Mobile Center

User's Manual

V1.00.0

ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD

Foreword

General

This manual introduces the functions and operations on the Manager and Client of the Mobile Center (hereinafter could be referred to as the "system" depending on the operation).

Safety Instructions

The following categorized signal words with defined meaning might appear in the manual.

Signal Words	Meaning
DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
TIPS	Provides methods to help you solve a problem or save you time.
NOTE	Provides additional information as the emphasis and supplement to the text.

Revision History

Version	Version Number	Revision Content	Release Time
V1.00.0	V3.010.0000002	First release	Oct 2019

Privacy Protection Notice

As the device user or data controller, you might collect personal data of others such as face, fingerprints, car plate number, Email address, phone number, GPS and so on. You need to be in compliance with the local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures including but not limited to: providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact.

About the Manual

- The manual is for reference only. If there is inconsistency between the manual and the actual product, the actual product shall prevail.
- We are not liable for any loss caused by the operations that do not comply with the manual.
- The manual would be updated according to the latest laws and regulations of related regions. For detailed information, see the paper manual, CD-ROM, QR code or our official website. If there is inconsistency between paper manual and the electronic version, the electronic version shall prevail.
- All the designs and software are subject to change without prior written notice. The product updates might cause some differences between the actual product and the manual. Please contact the customer service for the latest program and supplementary documentation.
- There still might be deviation in technical data, functions and operations description, or errors in print. If there is any doubt or dispute, please refer to our final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and the company names in the manual are the properties of their respective owners.
- Please visit our website, contact the supplier or customer service if there is any problem occurred when using the device.
- If there is any uncertainty or controversy, please refer to our final explanation.

Important Safeguards and Warnings

This chapter describes the contents covering proper handling of the device, hazard prevention, and prevention of property damage. Read these contents carefully before using the device, comply with them when using, and keep it well for future reference.

Operation Requirement

- Do not place or install the device in a place exposed to sunlight or near the heat source.
- Keep the device away from dampness, dust or soot.
- Keep the device installed horizontally on the stable place to prevent it from falling.
- Do not drop or splash liquid onto the device, and make sure there is no object filled with liquid on the device to prevent liquid from flowing into the device.
- Install the device in a well-ventilated place, and do not block the ventilation of the device.
- Operate the device within the rated range of power input and output.
- Do not dissemble the device.
- Transport, use and store the device under the allowed humidity and temperature conditions.

Electrical Safety

- Improper battery use might result in fire, explosion, or inflammation.
- When replacing battery, make sure the same model is used.
- Use the recommended power cables in the region and conform to the rated power specification.
- Use the power adapter provided with the device; otherwise, it might result in people injury and device damage.
- The power source shall conform to the requirement of the Safety Extra Low Voltage (SELV) standard, and supply power with rated voltage which conforms to Limited power Source requirement according to IEC60950-1. Please note that the power supply requirement is subject to the device label.
- Connect the device (I-type structure) to the power socket with protective earthing.
- The appliance coupler is a disconnection device. When using the coupler, keep the angle for easy operation.

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1 Overview

1.1 Introduction

Mobile Center is a flexible, scalable, high reliable and powerful central management system. Mobile Center is able to meet the requirements of large and medium-sized projects through distributed extension. With client-server architecture, Mobile center provides the central management, convenient connection, and multi-service cooperation. It can provide basic functions like user permission management, device management, alarm management, central storage, map, etc. It's also a professional platform for managing mobile vehicles.

1.2 Highlights

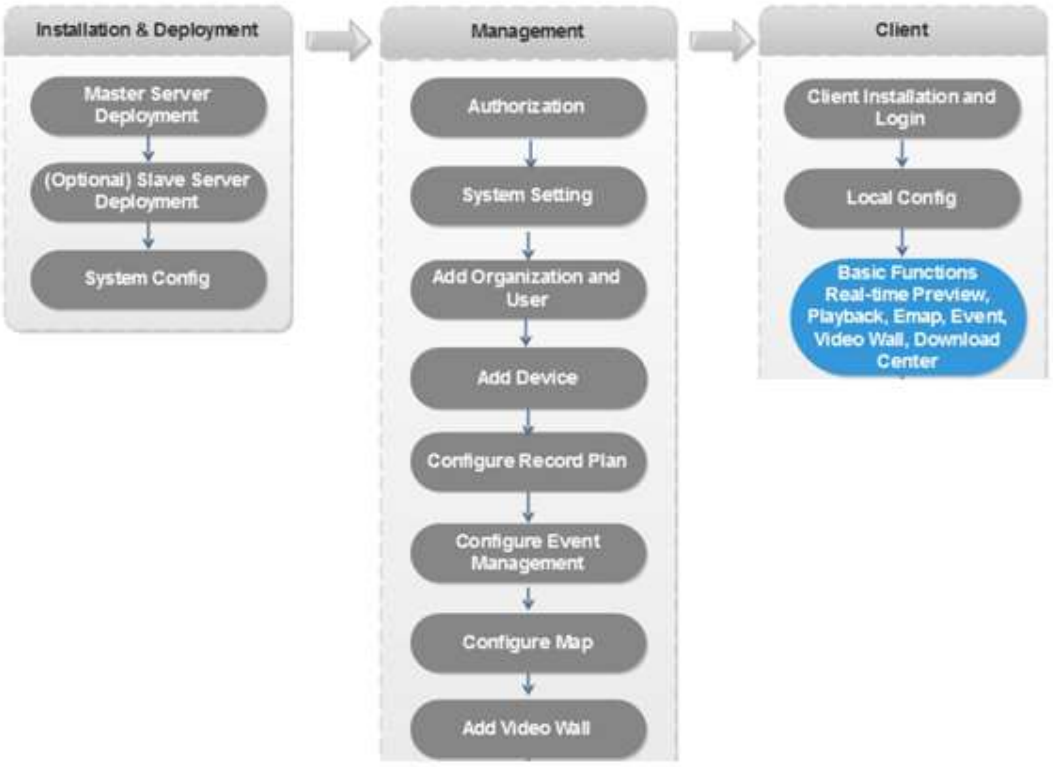
- Easily extendable
  - ◇ Supports system performance entension.
- More professional
  - ◇ Supports system operation and maintenance, easily acquire service, system, device, time and some other system info.
  - ◇ Separate Web management end, makes management more convenient and professional.
- Highly reliable
  - ◇ Supports dual hot standby, makes Mobile Center system more stable.
  - ◇ Supports system data auto backup and manual backup, reduce loss caused by system crash.
- More open
  - ◇ Open SDK, the third party platform can be connected through SDK.

2 Business Flow Chart

In the business flow chart, shading means configuration item, shading means the exact application of business in the client.

The overall flow chart is shown in Figure 2-1.

Figure 2-1 Overall flow



3 Server Installation and Deployment

Mobile Center supports both single server deployment and master/slave distributed deployment.

3.1 Configuration Requirement

Refer to Table 3-1 for the requirements of server configuration.

Table 3-1 Server configuration requirement

	Hardware Requirement
Recommended configuration	● CPU: E5-2640 v3@2.60GHz 2.60GHz 8core ● RAM: 16 GB ● Network card: 1Gps ● Hard drive type: HDD 1 TB ● Mobile Center installation directory space: Over 500G
Minimum configuration	● CPU: E3-1220 v5@3.00GHz 3.00GHz 4core ● RAM: 16GB ● Network card: 1Gps ● Hard drive type: HDD 1 TB ● Mobile Center installation directory space: Over 500G

3.2 Master Server

3.2.1 Installation

Step 1 Double-click .

The installation interface is displayed. See Figure 3-1.

Program name includes version number and program data. Please confirm the version before installation.

Figure 3-1 Installation (master)

Step 2 Click **agreement** to read the agreement about using this software, select the **I have read and agree the DSS** check box, and then click **Next**.

The server type selection interface is displayed. See Figure 3-2.

Figure 3-2 Server type selection (slave)

Step 3 Select server type as **Master**, and check whether the server supports hot standby, and then click **Next**.

Master means master mode; **Slave** means slave mode; **HA support** means it supports hot standby.

The installation path selection interface is displayed. See Figure 3-3.

Figure 3-3 Installation path selection (master)

Step 4 Select an installation path. You can use the default installation directory or click **Browse** to customize installation directory.

After selecting installation directory, the system displays information about needed space and free space of installation.

If the **Install** button shows in gray, check whether the installation directory is correct, or whether the available space of installation directory is bigger than the needed space.

Step 5 Click **Install**.

The installation progress interface is displayed. See Figure 3-4. The installation process takes about 3 minutes to 5 minutes. Please wait patiently. The interface is shown in Figure 3-5 after installation is completed.

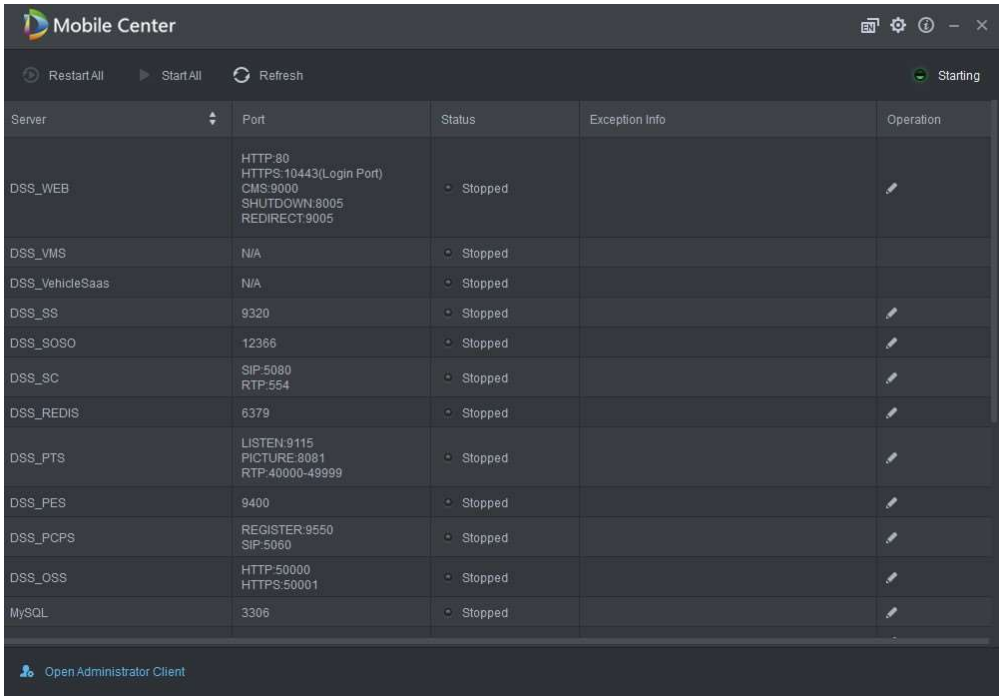
Figure 3-4 Installation progress

Figure 3-5 Installation completed

Step 6 Click **Run** to start immediately.

The Mobile Center service configuration interface is displayed. See Figure 3-6.

Figure 3-6 Mobile center service configuration interface (master)



3.2.2 Uninstallation

Step 1 On your PC, select **Start > All Programs**, unfold the Mobile Center folder, and then click **Mobile Center Uninstall**.

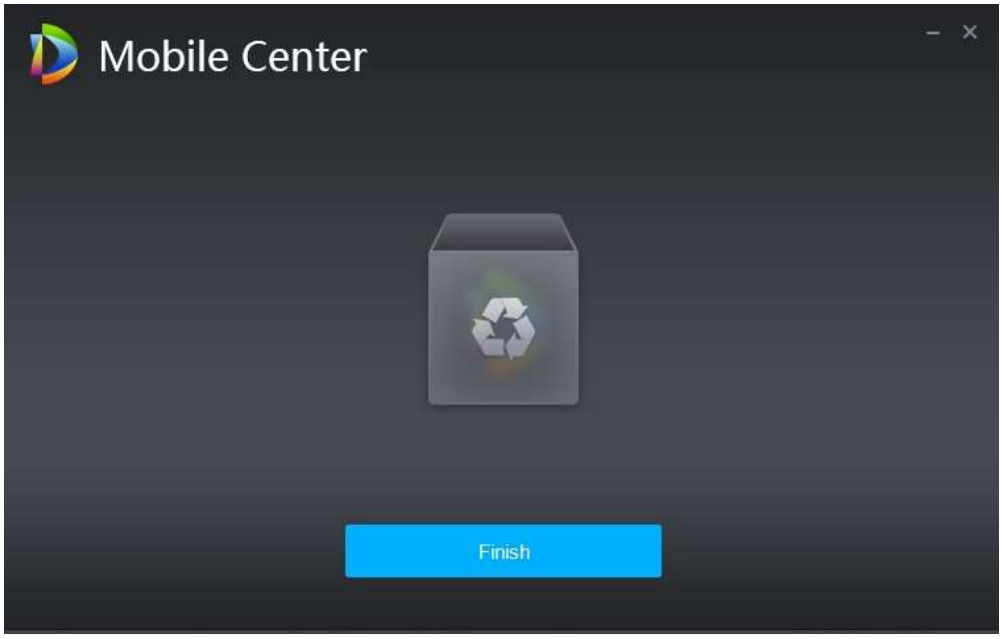
The uninstallation confirmation interface is displayed. See Figure 3-7.

Figure 3-7 Uninstallation confirmation

Step 2 Click **Yes**.

The system displays uninstallation progress; the interface shown in Figure 3-8 is displayed after uninstallation is completed.

Figure 3-8 Uninstallation completed



Step 3 Click **Finish** to complete uninstallation.

3.3 Slave Server

Please skip this section if only one server needs to be deployed.

3.3.1 Installation

Step 1 Double-click .

The installation interface is displayed. See Figure 3-9.

Program name includes version number and program data. Please confirm the version before installation.

Figure 3-9 Installation (slave)

Step 2 Click **agreement** to read the agreement about using this software, select the **I have read and agree the DSS** check box, and then click **Next**.

The server type selection interface is displayed. See Figure 3-10.

Figure 3-10 Server type selection (slave)

Step 3 Select server type as **Slave**, and then click **Next**.

The installation path selection interface is displayed. See Figure 3-11.

Figure 3-11 Installation path selection (slave)

Step 4 Select an installation path. You can use the default installation directory or click **Browse** to customize installation directory.

After selecting installation directory, the system displays information about needed space and free space of installation.

If the **Install** button shows in gray, check whether the installation directory is correct, or whether the available space of installation directory is bigger than the needed space.

Step 5 Click **Install**.

The installation progress interface is displayed. See Figure 3-12. The installation process takes about 3 minutes to 5 minutes. Please wait patiently. The interface is shown in Figure 3-13 after installation is completed.

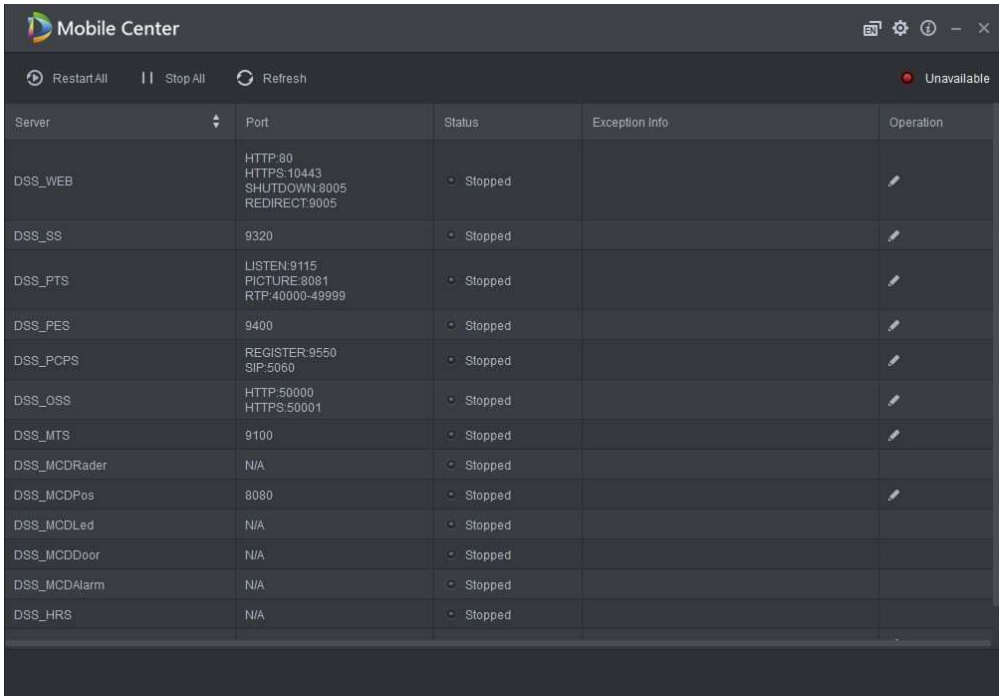
Figure 3-12 Installation progress

Figure 3-13 Installation completed

Step 6 Click **Run** to start immediately.

The Mobile Center service configuration interface is displayed. See Figure 3-14

Figure 3-14 Mobile center configuration interface (slave)



3.3.2 Registering to Master Server

On the slave server, you just need to enter the master server IP and port to get registered to the master server.

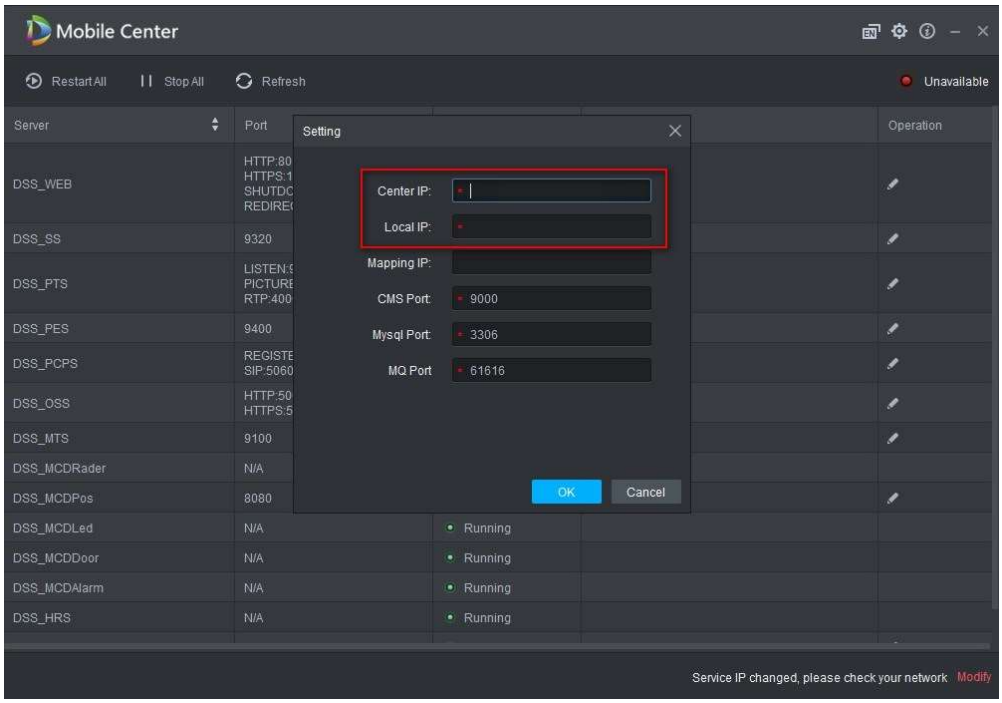
Step 1 Double-click on the slave server.

The Mobile Center configuration interface is dispplayed. See Figure 3-14.

Step 2 Click on the top right corner of the interface.

The **Setting** interface is displayed. See Figure 3-15.

Figure 3-15 IP setting



Step 3 Enter center IP, local IP and each port number, and then click **OK**.

The system automtically detects whether master server IP and ports are valid.

- If valid, the system restarts all the services of slave server and the server will be reloaded.
- If not valid, the system displays a prompt that indicats failure information, and you need to repeat this step to enter the correct information.

3.3.3 Starting Slave Server

You can start slave server and check the status of each service. For the operations on the slave server main interface, refer to "3.4 System."

3.4 System Configuration

This section introduces the operations on the Mobile Center configuration interface.

Figure 3-16 Server main inteface

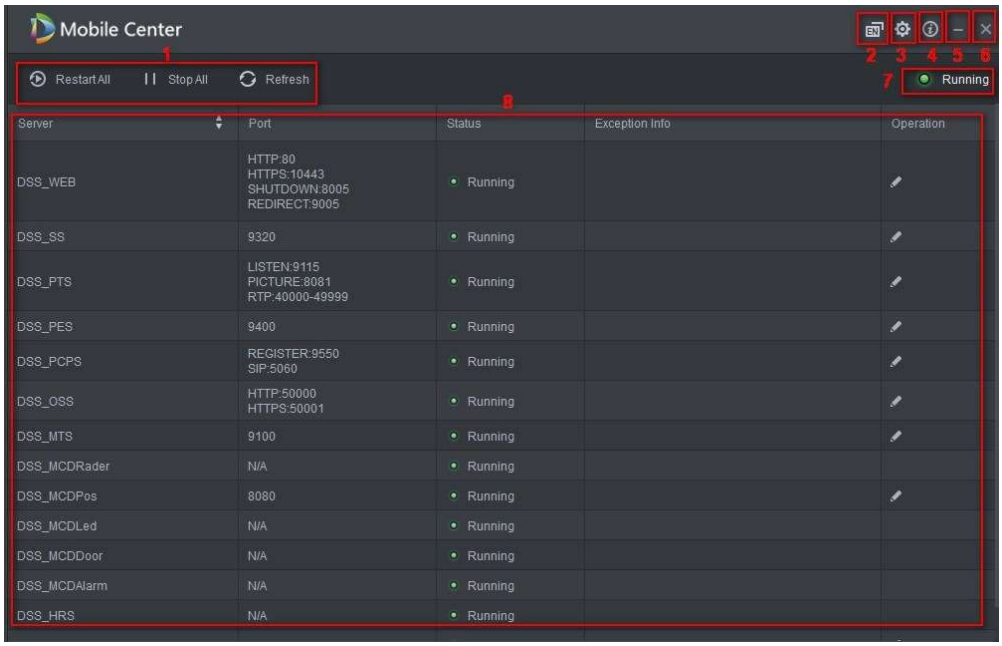


Table 3-2 Mobile Center configuration interface operations description

No.	Function	Description
1	Service Management	• Click Restart All to restart all services. • Click Stop All to stop all services. • Click Refresh to refresh services.
2	Language	Two languages are supoorted: Chinese and English. Click the icon to switch language, then restart to get the setting into effect.
3	Setting	Set CMS IP as the IP address of server which installs Mobile Center. If in the LAN/WAN environment, configure mapping address as WAN IP address.
4	About	Click the icon to view software version and release date.
5	Minimize	Click the icon to minimize the interface.
6	Close	Close main interface.
7	Service Status	• Starting • Unavailable: Service abnormity. • Stopping • Running: All the services run normally. • Stopped

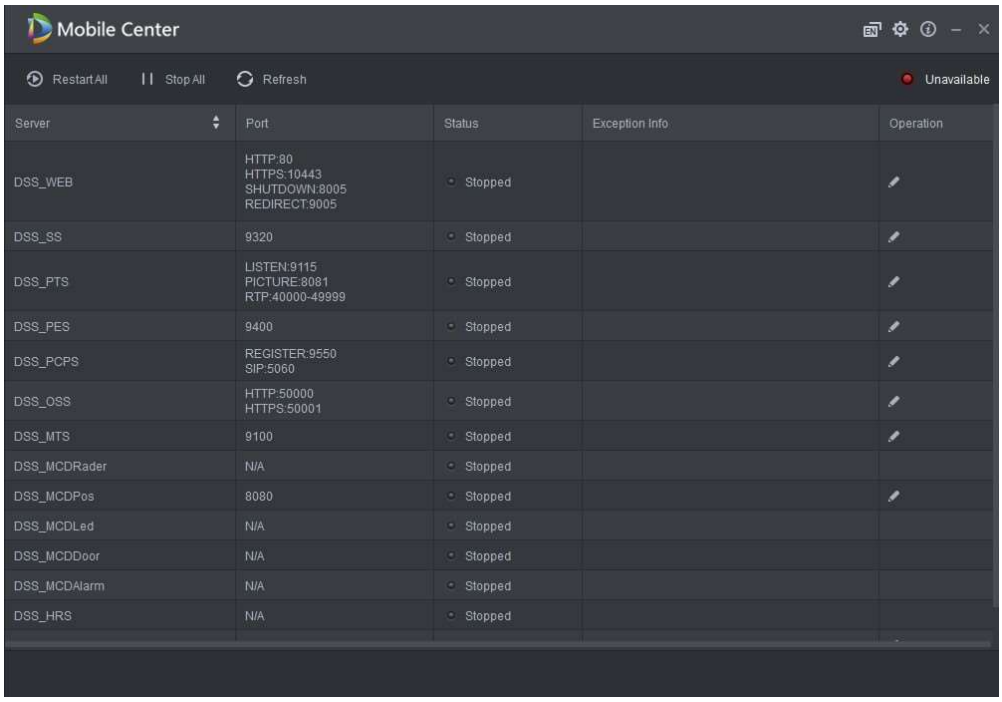
No.	Function	Description
8	Services Details	Display each service and service details. Click to modify service port number, and the system restarts automatically after modification.

3.5 Modifying Service Port

Step 1 Double-click to log in to Mobile Center configuration interface.

The Mobile Center configuration interface is displayed. See Figure 3-17.

Figure 3-17 Mobile Center configuration interface

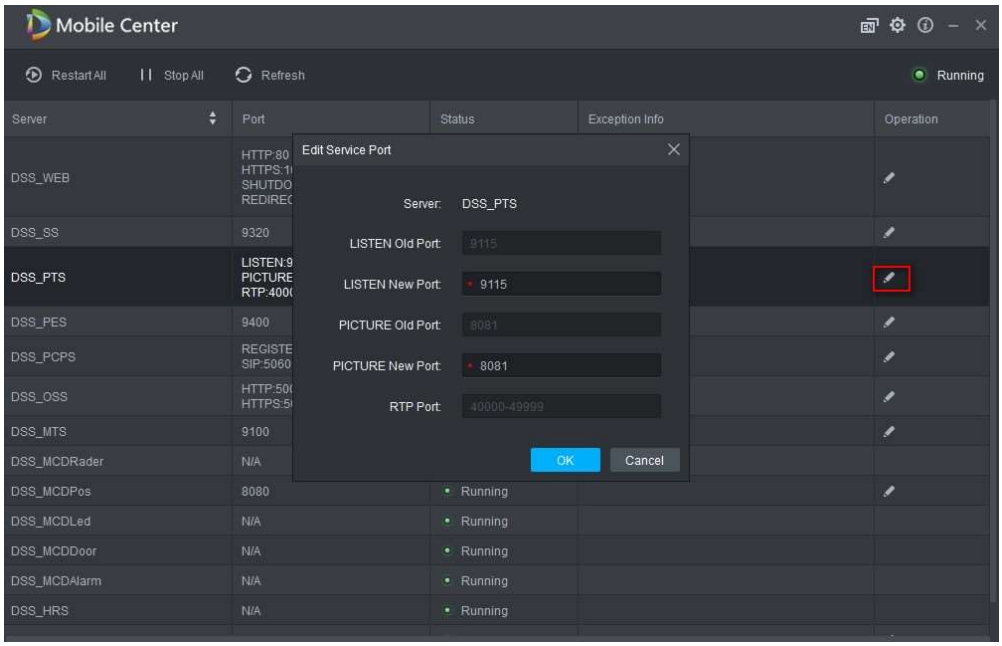


Step 2 Click to modify the port information of corresponding service. See Figure 3-18.

If there is LAN/WAN configuration, modify LAN/WAN port to the value customized by users.

- DSS_PTS service default port is 8081, which is often occupied. We recommend you modify this port.
- The system prompts a message to you for port modification when it is occupied.

Figure 3-18 Service modification



Step 3 Click **OK** to save modification.
The service is restarted after it is successfully modified.

3.6 Configuring LAN/WAN

The Mobile Center server configuration does not distinguish between LAN port and WAN port of service, and port configuration options are the same and the ports are the same in LAN and WAN.

3.6.1 Configuring Router

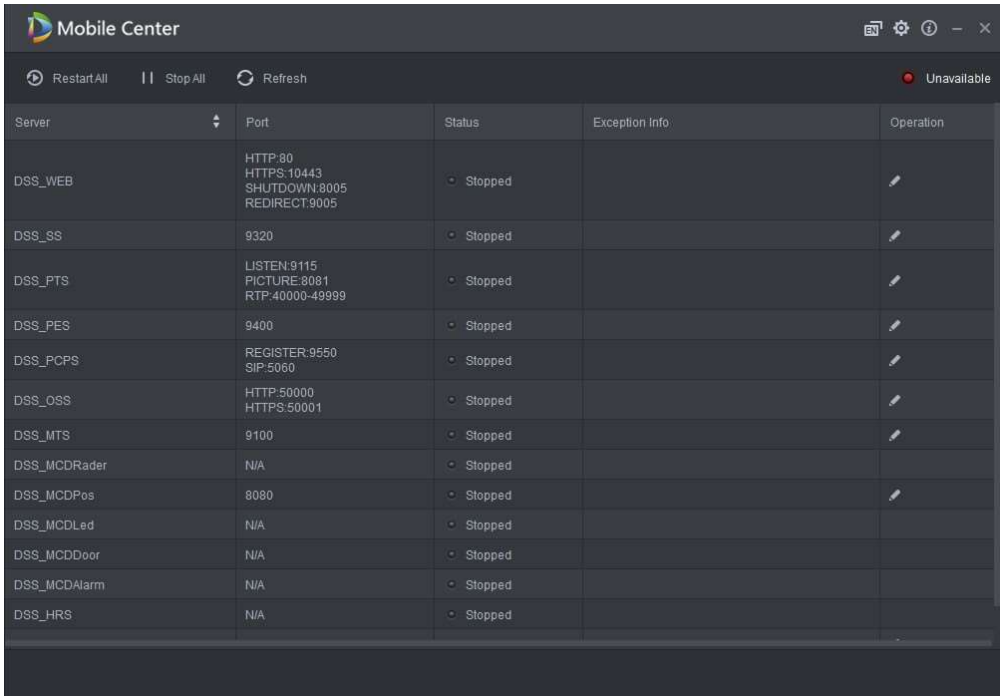
We recommend you to do DMZ mapping, but if cannot due to the environment, you can do ports mapping. The ports that should be for use including but not limited to 9500, 9200, 21, 990, 9090, 61616, 9100, 3306, 9550, 9400, 80, 5080. Refer to "Appendix 1 Service Module Introduction" for more details about port.

If there is port being occupied by other mapping, for example, 80 ports have been occupied, then you can modify it to 81 by referring to "3.5 Modifying Service Port", and then add mapping rule onto the router.

3.6.2 Configuring Server

Step 1 Double-click to login Mobile Center configuration interface.
The Mobile Center configuration interface is displayed. See Figure 3-19.

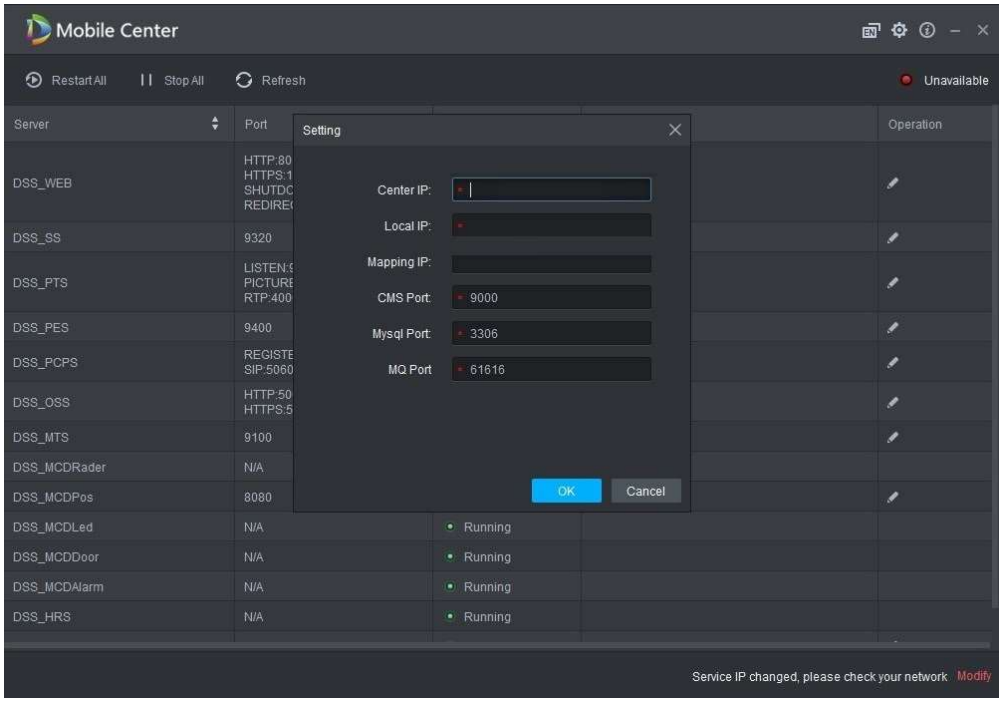
Figure 3-19 Mobile Center configuration interface



Step 2 Click .

The **Setting** interface is displayed. See Figure 3-20.

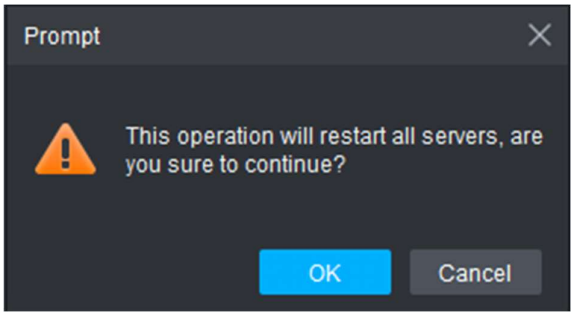
Figure 3-20 IP setting



Step 3 Enter WAN address in the **Mapping IP** box, and then click **OK**.

The prompt dialog box is displayed. See Figure 3-21.

Figure 3-21 Prompt



Step 4 Click **OK**.

The system restarts all services.

4 Manager Operations

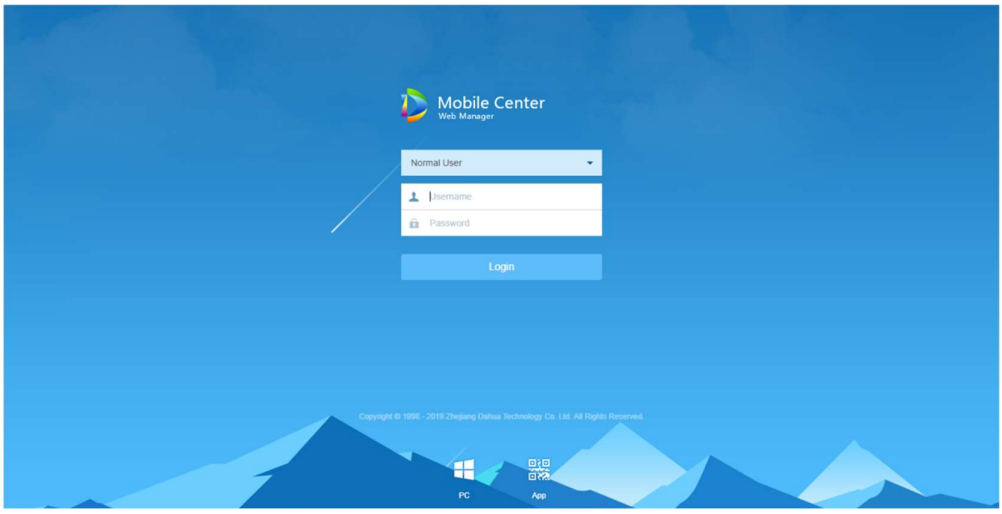
Mobile Center Manager (hereinafter referred to as "the Manager") supports configurations such as system information, user information, and record plan. It is recommended to use Google Chrome 40 and the later version, and Firefox 40 and the later version.

4.1 Logging in the Manager

Step 1 Open a server supported brower, enter IP address, and then press Enter.

The login interface is displayed. See Figure 4-1.

Figure 4-1 Manager login



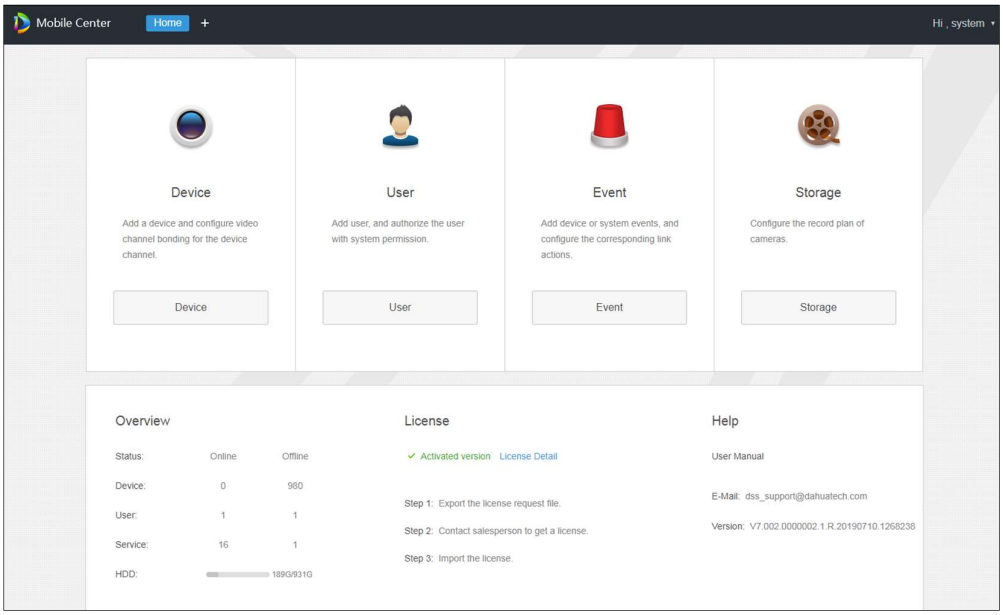
Step 2 Enter username and password, and then click **Login**.

The default username is system.

- The interface of modifying password appears if it is the first time to login system. You can continue to login after the password is modified in time.
- Add the Manager IP address into the trusted sites of browser if it is your first time to login Mobile Center Manager.

The home page is displayed after login. See Figure 4-2.

Figure 4-2 Home



- Place the mouse pointer on the user name of top right corner, and then you can change password or log out current user.
- The shortcuts of general modules are displayed on the top of interface. Click + next to **Home** to show all the modules.
- Overview: Displays the online and offline status of device, user, and service, and the usage proportion of HDD.
- License: Click **License Details**, then purchase authorization document by following the instructions. Refer to "4.2 Authorization" for details.
- Help: Find user manual, version information, and contact email.

4.2 Authorization

4.2.1 About Trail License

Refer to Table 4-1 for information about trial license period. There is no limit for modules and channels (such as alarm input and output) that are not included in the table.

The trial period only lasts 90 days, so it is recommended to purchase a license to continue to use the modules including **Device**, **Event**, **Storage** or **TV Wall** after trial period. Without license, you cannot log in to Client or mobile APP as well.

Table 4-1 About trial license

Function		**Capability**
Channel	Video (Encoding)	32

4.2.2 Applying for License

You need to apply for license for long-time use, and apply again when upgrading license. The quantity of all the authorized channel starts from 0 for the first application, and the initial status

of module authorization is trial. The authorization status becomes purchased when it is being purchased again.

The second purchase quantity represents the newly added quantity. For example, if you want to increase the total channesl to 10 from the original purchased 5 channels, then you only need to purchase another 5 channels.

Step 1 Acquire authorization request file.

1) Log in to Mobile Center Manager.
2) Click Step 1 on the Home page interface. See Figure 4-3.
   The **Upgrade** interface is displayed. See Figure 4-4.

Figure 4-3 License request file exporting

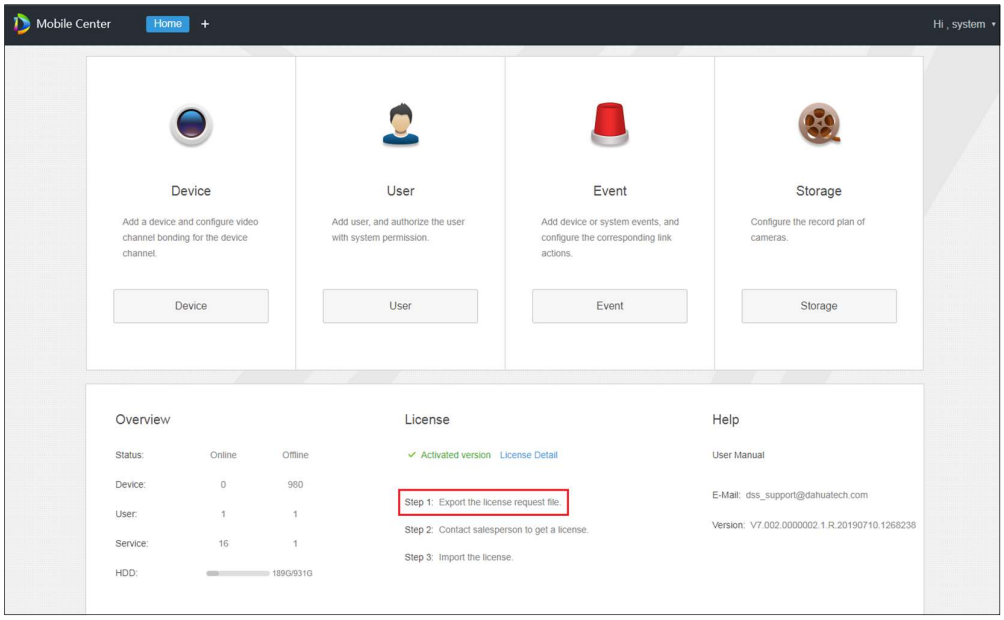
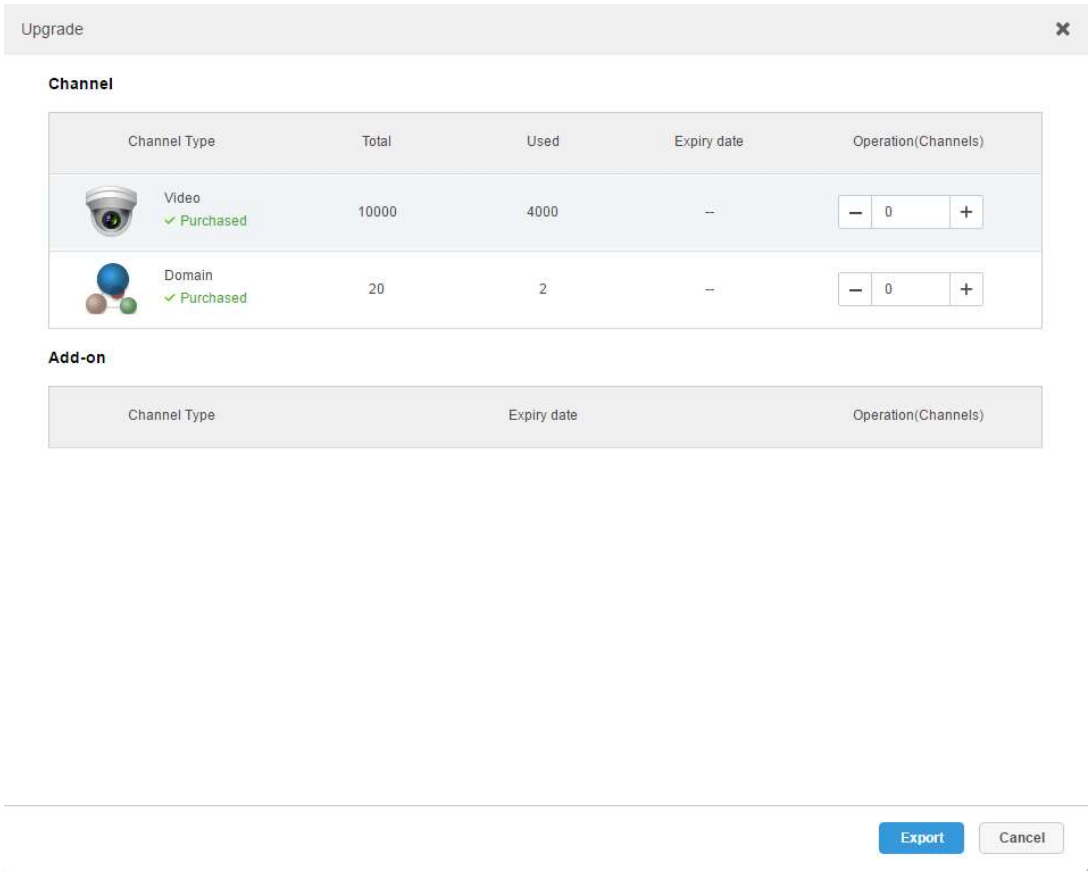


Figure 4-4 Upgrade



3) Enter channel number and select module as you need.
4) Click **Export**, and then a .zip file is generated and saved under the default download path of the browser.
You can open, save or save as the export file after export is completed.

Step 2 Send the exported .zip file to sales to apply for authorization file.

4.2.3 Loading License

Make sure you have applied and received license file before loading license.

Step 1 Log in to Mobile Center Manager.

Step 2 Click Step 3 on the **Home** interface. See Figure 4-5.
The **Import** interface is displayed. See Figure 4-6.

Figure 4-5 License importing

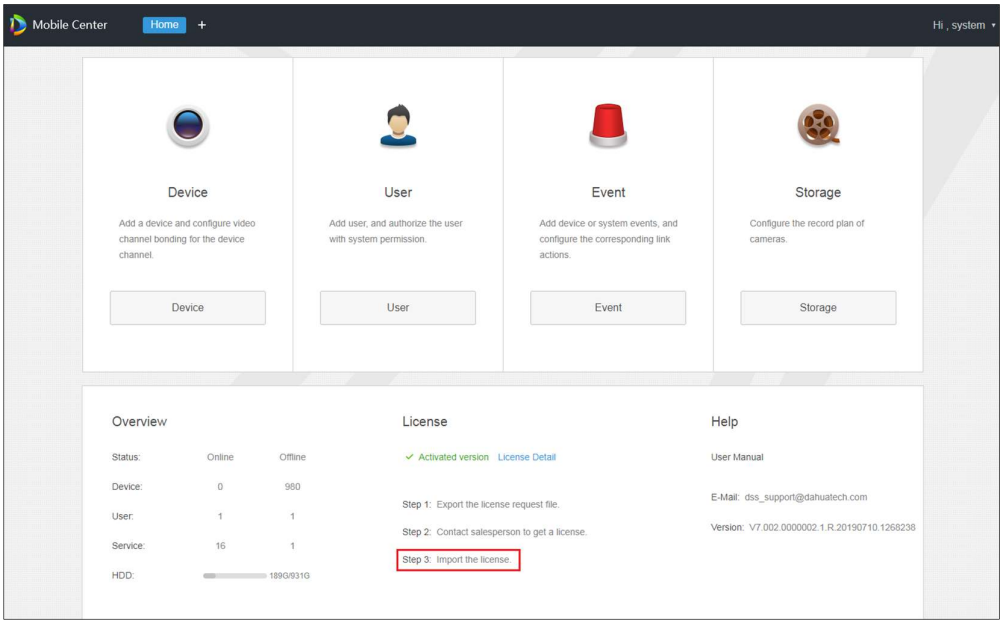
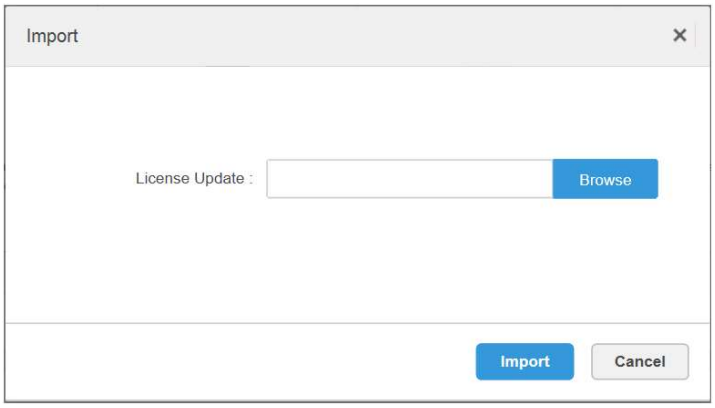


Figure 4-6 Import



Step 3 Click **Browse** and select the uploaded license file.

Step 4 Click **Import** and complete license loading.

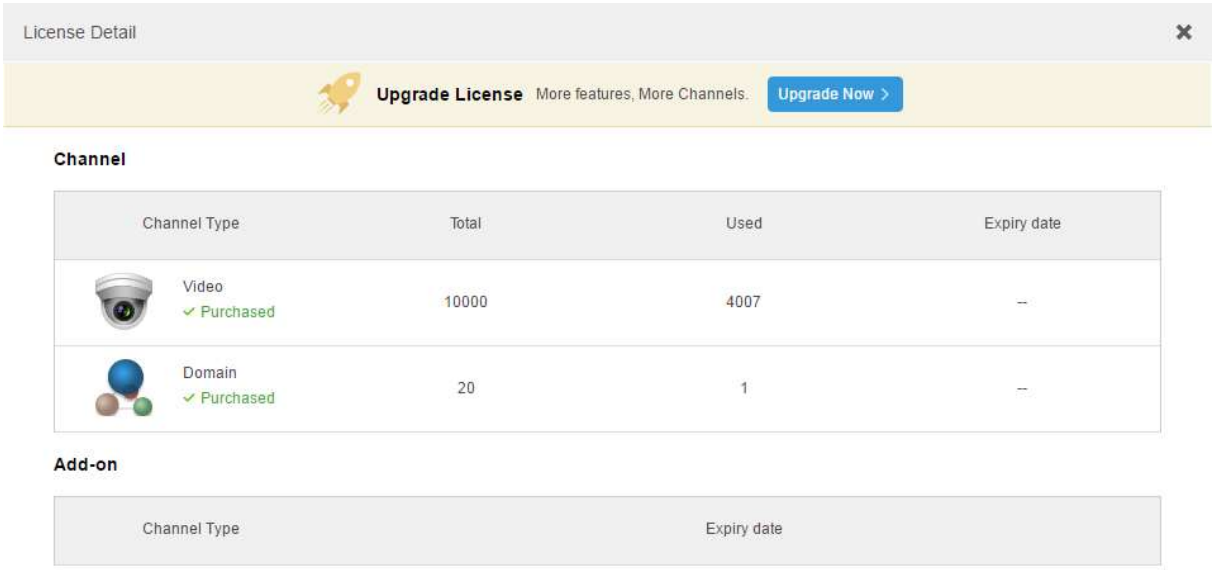
The system prompts that authorization information has changed after loading, and then the program starts again.

Step 5 Log in to Mobile Center Manager again.

You can check license by clicking **License Details** on the **Home** interface. See Figure 4-7.

Click **Upgrade Now** to go to **Upgrade** interface, then you can export authorization file.

Figure 4-7 License details



4.3 System Settings

4.3.1 Setting System Parameters

It needs to configure system parameters when it is first time to log in Mobile Center system, which is to make sure that the system runs normally.

Step 1 Click +, and then select **System** on the **New Tab** interface.

The system displays the interface. See Figure 4-8.

Figure 4-8 Message storage time

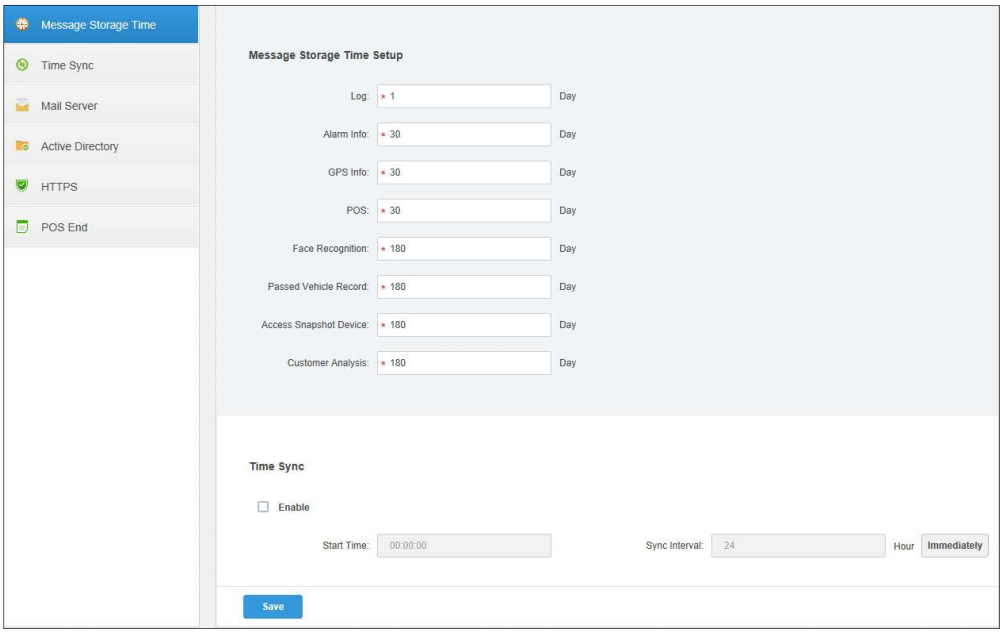


Table 4-2 Message storage time settings

Parameter		Description
Message Storage Time Setup	Log	Sets longest keep time of log, it is 30 days by default.
	Alarm Info	Sets the longest keep time of alarm info, it is 30 days by default.
	GPS Info	Sets the longest keep time of GPS info, it is 30 days by default.
	POS	Sets the longest keep time of POS info, it is 30 days by default.
	Face Recognition	Sets the longest keep time of face recognition info; it is 180 days by default.
	Passed Vehicle Record	Sets the longest keep time of passed vehicle record; it is 180 days by default.
	Access Snapshot	Sets the longest keep time of entrance snapshot record.
	Customer Analysis	Sets the longest keep time of people flow statistics record.
Time Sync	Enable	Check it to enable the function of time sync.
	Start Time	Sets start time of time sync.
	Sync Interval	The time of server shall prevail; synchronize the time of device and server. It is 2 hours by default, the system is based on the server time every 2 hours, and then it is to synchronize the time of both device and server. **NOTE** The time between device and server is synchronized via SDK.
	Immediately	Click the button to start time sync immediately.

Parameter		Description
Mail Server	—	It is to set mail server IP, port, encryption type, username/password, sender, test recipient etc. It can select to send email to users when the administrator configures the alarm linkage and the client handles the alarm. At this moment, it needs to configure mail server first.
Activity Directory	—	Set domain info.
HTTPS	—	Enable HTTPS security verification.
POS End	—	After setting POS end mark, it will display on the location of POS receipts end.
Picture Storage Setup	Picture Storage Time	Sets the storage time of the picture, unit: day.
	Max Capacity	When the storage space is less than the set value, cyclic overlap will be enabled.

Step 2 Configure corresponding parameters.

Step 3 Click **Save**.

4.3.2 Setting Mail Server

4.3.2.1 Application Scenarios

Send mail to user when the administrator is configuring alarm linkage and client handling alarm, at this moment, it needs to configure mail server first.

4.3.2.2 Config Method

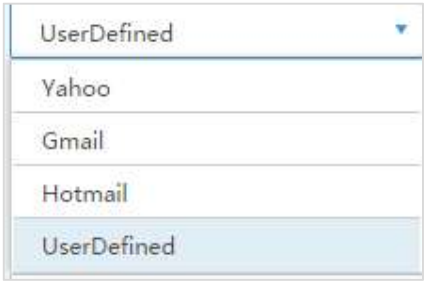
Step 1 Click and select **System** on the New Tab interface.

Step 2 Select the **Mail Server** tab, check **Enable** to enable mail config. See Figure 4-9.

Figure 4-9 Mail server

Step 3 Select the type of mail server in the drop-down box. See Figure 4-10.

Figure 4-10 Mail server type selection



Step 4 It is to set mail server IP, port, encryption type, username/password, sender and test recipient etc.

Step 5 Click **Mail Test** to test if the config of mail server is valid. Test prompt will be received if the test is successful, and the test account will receive corresponding email.

Step 6 Click after the test is successful, and then it can save config info.

4.4 Adding Organization

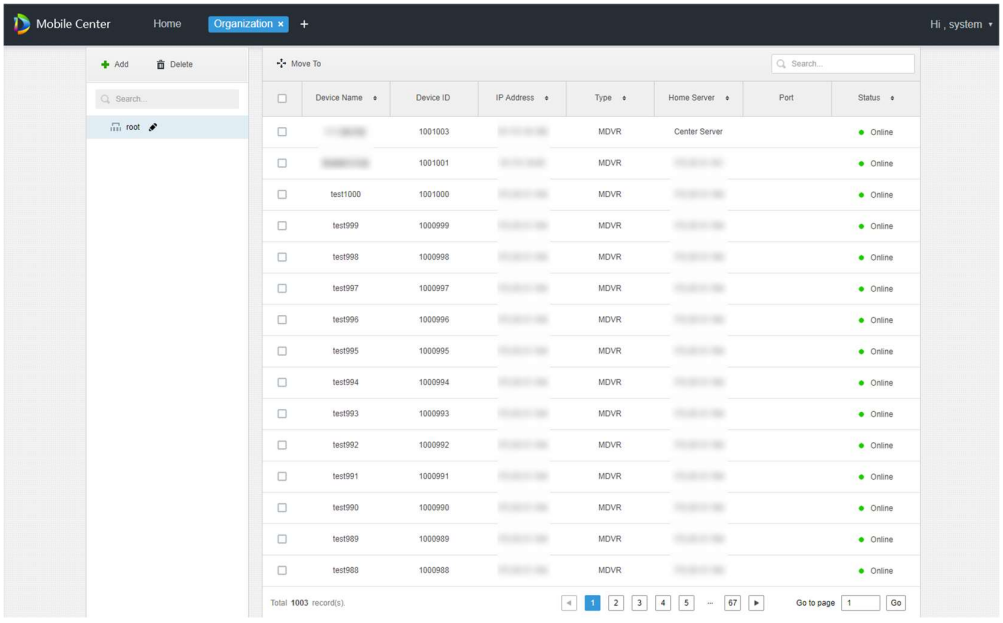
Adding organizations is to deploy the hierarchy of organization or device, which is to make it easy to manage. It doesn't have to add organizations, the added users or devices are classified to the default organization.

The default first level organization of the system is Root, the newly-added organization is displayed at the next level of root.

Step 1 Click and select **Organization** on the **New Tab** interface.

The system displays the interface of organization. See Figure 4-11

Figure 4-11 Organization



Step 2 Select root organization, click **Add**.

It is to add new organizations under the root organization. See Figure 4-12.

Figure 4-12 Add organization

Step 3 Enter organization name, press Enter.

Operations

- Move device: Select the device under the root organization, click Move To, select **New Organization 1**, click **OK**.
- Edit: Click the next to the organization and modify the organization name.
- Delete: Select organization, click Delete to delete organization.

4.5 Adding Role and User

4.5.1 Adding User Role

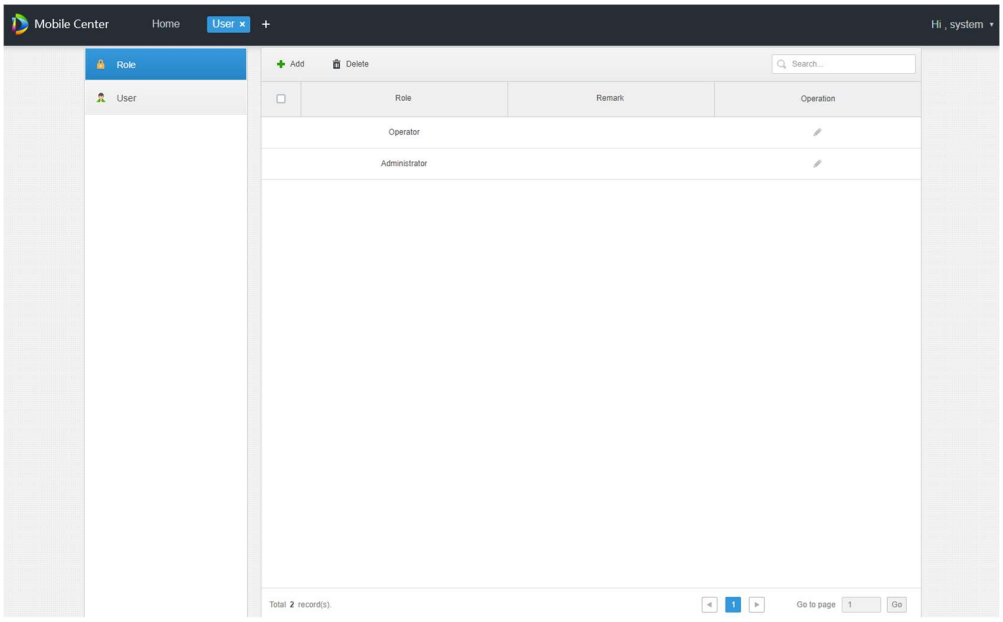
You can create user role and add user. The created user can log in both admin and client. Different user roles decide users to have different operation permissions.

The operation permission of user role includes device permission, management menu permission and operation menu permission. First it needs to grant permissions to these operations and then it can implement corresponding operations.

Step 1 Click and select **User** on the **New Tab** interface.

The system displays the **User** interface. See Figure 4-13.

Figure 4-13 Role



Step 2 Click **Add** under the **Role** tab.

The system pops out the **Add Role** interface.

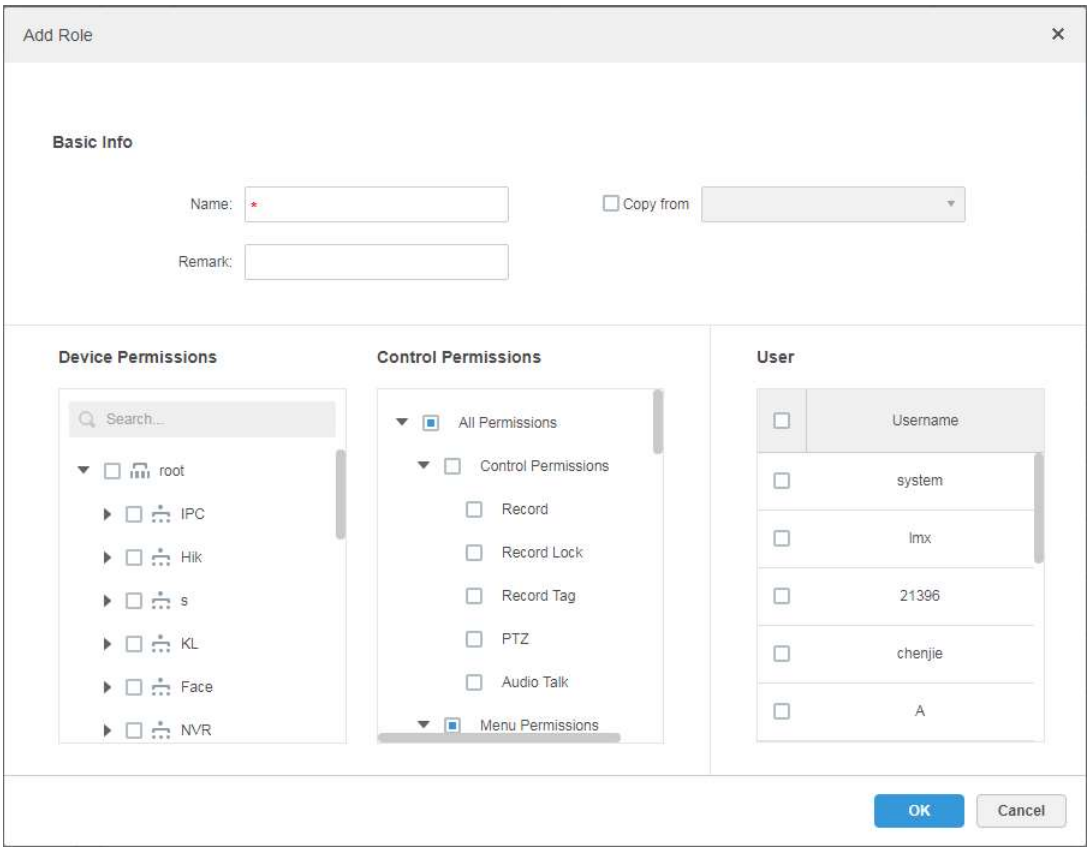
Step 3 Enter Role Name.

If it selects Copy from next to the Role Name and select some role in the drop-down list, then it can copy the config info into the selected roles and realize quick config.

Step 4 Select device Permission and Operation Permission.

The system displays the interface. See Figure 4-14.

Figure 4-14 Add role



If it fails to select corresponding device permission or menu permission, then the users under the role has no corresponding device or menu operation permission.

Step 5 Click **OK** to add the role.

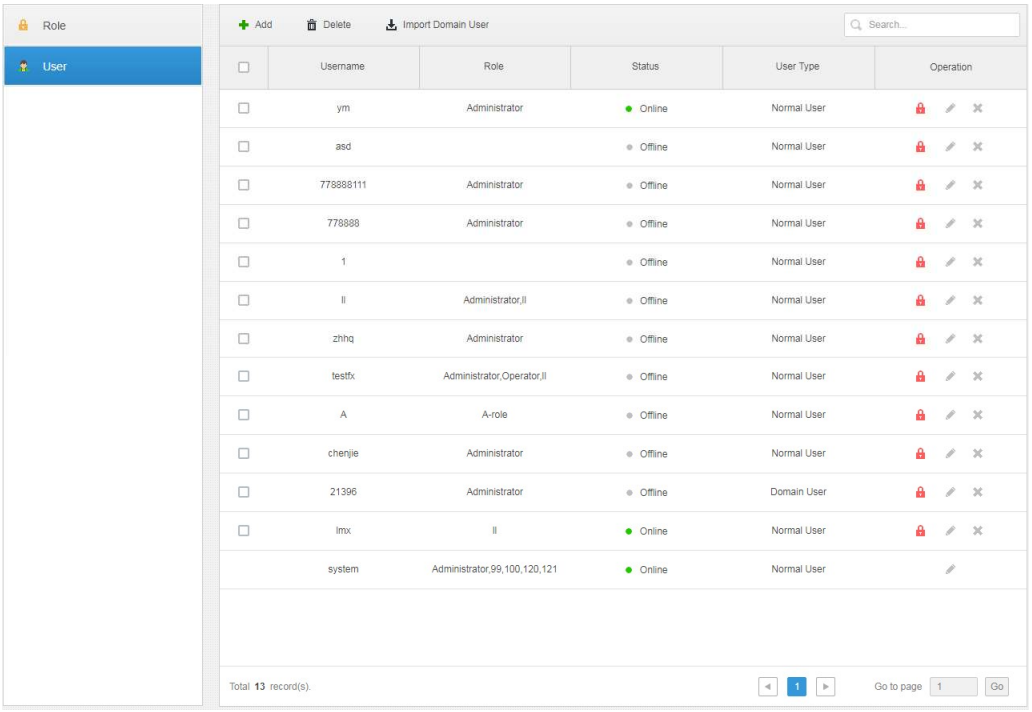
4.5.2 Adding User

You can add the user of the role if you have added the user role.

Step 1 Click **User** tab.

The system displays the interface. See Figure 4-15.

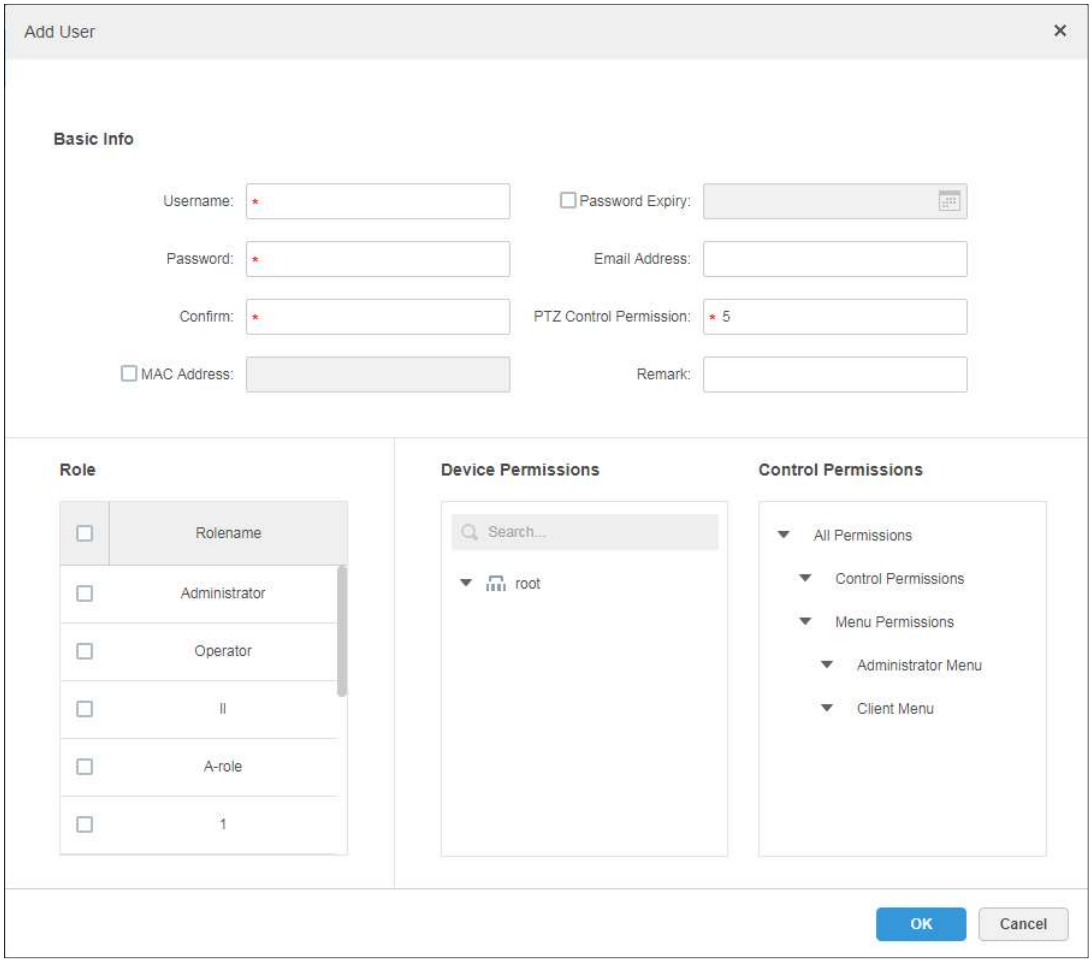
Figure 4-15 User



Step 2 Click **Add**.

The system will pop out the **Adding User** interface.

Figure 4-16 Add user



Step 3 Configure user info, select role below, and it will display device permission and operation permission of corresponding role on the right.

- The user has no **device Permission** or **Operation Permission** if it fails to select **Role**.
- You can select several roles at the same time.

Step 4 Click **OK** to add the user.

Operations

- Click to freeze user, the user which logs in the client will quit.
- Click to modify user info except username and password.
- Click to delete user.

4.5.3 Setting Domain User

The setting in this chapter is optional, please select if it is to set domain user according to the actual situation.

4.5.3.1 Application Scenario

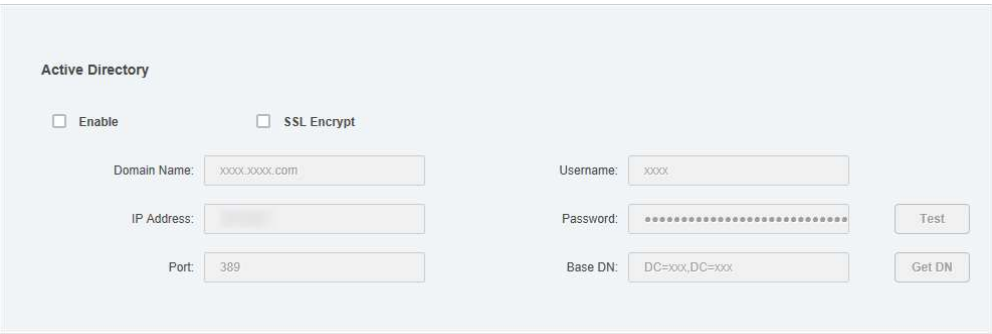
For the companies with domain information and want to use domain users as system login users, using domain user import can improve the convenience of project deployment.

4.5.3.2 Setting Domain Info

Step 1 Click + and select **System** on the New Tab interface.

Step 2 Click the tab of **Active Directory** and configure domain info. See Figure 4-17.

Figure 4-17



Step 3 After setting domain info, click **Get DN** and it will acquire basic DN info automatically.

Step 4 After getting DN info, click **Test** to test if domain info is available.

Step 5 Click **Save** to save config.

It can import domain user on the interface of **User** after it prompted successfully. Please refer to the next chapter for more operation details.

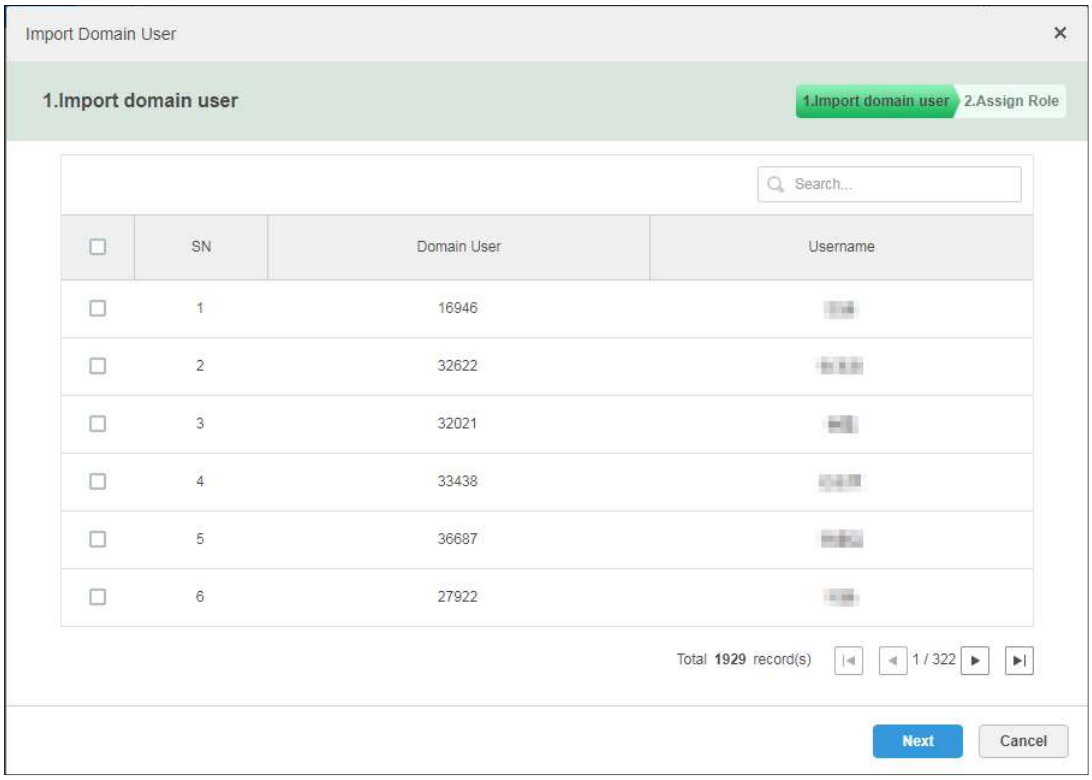
4.5.3.3 Importing Domain User

Step 1 Click + and select **User** on the New Tab interface.

Step 2 Select **User** tab, click **Import Domain User** on the right of the interface.

The system will display the interface of **Import Domain User**. See Figure 4-18.

Figure 4-18 Import domain user



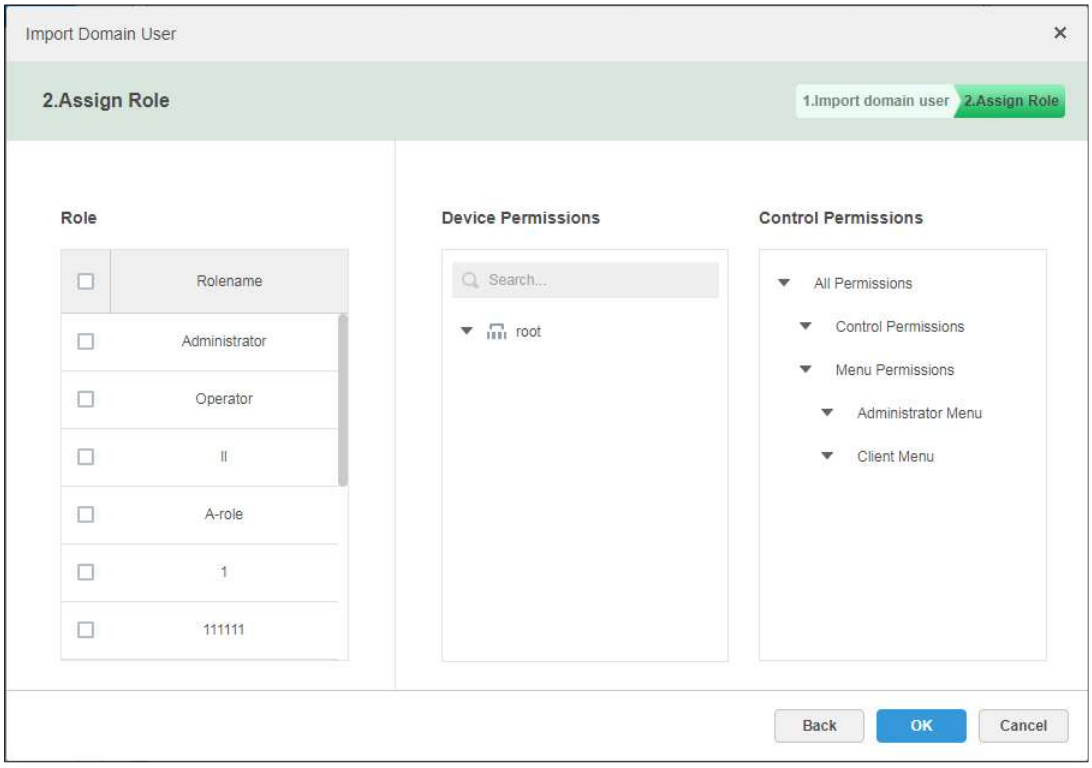
Step 3 Select the users which need to be imported from the acquired domain users.

It supports searching users by entering key words in the search box.

Step 4 Click **Next**.

The system displays the interface of **Import Domain User**. See Figure 4-19.

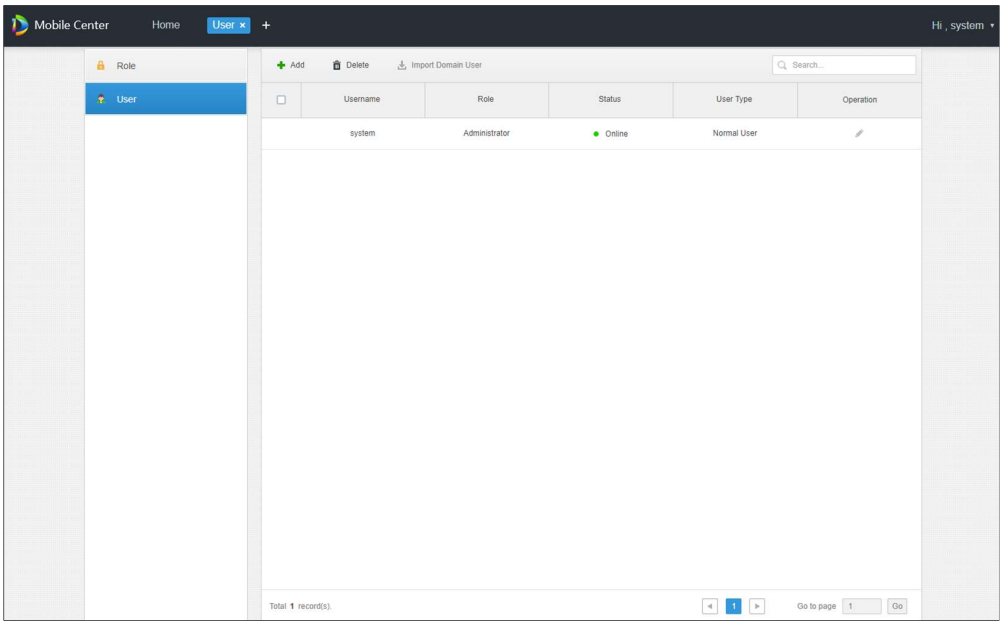
Figure 4-19 Assign role



Step 5 Select role for domain user, it displays corresponding device info and function permission info on the right of the interface, click **OK** after it is confirmed.

Make sure domain user has been successfully imported in **User Info**. See Figure 4-20.

Figure 4-20 User information

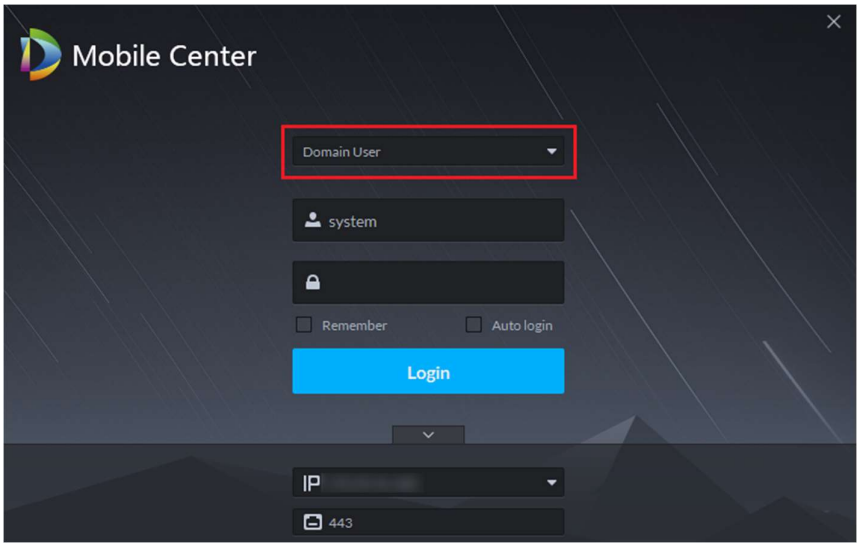


4.5.3.4 Logging in Domain User

It can use domain user to log in client.

Step 1 Select **Domain User** in the drop-down box of **User Type** on the client login interface. See Figure 4-21.

Figure 4-21 Login client



Step 2 Enter domain username, password, server IP, port and other info, click **Login**.

The interface and function are the same as login via general user after it logged in successfully, which is not going to be repeated here.

4.6 Adding Devices

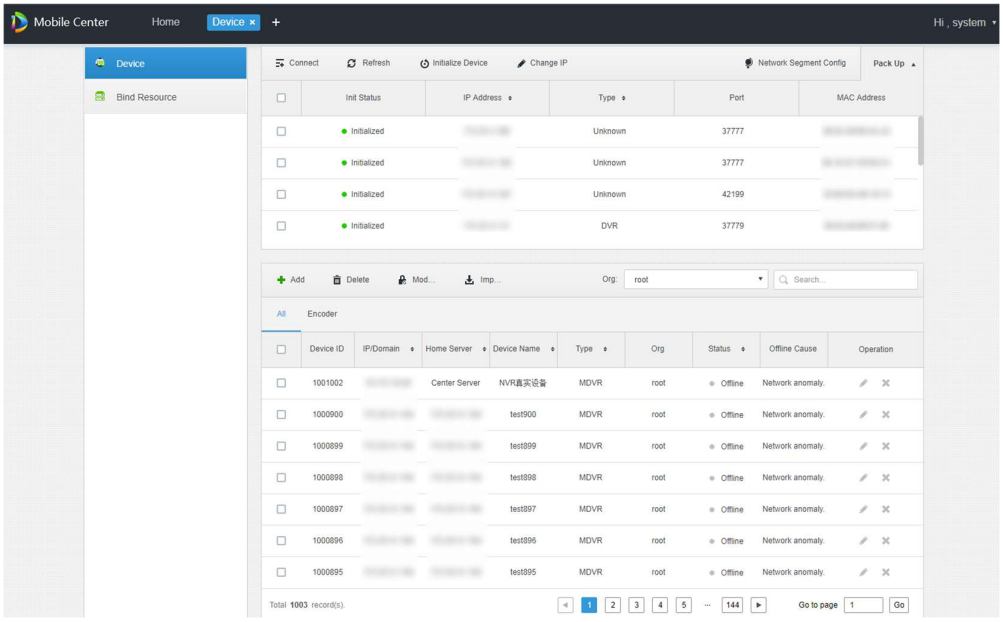
You can add different types of devices according to different business requirements. These devices include encoder, decoder, large display, matrix etc. In this chapter, it takes adding encoder as an example to introcude configuration. For other devices, the actual configuration interface shall prevail.

4.6.1 Adding Device Manually

Step 1 On the **Home** interface, click **device**.

The device interface is displayed. See Figure 4-22.

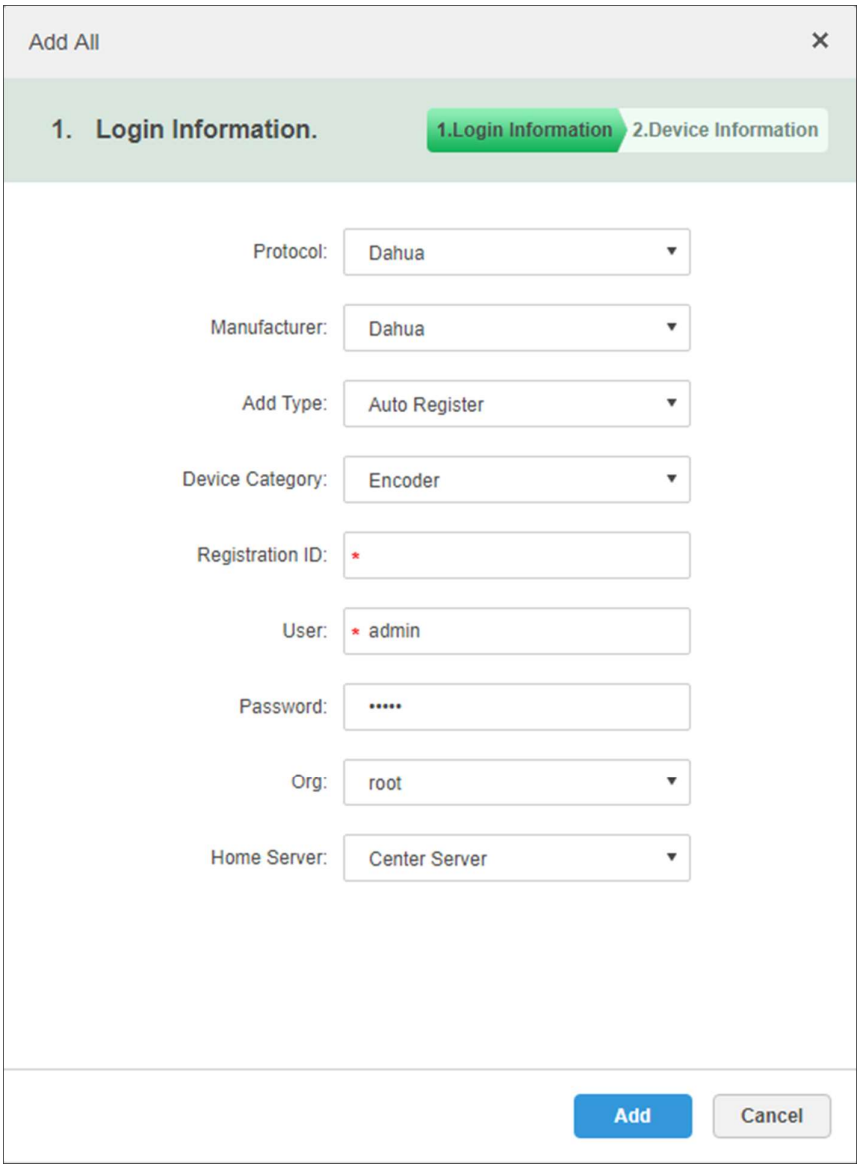
Figure 4-22 Device



Step 2 Click **Add**.

The **Loging Information** interface is displayed. See Figure 4-23.

Figure 4-23 Login information



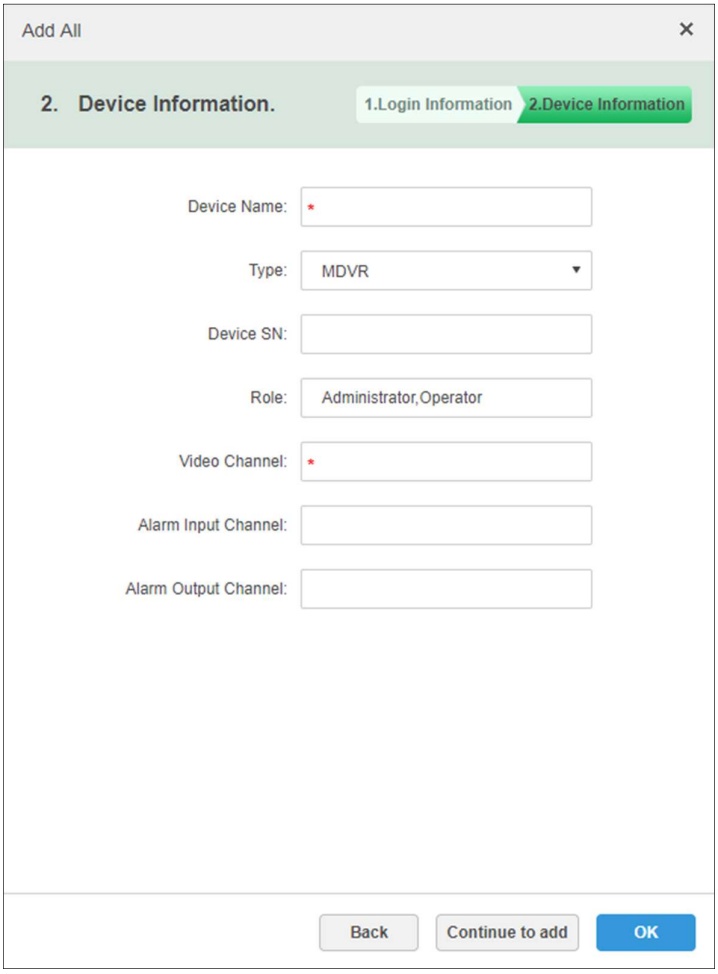
Step 3 Set login information.

- Protocol: Select **Dahua**.
- Manufacturer: Select **Dahua**.
- Add Type: Select **Auto Regeister**.
- Device Catogory: Select **Encoder**.
- Enter correspoinding device registration ID, user name, password, organization, and home server.

Step 4 Click **Add**.

The **device Information** interface is displayed. See Figure 4-24.

Figure 4-24 Device information



Step 5 Set device information.

- Enter device name, device serial number, video channel, alarm input channel and output channel, and select user role.
- Type: Select **MDVR** or **MPT**.

Step 6 Click **OK**, or click **Continue to add** if you want to continue to add more devices.

4.6.2 Searching Added device

Channels on the LAN with the platform server can be added using the automatic search function.

Step 1 Click and select **device** on the **New Tab** interface.

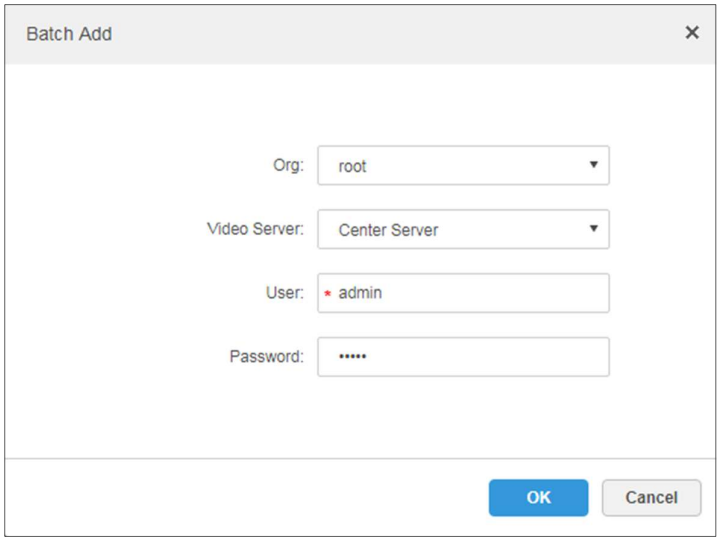
Step 2 Click **Search Again** on the **device** interface.

Click **Network Segment Config** to configure IP segment again, click **Search Again** to search the devices whose IP addresses are within the range.

Step 3 Select the device which needs to be added, and click **Connect**.

The system will pop out the **Batch Add** interface. See Figure 4-25.

Figure 4-25 Batch add



Step 4 Select Organization and Video Server, enter User and Password.

User and **Password** are the username and password which are used to log in the device; both are **Admin** by default.

Step 5 Click **OK**.

The system will add the devices into corresponding organization.

4.6.3 Importing Video Intercom device

Fill in intercom device information in the template, you can batch add intercom devices via importing template.

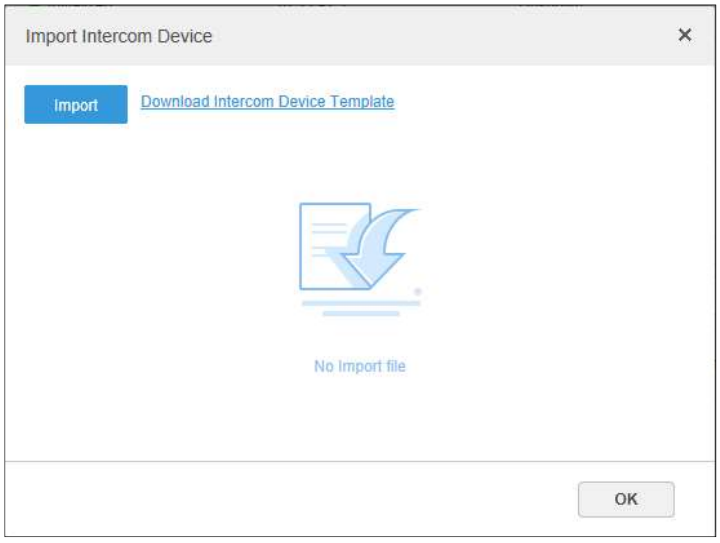
Step 1 Click and select **device** on the interface of **New Tab.**

The device management interface is displayed.

Step 2 Click **Import**.

The interface of Import Intercom device is displayed. See Figure 4-26.

Figure 4-26 Import intercom device



Step 3 Click **Download Intercom device Template** and save the template to PC according to interface tips.

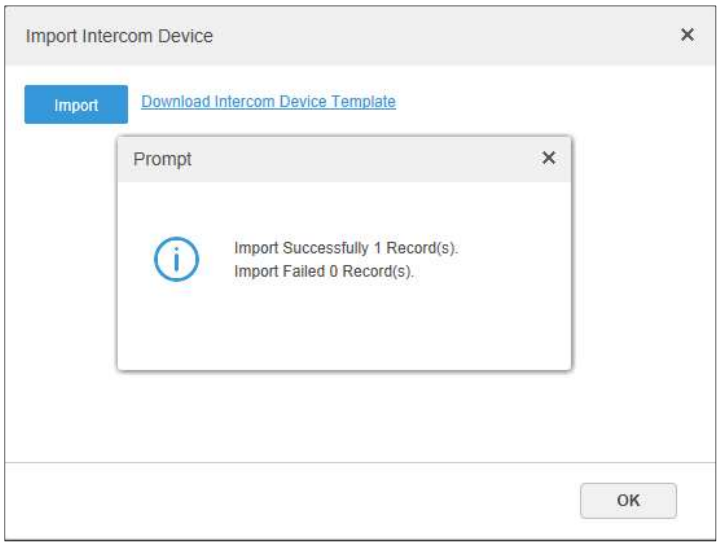
Step 4 Fill in the template according to the actual networking situation and then save the information.

Step 5 Click Import and select the completed template according to interface tips.

See Figure 4-27 for import progress and result. You can view the added device in the device list.

If the device is already added to Mobile Center in the template, then the system will prompt if it is to cover the existed device. You can select according to the actual situation.

Figure 4-27 License importing result



Step 6 Click and close the prompt box.

Step 7 Click **OK**.

4.6.4 Editing device

It needs to edit device after adding devices, set relevant channel info.

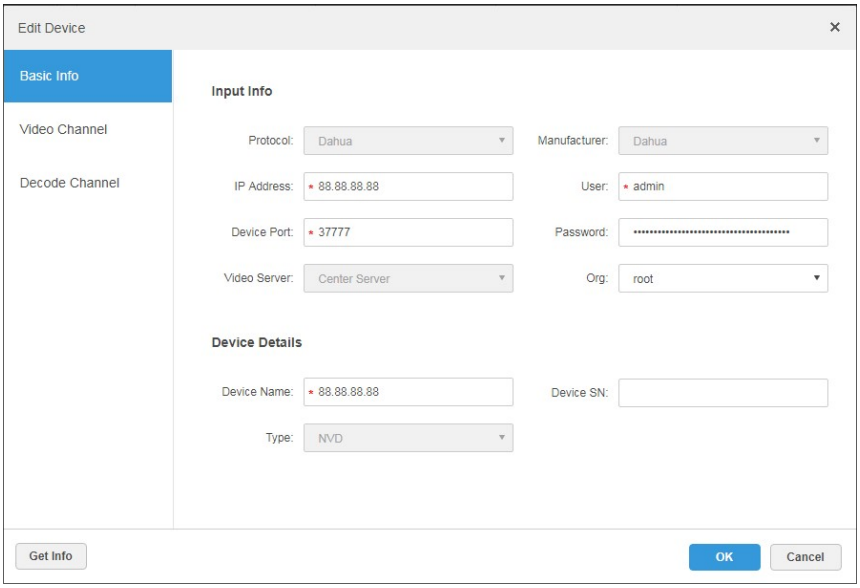
Step 1 Click and select **device** on the New Tab interface.

Step 2 Click the corresponding of device list.

The system displays the interface of **Edit device**. See Figure 4-28.

Click **Get Info** and the system will synchronize device info.

Figure 4-28 Edit device



Step 3 It is to modify device basic info on the **Basic Info** interface.

Step 4 Click **Video Channel** tab, set the device channel name, channel function, camera type, SN, keyboard code and face function.

The interface is shown in Figure 4-29.

Different types of device have different interfaces of channel setting; please refer to the real interface for more details. See Figure 4-29, Figure 4-30, Figure 4-31 and Figure 4-32.

Figure 4-29 Video channel (1)

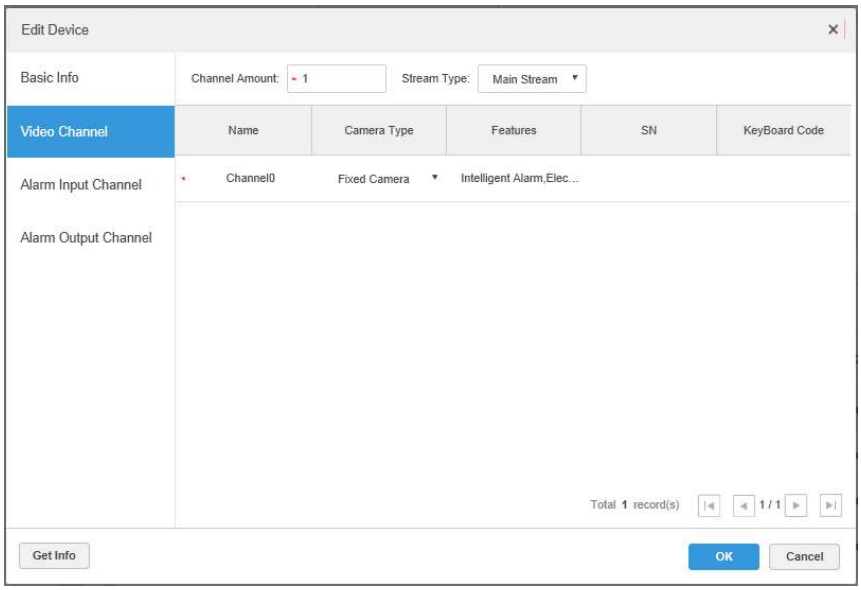


Figure 4-30 Video channel (2)

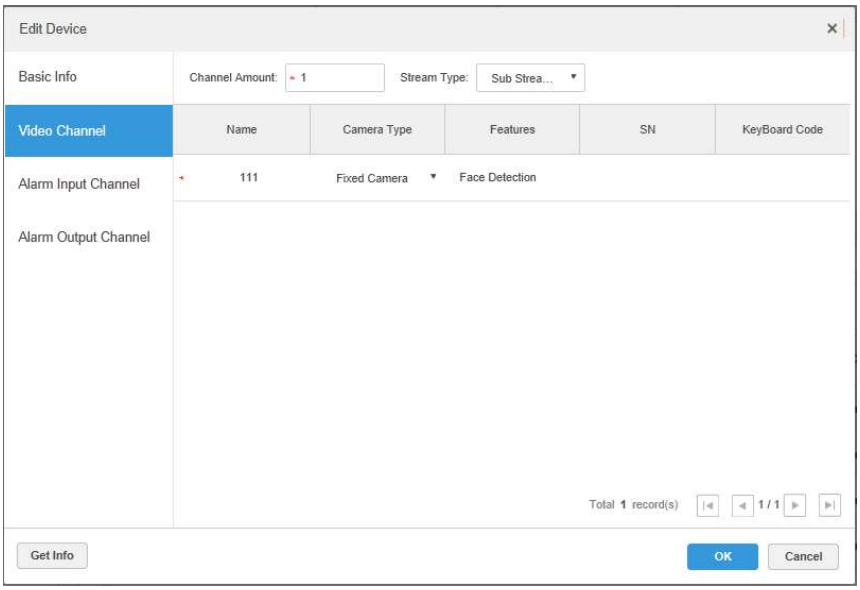


Figure 4-31 Video channel (3)

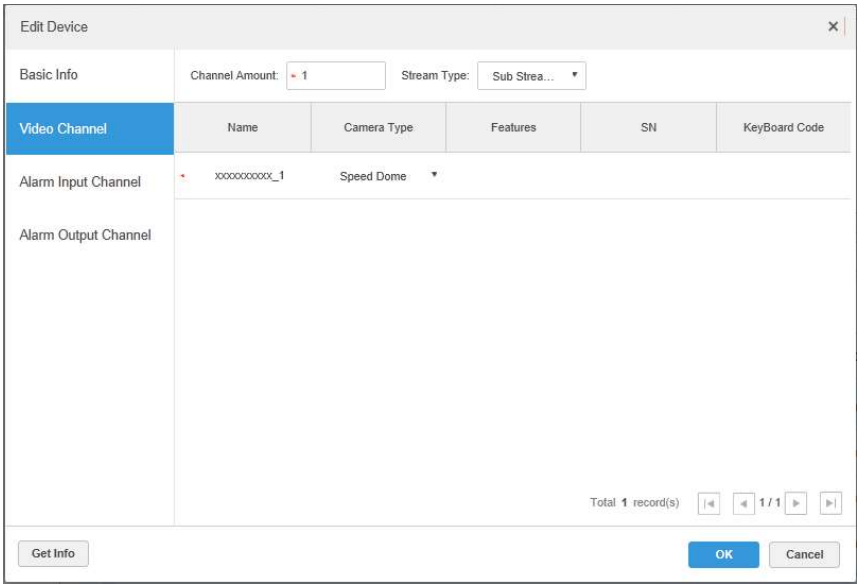
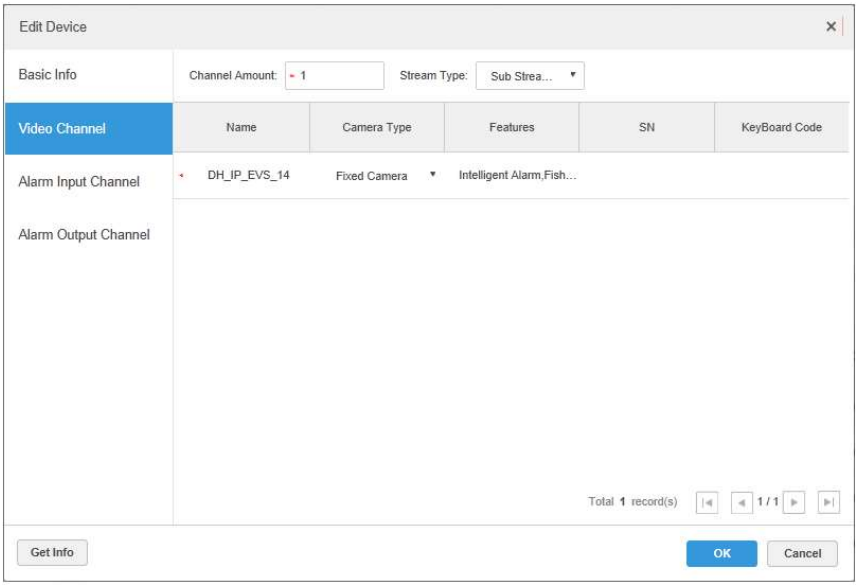


Figure 4-32 Video channel (4)



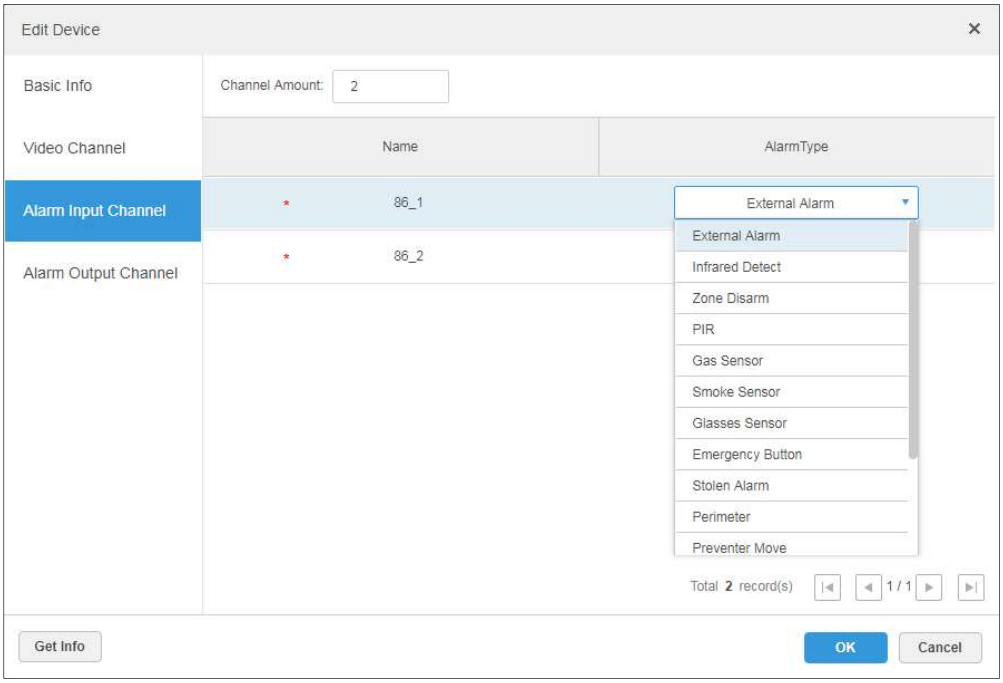
Step 5 Click the tab of **Alarm Input Channel**, configure channel name and alarm type of alarm input. See Figure 4-33.

Please skip the step only when added devices need to be configured during alarm input.

- Alarm type includes external alarm, IR detect, zone disarm, PIR, gas sensor, smoke sensor, glass sensor, emergency button, stolen alarm, perimeter and preventer move.
- Alarm type supports custom. Select **Customize Alarm Type** in the **Alarm Type** drop-down list. Click **Add** to add new alarm type. It supports max 30 custom newly-added alarm types.

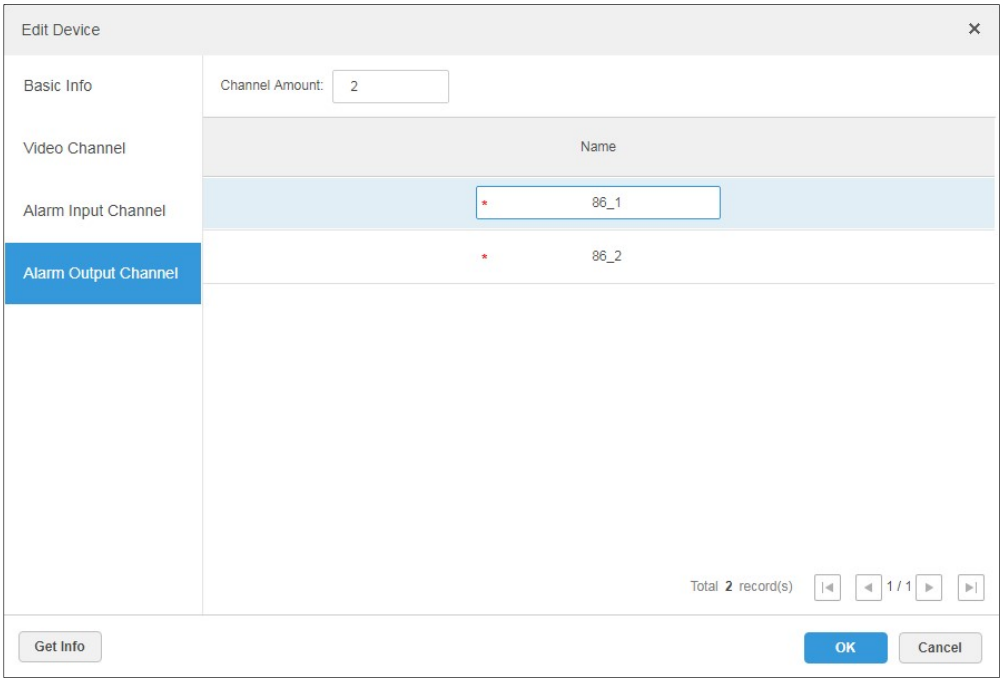
  Custom alarm supports modification and deletion.
  - If custom alarm type is used by alarm plan, then it is not allowed to deleted but modified.
  - It supports deletion if it is not used by alarm plan, after deletion, the alarm type of the alarm input channel configured with this alarm type is restored to the default value.
  - When the name of the custom alarm type is modified, the history data remains the original name, while the new data adopts the modified name.
- The alarm input channel of alarm host is **Alarm Host Alarm** by default, the types of other alarm input channel are **External Alarm** by default.

Figure 4-33 Alarm input channel



Step 6 Click the **Alarm Output Channel** tab and then modify the name of alarm output channel.

Figure 4-34 Alarm output channel



Step 7 Click **OK** to finish modification.

4.6.5 Binding Resource

The platform supports setting video channel, alarm input channel, ANPR channel, POS channel, face channel, access control channel and video channel resource binding. It can check bound

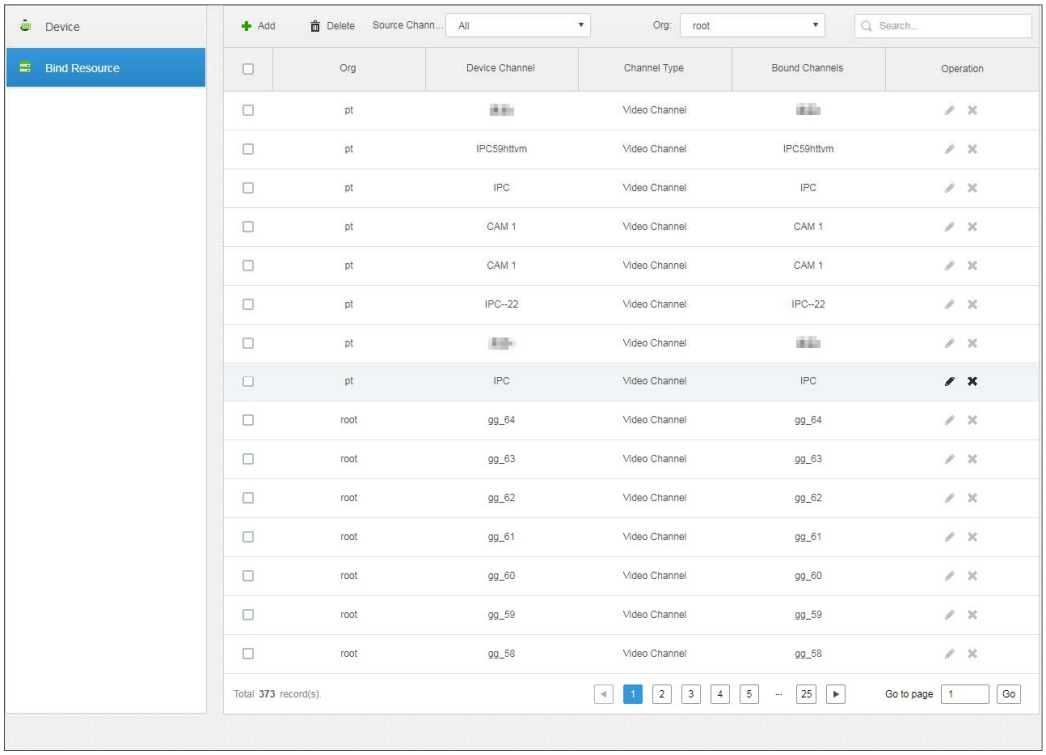
video via resource bind for businesses such as map, alarm, commercial intelligence and face etc.

Adding Resource Bind

Step 1 Click Resource Bind.

The system displays the **Resource Bind** interface. See Figure 4-35.

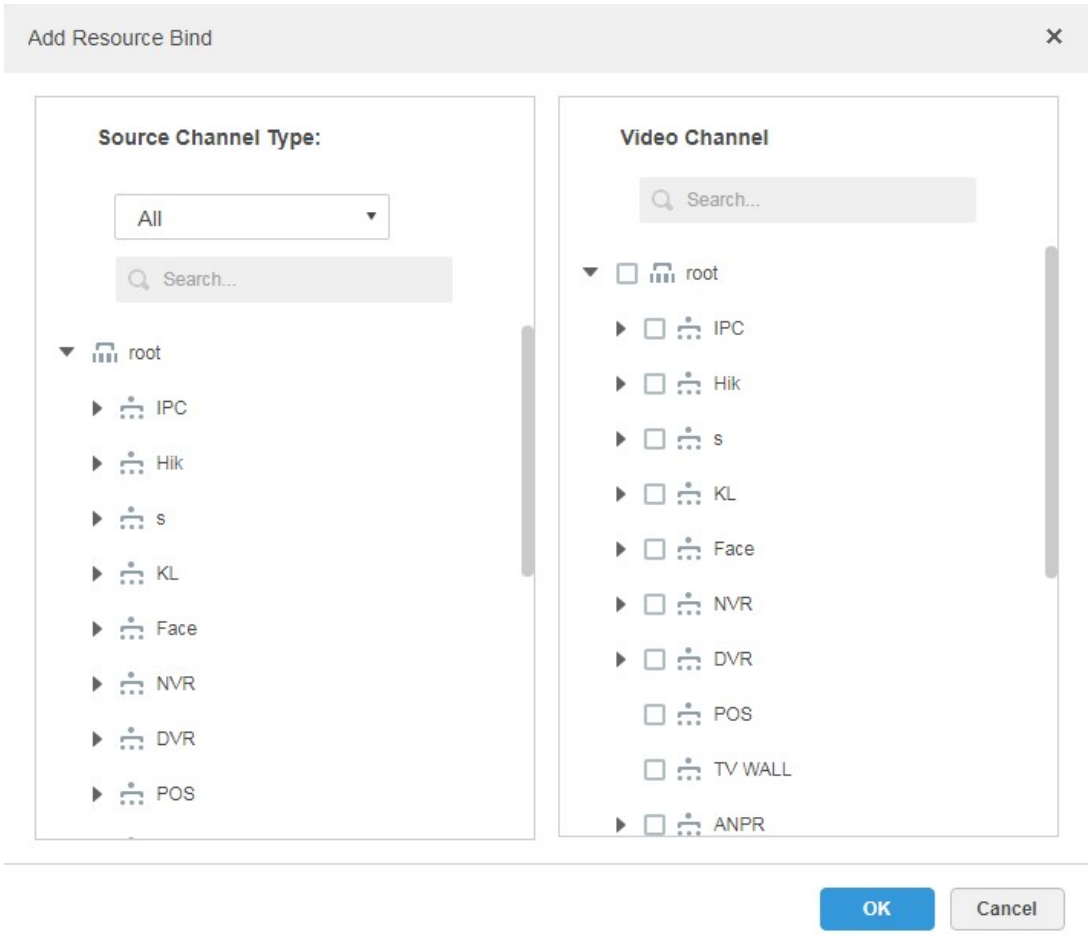
Figure 4-35 Bind source



Step 2 Click **Add**.

The interface is shown in Figure 4-36.

Figure 4-36 Add resource bind



Step 3 Select source channel and video channel respectively, click **OK**.

4.7 Configuring Record Plan

The platform management supports configuring record plan for video channel, which is to make front-end device record during the period which has been set.

4.7.1 Configuring Storage Disk

Add storage disk that can be used to store pictures and videos. The system supports adding net disk and local disk.

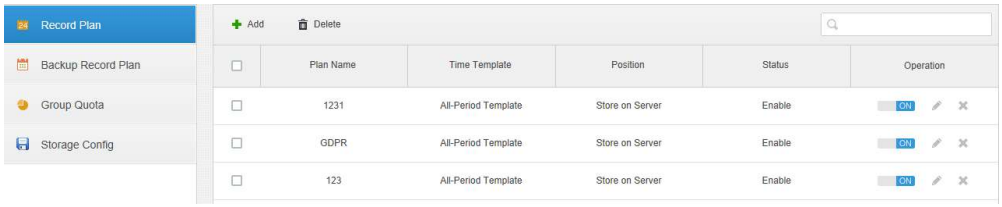
4.7.1.1 Configuring Net Disk

- The storage server is required to be deployed.
- One user volume of the current net disk can only be used by one server at the same time.
- User volume is required to be formatted when adding net disk.

Step 1 Click + and select **Storage** on the interface of **New Tab**.

The system displays the interface of **Storage.** See Figure 4-37**.**

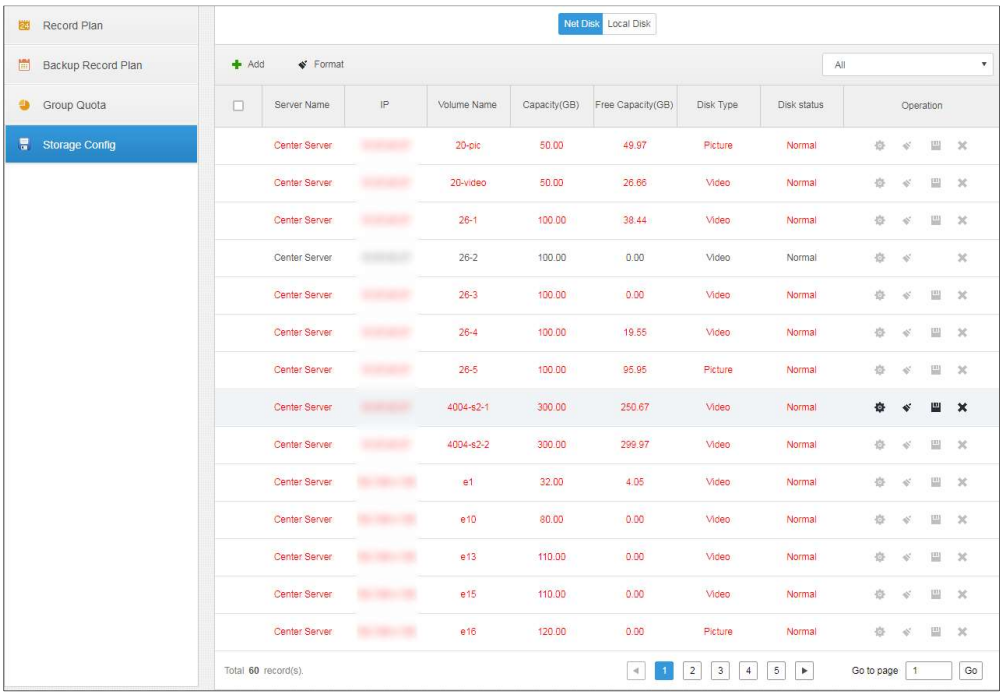
Figure 4-37 Record plan



Step 2 Select Storage Config > Net Disk.

The system displays the interface of **Net Disk**. See Figure 4-38.

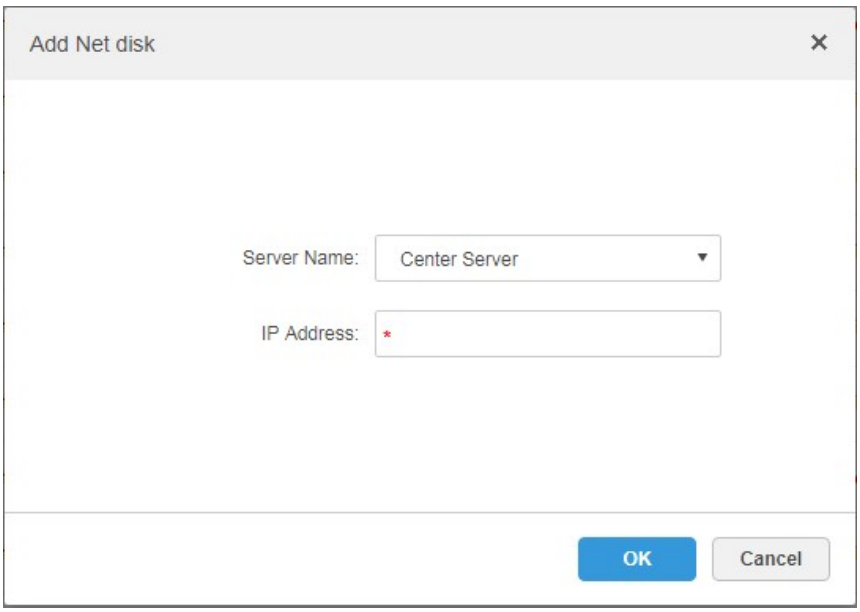
Figure 4-38 Storage configuration



Step 3 Click **Add**.

The system displays the interface of **Add Net Disk**. See Figure 4-39.

Figure 4-39 Add net disk



Step 4 Select server name, fill in the IP address of net disk, and click **OK**.
The system will display information of all user volumes on the storage server.

Step 5 Select disk and click **Format** or click the next to the disk info, which is to format the corresponding disk.

Step 6 Select format disk type according to actual situation, click **OK** to implement formatting.

Step 7 Click **OK** in the prompt box to confirm formatting.
You can check the results of disk formatting after formatting is completed; make sure both disk size and available space are correct.

One user volume can only be used by one server at the same time. If the disk info of the list shows red, then it is already added and used by other server. Click and take the right to use, then the disk needs to be formatted. It will fail to take the right of use if task manager is enabled.

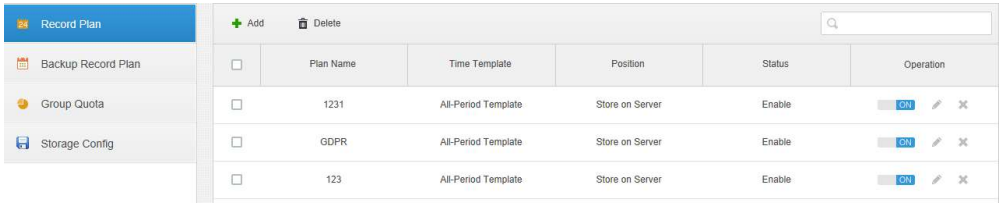
4.7.1.2 Configuring Local Disk

Configure local disk to store different types of files, including videos, ANPR pictures and general pictures. General pictures are used to store all the snapshot pictures except ANPR pictures. Meanwhile, Mobile Center supports external disk which can be used after formatting.

Step 1 Click and select Storage on the interface of New Tab.

The system displays the interface of **Storage**. See Figure 4-40.

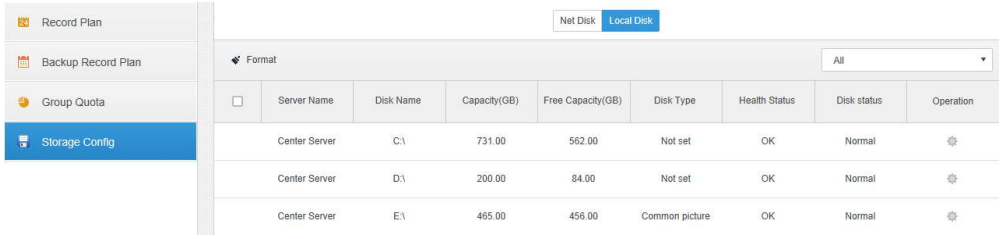
Figure 4-40 Record plan



Step 2 Select Storage Config > Local Disk.

The system displays the interface of **Local Disk**. See Figure 4-41.

Figure 4-41 Local disk



Step 3 Configure local disk.

- Click and configure disk type according to interface prompt.
- Select disk and click **Format**, or click next to disk info and format the disk according to interface prompt and configure disk type. Only external disk supports formatting.

4.7.2 Setting Disk Group Quota

Operate on a single server, divide storage disks into several groups, and designate the storage path of the video channel to a fixed packet disk. On the one hand, directional storage is realized through the grouping and binding method; on the other hand, timed storage is realized through the proportional relation between disk capacity and channel.

Step 1 Click the tab of **Group Quota**.

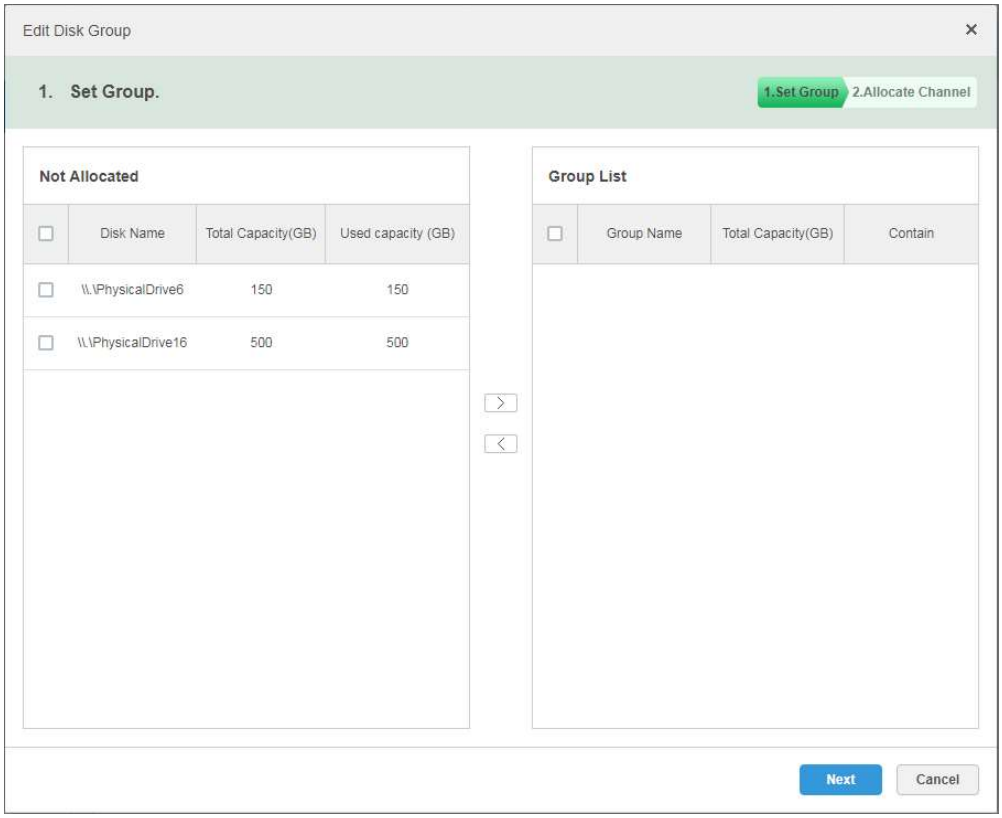
The system will display the online status of server. See Figure 4-42.

Figure 4-42 Group quota

Step 2 Click next to the Online status server.

The system will pop out the interface of **Edit Disk Group**. See Figure 4-43.

Figure 4-43 Edit disk group

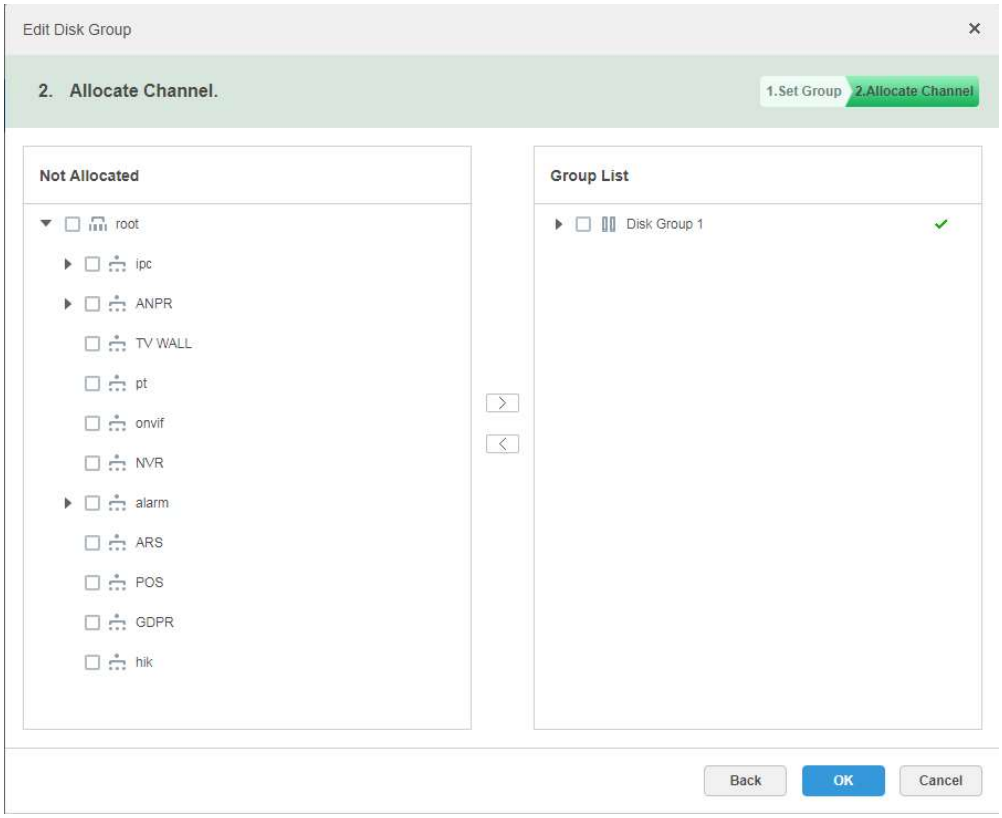


Step 3 Select the undistributed disks on the left, click > and add it to the disk group list on the right.

Step 4 Click **Next** to distribute channels for disk group.

The interface is shown in Figure 4-44.

Figure 4-44 Allocate channel



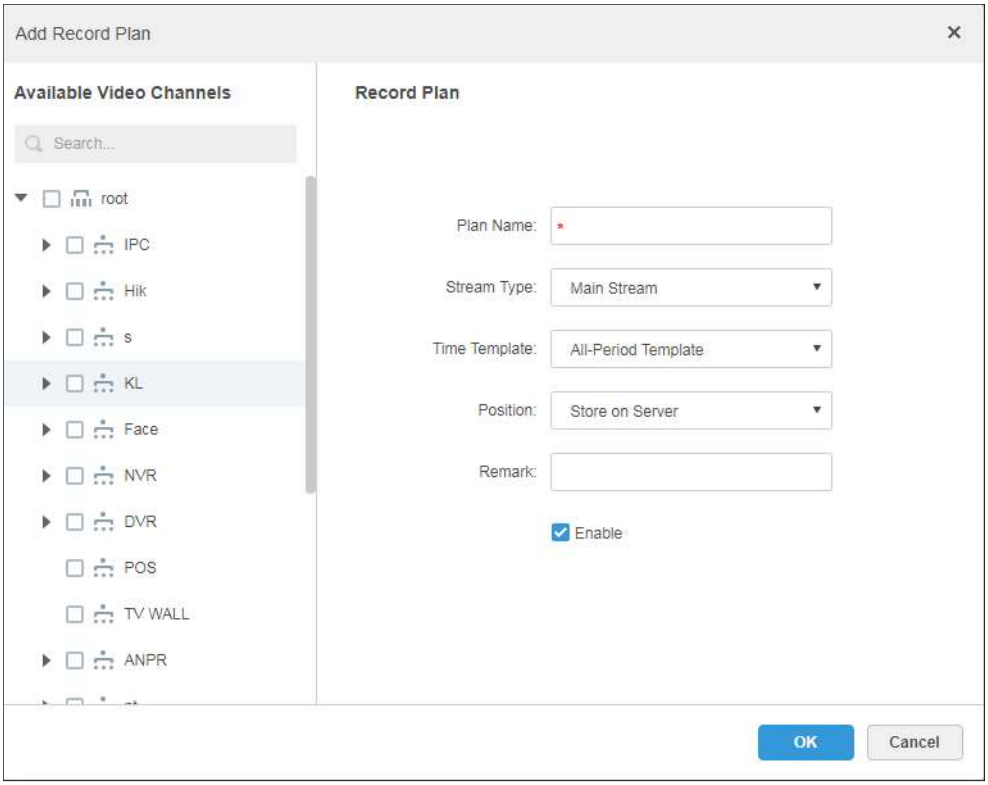
Step 5 Select channels in the device list on the left, click > to add it to the disk group on the right.

Step 6 Click **OK**.

4.7.3 Adding General Plan

Step 1 Click the tab of **Record Plan**, click **Add**.
It is to add record plan. See Figure 4-45.

Figure 4-45 Add record plan



Step 2 Select the video channel which needs to configure record plan, set **Plan Name**, **Stream**, select **Time Template** and **Position**.

- Stream type includes: Main stream, sub stream 1, sub stream 2.
- Time template can select the system default template or new template created by users, refer to "4.7.5 Adding Time Template" for details of adding time template.
- Storage position can select server or recorder.

Step 3 Click **OK**.

Operations

- Enable/disable general plan

  In the operation column, ON means that the plan has been enabled, click the icon and it becomes OFF, and it means that the plan has been disabled.
- Edit General Plan

  Click of corresponding plan to edit the general plan.
- Delete General Plan

  ◇ Select general plan, click Delete to delete plans in batches.

  ◇ Click of corresponding general plan to delete the individual general plan.

4.7.4 Adding Backup Record Plan

The system supports backup recording over the devices 3 days ago, the implementation time of backup plan can span the day, the condition of backup record is time/Wi-Fi optional.

- Backup video comes for the local record of the camera.
- Backup Condition can select time and Wi-Fi. If it selects time, sets backup plan time, it will make backup record automatically after the time reaches; If it selects Wi-Fi, then it will make backup record automatically after the device is connected to Wi-Fi mode.

Step 1 Click the tab of **Backup Plan**.

The interface is shown in Figure 4-46.

Figure 4-46 Backup record plan

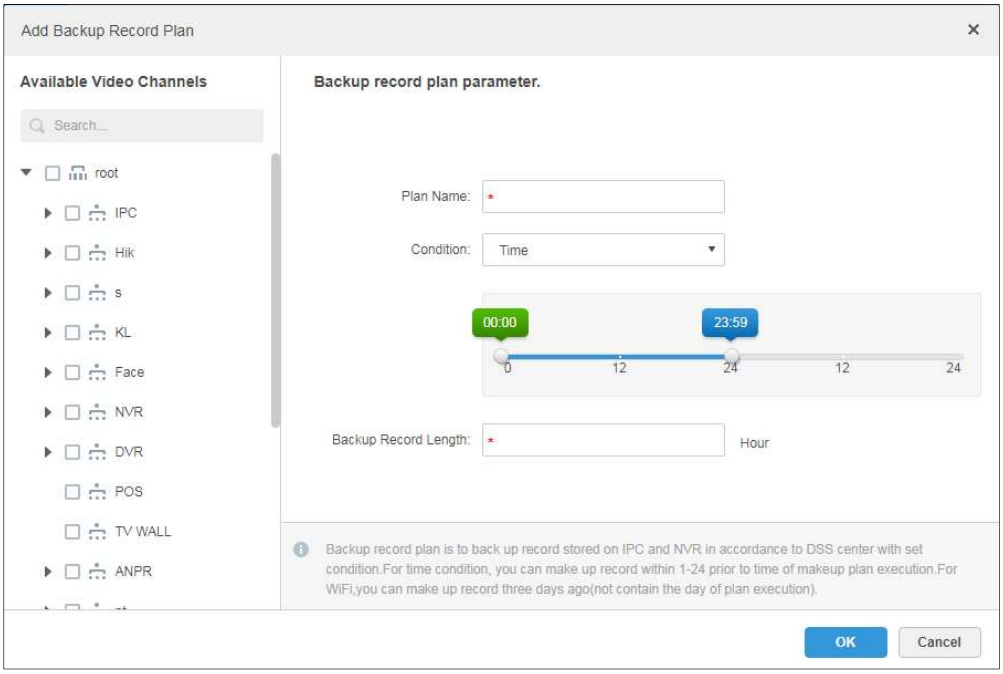
Step 2 Click **Add** to add backup plan.

Step 3 Select corresponding devices on the left device tree, and enter plan name.

Step 4 Set backup conditions.

- Take time as condition.

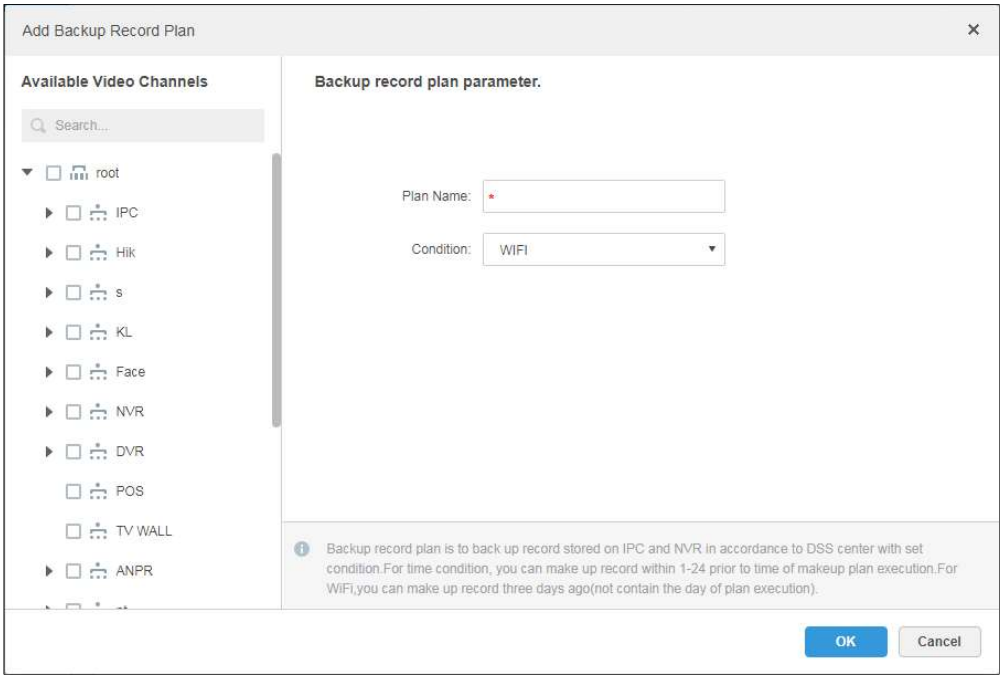
Figure 4-47 Backup record plan paramters



1) Select **Time** in the backup condition.
2) Drag time line and set the time period of backup record plan.
3) Enter backup record length, click **OK**.
   The time range is 1-24 hours.

- Take Wi-Fi as condition.

Figure 4-48 Wi-Fi plan



1) Select Wi-Fi in the backup record condition.
2) Click **OK**.
   It will make backup record automatically when the network of backup device is switched to Wi-Fi.

Operations

- Enable/Disable backup record plan.

  In operation column, ON means that the plan has been enabled; click the icon and it becomes OFF, it means that the plan has been disabled.
- Edit backup record plan

  Click the corresponding of the plan, and then you can edit the backup record plan.
- Delete backup record plan

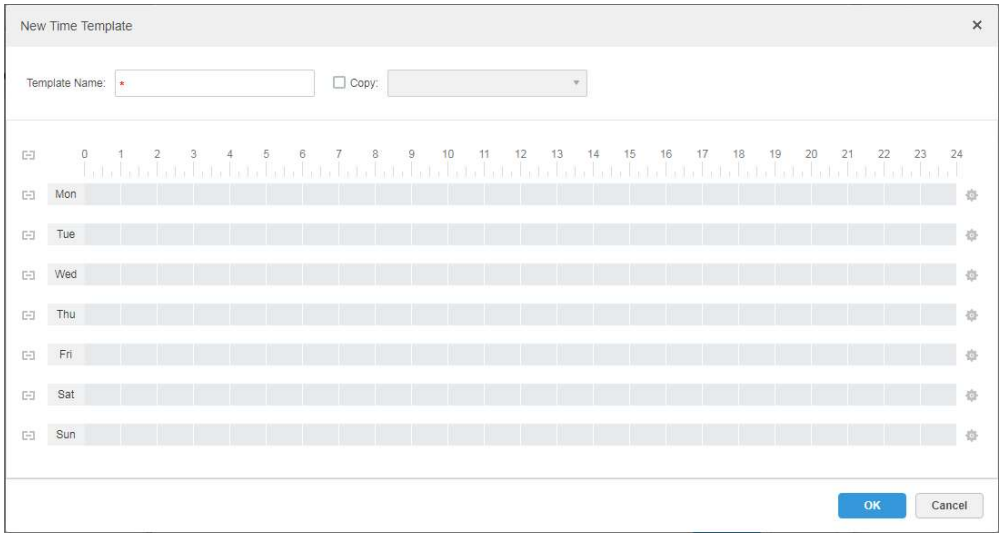
  ◇ Select backup record plan, click Delete to delete plan in batch.

  ◇ Click the corresponding of backup record plan, then you can delete the backup plan individually.

4.7.5 Adding Time Template

Step 1 Select **New Time Template** in the drop-down box of **Time Template**.
The system displays the interface of **New Time Template**. See Figure 4-49.

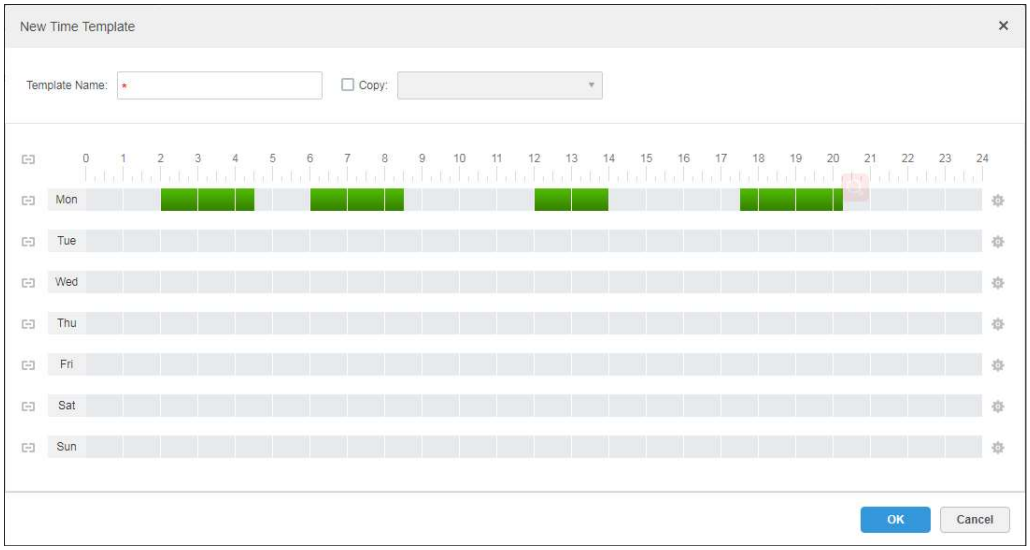
Figure 4-49 New time template



Step 2 Sets template name and time period.

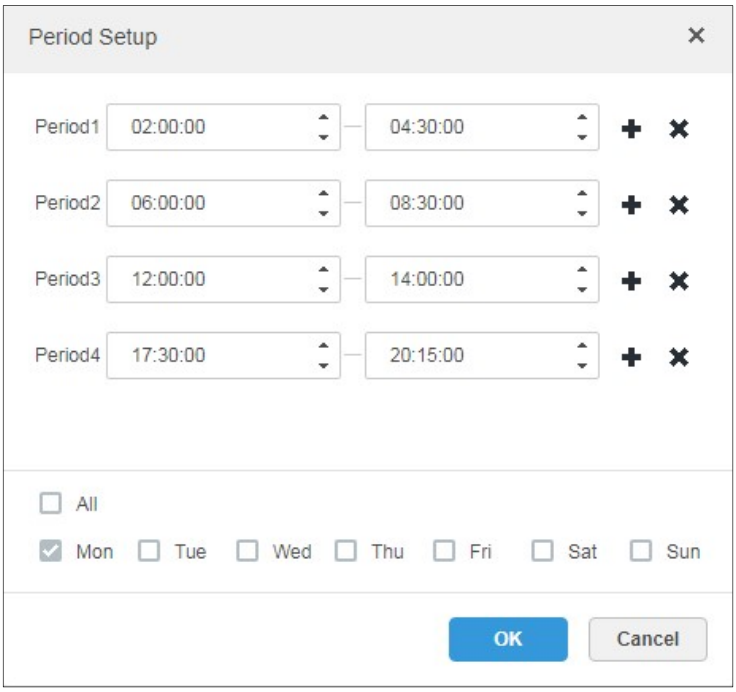
- Press the left button and drag it to draw time period on the time line. See Figure 4-50.

Figure 4-50 Template setting



- Click the ⚙ of the corresponding day, set time period on the interface of Period Setup. See Figure 4-51.

Figure 4-51 Period setup



It can set max 6 periods in one day.

Step 3 Click **OK** to save time template.

Select **Copy** and select the time template in the drop-down box, then you can directly copy the config of the time template.

4.8 Configuring Event

After configuring alarm plan on the management end, it supports displaying and handling corresponding report events on the client.

4.8.1 Configuring Alarm Source

Alarm source can be video channel, thermal channel and alarm input channel etc. Different encodes are configured with different alarm types, here it is to take IPC as an example to introduce.

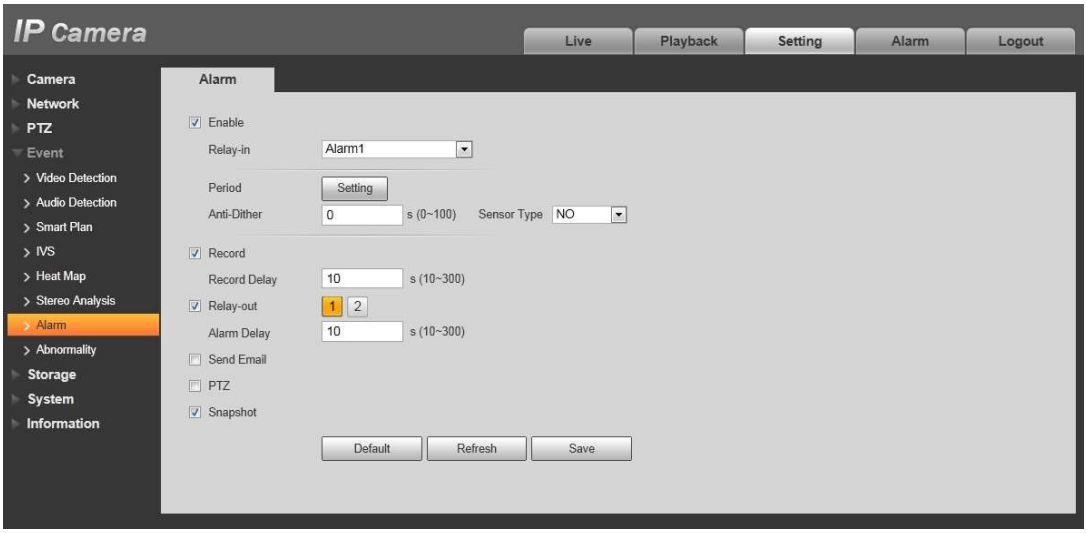
- Please make sure that IPC alarm input channel has connected to external alarm device before config, otherwise there will be no alarm being uploaded.
- Different devices need to configure different alarm types; it is based on the requirements of actual businesses. Please refer to user manual of each device for config of device end.

Step 1 Log in WEB config interface of IPC, or click next to IPC info line on the interface of **device** of Mobile Center management end.

Step 2 Select Setting > Alarm.

The system displays the interface of **Alarm Setting**. See Figure 4-52.

Figure 4-52 IPC alarm setting



Step 3 Set alarm input info, click **OK**. Please refer to Table 4-3 for more details.

Table 4-3 Alarm parameters setting

Parameter	Description
Enable	Select check box; enable the selected alarm input channel.
Alarm Input	
Arm/Disarm Period	Set the time of alarm being reported to IPC.
device Type	Select NO/NC; make sure it is in accordance with alarm device.
Other parameters need to be set according to actual requirements.	

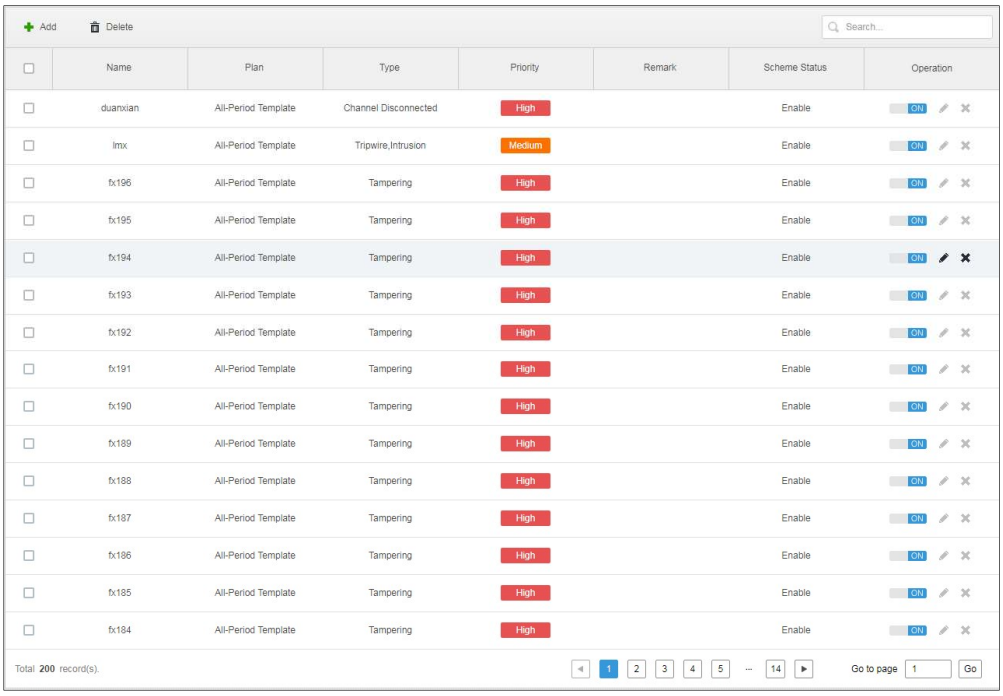
4.8.2 Adding Alarm Scheme

It is to set the reported events displayed on the Mobile Center, it supports setting linkage record, email, capture, display on wall and so on, and set alarm period.

Step 1 Click + on the management end, select **Event** on the **New Tab** interface.

The system displays the interface of **Event**. See Figure 4-53.

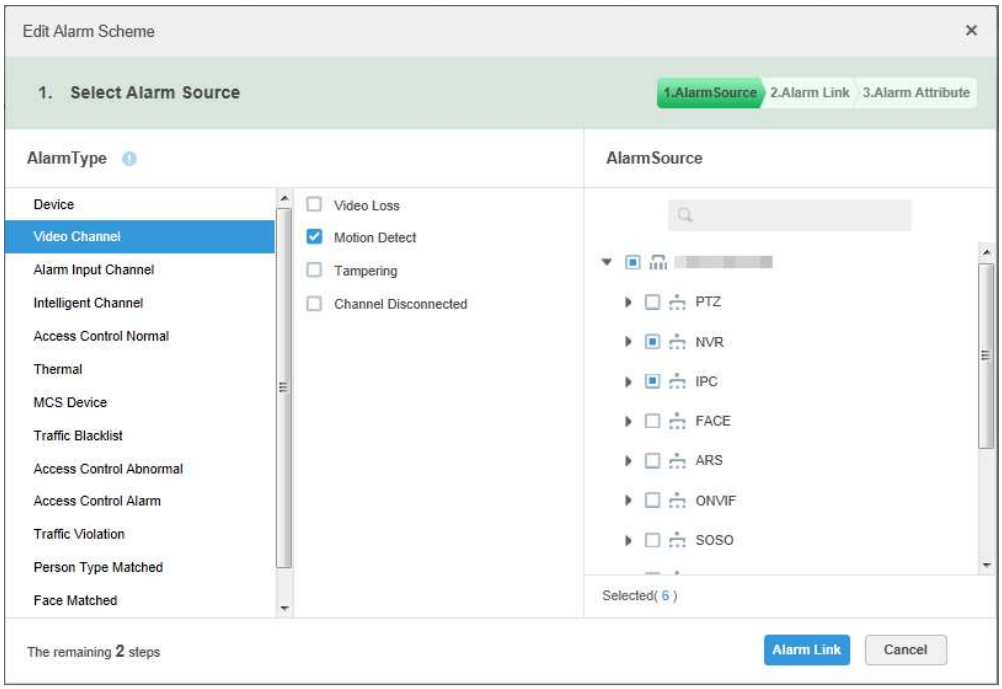
Figure 4-53 Event



Step 2 Click **Add**.

The system displays the interface of **Add Alarm Scheme**. See Figure 4-54.

Figure 4-54 Add alarm scheme

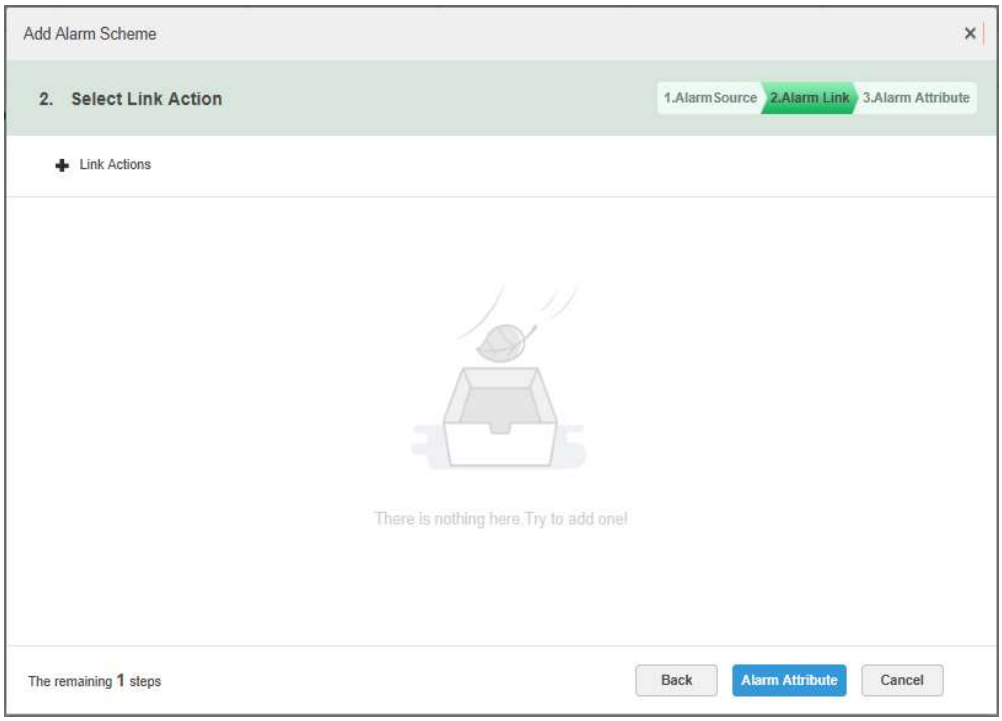


Step 3 Configure alarm source.

1) Select alarm type and alarm source.
2) Click Alarm Link.

The system displays the interface of **Add Alarm Scheme**. See Figure 4-55.

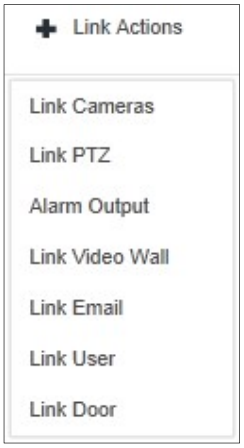
Figure 4-55 Alarm link



Step 4 Configure alarm link.

1) Click ✚ , the system pops out the list of **Link Actions**. See Figure 4-56.

Figure 4-56 Link actions



2) Select link action, it supports several link actions.

◇ Click **Link Cameras**, set parameters. See Figure 4-57. Please refer to Table 4-4 for more details about parameters.

Figure 4-57 Link cameras

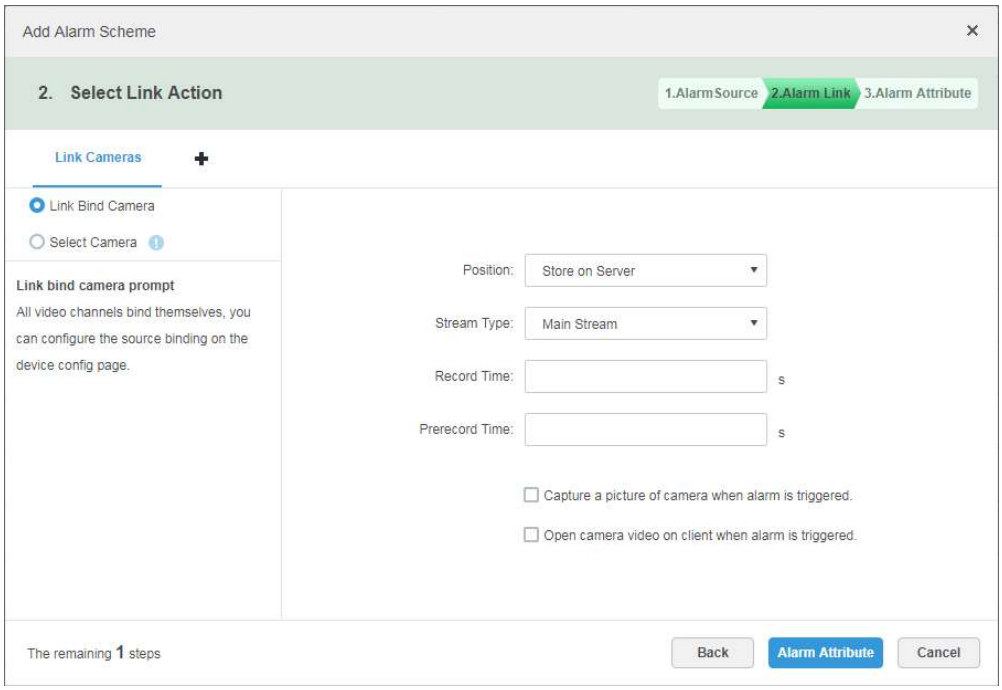
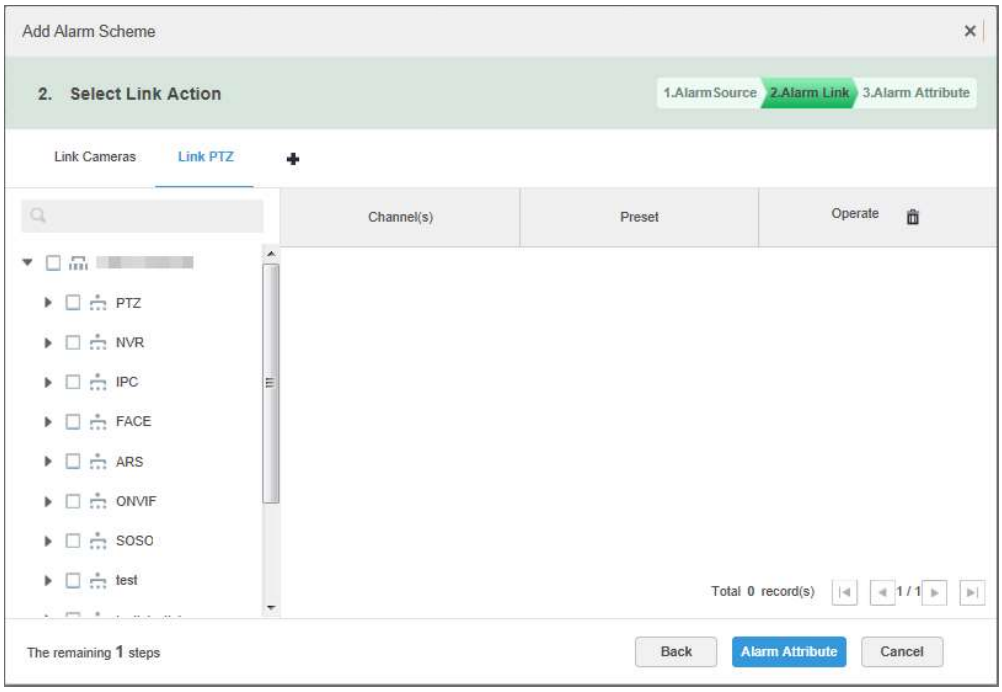


Table 4-4 Link cameras parametes setting

Parameter	Description
	● Link bind camera: Video channel has been bound with alarm source. It is to quickly configure scheme via resource binding of device management. ● Select link camera: It needs link camera to manually select the alarm source.
Position	It is to set whether store the video on server.
Stream Type	It is to set the stream type of recording video. Main stream and sub stream are clear but resource intensive.
Record Time	It is to set the length of video recording.
Prerecord Time	It is the recording time before setting link camera, the selected device is required to support record and it already exists in the device recording.
Capture a picture of camera when alarm is triggered.	Confirm if it captures camera picture.
Open camera video on client when alarm is triggered.	Confirm if it opens camera video window on the client during alarm.

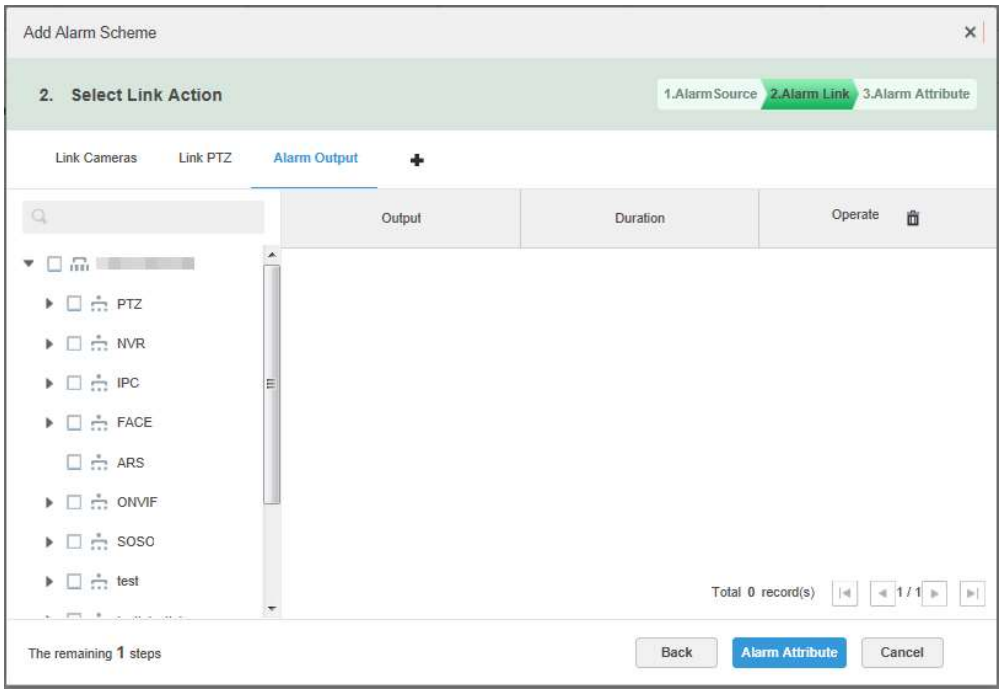
◇ Click **Link PTZ**, select the channels which need PTZ to link device, set prerecord actions. See Figure 4-58.

Figure 4-58 Link PTZ



◇ Click **Alarm Output**, select alarm output channel, set duration. See Figure 4-59.

Figure 4-59 Alarm output setting



◇ Click **Link Video Wall**, select link camera on the left of the interface, select video wall on the right of the interface. See Figure 4-60. When selecting **Link Bind Camera** and **Link Camera**, the interfaces will display differently, please base on the actual display. Click **Video Wall Alarm Window Setup** to set duration and select the video channel which needs to be displayed on wall. See Figure 4-61.

Figure 4-60 Link video wall

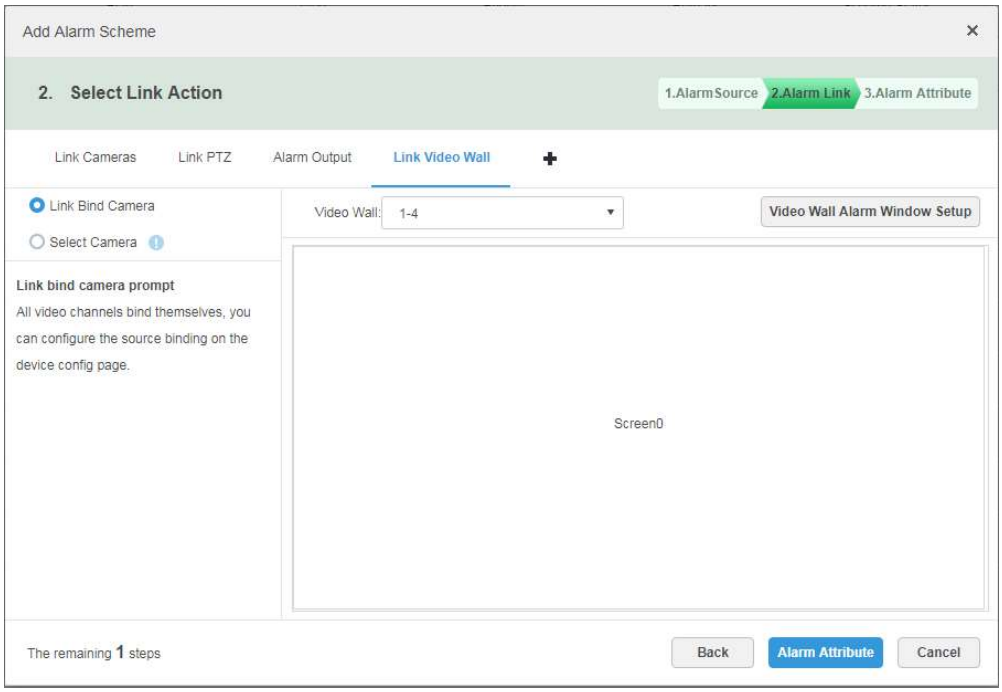
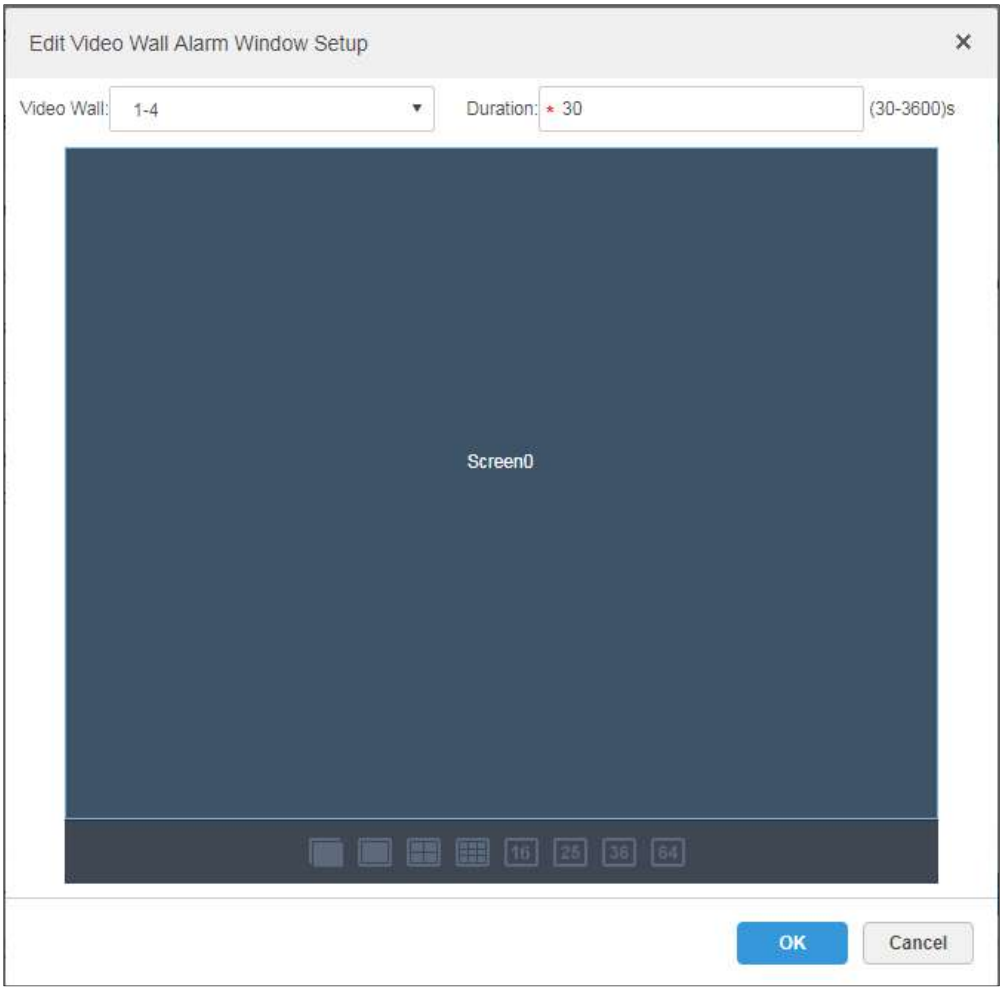


Figure 4-61 Edit video wall



◇ Click **Link Email**, select email template and recipient. See Figure 4-62.

The mail template can be configured, click the ▼ next to **Mail Template** and select **New Mail Template**, set new mail template. See Figure 4-63.

Click **Alarm Time**, **Organization** and other buttons to insert buttons into **Email Theme** or **Email Content**.

Figure 4-62 Link email

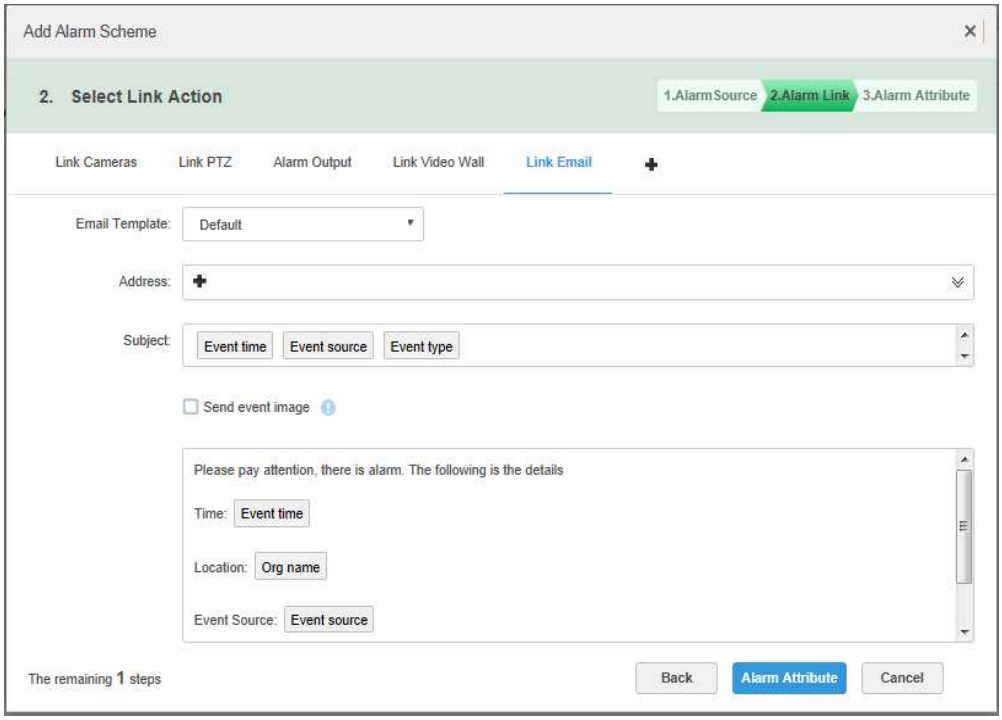
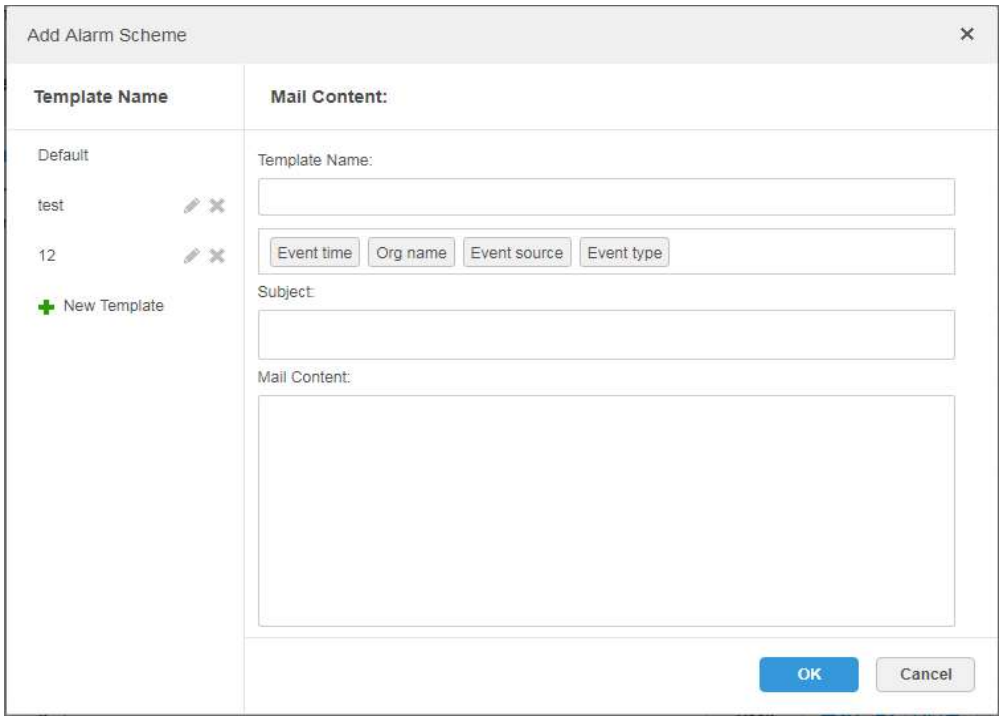
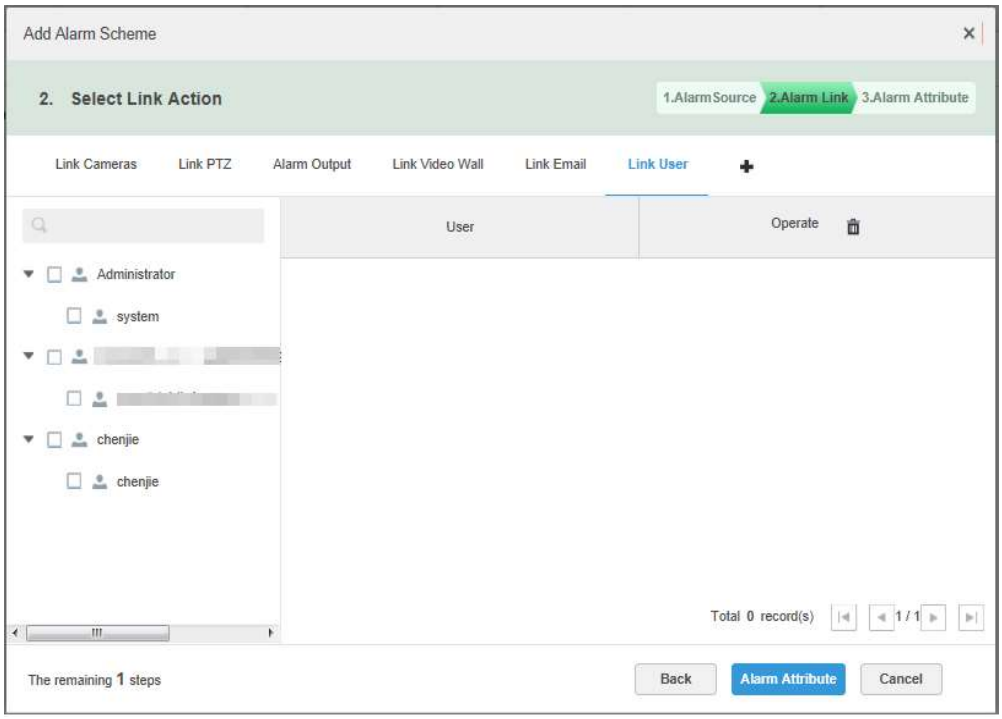


Figure 4-63 Email template



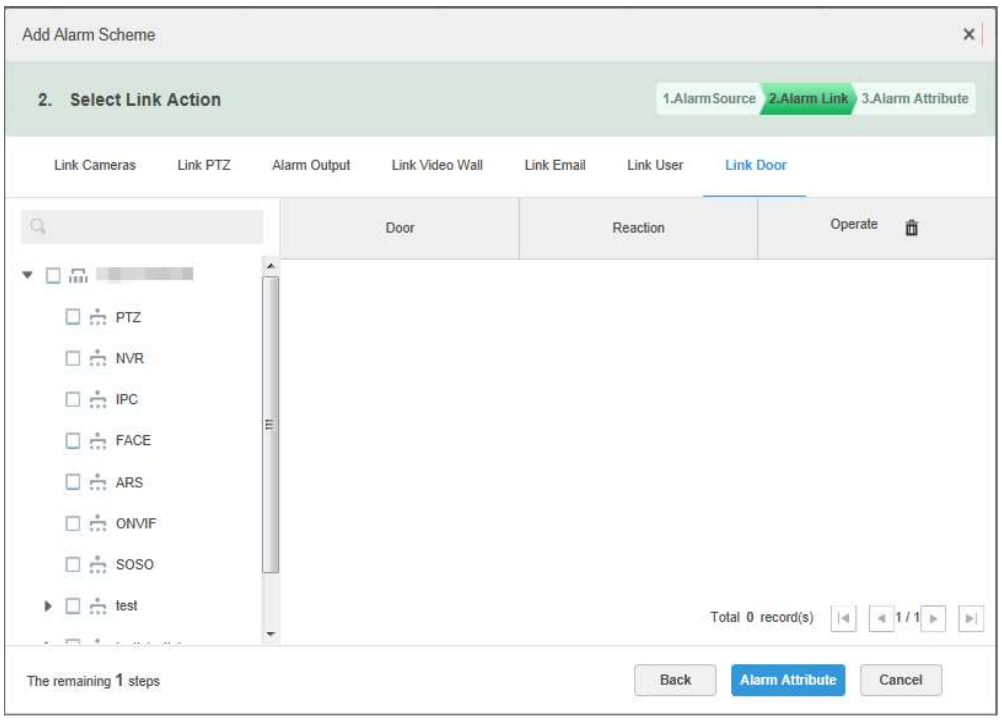
◇ Click **Link User**, select the users who need to be informed. See Figure 4-64.

Figure 4-64 Link user



◇ Click **Link Door**, select the access control device, and set the link action. See Figure 4-65.

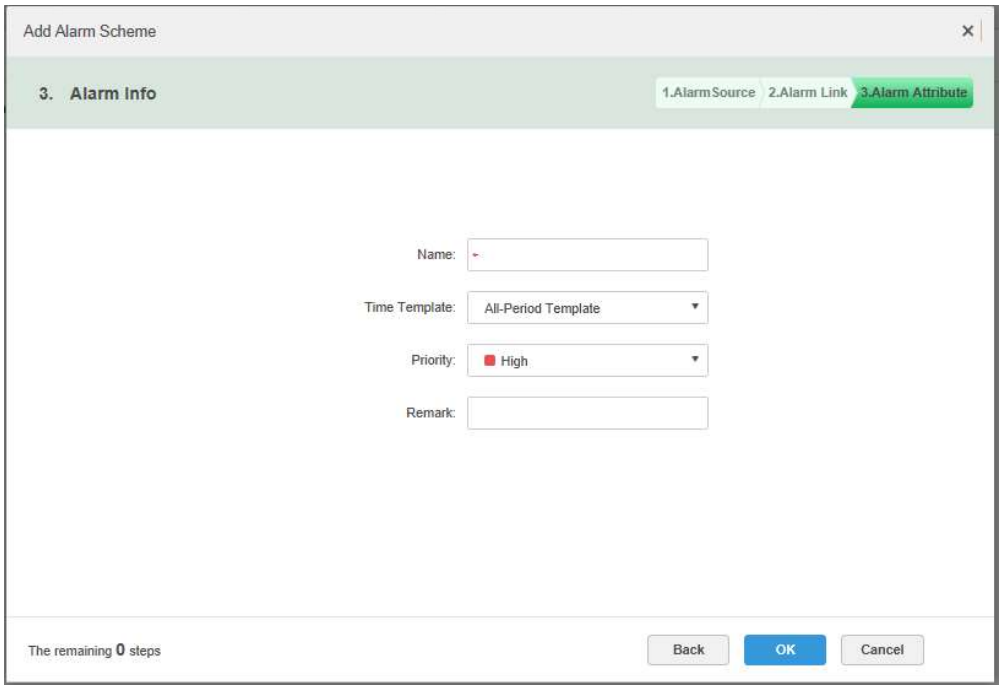
Figure 4-65 Link door



Step 5 Click Alarm Attribute.

The system displays the interface of **Alarm Attribute**. See Figure 4-66.

Figure 4-66 Alarm attribute



Step 6 Configure alarm attribute.

1) Set alarm name.
2) Select alarm time template and priority.
3) Click **OK**.

   The system displays the added alarm scheme.

Step 7 In the **Operation** column, click OFF to enable scheme. When the icon changes into ON, means that the scheme has been enabled.

Operations

- Edit

  Click the of corresponding scheme, and then you can edit the alarm scheme.

- Delete

  ◇ Select alarm scheme, click Delete to delete scheme in batches.

  ◇ Click the corresponding of alarm scheme, then you can delete the alarm scheme individually.

- Disable scheme

  In the Operation column, click ON. When the icon changes into OFF, means that the scheme has been disenabled.

4.9 Configuring Map

Before using the electronic map function, you need to select the map category on the administrative side, including rater map and GIS map, and then drag the video device, alarm device and so on to the map on the Mobile Center management side before you can use the map function on the client side. E-map supports alarm prompts, video viewing and video playback.

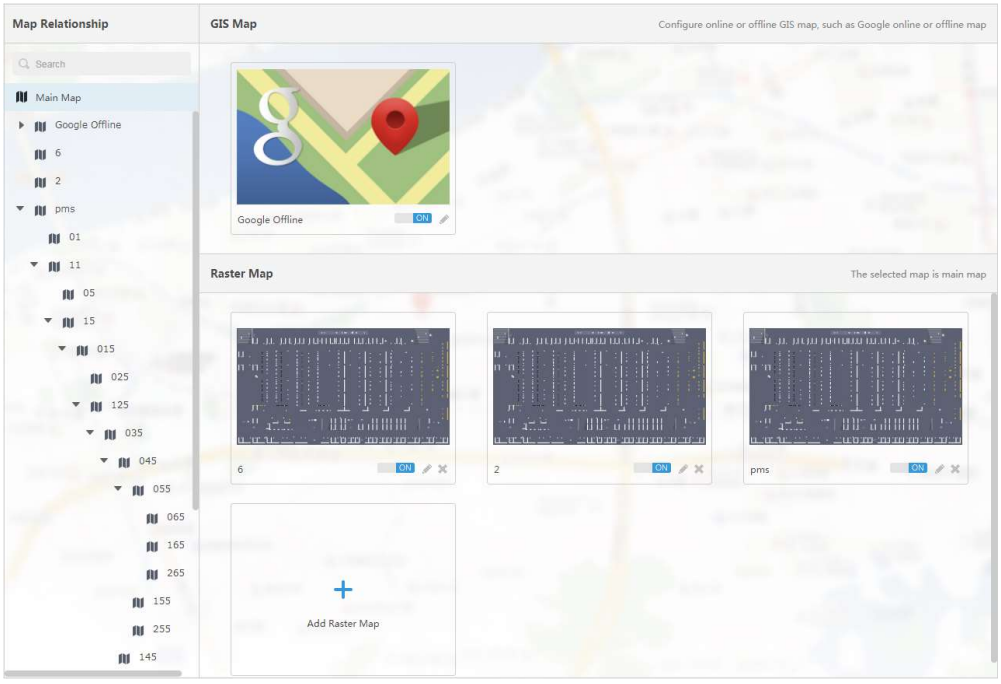
- Raster Map
  A displayed picture, it is more suitable for indoor scenario. Place the camera in the fixed location indoors, such as parking lot (flat scene), access control, people counting, retail and some other indoor scenarios. The server enables raster map by default.
- Google Online Map
  Google online map, it needs network permission of accessing Google map to access the map client, it is to display the map of whole city via network and using the map info of Google online, it can zoom in and out, present the picture of magnificent city and it can be accurate to some spot in the city as well.
- Google Offline Map
  Google offline map, deploy the offline map on other servers. The offline map can be accessed by accessing the client of the map and the server network of Google offline service.

4.9.1 Editing GIS Map

Step 1 Click and select **Map** on the **New Tab** interface.

The system displays the map interface. See Figure 4-67.

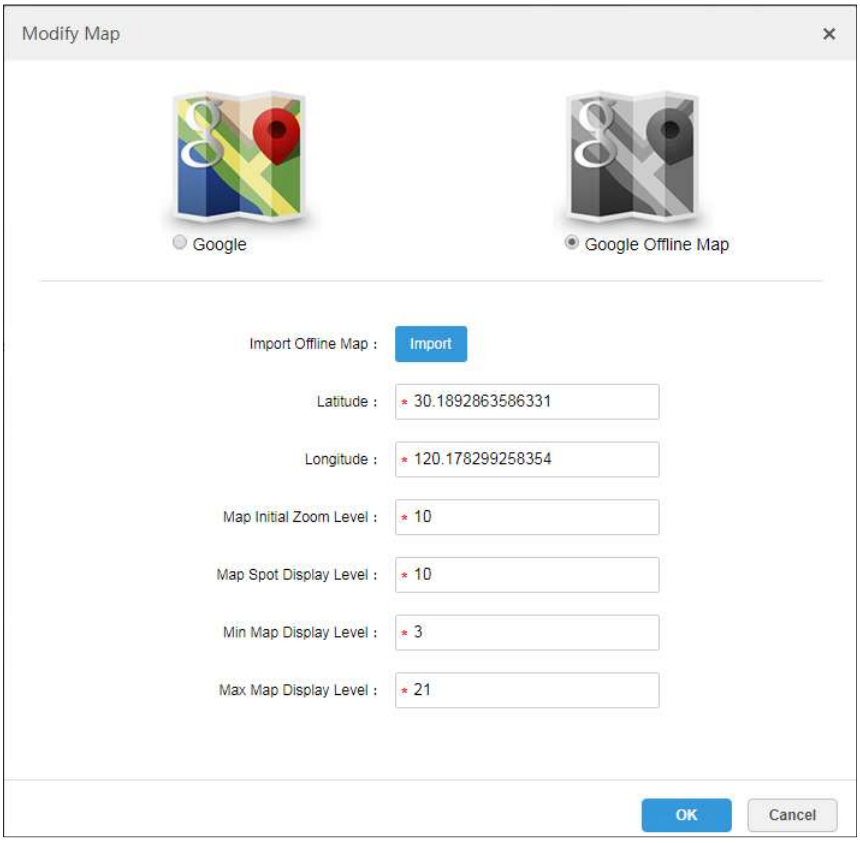
Figure 4-67 Map



Step 2 After click the above the Google map.

The system pops out the map config interface. See Figure 4-68.

Figure 4-68 Modify map



- Google online map

1) Select Google online map.
2) Configure map info, click **OK**.

- Google offline map

1) Select Google offline map.
2) Click Import and import offline map.
3) Configure map info, click **OK**.

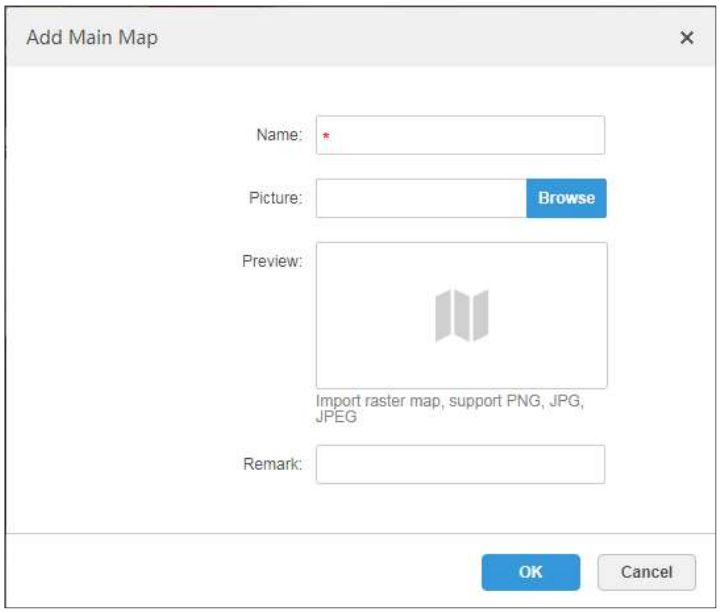
4.9.2 Adding Hot Zone

It can add raster map as hot area, which is convenient for checking detailed scene picture. For example, it can be used in flat scene like parking lot.

Step 1 Click **Add Raster Map** on the **Map** interface.

The system pops out the interface of **Add Main Map**. See Figure 4-69.

Figure 4-69 Add main map



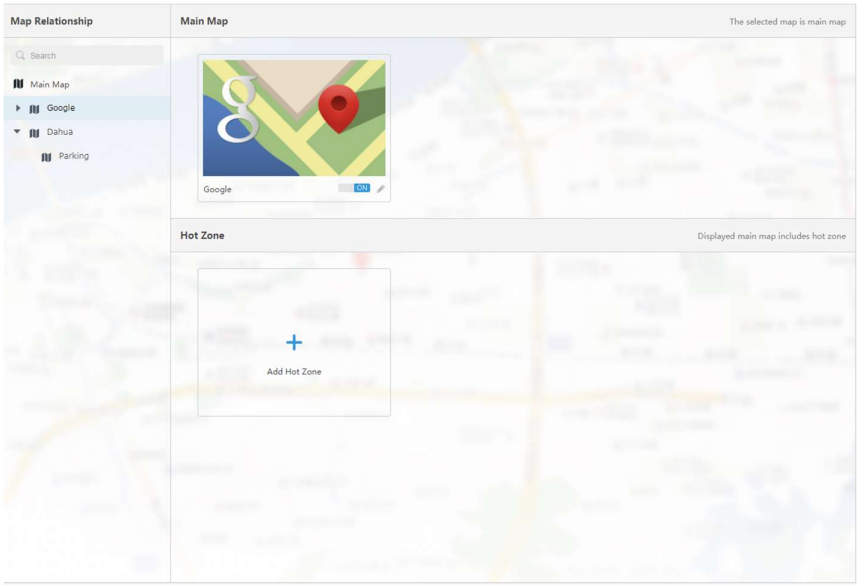
Step 2 Enter **Name**, select upload picture, click **OK**.

You can continue to add several raster maps.

Step 3 Add hot area.

1) Click the Google map or raster map on the left, it will display added hot zone module on the right. See Figure 4-70.

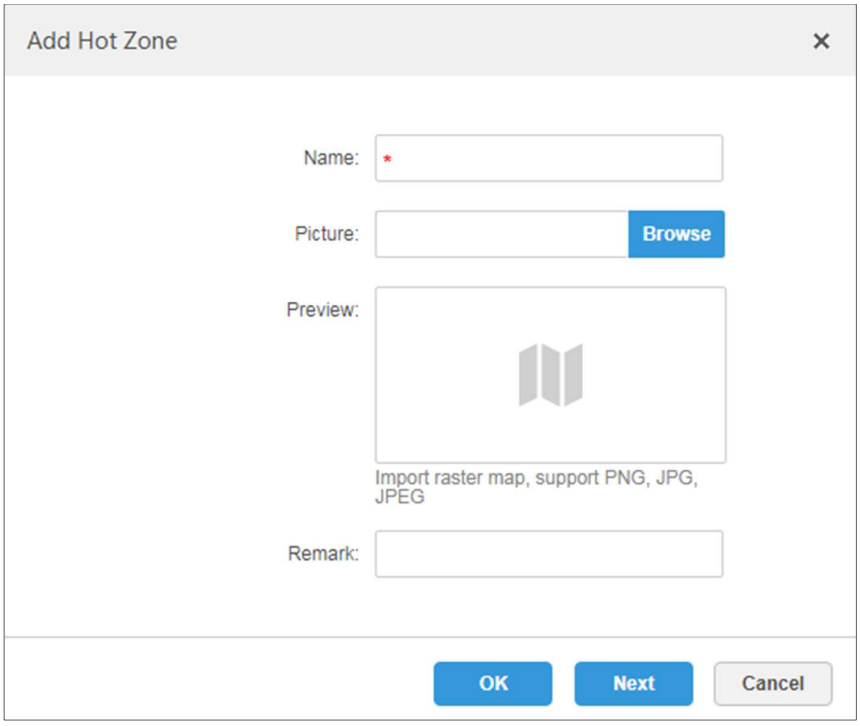
Figure 4-70 Main map



2) Click Add Hot Area.

The system displays the interface of **Add Hot zone**. See Figure 4-71.

Figure 4-71 Add hot zone



3) Enter hot zone name and upload picture, click **Next**.
4) Drag icon and confirm hot zone location, and then click **OK**.

4.9.3 Marking device

It can link the device to the map by dragging the device to the corresponding location o nthe map according to its actual installation location.

Step 1 Click the added main map on the navigation tree on the **Map** interface.
The system will display the map info. See Figure 4-72.

Figure 4-72 Map detail information

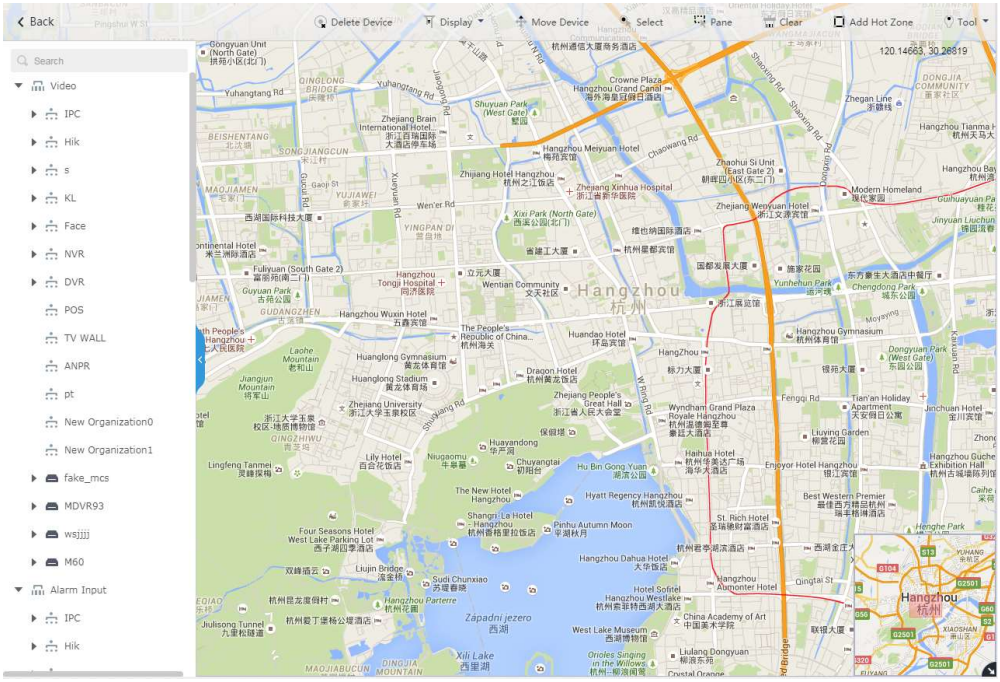
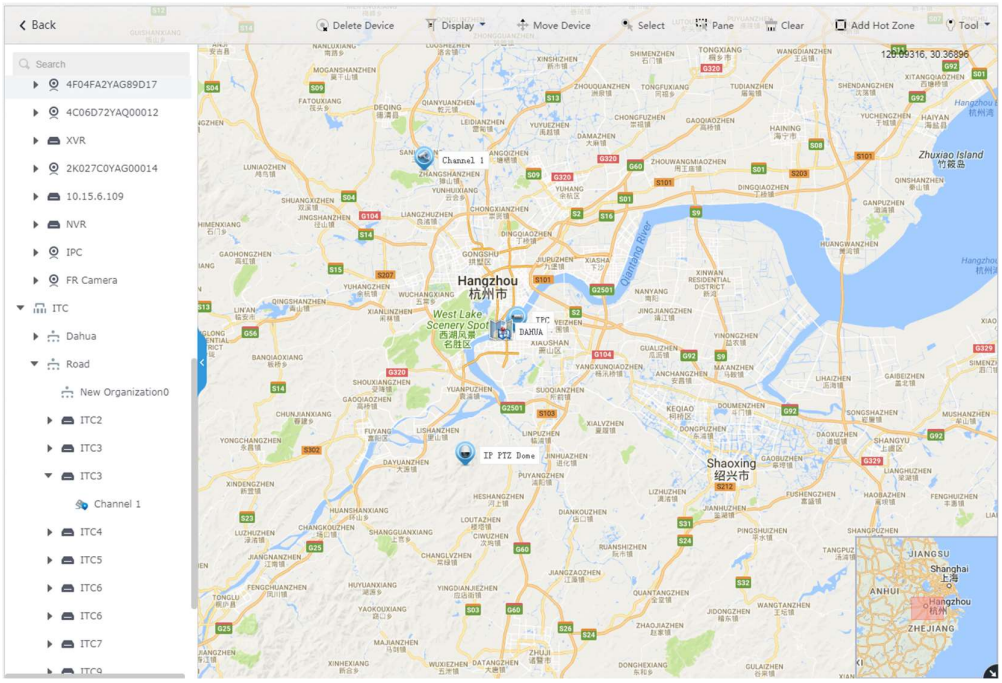


Table 4-5 Map settings

Parameter	Description
Display	● Raster map displays: video; access control; alarm input; intelligence device ● GIS map displays: video; alarm input; ITC; intelligence device
Delete device	Click to move the device location on the map.
Select	Select device via clicking on it.
Pane	Select device via box selection.
Clear	Clear the boxing trace on the screen.
Add Hot Zone	Click Add Hot Zone, select location on the map and add hot zone map. After entering hot zone, it can also continue to add lower-level hot zone map. Click hot zone on the client map, the system will automatically link the map to the hot zone map.
Tool	Includes length, area, mark and reset. ● Length: it is to measure the actual distance between two spots on the map. ● Area: It is to measure the actual area of the previous area on the map. ● Mark: It is to mark on the map. ● Reset: it is restored back the initial default location of the map.
Others	● Click hot zone, and it can modify the info of hot zone map. ● Double click hot zone, the system will automatically skip to hot zone map, and then it can drag it into the channel on the hot zone map.

Step 2 Drag the device channel from the left device tree to the corresponding location of the map. The interface is shown in Figure 4-73.

Figure 4-73 Location change



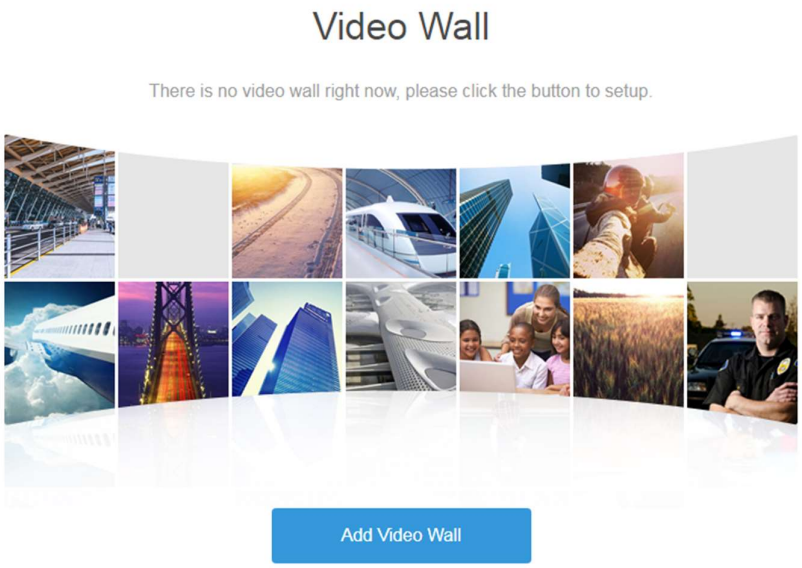
4.10 Adding Video Wall

It can refer to the content of the following chapter if you want to realize the business of displaying on wall.

Step 1 Click + and select **Video Wall** on the **New Tab** interface.

See Figure 4-74.

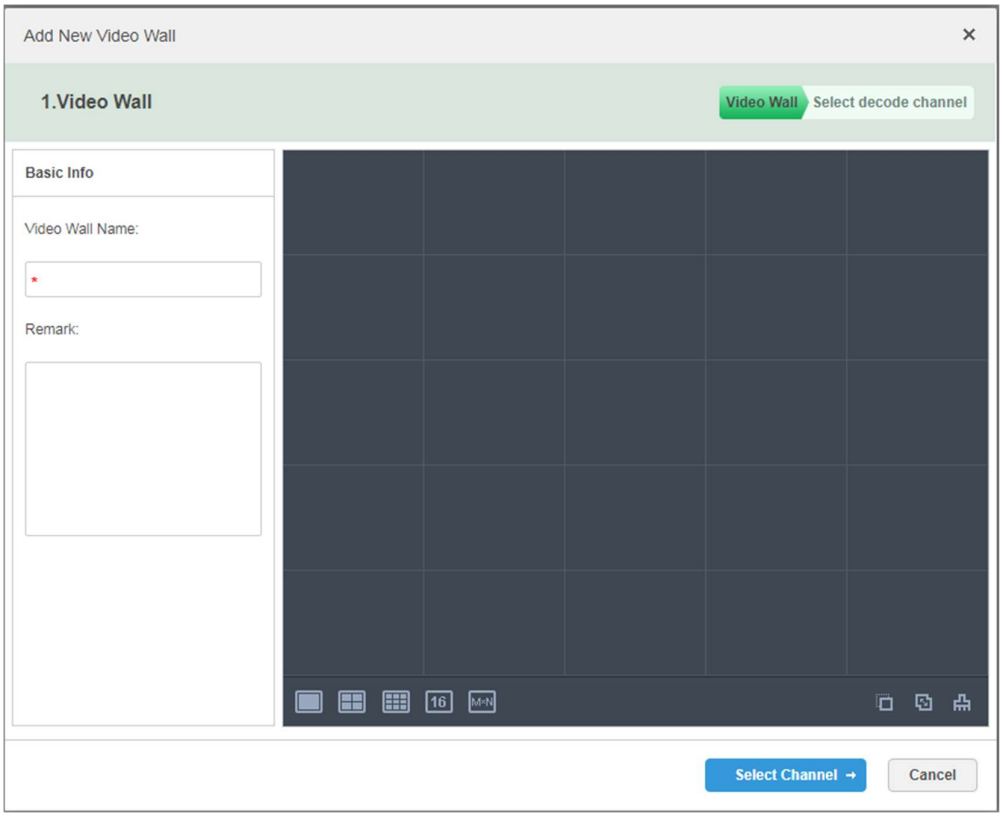
Figure 4-74 Video wall



Step 2 Click Add Video Wall.

The system pops out the interface of **Add New Video Wall**. See Figure 4-75.

Figure 4-75 Add video wall

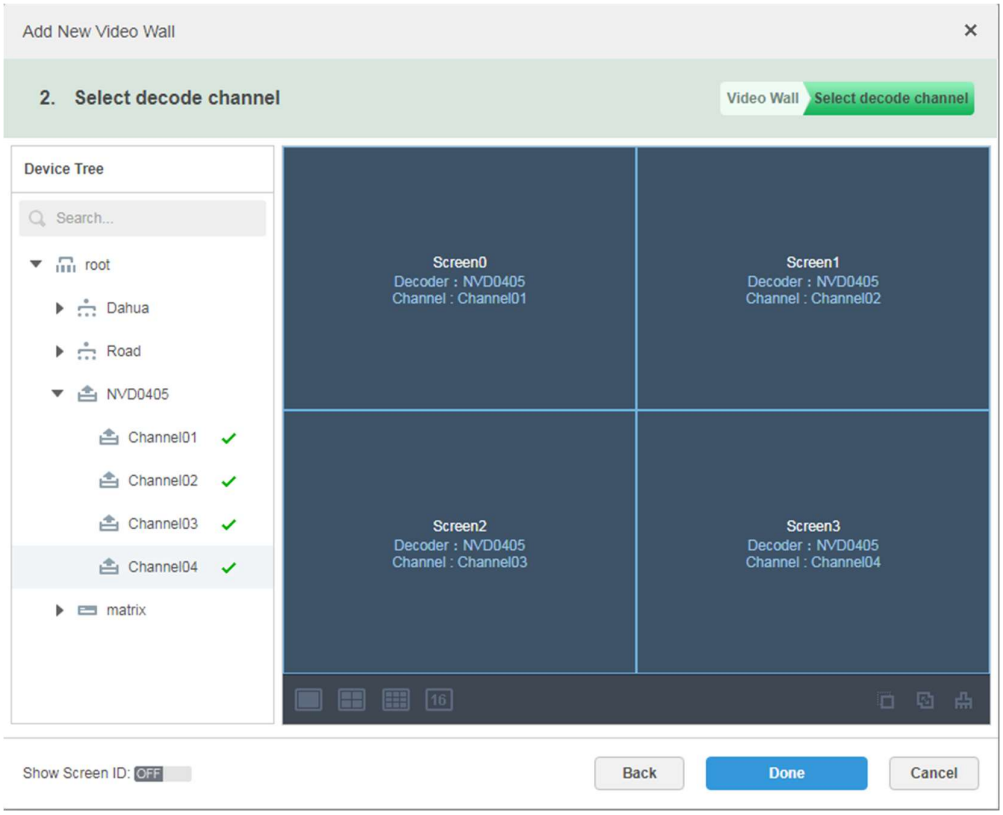


Step 3 Enter **Video Wall Name**, select window distribution.

Step 4 Click Select Channel.

The system will display the interface of **Select decode channel**. See Figure 4-76.

Figure 4-76 Select decode channel



It can set if it displays ID in the screen, Show Screen ID: OFF means that the screen ID has been disabled; click the icon and it becomes Show Screen ID: ON, and then it means that screen ID has been enabled.

Step 5 Select the encoder which needs to be bound in the device tree, and drag it to the corresponding screen.

Step 6 Click Done.

4.11 System Maintenance

4.11.1 Server Management

Server management supports managing server information, adjusting server or superior server of the device.

4.11.1.1 Server Management

Server management supports a series of operations, such as switching master/spare mode of server, modifying server name, enabling or disabling service etc.

Step 1 Click + and select **Server Management** on the interface of **New Tab**.

Step 2 Click tab of Server Management.

The system displays the interface of **Server Management**. See Figure 4-77.

Figure 4-77 Server management

Step 3 The management server supports following operations:

- Click and edit the server information.
- OFF means the server is not enabled; Click the icon and it becomes ON, means the server is already enabled.
- Click and allocate the server type.
- Click and delete the server information.

4.11.1.2 Resource Allocation

Adjust the device server during distributed deployment.

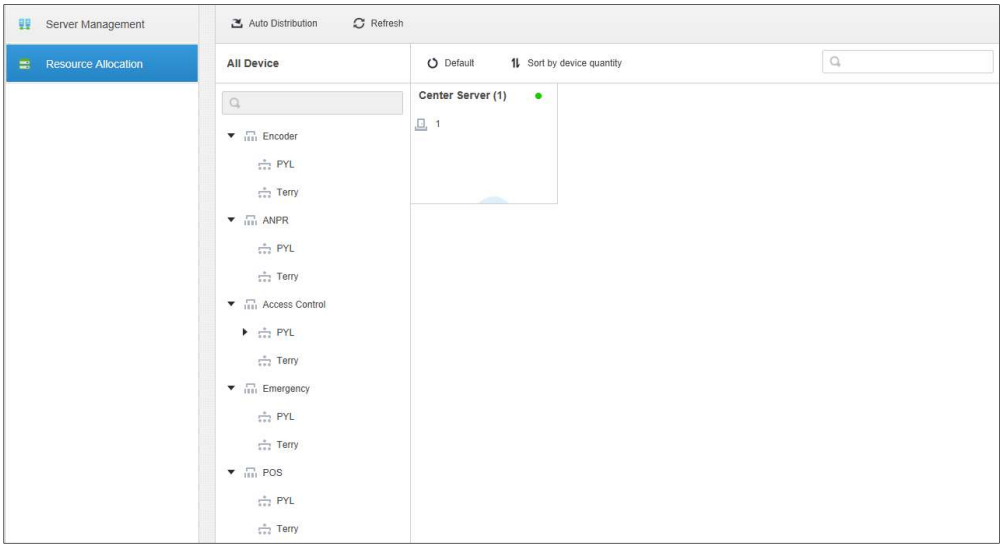
Step 1 Click and select **Server Management** on the interface of **New Tab**.

Step 2 Click Resource Allocation.

The system displays the interface of **Resource Allocation**. See Figure 4-78.

- Click Default and the servers will be sorted according to the time when they are added.
- Click Sort by device quantity and the servers will be sorted according to quantity of devices attached to them.

Figure 4-78 Resource allocation



Step 3 Adjust the attached server.

- Manual adjustment

Select the device on the left and drag it to the server on the right. The device quantity of attached server will increase while the device quantity of original server will decrease.

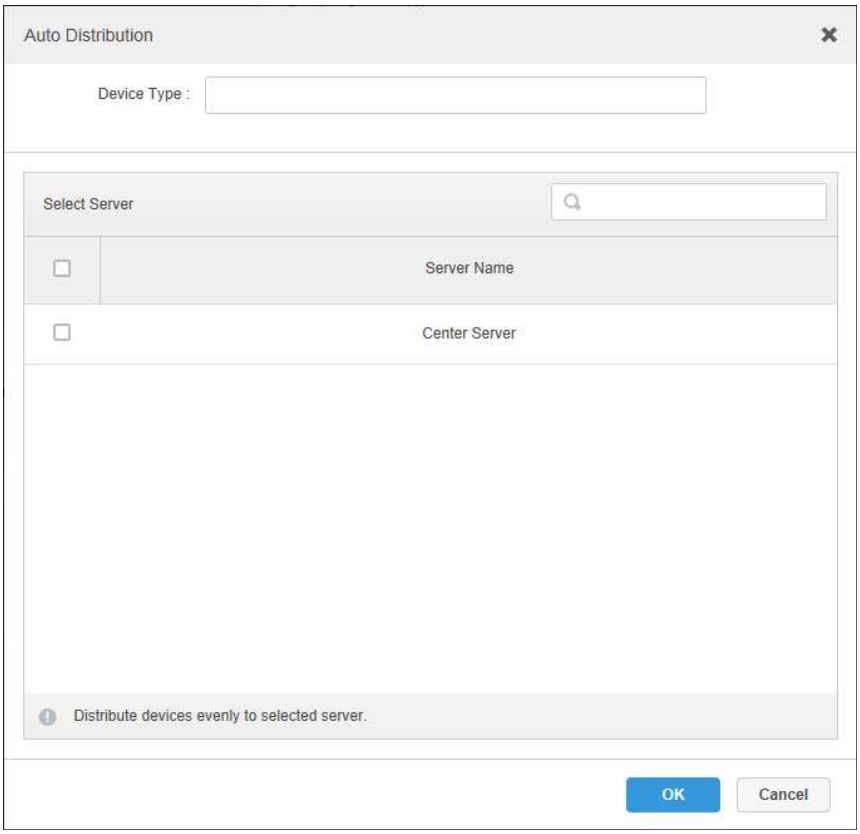
- Auto distribution

Averagely distribute the same type of device to the server that is deployed by distribution.

1) Click Auto Distribution.

The system displays the interface of **Auto Distribution**. See Figure 4-79.

Figure 4-79 Auto distribution



2) Select device Type, several types can be selected.
3) Select server where the device will be distributed to, several servers can be selected.
4) Click **OK**.

4.11.2 Backup and Restore

Mobile Center supports backup of configured information and save it to local PC, meanwhile it supports restoring system via backup file, which is convenient for system maintenance and guarantee system security.

Only system user supports backup and restore. It can implement system backup and restore only when it logs in Mobile Center management via system account.

4.11.2.1 System Backup

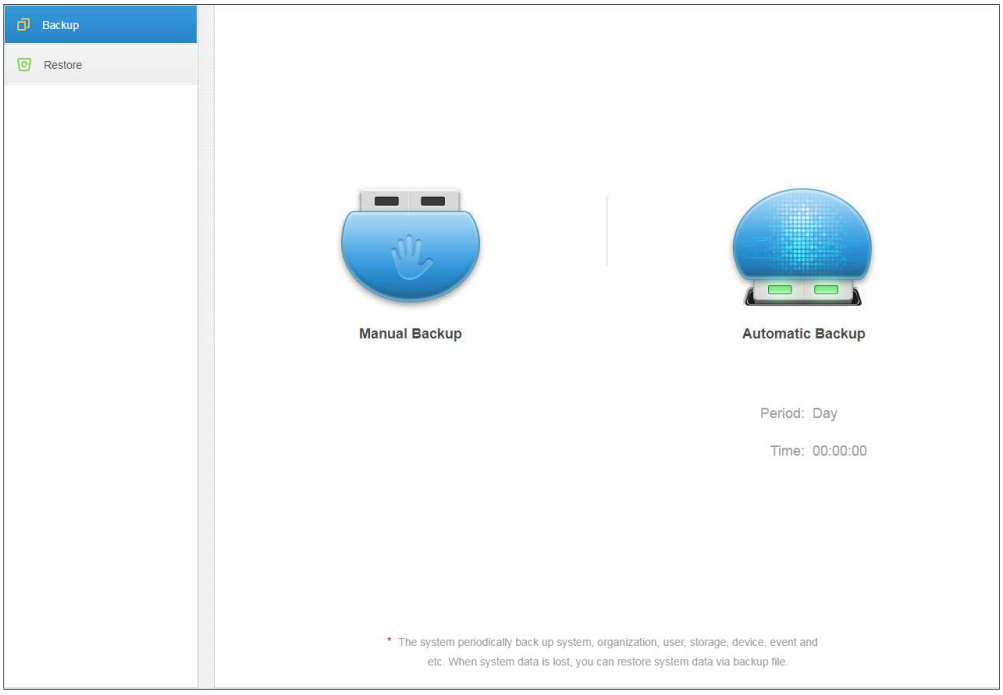
In order to guarantee the security of user data, Mobile Center system provides data backup function. The backup includes manual backup and automatic backup.

Manual Backup

Step 1 Click and select **Backup and Restore** on the **New Tab** interface.

The system displays the interface of **Backup**. See Figure 4-80.

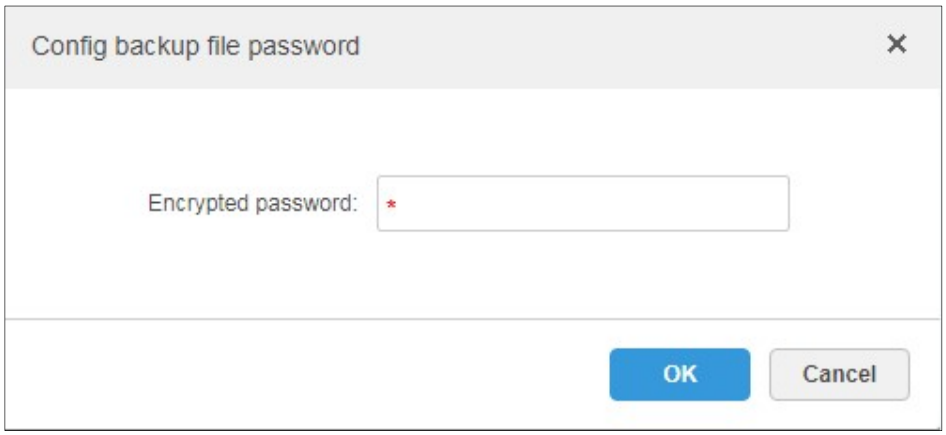
Figure 4-80 Backup



Step 2 Click Manual Backup.

The **Config backup file password** interface is displayed. See Figure 4-81.

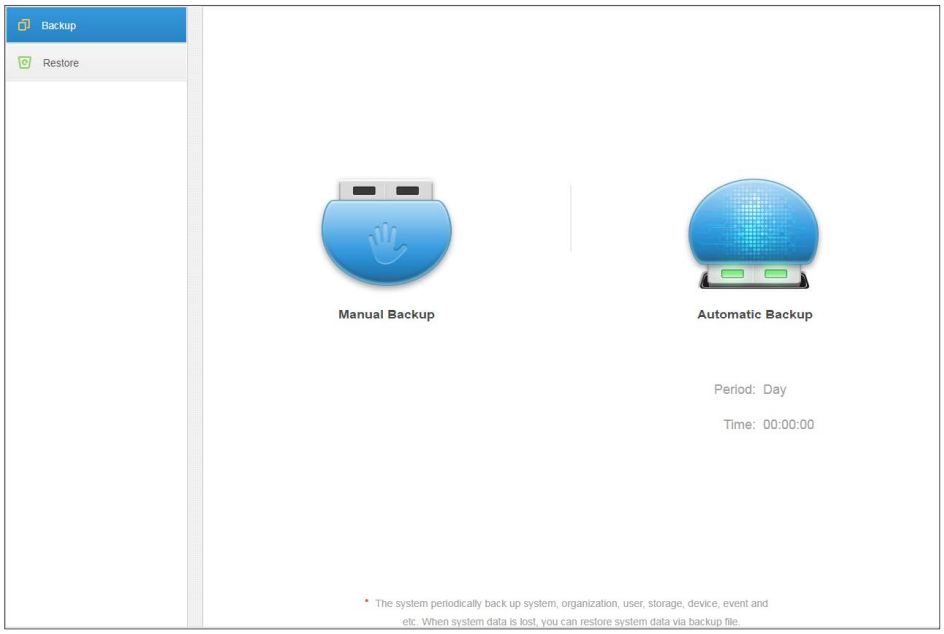
Figure 4-81 Config backup file password



Step 3 Enter encrypted password, click **OK**.

The backup result is displayed in Figure 4-82.

Figure 4-82 Backup result



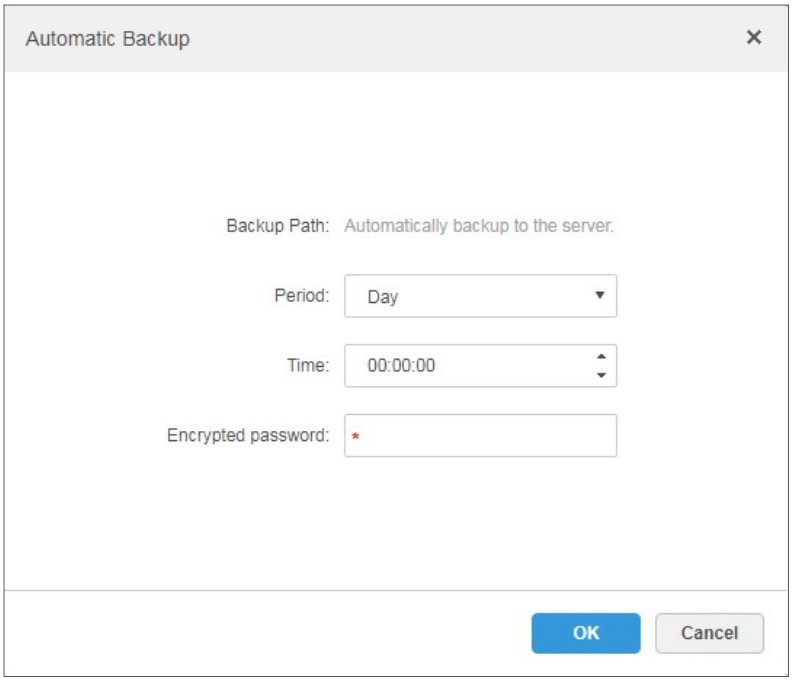
Automatic Backup

Step 1 Click + and select **Backup and Restore** on the **New Tab** interface.

Step 2 Click Automatic Backup.

The system pops out the interface of **Automatic Backup**. See Figure 4-83.

Figure 4-83 Automatic backup



Step 3 Select backup period, it includes: never, day, week, and month. See Figure 4-84.

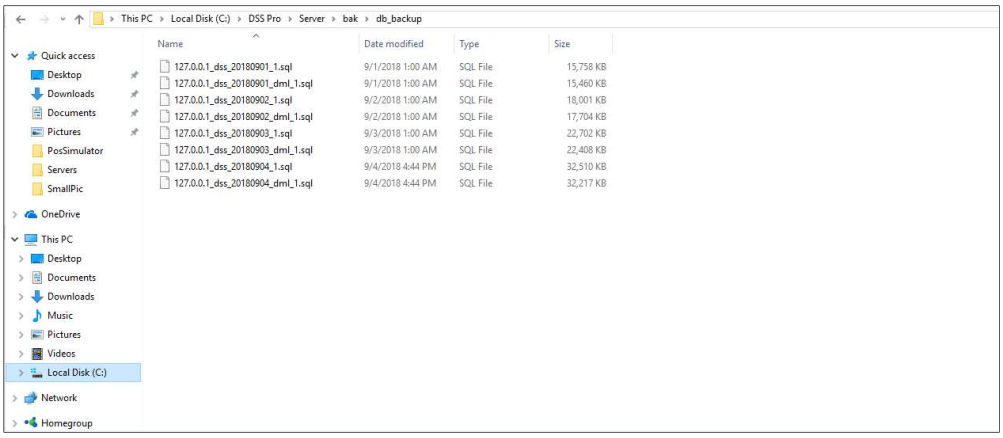
Figure 4-84 Backup period

Step 4 Click **OK** to save config.

The system will automatically back up the file onto the server according to the period and time which have been set.

Step 5 Check the auto-backup file on the server, the default backup path is -Servers-bak-db_backup. See Figure 4-85.

Figure 4-85 Check backup file



4.11.2.2 System Restore

It can use system restore function to restore the data back the time point of the latest backup when the user database becomes abnormal. It can quickly restore the user's Mobile Center system and lower user loss.

It needs to stop other users using Mobile Center system when implementing system restore. Please be cautious when using the function because it may change data info.

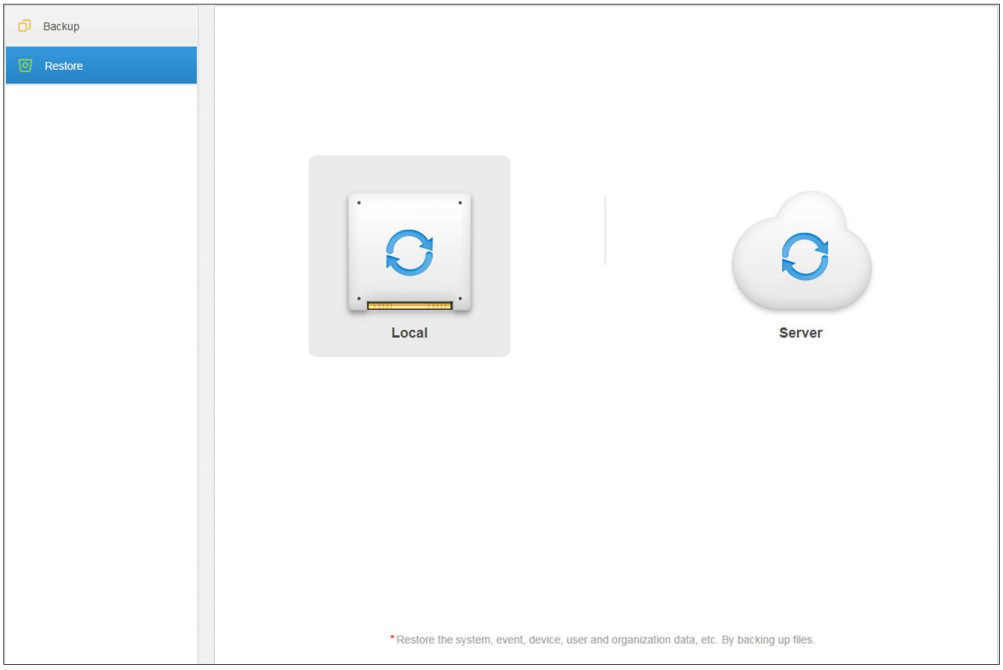
Local

In general, local file restoration means restoring manual backup fills onto the server.

Step 1 Select **Restore** tab.

The system enters the interface of **Restore**. See Figure 4-86.

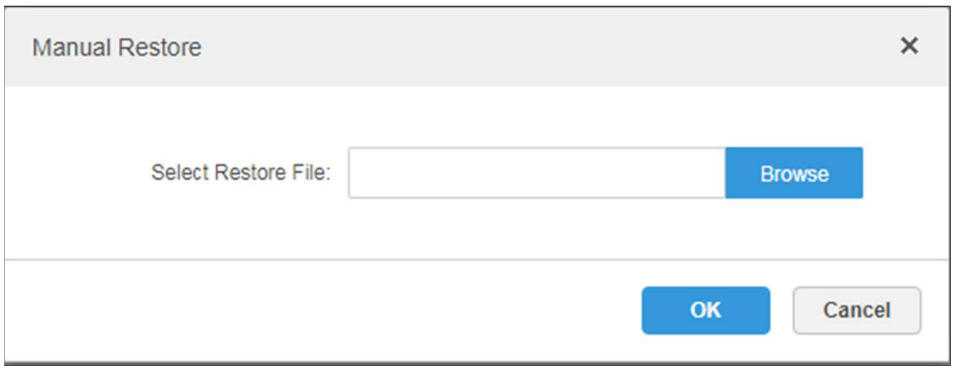
Figure 4-86 Restore



Step 2 Click **Local**.

The **Manual Restore** interface is displayed. See Figure 4-87.

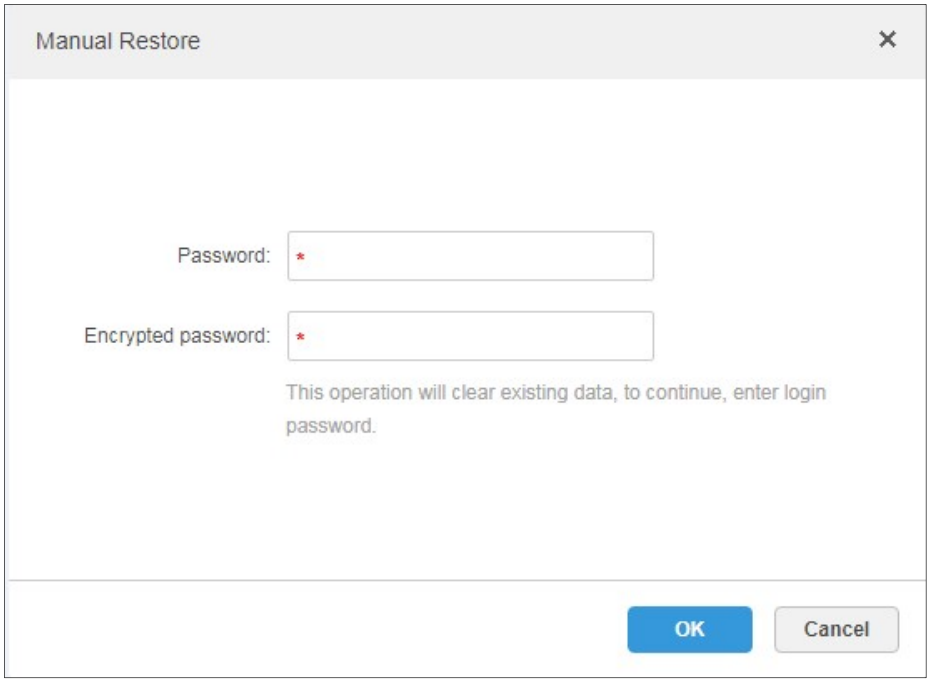
Figure 4-87 Manual restore (1)



Step 3 Click **Browse**, select file and then click **OK**.

Step 4 Enter administrator login **Password** and backup file **Encrypted Password**. See Figure 4-88.

Figure 4-88 Manual restore (2)



Step 5 Click **OK**.

The data is being restored; it will display the restoration percentage via progress bar. The system will start again after it is completed.

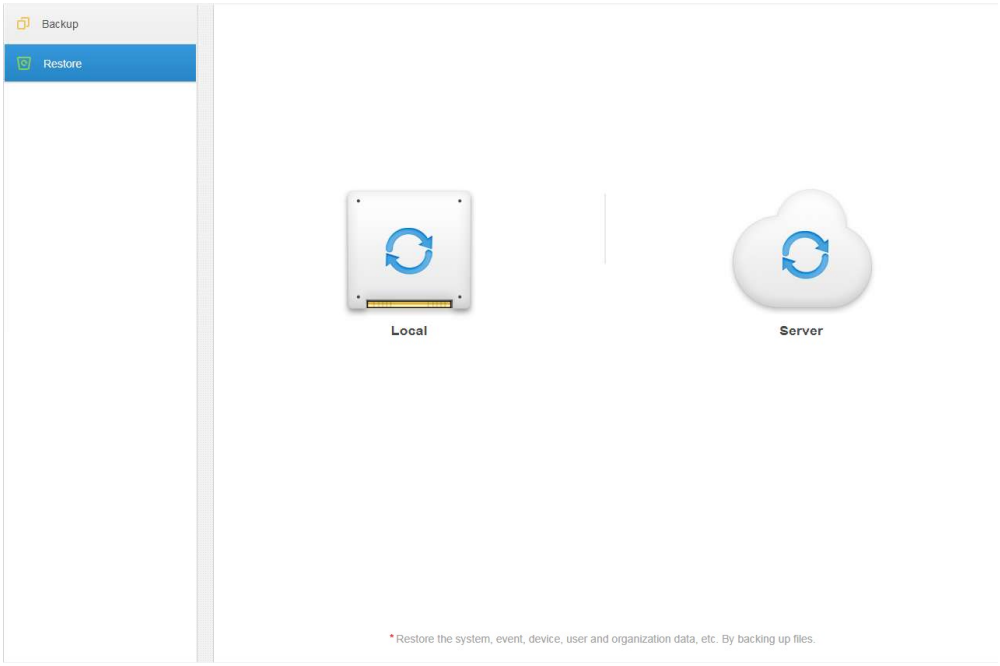
Server

It selects to restore the data from the backup file on the server side. The precondition is that it needs to enable the auto backup function, the server end backs up the database according to the set period and form backup file.

Step 1 Select **Restore** tab.

The system enters the interface of **Restore**. See Figure 4-89.

Figure 4-89 Restore



Step 2 Click **Server** and click from the list and select the file which needs to be restored.

Step 3 Enter admin password, click **OK** and restore.
The system will restart after the data is successfully restored.

4.11.3 Log

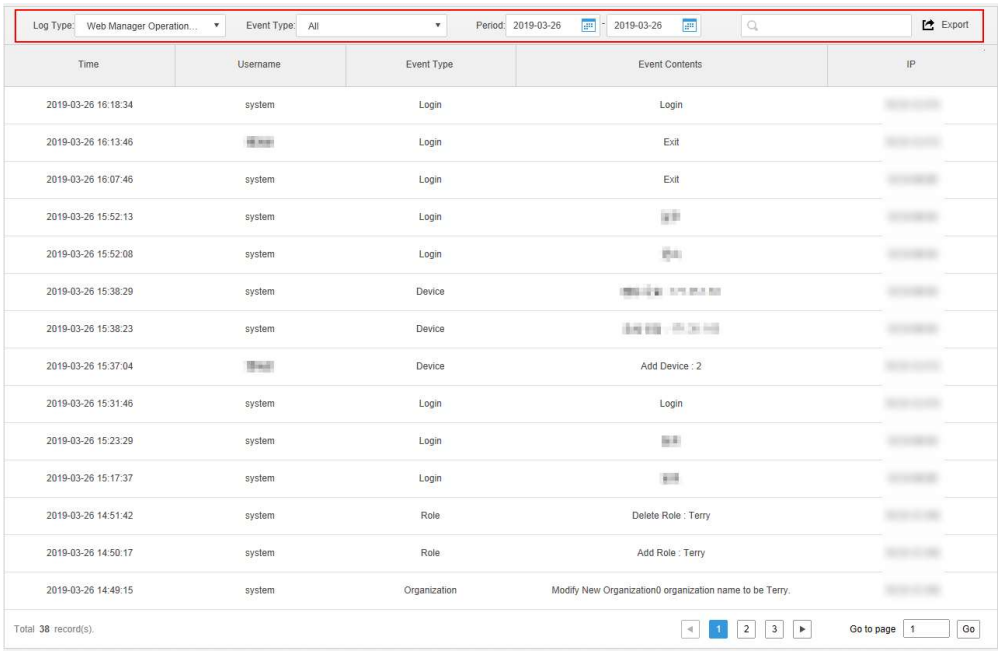
The system supports inquiring management configuring log, client setting config and system log. It can filtrate type, select period and search via key word during query. It can inquire log export as well (it is PDF by default).

Take **Management Configuring Log** for an example.

Step 1 Click and select Log on the **New Tab** interface.

Step 2 Select Log Type, Event Type or Query time.
The system displays query results; it will display the total records on the lower left corner. See Figure 4-90.

Figure 4-90 Log



Step 3 Click **Export** and export log info.

Step 4 Log exports results to check, the currently exported log package is displayed in the lower left corner of the browser, and you can also check it in the download section of your browser.

Step 5 Check log final record results. See Figure 4-91.

Figure 4-91 Log final records

Time	Username	Event Type	Event Contents	IP
2018-09-04 16:48:43	system	Preview	Request Main Stream video of IPC channel.	10.18.121.52
2018-09-04 16:48:20	system	Preview	Request Main Stream video of IPC channel.	10.18.121.52
2018-09-04 16:47:29	system	Preview	Request Main Stream video of IPC channel.	10.18.121.52
2018-09-04 16:46:50	system	Preview	Request Main Stream video of IPC channel.	10.18.121.52
2018-09-04 16:45:45	system	Preview	Request Main Stream video of IPC channel.	10.18.121.52
2018-09-04 16:45:17	system	Preview	Request Main Stream video of IPC channel.	10.18.121.52
2018-09-04	system	Preview	Request Main Stream video of	10.18.121.52

4.11.4 Overview

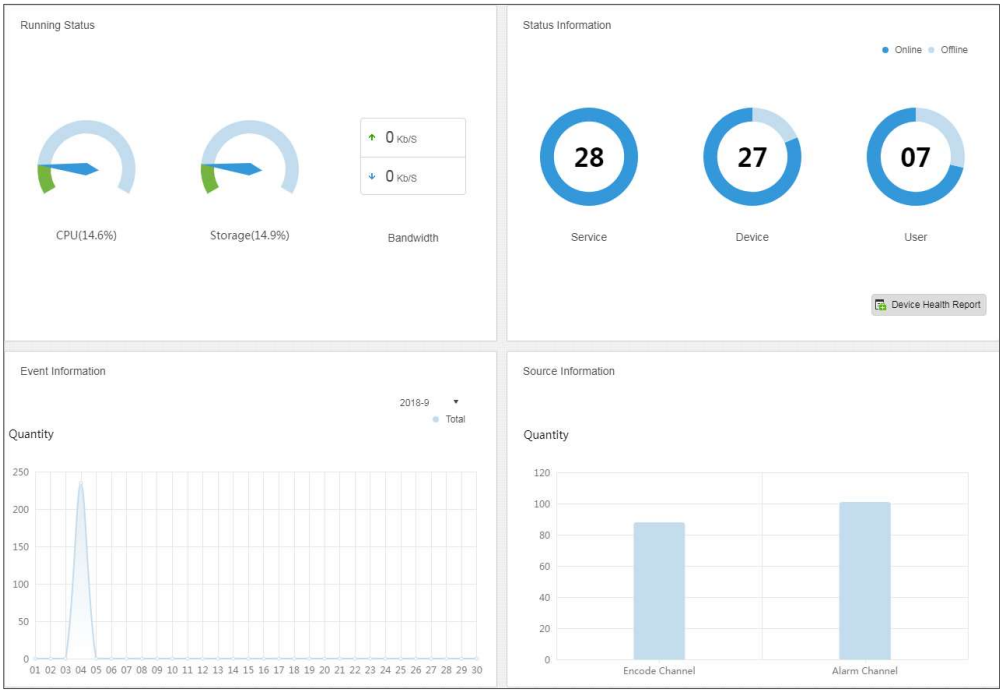
Mobile Center supports function of inquiring system operation and maintenance statistics, which is to know the system running situation in time.

4.11.4.1 Overview

Step 1 Click + and select **Overview** on the **New Tab** interface.

The system overview interface is displayed. See Figure 4-92.

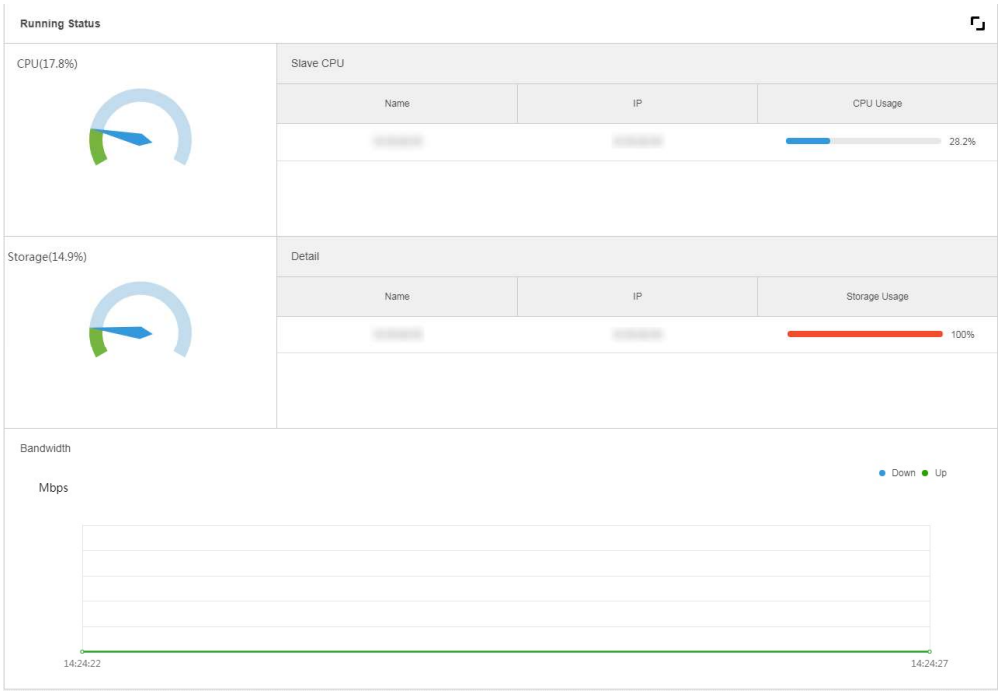
Figure 4-92 Overview



4.11.4.2 Running Status

Check CPU, storage, bandwidth and so on; click **Running Status** or the icon below and jump to the detail interface. See Figure 4-93.

Figure 4-93 Running status



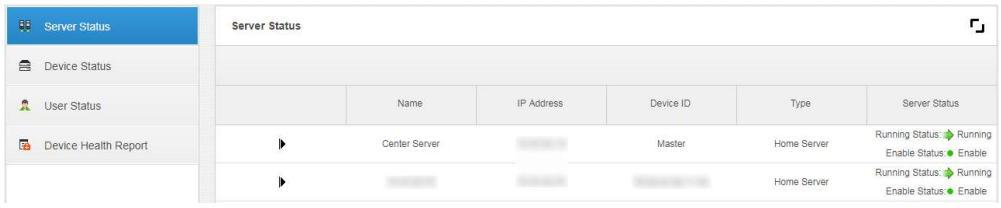
4.11.4.3 Status Information

Check server, device, user online/offline status statistics, click Status Information or the icon below to jump to the detailed interface.

Service Status Information

Click on the Service Status interface, and then the interface displays service details. See Figure 4-94.

Figure 4-94 Server status

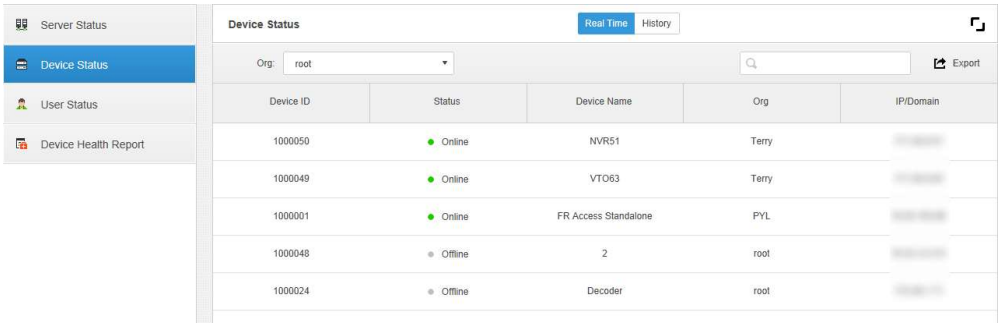


Device Status Information

Step 1 Click the tab of **device Status**.

The system will display device real-time status by default. See Figure 4-95.

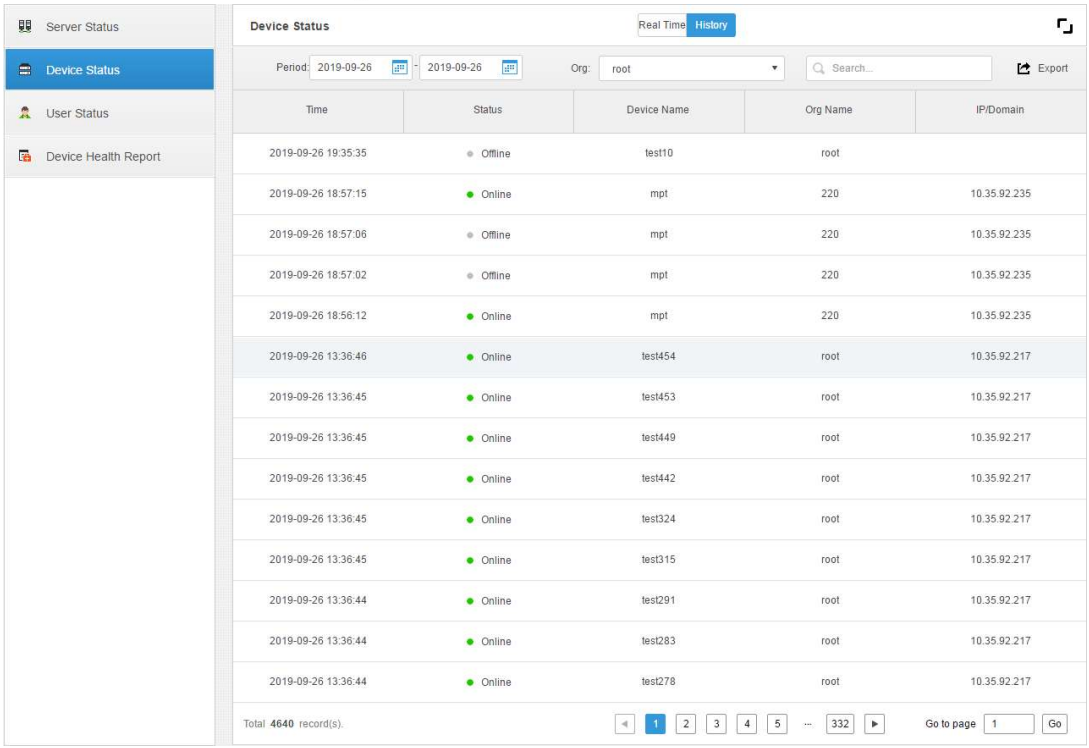
Figure 4-95 Device status



Step 2 Check device status.

- Click the **Real Time** tab on the device status information interface, check device realtime status info.
- Click the **History** tab on the device status information interface, check device history status info. See Figure 4-96.

Figure 4-96 Device status searching



Step 3 Click **Export**.

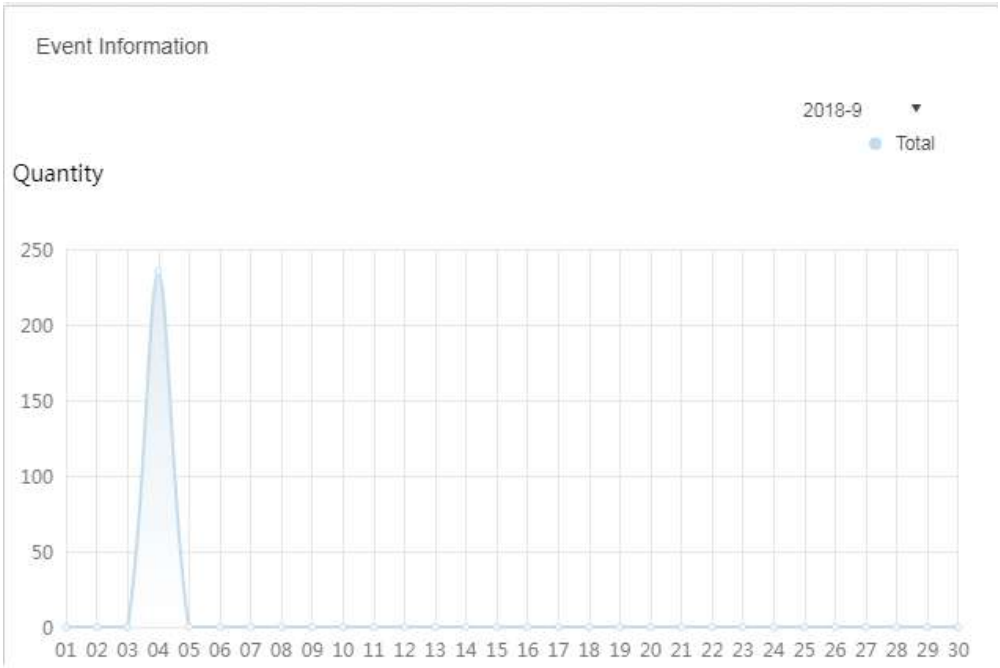
It exports device realtime status information (PDF format).

Step 4 Click **User State** and **device Health Report** tabs to check corresponding details.

4.11.4.4 Event Information

Check total number of alarm events and processed events according to month. See Figure 4-97.

Figure 4-97 Even information

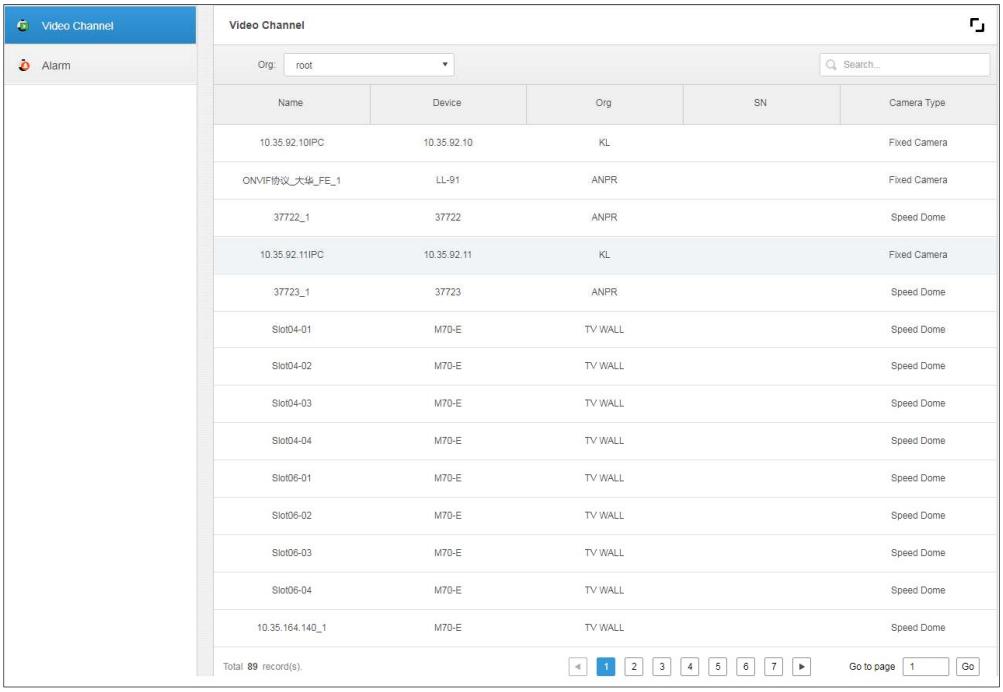


4.11.4.5 Source Information

It is to check the statistics of encoding channel and alarm channel, click Source Information or the icon below to jump to the detailed interface.

- Check video channel details. See Figure 4-98.

Figure 4-98 Video channel



- Click Alarm tab to check the details of alarm channel.

4.12 Configuring Cascade

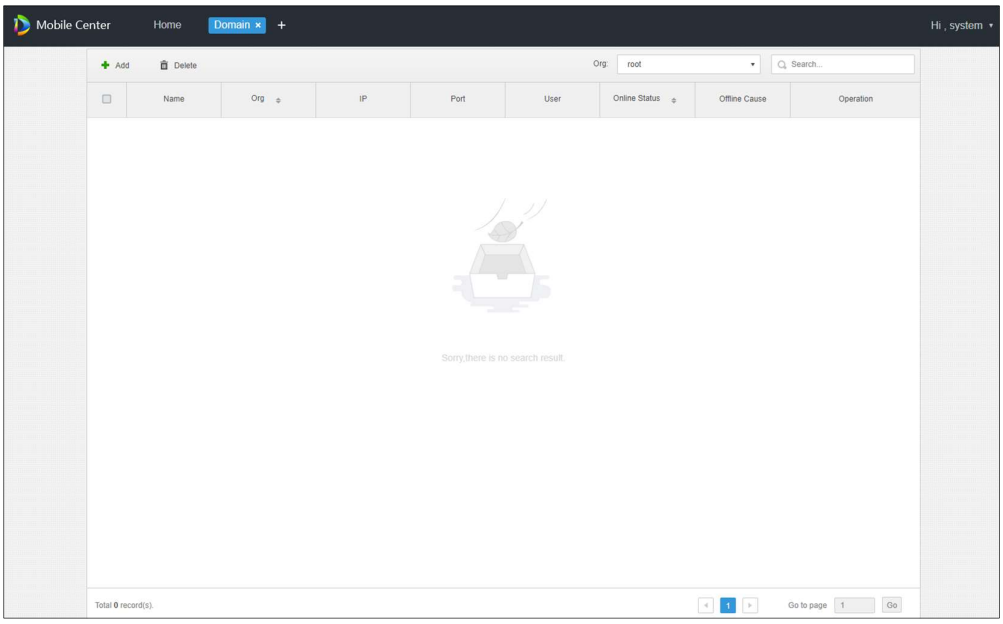
The system supports cascading. After cascading, platform of higher level can view the live video and video record of platforms of lower level. Configuring cascade refers to adding lower-level platforms to higher-level ones. It supports up to 3 levels.

- Before configuring, make sure the platform is deployed.
- Currently, the systems supports cascading between Pro and Express platforms. Express can only be lower-level platform.

Step 1 Click , and select **Domain** on the **New Tab** tab.

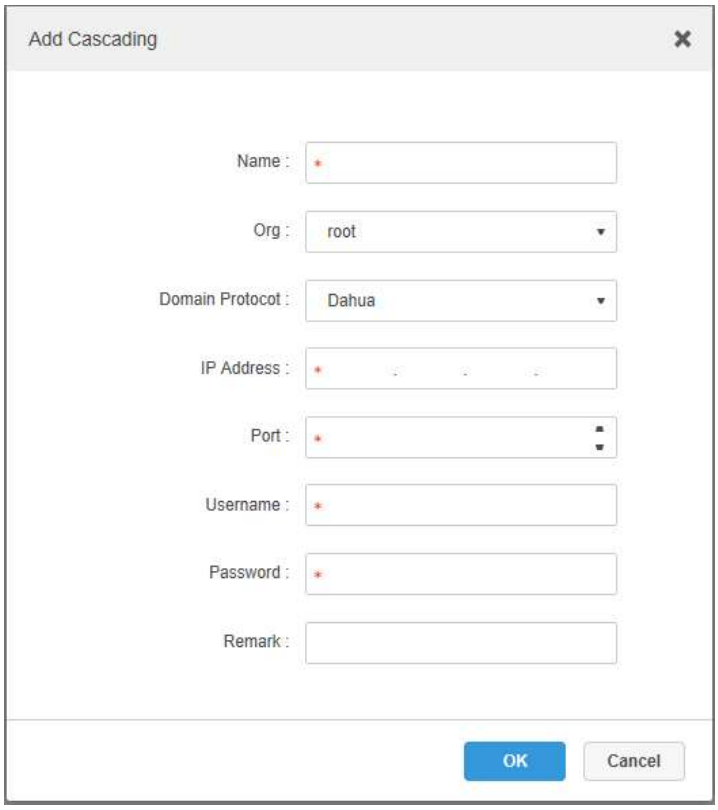
The **Domain** interface is displayed. See Figure 4-99.

Figure 4-99 Domain



Step 2 Click **Add**, and the **Add Cascading** interface is displayed. See Figure 4-100.

Figure 4-100 Add cascading



Step 3 Configure the parameters, and click **OK** to save the configuration.

Org refers to the higher-level platform that the added platform belongs to.

Step 4 If there is more than one level of platform, repeat this process.

5 Client Functions

Configure various functions and rules by Mobile Center client and then display results, such as attendance management, support configuring attendance rules and searching attendance report. Mobile Center client includes PC client and mobile phone APP. In this chapter, it takes Mobile Center client (hereinafter referred to as client) as an example to introduce each function.

5.1 Client Installation and Login

5.1.1 PC Requirements

To install the Mobile Center Client, the PC shall meet the following requirements shown in Table 5-1.

Table 5-1 Installation requirement

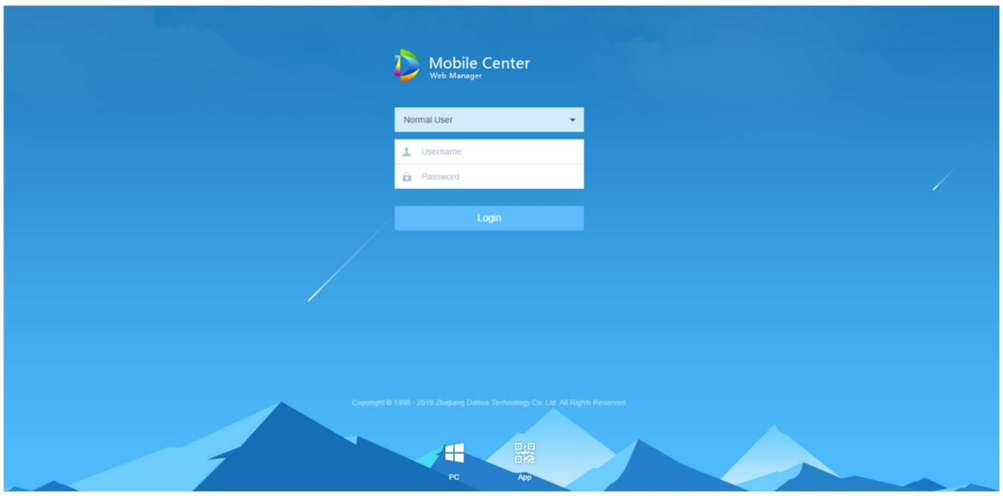
Parameters	Description
Recommended Config	● CPU: i5-6500 ● Main frequency:3.20GHz ● Memory:8GB ● Graphics:Inter HD Graphics 530 ● Network adapter:1Gbps ● HDD Type:HDD 1T ● Mobile Center client installation space:200GB
Min. Config	● CPU:i3-2120 ● Memory:4GB ● Graphics:Inter(R) Sandbridge Desktop Gra ● Network adapter:1Gbps ● HDD Type:HDD 300GB ● Mobile Center client installation space:100GB

5.1.2 Downloading and Installing Client

5.1.2.1 Installing PC Client

Step 1 Input IP address of Mobile Center into the browser and then press **Enter**.
The **Login** interface is displayed. See Figure 5-1.

Figure 5-1 Manager login



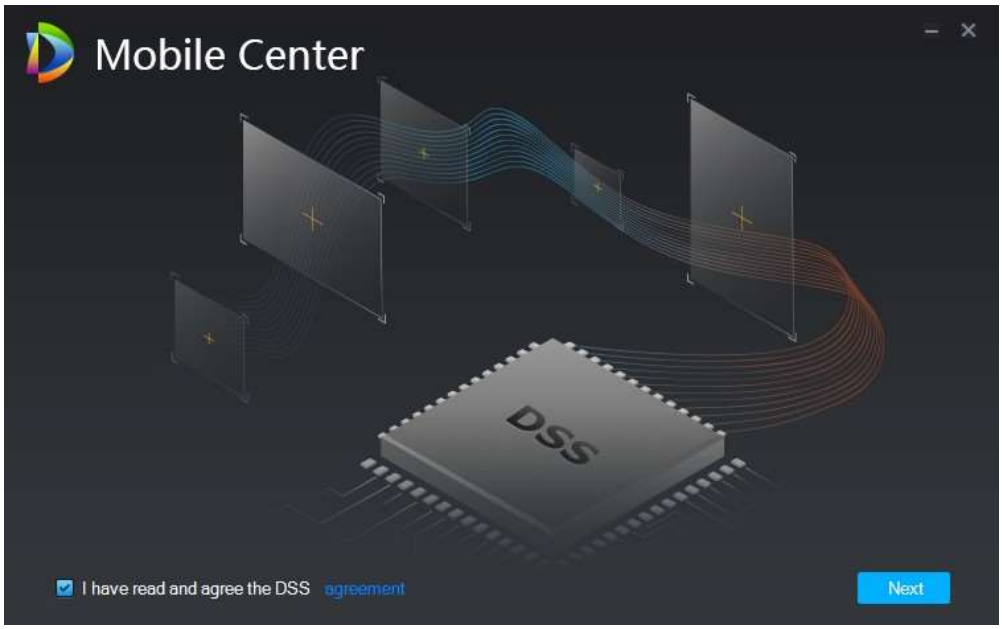
Step 2 Click to download the client.

System pops up the **File Downloads** dialogue box.

Step 3 Click **Save** to download and save the Mobile Center client software on the PC.

Step 4 Double-click the client setup.exe and begin installation.

Figure 5-2 Client installation



Step 5 Select language, and check the box of **I have read and agree DSS agreement** and then click **Next** to continue.

Step 6 Select installation path. See Figure 5-3.

Figure 5-3 Client installation

Step 7 Click **Install** to install the client.

System displays installation process. It takes 3 to 5 minutes to complete. Please be patient. The complete interface is shown as in Figure 5-4.

Figure 5-4 Client installation

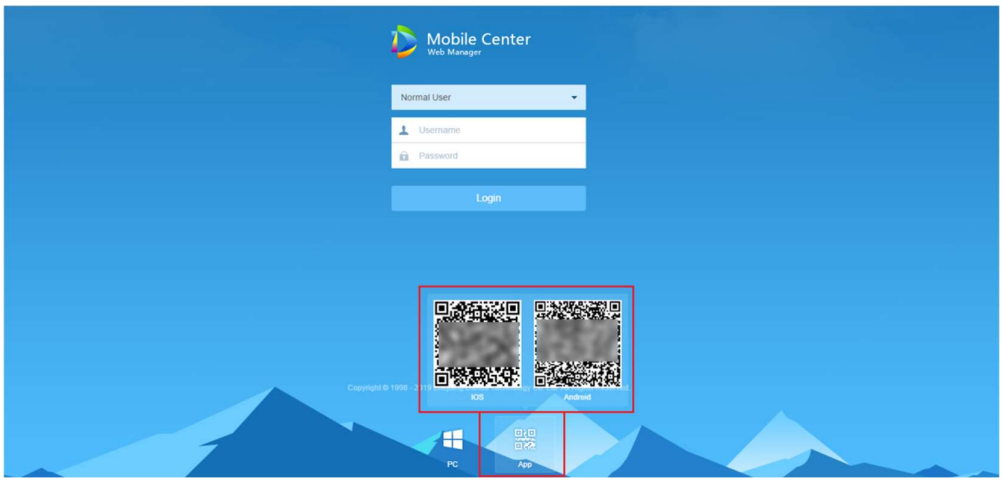
Step 8 Click **Run** to run the client.

5.1.2.2 Mobilephone App

Step 1 Input IP address of Mobile Center into the browser and then press **Enter**.

Step 2 Click to view QR code of mobilephone APP. Currently it supports iOS and Android. See Figure 5-5.

Figure 5-5 App downloading



Step 3 Scan the QR code on the actual interface and then download the mobilephone App.

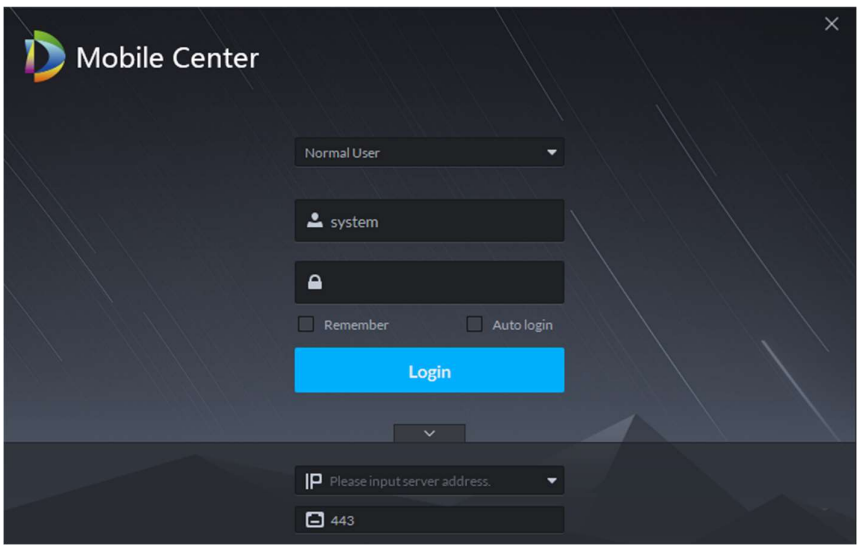
5.1.3 Logging in Client

Step 4 Double click icon

on the desktop.

The client login interface is displayed. See Figure 5-6.

Figure 5-6 Client login



Step 5 Enter **Username**, **Password**, **Server IP** and **Port**. Server IP means the IP address to install Mobile Center server or PC, Port is 443 by default.

Step 6 Click **Login**.

The **Live** interface is displayed by default. See Figure 5-7.

Figure 5-7 Live

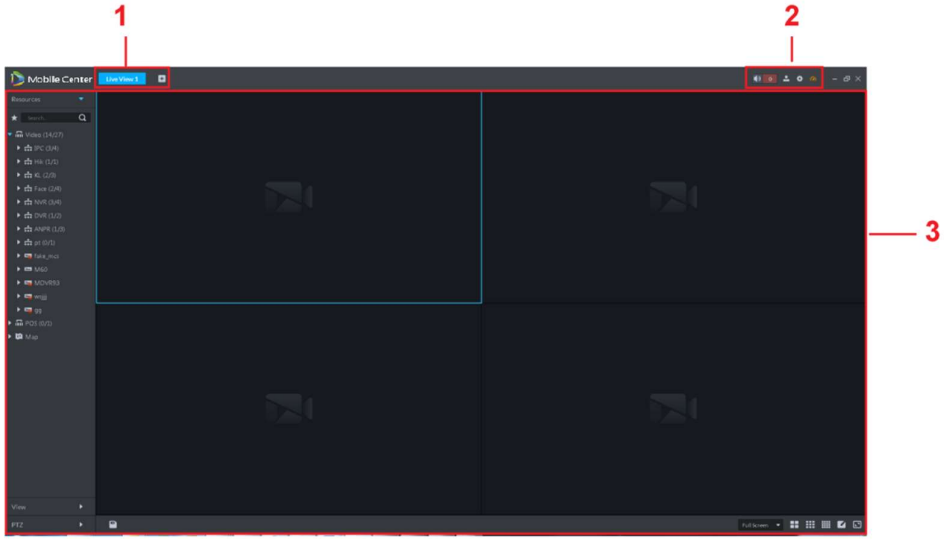


Table 5-2 Live view interface introduction

No.	Name	Function
1	Tab	Display all valid tabs. Click and you can open the module you want.

No.	Name	Function
2	System operation pane	Refer to the following contents for icon definition. ● : Open/close alarm audio. ● 0: It displays alarm amount. Click an alarm; you can go to Event center interface. ● : User information: click the icon and then select the corresponding function, you can login platform manager, modify password, lock client, view help file, and logout user. ◇ Select platform IP address, system goes to platform manager login interface. ◇ Select Modify password, you can change user password. ◇ Select Lock Client, it is to lock the system, you cannot operate on the client. Input the login password again to unlock. ◇ Select About, it is to view version information, released date. ◇ Select Logout, it is to logout the system. System goes back to the client login interface. ● : Local config. It is to set general, video, playback, snapshot, record, alarm shortcut settings. Refer to 5.2 Local Configuration for detailed information. ● : It is to view system status. It includes network status, CPU status, and memory status.
3	Operation area	It is to operate the functions.

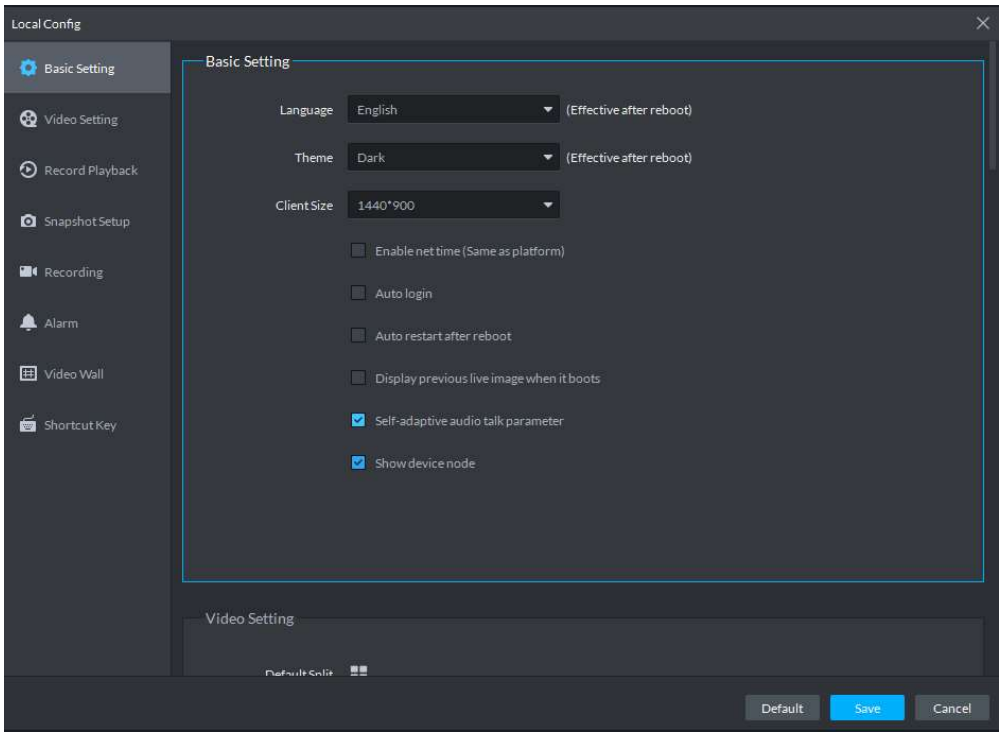
5.2 Local Configuration

After logging into the client for the first time, you need to configure the system parameters. It includes General, Video, Playback, Snapshot, Record, Alarm and the Shortcut Key.

Step 1 Click at the top right corner on the homepage.

The **Local Config** interface is displayed. See Figure 5-8.

Figure 5-8 Basic setting



Step 2 Click **Basic Setting** and set relevant parameters. Refer to Table 5-3 for more details.

Table 5-3 Basic settings parameters

Parameters	Description
Language	Modify the language displayed on client; reboot the client to make it valid after setting.
Theme	Theme color includes dark and white. Reboot the client to make it valid after setting.
Client size	It is to set client display size.
Enable net time	If checked, the client starts to synchronize network time with the server. It is to complete time synchronization.
Auto Login	If checked, auto login is allowed when Client starts running.
Auto Reboot	If checked, auto reboot of the Client is allowed when the PC power is on.
Display Previous live Image when it boots	If checked, system displays the last Live video automatically after rebooting the client.

Parameters	Description
Self-adaptive Audio Talk Parameter	If checked, the system will adapt to Sampling Frequency, Sampling Bit, and Audio Format to the device automatically during audio talk.
Show device Node	Check the box, system displays device node.

Step 3 Click **Video Setting** to set parameters.

The **Video Setting** interface is shown as in Figure 5-9. Refer to Table 5-4 to set parameters.

Figure 5-9 Video setting

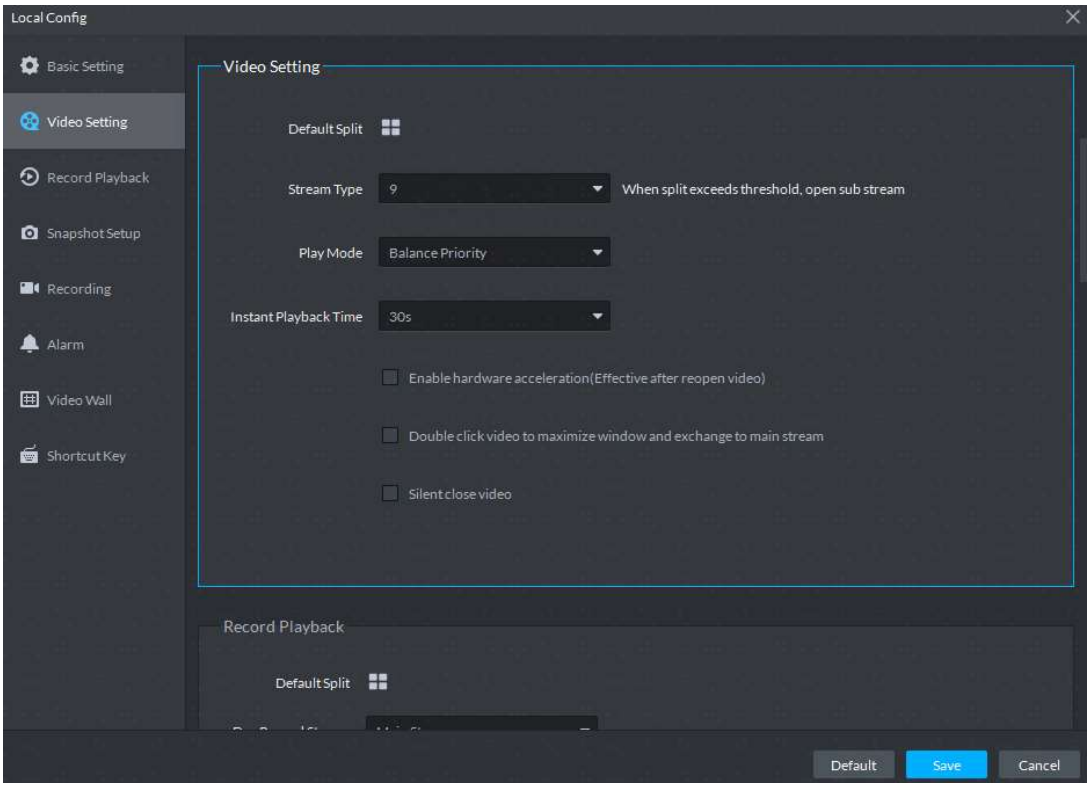


Table 5-4 Video setting parameters

Parameters	Description
Default Split	Set split mode of the video window.
Stream type	Defines bit stream type for video transmission. With main bit stream as default, the auxiliary bit stream will be used when number of window splits is greater than the value selected here.
Play Mode	Play mode to be selected as required, including Real Time Priority, Fluency Priority, Balance Priority, as well as user-defined modes.
Video buffer time	It is to set video buffer time. It is only valid when play mode is customized.

Parameters	Description
Instant playback time	Select instant playback time and then click Instant playback on the Live view interface, you can view the record of current period.
Enable hardware acceleration (effective after reopen the video)	Check the box to enable the function. It is to use hardware module to enhance acceleration features.
Double-click video to maximize window and exchange to main stream	Check the box to enable the function.
Slient close video	After being enabled, if the time of no operation for the Live interface exceeds the set value, the system will close Live automatically.

Step 4 Click **Record Playback** to set parameters.

The **Record Playback** interface is shown as Figure 5-10. Refer to Table 5-5 to set parameters.

Figure 5-10 Record playback

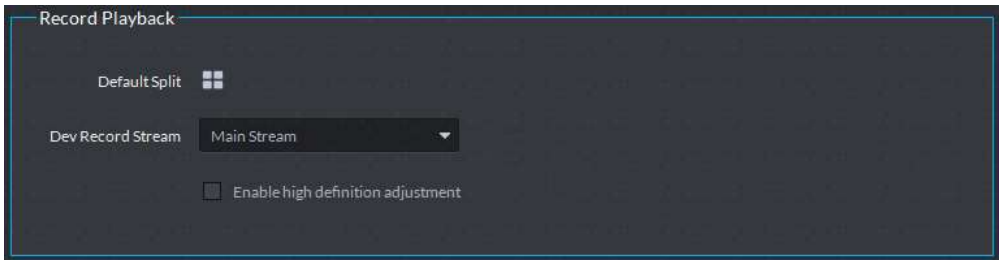


Table 5-5

Parameters	Description
Default Split	Set default split mode of the playback window.
device record stream	It is to select record playback bit stream.
Enable high definition adjustment	Check the box to enable the function. In high definition, big bit stream playback mode, system reserves I frames only to guarantee video fluency and reduce high decoding pressure.

Step 5 Click **Snapshot Setup** to set parameters.

The **Snapshot Setup** interface is shown as in Figure 5-11. Refer to Table 5-6 to set parameters.

Figure 5-11 Snapshot setting

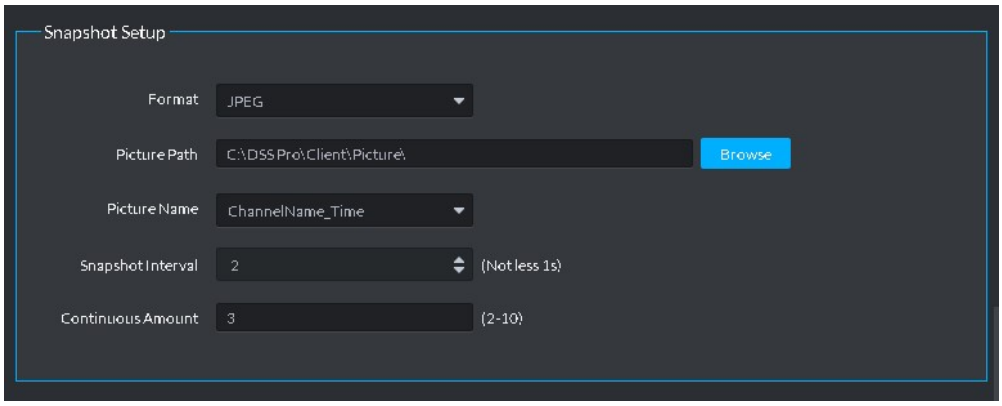


Table 5-6 Snapshot setting parameters

Parameters	Description
Format	Set snapshot image format.
Picture path	Set snapshot storage path. The default path: C:\Mobile Center\Client\Picture\.
Picture name	Select picture name rule.
Snapshot interval	Set snapshot interval. System snapshot once after the specified period.
Continuous amount	Snapshot amount at each time.

Step 6 Click **Recording** to set parameters.

The **Recording** interface is shown as in Figure 5-12. Refer to Table 5-7 to set parameters.

Figure 5-12 Recording

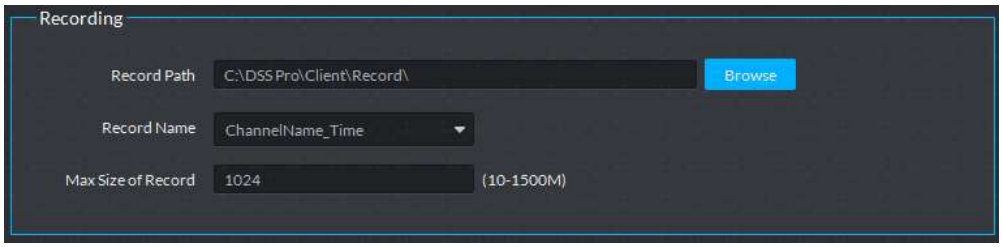


Table 5-7 Recording parameters

Parameters	Description
Record path	Set record storage path. The default path: C:\Mobile Center\Client\Record\.
Record name	Set record file name rule.
Max. record size	Set record file size.

Step 7 Click **Alarm** to set parameters.

The **Alarm** interface is shown as in Figure 5-13. Refer to Table 5-8 to set parameters.

Figure 5-13 Alarm

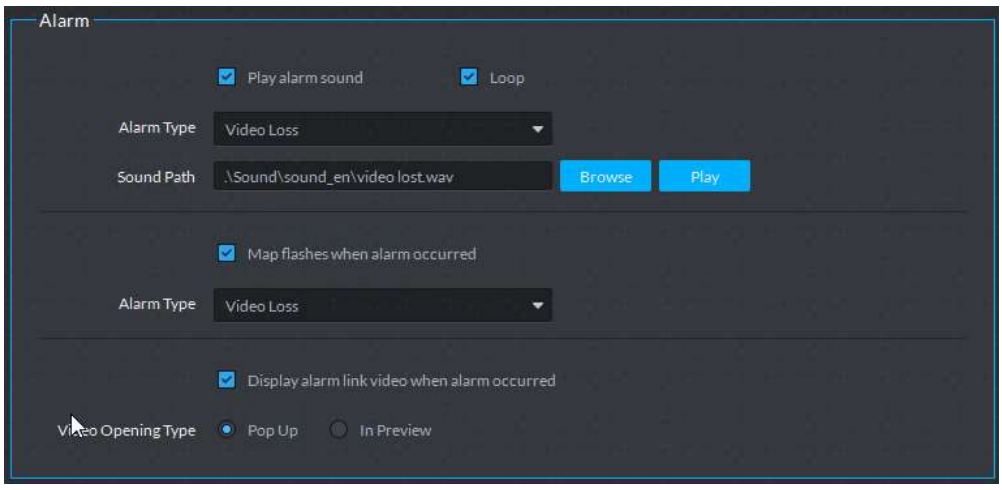


Table 5-8 Alarm settings

Parameters	Description
Play alarm sound	Check the box, system generates a sound when an alarm occurs.

Parameters	Description
Loop	Check the box; system plays alarm sound repeatedly when an alarm occurs. This item is only valid when Play alarm sound function is enabled.
Alarm Type	Set alarm type. System can play sound when corresponding alarm occurs. This item is only valid when Play alarm sound function is enabled.
Sound Path	Select alarm audio file path.
Map flashes when alarm occurred	Check the box and then select alarm type. When the corresponding alarm occurs, the device on the emap can flash.
Display alarm link video when alarm occurred	Check the box, system automatically opens linkage video when an alarm occurs.
Video opening type	System automatically opens linkage video when an alarm occurs. You can view on the pop-up window or on the preview interface.

Step 8 Click **Video Wall** to set parameters.

The **Video Wall** interface is shown as Figure 5-14. Refer to Table 5-9 to set parameters.

Figure 5-14 Video wall

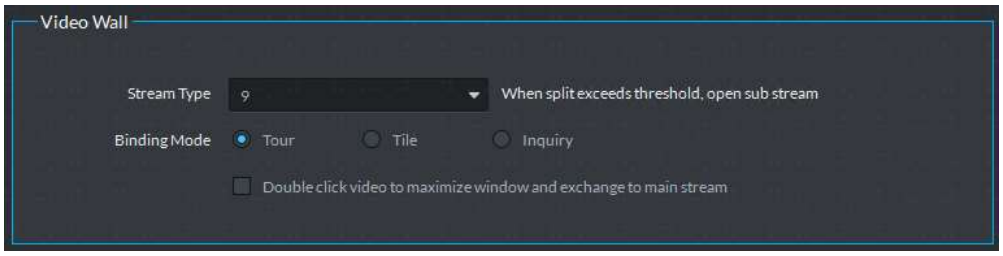


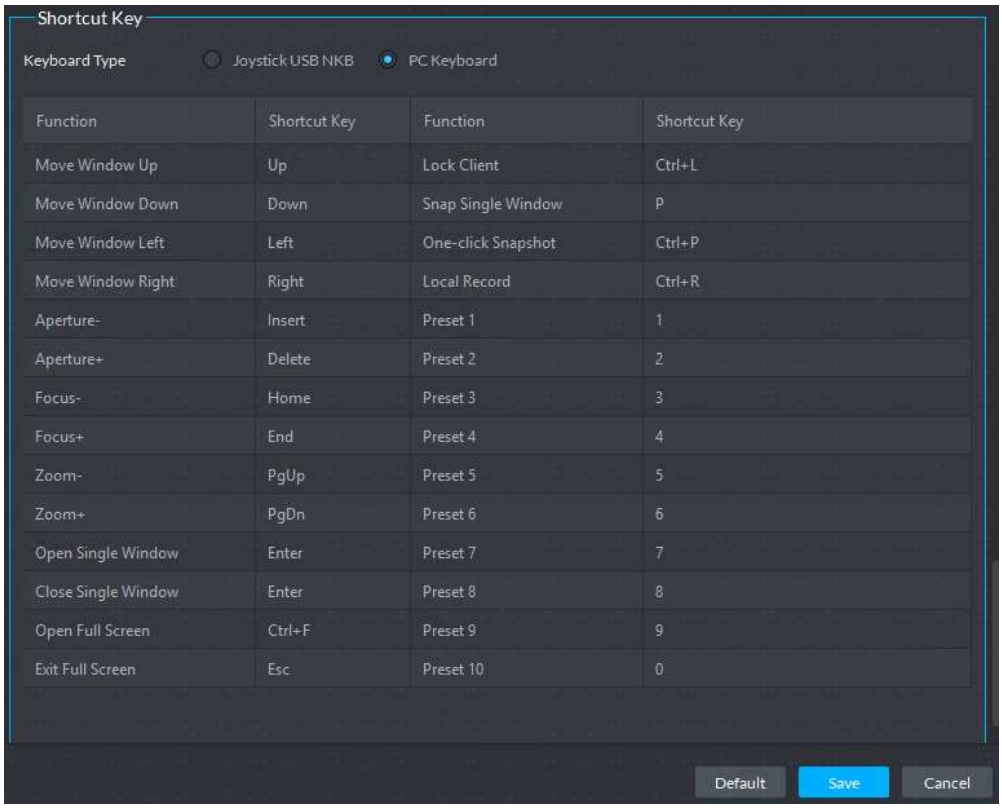
Table 5-9 Video wall setting

Parameters	Description
Stream type	When split exceeds threshold, open substream.
Binding mode	● Tour: device nodes are displayed on 1 window by tour. ● Tile: device nodes are aredisplayed on windows of current screen by tile. ● Inquiry: When dragging the device nodes to the window, the systems prompts whether tour or tile.
Double click video to maximize window and exchange to main stream	Double-click the video screen to maximize the window, and the stream change to main stream.

Step 9 Click **Shortcut Key** to set parameters.

The **Shortcut Key** interface is shown as in Figure 5-15.

Figure 5-15 Shortcut key



Step 10 Click **Save**.

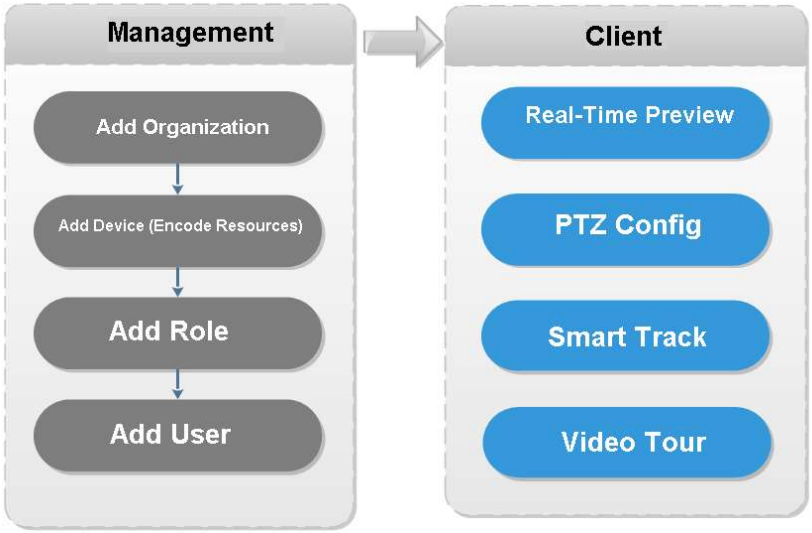
5.3 Live View

5.3.1 Preparations

Before the operation, refer to 4.6 Adding device to add decode device on the manager.

Refer to Figure 5-16 for video preview flows information.

Figure 5-16 Video live view flows



5.3.2 Live View

5.3.2.1 Live Video View

Step 1 Click and then on the **New Tab** interface, select Live View, system displays Live view interface by default.

Step 2 View real-time video by:

- Select channel from the device list on the left side of the Live view interface.
- Double-click or drag it to the video window. If you double-click the device, then all channels of the device will be opened.
- Select the preview window(s) on the right side of interface.
- On the device list, right-click to select Tour, and you can choose the time. The system will play (in loops) videos of all channels for selected deivces within the set time, which is the play time.

Real-time monitoring interface is displayed in the video window. See Figure 5-17. Refer to Table 5-10 to set parameters.

Figure 5-17 Live

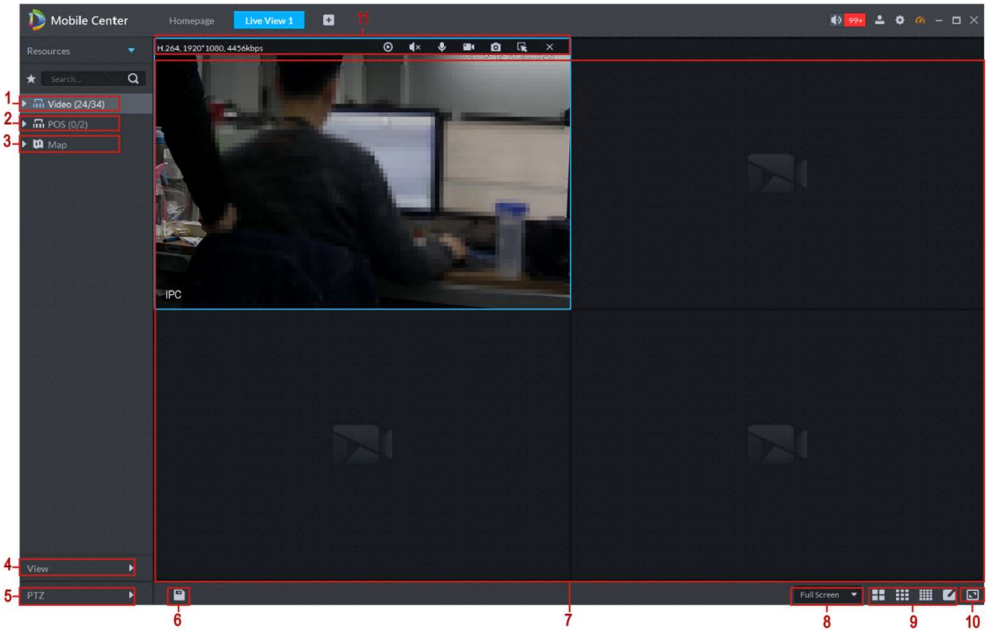


Table 5-10 Live interface introduction

No.	Name	Function

No.	Name	Function
1	Favorites and device Tree Search	● From Local config > General, if you enable Show device node, device tree displays all channels of current device. If you cancel the box, system display all channels of all device. ● Search is supported by input device name or channel name in here. ● : Add, Delete or Rename Favorite. Favorite Tour supported.
2	POS	Open POS and its corresponding video channel on the Live view interface.
3	Map Resource	Map can be opened in preview window, both GIS map and Raster map.
4	View	Live video window can be saved as View. Three-level directory is adopted for view, with level one as root node, level two for group and level three for view. Video Tour is supported from root node and group node, with tour intervals selected from 10s, 30s, 1min, 2min, 5min and 10min. Maximum of 100 views can be created.
5	PTZ	More info about PTZ of PTZ camera, refer to 5.3.3 PTZ.
6	Save view	Click to save current video window as a view.
7	Video play	Displays real-time video play. Put the mouse on the video play window, and you can scroll forward to zoom in and backward to zoom out.
8	Display mode	Aspect ratio of the video window, selected from two modes for video play: actual scale and fit in window.
9	Window Split Mode	Select from modes among 1 to 64 to set window split mode, or click to define split mode. If the real-time channel is more than the number of windows, then you can turn page(s) at the bottom-middle side of the interface.
10	Full Screen	Switch the video window to full screen mode. To exit full screen, press the Esc key, or right click to select exit full screen.
11	Bit Stream and Quick Start	Display encode format, bit stream information and quick start. Refer to 5.3.2.3 Window Shortcut Menu for detailed information.

5.3.2.2 Right–Click Shortcut Menu

On the **Live View** video window, right click mouse, the interface is shown as in Figure 5-18. Refer to Table 5-11 to set parameters.

Figure 5-18 Shortcut menu

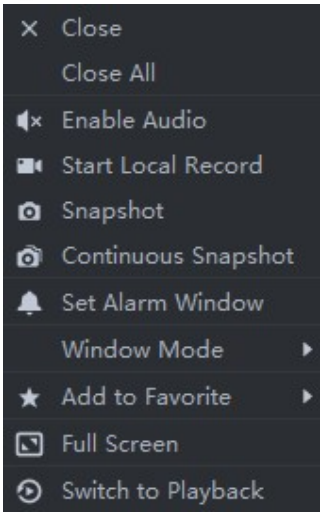


Table 5-11 Shortcut menu introduction

Parameters	Description
Close	Close active video window.
Close All	Close all video windows.
Enable Audio	Same as , to enable or disable camera audio.
Start Local Record	Same as , to record audio/video of the active video window and save them in local PC.
Snapshot	Same as , to save image of the active video window as picture (one picture for each snapshot).
Continuous Snapshot	To save image of the active video window as picture (three snapshots each time by default).
Window mode	It supports standard mode, 1+3 mode, 1+5 mode.
Add To Favorites	You can add the active channel or all channels into Favorite.
Full Screen	Switch the video window to full screen mode. To exit full screen, double click video window, or right click to select exit full screen.
Switch to Playback	You can switch between live view interface and playback interface quickly, without going back to homepage first.

5.3.2.3 Window Shortcut Menu

Move the mouse to the video window, you can see the shortcut menu at the top right. See Figure 5-19. Refer to Table 5-12 for detailed information.

Figure 5-19 Live window

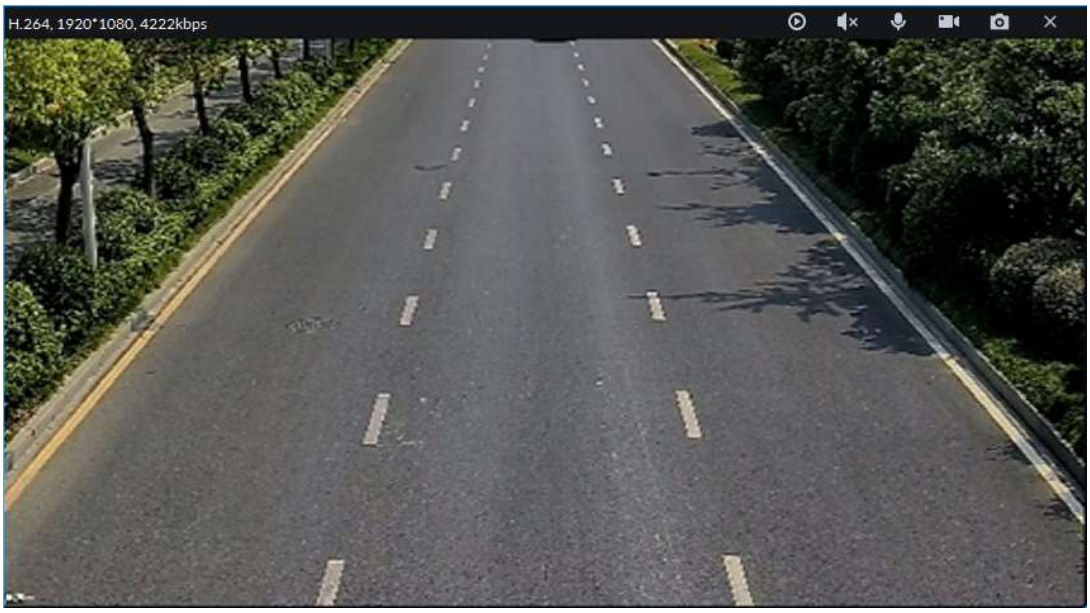


Table 5-12 Live window functions

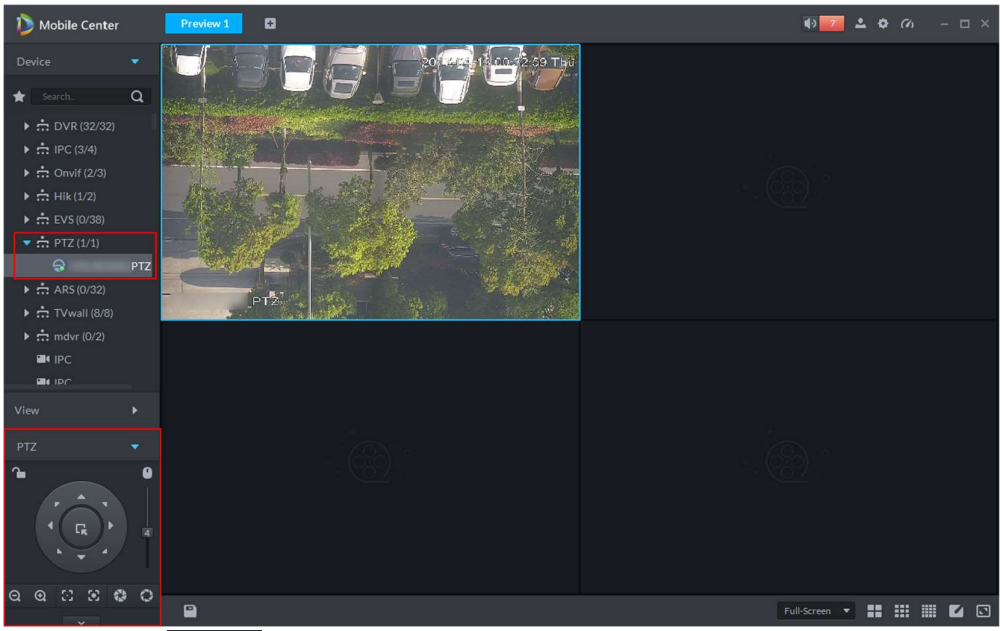
Icon	Name	Description
	Instant playback	Open/close instant playback. Go to Local config>General to set instant playback time. Make sure there is a record on the platform or the device.
	Audio	Open/close audio.
	Audio talk	Open/close bidirectional talk.
	Local record	Click it, system begins record local file and you can view the record time at the top left. Click again, system stops record and save the file on the PC.
	Snapshot	Click to snapshot once.
	Close	Click to close video.

5.3.3 PTZ

5.3.3.1 PTZ Operation Interface

Step 1 On Preview interface, open video from the PTZ camera, you can see PTZ operation interface on the left. See Figure 5-20.

Figure 5-20 PTZ operation



Step 2 Click at the bottom of the interface to operate. See Figure 5-21.

Figure 5-21 PTZ panel

Table 5-13 PTZ panel introduction

Parameters	Description

Parameters	Description
	Click to lock the current PTZ. Locked status shows as . Control over PTZ varies depending on user level. ● When user of low level locks PTZ, user of high level can unlock and enable the PTZ by clicking . ● When user of high level locks PTZ, user of low level can't unlock the PTZ, unless PTZ automatically unlock itself. ● Users of the same level can unlock PTZ locked by each other. Default time for automatically unlocking PTZ is 30s.
	• Control speed dome with mouse.
Direction Key	• Set rotation direction of PTZ, eight directions are available in total: up, down, left, right, upper left, upper right, lower left and lower right.
	• 3D Location and Partially Zoom In (for Speed Dome PTZ), to zoom in or zoom out the selected area. This function can be controlled with mouse only.
	From top to the bottom to adjust rotation speed of PTZ, to set the step size chosen from 1 to 8.
	• Zoom, to control zoom operation of speed dome.
	• Focus, to adjust focus.
	• Aperture, to adjust brightness.
	It is to set preset, tour, pattern, scan, rotation, wiper, light, IR light function, etc. Refer to 5.3.3.2 PTZ Settings for more information.

5.3.3.2 PTZ Settings

5.3.3.2.1 Configuring Preset

By adding preset, you can rotate the camera to the specified position.

Step 1 Click direction key of the PTZ to rotate the camera to the needed place.

Step 2 Click .

Step 3 Place mouse over 1 and click .

Step 4 Enter preset point SN, and click .

Adding preset point completed.

To the right of

, click , then camera will be rotated to the related position.

5.3.3.2.2 Configuring Tour

Set Tour to enable camera to go back and forth among different presets.

To enable tour, at least 2 preset points are required.

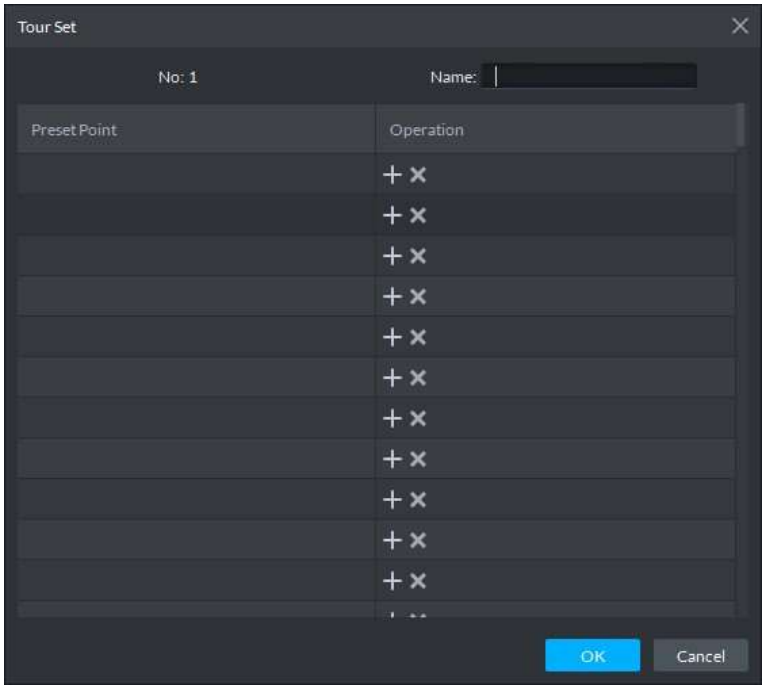
Step 1 Click .

Step 2 Place mouse over 1 and click .
New tour dialogue box pops up.

Step 3 Input name, and click Operation bar .

Choose preset points from the dropdown list on the left. See Figure 5-22.

Figure 5-22 Tour setting



Step 4 Click **OK**.
System prompts Tour Saved Successfully.

Step 5 Click **OK**.

To start tour, place mouse over 1 and click , then camera goes back and forth among the presets of Tour 1.

5.3.3.2.3 Configuring Pattern

Pattern is equivalent to a record process.

Step 1 Click .

Step 2 Place mouse over 1 and click , then operate 8 buttons of PTZ to set pattern.

Step 3 Click to complete pattern setup.

Step 4 Click , and the camera will rotate following the pattern settings.

5.3.3.2.4 Configuring Scan

Step 1 Click .

Step 2 Click PTZ button, and rotate PTZ toward left to a position, then click to set left boundary.

Step 3 Continue to rotate PTZ toward right to a position, and click to set right boundary.

Step 4 Click to start scan, then PTZ will rotate back and forth within the two boundaries.

5.3.3.2.5 Enable/Disable Pan

Click , and then click , PTZ rotate at 360°by specified speed. Click to stop camera rotation.

5.3.3.2.6 Enable/Disable wiper

It is to use RS485 command to control the connected peripheral device wiper on/off. Make sure the connected peripheral device supports wiper function.

Click , and then click , it is to enable wiper. After enabling wiper, click to disable.

5.3.3.2.7 Enable/Disable light

It is to use RS485 command to control the connected peripheral device light on/off. Make sure the connected peripheral device supports light function.

Click , and then click , it is to enable light. After enabling light, click to disable.

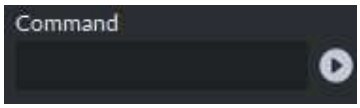
5.3.3.2.8 Configuring custom commands

Different devices support different customized commands. Contact the manufacture for detailed information.

Step 1 Click .

Step 2 Input command on the customized command interface. See Figure 5-23.

Figure 5-23 Command



Step 3 Click to display the function of the customized command.

5.3.3.2.9 PTZ Menu

Step 1 Click .

The PTZ menu is shown as in Figure 5-24.

Figure 5-24 PTZ menu

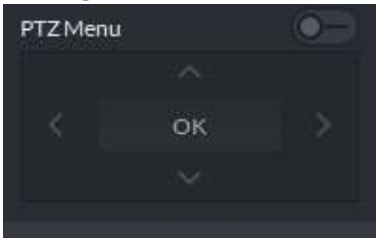


Table 5-14 PTZ menu introduction

Parameters	Description
	Up/down button. Move the cursor to the corresponding item.
	Left/right. Move the cursor to set parameters.
	Click to enable PTZ menu function. System displays main menu on the monitor window.
	Click to close PTZ menu function.
OK	It is the confirm button. It has the following functions. ● If the main menu has the sub-menu, click OK to enter the sub-menu. ● Move the cursor to Back and then click OK to go to go back to the previous menu. ● Move the cursor to Exit and then click OK to exit the menu.

Step 2 Click **OK**.

The monitor window displays main menu. See Figure 5-25.

Figure 5-25 OSD menu

Table 5-15 PTZ menu introduction

Parameters	Description

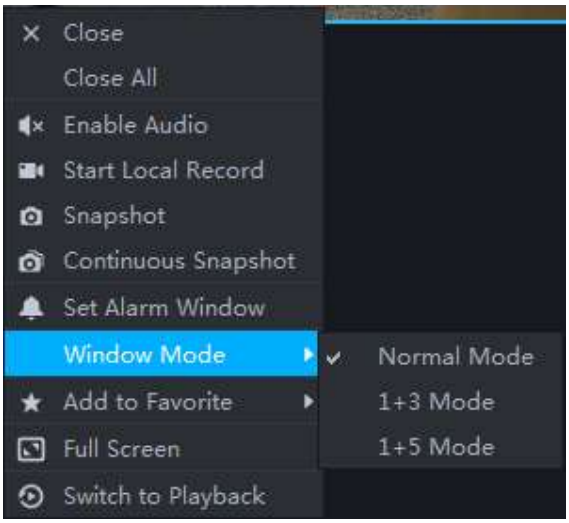
Parameters	Description
Camera	Move the cursor to Camera and then click OK to enter camera settings sub-menu interface. It is to set camera parameters.It includes picture, exposure, backlight, day/night mode, focus and zoom, defog, default, etc.
PTZ	Move the cursor to PTZ and then click OK to enter PTZ sub-menu interface. It is to set PTZ functions. It includes preset, tour, scan, pattern, rotation, PTZ restart, etc.
System	Move the cursor to System and then click OK to enter system sub-menu interface. It is to set PTZ simulator, restore camera default settings, video camera software version and PTZ version.
Return	Move the cursor to the Return and then click OK, it is to go back to the previous menu.
Exit	Move the cursor to the Exit and then click OK, it is to exit PTZ menu.

5.3.4 Region of Interest (RoI)

Client Live view window supports Normal mode, 1+3 mode and 1+5 mode.

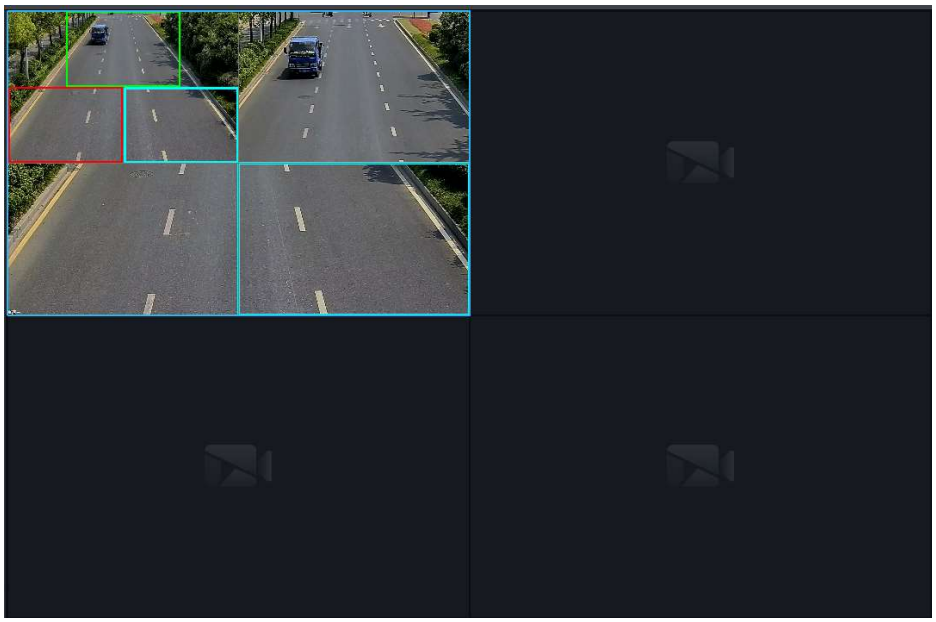
Right click to select Screen Mode in the live view window. See Figure 5-26.

Figure 5-26 Screen mode selection



For example, select 1+3 mode. See Figure 5-27.

Figure 5-27 Mode 1+3



5.4 Record

System can search and playback records from the device or center storage media, which enables you to search, playback and download records of different channels, different times and different types from the Client. If there are records, system displays different colors in date selection region.

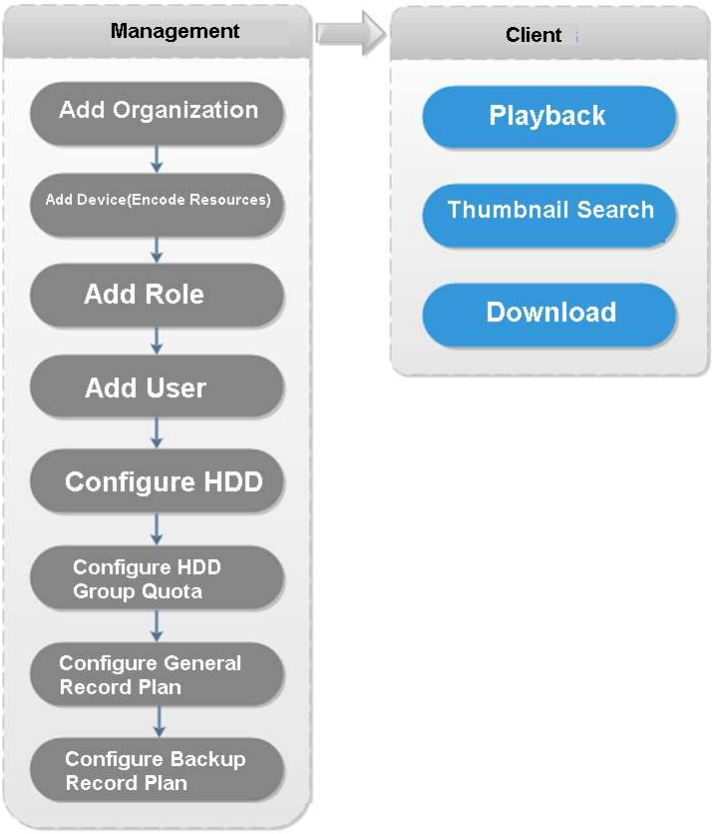
- Device Storage: Record to be stored in front-end SD card, or disks like DVR or NVR. Storage plan is configured on the device.
- Center Storage: Record to be stored in network storage server or Mobile Center disks. For detailed configuration, see Storage config in System Introduction. To play back the record, you need to configure the record plan first, and then system will store the record of the specified period in network storage server.

5.4.1 Preparations

Make sure you have set record schedule on the manager. Contact the admin or refer to 4.7 Configuring Record Schedule for detailed information.

Refer to Figure 5-28 for Playback flows information.

Figure 5-28 Playback flow



5.4.2 Record Playback

5.4.2.1 Search Record

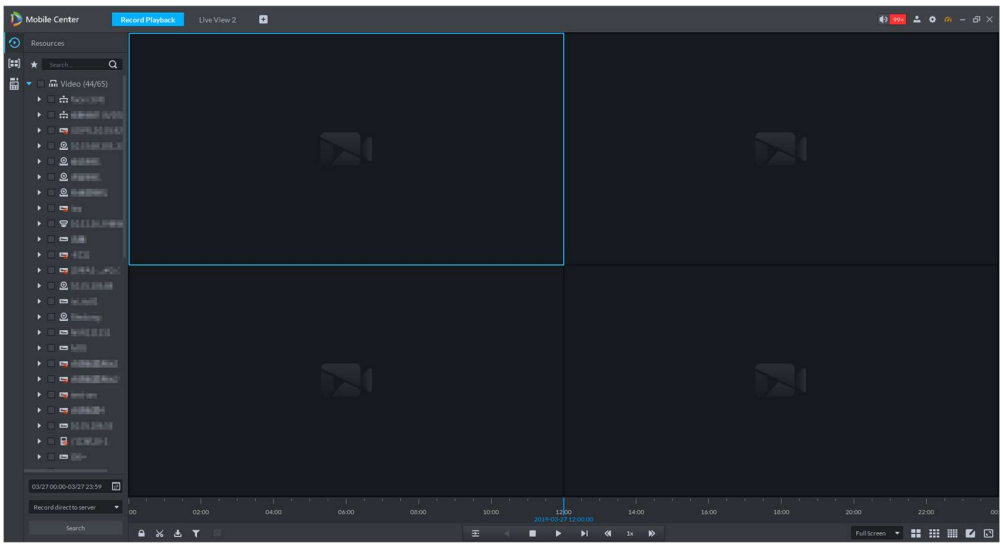
Search record of today, specified date or specified period.

Step 1 Click on the **New Tab** interface and select **Record Playback**.

Step 2 Click .

The **Record Playback** interface displayed. See Figure 5-29.

Figure 5-29 Record playback



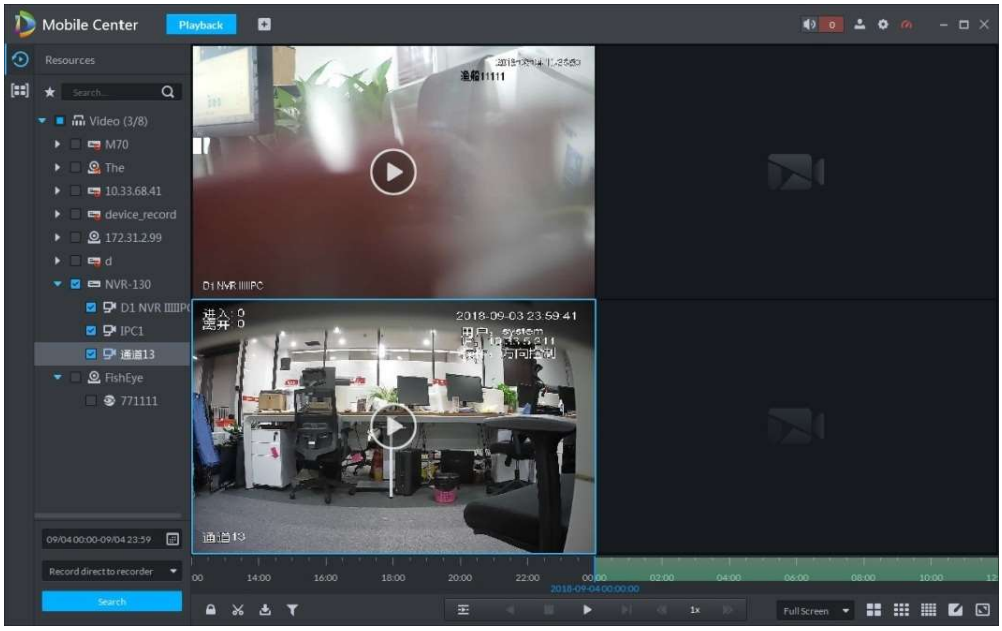
Step 3 Select a channel on the device tree.

Step 4 Select date and record storage position. Click **Search**.

Step 5 Select a video window that has the record and then click .

Corresponding window begins playback the record of current channel. See Figure 5-30.

Figure 5-30 Playback of current channel

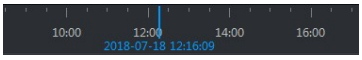


5.4.2.2 Record Control

Refer to Table 5-16 for buttons at the bottom of record playback interface and the description.

Table 5-16 Record control introduction

Icon	Description
	Lock the video stored on server within some period of designated channel. Locked video will not be overwritten when disk is full.

Icon	Description
	Cut video
	Download video
	Filter video according to record type.
	Make dynamic detection analysis over some area of the record image, it only replays the video with dynamic image in the detection area.
	Playback record files of the same period from different channels on selected windows.
	Stop/pause playback
	Frame by frame playback/frame by frame backward.
	Fast/slow playback. Max. supports 64X or 1/64X.
	During playback, you can drag time progress bar to play back record at the specific time.

5.4.2.3 Record Type Filter

Filter video according to record type, record type includes schedule record; alarm record and motion detect record.

Step 1 On **Record Playback** interface, click . See Figure 5-31.

The system displays the interface of **Record Type Filter**. See Figure 5-32.

Figure 5-31 Record playback

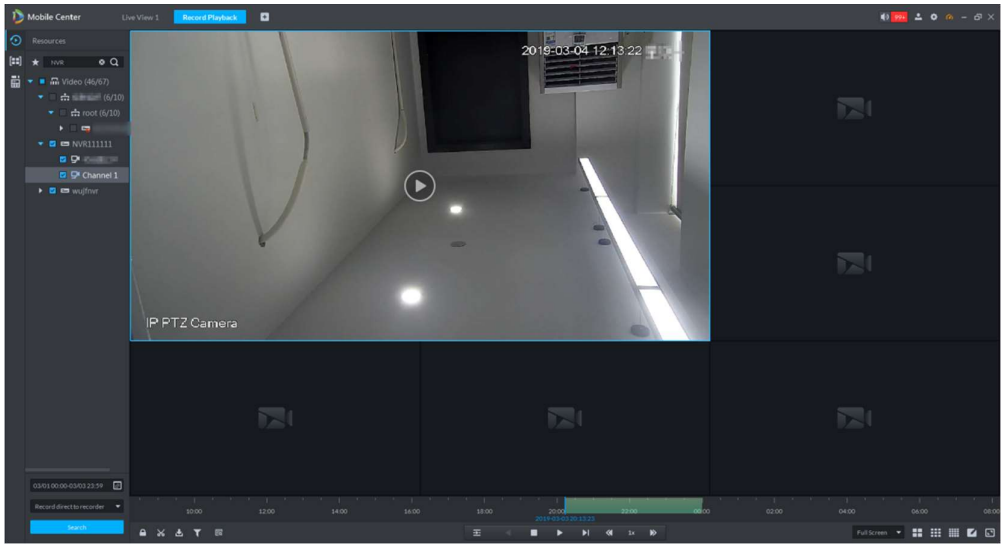
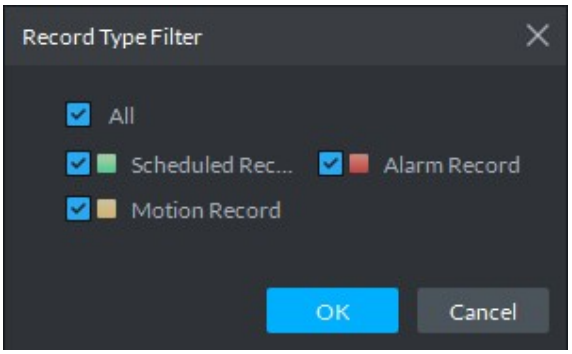


Figure 5-32 Record type filter



Step 2 Select a record type (or types) and then click **OK**.
The system only displays the video of selected type.

5.4.2.4 Smart Search

It makes dynamic detection analysis over some area and only replays the video with dynamic image whith the detection area. The added front device is required to support smart search, otherwise the search result will be null.

Step 1 Click on the interface of **Record Playback**. See Figure 5-33.
The system displays the interface of Smart Search. See Figure 5-34. 22×18 squares are displayed in the window.

Figure 5-33 Record playback

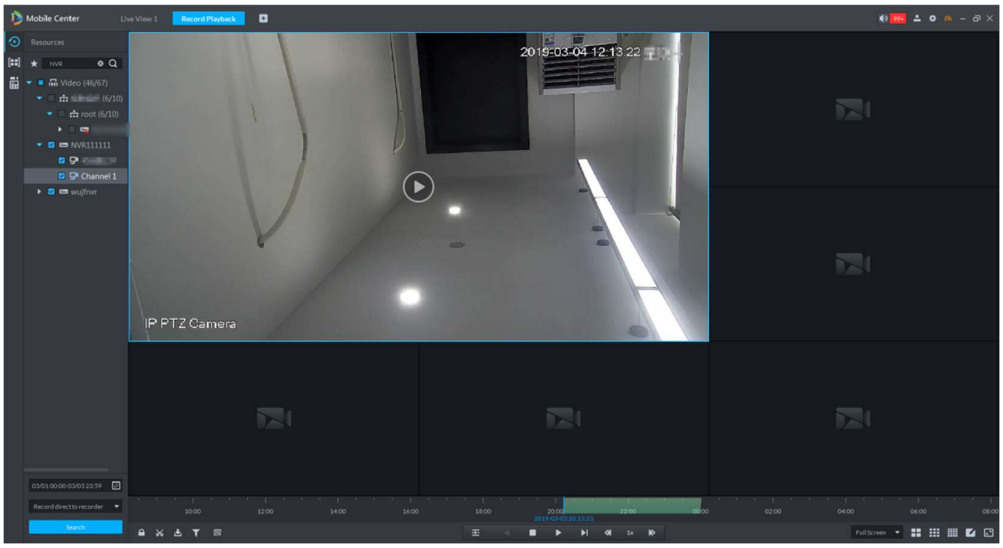
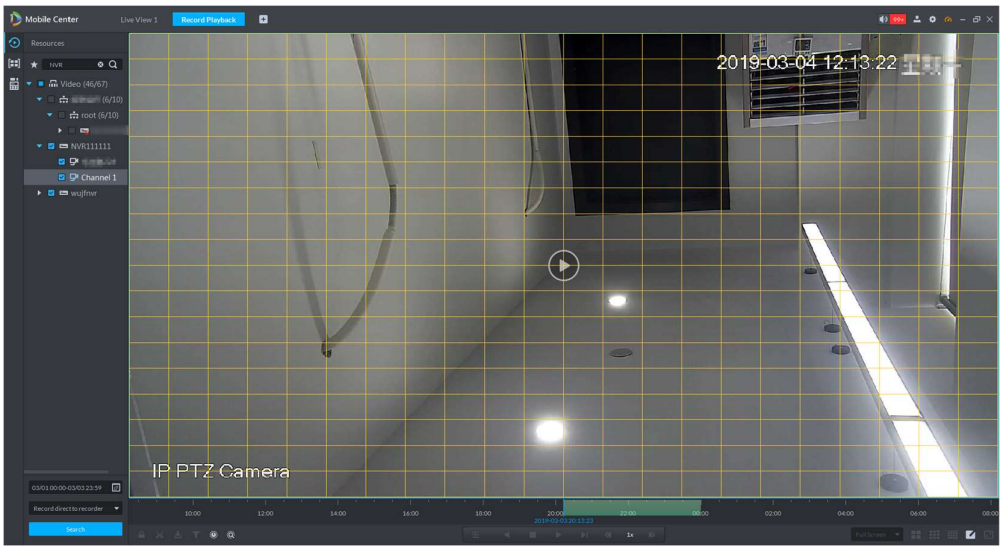


Figure 5-34 Smart search



Step 2 Click the square and select detection area, you can select several areas.

- Select detection area; move the mouse to image, press mouse left button and drag the mouse to select square.
- For selected area, click again or select square to cancel it.

Step 3 Click and start smart search analysis.

- If there is search result, the time progress bar will become purple and display dynamic frame.
- If there is no search result, or selected playback device fails to support smart search, then it will prompt that smart search result is null.

Click and you can reselect detection area.

Step 4 Click the play button on the image or control bar.

The system only replays search result, which is the purple display frame on the time progress bar.

Step 5 Click and exit smart search.

5.4.2.5 Lock Record

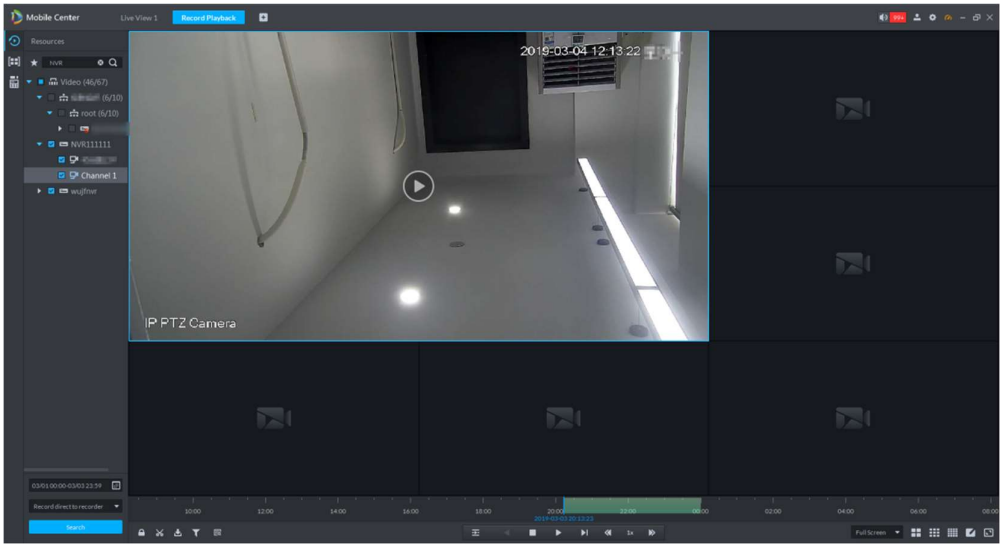
Lock the video stored on the server within some period of specific channel. The locked video will not be overwritten when disk is full.

You can only lock the central video stored on the server.

Step 1 Click at the bottom of the **Record Playback** interface (make sure the window has the record).

Place the mouse pointer to the time progress bar. See Figure 5-35.

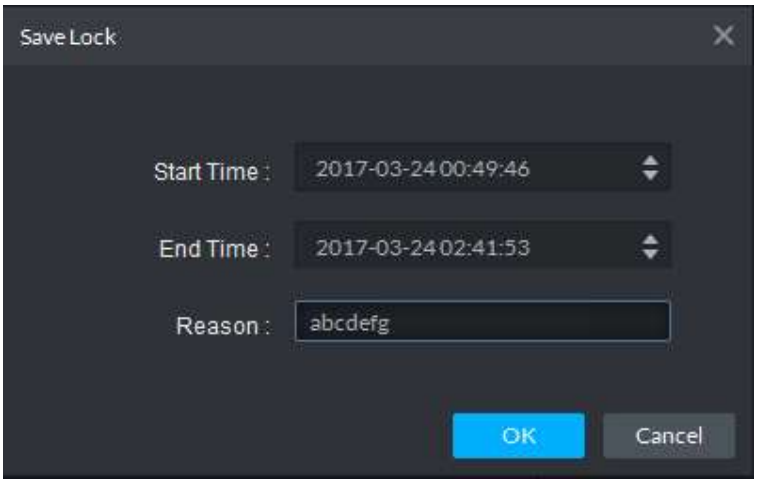
Figure 5-35 Progress bar



Step 2 Click the time progress bar to select lock start time, then drag mouse, and then click to select end time.

System pops up **Save Lock** dialogue box. See Figure 5-36.

Figure 5-36 Save lock



Step 3 Click **OK**.

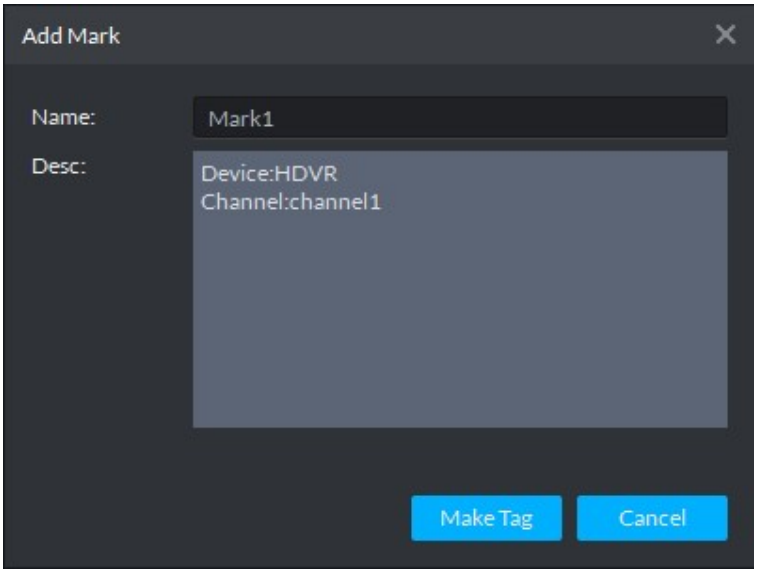
5.4.2.6 Add Mark

You can mark records that interest you by Add Mark for a subsequent search and location.

Step 1 On **Record Playback** interface, move mouse pointer to the window that is playing record. Click at the top left corner.

The **Add Mark** interface is displayed. See Figure 5-37.

Figure 5-37 Add mark



Step 2 Input **Name** and **Description**, and then click **Make Tag**.

System prompts **Tag Creation Successful**. You can search record via mark in the **Download Center**.

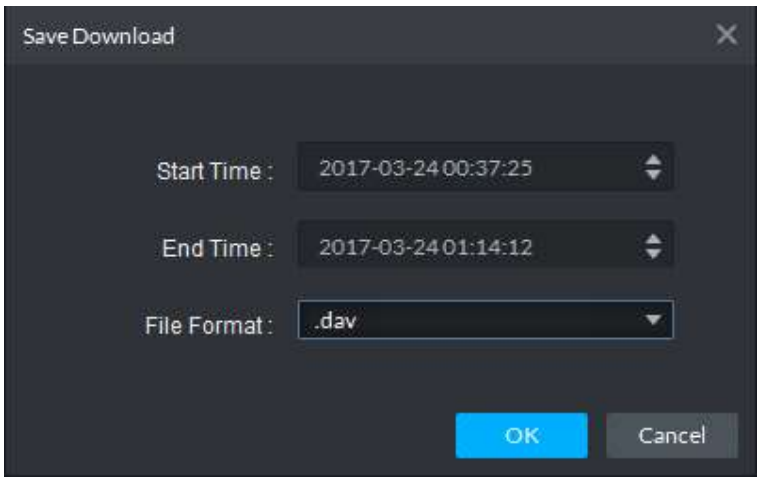
5.4.2.7 Clip Record

Step 1 Click at the bottom of the **Record Playback** interface (make sure there is record in the window).

Step 2 During the timeline, click to start clip and then drag the mouse, click to stop clip.

The **Save Download** interface is displayed. See Figure 5-38.

Figure 5-38 Save download



Step 3 Set file format and then click **OK**.

5.4.2.8 Downloading Recording

The system supports downloading the record in the server or the device to the client.

Click at the bottom side of the **Record Playback** interface, and the **Download Center** interface is displayed. For details, see 5.5 Record Download.

5.4.3 Search Thumbnail

Divide the searched video into levels and display in the form of thumbnail, which is the select ROI. You can view the searched video and image change of ROI at different time, and realize fast search.

Step 1 On **Record Playback** interface, click .

The system displays the interface. See Figure 5-39.

Figure 5-39 Record playback

Step 2 In the organization tree, select a video channel and then set search period and record position. Click .

There is a blue dot at the date top left corner if the channel has a record. See Figure 5-40.

Figure 5-40 Search period setting

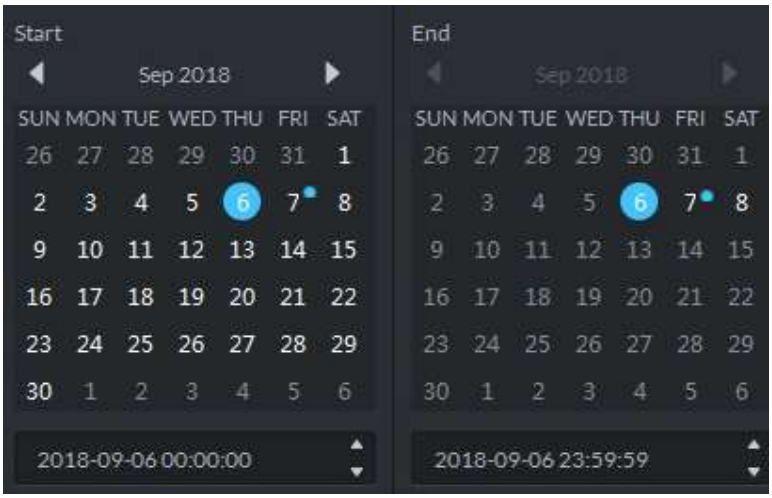
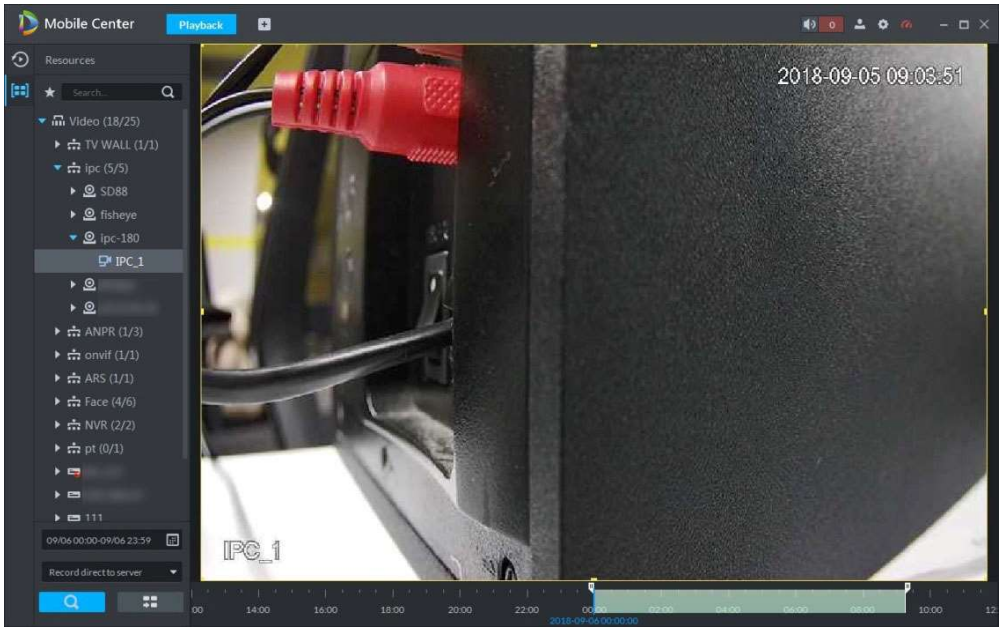


Figure 5-41 Playback



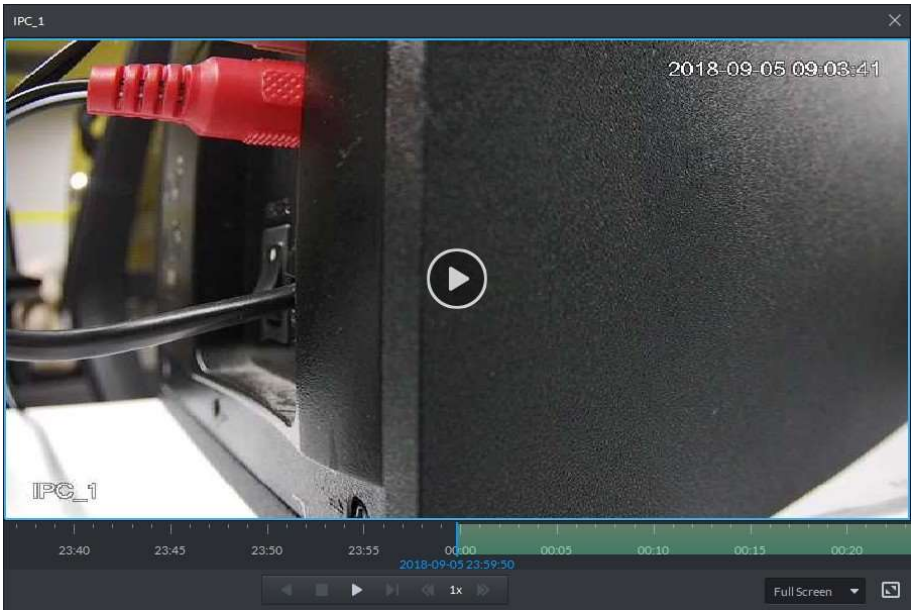
Step 3 Drag the yellow frame on the right to set thumbnail range. Click .

System displays the video of current range.

- System displays search results in suitable mode by default. Click Less, suitable, more to see proper mode.
- Double click the thumbnail, system search again for the record between current image and the next image.

Step 4 Click the at the bottom right corner of the thumbnail, you can view the corresponding video related to the thumbnail. See Figure 5-42.

Figure 5-42 Video playback

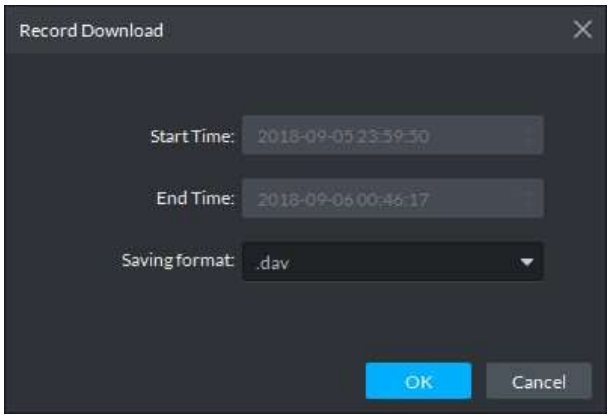


Step 5 Download Record

If videos of different stream type exist in the download period, then it can only be saved as .dav.

1) Click at the right corner of the thumbnail, system downloads the record between current image and the next image. See Figure 5-43.

Figure 5-43 Record download



2) Select file format and then click OK.
Go to the Download center to view download detailed information. Refer to 5.5 Record Download for detailed information.

5.5 Record Download

The system supports three download ways: Timeline, File List and Label.

5.5.1 Preparation

Make sure the record has been saved in the server, or SD card or HDD of device.

5.5.2 Timeline

Download video within some period.

If videos of different stream type exist in the download period, then it can only be saved as .dav.

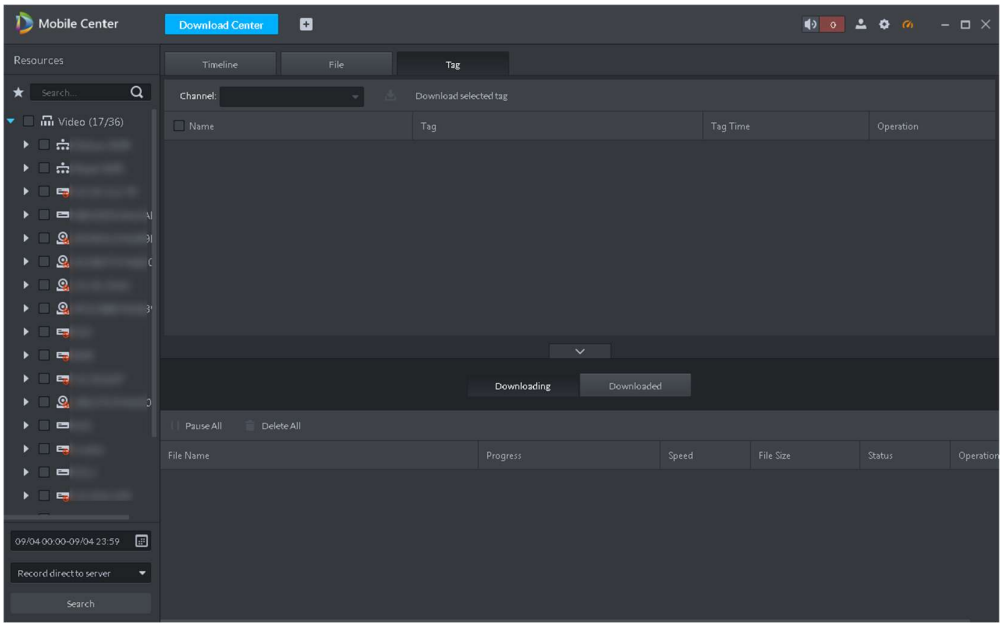
Step 1 Go to Download Center.

There are two ways to go to the download center.

- Click at the bottom of the Playback.
- Click , on the **New Tab** interface, select Download center.

The **Download** interface is displayed. See Figure 5-44.

Figure 5-44 Download

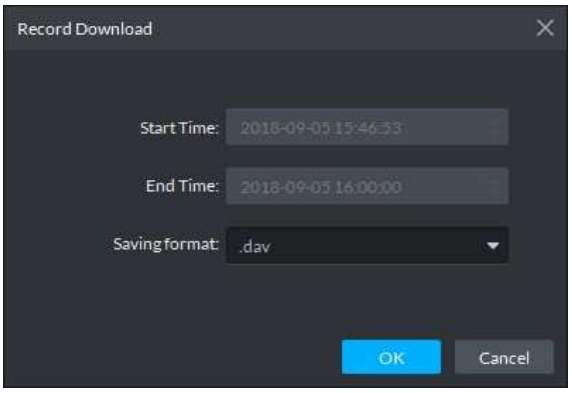


Step 2 Click Timeline.

Step 3 Select device channel, set search period and record storage position. Click **Search**.

Step 4 Select the period on the timeline, system pops up download dialogue box. See Figure 5-45.

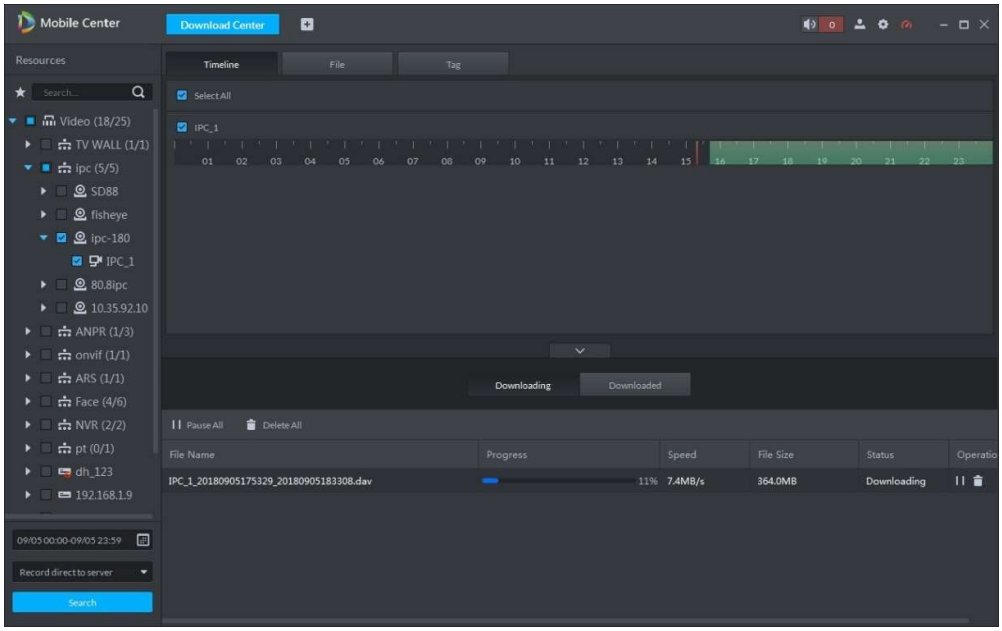
Figure 5-45 Record download



Step 5 Set file format and then click OK.

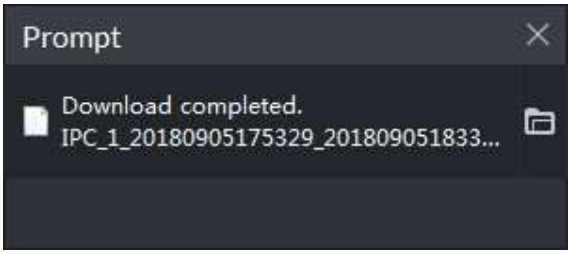
You can view the download process at the bottom of the interface. See Figure 5-46.

Figure 5-46 Download process



System pops up the following dialogue box once the download is complete. See Figure 5-47.

Figure 5-47 Download completed

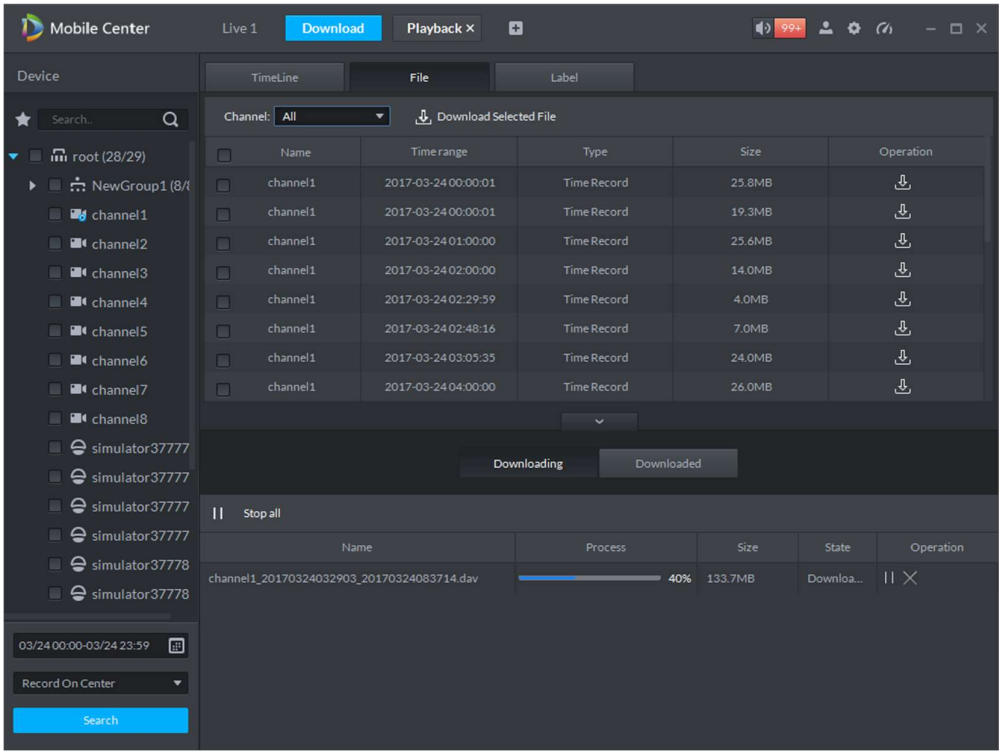


5.5.3 File List

Step 1 On **Download** interface, click the **File** tab.

System displays record files. See Figure 5-48.

Figure 5-48 Recorded files



Step 2 Directly click in the record file list, or check multiple files and click Download Selected Files

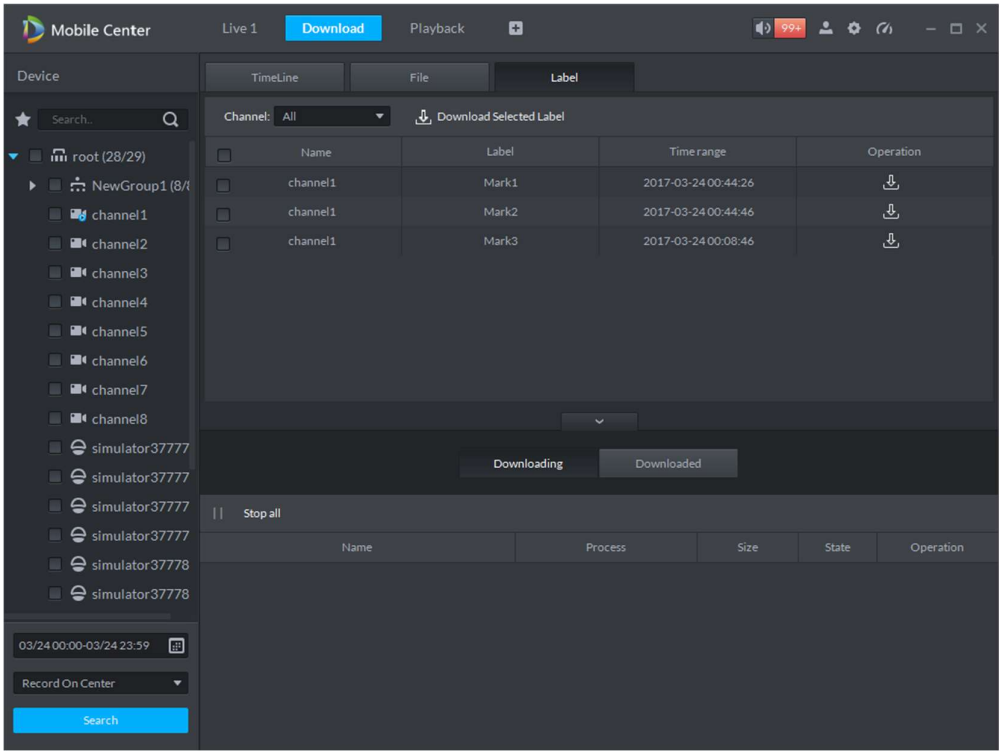
System displays download process at the bottom of the interface. System pops up dialogue box once the download is complete.

5.5.4 Label

Step 1 On **Download** interface click the **Label** tab.

System displays marked record files. See Figure 5-49.

Figure 5-49 Recorded files



Step 2 Directly click in the record file list, or check multiple files and click Download Selected Files

System displays download process at the bottom of the interface. System pops up dialogue box once the download is complete.

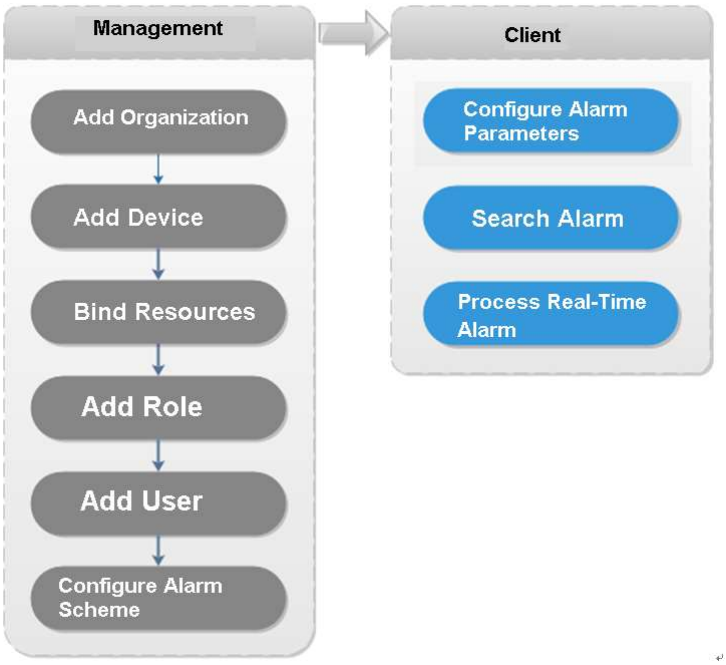
5.6 Event Center

5.6.1 Preparations

- Make sure you have added corresponding devices on the manager. Refer to 4.6 Adding device for detailed information.
- You have completed event management settings on the manager. Refer to 4.8 Configuring Event for detailed information.

Refer to Figure 5-50 for event management flows.

Figure 5-50 Event management flow

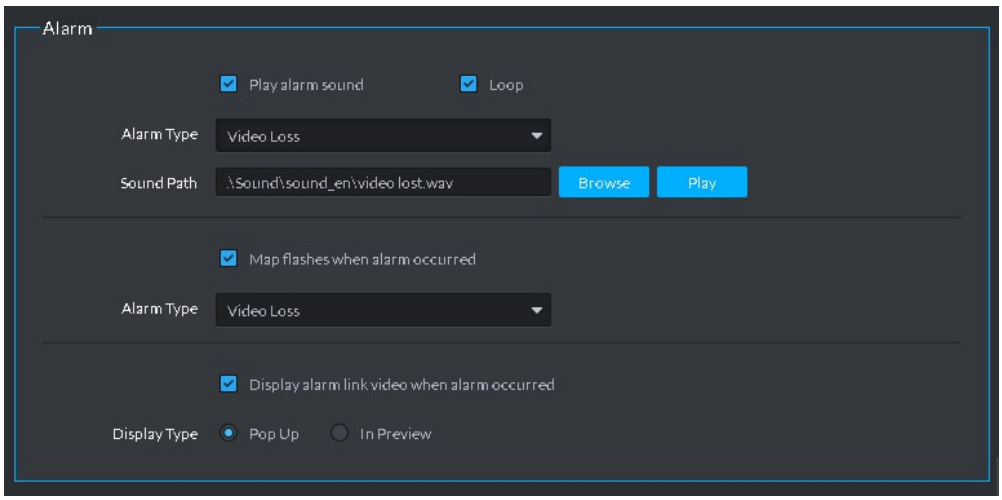


5.6.2 Configuring Alarm Parameters

Set alarm mode on the client, including alarm audio, alarm flashing on the map and so on.

Step 1 Click at the top right corner, select **General > Alarm**, the interface is shown as below. See Figure 5-51.

Figure 5-51 Alarm



Step 2 Set alarm parameters and then click **Save**.

Refer to Table 5-17 for detailed information.

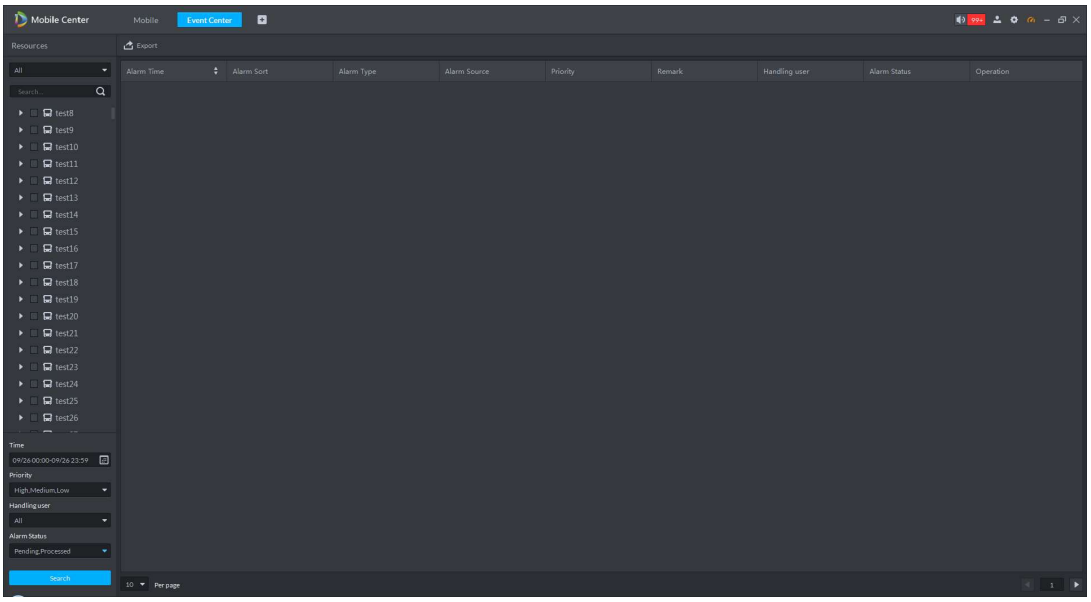
Table 5-17 Alarm parameters

Parameter	Description
Play alarm sound	Check the box, system generates a sound when an alarm occurs.

Parameter	Description
Loop	Check the box; system plays alarm sound repeatedly when an alarm occurs. This item is only valid when Play alarm sound function is enabled.
Alarm type	Set alarm type. System can play sound when corresponding alarm occurs. This item is only valid when Play alarm sound function is enabled.
Sound path	Select alarm audio file path.
Map flashes when alarm occurred	Check the box and then select alarm type. When the corresponding alarm occurs, the device on the emap can flash.
Display alarm link video when alarm occurred	Check the box, system automatically opens linkage video when an alarm occurs.
Display type	System automatically opens linkage video when an alarm occurs. You can view on the pop-up window or on the preview interface.

5.6.3 Searching Alarm Record

Figure 5-52 Search

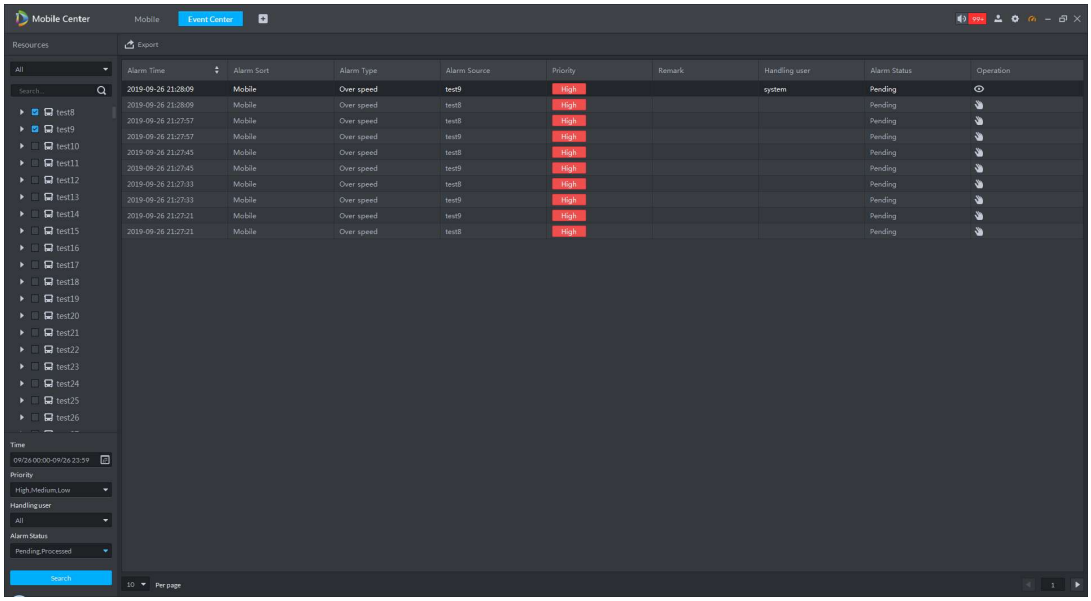


Step 1 Select device channel, search time, alarm level, user or alarm status.

Step 2 Click **Search**.

System displays corresponding alarm information. See Figure 5-53.

Figure 5-53 Search results



Operations

- Select amount on Per page, it is to set displayed alarm message amount each time.
- Click Statistics, it is to display the total alarm message amount of corresponding device.
- Click Export, it is to export device alarm message.
- Click to claim alarm, click to process alarm.

5.7 Video Wall

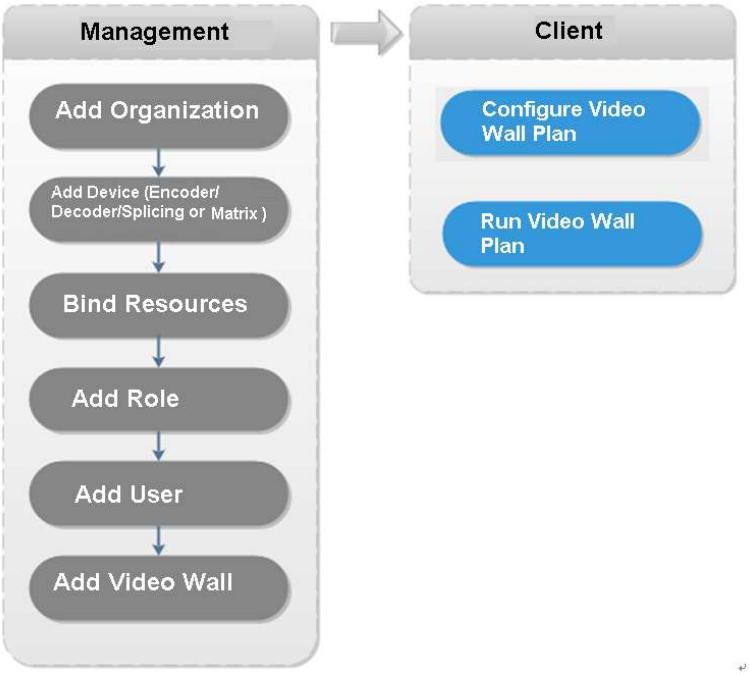
5.7.1 Preparations

View the video on the video wall on the client. It needs to complete the following settings.

- Adding corresponding device: It includes decoder, encoder or matrix device. Refer to 4.6 Adding device for detailed information.
- Refer to 4.10 Adding Video Wall to add the video wall first.

Refer to Figure 5-54 for video wall flows.

Figure 5-54 Video wall flow



5.7.2 Output to the Wall

Step 1 Click , on the **New Tab** interface select Video wall, system displays Video wall interface. See Figure 5-55.

Figure 5-55 View wall

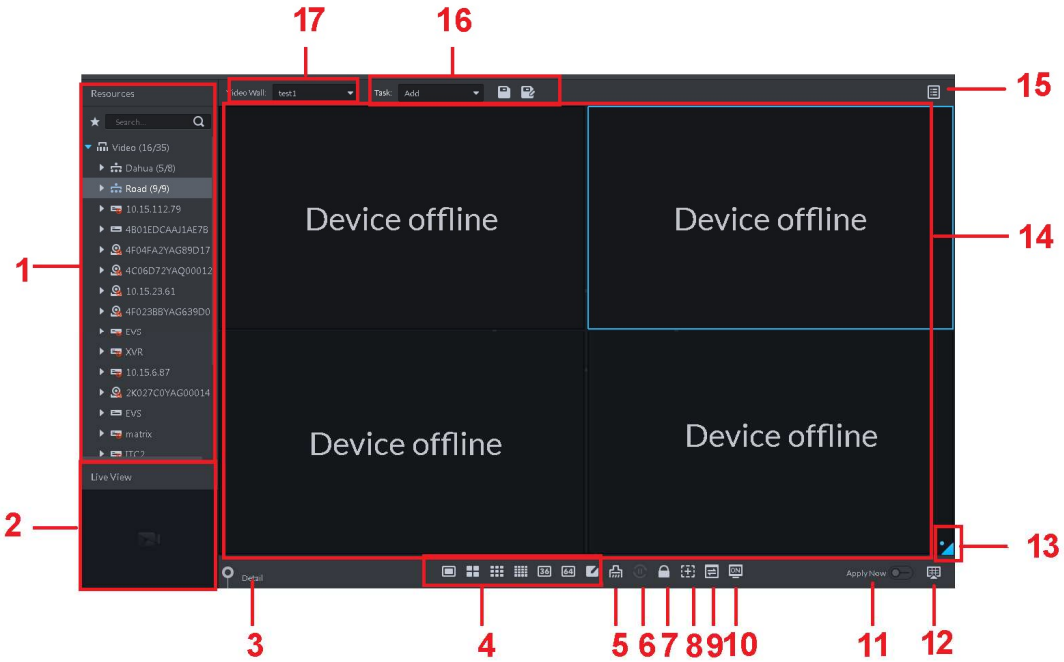


Table 5-18 Video wall introduction

No.	Name	Function
1	device tree	From Local config> General, if you enable Show device node, device tree displays all channels of current device. If you cancel the box, system display all channels of all device. Click to view the channels on the favorites folder. Search is supported by input device name or channel name in here.
2	Preview	View channel video.
3	Detailed information	Click to view the screen, window, and channel bound information. ● Click to preview the video at the bottom left pane. It is to check current channel is what you want or not. ● Click to adjust sequence. ● Click to delete the video channel that adds to current window. ● Click Stay time column or click , it is to modify signal interval on current channel when tour. ● Click Stream column or , it is to modify video bit stream.
4	Window split	It is to set window split mode.
5	Clear	It is to clear information on all screens.
6	Start/stop all tours	Start or stop all tours.
7	Lock window	Click to lock the window. You cannot operate on the locked window.
8	Add box	You can click to add a box, and click again to cancel box.
9	Back display	It is to view current layout
10	Screen On/Off	In Screen On mode, the system will automatically display the video after configuring the tasks.
9	Apply now	If you enable the function, system automatically outputs the video to the wall after you set the task.
10	Decode to wall	Click to manually output the video to the wall.
11	Eagle eye	View current video wall layout
12	Video wall	Video wall area.
13	Video wall task	It is to schedule task and tour task. Refer to 5.7.3 Video Wall Plan for detailed information.
14	Task management pane	It is to add, save delete task.

No.	Name	Function
15	Video wall selection	It is to select a video wall to configure.

Step 2 Select a video wall and then select a window.

Step 3 Double click the video channel or drag the video channel to the window.

The window displays Bound one video source

- Input device name or channel name to search.
- One window can bind several video channels at the same time.

Step 4 Click to output the video to the wall.

Once one window has bound several video channels at the same time, the window automatically begins tour operation after you output the video to the wall.

- Right click mouse or on the Detail pane, you can modify channel stay time and bit stream.
- Click to change tour sequence.

Right click mouse and then select Stop all tour, or click to stop all tour.

5.7.3 Video Wall Plan

5.7.3.1 Configuring Schedule plan

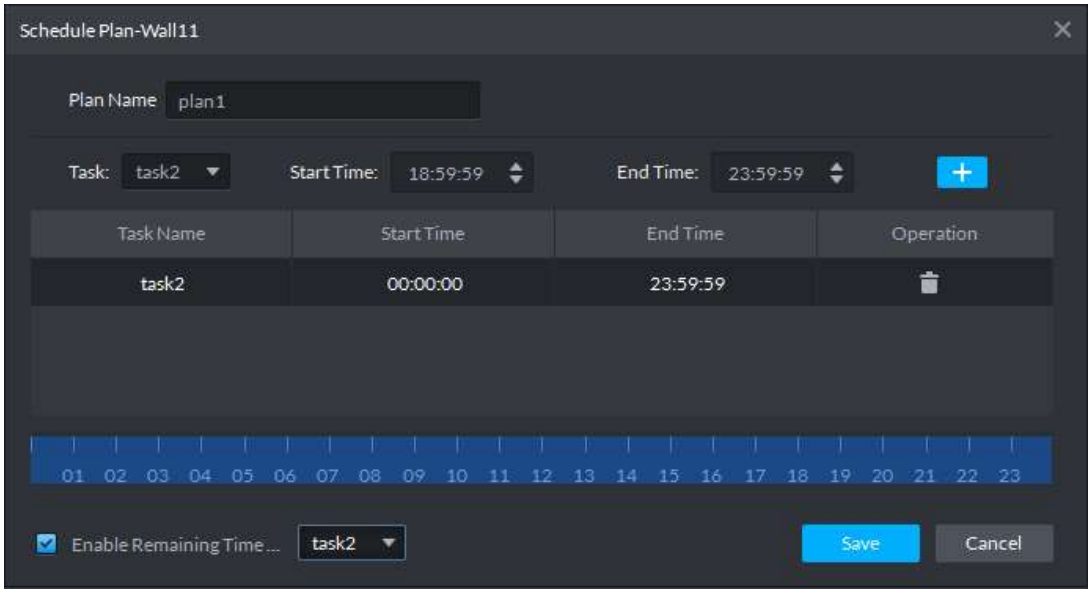
After set schedule plan, you can play video file on the video wall at the specified time.

Step 1 On the Video Wall interface, click at the top right corner.

Step 2 Select .

Enter Schedule plan interface. See Figure 5-56.

Figure 5-56 Schedule plan



Step 3 Input the plan name.

Step 4 Select a video task, and then set start time and end time, click .

The list displays detailed plan information. The specified period on the timeline is highlighted as blue. See Figure 5-57.

Check the Enable remaining time schedule function and set the task. The video wall displays corresponding video if it is not in the scheduled plan period.

Figure 5-57 Specified period highlighted

Step 5 Click **Save**.

Enter Video wall interface.

Step 6 Click to start the plan.

Operations

- Modify plan: Click of the corresponding plan, it is to modify plan.
- Delete plan: Click of the corresponding plan, it is to delete the plan.

5.7.3.2 Configuring Tour Plan

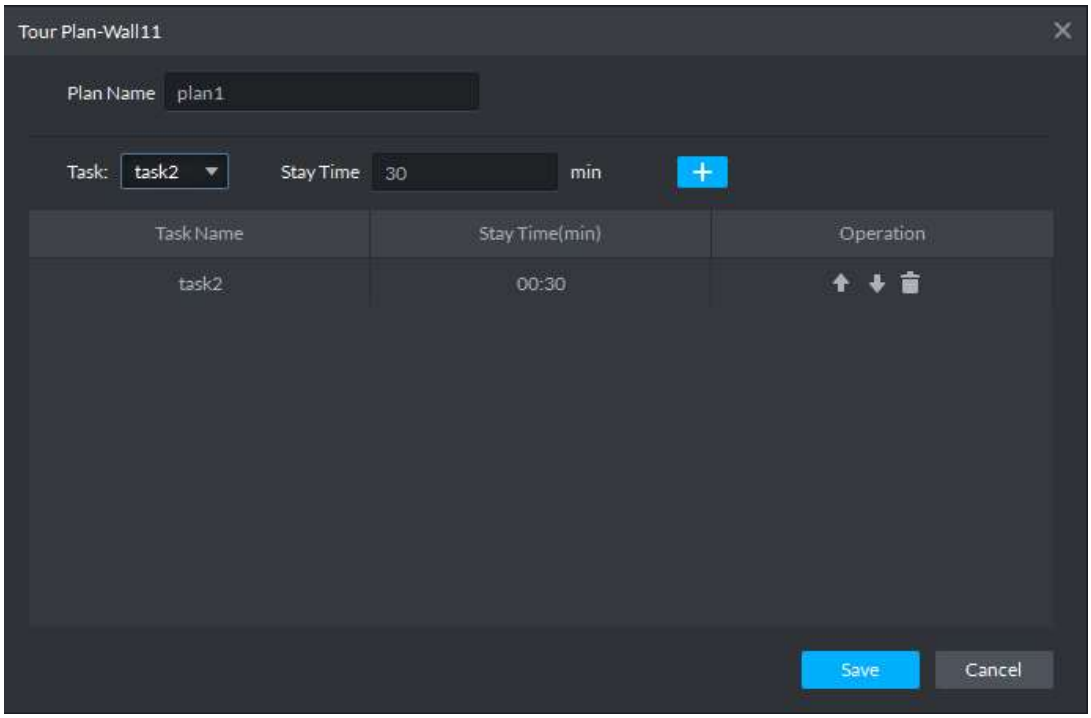
After setting tour plan, you can output several plans to the TV wall.

Step 1 On the Video Wall interface, click at the top right corner.

Step 2 Click .

Enter Tour plan interface. See Figure 5-58.

Figure 5-58 Tour plan



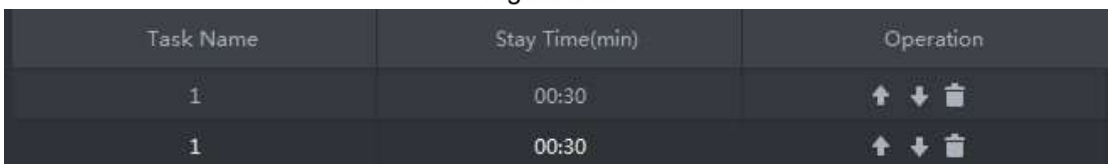
Step 3 Input task name.

Step 4 Select a video task and then set stay time. Click .

The list displays tour information. See Figure 5-59.

Click to adjust task sequence, click to delete task.

Figure 5-59



Step 5 Click **Save**.

Enter Video wall plan interface.

Step 6 Click to start the plan.

Operations

- Modify plan: Click of the corresponding plan, it is to modify plan.
- Delete plan: Click of the corresponding plan, it is to delete the plan.

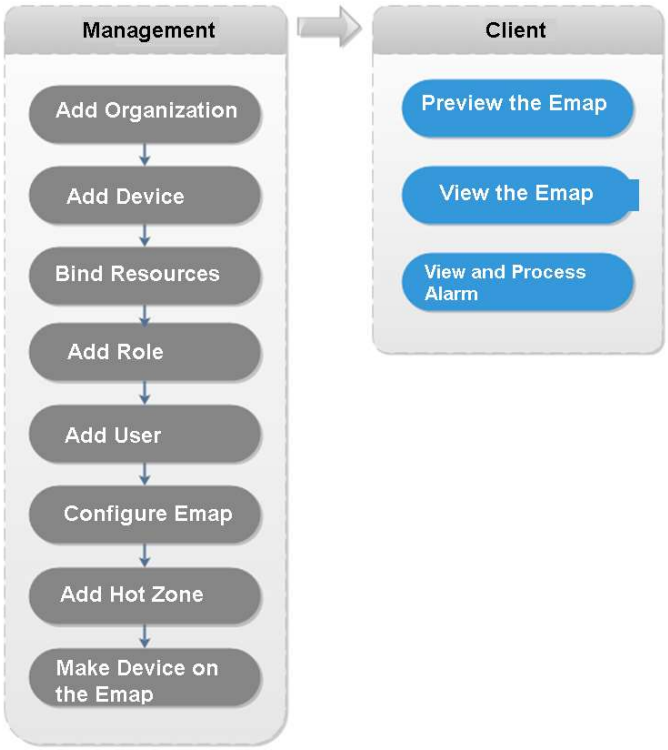
5.8 Emap

On the Mobile Center client, you can view the configured e-map and corresponding device information.

5.8.1 Preparations

Refer to 4.9 Configuring Emap to add emap and hot zone on the platform manager and mark the device on the map. Refer to Figure 5-60 for flows information.

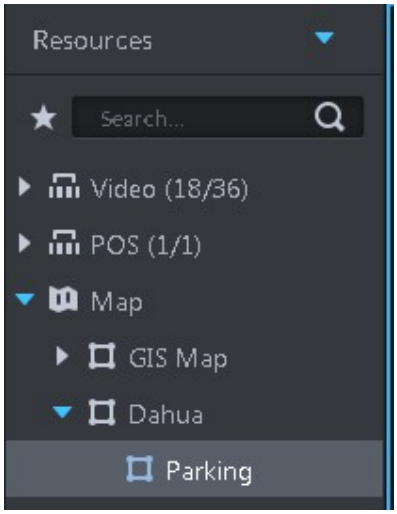
Figure 5-60 Emap flow



5.8.2 Open Emap on the Real-Time Preview

Step 1 On the Live view interface, click the Map at the bottom of the device tree on the left. System displays map and hotspot map on the manager. See Figure 5-61.

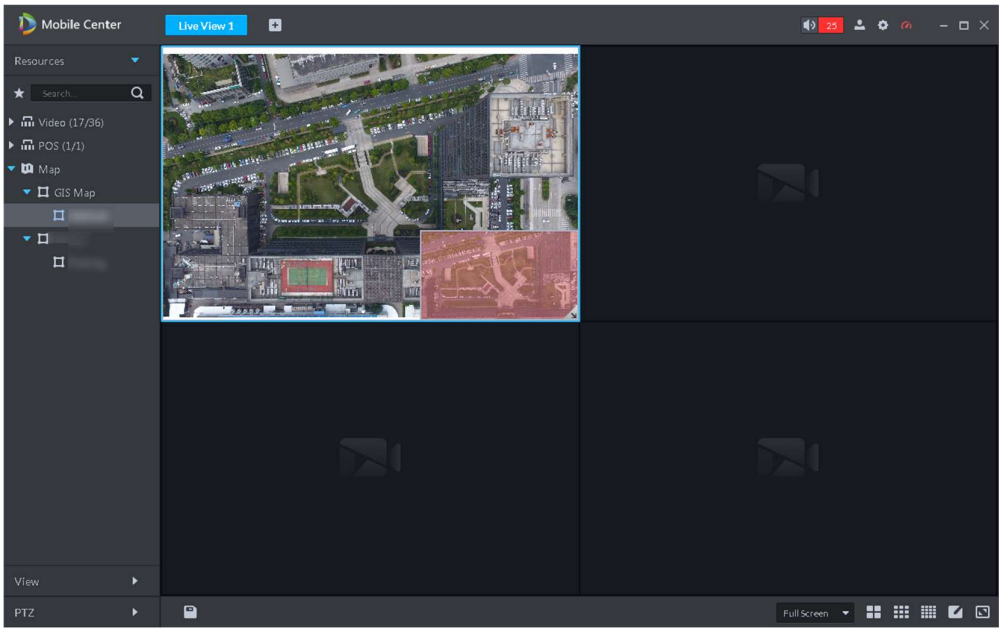
Figure 5-61 Maps



Step 2 Double-click the map, you can view the map and the added devices.

On the map, you can record real-time video, playback record file, cancel alarm and so on. See Figure 5-62.

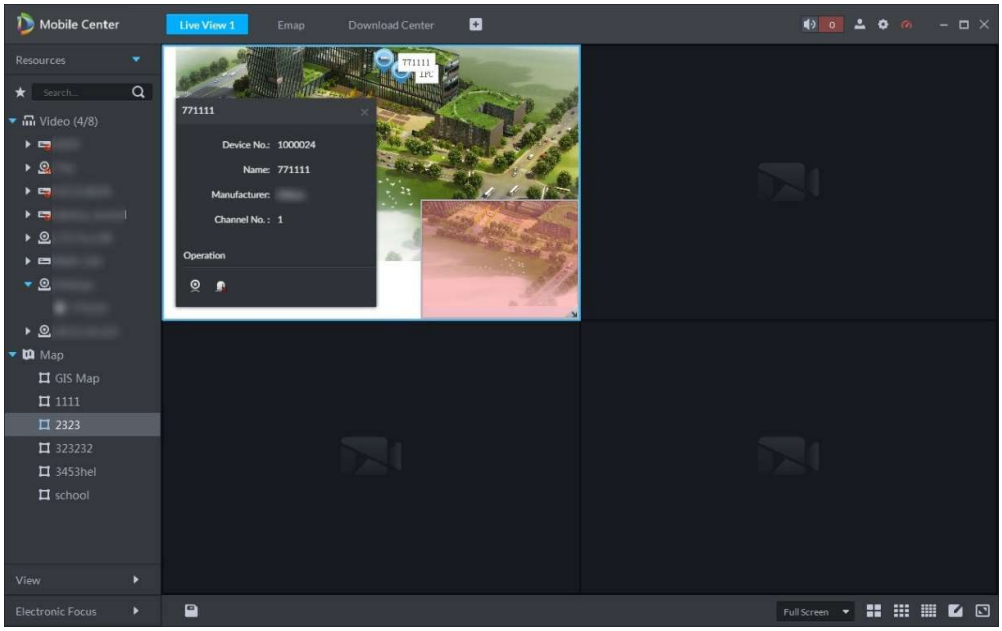
Figure 5-62 Map live view



Step 3 Click the marked channel.

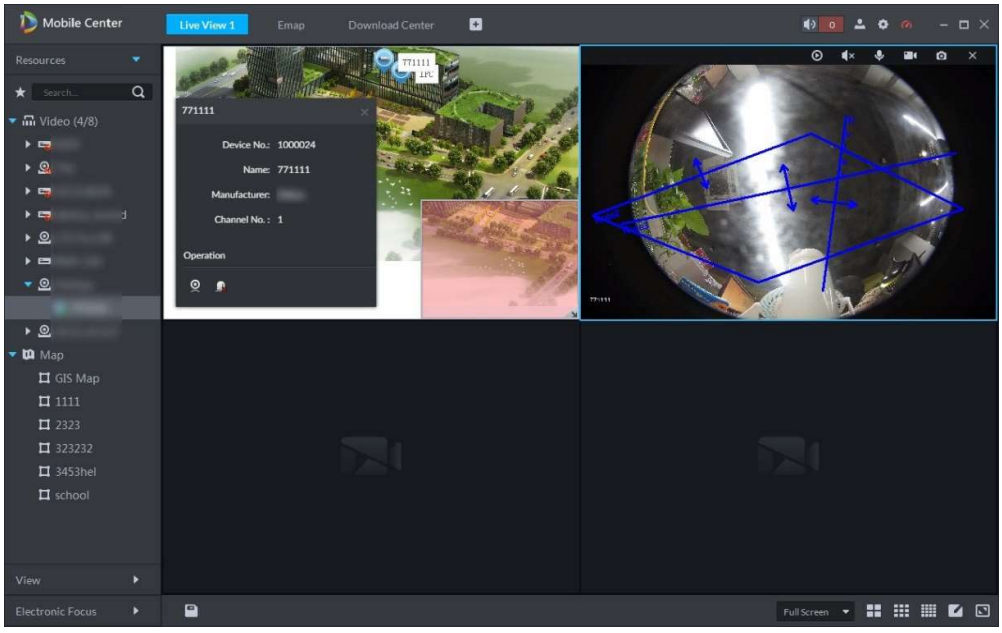
System displays channel information. See Figure 5-63.

Figure 5-63 Channel information



Step 4 Click to playback real-time video on the window. See Figure 5-64.

Figure 5-64 Playback



5.8.3 Viewing Map

Display the map setting on the manager. The e-map and the raster map are not the same. Here we use Google map to continue.

Step 1 Click , on the **New Tab** interface select Emap.

Step 2 Select Google map or raster map.

The **Emap** interface is displayed. See Figure 5-65.

Figure 5-65 Emap

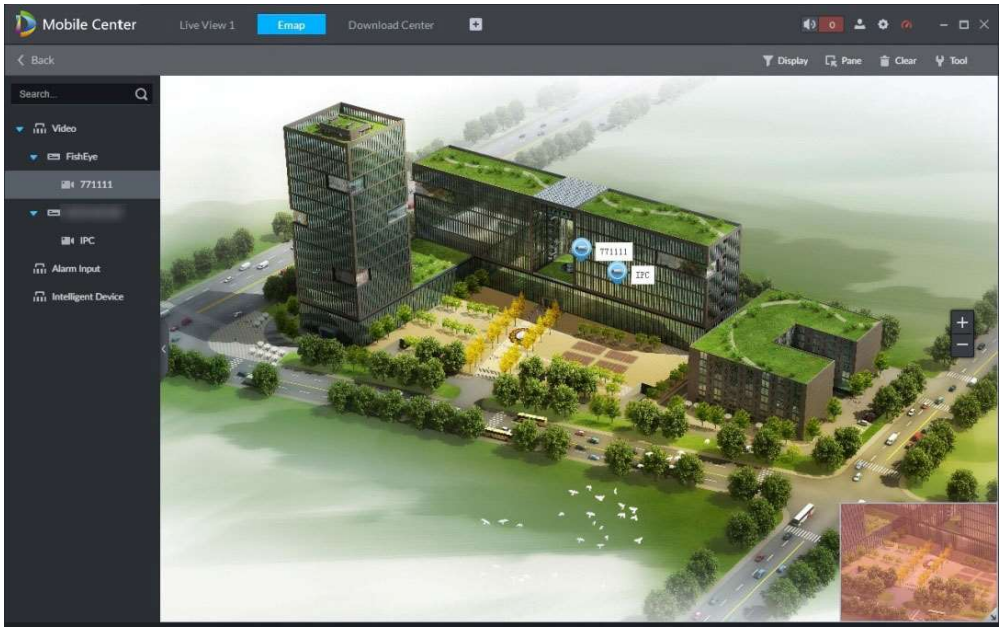


Table 5-19 Emap introduction

No.	Name	Description
1	Display device	Filter to display video device, alarm input channel.
2	Use frame to select	Use frame to select a device.
3	Clear data on the screen	Clear selection track on the screen.
4	Tools	It includes mark, reset, and video relay. ● Mark: It is to give a mark on the map. ● Reset: The map restores default position. ● Video relay: This function is null right now.

Step 3 Double click the channel on the device tree on the left, you can view the channel position on the map.

Step 4 Click the channel on the map.

System displays device SN, channel name, manufacture, channel information and other information. See Figure 5-66.

Figure 5-66 Channel information

- Click to playback video of current channel.
- Click to playback record.
- Click to cancel alarm.

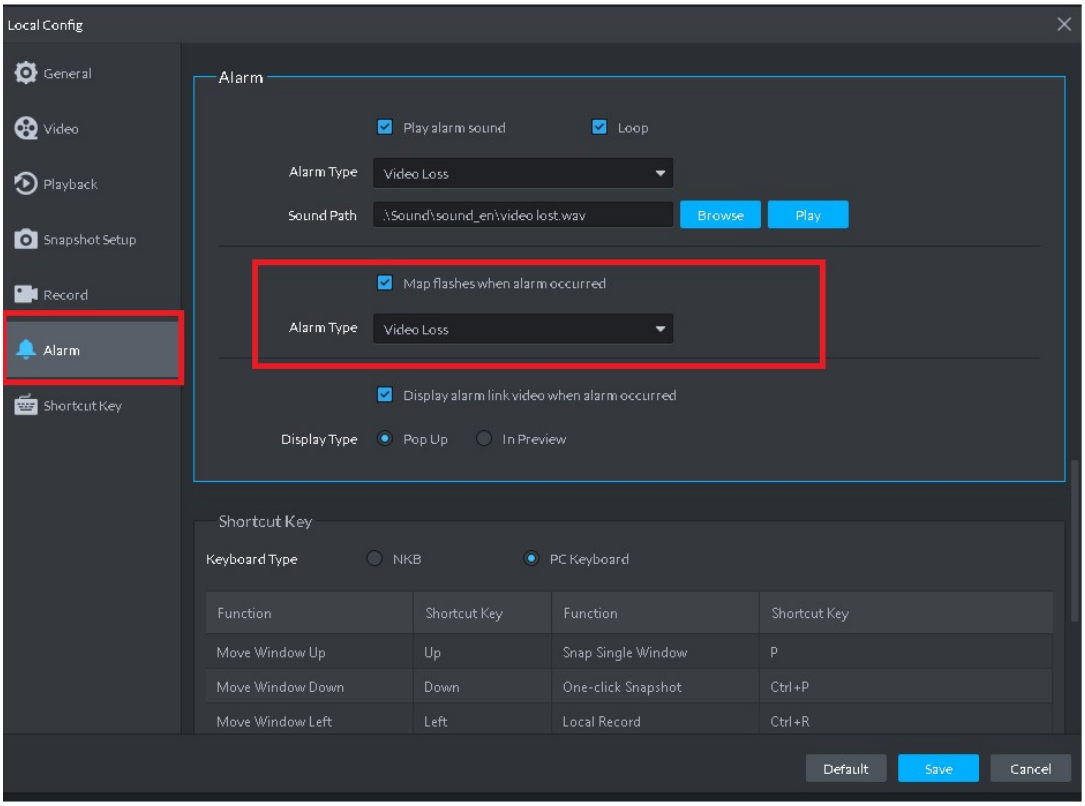
5.8.4 Alarm Flashing on the Map

5.8.4.1 Configuring Alarm Flashing on the Client

Step 1 Click at the top right corner, it is to open General interface.

Step 2 Click the **Alarm** tab, select Map flashes when an alarm occurs and then set alarm type from the dropdown list. See Figure 5-67.

Figure 5-67 Alarm type



Step 3 Click **Save**.

5.8.4.2 Client Triggering Alarm

Step 1 Click , on the **New Tab** interface select Emap.

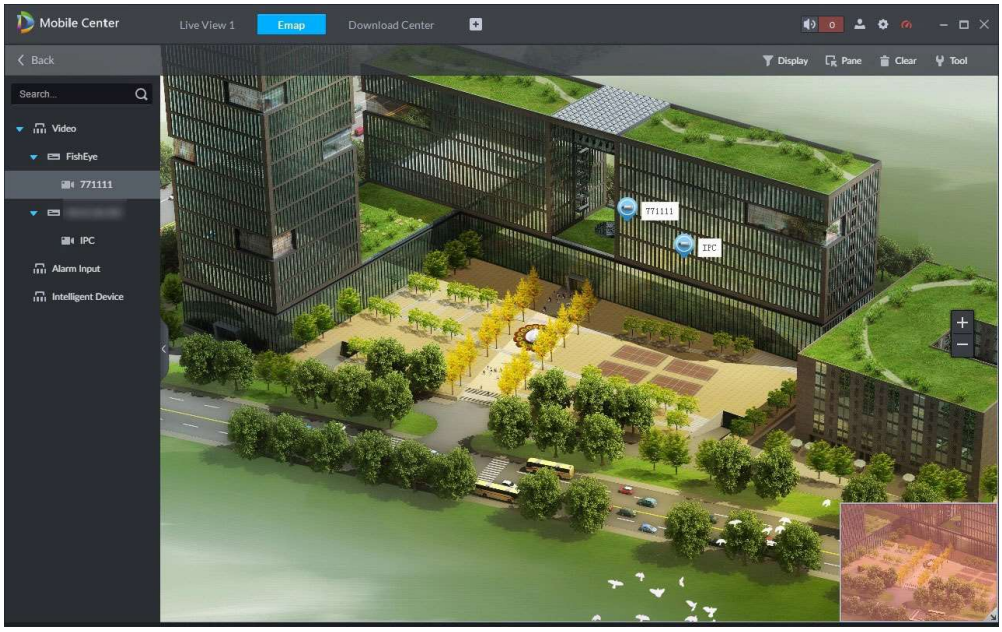
The Emap interface is displayed.

Step 2 Click to go to Google map or Raster map.

Here we use raster map to continue.

Step 3 The channel is flashing when an alarm occurs. See Figure 5-68.

Figure 5-68 Raster map



5.9 Mobile

You can manage vehicle basic information such as driver information, view real-time information on video and map, view and export vehicle GPS statistics, and add electronic fence to know vehicles movement and location.

On the Mobile Center home page, click **Mobile**, the **Mobile** interface is displayed. See Figure 5-69 and Figure 5-70.

Figure 5-69 Client home page

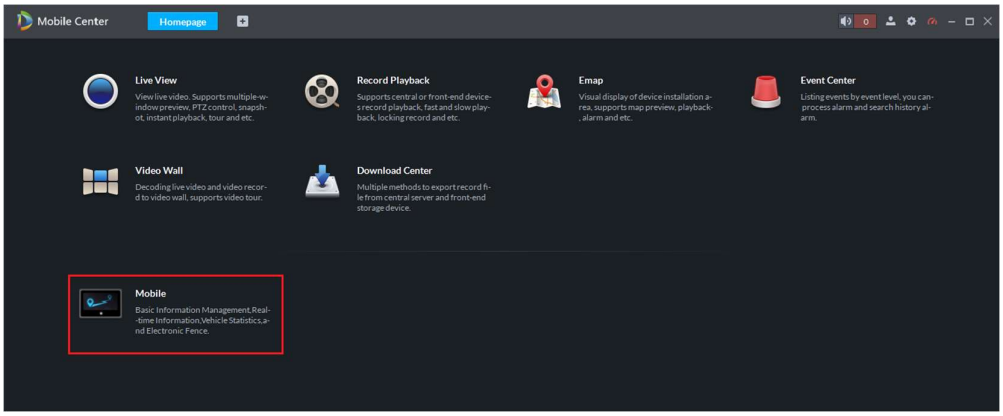
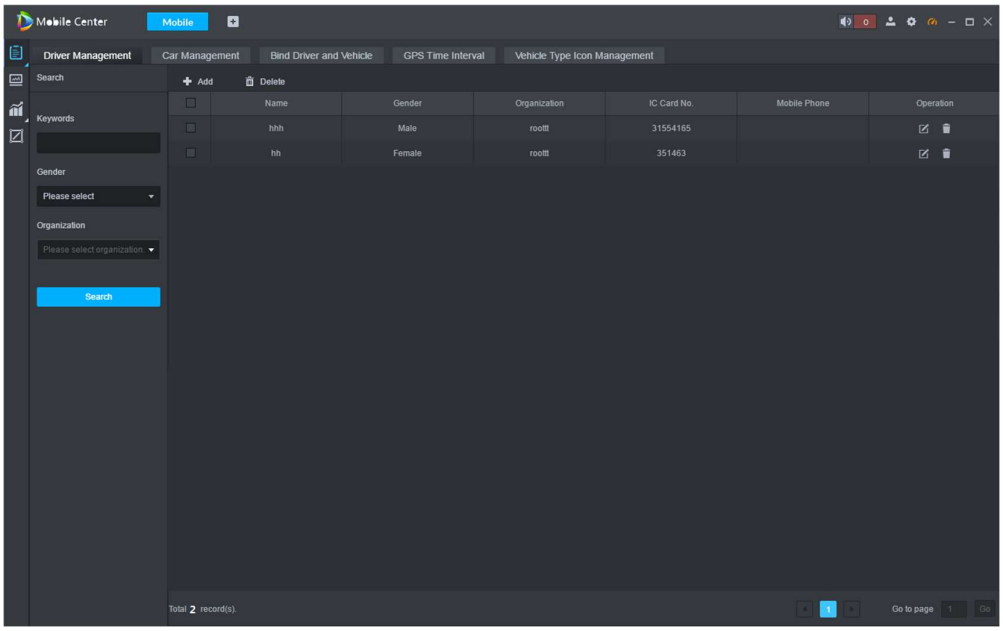


Figure 5-70 Mobile



5.9.1 Basic Information Management

You can add drvier and vehicle information respectively, and bind drvier with vehicle for integrated management. You can also know the location of each vehicle by setting the GPS upload interval and give a type icon for each vehicle for easy recognition.

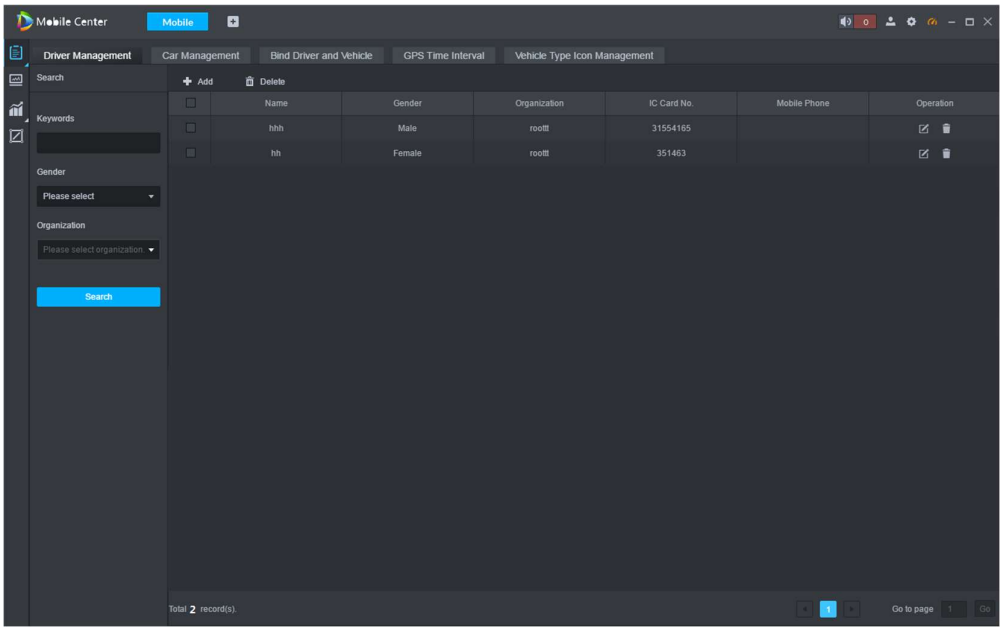
5.9.1.1 Adding Driver information

You can add driver information such as name, IC card number, driving license information, and service certificate information, and edit or delete information when necessary.

Step 1 Click .

The **Driver Managemet** interface on the **Basic Information Management** tab is displayed. See Figure 5-71.

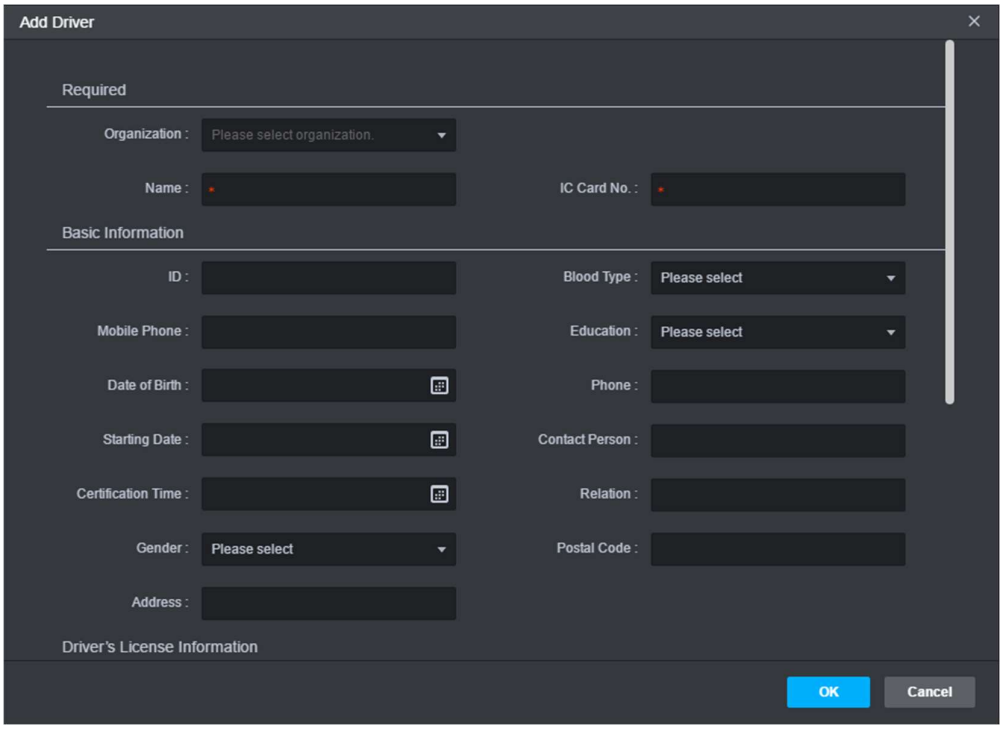
Figure 5-71 Driver managemet



Step 2 Click Add.

The **Add Driver** interface is displayed. See Figure 5-72.

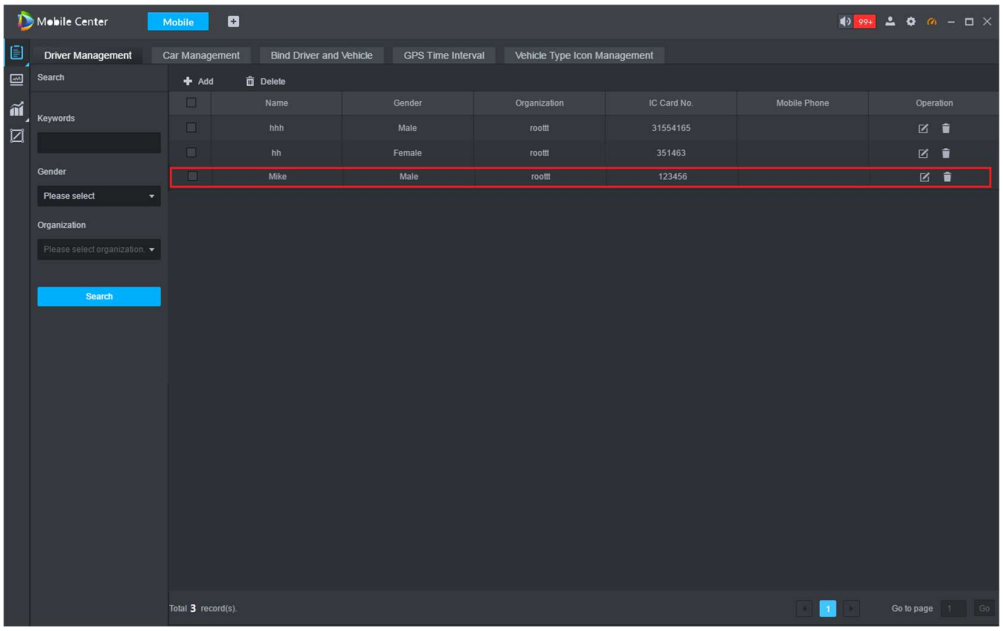
Figure 5-72 Add drvier



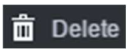
Step 3 Enter driver information and then click **OK**.

The added driver is displayed. See Figure 5-73.

Figure 5-73 Added drvier



- Edit driver information: Click
- Delete driver information: Click to delete the corresponding driver information;

  Select check box of drvier information, and then click  to delete one or baches of driver information according to your needs.
- Search driver information: You can search drvier information by keywords, gender and organization. You can search by one of these options or combination of them.

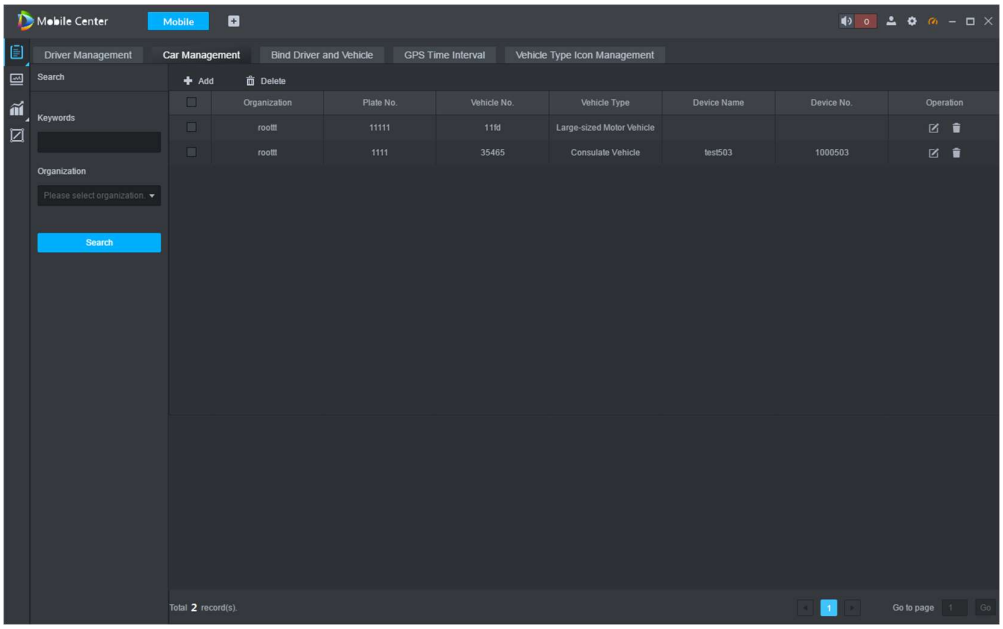
5.9.1.2 Adding Vehicle Information

You can add vehicle information such as plate number, vehicle type, and vehicle color, and edit or delete information when necessary.

Step 1 Select > Car Management.

The **Car Management** interface is displayed. See Figure 5-74.

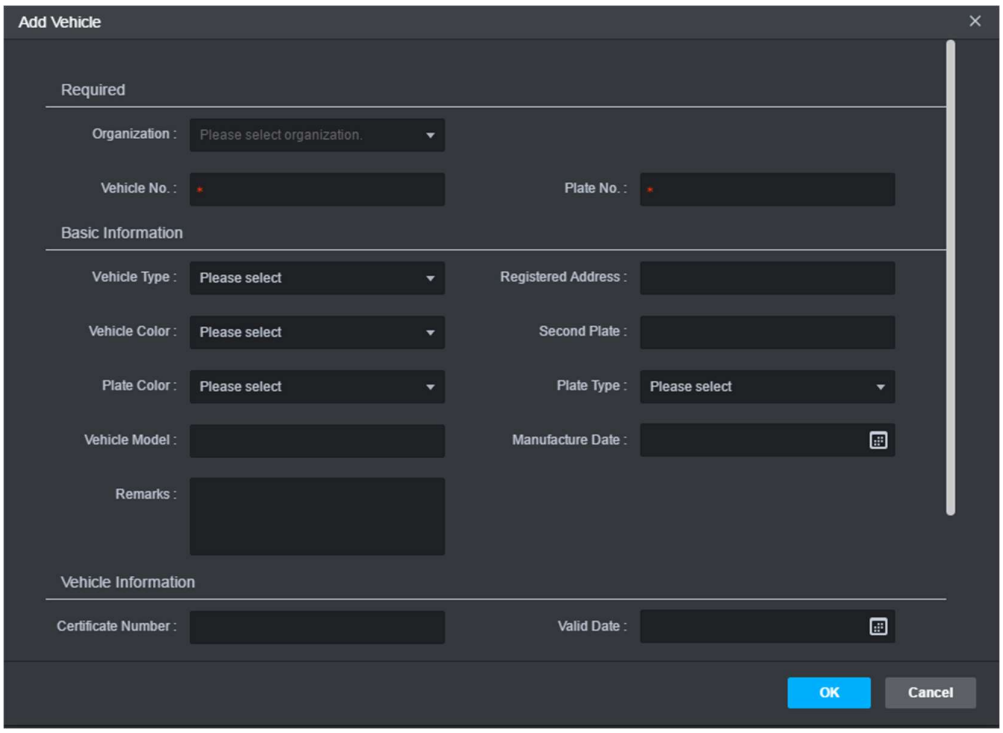
Figure 5-74 Car management



Step 2 Click Add.

The **Add Vehicle** interface is displayed. See Figure 5-75.

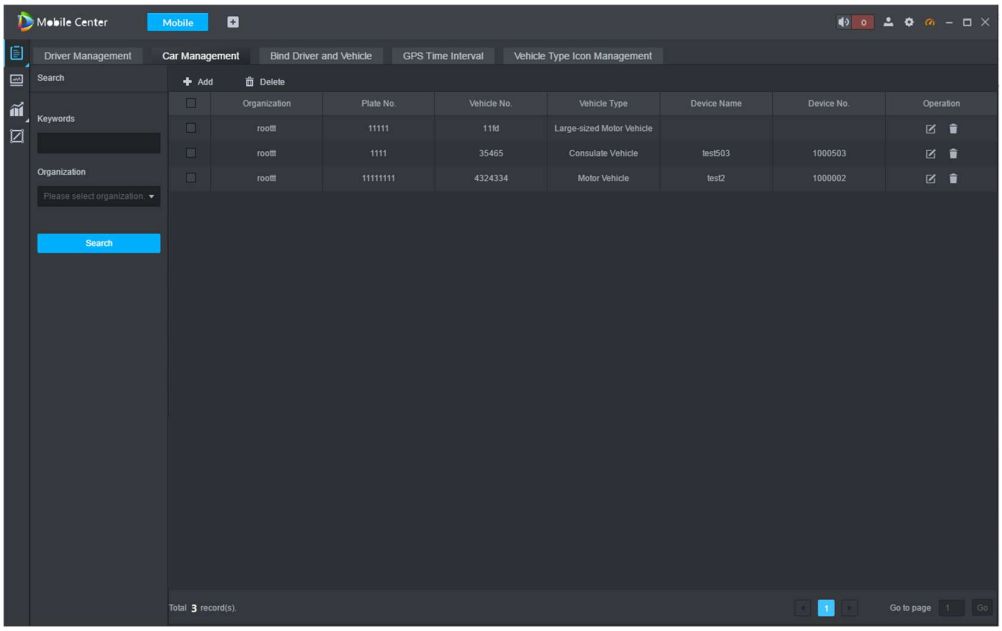
Figure 5-75 Add vehicle

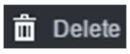


Step 3 Enter driver information and then click **OK**.

The added vehicle is displayed. See Figure 5-76.

Figure 5-76 Added vehicle



- Edit vehicle information: Click
- Delete vehicle information: Click to delete the corresponding vehicle information; Select check box of vehicle information, and then click  to delete one or baches of vehicle information according to your needs.
- Search vehicle information: You can search vehicle information by keywords and organization. You can search by either of the options or combination of them.

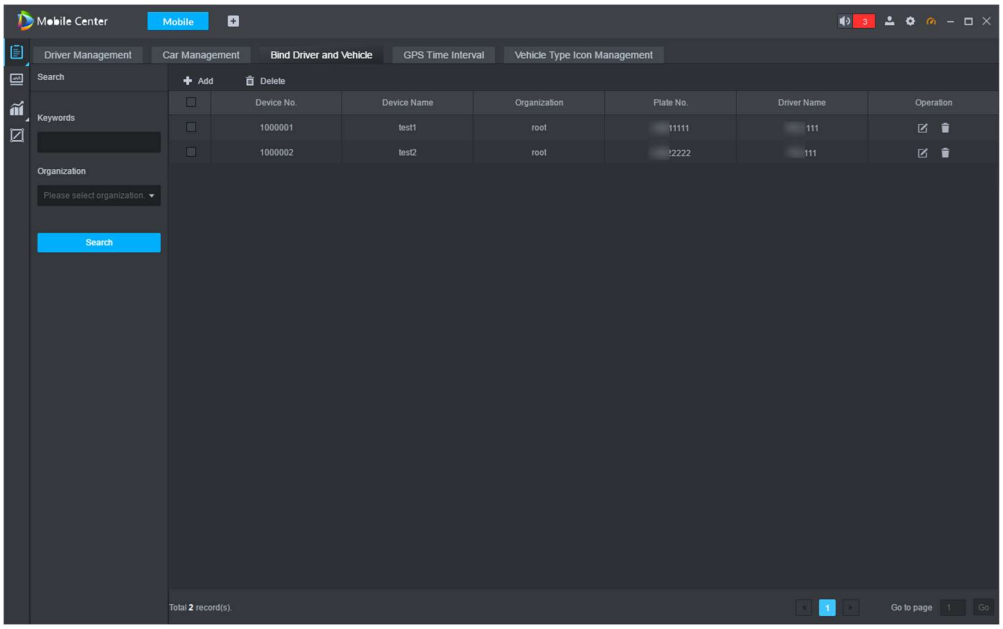
5.9.1.3 Binding Drvier and Vehicle

You can bind the added driver and vehicle for management. Make sure that the required driver and vehicle information have been added before binding.

Step 1 Select > Bind Drvier and Vehicle.

The **Bind Drvier and Vehicle** interface is displayed. See Figure 5-77.

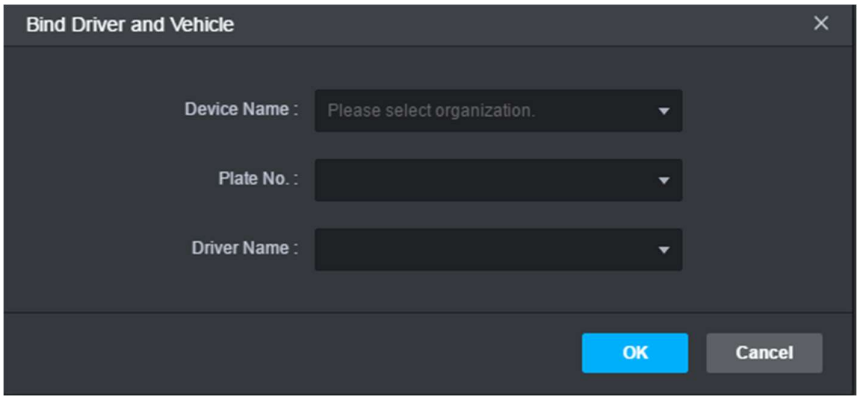
Figure 5-77 Bind drvier and vehicle



Step 2 Click Add.

The **Bind Driver and Vehicle** interface is displayed. See Figure 5-78.

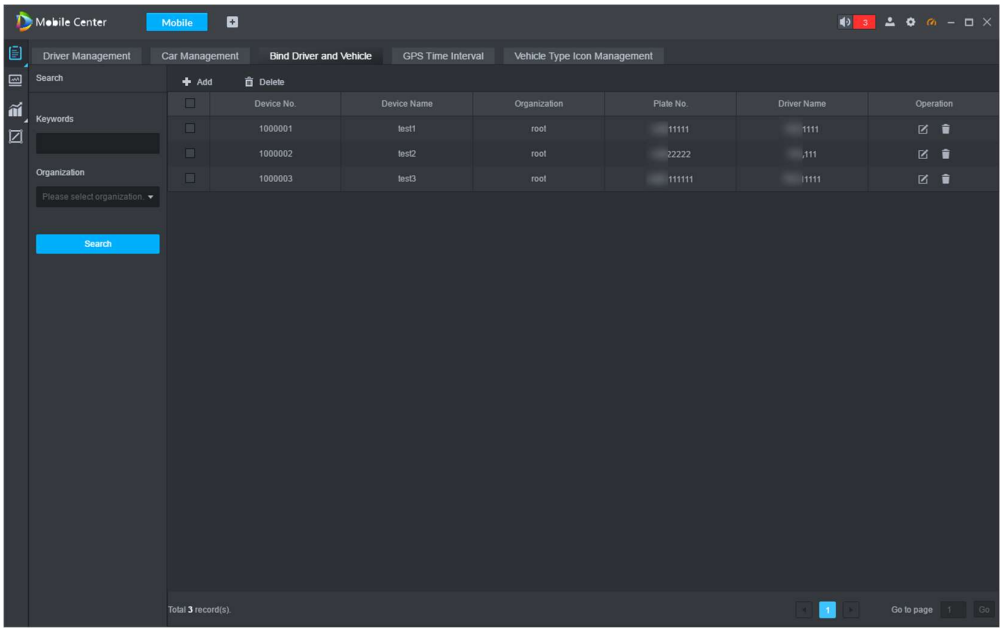
Figure 5-78 Bind drvier and vehicle

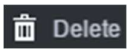


Step 3 Select device name, plate number, and driver name, and then click **OK**.

Then the bound relationship is displayed. See Figure 5-79.

Figure 5-79 Driver and vehicle bound



- Edit vehicle information: Click
- Delete binding information: Click to delete the corresponding binding information; Select check box of binding information, and then click  to delete one or baches of binding information according to your needs.
- Search binding information: You can search binding information by keywords and organization. You can search by either of the options or combination of them.

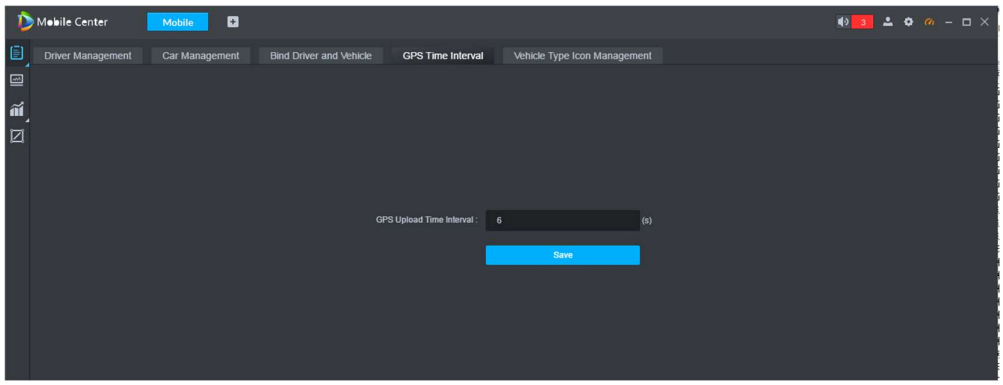
5.9.1.4 Setting GPS Upload Interval

You can set the GPS information upload interval to timely know the location of the vechile.

Step 1 Select > GPS Time Interval.

The **GPS Time Interval** interface is displayed. See Figure 5-80.

Figure 5-80 GPS time interval setting



Step 2 Set the interval and then click **Save**. The minimum value is 6 s.

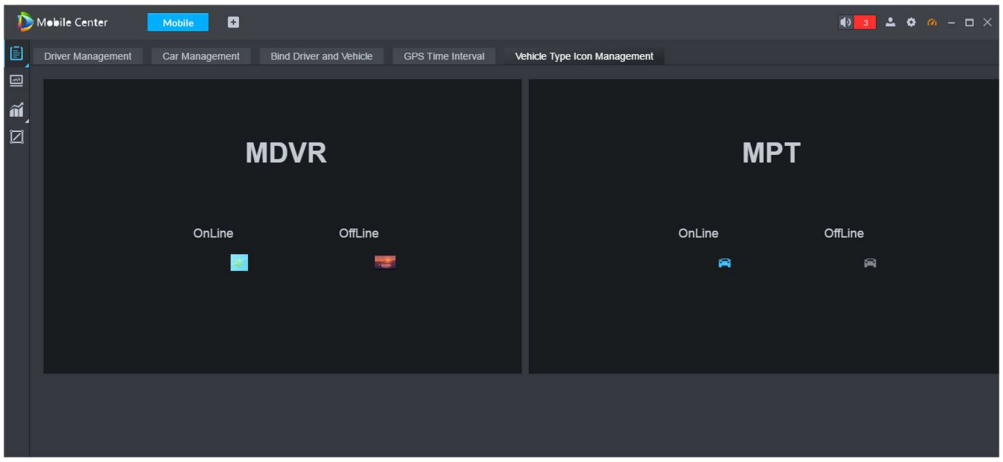
5.9.1.5 Setting Vehicle Type Icon

You can set an icon to identify the vehicle easily.

Step 1 Select > Vehicle Type Icon Management.

The **Vehicle Type Icon Management** interface is displayed. See Figure 5-81.

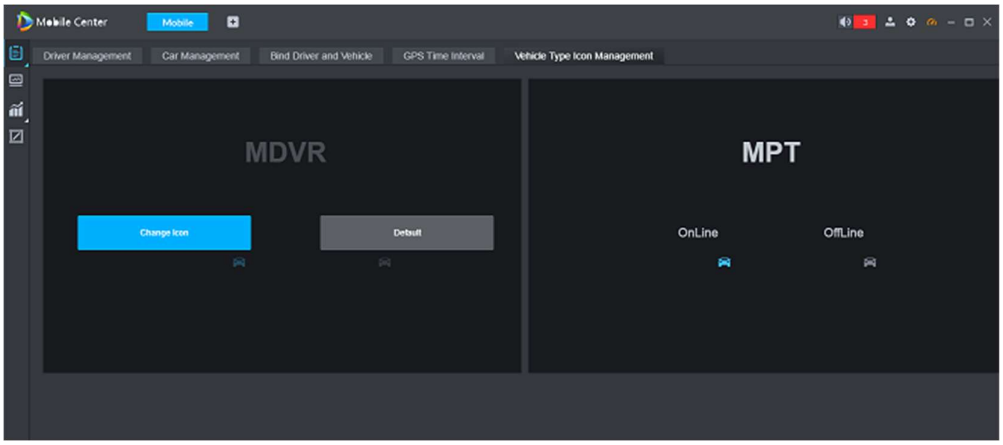
Figure 5-81 Vehicle type icon management



Step 2 Move the mouse pointer to icon area.

The **Change icon** button and **Default** button are displayed. See Figure 5-82.

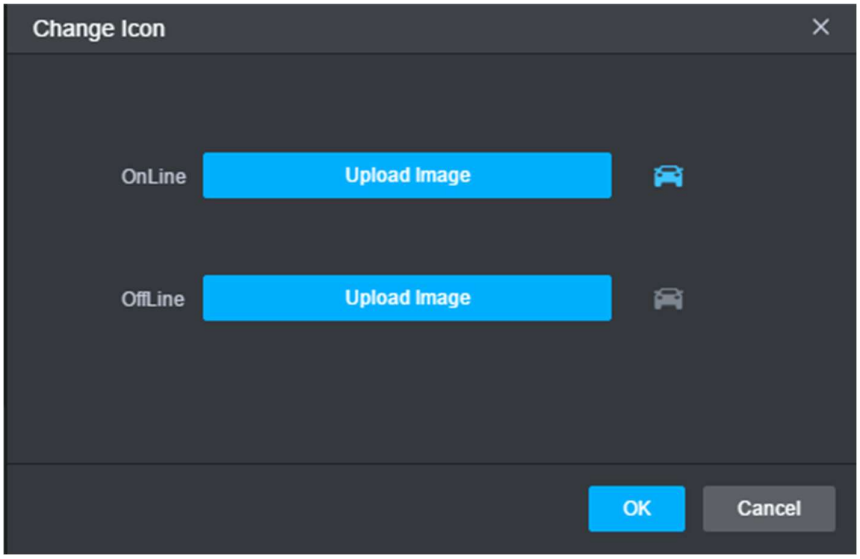
Figure 5-82 Icon setting



Step 3 Click Change Icon.

The **Change Icon** interface is displayed. See Figure 5-83.

Figure 5-83 Change icon



Step 4 Click **Upload Image** to select a picture to be the icon for Online and Offline status, and then click **OK**.

The icons are displayed to represent online and offline status.

5.9.2 Real-time Information

You can know the real-time status of vehicle through three modes (real-time video, map or both video and map), and perform the opeations such as voice call with device, handle alarm information uploaded from device, key monitoring, and view vehicle driving route.

5.9.2.1 Switching Display Modes

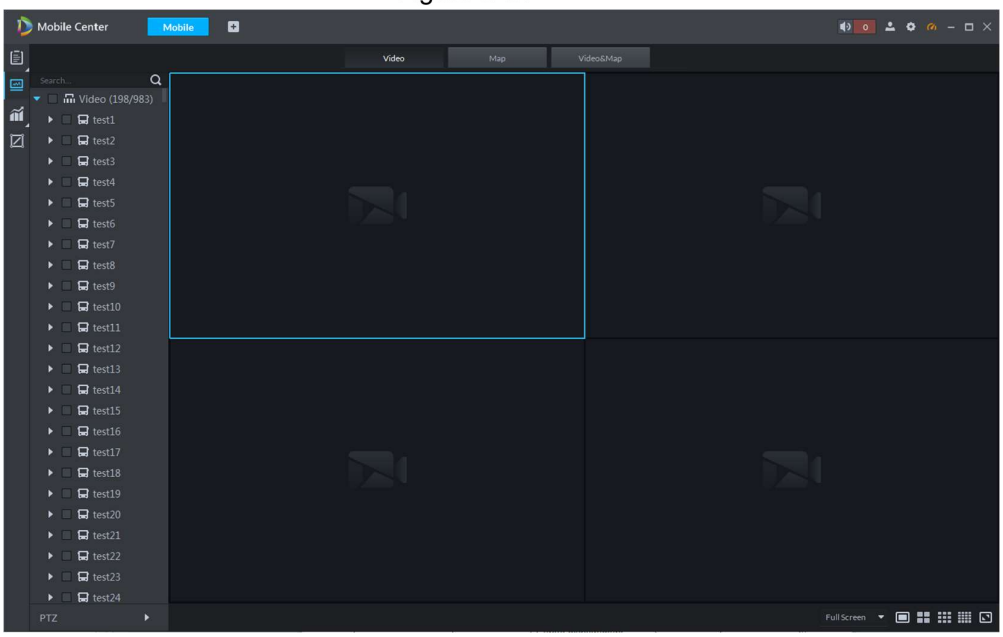
There are three display modes provided to you for viewing real-time information of device.

Video Mode

Step 1 Click .

The **Video** interface on the **Real-time Information** tab is displayed. See Figure 5-84.

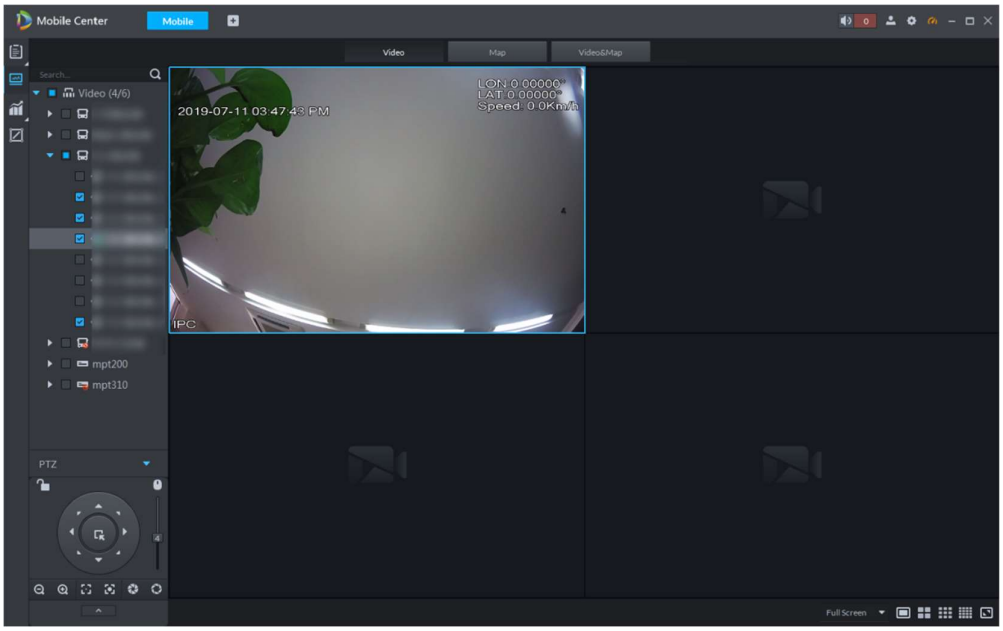
Figure 5-84 Video



Step 2 Select the device that you want to view the live video.

The live video is displayed. See Figure 5-85.

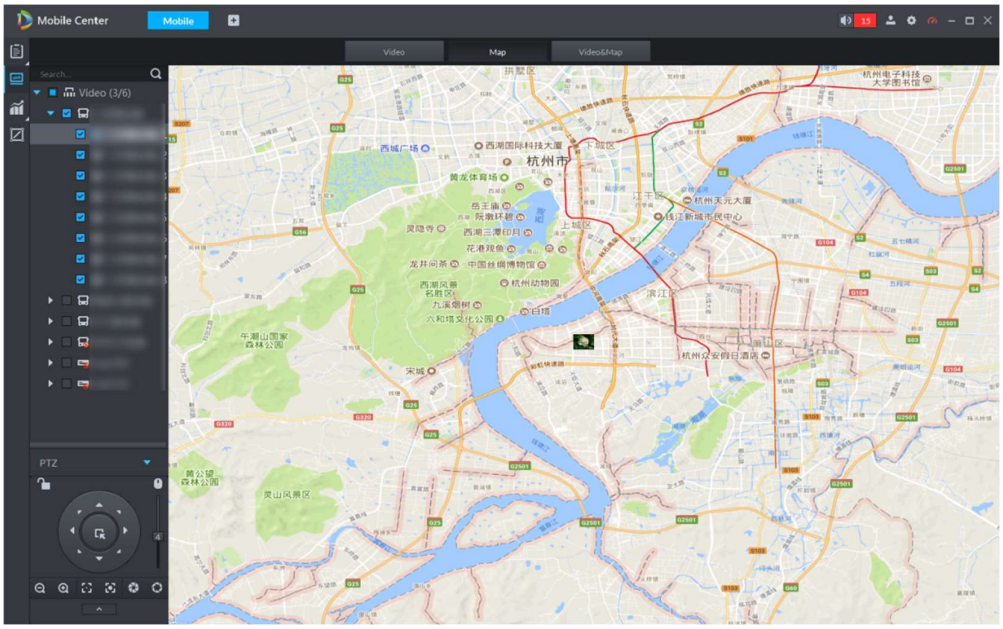
Figure 5-85 Live video



Map Mode

Select **> Map**, the **Map** interface is displayed. See Figure 5-86. You can view the real-time location of vehicle by finding the configured vehicle type icon.

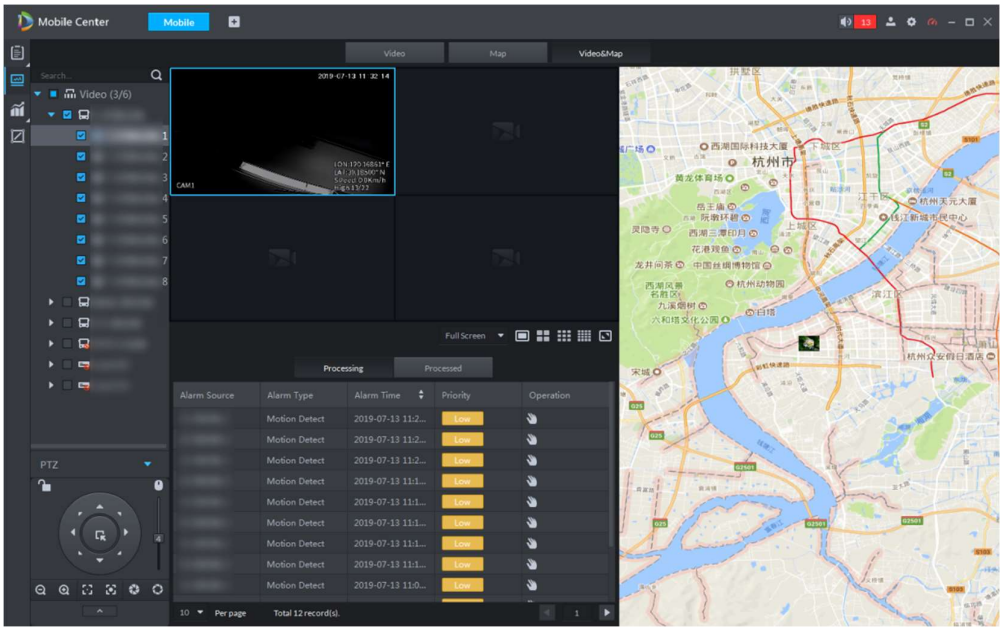
Figure 5-86 Map



Video and Map Mode

Select **> Video&Map**, the **Video&Map** interface is displayed. See Figure 5-87. You can view both the real-time view and location of vehicle.

Figure 5-87 Video and map



5.9.2.2 Opearting with Device from Platform

The platform provides the following opeations that you can do with the device on the previously described display modes.

- Real-time view
- Audio speak

- Main/assist stream switch
- Send information
- Vehicle locus playback
- Key monitoring

Not all operations are available on each display mode. This section takes Video&Map mode as an example because this mode covers all of these operations.

To show these operaitons, on the **Video&Map** interface, **right-click** on the device, the shortcut menu is displayed, alternatively, click the vehicle type icon on the map, the menu with the corresponding operation icons are displayed. See Figure 5-88. For details, see Table 5-20.

Figure 5-88 Operations menu

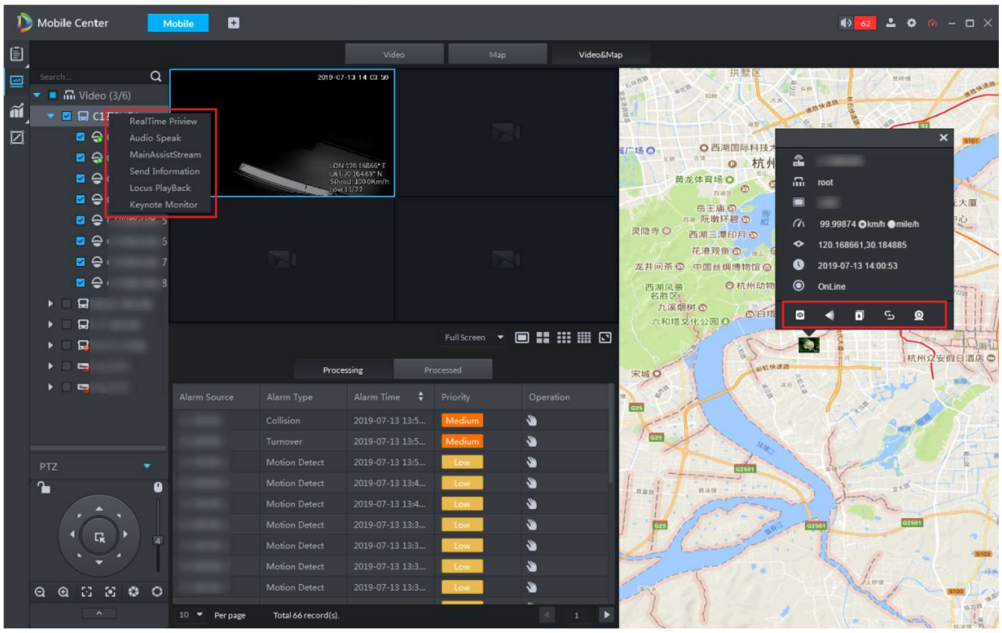


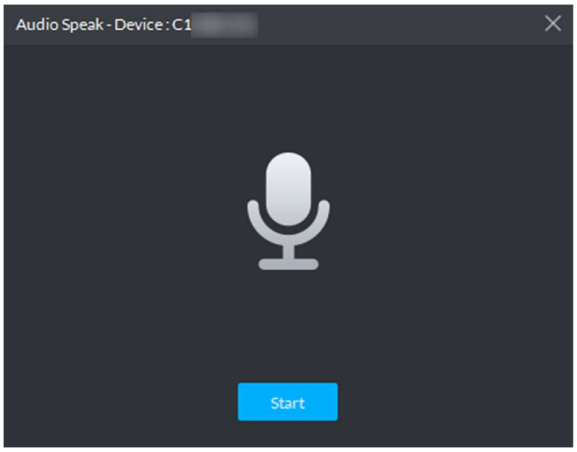
Table 5-20 Operations options and icons

Options	Icons	Function
RealTime Preview		Display all live video streams on the device.
Audio Speak		Start voice call with the device from platform.
MainAssistStream	—	Switch video stream between main stream and sub stream.
Send Information		Send information from platform to device if needed.
Locus Playback		Display vehicle driving route.
Keynote Monitor		Only show this vehcile on the map.

Starting Voice Call

Select **Audio Speak** or click , the **Audio Speak** interface is displayed. See Figure 5-89. You can start voice call with the device.

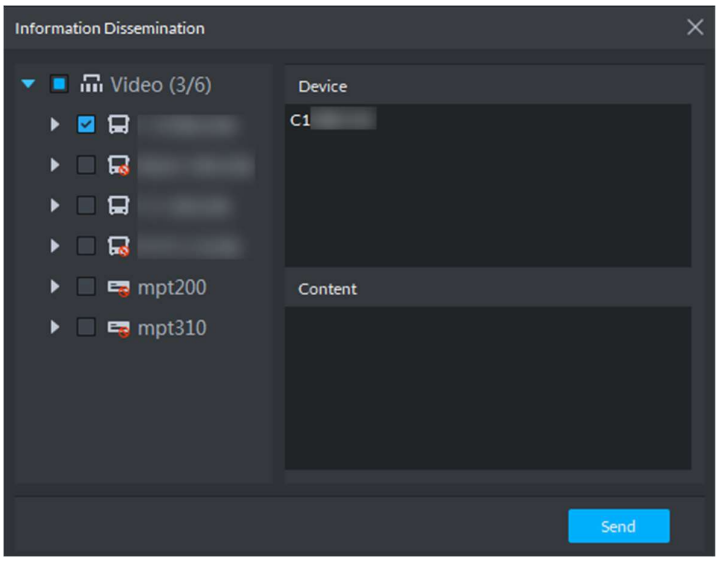
Figure 5-89 Voice call



Sending Information to Device

Step 1 Select **Send Information** or click , the **Send Information** interface is displayed. See Figure 5-89. You can start voice call with the device.

Figure 5-90 Send information dialog box



Step 2 In the **Content** box, enter the information that you want to send to the device.

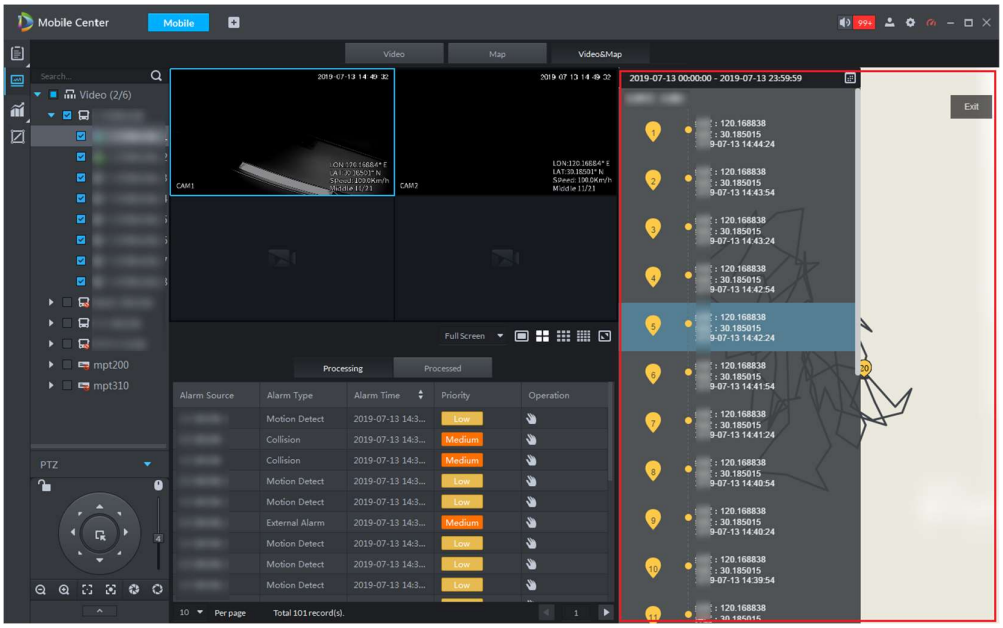
Step 3 Click **Send**.

Then the information can be received and viewed on the device in the vehicle.

Displaying Vehicle Driving Route

Select **Locus Playback** or click , the vehicle driving route information is displayed. See Figure 5-91.

Figure 5-91 Vehicle driving route information

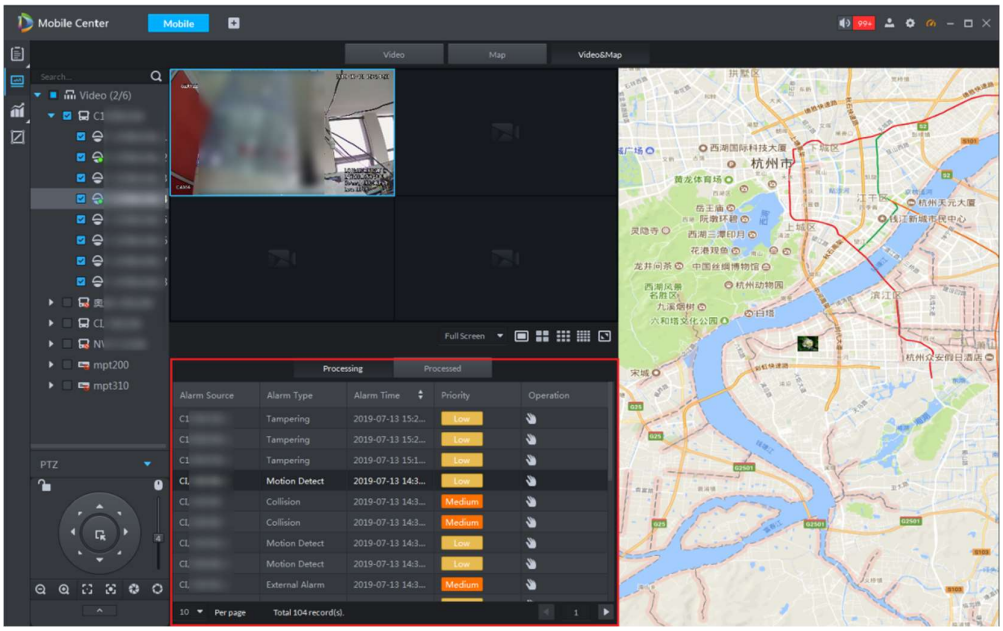


5.9.2.3 Handling Alarm Infomration from device

Step 1 Click > Video&Map.

The **Video&Map** interface is displayed with the alarm information in the middle bottom area. See Figure 5-92. You can view the alarm source, alarm type, alarm time, and handling priority.

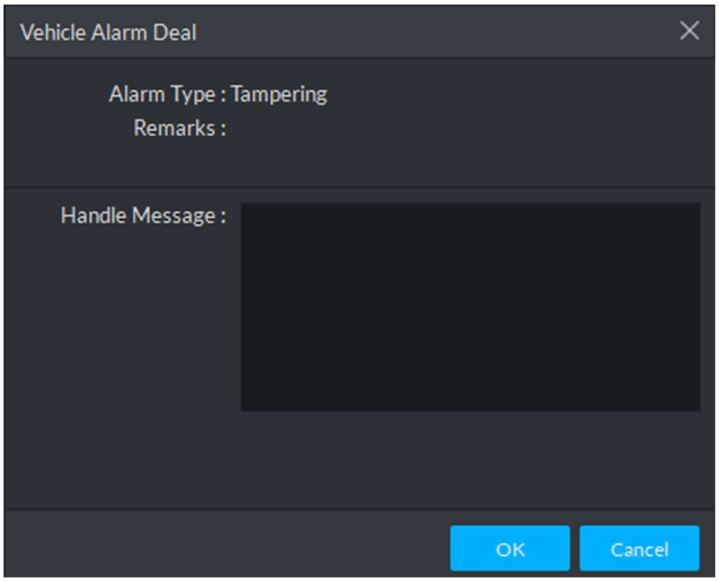
Figure 5-92 Video&Map



Step 2 Click .

The **Vehicle Alarm Deal** interface is displayed. See Figure 5-93.

Figure 5-93 Vehicle alarm handling



Step 3 In the **Handle Message** box, enter the contents which instruct the device to handle the alarms, and then click **OK**.

5.9.3 Vehicle Statistics

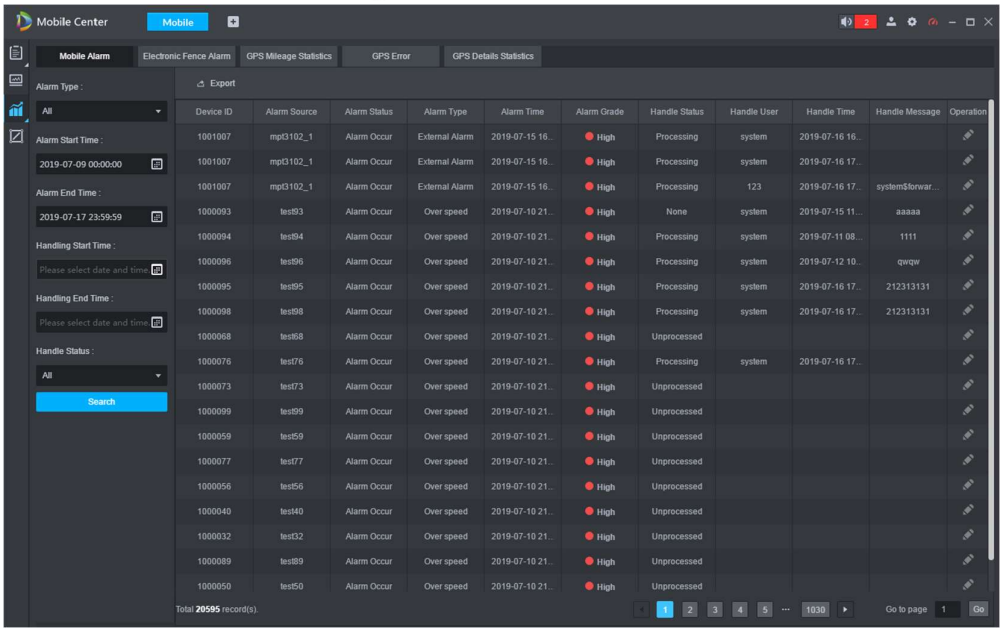
You can search the statistics information such as device alarms, fence alarms, GPS Mileage, GPS error, and GPS details, and export the statistics if needed.

5.9.3.1 Viewing device Alarms Statistics

Step 1 Click > Vehicle Statistics.

The **Mobile device** interface on the **Vehicle Statistics** tab is displayed. See Figure 5-94.

Figure 5-94 Mobile device



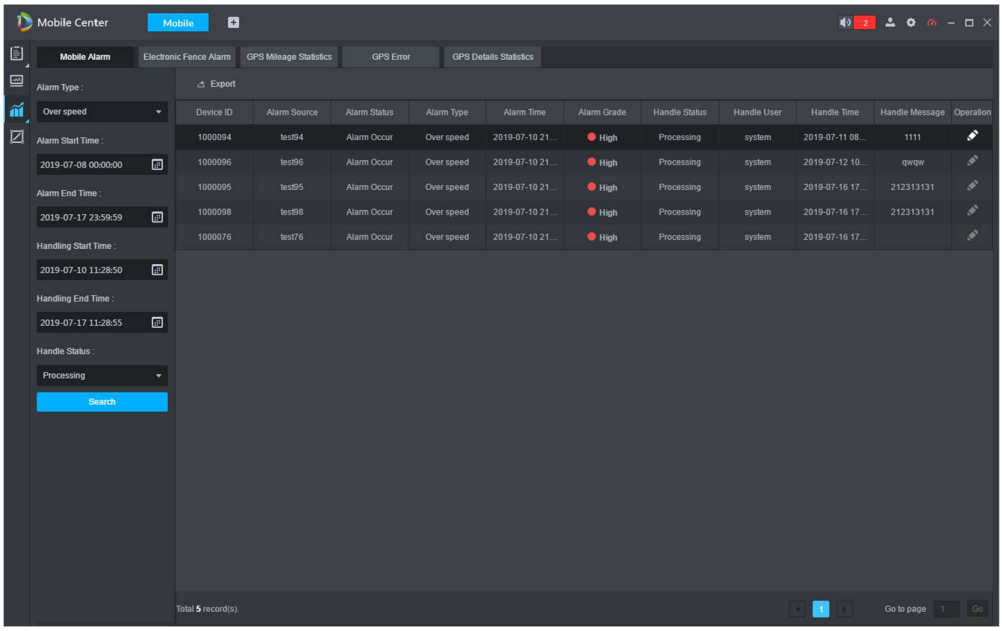
Step 2 Set the searching conditions.

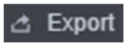
- In the **Alarm Type** list, select alarm type, for example, select **Over speed**.
- Enter alarm start time and end time, handling start time and end time respectively.
- In the **Handle Status** list, select alarm handling status, for example, select **Processing**.

Step 3 Click **Search**.

The searching result is displayed. See Figure 5-95.

Figure 5-95 Alarms searching result



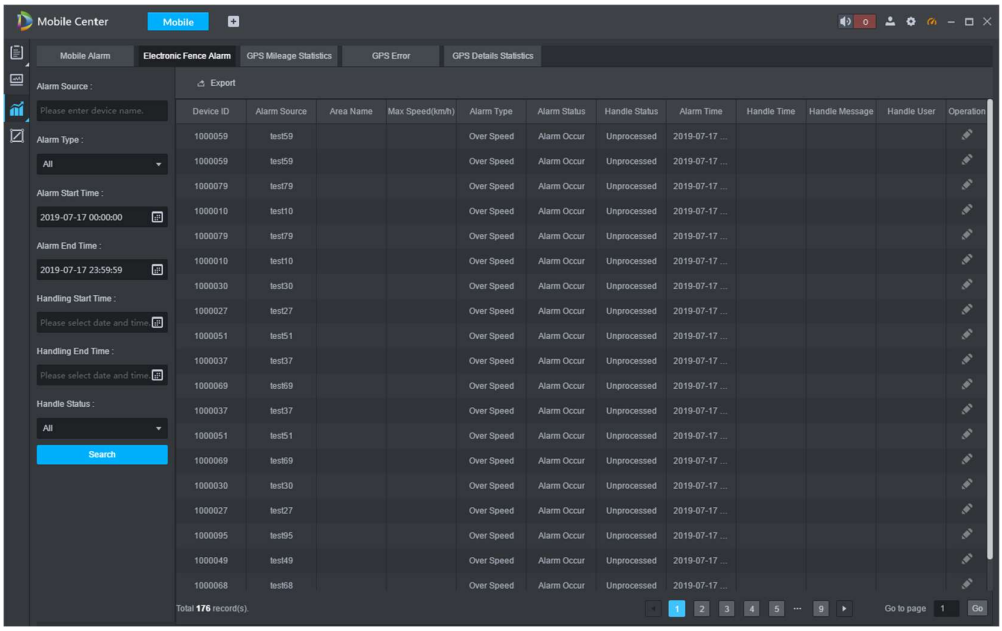
- Click to handle the alarms.
- Click  to export the searched alarms information to your local storage.

5.9.3.2 Viewing Electronic Fence Alarms Statistics

Step 1 Select > Electronic Fence Alarm.

The **Electronic Fence Alarm** interface on the **Vehicle Statistics** tab is displayed. See Figure 5-96.

Figure 5-96 Electronic fence alarm



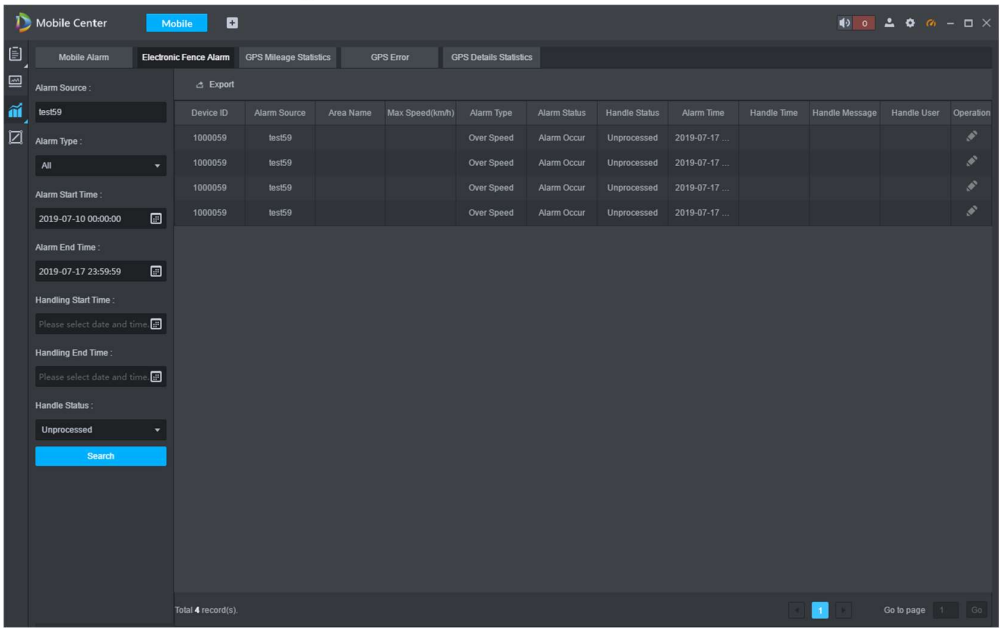
Step 2 Set searching conditions.

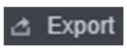
- In the **Alarm Source** box, enter device name, for example, enter test59.
- In the **Alarm Type** list, select fence alarm type, for example, select **Over Speed**.
- Enter fence alarm start time and end time, handling start time and end time respectively.
- In the **Handle Status** list, select fence alarm handling status, for example, select **Unprocessed**.

Step 3 Click Search.

The searching result is displayed. See Figure 5-97.

Figure 5-97 Fence alarm search result



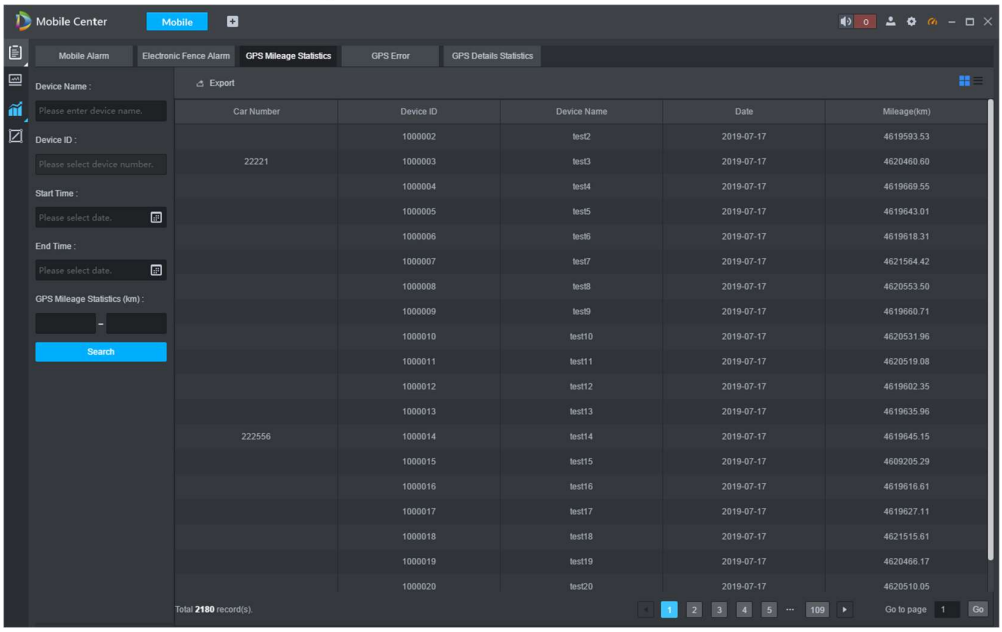
- Click to handle the alarms.
- Click  to export the searched alarms information to your local storage.

5.9.3.3 Viewing GPS Mileage Statistics

Step 1 Select > GPS Mileage Statistics.

The **GPS Mileage Statistics** interface on the **Vehicle Statistics** tab is displayed. See Figure 5-98.

Figure 5-98 GPS mileage statistics



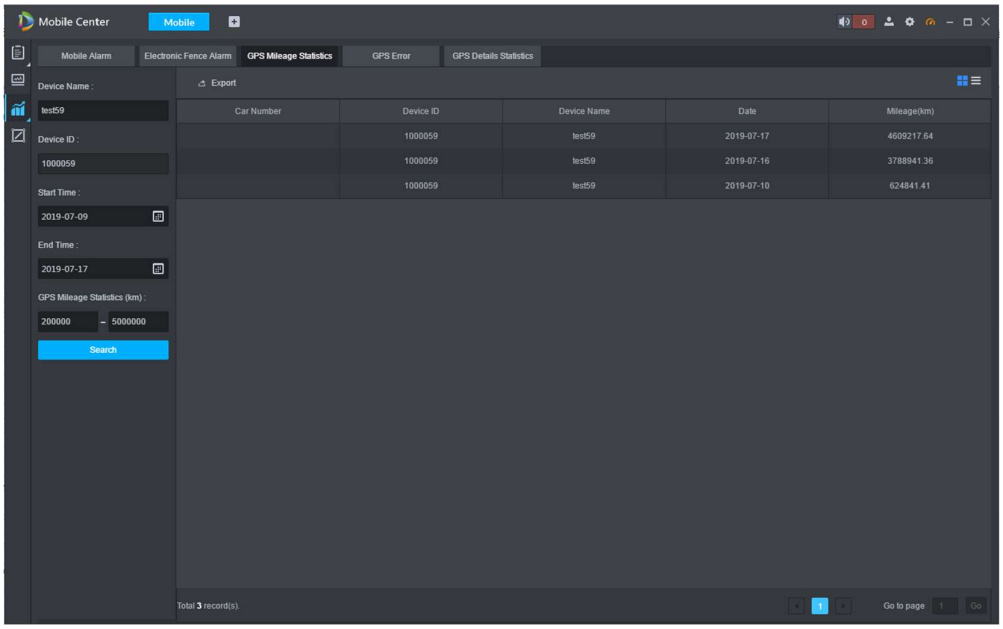
Step 2 Set searching conditions. You can only search one device at a time.

- In the **device Name** box, enter device name, for example, enter test59.
- Click in the **Devie ID** box, and select device name you just entered (test59 in this example), then the corresponding device ID is displayed in the **device ID** box.
- Enter start time and end time respectively.
- Enter mileage range that you want to search.

Step 3 Click **Search**.

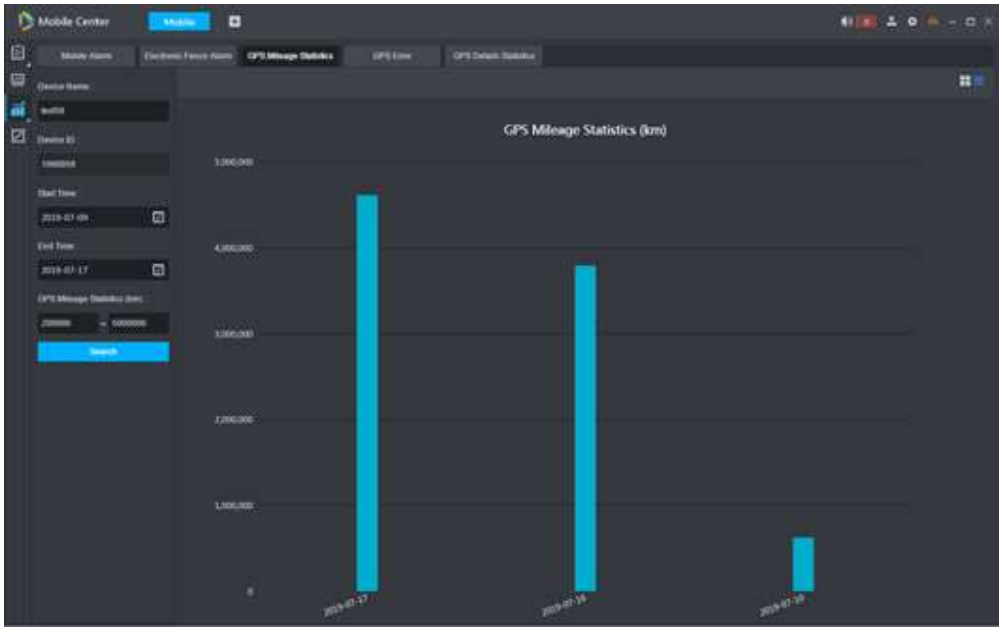
The search result is displayed. See Figure 5-99.

Figure 5-99 Mileage statistics search result



- Click , the statistics are displayed in chart. See Figure 5-100

Figure 5-100 Chart display



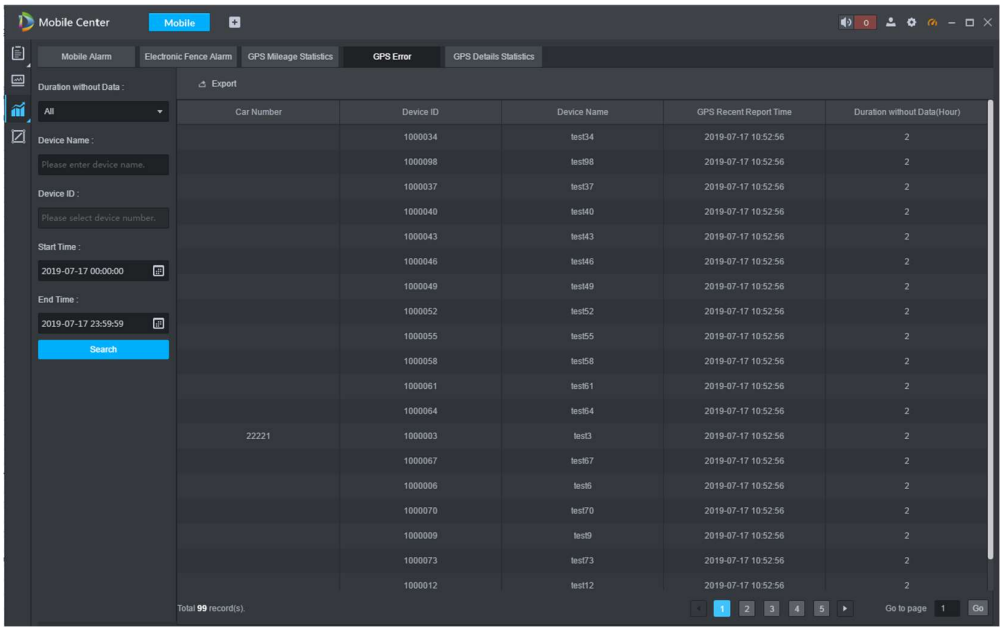
5.9.3.4 Viewing GPS Error Statistics

You can search the devces with GPS information are not uploaded timely.

Step 1 Select > GPS Error.

The **GPS Error** interface on the **Vehicle Statistics** tab is displayed. See Figure 5-101.

Figure 5-101 GPS error



Step 2 Set searching conditions. The searching duration you can search is within 24 hours.

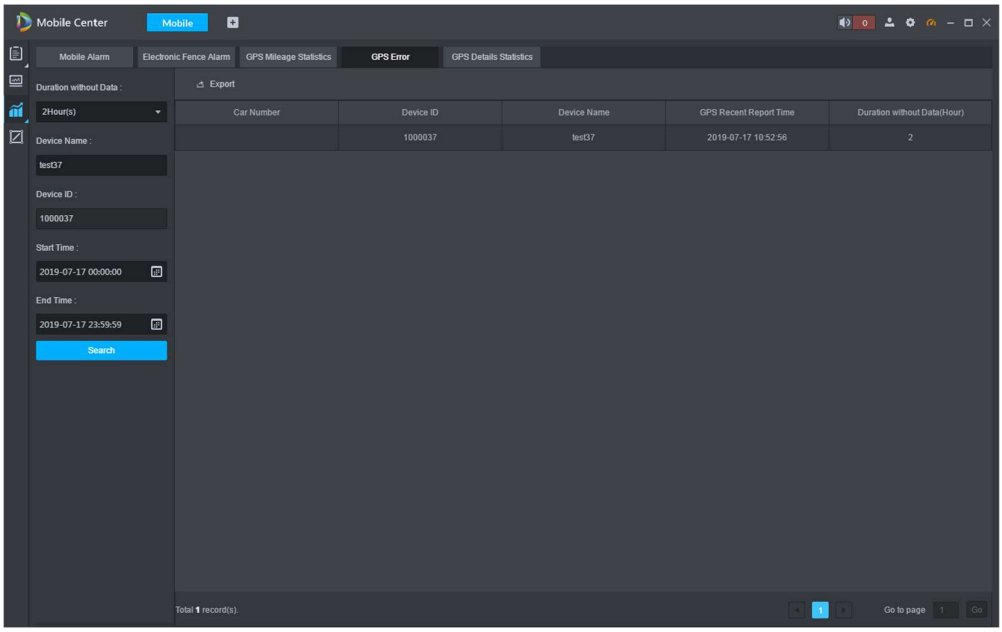
- In the **Duration without Data** list, select a duration value, for example, select **2Hour(s)**.
- In the **Devie Name** box, enter the device name, for example, enter test37.
- Click in the **device ID** box, and select device name you just entered (test37 in this example), then the corresponding device ID is displayed in the **device ID** box.
- Enter start time and end time respectively.

Step 3 Click **Search**.

The search result is displayed. See Figure 5-102.

Click Export to export the searched mileage statistics information to your local storage.

Figure 5-102 GPS error search result

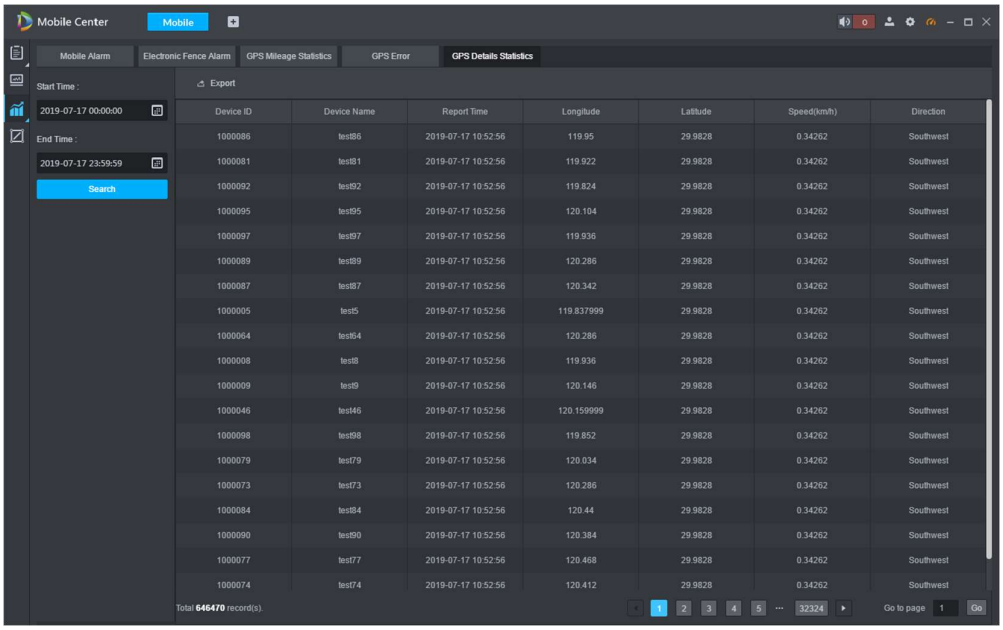


5.9.3.5 Viewing GPS Details Statistics

You can view the list of GPS details to know the report time, longitude, latitude, speed, and direction for all the vehciles.

Click > **GPS Details Statistics**, the **GPS Details Statistics** interface on the **Vehicle Statistics** tab is displayed. See Figure 5-103.

Figure 5-103 GPS Details statistics



5.9.4 Electronic Fence

You can add electronic fences on the map to define as different zones, and when the vehicle enters these zones, an alarm is triggered. There are totally five zones you can set, and for details, see Table 5-21.

Table 5-21 Fence types

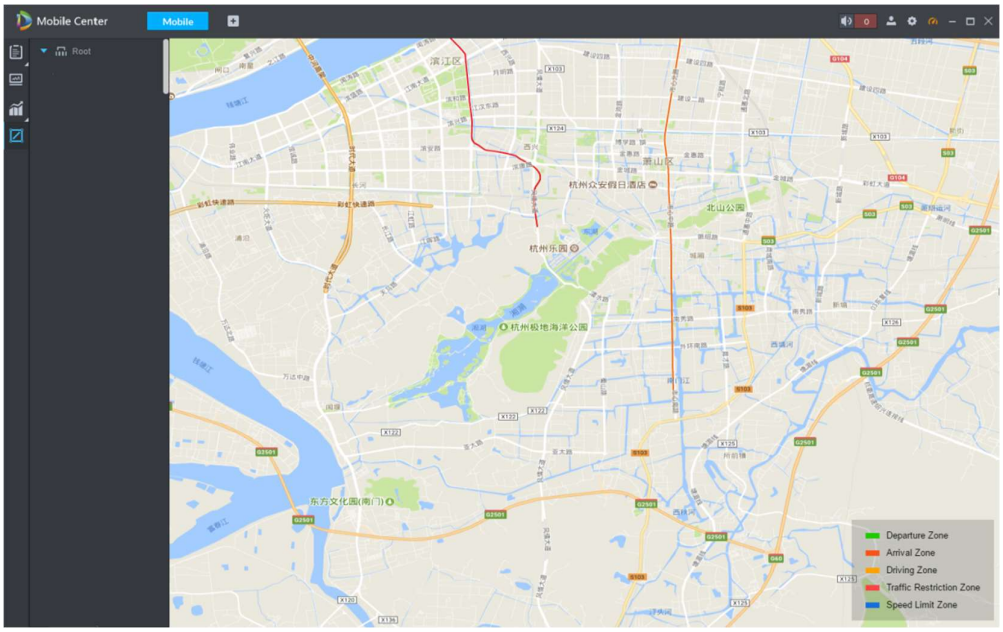
Fence type	Function
Departure Zone	• One alarm is triggered when vehicle enters the zone. • One alarm is triggered when vehicle leaves the zone. • The device does not keep uploading alarms during vehicle moving within the zone.
Arrival Zone	
Driving Zone	
Traffic Restriction Zone	
Speed Limit Zone	After the vehicle enters this zone, if the speed exceeds the limit, the device keeps uploading over speed alarm to the platform until the vehicle leaves this zone.

5.9.4.1 Setting an Electronic Fence

Step 1 Click .

The electronic fence interface is displayed. See Figure 5-104.

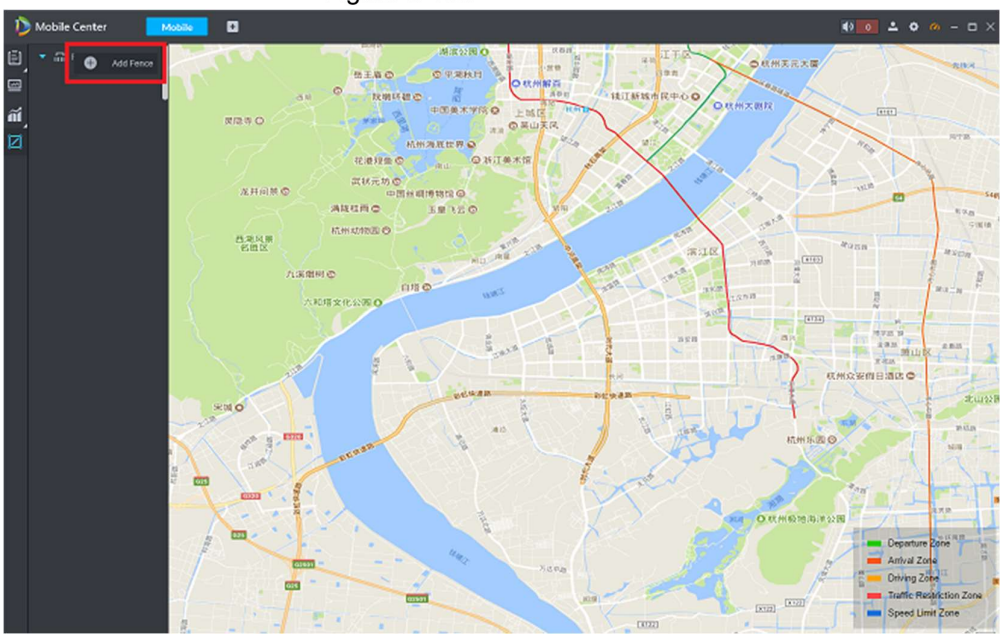
Figure 5-104 Electronic fence



Step 2 Right-click on the **Root** organization area.

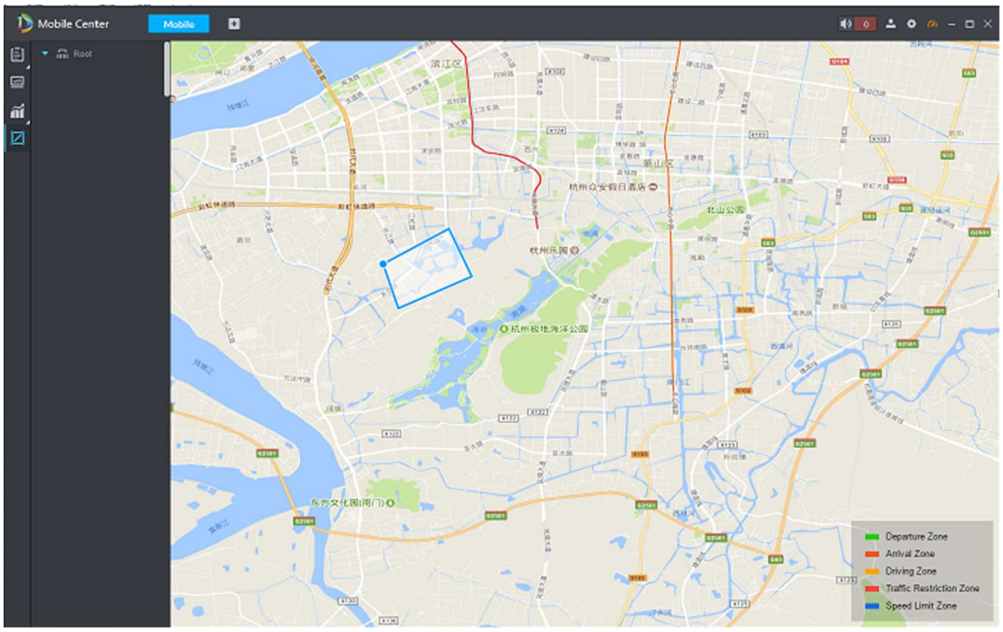
The **Add Fence** button is displayed. See Figure 5-105.

Figure 5-105 Add fence button



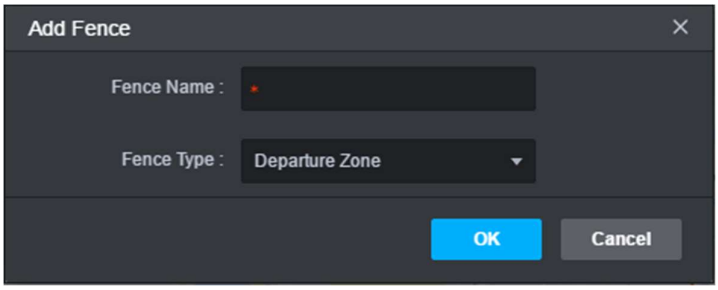
Step 3 Click **Add Fence**, and then draw an area on the map. See Figure 5-106.

Figure 5-106 Fence drawing



After drawing is completed, the **Add Fence** interface is displayed. See Figure 5-107.

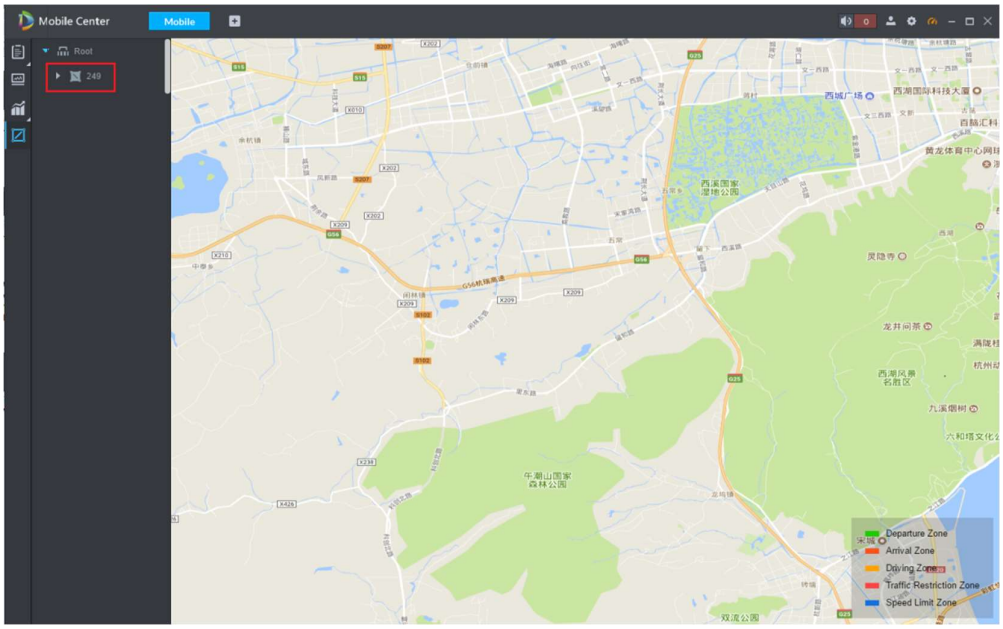
Figure 5-107 Fence name and type setting



Step 4 Enter fence name (249, for example) and select a fence type (**Speed Limit Zone**, for example) according to your needs, and then click **OK**.

A new fence is added. See Figure 5-108. You can continue to add as many fences as you want.

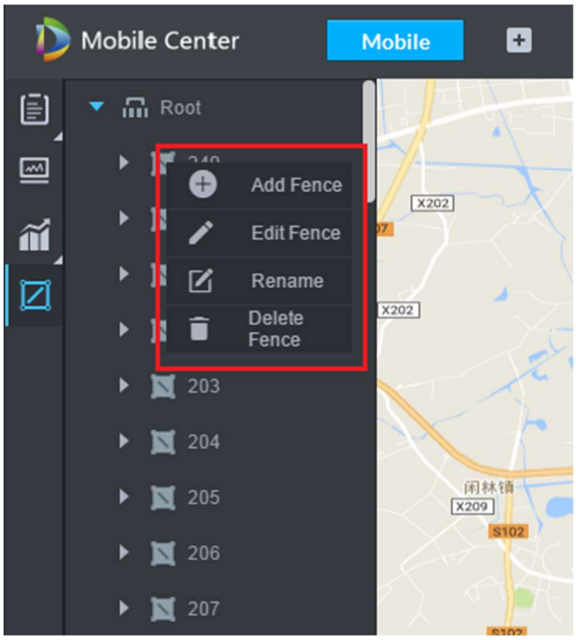
Figure 5-108 A new fence added



5.9.4.2 Binding Devices with Electronic Zones

Step 1 Right-click on the fence name, the shortcut menu is displayed. See Figure 5-109.

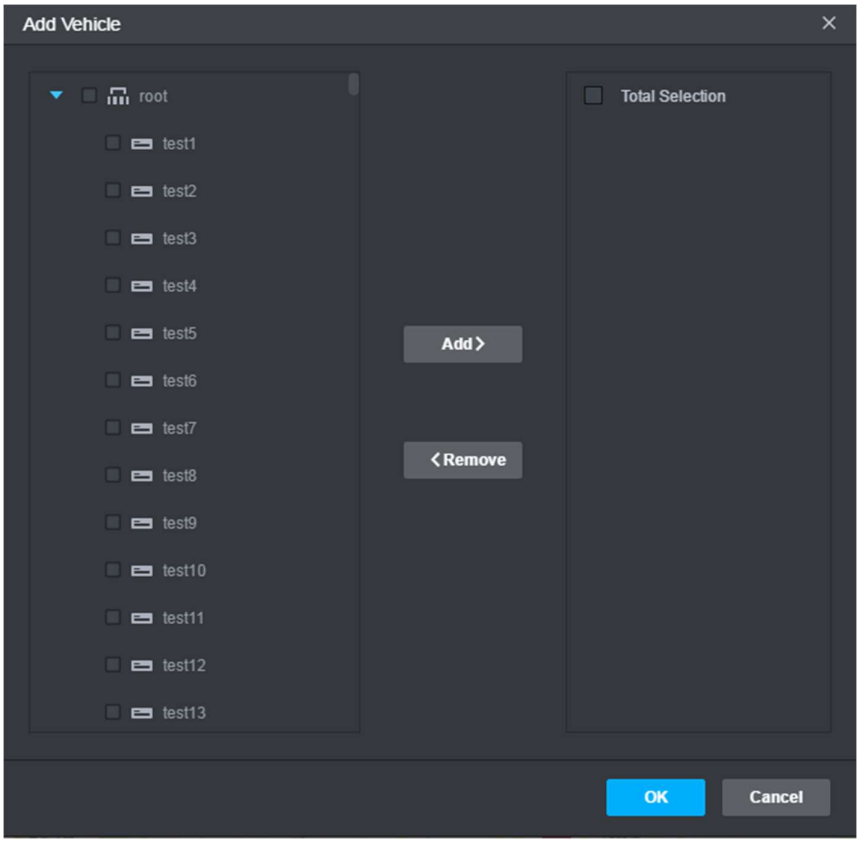
Figure 5-109 Fence shortcut menu



Step 2 Click Edit Fence.

The **Add Vehicle** interface is displayed. See Figure 5-110.

Figure 5-110 Add vehicle



Step 3 Select the device that you want to bind with this fence, and then click **Add**.
The added devices are listed in the right colume area.

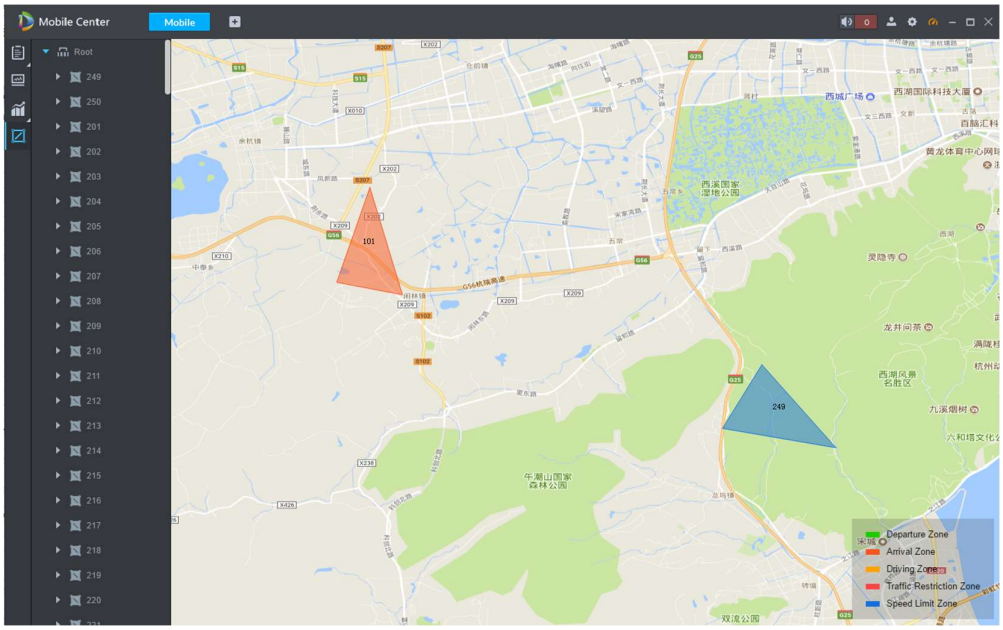
Step 4 Click **OK**.

5.9.4.3 Managing Electronic Zones

Displaying Electronic Zones

Double-click on the fence name, for example, fence 249 and 101, the electronic fences are displayed on the map. See Figure 5-111. The fence color corresponds to fence type.

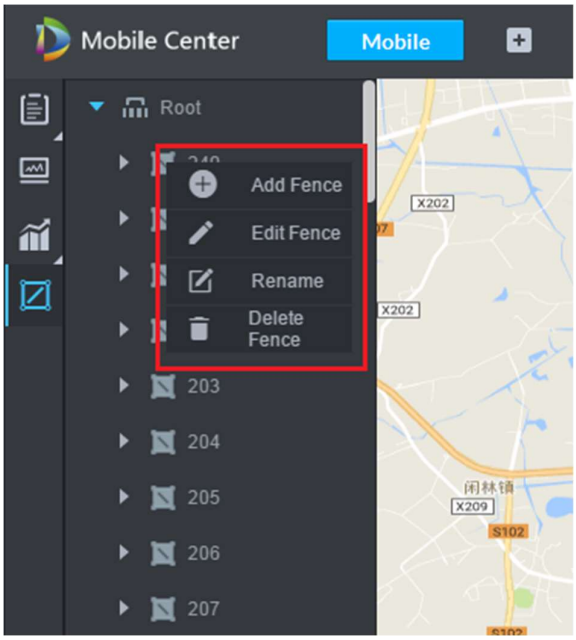
Figure 5-111 Fence shown on map



Renaming Electronic Zones

Step 1 Right-click on the fence name, the shortcut menu is displayed. See Figure 5-112.

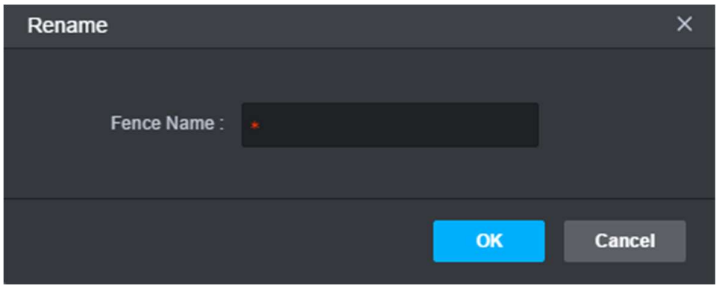
Figure 5-112 Fence shortcut menu



Step 2 Click **Rename**.

The **Rename** interface is displayed. See Figure 5-113.

Figure 5-113 Rename fence



Step 3 Enter the fence name, and then click **OK**.
The fence name is changed.

Deleting Electronic Fences

On the fence shortcut menu (Figure 5-112), click **Delete Fence**.

Appendix 1 Service Module Introduction

Appendix Table1-1 Service modules

Service Name	Service Name	Function Description	Port	Protocol Type
Center Management Service	DSS_WEB	Center management service is to manage each service and provide accessing port.	HTTPS: 443	TCP
Message Queue Service	DSS_MQ	Message queue service is to transfer messages between the platforms.	61616	TCP
DMS (device Management Service)	DSS_DMS	device management service is to register front-end encoder, receive alarm, transfer alarm and send out sync time command.	9200	TCP
MTS (Media Transmission Service)	DSS_MTS	Media transmission service is to get the audio/video bit stream from the front-end device and then transfer these data to the SS, client and decoder.	9100	TCP
SS (Storage Service)	DSS_SS	Storage service is to storage/search/playback record.	9320	TCP
VMS (Video Matrix Service)	DSS_VMS	Video matrix service is to login the the decoder and send out task to the decoder to output to the TV wall.	Not fixed, do not need to be mapped to the outside.	TCP
MGW (Media Gateway Service)	DSS_MGW	Media gateway service is to send out MTS service to the decoder.	9090	TCP
ARS (Auto Register Service)	DSS_ARS	Auto register service is to listen, login, or get bit streams to send to MTS.	9500	TCP

Service Name	Service Name	Function Description	Port	Protocol Type
PCPS (ProxyList control Proxy Service)	DSS_PCPS	ProxyList control Proxy Service is to login Hikvision device, Onvif device, and then get the stream and transfer the data to MTS.	5060 14509	UDP TCP
ADS (Alarm Dispatch Service)	DSS_ADS	Alarm dispatch service is to send out alarm information to different objects according to the plans.	9600	TCP

Appendix 2 Cybersecurity Recommendations

Cybersecurity is more than just a buzzword: it's something that pertains to every device that is connected to the internet. IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks. Below are some tips and recommendations on how to create a more secured security system.

Mandatory actions to be taken for basic equipment network security:

1. **Use Strong Passwords**

   Please refer to the following suggestions to set passwords:

   - The length should not be less than 8 characters;
   - Include at least two types of characters; character types include upper and lower case letters, numbers and symbols;
   - Do not contain the account name or the account name in reverse order;
   - Do not use continuous characters, such as 123, abc, etc.;
   - Do not use overlapped characters, such as 111, aaa, etc.;

2. **Update Firmware and Client Software in Time**

   - According to the standard procedure in Tech-industry, we recommend to keep your equipment (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the equipment is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
   - We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your equipment network security:

1. **Physical Protection**

   We suggest that you perform physical protection to equipment, especially storage devices. For example, place the equipment in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable equipment (such as USB flash disk, serial port), etc.

2. **Change Passwords Regularly**

   We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. **Set and Update Passwords Reset Information Timely**

   The equipment supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. **Enable Account Lock**

The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. **Change Default HTTP and Other Service Ports**

   We suggest you to change default HTTP and other service ports into any set of numbers between 1024~65535, reducing the risk of outsiders being able to guess which ports you are using.

6. **Enable HTTPS**

   We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.

7. **Enable Whitelist**

   We suggest you to enable whitelist function to prevent everyone, except those with specified IP addresses, from accessing the system. Therefore, please be sure to add your computer's IP address and the accompanying equipment's IP address to the whitelist.

8. **MAC Address Binding**

   We recommend you to bind the IP and MAC address of the gateway to the equipment, thus reducing the risk of ARP spoofing.

9. **Assign Accounts and Privileges Reasonably**

   According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.

10. **Disable Unnecessary Services and Choose Secure Modes**

    If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.

    If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:

    - SNMP: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
    - SMTP: Choose TLS to access mailbox server.
    - FTP: Choose SFTP, and set up strong passwords.
    - AP hotspot: Choose WPA2-PSK encryption mode, and set up strong passwords.

11. **Audio and Video Encrypted Transmission**

    If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.

    Reminder: encrypted transmission will cause some loss in transmission efficiency.

12. **Secure Auditing**

    - Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
    - Check equipment log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.

13. **Network Log**

    Due to the limited storage capacity of the equipment, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

14. **Construct a Safe Network Environment**

In order to better ensure the safety of equipment and reduce potential cyber risks, we recommend:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
- The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.
- Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.