MaxView V6 User Manual

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About the Guide

Conventions

This document is a simple description of the integrated monitoring platform MaxView based on Web (hereinafter regarded to as MaxWeb), to guide the users to understand MaxWeb's features and usage.

Assumptions

This document is applicable to the users.

Version 06 (2018-3-22)

The 6th official version.

1 System Summary

1.1 Introduction

1.1.1 Background

In order to meet the needs of many industries, such as integrated transmission line monitoring, substation auxiliary monitoring, industrial control, intelligent building, intelligent transportation and so on, to ensure the comprehensive monitoring requirements in the field of application, Bandweaver company has launched a MaxView monitoring platform based on data monitoring and integrated monitoring, including data storage, object monitoring, intelligent control, alarm alerting, and many other functions.

1.1.2 Definitions

MaxView monitoring platform is a distributed configuration monitoring platform which can monitor and monitor the front end monitoring system in real time through the browser. Operators do not need to install the client. Any PC machine that owns the network can login directly to the front end monitoring system by browser, and establish contact with the monitoring site. The operation and maintenance personnel can browse and query the field data through the monitoring interface to realize the function of picture configuration, centralized monitoring, event alarm and report statistics and printing.

1.2 Roles and Permissions

- System administrator

The system administrator role for the user with the highest permission to have all the permissions of the system all "operation set" and "operating domain".

- Other roles

Other user roles created by the system administrator role can obtain appropriate permissions by assigning different "operation sets" and "operating domains"。

1.3 Login

- Prerequisite

It is recommended to log in and access MaxView using IE9 and its above version browsers or Chrome browsers

- Operation Steps

1. Open the browser, enter the URL of the monitoring platform in the address bar, and press the Enter key to enter the login interface of the monitoring platform, as shown in Figure 1-1

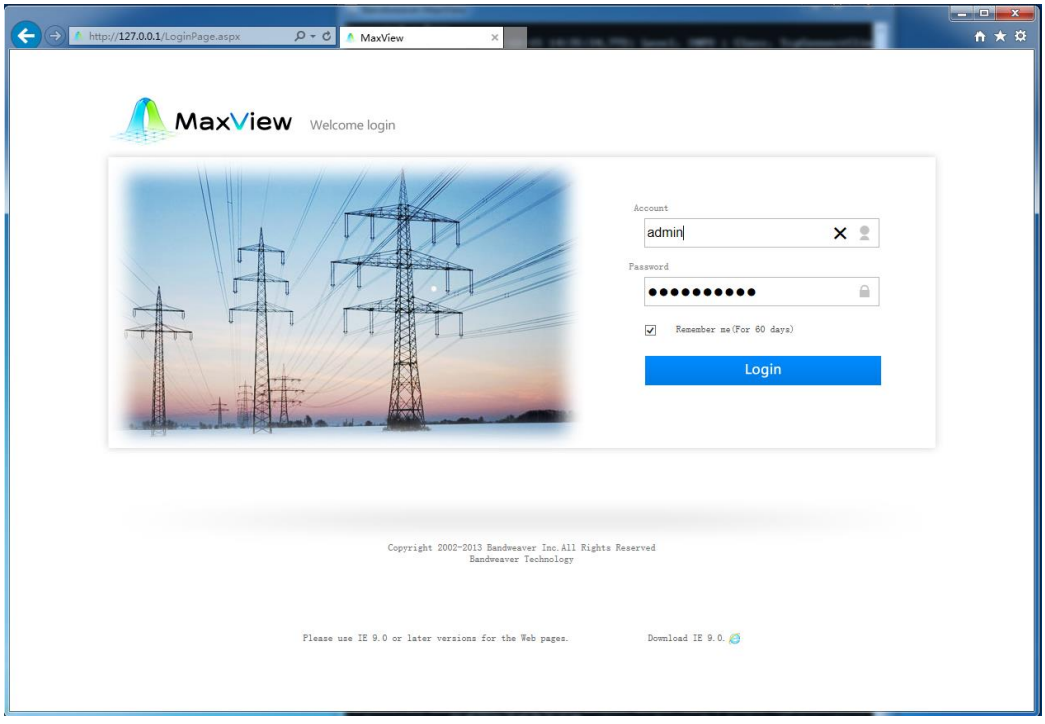


Figure 1-1 Login screen

2. Enter the correct "Account" and "Password" respectively, the default account admin, the password B@ndwe@ver. To ensure system security, users will be prompted to change their password when they are first logged in.

3. Click "login" login the integrated monitoring platform with the current user account

1.4 User Interface

1.4.1 Main Page

MaxWeb's main interface is shown in Figure 1-2 , and the description of the different functional areas is listed in 错误!未找到引用源。.

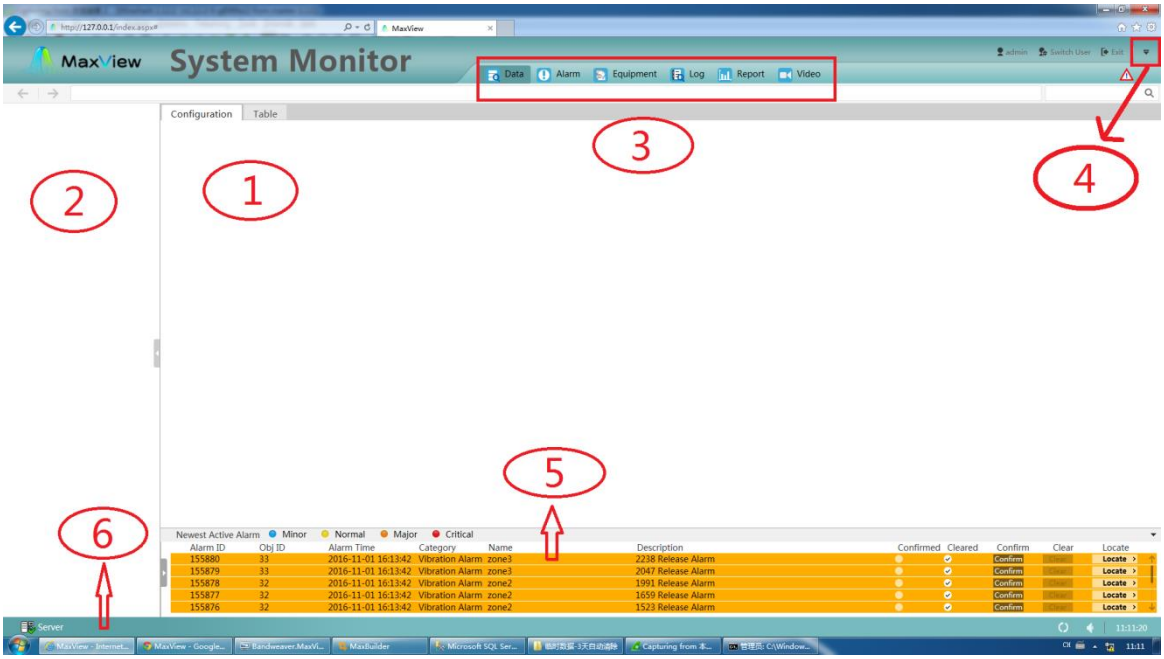


Figure 1-2 Main interface

Table 1 Main Interface Description

Functional area	Description
1、Main Interface Display area	Real-time data and status of the component associated with the current object is displayed under the "Configuration" tab, and the real time information of all the monitored objects in the current page is displayed in table form under the "Table" tab.

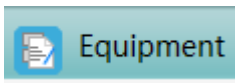
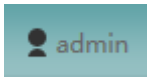
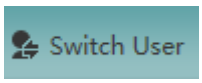
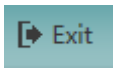
Functional area	Description
2、Navigation Bar	This part provides the switch between the main interface display area and the display page; The navigation bar can be expanded or put away by clicking “ ”.
3、Shortcut Menu	This area provides shortcut for data query, alarm management, equipment parameter, log query, data reports, video management, un-cleared alarm, the search bar, account switching, current user login information, account password change, and account cancellation.
4、Configuration Button	The in the user configuration area provides the system configuration portal.
5、Latest Warning List	This area can show the latest 50 un-confirmed, un-cleared or cleared warning messages; Identify, clear and locate operations can be performed on the selected alarm messages.
6、Status Bar	It provides information on server connection status, page rotation button, sound alarm horn, and current system time.

1.4.2 Shortcut Menu

The description of the shortcut menu of MaxWeb is listed in Table 2, but refer to Chapter “**错误!未找到引用源。错误!未找到引用源。**” for a detailed description.

Table 2 Shortcut Menu Features

Menu item	Description
	Provides query and download functions for the real-time and historical data of the monitored object.
	Provides query, confirmation, clear and download functions for the latest and historical alarm events

Menu item	Description
	Provides functions including management of route, equipment, and station.
	Provides query and download functions for the operation log, security log, and event log.
	Provides statistical function for various types of the data from the monitoring objects, including statistical reports according to warning levels, statistical reports for Top10 maximum alerts, statistical reports for single object measurement, statistical reports for minimum/maximum/average values for multi object measurement.
	Provides control to the video footage and video playback by a large number of buttons in the video control panel.
	Provides manual confirmation operation for the un-confirmed and un-cleared events and manual clearing operation for the confirmed and non-cleared warning for the monitoring targets
	Provides user account information display and password changes for the current user that has logged in.
	Switch current user account.
	Account log-out.
	Provides fast search and location for the monitoring targets. Supports fuzzy query of the number, name and IP address of the monitoring object.

1.4.3 Main Interface

I. Navigation Bar

After entering the MaxView monitoring platform, click the “ ” button on the right of the navigation bar, The navigation bar can be expanded and hidden. The display effect is shown in Figure 1-4 and Figure 1-5.

Figure 1-1 Display Navigation Bar

Figure 1-2 Hidden Navigation Bar

II. Main Monitor Page

The mouse moves to the lower right corner of the main monitoring page. After the "↘" button, click the button to expand or restore the monitoring page. You can hide the left navigation bar, the status bar, the shortcut menu bar, and so on. The expansion effect is shown in Figure 1-6.

Figure 1-3 Main Monitor Page Expansion

III. Configuration and Table

- Configuration

According to the field deployment, the state of the associated monitoring object is displayed more vividly in real time with the combination of various graphical components, as shown in Figure 1-7.

Figure 1-4 Configuration Page

- Table

The information of all monitored objects in the current page is displayed in table, including object ID, meas obj, location, object type, monitoring zone, measurement value, acquisition time, alarm state and operation, as shown in Figure 1-8.

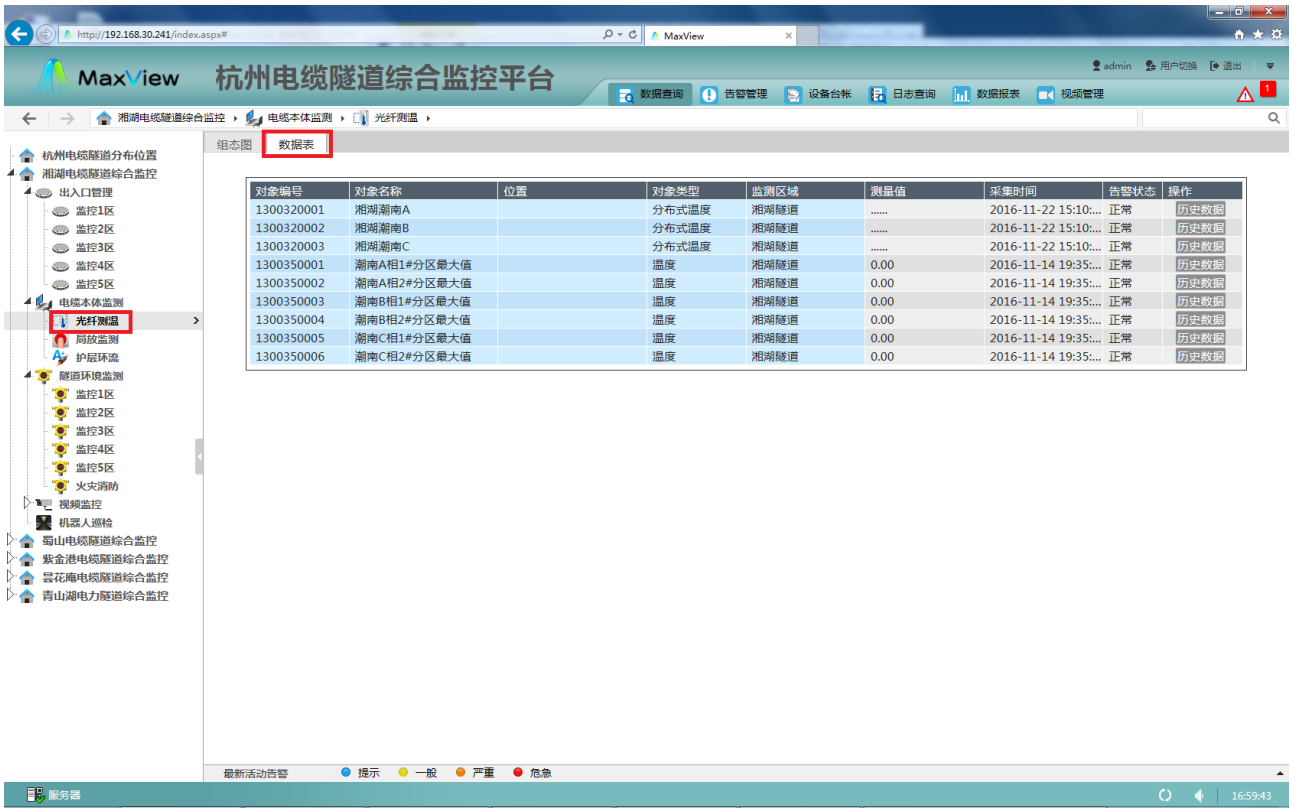


图 1-5 数据表页面

说明

There are no components or components in the pages of the election, but when the components are not associated with the corresponding measurement objects, the page displays only the header, and no specific data information is displayed.

2 System Configuration

2.1 System Config

Log in MaxWeb as administrator, click the button "▼" on the upper right corner of the interface, and select the "System Config" option.

2.1.1 Project Information

1. In the interface of "System Parameters", select "Project Info", as shown in figure 2-1.

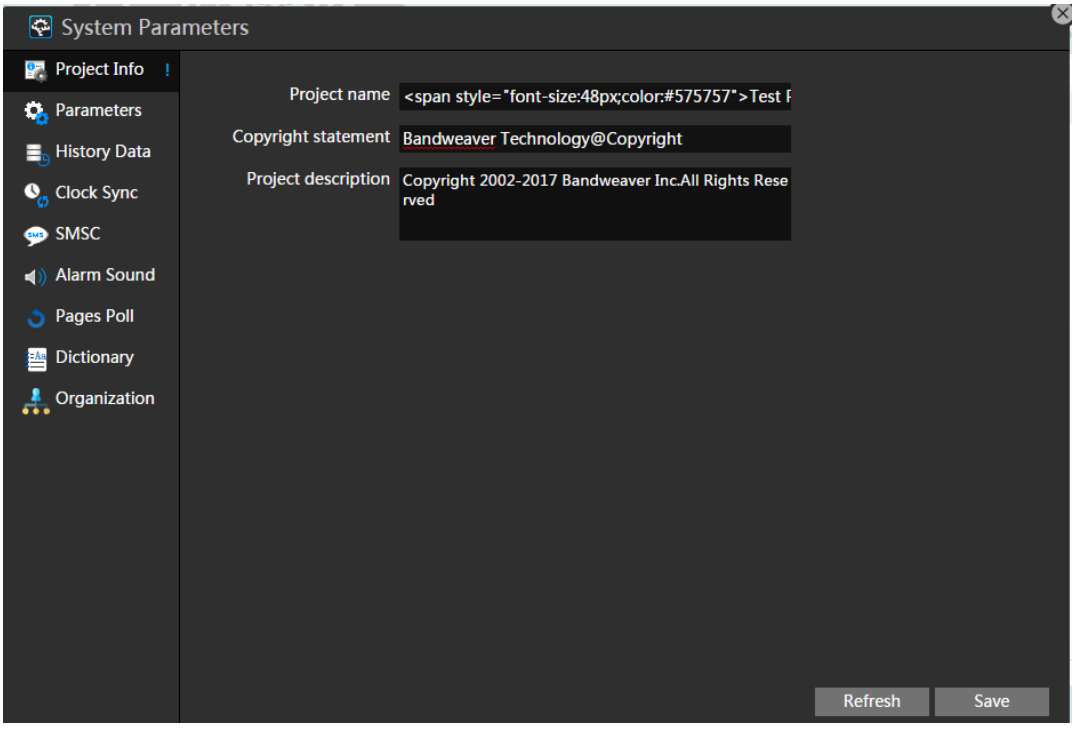


figure 2-1 System Parameters – Project Info

2. According to the needs, set the parameters of "project name, copyright declaration, project description" .

3. After setting, you can click the button “▼” on the upper right corner of the interface, and see the information in the “About Software”, as shown in figure 2-2.

Figure 2-2 About Software

2.1.2 Parameter

In the page, you can set Route, Map, Alarm display window, Default Video, Page Title Config, Lock Time and other parameters. As shown in figure 2-3

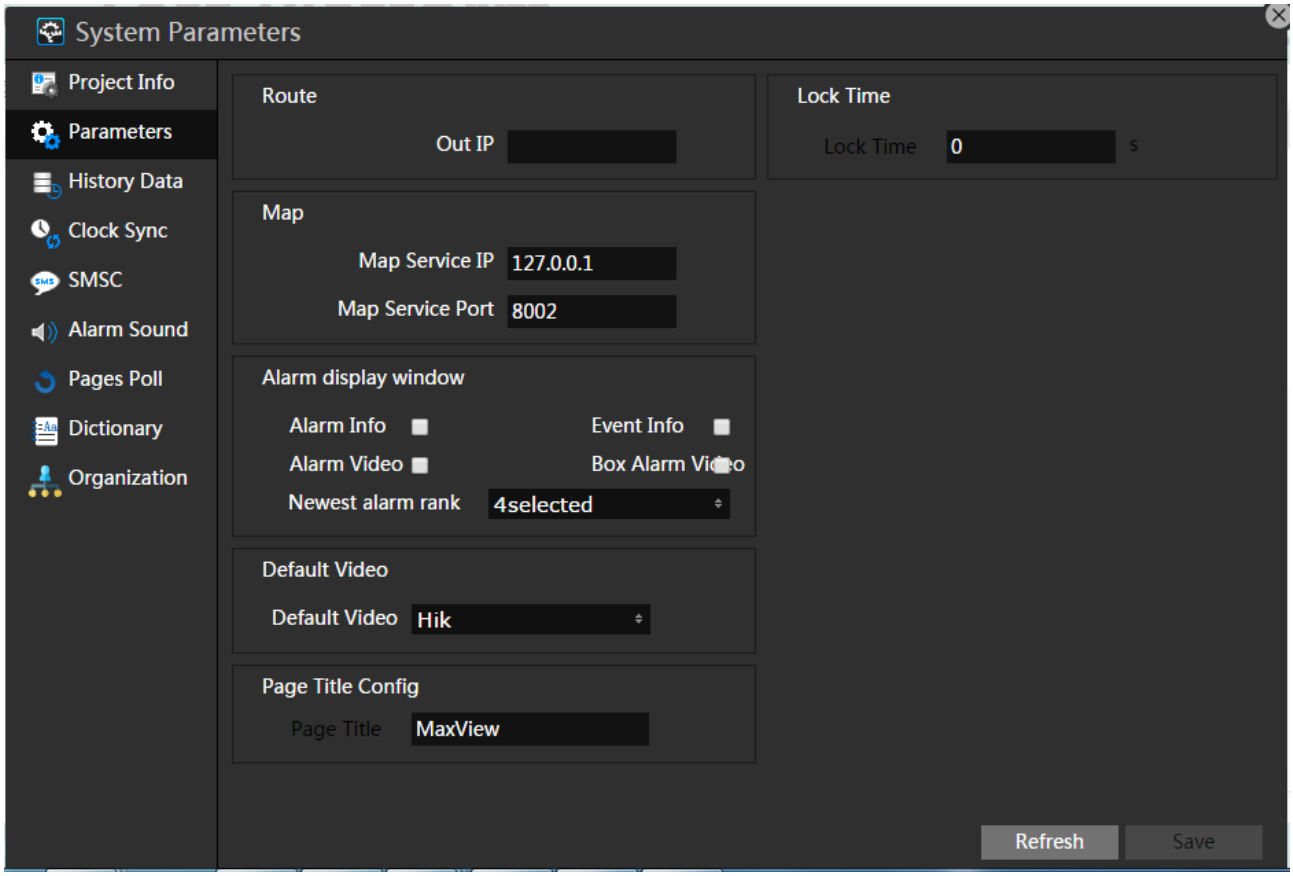


Figure 2-3 System Parameters – Parameters

- Route

The use of this function: when users access the internal network video server from the external network, it is necessary to map the address port by configuring the IP address of the external network.

- Map

This function is mainly to configure off-line map service. Before using this function, you need to configure the offline map IIS service.

Set the “Map Service IP” and “Map Service Port” with the offline map’s IP and port, ensuring the port number and the other port number is not conflicting.

- Alarm display window

To check the alarm info or event info, the tooltip of new alarm or event will pop up in the lower right corner of the main interface.

When check the "alarm video" and "video alarm module" at same time, if there is the video component in the current page and video in a non_preview state, the alarm linkage video will be displayed in the preview window;

if there is no video component in current page, the video management window pops up, and display the video the corresponding picture.

Just check "alarm video". There are video components or not in the current page, the alarm linked video will pop up and the corresponding video picture will be displayed.

It’s meaningless to select “Box Alarm Info” only.

You can choose to display the alarm level in the latest alarm list, that is, the selected level alarm will appear in the latest alarm list.

- Default Video

  Set the default video supplier in main menu -> video manager.

- Page Title Config

  Setting the title of the tag page opened by the browser.

- Lock Time

  When achieve the lock time, it’s impossible to do any operation, as shown in figure 2-4, you need to enter the login password to unlock it. If you set 0, it will never work to clock screen.

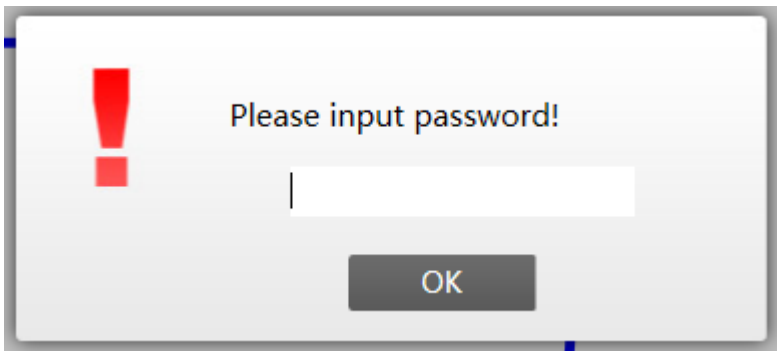


Figure 2-4 Lock Message

2.1.3 History Data

The page sets the number of tables, the maximum time of storing the data in single table, include analog input, state input, switch input, distributed data, spectrum data, as shown in figure 2-5.

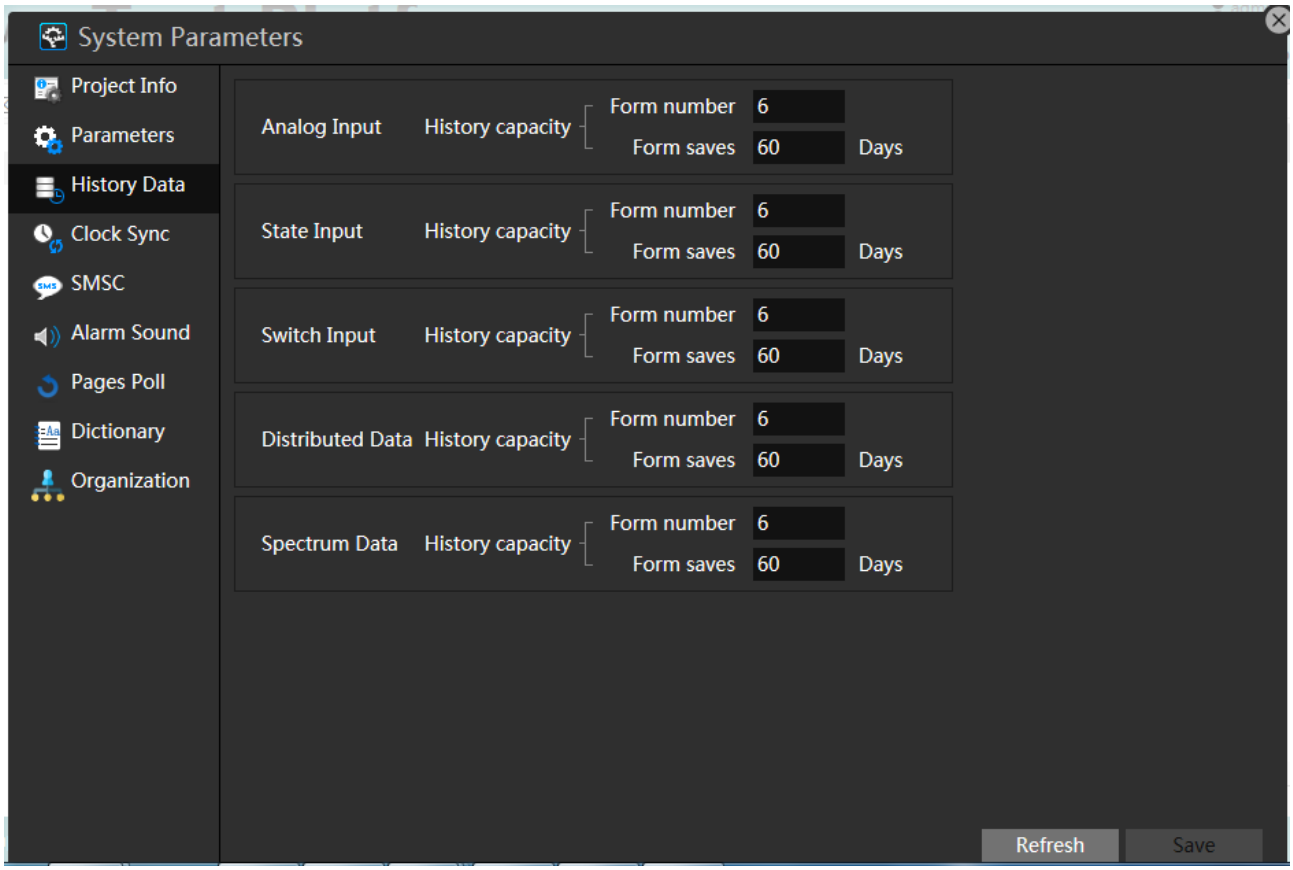


Figure 2-5 System Parameters – History Data

Form number: range between 1 and 100, it's shown in the corresponding type table.

Form saves: range between 1~365, when the number of restore days reach the setting, it will never store the data, and the new data will be stored in the same type table. When the number set 1, time reached the maximum duration of storage and the table will be retained within a year of data.

2.1.4 Clock Sync

In the actual project, the server or client clock is synchronized in the actual situation..

The following is an example of "there are two MaxServer services, one as the server, and the other as a client."

1. Two services are deployed on two different servers, and the IP addresses of the two servers are 192.168.6.55 and 192.168.30.80.
2. MaxWeb service is deployed on the server which deploy MaxServer, MaxWeb1 corresponds to MaxServer1 (192.168.6.55), MaxWeb2 corresponds to MaxServer2 (192.168.30.80).
3. Set MaxServer as Server, check the "NTP server", as shown in figure 2-6

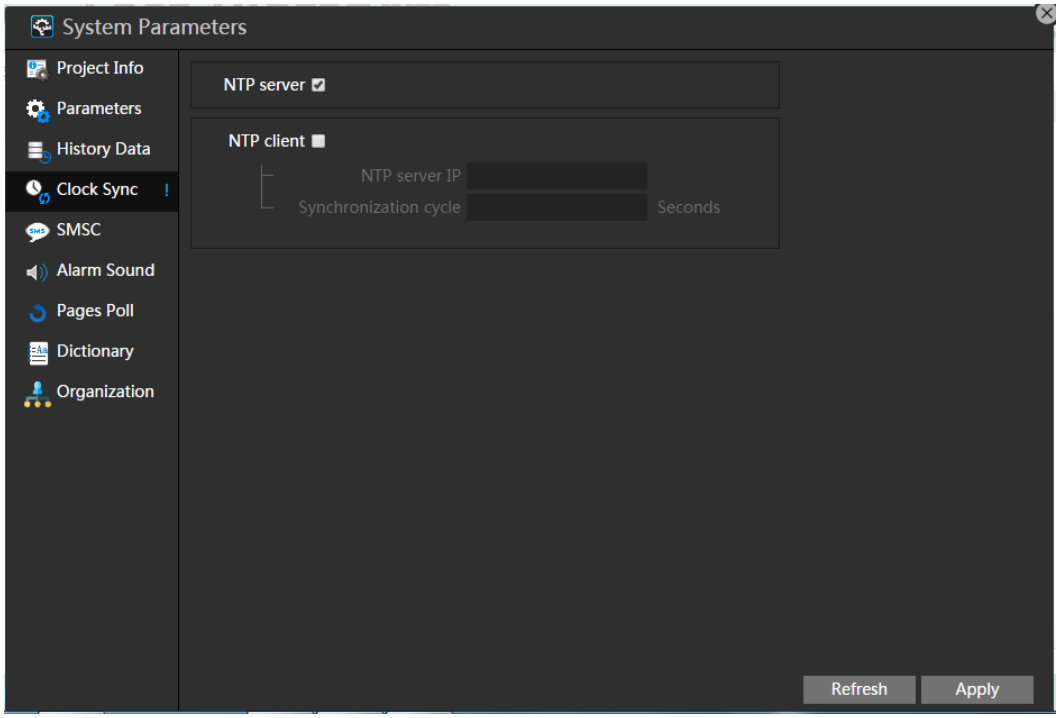


Figure 2-6 Clock Sync-NTP server

4. MaxServer2 as the client, in the MaxWeb2 , check "NTP client", and enter:

NTP service address: the IP address of server, that is, MaxServer1 (192.168.6.55);

Synchronization circle: the circle of synchronizing time. Unit: second.

As shown in Figure 27.

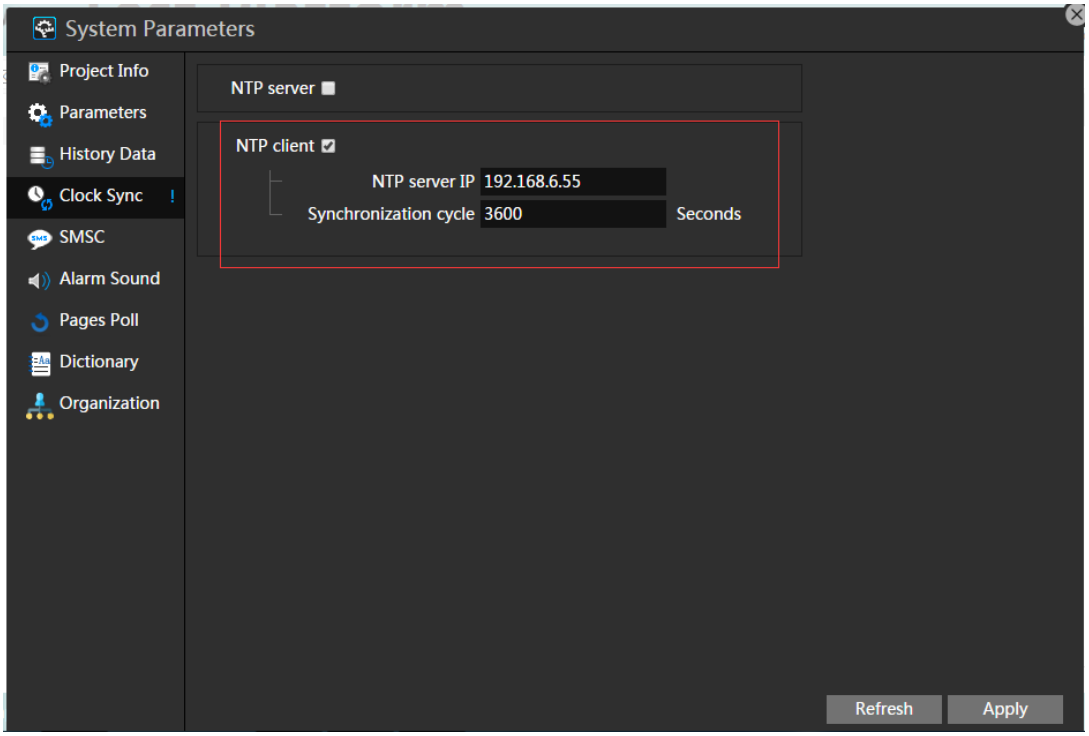


Figure 2-7 Clock Sync – NTP client

5. After setting, you can modify the time of MaxServer1 (192.168.6.55) in the machine, then check the time of MaxServer2 (192.168.30.80) in the machine, and when the cycle reaches the set time, the two time synchronization.

2.1.5 SMSC

The function is mainly used for connection with SMS cat hardware, the parameters such as account, Password, Type, baud rate, COM Port, Inteval, phone., and a test message can also be sent to verify it.

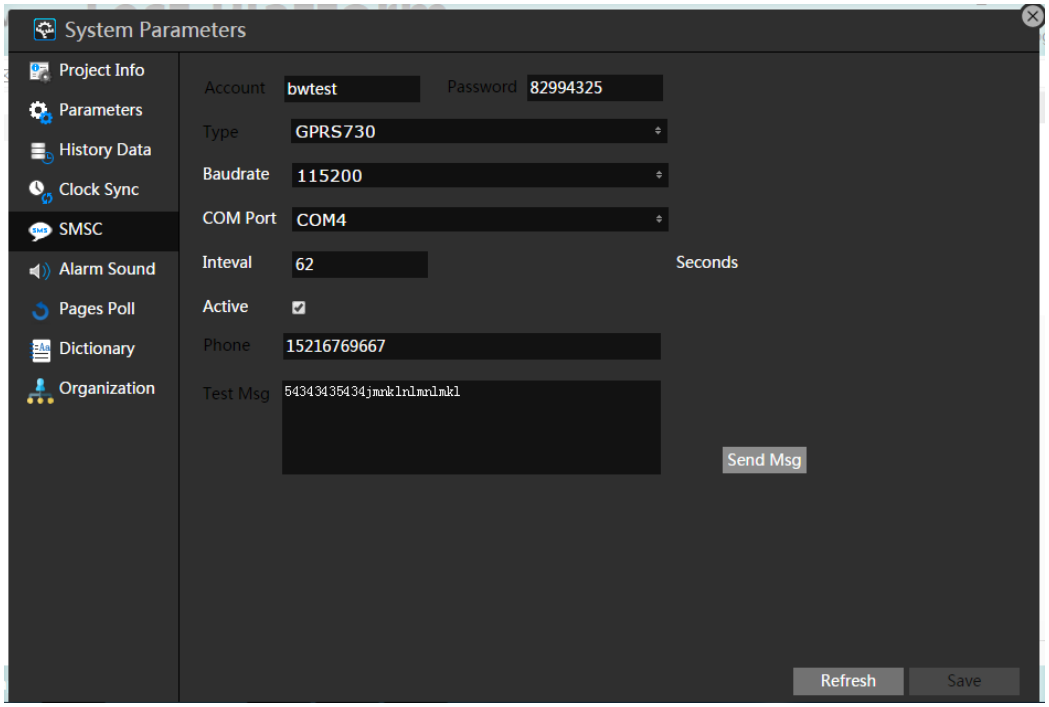


Figure 2-8 System Parameter - SMSC

- Types: support the GPRS DTU product models of Shenzhen Hongdian Technology Development Co., Ltd.: H6221 and H7710
- Baud rate: the baud rate of the SMS cat client, the default baud rate is 115200; in general, it is not recommended to modify.
- COM Port: the COM port deploy the SMS cat client.

In some cases, it is necessary to install serial tools adapted to SMS cat and access SMS cat hardware, through "Computer Management > equipment manager > port (COM and LPT) >Prolific USB-to-Serial Comm Port " check.

- Interval: the response time of the SMS cat and the MaxServer, can manually modify it, unit: seconds.
- Phone/Test Msg: can send a test short message to the test phone, verify whether the connection with the SMS cat is useful.

After the configuration is completed, we need to cooperate with the "Alarm SMS Forward" function in the "Alarm Rule". For specific operation, please refer to the chapter "2.7.4 Alarm SMS Forward "

2.1.6 Alarm Sound

According to the sound that the user chooses, when the system produces the alarm, can play the alarm level of the corresponding alarm level

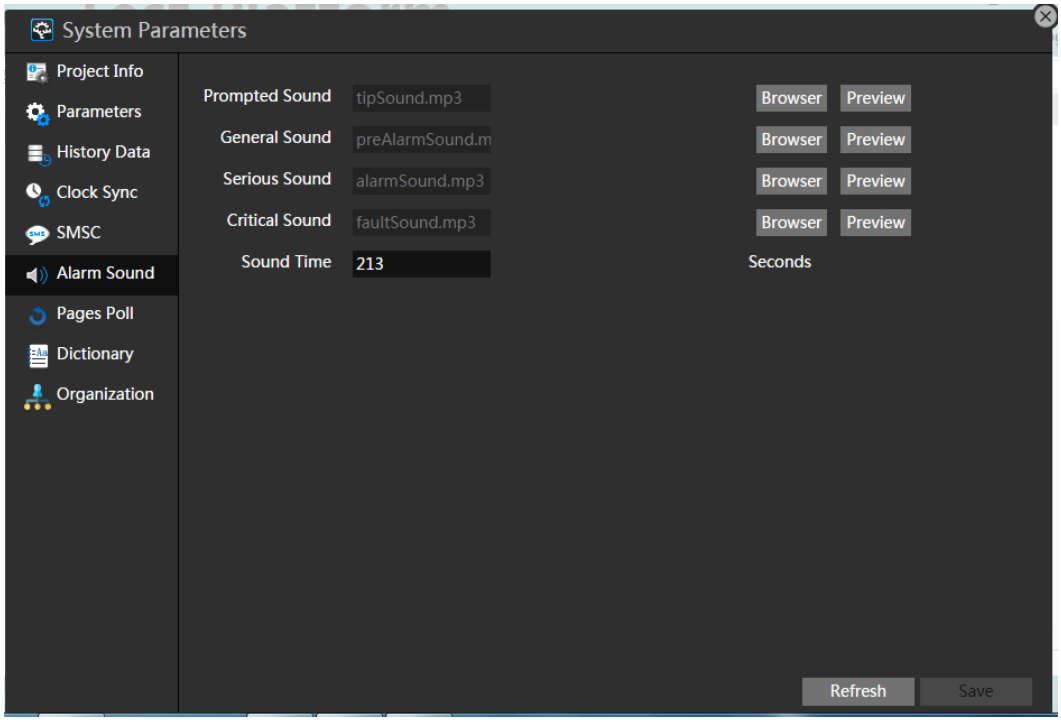


Figure 2-9 System Parameters – Alarm Sound

2.1.7 Pages Roll

According to the actual needs, the selected page is automatically displayed by the set page order, as shown in Figure 2-10. After saving the settings, refresh the MaxWeb page and click the "page polling button" on the right side of the status bar. As shown in Figure 211, we can see that the icon is in the rotation state, and the selected page starts to roll automatically, and then click the icon again, which will stop the page roll.

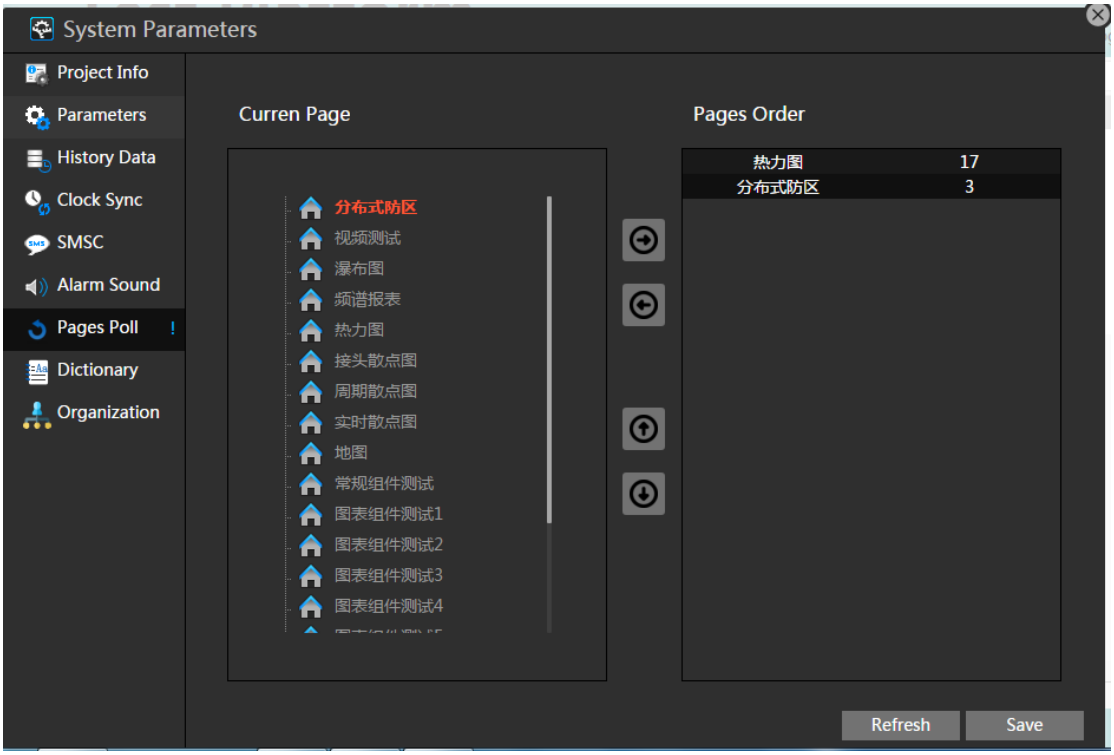


Figure 2-10 System Parameters-Pages Poll

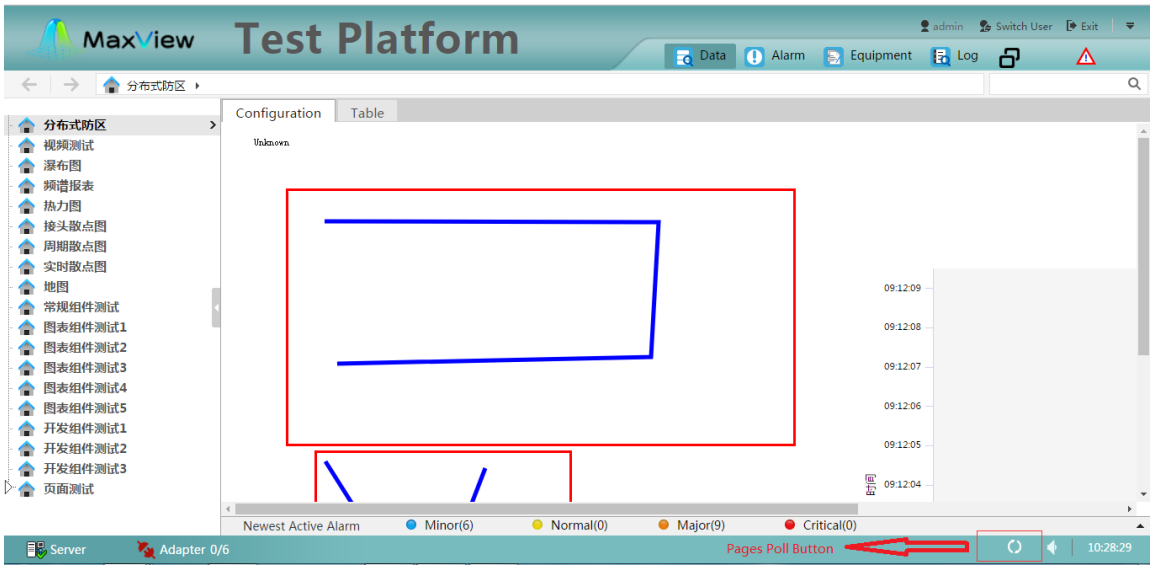


Figure 2-11 Pages Poll Button

2.1.8 Dictionary

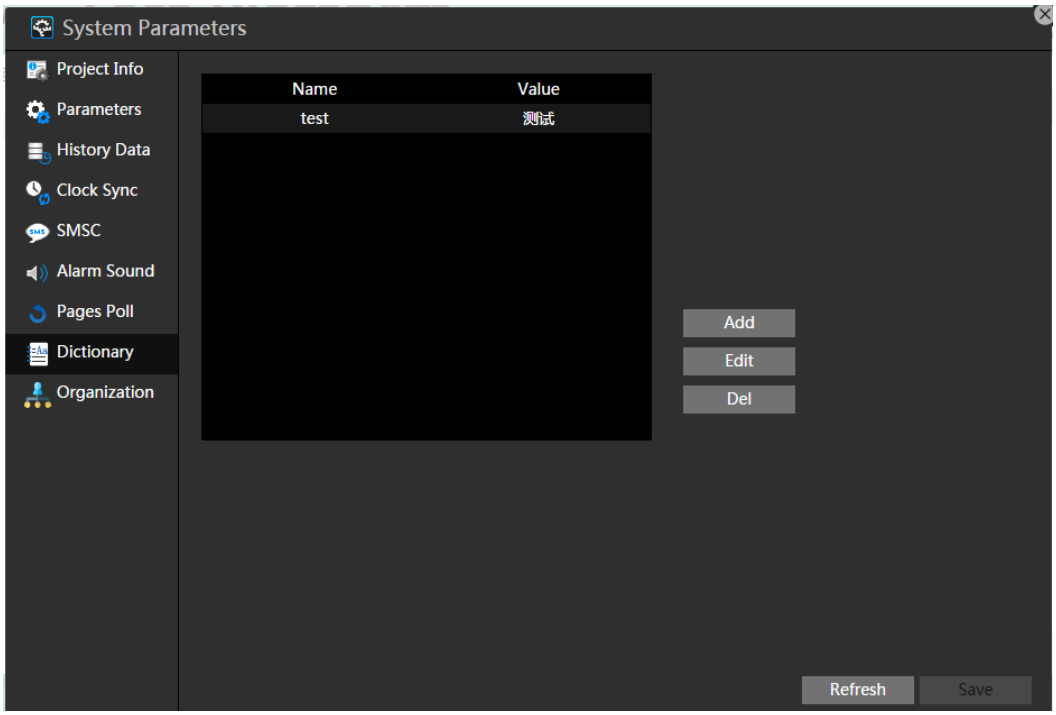


Figure 2-12 Dictionary

2.1.9 Organization

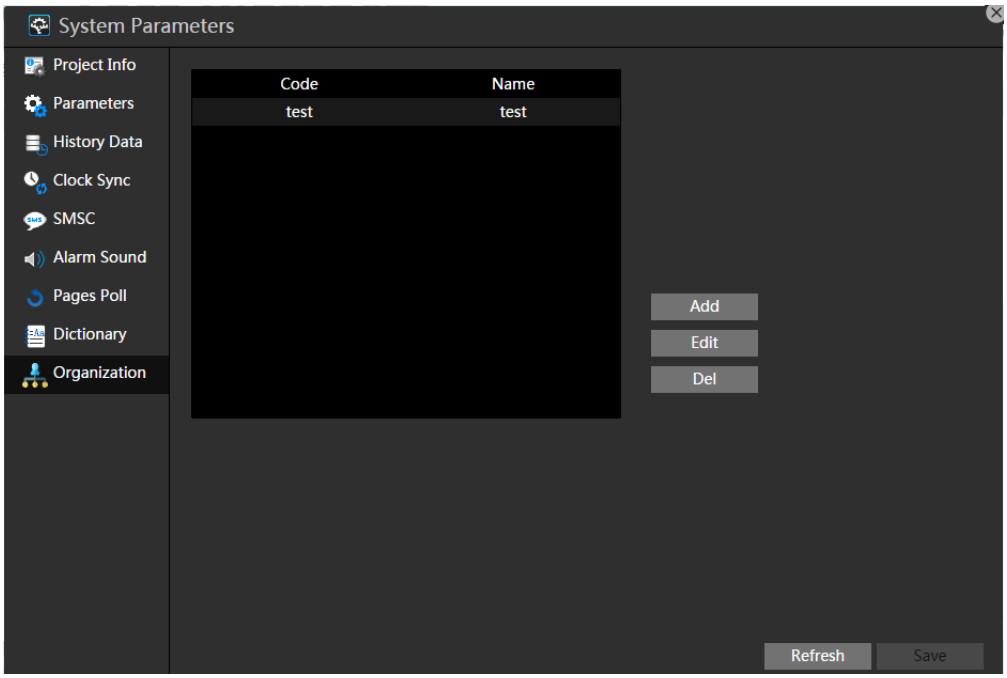


Figure 2-14 Organization

2.2 Meas Obj

2.2.1 Zone

- **Add Meas Zone**

"Zoon" tab page, click the "Add" button, in the dialog box, enter the zone name, select the "organization" and "ParentID", you will add the zone, as shown in figure 2-14.

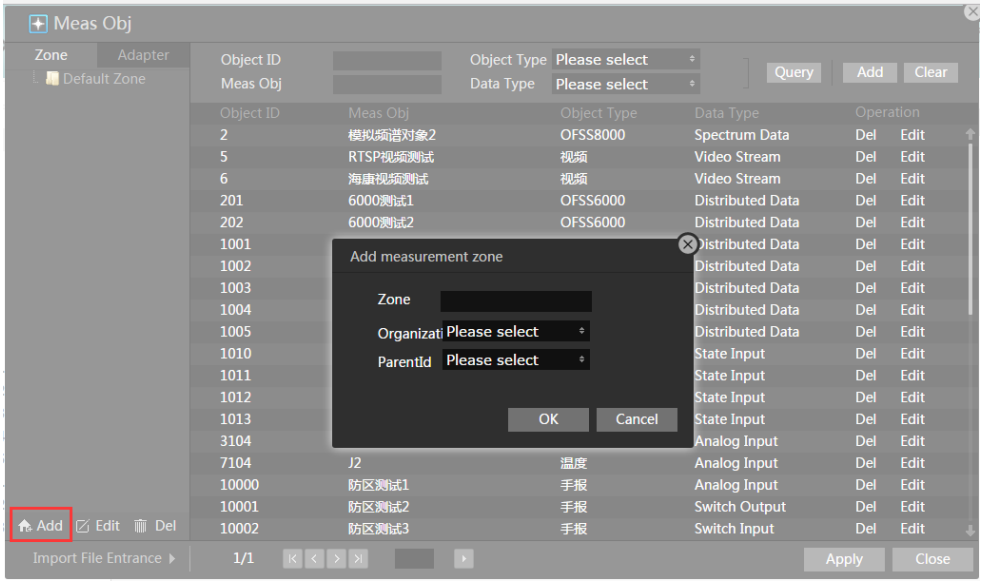


Figure 2-15 Add measurement zone

Edit measurement zone

Select the zone to edit, click “Edit” button, and edit its zone name.

Delete measurement zone

Select the zone to delete, click “Del” button, and delete it.

2.2.2 Measurrement Object

Add Measurement Object

You can add the objects through “Import File Entrance”, or click “Add” button to add.

- Import File Entrance

Click “Import File Entrance” button, and select the file, then click “import” button, as shown in figure 2-16.

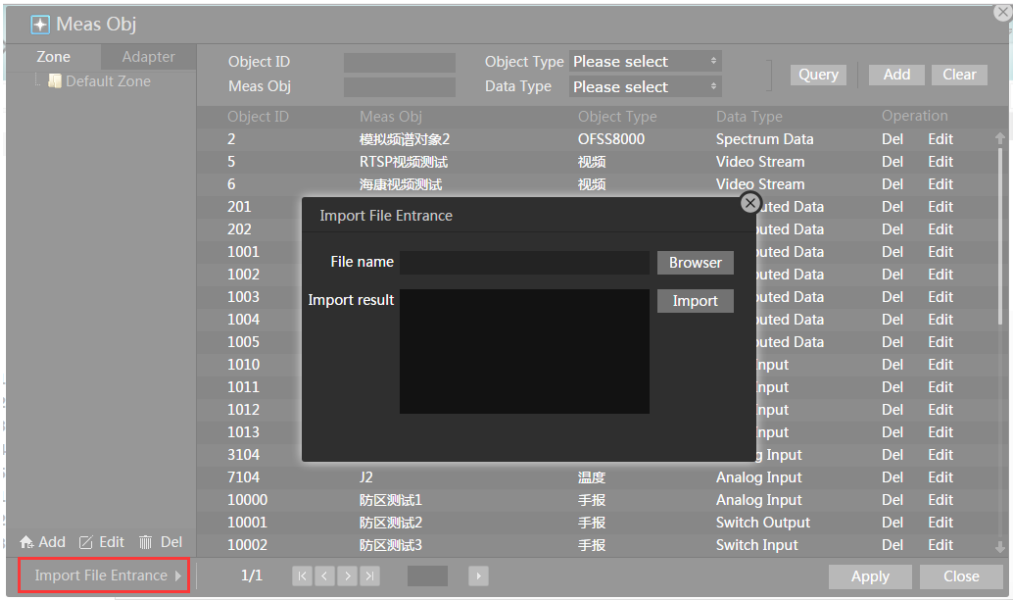


Figure 2-16 add measurement object throw import file

After import, as shown in figure 2-17

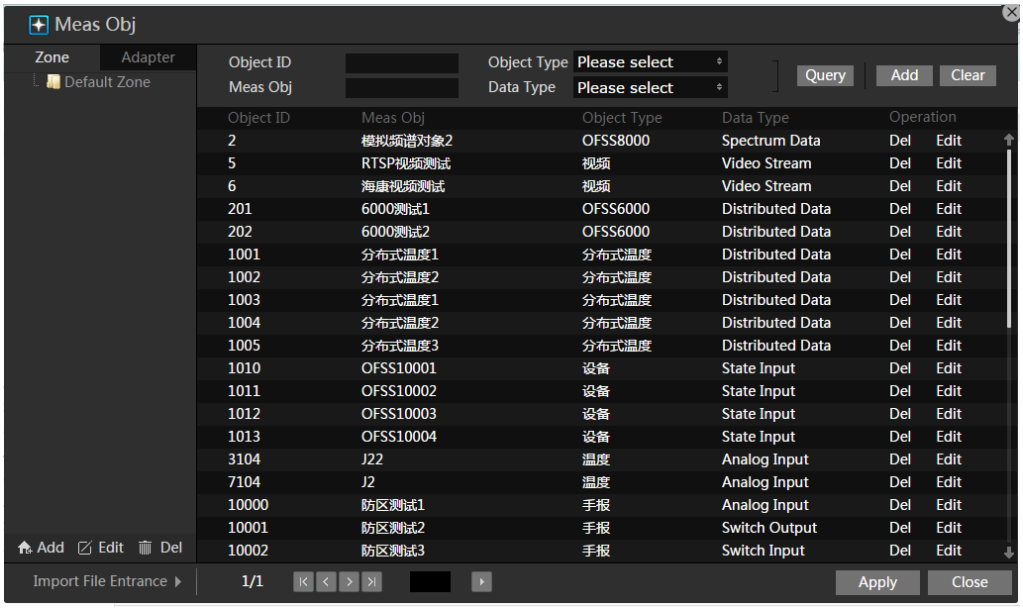


Figure 2-17 import result

Explain

The IDs of measurement objects can’t be repeated, otherwise it will not be imported.

- manually add

Select “Zone” or “Adapter” in left area, click “Add” button, and write the parameter, the new measurement object will be added. Here are 4 kinds of data objects, including “Analog Input”, “Distributed Data”, “Video Stream” and “Arithmetic Calculation”, for illustration.

➢ **Analog Input**

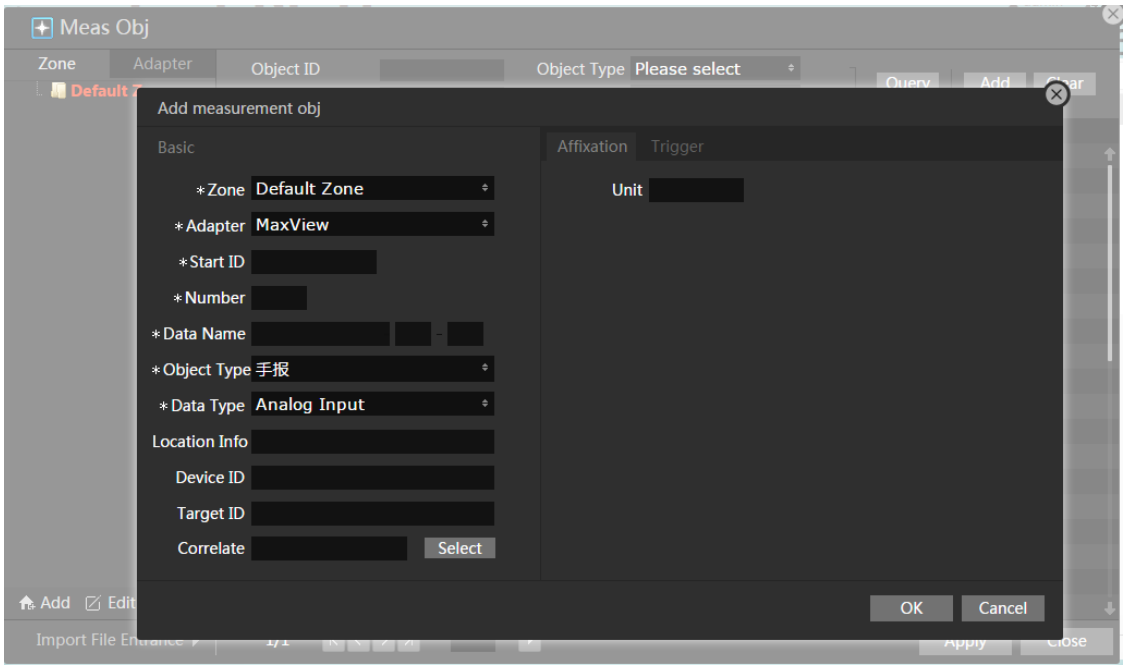


Figure 2-18 Add measurement obj – analog input

Base parameter:

- Zone: chose the required zone;
- Adapter: choose the required adapter;
- Start ID: the SN of the object, can't repeat with the existing object ID, required;
- Number: the number of objects which to add, required;
- Data Name: define the measurement objects, including the prefix name, middle name and suffix, they will be shown in any textbox, required;
- Object Type: the type of measurement object which to be added, required;
- Data Type: the Data Type of object, required; like this, as shown in figure 2-18;
- Location Info, Device ID, Target ID: Represent the location information of the added object, the associated device ID, and the target equipment ID, not required;

Affixation:

Unit: add the unit of the added object, only be useful for "Analogy Input" and "Distributed Data".

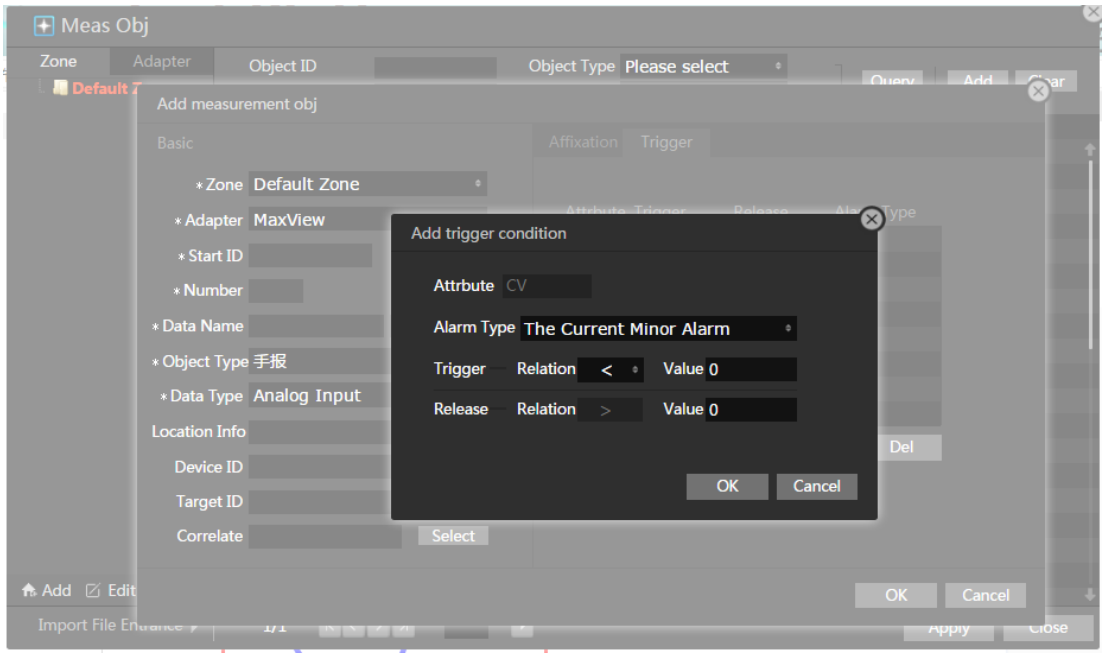
Trigger:

Select the "Trigger" tab, and click "add" button, add the current value (CV) of the object.

Select the alarm type, including: "The Current Minor Alarm", "The Current Normal Alarm", "The Current Major Alarm", "The Current Critical Alarm", "The Change Rate Minor Alarm" , "The Change Rate Normal

Alarm” , ”The Change Rate Major Alarm” , ”The Change Rate Critical Alarm”, the change rate alarm class is only valid for “Arithmetic Calculation” type.

After add the CV, as shown in figure 2-19.



Trick:

When importing the configuration file entrance, if the CV value of the object has been configured in the adapter, the CV value imported by the object is displayed directly. If we need to modify, click the Edit button.

After setting all parameters, click “OK” button, there’re single or multiple objects to be added.

➢ **Distributed Data**

Base Parameter:

See the base parameter of “Analogy Input” type.

Affixation:

- Byte Num: by protocol of transmission, default value is 2 bytes.

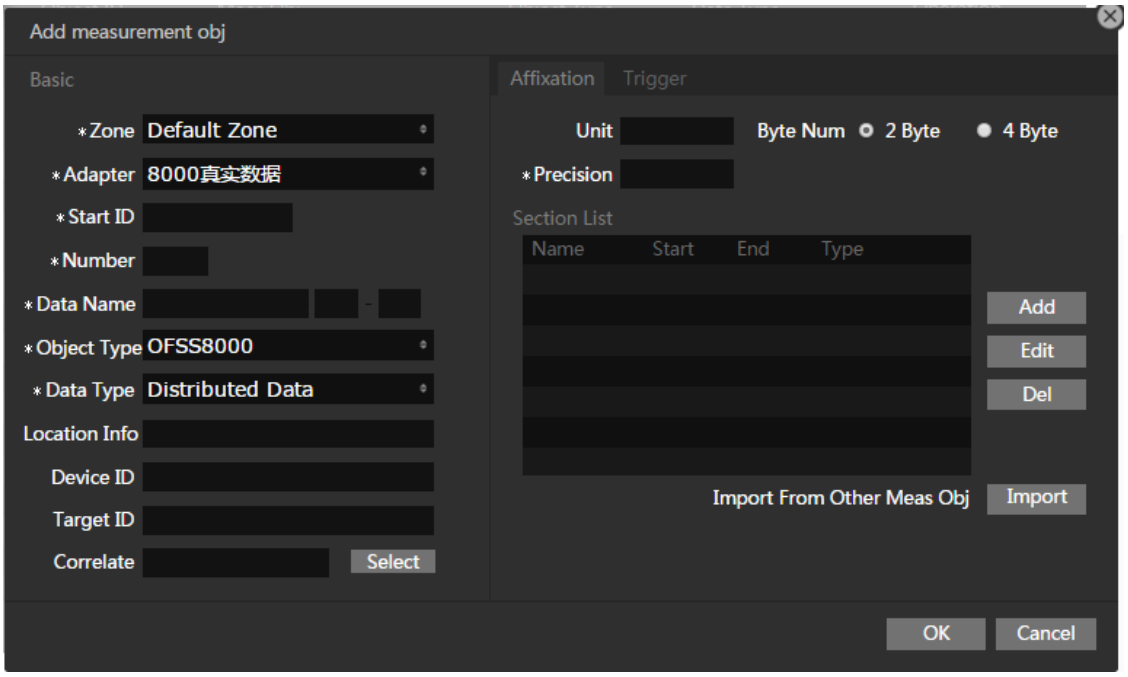


Figure 2-20 Add measurement obj – Distributed Data

- Section list: section, node, landmark and interference source, can be added to the geological survey information of the actual project. When no data source for objects, such as OFSS6000, OFSS8000 and other fitness equipment, add section information, can describe the warning position accurately, to provide more information for alarm; the object which has the data source, such as DTS, after add the section, can be show in partition area, such as shown in figure 2-21.

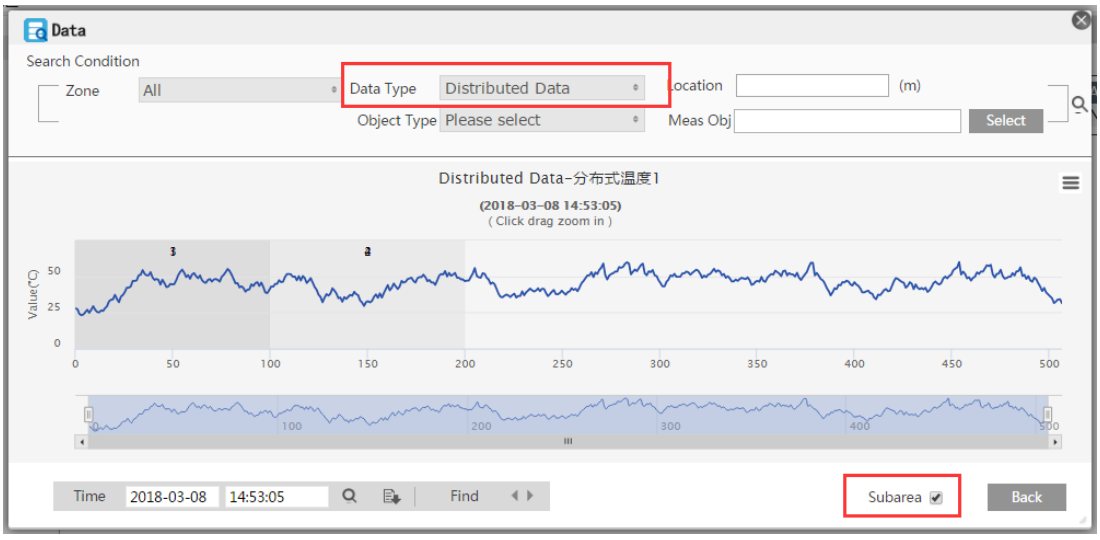


Figure 2-21 distributed data subarea show

- Trigger: like analogy, judge to the threshold value, and trigger the alarm.

➢ **Video Stream**

Base Parameter:

See the base parameter of “Analogy Input” type.

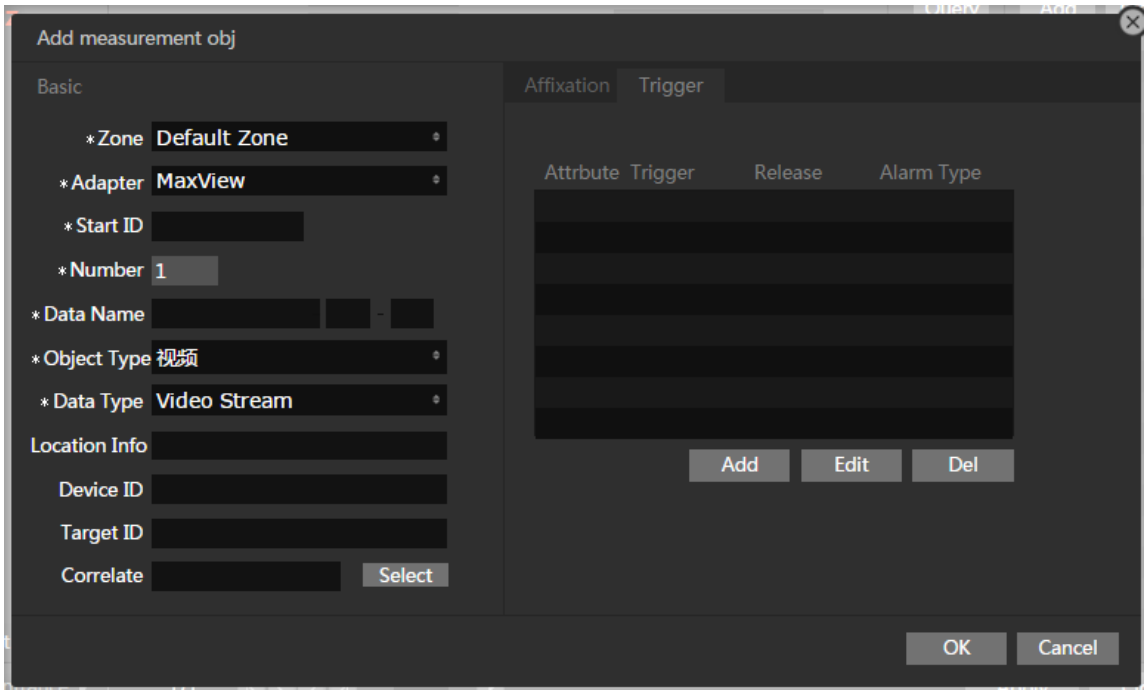


Figure 2-22 Add measurement obj – Video Stream

Affixation

- Vendor: the video device manufacturer and video model can be selected by the drop-down list.
- IP Address, Port: the IP and port of video server.
- User, Pwd: use to login in the video server.
- Channel: the number of channels in the current video can be modified according to the actual situation. The number of channels after modification is consistent with the number of channels in video components
- Stream Type: default is “Main Stream”.
- Set Channels: edit the channel name, code, watch position, and RTSP-URL.

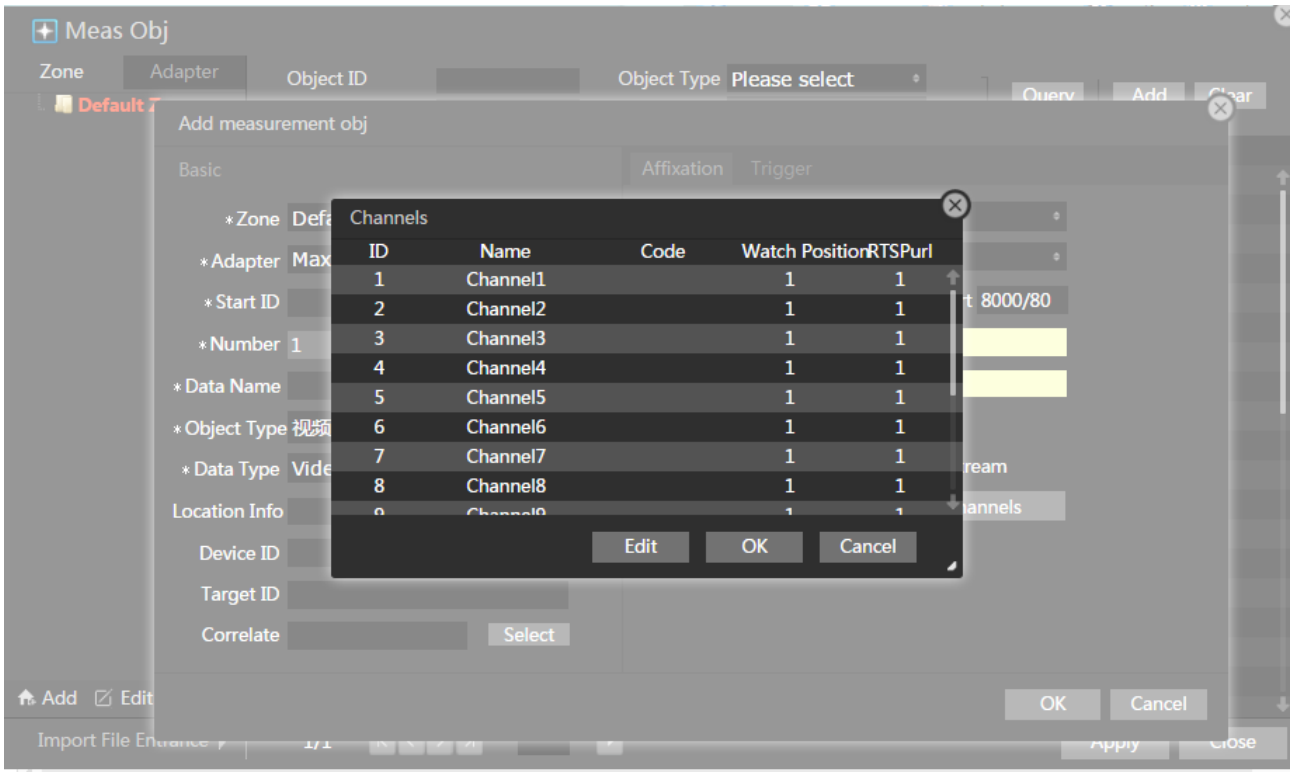


Figure 2-23 set channels

- After set the parameter, the video management can be viewed in the menu bar of the main interface and view the video, control the video also, as shown in Figure 2-24.

Trigger: invalid.

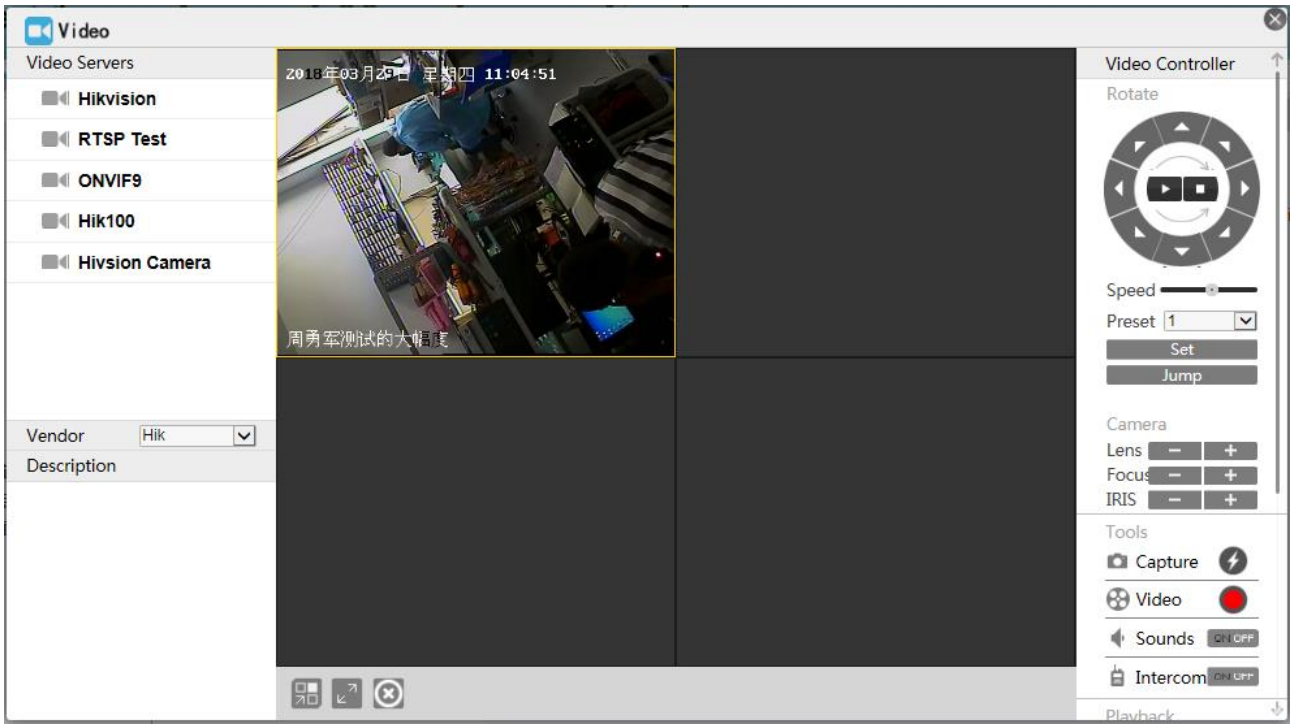


Figure 2-24 Video

➢ **Arithmetic Calculation**

Base Parameter:

See the base parameter of “Analogy Input” type.

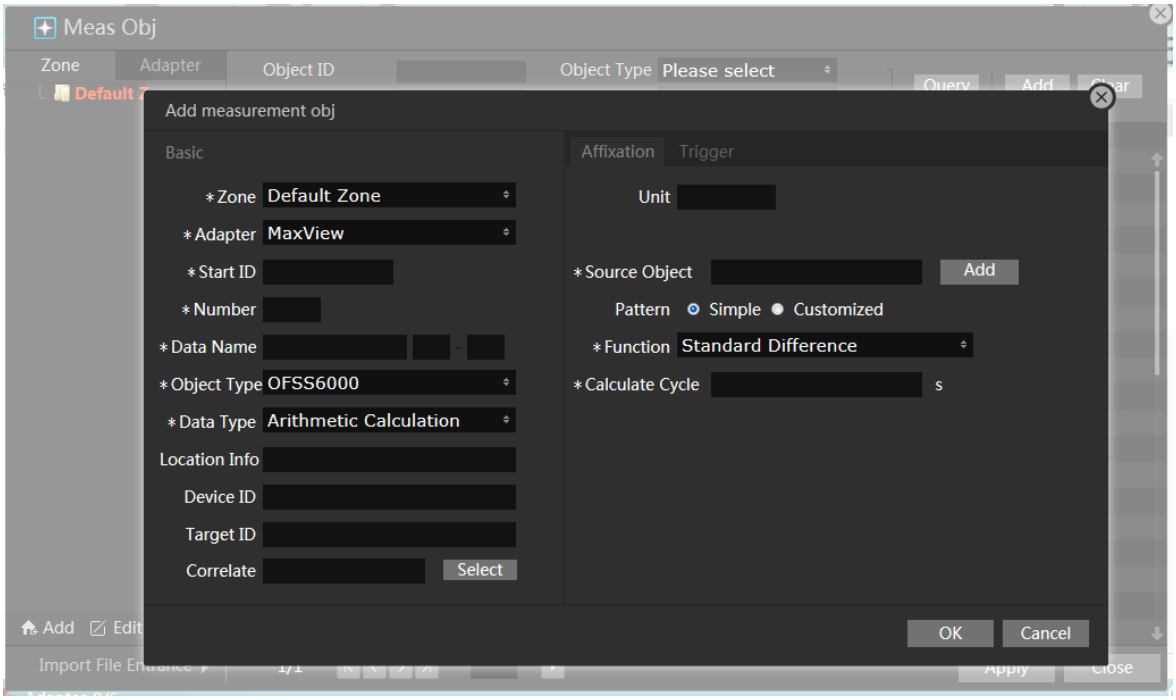


Figure 2-25 Add measurement obj – Arithmetic Calculation

Affixation:

- Source Object: the Object ID to be calculated, manually write or click “Add” to select.
- Pattern: include “Simple” and “Customized”.
- Function:

Simple mode: the types including, “Standard Difference”, “Greatest Difference”, “Greatest Value”, “Least Value”, “Average Value”, “Change Rate”, “Sum”, and “Difference”. When choose “Change Rate”, the object to be calculated should be analogy input, when choose other type, the objects number is at least two or more.

Customized mode: Users can manually enter the custom C# script language according to the actual project needs, see 5.3

- Calculate Cycle: the update time of data, unit is “s”.

Trigger: invalid

Edit Measurement Object

Select the object to be edited, click “Edit” button, and change the parameter.

Delete Measurement Object

Click the “Del” button, delete the objects one by one, or use “Clear” button to clear all objects in current list. As shown in figure 2-26. Click “Apply” to finish it.

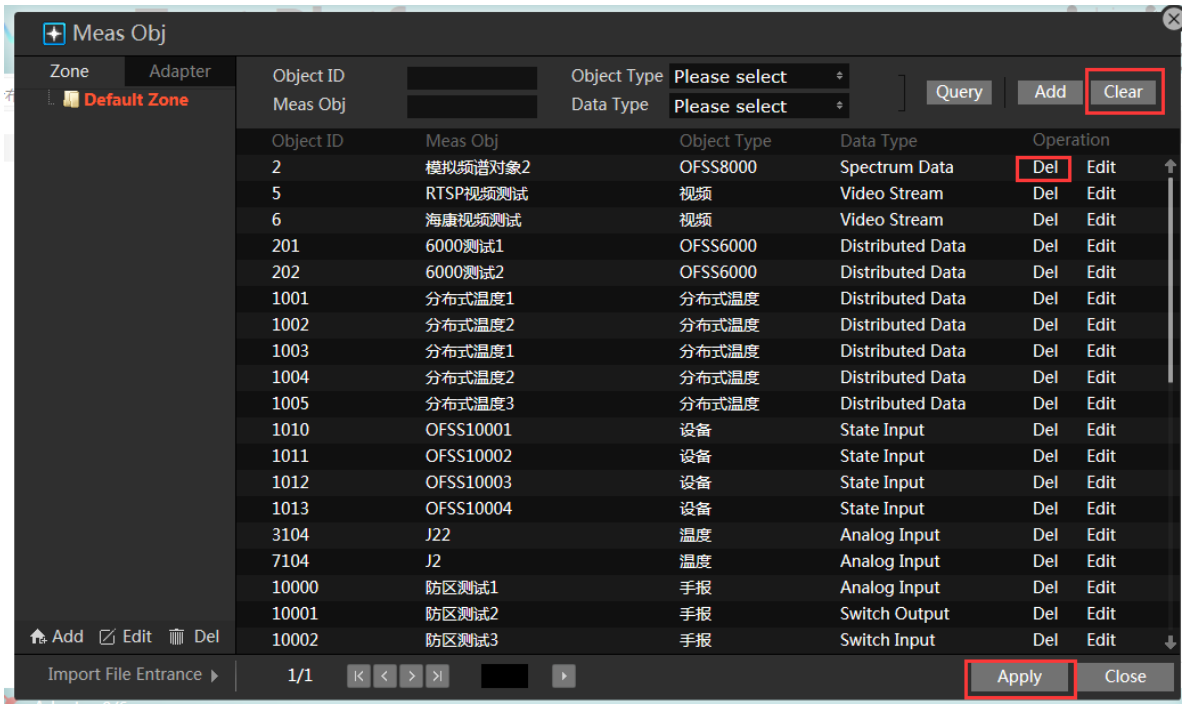


Figure 2-26 delete the objects

Explain

Before “Apply”, we can revoke the clear or delete object through the “Resume”.

2.3 Object Type

Object type is the attribute of all monitored objects, representing the types of monitoring objects, such as manhole cover, water pump, thermometer, distributed temperature and so on. The object type is associated with the alarm type of the monitoring object, and each object type has some associated object types.

Add Object Type

At the object type interface, click “Add” button. On the right side of the interface, enter the type name, select the icon and add the relevant configuration of type in sequence, as shown in Figure 2-27.

In the object type configuration, the CV value mapping added is a replacement of the actual measurement value and the display text. If the object type configuration of the "pump" is shown in Figure 2-27, when the data is inquired, the result is the "pump run" state, indicating that the actual measurement value is 1, and the "measurement value" is "pump stop" state, which indicates that the actual measurement value is 0.

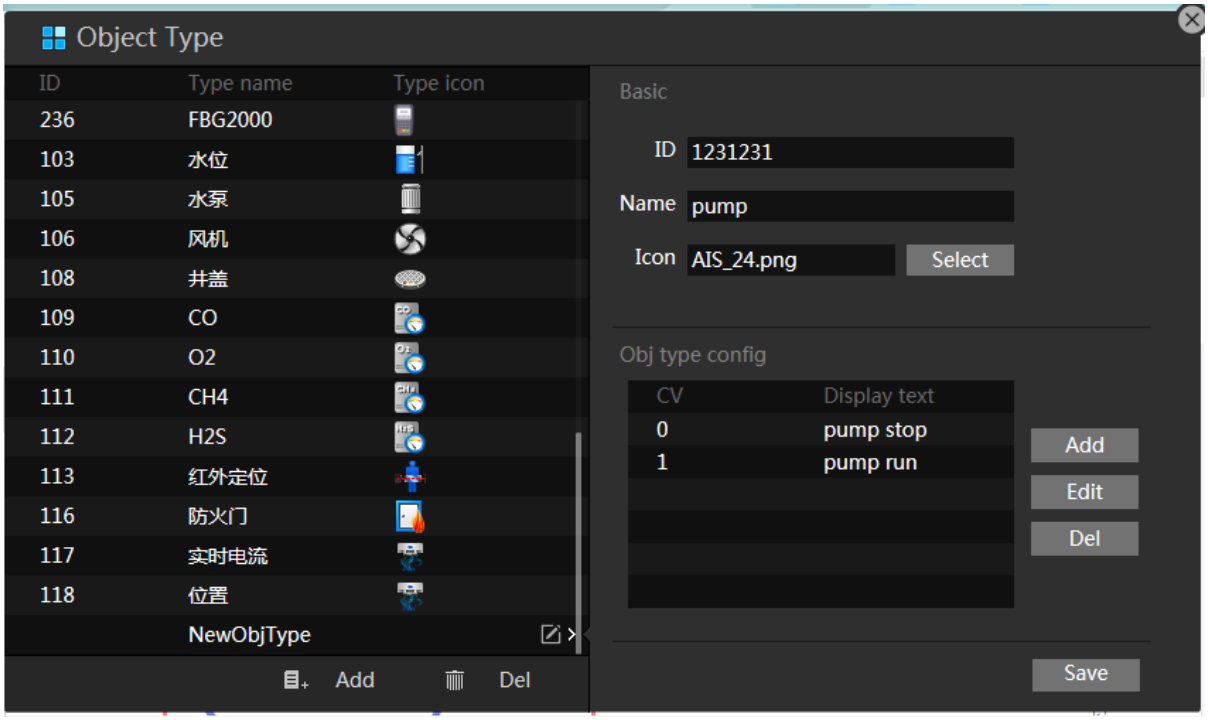


Figure 2-27 Add Object Type

Edit Object Type

In the "Object Type" interface, select the type of object that needs to be modified. On the right side of the interface, edit the name, icon, or object type configuration, and click "save".

Delete Object Type

In the “Object Type” interface, select the type of object that needs to be deleted. Click the “Del” button to delete the selected object type.

2.4 Adapter Manager

By adding adapters, a communication connection between devices and MaxServer can be established.

Add Adapter

In the “Adapter Manager” interface, click the Add button and play in the add adapter dialog box, as shown in Figure 2-28. After entering the relevant configuration information, click "confirm", that is, add the adapter.

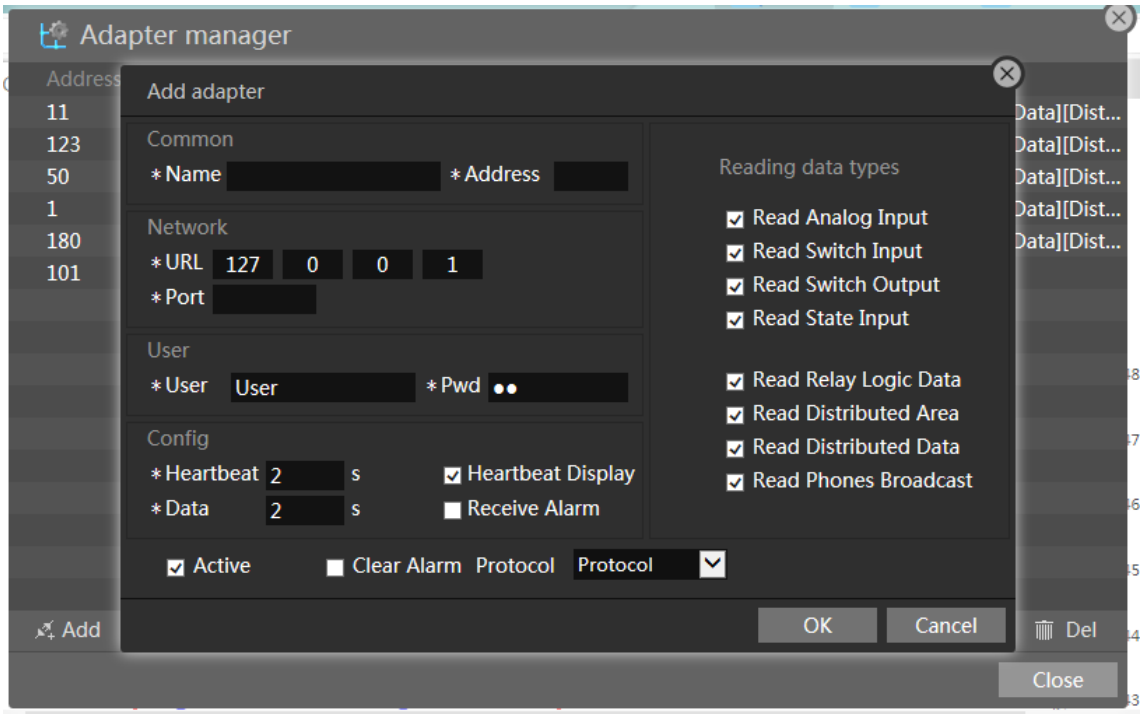


Figure 2-28 Add Adapter

- Name: write the name of adapter.
- Address: the address of the adapter, must be same with the address of the listened adapter.
- URL: the IP address of the server which deploys the adapter.
- Port: the port of the adapter.
- User, Pwd: if adapter set user and password, here must be same.
- Heartbeat, Data, Heartbeat Display: It can be set according to the actual situation, usually keeping the default.
- Receive Alarm: if check it, maxview will receive the alarm of the adapter, if not check it, will not receive the alarm.
- Active: Check it to activate this adapter. If it is not checked, will not activate the adapter.
- Clear Alarm: check it means, after the alarm is cleared on the MaxView, the alarm command is sent off by the adapter.
- Protocol: Most of the adapters that were connected at that time chose “Protocol”. When connecting OFSS8000 devices, “BDI” was selected.

- Reading data types: check the data types will be readed.

Here, introduce the adapter settings when MaxView connects to OFSS8000. When Protocol chooses “BDI” protocol, the adapter configuration is shown in Figure 2-29. Several additional configuration parameters are introduced as follows:

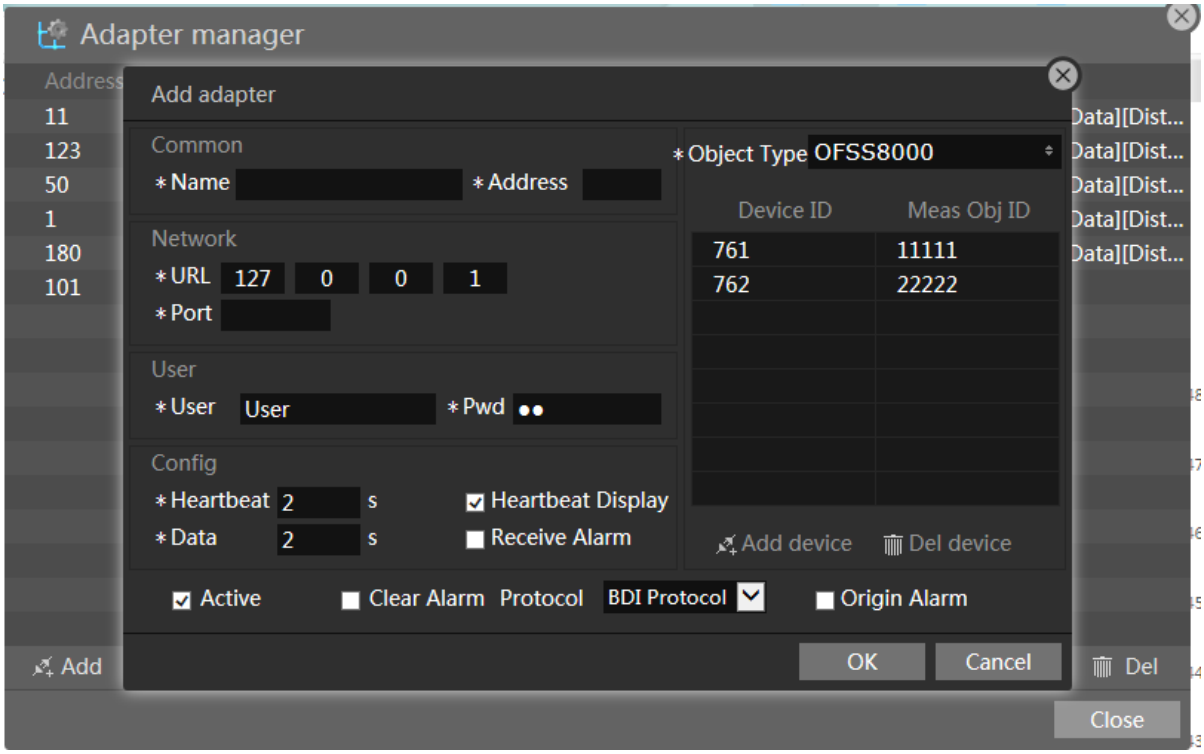


Figure 2-29 Add OFSS800 Adapter

- Object Type: select “OFSS8000”;
- Add device ID and Meas Obj ID: device ID is the ID of OFSS8000’s path, default is 761 and 762; Meas obj ID is the corresponding object ID added to MaxView on OFSS8000 for two path
- Origin Alarm:”Origin Alarm” and “Clear Alarm” can’t be selected at the same time, means different combination of alerts.
- Check the "Origin Alarm", do not choose the "Clear Alarm" (common mode).

At the MaxView side, the OFSS8000 is not merged, so we need to set the alert merge rule on MaxView to display the alarm, the setting of the alarm rules is detailed in 2.7.7

- Check the “Clear Alarm", do not choose the “Origin Alarm".

The Alarm of OFSS8000 will be shown in MaxView. If clear the alarms in MaxView, the alarms in OFSS8000 will be cleared.

Edit Adapter

At the adapter management interface, select the adapter that needs to be edited. Click the “Edit” button to make parameters modification.

Delete Adapter

At the adapter management interface, select the adapter that needs to be deleted. Click the “Del” button on the lower right corner to delete the current selected adapter.

2.5 2.5 Rights Management

2.5.1 User Account

Add account

In the "User Accounts" interface, click "Add User", enter the user name, select the "role" through the drop-down menu, multiple choice, and activate,

The completion of the addition of the account. As shown in Figure 2-30. The default password for the new account system that is usually created is: B@ndwe@ver.

To ensure the Department System security, each time an account logs in to the system for the first time, it prompts the user to change the password.

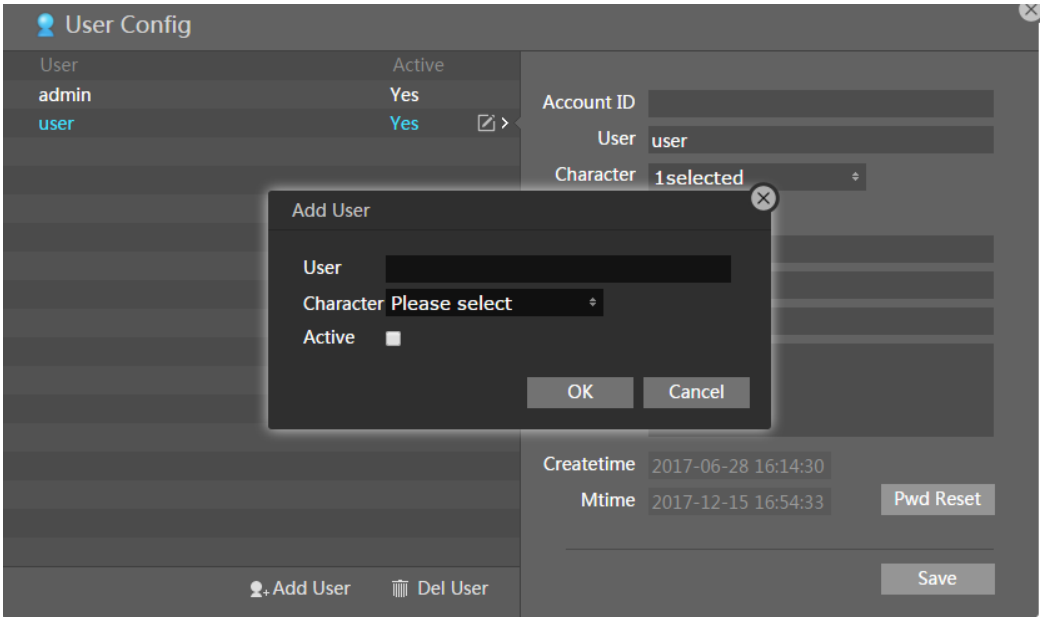


Figure 2-2 add user

Modify account information

Select the account to be modified in the user list, and after modifying the relevant information on the right side of the interface, click "Save".

Reset Password

If you forget the password, the administrator user can perform a password reset operation on an account through “reset password”. After the reset password, the system defaults to B@ndwe@ver.

Change Password

1. On the MaxWeb home screen, click the current login user name on the menu bar, as shown in Figure 2-31;

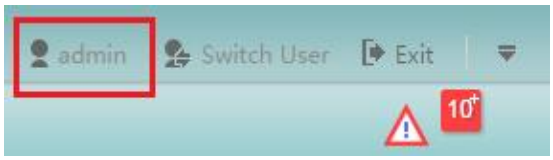


Figure 2-32 Currently logged in user

2. In the pop-up “User Information” dialog box, click “Change Password”, as shown in Figure 2- 32.

3. In the "Change Password" dialog box, enter the current password and new password, and click "Save Changes" to complete the password change. The password must not be less than 8 digits long and is a mixture of letters, numbers, or special characters.

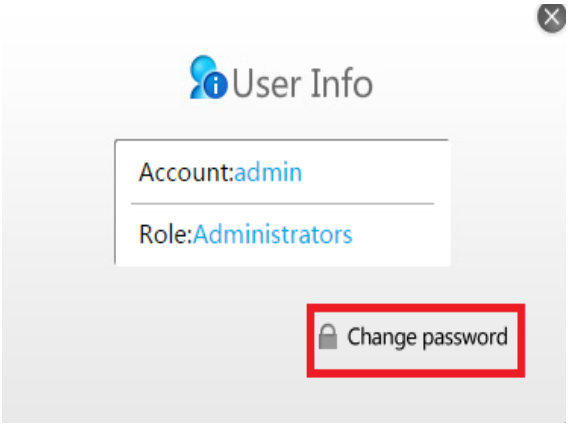


Figure 2-33 User Information

Delete Account

Select the account to be deleted in the user list and click "Delete User".

2.5.2 Authority Management

You can add different roles and set different operation sets and operation fields for each role.

- Add user role

On the “Rights Management” interface, click the “Add” button can add user roles, as shown in Figure 2-31.

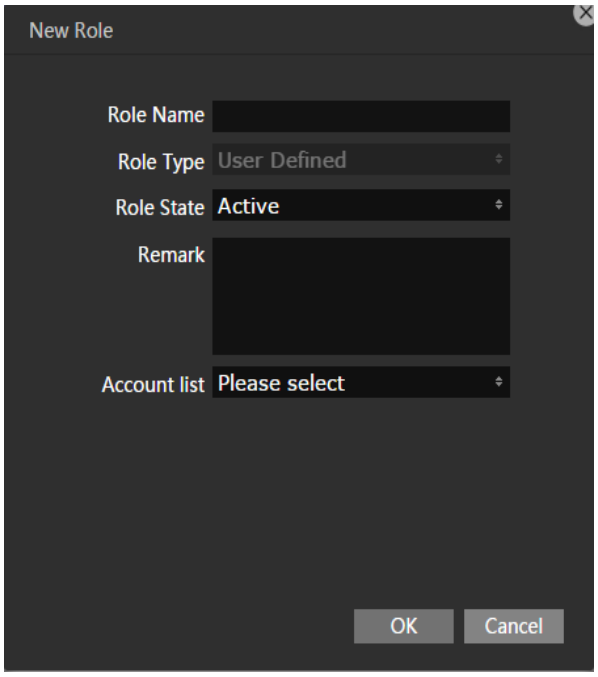


Figure 2 34 Adding User Roles

Modify user role

1. Select the user's role and click the "Edit" button. The system administrator role only allows modifying the associated user account.

2. In the "Modify Role" box that pops up, you can modify the role name, role status, notes, and associated user accounts.

- ## Delete user role

  Select a custom user role and click the “Delete” button to delete the current user role.

  The system administrator role is defined by the system and cannot be deleted!

- ## Assignment of operation rights

  To add "configuration page view, configuration page management" as an example, to explain.

1. Select a user role other than the system administrator role and click "Add" to the right of the "Operation set" box.

2. In the pop-up "Add operation set" window, enter the operation set name, remark information, and select the operation list, as shown in Fig. 2 -35.

3. After the addition is complete, add an operation domain in the “Operational Domain List”, as shown in Figure 2 33.

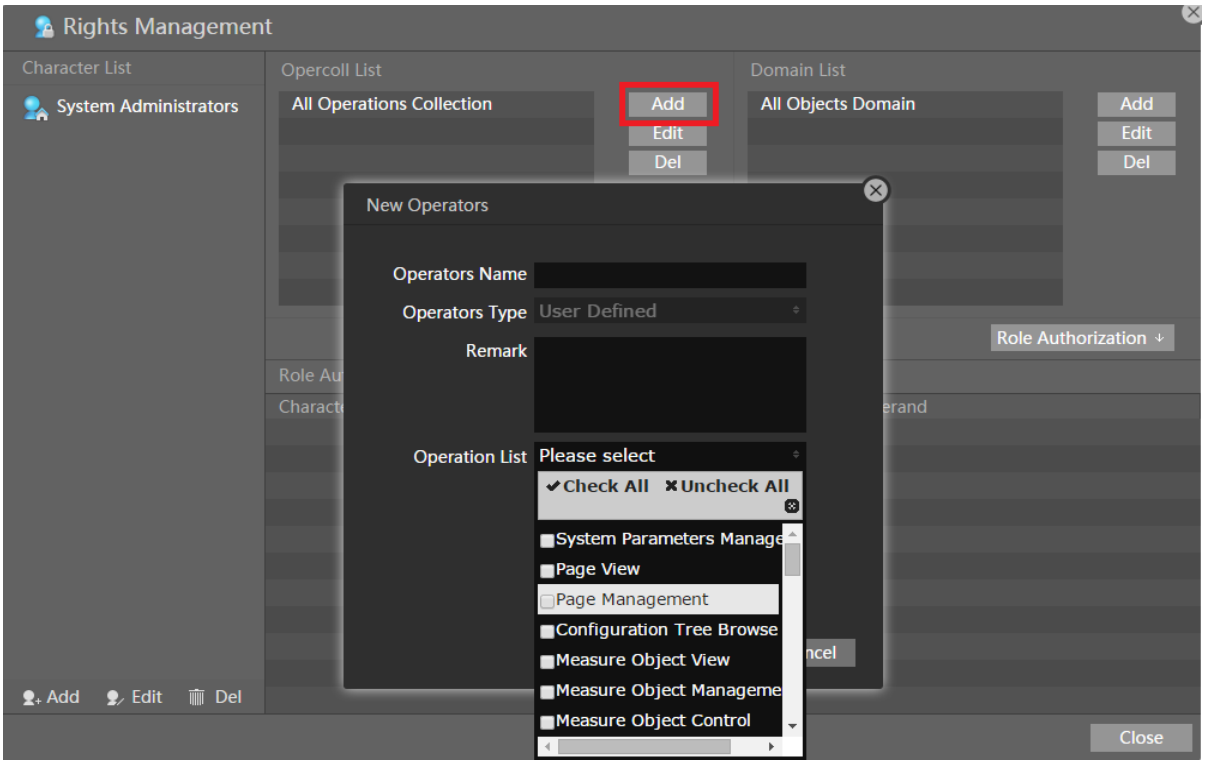
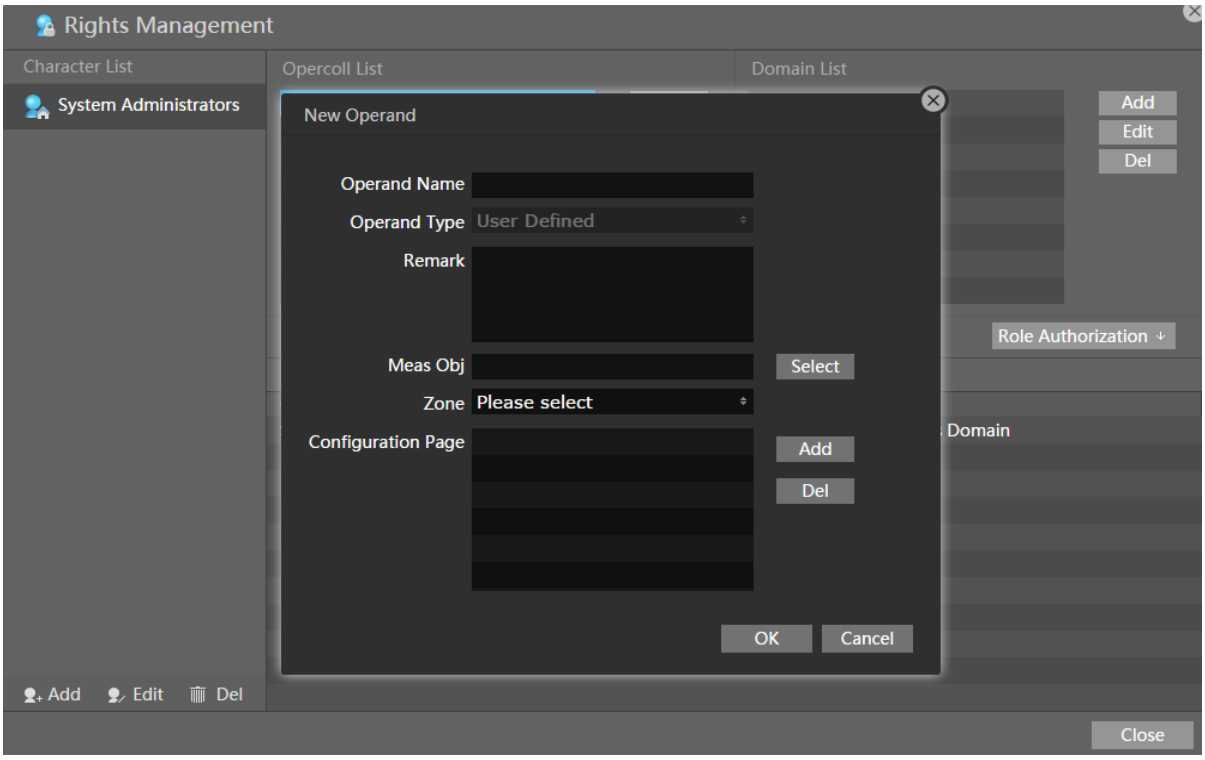


Figure 2-35 New operation set



4. After the addition is complete, Select user roles, newly added operation sets, and operation domain respectively, and click the “Role Authorization” button to grant the new user role to the newly added operation set and operation domain.

5. When logging in to MaxWeb with an account associated with a new role, can only set permissions operation

2.6 Scheduling Task

MaxView provides five types of tasks for user scheduling, namely: start the monitoring object, close the monitoring object, switch the monitoring object State, snap video photos and custom.

tasks can be scheduled once, you can also set the cycle for periodic scheduling. The following will specifically introduce each schedule tasks.

- **Start the monitoring object:** The system starts the device at a specified time or period .The monitoring targets are usually wind turbines, fire doors, water pumps, and infrared alarms.
- **Shut down the monitoring object:** The system shuts down the device periodically during the specified time or period. The monitoring targets are usually wind turbines, fire doors, water pumps, and infrared alarms.

- **Toggles the monitoring object status:** The system periodically switches the device to stop or start within a specified time or period. The monitoring targets are usually wind turbines, fire doors, water pumps, and infrared alarms.

  Must be a group of two monitoring objects, and the former associated object is defined as an "input" signal, and the latter associated object is an "output" signal. when the first object in a group of objects is added, just move the mouse pointer to the monitoring object number, click the "Add" button again to associate the output object, or enter the English "," to manually enter The monitoring object number to added.

- **Snapshot video photos:** The system captures video photos at specified times or periods, and needs to open the FTP file service during use. The captured video photos can be viewed in “System Configuration -> File Management -> Video Capture”.

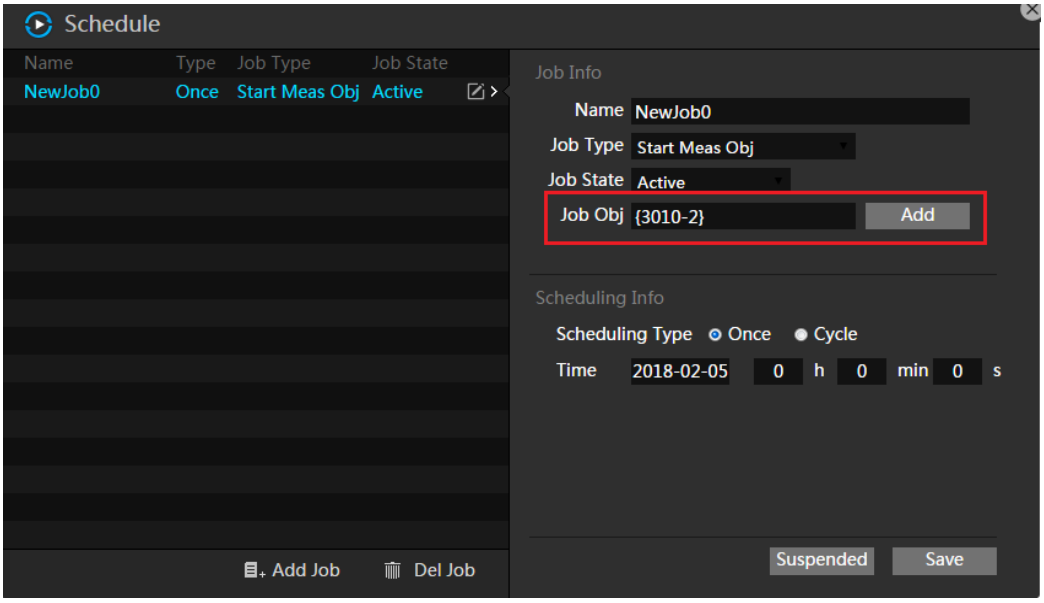


Figure 2-37 Scheduled Tasks - Snapshot Video Photos

When adding a "task object", the number and channel number of the associated video stream need to be associated, and the format is {video object ID-n}, as shown in Figure 2 -34. Among them: "video object ID" refers to the number of the associated video stream monitoring object; n is the channel number of the associated video stream object, and n can be * for all channel numbers.

- **Custom:** The system executes a user-defined script at a specified time or period. The input script is C# language. As shown in Figure 2 -35. for example:

  It is required that when the current value of the monitoring object numbered 2001 is greater than 10, the current value of the monitoring object with the number 91001 is output as "0"; otherwise, the output is "1", and the execution script is as follows:

  if(obj_2001.CV >10) { measValueService.updateSwitchMeasValue(91001, 0);

```
}
else {
measValueService.updateSwitchMeasValue(91001, 1);
}
```

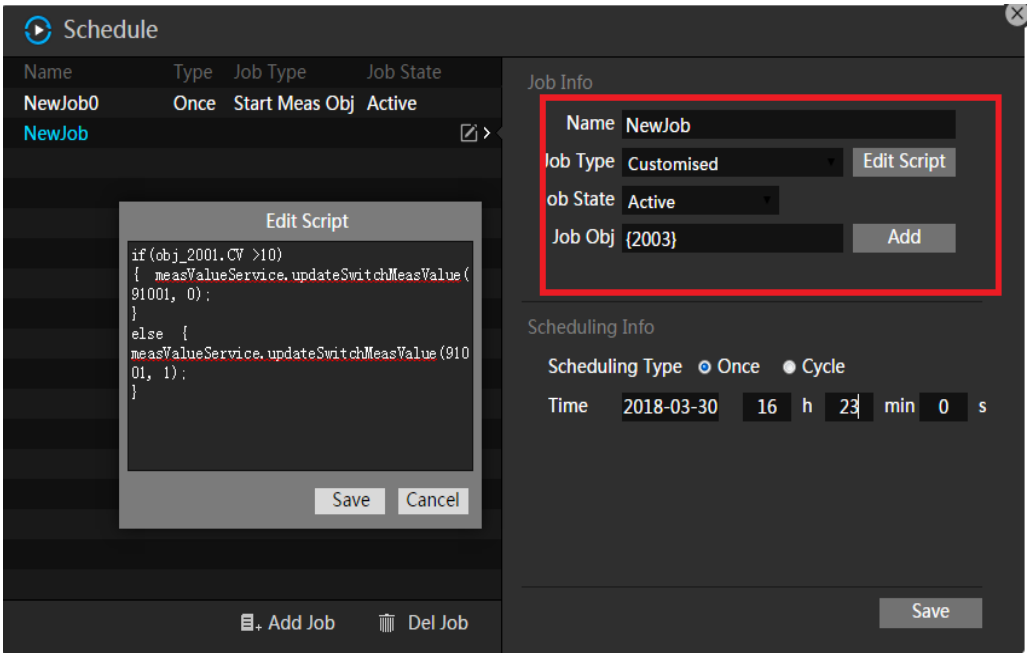


Figure 2-38 Scheduled Tasks - Custom

2.7 Alarm Rules

The user can process the alarm reported by the adapter by setting the alarm rule according to actual needs. The alarm rules mainly include automatic confirmation, automatic clearing, alarm masking, short message forwarding, linkage output, alarm delay, and distributed alarm combination. The following describes the implementation mechanism and specific attributes of each rule.

2.7.1 Automatic Confirmation

Automatically confirm the qualified alarm events.

Monitoring object: click "select" or directly enter the monitoring object ID manually;

Monitoring area: Use the drop-down menu to select the monitoring area to which it belongs. Insufficiency is the same as the meaning of full selection. It refers to all areas.

Explain:

Detailed settings, "Monitoring object" and "monitoring area" are "or" relationships, and at least one of them is set, Otherwise, the alarm rule cannot be saved.

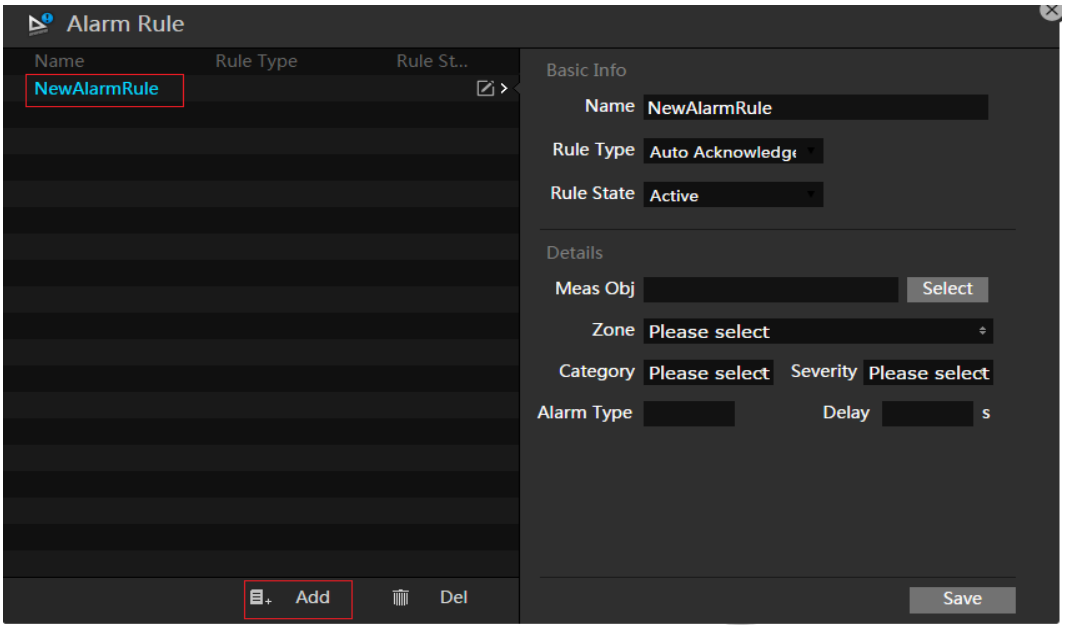


Figure 2 -39 Alarm Rules - Automatically Confirm

2.7.2 Automatic Clearing

In the general application method, except for the "root monitoring object" and "root alarm type", all other items in the detailed information are filled in correctly, then the alarm satisfying the condition is cleared automatically after the set delay time, that is, the alarm rule takes effect.

The special application scenario is as follows: When a monitoring object (root monitoring object) generates an alarm and triggers the alarm generation of other monitoring objects at the same time, the alarms of other monitoring objects will be automatically cleared, and just focus on the alarms of the root monitoring object. In this case, you need to fill in the "root monitor image" / "root alarm type" two items.

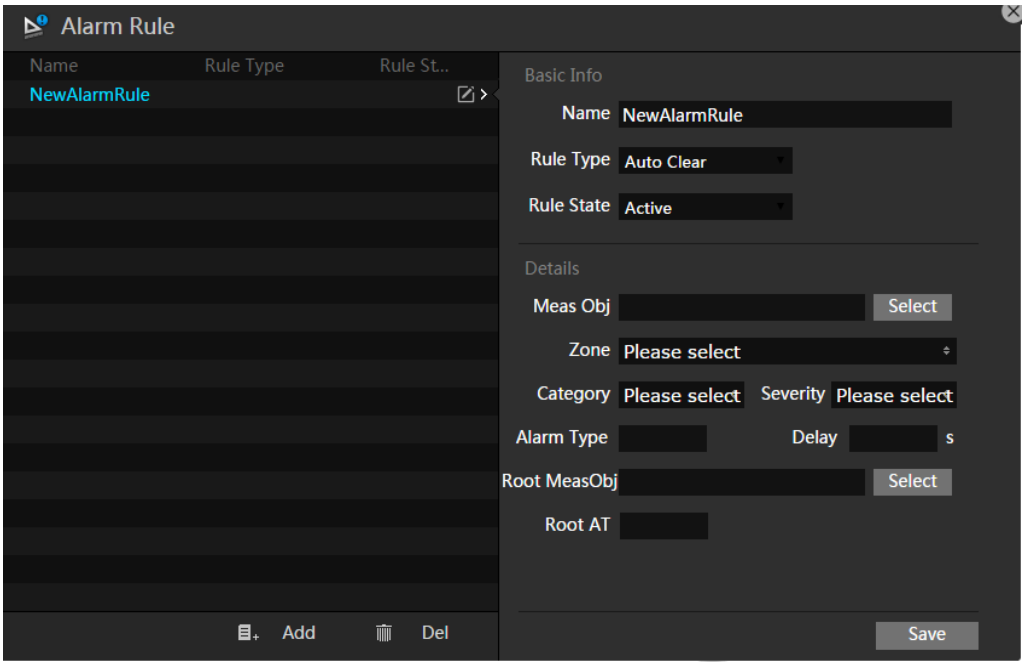


Figure 2 40 Alarm Rules - Automatic Clearing

2.7.3 Alarm Shielding

Mask lower priority alarms within the set time/space interval.

Enter the alarm type: Define the alarm type ID with a lower priority.

Priority alarm type: defines the alarm type ID with a higher priority

Interval: The maximum interval between high-priority and low-priority alarms applies only to distributed objects.

Space Interval: The maximum spatial separation between high-priority and low-priority alarms only applies to distributed objects.

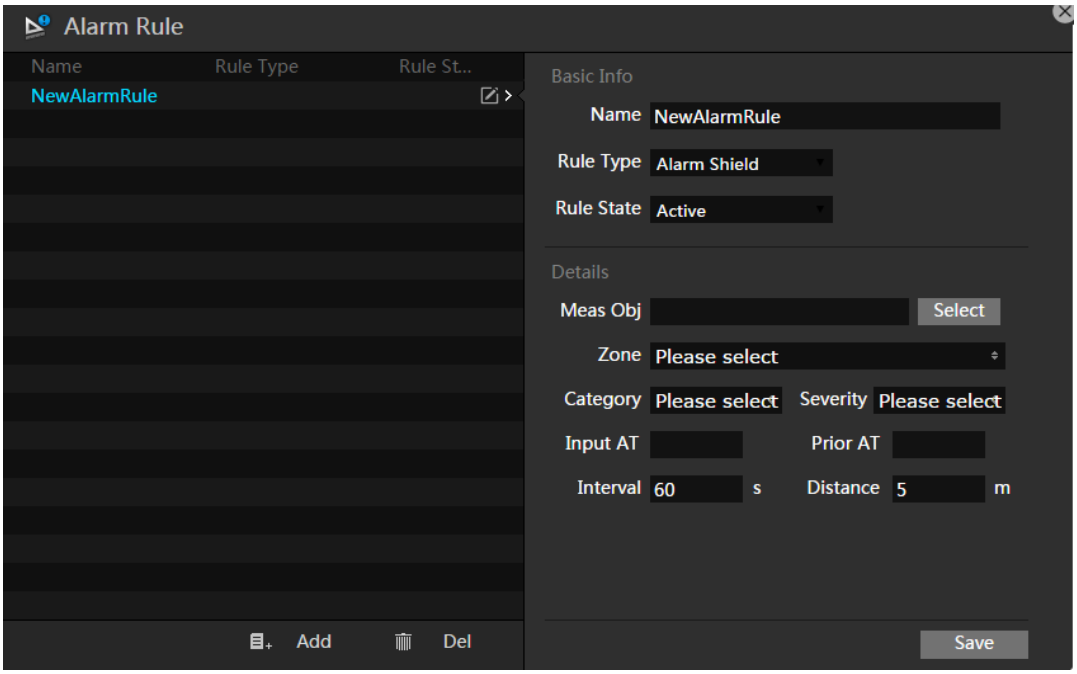


Figure 2 -41 Alarm Rules - Alarm Masking

2.7.4 SMS Forwarding

You can add one or more mobile numbers and enter the road distance of the section to be monitored in “Monitoring distance”. In this way, the alarms in a certain section that meets the conditions can be sent to the specified mobile phone number via SMS.

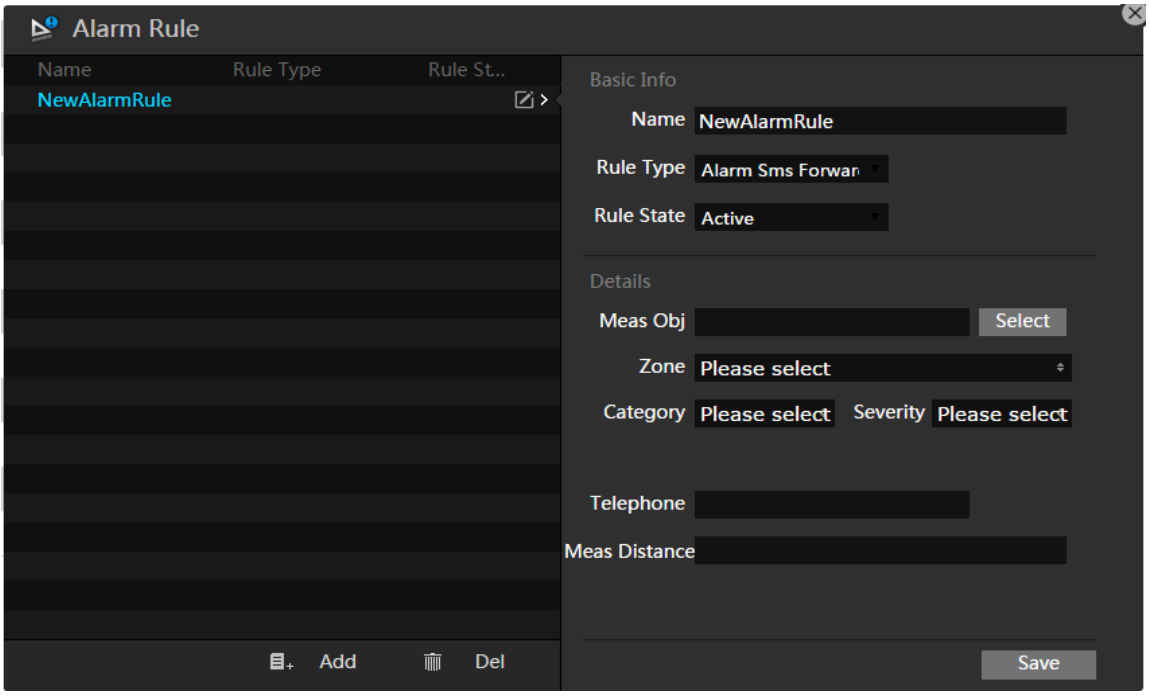


Figure 2-42 Alarm Rules - SMS Forwarding

The format of the monitoring distance is: digital-digital. If there are multiple segments, separate them with a comma ",".

2.7.5 Linkage Output

When the alarm is generated, will trigger the switch output object; when the alarm is cleared, the switch output object is closed. The switch output objects mainly include fire doors, infrared alarms, and fans.

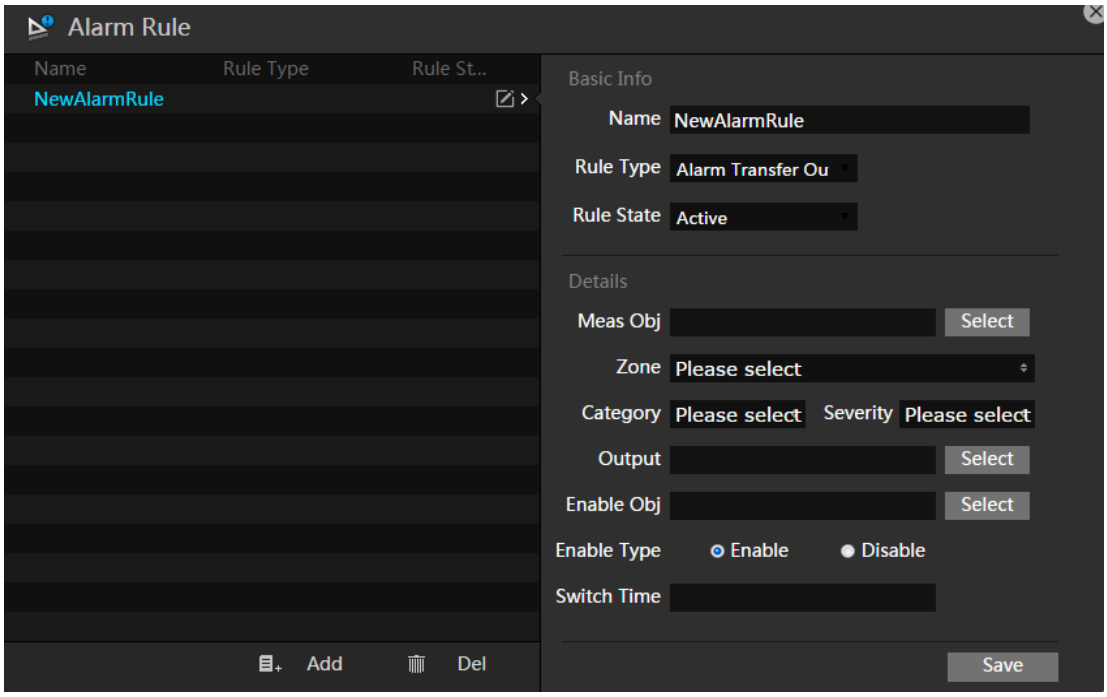


Figure 2-43 Alarm Rule - Linkage Output

2.7.5 Alarm Delay

Alarm delay is another alarm masking rule. In the specified time interval, only one alarm can be generated for the corresponding alarm. Other qualified alarms are masked. The configuration is shown in Figure 2 -41.

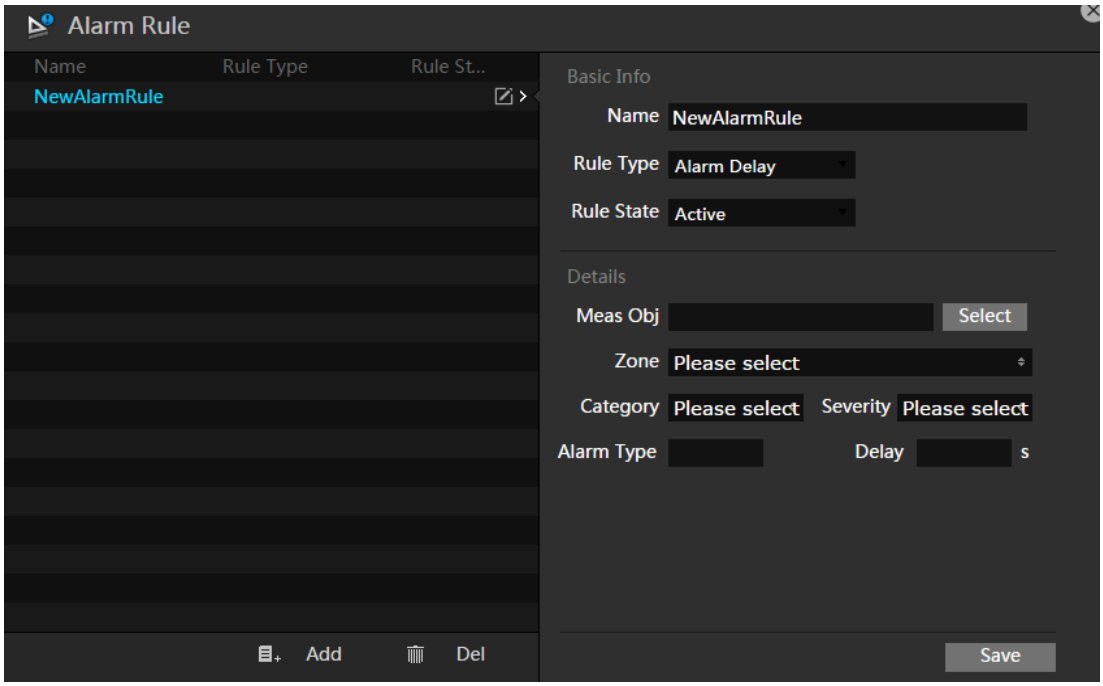


Figure 2 44 Alarm Rules - Alarm Delay

2.7.6 Distributed Alarm Consolidation

The alarm rule applies only to distributed monitoring objects. When the set time/space interval is met, multiple alarms are combined into one and the severity of the alarm will escalate. The configuration is shown in Figure 2-42.

Enter the alarm type: the received alarm type ID.

Output alarm type: The ID of the alarm type that is output after the merge.

Time/space interval: Alarms meeting the set time and space conditions are merged into one.

Alarm escalation time: Within the set time, MaxView did not receive the alarm clear message again,that is, it will go up one level, such as from a normal alarm to a serious alarm, or from a serious alarm to a critical alarm.

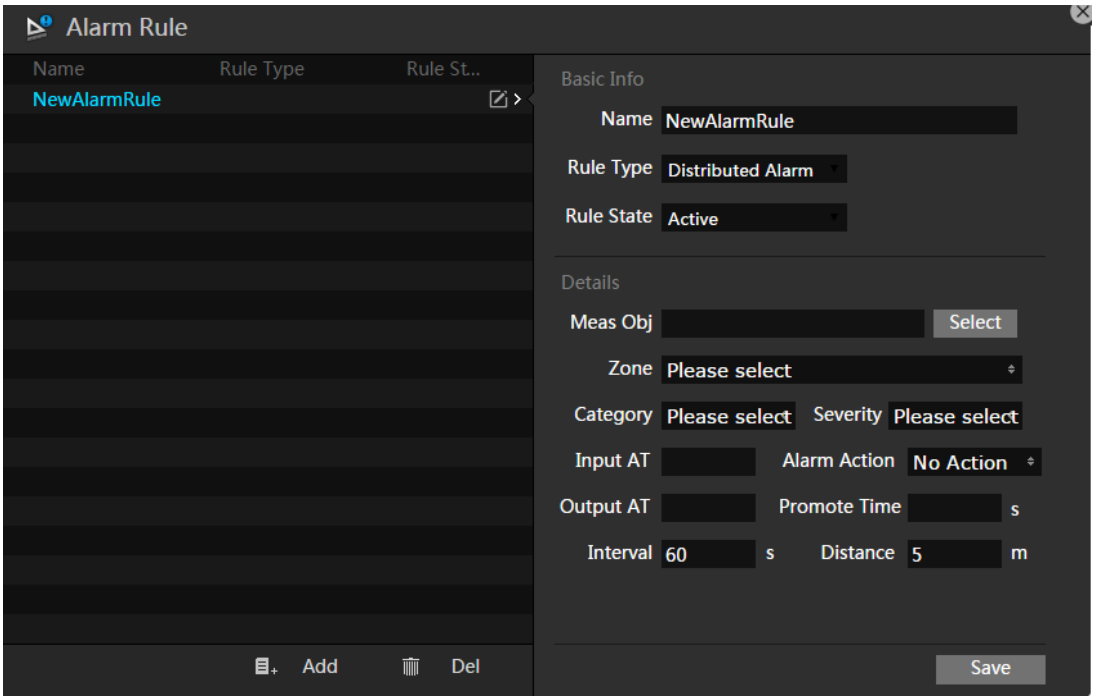


Figure 2 45 Alarm Rules - Distributed Alarm Consolidation

2.7.7 Enhanced Alarm Masking

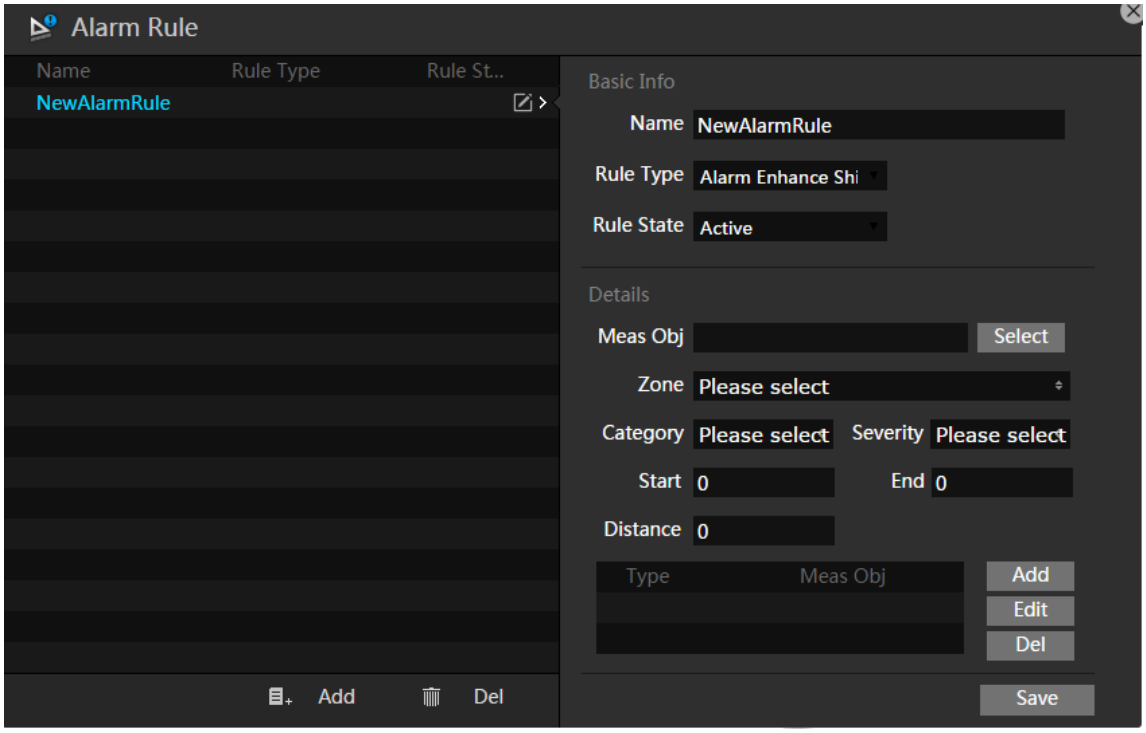


Figure 2-46 Alarm Rules - Enhanced Alarm Masking

2.8 Video Linkage

Video linkage means that after a monitoring object issues an alarm, it can trigger the already-placed camera to automatically switch to the location where the monitoring object is located, view the live image, and confirm the accuracy of the alarm. The dialog for adding a video linkage relationship is shown in Figure 2 43.

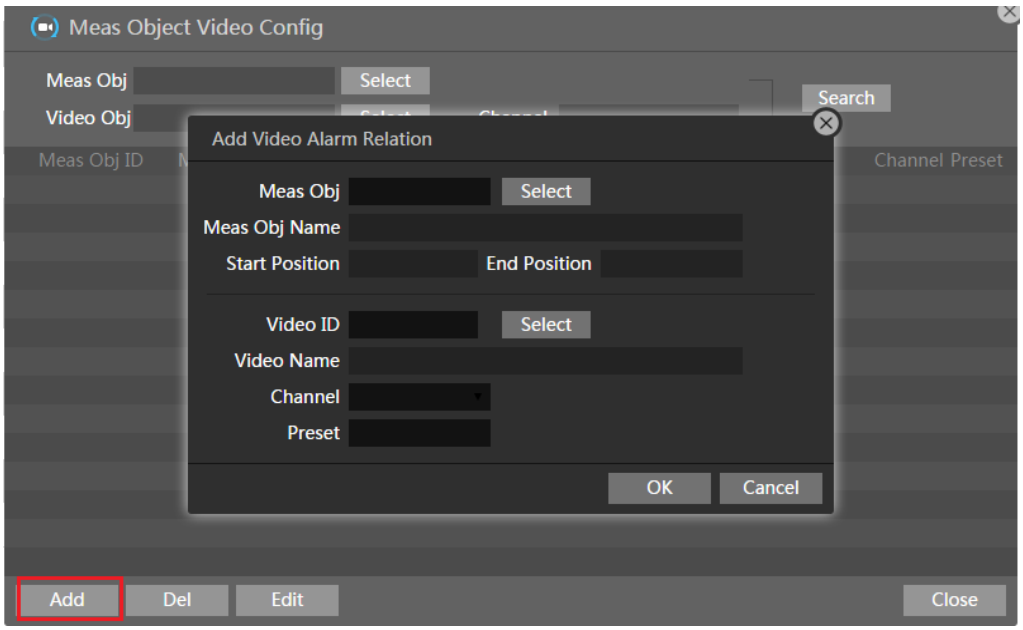


Figure 2-47 Video linkage

Monitoring object/name: Select the monitoring object ID that needs to add the video linkage relationship. The monitoring object name is automatically loaded.

Interval Start/End of Interval: The start and end points of the video surveillance range. This item is valid only for "Distributed Monitoring Object".

Video Object ID/Name: Select or enter the video object ID to be linked, and the video name will be automatically loaded.

Channel: Select the channel number of this video object.

Preset: Input the preset position of this video object.

When an alarm linkage video occurs, pictures of preset positions are automatically captured and saved. In the alarm list, double-click the alarm details displayed in the "Alert Details" to view historical images, as shown in Figure 2 48

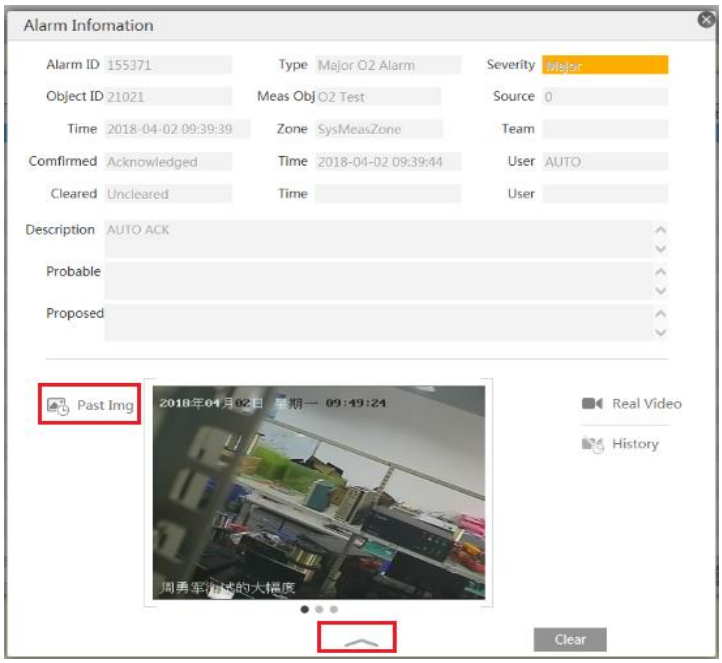


Figure 2 48 Auto-captured images during video linkage

2.9 Plug-in Management

Currently, it can support the installation and unloading of dynamic current-carrying capacity, multi-loop circulation, and single-loop circulation.

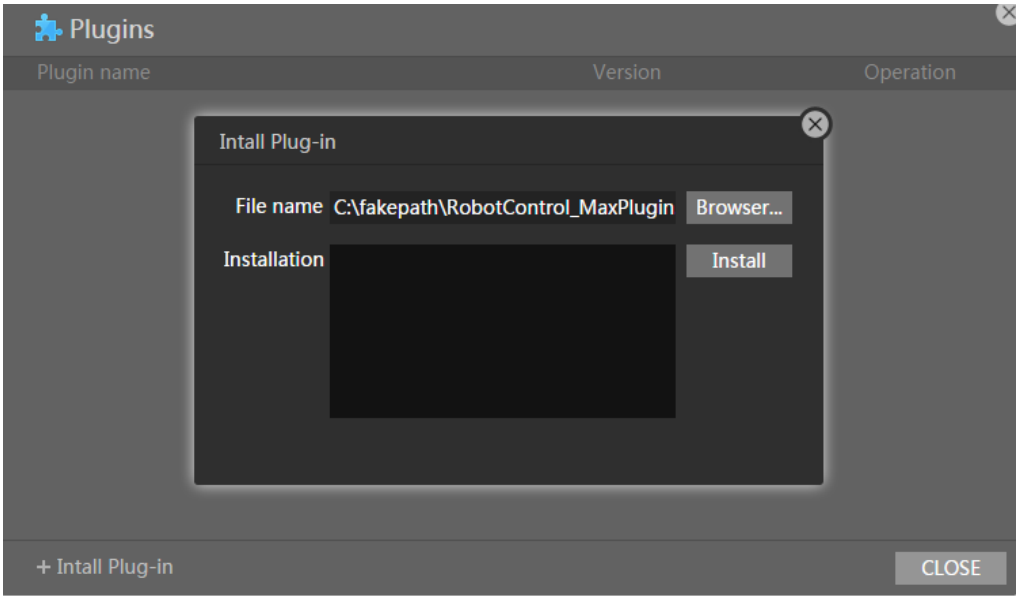


Figure 2-49 Installing the plug

2.10 File Management

When using file management, you need to enable the FTP file service first, that is, StartFTPServer.bat in the apache-ftpserver-1.0.6 folder in the version installation package.

● System files

The default system files on MaxWeb are stored in this directory. These system files cannot be deleted or uploaded. They can only be downloaded. The current default system files are shown in Figure 2.45. The environment they are used for is shown in the figure.

Select the check box next to the file to be downloaded and click "Download File" to save the file in the .zip format to the corresponding path.

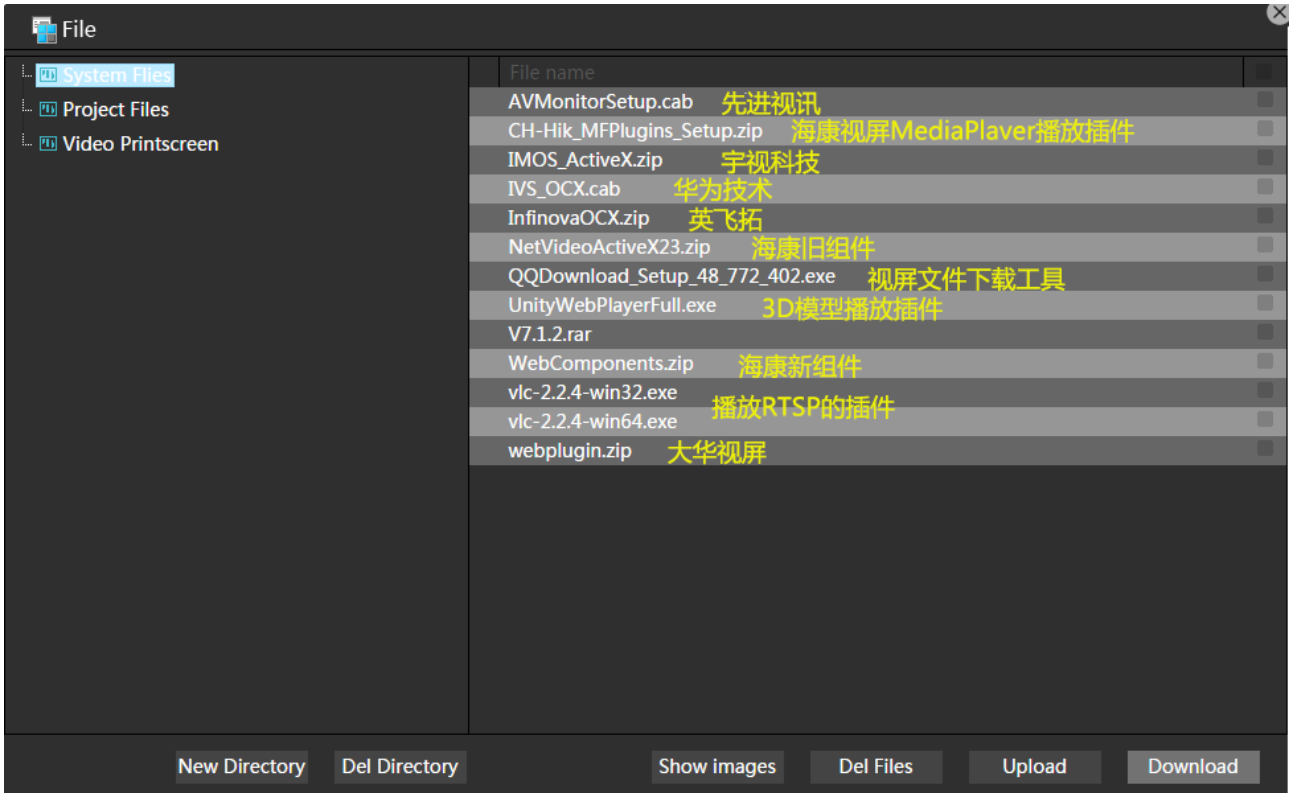


Figure 2-50 File Management

● Project documents

In the project file directory, you can upload, download, and delete files. You can also create or delete a directory other than the home directory under this directory.

● Video Capture

The screenshots stored here are the pictures saved in the scheduled task. In System Configuration -> Schedule Tasks, you can add the task of "Capture Video Photos". The saved images can be viewed here. See the configuration of capturing video photos in "2.6 Scheduling Tasks".

3 Shortcut Menu

3.1 Data query

Provides query and download functions for real-time and historical data of monitored objects.

- **Real-time data query**

Set query conditions，click “ ” button，You can see the data that meets the conditions，as shown in FigureFigure 3-1

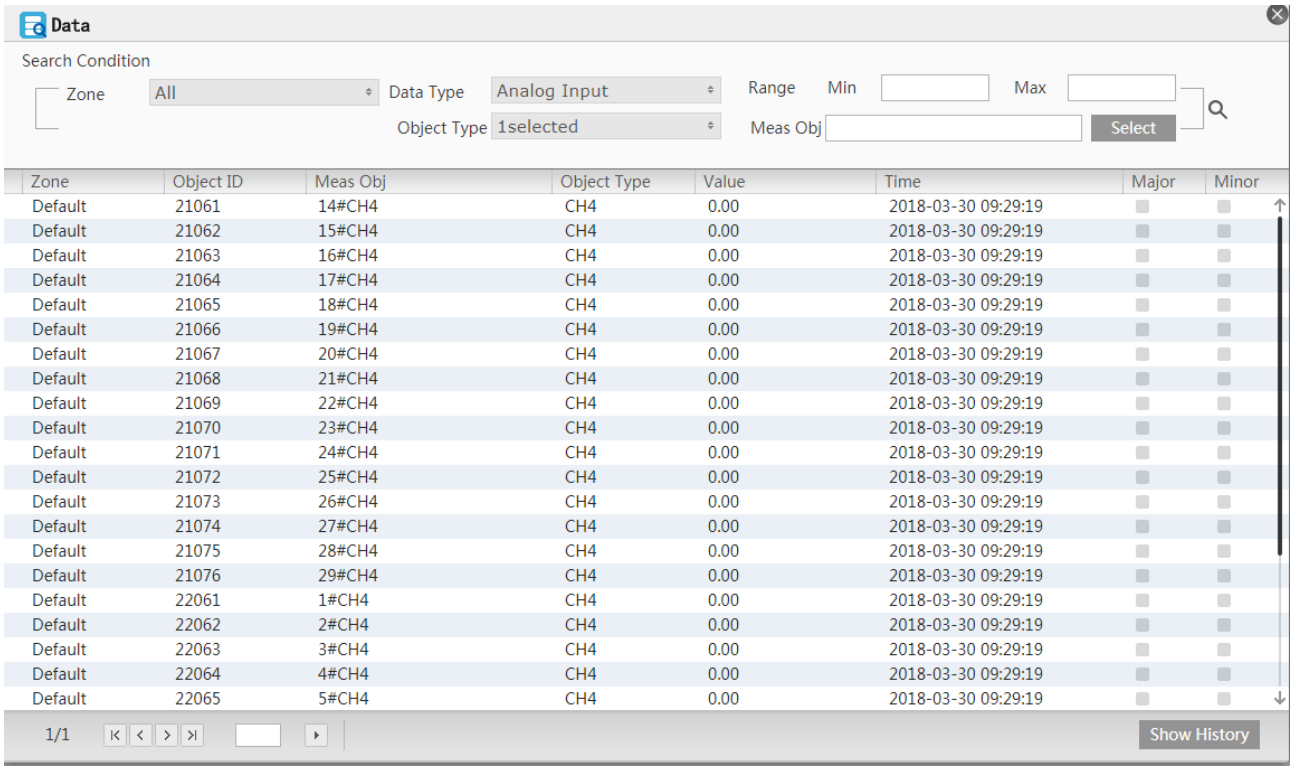


Figure 3-1 Real-time data query

● Historical data query

1、 Set query conditions,click “ ”button,then displays the monitoring object that meets query conditions;

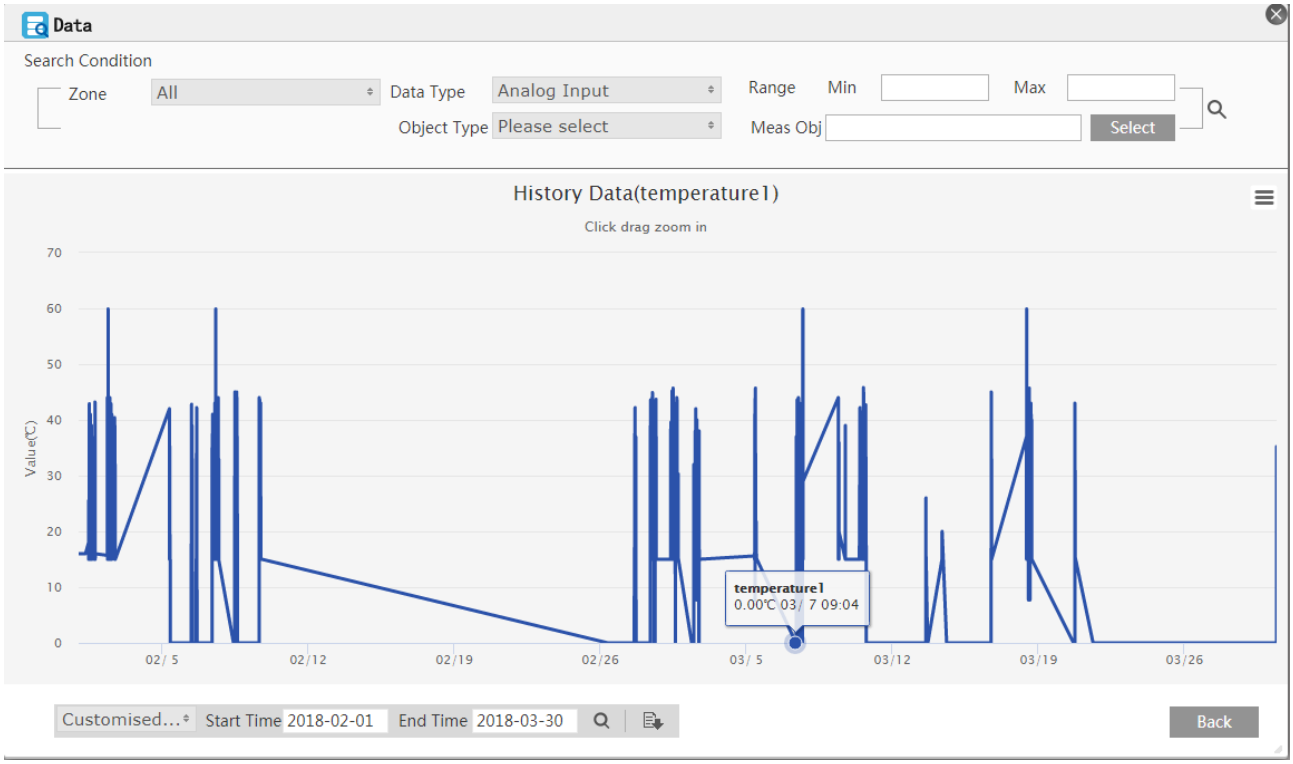
2、 Monitoring objects that need to query historical data,check” Left axis display”or” right axis display”,click "View Historical Data";

Instructions

1、When the query time selects "Custom", the start time and end time span cannot exceed 90 days.

2、Left axis display / right axis display.

3、Up to 5 monitoring objects can be selected for historical data query.



3、 On the trend graph, you can hold down the left mouse button and drag to zoom in to display the curve of the selected area. Click "Reset Zoom" to restore the original zoom effect;

4、 Move the mouse to the curve data node to display the data information of the current node;

5、 click“ ”button， Export current historical data in csv format.

Instructions

During data export operations, make sure the file server FtpServer Normal running.

3.2 Alarm Management

3.2.1 Alarm Query

The alarm records in the alarm query list are all alarms in the database. Double-click an alarm to view detailed alarm information.

- **Query Alarm**

Set the query condition,click“ ”， you can see the alarm events that match the query conditions.

- **Export Alarm**

After filtering out the qualified alarms, you can export them.click the button on the right.

Note：Before the "export" operation, need to open the FTP file service. In the MaxView version of the installation package, first extract the apache-ftpserver-1.0.6 folder, and then double-click the StartFTPServer.bat file to run. Figure 3-2.

After the FTP file transfer service is started,click“ ”button to export, In IE browser, the "open or save" prompt will pop up at the bottom of the page， as shown in figureFigure 3-3.click “Open”， Saved CSV file is opened directly by selecting Open,click “Save”, Will be automatically saved in your computer's "Downloads" folder and can be opened by selecting a suitable program (such as Excel).

- **Archiving alarms**

After the system is running for a long time, a large number of alarms are generated and stored in the database. Users can periodically archive alarms. The archive can export **confirmed and cleared** alarm records meeting the set conditions while deleting them in the database. FTP file service needs to be enabled during archiving operation. Same as above.

1、 Set the monitoring area, alarm level, monitoring object, alarm time, etc. in the search conditions, search, and display the alarm records that meet the conditions;

2、 click button， a prompt box will pop up "The archive operation will delete history data continues"， as shown in figureFigure 3-4,click “OK”;

3、 At this point, the prompt “Would you like to open or save xxx.csv from 127.0.0.1?” will pop up under the IE browser, as well as export the alarm and click “save”;

Alarm record will be saved in the corresponding path. Then these alarm records will been deleted.

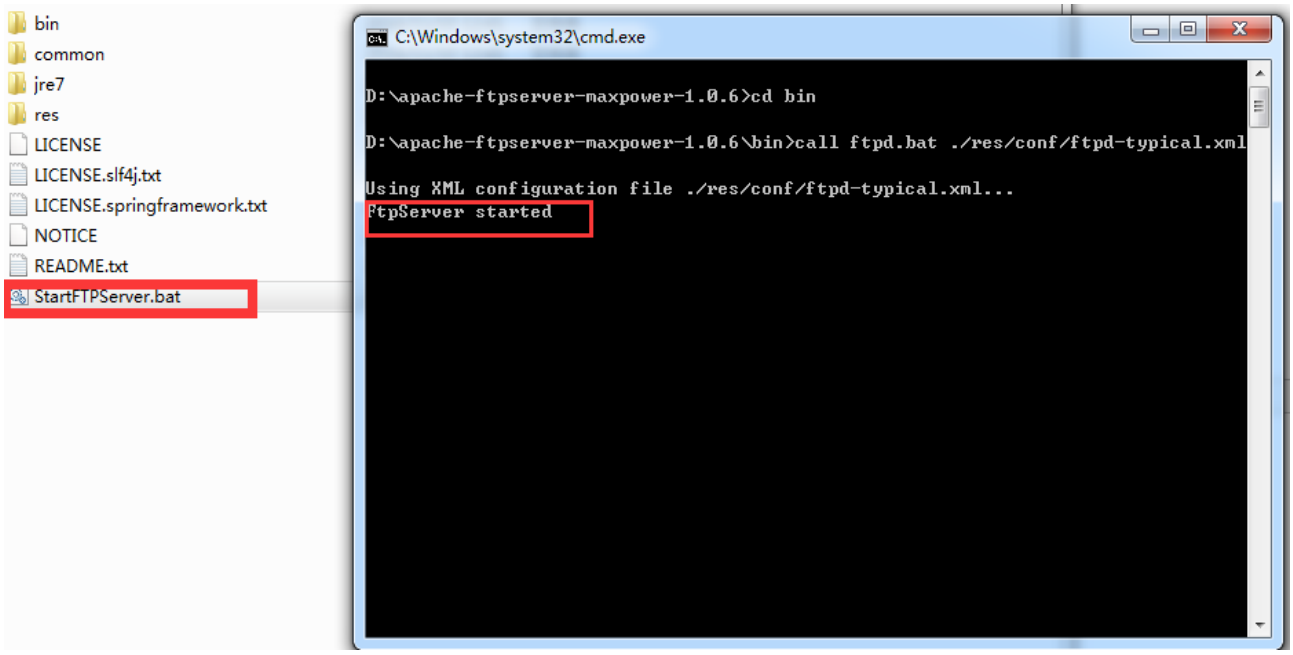


Figure 3-2 Turn on FTP file transfer service

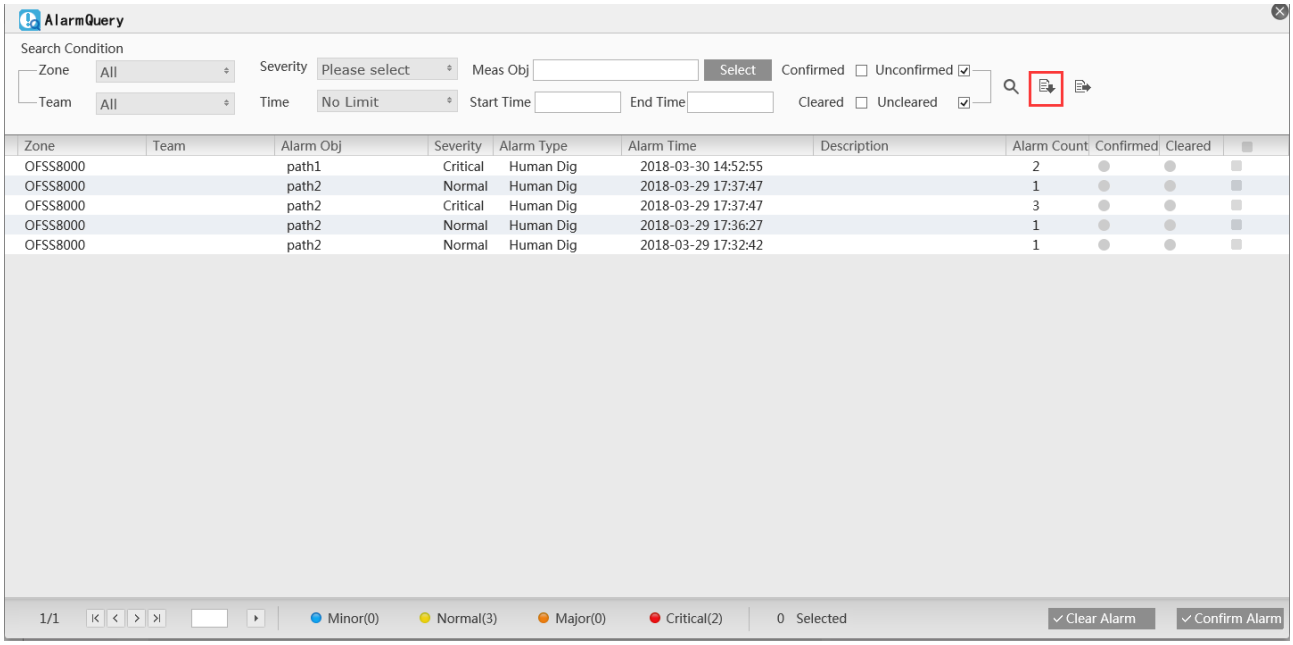


Figure 3-3 Export Alarm

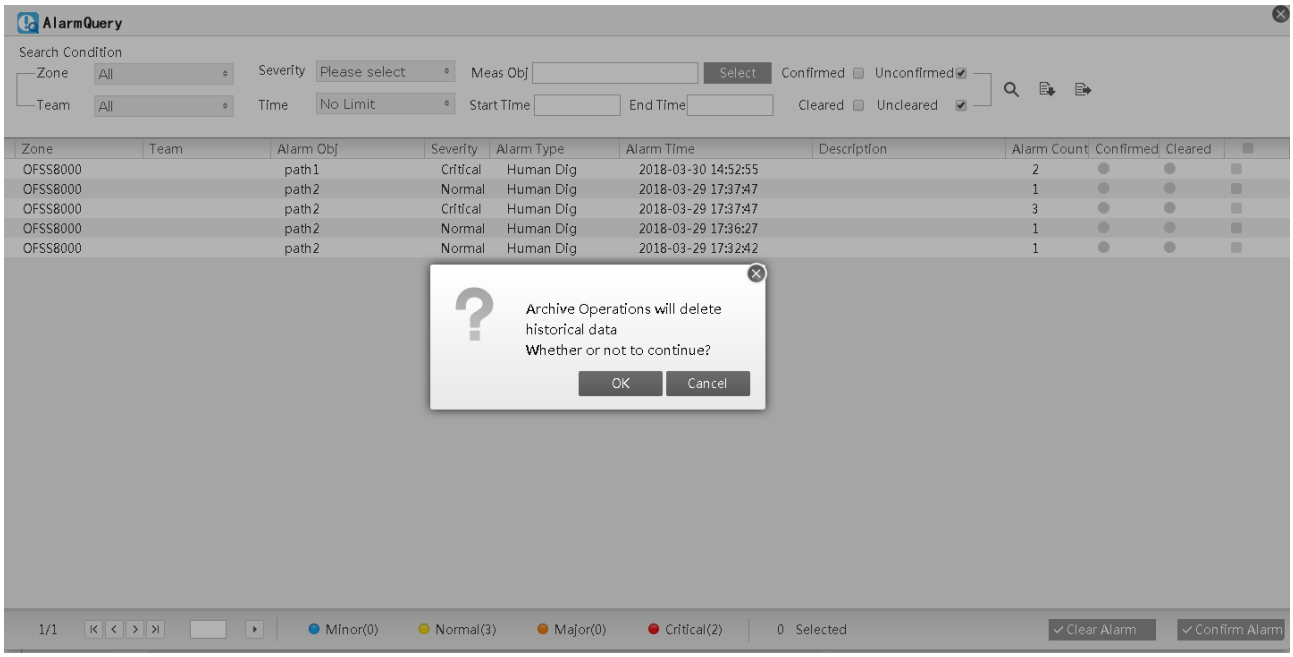


Figure 3-4 Archive operation tips

- **Handling alarms**

Processing of alarms includes "confirmation" and "clear" operations. One or more pictures can be uploaded when “confirmed” alarms, “clear” alarms, you can choose to clear the reason according to the actual situation.

Uncleared Alarms on the MaxWeb Main Screen

shows all uncleared alarms, Include uncleared confirmed and uncleared Confirmed alarm; In the latest active alarm list, the latest 50 alarms that have not been cleared and confirmed at the same time are displayed, cleared and confirmed Approved alarms do not appear in this list.。

3.2.2 Alarm Event Location

In MaxWeb's latest active alarm list, click on "Targeting" after an alarm record to jump to the configuration page where the alarm is located, Display results on the "configuration diagram" as shown in figure figure 3-5, The target monitoring object will be framed with a blue border; the positioning result in the "data sheet" as shown in figure figure 3-6.

figure 3-5 Configuration of alarm location

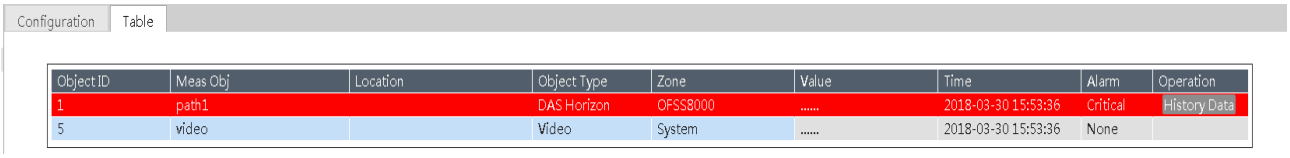


figure 3-6 Alarm location in the data table

Instructions

If there are two or more pages that meet the post-positioning criteria, only the monitoring object that matches the conditions on one page can be displayed on the main interface.

3.3 Equipment ledger

3.3.1 Line Management

Introduce

1、 On the Line Management screen, click Add at the bottom left to enter the line name and line description, as shown in figurefigure 3-7;

2、 Click "Import Path", select the path to the imported .csv file, import,as shown in figurefigure 3-8;

3、 add nodes online, you can manually add, you can also import a configured .csv file.

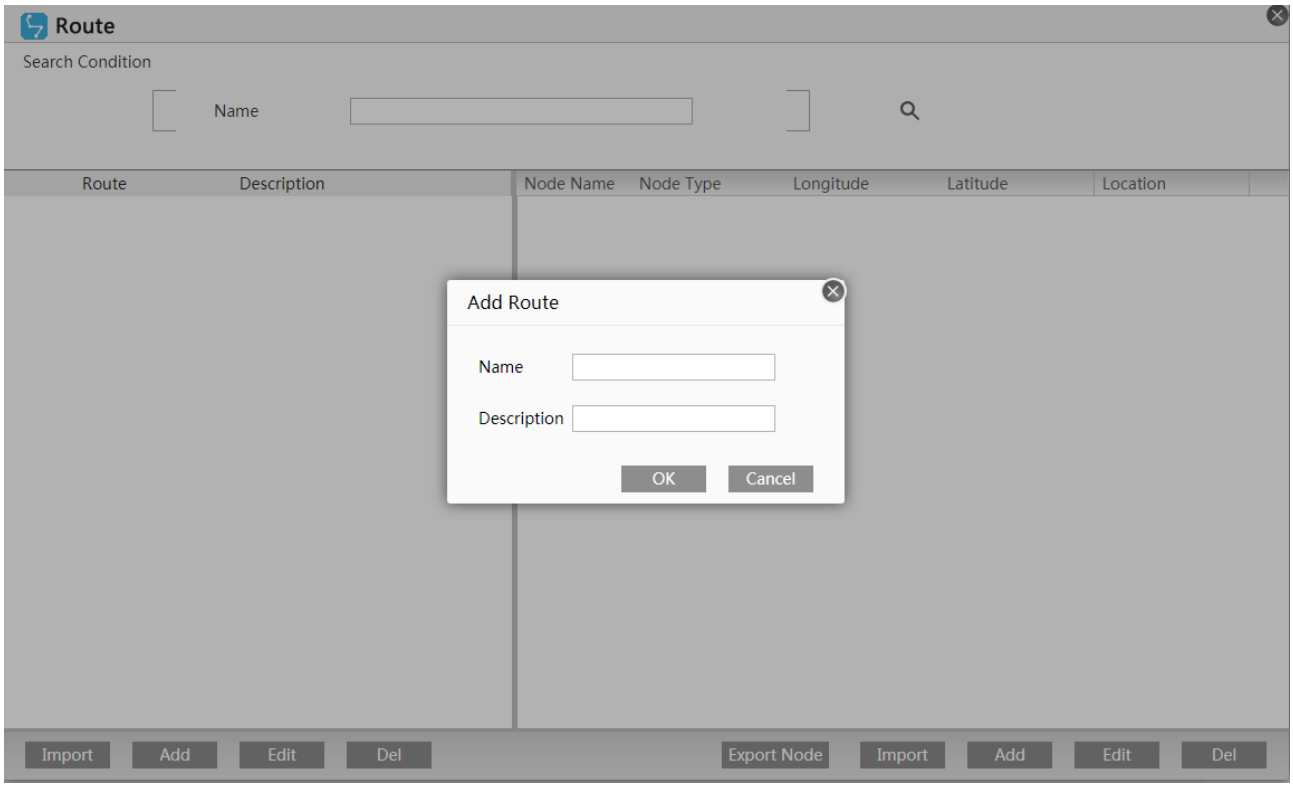


figure 3-7 Add line

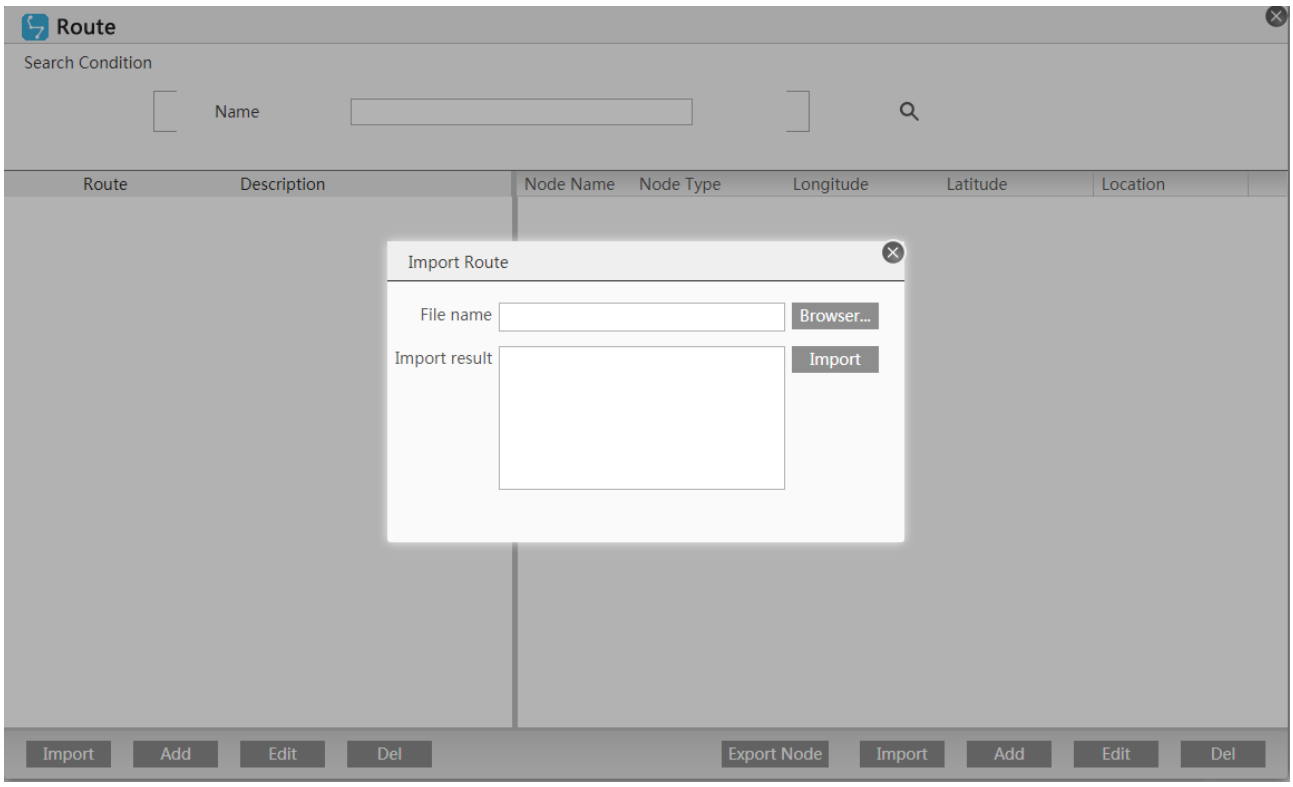


figure 3-8 Import path

3.3.2 Equipment Management

In the comprehensive monitoring project, for the convenience of management, the equipment ledger can be uniformly recorded here.click “Add” button,In the pop-up "Add device information" interface, enter the relevant information of the device in turn, where "*" is required, as shown in figurefigure 3-9. You can also add devices by "bulk new" or "import" .csv file.

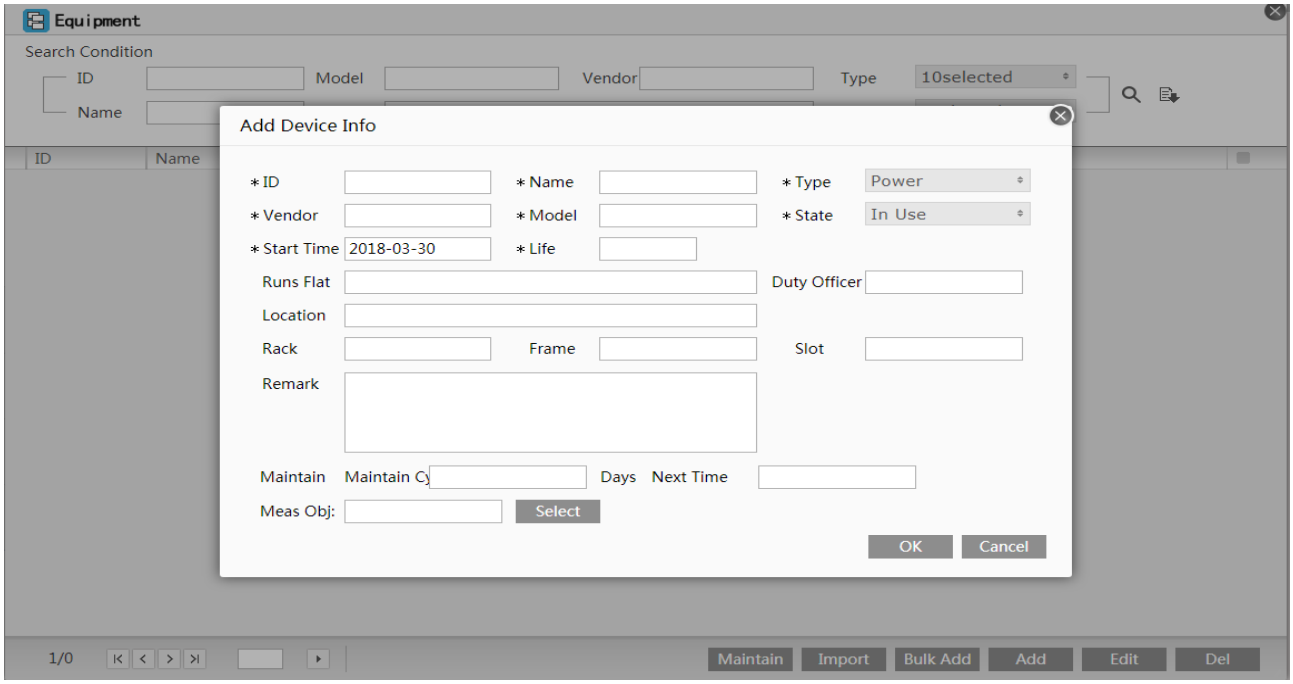


figure 3-9 Add device

3.3.3 Station Management

Introduce

Click "Add", in the pop-up "Add station record" dialog box, enter the relevant information of the station, where * is required,figure 3-10.You can import one or more pictures.

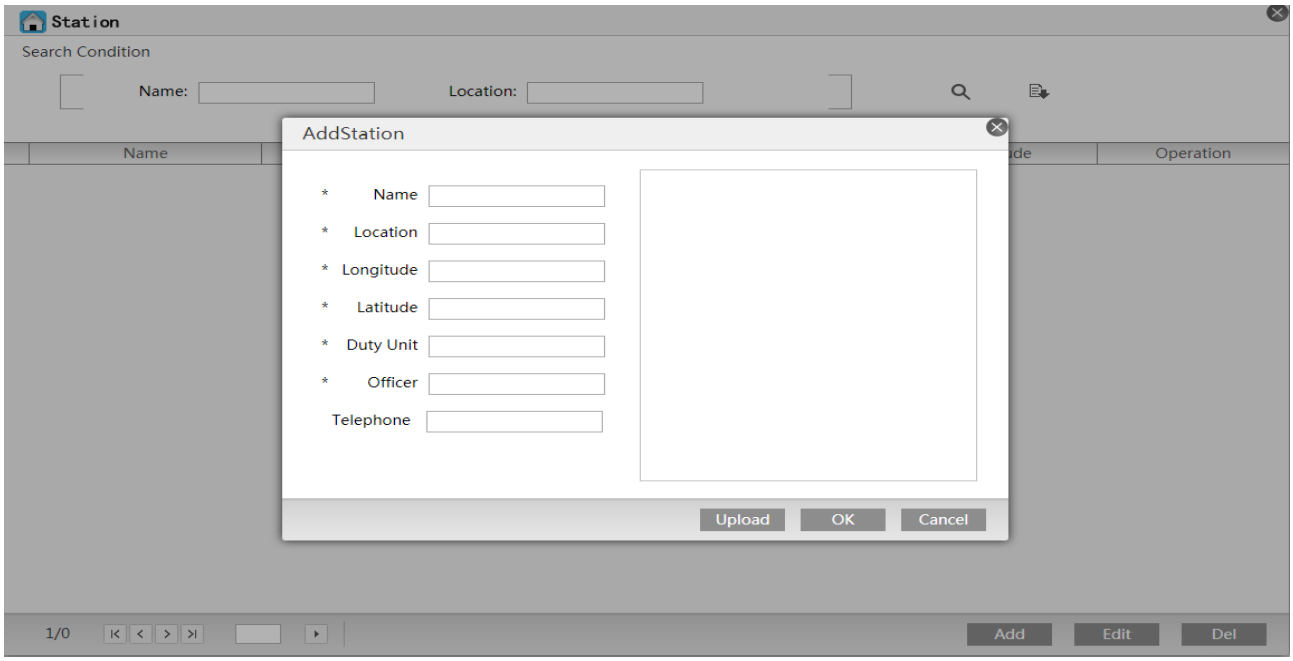


figure 3-10 Add station

3.4 Log Management

3.4.1 Operation Log

Operation log records from the log information of all operations performed by the user, such as system parameter management, configuration page management, alarm management, security management, etc. In the search condition box, search for an operation log that matches the conditions by setting the operation type, operator, result, and time.

1) Operation type: Select one or more operation types as required, or click "Select All" or "Empty" to perform operations.

2) Operator: You can check single or multiple operators according to actual needs. You can also click on Select All or Clear.

3) Time: When "Unlimited" is selected, "Start/end time" cannot be modified, Will filter out the results that meet the conditions at all times; When "Last day", "Last week", "Last year" is selected, "Start/end time" will automatically display the corresponding date; When selecting "Custom", select the start date via the time control in "Start/end time".

4) Results: "Success" and "failure" indicate the success or failure of the operation. They can be single-selected, all-selected or all unselected.

After the above search conditions are set， click ,You can see records that match the query.

3.4.2 Security Log

The security log records log information such as user accounts and role permissions, such as account login and logout, password modification, role addition, deletion, and other operations. You can set the search conditions for the security log query, with the operation log query, See section for details **错误!未找到引用源。**.

3.4.3 Event Log

Event log mainly records the login and logout events of the account, the activation of the monitoring object, the deactivation of the event, and the connection and disconnection of the adapter. Can set search conditions for the event of the query, with the operation log query, See section for details **错误!未找到引用源。**.

After the above log query, export operations can be performed. Need to open the FTP service on the premise. In the MaxView version of the installation package, first extract the apache-ftpserver-1.0.6 folder, and then double-click the StartFTPServer.bat file to run. After openingFigure 3-2.

After the FTP file transfer service is started， click“ ”button， In Internet Explorer, the "Open or Save" prompt appears at the bottom of the web page.click“Open”,Saved CSV file is opened directly by selecting Open; click”Save”, Will be automatically saved in your computer's "Downloads" folder and can be opened by selecting a suitable program (such as Excel).

At the same time, all logs can also be archived， Steps with the alarm archive in section **错误!未找到引用源。**. Filter out matching log records,click button, The corresponding record is saved to the csv file and deleted in the database.

3.5 Data Report

According to the monitoring object's existing data, generate a variety of different types of data reports, mainly according to the alarm level statistical reports, the most alarm Top10 statistical reports, single-object measured value statistical reports, multi-object minimum / maximum / average statistical reports Single object maximum/minimum association report.

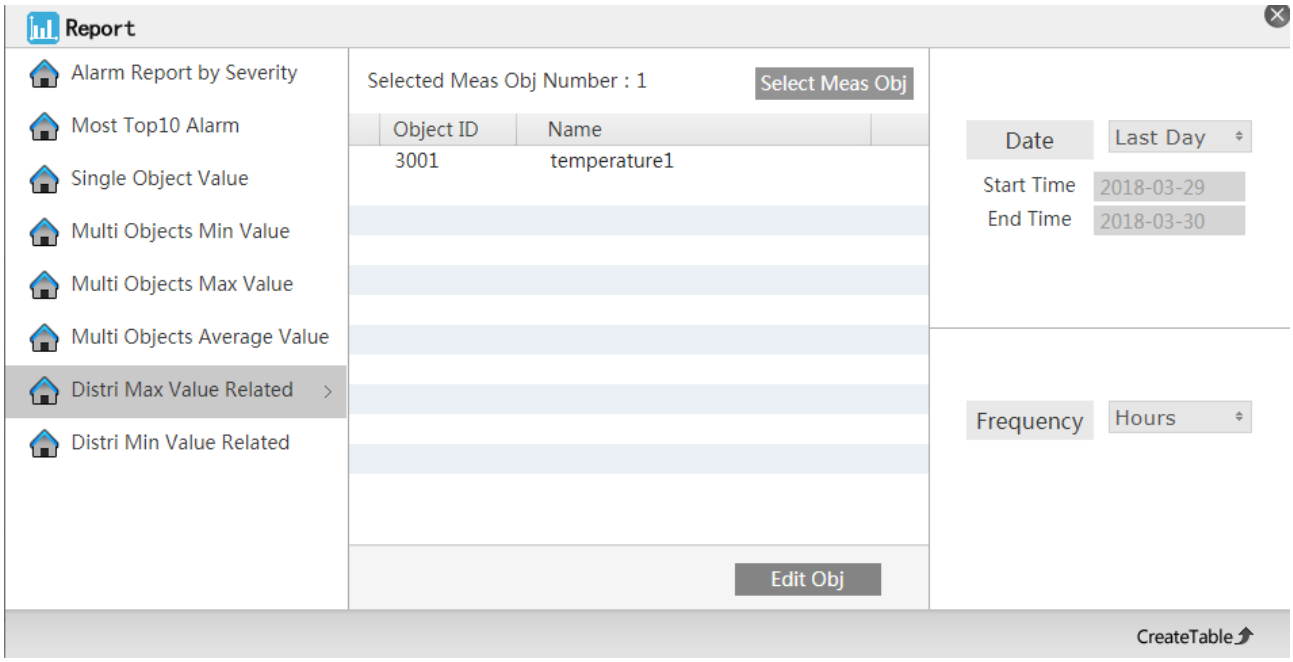


figure 3-11 data report

- **Statistics by alarm level**

Click “Select Monitoring Object”. In the pop-up monitoring object list, select single or multiple monitoring objects to be counted, set the date range to be counted, and click “Create Report” to generate the statistics report by alarm level, as shown in figurefigure 3-12.

Instructions

When you do not select any monitoring object and click "Create Report" directly, the report statistics of all monitored objects will be performed.。

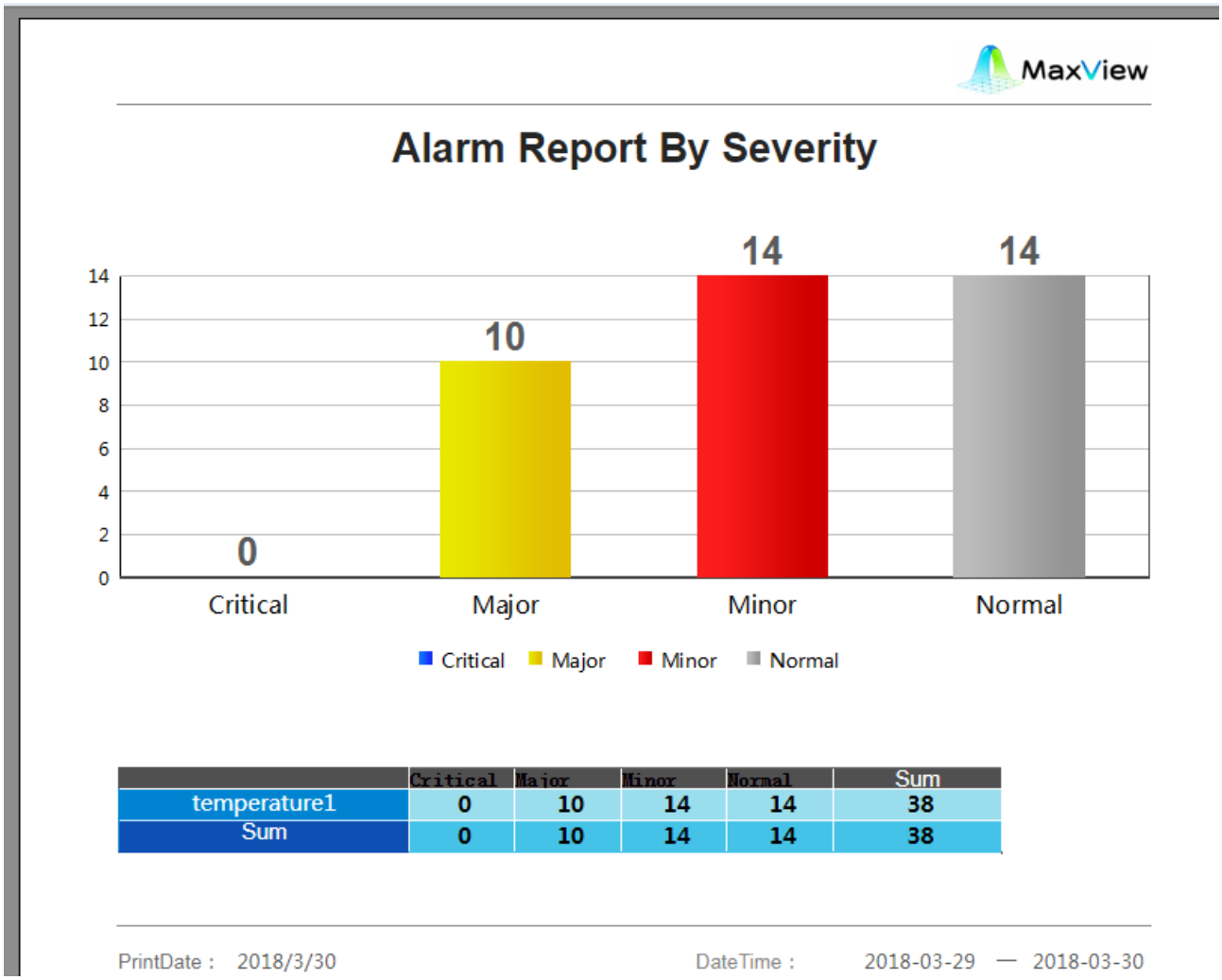
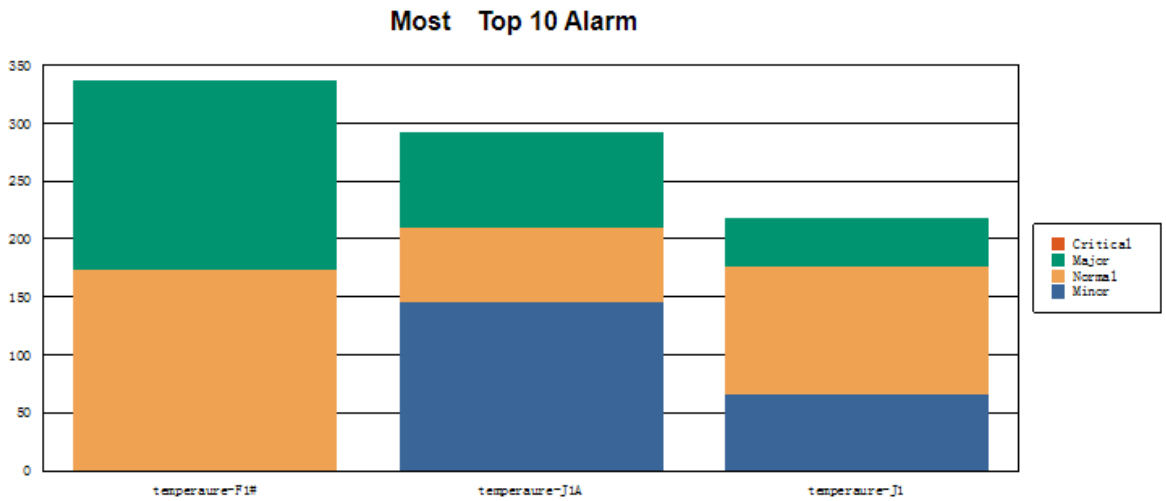


figure 3-12 Statistics by alarm level

- **Alarm Top10 statistics report**

Among the selected monitoring objects, the top ten monitoring objects that generate the alarm number are counted, as shown in figurefigure 3-13. When the number of selected monitoring objects is less than 10, the selected monitoring objects will be displayed in the order of the number of generated alarms.



ObjectName	Minor	Normal	Major	Critical	AlarmNum
temperaure-F1#	0	174	163	0	337
temperaure-J1A	146	64	82	0	292
temperaure-J1	66	111	41	0	218

Print Date： 2018/3/30 Time： —

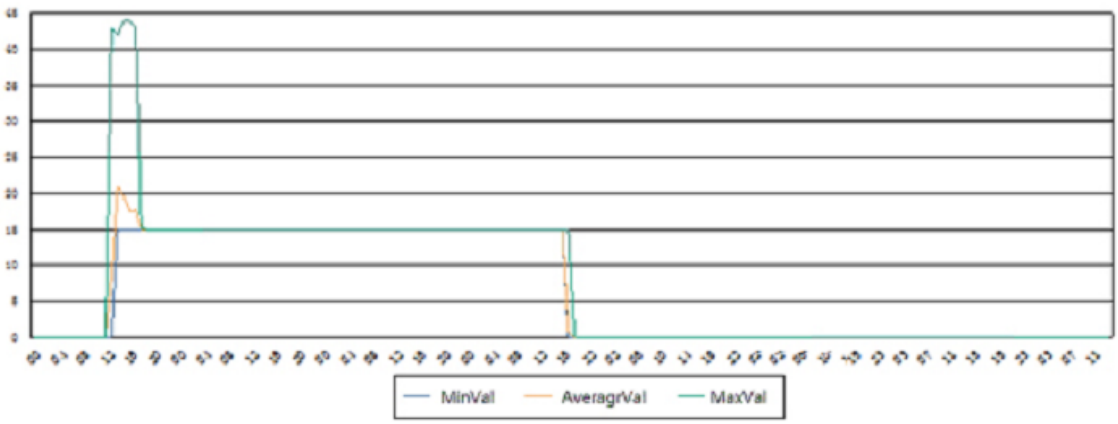
figure 3-13 Alarm Top10 statistical report

- **Single object measurement statistics report**

According to the selected time range and statistical period, the maximum value, minimum value and average value of the selected monitoring object in each period are counted, as shown in figurefigure 3-14.

Single Object Value

Object ID: 3001 Name: tempJ1 Period: Hour Unit: ℃

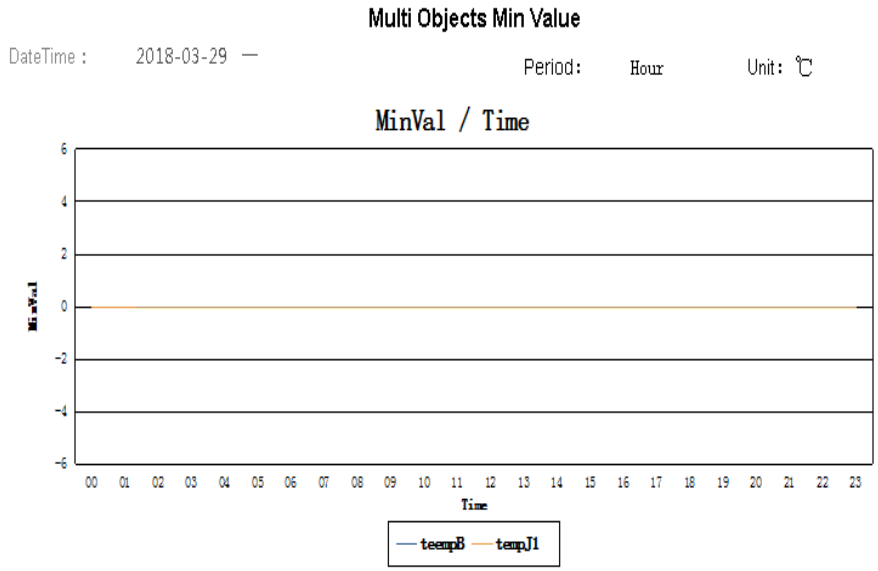


Time	MinVal	AverageVal	MaxVal
00	0.00	0.00	0.00
01	0.00	0.00	0.00
02	0.00	0.00	0.00
03	0.00	0.00	0.00
04	0.00	0.00	0.00
05	0.00	0.00	0.00
06	0.00	0.00	0.00
07	0.00	0.00	0.00
08	0.00	0.00	0.00
09	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.00	0.00
12	0.00	0.00	0.00
13	0.00	-8.45	43.00
14	15.00	-21.00	42.00
15	15.00	-19.60	44.00
16	15.00	-17.60	44.00
17	15.00	-17.68	43.00
18	15.00	-15.00	15.10
19	15.00	-15.00	15.00
20	15.00	-15.00	15.00
21	15.00	-15.00	15.00
22	15.00	-15.00	15.00
23	15.00	-15.00	15.00
00	15.00	-15.00	15.00

figure 3-14 Single object measurement statistics report

- **Multi-object measurement minimum statistics report**

According to the selected time range and statistical period, the minimum value of the selected monitoring object in each period is counted and displayed in different color curves. Up to 5 monitoring objects can be selected here, as shown in figurefig 3-15.



	teempB	tempJ1
	MinValue	MinValue
00	0.00	0.00
01	0.00	0.00
02	0.00	0.00
03	0.00	0.00
04	0.00	0.00
05	0.00	0.00
06	0.00	0.00
07	0.00	0.00
08	0.00	0.00
09	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00

fig 3-15 Multi-object measurement minimum statistics report

- **Multi-object measurement maximum statistics report**

According to the selected time range and statistical period, the maximum value of all monitoring objects in each period is counted and displayed in different color curves. The monitoring object can only select up to five.

- **Multi-object measurement average statistics report**

According to the selected time range and statistical period, the average value of the selected monitoring object in each period is counted and displayed in different color curves. The monitoring object can only select up to 5.

- **Single-object maximum correlation report**

- **Single object minimum association report**

In the generated data report, you can click“ (Export this report)”button,Export the current report,but also click ” (Print this report)” button,Print current report.

3.6 Video

Video management interface, mainly divided into video server, video preview area and video control panel area, as shown in Figure 3-14

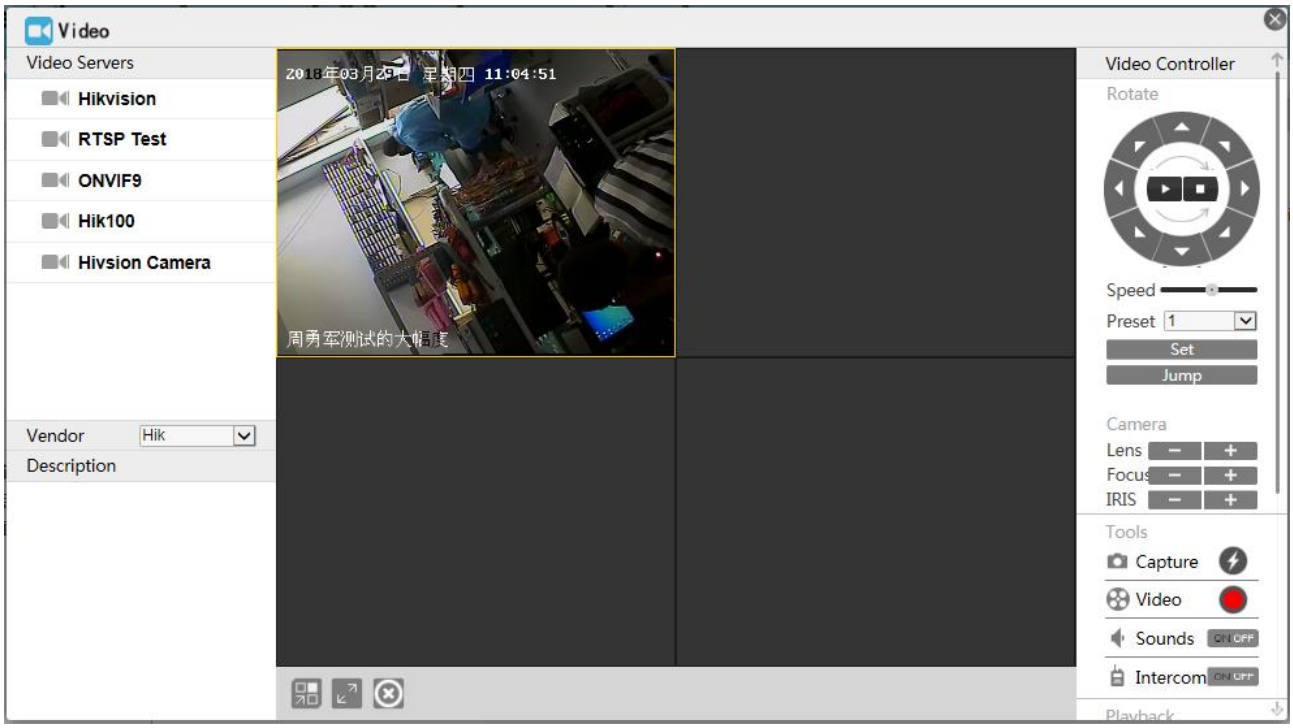


Figure 3-16 Video Management

Video Servers

Display all types of "video stream" measurement objects. Select the different video objects and the corresponding channel, and the video screen of the corresponding video channel will be displayed in the preview area.

The "description" area displays the location information when the video stream measurment objects is created.

Preview Area

The icon below the area can be divided into multiple frames, including the display of 1, 4, 9, 16, and so on. The icon implements the maximum display of the video preview area, and again clicks the recoverable original.

Video Controller

It includes the functions of PTZ control, lens adjustment, application tools, video playback, and so on. Including replay of video and modification of configuration parameters, such as video screen, save path, and so on.

3.7 Defence

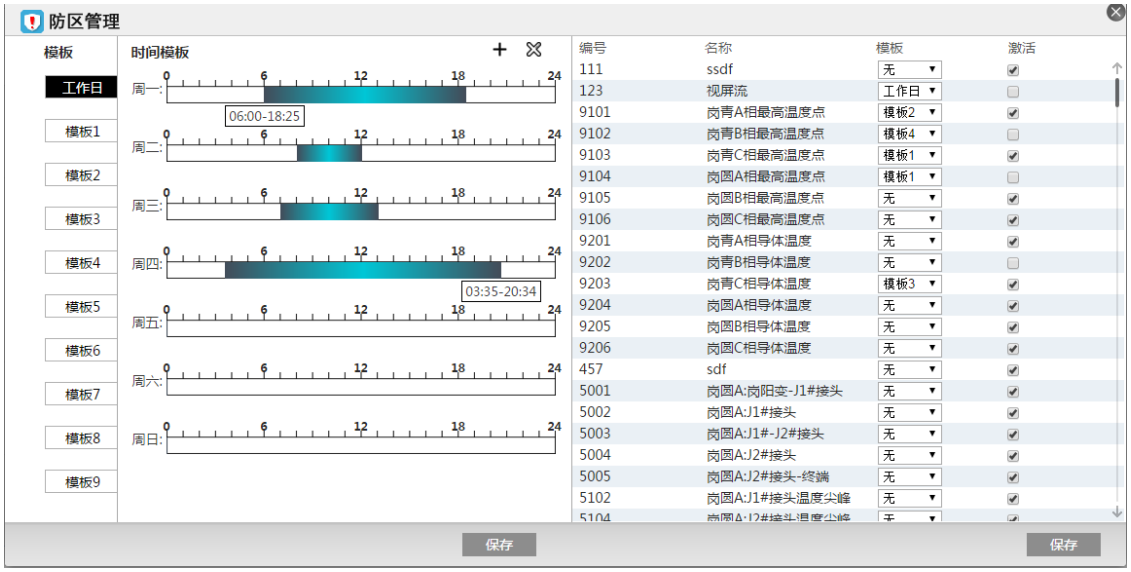


图 3-17 防区管理设置

4 Appendix

4.1 Data Type List

A brief description of different data types in MaxView is shown, as shown in table 5-1.。

Table 4-1 Data Type List

No.	Data Type	Description
1	Analog Input	Mainly refers to linear and continuous data, such as temperature data. The analog input is mainly environmental sensors, circulation monitoring sensors and so on.
2	Digital Input	It mainly refers to a kind of data such as on-off, opening and closing, which is the on-the-spot switching quantity signal input. The main performance is: access control, manhole cover, fan, pump and so on.
3	Digital Output	It mainly refers to remote control, which is a signal that outputs an action or a non action. The main performance is: manually start or stop fans, pumps and so on.
4	Status Input	It mainly refers to the multi state data, which determines the state for the background and gives the output of the conclusion, such as normal, prompt, early warning, alarm, fault and so on.
5	Distributed Data	It mainly refers to the collection of optical fiber temperature data, perimeter, OTDR and location data through distributed optical fiber temperature measurement technology.
6	Distributed Zone	Distributed zone is the statistical analysis of data in a certain area of distributed data.
7	Video Stream	主要是指通过硬盘录像机来实现视频数据的浏览。
8	Voice Stream	It is mainly through the NVR/DVR or Camera to achieve the browsing of video data.

No.	Data Type	Description
9	Structure Data	It mainly refers to complex data with multiple attributes, such as employee information.
10	Logical calculated data	In order to obtain the value and state of the associated output object, the input data is mainly connected, and the actual control logic or input control expression and the related output object are set up, and the output alarm level is set.
11	Arithmetical calculated data	The method of obtaining the value and state of the associated output object is to relate the input data of one or more one or more, and set up the actual type of operation, the logic expression of the input operation and the expression of the output object and the selection of the output object.
12	Statistical data	Through the statistical analysis of the collected sensing data, we get periodic data.

4.2 Box List

The functions of each component in MaxBuilder are introduced, as shown in table 5-2.

Table 4-2 Box List

No.	Box	Description
1		Static Label To display static text; to provide switch access between pages and pages.
2		Dynamic Label Real time display of associated measurement objects, numeric values, refresh time, or reference objects, etc., are used to relate data types of analog input.
3		Static Picture It is used to display static pictures or to jump function between pages by selecting jump pages.

No.	Box	Description
4		Dynamic Picture Real time display of status icon changes under different levels. According to the associated data source, through the current connected lower system and modifying the state level of the data source, after starting the monitoring, the display icons corresponding to this state level can be displayed on the MaxWeb monitoring platform (including: normal, prompt, warning, alarm, fault, etc.); and the phone components of different state audio stream types can be added through the icons.
5		Switch Button The box of the control switch are used for the command of the down switch, and the custom script can be executed.
6		Trend Chart By associating different types of data input and setting query cycle, we can see the change of historical data in the latest cycle of associated data.
7		Linear Mobile With the movement of monitoring location, we can get various data information.
8		Google Map In the context of map environment, map sub components can also be added to achieve custom effects.
9		NetVideo With the video equipment of the relevant suppliers, we can see the real-time monitoring image of the specified device channel.
10		Distributed Data Chart A curve showing one or more distributed real-time data.
11		Bixial Chart It can only be associated with distributed monitoring objects, and it can display data of two distributed monitoring objects at the same time.

No.	Box	Description
12		Compound The monitoring objects that can be associated with multiple different data types display the detailed information of each monitoring object in the form of a data box; the icon shows the highest alarm level in all the monitored objects associated.
13		Structure The associated structured type of monitoring objects can be used to display information of complex data volume.
14		Histogram The analog data can be displayed more vividly or horizontally or vertically.
15		Historical Trend Chart It can be associated with different types of monitoring objects, such as analog volume, switch volume and state data. Meanwhile, it shows the historical changes of multiple monitoring objects.
16		Status Switch It's related to data type of switch input and switch output, and contains functions of control switch and status display.
17		Unity 3D Restore scene scene based on 3D model and check site monitoring information.
18		Gauge It is used to simulate the data of different monitoring objects, and the pointer points to the numerical value of the current associated analog data.
19		Distribute Line The associated distributed type objects can be configured with distributed curve nodes, displaying specific data information and alarm location information.
20		Alarm Waterfall Displaying the uncleared alarm in the distributed monitoring object in the form of waterfall graph.

No.	Box	Description
21		NetVideo Controller Video PTZ control and lens adjustment