximum value of data among the four values of collected performance data is saved into the 1-hour period performance data report. The 1-hour period performance data can be saved for a maximum of two years.

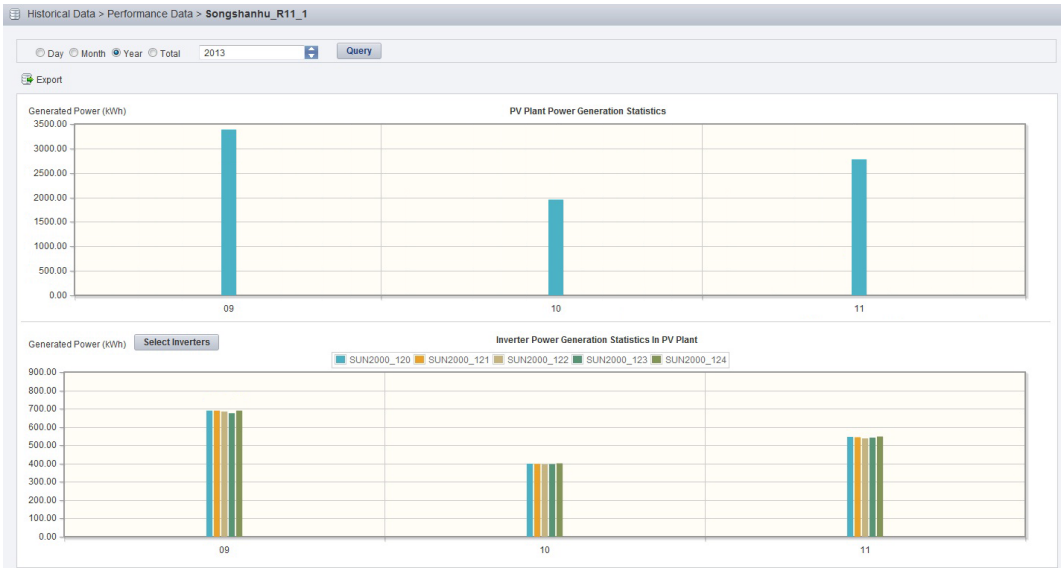
- Querying performance data by month

  Select **Month** in the operation display area, set the month, and then click **Query**.



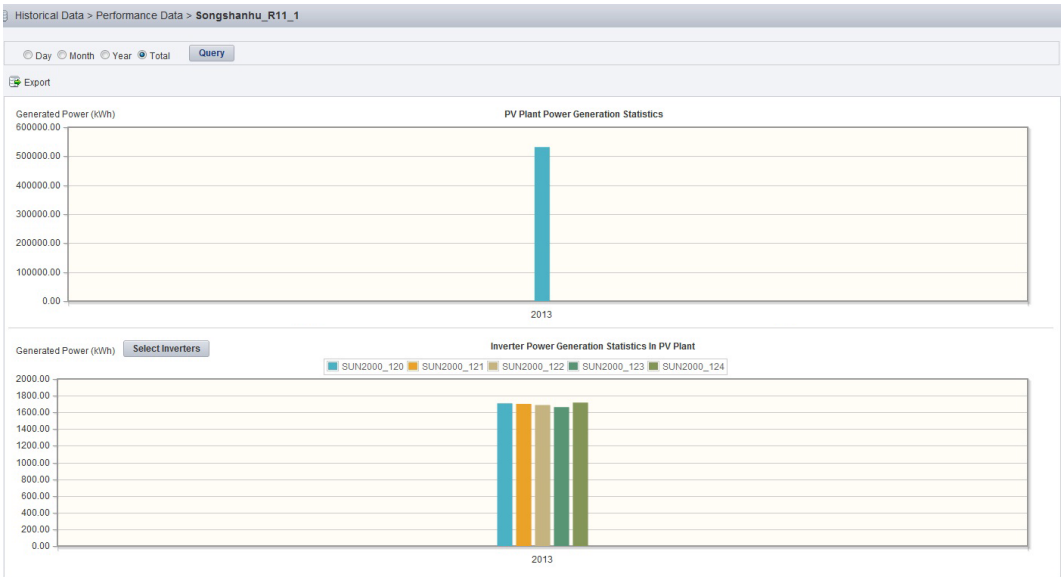
- Querying performance data by year

  Select **Year** in the operation display area, set the year, and then click **Query**.



- Querying performance data by total

  Select **Total** in the operation display area, and then click **Query**.



Step 4 (Optional) Click **Export** to export the queried performance data records into a CSV file.

----End

Querying the Performance Data of a Device

This section describes how to query the performance data of a device. You can set query criteria to obtain the required performance data.

Prerequisites

You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

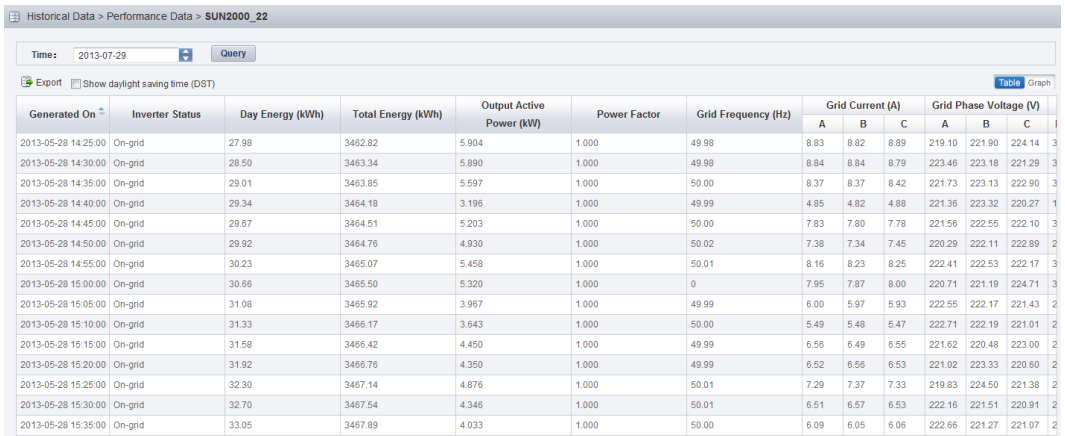
Step 1 Choose **Historical Data** > **Performance Data** from the main menu.

Step 2 Choose a device to be queriedin the device navigation tree.

Step 3 Set query conditions in the operation display area, and then click **Query**.

All qualified performance data is displayed on one or more pages, as shown in **Figure 6-17**.

Figure 6-17 Querying the performance data of a device



Generated On	Inverter Status	Day Energy (kWh)	Total Energy (kWh)	Output Active Power (kW)	Power Factor	Grid Frequency (Hz)	Grid Current (A)			Grid Phase Voltage (V)			
							A	B	C	A	B	C	
2013-05-28 14:25:00	On-grid	27.98	3462.82	5.904	1.000	49.98	8.83	8.82	8.89	219.10	221.90	224.14	3
2013-05-28 14:30:00	On-grid	28.50	3463.34	5.890	1.000	49.98	8.84	8.84	8.79	223.46	223.18	221.29	3
2013-05-28 14:35:00	On-grid	29.01	3463.85	5.597	1.000	50.00	8.37	8.37	8.42	221.73	223.13	222.90	3
2013-05-28 14:40:00	On-grid	29.34	3464.18	3.196	1.000	49.99	4.85	4.82	4.88	221.36	223.32	220.27	1
2013-05-28 14:45:00	On-grid	29.67	3464.51	5.203	1.000	50.00	7.83	7.80	7.78	221.56	222.55	222.10	3
2013-05-28 14:50:00	On-grid	29.92	3464.76	4.930	1.000	50.02	7.38	7.34	7.45	220.29	222.11	222.89	2
2013-05-28 14:55:00	On-grid	30.23	3465.07	5.458	1.000	50.01	8.16	8.23	8.25	222.41	222.53	222.17	3
2013-05-28 15:00:00	On-grid	30.66	3465.50	5.320	1.000	0	7.95	7.87	8.00	220.71	221.19	224.71	3
2013-05-28 15:05:00	On-grid	31.08	3465.92	3.967	1.000	49.99	6.00	5.97	5.93	222.55	222.17	221.43	2
2013-05-28 15:10:00	On-grid	31.33	3466.17	3.643	1.000	50.00	5.49	5.48	5.47	222.71	222.19	221.01	2
2013-05-28 15:15:00	On-grid	31.58	3466.42	4.450	1.000	49.99	6.56	6.49	6.55	221.62	220.48	223.00	2
2013-05-28 15:20:00	On-grid	31.92	3466.76	4.350	1.000	49.99	6.52	6.56	6.53	221.02	223.33	220.60	2
2013-05-28 15:25:00	On-grid	32.30	3467.14	4.876	1.000	50.01	7.29	7.37	7.33	219.83	224.50	221.38	2
2013-05-28 15:30:00	On-grid	32.70	3467.54	4.346	1.000	50.01	6.51	6.57	6.53	222.16	221.51	220.91	2
2013-05-28 15:35:00	On-grid	33.05	3467.89	4.033	1.000	50.00	6.09	6.05	6.06	222.66	221.27	221.07	2

In the operation display area, you can click **Graph** to display the queried performance data in a line chart.

You can view the performance data based on different performance counters in the line chart by setting the horizontal and vertical coordinates.

To set the horizontal and vertical coordinates, perform the following operations:

Step 4 (Optional) Click **Export** to export the queried performance data records into a CSV file.

----End

Follow-up Procedure

You can also perform the following operations on the **Querying the performance data of a device** page:

Operation	Steps	Description
Display performance data in a line chart	In the operation display area, click **Graph**.	Display the queried performance data in a line chart.
Set the horizontal and vertical coordinates of the line chart	1. Click ⚙. The **Select Counters** dialog box is displayed. 2. Enter the values for the Y1 and Y2 coordinates. **NOTE** The preceding two values must be different. 3. Click **OK**.	View the performance data based on different performance counters in the line chart by setting the horizontal and vertical coordinates.
Display daylight saving time (DST)	Select **Show daylight saving time (DST)**.	After DST starts, DST marks are displayed behind each time in the **Generated On** column. For example, 2013-09-17 09:40:00 DST.

6.4.3 Synchronizing Historical Performance Data

This section describes how to synchronize historical performance data from a device to the NetEco 1000S by creating a synchronization task on the NetEco 1000S. This solves the problem that historical performance data cannot be automatically synchronized to the NetEco 1000S after the device is disconnected from the NetEco 1000S for more than 6 hours.

Prerequisites

- The device has been connected to the NetEco 1000S through the data collector and the version of the data collector is SmartLogger1000 V100R001C91 or later.
- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

Context

When a device is connected to the NetEco 1000S for the first time, if the device has been running before and there are performance files stored on the data collector, you can also synchronize historical performance data generated before the device is connected to the NetEco 1000S to the NetEco 1000S by creating a historical performance data synchronization task.

In normal cases, the data collector saves historical performance data of the latest one month. The synchronization on the NetEco 1000S succeeds only when the data collector stores historical performance data that needs to be synchronized.

NOTICE

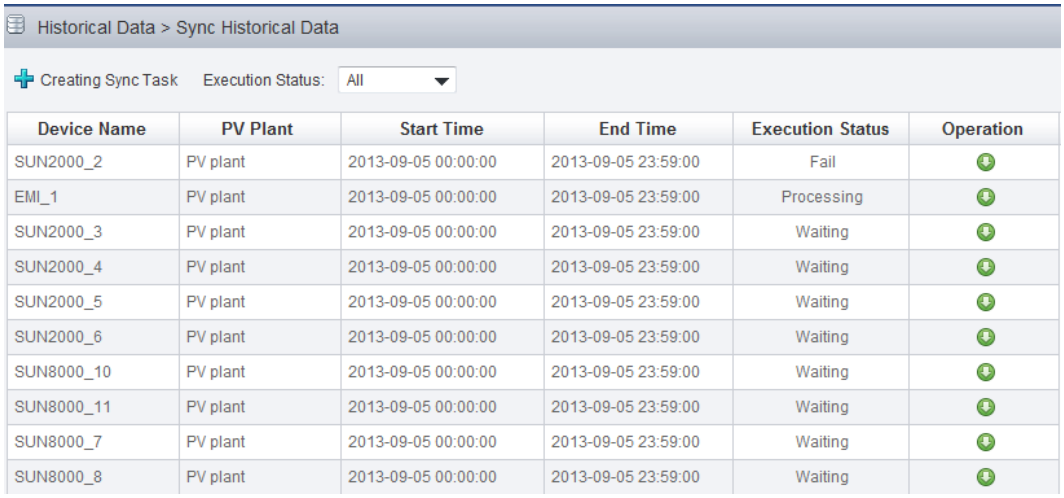
You can create only one historical performance data synchronization task for one device at a time.

When historical performance data is being synchronized on the device, if you create another synchronization task for the device, the creation fails.

Procedure

Step 1 Choose **Historical Data** > **Sync Historical Data** from the main menu.

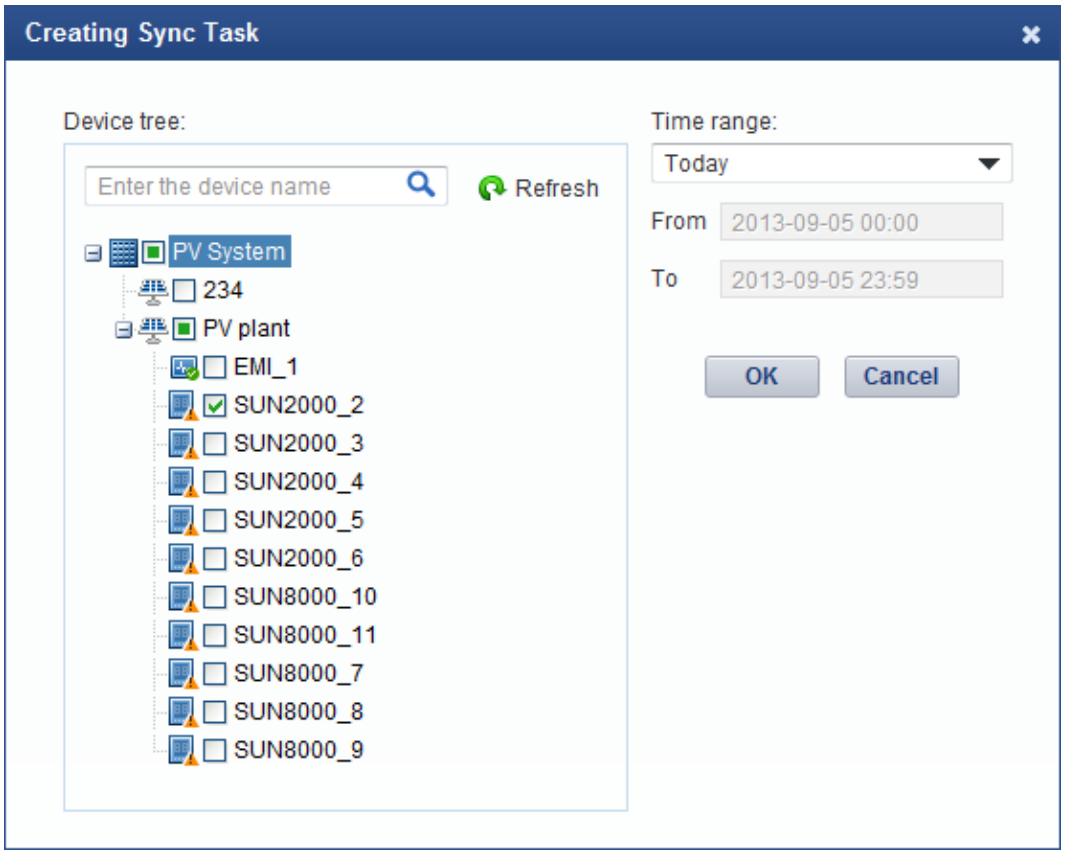
Figure 6-18 Synchronizing historical data



Device Name	PV Plant	Start Time	End Time	Execution Status	Operation
SUN2000_2	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Fail	
EMI_1	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Processing	
SUN2000_3	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN2000_4	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN2000_5	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN2000_6	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN8000_10	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN8000_11	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN8000_7	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN8000_8	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	

Step 2 Click **Create Sync Task**.

Figure 6-19 Creating a synchronization task



Step 3 Choose a device for which you want to create a supplementary collection task from the device navigation tree.

Step 4 Set the time range as required.

The time range can be set to **Today**, **Last Three Days**, **Last Seven Days**, or **Customize**.

NOTE

The time range of the **Customize** cannot exceed 7 days

Step 5 Click **OK**.

The supplementary collection task is performed automatically after the task is created.

----End

Follow-up Procedure

If the supplementary collection task fails to be executed, click to execute the task again.

6.5 Device Maintenance

6.5.1 Upgrading a Device

This section describes how to upload a software package and remotely upgrade a device through the NetEco 1000S.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- You have added a device to the NetEco 1000S. For detailed operations, see **6.3.1 Searching Devices Based on IP Addresses** or **6.3.2 Searching Devices Based on Serial Port Addresses**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.
- You have contacted Huawei technical support engineers to obtain the software package required for device upgrade.

Context

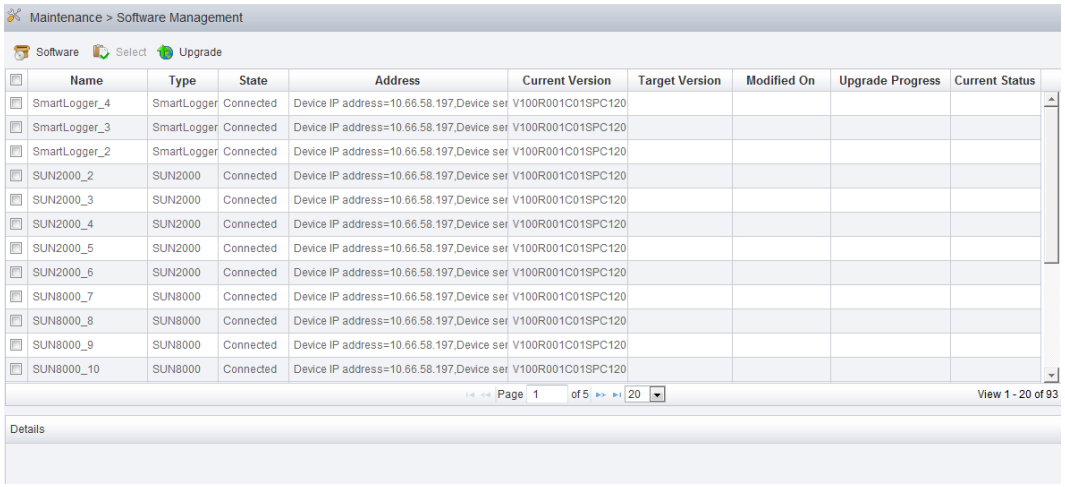
Remote upgrade applies data collectors and inverters.

Procedure

Step 1 Choose **Maintenance** > **Software Management** from the main menu.

The **Software Management** page is displayed, as shown in **Figure 6-20**.

Figure 6-20 Software Management

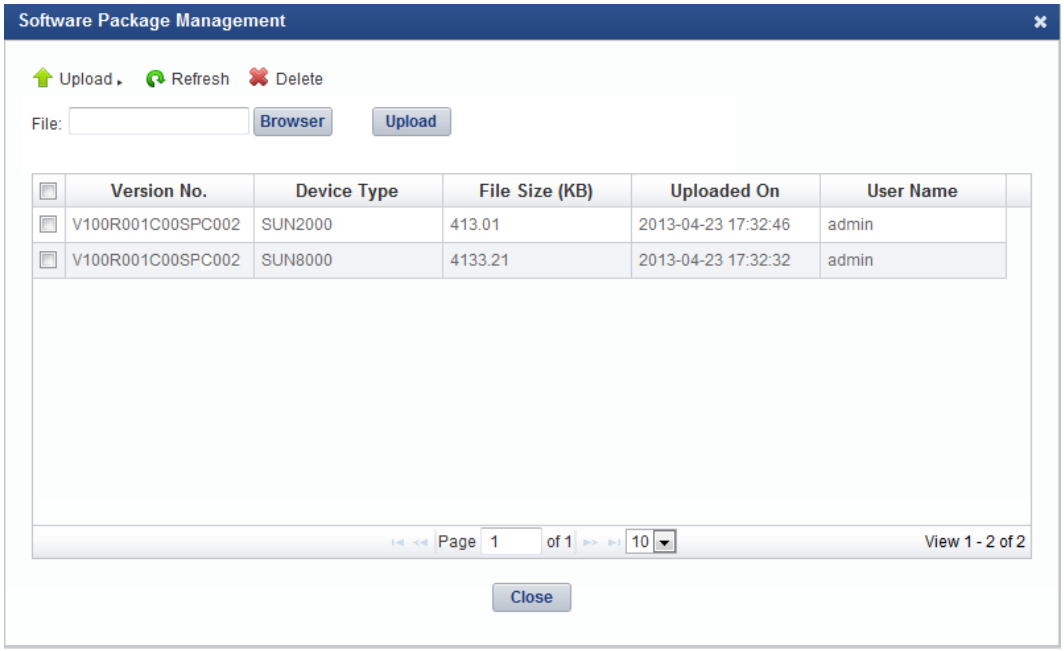


Step 2 Click **Software**.

Step 3 Click **Upload** in the **Software Package Management** window.

Browser is displayed in the **Software Package Management** window, as shown in **Figure 6-20**.

Figure 6-21 Software Package Management



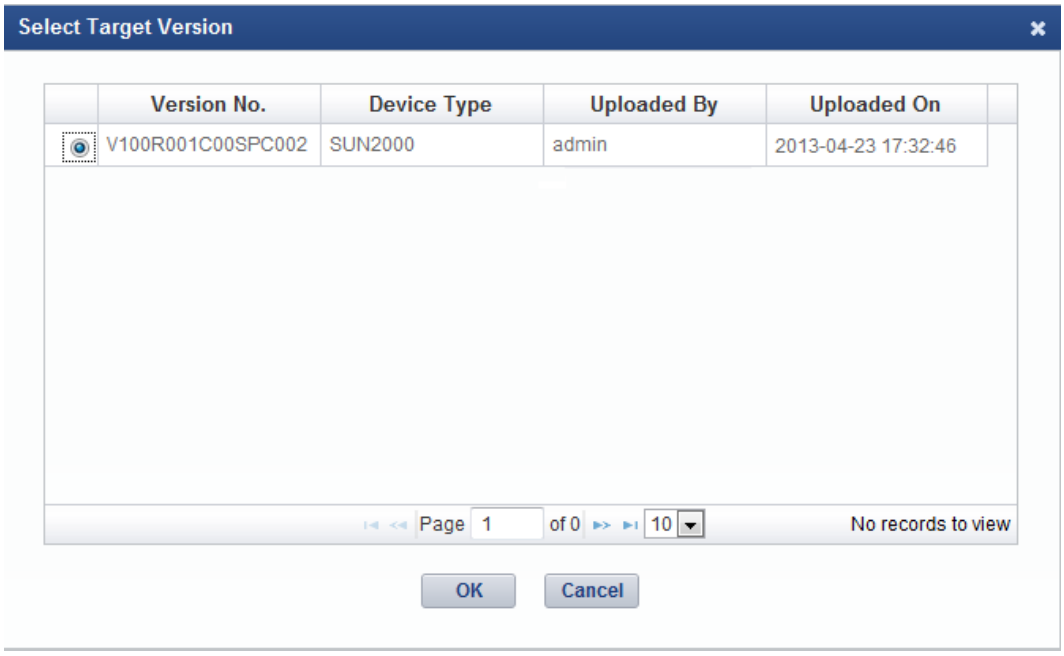
Step 4 Click **Browser** to select a version file, and then click **Upload**.

The added version file is listed below.

Step 5 Click **Close**.

Step 6 Select a device to be upgraded in the **Software Management** page, and click **Select**.

Figure 6-22 Select Target Version

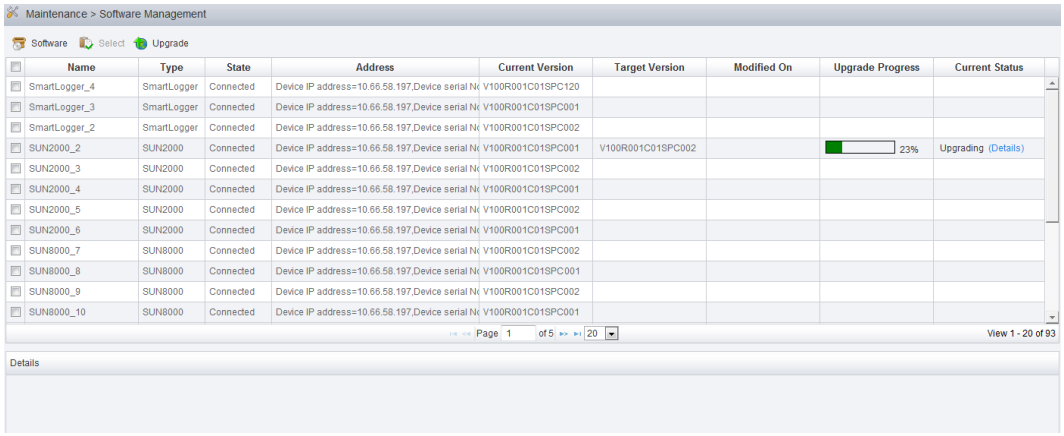


Step 7 Select the target version in the **Select Target Version** window and click **OK**.

Step 8 Click **Upgrade** in the **Software Management** window.

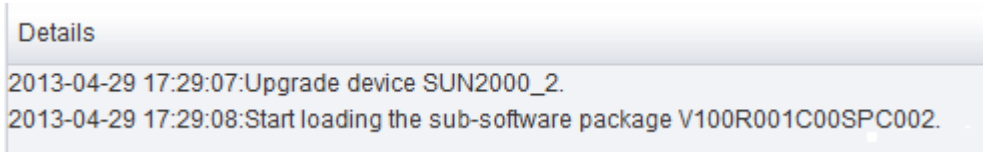
The upgrade progress and status are displayed in the **Software Management** dialog box, as shown in **Figure 6-23**.

Figure 6-23 Upgrade Progress



Click **Details**, the details of the inverter upgrading will be shown.

Figure 6-24 The details of the inverter upgrading



----End

6.5.2 Obtaining Device Logs

This section describes how to obtain device logs for device analysis and maintenance.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- You have added a device to the NetEco 1000S. For detailed operations, see **6.3.1 Searching Devices Based on IP Addresses** or **6.3.2 Searching Devices Based on Serial Port Addresses**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

Context

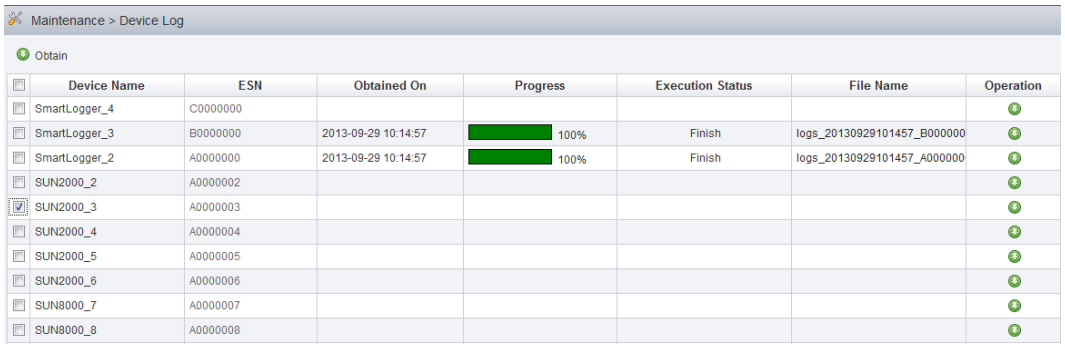
Remotely obtaining device logs applies data collectors and inverters.

Procedure

Step 1 Choose **Maintenance** > **Device Log** from the main menu.

The **Device Log** window is displayed, as shown in **Figure 6-25**.

Figure 6-25 Device Log



Step 2 Select a device in the device list, and click **Obtain**.

When **Finish** is displayed in the **Execution Status** column, device logs are synchronized to the NetEco 1000S.

Step 3 Click the corresponding file name in the **File Name** column to download the device log file to the local PC.

----End

6.5.3 Device Access

This section describes how to access devices of the NetEco 1000S through the data collector and add devices to the device list so that devices can be monitored in real time.

Prerequisites

- The device has been connected to the NetEco 1000S through the data collector.
- The data collector and NetEco 1000S must be in the same time zone.

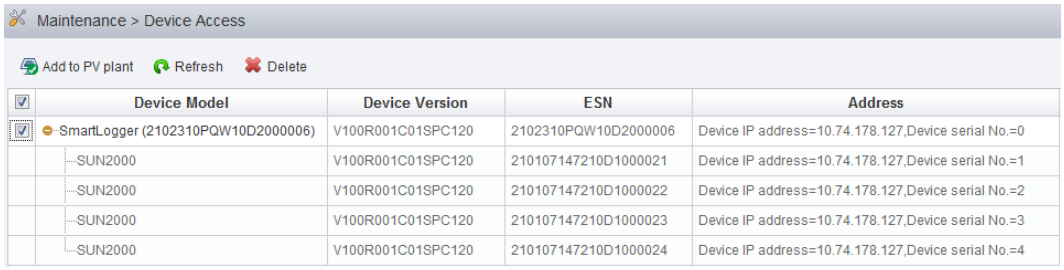
  If the data collector and NetEco 1000S are not in the same time zone, change the time zone of the data collector by following the instructions provided in the device user manual.
- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.

Procedure

Step 1 Choose **Maintenance** > **Device Access** from the main menu.

The **Device Access** page is displayed, as shown in **Figure 6-26**.

Figure 6-26 Device Access



Step 2 Select the check box corresponding to the data collector you want to add to a PV plant.

Step 3 Click **Add to PV plant**.

Step 4 Select a PV plant from the **Add to PV plant** drop-down list in the **Select Power Station** window.

Step 5 Click **OK**.

The message `Are you sure you want to execute the task?` is displayed.

Step 6 Click **OK**.

----End

Follow-up Procedure

When a device connected to the data collector is deleted, perform the following operations to manually delete the unnecessary device from the Device Access on the NetEco 1000S:

1. Select the check box corresponding to the data collector you want to delete and click **Delete**.

   The message `After being deleted device cannot be recovered. Are you sure you want to delete it?` is displayed.

2. Click **OK**.

6.6 System Management

6.6.1 Managing User Information

This section describes how to manage user information. The user management function allows you to manage the information about and operation rights of users.

User Categories

This section describes user categories. You need to familiarize yourself with these user categories before managing users.

Software users are system administrator, system operators, and guest users.

Operation rights vary by user. **Table 6-4** lists the software users and their operation rights.

Table 6-4 User operation rights

User Category	Operation Rights
System administrator **NOTE** By default, there is only one system administrator whose name and password are **admin** and **Changeme123**, respectively. The system administrator cannot be deleted or modified.	System administrator have all the operation rights, including: ● PV plant management: creates, modifies, and deletes PV plants, and browses information about PV plants, device lists, and current alarms. ● Device management: searches, modifies, and deletes devices, and browses information about devices and current alarms. ● Historical data query: queries alarm logs, PV plant performance data, and device performance data, and synchronizes historical performance data. ● Device maintenance: accesses devices, upgrades devices, and obtains device logs. ● System management: manages users, sets remote notification, queries user logs, and sets the system.
System operators	● PV plant management: creates, modifies, and deletes PV plants, and browses information about PV plants, device lists, and current alarms. ● Device management: modifies and deletes devices, and browses information about devices and current alarms. ● Historical data query: queries alarm logs, PV plant performance data, and device performance data, and synchronizes historical performance data. ● Device maintenance: upgrades devices and obtains device logs. ● System management: manages users, sets remote notification rules, and queries user logs.
Guest users	● PV plant management: browses information about PV plants, device lists, and current alarms, and uploads and deletes PV plant images. ● Device management: browses information about devices and current alarms. ● Historical data query: queries alarm logs, PV plant performance data, and device performance data.

NOTE

In the login window, if you use an account of the system operators or guest users for the login, the menus on which you do not have related operation rights are hidden. This helps implement rights control on the software and improves system security.

Adding a User

This section describes how to add a user on the NetEco 1000S. You can add users as required. The operation rights of users vary according to user categories.

Prerequisites

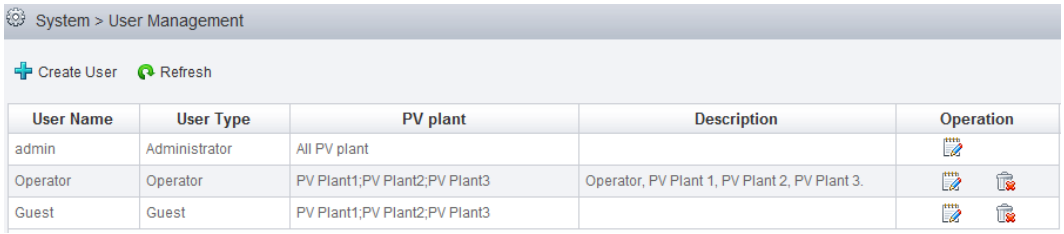
- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

Procedure

Step 1 Choose **System** > **User Management** from the main menu.

The **User Management** window is displayed, as shown in **Figure 6-27**.

Figure 6-27 User Management



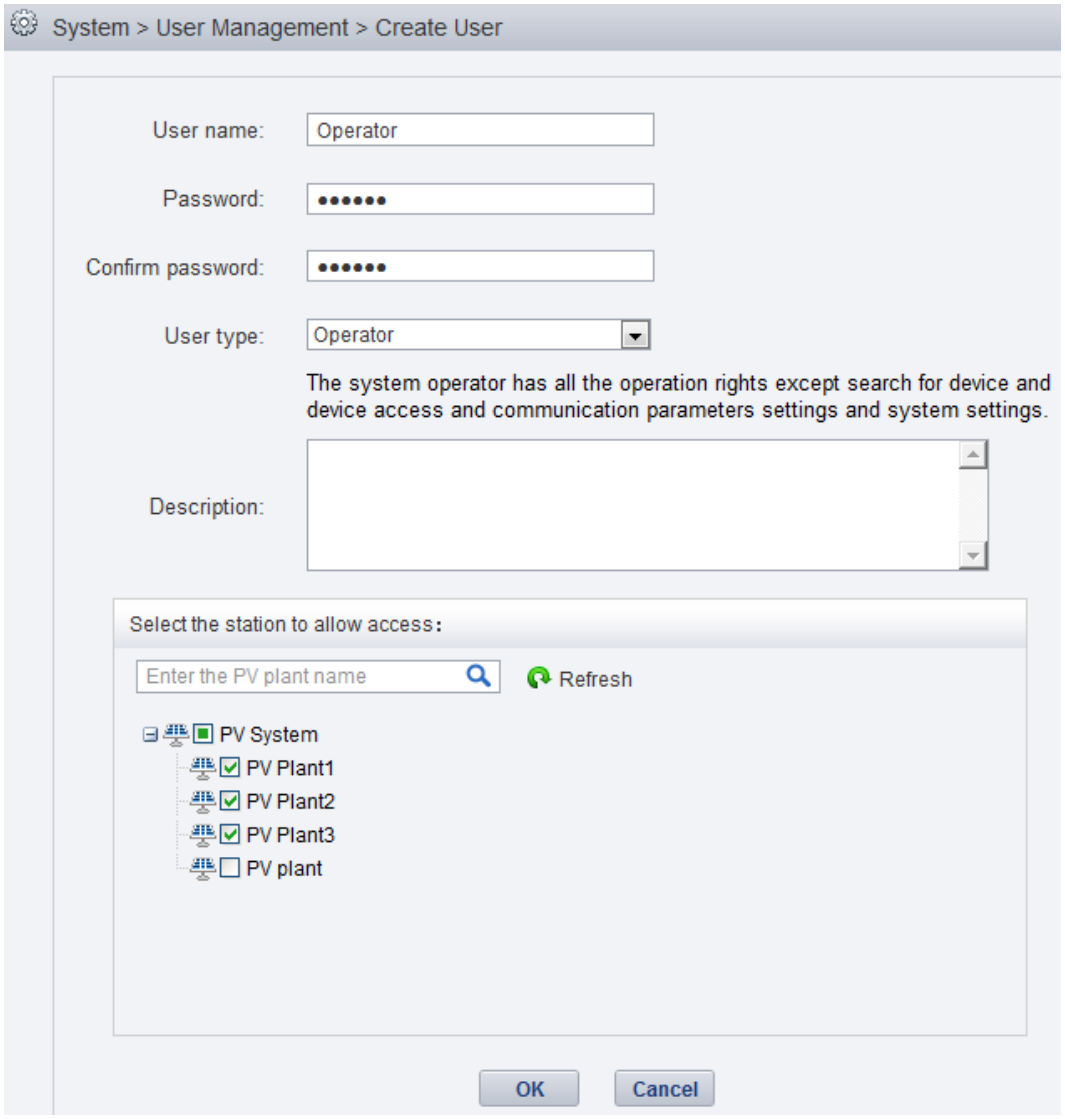
NOTE

System operators can see only their own information and information about guest users they have created.

Step 2 Click **Create User**.

The **Create User** window is displayed, as shown in **Figure 6-28**.

Figure 6-28 Create User



Step 3 Set the user parameters, and then click **OK**.

NOTE

System operators can only create guest users and bind PV plants with guest users. Guest users can manage only PV plants bound with them after the login.

The added user is displayed in the user list in the **User Management** window.

----End

Modifying User Information

This section describes how to modify user information. If information about a user needs to changed or the password of the user is forgotten, you can modify information about the user as an administrator.

Prerequisites

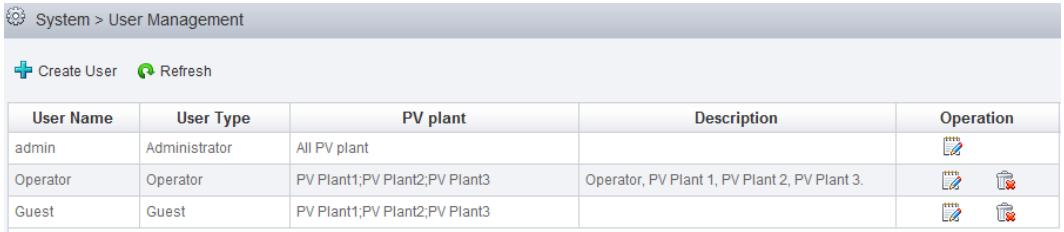
- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

Procedure

Step 1 Choose **System** > **User Management** from the main menu.

The **User Management** window is displayed, as shown in **Figure 6-29**.

Figure 6-29 User Management



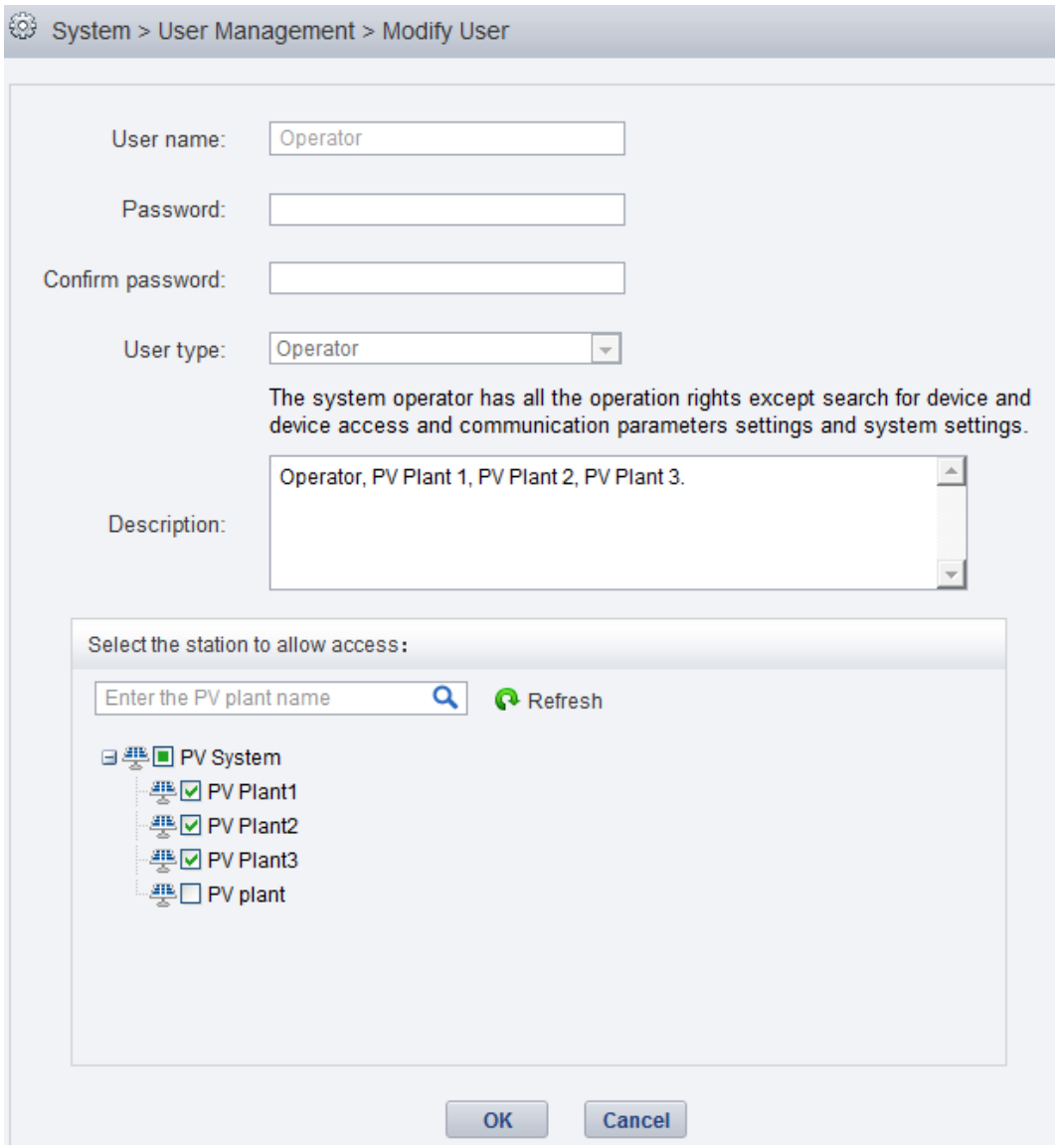
NOTE

System operators can see only their own information and information about guest users they have created.

Step 2 Click .

The **Modify User** window is displayed.

Figure 6-30 Modify User



Step 3 Modify the user information.

The value of **User Name** and **User Type** cannot be changed.

NOTE

System operators can only modify information about guest users they have created.

Step 4 Click **OK**.

----End

Modifying the Password of the Current User

This section describes how to modify the password of the current user. You are advised to modify user password regularly to ensure system security.

Prerequisites

You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

Step 1 Click  from the main menu.

The **Modify Password** dialog box is displayed, as shown in **Figure 6-31**.

Figure 6-31 Modify Password

Step 2 Enter the old password and new password and confirm the new password.

Step 3 Click **OK**.

----End

Deleting a User

This section describes how to delete a user. The system administrator is allowed to delete users.

Prerequisites

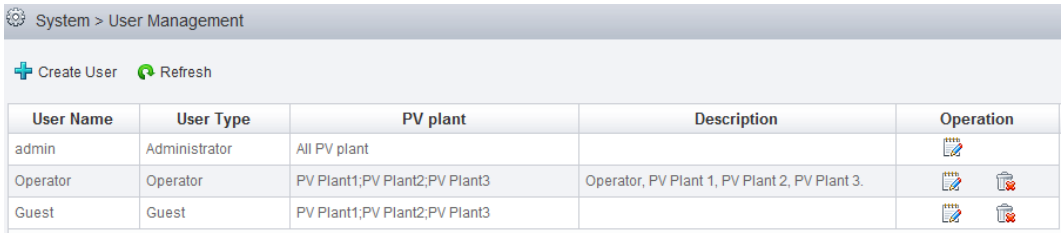
- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.

Procedure

Step 1 Choose **System** > **User Management** from the main menu.

The **User Management** window is displayed, as shown in **Figure 6-32**.

Figure 6-32 User Management



NOTE

System operators can see only their own information and information about guest users they have created.

Step 2 Click .

The **Warning** dialog box is displayed.

Step 3 Click **OK**.

----End

6.6.2 Querying User Operation Logs

This section describes how to query user operation logs to learn about the operations performed by users.

Prerequisites

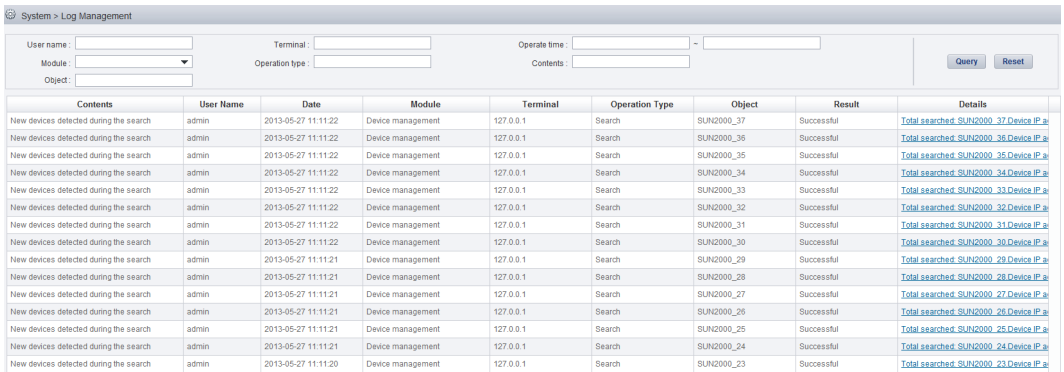
You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

Procedure

Step 1 Choose **System** > **Log Management** from the main menu.

The **Log Management** window is displayed.

Figure 6-33 Log Management



Step 2 (Optional) Set the query criteria by referring to **Table 6-5**.

Table 6-5 Query criteria parameters

Parameter	Description
User Name	Name of a user.
Module	Module in which an operation is performed, including: ● **Device management**: involves PV plant creation, modification, and deletion, device search, and device deletion. ● **Configuration management**: involves device information modification and control command delivery. ● **Security management**: involves user login and logout, and user creation, user information modification, and user deletion. ● **Software management**: involves software package upload, device upgrade, and software package deletion. ● **Performance Management**: involves historical performance data synchronization. ● **Device log**: involves the obtaining of device logs. ● **Remote notification**: involves email server parameter and SMS message server parameter modification, and remote notification rules creation, modification, deletion, enabling, and disabling. ● **System settings**: involves the clock synchronization, baud rate modification, alarm resetting, benefit setting, and collection period setting.
Object	Object on which an operation is performed, including: ● Local network manager ● NetEco 1000S user ● PV plant ● Device
Terminal	Client IP address used for the login.
Operation Type	Type of operation a user has performed, including: ● System login ● System logout ● Search ● Add ● Synchronize ● Upgrade ● Modify ● Delete ● Reset
Operate Time	The value must be a time segment. The start time must be earlier than or equal to the end time.

Parameter	Description
Contents	Operation performed by a certain user.

Step 3 Click **Query**.

----End

6.6.3 Setting Remote Notification

This section describes how to set remote notification. The NetEco 1000S notifies users of information about alarms or generated power remotely based on remote notification rules.

Setting Parameters for the Email Server

This section describes how to set parameters for the email server for sending emails to users.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.
- The PC on where the NetEco 1000S software is installed is properly connected to the email server, and you have obtained the email server's IP address (or domain name) and port number that are used for email transmission from the email server OM personnel.

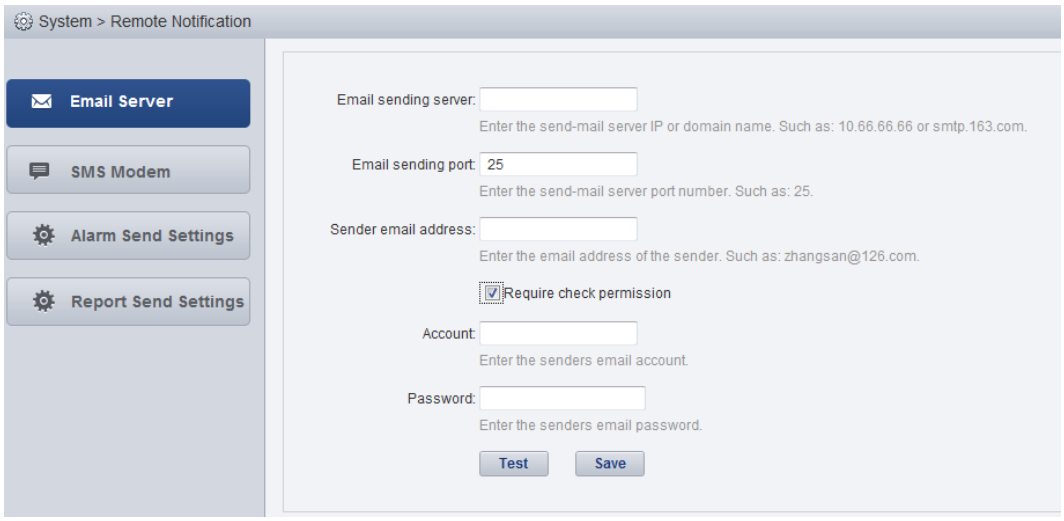
Procedure

Step 1 Choose **System** > **Remote Notification** from the main menu.

Step 2 Choose **Email Server**.

The **Setting parameters for email server** window is displayed, as shown in **Figure 6-34**.

Figure 6-34 Setting parameters for email server



Step 3 Setting parameters for email server by referring to **Table 6-6**.

Table 6-6 Setting parameters for email server

Parameters	Description
Email sending server	Enter the IP address or domain name of the SMTP email server. If the domain name of a website is **www.yourdomain.com**, the domain name of the SMTP email server for this website may be one of the following: ● smtp.yourdomain.com ● mail.yourdomain.com ● smtp.mail.yourdomain.com For example, the domain name of the SMTP email server for **email@126.com** is **smtp.126.com**. If the domain name of the SMTP email server obtained based on the preceding domain naming rule is invalid and email-based remote notification fails to be enabled, contact the email service provider to obtain the valid domain name of the SMTP email server. The domain names of the SMTP email servers for some frequently used email boxes are as follows: ● **126.com**: **smtp.126.com**. ● **gmail(google.com)**: **smtp.gmail.com**. ● **21cn.com**: **smtp.21cn.com**. ● **163.com**: **smtp.163.com**. ● **sohu.com**: **smtp.sohu.com**. ● **yahoo.com**: **smtp.mail.yahoo.com**.
Email sending port	Enter the port of SMTP email server. **NOTE** The default SMTP port number is 25. Check whether the port on the SMTP email server is available to ensure that the mail can be sent properly.
Sender email address	Enter the email address of the sender.
Require check permission	If the SMTP email server requires authentication, select **Require check permission**, and set the user name and password for connecting to the SMTP email server.

Step 4 (Optional) Test that parameters for the email server are set correctly.

1. Click **Test** in the **Setting parameters for email server** page.
2. Enter the test email address in the **Receiver email address** text box.
3. Click **OK**.

Step 5 Click **Save**.

----End

Setting Parameters for the SMS Modem

This section describes how to set parameters for the SMS modem for sending SMS messages to users.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.
- The SMS modem has been properly installed, and you have obtained the serial port number used for communication between the PC and the SMS modem.
- You have obtained the phone number of the SMS center from the telecom operator providing the SMS service.

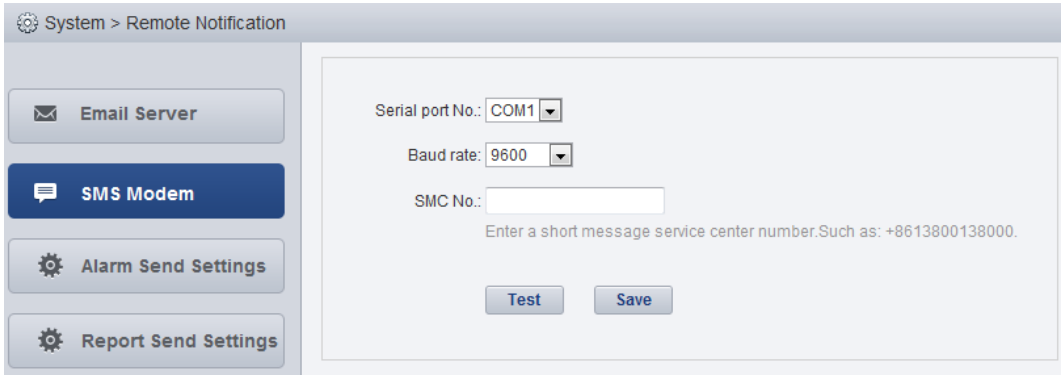
Procedure

Step 1 Choose **System** > **Remote Notification** from the main menu.

Step 2 Click **SMS Modem**.

The **Setting parameters for SMS modem** window is displayed, as shown in **Figure 6-35**.

Figure 6-35 Setting parameters for SMS modem



Step 3 Setting parameters for SMS modem by referring to **Table 6-7**.

Table 6-7 Setting parameters for SMS modem

Parameters	Description
Serial port No.	Enter the RS232 serial port number for communication, through which the SMS modem and the PC are connected.
Baud rate	Choose a matching baud rate.

Parameters	Description
SMC No.	Enter the number of the SMC which is obtained from the SMC operator.

Step 4 (Optional) Test that parameters for the SMS modem are set correctly.

1. Click **Test** in the **Setting parameters for SMS modem** page.
2. Enter the test Phone NO. in the **Receiver phone No.** text box.
3. Click **OK**.

Step 5 Click **Save**.

----End

Setting Alarm Sending Rules

This section describes how to set alarm sending rules. Based on the preset alarm sending rules, the NetEco 1000S sends emails or SMS messages to notify users of alarm information.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

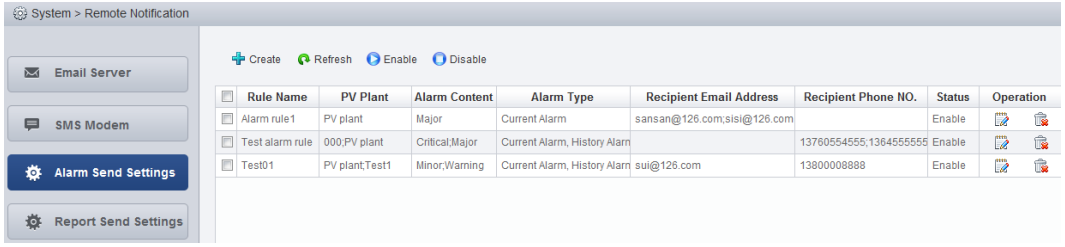
Context

- The NetEco 1000S notifies users of alarm information by email: After the NetEco 1000S receives an alarm reported by a device, the NetEco 1000S waits for 3 minutes, and then sends all alarm information received within 3 minutes to users using one email.
- The NetEco 1000S notifies users of alarm information by SMS: The NetEco 1000S sends the alarm information to users by SMS once receiving an alarm reported by a device.

Procedure

Step 1 Choose **System** > **Remote Notification** from the main menu.

Step 2 Click **Alarm Send Settings**.



Step 3 In the Setting Alarm Sending Rules page, you can perform the following operations.

Setting Alarm Sending Rules	Operation Method
Create alarm sending rules	A alarm notification rule is enabled by default once it is created. 1. Click **Create**. 2. Set **Rule name**, **PV plant**, **Alarm Contents**, **Alarm type**, **Recipient email addres** and **Recipient phone No.** on the **Create Rule** page. **NOTE** **Current Alarm** is selected in the **Alarm type** area by default and the selection cannot be cleared. You must set at least one of the following two parameters: **Recipient email addres** and **Recipient phone No.**. 3. Click **Save**.
Enable alarm sending rules	Enable a disabled alarm notification rule. Select one or more alarm sending rules and click **Enable** to enable the alarm sending rules.
Disable alarm sending rules	Disable a alarm notification rule that is not used currently. Select one or more alarm sending rules and click **Disable** to disable the alarm sending rules.
Modify alarm sending rules	Modify a alarm notification rule to meet management requirements. 1. Click  in the **Operation** column where the required alarm notification rule is located. 2. On the **Modify Rule** page, modify the alarm notification rule information.
Delete alarm sending rules	Delete an unused alarm notification rule to ensure sufficient memory and proper running of tasks on the server. 1. Click  in the **Operation** column where the required alarm notification rule is located. 2. In the **Warning** dialog box, click **Yes**.

----End

Setting Report Sending Rules

This section describes how to set report sending rules. The NetEco1000S sends emails to users each day to notify users of day energy and total energy generated by the PV plant based on rules.

Prerequisites

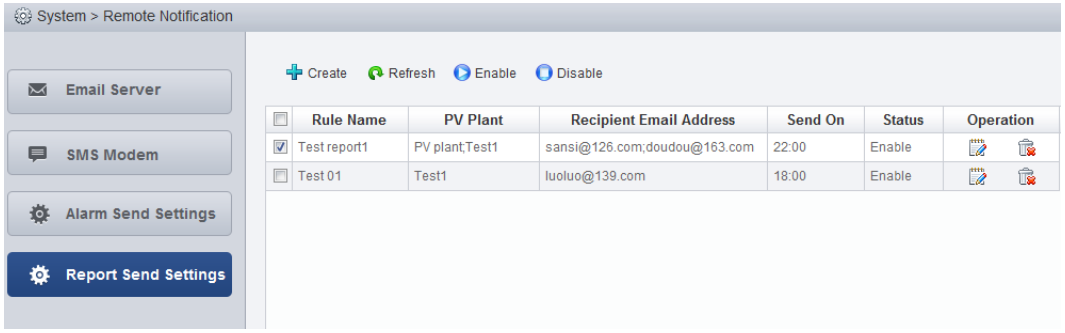
- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.

- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

Procedure

Step 1 Choose **System** > **Remote Notification** from the main menu.

Step 2 Choose **Report Send Settings**.



Step 3 In the Setting Report Sending Rules page, you can perform the following operations.

Setting Report Sending Rules	Operation Method
Create report sending rules	Based on the created report sending rules, the NetEco1000S sends emails to users each day to notify users of day energy and total energy generated by the PV plant. This helps maintenance personnel that are not onsite to learn the day energy and total energy generated by the PV plant on the NetEco1000S in time. A report sending rule is enabled by default once it is created. 1. Click **Create**. 2. Set **Rule name**, **PV plant**, **Daily send time** and **Recipient email address** on the **Create Rule** page. **NOTE** The NetEco1000S sends day energy and total energy generated by the PV Plant from 00:00 of the current day to **Daily send time**. 3. Click **Save**.
Enable report sending rules	Enable a disabled report sending rule. Select one or more report sending rules and click **Enable** to enable the report sending rules.
Disable report sending rules	Disable a report sending rule that is not used currently. Select one or more report sending rules and click **Disable** to disable the report sending rules.

Setting Report Sending Rules	Operation Method
Modify report sending rules	Modify a report sending rule to meet management requirements. 1. Click  in the **Operation** column where the required report sending rule is located. 2. On the **Modify Rule** page, modify the report sending rule information.
Delete report sending rules	Delete an unused report sending rule to ensure sufficient memory and proper running of tasks on the server. 1. Click  in the **Operation** column where the required report sending rule is located. 2. In the **Warning** dialog box, click **Yes**.

----End

6.6.4 Setting System Parameters

This section describes how to set system parameters to modify communication parameters, reset alarms, synchronize the clock time, and set the income unit.

Setting Communication Parameters

This section describes how to set communication parameters. If a device is connected to the monitoring PC using a serial port, the baud rate of the device must be the same as that set on the NetEco 1000S. Otherwise, the device communicates with the monitoring PC improperly. By default, the baud rates of the device and NetEco 1000S are 9600. In normal cases, you can retain the default settings unless the actual transmission rate is insufficient. After the baud rate is changed, you need to restart the NetEco 1000S for the setting to take effect.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.

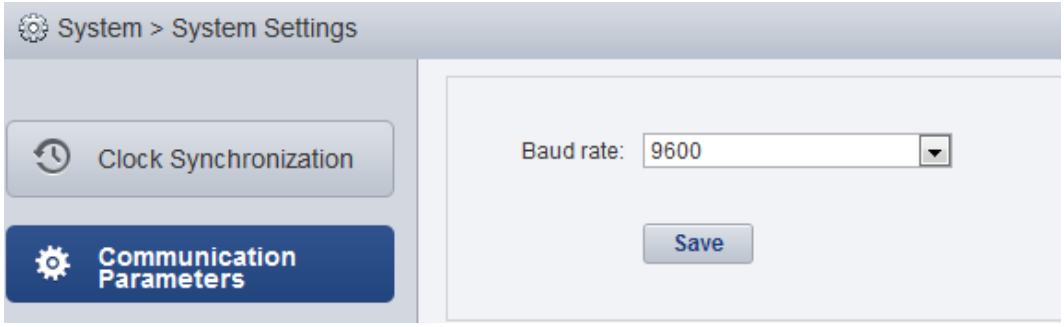
Procedure

Step 1 Choose **System** > **System Settings** from the main menu.

Step 2 Click **Communication Parameters**.

The **Baud rate** window is displayed, as shown in **Figure 6-36**.

Figure 6-36 Baud rate



Step 3 Select a baud rate from the **Baud rate** drop-down list and click **Save**.

The message `Change the baud rate need to restart the network management services, and do you want to continue?` is displayed.

Step 4 Click **Yes**.

The message `Modified successfully.Please restart the network management services.` is displayed.

Step 5 Click **OK**.

Step 6 Restart the NetEco 1000S service.

1. Right-click the NetEco 1000S service icon in the lower right corner of the desktop and choose **Exit** from the shortcut menu.
2. Choose **Start** > **All Program** > **NetEco 1000S** > **NetEco 1000S Service** to start the NetEco 1000S service in the operating system.

----End

Resetting Alarms

This section describes how to reset alarms. When the inverter restores its factory defaults or changes its connection mode, you must reset alarms for the inverter on the NetEco 1000S. In this case, all the existing alarm records for the inverter will be deleted, and alarms are synchronized from the inverter to the NetEco 1000S again.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.

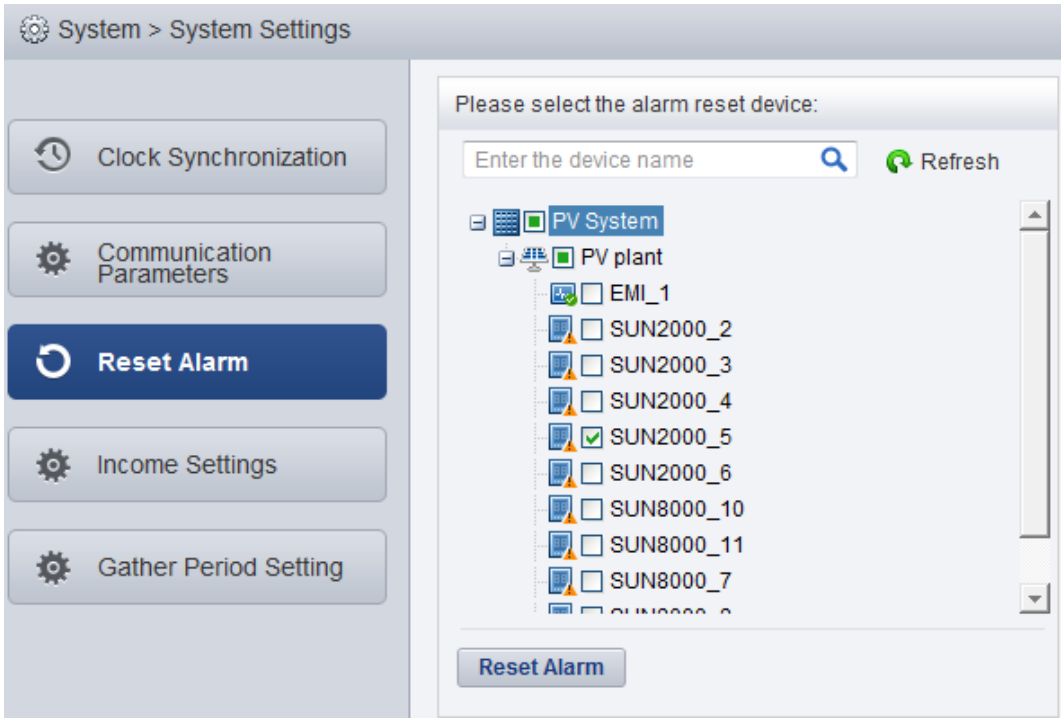
Procedure

Step 1 Choose **System** > **System Settings** from the main menu.

Step 2 Click **Reset Alarm**.

The **Reset Alarm** window is displayed, as shown in **Figure 6-37**.

Figure 6-37 Reset Alarm



Step 3 Select the devices for which you want to reset alarms and click **Reset Alarm**.

The **Warn** dialog box is displayed.

Step 4 Click **OK**.

All alarm records for the selected devices are deleted.

----End

Clock Synchronization

This section describes how to synchronizes the time on the monitoring PC on which the NetEco 1000S is installed to devices. This ensures time consistency between the devices and the NetEco 1000S.

Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.

Context

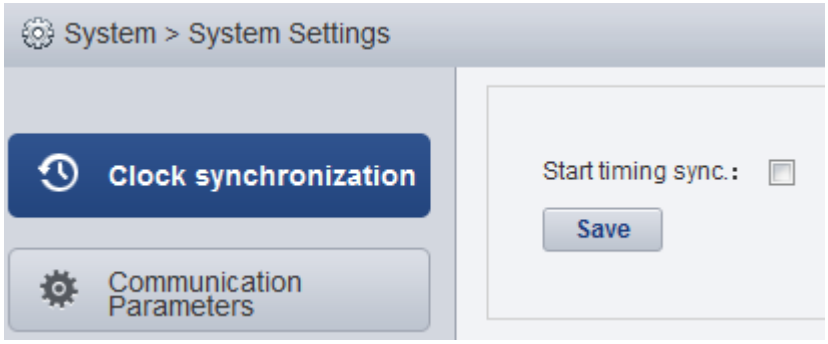
By default, the time synchronization function is not started.

If the time synchronization function is started, the NetEco 1000S performs time synchronization at 00:00 every day to synchronize time from the NetEco 1000S server to devices mounted to the PV plant.

Procedure

Step 1 Choose **System** > **System Settings** from the main menu.

Step 2 Click **Clock Synchronization**.



Step 3 Select this check box. and click **Save**.

The message `Are you sure you want to delivery?` is displayed.

Step 4 Click **OK**.

The message `The synchronize command has been issued` is displayed.

Step 5 Click **OK**.

----End

Setting Income

This section describes how to set the unit of the PV plant income. The default currency unit is **ERU/kWh**.

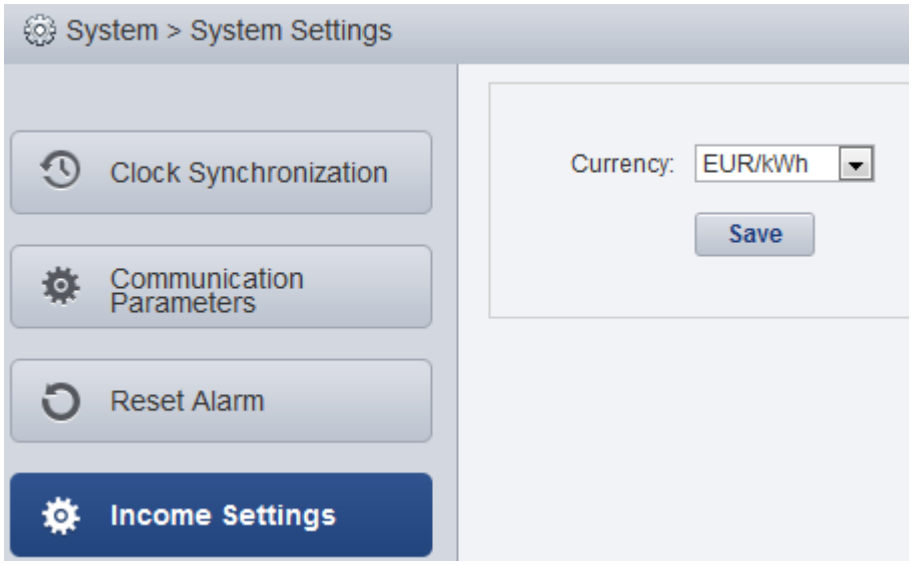
Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.

Procedure

Step 1 Choose **System** > **System Settings** from the main menu.

Step 2 Choose **Income Settings**.



Step 3 Select a currency unit and click **Save**.

Step 4 Click **OK**.

----End

Setting the Data Collection Period

This section describes how to set the period for collecting performance data of devices on the NetEco 1000S as required. The setting is available only for devices that access the NetEco 1000S using the data collector. The data collection period is 5 minutes by default.

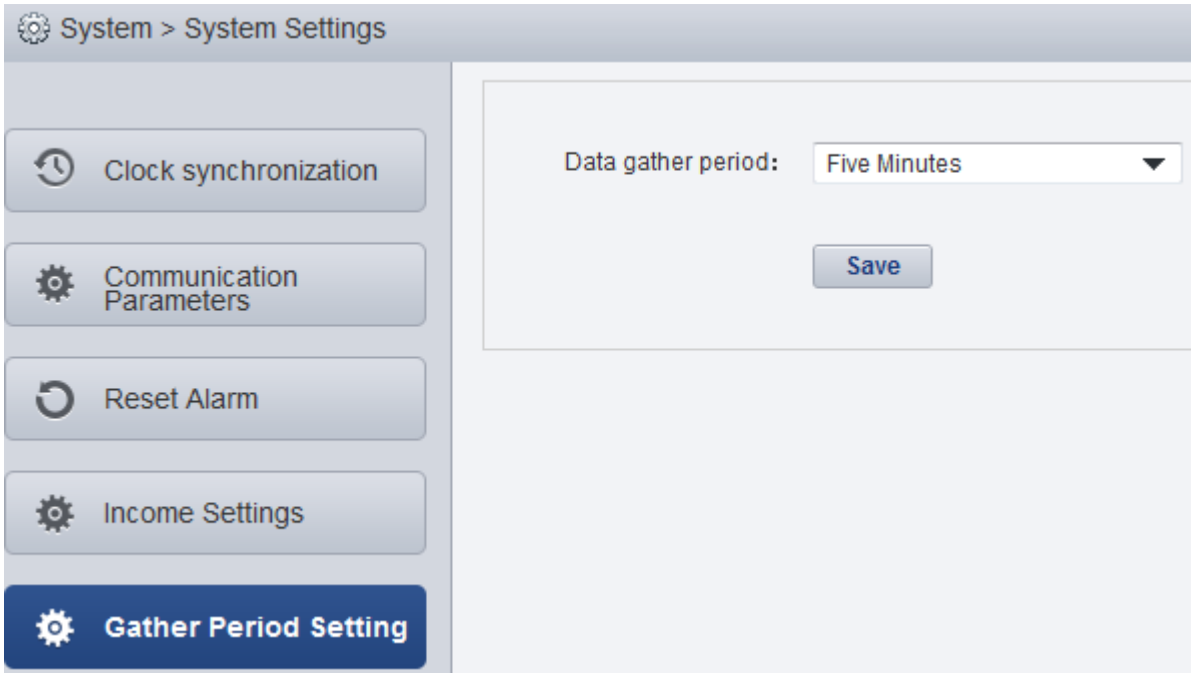
Prerequisites

- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator. For details about the user categories, see **User Categories**.

Procedure

Step 1 Choose **System** > **System Settings** from the main menu.

Step 2 Choose **Gather Period Setting**.



Step 3 Select a data collection period and click **Save**.

NOTE

Changing the data collection period indicates changing the period that the NetEco 1000S collects performance data of devices from the data collector. The period that the data collector collects performance data from devices remains 5 minutes.

For example, if the data collection period is changed to 15 minutes, the NetEco 1000S collects performance data every 15 minutes. In this way, performance data of devices in three periods is collected each time.

Step 4 Click **OK**.

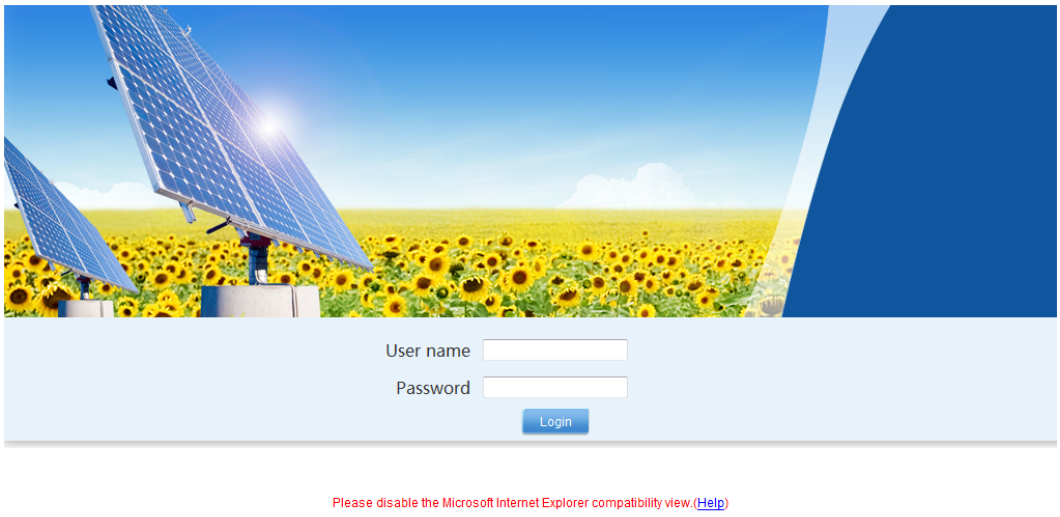
----End

6.7 FAQs

6.7.1 What Do I Do When the Internet Explorer Browser Displays a Message Asking Me to Close the Compatibility View on to the Login Page?

Symptom

Figure 6-38 Message indicating that the compatibility view needs to be closed



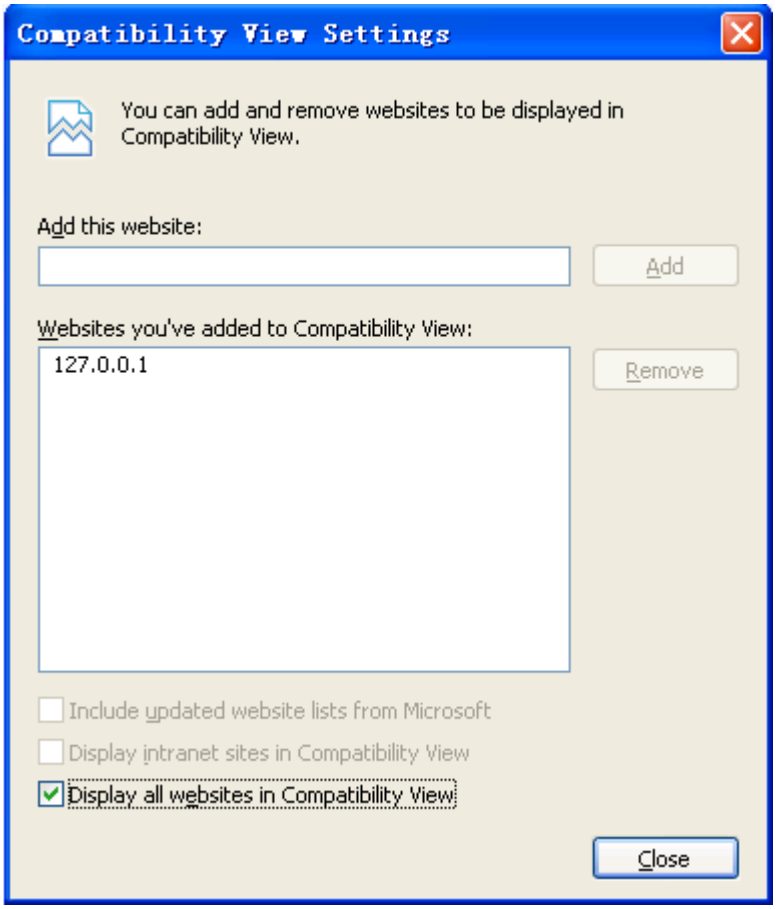
Possible Causes

You have enabled the compatibility view of the Internet Explorer browser.

Procedure

Step 1 Choose **Tools** > **Compatibility View Settings** on the Internet Explorer menu bar.

Step 2 Clear the check box for **Display all websites in Compatibility View**.



----End

6.7.2 What Do I Do When Devices Fail to Be Detected?

Symptom

Devices fail to be detected based on serial port addresses.

Possible Causes

- The baud rate set on the NetEco 1000S is inconsistent with that of the device.
- The serial port addresses configured for the device are duplicate.
- The address of RS-485 serial port for the device is out of the default search range (1 to 20) of the NetEco 1000S.

Procedure

Step 1 Check whether the baud rate setting on the device is consistent with that on the NetEco 1000S.

1. Obtain information about the baud rate set for the device by referring to User Manual on the monitored device side.
2. Obtain information about the baud rate set on the NetEco 1000S by referring to **Setting Communication Parameters**.
3. Check whether the baud rate set for the device is the same as that set on the NetEco 1000S.

- If the two baud rates are the same, go to **Step 2**.
- If the two baud rates are different, change the baud rate on either the device or the NetEco 1000S.

Step 2 Check whether the value of **RS485 Com Address** for the device is duplicate by referring to User Manual on the monitored device side.

- If the value of **RS485 Com Address** is unique, go to **Step 3**.
- If the value of **RS485 Com Address** is duplicate, change the parameter value by referring to User Manual on the monitored device side.

Step 3 Check whether the value of **RS485 Com Address** for the device is within the default search range (1 to 20) of the NetEco 1000S.

If value is out of the default search range, change the address search range on the NetEco 1000S, or change the value of **RS485 Com Address** by referring to User Manual on the monitored device side.

----End

6.7.3 Synchronizing Historical Performance Data

This section describes how to synchronize historical performance data from a device to the NetEco 1000S by creating a synchronization task on the NetEco 1000S. This solves the problem that historical performance data cannot be automatically synchronized to the NetEco 1000S after the device is disconnected from the NetEco 1000S for more than 6 hours.

Prerequisites

- The device has been connected to the NetEco 1000S through the data collector and the version of the data collector is SmartLogger1000 V100R001C91 or later.
- You have logged in to the NetEco 1000S client. For detailed operations, see **6.1.2 Login**.
- The current user is system administrator or system operators. For details about the user categories, see **User Categories**.

Context

When a device is connected to the NetEco 1000S for the first time, if the device has been running before and there are performance files stored on the data collector, you can also synchronize historical performance data generated before the device is connected to the NetEco 1000S to the NetEco 1000S by creating a historical performance data synchronization task.

In normal cases, the data collector saves historical performance data of the latest one month. The synchronization on the NetEco 1000S succeeds only when the data collector stores historical performance data that needs to be synchronized.

NOTICE

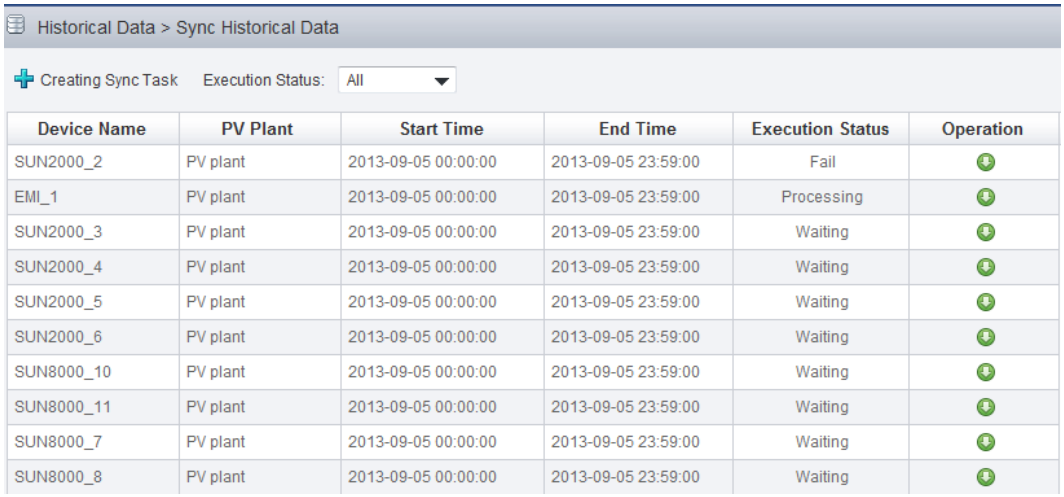
You can create only one historical performance data synchronization task for one device at a time.

When historical performance data is being synchronized on the device, if you create another synchronization task for the device, the creation fails.

Procedure

Step 1 Choose **Historical Data** > **Sync Historical Data** from the main menu.

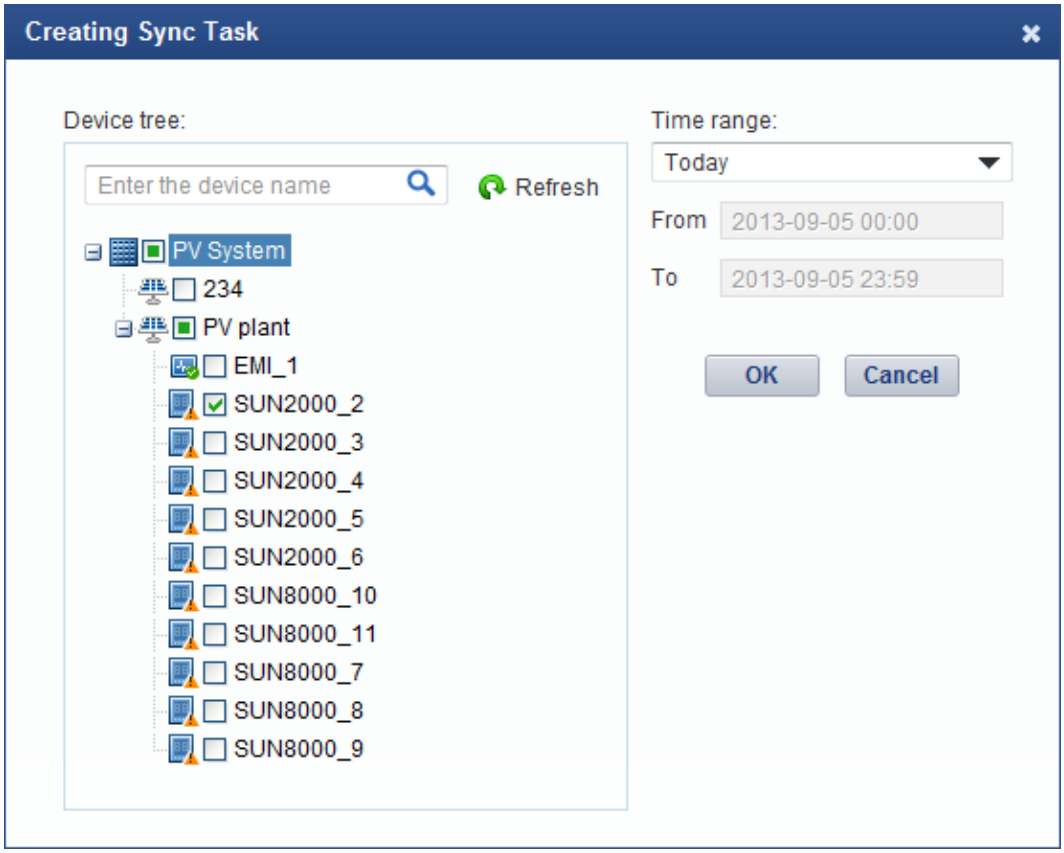
Figure 6-39 Synchronizing historical data



Device Name	PV Plant	Start Time	End Time	Execution Status	Operation
SUN2000_2	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Fail	
EMI_1	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Processing	
SUN2000_3	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN2000_4	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN2000_5	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN2000_6	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN8000_10	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN8000_11	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN8000_7	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	
SUN8000_8	PV plant	2013-09-05 00:00:00	2013-09-05 23:59:00	Waiting	

Step 2 Click **Create Sync Task**.

Figure 6-40 Creating a synchronization task



Step 3 Choose a device for which you want to create a supplementary collection task from the device navigation tree.

Step 4 Set the time range as required.

The time range can be set to **Today**, **Last Three Days**, **Last Seven Days**, or **Customize**.

NOTE

The time range of the **Customize** cannot exceed 7 days

Step 5 Click **OK**.

The supplementary collection task is performed automatically after the task is created.

----End

Follow-up Procedure

If the supplementary collection task fails to be executed, click to execute the task again.

6.7.4 What Do I Do When Characters in a CSV File Are Displayed in Disorder?

Symptom

When users open a CSV file exported from the NetEco 1000S, the characters in the file are displayed in disorder.

Possible Causes

When data in a list is exported to a CSV file, the default separator used by the operating system is not comma(,).

Procedure

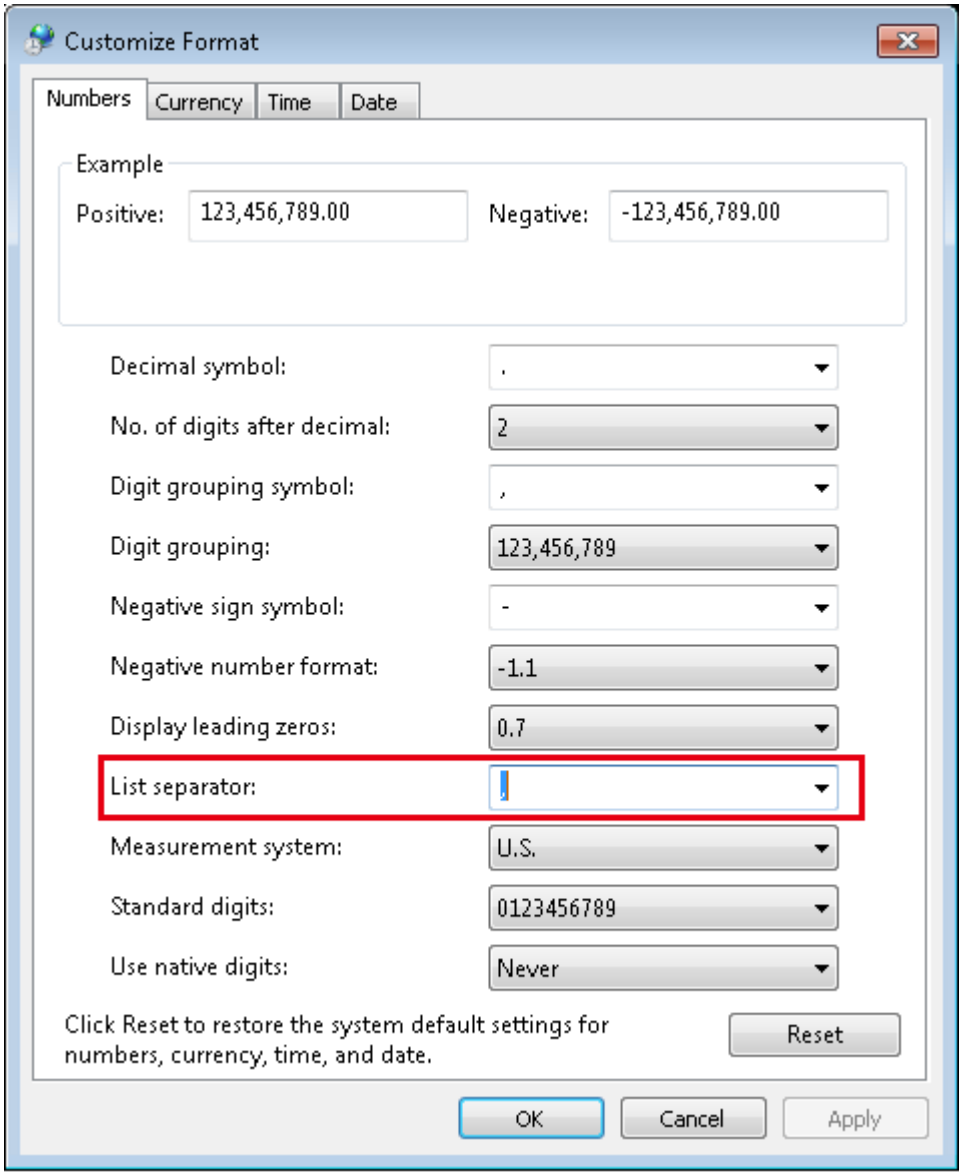
Step 1 Choose **Start** > **Control Panel**.

Step 2 In the displayed **Control Panel** window, click **Regional Options**.

Step 3 In the displayed **Regional Options** window, click the **Formats** tab.

Step 4 Click **Additional settings**.

Step 5 In the displayed dialog box, set **List separator** to comma(,) on the **Numbers** tab page.



Step 6 Click **OK**.

----End

6.7.5 What Do I Do When the NetEco 1000S Service Icon Is Not Displayed?

Symptom

On a PC running the Windows operating system, the NetEco 1000S service icon is not displayed on the right of the taskbar when the NetEco 1000S service is running.

Possible Causes

An exception occurs in the resource manager of the operating system.

This problem does not affect the functions of the NetEco 1000S. You can ignore it.

Procedure

To restart the NetEco 1000S service, perform the following steps:

Step 1 Log off the Windows operating system.

Step 2 Log in to the Windows operating system again and then start the NetEco 1000S services.

----End

6.7.6 How Do I Solve the Problem that the Login Page Fails to Be Displayed When I Access theNetEco 1000S Using a Web Browser?

Symptom

The login page fails to be displayed when I access **http://IP address:8010** using a web browser.

Possible Causes

- The network is connected improperly.
- The PC where the NetEco 1000S is installed is powered off.
- The NetEco 1000S service has not been started on the PC.

Procedure

Step 1 Choose **Start** > **Run** in the operating system. In the displayed dialog box, enter **cmd** and press **Enter**. The command-line interface (CLI) is displayed.

Step 2 Run the following command to check whether the network between the PC on which users can log in to the NetEco 1000S and the PC where the NetEco 1000S is installed is connected properly:

ping *IP address*

NOTE

Replace *IP address* with the IP address of the PC on which the NetEco 1000S is installed.

- If the IP address cannot be pinged, go to **Step 3**.
- If the IP address can be pinged, go to **Step 5**.

Step 3 Check whether the PC on which the NetEco 1000S is installed is started.

- If the PC is started, go to **Step 4**.
- If the PC is not started, perform the following operations:
  1. Start the PC on which the NetEco 1000S is installed.
  2. Choose **Start** > **All Program** > **NetEco 1000S** > **NetEco 1000S Service** in the operating system to start the NetEco 1000Sservice .

Step 4 Check whether the network cable of the PC where the NetEco 1000S is installed is loosened or disconnected.

In normal cases, the indicator of the network port where the network cable is inserted is green. The indicator blinks when data is transmitted.

- If the network cable is loosened or disconnected, connect it again.
- If the network cable is connected properly but the IP address of the NetEco 1000S server still cannot be pinged, check whether network connection problems occur on the user side.

Step 5 Check whether the NetEco 1000S service has been started on the PC.

- If the NetEco 1000S service is not started, choose **Start** > **All Program** > **NetEco 1000S** > **NetEco 1000S Service** in the operating system to start the NetEco 1000S service.
- If the NetEco 1000S service has been started but logging in to the NetEco 1000S using the web browser fails, contact Huawei technical support.

----End

6.7.7 How Do I Solve the Problem that the Serial Port for the SMS Modem to Connect to a PC Is Always Occupied After the SMS Is Enabled?

Question

How do I solve the problem that the serial port for the SMS modem to connect to a PC is always occupied after the SMS is enabled?

NOTE

After the serial cable between the SMS modem and the PC is disconnected or removed, the serial port is still occupied.

Answer

Perform the following steps to restart the NetEco 1000S service:

Step 1 Right-click the NetEco 1000S service icon in the lower right corner of the taskbar of the desktop and choose **Exit** to stop the NetEco 1000S service from the shortcut menu.

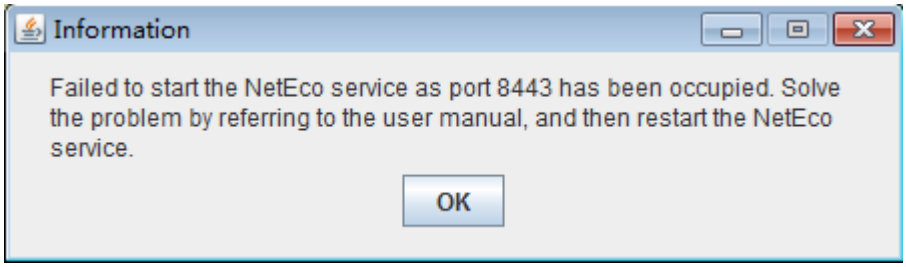
Step 2 Choose **Start** > **All Program** > **NetEco 1000S** > **NetEco 1000S Service** to start the NetEco 1000S service in the operating system.

----End

6.7.8 How Do I Solve the Problem that `Failed to start the NetEco service as port XXXX has been occupied` Is Displayed When I Start NetEco 1000S Services?

Symptom

When users start NetEco 1000S services, the `Failed to start the NetEco service as port XXXX has been occupied` message is displayed.



Possible Causes

Some services of users occupy the service port of the NetEco 1000S.

Procedure

Step 1 Choose **Start** > **Run** in the operating system. In the displayed dialog box, enter **cmd** and press **Enter**. The command-line interface (CLI) is displayed.

Step 2 Query the number of the process that occupies the service port of the NetEco 1000S.

netstat -aon|findstr *"port number"*

NOTE

"port number" indicates the number of the occupied port on the NetEco 1000S.

```
C:\Users>netstat -aon|findstr "8443"
  TCP    127.0.0.1:8443         0.0.0.0:0              LISTENING       1836
```

Step 3 Query the application running the process.

tasklist|findstr *"process number"*

NOTE

"process number" indicates the process number queried in **Step 2**.

```
C:\Users>tasklist|findstr "1836"
arr_isrv.exe                  1836 Services                   0        936 K
```

- If the queried application is unnecessary, go to **Step 4**.
- If the queried application is necessary, go to **Step 5**.

Step 4 Stop the application queried in **Step 3**.

Step 5 Modify the service port of the NetEco 1000S.

1. Navigate to the **NetEco 1000S installation directory\WebRoot\WEB-INF\classes** directory.
2. Open the **struts.properties** file.
3. Change the values of the following parameters:

   NOTE

   Among ports used in the NetEco 1000S, numbers only of the following two ports can be changed:

   ```
   struts.httpPort=8010
   struts.httpsPort=8443
   ```

Step 6 Choose **Start** > **All Program** > **NetEco 1000S** > **NetEco 1000S Service** in the operating system to start the NetEco 1000S services.

- If the NetEco 1000S services are started properly, the problem is solved.
- If the NetEco 1000S services fail to be started, contact Huawei technical support.

----End

7 FAQs

About This Chapter

7.1 How Do I Remove the NetEco 1000S Software?

Question

How do I remove the NetEco 1000S software?

Answer

Step 1 Right-click NetEco 1000S in the lower right corner of the desktop and choose **Exit** from the shortcut menu.

NOTE

If the NetEco 1000S service is not started, skip this step.

Step 2 Choose **Start** > **All Program** > **NetEco 1000S** > **Uninstall NetEco 1000S**in the operating system to start the uninstallation program.

The **Select Software Components** window is displayed.

Step 3 Select the **NetEco 1000S** component, and click **Next**.

Step 4 Click **Yes**.

The NetEco 1000S uninstallation progress is displayed in the window.

Step 5 Click **Finish** when the uninstallation is complete.

The **Conformation** dialog box is displayed.

Step 6 Determine whether to restart the operating system.

- If you click **Yes**, the operating system is restarted, and the NetEco 1000S installation directory is deleted automatically.
- If you click **No**, the operating system will not be restarted, and you need to manually delete the NetEco 1000S installation directory.

----End

7.2 How Do I Check the Integrity of Software Packages?

Question

How do I check the integrity of software packages?

Answer

Step 1 Contact Huawei technical support engineers to obtain the NetEco 1000S software package iManagerNetEco1000SV100R001C01SPC210.zip and software package integrity check tool **iPSI Sign Tool Setup.exe** to a directory on the NetEco 1000S server. This section takes **D:** for example. To obtain the software package and software package integrity check tool, Huawei technical support engineers can choose **SUPPORT** > **Software Download** > **Network**

Energy > **UPS and Inerter** > **Inverter** > **iManager NetEco 1000S** > **V100R001C01SPC210** at **http://www.huawei.com/en/**.

Step 2 Install the software package integrity check tool.

1. Double-click **iPSI Sign Tool Setup.exe**.
2. Click **Next**.
3. Choose **I accept the terms in the License Agreement**, and click **Next**.
4. Specify an installation path and click **Install**.
5. Click **Finish**.

Step 3 Decompress the software package iManagerNetEco1000SV100R001C01SPC210.zip.

Step 4 Choose **Start** > **Run**. In the displayed dialog box, enter **cmd** and press **Enter**. The command-line interface (CLI) is displayed.

Step 5 Run the following command to navigate to the installation directory of the software package integrity check tool.

cd *C:\Program Files\iPSI Sign Tool*

NOTE

C:\Program Files\iPSI Sign Tool is the installation directory of the software package integrity check tool. Replace it as required.

Step 6 Run the following commands to check the integrity of the software package:

ipsisign /verify /p *d:\iManagerNetEco1000SV100R001C01SPC210* **/d** *iManagerNetEco1000SV100R001C01SPC210.rar* **/s** *d:\iManagerNetEco1000SV100R001C01SPC210\iManagerNetEco1000SV100R001C01SPC210.rar_SIGN.txt*

NOTE

- If the file name or directory contains spaces, you must add a pair of quotation marks (") before command execution.

  For example: **ipsisign /verify /p** *"d:\iManagerNetEco1000SV100R001C01SPC210"* **/d** *"iManagerNetEco1000SV100R001C01SPC210.rar"* **/s** *"d:\iManagerNetEco1000SV100R001C01SPC210\iManagerNetEco1000SV100R001C01SPC210.rar_SIGN.txt"*.
- *d:\iManagerNetEco1000SV100R001C01SPC210* is the directory generated after software package decompression. Replace it as required.
- If information similar to the following is displayed, the software package is intact.
  `SignCLI Info: Successfully verified`
- If the information containing **fail** or **error** is displayed, the software package failed the integrity check. In this case, contact Huawei technical support.

----End

7.3 How Do I Update the NetEco 1000S Software?

Question

How do I update the NetEco 1000S software?

Answer

Step 1 Contact Huawei technical support engineers to obtain the software package iManagerNetEco1000SV100R001C01SPC210.zip. To obtain the software package, Huawei technical support engineers can choose **SUPPORT** > **Software Download** > **Network Energy** > **UPS and Inerter** > **Inverter** > **iManager NetEco 1000S** > **V100R001C01SPC210** at **http://www.huawei.com/en/**.

Step 2 Right-click NetEco 1000S in the lower right corner of the desktop and choose **Exit** from the shortcut menu.

NOTE

If the NetEco 1000S service is not started, skip this step.

Step 3 For details about how to install the NetEco 1000S, see **4 NetEco 1000S Software Installation**.

NOTE

- The NetEco 1000S installation directory cannot be changed.
- Historical data is inherited after the update.

----End

7.4 User Names and Their Initial Passwords

This section describes the user names and their initial passwords required during the installation and operation of the NetEco 1000S.

Table 7-1 lists the user names and initial passwords required during the installation and operation of the NetEco 1000S, and their description.

Table 7-1 User names and their initial passwords

System or Device	User Name	Initial User Password	Description
Operating system	admin	NetEco123	User who has the authority to upload and download files.
MySQL	dbuser	NetEco_123	User who is authorized to perform operations in the MySQL database, which is created during the installation of the NetEco 1000S.

7.5 The NetEco 1000S system is running improperly for change the OS time on the PC

Symptom

When the NetEco 1000S run sometime after change the OS time on the PC, the NetEco 1000S system is running improperly.

Procedure

Step 1 Change the OS time on the PC.

Step 2 Right-click NetEco 1000S in the lower right corner of the desktop and choose **Exit** from the shortcut menu.

Step 3 Log in to the Windows operating system again and then start the NetEco 1000S services.

----End

A Abbreviations

H

Http	Hypertext Transfer Protocol
Https	Hypertext Transfer Protocol Over Secure Socket Layer

K

KPI	Key Performance Indicator

S

SMTP	Simple Mail Transfer Protocol

T

TCP	Transmission Control Protocol