

KEDACOM

VMS Configuration Guide

Version 02

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Intended Audience

This document is intended for the personnel who:

- Configure the Video Management System (VMS)
- Know video surveillance basics

Document Versions

Version 02 (2016-03-15)

Compared with Version 01 (2015-09-30), Version 02 (2016-03-15) includes the changes described in the following table.

Change Type	Description
Feature change	Added GB VMS Setting; Added User Management function; Added NAT Setting.
Editorial change	Updated screenshots. Revised the document.

Version 01 (2015-09-30)

Compared with Version 00 (2014-11-20), Version 01 (2015-09-30) includes the changes described in the following table.

Change Type	Description
Feature change	-
Editorial change	Updated screenshots. Revised the document.

Version 00 (2014-11-20)

This is a draft.

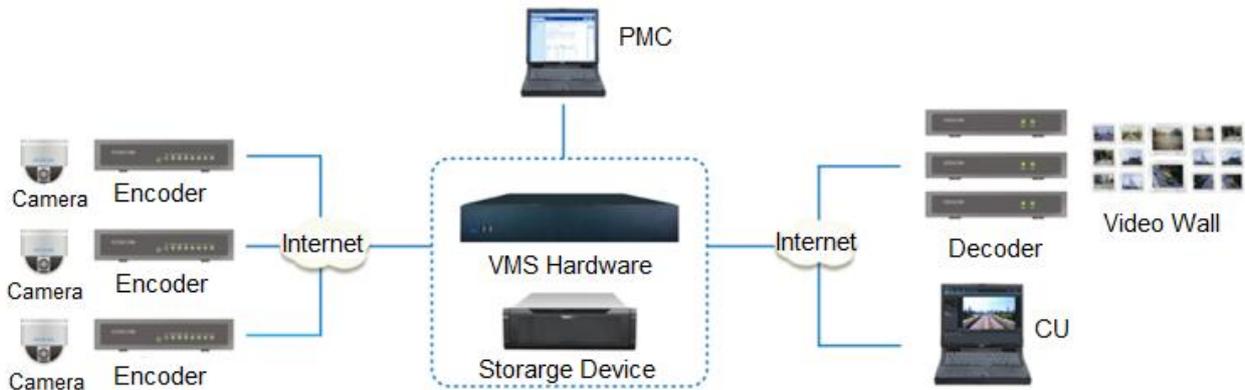
Compatibility

The following table provides the products and VMS software version to which this document applies.

Product	KDM2801H-G2
NVR Software Version	V2R2B3SP1

1 Typical VMS Networking

The following is the typical VMS networking.



As shown in the preceding figure, the typical VMS networking includes the following:

- Front-end device

Front-end devices include cameras, encoders, decoders, recorders, audio devices, and alarm devices.

- VMS hardware

With the optimal graphical user interface (GUI) the VMS hardware is easy to use. The VMS hardware manages and schedules front-end devices.

- Storage device

The storage device stores and manages recordings.

- PMC

On the PMC, you can add front-end devices, configure the VMS, and manage disks.

- CU

The CU supports live viewing, audio controls, front-end device/recording/alarm/snapshot/user management, video-wall control, and e-map.

2 VMS Hardware

The following table provides the specifications of the KDM2801H-G2.

Structure	Embedded, 19 inch (2U)
Number of Ethernet ports	2 RJ45 ports (10M/100M/1000M, adaptive)
Number of USB ports	4
Number of COM ports	1 RS485 (for adjustment)
Number of VGA ports	1 VGA port (for adjustment before delivery)
Power input	Single, AC 100-240V, 50-60 Hz
Memory	4 GB
CPU	Celeron 1037u, dual-core, 1.6 GB
Storage	mSATA 8 GB
Power consumption	≤ 25 W
Operating temperature	0°C to 55°C
Relative humidity	10% to 90%
Size (height x width x depth)	443 mm x 461 mm x 88.1 mm
Weight	≤ 13 kg

3.1 Logging In to the PMC

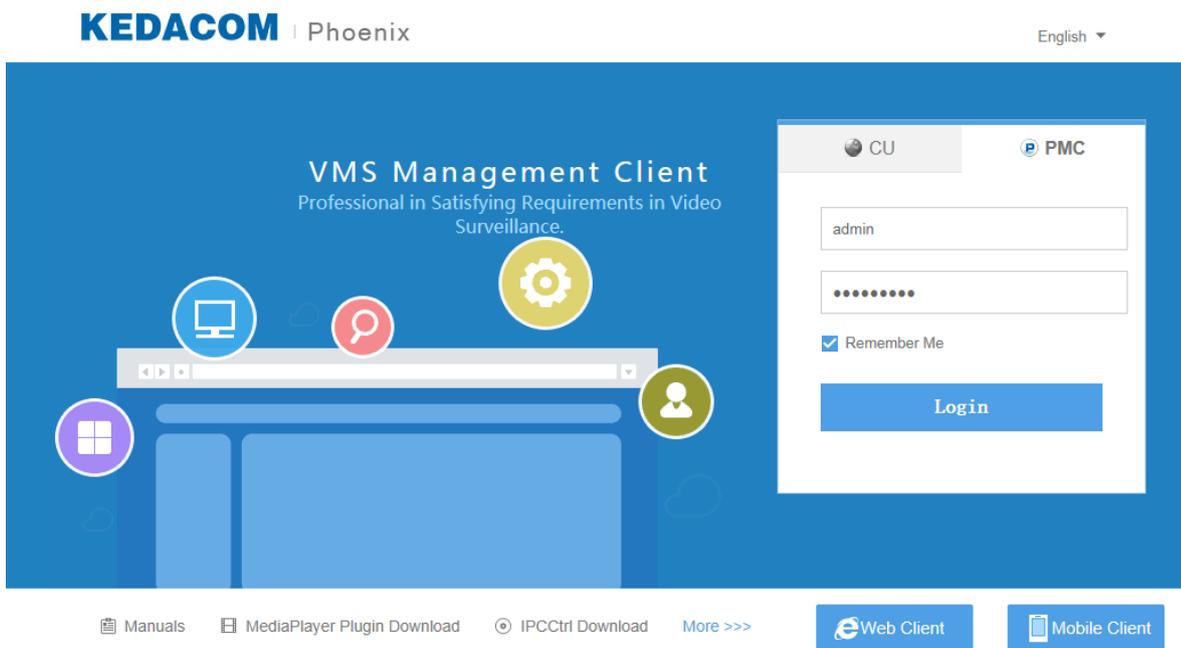
To log in to the PMC:

1. Run the Internet Explorer web browser as the administrator of your personal computer (PC).
2. Enter the IP address of the VMS into the address bar of the Internet Explorer web browser.

Note that Internet Explorer 10 or later is recommended.

If the VMS is located in a NAT-enabled network but your PC not, enter the IP address and access port of the VMS into the address bar, for example, <http://10.20.30.252:80>.

3. Select **PMC**.
4. Enter a user name and the password, as shown in the following figure.



The VMS comes with an administrator account whose user name is admin and password 888888.

5. (Optional) Select **Remember Me**.
6. Click **Login**.



Note

During first login, download and install the cuocx control. If you install this control with Internet Explorer closed, you can log in to the PMC without bothering to restart your PC. If you install this control with Internet Explorer open, you need to restart your PC before you can log in to the PMC.

If you already back up the configuration file (/etc/httpd/conf.d/kdm.conf) of the apache, correct the file and delete the backup. Otherwise, you cannot log in to the PMC.

3.2 Tools

If you need more tools, click **More>>>** on the PMC login interface. Then, you can see the following:



3.3 Icons

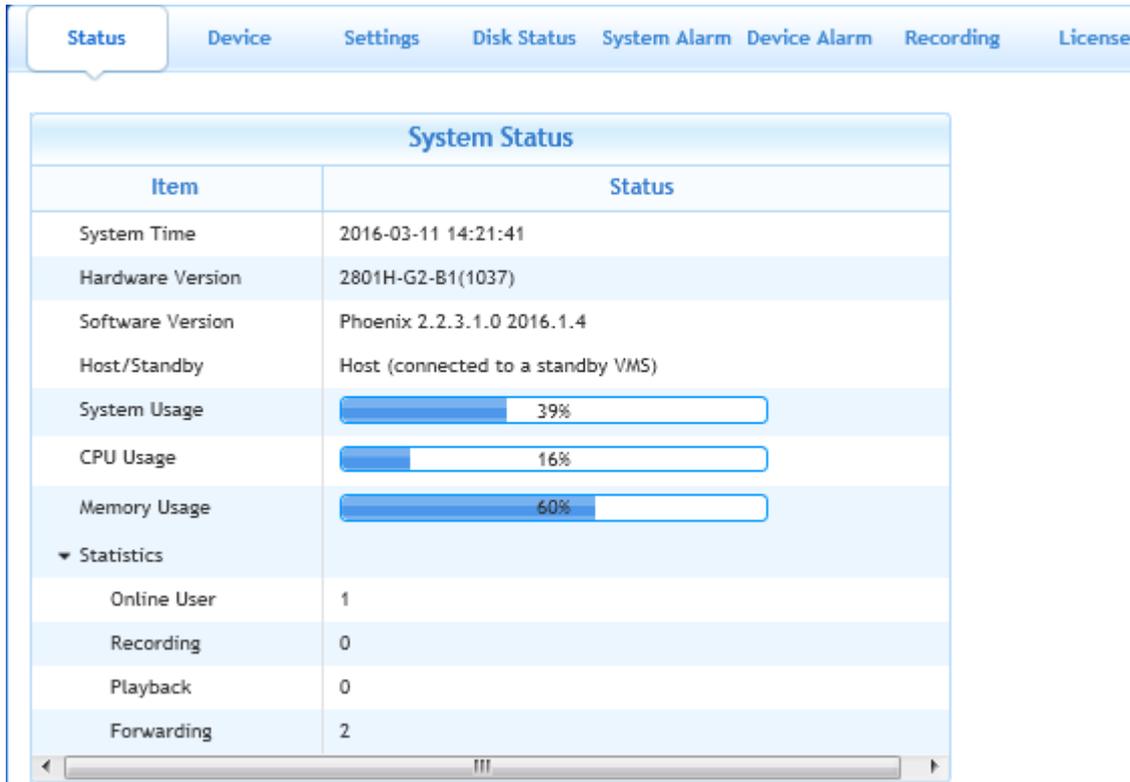
The following table helps you read icons under **VMS List**.

Icon	Description	Note
	Master VMS	A blue icon indicates an online device. A grey icon indicates an offline device. When the icon turns red and blinks, alarms are generated.
	Slave VMS	
	Front-end device	
	NRU	
	Internet connected	-

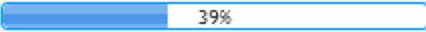
Icon	Description	Note
	Internet disconnected	-
	GB VMS	-

4.1 Querying System/Module Status

On the **Status** tab page, you can query the status of the VMS and its modules.



The screenshot shows the 'Status' tab page of a VMS interface. The page has a navigation bar with tabs: Status, Device, Settings, Disk Status, System Alarm, Device Alarm, Recording, and License. The 'Status' tab is active, displaying a 'System Status' table. The table has two columns: 'Item' and 'Status'. The 'System Usage' row includes progress bars for System Usage (39%), CPU Usage (16%), and Memory Usage (60%). A 'Statistics' section is expanded, showing Online User (1), Recording (0), Playback (0), and Forwarding (2).

System Status	
Item	Status
System Time	2016-03-11 14:21:41
Hardware Version	2801H-G2-B1(1037)
Software Version	Phoenix 2.2.3.1.0 2016.1.4
Host/Standby	Host (connected to a standby VMS)
System Usage	 39%
CPU Usage	 16%
Memory Usage	 60%
▼ Statistics	
Online User	1
Recording	0
Playback	0
Forwarding	2

Module Status		
Name	IP Address	Status
PROXY	10.77.128.204	Connected
3AS	10.77.128.204	Connected
TVS	10.77.128.204	Connected
UAS	10.77.128.204	Connected
RCS	10.77.128.204	Connected
ALS	10.77.128.204	Connected
MPS	10.77.128.204	Connected
GBS	10.77.128.204	Connected
PUI	10.77.128.204	Connected
CUI	10.77.128.204	Connected
VTDU	10.77.128.204	Connected
CUI1	10.77.128.204	Connected
PUIGB	10.77.128.204	Offline

The following table provides the description about each VMS module.

Module	Description
PROXY	All Session Initiation Protocol (SIP) network elements (NEs) register to this module.
3AS	This module saves device and user data for each VMS domain.
RCS (Record Server)	<p>This module includes the following two sub-modules:</p> <ul style="list-style-type: none"> ✓ RMS: accepts NRU registration/access and schedules and manages NRUs. ✓ SCS: is responsible for iSCSI disk array connection and disk partition/formatting/mounting/logging. <p>NRU stands for Network Recorder Unit.</p>
MPS (Map Server)	This module manages the e-map and map elements, for example, download/upload/create/delete sub-maps and add/delete/drag map elements.
TVS (TV Server)	This module manages the video wall.

Module	Description
UAS (User Application Server)	This module saves front-end device configurations, user-defined data, and user/device/alarm logs.
ALS (Alarm Server)	This module manages alarms.
PUI (Peripheral Interface Unit)	This module converts protocols for front-end devices and the cmu.
GBS (GB/T28181Server)	This module manages the access of devices/VMSs that comply with the Guobiao (GB) protocol of China.
CUI1 (Client Interface Unit 1)	This module ensures the interconnection between the VMS and Kedacom solutions/G300/G400/G700. It supports the conversion between the Open Settlement Protocol (OSP) and SIP and the conversion between device IDs that comply with the VMS 2.0 and Kedacom numbers that are used by other systems.
PUIGB (Peripheral Interface Unit GB)	This module converts protocols for GB-compliant front-end devices and the cmu.
CUI (Client Interface Unit)	This module manages user access and authorization and supports the conversion between the web service and SIP.
VTDU (Video Transfer&Distribute Unit)	This module transfers and distributes streams (in relays when required).
MTS	This module is an embedded G800 and works with the GBS to convert Kedacom

Module	Description
(Media Transfer Unit)	standard streams into GB-compliant streams.

4.2 Configuring the VMS

4.2.1 Network

NIC

To configure the NIC:

1. Choose **Settings > Network**.
2. Under **NIC**, configure parameters displayed, as shown in the following figure.

The screenshot shows a configuration window titled "NIC". It contains the following fields and controls:

- Default Gateway:** 10.77.255.254
- Net Card:** G-LAND (dropdown menu) 1000Mbps (checkbox)
- Working Mode:** Auto-negotiation (dropdown menu)
- IP Address:** 10.77.128.204
- Subnet Mask:** 255.224.0.0
- Apply** button

Note that all Net Card must share one default gateway.

If net cards are located on different network segments, you need to create a port-mapping table. You are advised to use G-LAN1 for NAT connection.

3. Click **Apply**.

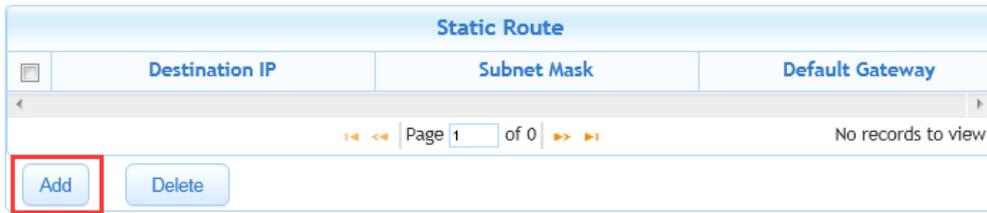
Static Route

Networking devices forward packets using route information that is either manually configured or dynamically learned using a routing protocol. Static routes are manually configured and define an explicit path between two networking devices. Unlike a dynamic routing protocol, static routes are not automatically updated and must be manually reconfigured if the network topology changes.

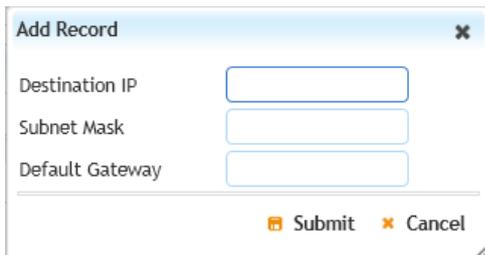
The benefits of using static routes include security and resource efficiency. Static routes use lower bandwidth than dynamic routing protocols and no CPU cycles are used to calculate and communicate routes. The main disadvantage to using static routes is the lack of automatic reconfiguration if the network topology changes.

To create a static route:

1. Choose **Settings > Network**.
2. Click **Add** under **Static Route**, as shown in the following figure.



3. In the displayed **Add Record** dialog box, specify parameters displayed, as shown in the following figure.



4. Click **Submit**.

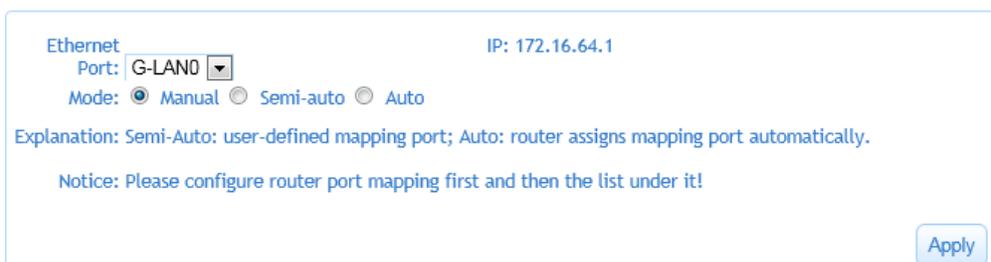
NAT

Address translation substitutes the real address in a packet with a mapped address that is routable on the destination network. The network address translation (NAT) technique includes the following processes:

- Translate a real address into a mapped address
- Undo translation for returning traffic

To configure NAT settings:

1. Choose **Settings > Network**.
2. Select an Ethernet port under **NAT**.
3. Select a mapping mode.



Manual: If you select this value, you need to create the same port-mapping table on both the VMS and router in operation.

Semi-auto: If you select this value, you need to create a port-mapping table on the VMS. The router, however, must support the Universal Plug and Play (UPnP) technology.

Auto: If you select this value, the router in operation will allocate mapped ports to the VMS. The router, however, must support the UPnP technology.

Note that the UPnP technology supports only single-layer NAT port mapping.

If you select the **Manual** mode:

- 1) Select a port number.

Port	Protocol	External IP	External port	Enabled	Status	Note
12000	UDP		0	<input type="checkbox"/>	Invalid	Wireless PU Port
80	TCP		0	<input type="checkbox"/>	Invalid	HTTP Port. For C
90	TCP		0	<input type="checkbox"/>	Invalid	Mobile CU Port
1722	TCP		0	<input type="checkbox"/>	Invalid	CUI1 Login Port
3478	UDP		0	<input type="checkbox"/>	Invalid	STUN Server Port
5060	TCP		0	<input type="checkbox"/>	Invalid	PROXY Port
5060	UDP		0	<input type="checkbox"/>	Invalid	PROXY Port
5062	UDP		0	<input type="checkbox"/>	Invalid	PMS Port
5510	TCP		0	<input type="checkbox"/>	Invalid	VSIP Listening Por
5511	UDP		0	<input type="checkbox"/>	Invalid	GB Port
5650	TCP		0	<input type="checkbox"/>	Invalid	Mobile CU Port
6700	TCP		0	<input type="checkbox"/>	Invalid	Mobile CU Port
7000	UDP		0	<input type="checkbox"/>	Invalid	Platform Receive Stream Port
8000	UDP		0	<input type="checkbox"/>	Invalid	CUI1 NAT Port

- 2) Click **Edit**.

- 3) In the displayed dialog box, specify parameters displayed.

Change port mapping relation
✕

Port:

Communication Protocol:

Enable/Disable:

External IP:

External port:

Note:

- 4) Click **Apply**.
- 5) Copy the port mapping relation to the router in operation.

If you select the **Semi-auto** mode:

- 1) Select a port number.

Port	Protocol	External IP	External port	Enabled	Status	Note
12000	UDP		0	<input type="checkbox"/>	Invalid	Wireless PU Port
80	TCP		0	<input type="checkbox"/>	Invalid	HTTP Port. For CI PMC login
90	TCP		0	<input type="checkbox"/>	Invalid	Mobile CU Port
1722	TCP		0	<input type="checkbox"/>	Invalid	CUI1 Login Port
3478	UDP		0	<input type="checkbox"/>	Invalid	STUN Server Port
5060	TCP		0	<input type="checkbox"/>	Invalid	PROXY Port
5060	UDP		0	<input type="checkbox"/>	Invalid	PROXY Port
5062	UDP		0	<input type="checkbox"/>	Invalid	PMS Port
5510	TCP		0	<input type="checkbox"/>	Invalid	VSIP Listening Port
5511	UDP		0	<input type="checkbox"/>	Invalid	GB Port
5650	TCP		0	<input type="checkbox"/>	Invalid	Mobile CU Port
6700	TCP		0	<input type="checkbox"/>	Invalid	Mobile CU Port
7000	UDP		0	<input type="checkbox"/>	Invalid	Platform Receive Stream Port
8000	UDP		0	<input type="checkbox"/>	Invalid	CUI1 NAT Port

- 2) Click **Edit**.
- 3) In the displayed dialog box, specify parameters displayed.

4) Click **Apply**.



Note

When the **Manual** mode is selected and the IP address of the VMS is changed, you need to update the IP address for the VMS on the router.

DDNS

The Dynamic Domain Name System (DDNS) update integrates DNS with DHCP. The two protocols are complementary: DHCP centralizes and automates IP address allocation; DDNS update automatically records the association between assigned addresses and hostnames at pre-defined intervals.

The DDNS allows frequently changing address-hostname associations to be updated frequently. Mobile hosts, for example, can then move freely on a network without user or administrator intervention. DDNS provides the necessary dynamic update and synchronization of the name-to-address mapping and address-to-name mapping on the DNS server.

To configure the DDNS settings:

1. Choose **Settings > Network > DDNS**.
2. Click **Edit** under **DDNS**.

3. Enter a domain name for the VMS in the **DDNS Service** text box.

Change DDNS service address
✕

DDNS: www.ddnseasy.com/

Apply
Log Out

4. Click **Apply**.

After the preceding steps are performed, users can access the VMS through its domain name.

4.2.2 Module

You can disable or enable modules on the **Module** sub-tab page, as shown in the following figure.

Module	Status
VTDU Video transferring distribution module	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
NRU Network Record Module	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
PUI Device access module	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
CUI Client access module	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
GBS GB access module Configuration: GB	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
MTS GB transcoding module	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
CUI1 Please click the following link for configuration Compatible client module Configuration: More	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
MSS Media service module	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
PUIGB GB device access module IP Address 10.77.128.204:5800	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>
CAPS Wechat release module	<div style="background-color: #4a86e8; color: white; padding: 2px 5px; display: inline-block;">ENABLED</div> <input style="width: 60px; height: 15px; margin-left: 5px;" type="checkbox"/>

4.2.3 General

On the **General** sub-tab page, you can:

- Change the domain name of the VMS (the change can take effect only after the VMS is rebooted.)

- Extend the access capability for GB-compliant front-end devices
- Configure STUN settings

With a STUN server, two hosts located behind two different NAT-enabled networks can discover their own public IP address and communicate with each other.

Run the STUNTEST to check whether STUN settings work properly.

- ✓ If yes, the settings are successful.
- ✓ If not, deploy another STUN server and apply its IP address.

Note that the default value for **Webserver Port** is **80**. You cannot set this parameter to **90**, which is occupied by the MSS.

- Set the system time

Note that a slave or lower-level VMS synchronizes its system time with its master or upper-level VMS. Therefore, you do not need to set the system time for the slave or lower-level VMS.

- Enter the name and IP address of an upper-level VMS
- Reboot or shut down the VMS
- Import or export an mirror file for the VMS
- Restore factory defaults for the VMS
- Upgrade the VMS

The following are examples.

The image shows a configuration interface with three distinct sections, each with a title bar and an 'Apply' button.

- Basic Information:** Contains a text input field for 'Domain Name' with the value 'kedscom'.
- Interconnection:** Contains a dropdown menu for 'Level' with the text 'Please select a level.', an 'ID' label, and a text input field for 'Location' with '(Optional)' next to it.
- STUN:** Contains a text input field for 'STUN Server' with the value '0.0.0.0' and a text input field for 'webserver port' with the value '80'.

System Time

NTP NTP Server:
 Manual Date: Time:

Upper-level VMS

Name:

IP Address:

4.2.4 GB VMS Setting

1. Go to **Settings>GB**;

Settings

MTS IP: MTS Port: Connected

Upper-Level

Alias	GB ID	IP Address	Port	Connected
Page 1 of 0				

To access to upper-level GB VMS

Lower-Level VMS

Alias	GB ID	IP Address	Status	User Name	Password
Page 1 of 0					

To add lower-level GB VMS

GB-compliant Device

Alias	GB ID	IP Address	Status	User Name	Password
mss	31000000002700000090	172.16.251.3	Offline	admin	888888
Page 1 of 1					

To add GB-compliant device such as MSS

Parameters settings:

- Region: Click "Edit" and select an administrative region name from the popup window. The GB ID will generate automatically.

Note: Only VMS of V2R2B2 and above version supports automatically generating GB ID function.

When VMS of old version is upgraded to this version, GB ID should be set manually.

- Code transferring service IP: MTS IP address.

Note: If use built-in MTS code transferring, no need to modify IP address. Enable MTS.

- Code transferring port: MTS port.
- GB VMS port: GB connection port, 5511 by default, cannot be modified on PMC.

Note: When lower-level VMS cascades and the upper-level VMS enables GBS, the lower-level VMS uses GB ID of its own level.

2. Click “**More**” and enter **The CU can access videos types: Auto Selected, VMS and Device**. The default is **Auto Selected**.

Note:

- 1) When upper-level VMS views GB device videos of lower-level one, if the lower-level selects **Device**, the upper-level can view and playback videos of this GB device. If the lower-level selects **VMS**, the lower-level only provides VMS videos and the upper-level cannot view videos of this GB device at lower-level.
- 2) When upper-level VMS views GB videos of lower-level one, if the lower-level selects **Auto Selected**, the lower-level can provide videos of either GB device or VMS according to the request of upper-level.
- 3) As an upper-level VMS, it can view videos of lower-level VMS by default. To set view request, please refer to *VMS Advanced Configuration Guide*.

4.2.4.1 Configure Upper-level GB Domain

One VMS can configure one or more upper-level VMS, operation steps:

1. Click “**Add**” in **Upper-Level** interface and a window will pop up. Input the information as follows:

Explanation of parameters:

Parameter	Explanation
Alias	Can be modified
GB ID	Upper-level GB ID
IP Address	Upper-level VMS IP address, can be modified
Port	For VMS cascading, the default is 5511, can be modified
User Name	Compulsory, the default is lower-level VMS GB ID
Password	Compulsory, the default is 888888

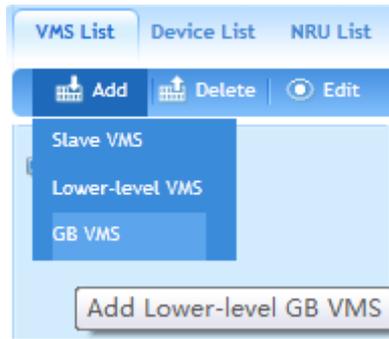
2. After setting, click “**Add**”.

Check added VMS, click “**Info**” to view relative information, “**Delete**” to delete the VMS and “**Edit**” to edit VMS information.

4.2.4.2 Configure Lower-level GB Domain

1. There are 2 methods to add lower-level VMS:

- Click “**Add**” in **Lower-Level VMS** interface.
- In topological area, click “**Add**”>”**GB VMS**”.



2. In the popup window, input relative information. IP address is optional and the default is the GB ID that inherits this VMS.

Explanation of parameters:

Parameter	Explanation
Alias	Can be modified
GB ID	Lower-level GB ID, cannot be modified
IP Address	Optional, it can be obtained automatically when the lower-level registers to the upper-level and it updates automatically
User Name	Optional, the default is lower-level VMS GB ID
Password	Optional, the default is 888888

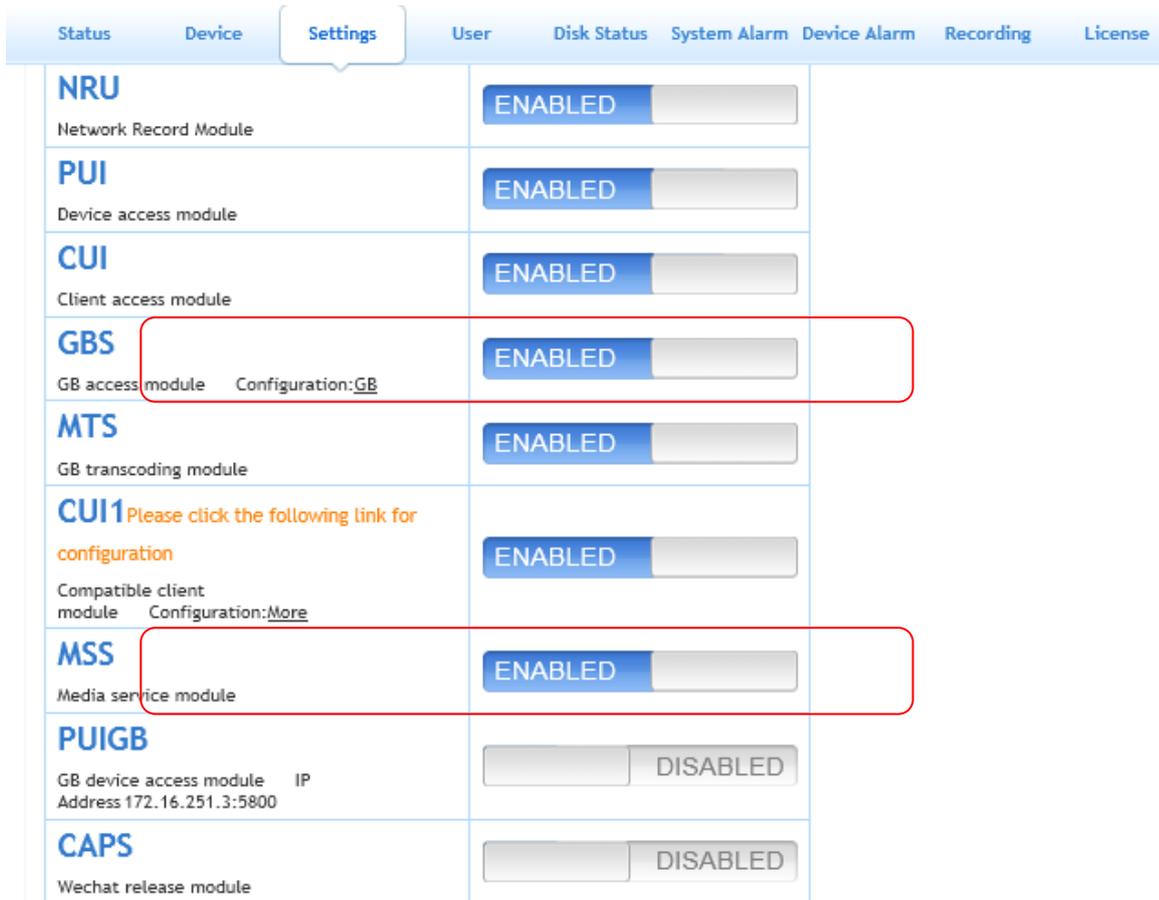
After adding lower-level GB VMS, it will display in the topological area. Double click the VMS to show relative information.

4.2.4.3 Configure GB-compliant Device

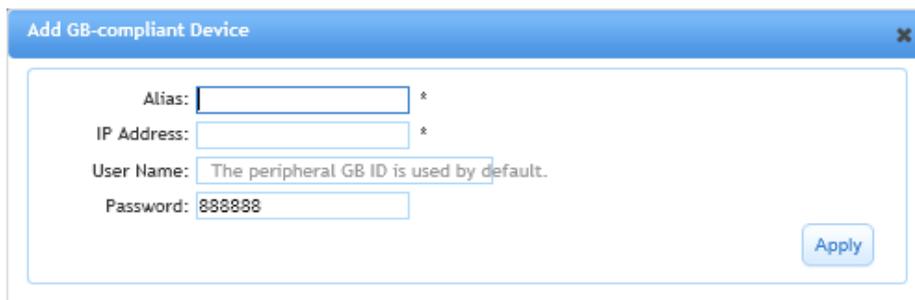
In GB-compliant Device area, add GB-compliant device such as MSS. The following steps take

adding MSS as an example.

1. Go to **Settings>Module** and enable GBS and MSS modules;



2. Go to **Settings>GB>GB-compliant Device**, click “Add” and input parameters in the popup window;



3. After input parameters, click “**Apply**” and the added device will display in the interface;

GB-compliant Device					
Alias	GB ID	IP Address	Status	User Name	Password
embedded mss	3100000002700000027	10.77.128.204	Online	admin	888888
externalmss	3100000002700000028	10.77.128.102	Online	admin	888888

Page 1 of 1

Add Edit Delete

- Enter MSS login interface (user name: **admin**, password: **888888**) by inputting its address in IE browser. For example, if the VMS IP address is 10.77.128.204, the MSS address is <http://10.77.128.204/mss/index.html>;
- Go to **System configuration> Platform parameter** and input parameters:

The screenshot shows the 'Platform parameter' configuration page in the Media Streaming Server. The fields are as follows:

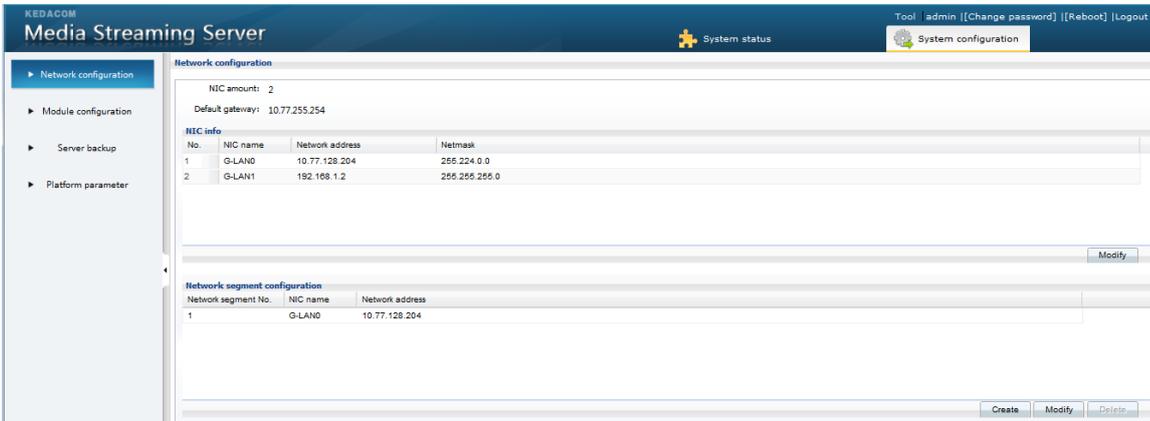
- Platform type: Platform 2.0
- Platform address: 10.77.128.204
- Platform port: 5511 (Default port of platform 1.0 is 5070, platform 2.0 is 5511.)
- Media streaming ID: 3100000002700000027
- Platform ID: 3100000002000000000
- Platform username: admin
- Platform password: [masked]

Parameter	Explanation
Platform type	select "Platform 2.0"
Platform address	Input the IP address of platform 2.0 Note: platform address should be in the same segment as that of platform's first net card.
Platform port	GB VMS port
Media streaming ID	GB ID of VMS peripheral device
Platform ID	GB VMS ID
Platform username	VMS user name
Platform password	VMS password

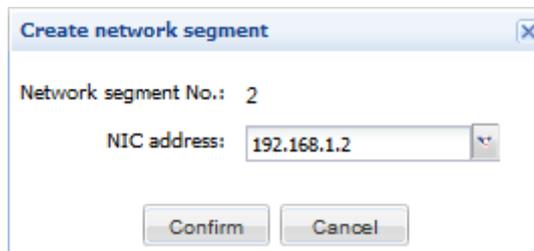
- Modify network configuration: if the platform is in dual segments, configure its network segments,

steps:

- 1) Go to **System configuration>Network configuration**, click **“Create”**;



- 2) Input **“NIC address”** in the popup window:

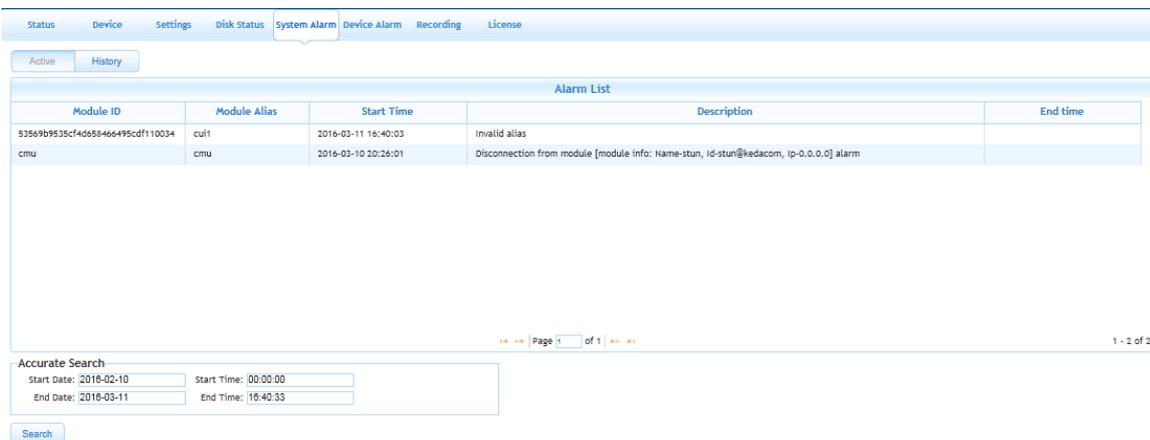


7. When the client is in WLAN while the platform is in LAN, user needs to configure NAT mapping and network mapping at PMC client and MSS client. Please refer to NAT Configuration and MSS Mapping Configuration.

4.3 Querying System Alarms

4.3.1 Active Alarms

To query active device alarms, choose **System Alarm > Active**.



You can use **Accurate Search** to search for specific active alarms.

4.3.2 History Alarms

To query history alarms, choose **System Alarm > History**.

The screenshot shows the 'System Alarm' interface with the 'History' tab selected. The main content is an 'Alarm List' table with the following data:

Module ID	Module Alias	Start Time	Description	End time
53569b9535cf4d658466495cdf110034	cul1	2016-03-11 14:32:01	Invalid alias	
pms	pms	2016-03-11 00:02:18	CPU overload alarm	2016-03-11 00:02:50
cmu	cmu	2016-03-10 20:26:01	Disconnection from module [module info: Name-stun, id-stun@kedacom, ip-0.0.0.0] alarm	
cmu	cmu	2016-03-10 20:16:07	Disconnection from module [module info: Name-stun, id-stun@kedacom, ip-0.0.0.0] alarm	
3as	TAS	2016-03-10 19:46:09	Invalid license alarm	
cmu	cmu	2016-03-10 18:24:18	Disconnection from module [module info: Name-stun, id-stun@kedacom, ip-0.0.0.0] alarm	
pms	pms	2016-03-10 10:12:11	CPU overload alarm	2016-03-10 10:12:44
cmu	cmu	2016-03-10 10:11:34	Disconnection from module [module info: Name-stun, id-stun@kedacom, ip-0.0.0.0] alarm	
3as	TAS	2016-03-09 14:25:00	Invalid license alarm	
pms	pms	2016-03-09 09:42:28	CPU overload alarm	2016-03-09 09:43:02

Below the table is an 'Accurate Search' section with input fields for 'Start date' (2016-02-10), 'End date' (2016-03-11), 'Start Time' (00:00:00), and 'End Time' (16:39:41). There are 'Search' and 'Export' buttons. The page number is 'Page 1 of 8' and the total number of pages is '1 - 10 of 77'.

You can use **Accurate Search** to search for specific history alarms.

You can click **Export** to export and download a list of history alarms.

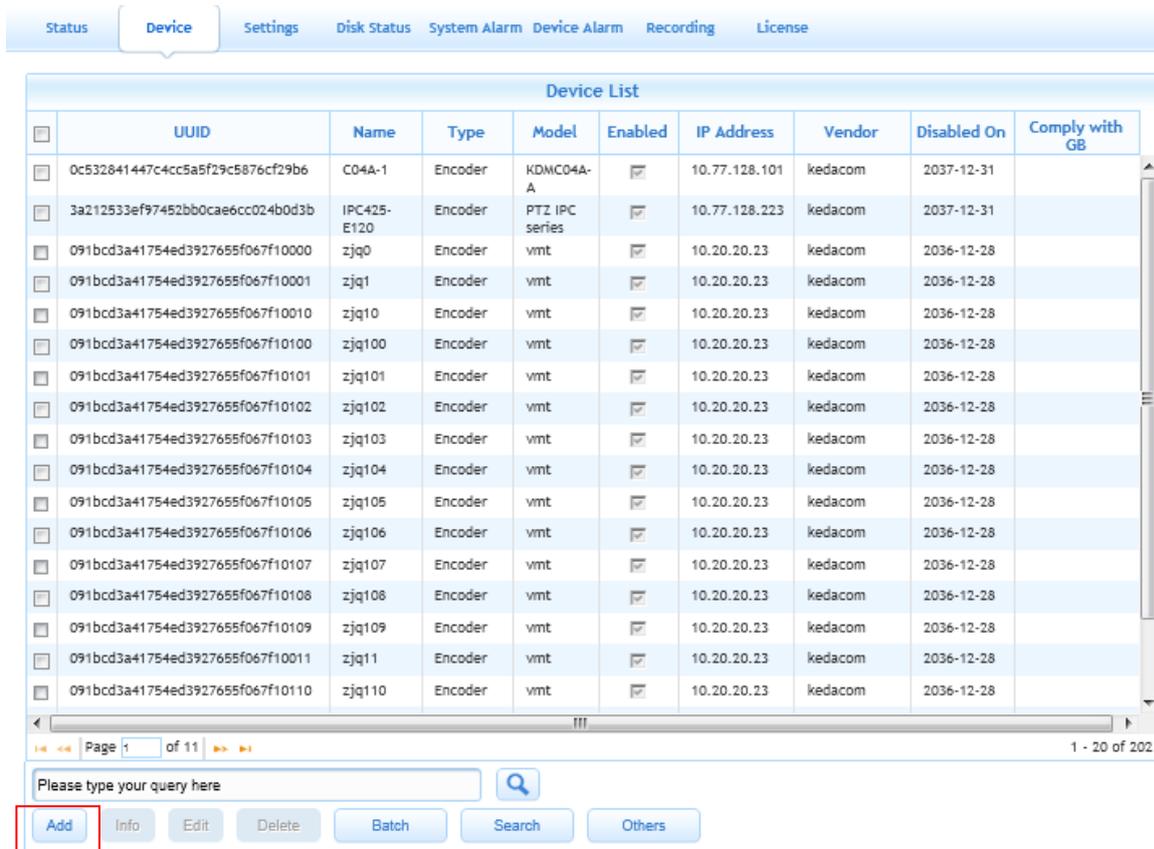
5 Managing Front-End Devices

5.1 Device Management

5.1.1 Adding a Device

To add a device:

1. Click **Add** on **Device**, as shown in the following figure.



Alternatively, click **Add** under **Device List**, as shown in the following figure.



2. In the displayed **Add Device** dialog box, specify parameters displayed, as shown in the following

figure.

Name: * GB Device
Type: Encoder Model: *
Enabled/Disabled: Enabled IP: *
Access Route: VMS in another NAT Front-end in another NAT ?
Disabled On: 2037-12-31 *
Location:
 Write Data: *
OK Cancel Others

If you select **Write Data**, you need to enter the current IP address of the device. Then, the IP address of the VMS and the Universally Unique Identifier (UUID) of the device will be sent to the device.

For the **IP** parameter, you can enter either the current IP address of the device or a new IP address. If you enter a new IP address, the device will use this new IP address after it receives this IP address from the VMS.

When specifying **Model**, you can click **Others** to add a new model specific to the device as follows:

- 1) Click **Others**.
- 2) Click **Add**, as shown in the following figure.

<input type="checkbox"/>	Model name	Vendor	GB Model	Type	Device Series	Max Number of Video Sources	Required License	Local Storage	Number of Alarm Inputs	Max Number of Data Streams	Max Number of Decoding Channels	Max Number of Decoding Outputs
<input type="checkbox"/>	Fixed IPC series	kedacom		Encoder	Fixed IPC	1	1	No	36	2		
<input type="checkbox"/>	Fixed IPC series with storage	kedacom		Encoder	Fixed IPC	1	1	Yes	36	2		
<input type="checkbox"/>	Fixed LC series	kedacom		Encoder	Fixed IPC	1	1	No	0	2		
<input type="checkbox"/>	Fixed LC series with storage	kedacom		Encoder	Fixed IPC	1	1	Yes	0	2		
<input type="checkbox"/>	KDM-DD1E	kedacom		Decoder							16	1
<input type="checkbox"/>	KDM-DD1F	kedacom		Decoder							16	1
<input type="checkbox"/>	KDM-DD1G	kedacom		Decoder							16	1

Page 1 of 6 1 - 10 of 51

Add Delete

- 3) In the displayed **Add model** dialog box, specify parameters displayed, as shown in the following figure.

4) Click **Save**.

3. Click **OK**.

5.1.2 Querying Information About a Device

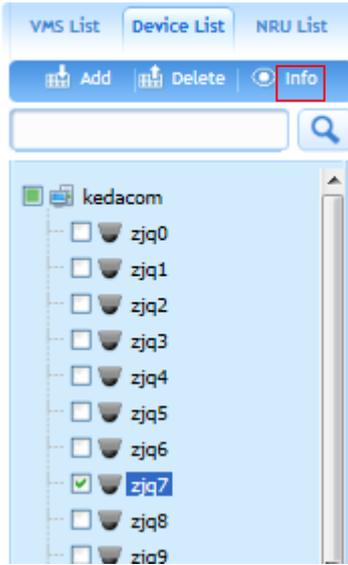
You can query information about a device in any of the following ways:

- ✓ Select the device from the device list and click **Info**.

	UUID	Name	Type	Model	Enabled	IP Address	Vendor	Disabled On	Comply with GB
<input type="checkbox"/>	0c532841447c4cc5a5f29c5876cf29b6	C04A-1	Encoder	KDMC04A-A	<input checked="" type="checkbox"/>	10.77.128.101	kedacom	2037-12-31	
<input checked="" type="checkbox"/>	3a212533ef97452bb0cae6cc024b0d3b	IPC425-E120	Encoder	PTZ IPC series	<input checked="" type="checkbox"/>	10.77.128.223	kedacom	2037-12-31	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10000	zjq0	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10001	zjq1	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10010	zjq10	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10100	zjq100	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10101	zjq101	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10102	zjq102	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10103	zjq103	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10104	zjq104	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10105	zjq105	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10106	zjq106	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10107	zjq107	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10108	zjq108	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10109	zjq109	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10011	zjq11	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10110	zjq110	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	

- ✓ Double-click the device from the device list.

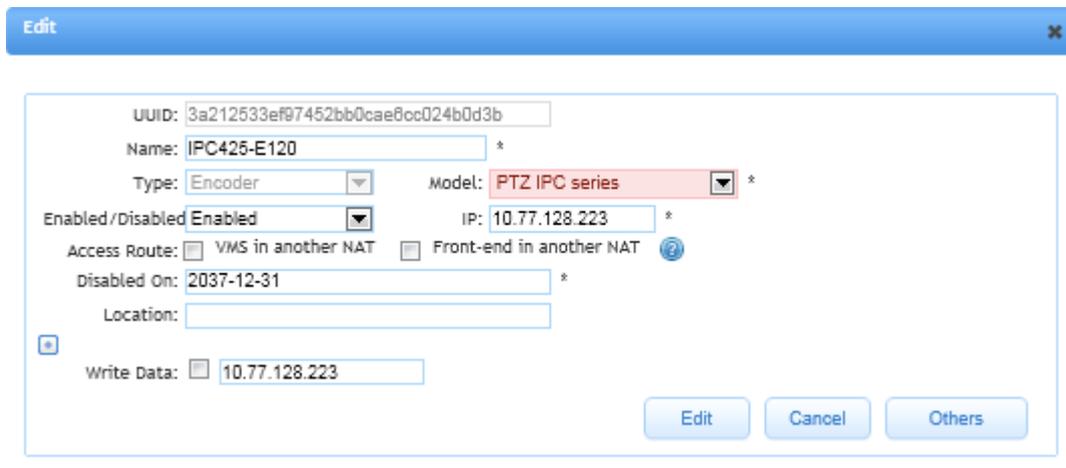
- ✓ Select the device under **Device List** and click **Info**.



5.1.3 Editing a Device

To edit a device:

1. Select the device from the device list and click **Edit**.
2. In the displayed **Edit** dialog box, change parameter values, as shown in the following figure.



3. Click **Edit**.

5.1.4 Deleting a Device

To delete a device:

1. Select the device from the device list and click **Delete**.

Status **Device** Settings Disk Status System Alarm Device Alarm Recording License

Device List									
<input type="checkbox"/>	UUID	Name	Type	Model	Enabled	IP Address	Vendor	Disabled On	Comply with GB
<input type="checkbox"/>	0c532841447c4cc5a5f29c5876cf29b6	C04A-1	Encoder	KDMC04A-A	<input checked="" type="checkbox"/>	10.77.128.101	kedacom	2037-12-31	
<input checked="" type="checkbox"/>	3a212533ef97452bb0cae6cc024b0d3b	IPC425-E120	Encoder	PTZ IPC series	<input checked="" type="checkbox"/>	10.77.128.223	kedacom	2037-12-31	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10000	zjq0	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10001	zjq1	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10010	zjq10	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10100	zjq100	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10101	zjq101	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10102	zjq102	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10103	zjq103	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10104	zjq104	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10105	zjq105	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10106	zjq106	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10107	zjq107	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10108	zjq108	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10109	zjq109	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10011	zjq11	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10110	zjq110	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	

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Please type your query here

Add Info Edit **Delete** Batch Search Others

Alternatively, select the device under **Device List** and click **Delete**.

VMS List **Device List** NRU List

Add **Delete** Info

kedacom

- zjq0
- zjq1
- zjq2
- zjq3
- zjq4
- zjq5
- zjq6
- zjq7

2. In the displayed dialog box, confirm your operation.

5.1.5 Batch Operations

5.1.5.1 Adding Devices

To add a batch of devices:

1. Click **Batch**.

Status **Device** Settings Disk Status System Alarm Device Alarm Recording License

Device List									
<input type="checkbox"/>	UUID	Name	Type	Model	Enabled	IP Address	Vendor	Disabled On	Comply with GB
<input type="checkbox"/>	0c532841447c4cc5a5f29c5876cf29b6	C04A-1	Encoder	KDMC04A-A	<input checked="" type="checkbox"/>	10.77.128.101	kedacom	2037-12-31	
<input checked="" type="checkbox"/>	3a212533ef97452bb0cae6cc024b0d3b	IPC425-E120	Encoder	PTZ IPC series	<input checked="" type="checkbox"/>	10.77.128.223	kedacom	2037-12-31	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10000	zjq0	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10001	zjq1	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10010	zjq10	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10100	zjq100	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10101	zjq101	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10102	zjq102	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10103	zjq103	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10104	zjq104	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10105	zjq105	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10106	zjq106	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10107	zjq107	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10108	zjq108	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10109	zjq109	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10011	zjq11	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	
<input type="checkbox"/>	091bcd3a41754ed3927655f067f10110	zjq110	Encoder	vmt	<input checked="" type="checkbox"/>	10.20.20.23	kedacom	2036-12-28	

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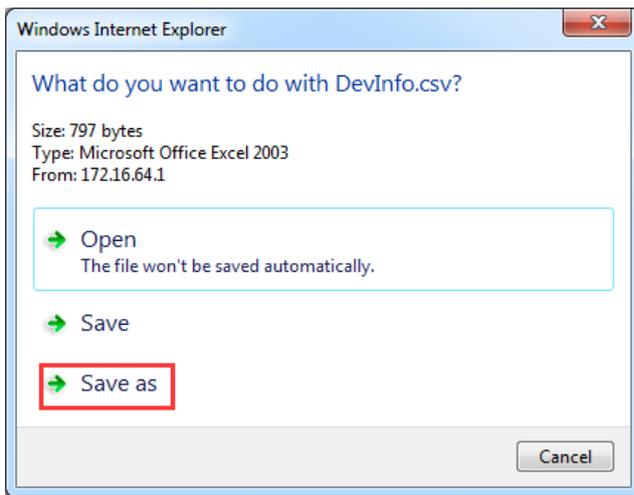
Please type your query here

2. In the displayed **Batch** dialog box, click **Download**.

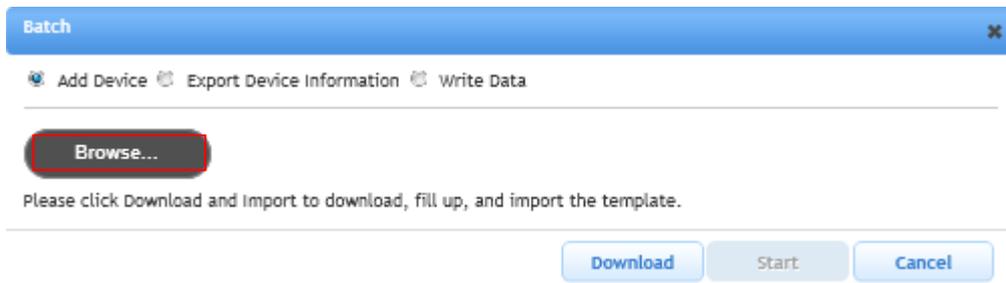
Batch

Please click Download and Import to download, fill up, and import the template.

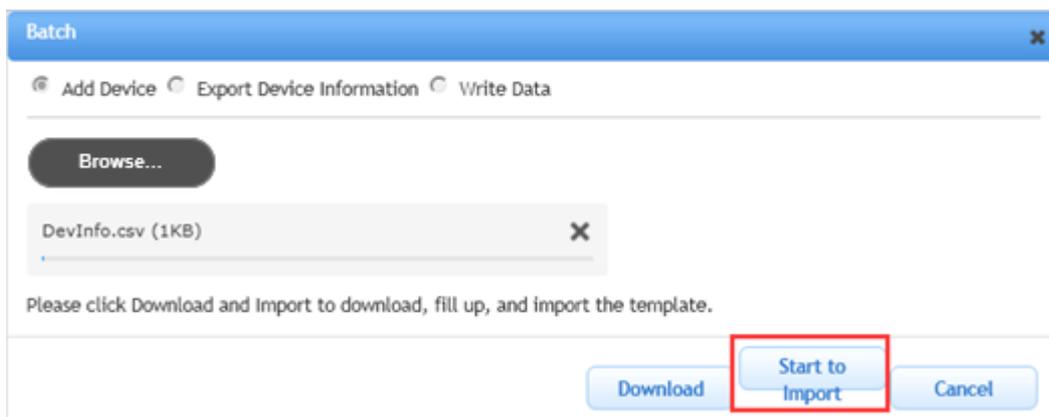
3. Click **Save as**.



4. In the downloaded **DevInfo.csv** file, enter device information according to the existing two examples in the file.
5. In the **Batch** dialog box, click **Browse**.



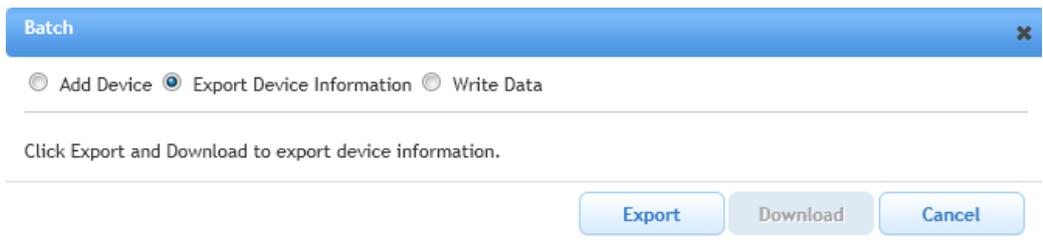
6. Open the **DevInfo.csv** file with device information entered.
7. Click **Start to Import**.



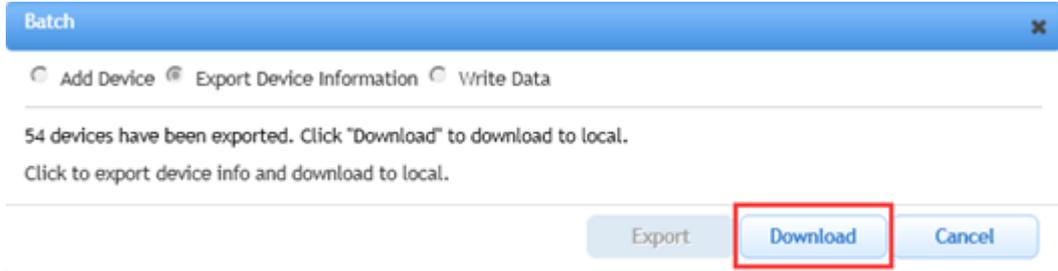
5.1.5.2 Exporting Device Information

To export information about a batch of devices:

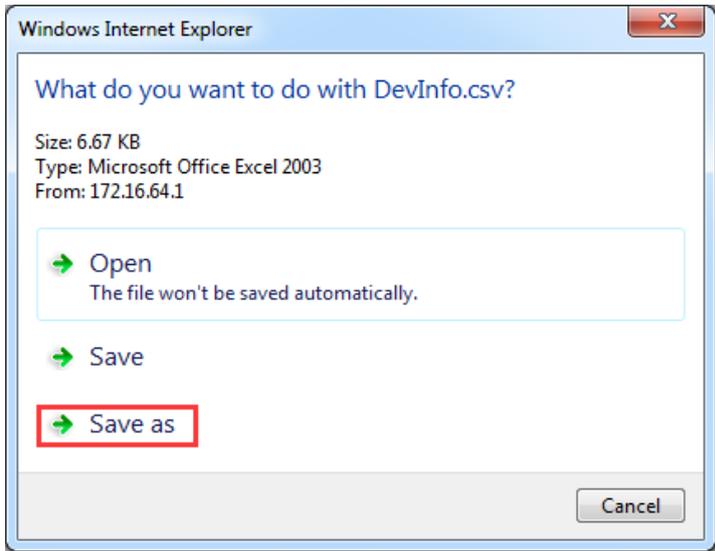
1. Choose **Batch > Export Device Information > Export**.



2. Click **Download**.



3. Click **Save as**.



5.1.5.3 Writing Data

To write the UUID and VMS IP address into a batch of devices:

1. Choose **Batch > Write Data**.
2. Specify **VMS IP Address** and **Port Number**.

Note that the default value for **Port Number** is **5510**.

Batch

Add Device
 Export Device Information
 Write Data

Please enter or select a path in the Device Information text field.

VMS IP Address: Port Number:

Device Information:

No.	Device Name	Device ID	Operation Result

3. Click **Browse** to upload the **DevInfo.csv** file with information about target devices entered.

The following is an example.

Batch

Add Device
 Export Device Information
 Write Data

Please enter or select a path in the Device Information text field.

VMS IP Address: Port Number:

Device Information:

No.	Device Name	Device ID	Operation Result

4. Click **Write**.

5.2 Device Alarms

5.2.1 Active Alarms

To query active device alarms, choose **Device Alarm > Active**.

You can use **Accurate Search** to search for specific active alarms.

You can click **Clear** to clear an active alarm.

5.2.2History Alarms

To query history alarms, choose **Device Alarm > History**.

You can use **Accurate Search** to search for specific history alarms.

You can click **Export** to export and download a list of history alarms.

6 Managing Disks

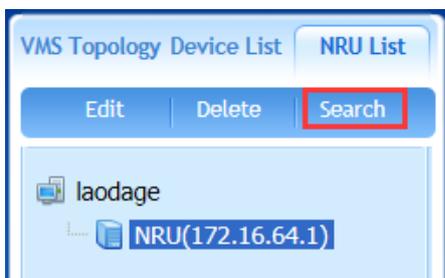
You must configure disk arrays before you can use the recording function of the VMS.

6.1 Adding, Editing, and Deleting NRUs

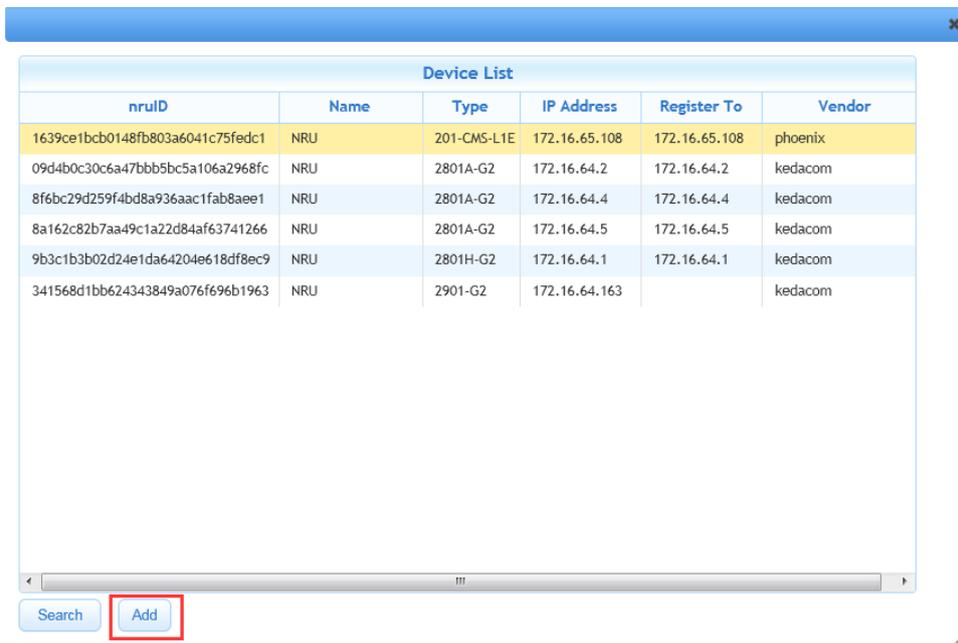
6.1.1 Adding an NRU

To add an NRU:

1. Under **NRU List**, click **Search**.



2. Select the target NRU and click **Add**.



3. In the displayed **Add NRU** dialog box, specify parameters displayed.

Add NRU

VMS IP Address:

Device ID:

IP Address:

Device Name:

Enabled/Disabled:

4. Click **OK**.



If the VMS is configured with a slave VMS, you must add NRUs of the slave VMS to the VMS.

6.1.2 Editing an NRU

To edit an NRU:

1. Under **NRU List**, select the NRU and click **Edit**.

VMS Topology Device List | **NRU List**

laodage

NRU(172.16.64.1)

2. In the displayed **Modify NRU Info** dialog box, change parameter values.

Modify NRU Info

VMS IP Address:

Device ID:

IP Address:

Device Name:

Enabled/Disabled:

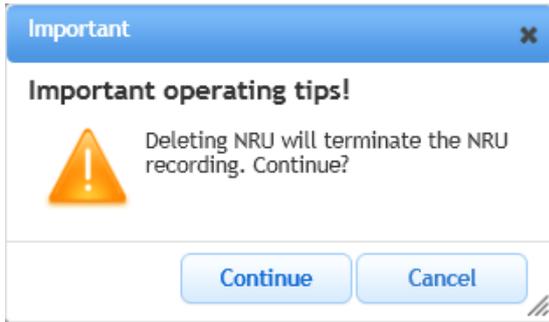
3. Click **OK**.

6.1.3 Deleting an NRU

To delete an NRU:

1. Under **NRU List**, select the NRU and click **Delete**.

2. Click **Continue**.

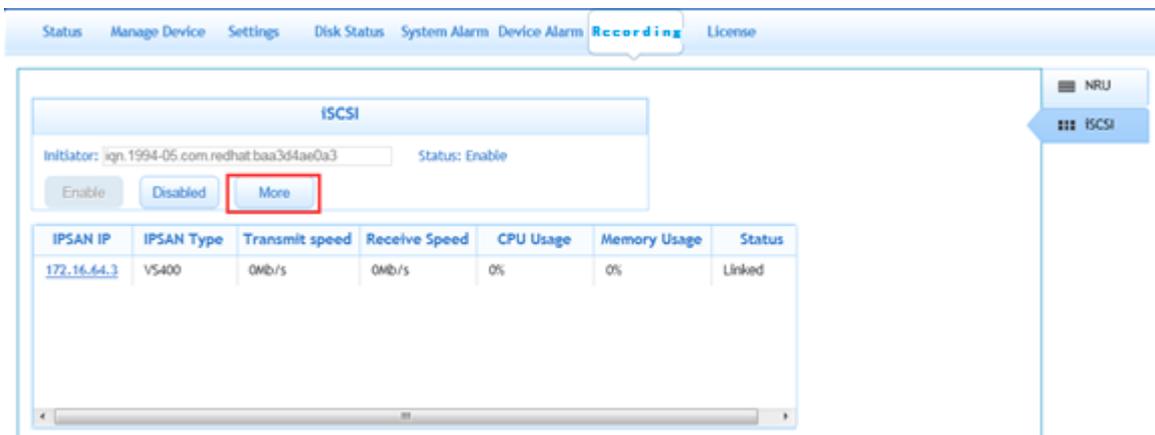


6.2 Adding, Deleting, Connecting to, Disconnecting from, Enabling, and Disabling iSCSI Disks

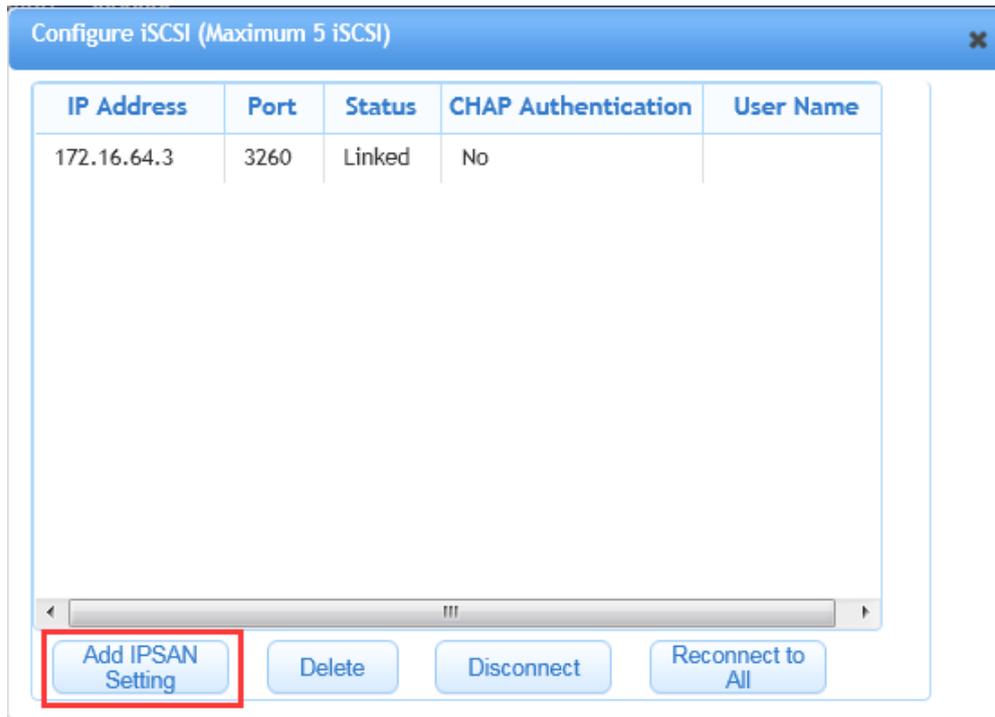
6.2.1 Adding an iSCSI Disk

To add an iSCSI disk:

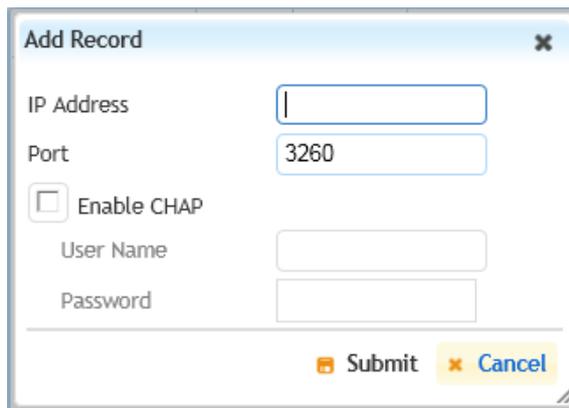
1. Ensure that the disk can communicate with the VMS and that the disk IP address and the IP address of the G-LAN1 are located on the same network segment.
2. Choose **Recording > iSCSI > More**.



3. In the displayed dialog box, click **Add IPSAN Setting**.



- In the displayed **Add Record** dialog box, specify parameters displayed.



The default value for **Port** is **3260**.

- Click **Submit**.

6.2.2 Deleting an iSCSI Disk

To delete an iSCSI disk, select the disk in the **Configure iSCSI (Maximum 5 iSCSI)** dialog box and click **Delete**.

6.2.3 Connecting to iSCSI Disks

To connect to iSCSI disks, click **Reconnect to All** in the **Configure iSCSI (Maximum 5 iSCSI)** dialog box.

6.2.4 Disconnecting from an iSCSI Disk

To disconnect from an iSCSI disk, select the disk in the **Configure iSCSI (Maximum 5 iSCSI)** dialog box and click **Disconnect**.

6.2.5 Enabling or Disabling iSCSI Disks

To enable or disable an iSCSI disk, click **Enable** or **Disable** under **iSCSI**, respectively.

6.3 Operations on NRUs

6.3.1 Partitioning

To create partitions for an NRU:

1. Choose **Recording > NRU > Disk List**.
2. Select the NRU from the disk list and click **Partition**.

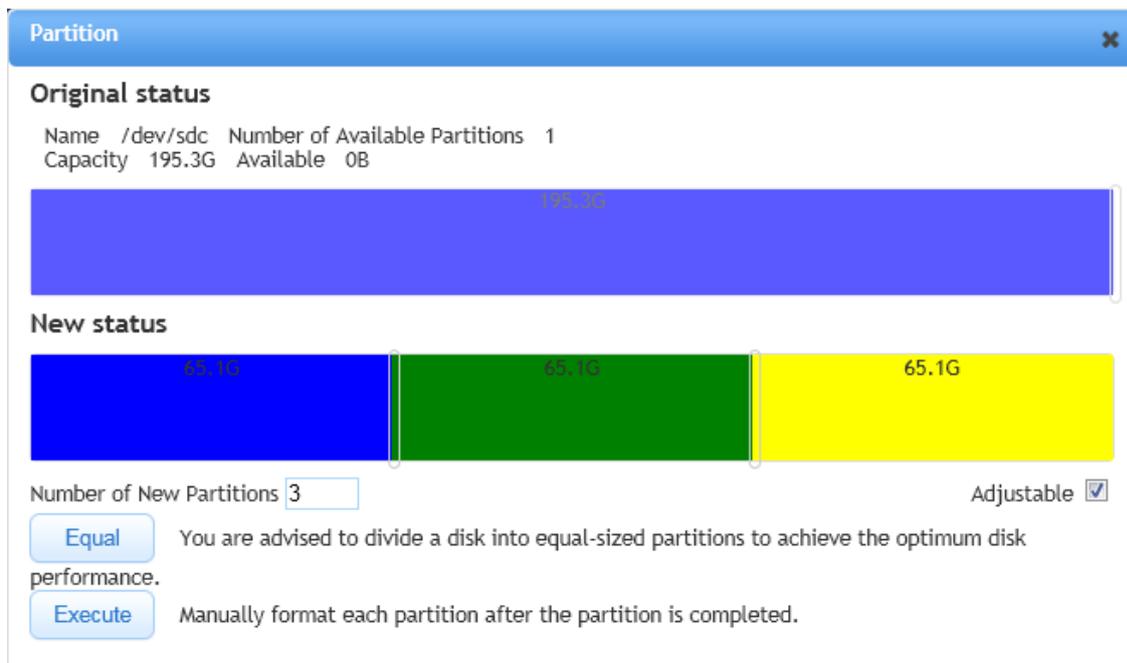


Disk List						
Name	ID	Capacity	Status	Number of Available Partitions	Number of History Exceptions	From
/dev/sdc	6	195.3G	Online	1	5	[VIRTUAL-DISK] IP: 172.16.64.3:3260,0 (HostID:13,BusID:0,TargetID:13,LunID:0)

Buttons: Partition, Remove, View Log

3. In the displayed **Partition** dialog box, specify parameters displayed.
 - 1) Specify **Number of New Partitions**.
 - 2) Click **Equal** to equally divide the NRU.
 - 3) (Optional) Select **Adjustable** to divide the NRU according to onsite needs.

The following is an example.



4. Click **Execute**.

6.3.2 Formatting

To format a partition, select the partition under **Partition List** and click **Format (vbfs)** or **Format (ext3)**.

If existing recordings are configured to be overwritten when recording space is insufficient, you are advised to format a partition as the ext3 file system.

6.3.3 Mounting and Unmounting

To mount or unmount a partition, select the partition under **Partition List** and click **Mount** or **Unmount**, respectively.

6.3.4 Restoring

To restore a partition, select the partition under **Partition List** and click **Restore**.

6.3.5 Viewing Logs

To view operation logs of a partition, select the partition under **Partition List** and click **View Log**.

6.4 Querying Disk Status

To query disk status, click **Disk Status**.

Under **USB Status**, you can query the status about a USB backup disk, which stores system data. If VMS hardware fails, you can restore the system data of the faulty VMS on another normal VMS.

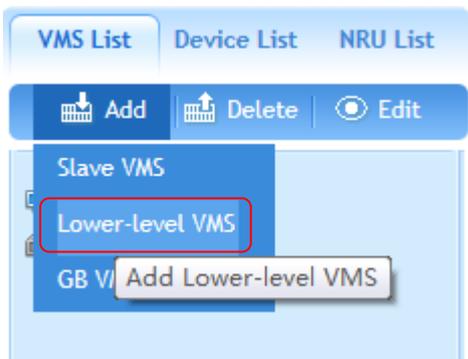
When the VMS is operating properly, do not remove the USB backup disk.

7.1 Cascading

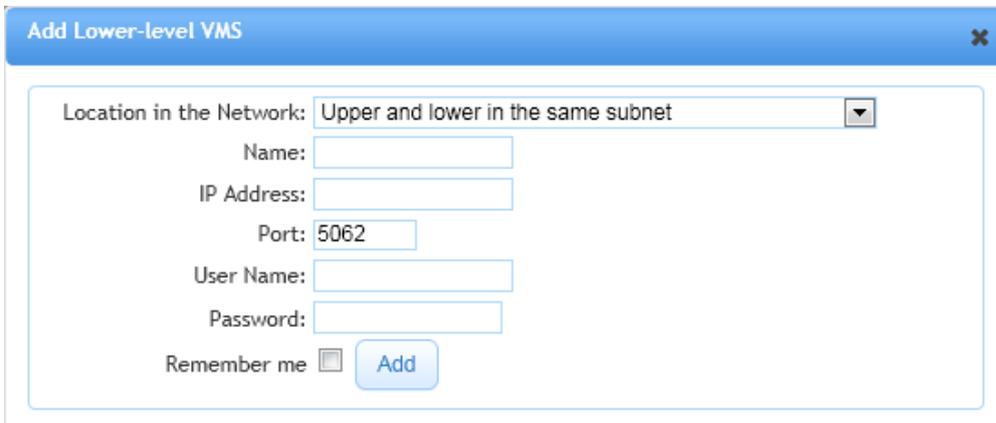
7.1.1 Adding a Lower-Level VMS

To add a lower-level VMS:

1. Ensure that the IP addresses of the lower- and upper-level VMSs are located on the same network segment.
2. Under **VMS List**, choose **Add > Lower-level VMS**.



3. In the displayed **Add Lower-level VMS** dialog box, specify parameters displayed.

A screenshot of a dialog box titled 'Add Lower-level VMS'. It contains the following fields: 'Location in the Network:' with a dropdown menu set to 'Upper and lower in the same subnet'; 'Name:' with an empty text input; 'IP Address:' with an empty text input; 'Port:' with a text input containing '5062'; 'User Name:' with an empty text input; 'Password:' with an empty text input; and 'Remember me' with an unchecked checkbox. An 'Add' button is located at the bottom right of the form area.

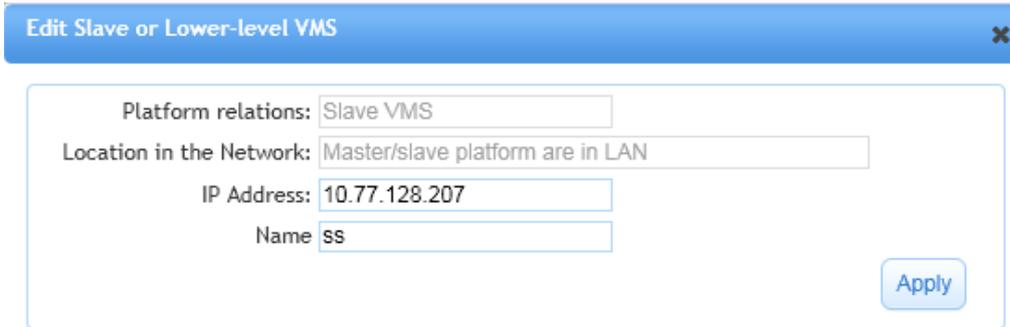
4. Click **Add**.

7.1.2 Editing a Lower-Level VMS

To edit a lower-level VMS:

1. Select the lower-level VMS and click **Edit**.

2. In the displayed dialog box, change parameter values.



Platform relations:

Location in the Network:

IP Address:

Name

3. Click **Apply**.

7.1.3 Removing a Lower-Level VMS

To remove an online lower-level VMS, select the lower-level VMS and choose **Delete > Online**.

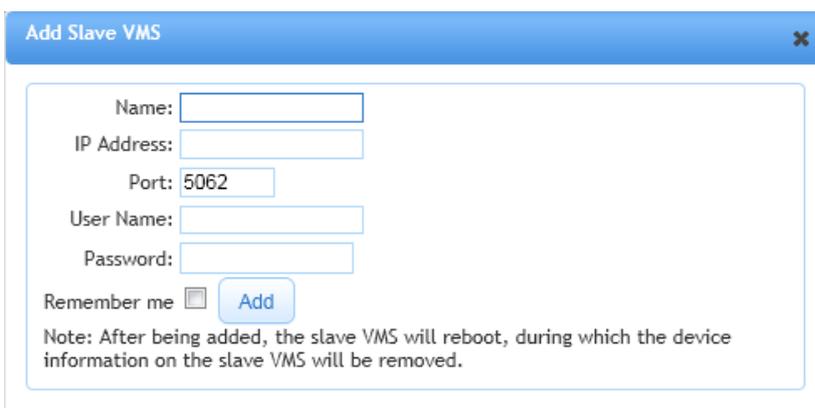
To remove an offline lower-level VMS, select the lower-level VMS and choose **Delete > Offline Deletion**.

7.2 Stacking

7.2.1 Adding a Slave VMS

To add a slave VMS:

1. Ensure that the IP addresses of the master and slave VMSs are located on the same network segment.
2. Under **VMS List**, choose **Add > Slave VMS**.
3. In the displayed **Add Slave VMS** dialog box, specify parameters displayed.



Name:

IP Address:

Port:

User Name:

Password:

Remember me

Note: After being added, the slave VMS will reboot, during which the device information on the slave VMS will be removed.

4. Click **Add**.

7.2.2 Editing a Slave VMS

To edit a slave VMS:

1. Select the slave VMS and click **Edit**.
2. In the displayed dialog box, change parameter values.
3. Click **Apply**.

7.2.3 Removing a Slave VMS

To remove an online slave VMS, select the lower-level VMS and choose **Delete > Online**.

To remove an offline slave VMS, select the lower-level VMS and choose **Delete > Offline Deletion**.

8 User Management

Click **User** in the menu bar to manage administrator account and view operation logs of every account.

Form: User Accounts

User Type	Explanation
System administrator	Have the authorities to manage and configure VMS, default user name: admin, password: 888888.
administrator	Have all the authorities as a system administrator account has except user management. Administrator should be created by a system administrator only.



Note: multiple administrator accounts can login to the PMC client at the same time.

The screenshot shows the 'User List' interface. At the top, there is a navigation bar with 'Location: kedacom' and buttons for 'Reboot' and 'Shutdown'. Below this is a menu bar with 'Status', 'Device', 'Settings', 'User', 'Disk Status', 'System Alarm', 'Device Alarm', 'Recording', and 'License'. The 'User' menu item is selected. The main content area displays a table titled 'User List' with the following data:

User Name	Type	Description
admin	Administrator	super administrator

At the bottom of the table, there are navigation controls: 'Add', 'Edit', and 'Delete' buttons, and a pagination indicator showing 'Page 1 of 1' and '1 - 1 of 1'.

8.1 Account Management

Click **User** in the interface to add, edit or delete an account.

Add

1. In **User List** interface, click **Add**;
2. In the popup window of **Add Record**, input user name, password and description, click **Submit** to finish adding an account.



Note: a new account is an administrator account by default.

The screenshot shows a modal window titled "Add Record" with a close button (x) in the top right corner. The window contains the following fields and controls:

- User Name:** A text input field.
- Password:** A text input field.
- Type:** A dropdown menu with "User" selected.
- Description:** A text area with a vertical scrollbar.
- Buttons:** "Submit" and "Cancel" buttons at the bottom.

Edit

1. In **User List** interface, select an account and click **Edit**;
2. In the popup window of **Edit Record**, input a new user name, password and description, click **Submit** to finish editing an account.

Delete

In **User List** interface, select an account and click **Delete** to finish deleting an account.

8.2 Log

In **User** interface, click **Log** to view or export operation logs of all accounts.

In the **Accurate Search** area, select **Start Date**, **Start Time**, **End Date** and **End Time**, and click **Search** or **Export** to view or export operation logs in this period.

9.1 License Management

You can click **License** to view license information.

Status Device Settings User Disk Status System Alarm Device Alarm Recording **License**

License Information	
Apply To	fcf06445c83f836aac579c025a8b662c6a78a465a5a1b9c4bfb60614c62cdec
ID	43c3c577-4e49-4d09-8325-c8640ec7686a
Type	FileKey
Version	V2R1
End Date	2016-05-25

Monitoring	
License	330
Used	204
Free	126

Interoperation with Third Party Devices	
No.	Vendor
1	other

Refresh Update

License Information

On the license information section, you can view the machine code, license number, license type, license version, license end date.

Allowed Device Number

On this section, you can view the maximum device number, used number and free number.



Note:

The default setting of the new user account is “administrator”.

Interoperation with Third Party Devices

Display the manufacturers' name that can add and "other" means the ones no included in the list.

Update License

Click "Update" and select the file, click "OK" to update.

Refresh License

Click on "Refresh", you can refresh the current license information.

9.2 Exporting and Importing Mirror Files

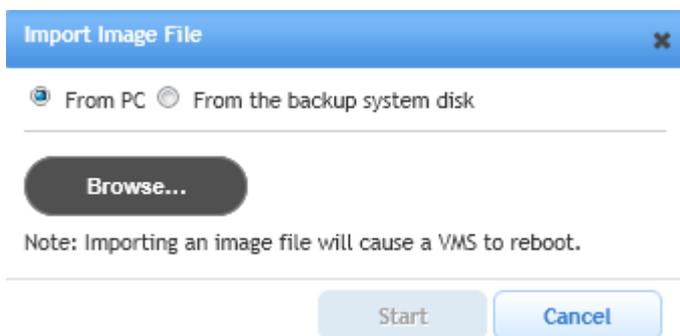
9.2.1 Exporting

To export a mirror file, choose **Settings > General > Export Mirror**.

9.2.2 Importing

To import a mirror file:

1. Choose **Settings > General > Export Mirror**.
2. In the displayed dialog box, select **From PC** or **From the backup system disk**.



3. Click **Browse**.
4. Open the file.
5. Click **Start**.

9.3 Restoring Factory Defaults

To restore factory defaults, choose **Settings > General > Restore**.

You are advised to make backups before restoring factory defaults.

9.4 Upgrading the System

To upgrade the system:

1. Choose **Settings > General > Upgrade**.
2. (Optional) Export a mirror file.



3. In the **Upgrade System** dialog box, click **Browse** and open the upgrade file.



4. Click **Start**.



Note:

You are advised to make backups before upgrading the system.

10 NAT Configuration

10.1 NAT Network Configuration

Create network connections among different networks and configure port mapping in VMS and router according to specific conditions. Please note the following points:

1. If the VMS is not in NAT, no need to configure port mapping;
2. If the VMS is in NAT, need to configure port mapping in both VMS and router, and configure STUN Server;
3. If login to the VMS which is in NAT through CUI1 module, after configuring port mapping, need to modify opt/kdm/cui1/conf/cui1.xml file, and add NATIP, NATPort (8000), MAPIP, MapPort (8000) IP and port;
4. If the VMS crosses multiple network segments, please use G-LAN1 address to configure NAT traversal.

10.2 Common Ports of VMS

Port	Explanation
80	HTTP port, for CU and PMC login
1722	CUI1 login port
1727	Network management port
2222	SSH port
3478	STUN Server port
5060	PROXY port
5062	PMS port
5510	VSIP start listening port

7000	Port of VMS receiving PU streams
8000	CUI1 crossing NAT port
8001	NAT packet receiving port for CUI and VTDU
8002	Stream receiving port for CUI and VTDU
12000	Wireless front-end port, should be configured on the wireless front-end web control that is out of NAT

10.3 Login Crossing NAT

When login the VMS in NAT from outside of NAT, need to configure NAT mapping with VMS port 80 on the VMS in NAT.

10.4 Cascading Crossing NAT

In cascading networks, when the upper-level VMS is in NAT while the lower-level VMS is out of NAT, or when the upper-level VMS is out of NAT while the lower-level VMS is in NAT, or when the upper-level and lower-level VMS are in different NAT, need to configure NAT and STUN.



Note: when the upper-level and lower-level VMS are in the same Ethernet, no need to configure NAT or STUN.

10.4.1 Upper-level VMS in NAT, Lower-level VMS out of NAT

When the upper-level VMS is in NAT while the lower-level VMS is out of NAT, need to configure NAT mapping on the upper-level VMS with VMS port 5060 and 5062 respectively.

10.4.2 Upper-level VMS out of NAT, Lower-level VMS in NAT

When the upper-level VMS is out of NAT while the lower-level VMS is in NAT, need to configure NAT mapping on the lower-level VMS with VMS port 80, 5060 and 5062 respectively.

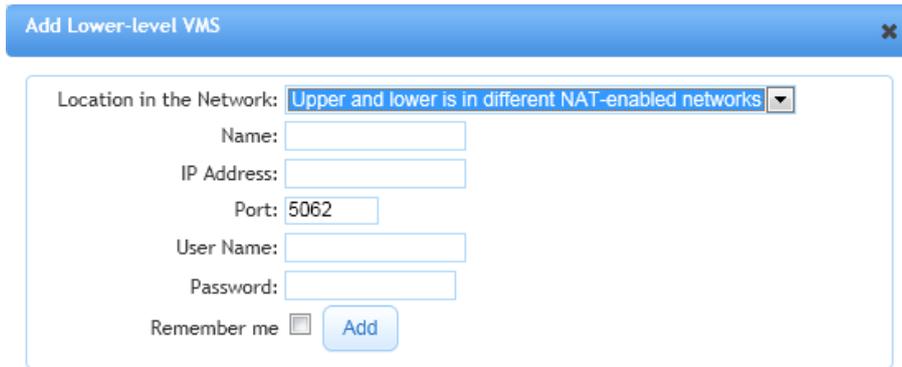
10.4.3 Upper-level and Lower-level VMS in Different NAT

When the upper-level and lower-level VMS are in different NAT, need to configure NAT mapping on the upper-level and lower-level VMS with VMS port 80, 5060 and 5062 respectively. Meanwhile, need to configure STUN.

Operation steps:

- 1) Login to PMC, click **VMS List** from the left. Select **Add> Lower-level VMS** and select **Upper and**

lower in different NAT-enabled networks for Location in the Network;



Add Lower-level VMS

Location in the Network: Upper and lower is in different NAT-enabled networks

Name:

IP Address:

Port: 5062

User Name:

Password:

Remember me

- 2) Go to **Settings>Network**, and in **NAT** configuration area, add NAT mapping with VMS port 80, 5060 and 5062;

Operation steps for configuring **STUN**:

- a) Run the software tool STUNTEST in upper-level and lower-level VMS NAT, then use the internet IP of host VMS as STUN server IP address;
- b) Go to PMC interface of upper-level VMS, and configure STUN server address in **Settings>General**;
- c) Go to PMC interface of lower-level VMS, and configure STUN server address in **Settings>General**;
- d) Run CU and the server address is the upper-level VMS address. If it can obtain device list of lower-level VMS, cascading is successful.

10.5 Single VMS Crossing NAT

When the VMS and the front-end device are in different NAT, need to add an NAT mapping with VMS port 7000 to the VMS.

11 Abbreviations and Acronyms

DDNS	Dynamic Domain Name System
GB	Guobiao
GUI	graphical user interface
NAT	network address translation
NE	network element
OSP	Open Settlement Protocol
PC	personal computer
SIP	Session Initiation Protocol
UPnP	Universal Plug and Play
UUID	Universally Unique Identifier
VMS	Video Management System