

Dear users, functional setting of this software requires some expertise. Therefore, please carefully read and fully understand the instruction before use.



IVMS Server Control Management Server

Installation Manual V3.8

2022/11



Thank you for choosing IVMS. Difference between software upgrading may result in features different from those described in the instruction,so Information contained herein is subject to irregular change without prior notice.



Notes

The contents described in this manual may be different from the version you are currently using. If you are unable to resolve a problem using the manual please contact the company's technical support department or supplier. The contents of this manual will be updated from time to time, the Company reserves the right not to give notification of any changes.

Statement

The Company does not assume any responsibility or any liability, loss or risk, direct or indirect outcome from the use or application of any of the contents of this document arising from any inaccuracies or omissions in this document.

This manual may contain screen shots used in day-to-day operations, the reporting, person and company names may be fictitious. Any similarity in the name and address of the company or an individual in reality is purely coincidental.

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1. Product Introduction

1.1. Product Functions

IVMS is a centralized management, monitoring and high-level system for all types of vehicles on a wireless network based on proprietary protocols and mini-label protocols. Based on high-quality, high-efficiency centralized and distributed network management, IVMS is based on network transmission of multimedia information such as video, audio and data, and performs real-time monitoring, GPS positioning, video storage, vehicle scheduling and alarm warning for users.

The IVMS management system integrates artificial intelligence and big data technology, and is a comprehensive platform for comprehensively solving the safety management problems in the driving process for commercial transportation industries such as dangerous goods, public transportation, passenger transportation and freight transportation. The system design has powerful functions, good compatibility, and rich expansion, which effectively guarantees the stability of the system and the convenience of future upgrade and expansion. In addition to integrated GPS/BD and 3G/4G video, IVMS combines driving behavior analysis and early warning equipment and forward artificial intelligence equipment to make the whole driving process completely transparent. The picture and video warning mechanism triggered by abnormal rules can be comprehensive. Improve the efficiency and level of supervision, and truly "passive" management as "active" management.

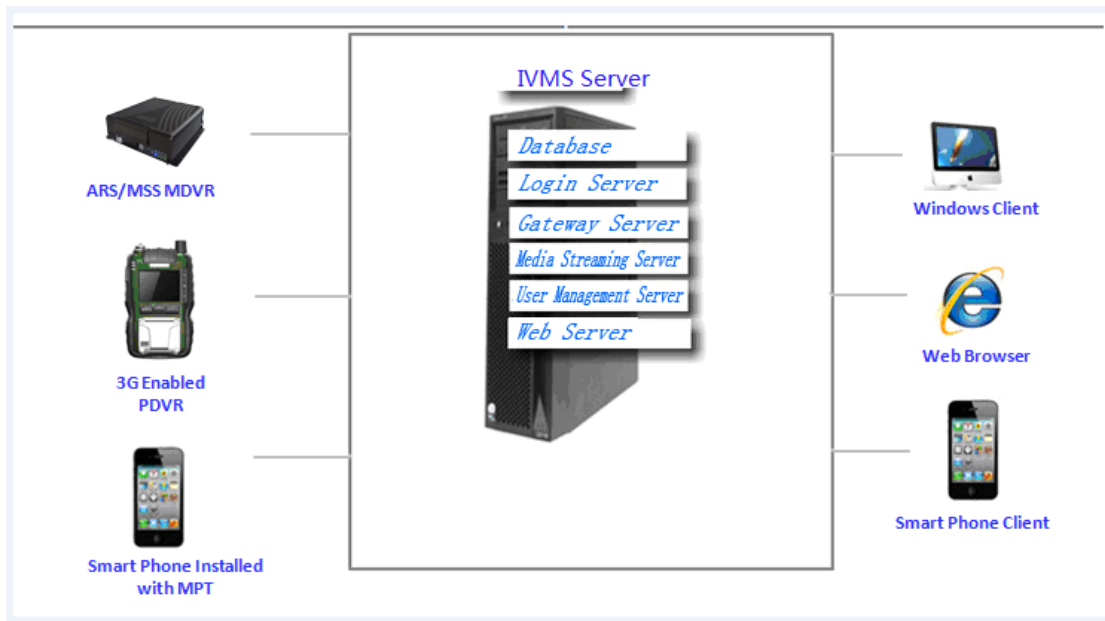
IVMS system can realize wireless remote real-time video monitoring, GPS map positioning, vehicle historical driving track playback, voice intercom, active security alarm analysis, alarm linkage, remote video storage, remote download recording, remote video playback, vehicle area management, vehicle remote Upgrade, vehicle SMS delivery, rich vehicle report management (speed, fuel volume, etc.), view alarm information, and more.

1.2 Features Introduction

- The IVMS Server Network can support up to 50,000 vehicles monitoring
- Vehicle information management system
- Quickly locate and track vehicles quickly via GPS information, displays real-time vehicle status display online and statistical interpretation of data collected
- Alarms and Alerts information statistical functions
- Active Security Alarm Analysis (ADAS+DSM+BSD)
- Send SMS Alerts
- Real-time remote audio and video surveillance

- Real-time vehicle front end image capture function
- Two-way voice intercom, vehicles broadcast function
- Pan Tilt Zoom (PTZ) remote control function
- Vehicle's historical tracking playback function
- Remote video search, download and playback capabilities
- Depending on the configuration program, the storage server automatically snap pictures, automatic recording, occur after alarm linkage, automatic SMS and mail to notify the user
Alarm Linkage (Emergency button alarm, Video signal alarm, Unauthorized unlock alarm, Hard disk-error alarm, Over speed alarm, Motion detection alarm, Long idling time alarm, Temperature alarm, GPS signal lost alarm, IO alarm (custom), Electronic map lock alarm.
- Assets Report Description
- iPhone and ANDROID mobile smart phone Client Support

1.3 System Architecture



IVMS Server Architecture

The IVMS consists of 14 Functional Servers, namely the:

1. Login Server
2. Gateway Server
3. Media Server
4. HTML5 Media Server
5. User Server
6. Web API Server
7. Download Server
8. Storage Server
9. Auto Upload Storage Server
10. Redis Server
11. Data Server
12. IVMS SSL Server
13. Web server
14. Watch Dog

Note: Different server software versions may have different number of functional services

Users have the option of deploying 1 or 2 of the 14 Functional Servers stated above such as, Login Servers, Multiple Gateways Servers, Media Streaming Servers, and Multiple Users Management Servers to provide Mobile DVR and Remote Client Services and features as GPS Location, Video and Alarms.

Description of Main Functional Servers

Database Server: Used mainly as Storage Server, Configuration information and Alarm events.

The database server application used is MySQL-8.0.29.

Login Server: For registration of various servers and to coordinate and manage registered servers, Assign User Clients, Configure End Management Server, Allocation of Gateway Server for MDVR devices, User Management, Gateway Servers, Server Load Balancing.

Gateway Server: Provide vehicle access. Vehicle Gateway Server is used to establish a communication link between the MDVR device and the server, sending vehicle location and status information via this link.

Media Server: Provides media data forwarding function. Including Audio and Video, Intercom, Remote Monitoring, Remote Capture, Configuration parameters, Search and forwarding download data.

User Server: Provides Remote Client Access

Storage Server: For storing pictures, video capture and reduce costs

WIFI Download Server: When within the assigned access point range, the WIFI enabled MDVR will automatically upload the video files onto the server.

Web Server: Provides GIS electronic map information, and provide links to the IVMS Backroom Control center, Front End management system login.

2. IVMS Server Deployment

2.1 IVMS Server Minimum Requirements

OS	Microsoft Windows Server 2008 or Higher
CPU	Intel quad-core Xeon, Frequency of not less than 2.33GHz
Network	2 Gigabit Ethernet
RAM	4G or more
Hard Disk	1TB or more
CD Player	DVR-ROM
Others	Support VGA Display Supports normal keyboard, recommended to use USB Keyboard LED Indicator lights for Computer, HDD and other Activities Status

2.2 Media Streaming Server

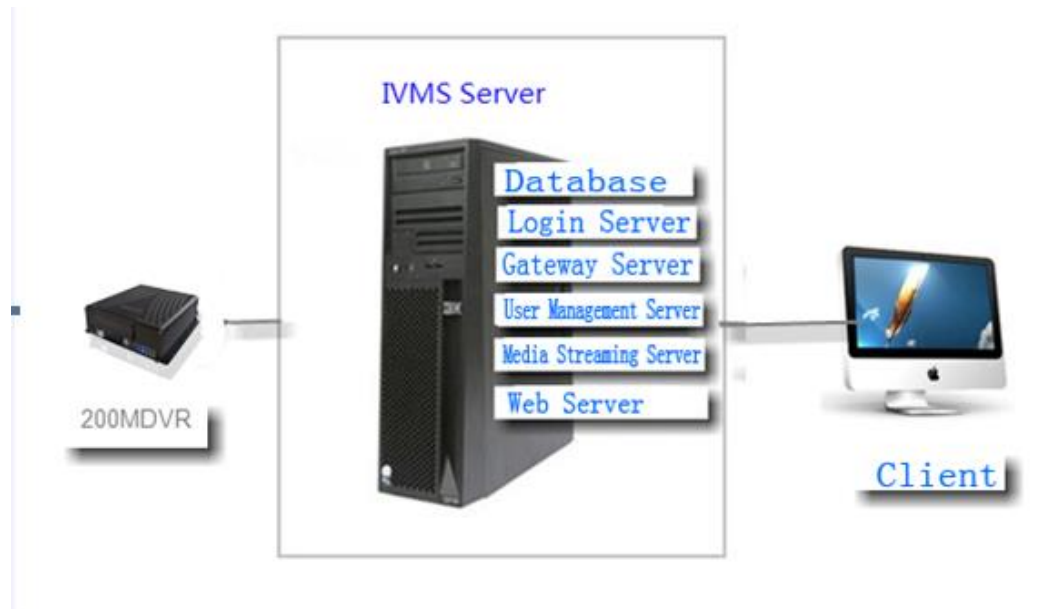
Performance Specifications	
	Each Streaming Server, distributed, can support up to 256 concurrent

	<p>Incoming Channels with a bandwidth of 128Mbps.</p> <p>Each Video Channel supports up to 6 Clients viewing. Each Channel maximum data rate output is 512Mbps.</p> <p>Gigabit Ethernet ports, 20Mbps output stream rate average forwarding delay is less than 5ms</p> <p>Gigabit Ethernet ports, 100Mbps output stream rate average forwarding delay is less than 40ms.</p> <p>Gigabit Ethernet ports, 512Mbps output stream rate average forwarding delay is less than 200ms.</p>
Video Bandwidth	
	<p>Using CIF video format per Channel video data rate is 320Kbit/second, 256 video channels therefore requires $320 \times 256 = 81,920$ Kbit bandwidth.</p> <p>NOTE: As the MDVR device in a 3G network environment has network bandwidth limitations. The maximum upload is using CIF resolution video format.</p>

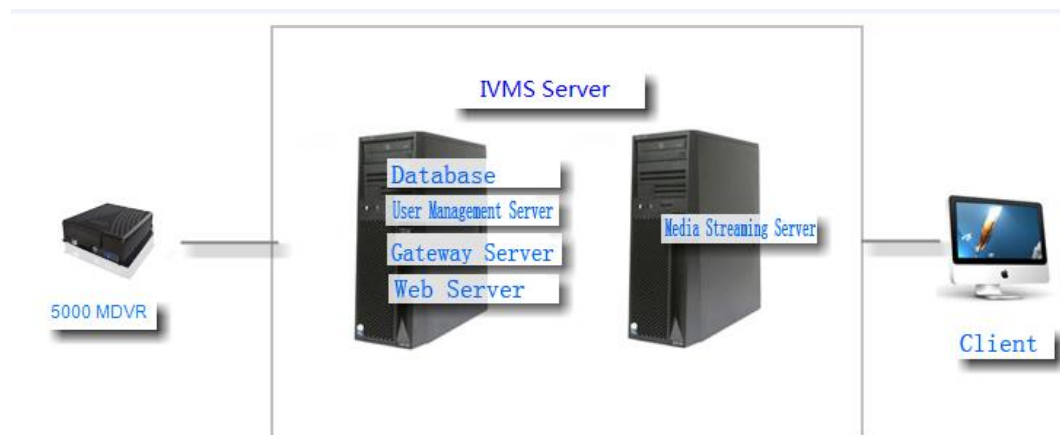
2.3 Examples of System Deployment

These examples are for reference only, using user's hardware, network and IVMS, MDVR installation environment.

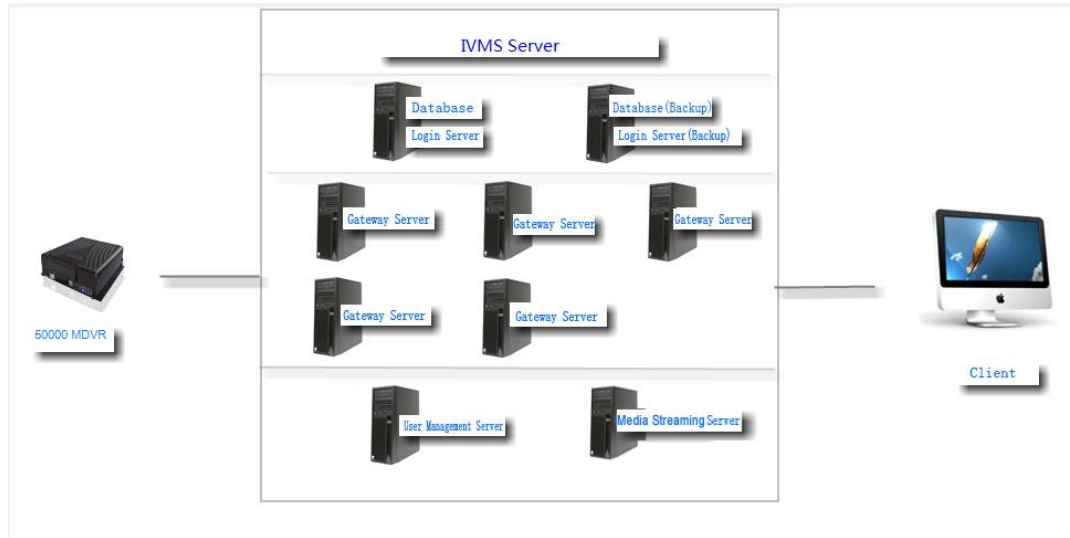
2.3.1 200 Vehicles/Devices



2.3.2 5000 Vehicles/Devices



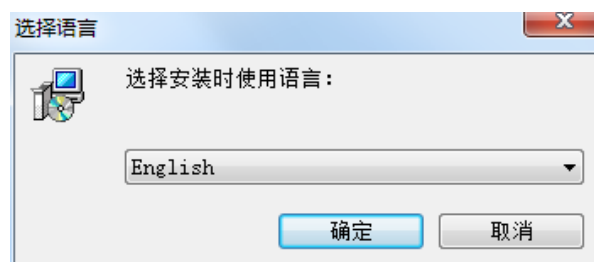
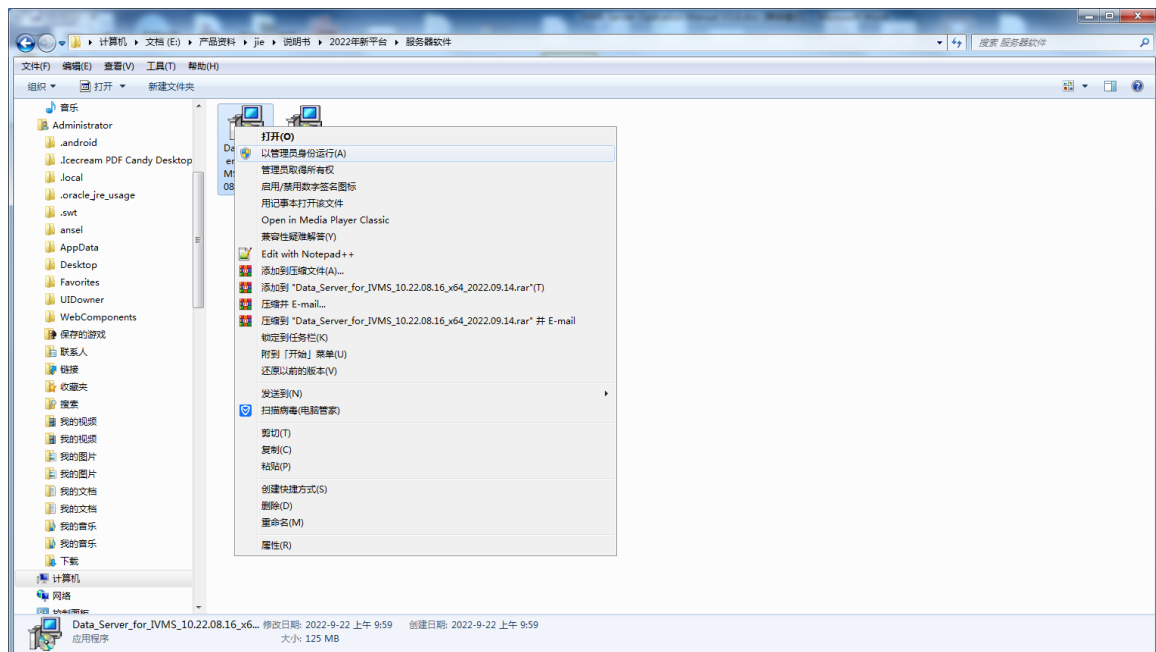
2.3.3 50000 Vehicles/Devices



3. MySQL Server Installation

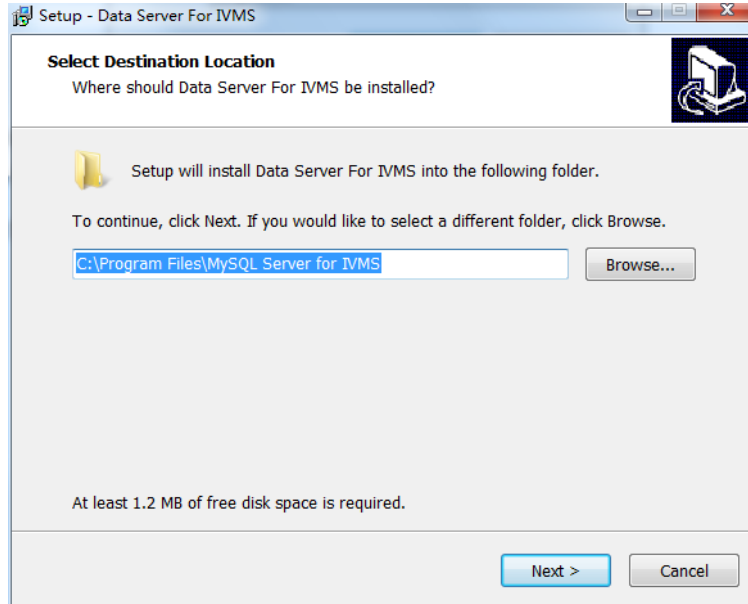
IVMS Server needs to install Data MySQL Server separately.

1. Run MySQL Server software as Administrator.



2. Click "OK" to enter the installation wizard interface, select the installation path interface, as shown below:

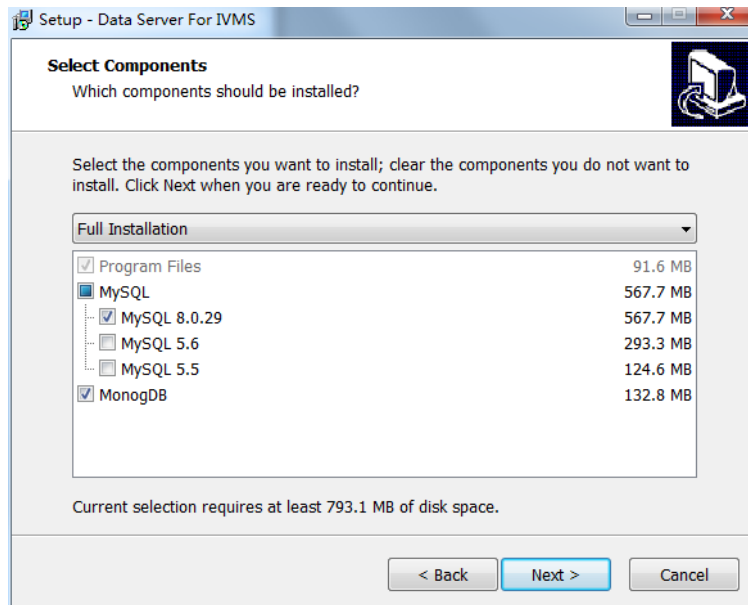
Note: The installation directory does not need to be the same as the server program.



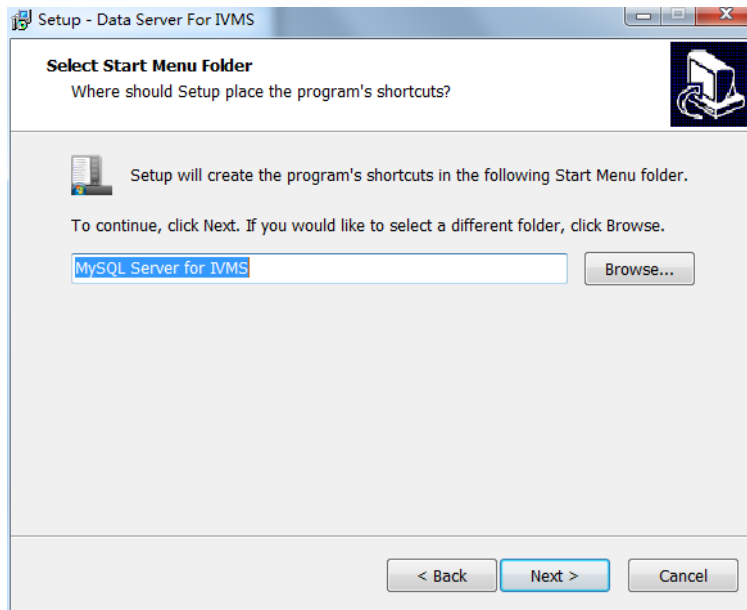
Select Installation Path

3. Select the method you need to install, and then click "Next" to continue.

Full installation by default latest version MySQL 8.0.29. If you are not familiar with the installation of our server, please consult our technical staff first.

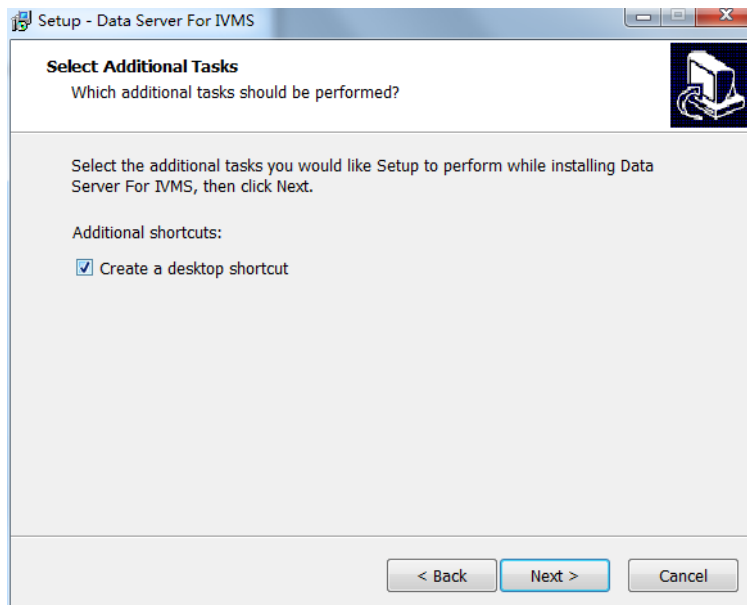


4. Specify the target installation path, click "Next" to continue.



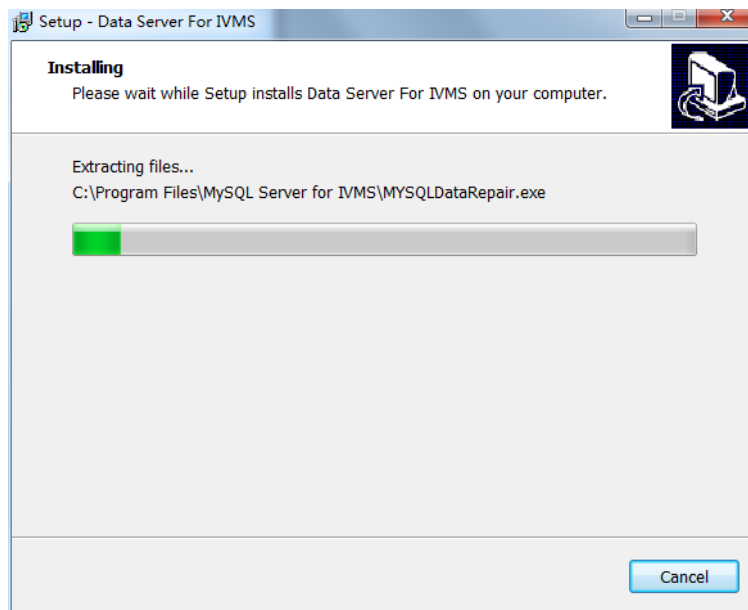
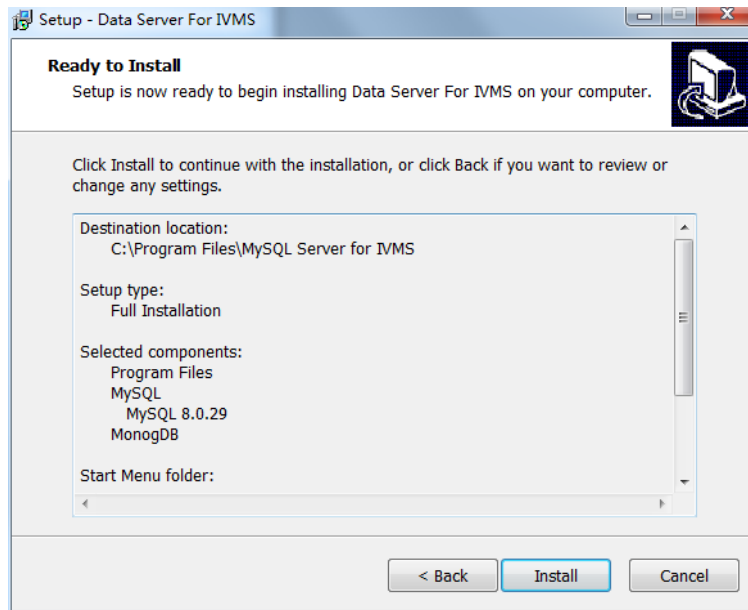
Select the Program location

5. Select additional tasks (whether to create a desktop shortcut), and then click "Next" to continue.



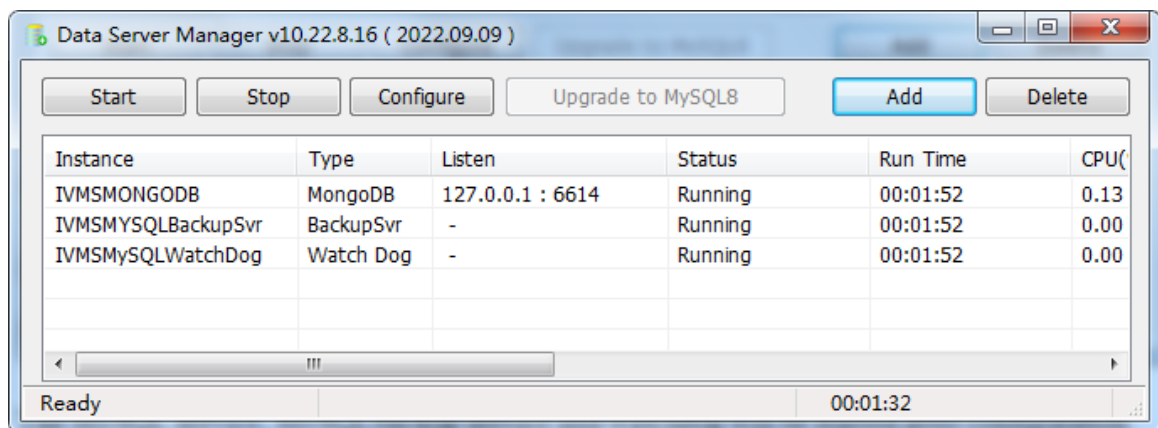
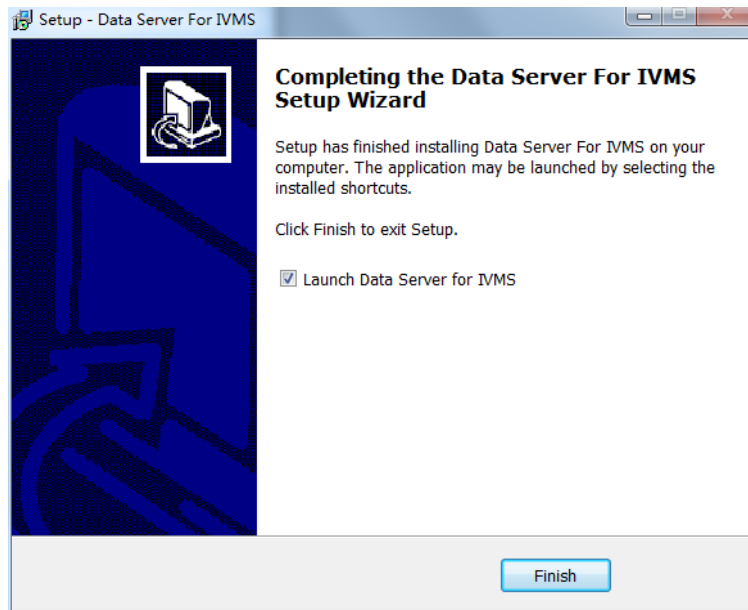
Choose whether to create a desktop shortcut

6. Click on “Install” to complete the Installation.



Installation Process

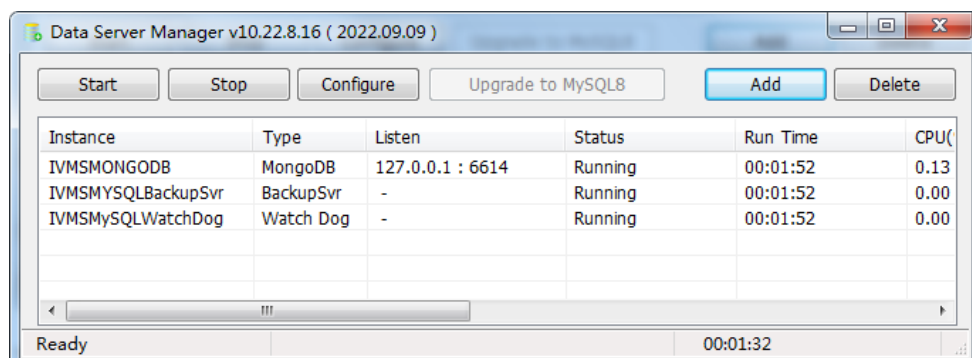
7. Click the "Finish" button, Data Configuration begins after this.



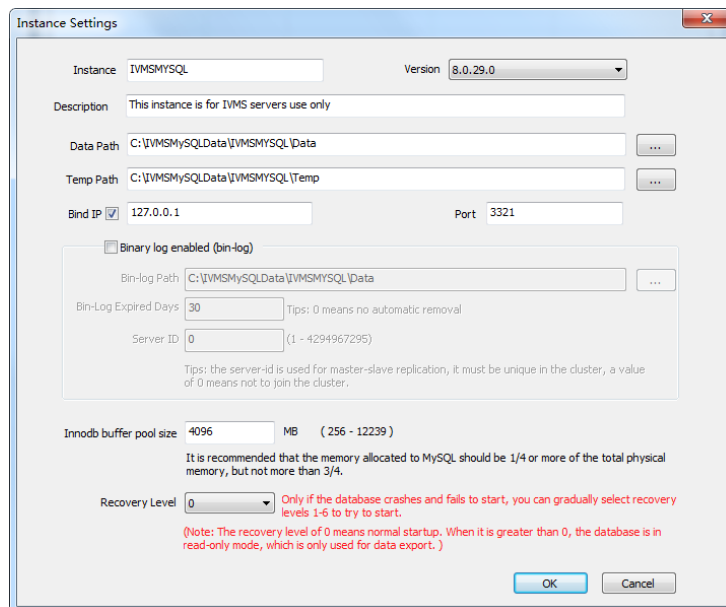
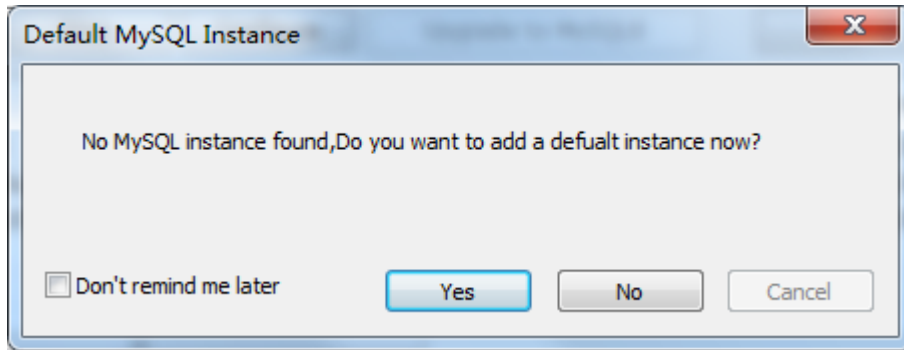
4. Data Server Configuration

4.1 ADD service

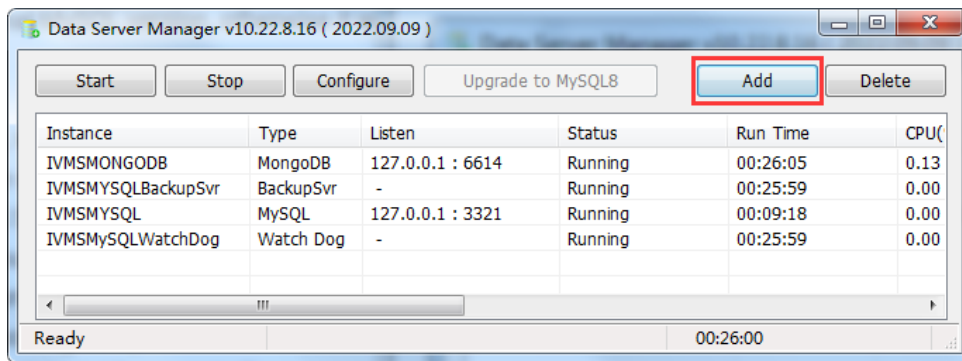
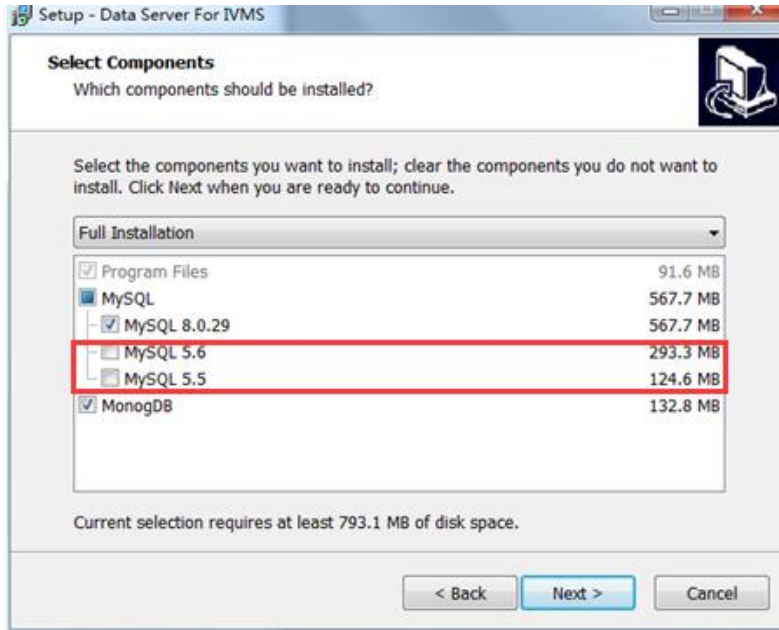
If your server does not have mysql data before, choose the latest MySQL version to install.



The IVMSMONGODB service, IVMSMySQLbackup service and IVMSMySQLwatchdog will be started after configuration is ready, and the data server will pop up a window asking whether to add a default MySQL instance, click Yes, and the installation interface will pop up, click Yes. (Under normal circumstances, you can choose the default parameters)



If you need to add another version of MySQL 5.5/5.6 (corresponding to the old server), select MySQL 5.5/5.6 during installation. After installation, click ADD, as shown below:



Service: Service name (cannot be repeated)

MySQL version: select the MySQL version that needs to be started.

It is recommended to use 8.0 for a new installation. The existing MySQL data needs to use the original MySQL version, otherwise it will not start

Data path: MySQL data path

Note: If you use the original MySQL version, you can use the original data path (you need to uninstall the old MySQL). The default data path of the old service is: \IVMS Server\MySQL\gserver_dbdata.

If you use a new MySQL version, you need to use the upgrade tool to import and import data, and you can use the new path. (You cannot uninstall the old MySQL before importing data)

Port: The port used by the database (cannot be repeated).

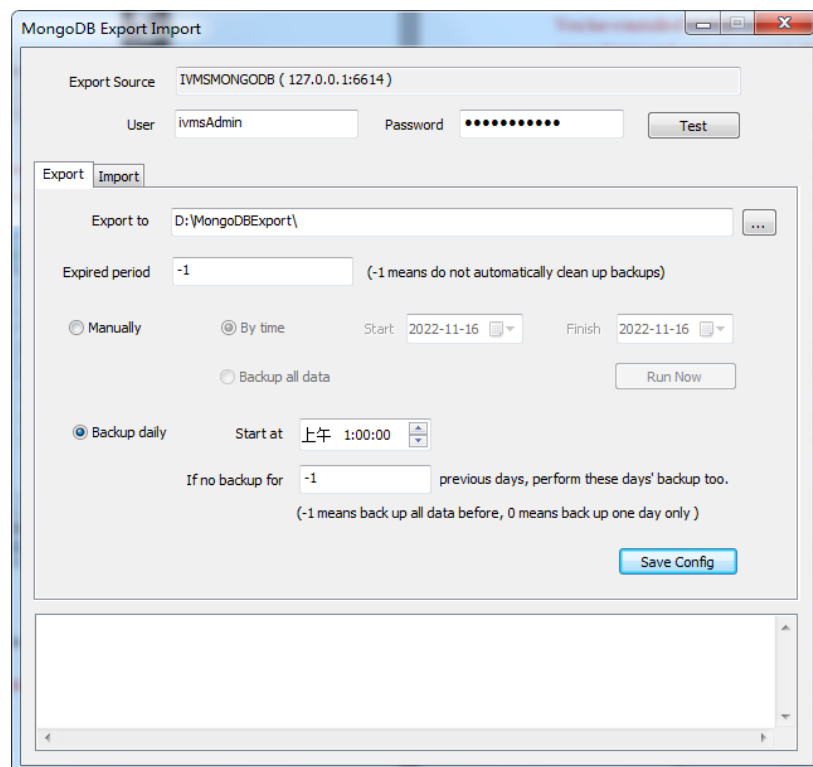
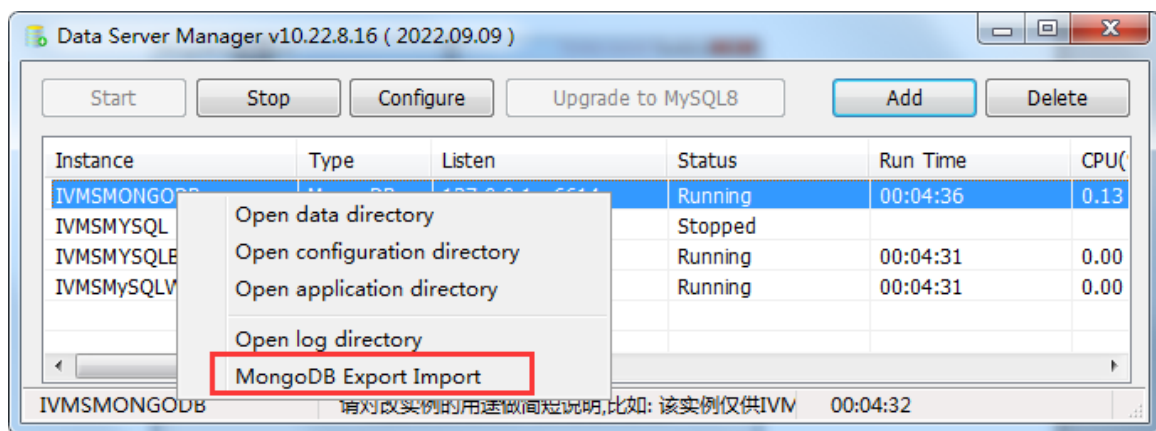
Bind address: database IP

After configuration, the database service and watchdog will be automatically started

You have installed MySQL version for the first time, and it may appear that MySQL is in a stopped state and cannot be started after installation. You need to delete and re-add the latest version (8.0.29) of MySQL.

4.2 IVMSMONGODB backup and recovery

Select "IVMSMODODB" and click the right mouse button to display five options: open the data directory, open the configuration directory, open the directory where the application is located, open the log directory, and mongodb import export tool. Click MongoDB to import the export tool to enter the interface, as follows:



MongoDB backup settings:

Backup directory: manually modify the backup directory.

Number of backup reservations: How many days can be kept backup files (-1 indicates not to automatically clean up the backup).

Manual backup: Select the specified time period backup, whether to back up all files, etc.

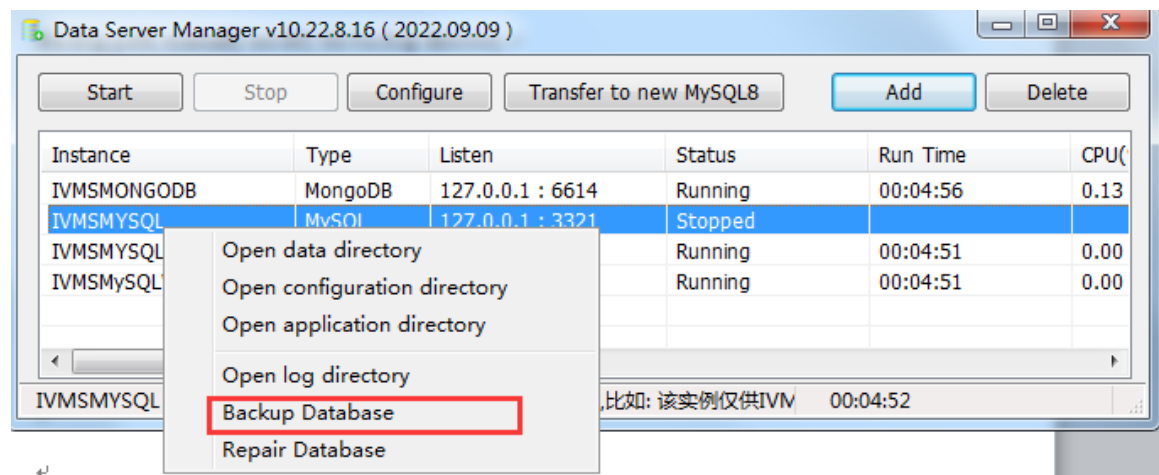
Automatic filing: Set up a certain time to automatically perform backup and do not back up at the current day, and perform automatic backup (default-1 backup all data).

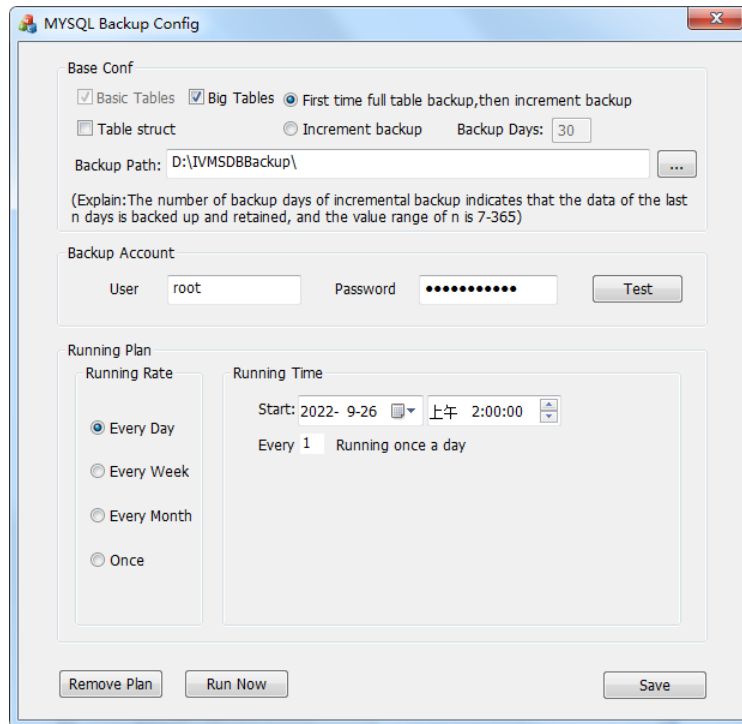
MongoDB recovery settings:

Can be imported MongoDB data before, but now different import methods, such as full import, day by day, and date.

4.3 IVMSMYSQL backup plan

Select "IVMSMYSQL" and right-click the mouse to display six options: open the data directory, open the configuration directory, open the directory where the application is located, open the log directory, backup plan and restore database. Click the backup plan to enter the interface, as follows:





IVMSMYSQL data backup configuration:

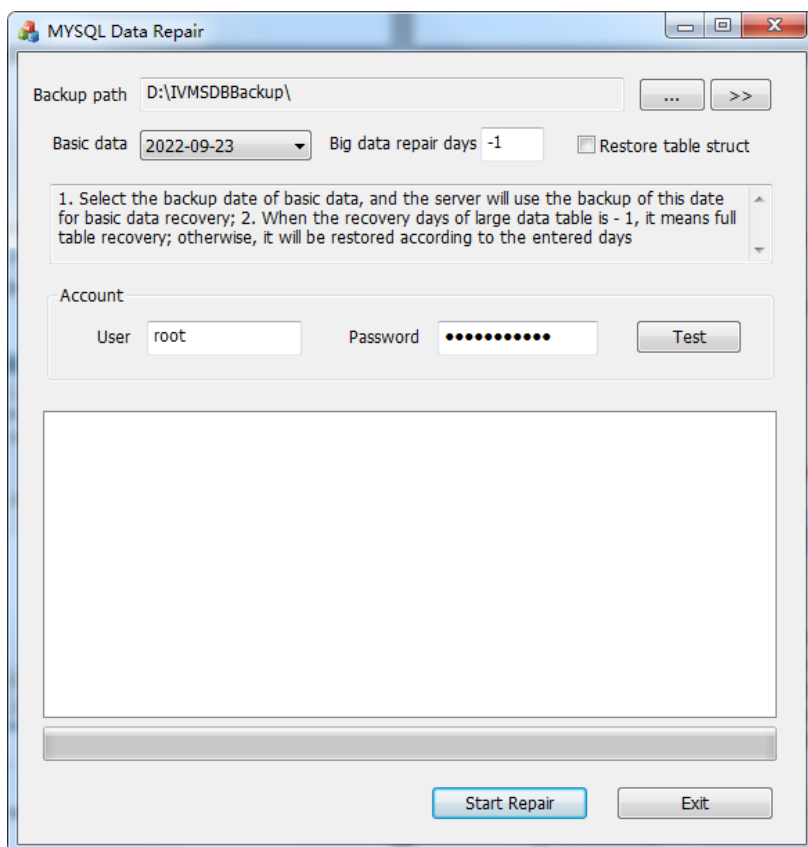
Basic configuration: default selection (basic data tables, big data tables, first execution full backup, each execution of incremental backup).

Backup path: manually modify the backup directory.

Backup execution plan: Select the frequency of database execution (daily, week, month, once), and configure the execution time preservation plan.

4.4 IVMSMYSQL resume database

Select "IVMSMYSQL" and right-click the mouse to display six options: open the data directory, open the configuration directory, open the directory where the application is located, open the log directory, backup plan and restore database. Click to restore the database to enter the interface, as follows:



Import IVMSMYSQL data

Note: 1. Select the backup date of the basic data, the server will use this date backup to recover the basic data;

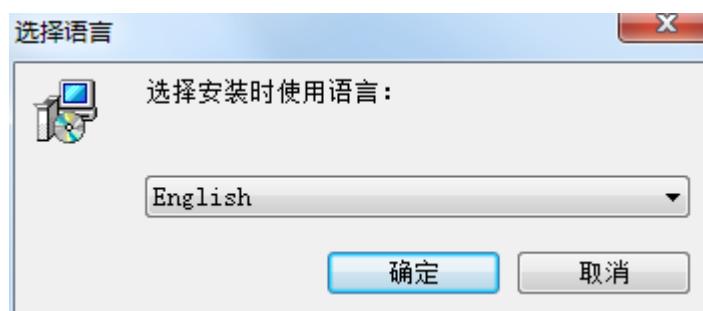
2. When the number of big data table recovery is -1, it means full recovery, otherwise it will recover according to the number of days input;

5. IVMS Server Installation

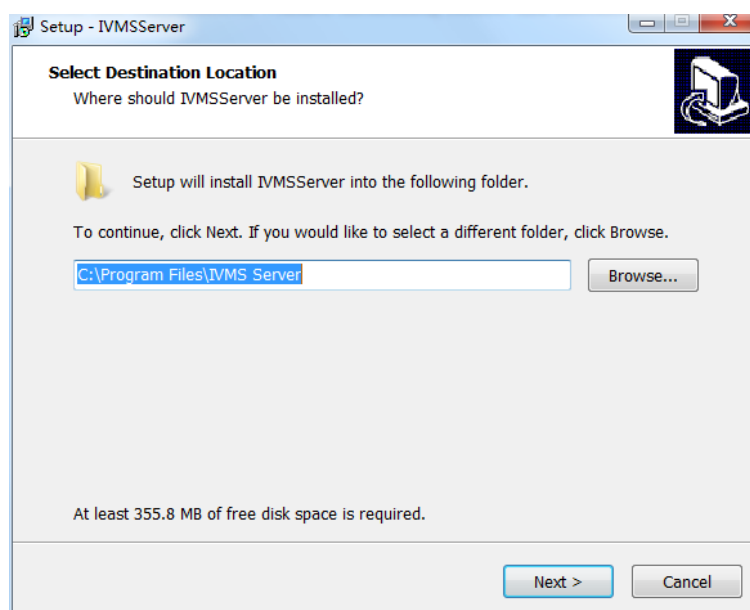
Requirements:

Existing IVMS Server installation can directly install the new version of the IVMS Server.

1. Run IVMS Server software as Administrator.



2. Click "OK" to enter the installation wizard interface, select the installation path interface, as shown below:



Select Installation Path

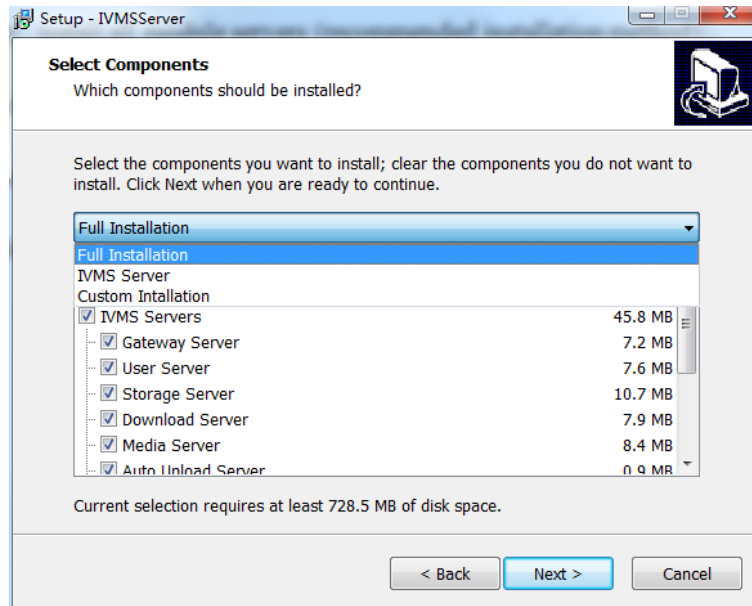
3. Select the method you need to install, and then click "Next" to continue.

Full Installation: install all module servers (recommended installation method);

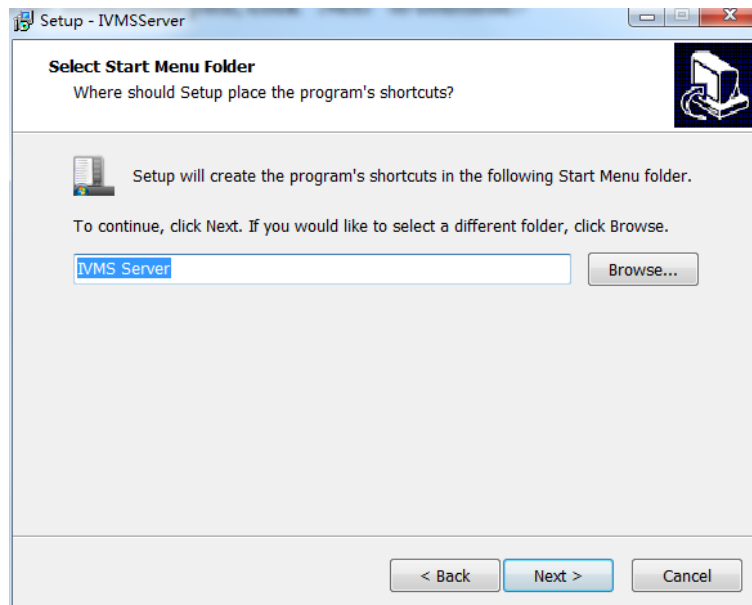
IVMS server: install the standard version of IVMS server;

Custom installation: customized installation;

If you are not familiar with the installation of our server, please consult our technical staff first.

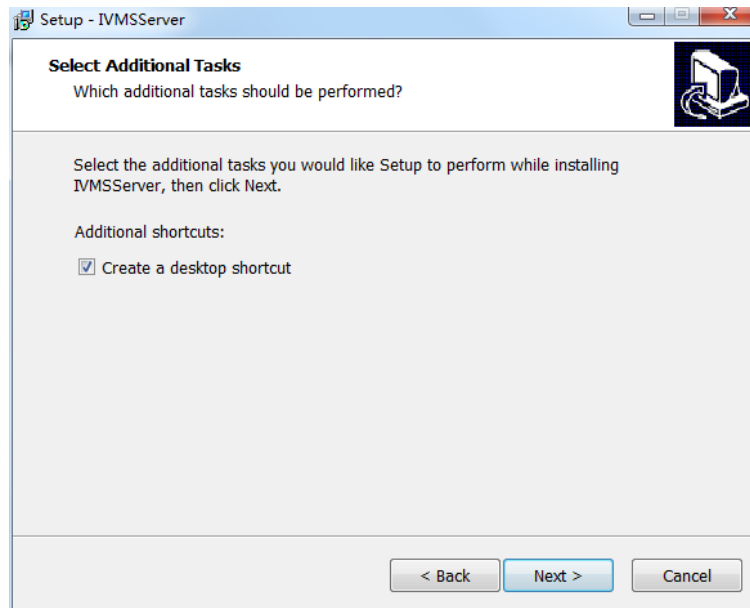


4. Specify the target installation path, click "Next" to continue.



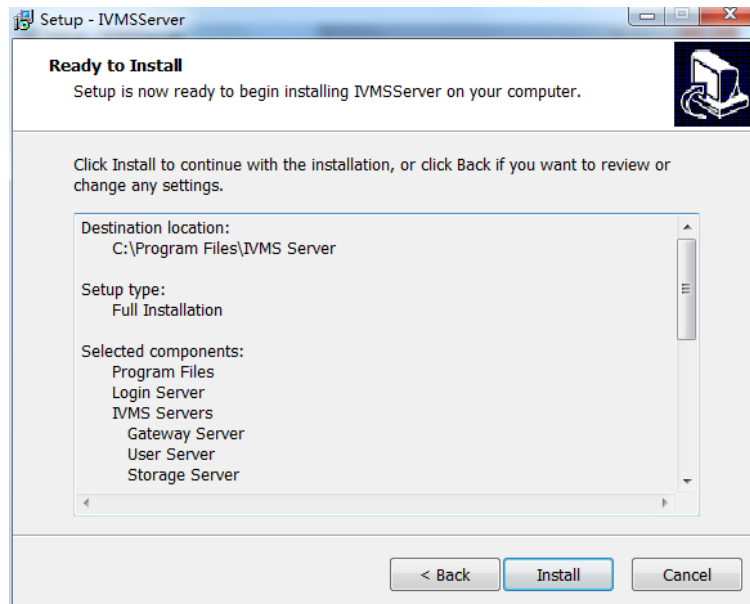
Select the Program location

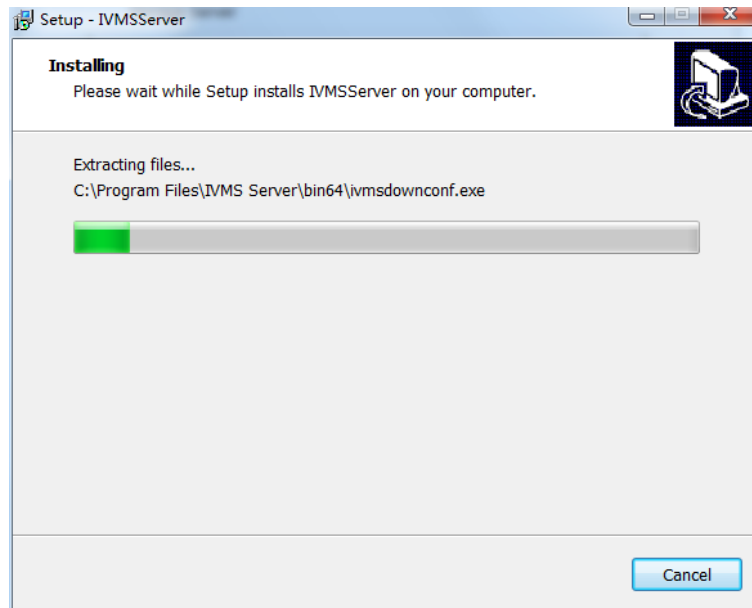
5. Select additional tasks (whether to create a desktop shortcut), and then click "Next" to continue



Choose whether to create a desktop shortcut

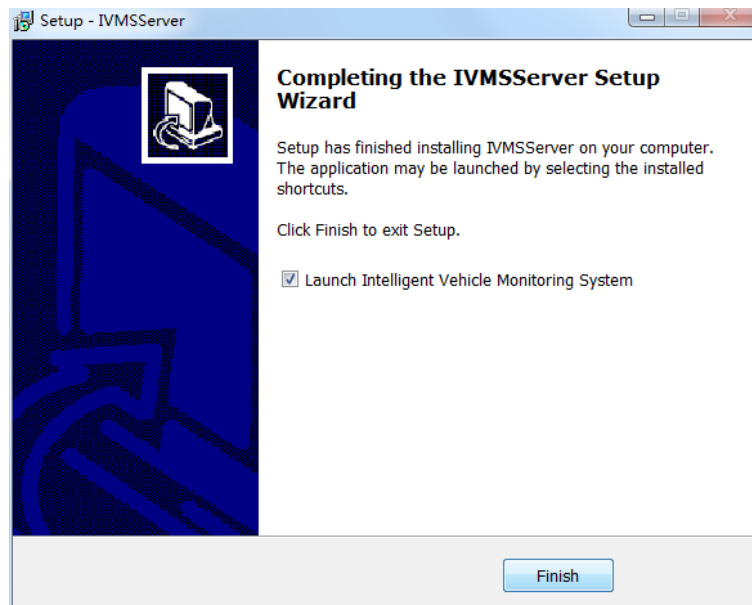
6. Click on "Install" to complete the Installation.



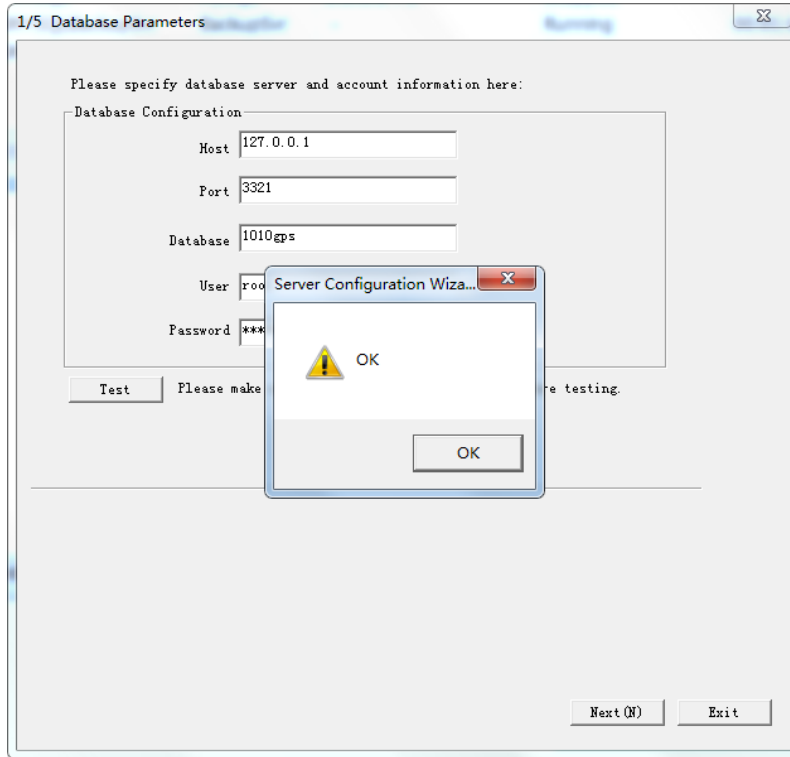


Installation Process

7. Click the "Finish" button, Data Configuration begins after this.



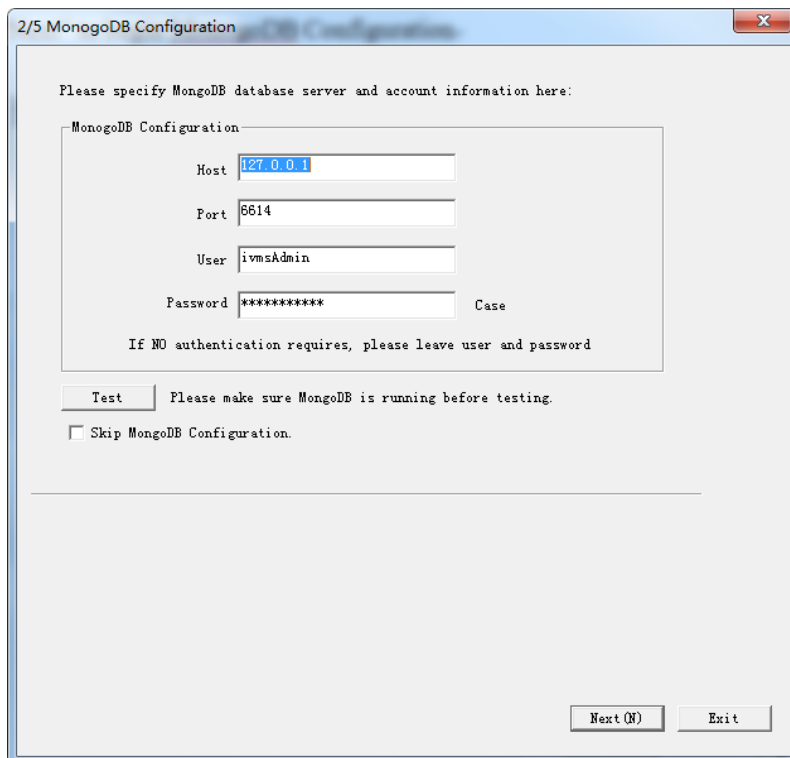
When install server, fill in IP port, click test, showing "OK" means ready.



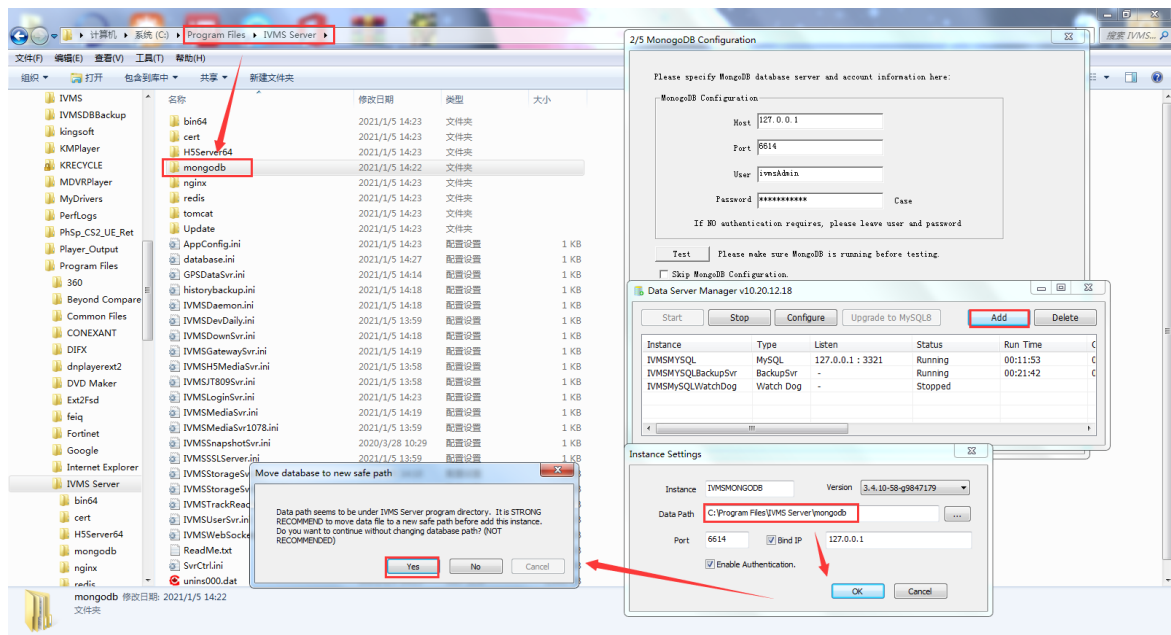
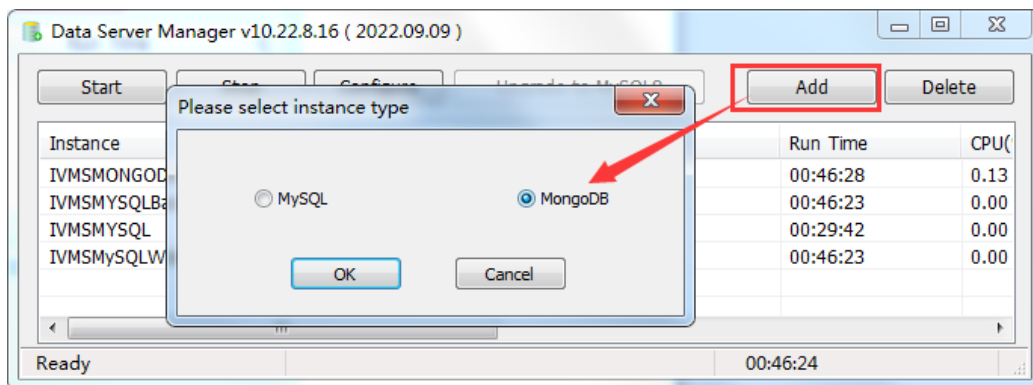
Database Configuration Parameters

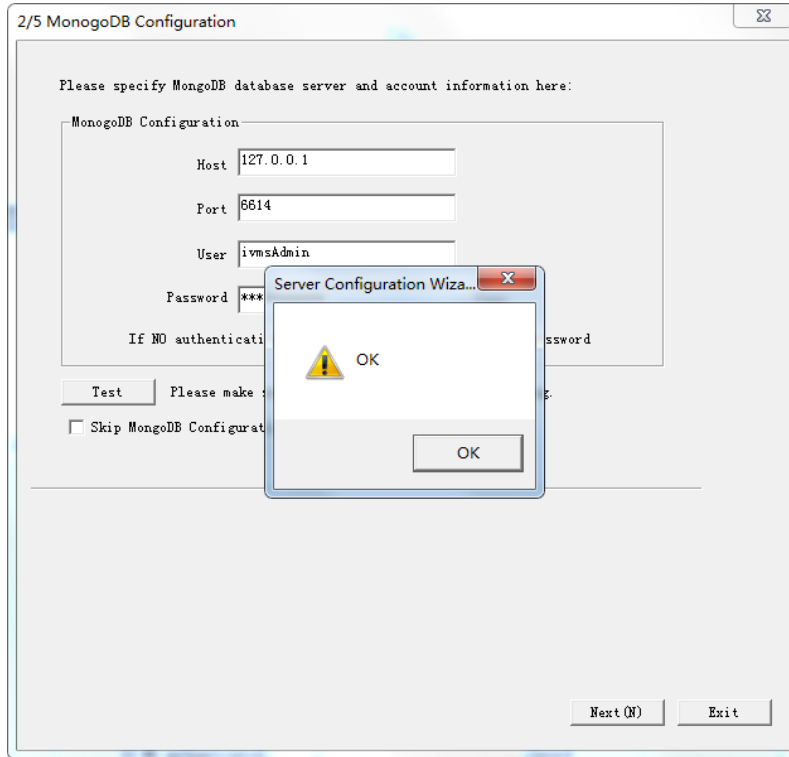
Note: It is recommended that upgrade it on weekday if you want to upgrade Product Server. So that our engineers could answer and help immediately if you have any question.

8. Click on “Next” to begin MonogODB Configuration

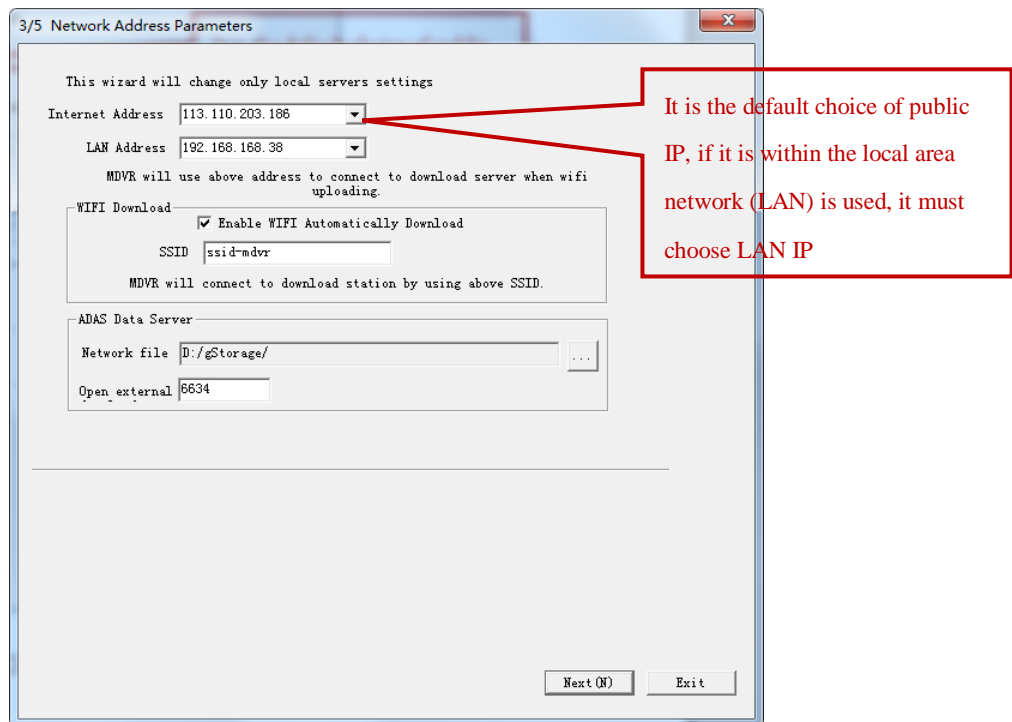


We need to add MongoDB server at Data Server Manager Side. When executing the MonogODB Server configuration, select the default configuration. At this time, you need to add the MongoDB service to the data server. If you had MongoDB Server at your old version, then the data path is the path of the previous version of the MongoDB service. If you are first time install or your old server do not had MongoDB server, then just use the default path to add it. Click OK, the system will pop up move data file to a new safe path suggestion, click Yes, then click Test on the MongoDB server configuration interface to determine whether the MongoDB service is running successfully, if it shows OK, click Next.



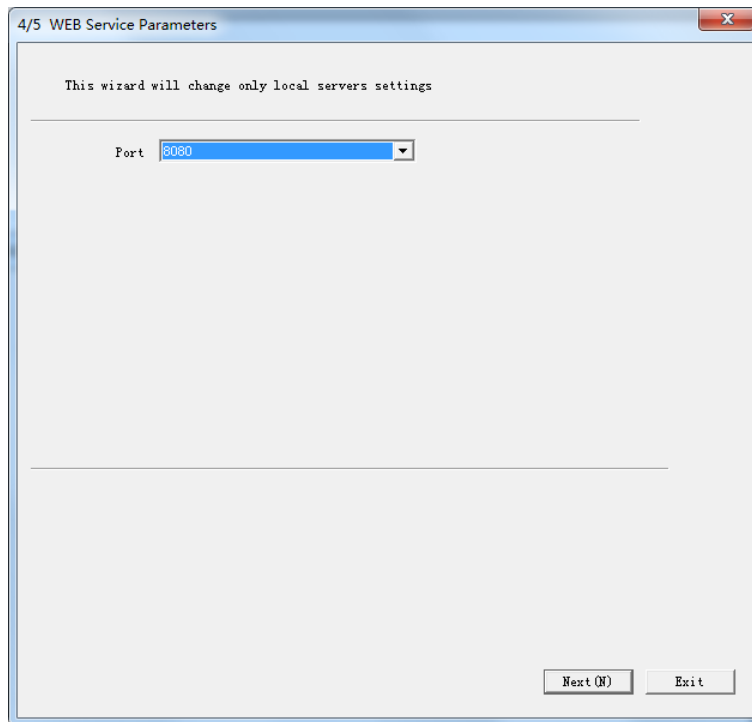


9. Click on “Next” to begin Network Address Configuration.



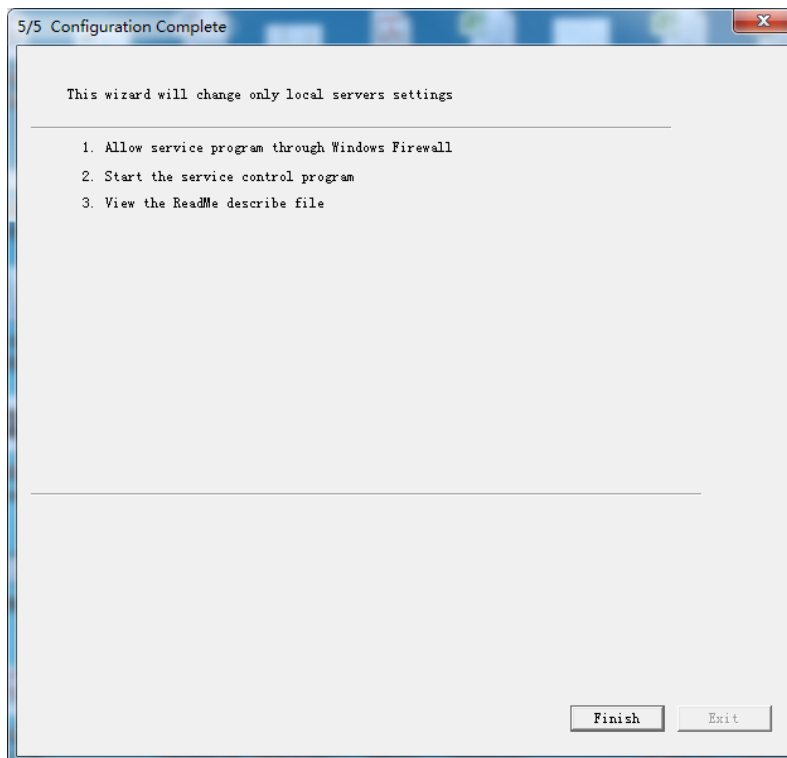
Network Parameter Configuration

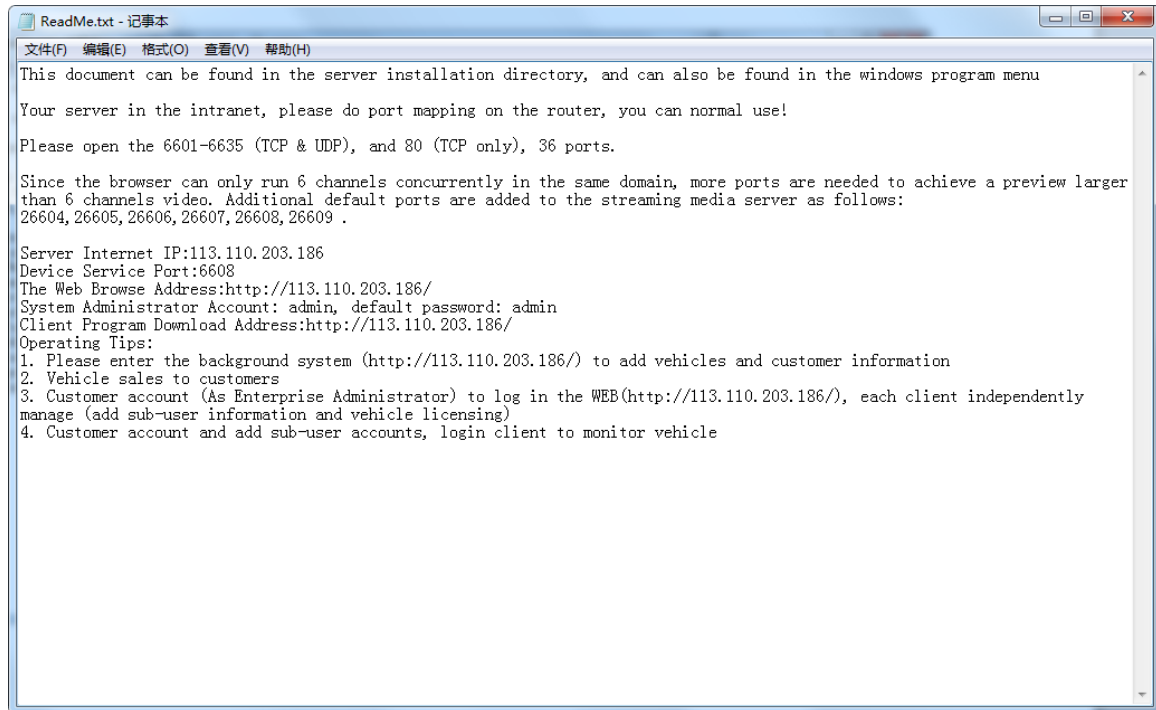
10. Click on “Next” to start Web Server Configuration Parameters



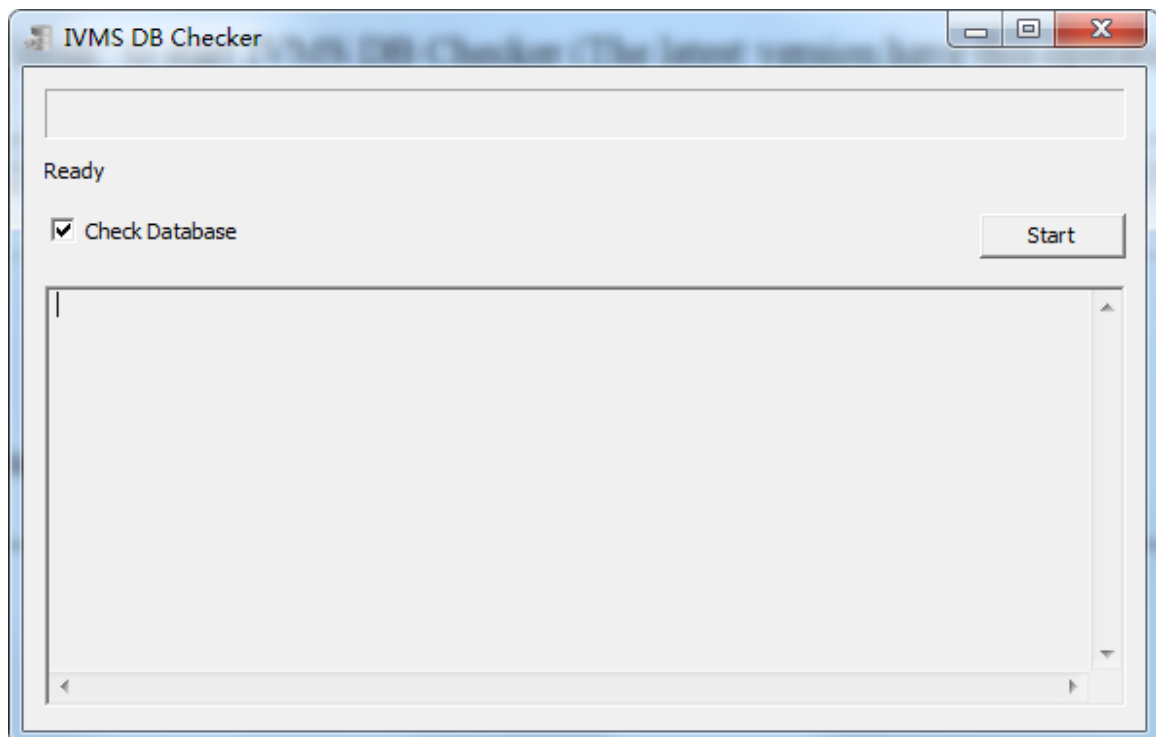
Web Server Port Configuration

11. Click on “Finish” to activate IVMS Server Controller.

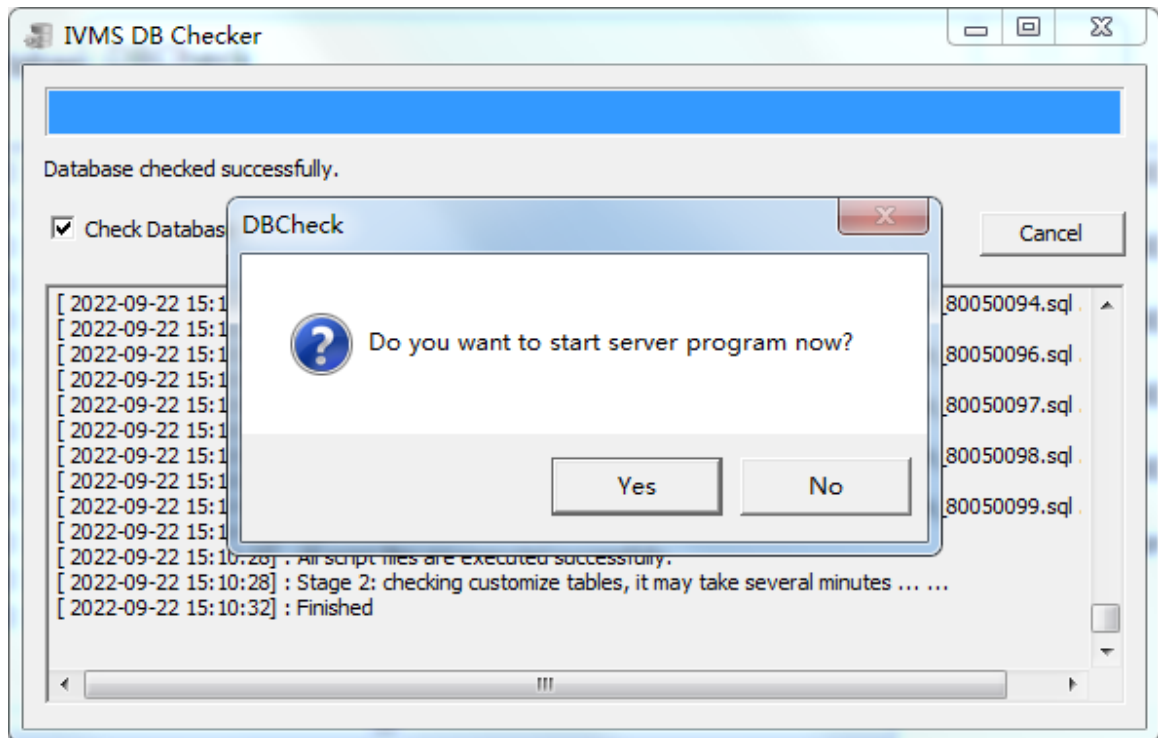
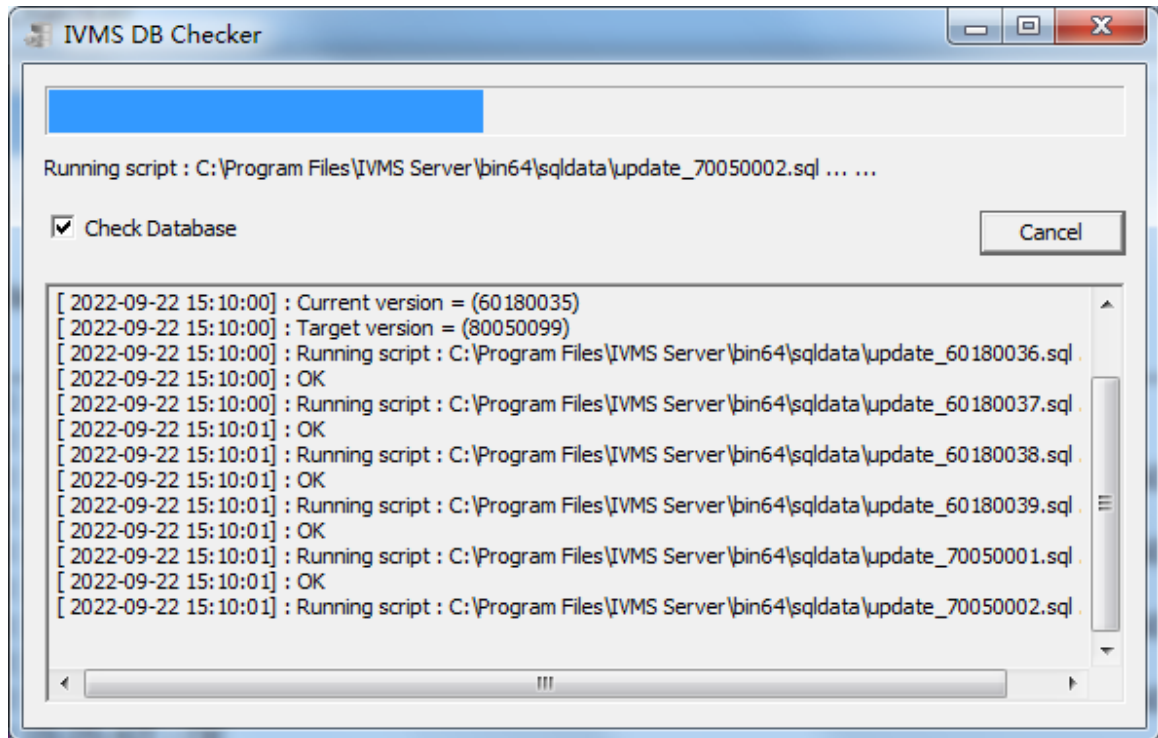




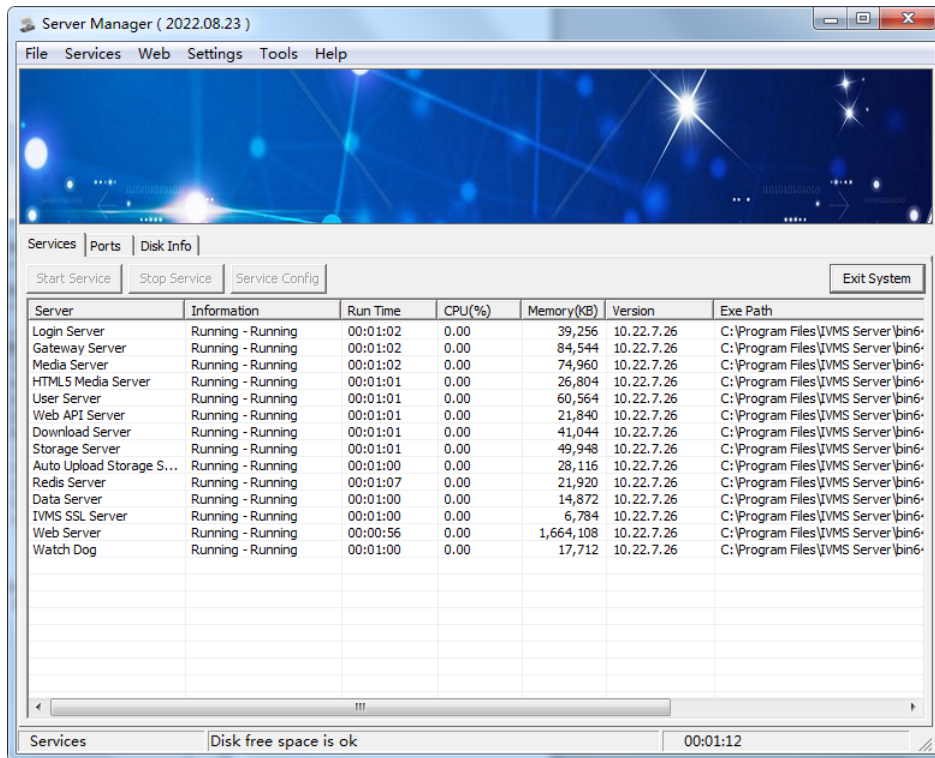
12. Click on “Finish” to start IVMS DB Checker (The latest version has this operation)



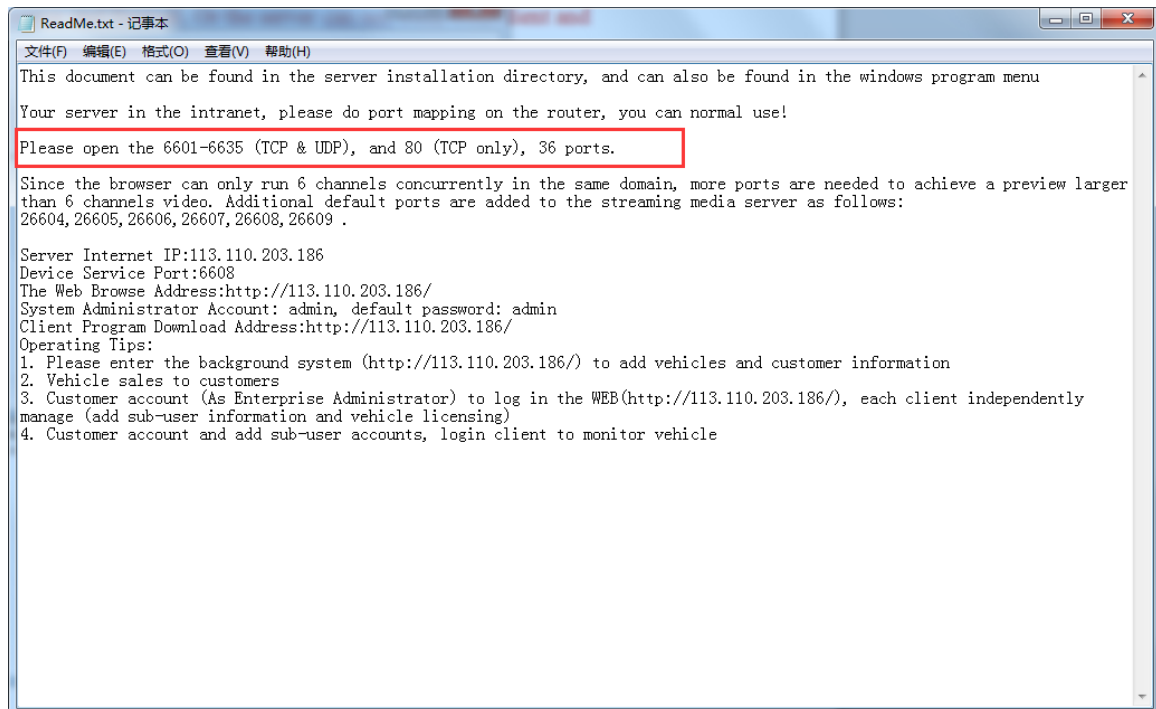
13. Click on “Start” to start IVMS Server.



14. Click on “Yes”



Note: Please open these ports in router and firewall, or the server cannot work with client and device well.



Configuration Complete

6. Server Configuration

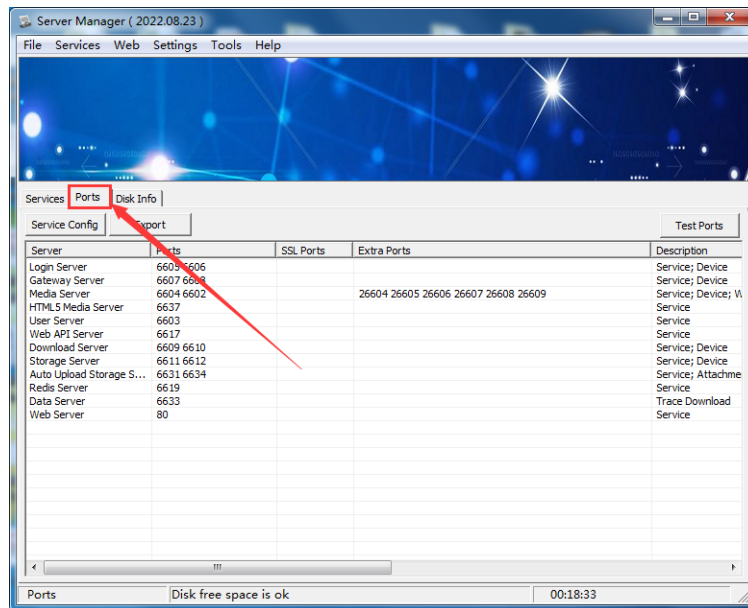
6.1 IVMS Server Port Description

IVMS Server default ports are as follows for Mobile DVR and Client services. If the Server is behind a firewall, please ensure the following ports are opened in order for the appropriate services are made available for the Mobile DVR and Client Users.

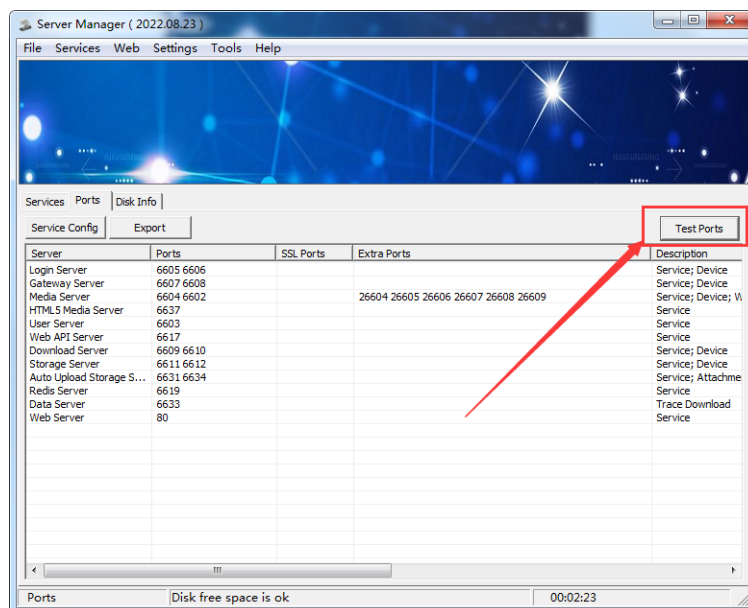
Server Name	Server Port	Description	Remarks
Login Server	6605, 6606	6606 Device Service Port 6605 Client Service Port	6606 - UDP 6605 - TCP and UDP
Gateway Server	6607, 6608	6608 Device Service Port 6607 Client Service Port	6608 - TCP 6607 – TCP and UDP
Media Server	6602, 6604	6602 Device Service Port 6604 Client Service Port	6602 - TCP 6604–TCP and UDP
HTML5 Media Server	6637	6637 Client Service Port	6637 - TCP
User Server	6603	6603 Client Service Port	6603 –TCP and UDP
Web API Server	6617	6617 Client Service Port	6617 –TCP and UDP
WIFI Download Server	6609 6610	6610 Device Service Port 6609 Client Service Port	6610 - TCP 6609–TCP and UDP
Storage Server	6611 6612	6612 Device Service Port 6611 Client Service Port	6612 - TCP 6611–TCP and UDP
Snapshot Server	6613	6613 Device Service Port	6613 - TCP
MongoDB Server	6614	6614 Device Service Port	6614 - TCP
Redis Server	6619	6619 Device Service Port	6619 - TCP
Data Server	6633	6635 Device Service Port	66305- TCP
Auto Upload Storage Server	6631	6631 Device Service Port	6631 - TCP

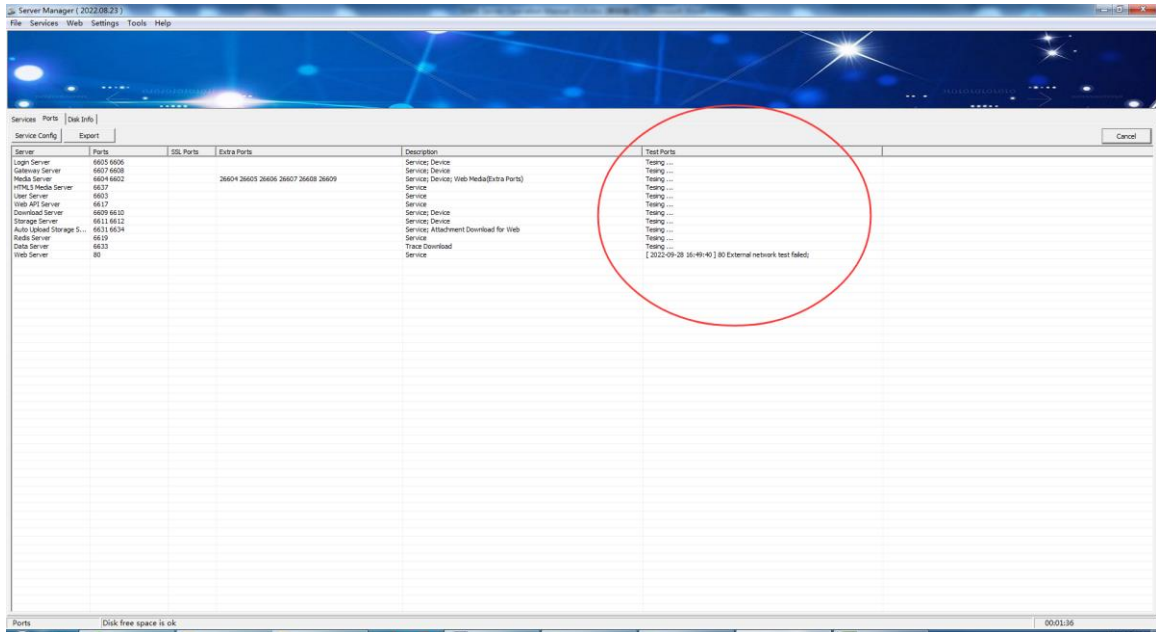
ADAS, alarm file download Server	6634	6634 Client Service Port	6634 –TCP and UDP
WEB Server	80/88/8080/8088	80/88/8080/ 8088 Client Service Port	80/88/8080/ 8088 - TCP

IVMS Server Port interface:

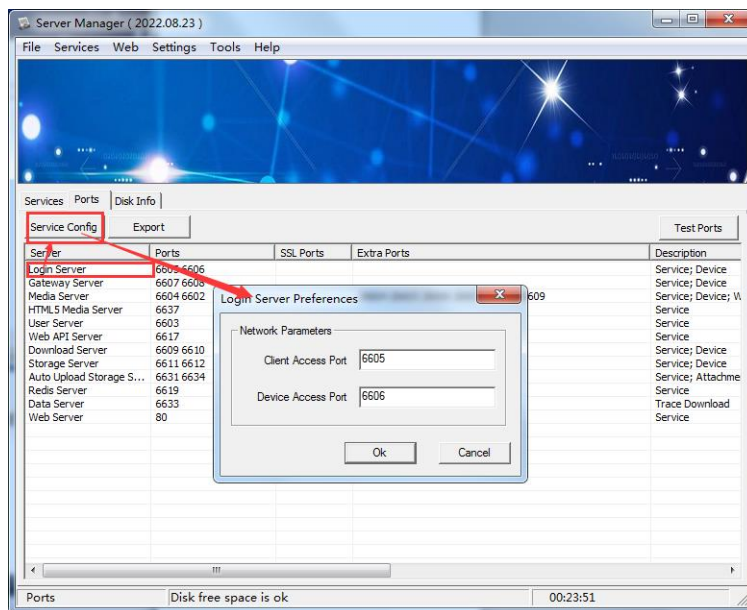


Test port: Test whether the server port passes or is occupied. If the port fails or is occupied, you can modify the corresponding server port through configuration.

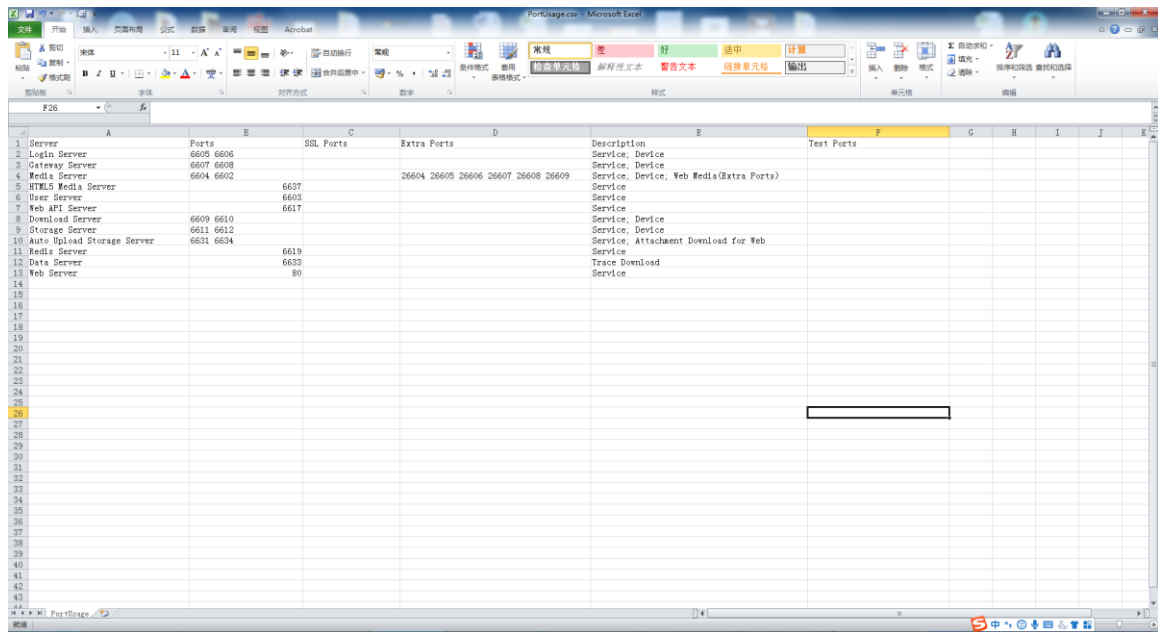
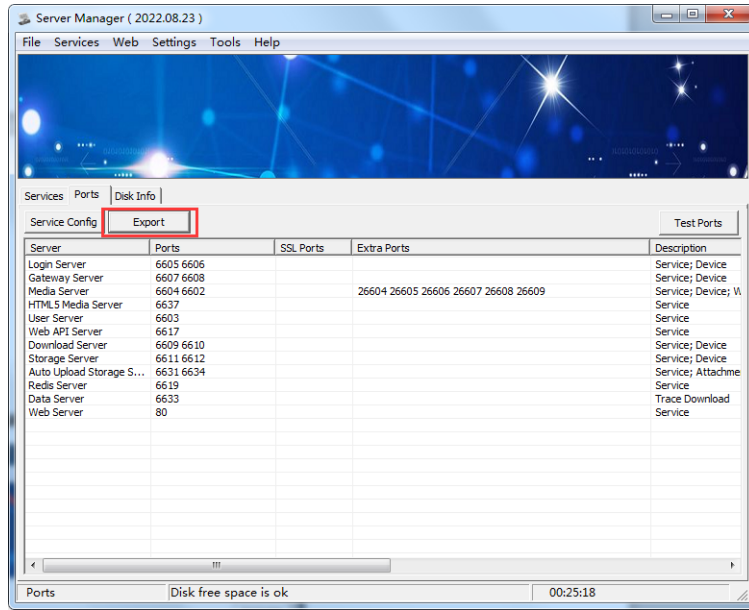




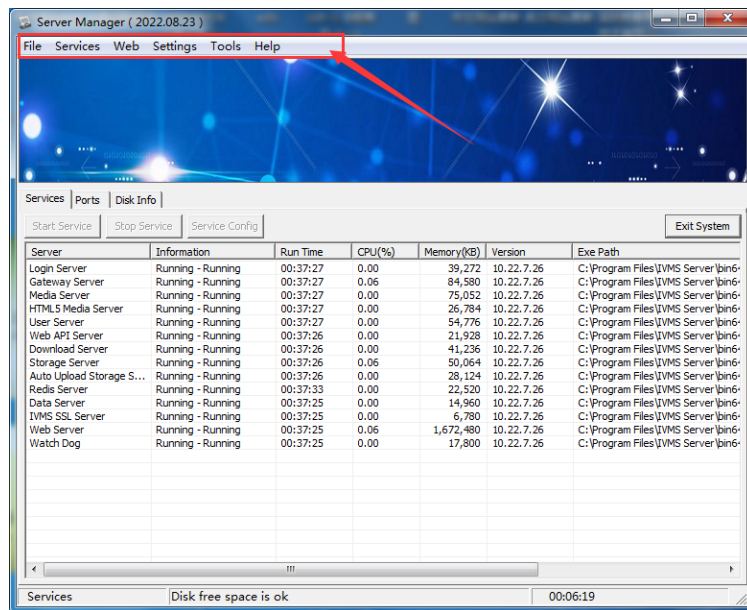
Port parameters can be viewed and modified by selecting the relevant server (such as the login server):



Export server port parameter table:



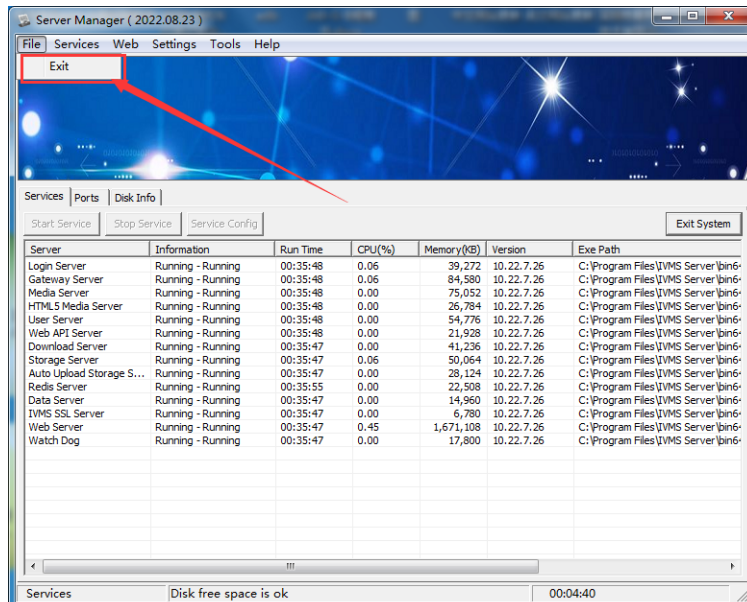
6.2 IVMS Server System Configuration



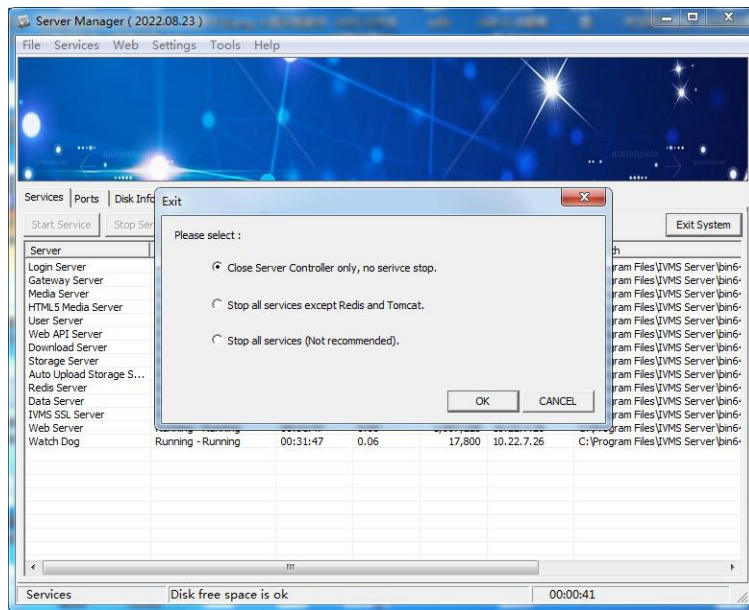
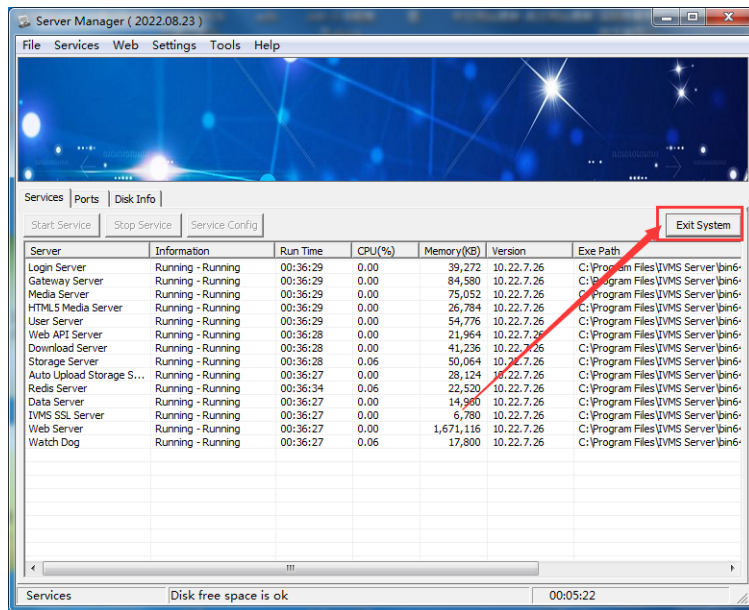
6.2.1 Exit System

- ▶ Close Server Controller only, no service stop.
- ▶ Stop all services except Redis and Tomcat.
- ▶ Stop all services (Not recommended).

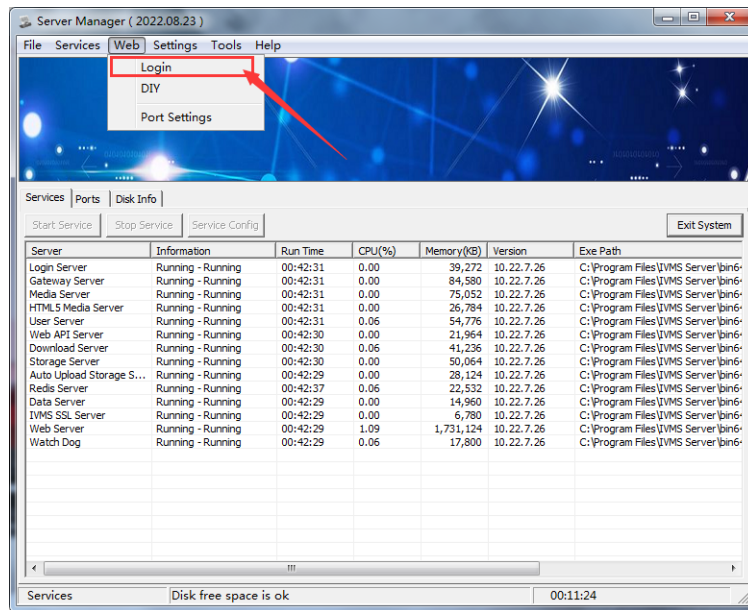
method one:



Method two:



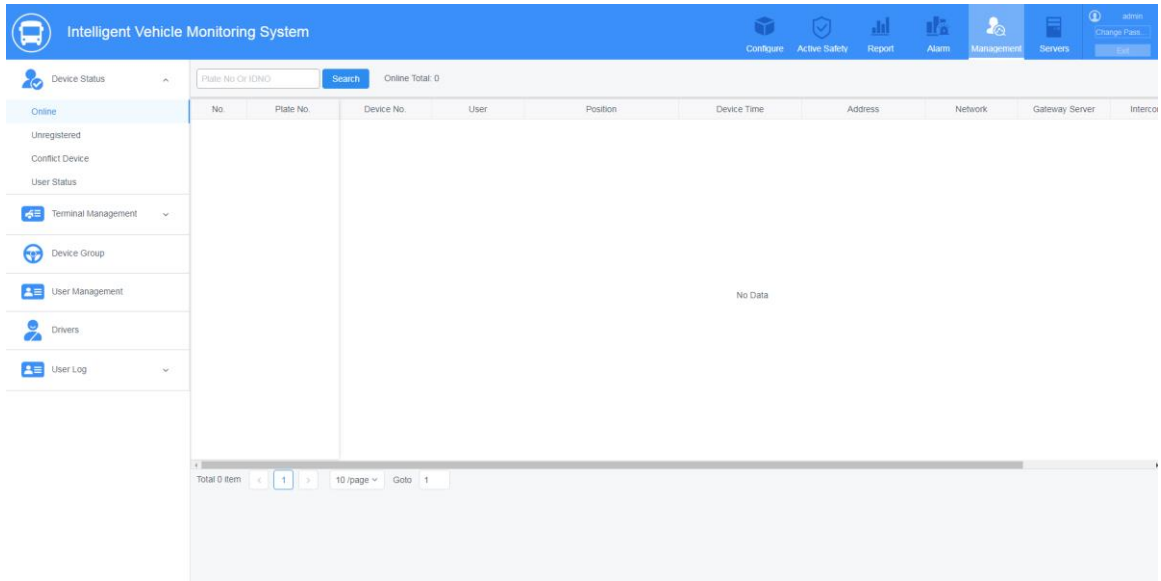
6.2.2 Login to System



Login to the management system (address: <http://localhost> : port), Local host IVMS Server is where the server resides, PC's IP address; IVMS Server BackOffice management system default login name and password are: admin



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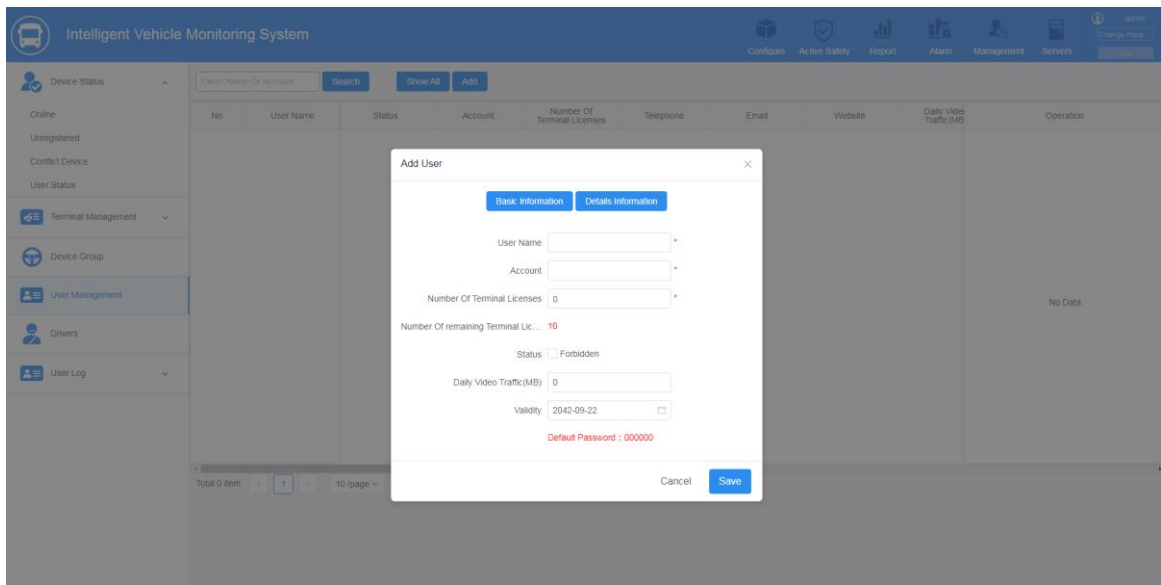
6.2.2.1 Adding Users

Level 1:

Select "User Management" Tab, Add a first-level management name, manage account information, etc.

Basic Information: User Name, Account.

Details Information: IDNO, Telephone, Email, Website, etc.



View the first-level account information, and view the terminal list and user list of the subordinate account.

The screenshot shows the 'Intelligent Vehicle Monitoring System' dashboard. On the left, there is a navigation menu with options: Device Status, Terminal Management, Device Group, User Management, Drivers, and User Log. The main area displays a table of accounts. The first row shows an account with No. 1, User Name 'play', Status 'Enabled', Account 'play', Number Of Terminal Licenses 10, Telephone, Email, Website, and Daily Video Traffic (MB) 0. A red box highlights the 'View' button in the 'Operation' column for this account. Below the table, there is a pagination bar showing 'Total 1 item', '1' of 10 pages, and 'Go to 1'.

No.	User Name	Status	Account	Number Of Terminal Licenses	Telephone	Email	Website	Daily Video Traffic (MB)	Operation
1	play	Enabled	play	10				0	View Edit Delete Password unlock

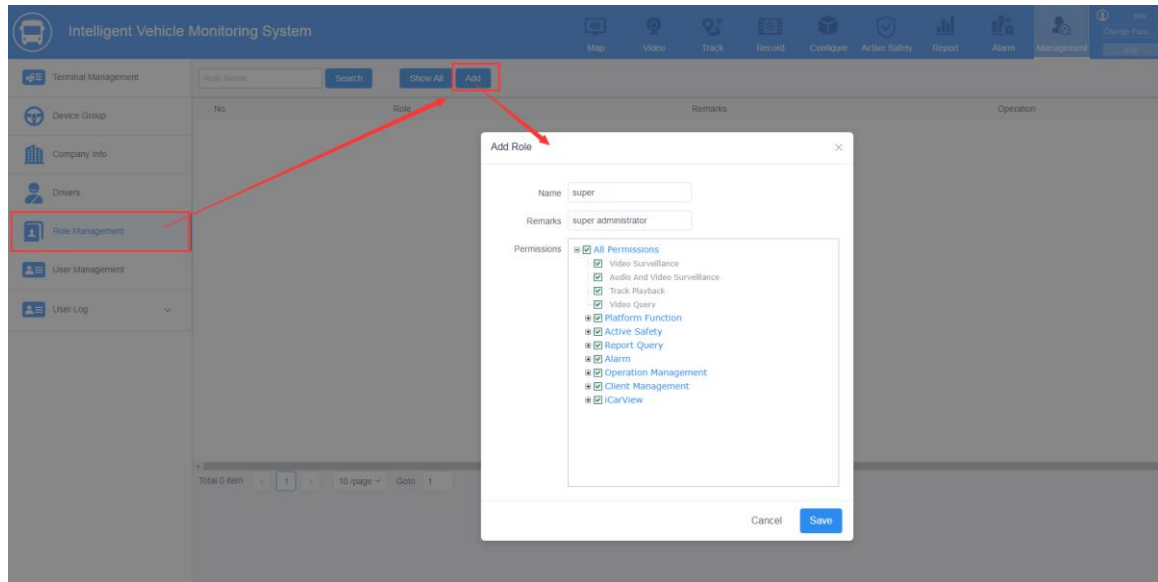
The screenshot shows the 'Intelligent Vehicle Monitoring System' dashboard after clicking the 'View' button. The left navigation menu is expanded, and a red box highlights the 'Devices List' and 'Users List' options. The main area displays a table with columns: No., Plate No., Team Name, Plate Color, Driver, Manufacturer, Model, Device No., Type, and Company. The table is currently empty, showing 'No Data'. Above the table, there are buttons for 'Reset Password', 'Delete Selection', 'Save Selected', and 'Export To Excel'. Below the table, there is a pagination bar showing 'Total 0 item', '1' of 10 pages, and 'Go to 1'.

No.	Plate No.	Team Name	Plate Color	Driver	Manufacturer	Model	Device No.	Type	Company
No Data									

Level 2(Account):

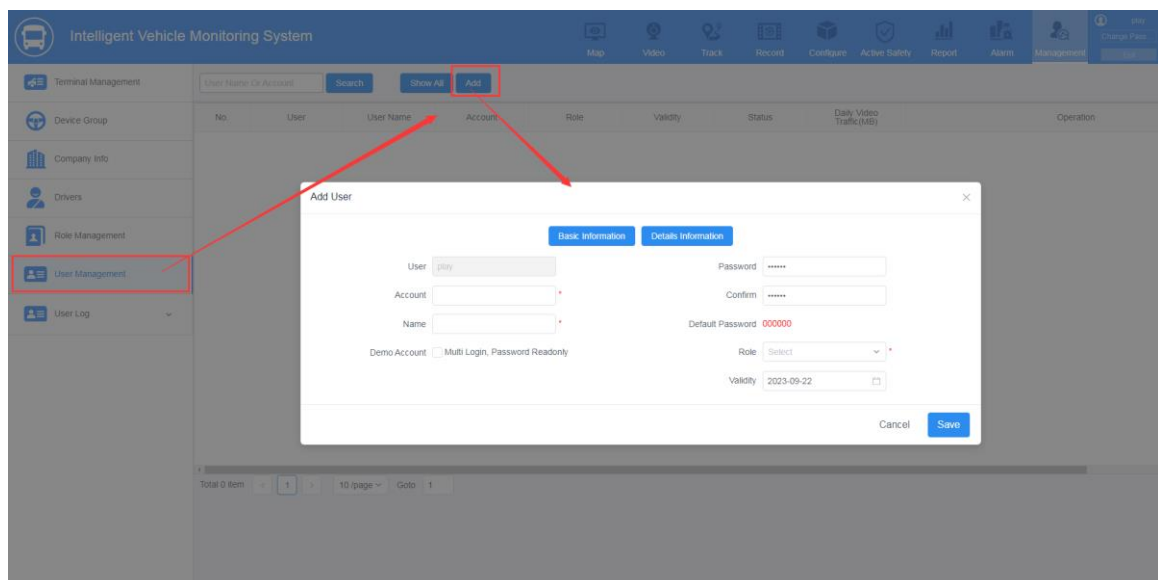
Create a secondary management login account under the primary account (Log in to the first-level account).

First need to add a "role management" account, such as super administrators, administrators, customers, etc.



Add user:

Click "User Management" and "Add" to fill in the user information as required.



Add interface:

Basic Information: Account, Name, password, Role, Validity.

Details Information: Industry, Gender, ID, Telephone, Email, etc.

Add User

Basic Information Details Information

User play Password *****

Account play2 * Confirm *****

Name play2 * Default Password 000000

Demo Account Multi Login, Password Readonly Role Select *

Validity 2023-09-22

Cancel Save

Driver Management (Add driver information):

Click "Driver Management" and "Add" to fill in user information such as name, driver's license number, qualification certificate, ID card, corresponding device number, etc. as needed.

Intelligent Vehicle Monitoring System

Terminal Management Driver Name Please select a company Search Share Add Delete Selection Export to Excel Import Excel

Device Group No. Company Name Driver Face ID Phone Email ID Qualification Certificate Number Operation

Company Info

Drivers

Role Management

User Management

User Log

Add Driver Data

Company Select Name *

Phone Email

ID * License *

Qualification Certificate * Issuing Authority

Valid From 2022-09-22 Expiration Date 2023-09-22

Address Region

Birthplace

Head Portrait Upload (Width: 172-516, Height: 220-660, jpg, jpeg, bmp formats only)

Cancel Save

ADD interface:

Add Driver Data ✕

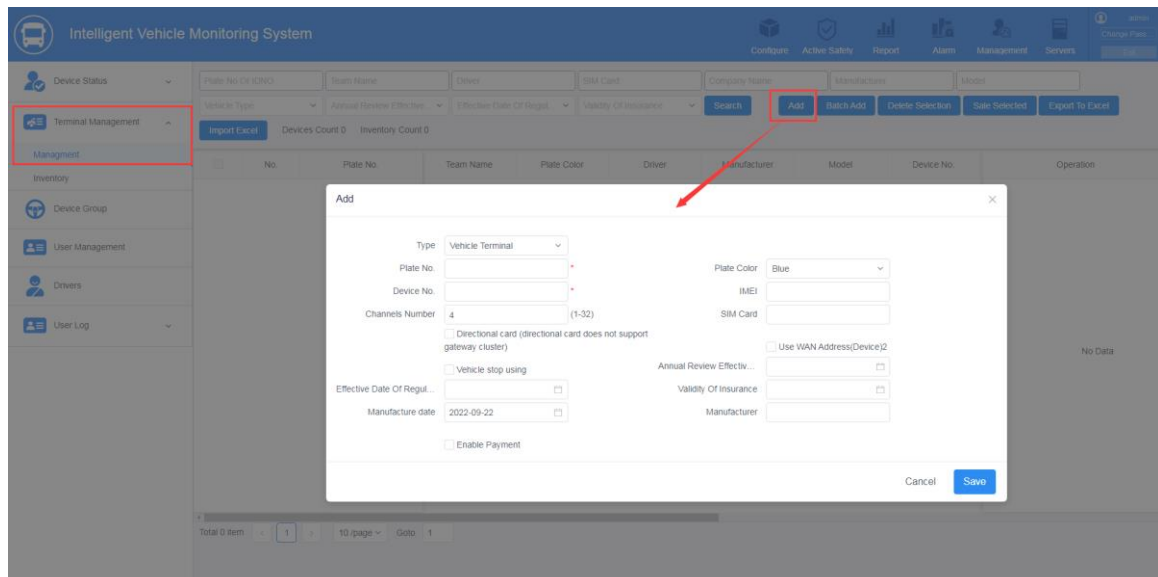
Company	<input type="text" value="Select"/>	Name	<input type="text"/>
Phone	<input type="text"/>	Email	<input type="text"/>
ID	<input type="text"/>	License	<input type="text"/>
Qualification Certificate ...	<input type="text"/>	Issuing Authority	<input type="text"/>
Valid From	<input type="text" value="2022-09-22"/>	Expiration Date	<input type="text" value="2023-09-22"/>
Address	<input type="text"/>	Region	<input type="text"/>
Birthplace	<input type="text"/>		
Head Portrait	<input type="button" value="Upload"/>	(Width: 172~516,Height: 220~660;jpg, jpeg, bmp formats only)	

6.2.2.2 Adding Terminals/Devices/Vehicles ID

Select "Terminal Management-Management" Tab

1. Adding a Single Terminal

Select "ADD", Add Terminal Window will pop up. Enter the terminal/device information as required in the window and SAVE.



ADD interface:

Add ×

Type	Vehicle Terminal	Plate Color	Blue
Plate No.	<input type="text"/>	IMEI	<input type="text"/>
Device No.	<input type="text"/>	SIM Card	<input type="text"/>
Channels Number	4 (1-32)	<input type="checkbox"/> Directional card (directional card does not support gateway cluster)	<input type="checkbox"/> Use WAN Address(Device)2
<input type="checkbox"/> Vehicle stop using	Annual Review Effectiv...	<input type="text"/>	<input type="text"/>
Effective Date Of Regul...	<input type="text"/>	Validity Of Insurance	<input type="text"/>
Manufacture date	2022-09-22	Manufacturer	<input type="text"/>
<input type="checkbox"/> Enable Payment			

[Cancel](#) [Save](#)

After successfully saving the device information you will notice a line with your asset information added into the page.

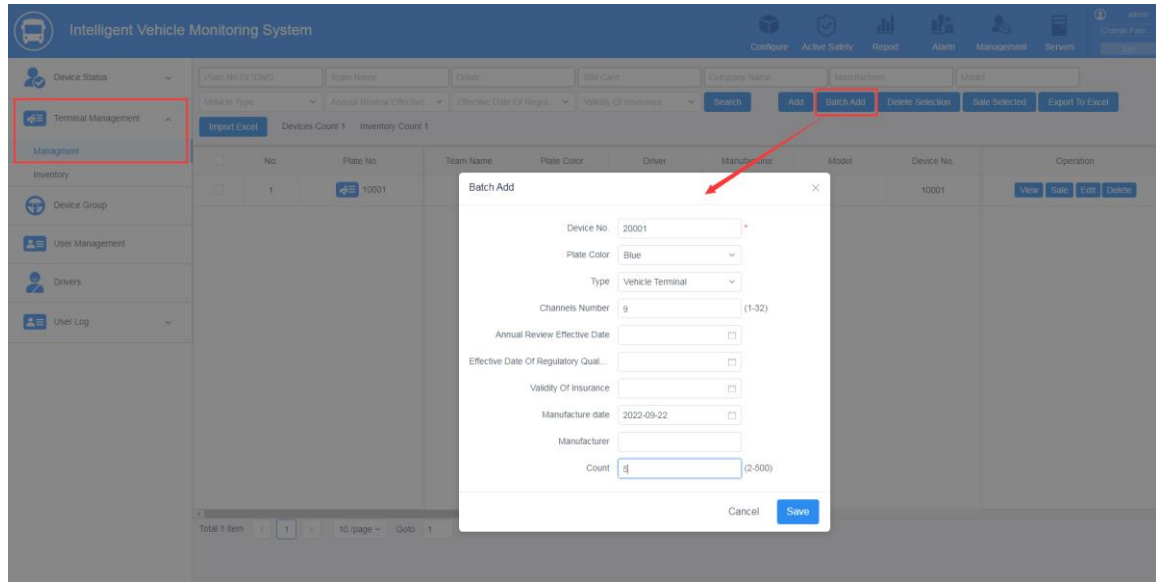
The screenshot shows the 'Intelligent Vehicle Monitoring System' interface. The top navigation bar includes 'Configure', 'Active Safety', 'Report', 'Alarm', 'Management', and 'Servers'. The left sidebar lists 'Device Status', 'Terminal Management', 'Management', 'Inventory', 'Device Group', 'User Management', 'Drivers', and 'User Log'. The main content area displays a table with columns: No., Plate No., Team Name, Plate Color, Driver, Manufacturer, Model, Device No., and Operation. A single row is visible, with the 'Plate No.' field containing '10001' and the 'Device No.' field containing '10001'. The 'Operation' column for this row contains buttons for 'View', 'Sale', 'Edit', and 'Delete'. The table is highlighted with a red border. Below the table, there is a pagination bar showing 'Total 1 item', '1' of 10 pages, and 'Goto 1'.

No.	Plate No.	Team Name	Plate Color	Driver	Manufacturer	Model	Device No.	Operation
1	10001		Blue				10001	View Sale Edit Delete

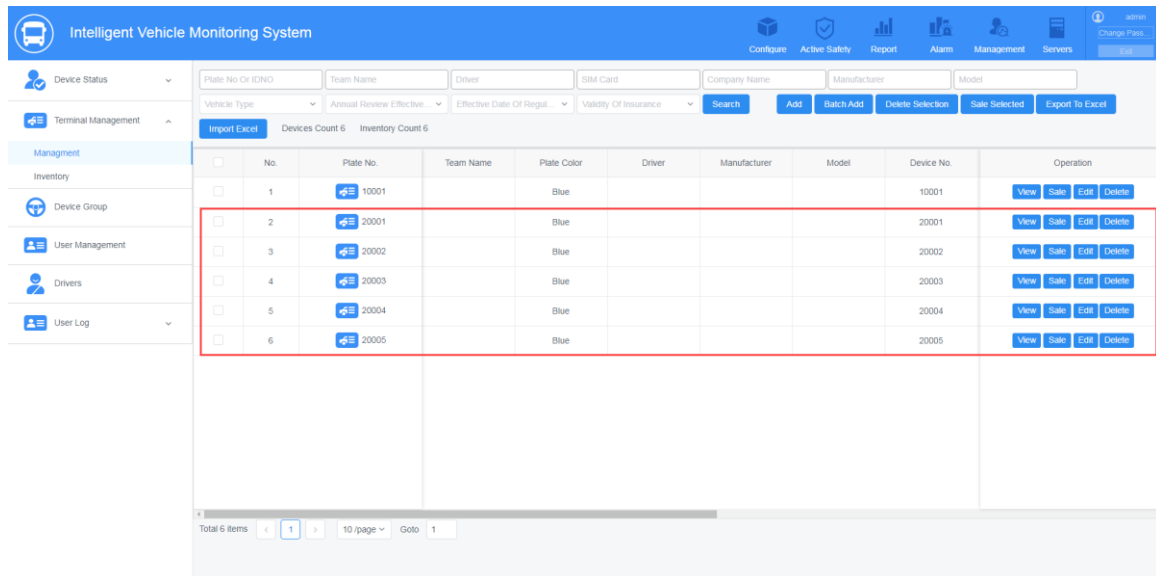
3. Adding Multiple Terminals/Devices in Batch

Select “Batch Add”, a “Batch Add” Terminal window will pop up.

Note: Adding Multiple Terminals in Batch requires adding more than 1 but less than 10 Vehicles/Devices.



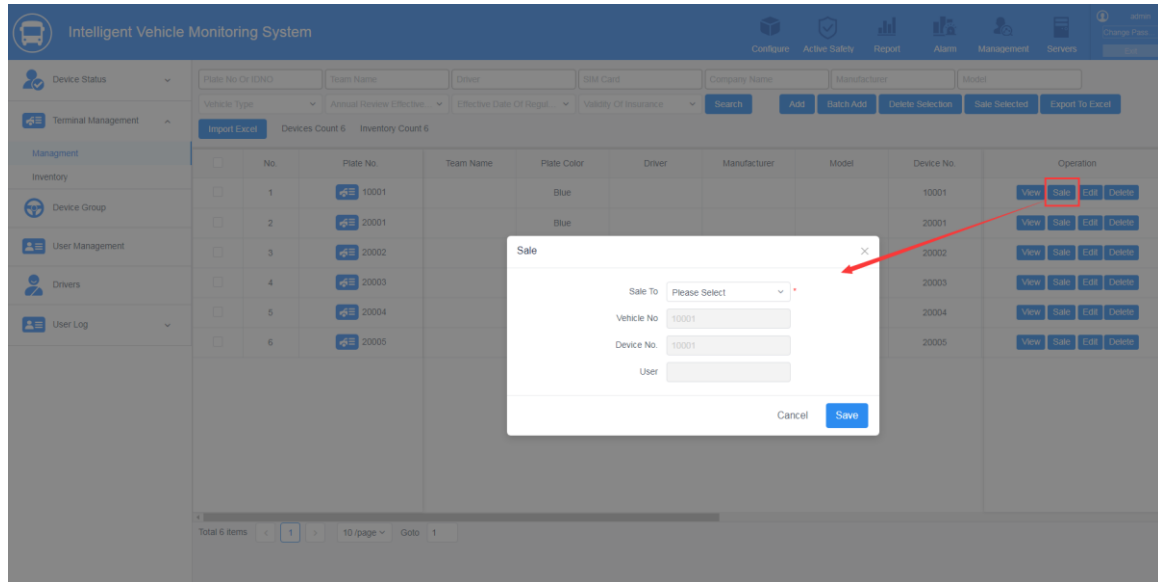
The example above and the result below show the successful addition of 5 new vehicles/devices.



6.2.2.3 Assigning Groups/Owners/ (sale)

1. Single Terminal/Device Assignment

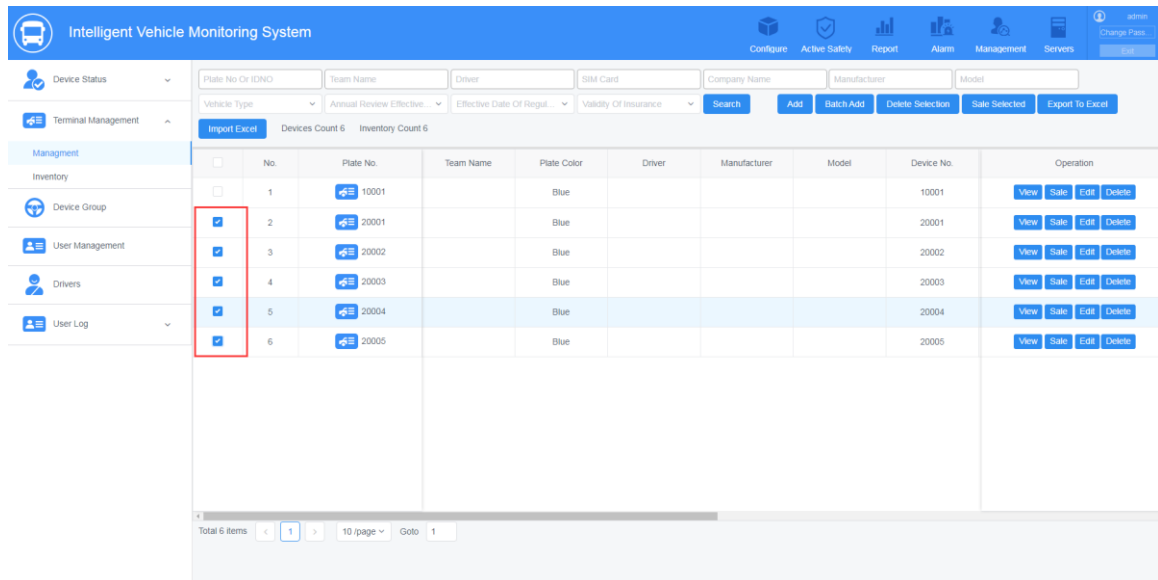
Select Assign Terminal/Device, Click on Assign, the Assign Terminal Window will pop up.

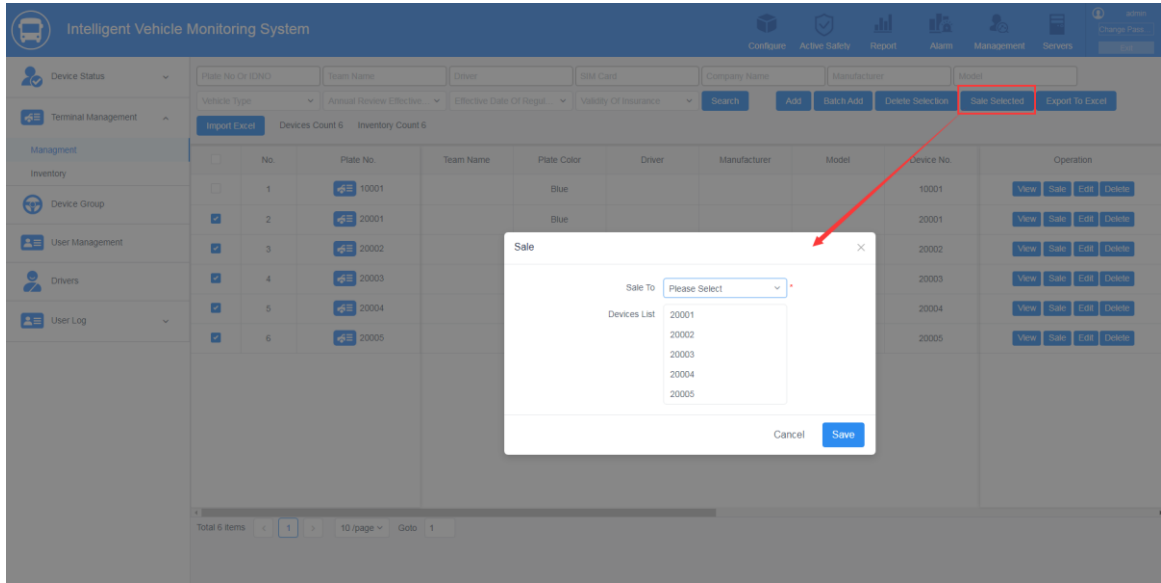


Select the Group/Owner to Assign to, SAVE, after successful Save, the terminal/device will be associated with the assigned Group/Owner name.

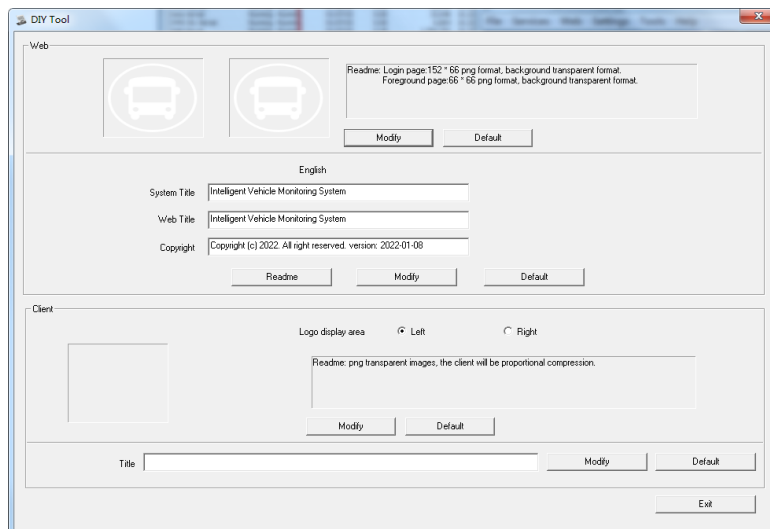
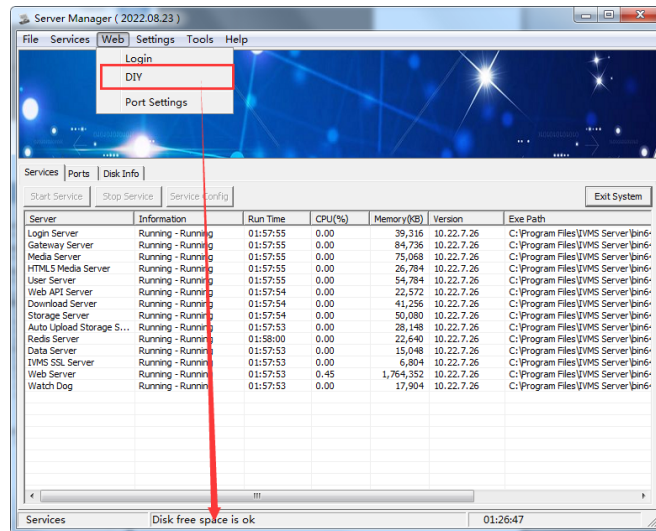
2. Assigning in Batch

Select the terminals/devices to be assigned, Select the Group/Owner to be assigned to.





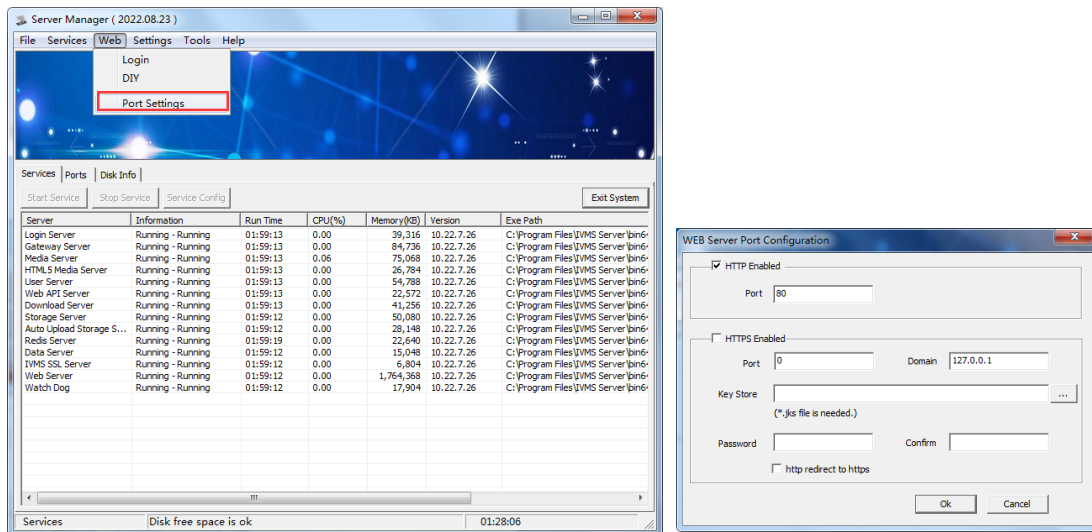
6.2.3 DIY: logo and title customization



DIY configure

6.2.4 Modified IVMS Server web access port

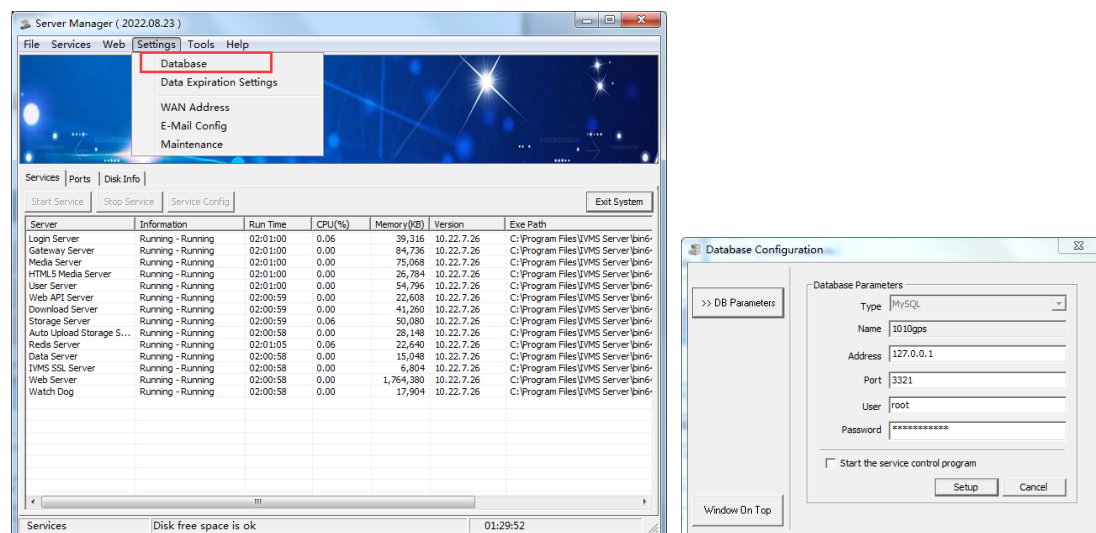
Here you can modify the web service port configuration 80 port has been occupied, as shown below:



Modify web access port

6.2.5 Database view and configure

Note: The database configuration, installation package has already been configured for this version of IVMS Server.



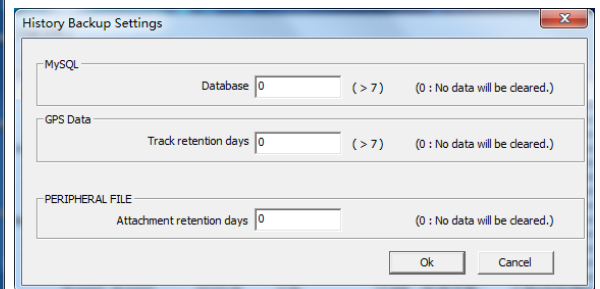
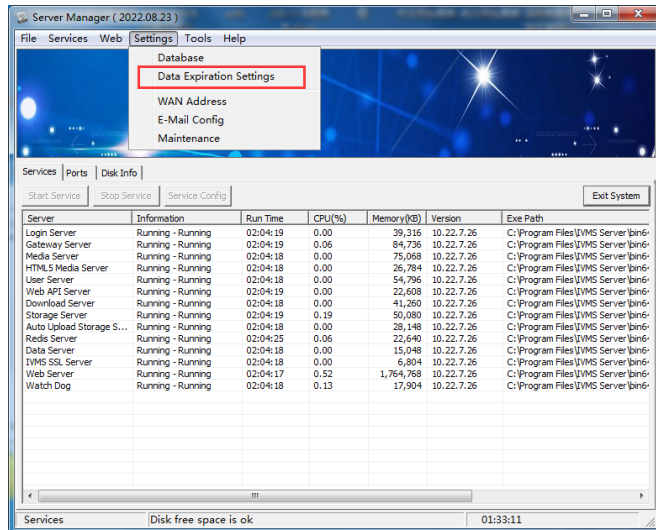
Database Configuration Information

6.2.6 Data Expiration Settings

Database:

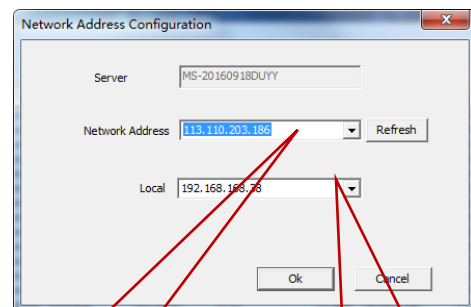
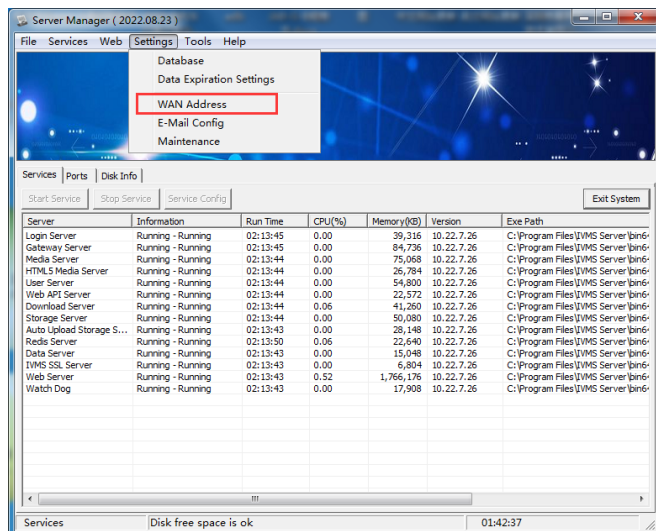
0: Refer to save all data.

>7: Indicates that the records in the database are kept in recent days. The value must be greater than 7. In addition to 0, 0 means no cleanup. For example: fill in 30, which retained the last 30 days of data in the database.



6.2.7 IVMS Server modify network IP address

Installation configuration LAN, and now would like to replace the public network, directly at the following figure can be modified, and vice versa.

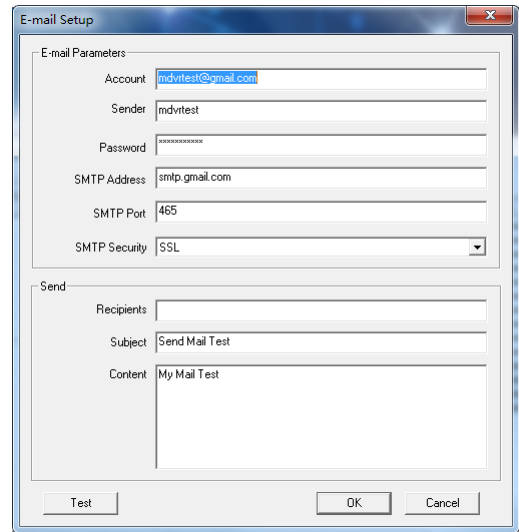
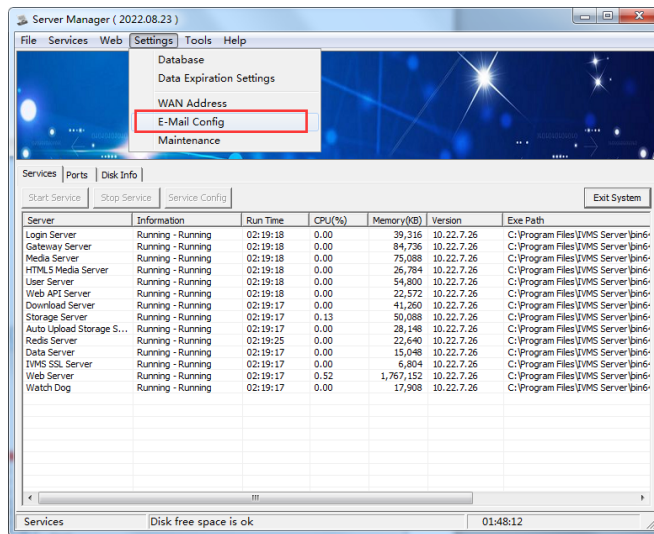


Modify network IP address

WAN IP (Get public WAN IP)

The address being used at present

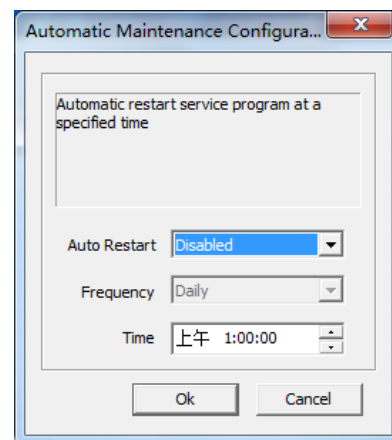
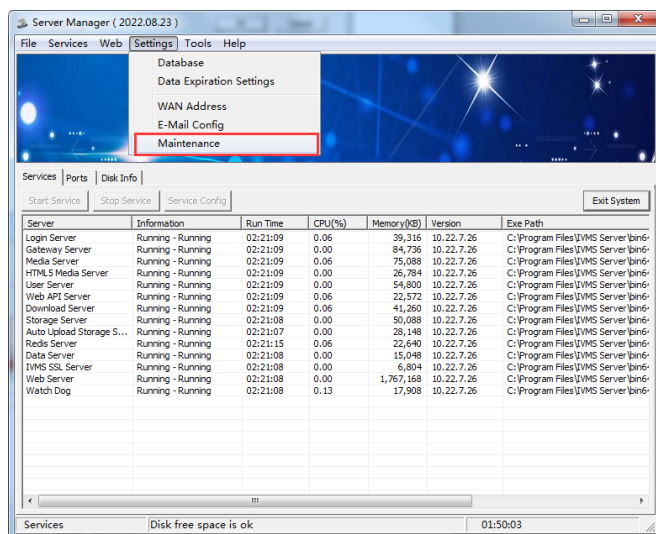
6.2.8 Email configuration



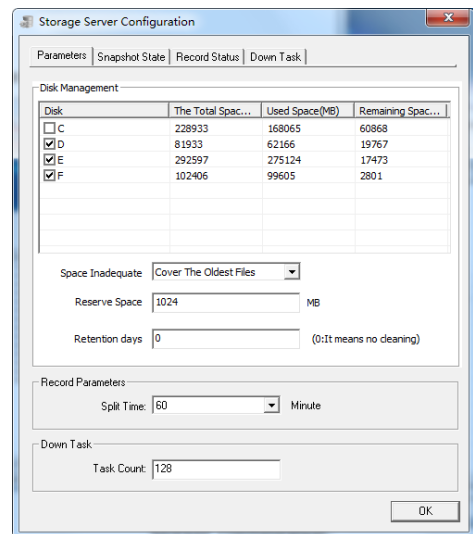
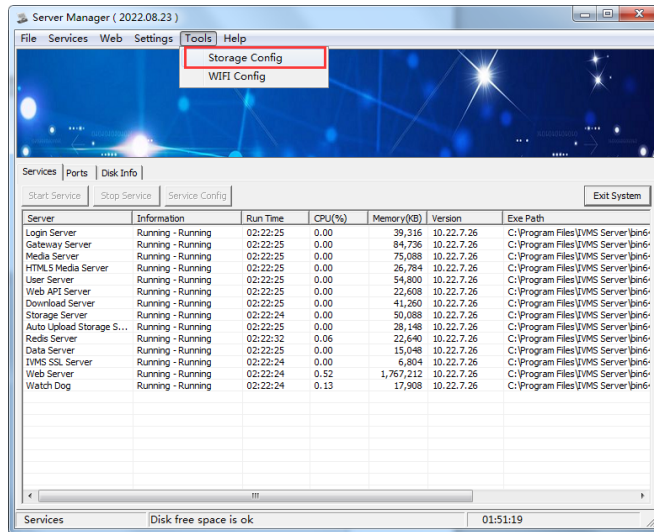
Email configuration

6.2.9 Auto maintenance

Automatic servers restart settings:

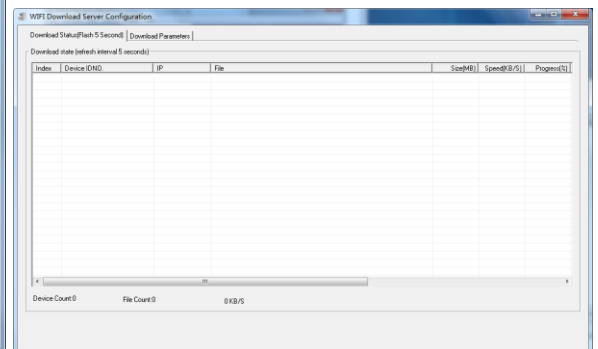
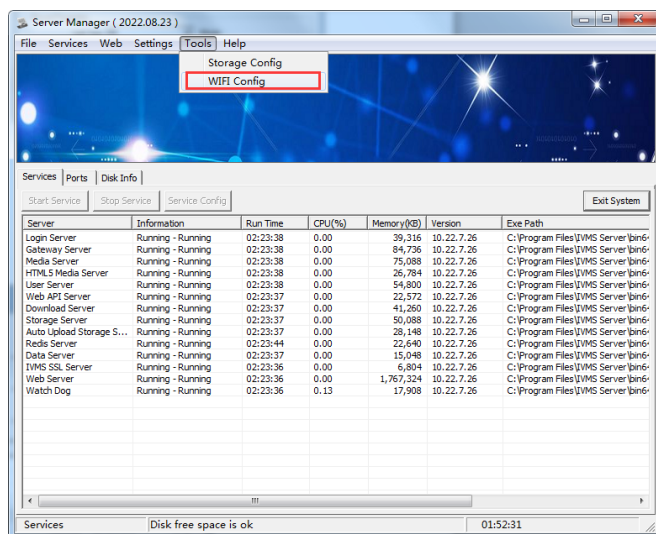


6.2.10 Storage configuration



Storage configuration

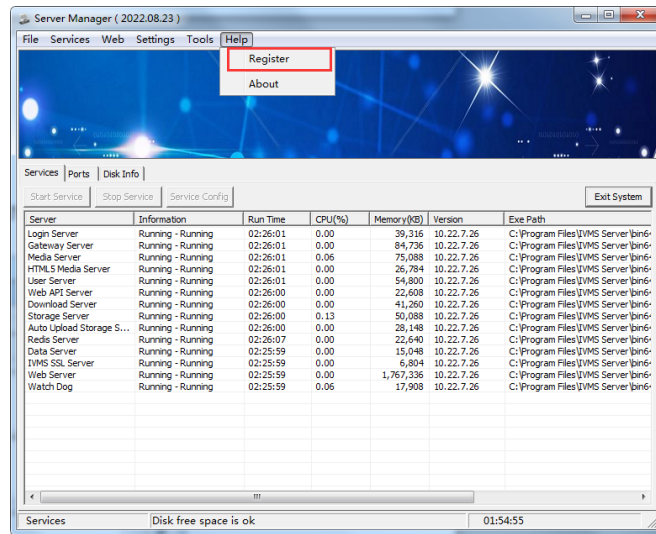
6.2.11 WiFi configuration



WiFi download configuration parameters and status View

6.2.12 Server Registration

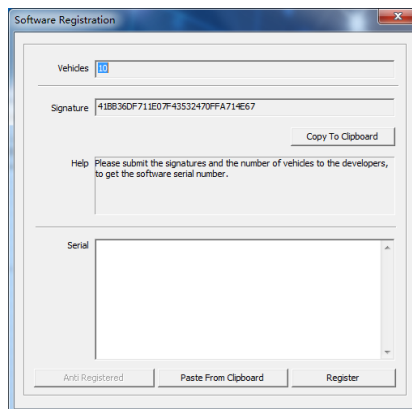
1. Click on the "Software Registration" menu item in the IVMS Server control window.



2. The software registration interface at this time you can see the signature of this server, as shown above the red box shown

3. When mouse click "Copy to clipboard" signature copied to the clipboard, you can also directly select the signature copy available to developers, this signature to obtain the corresponding serial number (including the management of vehicles quantitative information).

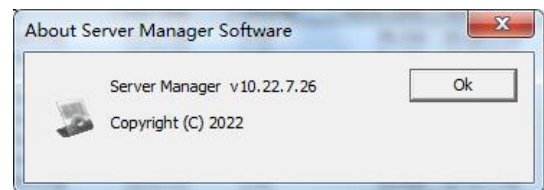
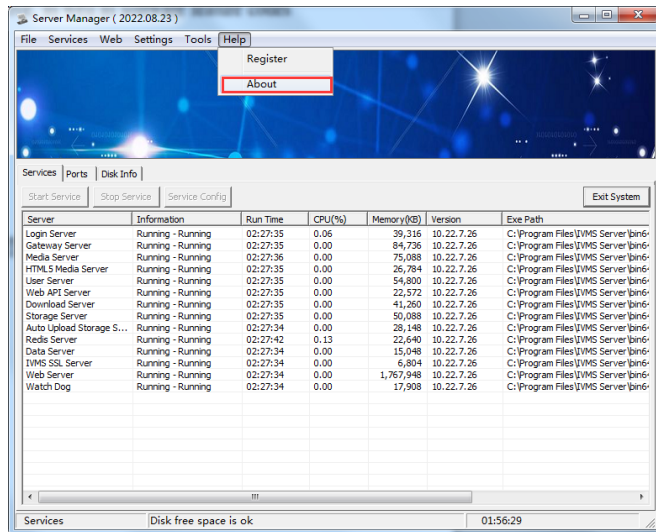
4. Paste it into the corresponding serial number provided by the developers of the signature sequence number window, as shown below:



5. Click "Register" button to complete the registration. If you want to see the Software Registration information, Click IVMS Server control interface "Software Registration" button will pop up the software registration information. This registration information has been saved to the registry service where PC users to replace the network card or hard drive, as well as software feature codes change, need to re-obtain the serial number.

6.2.13 About

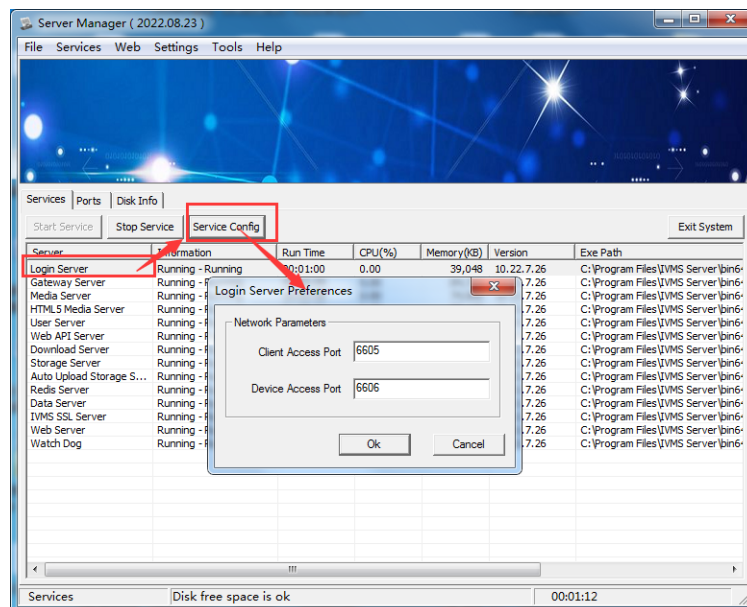
View current IVMS server version information through "ABOUT".



6.3 IVMS Server Introduction

6.3.1 Login Server

1. From the main IVMS Server window, select "Login Server", "Service Configuration" button and then click on the top of the interface, log on to the server can be configured in the form of pop-up network parameters, as shown below:



Login Server Parameter Configuration

Client Access Port: Registered Client Users connect to the server through this port. Default is 6605, it is recommended not to modify;

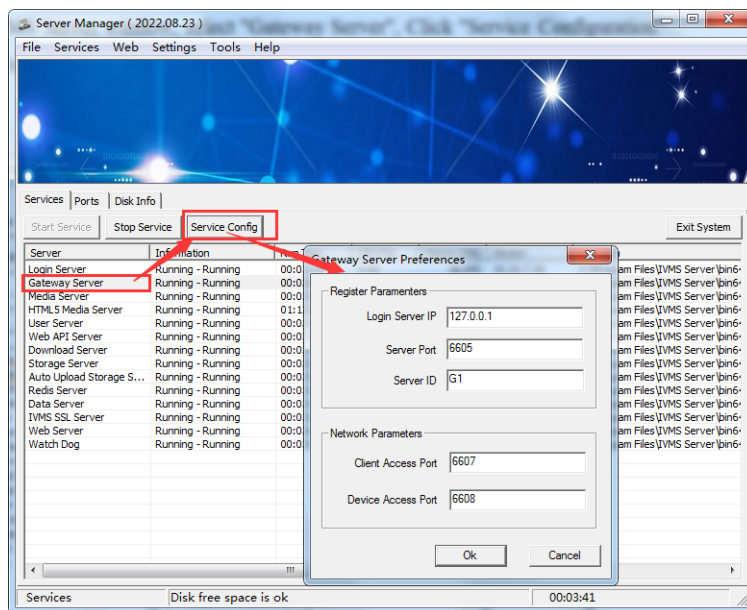
Device Access Port: Registered devices/vehicles connect to the gateway server through this port. Defaults to 6606, it is recommended not to modify.

One or 2 servers can be deployed on the IVMS Server system and log on to the server, one of them as the primary server, another as Login (Backup) server. When the Login server fails, the Login server by switching to a virtual IP, will not affect the normal use of the device and the client.

The login server is mainly used to save the online relationship between users and devices and the status of each server module. It is used to distribute traffic in the cluster.

6.3.2 Gateway Server

1. From the main IVMS Server window, select "Gateway Server", Click "Service Configuration" button which on the top of the interface, then you can confer your gateway parameters, as shown below:



Gateway Server Configuration Parameters

Login Server Address: The IP address of the PC where the login server is located. If the gateway server and login server on the same PC, you can enter 127.0.0.1; conversely enter the login server where the PC's IP address (gateway server and login server in the same local area network, enter the login server where the LAN IP address, Otherwise enter the login server's PC's public IP address and enter the Windows service to modify the login tab in the gateway server properties); In some cases, the 127.0.0.1 address is invalid. In this case, you must enter the IP address of the PC where the IVMS login server is located.

Server port: Client Access the Login Server service port, default 6605, does not propose to modify.

Server ID: Each Gateway Server has a unique number. The system can deploy one or more Gateway Servers, Login Server uses the unique number to distinguish between different gateway server, the unique number must be the same as the ID of the gateway server, and server management information defined in IVMS Server BackOffice Management System;

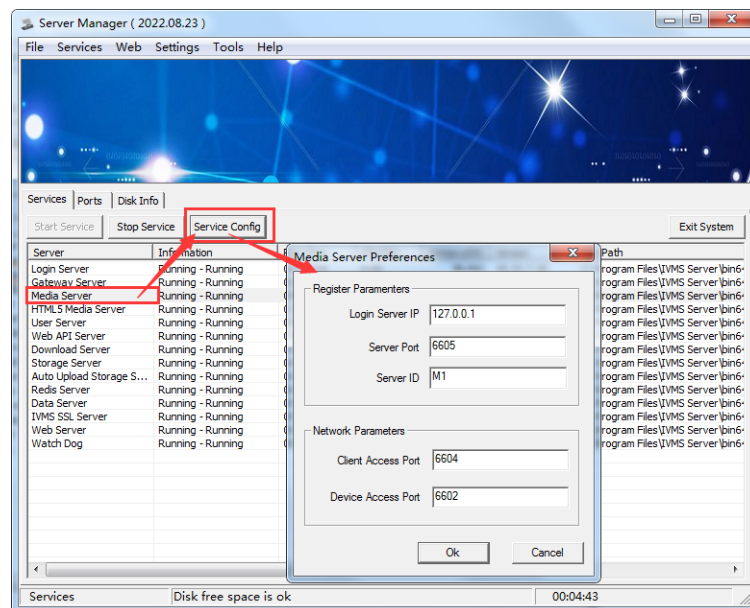
Client Access Port: Through this port to provide service for the Client and Media, default is 6607, does not propose to modify;

Device Access Port: Provide command registration service for vehicle DVR through this port. The default is 6608, it is not recommended to modify;

The gateway server is mainly for the IVMS protocol device, and is responsible for receiving information such as the location, status, alarm and peripheral data of the parsing device, distributing it to other servers that need data, and sending various control commands to the device.

6.3.3 Media Server

From the main IVMS Server window, select "Login Server", "Service Configuration" button and then click on the top of the interface, media server can be configured in the form of pop-up network parameters, as shown below



Media Server Configuration Parameter

Login Server Address: The IP address of the PC where the login server is located. If the gateway server and login server on the same PC, you can enter 127.0.0.1; conversely enter the login server where the PC's IP address (media server and login server in the same local area network, enter the login server where the LAN IP address, Otherwise enter the login server's PC's public IP address and enter the Windows service to modify the login tab in the media server properties); In some cases, the 127.0.0.1 address is invalid. In this case, you must enter the IP address of the PC where the IVMS login server is located.

Server port: Client Access the Login Server service port, default 6605, not advised to change.

Server ID: Each Media Server has a unique number. The system can deploy one or more Media Servers, Login Server uses the unique number to distinguish between different Media server, the unique number must be the same as the ID of the Media Server, and server management information defined in IVMS Server BackOffice Management System;

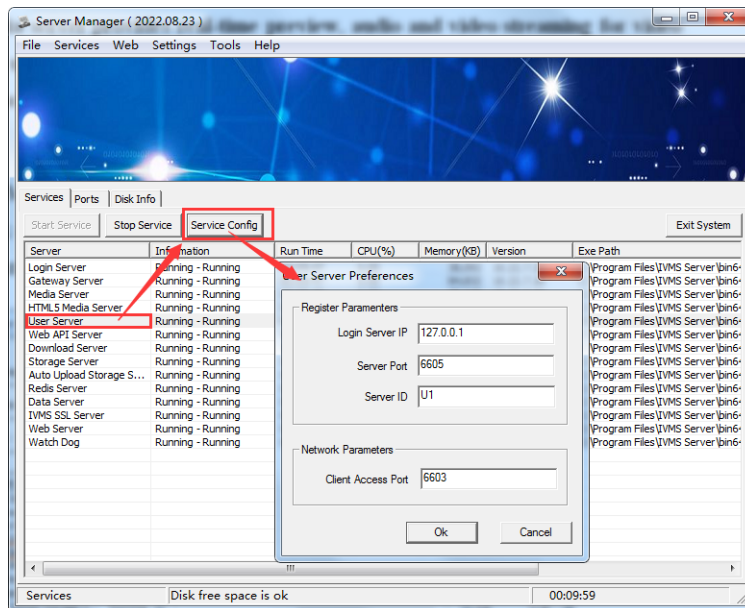
Client Access Port: Through this port to provide Media forwarding service, default is 6604 , does not propose to modify;

Device Access Port: Provides media registration service to the vehicle DVR through this port. The default is 6602 and is not recommended for modification.

The streaming media server provides real-time preview, audio and video streaming for video playback; provides uploading services such as device upgrades and configuration files; provides services such as audio and video, snapshots, and log downloads.

6.3.4 User Server

1. From the main IVMS Server window, select "Login Server", "Service Configuration" button and then click on the top of the interface, user server can be configured in the form of pop-up network parameters, as shown below:



User Server Configuration Parameters

Login Server Address: The IP address of the PC where the login server is located. If the gateway server and login server on the same PC, you can enter 127.0.0.1; conversely enter the login server where the PC's IP address (user server and login server in the same local area network, enter the login server where the LAN IP address, Otherwise enter the login server's PC's public IP address and enter the Windows service to modify the login tab in the user server properties); In some cases, the 127.0.0.1 address is invalid. In this case, you must enter the IP address of the PC where the IVMS login server is located;

Server port: Client Access the Login Server service port, default is 6605, not advised to change.

Server ID: Each User Server has a unique number. The system can deploy one or more User Servers, Login Server uses the unique number to distinguish between different User server, the unique number must be the same as the ID of the User server, and server management information defined in IVMS Server BackOffice Management System;

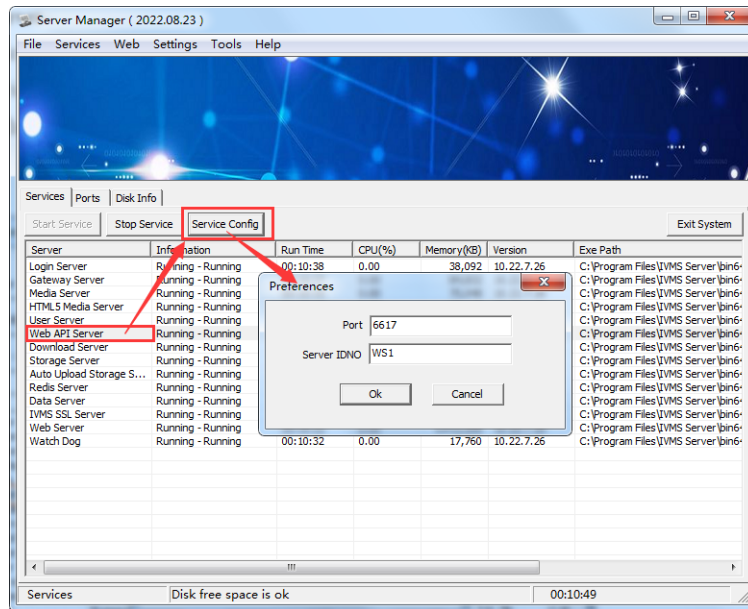
Client Access Port: Through this port to provide registration and update data service, default is 6603, does not propose to modify;

The user server is primarily client-oriented and provides efficient real-time monitoring.

Responsible for user login, device information download, track download, forwarding device data sent by the gateway to the client and forwarding client commands to the gateway.

6.3.5 WEB API Server

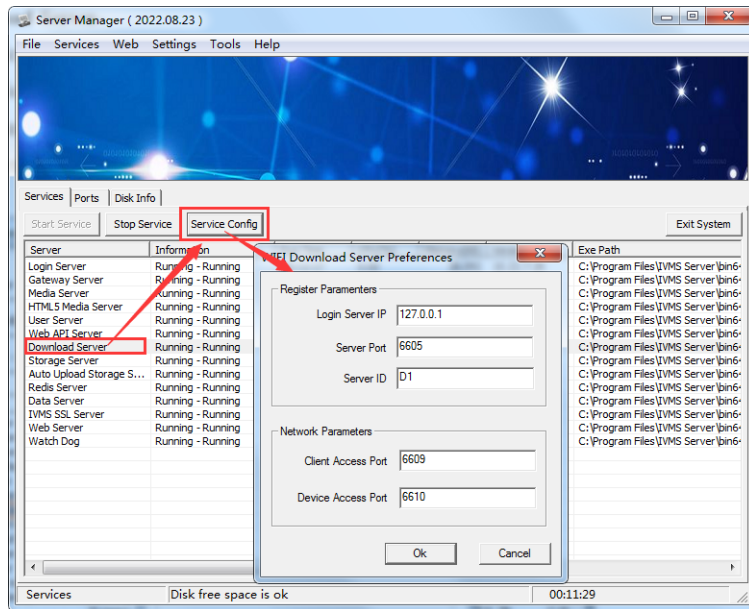
1. In the main window of the IVMS Server control, click to select "Web API Server", and then click the "Service Configuration" button at the top of the interface. In the pop-up form, you can configure the network parameters of the Web API server, as shown in the following figure.



Service port: 6617 Communication port with web server The Web socket server is mainly responsible for sending the device information forwarded by the gateway to the web, providing communication between the browser and the server.

6.3.6 WIFI Download Server

1. In the main window of the IVMS Server control, click to select "WIFI automatic download server", and then click the "Service Configuration" button at the top of the interface, in the pop-up form, you can configure WIFI to automatically download the server's network parameters, as shown below



Login Server Address: The IP address of the PC where the login server is located. If the gateway server and login server on the same PC, you can enter 127.0.0.1; conversely enter the login server where the PC's IP address (WiFi-download server and login server in the same local area network, enter the login server where the LAN IP address, Otherwise enter the login server's PC's public IP address and enter the Windows service to modify the login tab in the WiFi-download server properties); In some cases, the 127.0.0.1 address is invalid. In this case, you must enter the IP address of the PC where the IVMS login server is located;

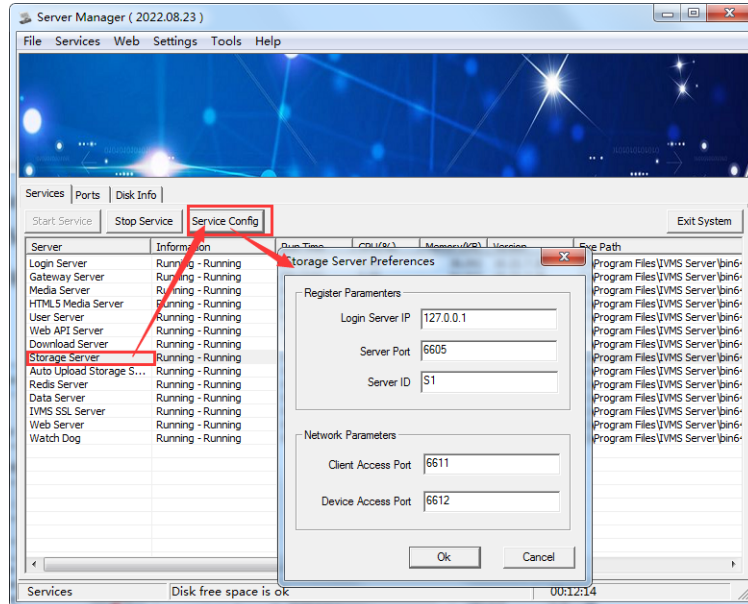
Server port: Client Access the Login Server service port, default 6605, not advised to change.

Server ID: Each WIFI Download Server has a unique number. The system can deploy one or more WIFI Download Servers, Login Server uses the unique number to distinguish between different WIFI Download Server, the unique number must be the same as the ID of the WIFI Download Server, and server management information defined in IVMS Server BackOffice Management System;

The WIFI automatic download server provides an execution module for automatically downloading device data, pictures and other big data tasks through Wi-Fi periodically. When the device is linked to the server by Wi-Fi, the server will execute the download recording plan developed by the web front end or the PC client.

6.3.7 Storage Server

1. In the main window of the IVMS Server control, click to select "Storage Server", and then click the "Service Configuration" button at the top of the interface. In the pop-up form, you can configure the network parameters of the storage server, as shown in the following figure.



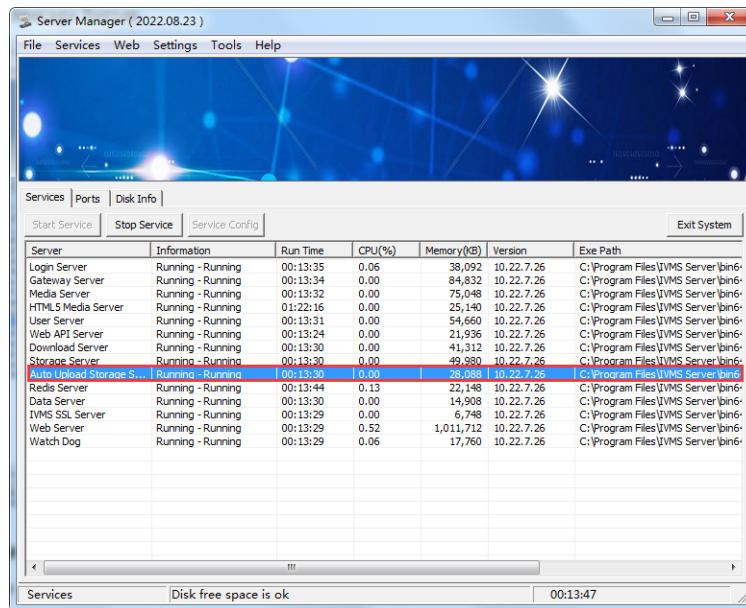
Login Server Address: The IP address of the PC where the login server is located. If the gateway server and login server on the same PC, you can enter 127.0.0.1; conversely enter the login server where the PC's IP address (storage server and login server in the same local area network, enter the login server where the LAN IP address, Otherwise enter the login server's PC's public IP address and enter the Windows service to modify the login tab in the storage server properties); In some cases, the 127.0.0.1 address is invalid. In this case, you must enter the IP address of the PC where the IVMS login server is located;

Server port: Client Access the Login Server service port, default 6605, not advised to change.

Server ID: Each Storage Server has a unique number. The system can deploy one or more Storage Servers, Login Server uses the unique number to distinguish between different Storage Server, the unique number must be the same as the ID of the Storage Server, and server management information defined in IVMS Server BackOffice Management System;

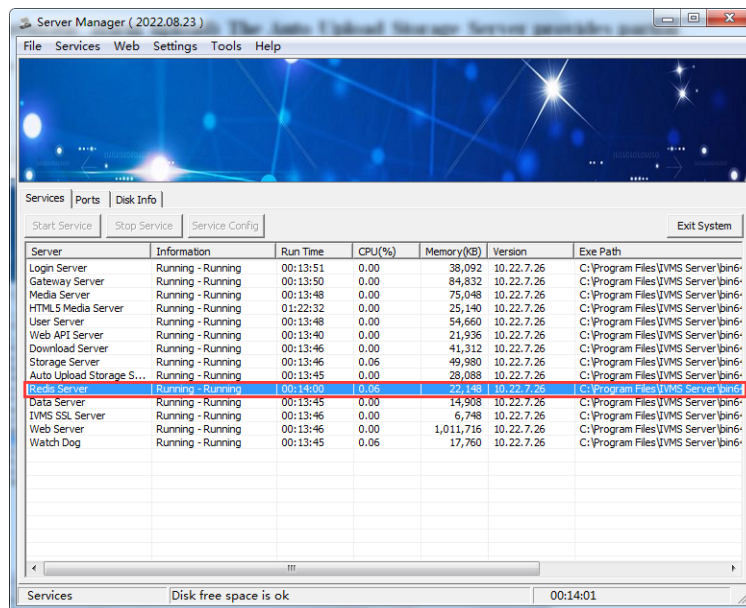
The storage server mainly executes the recording plan task, the snapshot plan task, and the alarm file and video recording automatically uploaded by the download device alarm.

6.3.8 Auto Upload Storage Server



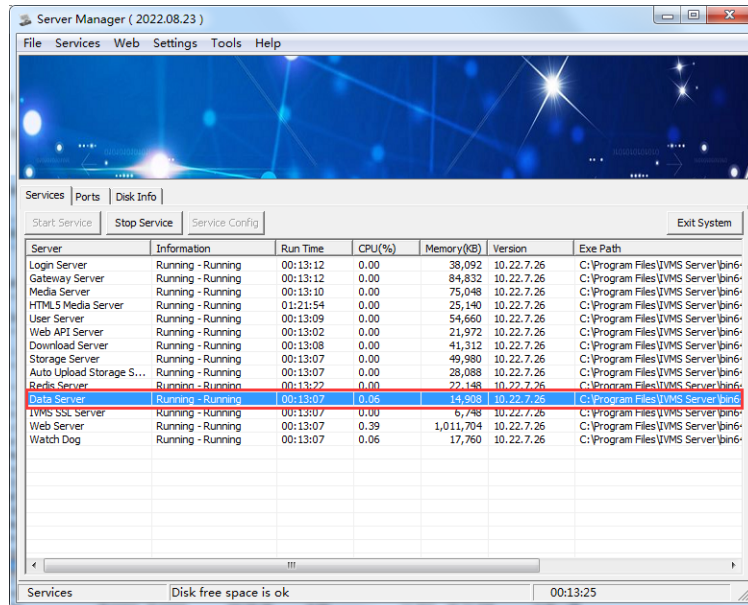
Port: 6631 (automatic upload of DSM/ADAS alarm attachments) The Auto Upload Storage Server provides partial file uploading of the protocol, such as ADAS alarm and alarm upload function.

6.3.9 Redis Server



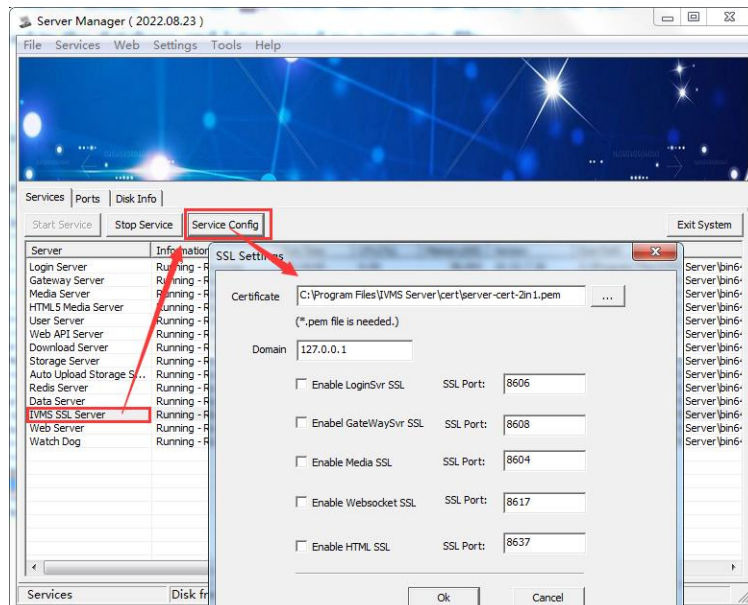
Port: 6619 Server see communication Redis server currently saves the status of each module's watchdog, reducing the coupling of each module and improving efficiency.

6.3.10 Data Server



Port: 6630, the data server mainly saves the GPS status and saves the history track. The original track is saved in the database and later saved as a separate file.

6.3.12 IVMS SSL Server

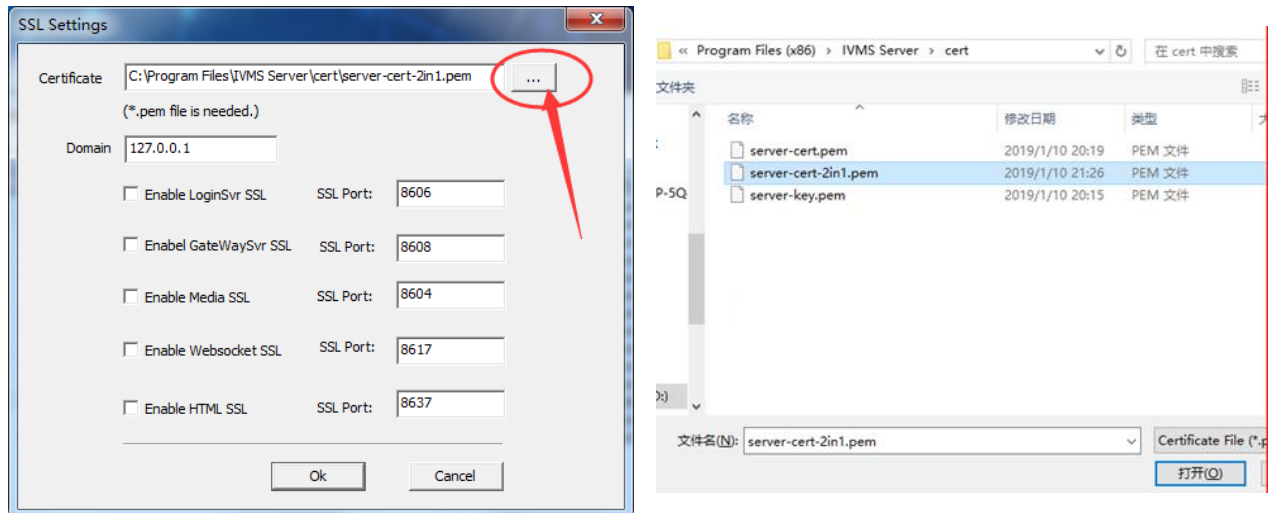


This server is used to encrypt data transmission for increased security, stability and integrity. Allow the web to use the https protocol. (Need to apply for SSL certificate by yourself).

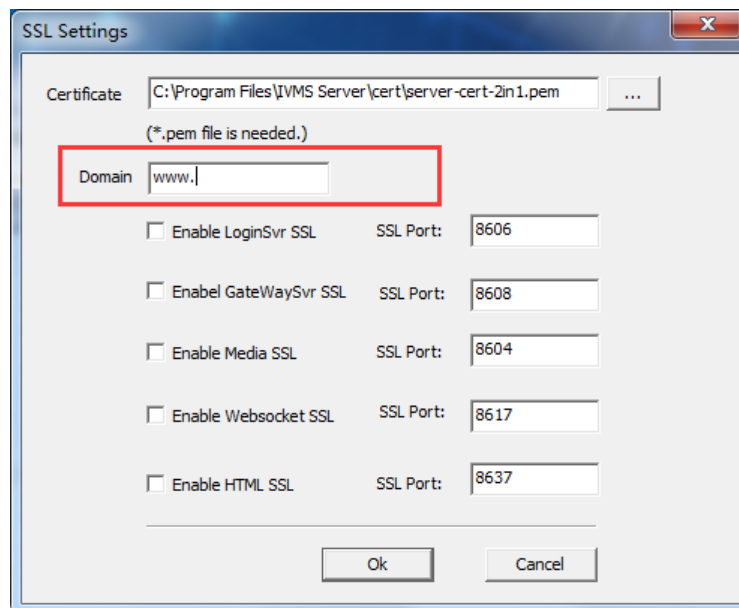
SSL server configuration operation:

Preparation steps: You can use the normal domain name address, one or several unused ports, *.pem type certificate file, *.jks type certificate file and password.

Select *.pem type certificate file:



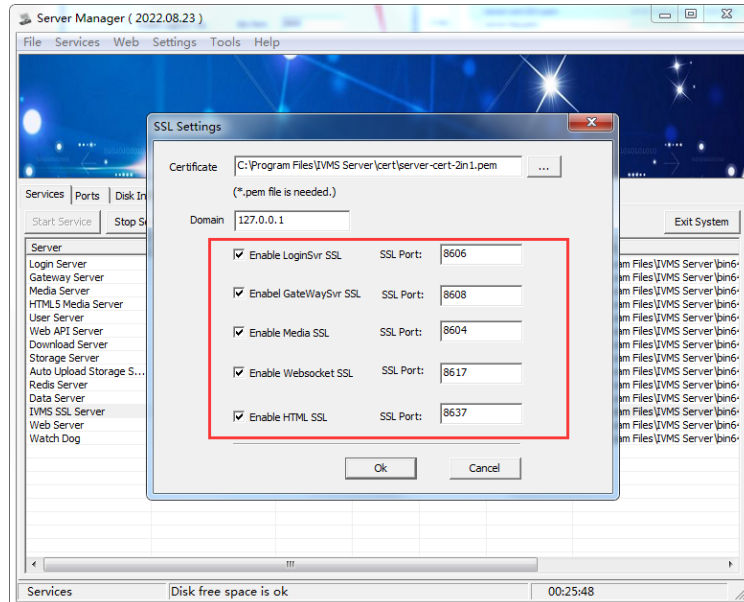
Enter domain name:



Open the SSL server port:

Check the server that needs to be opened, fill in the unused port, and click OK after filling in. The SSL server will automatically restart.

Note: Set multiple ports of streaming media, use; separate.



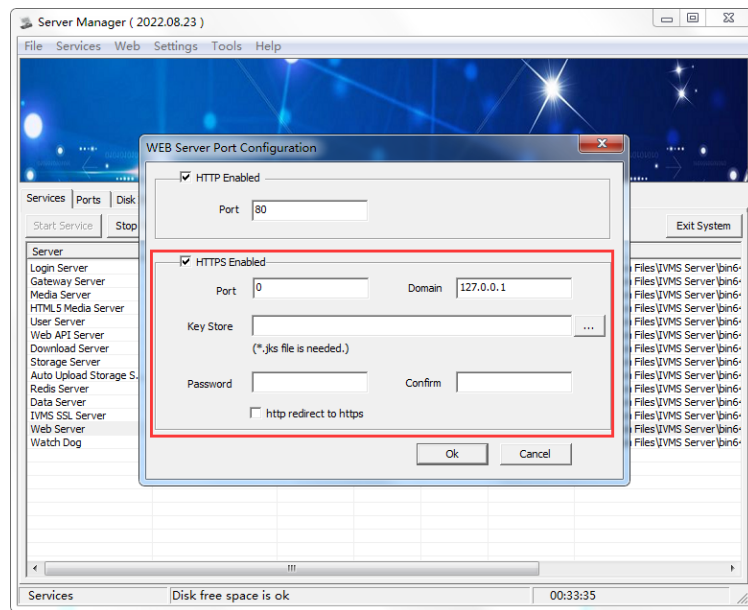
You can view the server configuration file: IVMSSSLSERVER.INI to confirm the relevant settings.

```
D:\Program Files (x86)\IVMS Server\IVMSSSLServer.ini - Notepad++
[Settings]
Certificate=D:\Program Files (x86)\IVMS Server\cert\server-cert-2in1.pem
Count=5
[Server0]
Name=Login Server
Enabled=0
SSL_Enabled=1
HTTP_Enabled=0
Listen=8606
Targets=127.0.0.1:6606
[Server1]
Name=Gateway Server
Enabled=0
SSL_Enabled=1
HTTP_Enabled=0
Listen=8608
Targets=127.0.0.1:6608
[Server2]
Name=Media Server
Enabled=0
SSL_Enabled=1
HTTP_Enabled=1
Listen=8604
Targets=127.0.0.1:6604
[Server3]
Name=Websocket Server
Enabled=0
SSL_Enabled=1
HTTP_Enabled=1
Listen=8617
Targets=127.0.0.1:6617
[Server4]
Name=HTML5 Video Server
Enabled=0
SSL_Enabled=1
HTTP_Enabled=1
Listen=8637
Targets=127.0.0.1:6637
```

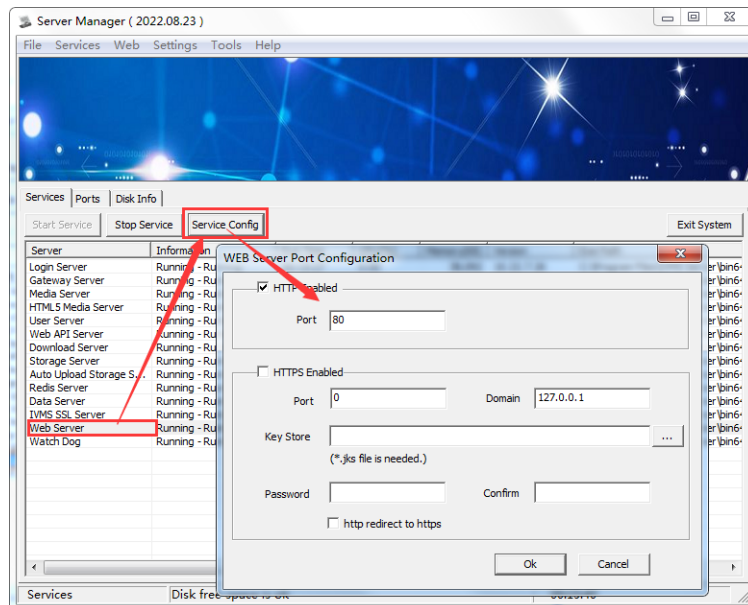
Configure the web server https:

Check 6.3.13 Web Server's HTTPS, input port, domain name, certificate path and password, click to confirm.

Note: The certificate needs to enter the confirmation password. After setting, click to confirm the automatic restart to the Web server.



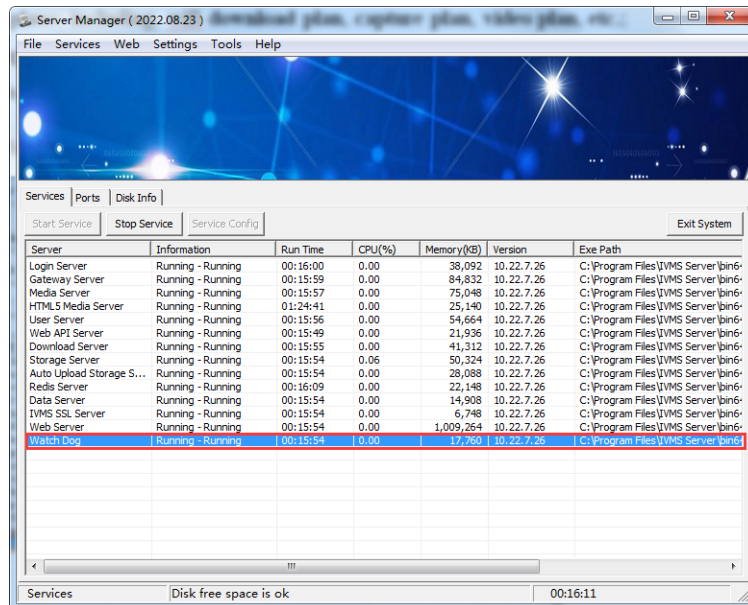
6.3.13 Web Server



Port: 80/88/8080/8088 Web server implements device management; implements company, personnel, and account management; implements server allocation and management, and formulates various plans: including, Wi-Fi download plan, capture plan, video plan, etc.;

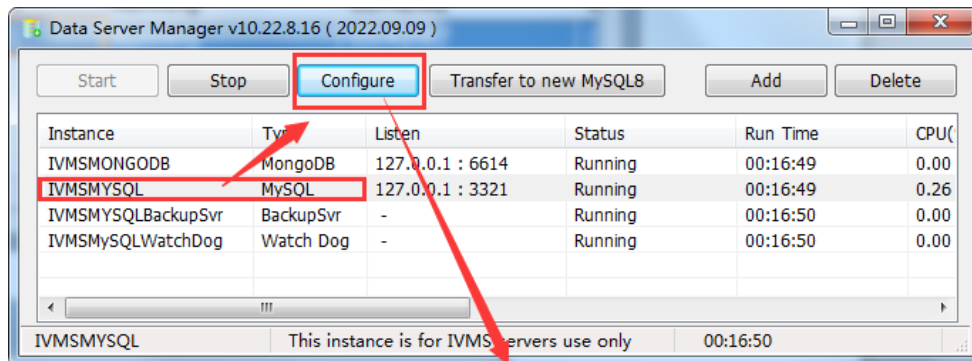
Alarm related linkage function; provide statistical reports of various alarms; provide API for secondary development.

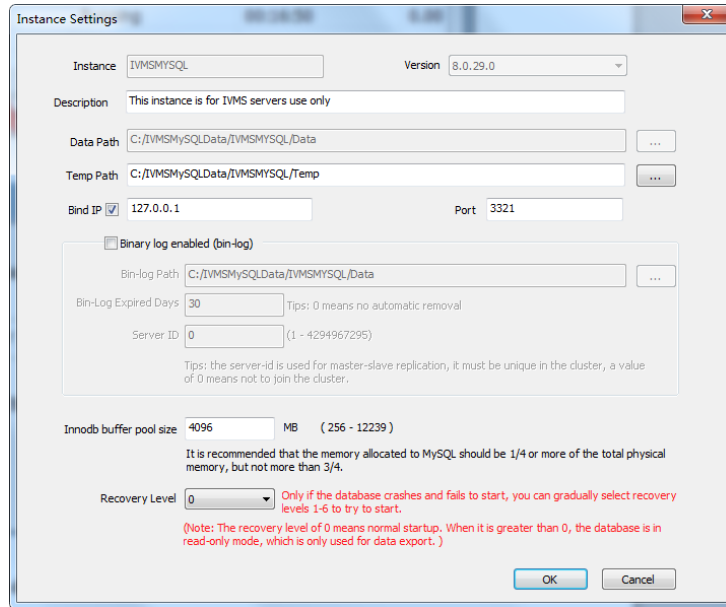
6.3.14 Watch Dog Server



Watch dog: Observe the status of other servers and restart the error server.

6.3.15 MySQL Server

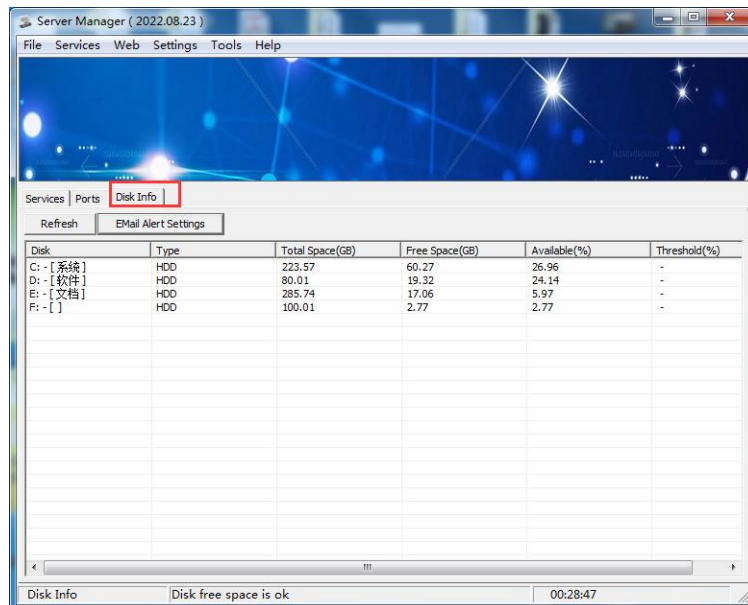




Port 3321, MySQL server: database, store various device information, alarm information, user information, video file path, and so on.

6.4 Disk Info

View server disk information (such as capacity information) to avoid data failure due to insufficient disk capacity.



It can be set to send an alarm report of the remaining capacity of the disk every day, and set an alarm threshold (when the remaining capacity is lower than the alarm threshold, an alarm email will be sent every hour).

Recipients: mail recipient.

CC: cc recipient.

