Navigateworx
Device Management Platform
V1.0.1

Guangzhou Navigateworx Technologies Co, Ltd

www.navigateworx.com

REVISION HISTORY

Revision	Date	Firmware version	Revision Details
0	Oct 2019	1.0.0(337913f)	Initial release.
1	Dec 2019		Change home page layout of UM

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Technical Support

E-mail: support@navigateworx.com

info@navigateworx.com

Web: www.navigateworx.com

Table of Contents

Chapter 1.   Product Overview

1.1   Overview

Navigateworx Device Management Platform is a cloud-based device management and data enablement platform that makes it easy to connect your application. With Navigateworx Device Management Platform, you can efficiently interact with any device or group of devices in your Device Management Platform inventory. This enables you to: Ensure that all of your devices are up to date with the latest security patches, firmware, and configurations.

This guide provides step-by-step instructions for using the Device Management Platform user interface.

1.2   Requirements

To use Device Management Platform, make sure your system meets or exceeds the following requirements.

1.2.1 Port requirements

Port	Usage
TCP 443	Must be open for outbound traffic from devices to establish a secure connection to Device Management Platform
TCP 1883	Must be open for outbound traffic on devices configured to use raw TCP connection

NOTE: Outgoing ports may be blocked by firewalls.

1.2.2 Basic Function

Navigateworx Device Management Platform mainly used for device remote monitoring and user management of router. The platform mainly includes following constructions:

- Dashboard
  - Dashboard view
  - Device information monitoring chart
- Device List
  - Device detail
  - Assign group
  - Reboot
  - Firmware upgrade
  - Configuration upgrade
  - APP upgrade
- Administration
  - User management

1.2.3 Recommend Hardware Installation

CPU	Memory	Disk	OS	Device Count	Group	Count	Band width
4 cores (3.1GHz Intel® Xeon® Platinum 8000)	8GB	128GB	CentOs-7+	0-1K	All services could be installed in one server	1	10MB
4 cores (3.1GHz Intel® Xeon® Platinum 8000)	8GB	256GB	CentOs-7+	1K-2K	(1) ActiveMQ +nginx (2) Tomcat+ mongodb +zk	2	20MB

Chapter 2.   Get Started

Device Management Platform is a cloud-based device management platform that allows you to connect any device to any application, anywhere. To get started, you need a Device Management Platform account. After you have an account, you can add the devices that you want monitor to the Device Management Platform inventory.

## 2.1   Apply for Admin account

Please contact your sales representative to have a trail admin account.

You can explore all the Device Management Platform features and functionality.

2.1.1 Log in to your account

After you have received your Device Management Platform account, you can log in.

1. Log in to Device Management Platform.

2. Type your login credentials in the **Username** and **Password** fields.

3. Click **Log in**.
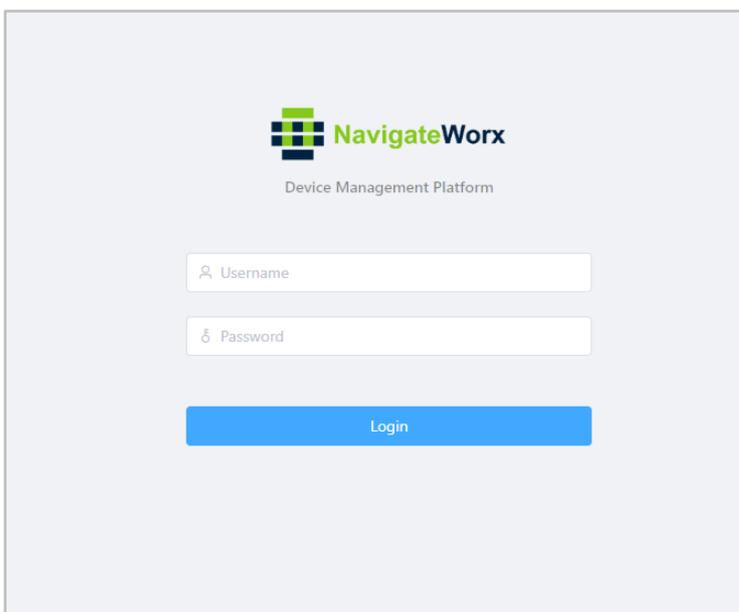
2.2   View the dashboard

The dashboard appears automatically when you log into your account and shows device connection status information as a pie chart.

2.2.1 Monitor Status chart

The Monitor Status chart shows a summary of all system monitors by monitor status: Online, Offline and Inactive, and Product Type Statistics.

- **Total Devices**
  - The total number of Online devices, Offline devices and Inactive devices.
- **Online**
  - The device has been registered to platform and report status periodic
- **Offline**
  - The device is not registered to platform at the moment
- **Inactive**
 - The device is on Import device list but not register to platform yet.
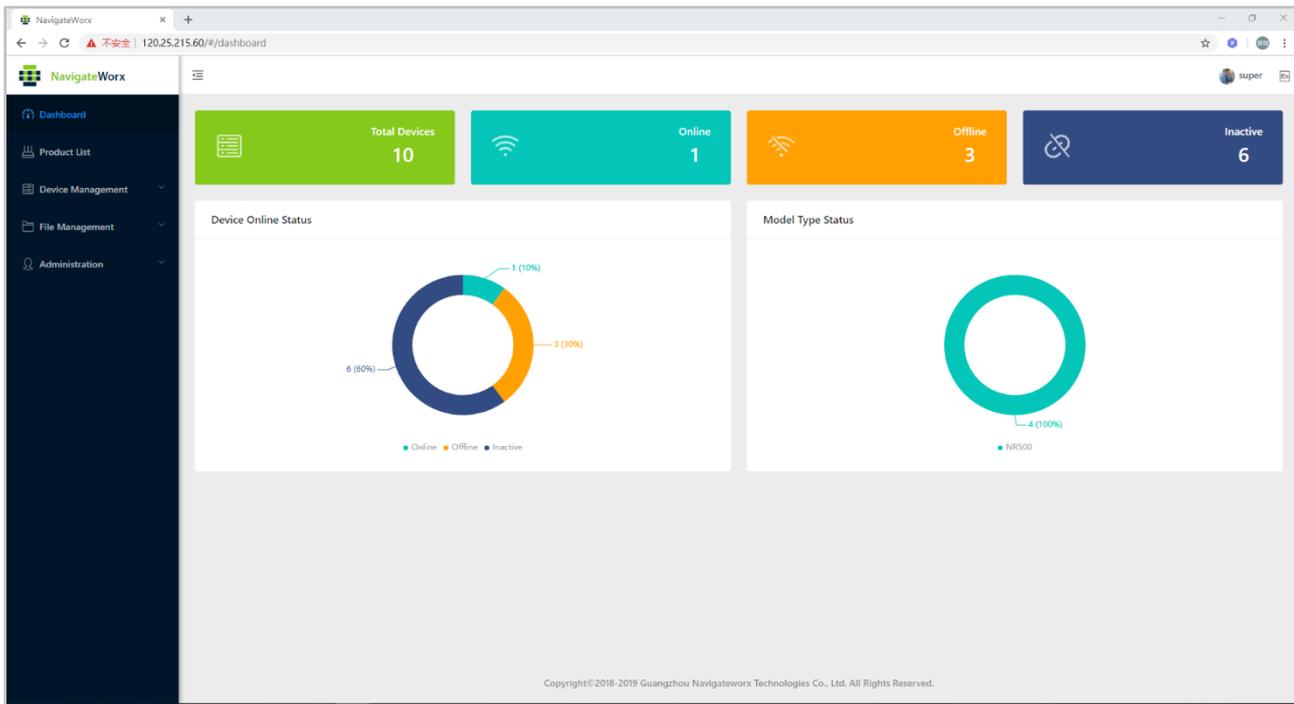
Chapter 3.   Product List

3.1   Create a new Product Type

A product is equivalent to a collection of devices of the same type, and devices under the same product have the same function. You can manage your devices in batches based on your product. Each of your actual devices needs to correspond to an IoT platform device.

1) On the Device Management page, click **Add New Product**.
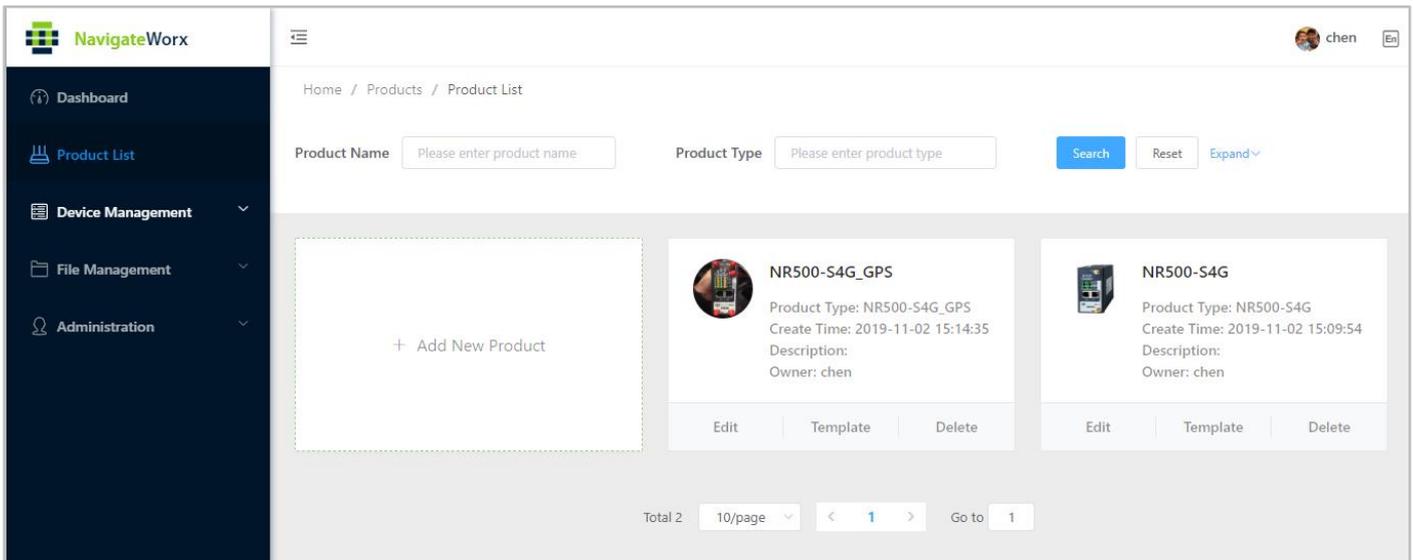
2) Upload the product picture and input the unique Product type and Product name. Description is optional.
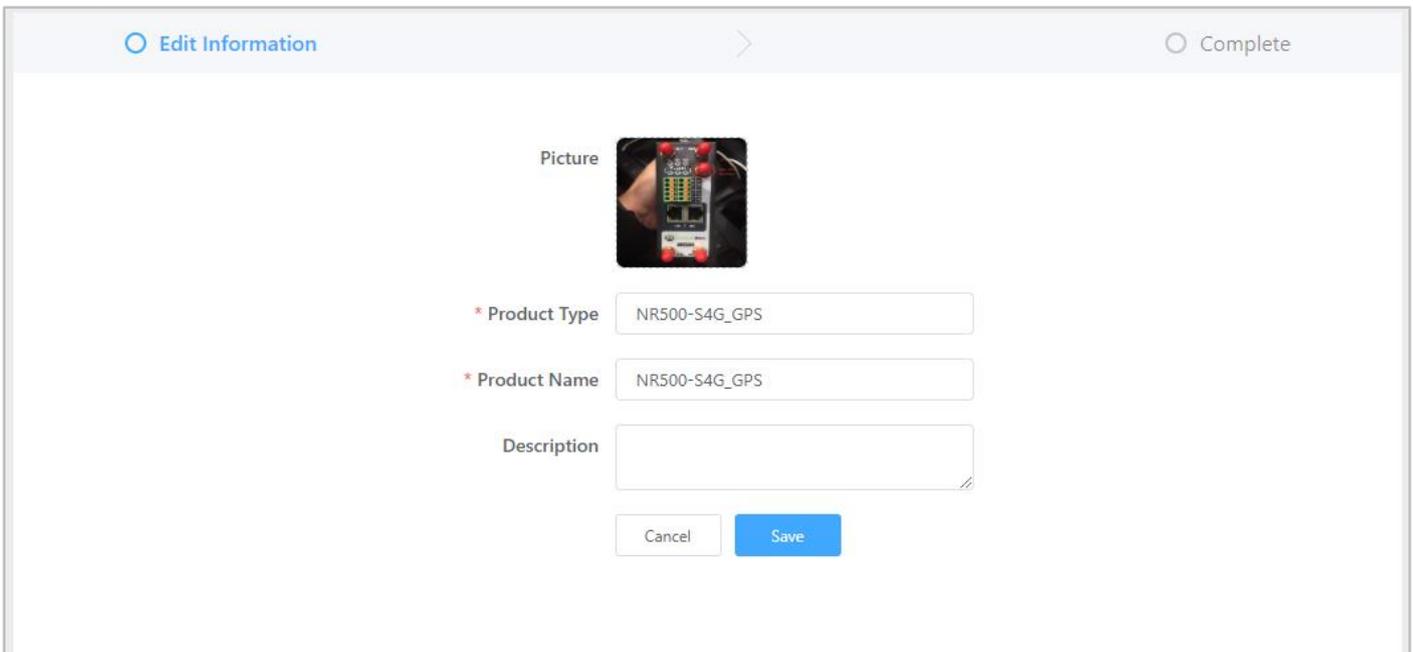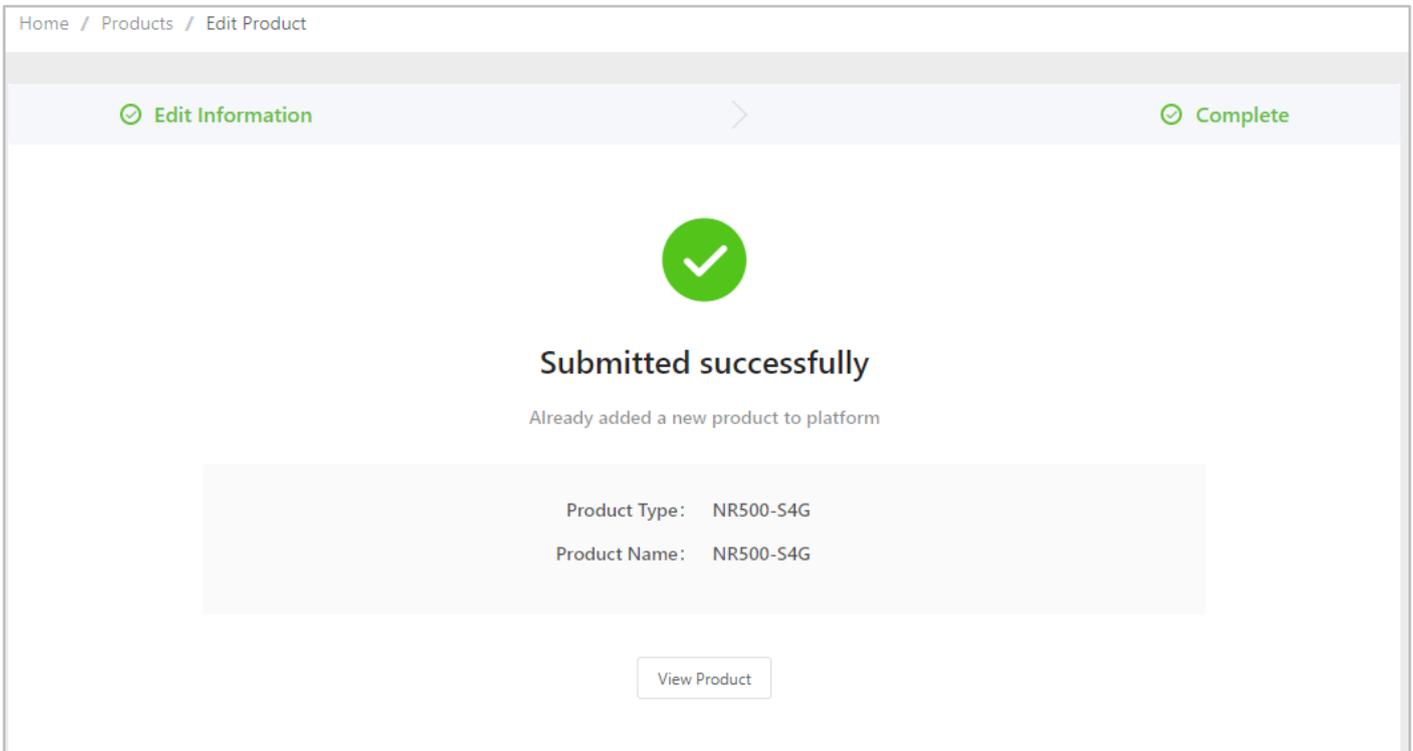

NOTE: please follow below reminding

a) Picture, Production Type, and Product Name is not allow changed after create product. You are not able to create the same Product Type.

b) All uploading picture areas only support "jpg, jpeg, png" files, all have a size restriction of 1MB.

c) Recommend to use 600px * 600px.

3) Click "**Save**", then a new product could be added successfully.

Home / Products / Edit Product

⊘ Edit Information   >   ⊘ Complete

✓

Submitted successfully

Already added a new product to platform

Product Type: NR500-S4G

Product Name: NR500-S4G

View Product

3.2 Modify product parameters template

Product template is used for manage the monitor data coming from devices.

The devices belong to the same product type will obtain the parameters template, and follow the template to upload its data to Device Management Platform.

1) On Product Template List, click "**Module**" to edit the template.

2) Add Module according to below table.

Please refer to below table to add parameters.

NOTE: Module, Field Name, Description is changeable, Field Code must be matched with following characters.

| Module	Field Name	Field Code	Description
System Info	SIM1	Sim1_available	SIM1
	SIM2	sim2_available	SIM2
	RAM	ram	RAM
	Uptime	uptime	Uptime
	Current Time	time	Current Time
	Serial Number	serial_number	Serial Number
	Kernel Version	kernel_version	Kernel Version
	Firmware Version	firmware_version	Firmware Version
	Model Name	model	Model Name
Cellular Info	Rx_bytes	rx_bytes	Rx_bytes
	Tx_bytes	tx_bytes	Tx_bytes
	Modem Status	modem_status	Modem Status
	IMEI	imei	IMEI
	Modbus Version	firmware_version	Modbus Version
	Module	modem_module	Module
	IMSI	imsi	IMSI
	Cell ID	cell_id	Cell ID
	Local Area Code	lac	Local Area Code
	PLMN	plmn_id	PLMN
	Network Type	network_type	Network Type
	Operator	operator	Operator
	Registration	registration	Registration
Active Link Info	IP Address	ip	IP Address
	Secondary DNS Server	dns2	Secondary DNS Server
	Gateway	gateway	Gateway
	Netmask	netmask	Netmask
	Link Type	type	Link Type
	Primary DNS Server	dns1	Primary DNS Server
DI-1	Level	level	Level
	Status	status	Status
	Enable	enable	Enable
DI-2	Level	level	Level
	Status	status	Status
	Enable	enable	Enable
DO-1	Level	level	Level
	Status	status	Status
	Enable	enable	Enable
DO-2	Level	level	Level
	Status	status	Status
	Enable	enable	Enable

Chapter 4.　Device management

The Device Management Platform **Device Management** view allows you to monitor and manage devices registered to your Device Management Platform account. You can add and remove devices from the Device Management Platform inventory, and refresh device information

4.1　Device List

In the device monitor page, you can view the information of all the devices, including: online status, firmware version, up time and other device details. At the same time, the device can be remotely controlled and managed, including: device reboot, firmware upgrade and configuration file upgrade.

- **Online state**
  - The device's connection state, online is green and offline is gray.
- **SN**
  - The only identification number reported by the device.
- **Firmware Version**
  - The current firmware version of the device.
- **Create Time**
  - The device import to platform time.
- **Update Time**
  - The device latest online time.
- **Creater**
  - the source creater of the device.
- **Group**
  - The device belongs to user group.
- **Description**
  - The description of the device.
- **Task**
  - The latest device task status.
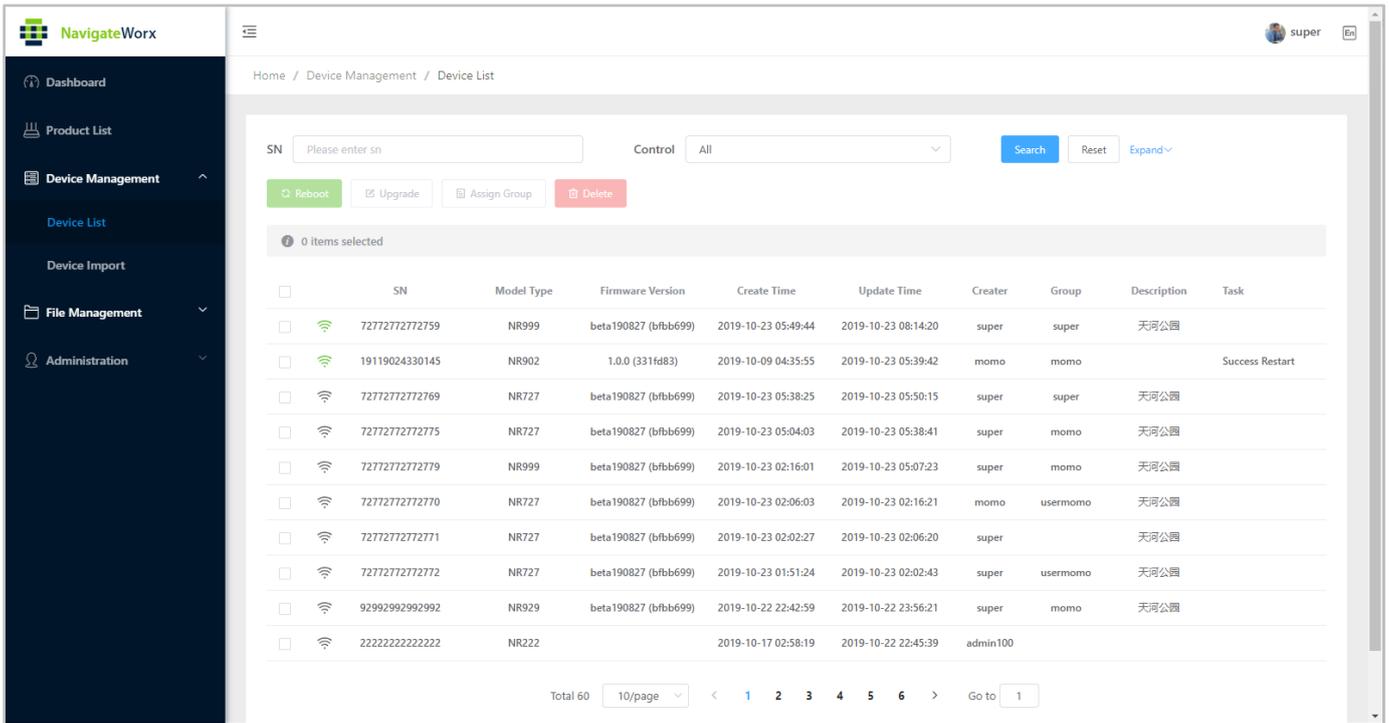
4.1.1 View device properties

You can view a device's properties to see the device type, MAC address, device ID, IP address, and description.
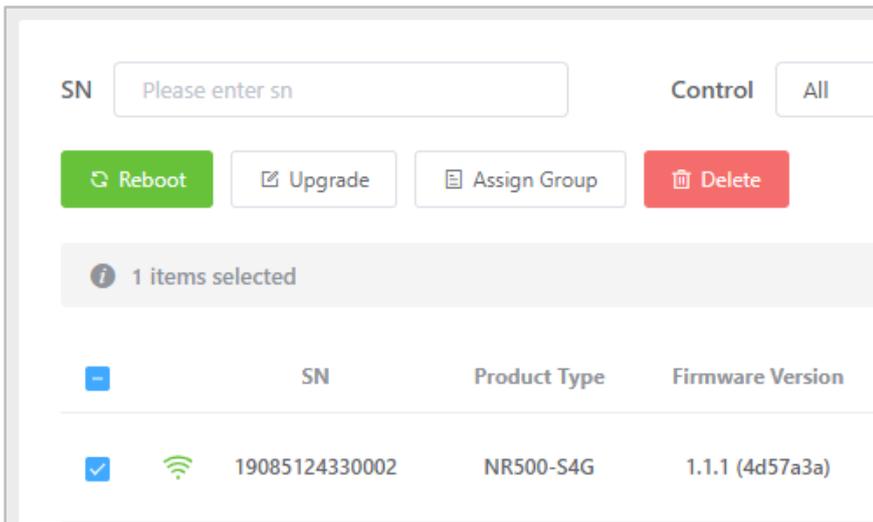
1) Click **Device Management > Device List**.

2) Select a device from the device list.

3) Then you could view the product detail info.
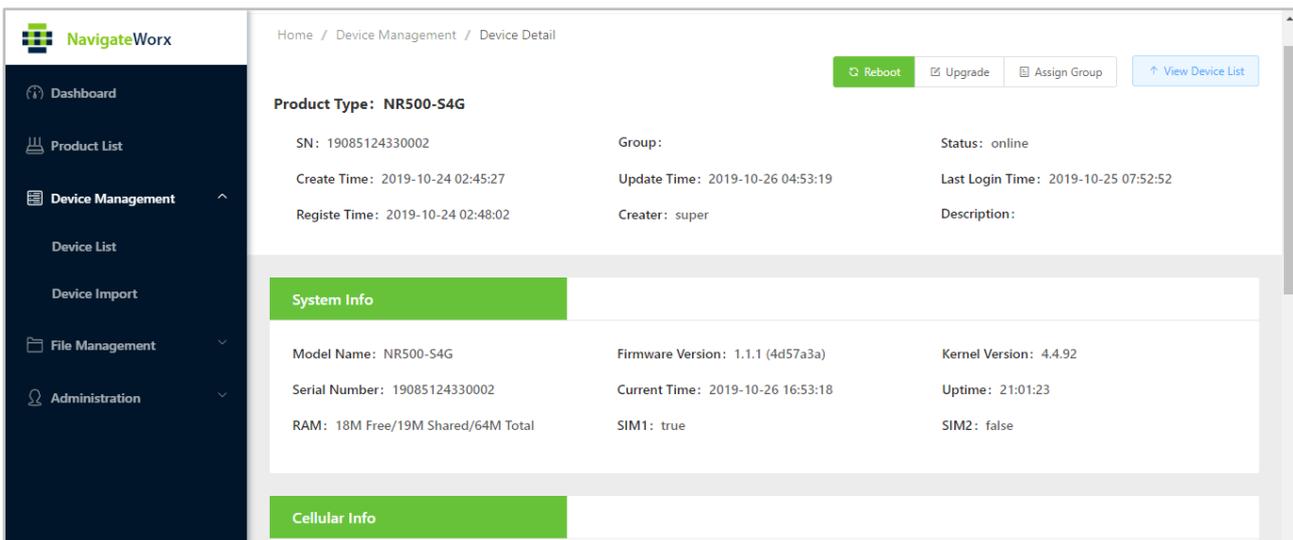
4.1.2 Reboot devices

You can reboot devices from your Device Management Platform.

1)   Click **Device Management > Device List**.

2)   Select a device or multiple devices.

3)   Click **Reboot**.

4)   A dialog appears, requiring you to confirm that you want to reboot the device.

5)   Click **Confirm** to reboot the device immediately or **Cancel** to stop this operation.
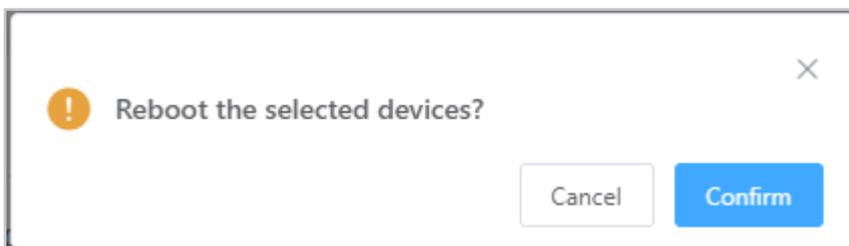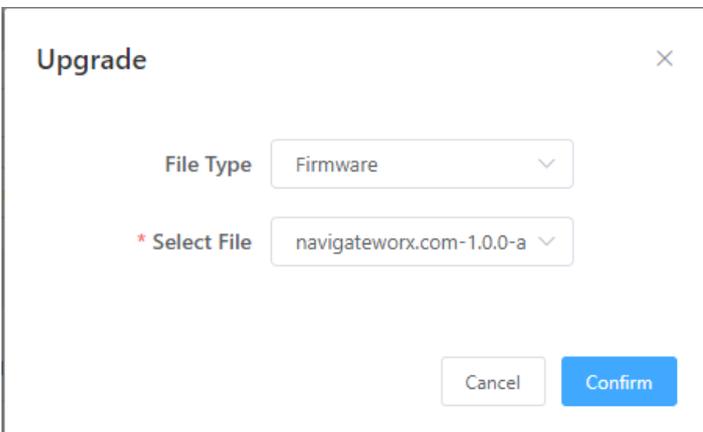

4.1.3 Upgrade firmware

You can upgrade firmware for one or more devices. To upgrade firmware for multiple devices at the same time, all devices must be the same **Product Type**.

1)   Please make sure you have been submitting the correct firmware for this type of product, more details please check **File Management**.

2)   In your Device Management Platform account, click **Device Management > Device List**.

3)   Select the one or multiple devices you want to upgrade.
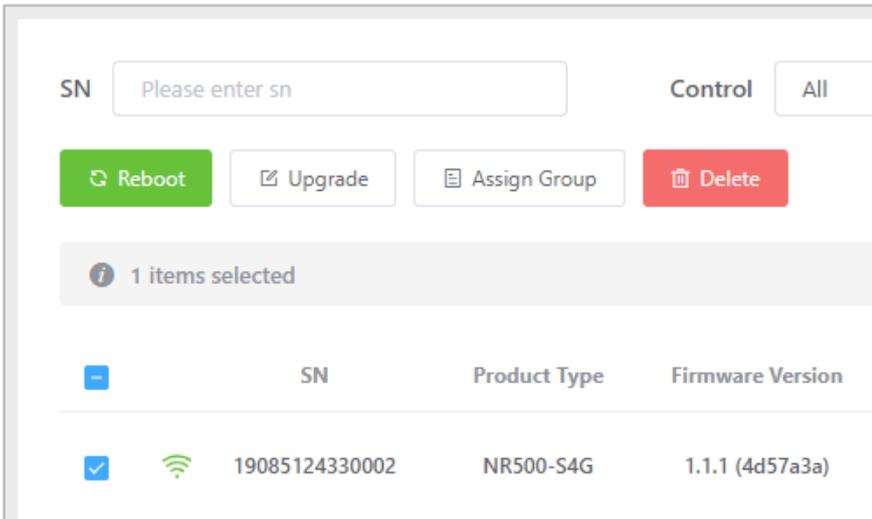
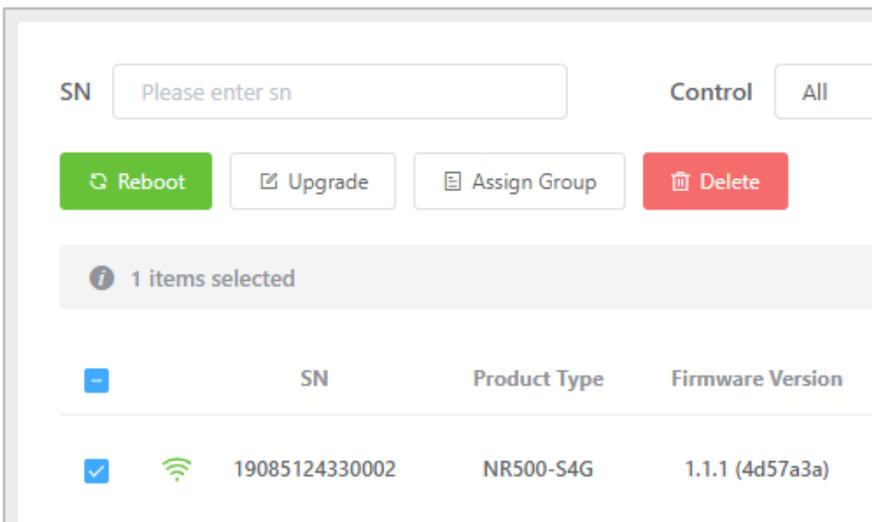4) Click **Upgrade**. The **Upgrade** dialog appears.

5) Select the appropriate firmware file for the device.

6) Click **Confirm** to update the firmware as specified. The updated devices will automatically reboot when the updates are complete.
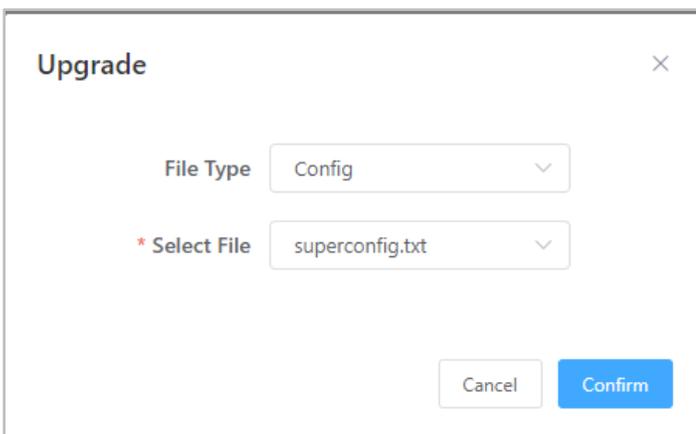
4.1.4 Update config file

You can update config file for one or more devices. To update config file for multiple devices at the same time, all devices must be the same **Product Type**.

1) Please make sure you have been submitting the correct config file for this type of product, more details please check **File Management**.

2) In your Device Management Platform account, click **Device Management > Device List**.

3) Select the one or multiple devices you want to upgrade.

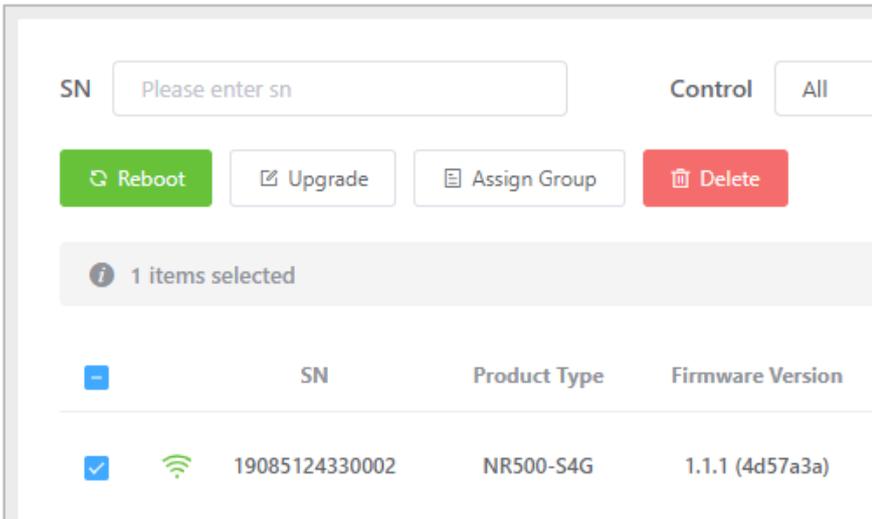4) Click **Upgrade**. The **Upgrade** dialog appears.

5) Select the appropriate firmware file for the device.

6) Click **Confirm** to update the firmware as specified. The updated devices will automatically reboot when the updates are complete.
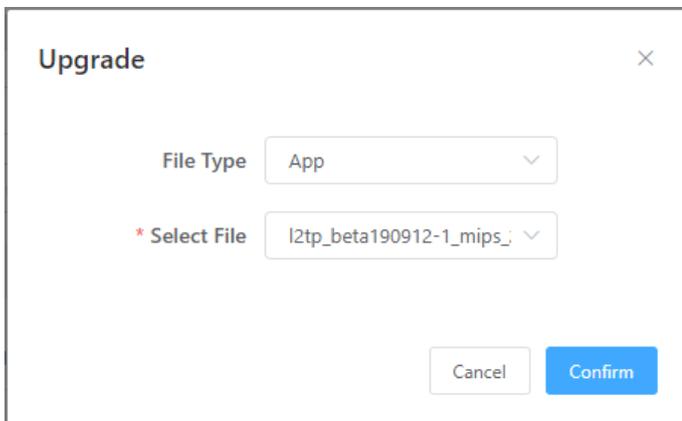
4.1.5 Update APP

You can update config file for one or more devices. To update config file for multiple devices at the same time, all devices must be the same **Product Type**.

1) Please make sure you have been submitting the correct config file for this type of product, more details please check **File Management**.

2) In your Device Management Platform account, click **Device Management > Device List**.

3) Select the one or multiple devices you want to upgrade.

4) Click **Upgrade**. The **Upgrade** dialog appears.

5) Select the appropriate firmware file for the device.

6) Click **Confirm** to update the firmware as specified. The updated devices will automatically reboot when the updates are complete.

4.1.6 Assign groups

The devices management groups are based on user account. Within Device Management Platform to organize your device inventory, you can assign devices to that group.

1) Selected the device on the list.

2) Selection of grouping in User grouping list.

Assign Group   ×

* Select User | please select   ^ |

                      chen3

                      chen4

                      chen2   Confirm

                      chen

	Product Type		Update Time
3	NR500	:18	2019-10-08 23:25:11
2	NR500	:18	2019-09-30 00:53:54
1	NR500	2019-09-23 22:38:28	2019-09-30 00:53:54

Total 3   10/page ∨   ‹ **1** ›   Go to   1

4.2   Import Devices

You must add all devices that you want to manage with Device Management Platform firstly. then configure the device connect to remote management. Devices need to be added by using a CSV file.
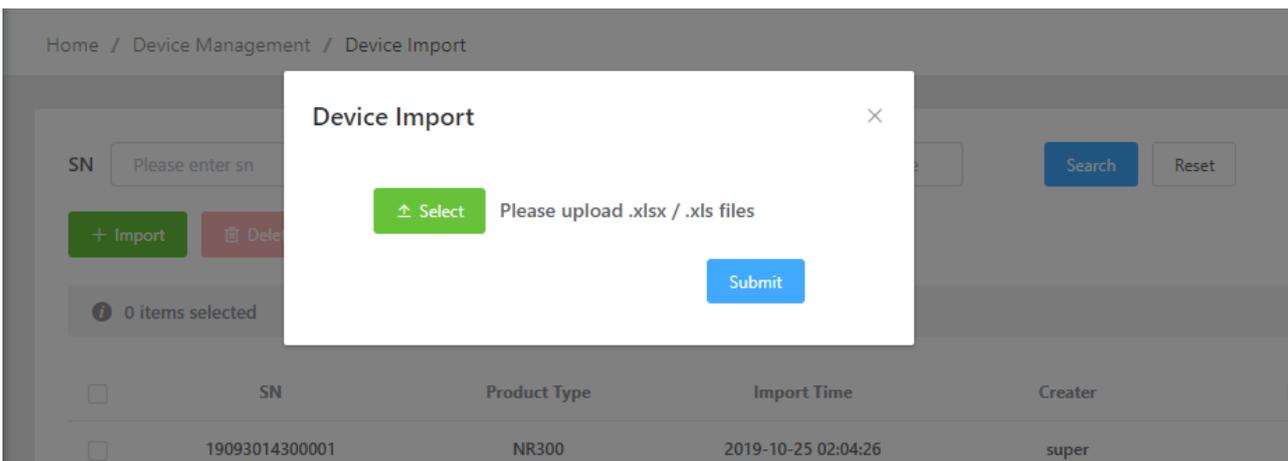
4.2.1   Add multiple devices using EXCEL file

You can add up to 2000 devices at one time to Device Management Platform using Excel file.

1) Create Excel file that includes the list of devices you want to register with Device Management Platform and save it on your local machine.

2) Click **Device Management > Device Import**.

3) Click **Import**. The **Bulk Add Devices** dialog appears.

SN	Please enter sn		Product Type	Please enter product type		Search	Reset
+ Import	🗑 Delete						

4) In the **File** field, browse to and select the Excel file that contains the list of devices you want to add.

5) Click **Submit**.

Home / Device Management / Device Import

Device Import   ✕

⬆ Select   Please upload .xlsx / .xls files

Submit

SN	Product Type	Import Time	Creator
19093014300001	NR300	2019-10-25 02:04:26	super

4.2.2 Create EXCEL file

The format of the file is as follows:

- Specify one device per row in the file.

- Provide the device ID for each device. See SN.

- You could add the device requires an installation description

The following shows a sample Excel file for adding multiple devices.

|	A	B	C	D	E	F
1	SN	TYPE	Description			
2	19075144330001	NR500	Guangzhou, China			
3	19075144330002	NR500	Guangzhou, China			
4	19075144330003	NR500	Guangzhou, China			
5	19075144330004	NR500	Guangzhou, China			
6	19075144330005	NR500	Guangzhou, China			
7	19075144330006	NR500	Guangzhou, China			
8	19075144330006	NR500	Guangzhou, China			
9	19075144330007	NR500	Guangzhou, China			
10	19075144330008	NR500	Guangzhou, China			
11	19075144330009	NR500	Guangzhou, China			
12	19075144330010	NR500	Guangzhou, China			
13	19075144330011	NR500	Guangzhou, China			
14	19075144330012	NR500	Guangzhou, China			
15	19075144330013	NR500	Guangzhou, China			
16	19075144330014	NR500	Guangzhou, China			
17	19075144330015	NR500	Guangzhou, China			
18	19075144330016	NR500	Guangzhou, China			
19	19075144330018	NR500	Guangzhou, China			
20	19075144330019	NR500	Guangzhou, China			
21	19075144330020	NR500	Guangzhou, China			
22						
23						

4.3 Connect a device to Platform

Most device types have unique options that you can configure to allow the device to be

managed using Device Management Platform.

- **Enable**
  - Enable Device Management Platform connection.
- **Server Address**
  - The server address of Device Management Platform.
- **Username**
  - The platform login username.
- **Password**
  - The platform login password.
- **Keepalive**
  - The keepalive package sending interval between device and platform.
- **Reconnect Interval**
  - The retry interval when failed to connect to platform.
- **Update Interval**
  - The monitor data update interval.
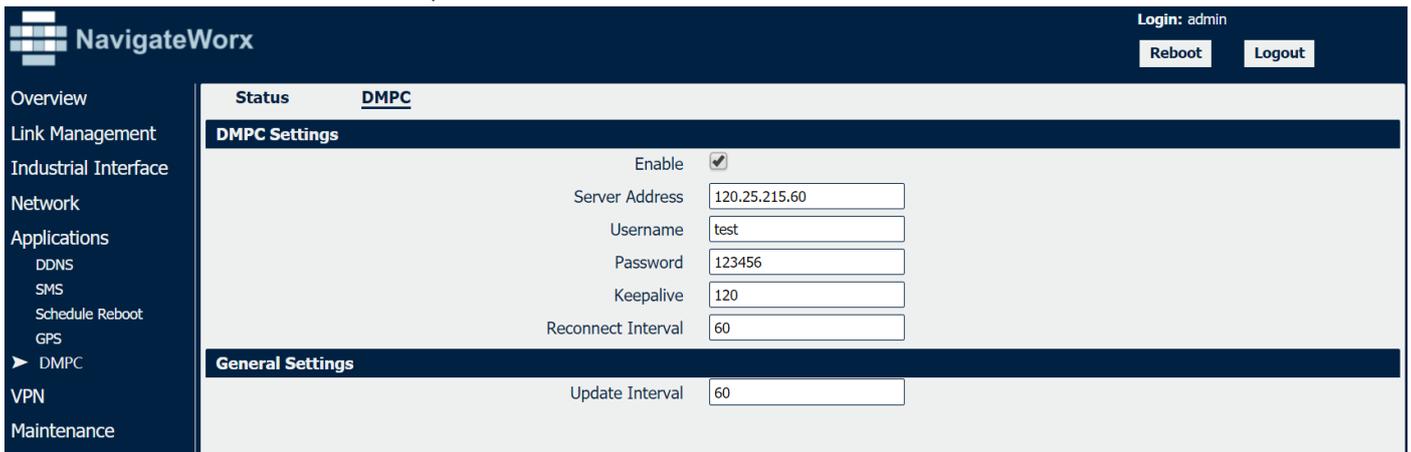
Note: Before connect device to Device Management Platform, you need to import device firstly,

please refer to **4.2.1**.

1) Click **DMPC**.

2) Import the configuration details.

3) Click "**Save**" and "**Apply**".

4) Check the Connection Status.
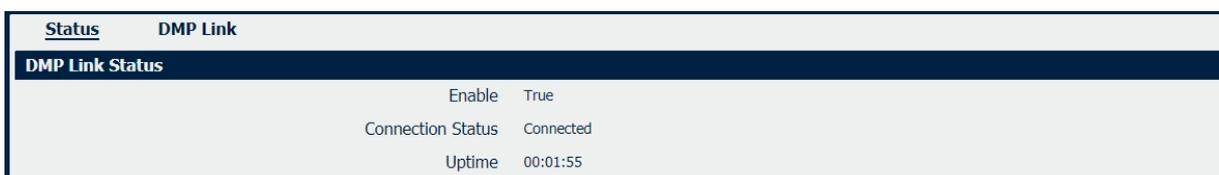
Chapter 5.   File Management
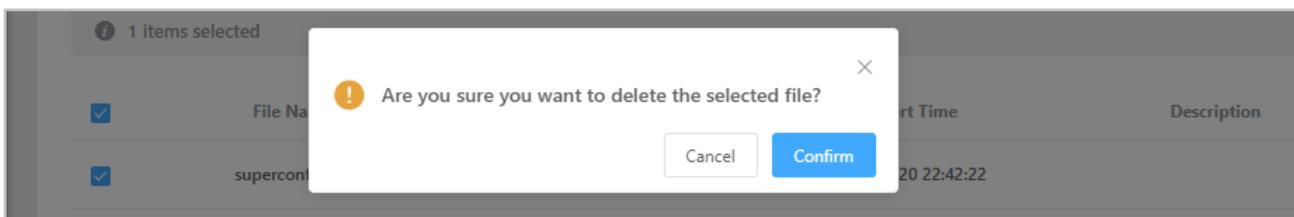
5.1   Manage config file

1)   Enter the **File Management->Config File** page, click "**Add**" on the left side.
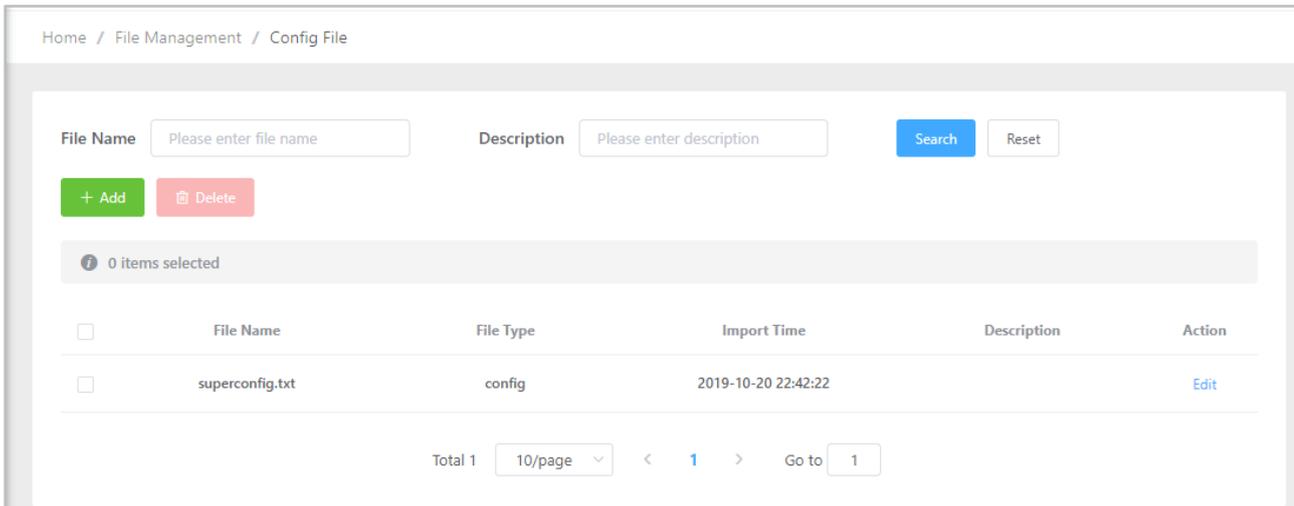
2)   Then it will pop up the dialog, click **Select File**, select the config file to upload as shown in the figure below.
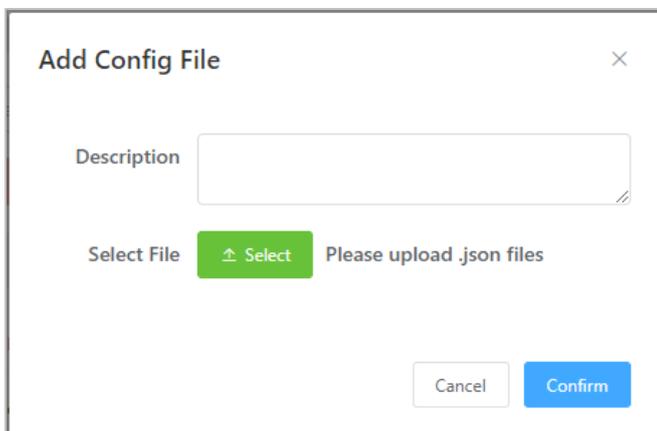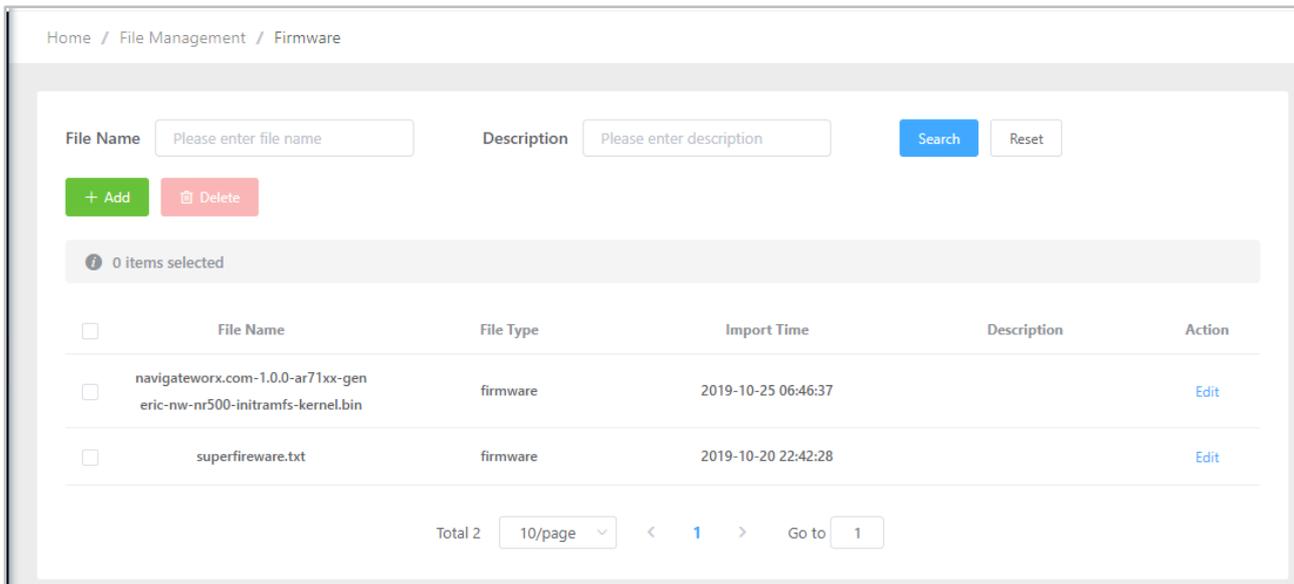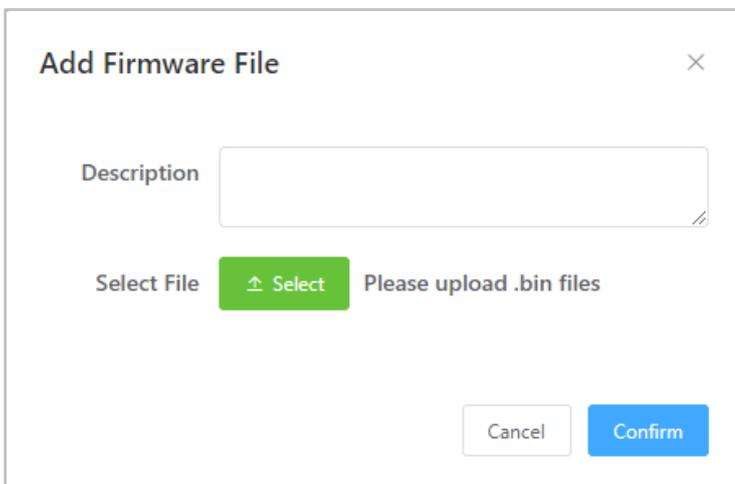

3)   If you want to delete a config file, please select the configure file to be deleted, click **Delete**.

4)   A dialog appears, requiring you to confirm that you want to delete the files.

5)   Click **Confirm** to delete the config file immediately or **Cancel** to stop this operation.

5.2 Firmware

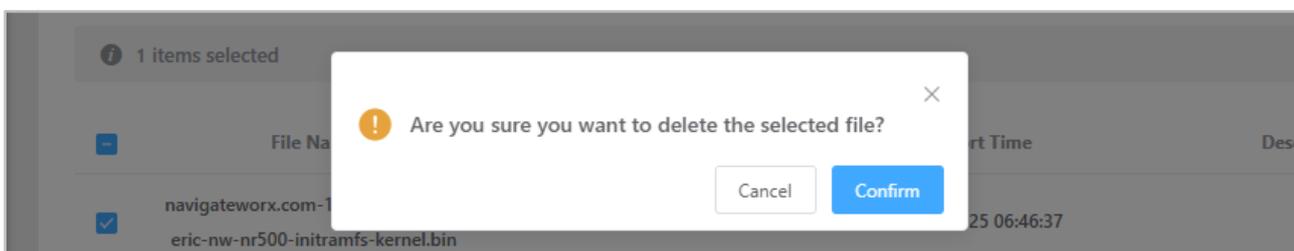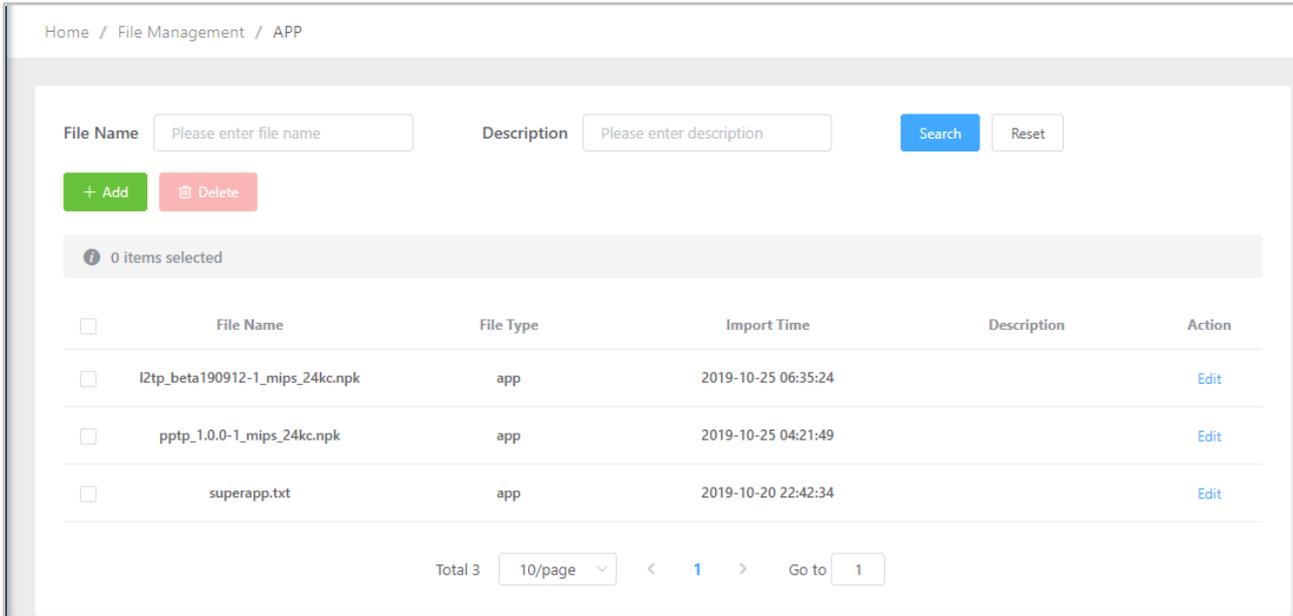1) Enter the **File Management->Firmware** page, click "**Add**" on the left side.

2) Then it will pop up the dialog, click **Select File**, select the firmware to upload as shown in the figure below.

3) If you want to delete a firmware, please select the firmware to be deleted, click **Delete**.

4) A dialog appears, requiring you to confirm that you want to delete the files.

5) Click **Confirm** to delete the config file immediately or **Cancel** to stop this operation.
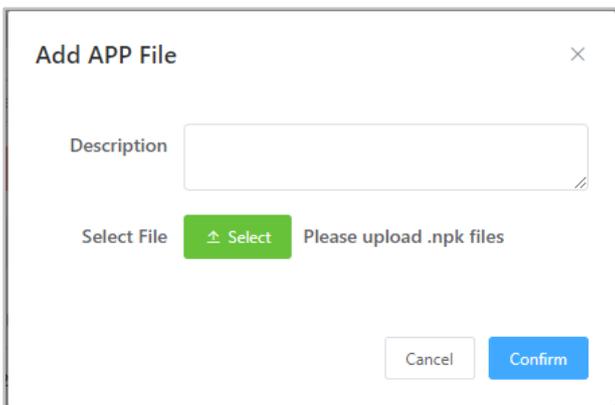
5.3　APP

1) Enter the **File Management->APP** page, click "**Add**" on the left side.
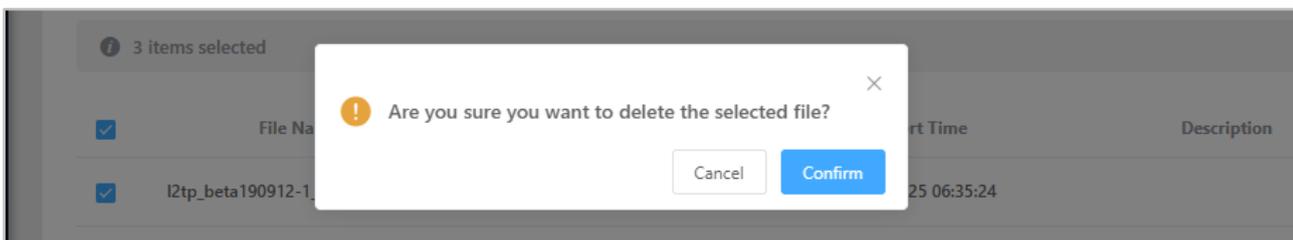

2) Then it will pop up the dialog, click **Select File**, select the APP to upload as shown in the figure below.

3) If you want to delete an APP, please select the APP to be deleted, click **Delete**.

4) A dialog appears, requiring you to confirm that you want to delete the files.

5) Click **Confirm** to delete the config file immediately or **Cancel** to stop this operation.

Chapter 6.   Administration

There is some difference in the operation between the users with administrators' permissions on the platform. administrator only has the system management page permissions, including: the establishment of group users, import devices, create product template, you can manage your Device Management Platform account settings, subscriptions, and customer account information in the **Account** page.

6.1   Add a new account

- **Change Avatar**
  - Add the picture of this user.
  NOTE: please follow below reminding
  a) All uploading picture areas only support "jpg, jpeg, png" files, all have a size restriction of 1MB.
  b) Recommend to use 600px * 600px
- **User Name**
  - The user's login name.
- **New Password**
  - The password of the user's login.
- **Email Address**
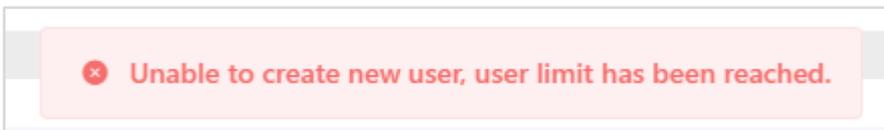 - The email address of the user.

- **Privilege**
    - The privilege of the user.

Click "**Save**", then a new user could be added successfully.
NOTE: You could not Delete a user, only able to disable the login.
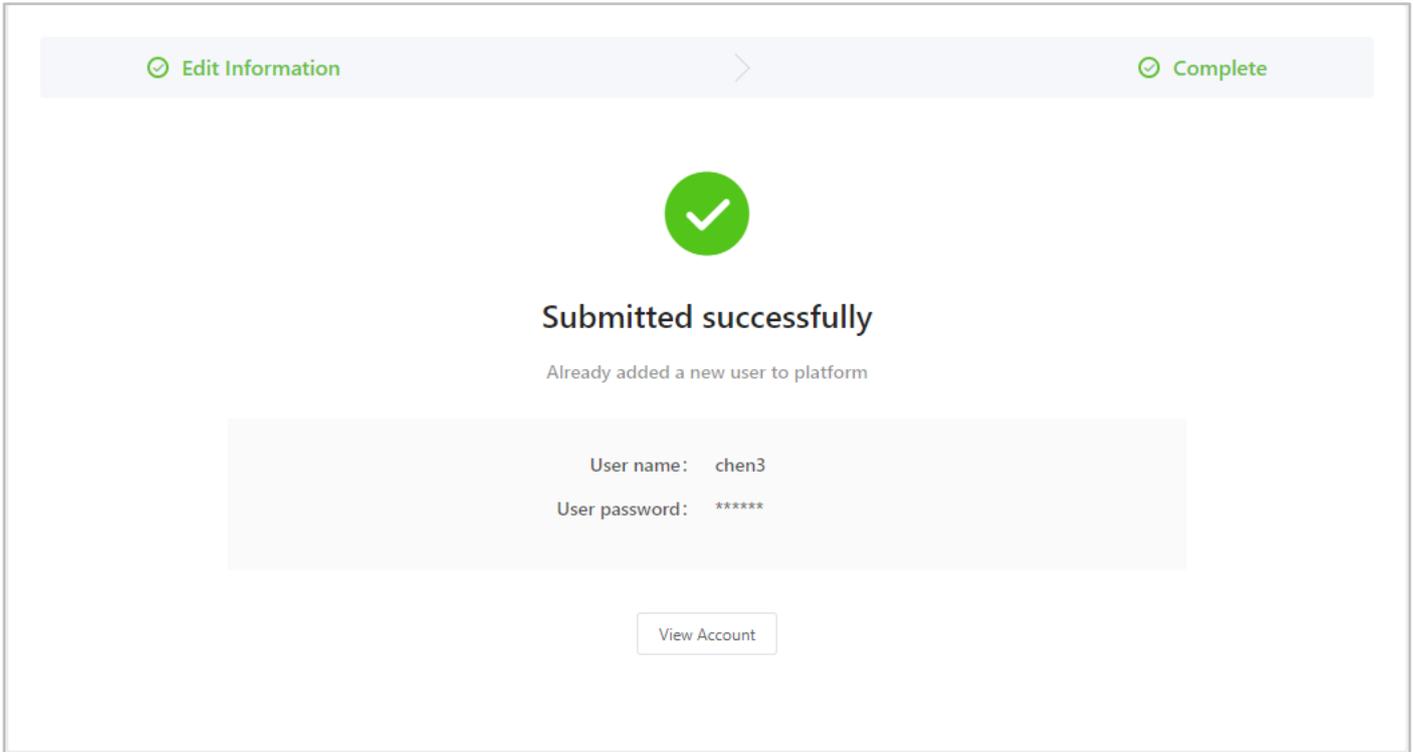
There is limited for creating user, please contact your sales representative

6.2 Edit your user profile

You can edit the personal information in your Device Management Platform user profile. This

information was entered when your user account was created.

1) Click **Administration > Account>** My Account.

2) Click "**Edit**" button. The Edit Profile dialog appears.

3) Enter new or revised details. Click "**Save**". The account profile is updated.