

Installation Manual

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1 Introductions

1.1 Functions

CMS is based on the wireless network for all of the vehicles for a centralized management.

CMS system supports video surveillance, GPS location, vehicle run track playback, talk-back, alarm linkage, remote video storage, remote video download, remote video playback, vehicle zoom management, device remote upgrade, etc.

1.2 Main Features

The system can control the surveillance of up to 2000 vehicle.

Improve the vehicles management.

Quick positioning, GPS info, display real time of the vehicle, show the vehicle online state and QTY statistics

Real-time Audio & Video surveillance.

Real-time capture before vehicle.

Talk-back for drivers & CMS, vehicle broadcast.

PTZ control.

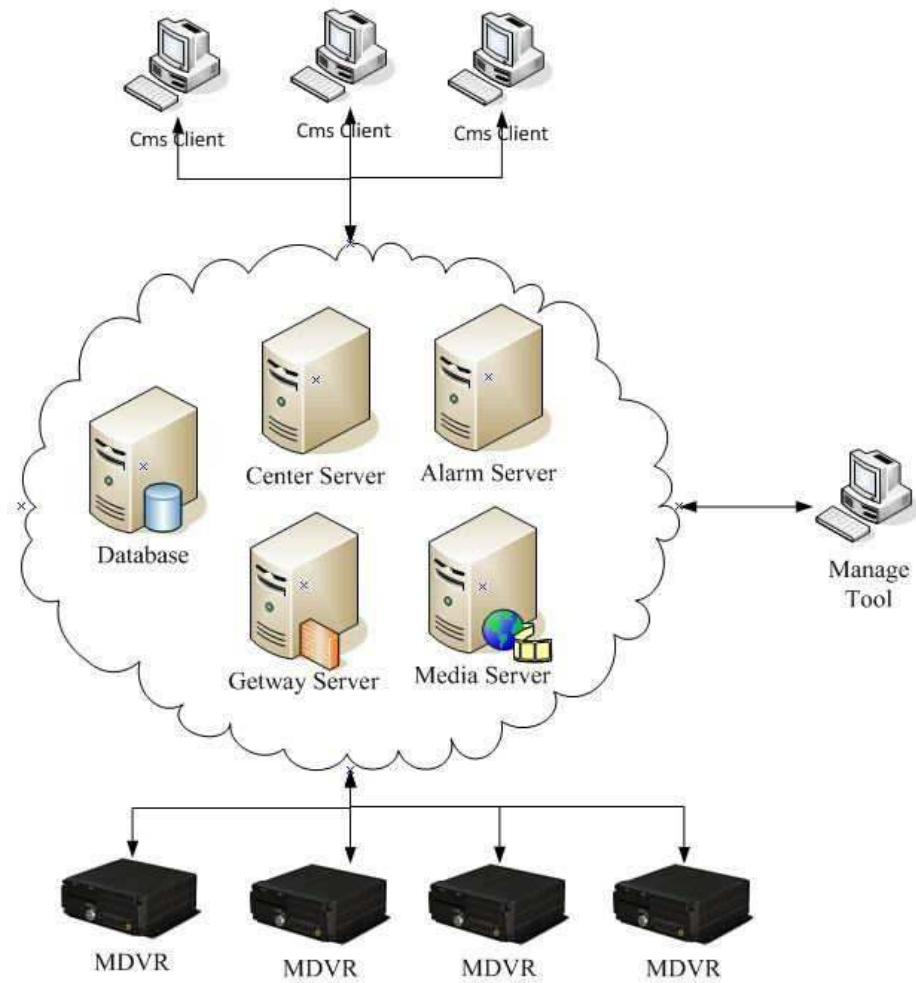
Playback vehicle data.

Searching, download and playback the remote recording.

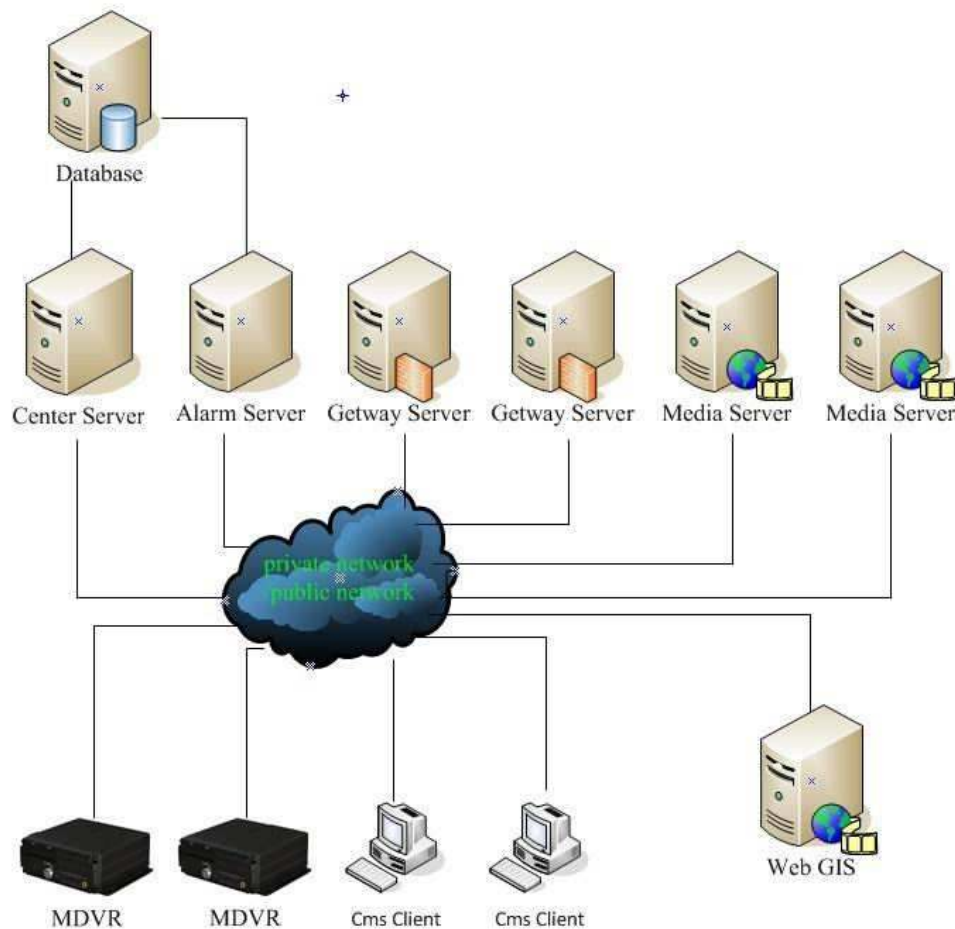
Alarm linkage: over speed alarm, outer critical alarm, video loss alarm, HD error alarm, electronic map mark alarm.

2 System structure

2.1 System structure



2.1 system structure



2.2 System structure

CMS includes Center Server 、 Gateway server、 Media Server、 Alarm Server and remote manage clients.。

Server includes a data-base server, a center server, an alarm server, some gateway server, some media server supply vehicle DVR and Clients with GPS, video, alarm, etc.

Data-base Server : Mainly used for stored server configuration data, alarm data, etc. Using **MSDE**(free version , for small projects , used for within 512 vehicle management of MDVR) , **SQL Server 2000** or higher (charged version ,for big projects)｡ In system ,Only center server and alarm server can interactive with data-base server, center server stores vehicle, users data in data-base, alarm server stores alarm data in data-base.

Center Server : Manage all system resources , include vehicle data、 User system and related server data, and verify user operation.

Gateway server : Offer connect device with server｡

Media Server : Offer media data transmit｡ Mainly including audio & video、 talk-back、 snapshot、 parameter configuration、 search and download data and retransmission｡

Alarm Server : receiving alarm data via device transmission , and disposal , and stored alarm data to data-base and transmit to clients CMS｡

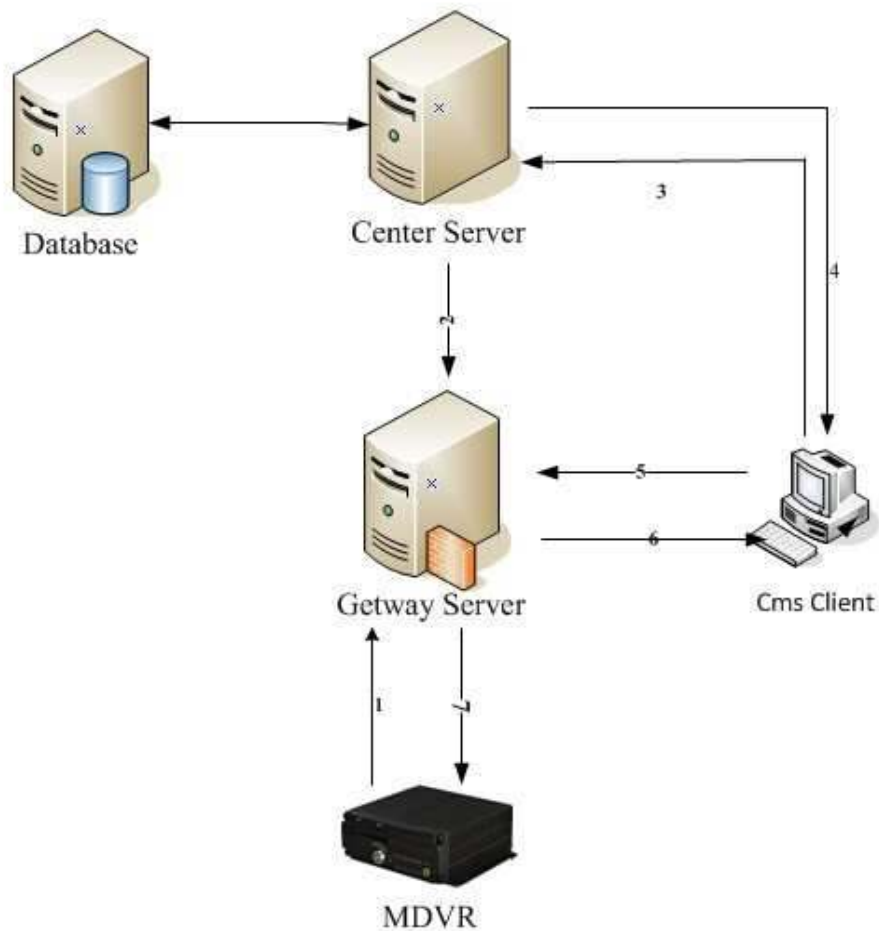
Management tool :Mainly do configuration on servers data, includes vehicle data, user data,

server data, etc.

Client CMS : Real-time video preview , electronic map vision , vehicle surveillance, Video searching、download playback , vehicle lines playback, real-time alarm data surveillance, etc.

2.2 Signaling login (Gateway server)

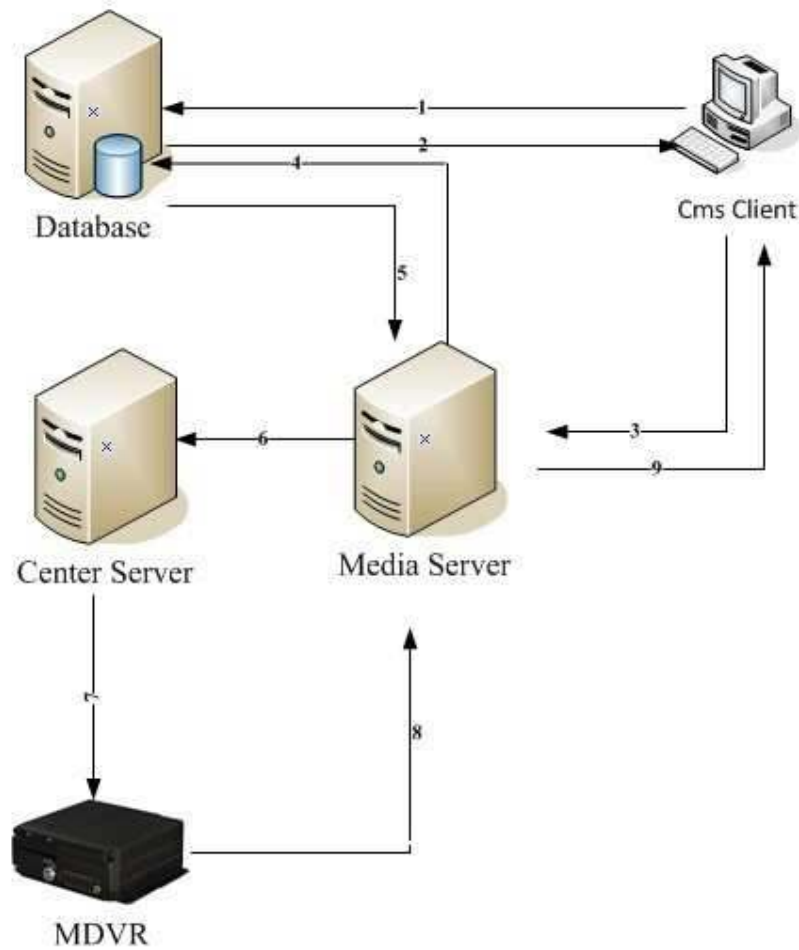
A gateway server can supply 1000 vehicle DVR with servers. If vehicle DVR device is larger than 1000, it support some more gateway server.



2.3 signaling login

2.3 Media Retransmission (media server)

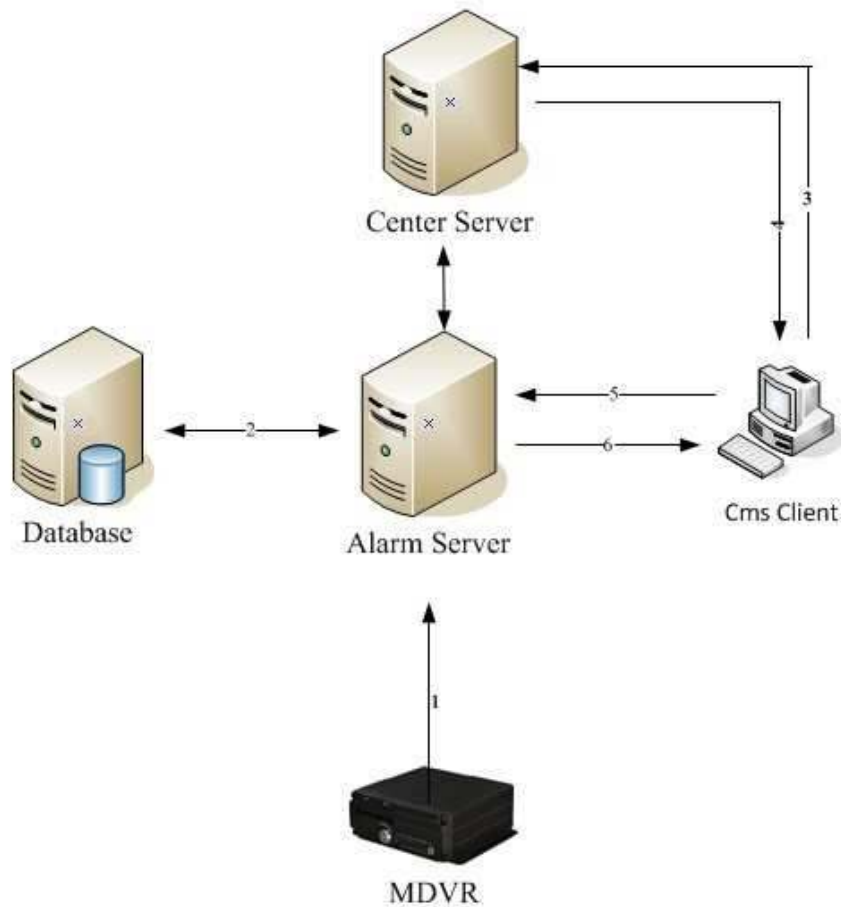
Every media server will support up to 256 vehicles DVR. It can add more if needed.



2.4 Media server

2.4 Alarm channel (alarm server)

So far, the system can just support single alarm server, every alarm server can supply 2000 vehicle DVR with service at the same time.



2.5 Alarm server

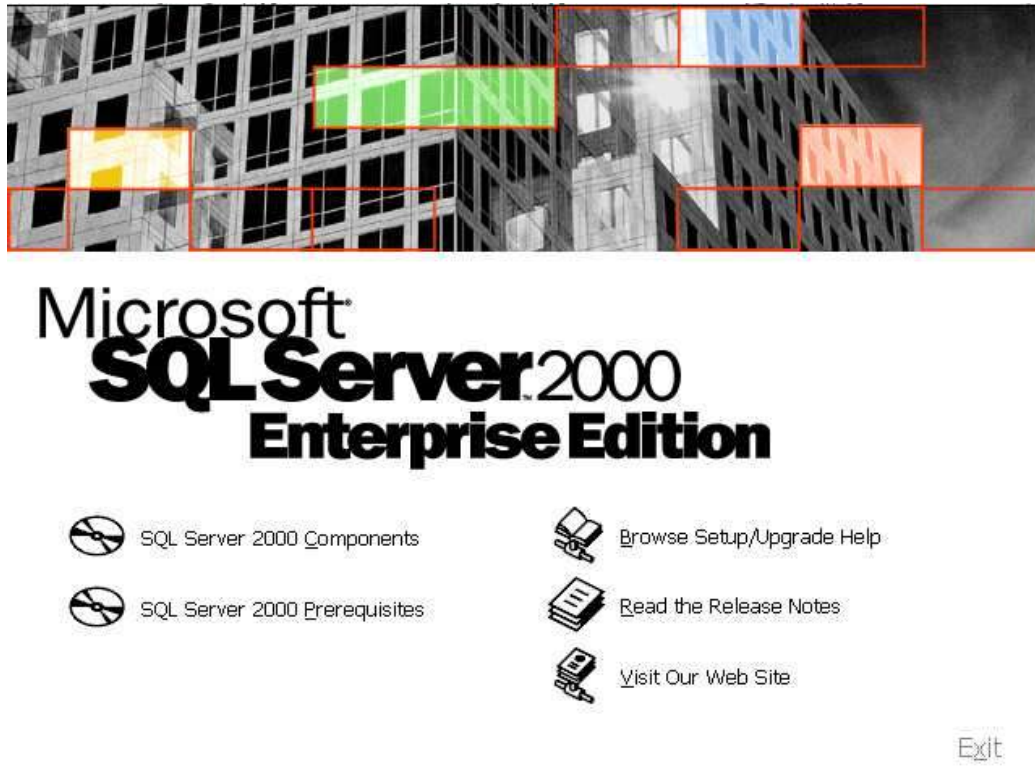
3 System Installation

3.1 Data-base installation

MSSQL installation (For big projects)

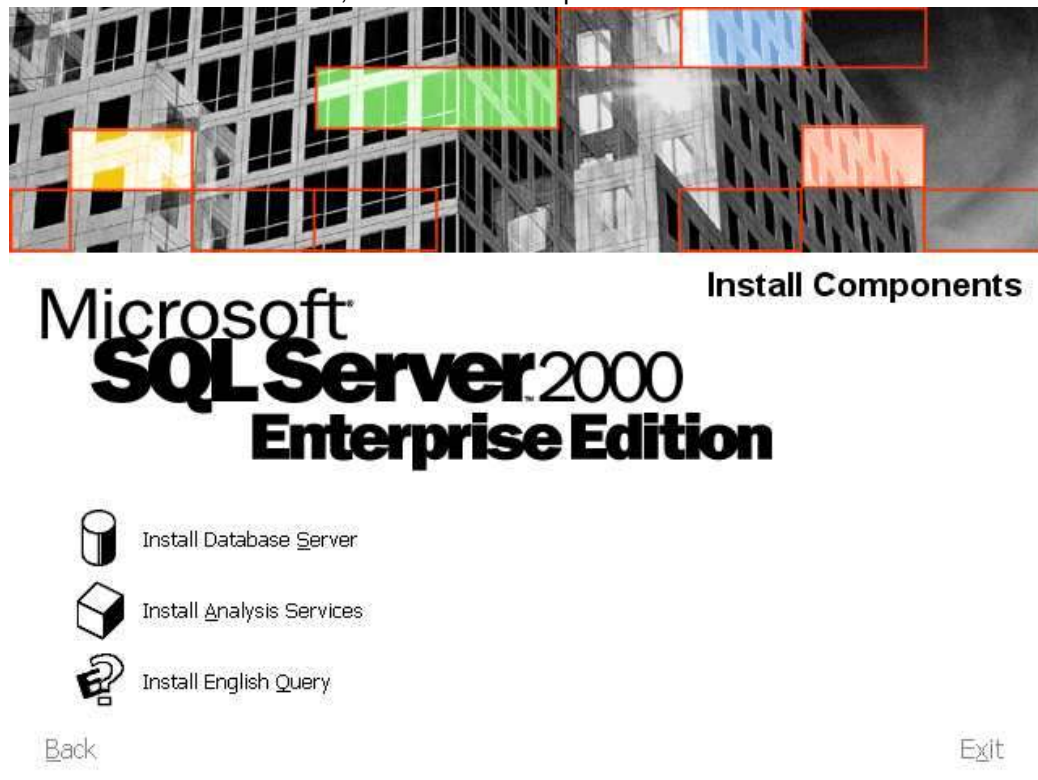
3.1.1 MSSQL installation (For big projects)

- 1 . Decompressed MSSQL and installation, double-click and run **AUTORUN.EXE** ,



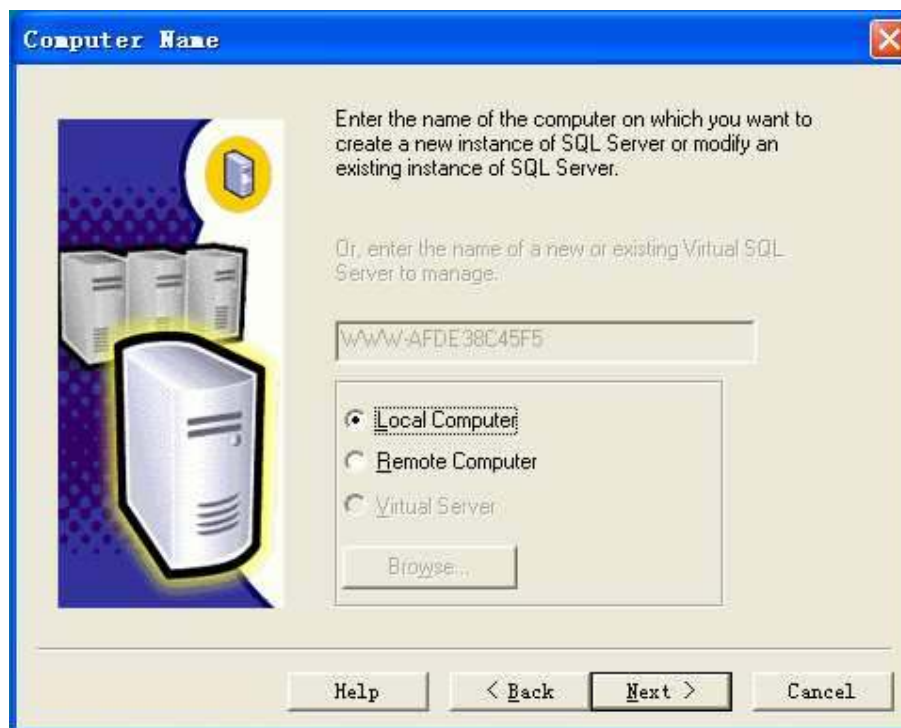
3.1 Installation main interface

- 2 . Select “ install Server 2000” , enter” Install Components”



3.2 Install Components

- 3 . Select “Install data-base server” , enter install guide“ welcome”
- 4 . Click“ Next” , enter as below:



3.3 PC name

5 . Click "Next"



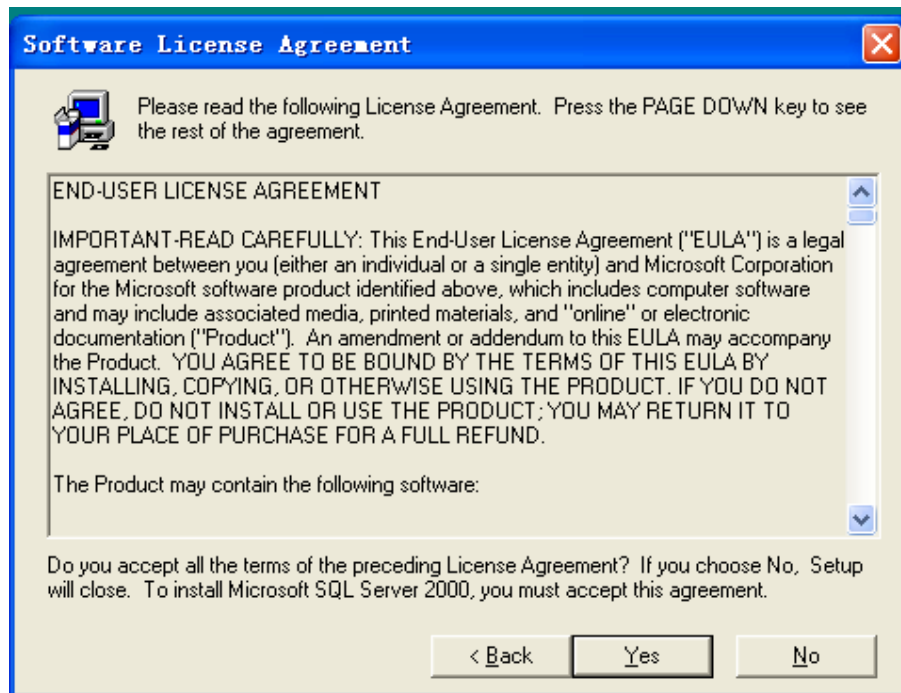
3.4 Installation Selection

6 . Click "Next" , enter User Information



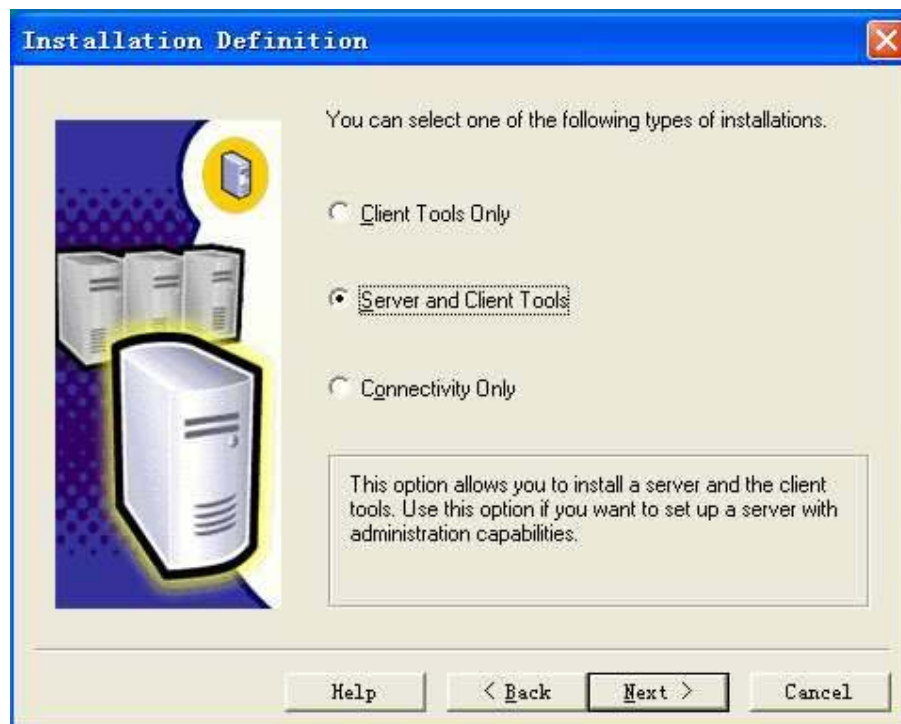
3.5 User Information

7 . Click "Next" , enter " software License Agreement"



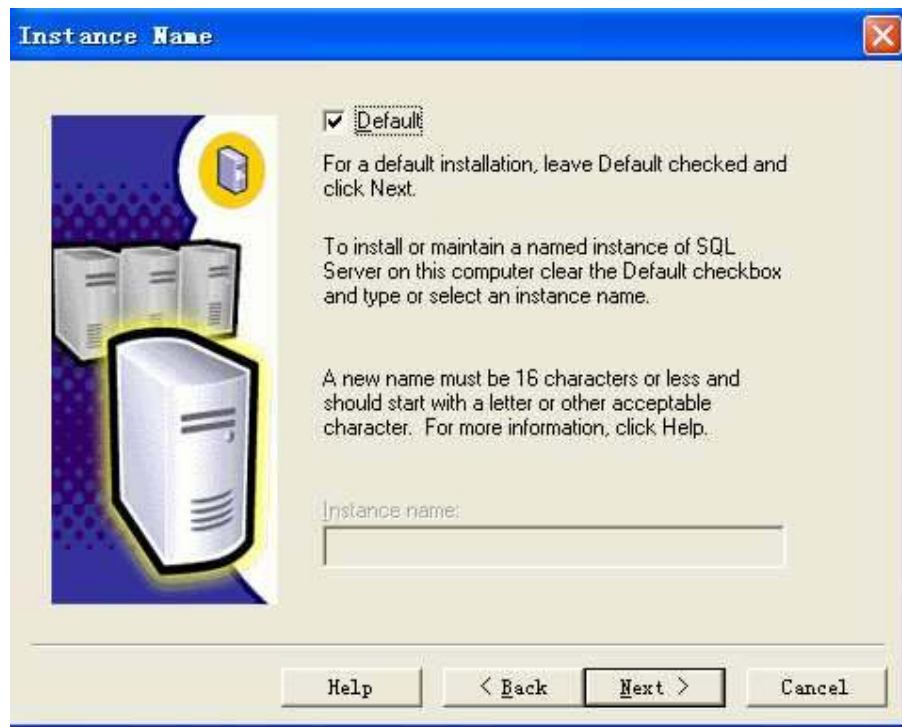
3.6 software License Agreement

8 . Click " Yes" , Enter " Installation Definition"



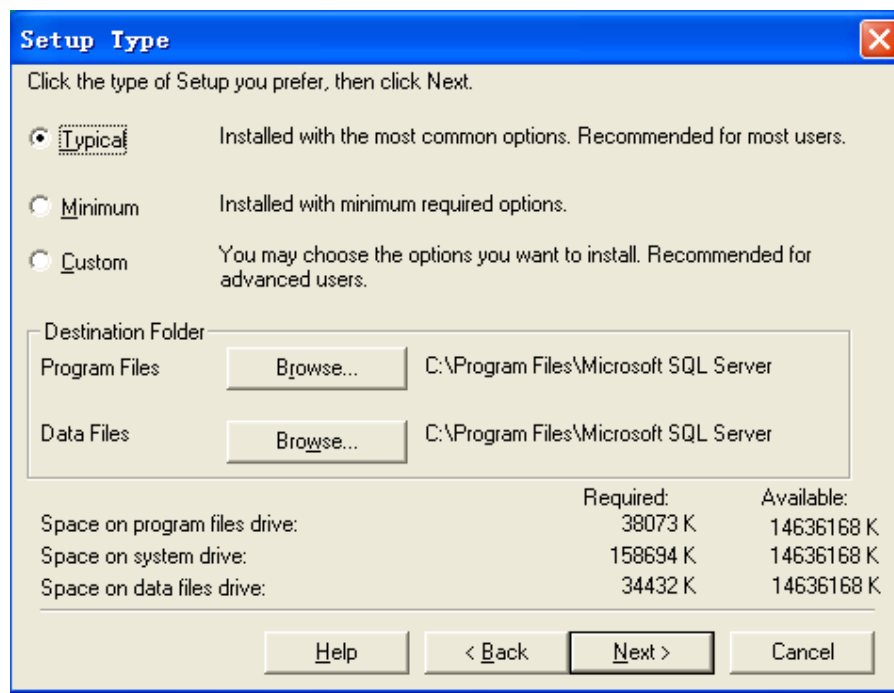
3.7 Installation Definition

9 . Click " Next" , enter " Instance Name"



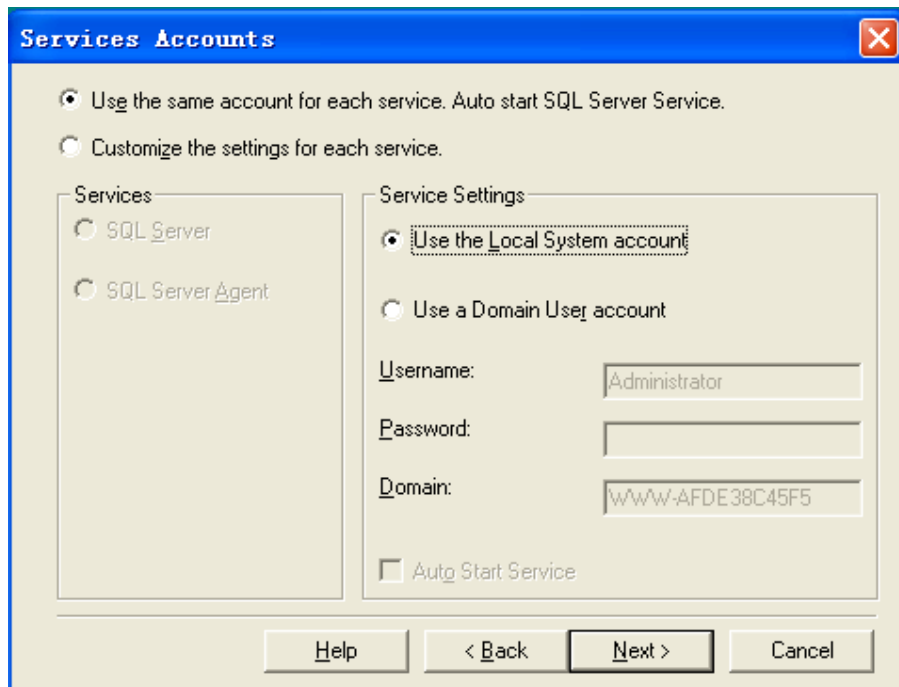
3.8 Instance Name

10. Click “ Next ” , enter “ Setup Type ”



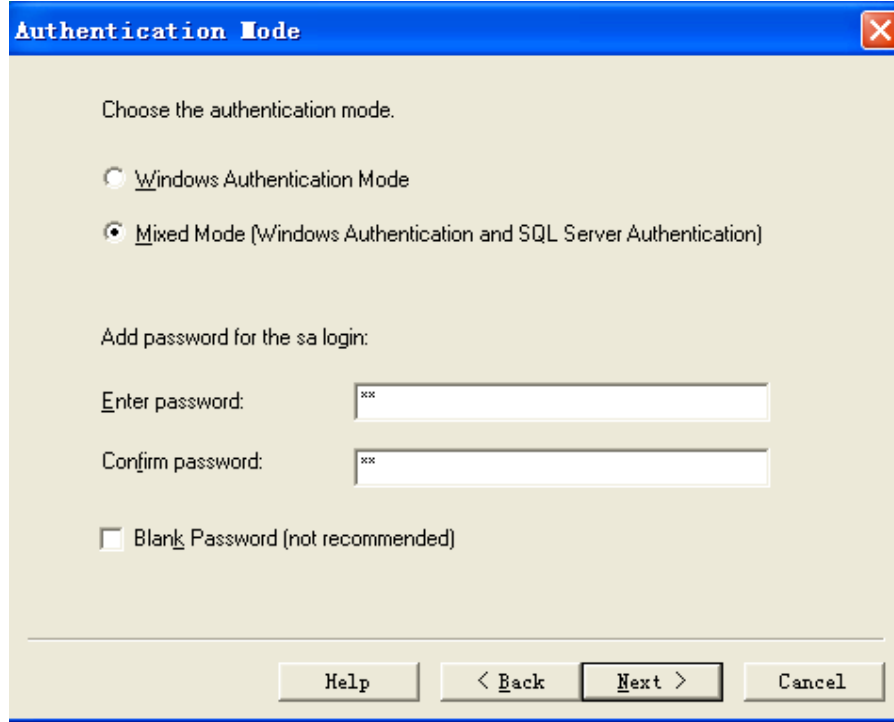
3.9 Setup Type

11. Click “ Next ” , enter “ Services Accounts ” , select “ Use the local system account ”



3.10 Services Accounts

12. Click “Next”, enter “Authentication mode”, select “Mixed mode”. Enter password “sa”



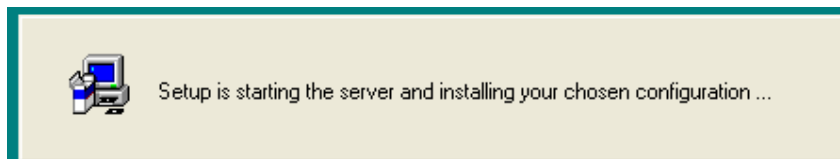
3.11 Authentication mode

13. Click “Next”, enter “Start Copying Files”



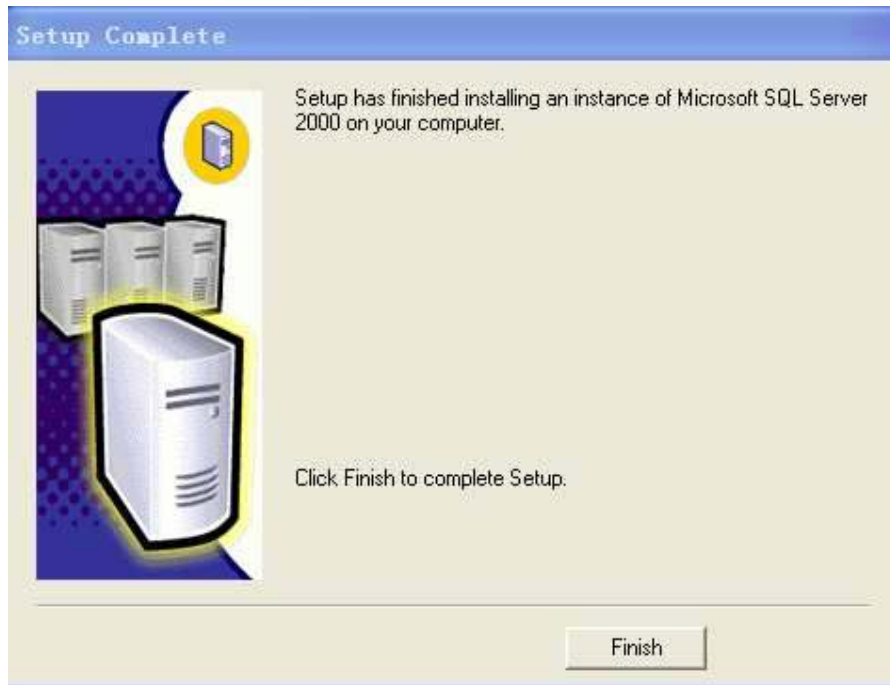
3.12 Start Copying File

14. Click “ Next ” , start install component



3.13 install component

15. Setup Complete



3.14 Setup Complete

3.1.2 MSDE installations (For small projects)

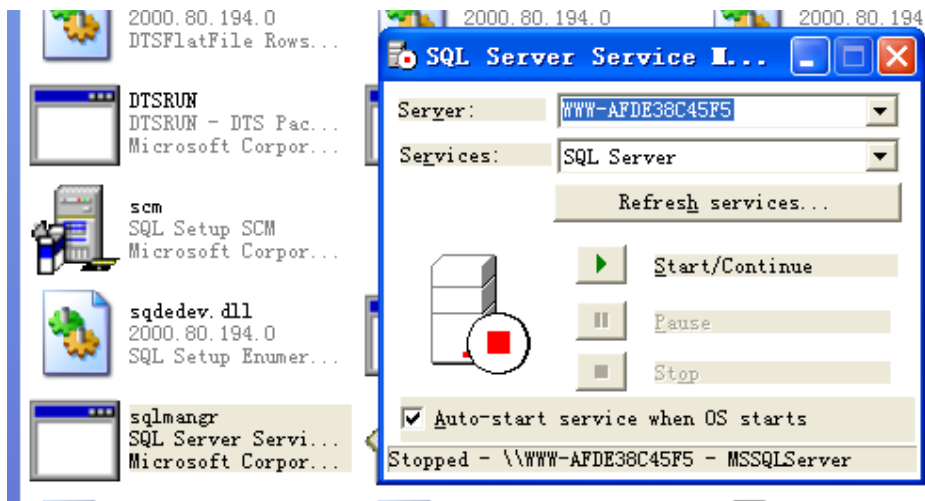
1. Double click and decompress setup.exe file of **MSDE** , start installation



3.15 Decompress installation

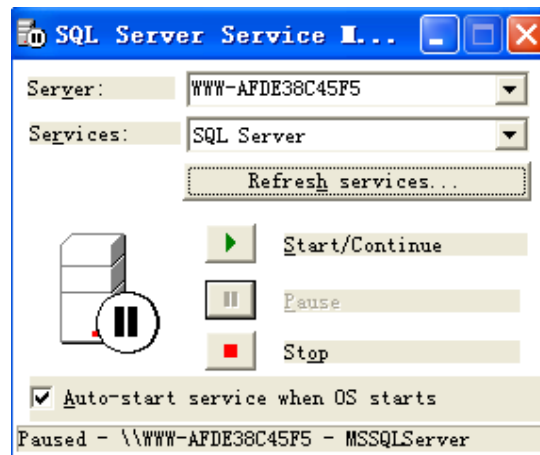
MSDE default install in C :

2. Double click C:\Program Files\Microsoft SQL server\80\Tools\Binn sqlmangr.exe , open data-base serve management

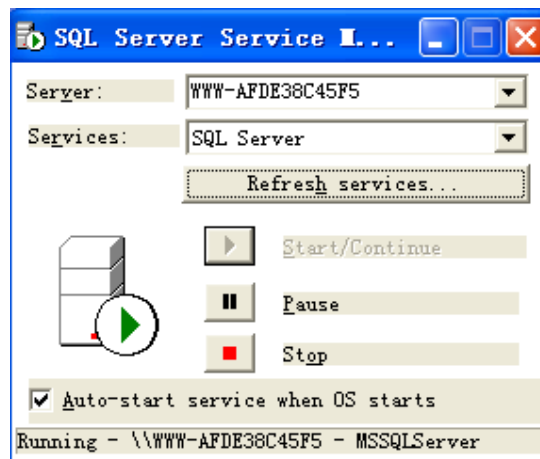


3.16 Open Server

3. Click “start/continue” open data-base server



3.17 Server Service



3.18 Open serve

3.2 CMS server installation

1. Double “ server.exe ” , enter “ Select the install language ”



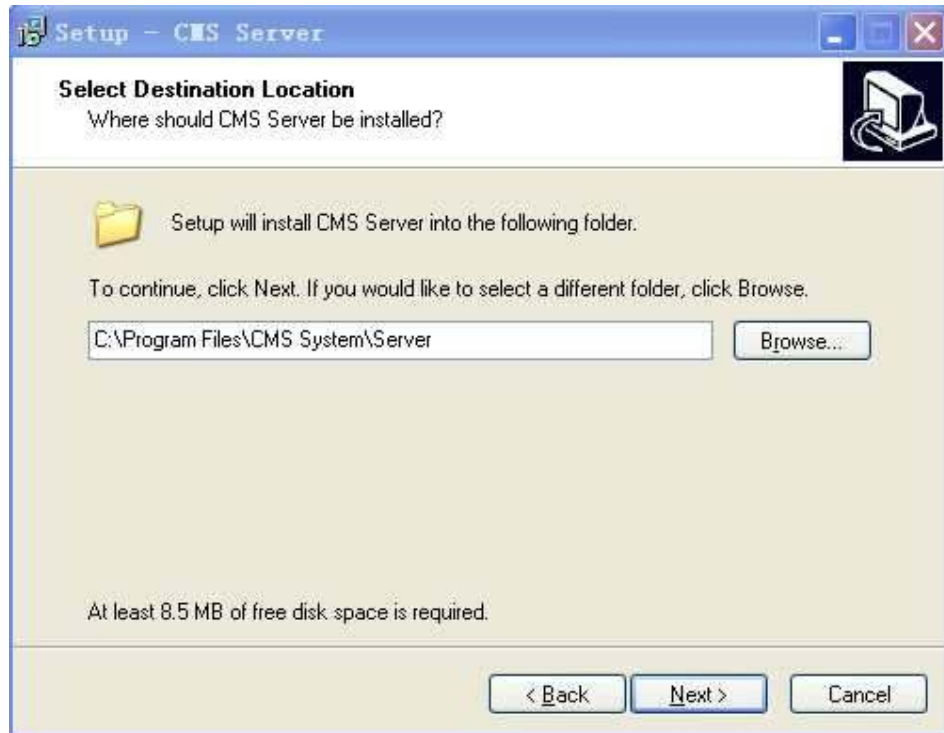
3.19 Select the install language

2. Select install language “ Chinese ” or “ English ” , click “ yes ” , enter “ installation guide ”



3.20 Alarm channel

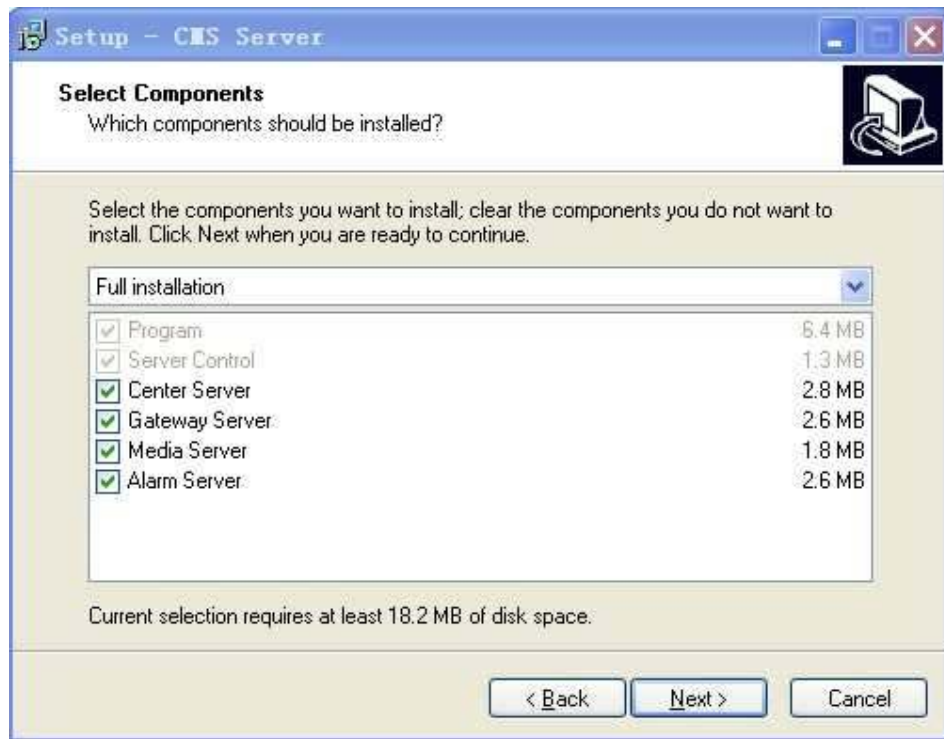
3. Click “Next”, enter “Select Destination Location”



3.21 Installation Browse

4. Click “Next”, enter “Select component”, include 3 types of installations “Full installation”, “Sample installation”, “Defined installation”

Take “Full installation” for example, default installation include “Center”, “Gateway Server”, “Media Server”, “Alarm Server”, “Manger Tool”, can also cancel no need server.



3.22 Select component

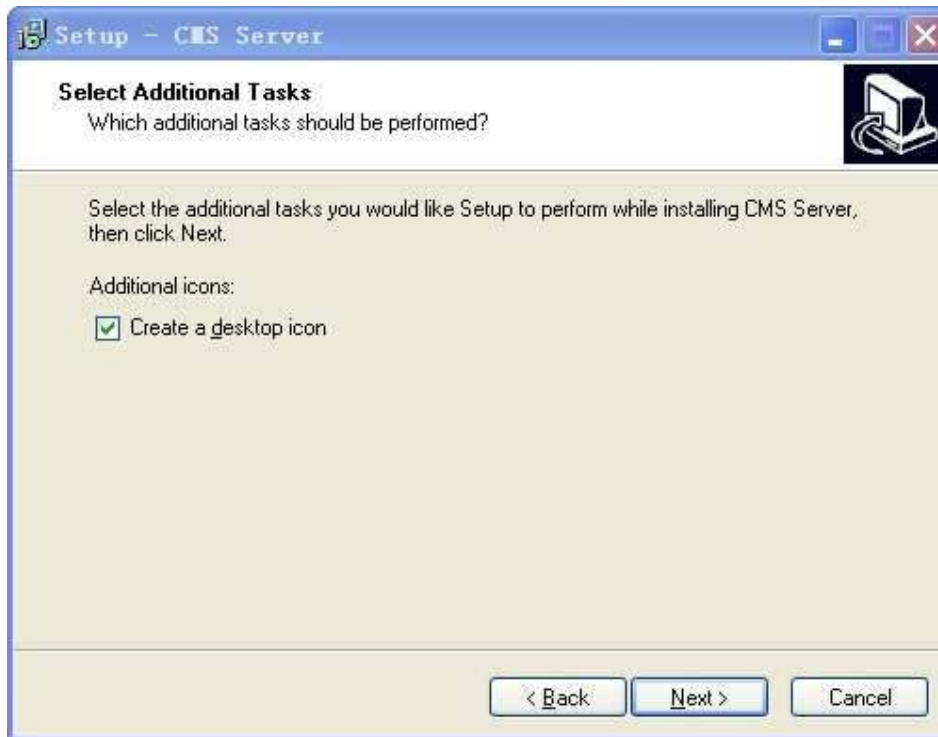
5. Click “ Next ” , enter “ Select start Menu Folder ”

Select shortcut for storage



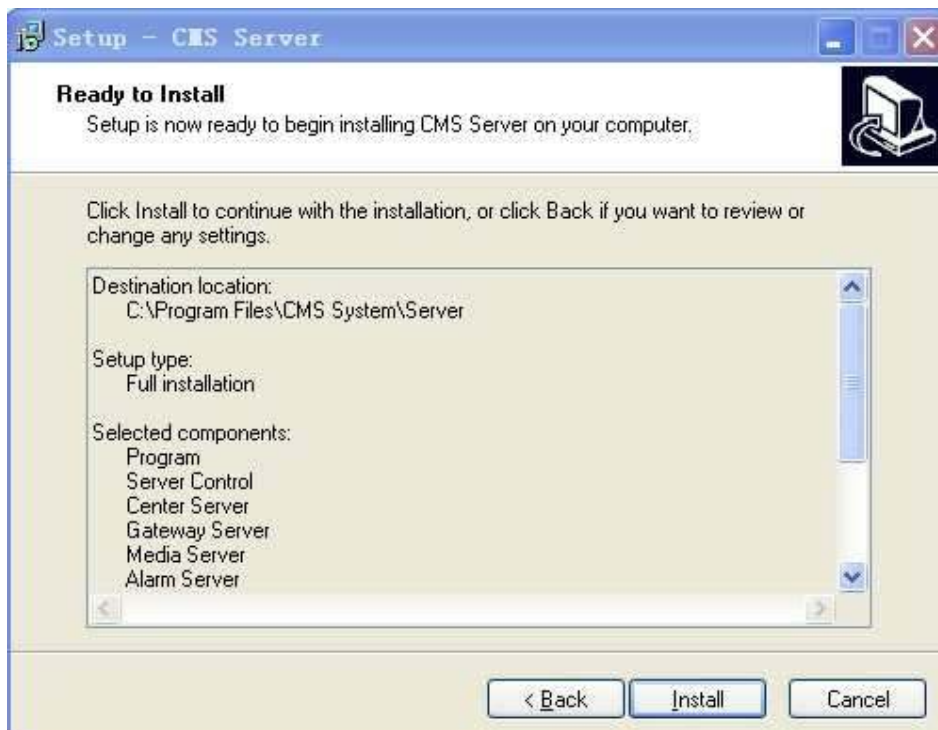
3.23 Select start Menu Folder

6. Click “Next”, enter “Select Additional Tasks”, default “Create a desktop icon”, cancel if no need ☒



3.24 Select Additional Tasks

7. Click “Next” enter “Ready to install”



3.25 Ready to install

8. Click “Installation” to launch CMS server.



3.26 launch CMS server.

9. Find startup in the installed software after launch.



3.27 startup installed software

3.3 CMS Client installation

1. Double-click "client.exe" file, enter "Select installing using language"



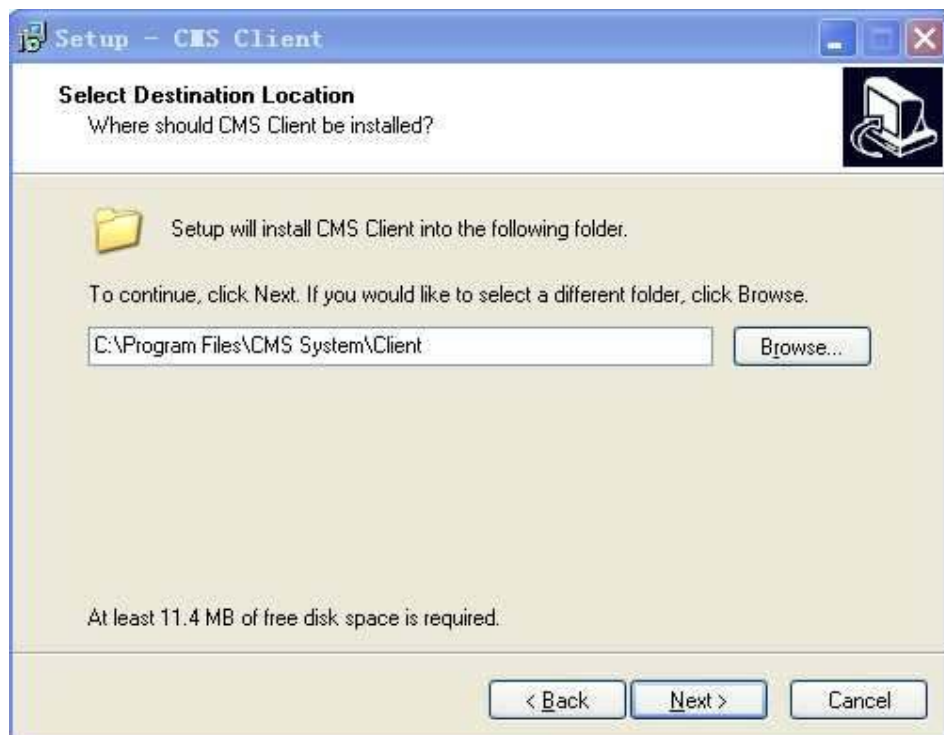
3.28 Select installing using language

2. Select language, "Chinese" or "English", click "Yes", enter installing guide



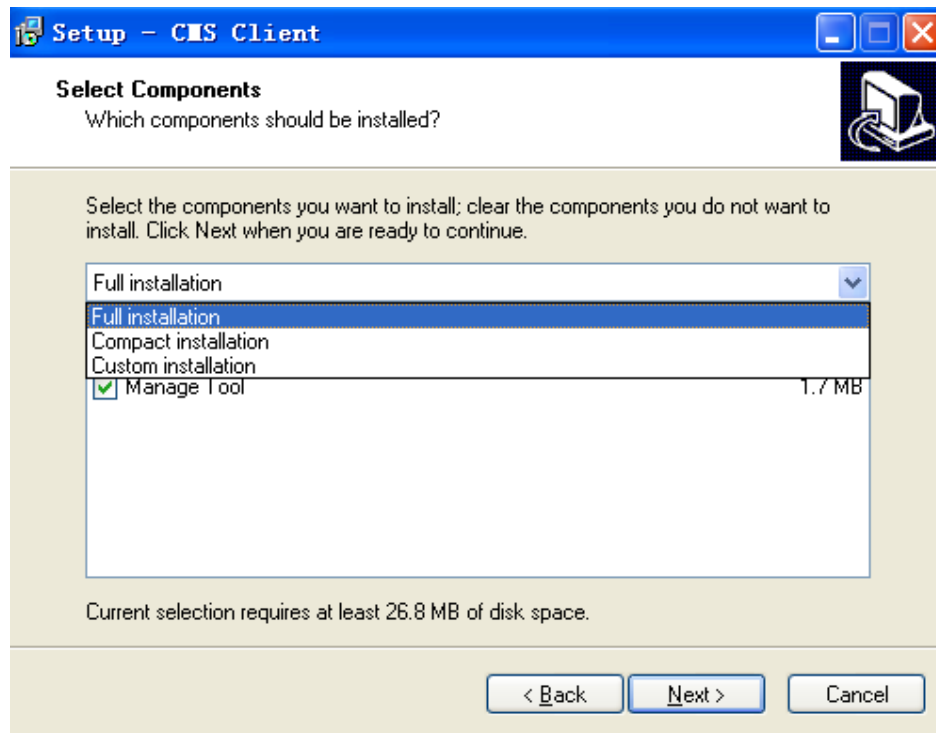
3.29 Installation Guide

3. Click “Next”, enter install browse



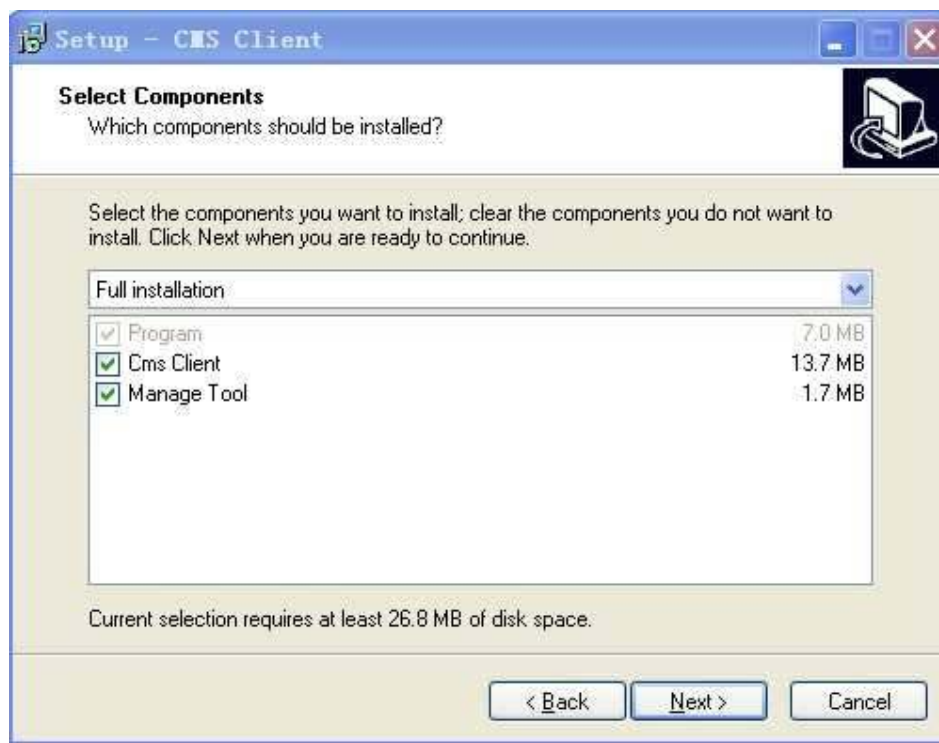
3.30 Select destination Location

4. Click “Next”, enter “Select Components”



3.31 Select Components

5. Select installed components , Such as“ Full installation” , click“ Next”



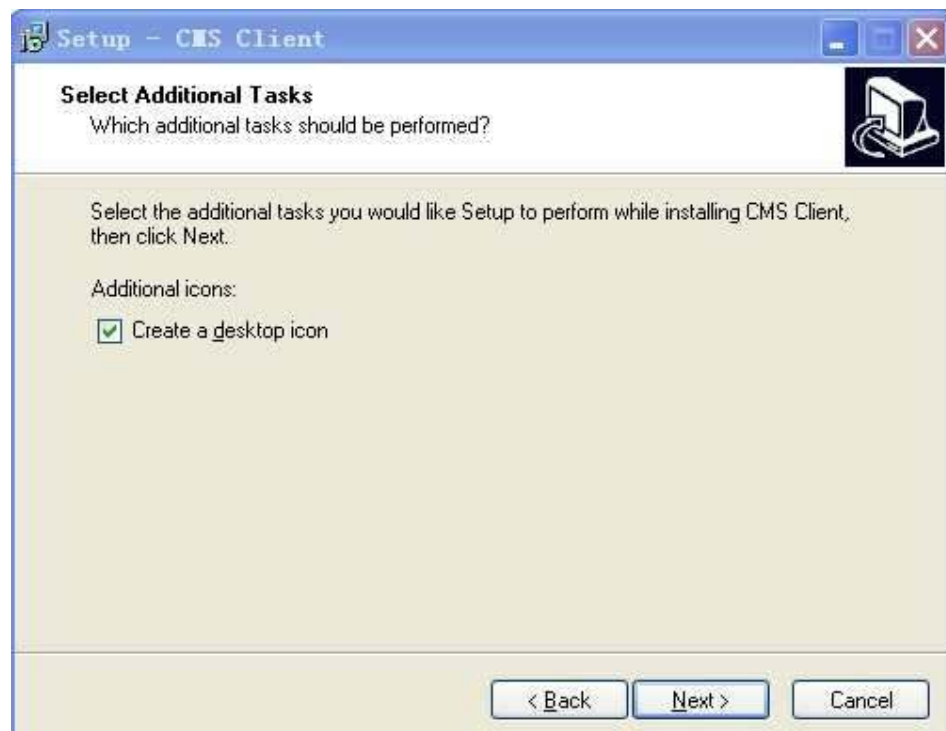
3.32 Full installation

6. Click“ Next” , enter“ Select Start Menu Folder”



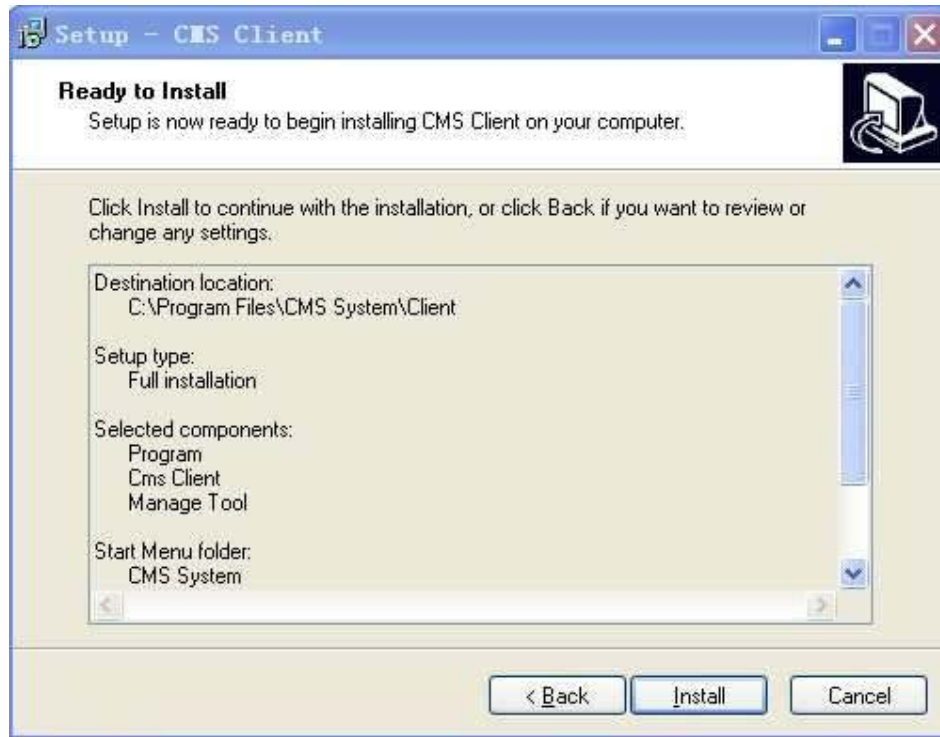
3.33 Select Start Menu Folder

7. Click “ Next ” , enter “ Select Additional Tasks ” , default Create a desktop icon , if you don’t want, pls don’t mark



3.34 Select Additional Tasks

8. Click “Next”, enter “Ready to install”



3.35 Ready to install

9. Click “install” launch CMS client



3.36 installed completed

10. Startup the installed software.



3.37 software startup


4 Server configuration

When installing CMS servers, can flexible deploy according to the whole system capacity. If the vehicles are within 128, then can put all of the servers into one PC, if vehicles are more than 128, can do distributed deployment on servers.

Server configuration needs to use CMS system management (Manage Tool procedure), define the server's resources under system, and the servers' related configuration information. Center server can adjust resource according to defined server information.

Moreover , also need to do configuration on each server's system parameter, and connect to CMS system。

4.1 Centre server configuration

Right Click “ Preferences” in the center server of system tray in taskbar.



4.1 Center server menu

4.2 Center server parameter settings

Database address : (local) i.e. the database server of using PC , If server 如果 and database installed in the same PC, then can use(local) , Or else, fill out IP of database server.

User name : User accessed database server , i.e. Database server users, center server connect with database server via user name.

Password : password for access database server.

Client access port :default 8500 , Pls do not modify the ID. Center server prompt service to client and other servers via this port.

4.2 Gateway server configuration

Double click“ Manage Tool” , Pop“ Login” .



4.3 Login

Input user name(default: admin), NO Password, and center server IP ,Click“ Login” ,enter CMS system management.

4.2.1 Gateway server management

Run **CMS system manage tool**(Manage Tool),Can do related edit, add, modify, delete, etc on gateway server.

gateway server must be visible to vehicle DVR, or else, vehicle DVR can not connect to CMS system.

Client access address, client access port :Clients inquiry the related server from gateway server via IP and Port.

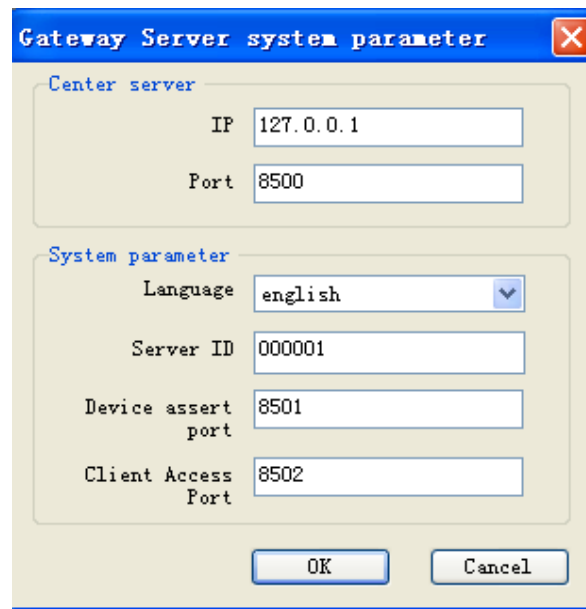
4.2.2 Gateway server parameter configuration

Gateway server communicates with center server, prompt DVR device registering service, getting the inquiries of the stream media server via clients.

Right Click“ Preferences” in the gateway server of system tray in taskbar.



4.6 Gateway server menu

A screenshot of the 'Gateway Server system parameter' configuration window. The window has a blue title bar and a yellow background. It is divided into two sections: 'Center server' and 'System parameter'. In the 'Center server' section, there are two text boxes: 'IP' with the value '127.0.0.1' and 'Port' with the value '8500'. In the 'System parameter' section, there are four text boxes: 'Language' with a dropdown menu showing 'english', 'Server ID' with the value '000001', 'Device assert port' with the value '8501', and 'Client Access Port' with the value '8502'. At the bottom of the window are 'OK' and 'Cancel' buttons.

4.7Gateway server parameter configuration

Center server parameter

IP: Centre server IP. 127.0.0.1 i.e. loopback address, If Gateway server and center server connect with the same PC on running, then can setup the IP of 127.0.0.1.

Port : Center server 's port , default :8500.

System parameter

Server ID : Unique ID for each gateway server. System can deploy one or more gateway server. Center server can classify gateway server via the ID. The ID must be same with gateway

4.8 stream media server management

Server name	local
Server ID	000001
Device access address	127.0.0.1
Device Access port	81
Client Access address	127.0.0.1
Storage server access address	127.0.0.1
Client and storage server access port	8504

4.9 stream media server parameter

Server name : local

Server ID : Unique ID for each stream media server, the ID must be the same with stream media server procedure setting, for more, pls check 4.3.2.

Device access add. & port: Vehicle DVR can establish media link with stream 可 media server via the IP, port. The address data have to be accessed by DVR, i.e. that the Stream media server must be visible to DVR. Or else, DVR device can not transmit media data to clients CMS.

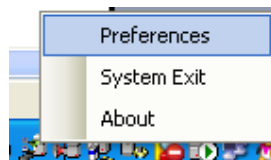
Client access add port : Client can ask gateway server the related service via this IP port.

Storage server access port : Not available now.

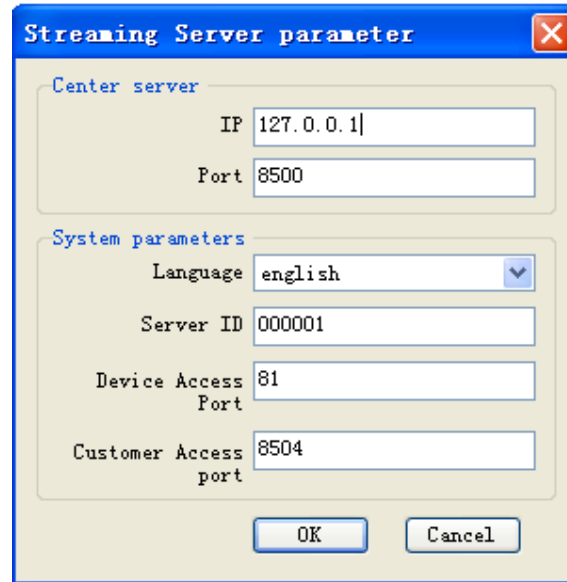
4.3.2 Streaming server configuration

Stream media server communicate with center server, offer clients media transmit server, offer DVR device prompt media registered service.

Right Click“ Preferences” in the Stream media server of system tray in taskbar.



4.10 stream server



The dialog box titled "Streaming Server parameter" contains two sections. The "Center server" section has fields for "IP" (127.0.0.1) and "Port" (8500). The "System parameters" section has a "Language" dropdown (english), a "Server ID" field (000001), a "Device Access Port" field (81), and a "Customer Access port" field (8504). At the bottom are "OK" and "Cancel" buttons.

4.11 stream media parameter settings

Center server parameter

IP: center server's IP。 127.0.0.1 i.e. loopback address, If stream server and center server connect with the same PC on running, then can setup the IP of 127.0.0.1。

Port : Center server 's port , default :8500。

System parameter

Server ID : Unique ID for each stream media server。 System can deploy one or more stream media server. Center server can classify stream media server via the ID. The ID must be same with stream media server ID in manage tool.

Device access port : Supply DVR with media registering service via this port, default : 81、 advised not to modify.

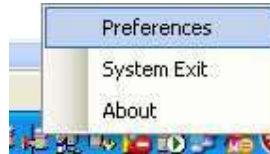
Client access port : Supply clients with media transmit via this port, default : 8504、 advised not to modify.

4.4 Alarm server configuration

4.4.1 Alarm server management

Run **CMS system management** (Manage Tool procedure) , under the alarm label , do edit operating, add, modify, delete, etc.

Click “ Preference” in
taskbar.



4.14 Alarm server menu

4.15 Alarm server parameters configuration

Centre server parameter

IP: Center server IP. 127.0.0.1. If alarm server and center server work on the same computer, then IP can be set 127.0.0.1.

Port : center server port, 8500.

Date-base parameter

Database add. : (local) show the database server on this PC, if server and database install on the same PC, then can use local.

User name : user name for login database server

Password : password for login database server

System parameter

Server ID : Unique ID for each media server.....

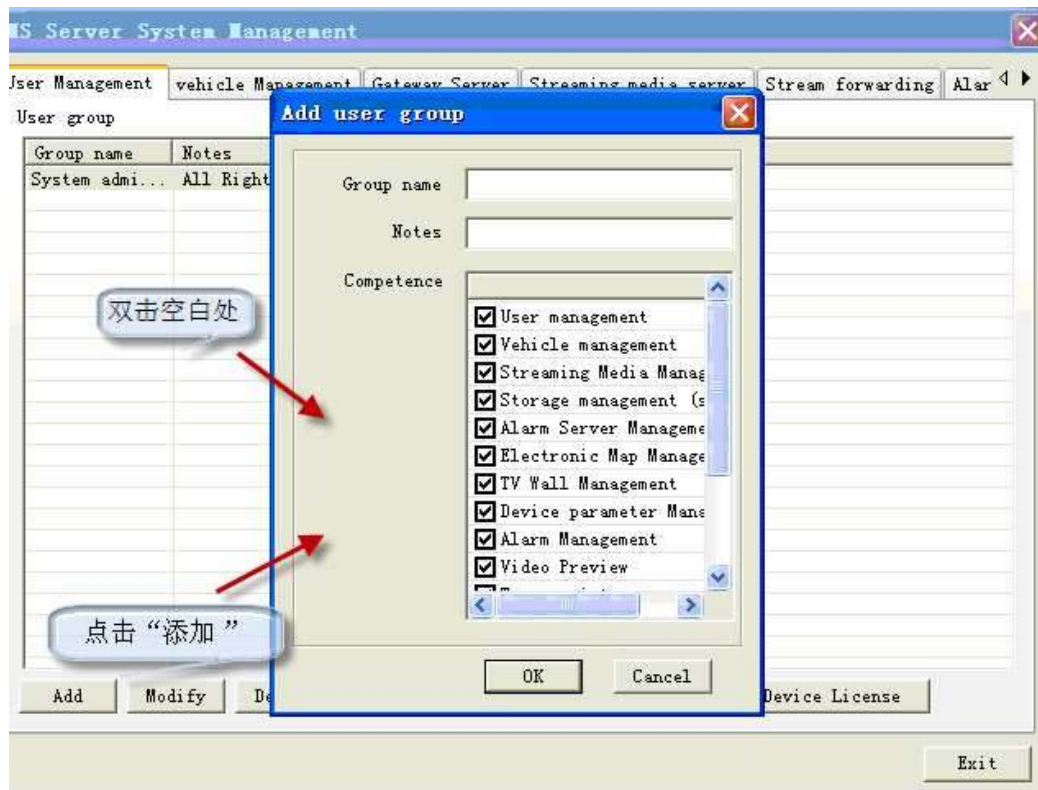
Device access port: Supply vehicle DVR with receiving alarm data via the port。 Default: 8505、advise not to revised。

Client access port: Supply alarm data to client via the port, default 8506, advised not to revised.

4.5 System user management

Add user group

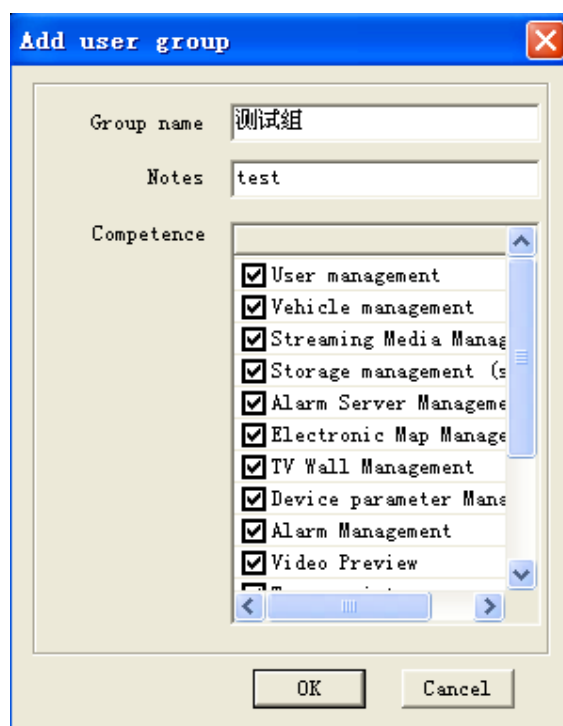
Click “add user” or double-click blank, pop “add group”



4.16 Add user group

Filling-in “group

name” , “notes” (optional) , competence , Click “OK” ,



Add user group

Group name: 测试组

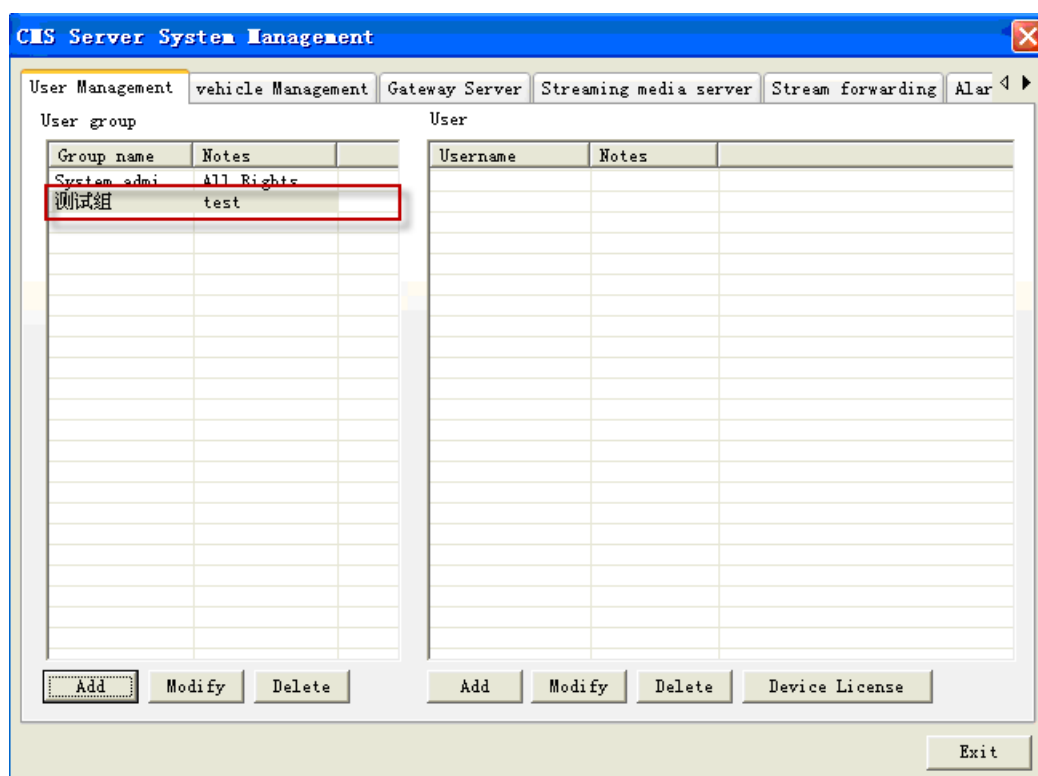
Notes: test

Competence:

- ☒ User management
- ☒ Vehicle management
- ☒ Streaming Media Manag
- ☒ Storage management (s
- ☒ Alarm Server Manageme
- ☒ Electronic Map Manage
- ☒ TV Wall Management
- ☒ Device parameter Mana
- ☒ Alarm Management
- ☒ Video Preview

OK Cancel

4.17 Add user data



CMS Server System Management

User Management vehicle Management Gateway Server Streaming media server Stream forwarding Alar

User group

Group name	Notes
System admin	All Rights
测试组	test

User

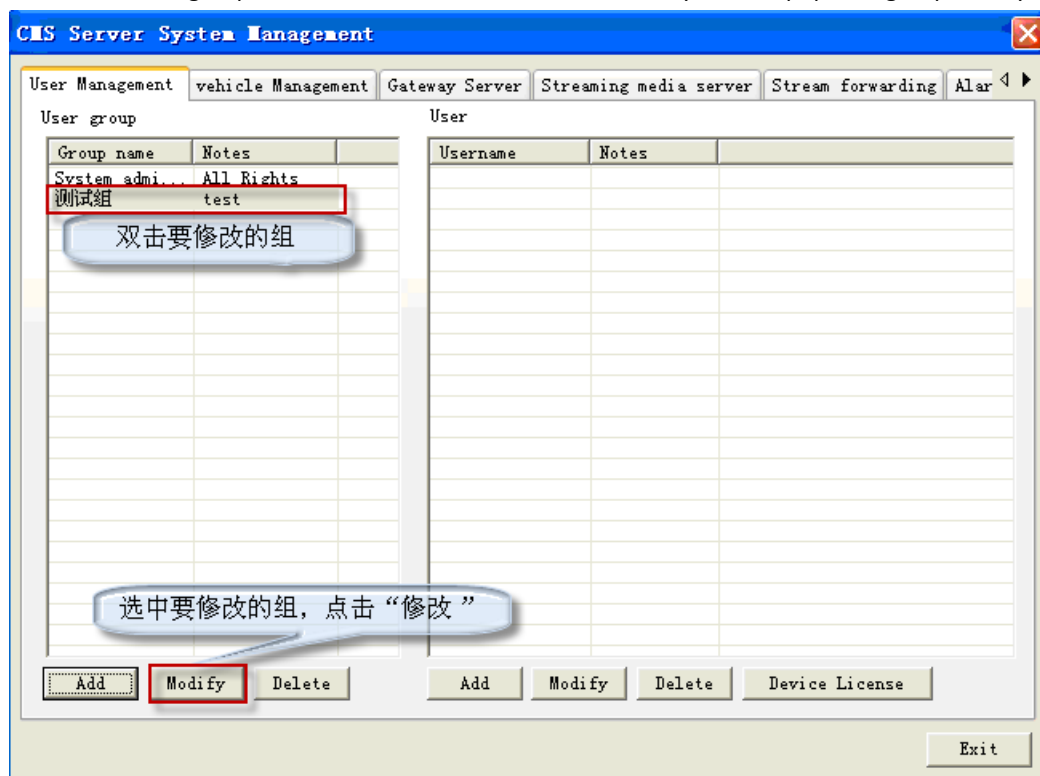
Username	Notes
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Add Modify Delete Add Modify Delete Device License Exit

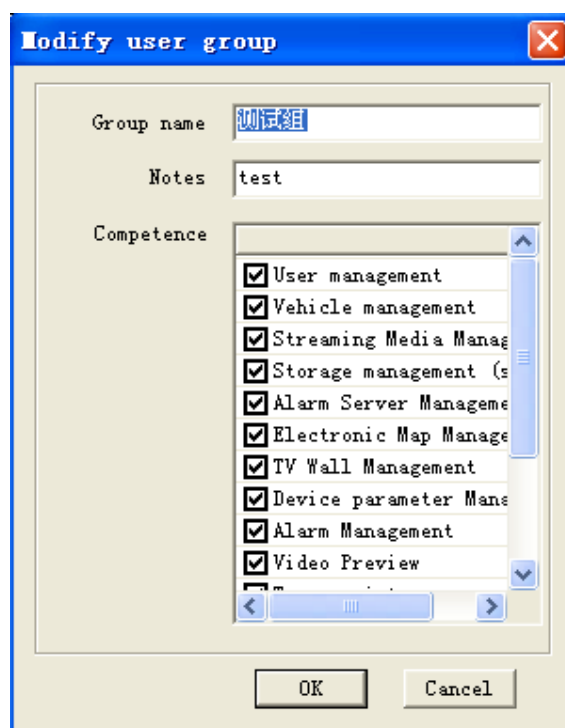
4.18 add group

Modify user group

Double-click the group needed modified , or Click“ modify” , pop user group modify



4.19 modify user group



4.20 modify user group data

Modify the related content , Click“ OK” complete,

Modify user group

Group name: 测试组111

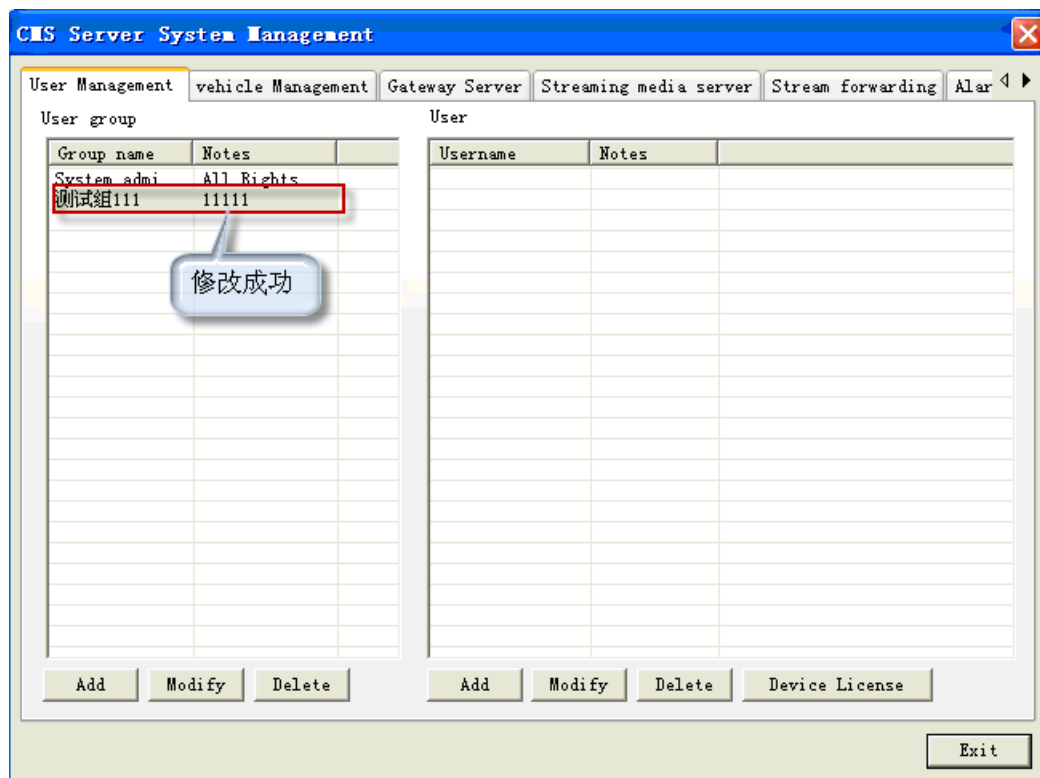
Notes: 11111

Competence:

- ☐ User management
- ☐ Vehicle management
- ☐ Streaming Media Manag
- ☐ Storage management (s
- ☐ Alarm Server Manageme
- ☐ Electronic Map Manage
- ☐ TV Wall Management
- ☐ Device parameter Mane
- ☐ Alarm Management
- ☐ Video Preview

OK Cancel

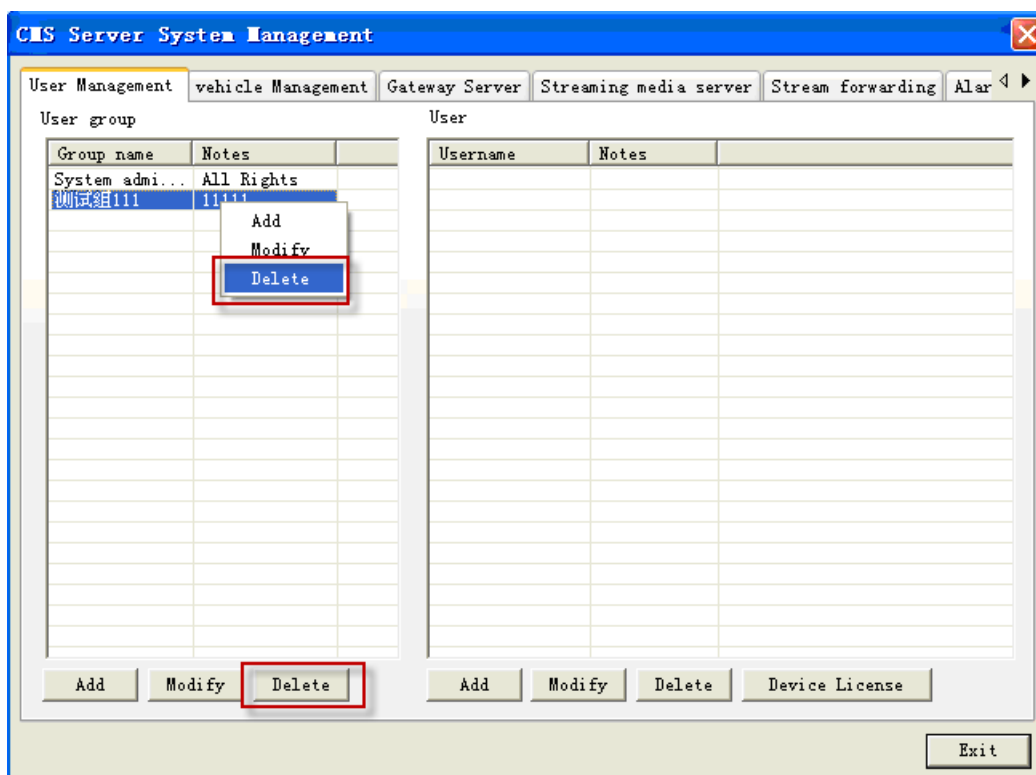
4.21 Test info



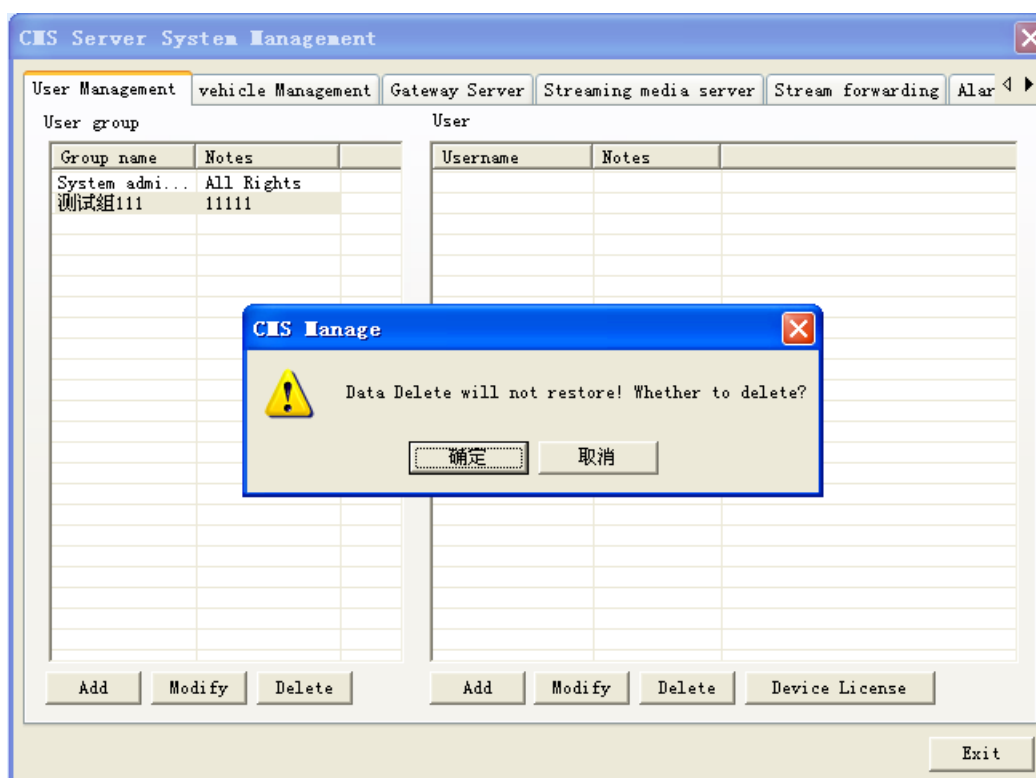
4.22 Modify user group name

Delete users group

Select the deleted user group, Click" delete".



4.23 Delete user group



4.24 confirm delete

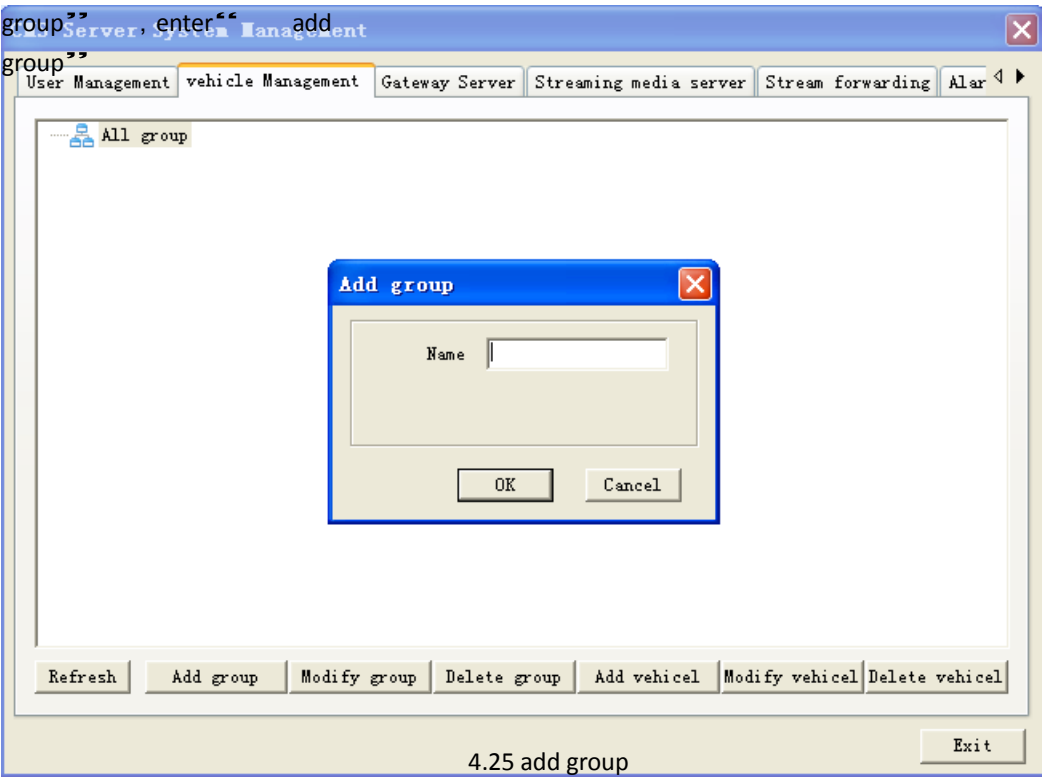
Click“ OK” , deleted
successful

User add, modify, delete,etc.

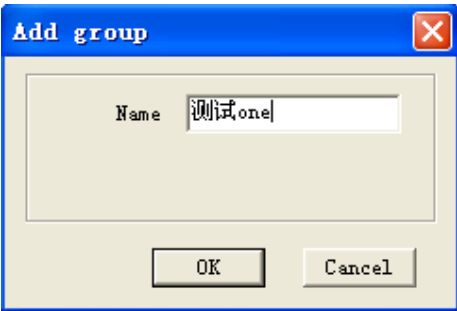
4.6 Vehicle data

Add group

Click“ add
group” , enter“ add
group”

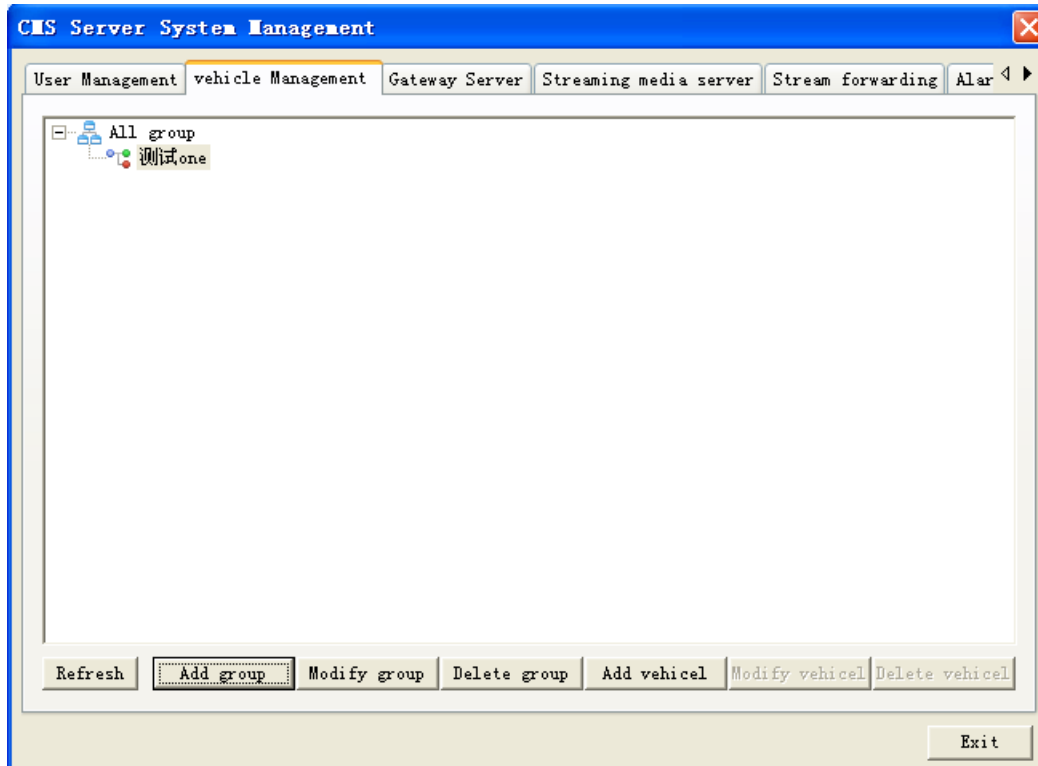


Input group
name , Click“ OK”



4.26 Input group name

Succeed added



4.27 add group

Add vehicle

Select the group need to add, Click “ add vehicle”

Enter “ add vehicle”

Add vehicle ✕

Vehicle name

Vehicle code

Device User

User password

IO Input

IO Output

Channel

Channel	Vehicle name	
1	channel1	
2	channel2	
3	channel3	
4	channel4	

4.28 add group data

Input related info

Add vehicle

Vehicle name: 东风雪铁龙

Vehicle code: 粤B12345

Device User: admin

User password: 123456

IO Input: 1

IO Output: 1

Channel: 4

Channel	Vehicle name
1	channel1
2	channel2
3	channel3
4	channel4

OK Cancel

4.29 input vehicle data

Click “Exit”

CMS Server System Management

User Management vehicle Management Gateway Server Streaming media server Stream forwarding Alarm

All group

测试one

东风雪铁龙

channel1

channel2

channel3

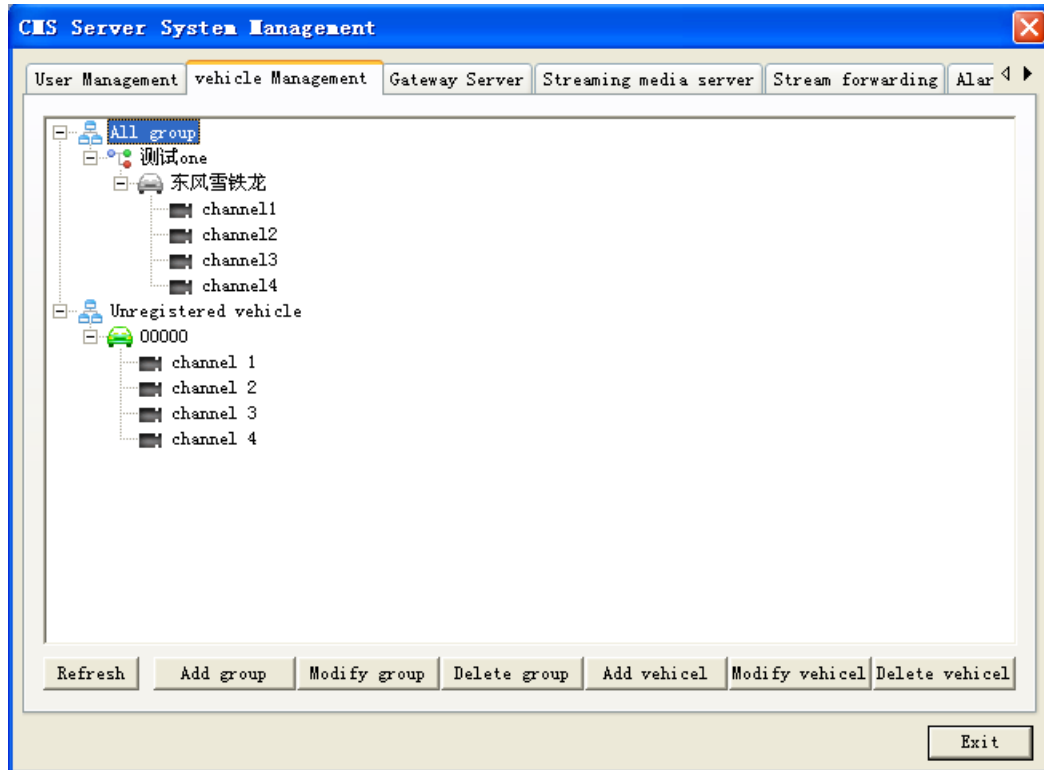
channel4

Refresh Add group Modify group Delete group Add vehicel Modify vehicel Delete vehicel

Exit

4.30 add vehicle

Enter vehicle management , the vehicle is in the group when i.e. it's registered, otherwise, unregistered.



4.31 Vehicle register

4.7 Sever control software

Mainly do surveillance on server conditions

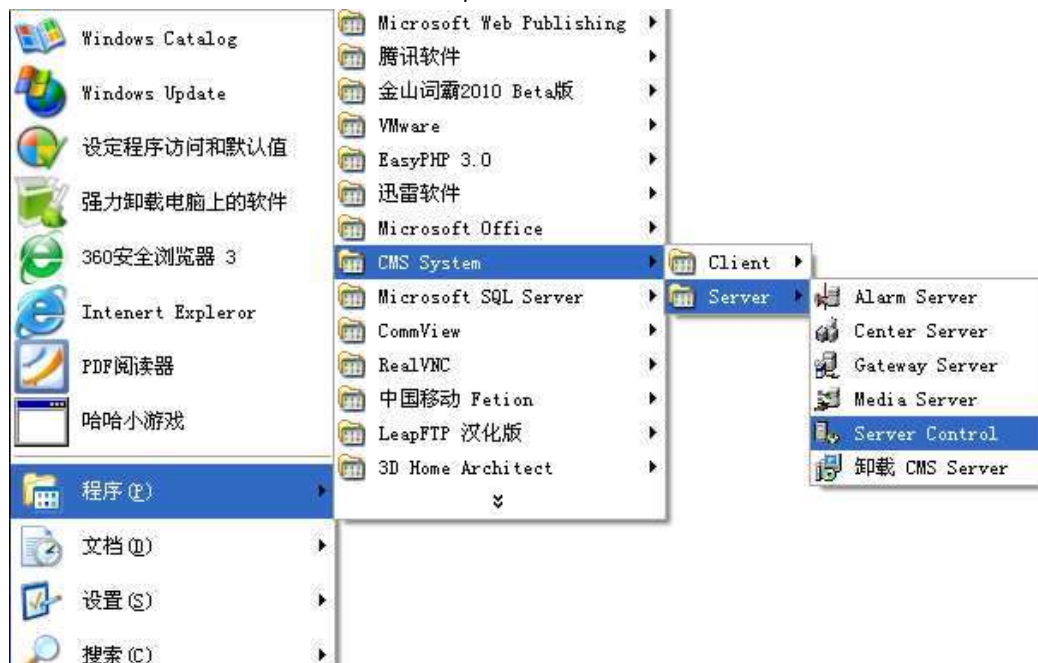
Startup server : control software will run automatic after startup, users can use this software to startup server procedure.

Surveillance condition : show the running condition, and running time.

Guarding : if server don't update info within 60s, the procedure will reboot and confirm the servers 7*24h continuous working.

Server parameter configuration : Adjust server parameters configuration via sending message to running server

1. Click “Server Control” in the procedure



4.32 Procedure startup

2. For the first time installation, it will show pop create database, non-existent, create database or not, Click “OK”, create it success.

3. And start center server, gateway server, media server, alarm server ,pop “CMS server control”

5 Fast system configuration

The using environment of fast system configuration is installing all of the servers to the same computer.

5.1 Starting work

Consult system 3 installation, install CMS system.

5.2 Startup data-base server

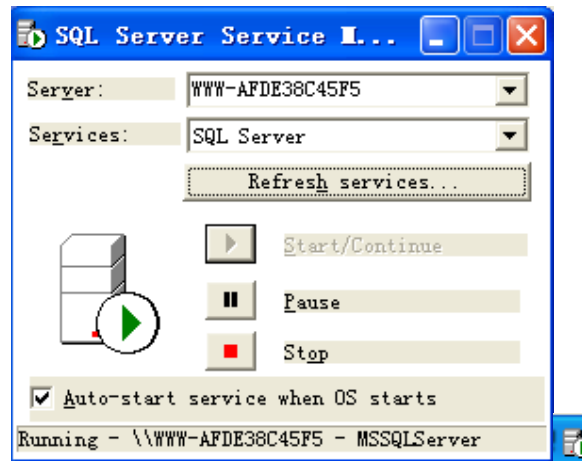
5.2.1 Startup MSSQL data

1. CMS client MSSQL, to be center database, select MSSQL server in procedure. such :



5.1 startup procedure

2. Click “ server management ” , SQL Server startup, then it will be a icon in the right procedure on PC.



5. 2 Startup server

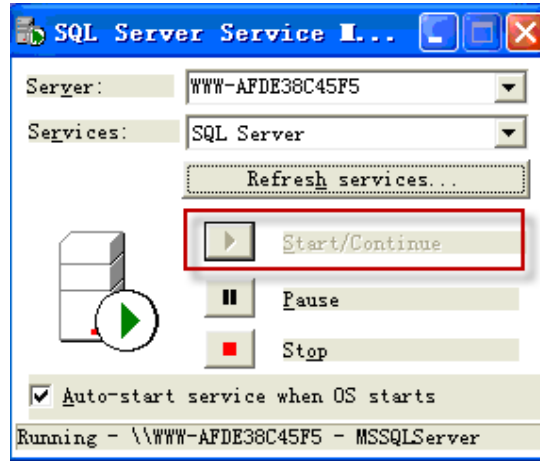
5.2.2 Startup MSDE database

1. CMS client open MSDE server via MSDE which to be center database , such:



5.3 Startup server

2. Click “start/continue” startup database server, as below:

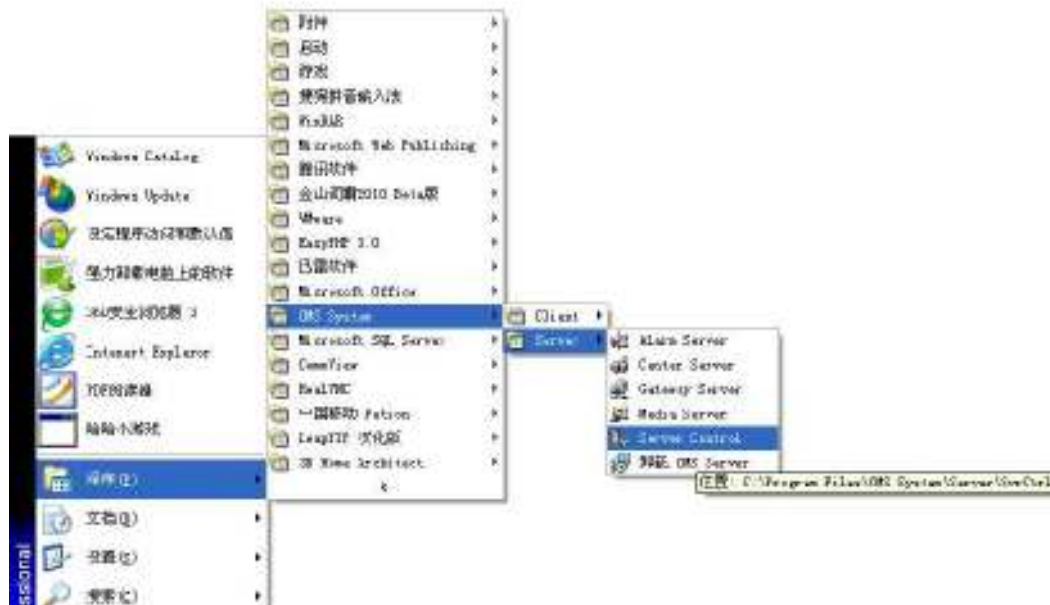


5.4 startup server

3. Startup server successful.

5.3 Startup CMS server

1. Select “Server Control” in procedure, and click it open



5.5 Startup procedure

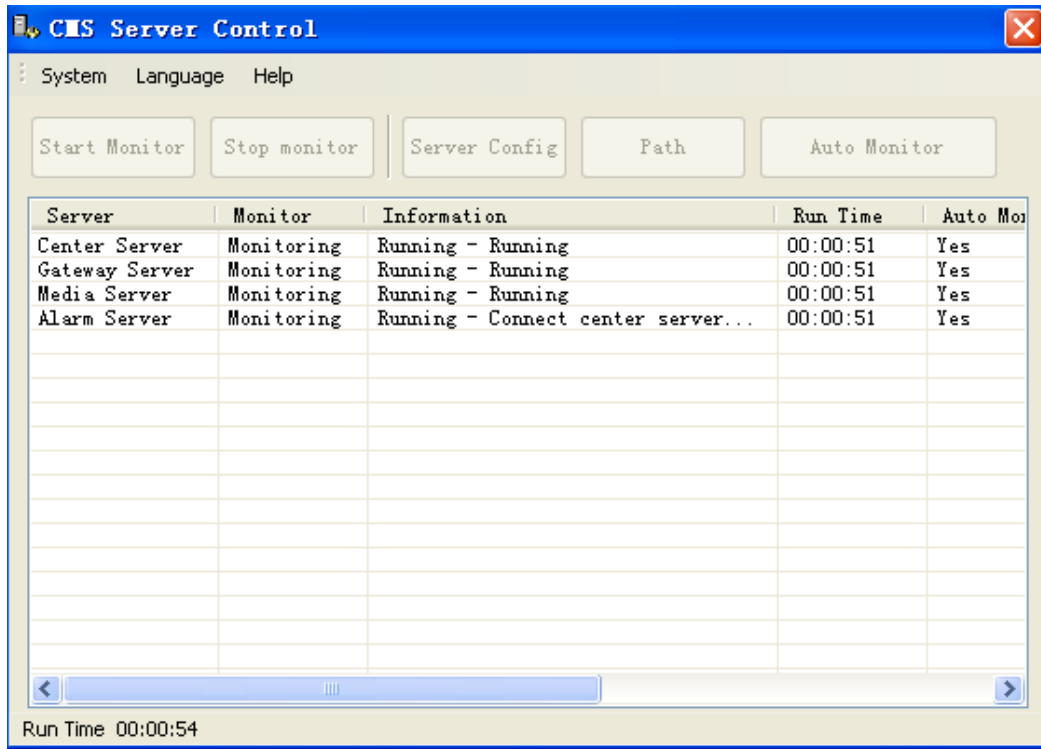
2. For the first time installation, it pop “Database does not exist , create the database”.

Only for the first time installation, it will point out this.



5.5 installation

3. Click “OK” ,created successfully, and startup center server、gateway server、streaming media server、 alarm server.



5.6 Server control

5.4 CMS server configuration

CMS server configuration is to be configured according to the particular network environment.

CMS server must be working under public environment. Vehicle DVR establish communication with CMS initiatively via 3G under public network environment.

5.4.1 Server service port

CMS server default state is using the following ports supply service to DVR and client CMS. If exist fire wall, it must open the following port, then the servers can offer DVR and client CMS the related service.

Server name	Server port	Spec.	Remark
Center server	8500	Supply all of the servers and clients with access server.	TCP & UDP
Gateway server	8501、 8502	8501: device service port 8502: Supply clients with services	8501: UDP 8502: TCP & UDP
Streaming media server	81、 8504	81: Supply device with services port 8504: Supply clients with service port	81: TDP 8502: TCP & UDP
Alarm server	8505、 8506	8505: Supply device with services port 8506 Supply clients with service port	8505: UDP 8506: TCP & UDP

5.4.2 Server address configuration

Servers must supply vehicle DVR device & clients with service on WAN. Server address configuration includes Gateway server, Stream media server, Alarm server, and confirm address is the WAN address. Towards the device or clients CMS, can access the related server via the address. Server address configuration is mainly use “CMS system management” do the configuration.

As below:

Server name	Server address	Spec.	Remark
Gateway server	Device access address	Gateway server WAN IP that Device access	5.4.2..2
	Client access address	Gateway server WAN IP that CMS client access	5.4.2. .2
Stream media server	Device access address	Stream media server WAN IP that Device access	5.4.2..3
	Client access address	Stream media server WAN IP that CMS client access	5.4.2..3
Alarm server	Device access address	Alarm server WAN IP that Device access	5.4.2..4
	Client access address	Alarm server WAN IP that CMS	5.4.2..4

	address	client access	
--	---------	---------------	--

5.4.2.1 CMS system management login

Setting each server's IP , select Manage Tool in the procedure , click startup



5.5 startup clients

Pop "Manage Tool" login

 A screenshot of a 'Login' dialog box. The dialog has a blue title bar with the text 'Login' and a close button. Below the title bar is a blue header area with a key icon. The main area is white and contains the text 'Please enter a user name and server information'. There are four input fields: 'User' (empty), 'Password' (empty), 'Server' (containing '127.0.0.1'), and 'Language' (a dropdown menu showing 'english'). At the bottom are two buttons: 'Login' and 'Exit'.

5.5 Login

Input user (default: admin), Password (NO password) & server IP.



Login

Please enter a user name and server information

User: admin

Password:

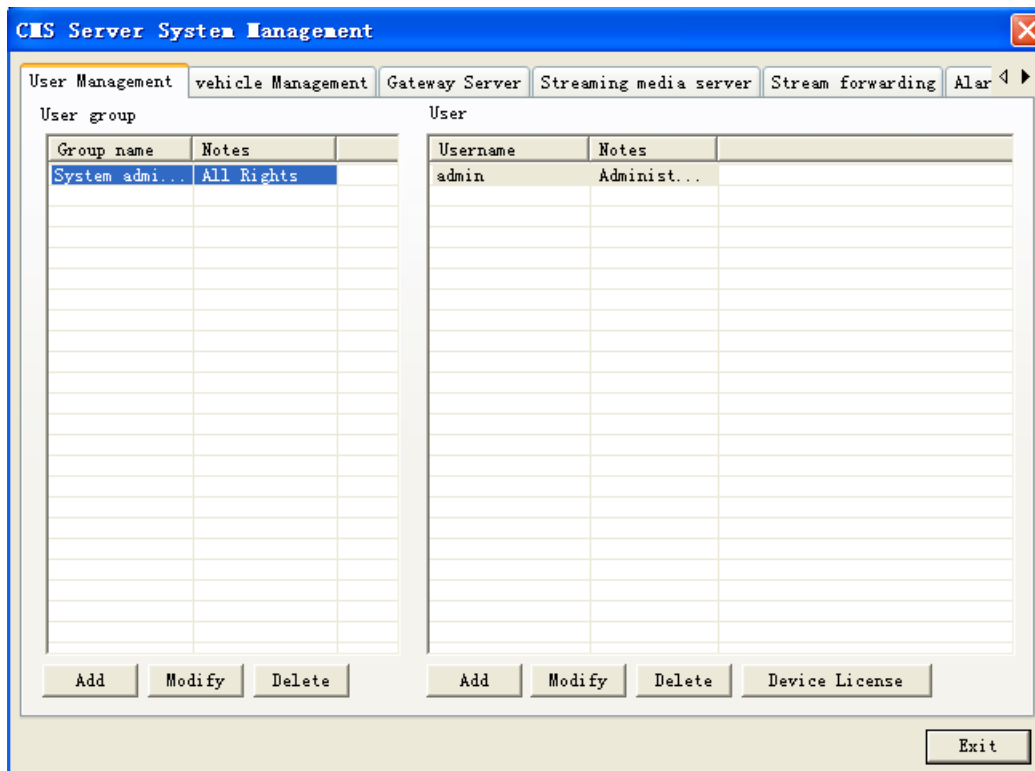
Server: 127.0.0.1

Language: english

Login Exit

5.5 input info

Click “ Login ” , enter CMS system management



CMS Server System Management

User Management vehicle Management Gateway Server Streaming media server Stream forwarding Alar

User group

Group name	Notes
System admin...	All Rights

User

Username	Notes
admin	Administ...

Add Modify Delete Add Modify Delete Device License

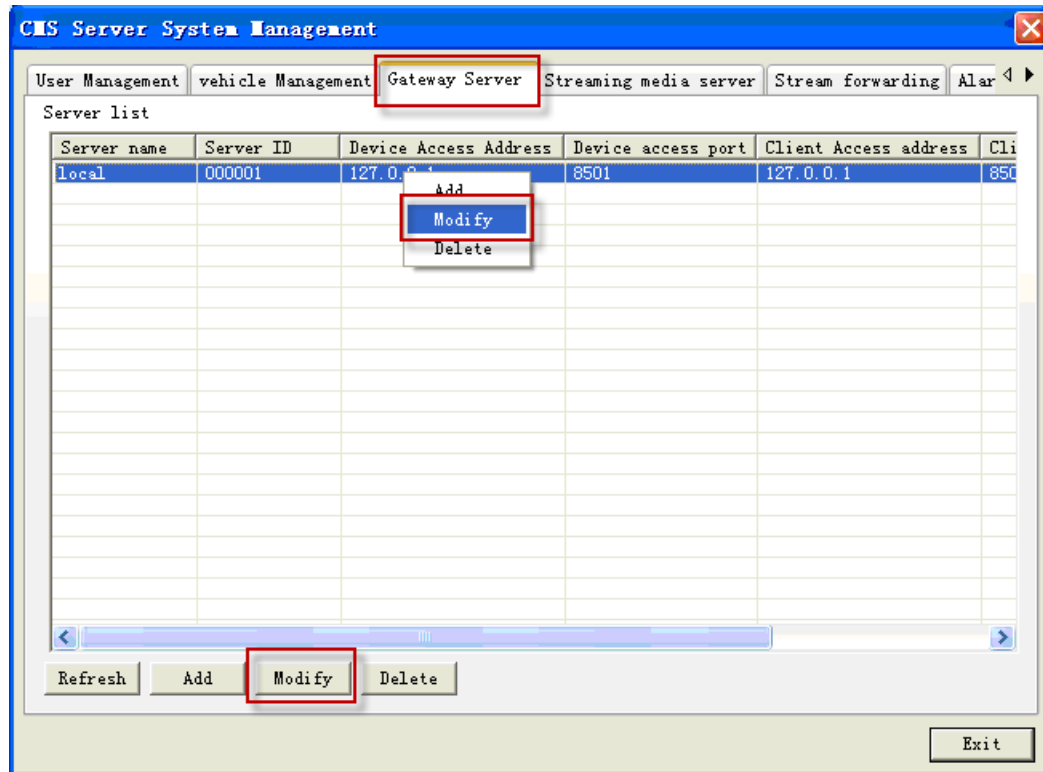
Exit

5.5 Management

5.4.2.2 Gateway server IP configuration

Select and modify gateway server in the CMS system management, three ways as below:

1. Select the modified gateway server, click right mouse select modify ;
2. Select the modified gateway server , Click “modify” ;
3. Select the modified gateway server , Double-click.



5.5 Modify gateway server

Pop modify interface

Device access and client access add. Needed to be modified (frame it in red).

5.5 Modify interface

Clients need to modify device access address and client access address.

Device access address: Public network IP in streaming media server device accessed ;

Client's access address: Public network IP in streaming media server clients accessed.

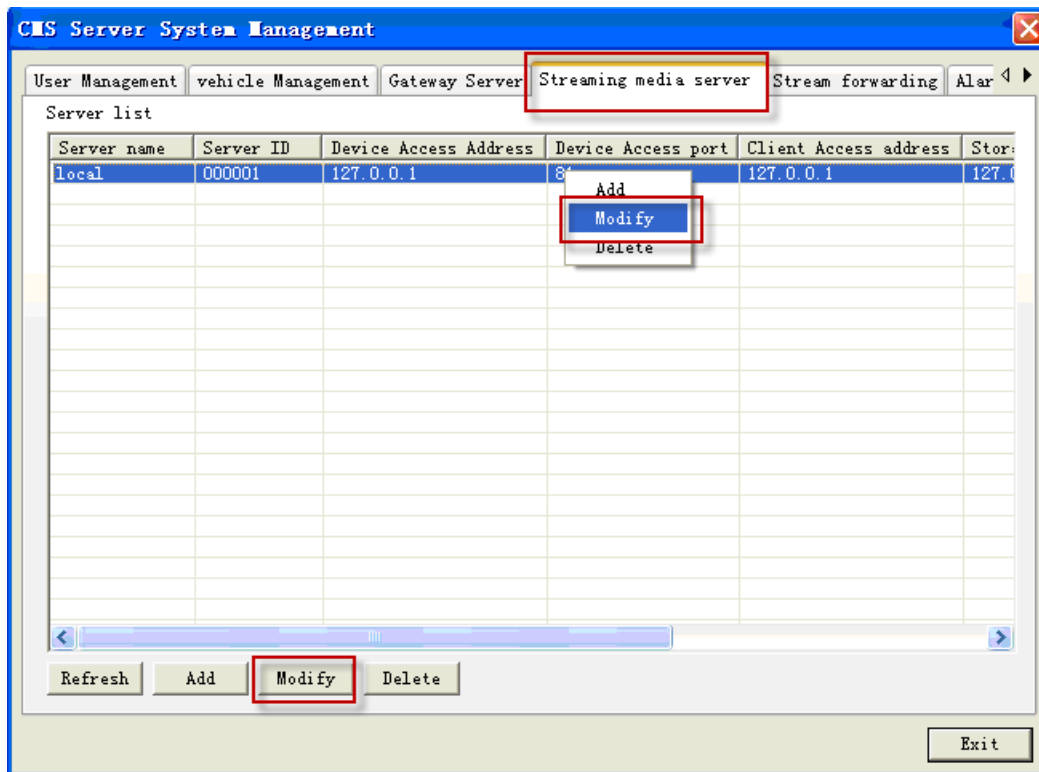
Control port setting is the port no. of the gateway server, ordinary setting: 8501.

Click “YES” , modified the gateway successfully.

5.4.2.3 Streaming server IP configuration

Select and modify stream media server in the CMS system management, three ways as below:

1. Select the modified stream media server, click right mouse select modify ;
2. Select the modified stream media server , Click “modify” ;
3. Select the modified stream media server , Double-click.



5.5 modify stream media server

Pop modify interface

Device access, CMS client access, and storage server add. Need to be modified (framed it in red).

The screenshot shows the 'Modify streaming media server' dialog box. It contains several input fields for server configuration. The 'Device access address' field, 'Client Access address' field, and 'Storage server access address' field are highlighted with red boxes, indicating they need to be modified. The 'Server name' field contains 'local', 'Server ID' contains '000002', 'Device Access port' contains '81', and 'Client and storage server access port' contains '8504'. The 'OK' and 'Cancel' buttons are at the bottom.

Server name	local
Server ID	000002
Device access address	127.0.0.1
Device Access port	81
Client Access address	127.0.0.1
Storage server access address	127.0.0.1
Client and storage server access port	8504

5.23 Modify interface

Clients need to modify device access address and CMS client access address.

Device access address: Public network IP in streaming media server device accessed ;

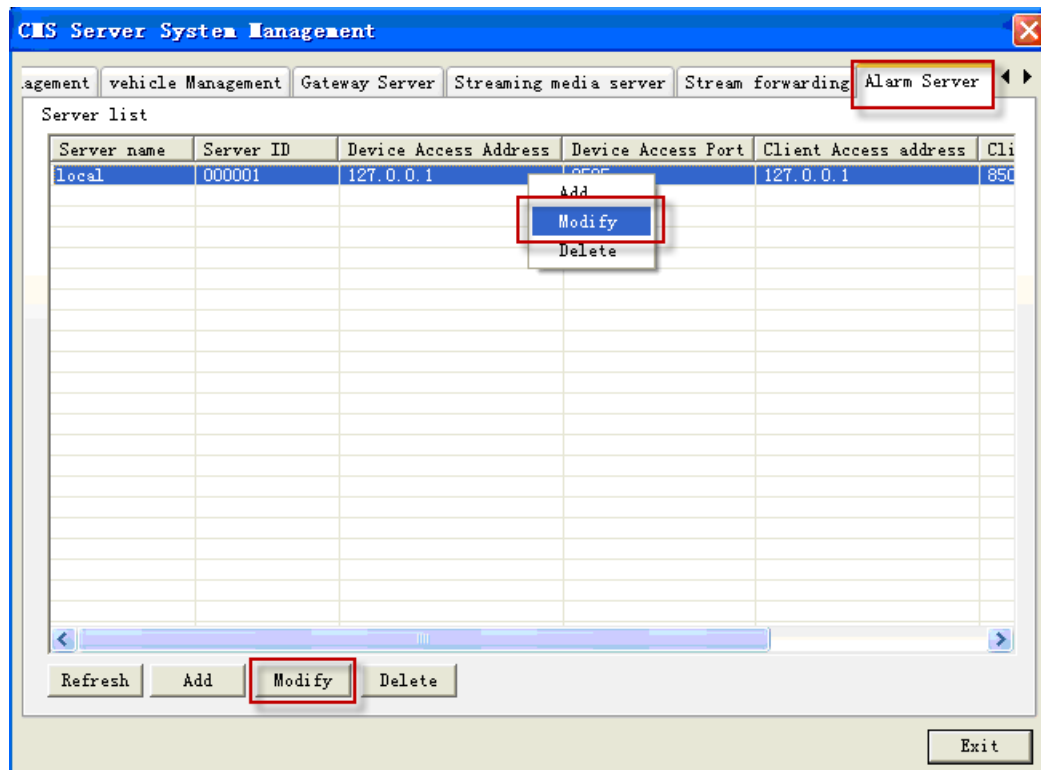
Client's access address: Public network IP in streaming media server clients accessed.

Click “YES” , modified the stream media server successfully.

5.4.2.4 Alarm server address configuration

Select and modify alarm server in the CMS system management, three ways as below:

1. Select the modified alarm server, click right mouse select modify ;
2. Select the modified alarm server , Click “modify” ;
3. Select the modified alarm server , Double-click.



5.5 modify alarm server

Pop modify interface

Device access, CMS client access, and storage server add. Need to be modified(frame it in red).

Modify alarm server

Server name: local

Server ID: 000003

Device Access Address: 183.15.133.97

Device Access Port: 8505

Client Access address: 183.15.133.97

Client Access Port: 8506

OK Cancel

5.23 Modify interface

Clients need to modify device access address and CMS client access address.

Device access address: Public network IP in streaming media server device accessed ;

Client's access address: Public network IP in streaming media server clients accessed

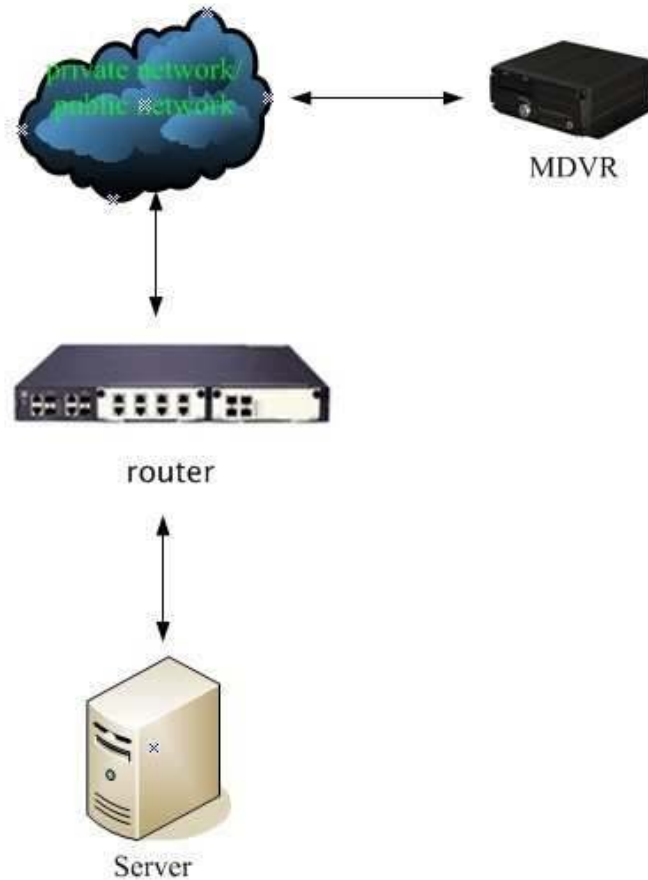
Click “YES”, modified the alarm server successfully.

5.4.3 Server configuration

Servers distribution mainly exist two conditions so far.

5.4.3.1 Server do network via router

Structure :



5.5 Structure

Company surf on-line via ADSL, is belongs to the state. DVR can not access CMS client directly, can only access router, port mapping to server on router via WAN IP.

Operating :

1. **Examine router WAN IP ;**
2. **Port mapping ;**
3. **Modify gateway、stream media、alarm server address ;**
4. **Server IP setup on DVR (WAN IP)**

Virtual server defines mapping relationship between WAN server port and LAN server, re-positioning all of the WAN server port access to the LAN server via IP address appointed. Vehicle can only access router via WAN IP , then do port mapping via router access PC installed CMS, so it need to do Virtual Server setup to router. Similar setup among the setting, Take Virtual server of Tenda router and virtual server of TP-LINK router for examples. As below:

Note : Open CMS server when test port mapping , For further info on open server, check 5.3 , setup CMS server.

5.4.3.1.1 TENDA router

1. Examine router's WAN IP

1. First open E browser ,input :192.168.0.1 ,Pop login, User name and password ,Click" Yes".



5.5 login interface

2. Pop Tenda router main interface ,Click“ k running condition” Enter WAN condition, notes WAN IP, for using behind, In our interface: **183.15.133.97** ,



5.5 Router main interface

2. Port mapping

1. Click intended server , Enter the main interface , setup server port and inner network IP , Framed in red。 Server ports needed setting : 8500 (Center server) , 8501 (Gateway server) , 8502(Gateway server) , 81(Stream media server) , 8504(Stream media server) , 8505(Alarm server) , 8506 (Alarm server) , Inner network IP setting is same as CMS servers IP , All of the servers install on a computer , setting the same IP , eg,192.168.0.111(note: different servers have different IP) , After setting, Click Save。



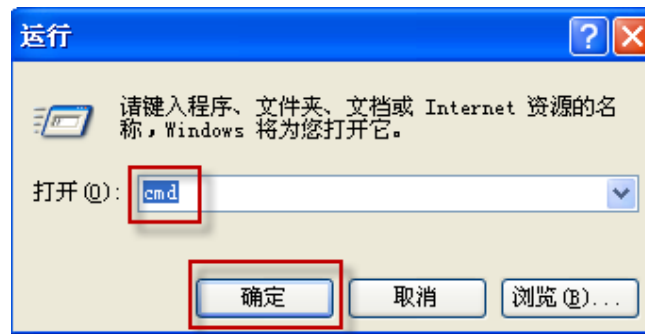
5.5 invent server

2. Successful , Click continue completed。



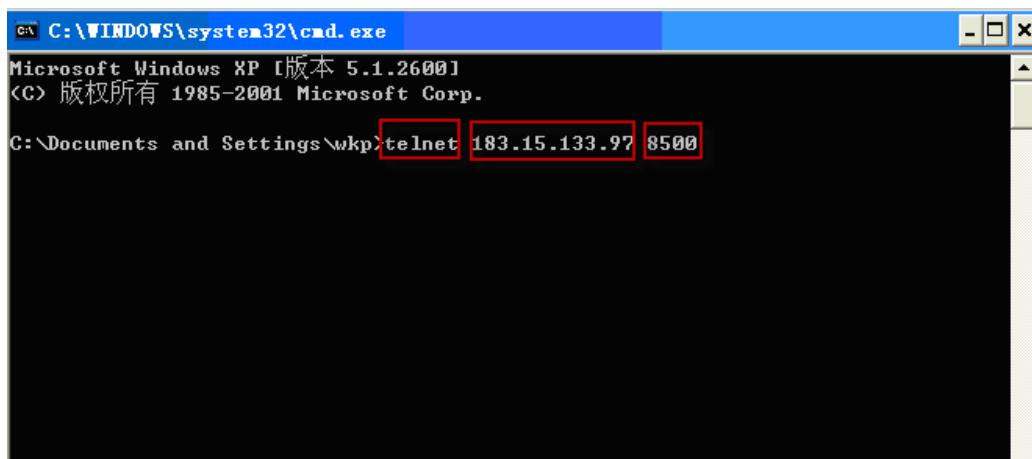
5.5 Success

3. How to examine port mapping condition , input “ cmd ” in the running , Click “ Yes ”。



5.5 Running interface

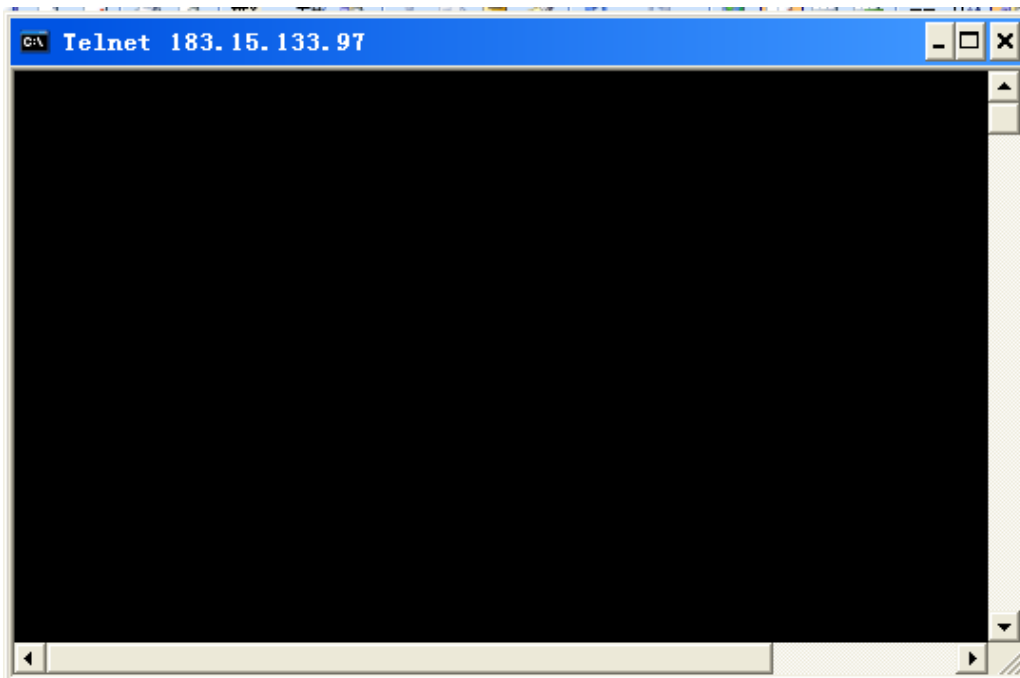
4. Input "telnet 183.15.133.97 8500" when happens the interface as below , 183.15.133.97 is the WAN IP , 8500 is port No. , can do port mapping test by inputting port no. one by one.



5.5 Test port mapping

Notes : a blank separated telnet and WAN IP

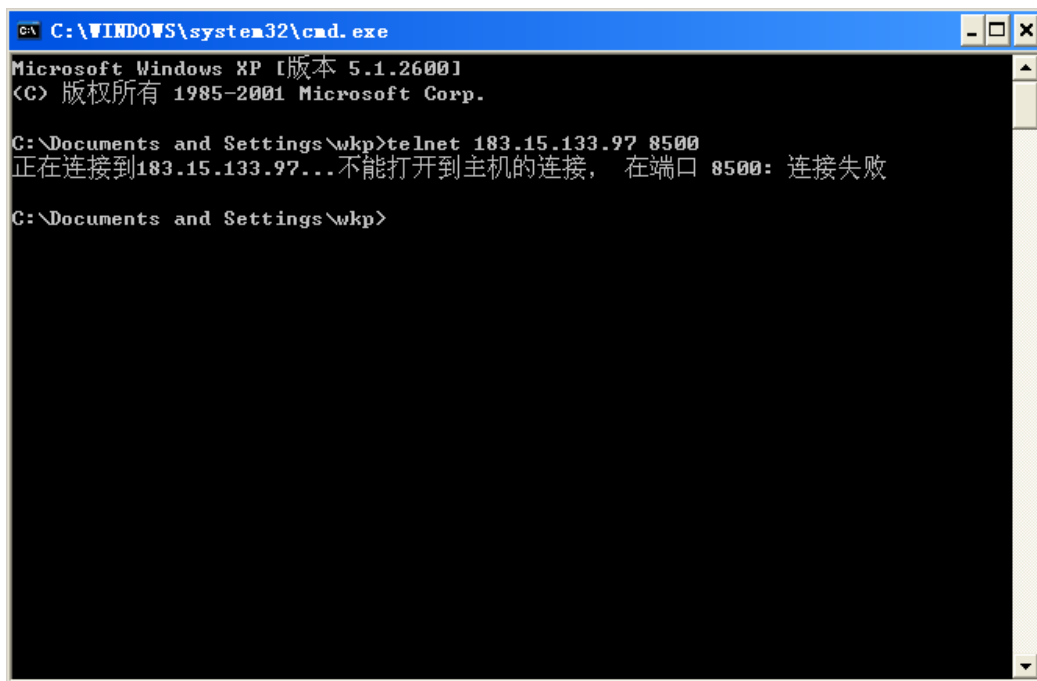
5. Enter the interface as below when successful.



5.5 successful interface

6. “Can not open master’s connection ,at port 8500 :failed in connection” when unsuccessful ,

The reason why is CMS server is open。 Afresh test will be OK.



5.5 Failure interface

3. Modify gateway、stream media、alarm server address。(For further information, pls check in 5.4.2)

4. Server IP setting (WAN IP) on DVR. (For further information, pls check in 5.5.2 Network setting)

5.4.3.1.2 TP-LINK Router

1. Check the router's WAN IP.

1. First, open I E browser , input : 192.168.0.1 , Pop login interface , Input user name and password , Click "Yes".

Pop TP-LINK route interface , Click running condition in left menu , turns up WAN , notes IP address , which will be used in future.



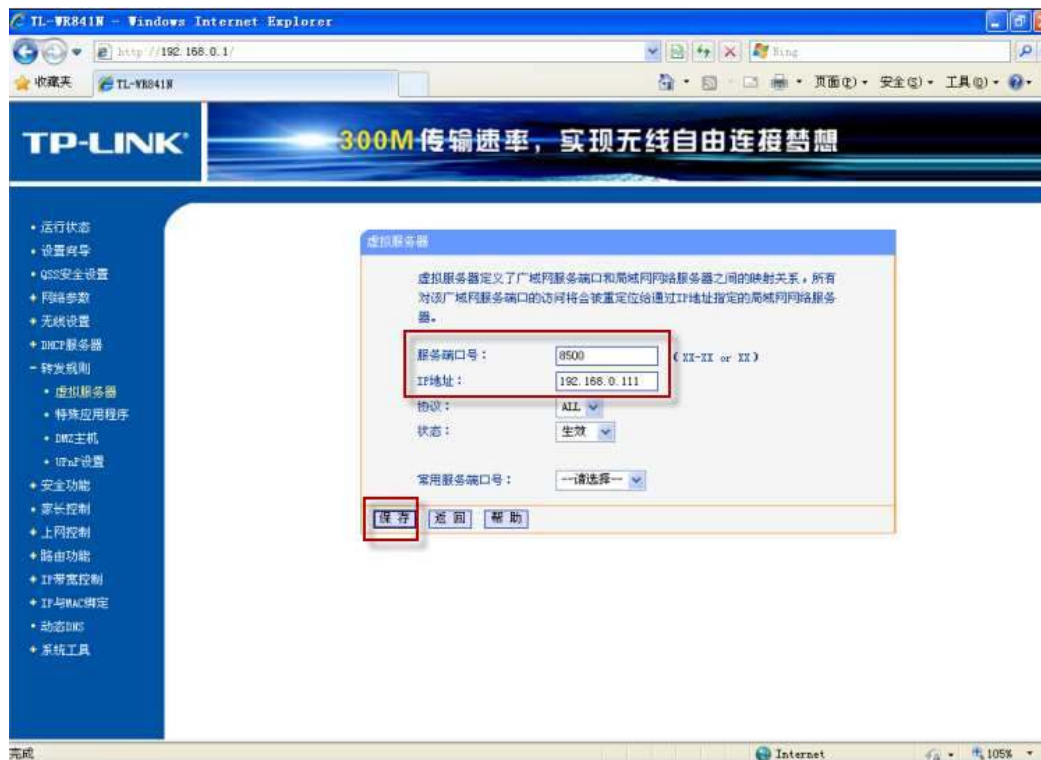
5.5 Router main interface

2. Process port mapping

1. Click "transmit rule" in the left menu , it will pop WAN server setting interface.
Click "Add new clauses."

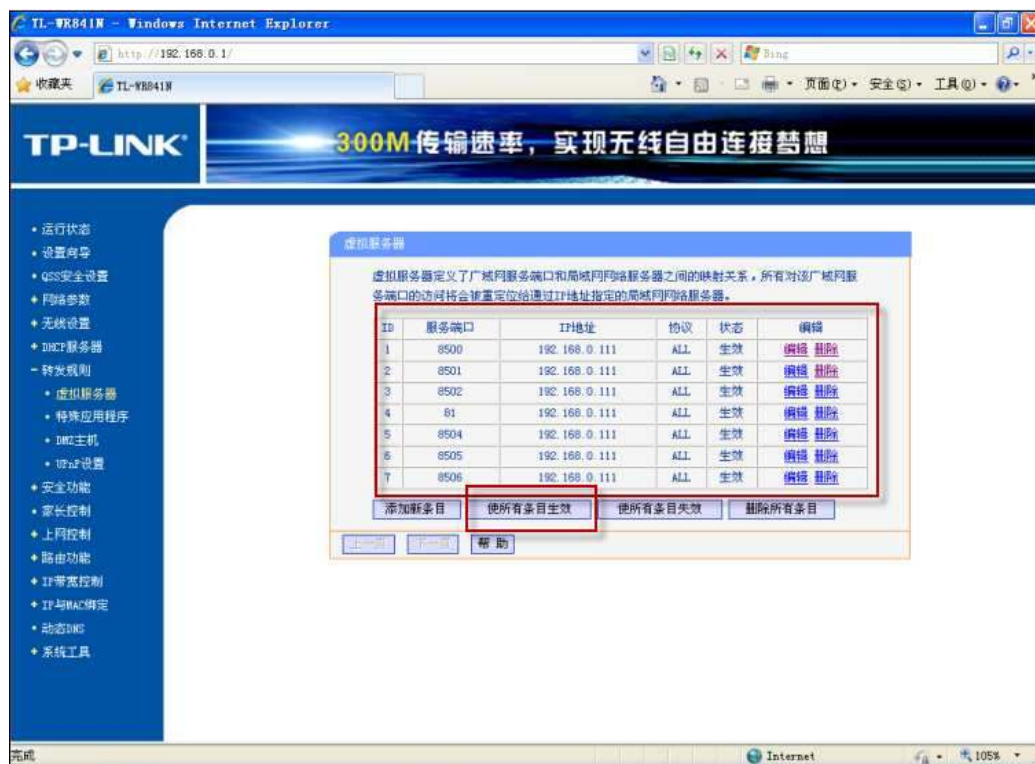


2. Mainly setting server port and inner network IP , which is framed in red. Click "Keep" after setting.



5.5 Setting WAN server

3. Server port setting :8500(Center server), 8501(Gateway server), 8502(Gateway server), 81 (stream media server), 8504 (stream media server), 8505 (Alarm server), 8506 (Alarm server). Inner network IP setting installed CMS servers IP , as all of the servers install to a PC, so setting the same IP, eg,192.168.0.111(这 It depends, as different servers have different IP).Click” complete”。



5.5 Setting WAN server

4. Test port mapping (same test as 5.4.3.1.1 Tenda router)

4. Modify gateway、stream media、alarm server address。(For further info, pls check 5.4.2 server address configuration)

6. IP setting on DVR server (WAN IP). (For further info, pls check 5.5.2 network setting)

5.4.3.2 Servers on public network

Structure :

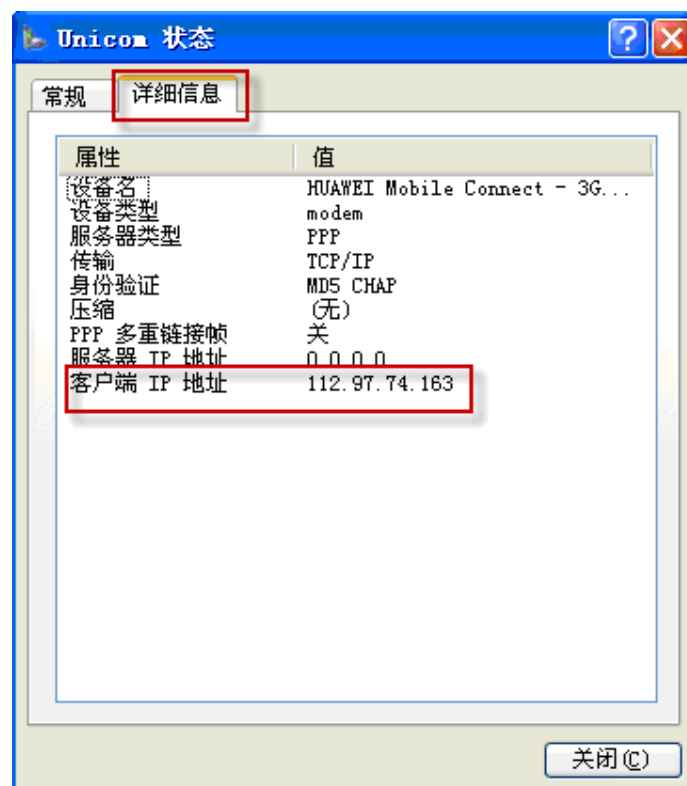


Server is on the WAN network, DVR can access server.

Operating :

1. Examine WAN IP ;
2. Modify gateway、stream media、alarm server address ;
3. IP setting on DVR server (WAN IP) .

1. double-click the right blank of  , select the details and pop the interface as below:



3. Pls note clients IP address , exactly we will use behind WAN IP.

3. Modify gateway、stream media、alarm server address ; (For further info, pls check 5.4.2 server address configuration setting)

4. IP setting on DVR server (WAN IP) (For further info, pls check 5.5.2 network setting)

5.5 Vehicle login configuration

Vehicle login configuration do setup on center setup and 3G setup. Center setup mainly do server IP and gateway control port. 3G setup mainly do wireless type, connection port, center ID and user data.

5.5.1 Vehicle ID setting

Notes : After connecting power line , Click LOGIN, enter the interface as below :



5.7 LOGIN

Device No. : Unique ID for each device, show in the right frame when Login automatic, user input the same ID.

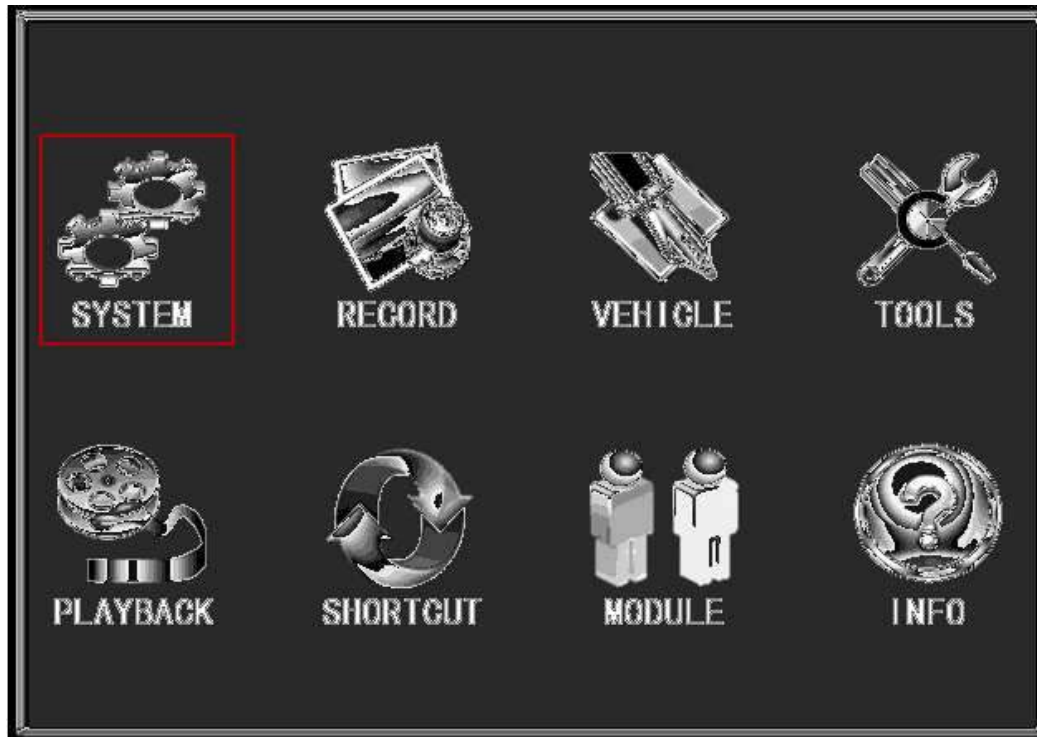
Password : **User password or Admin password** , When using user psw login, can only selecting、 information menu , can't enter. When admin psw login, can set menu, parameter.

When the password is incorrect, press down, then press login. when password is incorrect, reveal prompt message, press up key, then press CANCEL, re-enter

the right password.

Note : Original User Password: 111111, Original Admin Password: 111111.

Main menu include: SYSTEM, RECORD, VEHICLE, TOOLS, PLAYBACK, SHORTCUT, MODULE, INFO. As below:



5.8 System setting

1. Select the system setting in main interface , pop system setting.



5.5 Basic setting

2. Select "basic " in system , press "Enter" :

BASIC SETUP

DATE TYPE	<input type="text" value="WEEK"/>	AUTOTIMING	OFF
DATE	2010-05-19	TIME ZONE	<input type="text" value="GTM-4"/>
TIME	10:45:38	TIMING TIME	<input type="text" value="00:00:00"/>
OPR TIMEOUT	30 (30~1800s)		
DEV NUM	<input type="text" value="00000"/>		
COMPANY NAME	<input type="text" value=""/>		
VEHICLE NUM	<input type="text" value="00000"/>		
DRIVER NAME	<input type="text" value=""/>		
LINE NUM	<input type="text" value=""/>		

5.5 Device NO.

1. Unique ID for each device, every vehicle has its own ID , No permit repeat ID.

5.5.2 Center login setting

1. Select the system setting in main interface , pop system setting.



5.9 Network setting

2. Select "NETWORK " in system , Press "enter" :

NETWORK SETUP

LOCAL NETWORK

IP ADDR: 192.168.000.250

NETMASK: 255.255.255.000

GATEWAY: 192.168.000.001

MAC ADDR: 05:55:55:55:55:55

CENTER SETUP:

SERVER IP: 192.168.000.010

CONTROL PORT: 5678

MEDIA PORT: 5678

SAVE

5.10 Center setting

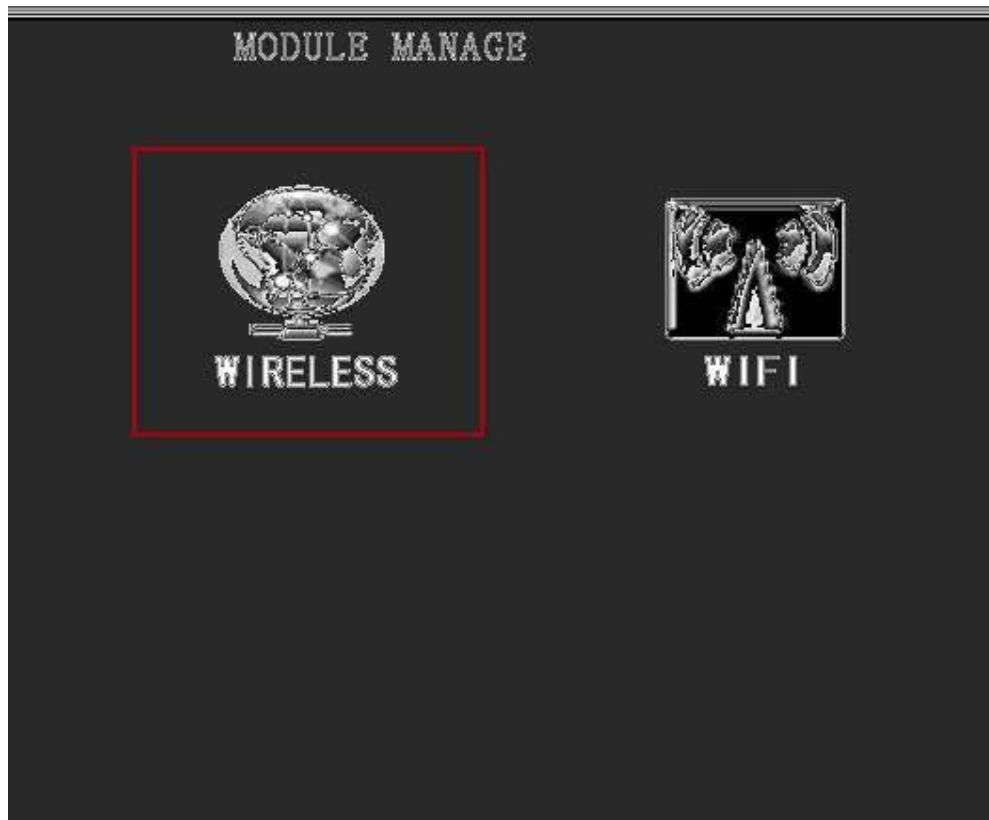
- 1 . IP addr、 Netmask and gateway setting: Press “CANCEL” , Press digital key modify in turns. Setup to be the addr as Center server addr.
- 2 . MAC addr setting: Press “ ENTER” , enter soft keyboard. Press direction key, then ENTER the related add.
3. SERVER IP, CONTROL PORT, MEDIA PORT setting: Press CANCEL, then press digit key (Control & media port range: 0—65535).

Frame in red: Setup the server IP into CMS server WAN IP.

Sett Control port to be gateway server port ID , normal : 8501。

5.5.3 3G setting

1. Select the module management in the main interface , pop module management interface



5.11 module management

2. Select Wireless setup, Pop as below :

The image shows a 'WIRELESS SETUP' screen with the following fields and options:

- WIRELESS:** ON (selected)
- TYPE:** WCDMA (selected and highlighted with a red box)
- APN:** 3gnet
- CENTER NUM:** *99#
- USER NAME:** card
- PASSWORD:** card
- SAVE** button

5.12 Wireless setup

Note: 1. Press Enter, select ON/OFF for wireless, select ON.

2. Press Down, select type of 3G, EVDO/ WCDMA.

For further info on **WCDMA**, pls check **5.5.2.1** , **EVDO 5.5.2.1**.

5.5.2.1 WCDMA

1. If the DVR SIM card is WCDMA/ HSPA , select WCDMA , input APN, center num, User name and password.

WIRELESS SETUP

WIRELESS: ON

TYPE: WCDMA

APN: 3gnet

CENTER NUM: *99#

USER NAME: card

PASSWORD: card

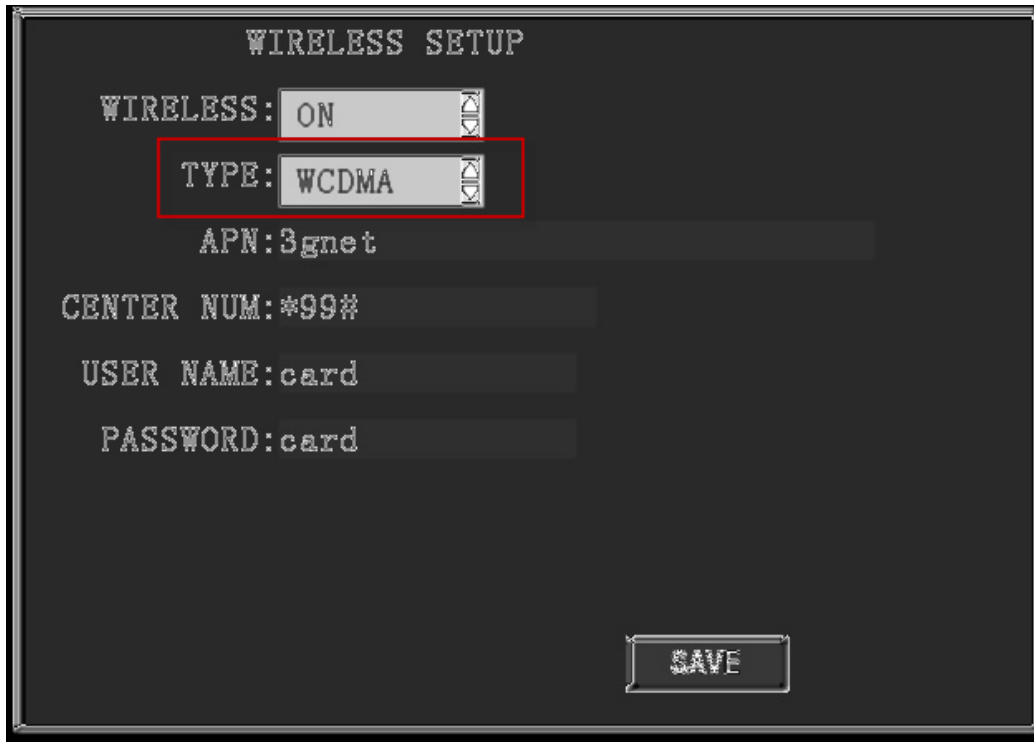
SAVE

5.5 WCDMA

2. Click SAVE.

5.5.2.1 EVDO

1. If the DVR SIM card is telecom , select EVDO , input APN, center num, User name and password.



The image shows a 'WIRELESS SETUP' screen with the following fields and values:

- WIRELESS: ON
- TYPE: WCDMA (highlighted with a red box)
- APN: 3gnet
- CENTER NUM: #99#
- USER NAME: card
- PASSWORD: card

A 'SAVE' button is located at the bottom right of the screen.

5.5 EVDO

2. Click SAVE.

5.6 Vehicle data register

CMS system mainly manage the registered and unregistered vehicles, can do query, refresh, add, delete, modify, etc.

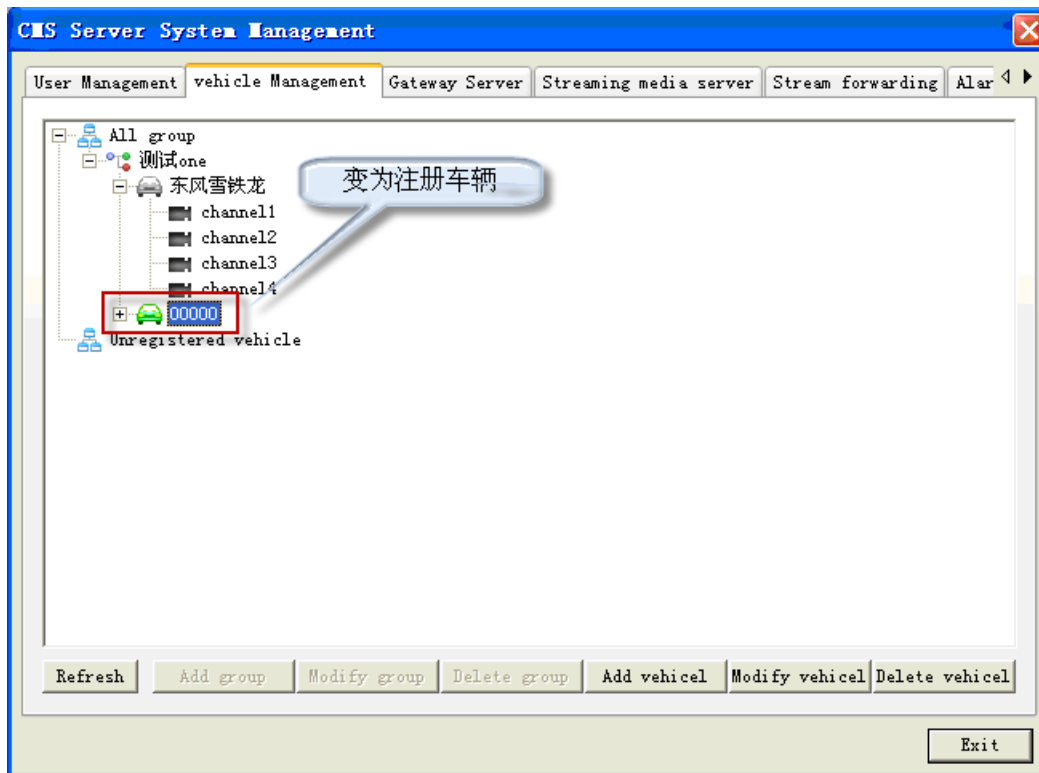
Enter vehicle management, If the vehicle is in the Test group, it i.e. it was a registered vehicle, or else, i.e. unregistered. Such as 00000 is the unregistered vehicle.

In order to do surveillance on the vehicles, we should turn the state into registered, Pull the vehicle into test one.



5.13 Register information

Pull vehicle 00000 into Test one, it turns to registered vehicle.



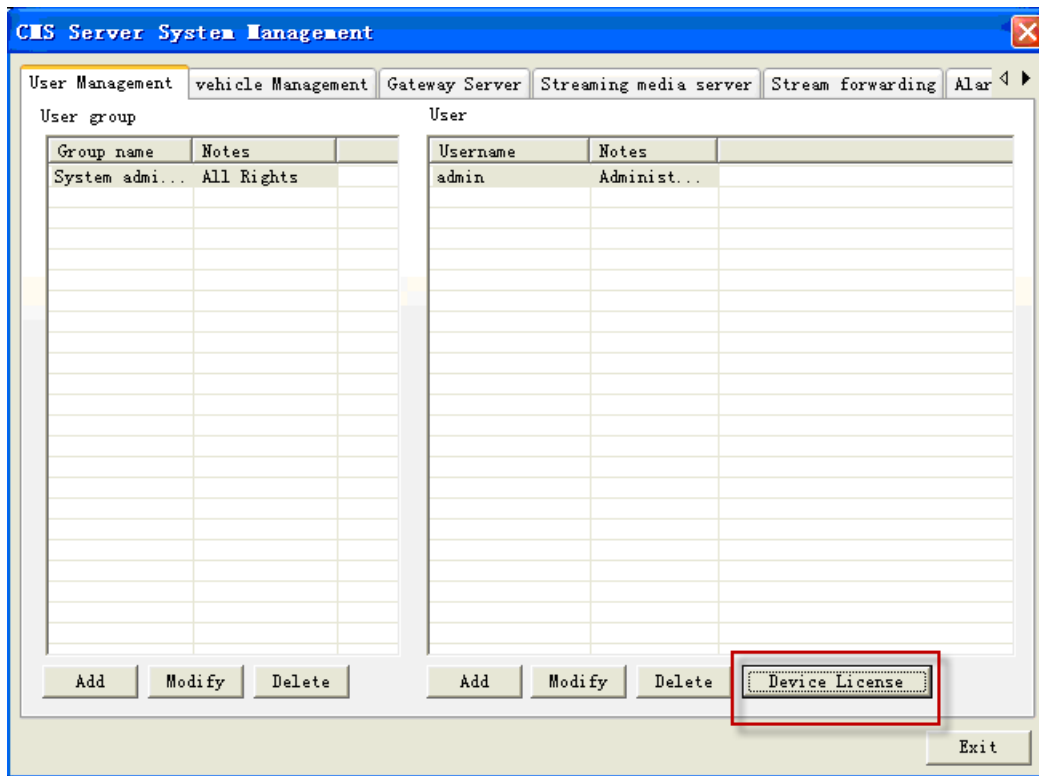
5.14 Registered vehicle

5.7 User device authorization

Device License in CMS system user management , mainly do distribute vehicles authorization.

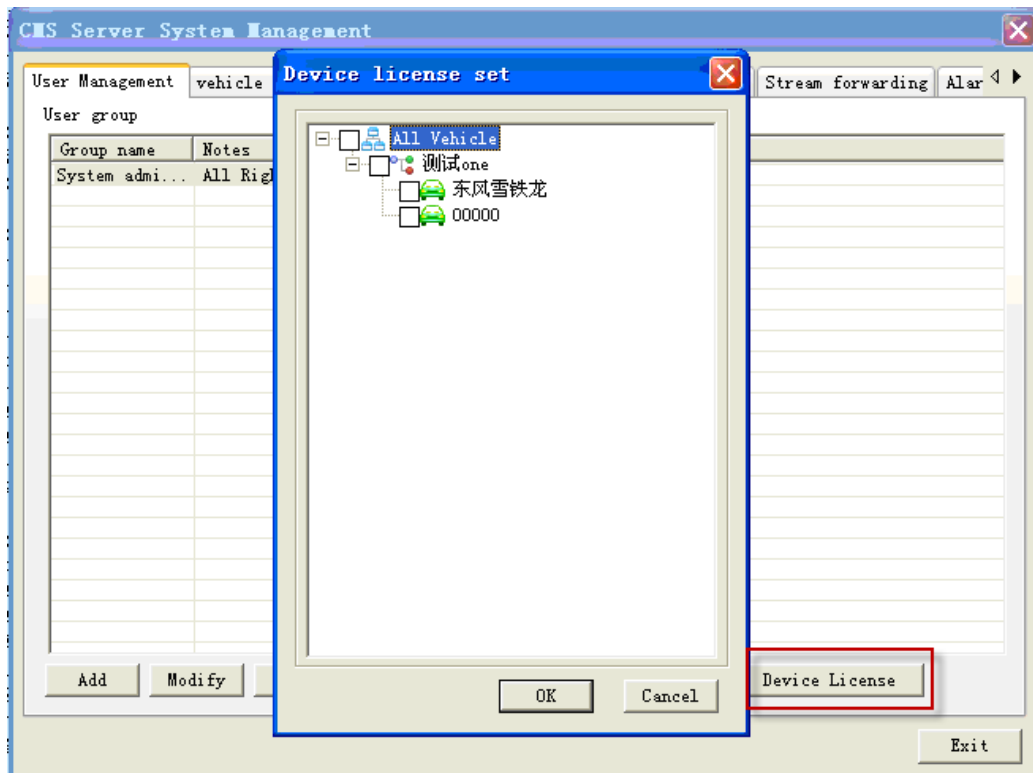
Users can only operate owned vehicles。

Enter user management , select““ Device License””



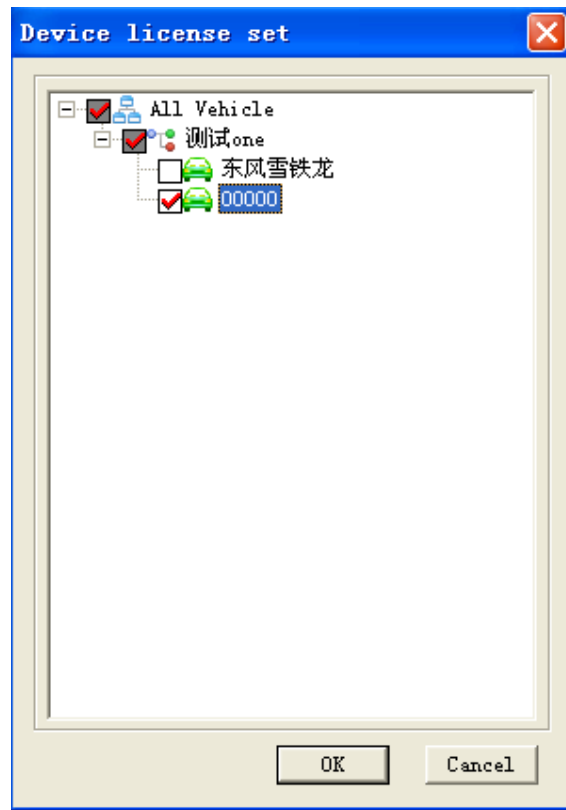
5.15 Network setup

Select user name, Click “ Device License ”



5.16 Add device license

Select “ 00000 ” , Click “ OK ” , User “ admin ” have authorization to manage vehicles.

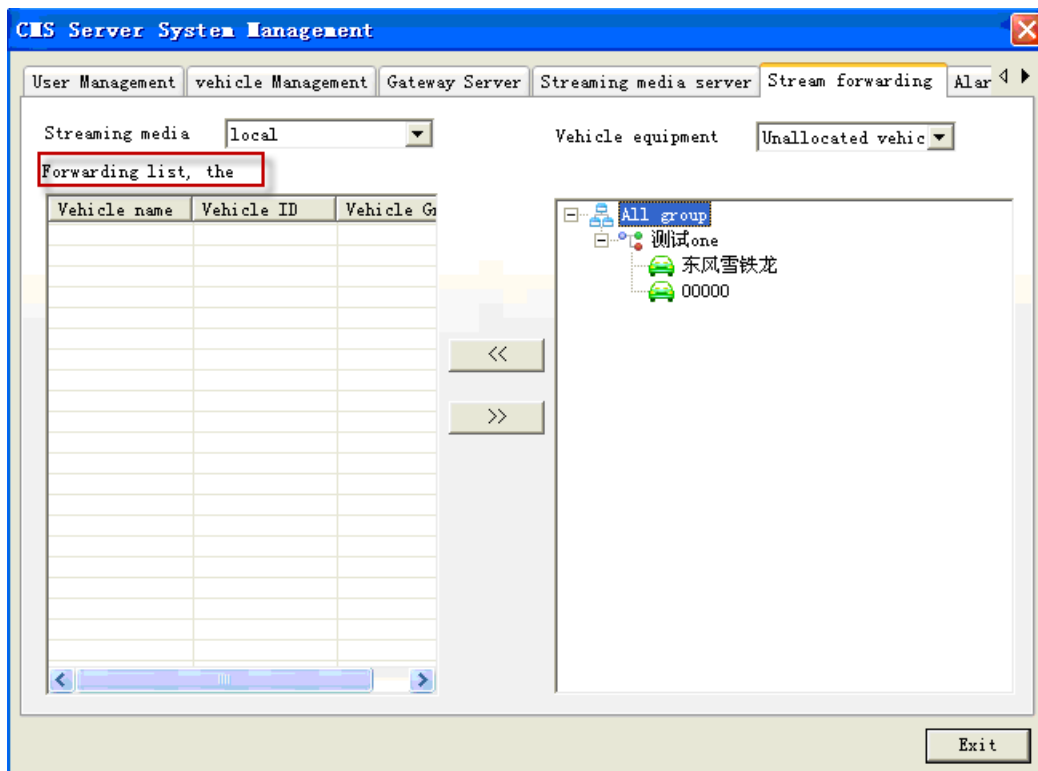


5.17 Select Device License setup vehicle

5.8 Stream media forwarding configuration

Stream media forwarding configuration

1. Open Stream media forwarding configuration in CMS.

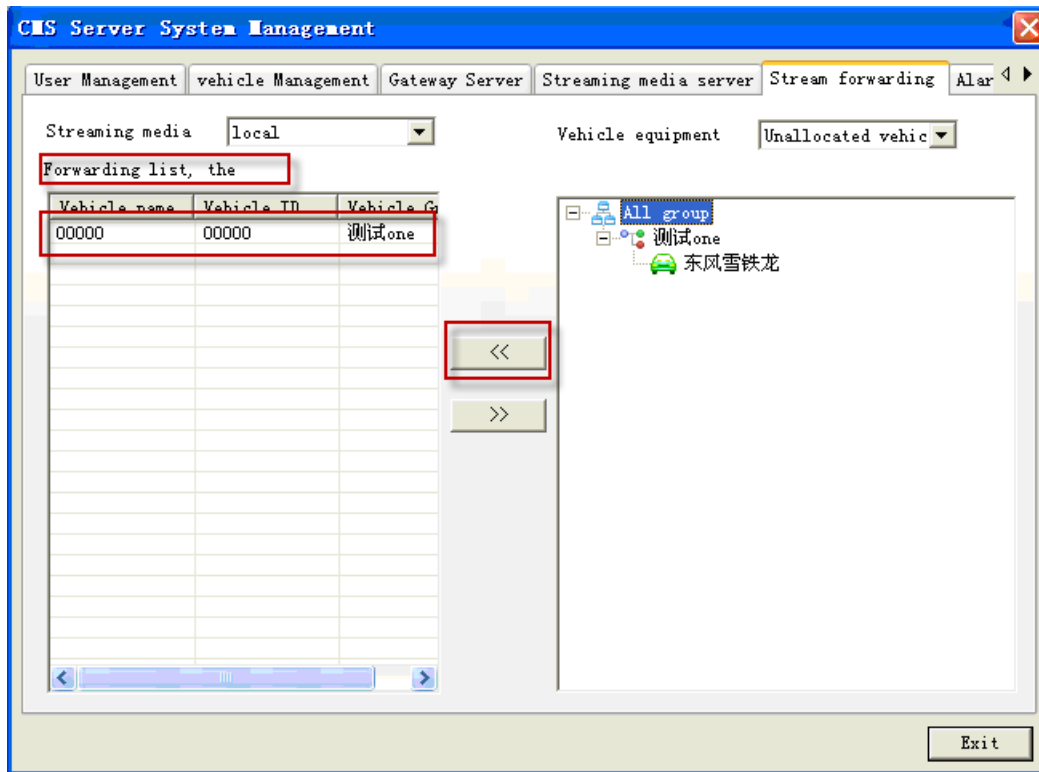


5.18 Forwarding lists

2. Select forwarded vehicles and related stream media server, double-click vehicle name or Click



and then define vehicles to related stream media server and forwarding.



5.19 Forwarding lists

Forwarding lists & changes in vehicles data

6 Client CMS

Client CMS runs in Windows2000/XP/Vista working platform. Talk-back between CMS & drivers, supply users with real-time surveillance, remote control and system management.

6.1 System introduction

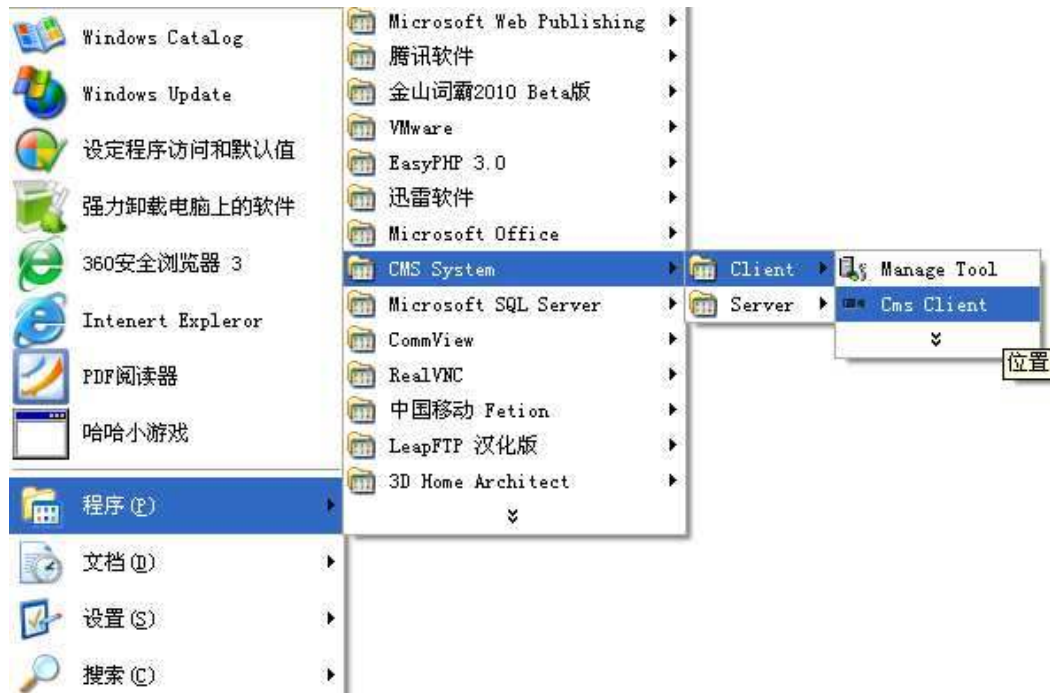
6.1.1 System introduction.

CMS clients can remote real-time video surveillance, GPS map、vehicle running track playback、talk-back、alarm linkage、remote video storage、remote download video、remote video playback、vehicle zoom management、device remote upgrade, etc.

6.1.2 System interface

CMS client interface mainly: view display, video.

1. Select “ Cms Client ” in procedure , click startup CMS clients.



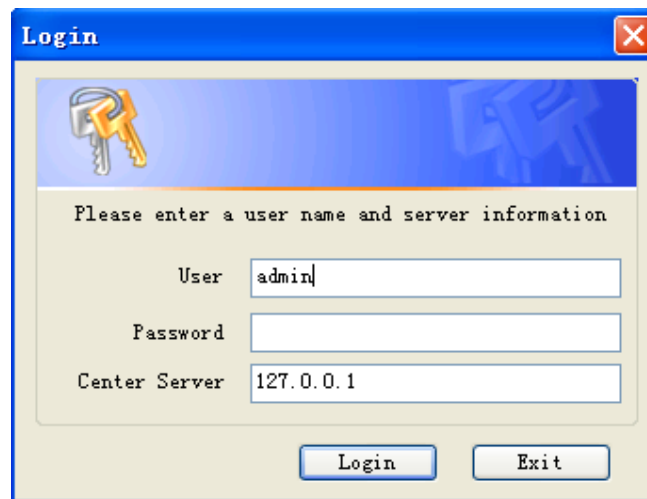
6.1 Startup procedure

Pop client's login.



6.2 Login

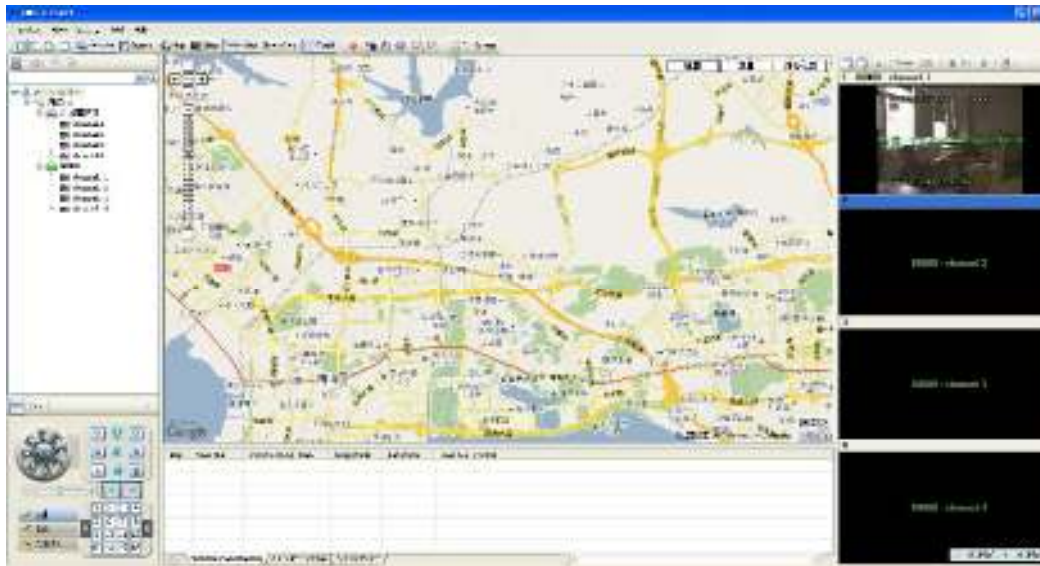
2. Input user name(admin), NO password , Center server (Your Center server IP addr).



A Windows-style login dialog box titled "Login" with a blue header bar and a close button (X) in the top right corner. Below the header is a blue banner with a yellow key icon. The main area is light beige and contains the text "Please enter a user name and server information". There are three input fields: "User" with "admin" entered, "Password" (empty), and "Center Server" with "127.0.0.1" entered. At the bottom are two buttons: "Login" and "Exit".

6.3 Input login data

3. Display client CMS interface



6.4 client CMS interface

It includes: Google Map part, video part, menu part, tools part, vehicle inquiry part, PTZ control part and system data part.

Google Map part : In the mid of the system, mainly show position the vehicles located。

Menu : In the upside of the system, show mainly functions of the system.

Tools : In the upside of the map, It includes common operation in interface composition, etc ;

vehicle inquiry : Fast inquiry from vehicle data, and can fix position ;

System data : includes vehicle surveillance、alarm data、system issues。

PTZ control : Default condition show PTZ control, includes ptz & color setup。

Setting memory functions

When user exit, client CMS can save the setup have been modified, when login next time, the main system will enter the switched one automatic.

o

6.2 Function operating

CMS client functions includes: vehicle inquiry、GPS fix position, video surveillance、viewing、setup and ,etc.

6.2.1 vehicle inquiry

Client CMS Vehicle lists blank will be updated.

In Manage Tool, do device license

Setup user operated vehicle info, Users can only operate authorized vehicle.

When changing device license, should update authorizing device lists.

(User authorizing device, check 5.6)

Device online condition

Vehicle lists code, Green shows vehicle online, Gray shows vehicle not on line.

When vehicle login, the system updates the vehicle condition automatically.

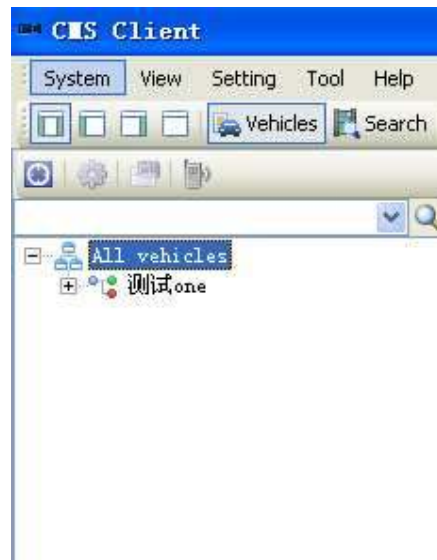


6.13 Device online

Vehicle select

Input key word of the vehicle name in the searching blank, pop the related vehicle lists

Selecting rules, Vehicle name storages the key word of searching.



6.14 Vehicle searching

Vehicle selecting

Select the related vehicles from the pop blank after searching, select the vehicle code in the following blank.



6.15 Vehicle select

6.2.2 GPS fix position

CMS client can do real-time surveillance and show position in the map.

Real-time surveillance

1. Select the vehicle to be viewed in list, right click, start real-time monitoring.



6.16 real-time surveillance

2. Pop related information on vehicle “00000” in surveillance, includes vehicle ID, positioning time, longitude & latitude and vehicle status

Id	Vehicle	Positioning time	Longitude	Latitude	Vehicle Status
0	00000	2010-02-11 14:14			Location: East Asia, U.S. Open registration, U.S. Type: car, color: white, U.S. engine:

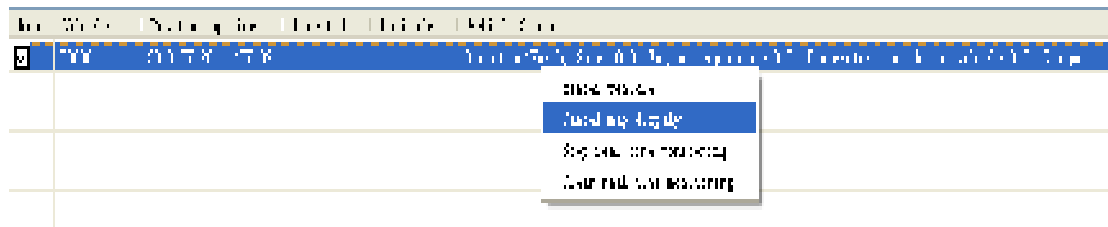
6.17 Vehicle data

- 3 . Display the vehicle's fix position, shows green car & Plate num.



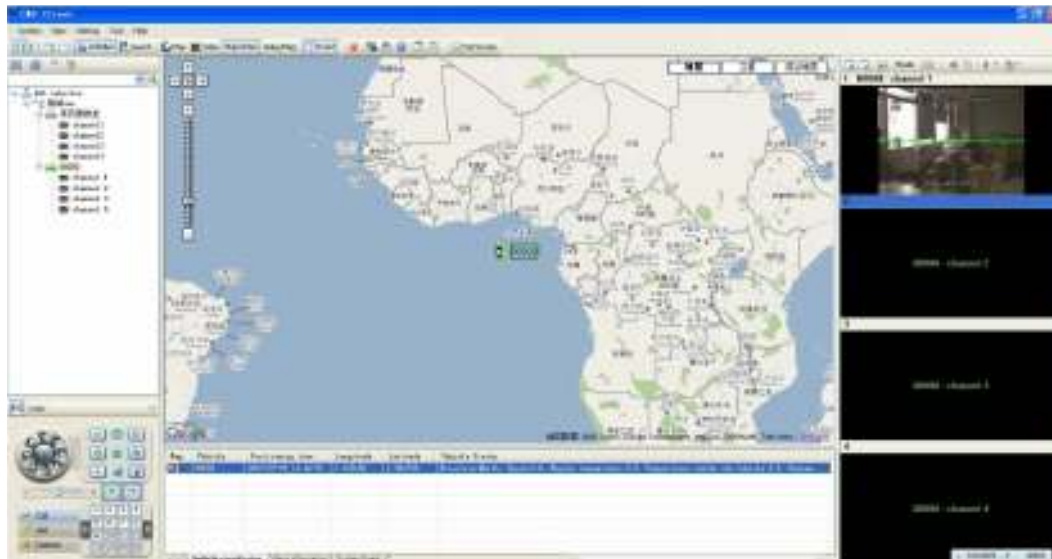
6.1 8 Map display

1. Select the vehicle to be controlled in list, right click



6.18 Center map display

2. Select the Vehicle center display, as below :



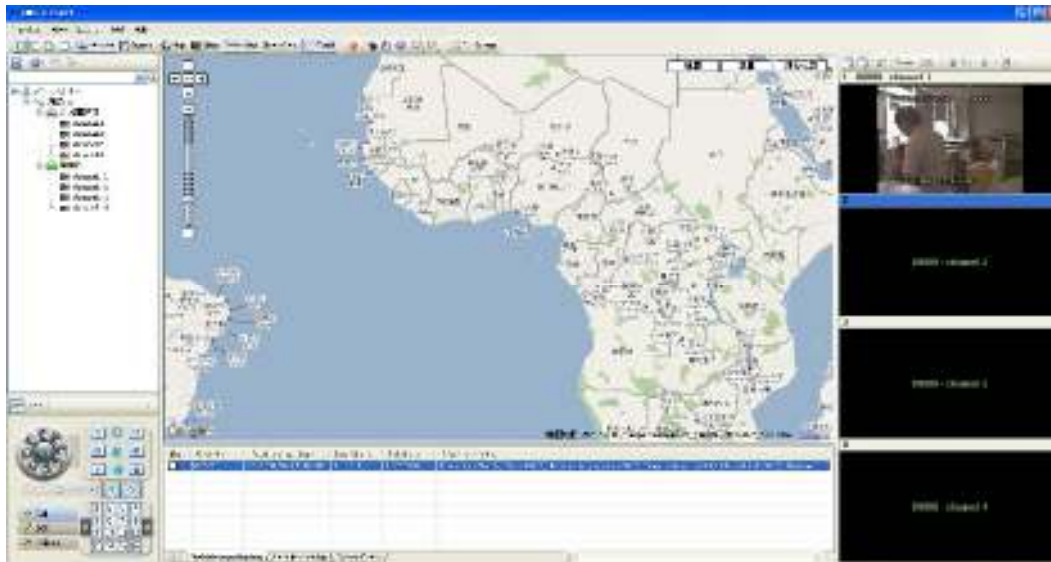
6.19 Vehicle center display

7 . Select the vehicles to be controlled in surveillance interface, right click

Id	Vehicle	Positioning time	Longitude	Latitude	Vehicle Status
3	0000	2014-06-11 10:20			Uncontrolled, Speed 0, Organ temperature 0, Organism inside the vehicle 0, Organism
					<div> <div>Cancel map display</div> <div>Cancel map display</div> <div>Stop real-time monitoring</div> <div>Cancel real-time monitoring</div> </div>

6.20 Cancel map display

8. Select the Cancel map display, the green vehicle icon will disappear.



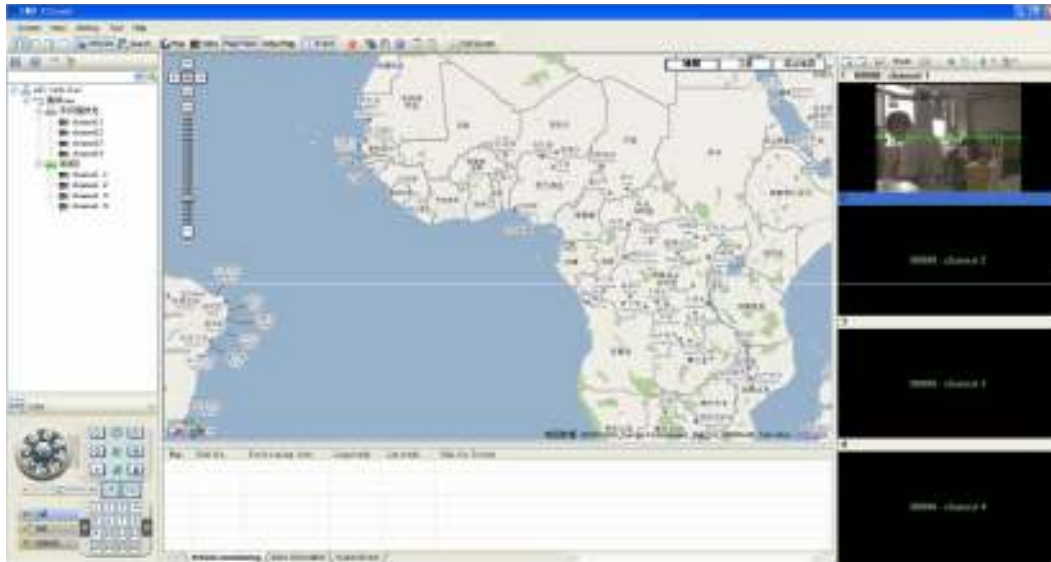
6.21 Cancel map display

9 . Select the vehicles to be controlled in surveillance interface, right click

Id	Vehicle	Positioning time	Longitude	Latitude	Vehicle Status
3	0000	2014-06-11 10:20			Uncontrolled, Speed 0, Organ temperature 0, Organism inside the vehicle 0, Organism
					<div> <div>Cancel map display</div> <div>Cancel map display</div> <div>Stop real-time monitoring</div> <div>Cancel real-time monitoring</div> </div>

6.22 Stop real-time monitoring

10 . Select Stop real-time monitoring, it will be cleared the vehicle information in the vehicle surveillance.

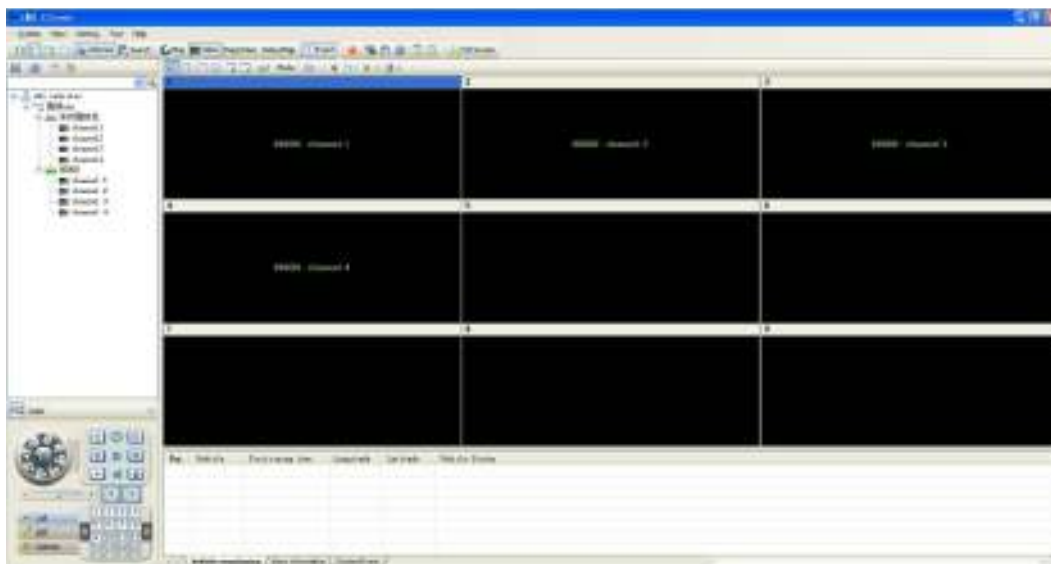


6.23 Stop real-time monitoring

6.2.3 Video surveillance

CMS clients can have surveillance to the vehicles video in the left list

1. When login, only display the online, with authorizing vehicles list, select video mode, as below:

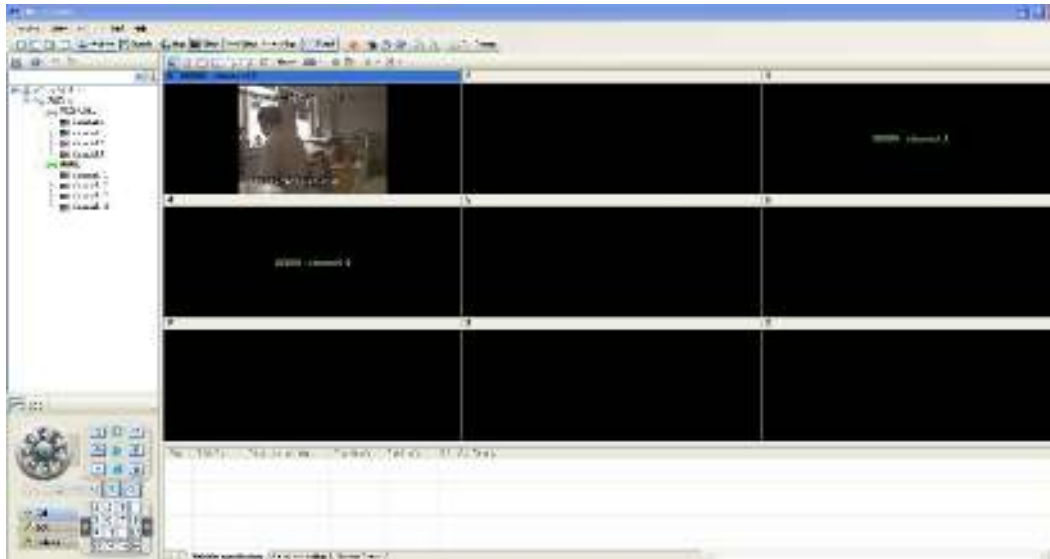


6.24 video mode

Preview vehicles video

Pull the online vehicle channels to the video windows, and display the vehicle video. It will give

related prompt info during the video preview.



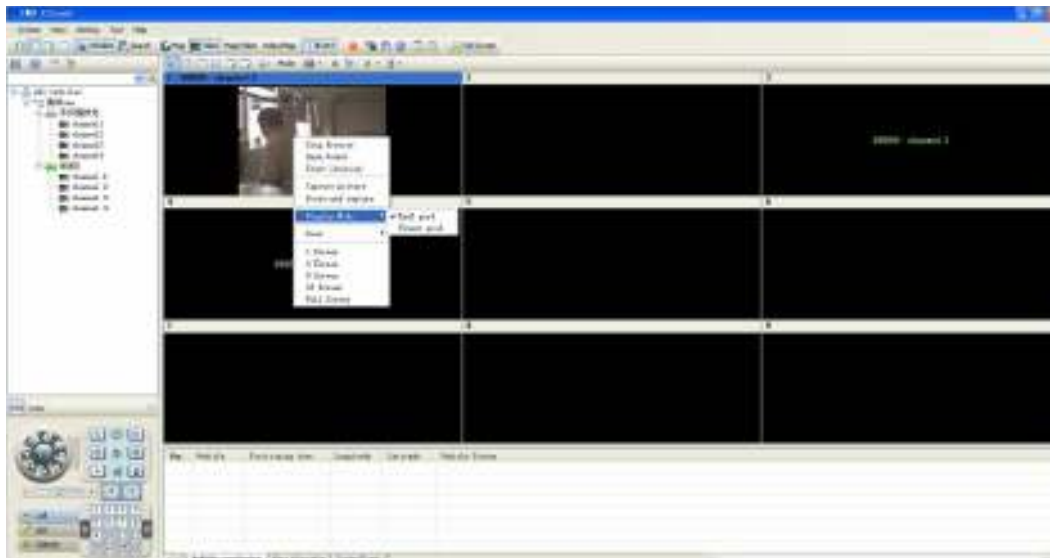
6.25 Preview vehicles video

Video display mode

Select the displaying video, right click, select the display mode.

Real good: real display the video data, but not very fluent.

Fluent good: System will storage a period of video first, and then display,



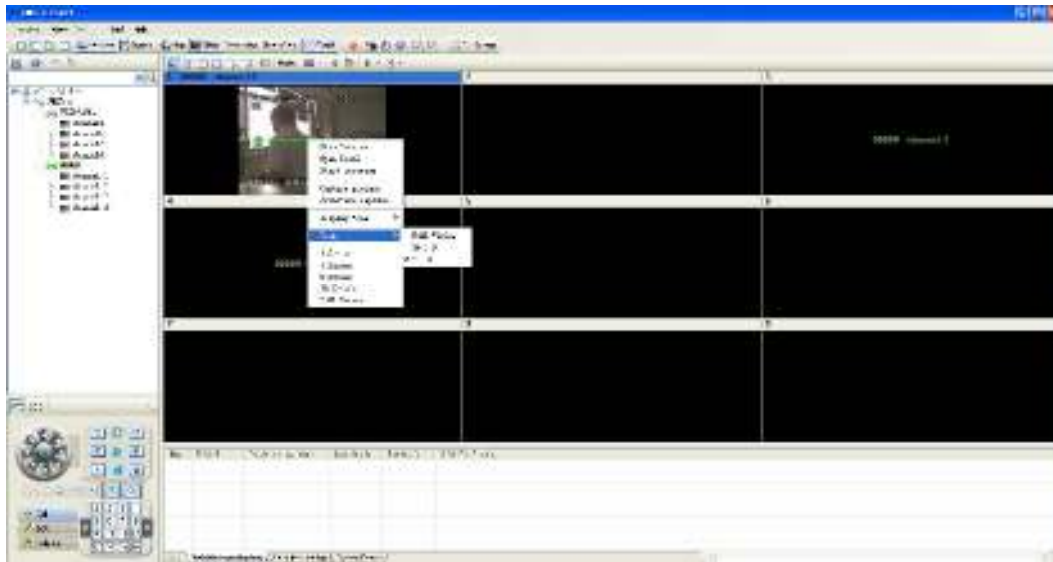
6.26 video display

Video display proportion

Full-screen display: full window display video

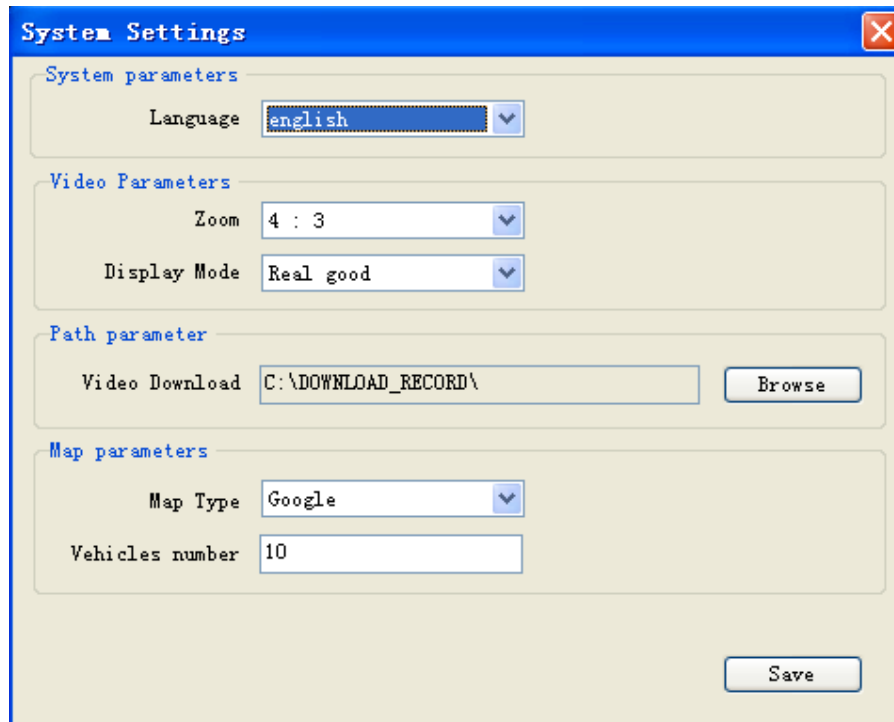
4 : 3 : Video display proportion by 4:3

16:9: Video display proportion by 16:9.



6.27 Video display proportion

Setup video parameter in the system setup.

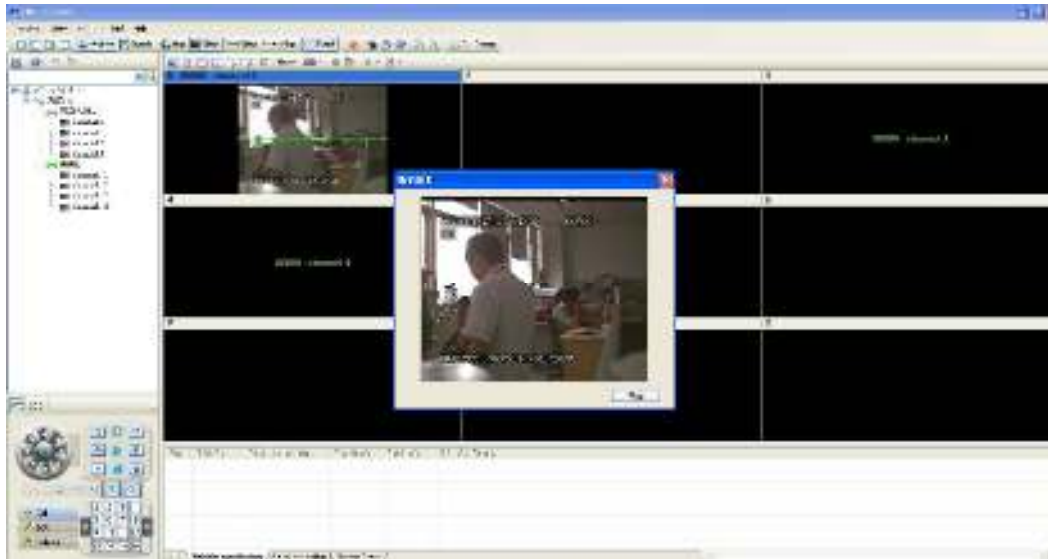


6.28 System settings

Capture image

Capture images in video display

Select the displaying video, right click capture image. Click “SAVE”.

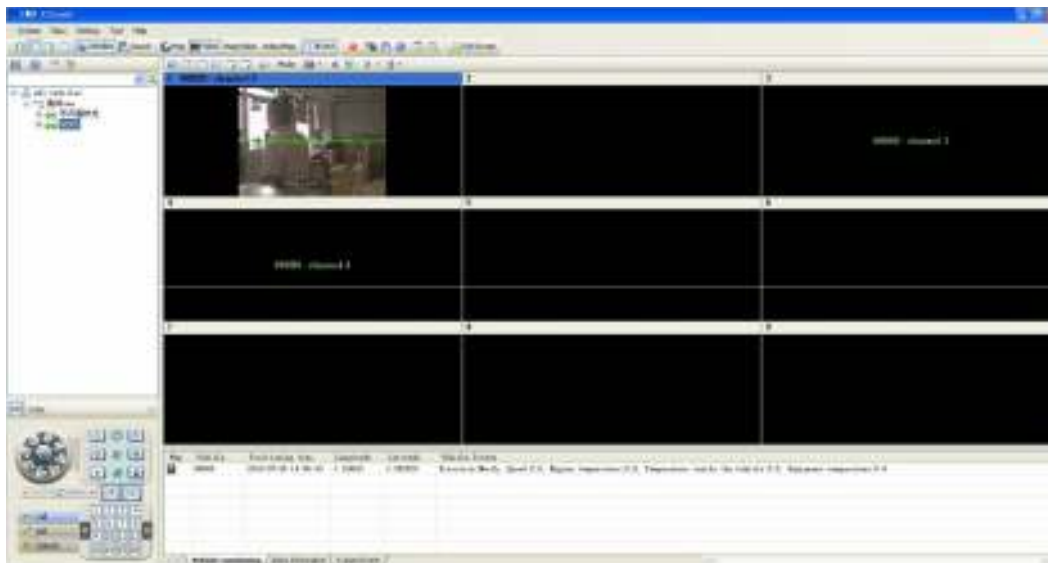


6.30 Capture picture

Real-time surveillance on Vehicle info

Pull the vehicles into the video display windows.

Click right select the vehicle surveillance



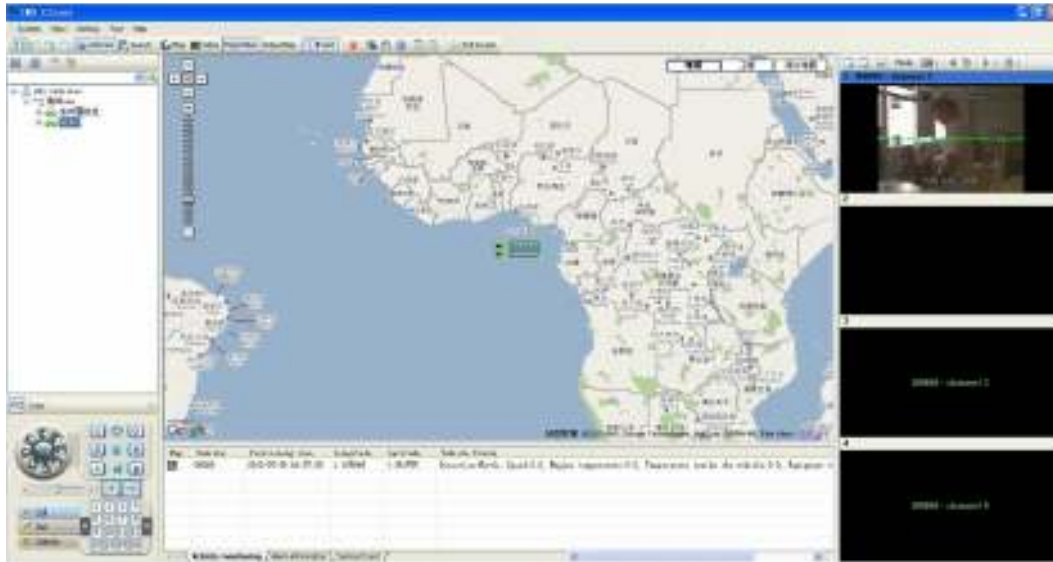
6.31 vehicle surveillance

6.2.4 Menu functions

6.2.4.1 System

Exit system

When select exit system in the system menu, current applied procedure will closed exit.

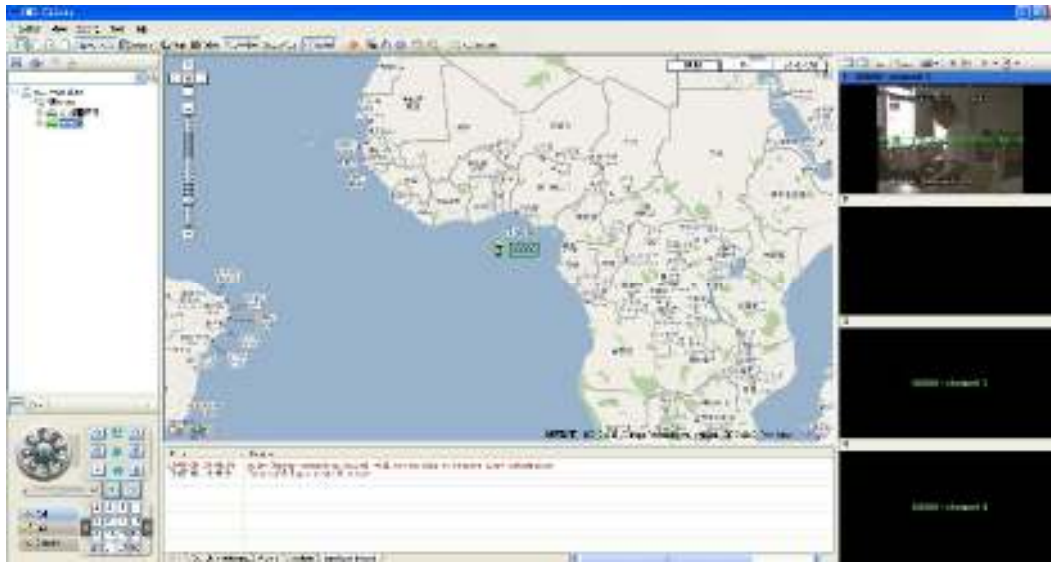


6.32 System Exit

6.2.4.2 View

Display interface1

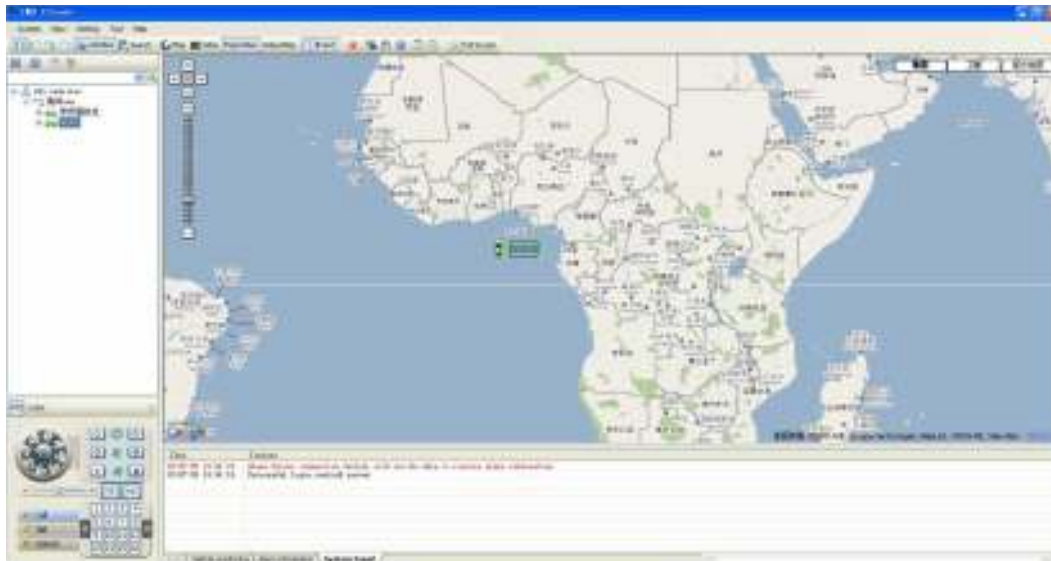
When select distribution 1 in menu as below:



6.33 Display interface 1

Display interface 2

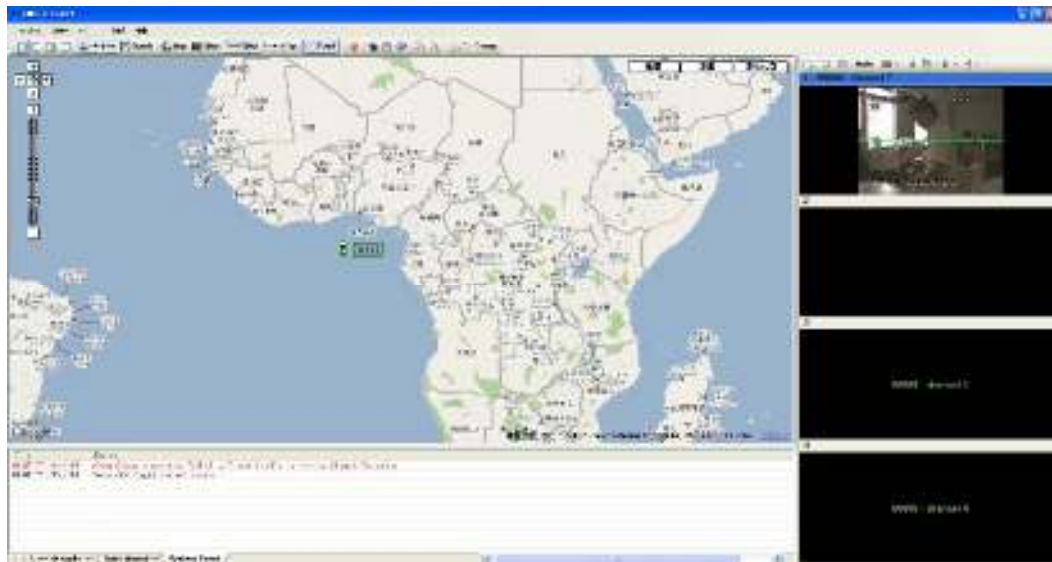
When select distribution 2 in menu as below :



6.32 Display interface 2

Display interface 3

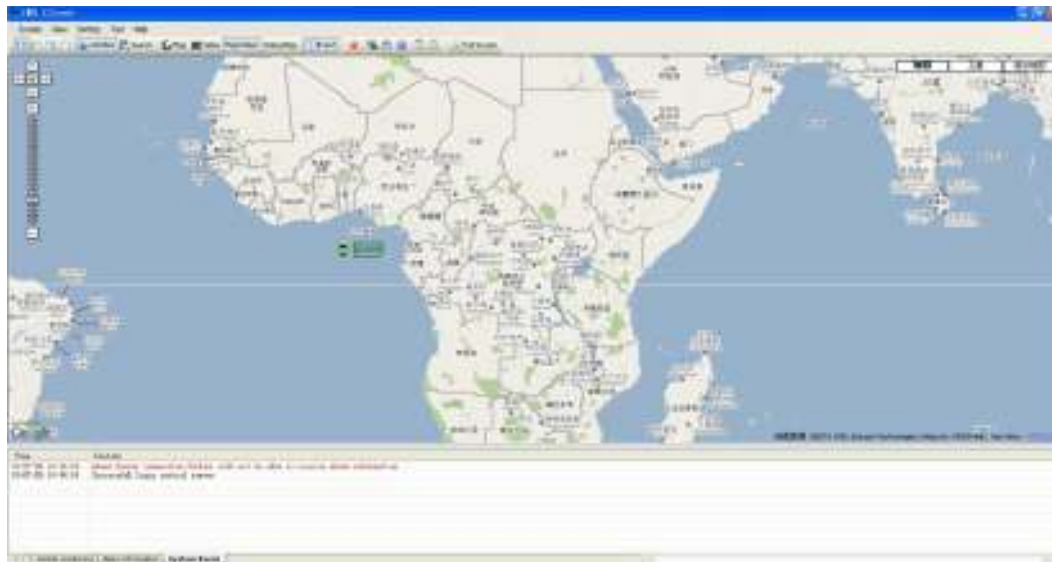
When select distribution 3 in menu as below:



6.33 Display interface 3

Display interface 4

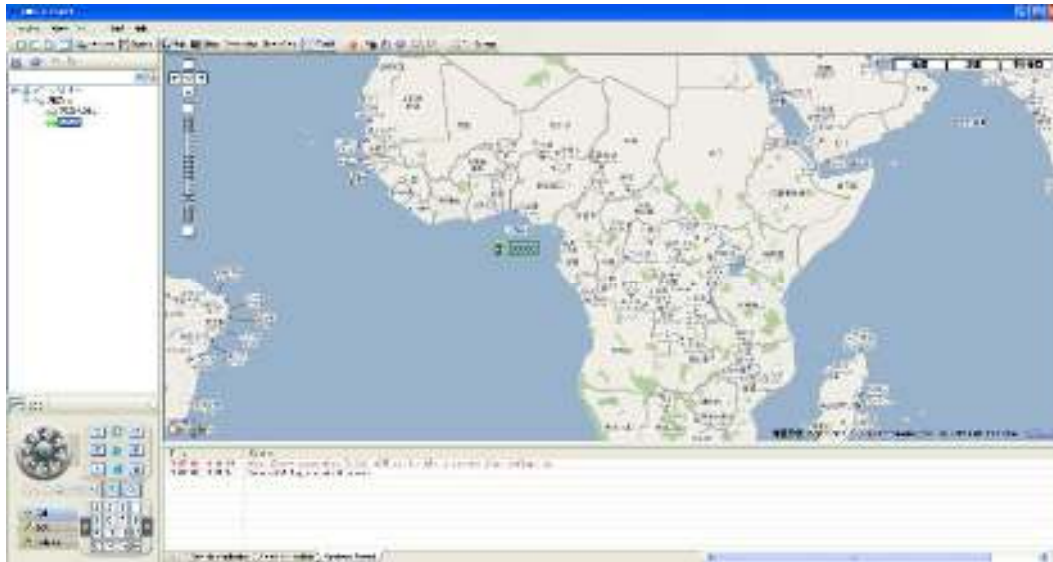
When select distribution 4 in menu as below:



6.34 Display distribution

Display vehicle list board

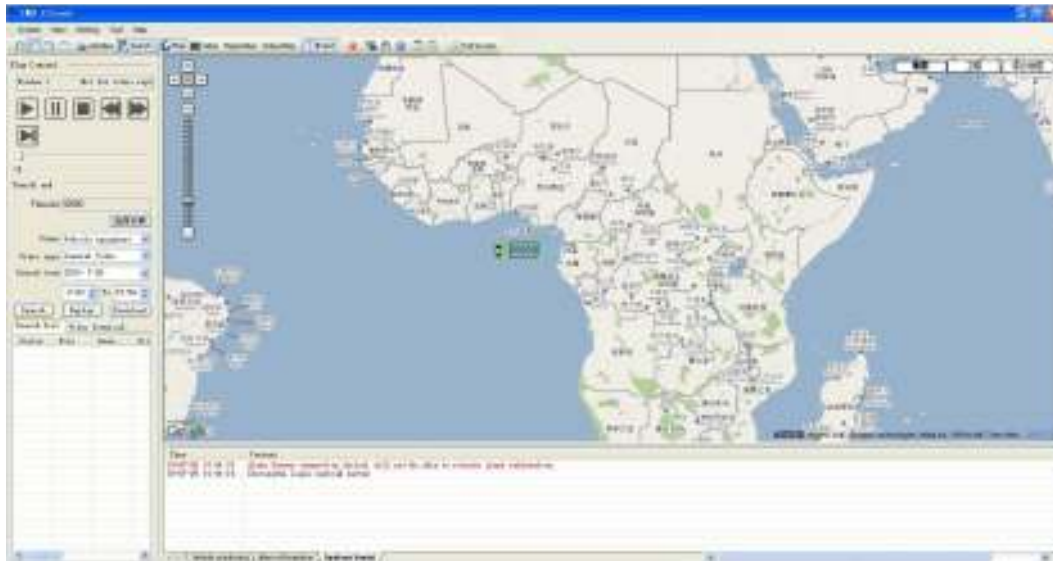
When select vehicle list blank in menu as below:



6.35 Display vehicle list board

Video searching and download board

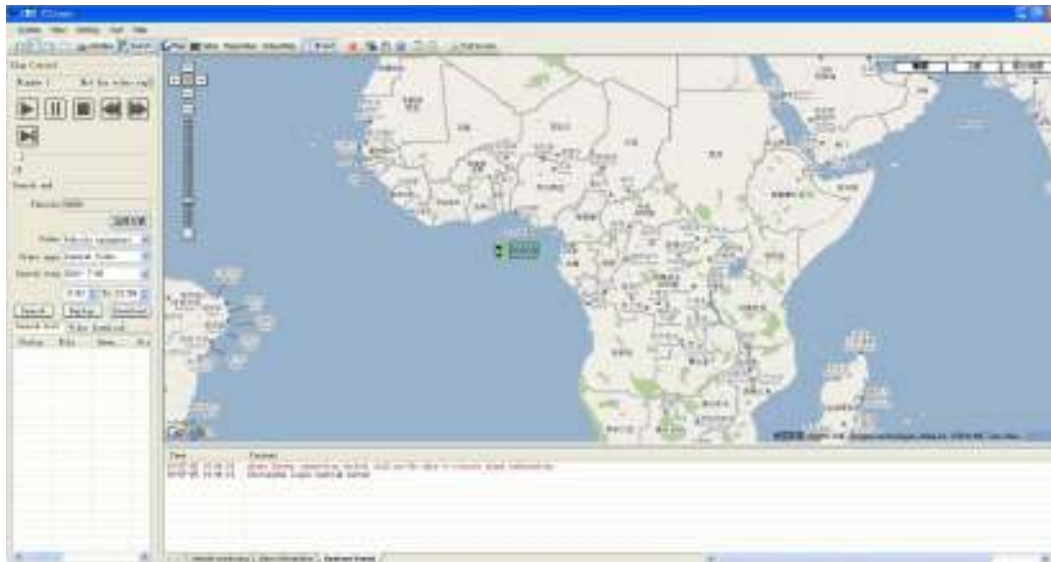
When select Video searching and download board in menu viewing, as below:



6.36 Video searching and download board

Map

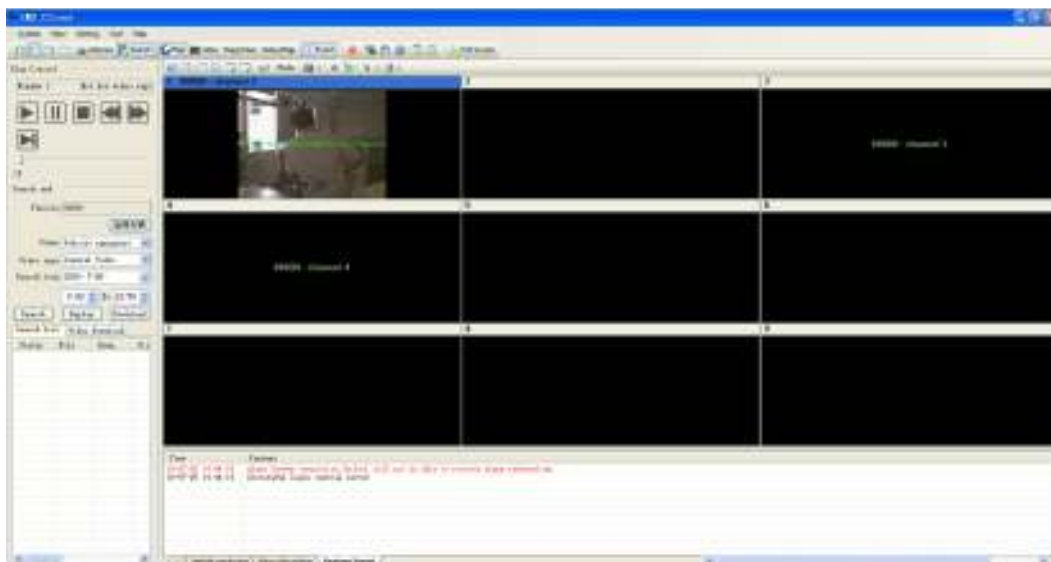
When selecting the map in menu, as below:



6.37 Map

Video

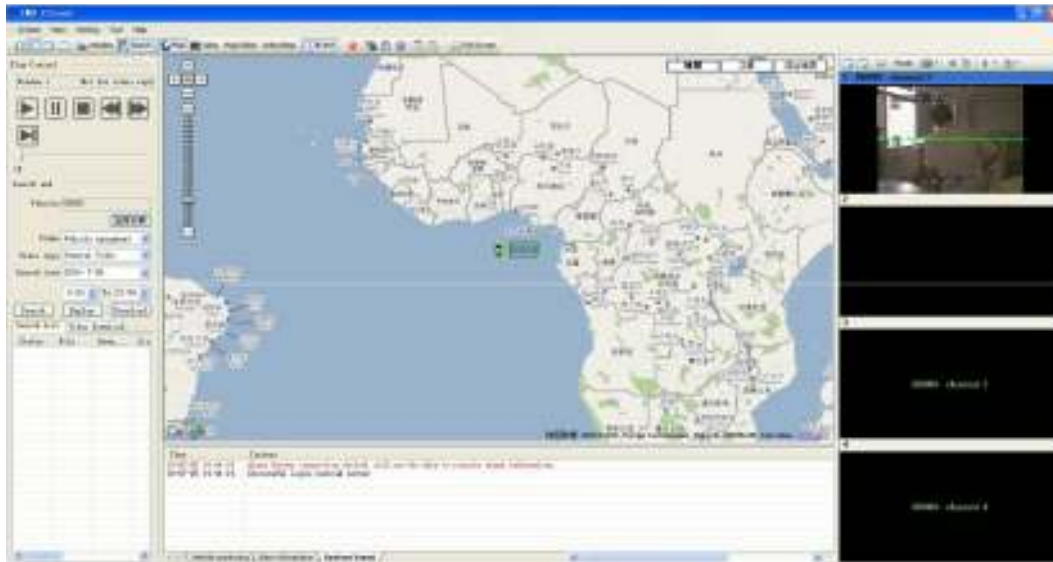
When selecting the video in window, as below:



6.38 Video

Map/ Video

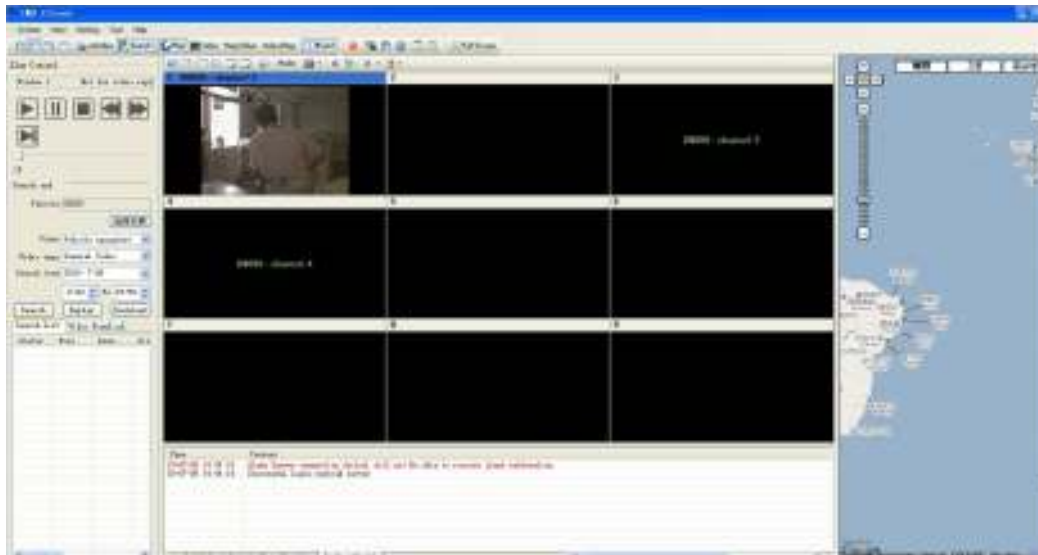
When selecting map/video, as below:



6.39 map/video,

Video / Map

When selecting the video/map, as below:

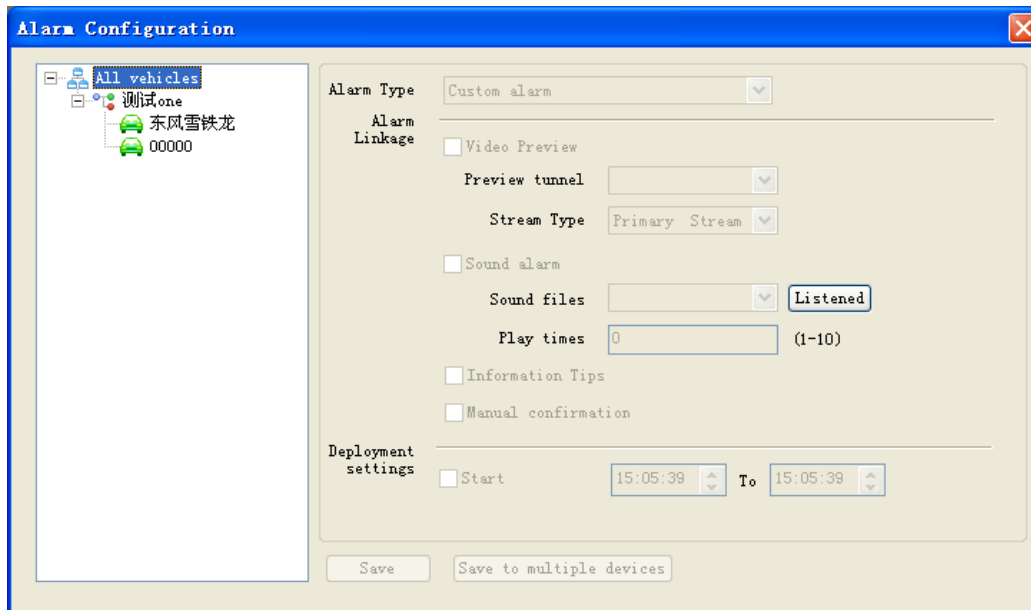


6.40 video/map

Issue

When selecting issues in the menu video, as below:

Alarm linkage setup



6.43 Alarm linkage setup

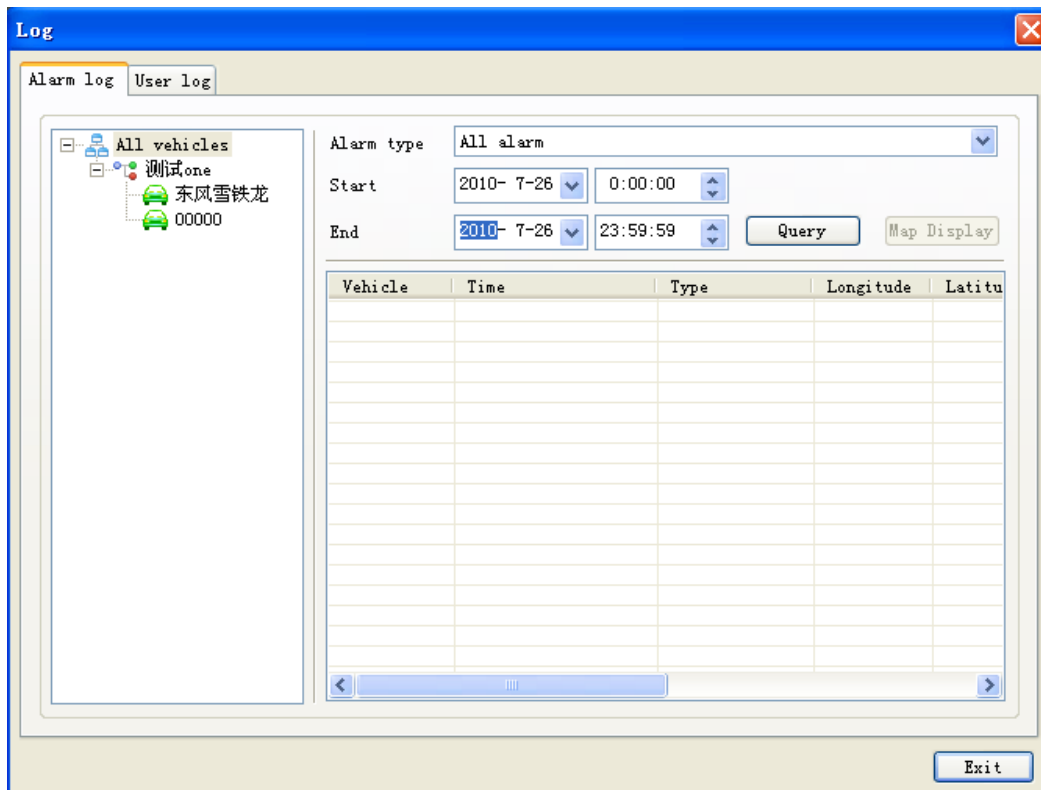
System setup

For further info, pls check in 6.2.3

6.2.4.4 Log

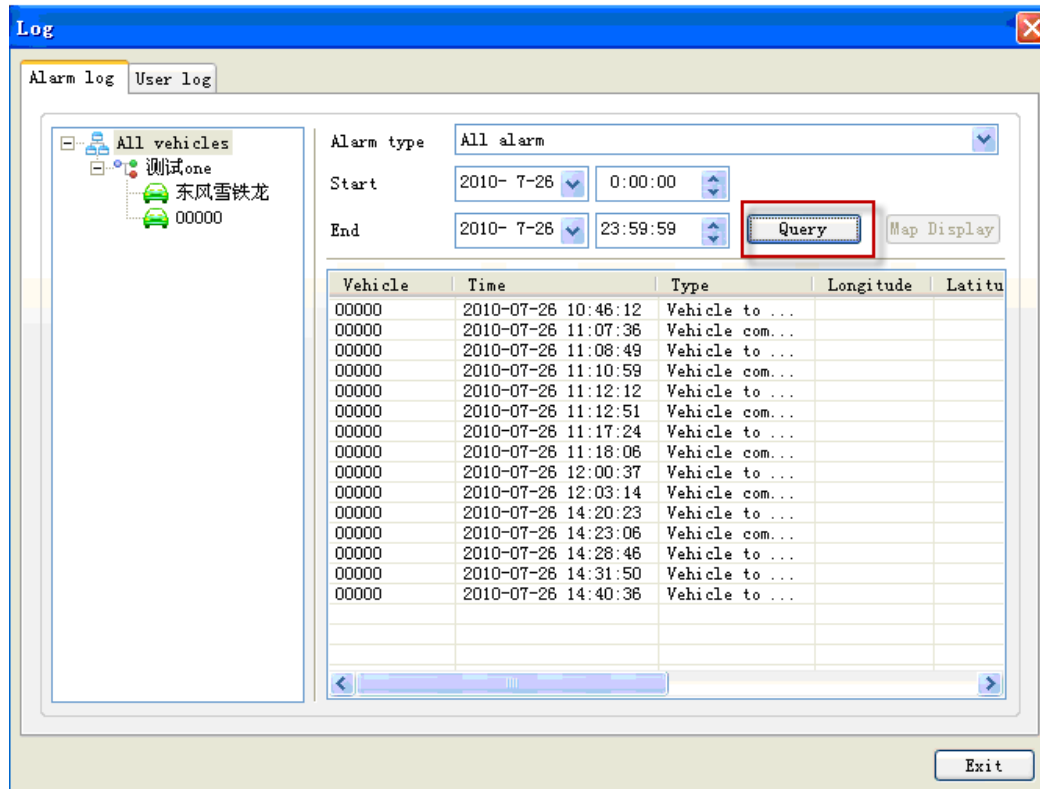
Alarm log

Select the alarm log in the menu bar log.



6.44 Alarm log

Select the inquired vehicle in the list, the alarm type and start & end time, Click Query , then can find out all of the alarm data during the period.

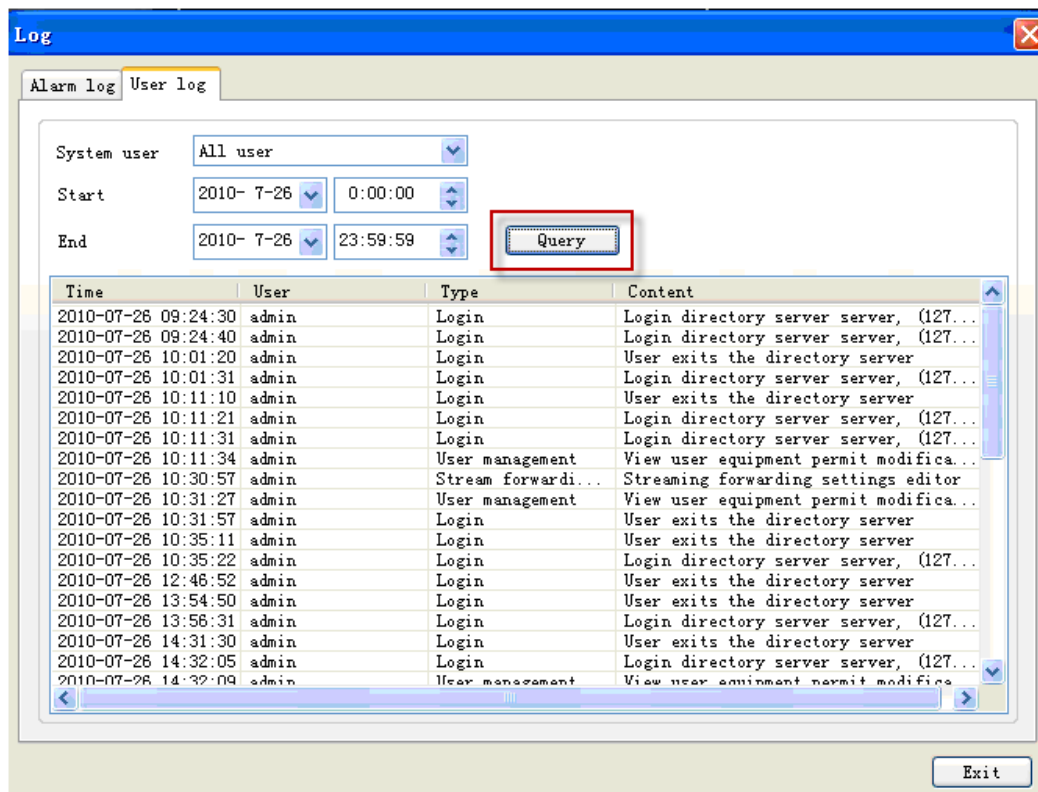


6.45 Query results

User log

Select the

Select the User log in the menu.

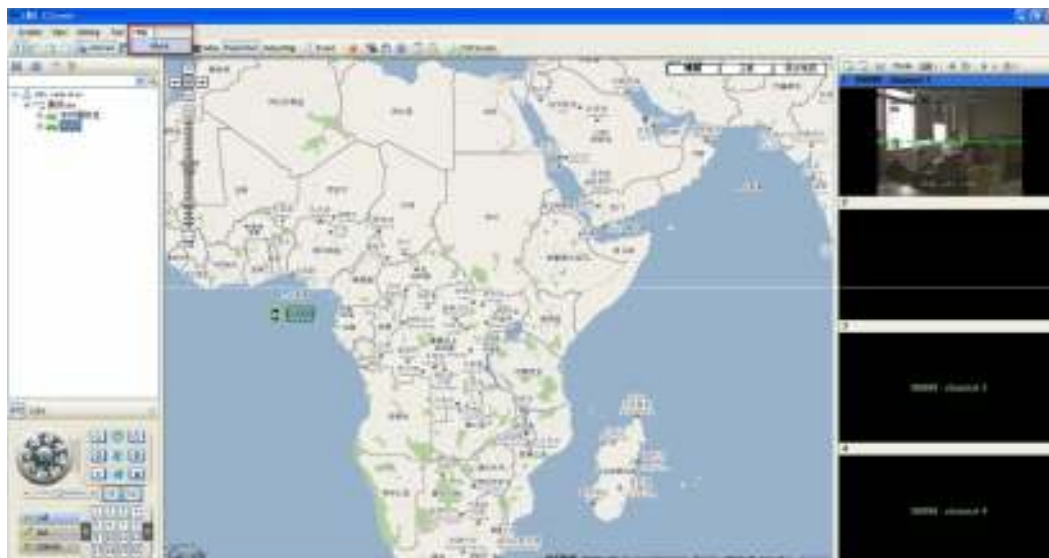


6.47Query results

6.2.4.5 Help

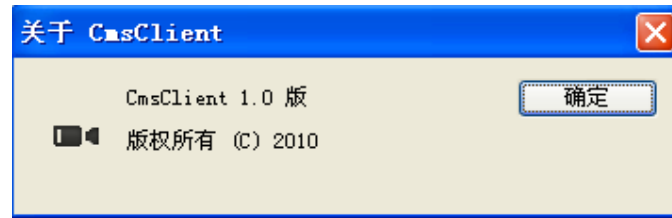
About

Select the about on the Help menu



6.48 About 关于

Enter related CMS client data , as below



6.49CMS client data