

Wisenet TMS Console

Administrator Manual

VER 1.0





Wisenet TMS Console Administrator Manual

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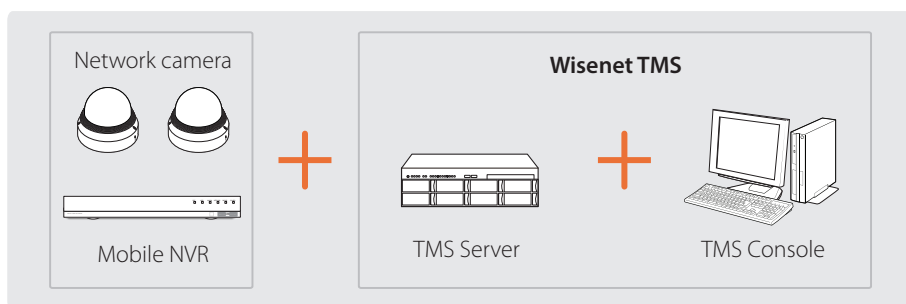
About Wisenet TMS

Wisenet TMS (Transport Monitoring System) is a solution for archiving recorded information in the mobile NVR. From the mobile NVR, TMS can archive driving path (GPS information) of trains, buses, etc., events occurring during operation, and recorded video.

It also displays the search and playback of GPS information, events and video stored on the **Wisenet TMS Server** on the map. TMS is an efficient solution that can manage recorded information at remote locations.

About System Configuration

Wisenet TMS (Transport Monitoring System) is configured as follows:



TMS Console

- You can search or play the videos recorded by the camera and a vehicle's driving route, which are archived in **TMS Server** on the map.
- You can check statistics on major events that have occurred while driving the vehicle and search a specific event to export the search result to a file.
- You can directly connect a disk mounted on the Mobile NVR to **TMS Server** and search and export a desired data.

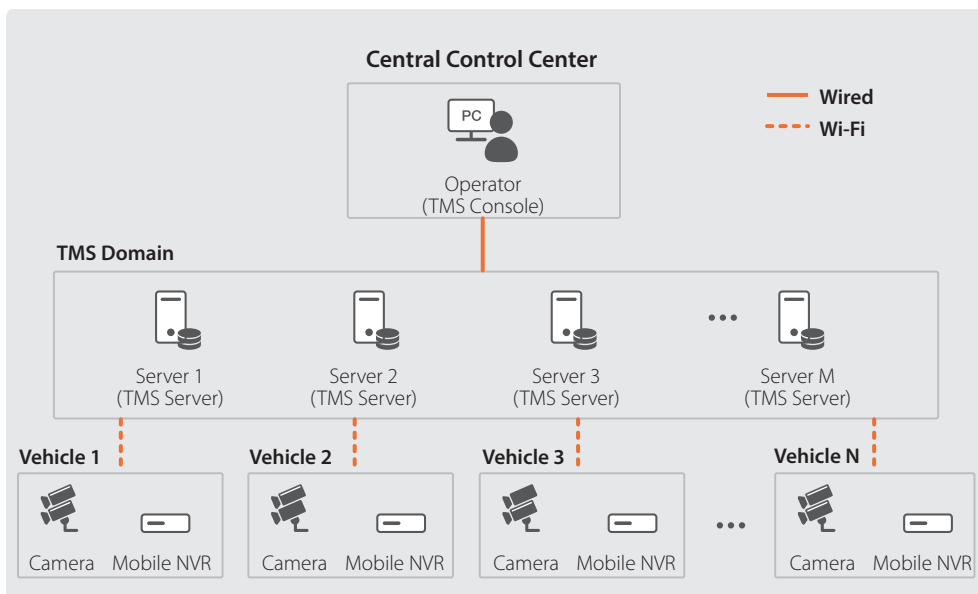
TMS Server

- You can save and manage the event information occurring in the **TMS Server** system. When the Mobile NVR mounted on the vehicle is connected to Wi-Fi, the GPS information stored in the Mobile NVR, recorded camera videos, and event information are archived in **TMS Server**.
- You can cluster several **TMS Servers** to configure one domain. In this case, even if you access a single **TMS Server**, you can manage in an integrated manner the device information recorded on another TMS Server that is clustered.
- You can back up or restore the system settings of **TMS Server**.

TMS Domain

TMS Domain refers to a unit of an integrated video management system that configures **Wisenet TMS**. TMS Domain may be configured by a single **TMS Server** or by building a server cluster using several **TMS Servers** into a single domain.

TMS Domain is configured as follows:

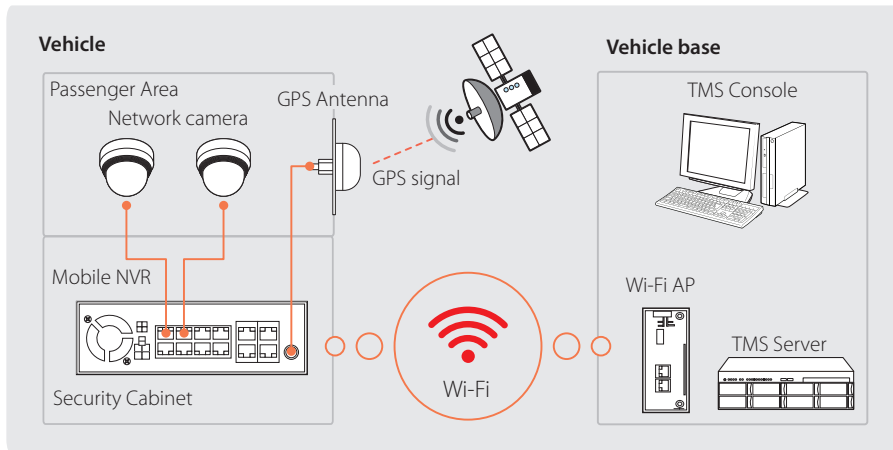


- Several **TMS Servers** and **TMS Consoles** may be configured into a single domain through server clustering.
- You can share user information and device information between several servers on the Domain to operate a system safely.

Video Storage Method

Archive

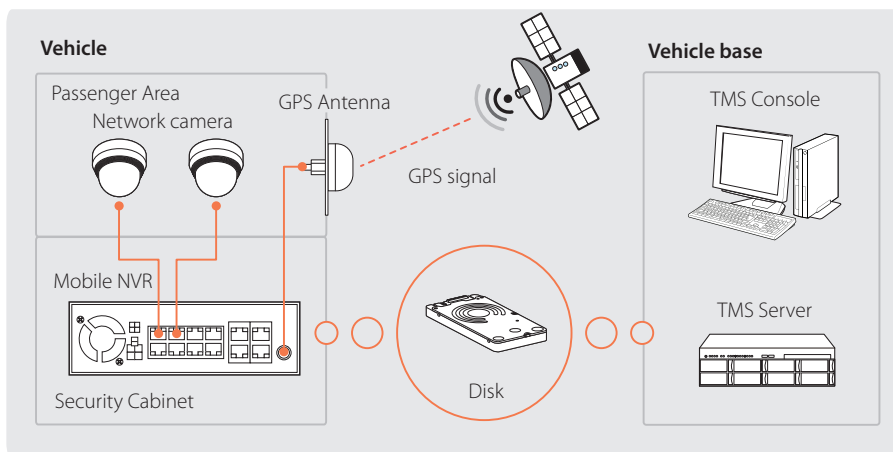
An automatic backup of GPS information and videos stored in the Mobile NVR uses Wi-Fi to bring data remotely from the Mobile NVR and to back it up.



- You can register up to 128 Mobile NVRs on a single **TMS Server**. You can also operate up to 10,000 cameras on a single domain.

Export to External Storage

A manual backup of GPS information and videos stored in the Mobile NVR takes data directly from the Mobile NVR's disk and backs it up.



Note

- If you want to use the function of exporting to an external storage on a PC where the **TMS Console** is installed, you need to install the **Paragon** software and to activate the software license.

Start Wisenet TMS

You can check how to run the **TMS Console** program including the menu and screen configuration.

Before Getting Started

Start Service Manager

Before starting **Wisenet TMS**, **TMS Service Manager** lets you check the execution status of **SystemManager** and **MediaServer** and start or stop them.



Note

Before using **TMS Console**, always check whether each service is executed via **TMS Service Manager**.

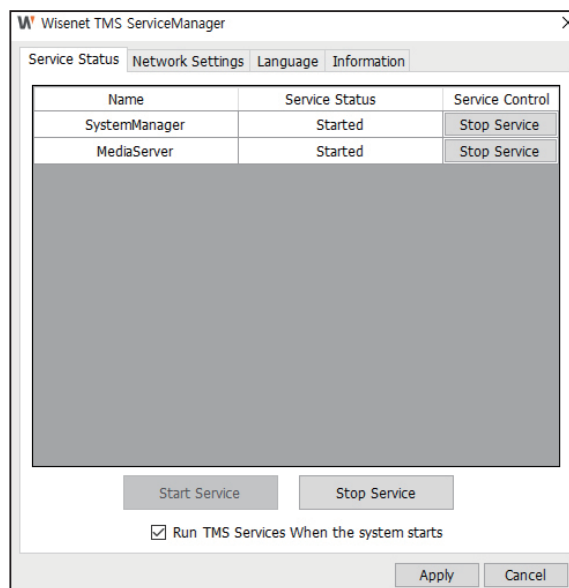
Execute Service Manager

1. Execute the **TMS Service Manager** program.

- On the desktop, double-click the **TMS Service Manager** program icon .
- Or, select  > **Wisenet** > **TMS Server** > **TMS Service Manager**.

2. Check whether all services are **Started**.

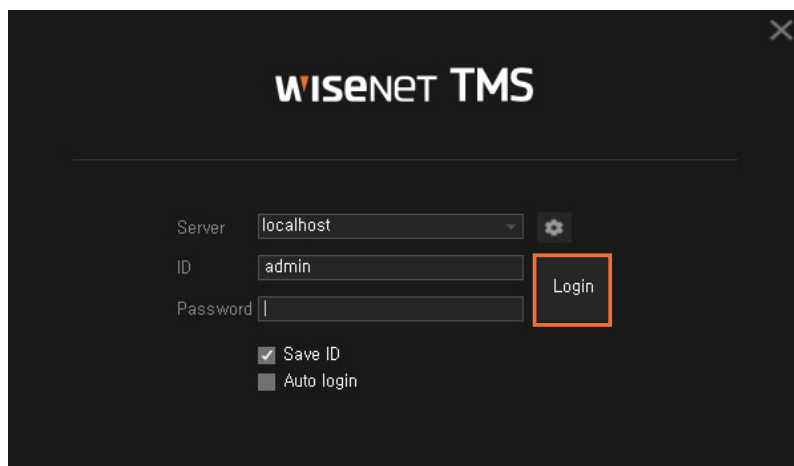
If a service is **Stopped**, press the **Start Service** button on Service Control to run the service.



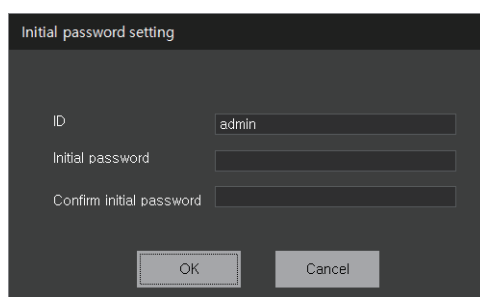
Initial Login

After installing **TMS Server**, and when initially logging into **TMS Server** on **TMS Console**, you need to set a default password for the administrator.

1. Run the **TMS Console** program.
 - On the desktop, double-click the **TMS Console** program icon .
 - Or, select  > **Wisenet** > **TMS Console**.
2. Click the **Login** button on the Login screen.



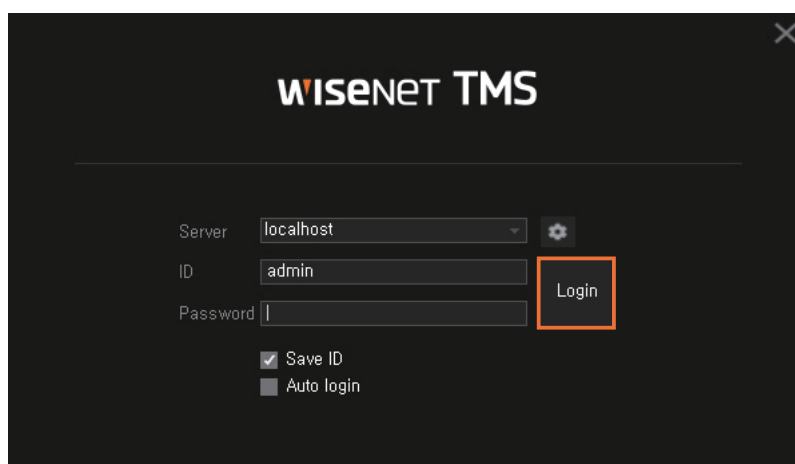
3. When the **Initial password setting** dialog box appears, set the initial password and click the **OK** button.



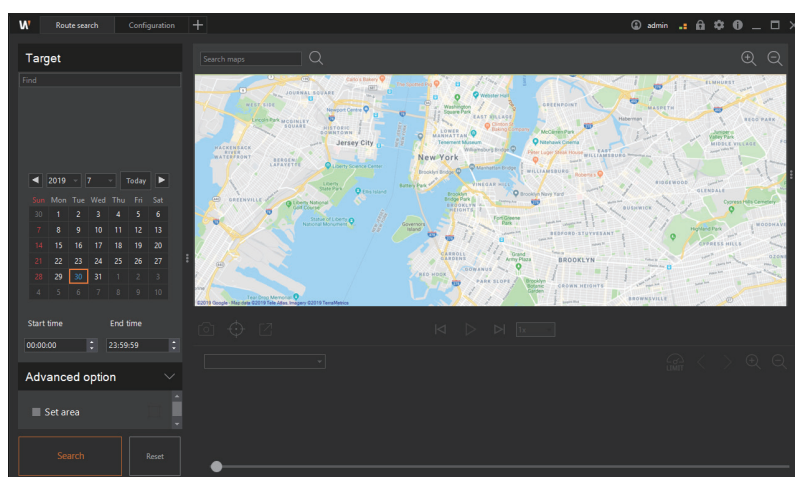
Note

- You cannot use your ID as password.
- The password should be 6 to 32 characters long.
- If your password is less than 10 characters long, you need to combine three or more upper and lower case letters, numbers, and special characters.
- If your password is 10 characters or more, you need to combine two or more upper and lower case letters, numbers, and special characters.
- You may not use four or more consecutive characters (e.g., 1234, abcd, etc.).
- You may not repeat the same character for four times or more (e.g., !!!!, 1111, aaaa, etc.).
- There are no limitations on special characters.
- If you forget your password, you cannot reset it. Thus, be sure to remember your password.

4. After entering the initial password on the Login screen, click the **Login** button.



5. When logging in for the first time, or there is no registered device, the **Route search** tab and the **Configuration** tab will appear.



Note

- If you exit the program and restart it, you will see the menu opened last before exiting the program.
- You can change the Start options of the program by clicking as follows:
TMS Console >  > **Normal** > **Start options**
- The screen of **TMS Console** may be configured differently according to the menus selected by the administrator.

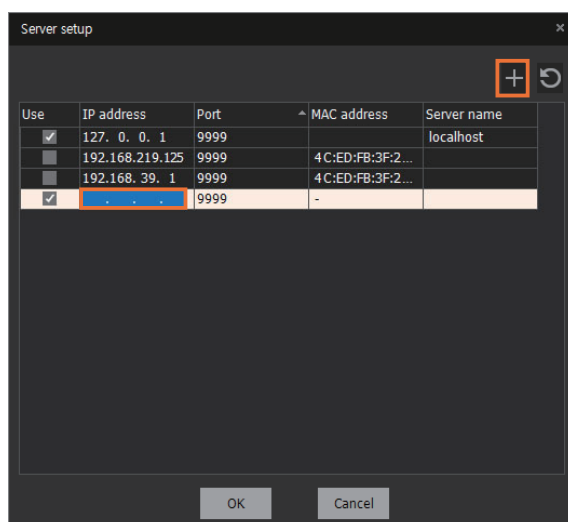
Change Login Server

To change the server for login, you can select a desired server in the server list of the Login screen.

1. Run the **TMS Console** program.
2. Click the **Server** on the Login screen and select a desired server.



3. If you do not find the server for login in the server list, click the  button and select a desired server in the list of automatically searched servers.
To set an IP address manual and select a server, click the  button. Enter the **IP address** and click the **OK** button.



4. Enter the ID and the password for the selected server, and then log in.

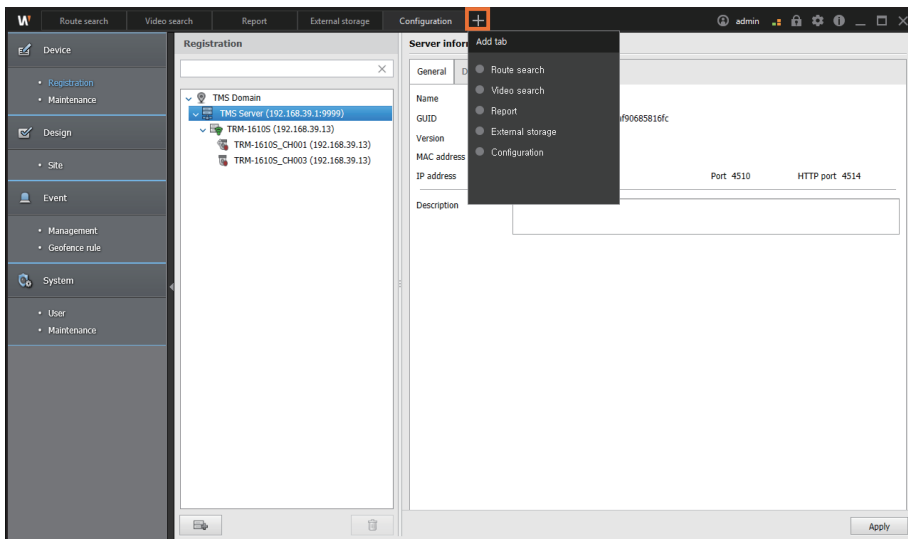
About Screen Configuration

You can check the menu and screen configuration of the **TMS Console** program.

Open Menu of TMS Console

The menu of **TMS Console** consists of tabs. You can freely move between the menu tabs and select a desired menu item, or form a separate page to operate it like a separate program.

1. Run the **TMS Console** program.
2. To open the menu page, click the **+** button and select a desired menu in the **Add tab** dialog box.
 - To close the menu page, click **X**, which appears when you click the Menu tab.
 - To separate a menu page, drag and drop the Menu tab.



Route search	You can search the moving route of a vehicle on a map or select a specific area to search a moving route. You can check out the recorded video of the point of time when an event has occurred via Instant viewer.
Video search	You can watch the video recorded by the camera and play the recorded video at the point of time when an event has occurred. You can also search recorded videos stored in the server and those of the Mobile NVR connected to Wi-Fi.
Report	You can search events such as Overspeed, Geofence, Emergency bell, and Impact detection and other events that have occurred on the device and the TMS Server system.
External storage	You can directly connect a disk mounted on the Mobile NVR to TMS Server and search or export the desired data.
Configuration	You can configure and manage the TMS Server system.

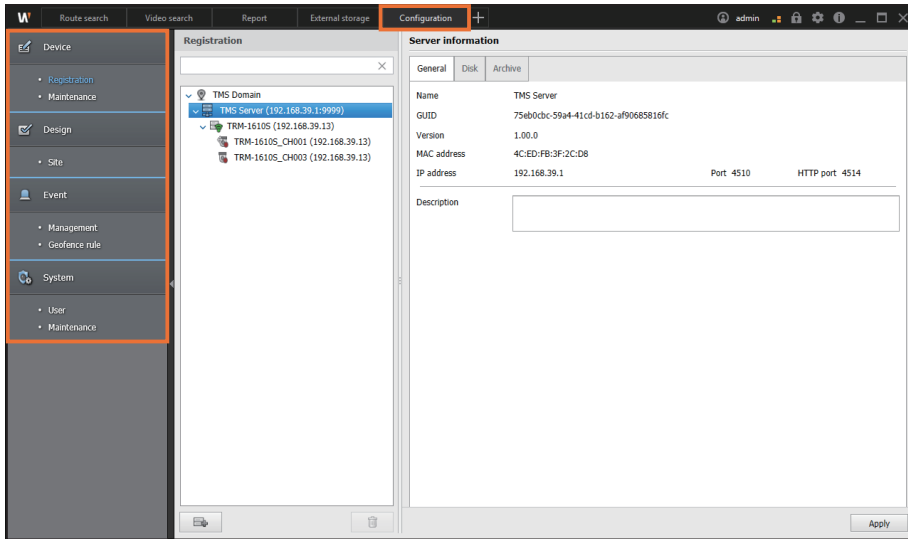
**Note**

- Please refer to the separate User Manual for details on how to use the menu of the **TMS Console** program.
- You can download the User Manual from the product's webpage (<http://www.hanwha-security.com>).

Configuration Manager Menu

You can select the **TMS Console** program's **Configuration** menu to register a device or change function-specific settings.

1. Run the **TMS Console** program.
2. Click the **Configuration** tab to open the **Configuration** menu page.



- In the **Device** menu, you can manage the registration and settings of a video device for operating the system.

Registration	You can register or set TMS Server and Mobile NVR.
Maintenance	You can maintain a device registered on TMS Server .

- In the **Design** menu, you can classify devices registered on **TMS Server** according to the management criteria and operate them.

Site	You can designate a group for each device and create a flexible domain structure.
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- In the **Event** menu, you can determine settings related to the events of a device.

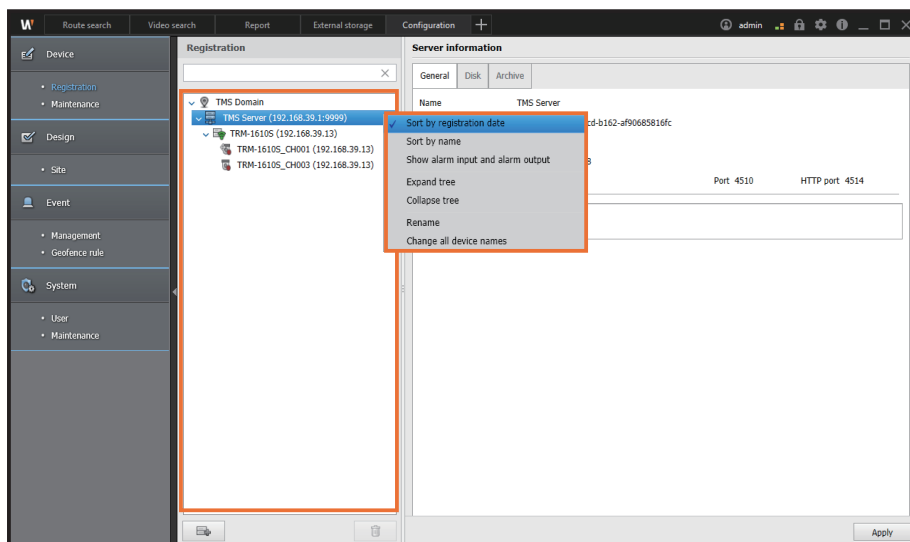
Management	You can manage all kinds of events used by TMS .
Geofence rule	You can set the Geofence rule to allow a Geofence event to occur when the vehicle invades a specific area or deviates from it.

- In the **System** menu, you can determine various system settings.

User	You can add a user group or a user of TMS Server . You can also set the permission for each user group.
Maintenance	You can maintain the system of TMS Server .

Device List and Shortcut Menu

You can check the registered Device list. You can also sort the Device list according to the desired criteria or change the device name by using the Shortcut menu.



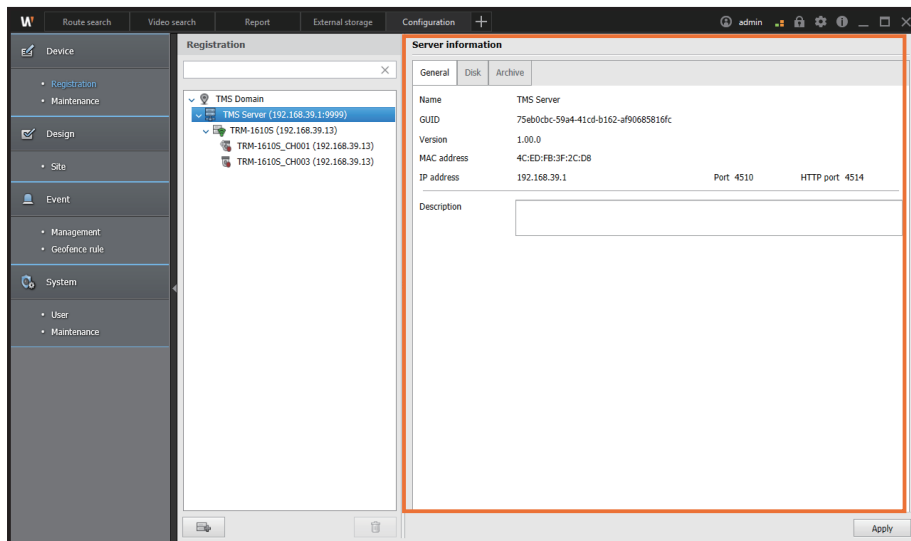
- **Shortcut menu**

Sort by registration date	Sorts the devices by the registration date.
Sort by name	Sorts the devices by name.
Show alarm input and alarm output	Displays the alarm input and alarm output of the device.
Expand tree Collapse tree	Expands or collapses the Device list.
Rename	Changes the name of the selected device.
Change all device names	Changes all of the names of the registered devices.

- Clicking the  button registers a device. Refer to [Register Device](#) for details.
- Clicking the  button deletes a selected device. Refer to [Delete Device](#) for details.

Details

You can check or modify the details of a device selected from the list.



- To apply the modified device information, click the **Apply** button at the bottom of the page.
- If the Details window consists of tabs, you need to click the **Apply** button in each tab to store the modified information.

Set Device

You can add **TMS Server** to the Domain and register a device. You can also modify the information of a device registered on **TMS Server** or change the settings.

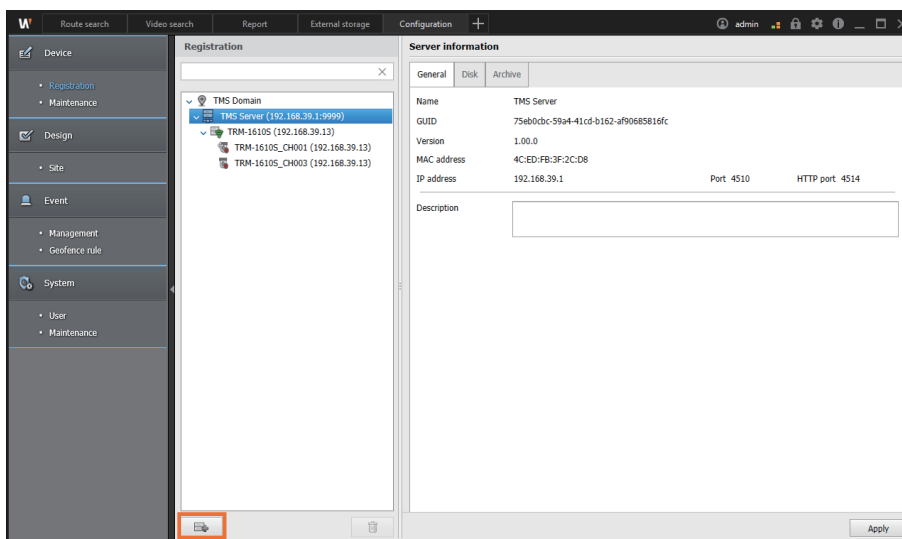
Register Device

You can let the product search a device that can be registered on **TMS Server** from the list and register the device automatically, or directly enter the device information and manually register the device.

Automatically Register Device

You can let the product automatically search the list of Devices that can be registered on **TMS Server** and register the devices.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select **TMS Server** to register the device from the Device list.
4. Click the  button. The **Register Device** dialog box will then appear.



5. Select a device to be registered.

You can select multiple devices that share the same ID and password and register them all at once.

The 'Register Device' window has tabs for 'Auto' and 'Manual'. The 'SUNAPI Priority' checkbox is checked. A 'Change IP' button and a refresh icon are present. Below is a table with columns: No., Model, IP address, MAC address, Port, HTTP port, SUNAPI, and Status.

☐	No.	Model	IP address	MAC address	Port	HTTP port	SUNAPI	Status
☒	1	TRM-1601S	192.168.1.200	00:09:18:00:55:55	554	80	O	
☐	2	TRM-810S	192.168.2.106	00:16:6c:f9:99:99	554	80	O	
☐	3	TRM-410S	192.168.2.157	00:16:6c:f9:0d:3a	554	80	O	

6. Enter the ID and the password.

The 'Register Device' window shows the same table as before. Below the table, the 'ID' and 'Password' input fields are highlighted with a red rectangle. A 'Registration' button is to the right of the password field. At the bottom, there is a 'Close' button.

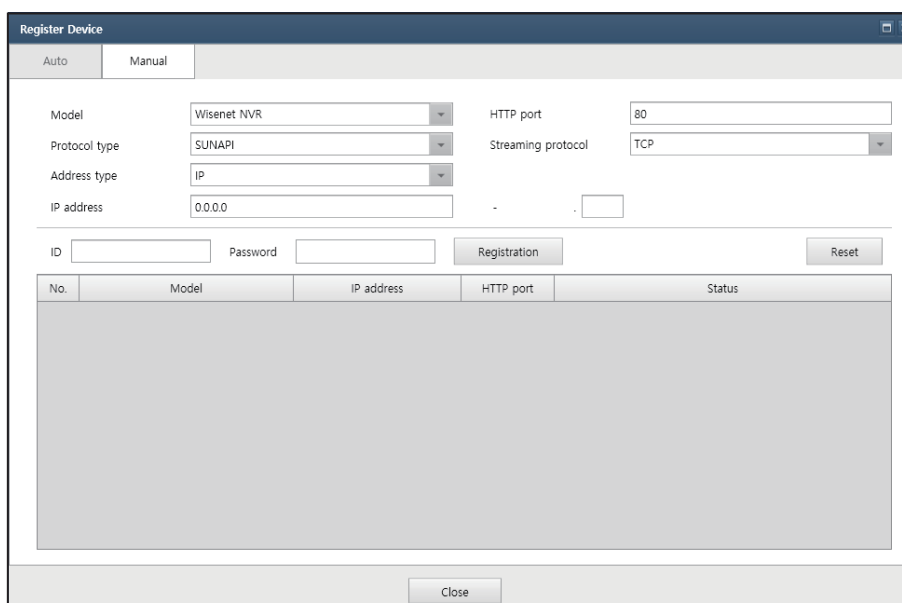
7. Click the **Registration** button.

- If the product fails to register the device, an error message appears on the Status column.
- If the device is registered, the Status column indicates **Registered**, and the device appears under **TMS Server** in the Device tree.

Manually Register Device

You can directly enter the device information that can be registered on **TMS Server** and register the device.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select **TMS Server** to register the device from the Device list.
4. Click the  button. The **Register Device** dialog box will then appear.
5. Click the **Manual** tab.



Register Device

Auto Manual

Model: Wisenet NVR HTTP port: 80

Protocol type: SUNAPI Streaming protocol: TCP

Address type: IP

IP address: 0.0.0.0

ID: Password: Registration Reset

No.	Model	IP address	HTTP port	Status
-----	-------	------------	-----------	--------

Close

6. Select an **Address type** from among the **IP**, **URL**, and **Wisenet DDNS**.
7. Enter other device information such as **HTTP port**, **Streaming protocol**, and **IP address**.
 - The information that needs to be entered may vary according to the address type.
 - If you want to register multiple devices manually at once, enter the range in the IP address; you can then register all the devices at once.

8. Enter the **ID** and the **Password** of the device to be registered.

The 'Register Device' dialog box has two tabs: 'Auto' and 'Manual'. The 'Manual' tab is selected. It contains the following fields:

- Model: Wisenet NVR (dropdown)
- Protocol type: SUNAPI (dropdown)
- Address type: IP (dropdown)
- IP address: 0.0.0.0 (text box)
- HTTP port: 80 (text box)
- Streaming protocol: TCP (dropdown)
- ID: (text box)
- Password: (text box)
- Buttons: Cancel, Reset

Below the fields is a table with 5 columns: No., Model, IP address, HTTP port, and Status.

No.	Model	IP address	HTTP port	Status
1	Wisenet NVR	192.168.216.1	80	Registration in progress...
2	Wisenet NVR	192.168.216.2	80	
3	Wisenet NVR	192.168.216.3	80	
4	Wisenet NVR	192.168.216.4	80	
5	Wisenet NVR	192.168.216.5	80	
6	Wisenet NVR	192.168.216.6	80	
7	Wisenet NVR	192.168.216.7	80	
8	Wisenet NVR	192.168.216.8	80	
9	Wisenet NVR	192.168.216.9	80	
10	Wisenet NVR	192.168.216.10	80	

Below the table, it says: Result : 0 Registered, 0 Failed

At the bottom is a 'Close' button.

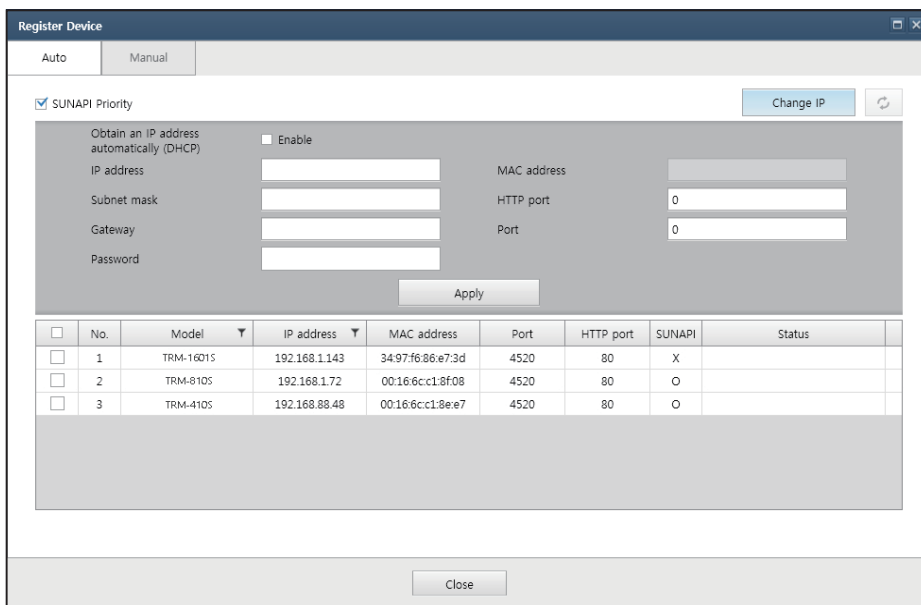
9. Click the **Registration** button.

- If the product fails to register the device, an error message appears on the Status column.
- When registering multiple devices at once, clicking the **Cancel** button cancels those devices that have not yet been registered.
- Clicking the **Reset** button will reset the registration result.

Change Device IP Address

When you let the product automatically register a storage, you can change the network information of the device.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired **TMS Server** from the Device list.
4. Click the  button. The **Register Device** dialog box will then appear.
5. Select a desired device. You can select multiple devices that share the same ID and password and change all of the devices.
6. Click the **Change IP** button.



☐	No.	Model	IP address	MAC address	Port	HTTP port	SUNAPI	Status
☐	1	TRM-1601S	192.168.1.143	34:97:f6:86:e7:3d	4520	80	X	
☐	2	TRM-810S	192.168.1.72	00:16:6c:c1:8f:08	4520	80	O	
☐	3	TRM-410S	192.168.88.48	00:16:6c:c1:8e:e7	4520	80	O	

7. Enter a new IP address. To receive an IP address automatically, set **Obtain an IP address automatically (DHCP)** to **Enable**.
8. Enter other information such as the **Password**, **HTTP port**, and **Port**.
9. Click the **Apply** button.



Note

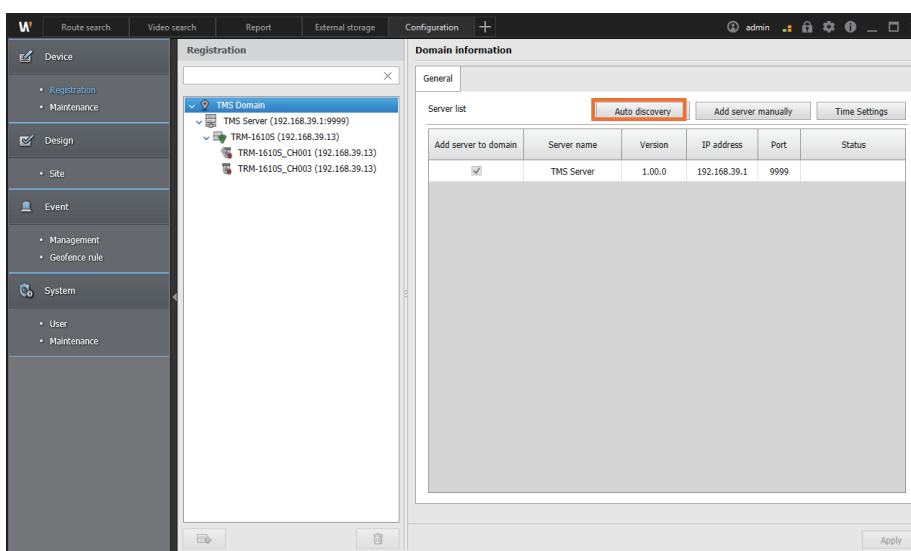
- If you select two or more devices, an input field for setting the IP address range will appear. Enter an IP address range and click the **Test setup** button. The changed IP address will be displayed on the Status column.
- To configure the IP address of the device to **Obtain an IP address automatically (DHCP)**, there must be a DHCP server set in the network.

Set Server in Domain

You can add several **TMS Servers** to TMS Domain and cluster them. You can also change an already set Domain information.

Automatically Add Server to Domain

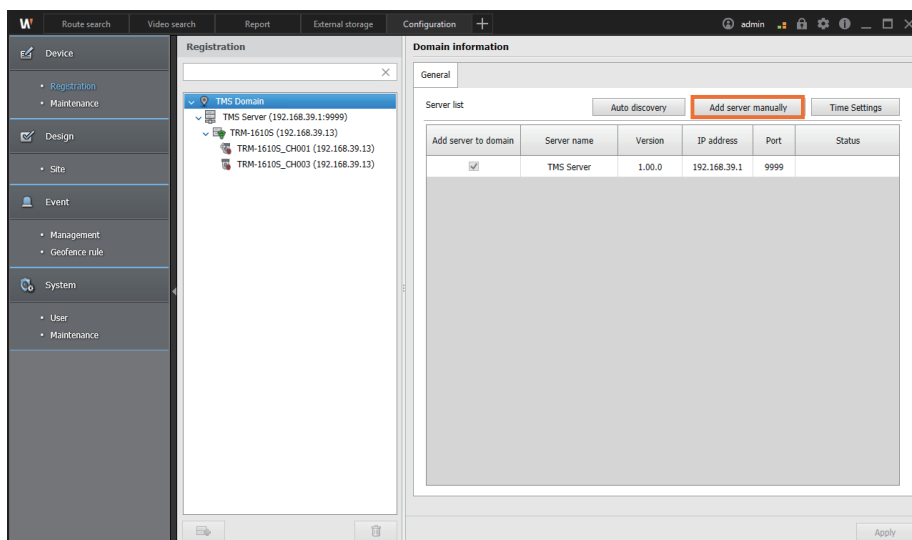
1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a **TMS Domain** to add a server from the Device list.
4. In the **Domain information** page, click the **Auto discovery** button.



5. Select a server to be added to the Domain from the searched server list.
 6. When the **Add server to domain** dialog box appears, enter the ID and the password of the selected **TMS Server**.
 7. Click the **Registration** button.
- If clustering is done, TMS Server is displayed under the **TMS Domain** part of the Device list.

Manually Add Server to Domain

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a **TMS Domain** to add a server from the Device list.
4. In the **Domain information** page, click the **Add server manually** button.



5. When the **Add server manually** dialog box appears, enter the **IP address**, **Port**, **ID**, and **Password** of the server to be added to the Domain.

The 'Add server manually' dialog box contains the following fields and buttons:

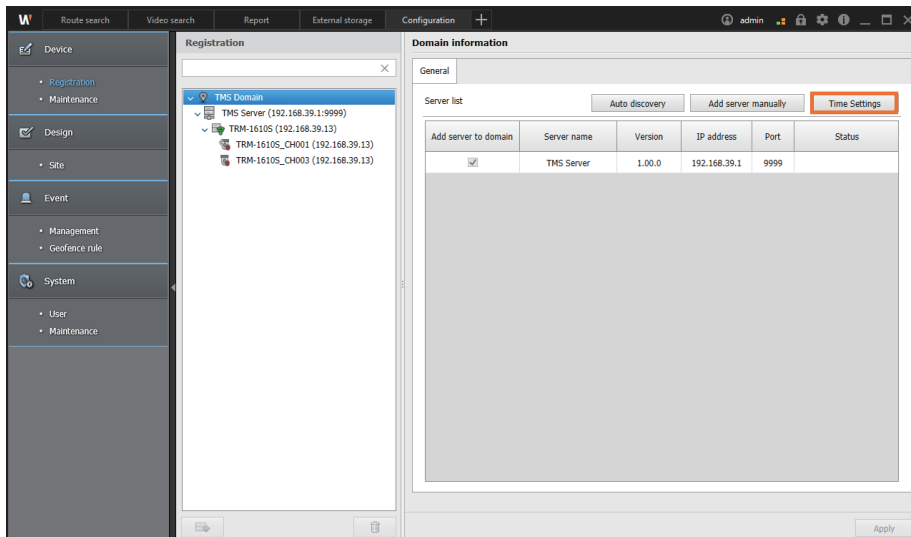
- IP address:
- Port:
- ID:
- Password:
- Buttons: **Registration** (highlighted), **Cancel**

6. Click the **Registration** button.
If clustering is done, TMS Server is displayed under the **TMS Domain** part of the Device list.

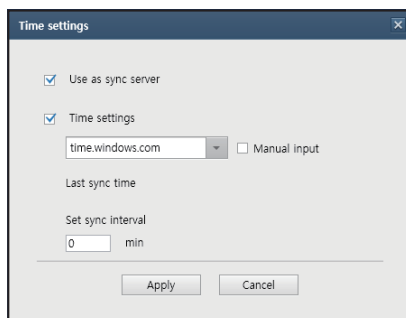
Synchronize time

You can use the system time of TMS Domain for an NTP server or synchronize the system time with another NTP server time.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a **TMS Domain** to add a server from the Device list.
4. In the **Domain information** page, click the **Time Settings** button.



5. When the **Time Settings** dialog box appears, set the time sync item.



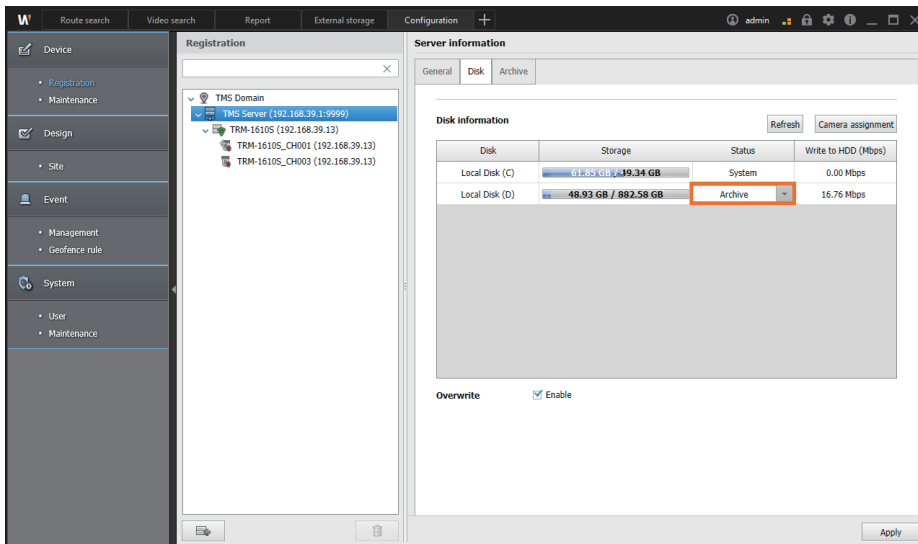
- **Use as sync server:** You can set the system time of TMS Domain as an NTP server. If TMS Domain is set as the NTP server by another device, you can synchronize as the system time of TMS Domain.
 - **Time settings:** If you select a desired server from the NTP Server address list. You can also synchronize the system time with the selected NTP server time. Selecting Manual input enables entering the server address in person.
 - **Last sync time:** The latest time synchronized as the NTP server time is displayed.
 - **Set sync interval:** The system time will be synchronized as the NTP server time for every designated point of time.
6. Click the **Apply** button.

Set Archive

You can change the disk status of **TMS Server** or change the Camera list automatically assigned to the archive disk.

Set Disk Status

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired **TMS Server** from the Device list.
4. In the **Server information** page, click the **Disk** tab.
5. In the **Disk information** page, select a disk to be changed.
6. Click the list of the **Status** column and set the disk status value to change.



- **Archive:** You can archive camera videos recorded in the Mobile NVR in a disk of **TMS Server**. You can also search or play recorded videos of the archived camera.
- **Cancel:** You cannot archive camera videos recorded in the Mobile NVR in a disk of **TMS Server**. You can search or play the recorded videos of the already archived camera.
- **System:** It is a system disk on which the Windows OS is installed. You cannot archive the camera videos recorded in the Mobile NVR in the system disk. Moreover, you cannot perform archiving if there is only a system disk in the PC where **TMS Server** is installed.

7. Click the **Apply** button.



Note

- **Overwrite:** You can set whether to overwrite an existing record file or not when there is no free space in the disk.
- **Refresh:** You can update and view disk information.

Assign Camera to Disk

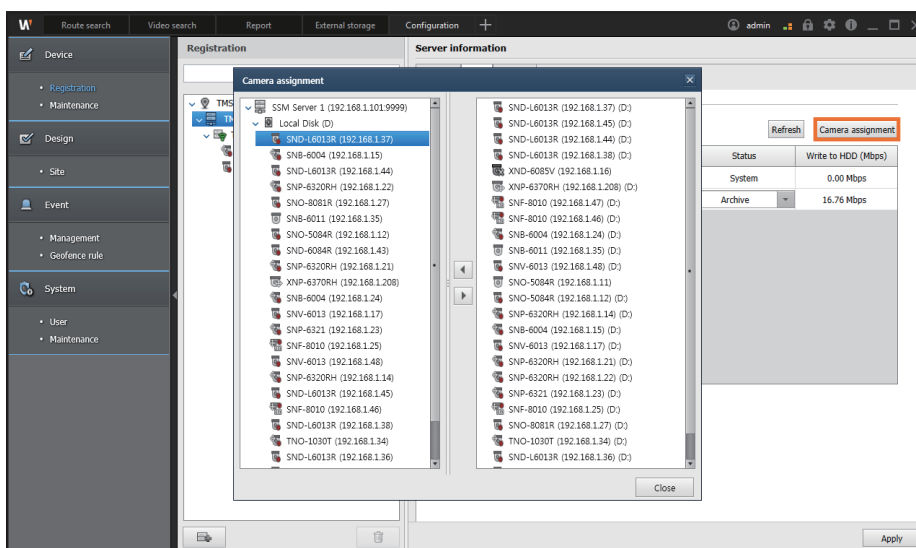
If you register the Mobile NVR on **TMS Server**, an archive disk is automatically set to store the record files of the camera registered on the Mobile NVR. You can set a disk other than the automatically set disk as an archive disk.



Note

If a storage disk is not designated in the camera, you cannot archive the record files of the camera.

1. Open the **Configuration** menu page.
2. Click **Device** > **Registration** from the menu.
3. Select a desired **TMS Server** from the Device list.
4. In the **Server information** page, click the **Disk** tab.
5. In the **Disk information** page, click the **Camera assignment** button.



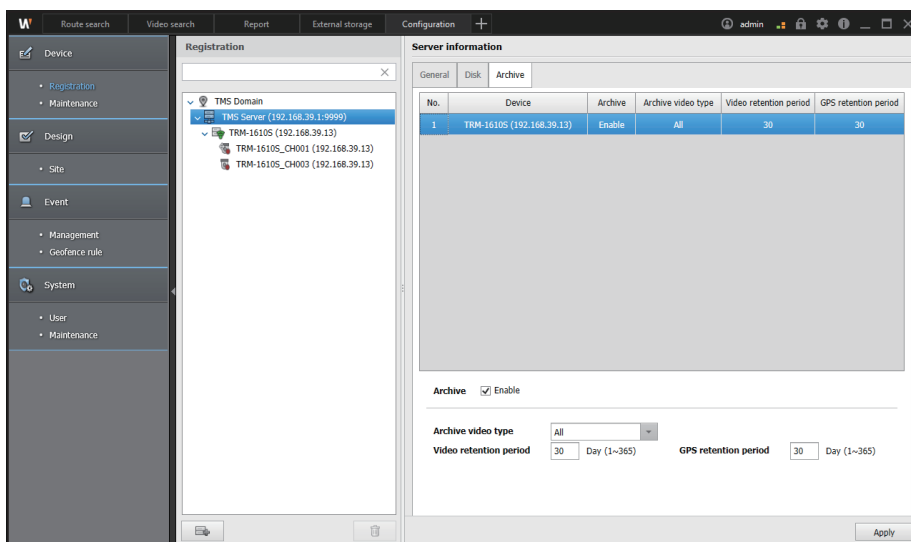
6. When the **Camera assignment** dialog box appears, select **TMS Server** including the disk to store record files from the Device list on the left.
7. Select a camera to be archived in the selected disk from the Camera list on the right.
8. Click the  button to add the camera to the disk.
 - The selected camera is displayed under the disk.
 - You can assign a single camera to multiple disks.

Modify Archive Settings

You can modify the archive settings for the recorded videos of the device registered on **TMS Server**.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired **TMS Server** from the Device list.
4. In the **Server information** page, click the **Archive** tab.
5. Select a desired device from the list.

To change the settings of multiple devices at once, press the **[Ctrl]** or the **[Shift]** key to select a desired device.



6. Modify the archive settings for the recorded videos of the selected device.
 - **Archive video type**
 - **All:** Archives all videos recorded on the Mobile NVR in **TMS Server**.
 - **Event:** Archives only the event videos recorded on the Mobile NVR in **TMS Server**.
 - **Video retention period/GPS retention period**
 - You can set the period for each device; if a preset period has passed, the record file will be automatically deleted.
 - Directly enter the period ranging from 1 day to 365 days.
7. Click the **Apply** button.



Note

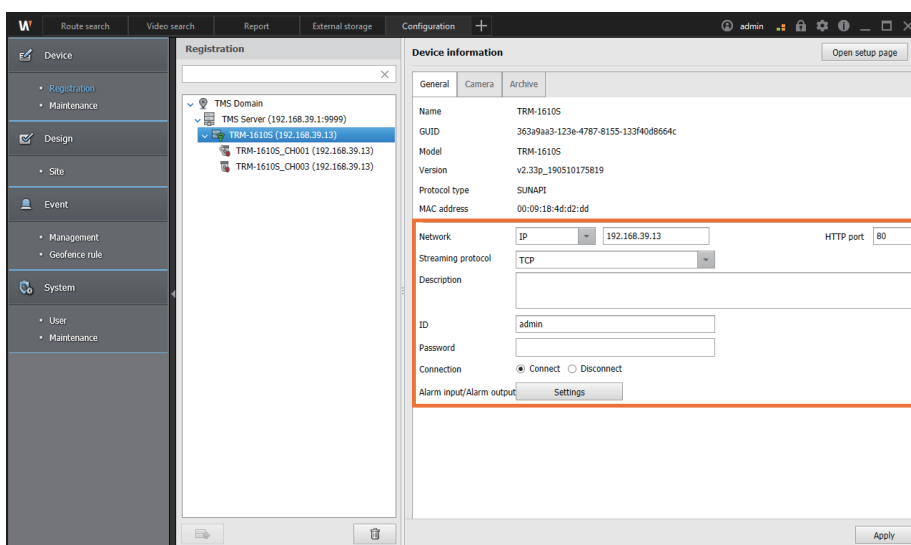
- When you store a video in TMS, the maximum speed is 520 Mbps.
- For stable recording, use SATA2 7,200 rpm or more of HDD. (The maximum storage volume per HDD is 130 Mbps.)
- You can search and play the recorded videos in **TMS Console's Video search** menu.

Set Device Information

Modify Device Information

You can change the settings information of a device registered on **TMS Server**.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired device from the Device list.
4. Modify the device information.



- **Connection:** You can connect or disconnect a device.
- **Alarm input/Alarm output:** Click the Settings button and select the alarm input or alarm output to be added.

5. Click the **Apply** button.



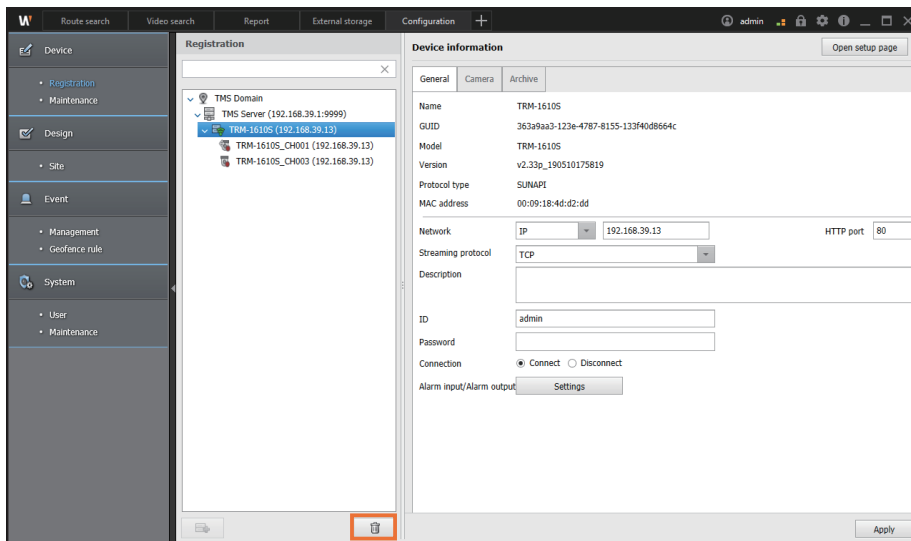
Note

- If you replace the device with a new one because of an abnormality in the device or the like, a dialog box asking whether to replace the device will appear.
 - Clicking the **Yes** button will replace the device.
 - If you click the **No** button, the existing device settings are maintained.
 - You can replace the device with the same model only.

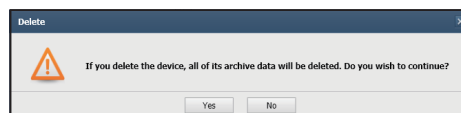
Delete Device

You can delete the devices and cameras registered on **TMS Server**.

1. Open the **Configuration** menu page.
2. Click **Device** > **Registration** from the menu.
3. Select a desired device from the Device list.
4. Click the  button.



5. When the **Delete** dialog box appears, click the **Yes** button.



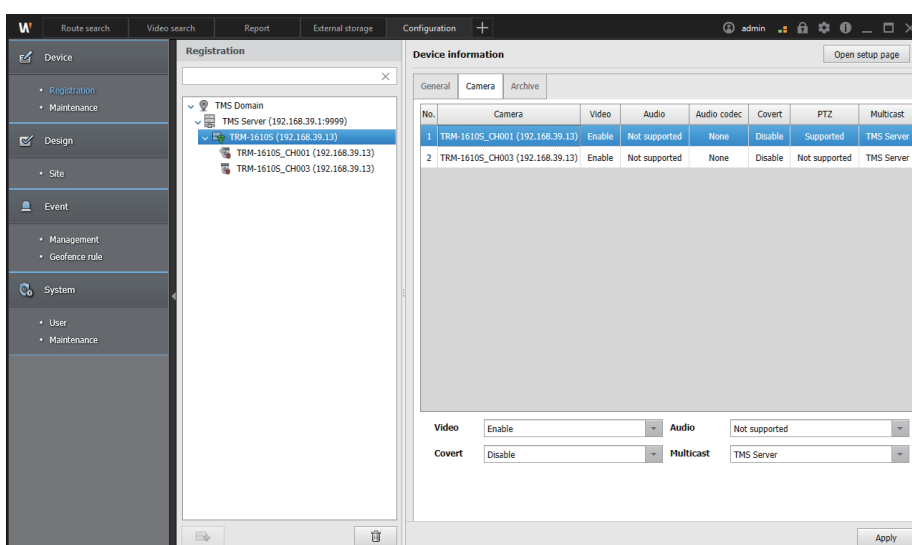
- If you delete a device, all data of the device archived in **TMS Server** will be deleted.
- To delete at once the multiple devices registered on **TMS Server**, press the [Ctrl] or the [Shift] key to select the desired devices.

Set Camera Profile

You can check and change the profile of a camera registered on **TMS Server**.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired device from the Device list.
4. In the **Device information** page, click the **Camera** tab.
5. Select a desired camera from the Camera list.

To change the settings of multiple cameras at once, press the **[Ctrl]** or the **[Shift]** key to select a desired camera.

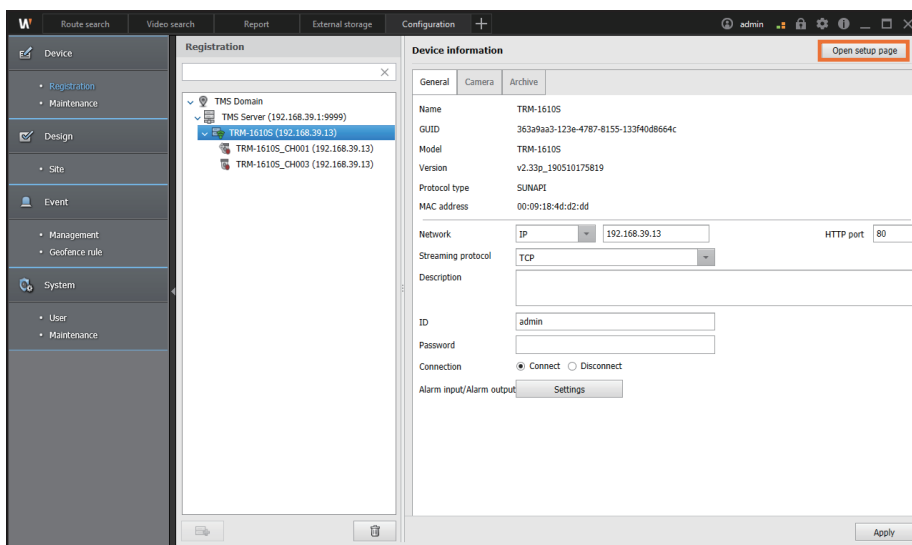


6. Set the profile of the camera.
 - **Video:** If you set this to **Disable**, you cannot view a video when monitoring it, and the audio will be automatically set to **Not supported**.
 - **Audio:** If you set this to **Disable**, you cannot hear the audio when monitoring a video.
 - **Covert:** If you set Covert to **Enable**, you can store videos and audios but not monitor them. If you set Covert to **Disable**, you can play a video that is previously set to Covert and recorded.
 - **Multicast:** You can set the camera data transmission method to Multicast. If you select **TMS Server**, you can transmit data by Multicast from TMS Server to TMS Console.
 - Multicast is used when the recipient of the data is a specific group consisting of multiple addresses. When transmitting data to multiple networks, you can do so to multiple devices at once.
7. Click the **Apply** button.

Open Device Web Viewer

You can change the settings of the Mobile NVR registered on **TMS Server** from a remote place via Web Viewer.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired device from the Device list.
4. Click the **Open setup page** button.

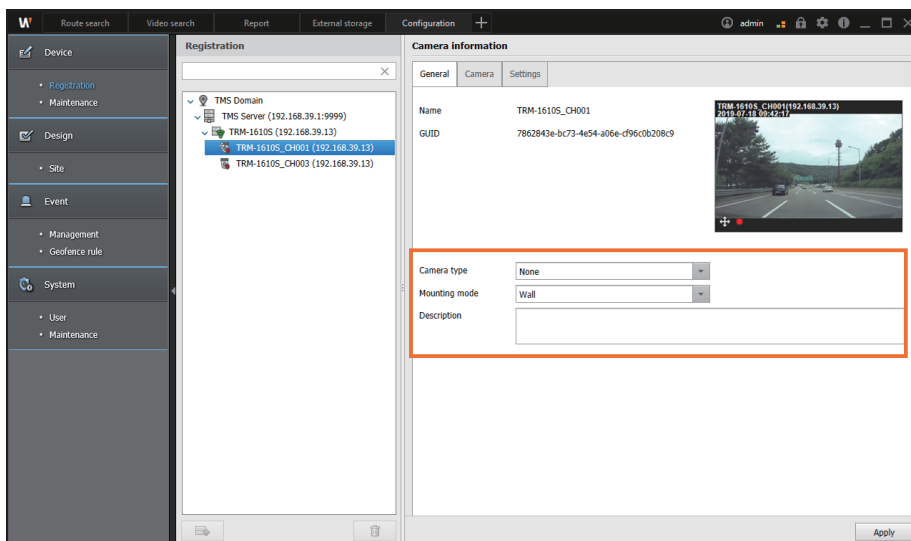


5. When the device web view appears on the web browser, enter the ID and the password of the device.
6. Click the **OK** button.

Modify Camera Information

You can change the settings information of a camera registered on TMS Server.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired camera from the Device list.
4. Modify the camera information.



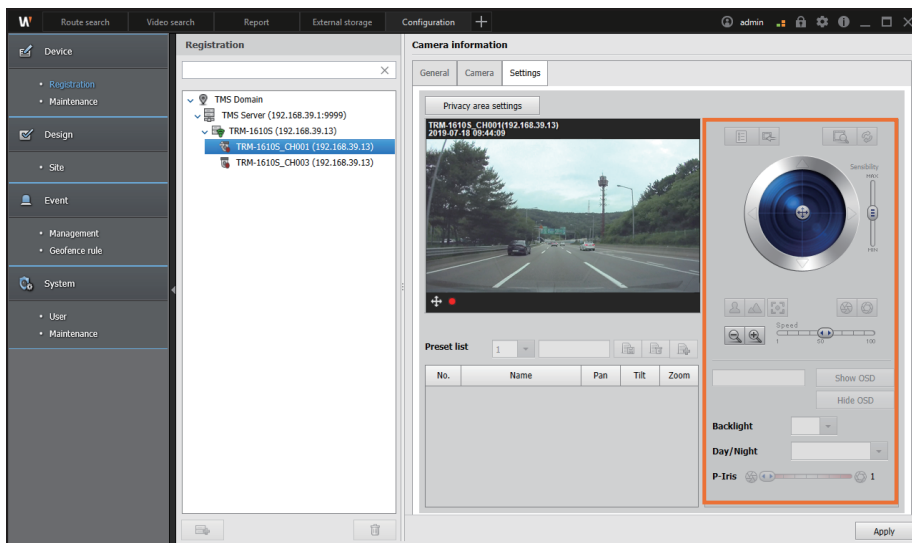
- **Camera type:** You can select from among **Box**, **Dome**, **PTZ**, **PT driver**, **Fish-eye 7010**, **Fish-eye 8010**, and **Fish-eye 9010**. If you set the camera type, the icon of the selected camera type will be displayed on the Device list.
- **Mounting mode:** You can select whether to install the camera on a **Wall**, **Ceiling**, or **Ground**.
- **Camera video preview:** When you put the cursor to a desired camera in the registered camera list, the videos of the camera will appear in thumbnail type. If the camera does not support a preview, the **No preview support** tooltip will appear when you put the cursor to it.

5. Click the **Apply** button.

Control Camera Settings

You can control the focus, iris, backlight, Day/Night, Digital zoom, etc. of a camera registered on TMS Server.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired camera from the Device list.
4. In the **Camera information** page, click the **Settings** tab.
5. Modify the camera settings information.



- **Simple Focus** : You can let the product automatically control the focus of the camera.
- **Focus**: You can manually control the focus of the camera. Pressing the  button moves the focus closer, whereas pressing the  button moves the focus farther. If the camera is registered for the SUNAPI protocol, you can set the focus moving interval.
- **Digital zoom in**  / **out** : You can zoom in or out by the desired magnification. If the camera is registered for the SUNAPI protocol, you can set the zoom moving interval.
- **Show OSD/Hide OSD**: You can set whether to show OSD on the camera video or not.
- **Backlight**: This is a backlight correction mode that lets you set a level only when the WDR mode is selected.
- **Day/Night**: You can select from among color, black-and-white, and automatic.
- **P-Iris**: In a box or a dome camera, you can open the iris for a preset level and control exposure to light by using a slide or entering a value. The greater the value is, the greater the volume of light, making the screen brighter.

6. Click the **Apply** button.



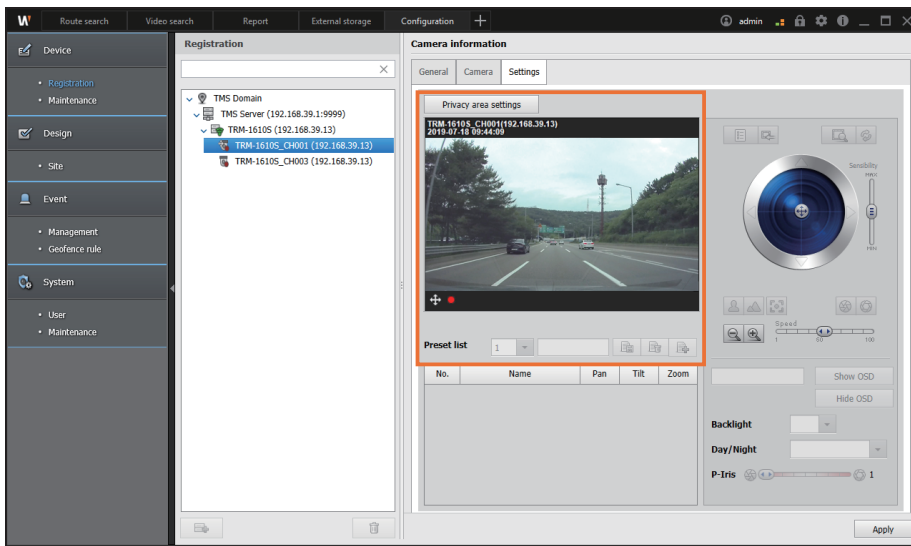
Note

The supported settings menus may vary according to the camera model.

Set Privacy Area

You can set an area requiring privacy protection or an area that need not be monitored in a stored video as a privacy area.

1. Open the **Configuration** menu page.
2. Click **Device > Registration** from the menu.
3. Select a desired camera from the Device list.
4. In the **Camera information** page, click the **Settings** tab.
5. Click the **Privacy area settings** button, and then set a privacy area on the video.
 - Clicking will cause a square to appear. Click again a desired position to set the privacy area.
 - You can set up to eight privacy areas.



6. Click the **Apply** button.
7. Set whether to show a **Privacy area** or not by clicking as follows:
Configuration > System > User > Select user group > Function-specific permissions > Privacy area.
 - In the **Video search** menu, the privacy area will be displayed on the record screen according to the settings.
8. Click the **Apply** button.

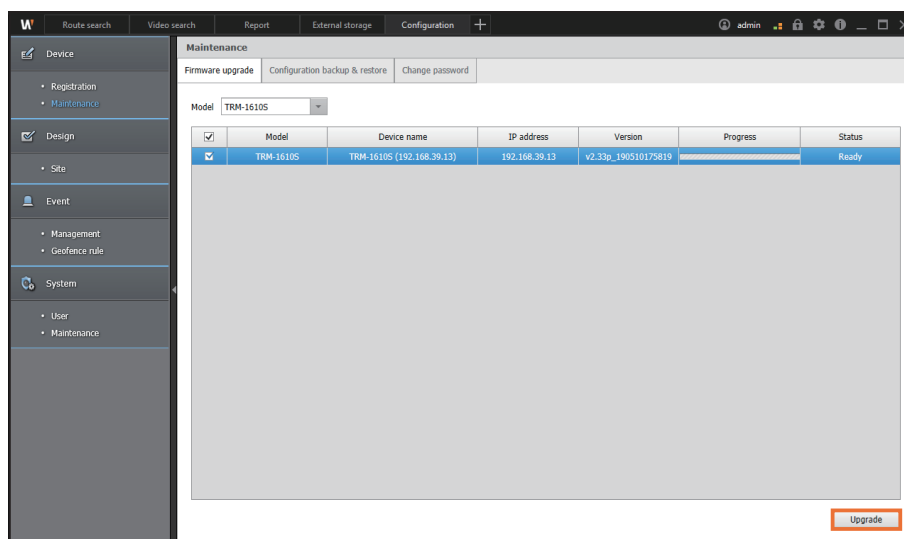
Maintain Device

You can upgrade the firmware of a device registered on **TMS Server**, back up or restore settings information, or remotely change the password of the device.

Upgrade Firmware

You can upgrade the firmware of a device registered on **TMS Server**.

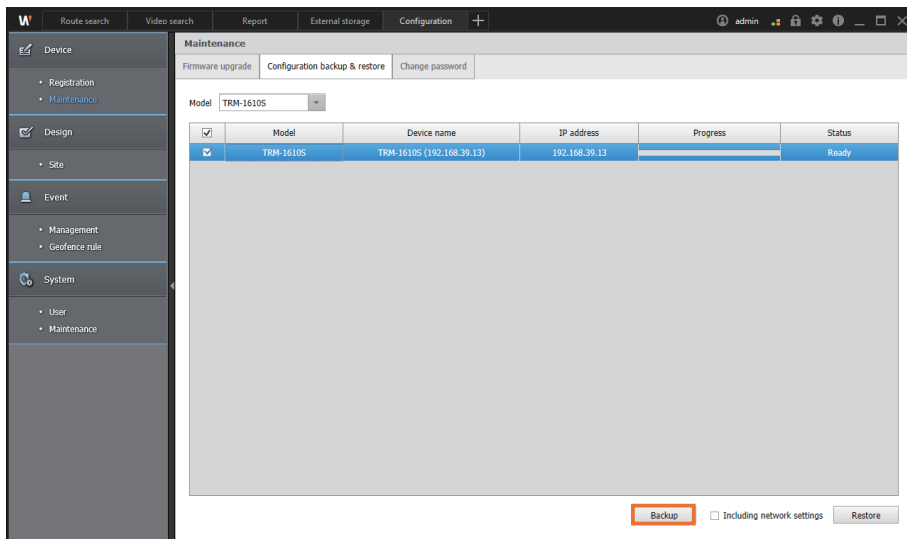
1. Open the **Configuration** menu page.
2. Click **Device > Maintenance** from the menu.
3. In the **Maintenance** page, click the **Firmware upgrade** tab.
4. Select a desired device from the **Model**.
5. After selecting the device to be upgraded, click the **Upgrade** button.
You can select multiple devices of the same model and upgrade firmware at the same time.
6. Select a firmware file. The upgrade progress and status will be displayed on the column.



Back up Settings Information

You can back up the settings information of a device registered on **TMS Server**.

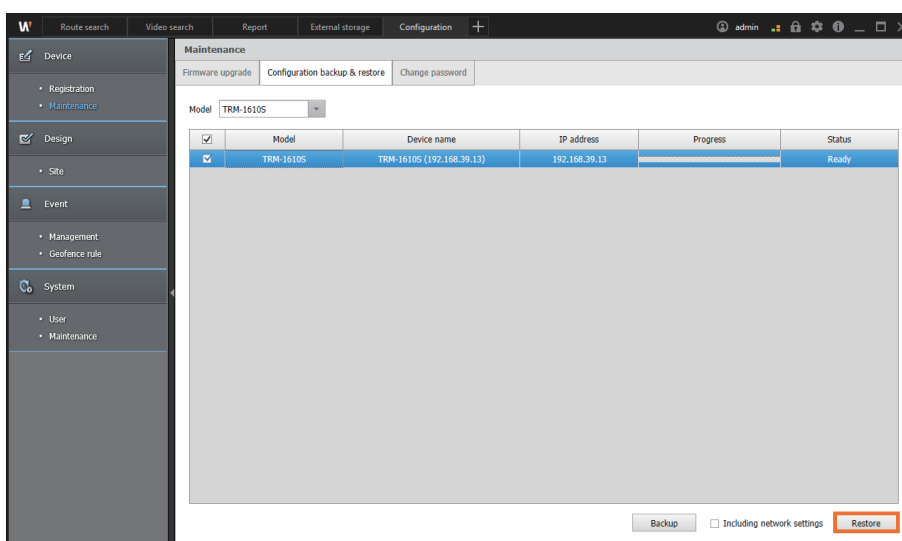
1. Open the **Configuration** menu page.
2. Click **Device** > **Maintenance** from the menu.
3. In the **Maintenance** page, click the **Configuration backup & restore** tab.
4. Select a desired model from the **Model** list.
5. Click the **Backup** button and set a File Path to store the settings information.



Restore Settings Information

You can restore the settings information of a device registered on **TMS Server** to the settings at the time backup was done. You can also create multiple configuration files for a device, restore the configuration files to the desired settings, and use them according to the usage or environment of the device.

1. Open the **Configuration** menu page.
2. Click **Device > Maintenance** from the menu.
3. In the **Maintenance** page, click the **Configuration backup & restore** tab.
4. Select a desired model from the **Model** list.
5. Click the **Restore** button and select a configuration file that is backed up.



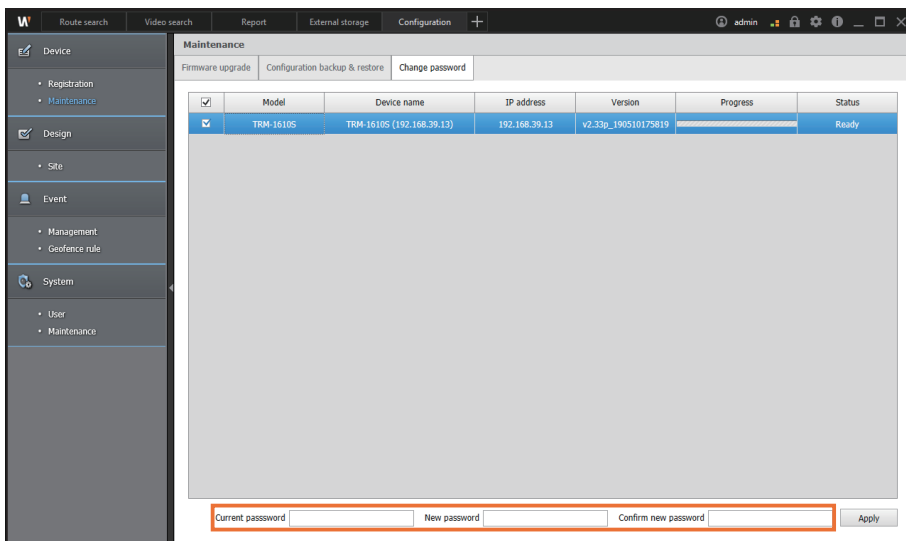
Note

- When restoring the device settings, selecting **Including network settings** will change the network information of the device to the network settings of the backup file.
- You can select and restore multiple devices at once with Configuration Restore but can back up only one device at a time by Configuration Backup.

Changing password

You can change the password of a device registered on **TMS Server**.

1. Open the **Configuration** menu page.
2. Click **Device > Maintenance** from the menu.
3. In the **Maintenance** page, click the **Change password** tab.
4. Select a device whose password you want to change.
If you want to change the settings of multiple devices with the same ID and password at once, press the **[Ctrl]** or the **[Shift]** key to select the desired devices.
5. Enter the current password of the selected device and set a new password.



6. Click the **Apply** button.

Set Design

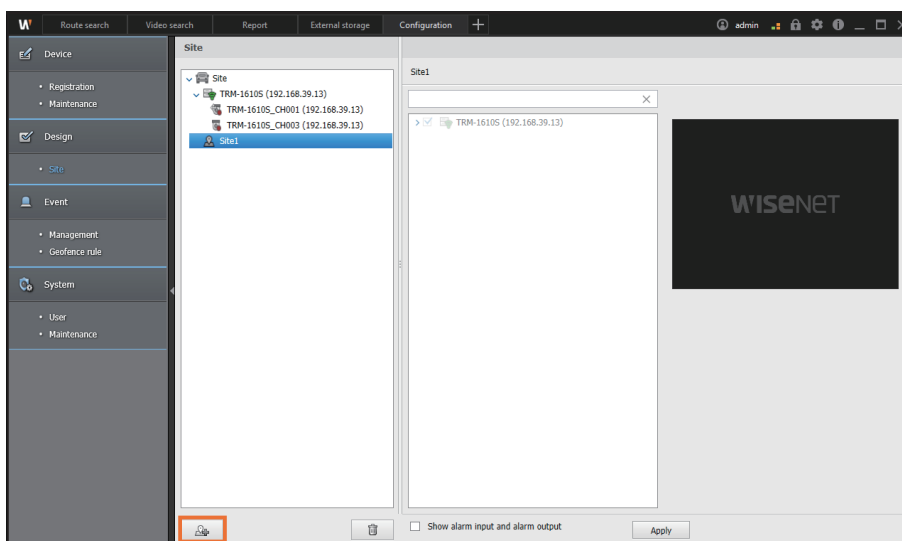
You can classify those devices registered on **TMS Server** according to the management criteria and operate them. You can also create a site according to the classification criteria and assign a device to the relevant site or cancel it.

Set Site

Create Site

You can configure a site with regions, routes, vehicle bases, etc. to manage the device.

1. Open the **Configuration** menu page.
2. In the Menu list, click **Design > Site**.
3. At the bottom of the **Site** page, click the  button. A site will then be created.

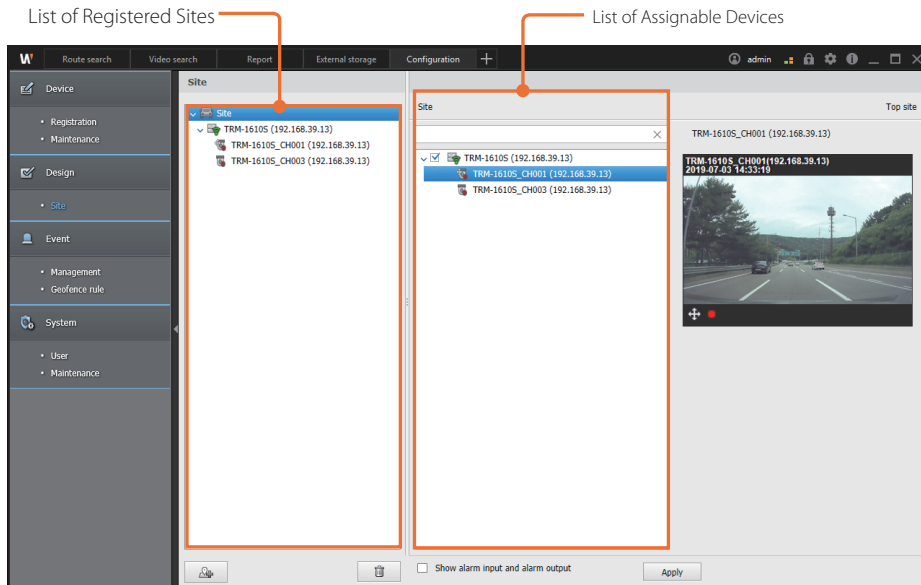


- To delete a site, select a desired site from the Site list and click the  button. All federated sites including the relevant site and all the assigned devices will then be deleted.
 - The federating parent site is basically provided when the program is installed and cannot be deleted.
4. Click the **Apply** button.

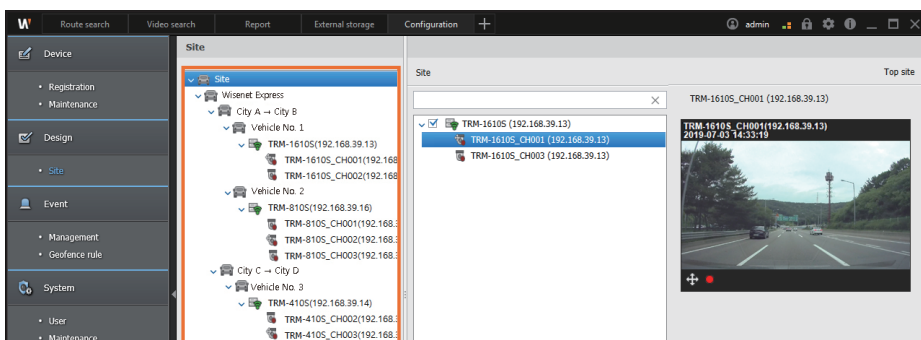
Assign Device to Site

You can assign a device to a desired site or cancel it.

1. Open the **Configuration** menu page.
2. In the Menu list, click **Design > Site**.
3. Click the checkbox of the device to be added to the site from the list of assignable devices.

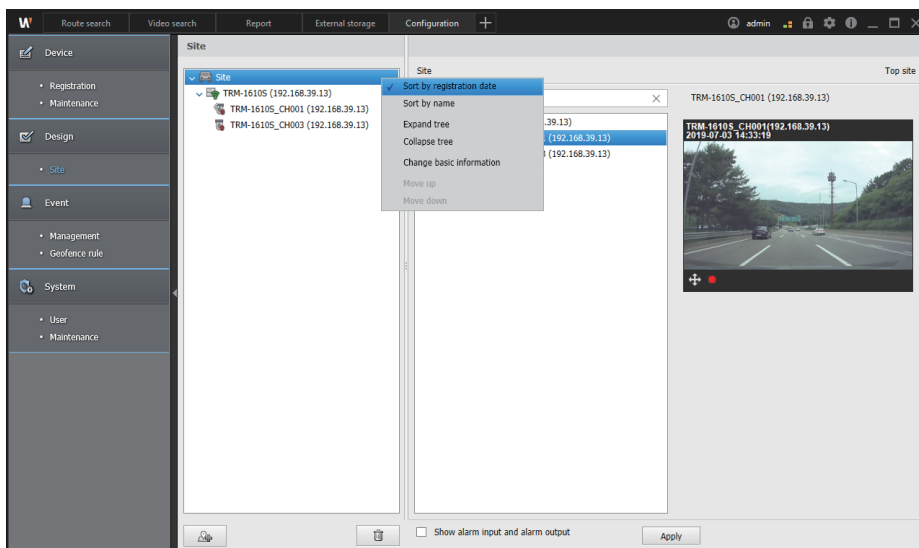


- You can search the device on the Search window.
 - If you select a device, the Preview screen for the device will appear on the screen on the right.
 - You cannot assign a single device to multiple devices at the same time.
 - To delete a device added to a site, click the checkbox of the device to be deleted in the Device list.
4. Click the **Apply** button. The selected device will then be assigned to the relevant site.
- Below is an example of site configuration and use.



Site List and Shortcut Menu

You can check the registered site list. You can also sort the Device list according to the desired criteria by using the Shortcut menu or change the device information.



Sort by registration date	Sorts the devices by the registration date.
Sort by name	Sorts the devices by name.
Expand tree Collapse tree	Expands or collapses the Device list.
Change basic information	Changes the site name or description.
Move up	The selected device will move upward by one step.
Move down	The selected device will move downward by one step.

Set Event

You can change the settings of an item related to an event and efficiently manage the event. You can also create a Geofence to check an event for the relevant area.

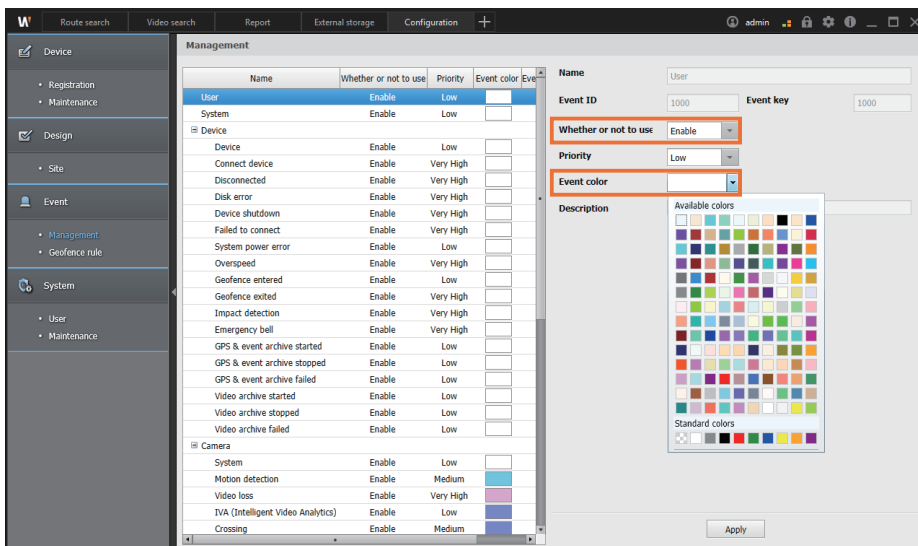
Manage Event

You can set the event items to be monitored and the priority of each event in TMS. You can also designate an event color to be displayed on the record screen when an event occurs or set event filtering to receive only some specific events.

Set Event Color

You can set an event color to be displayed on an event log or a record screen of **TMS Console** when an event occurs.

1. Open the **Configuration** menu page.
2. In the Menu list, click **Event > Management**.
3. Select a desired event from the Event list.
4. In the event information, set **Whether or not to use** and **Event color**.

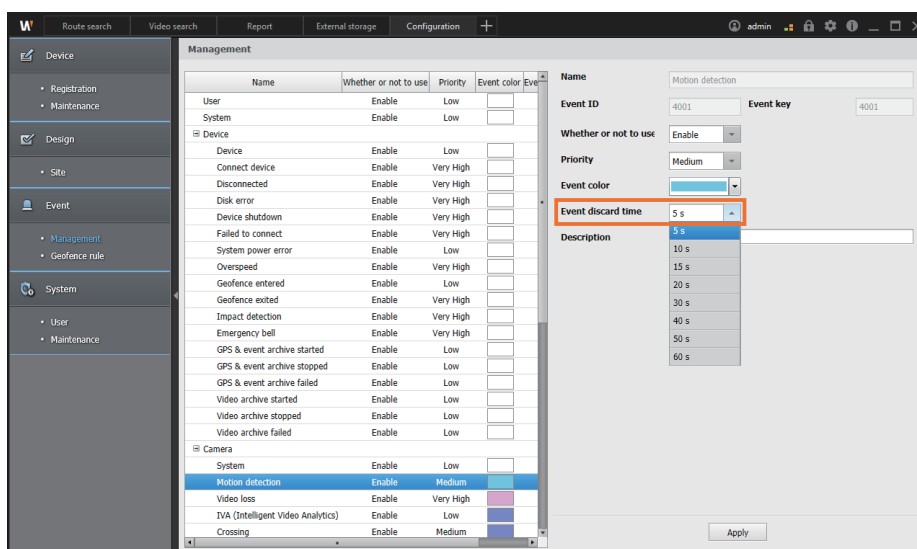


5. Click the **Apply** button.

Set Event Discard Time

If an event occurs, and then the same event occurs within a set period of time, you can ignore the additionally occurring event.

1. Open the **Configuration** menu page.
2. In the Menu list, click **Event > Management**.
3. Select a desired event from the Event list.
4. In the event information, set the **Event discard time**.



- The **Event discard time** can be set only for events related to a camera.

5. Click the **Apply** button.

Event Terminology

Device	Input Event Name	Description
Storage	Device	Refers to all events that are not managed as a device event in the Event > Management menu. (E.g., Start recording on remote device, Stop recording on remote device, and Restart after device update)
	Connect device	An event occurs when the Mobile NVR is connected.
	Disconnected	An event occurs when the Mobile NVR is disconnected.
	Disk error	An event occurs when data cannot be read in the Storage of the Mobile NVR.
	Device shutdown	An event occurs when the Mobile NVR system is ended.
	Failed to connect	An event occurs when the Mobile NVR is not connected.
	Overspeed	An event occurs when the driving speed of the vehicle exceeds a set speed in the Mobile NVR.
	Geofence entered	An event occurs when a vehicle enters a set Geofence area.
	Geofence exited	An event occurs when a vehicle exits from a set Geofence area.
	Impact detection	An event occurs when impact or vibration is detected by the Mobile NVR.
	Emergency bell	An event occurs when the [EMERGENCY] button on the control box connected to the Mobile NVR is pressed.
	GPS & event archive started	An event occurs when GPS and event archiving is started.
	GPS & event archive stopped	An event occurs when GPS and event archiving is stopped or ended.
	GPS & event archive failed	An event occurs when GPS and event archiving fails.
	Video archive started	An event occurs when video archiving is started.
	Video archive stopped	An event occurs when video archiving is stopped or ended.
	Video archive failed	An event occurs when video archiving fails.
	System power error	An event occurs when the Mobile NVR system is not powered on.

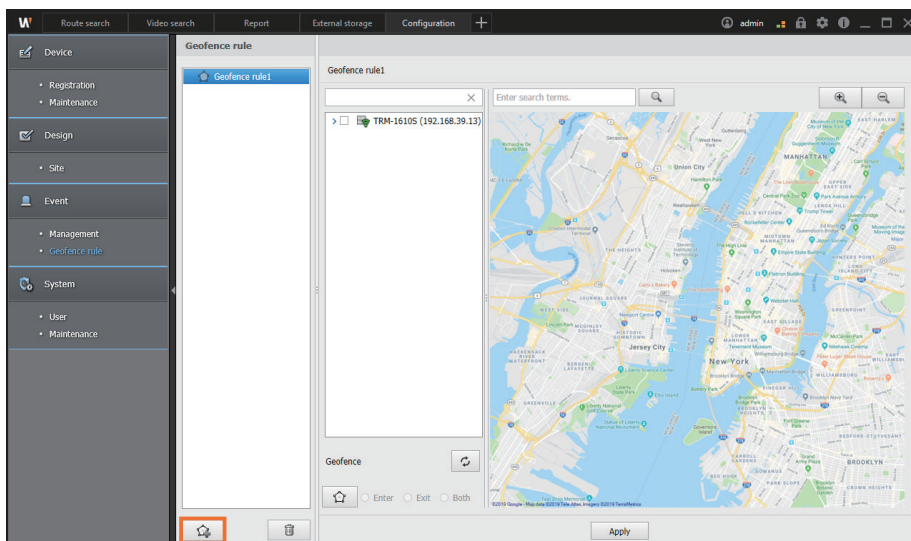
Device	Input Event Name	Description
Camera	Motion detection	An event occurs when motion is detected in an area of interest set for the camera.
	Video loss	An event occurs when the Mobile NVR fails to receive a camera video.
	IVA (Intelligent Video Analytics)	An event occurs when an IVA is detected.
	Crossing	An event occurs when an object crossing a virtual line set for the camera is detected.
	Enter	An event occurs when a moving object enters a virtual area set for the camera from outside.
	Exit	An event occurs when a moving object exits from inside a virtual area set for the camera toward the outside.
	Appear/Disappear	An event occurs when an object that has not been in a virtual area set for the camera stays in the area for a certain period of time or longer, or an object that has been in the virtual area does not exist in the area for a certain period of time or longer.
	Tampering	An event occurs when the camera video is covered, or the position of the camera is changed.
	Auto tracking	An event occurs when a moving object in the camera video is automatically tracked.
	Face detection	An event occurs when a person's face is detected on the camera video.
	Audio detection	An event occurs when audio equal to or higher than the level set for the camera is detected.
	Defocus detection	An event occurs when the focus of the camera lens is detected as blurred.
	Intrusion	An event occurs when a moving object is detected in a virtual area set for the camera for a certain period of time.
	Loitering	An event occurs when a loitering object's motion is detected in a virtual area set for the camera for a certain period of time.
	Fog detection	An event occurs when fog is formed on the camera, or a video showing cloudy weather is detected.
	Scream	An event occurs when the camera detects a screaming or shouting person.
	Gunshot	An event occurs when the camera detects shots not fired continuously.
	Explosion	An event occurs when the camera detects an explosion.
	Crashing glass	An event occurs when the camera detects a sound of shattering glass.

Set Geofence Rule

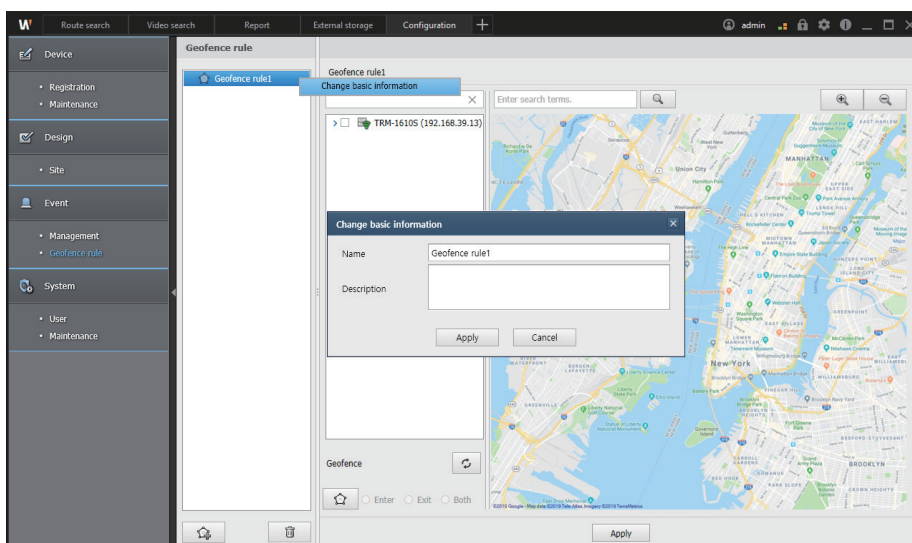
You can set the Geofence rule to allow a Geofence event to occur when the vehicle invades a specific area or deviates from it.

Add Geofence

1. Open the **Configuration** menu page.
2. In the Menu list, click **Event > Geofence rule**.
3. At the bottom of the **Geofence rule** page, click the  button. A Geofence will then be created.



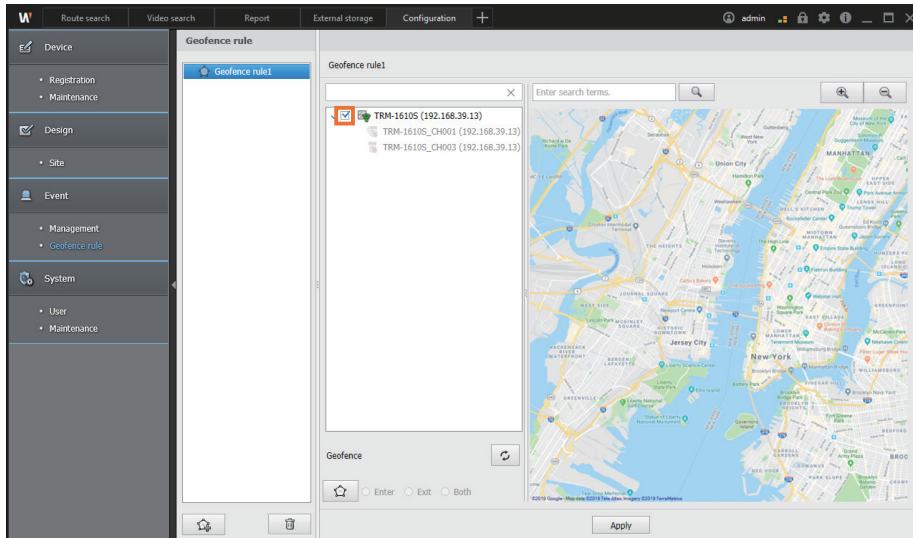
4. To change the basic information of the **Geofence rule**, right-click a desired Geofence rule and select **Change basic information**, and then change it into the desired information.



5. Click the **Apply** button.

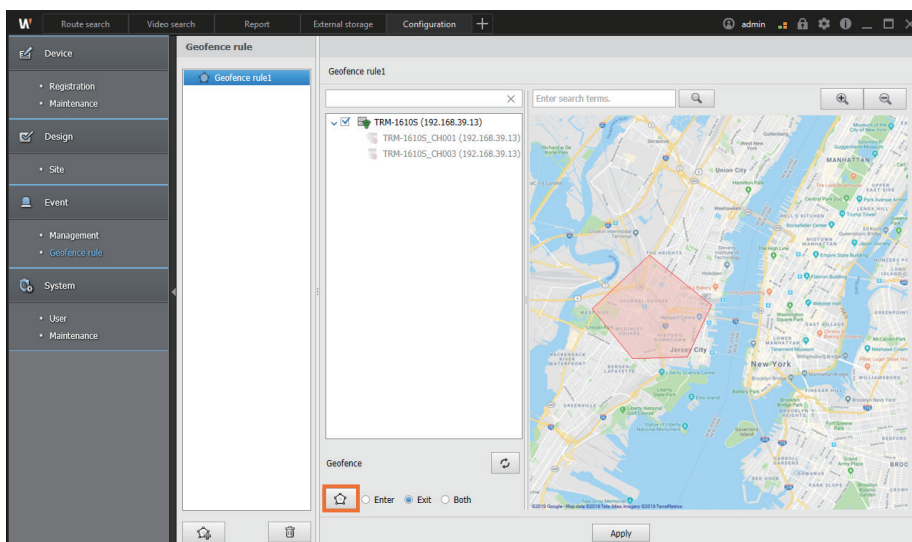
Set Geofence

1. Open the **Configuration** menu page.
2. In the Menu list, click **Event > Geofence rule**.
3. In the **Geofence rule** list, select a desired Geofence rule.
4. Select the checkbox of the device to be monitored by Geofence from the Device list.



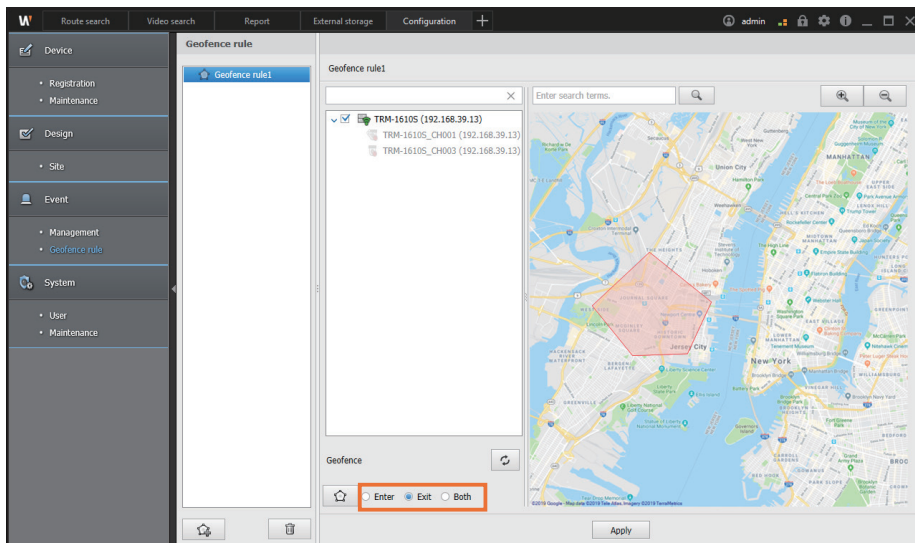
- You can search a camera on the search window.

5. Click the  button and set a desired area on the map. Click to set the area and right-click to complete the setting. A Geofence may consist of up to 64 apexes.



- Clicking the  button on the upper right side of the map enables expanding or reducing the map.
- Click the  button to set the area again.

6. Select a desired event item from the set area.



- **Enter:** When the Mobile NVR enters a Geofence.
- **Exit:** When the Mobile NVR exits from a Geofence.
- **All:** When the Mobile NVR enters or exits from a Geofence.

7. Click the **Apply** button.

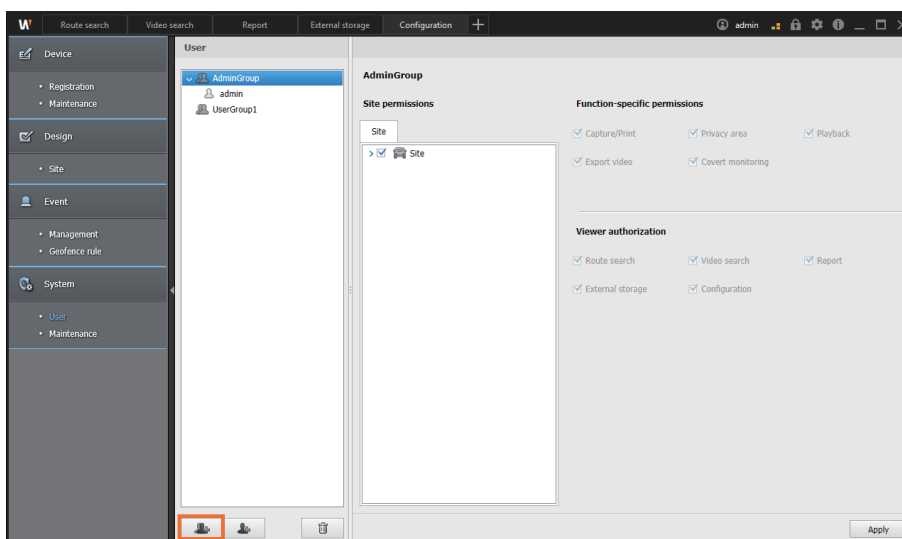
Setting up the system

You can add a user group or a user to the TMS system or set permissions of a user group. You can also change the settings of those items necessary for maintenance of the system.

Settings for User

Add User Group

1. Open the **Configuration** menu page.
2. In the Menu list, click **System > User**.
3. At the bottom of the **User** page, click the  button. A user group will then be created.



4. Select an added user group and set the permissions.
You can select site permissions, function-specific permissions, and viewer authorization.
5. Click the **Apply** button.

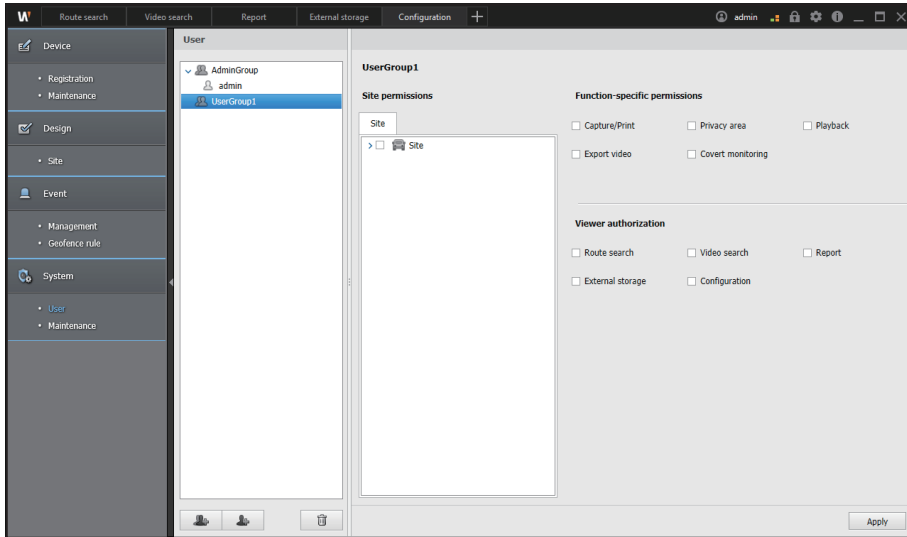


Note

AdminGroup is a user group that is basically provided and cannot be deleted.

Set User Group Permissions

1. Open the **Configuration** menu page.
2. In the Menu list, click **System > User**.
3. Select a user group for which permissions will be set.



4. Set the permissions for a user group. You can select site permissions and function-specific permissions.
 - **Site permissions:** You can select a site to be operated in the selected user group.
 - **Function-specific permissions:** You can set the functions to be used in the selected user group.



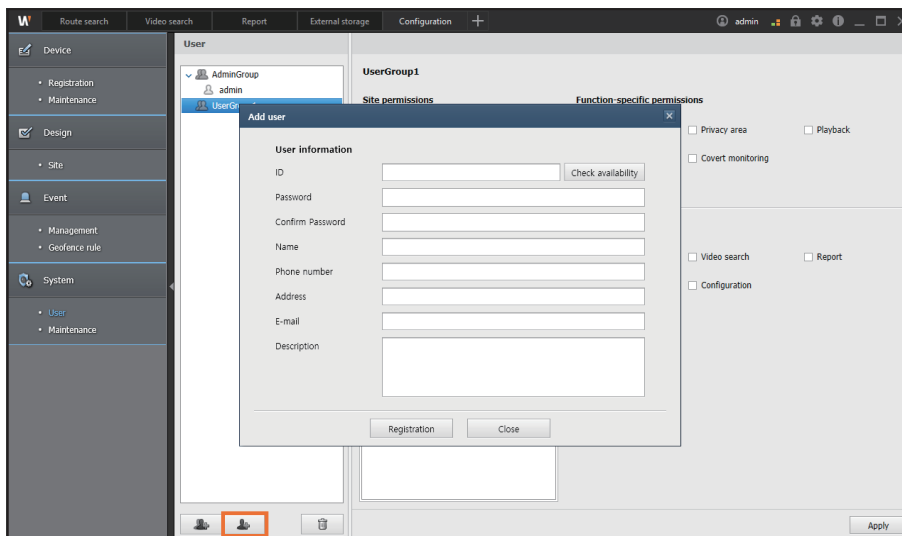
Note

- **AdminGroup** has all permissions, so those users belonging to **AdminGroup** also have all permissions.
- Permissions can be set only in a user group.
- User permissions may vary according to the permissions for the user group where the user belongs.

5. Click the **Apply** button.

Add User

1. Open the **Configuration** menu page.
2. In the Menu list, click **System > User**.
3. Select a user group where a user will be added.
4. At the bottom of the **User** page, click the  button.



5. Enter user information.
Check if the set ID is an available ID or not by clicking the **Check availability** button.
6. Click the **Registration** button. The user will be added to the selected group.

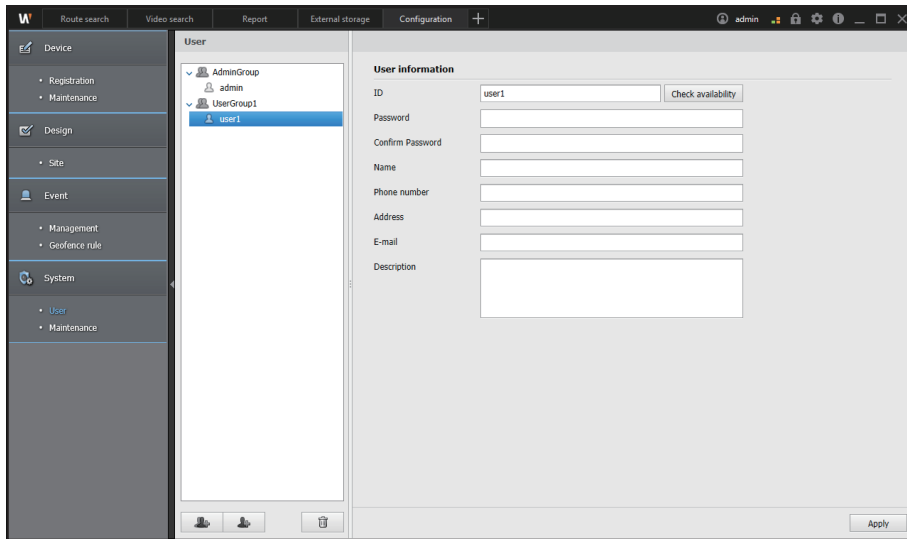


Note

Admin ID is basically created when the program is installed and cannot be deleted.

Modify user information

1. Open the **Configuration** menu page.
2. In the Menu list, click **System > User**.
3. Select a desired user and modify the user information.



4. Click the **Apply** button.

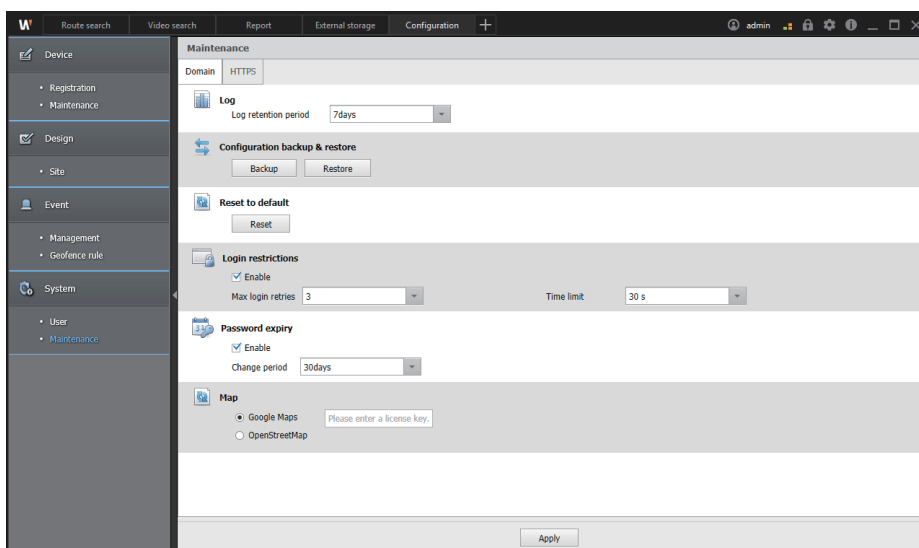
Maintain System

You can change the Log retention period or the password change period of **TMS Server** and back up/restore or reset the system settings of the server. You can also change the map source of a map used for route search or the like or set the Secure connection system such as HTTPS.

Set Domain

You can change and manage the settings of items needed for maintaining the TMS system.

1. Open the **Configuration** menu page.
2. In the Menu list, click **System > Maintenance**.
3. Select a desired item, and then set.



- **Log**

You can set the **Log retention period** to delete the relevant file automatically when a certain period has passed.

- **Configuration backup & restore**

You can back up the current system settings of **TMS Server** or restore the system settings to a point of time for backup later.

- **Backup:** Selecting an item will enable the button. If you set the route and click the **Backup** button, backup will be performed for the set route.
- **Restore:** Selecting an item will enable the button. If you set the route and click the **Restore** button; the settings will be loaded from the designated route, and restoration will be started.

- **Reset to default**

You can reset the system settings of **TMS Server** to default values as when the product was installed for the first time.

- **Login restrictions**

You can configure the settings to perform Login Locked.

- **Max. login retries:** If you fail to log in for a certain number of times, there will be restrictions on login.
- **Time limit:** If you fail to log in, your login will be restricted for a certain period of time.

- **Change password**

- You can set the notification to change the password in order to change the password on a regular basis.
- Change the password once every three months for security purpose.

- **Map**

You can select Google Map or OpenStreetMap as the map displayed on **TMS Console**.

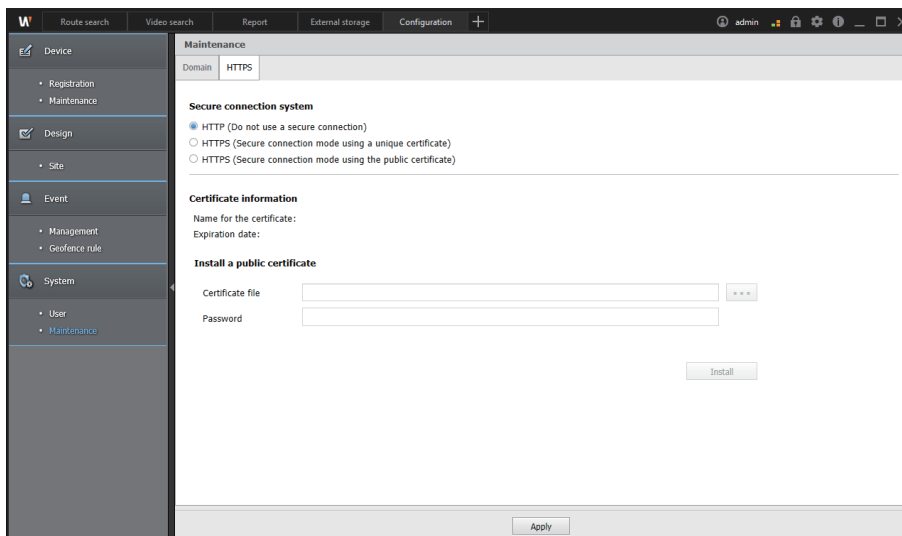
- **Google Maps:** You need to enter a Google Map API key to use it since it is a charged map service from Google.
- **OpenStreetMap:** An open source map service that you can freely use without a separate API key.

4. Click the **Apply** button.

Set HTTPS

You can set the Secure connection system of the TMS system.

1. Open the **Configuration** menu page.
2. In the Menu list, click **System** > **Maintenance**.
3. In the **Maintenance** page, click the **HTTPS** tab.



4. Select a **Secure connection system** from below.
 - **HTTP (Do not use a secure connection)**: Select this when transmitting data without encryption.
 - **HTTPS (Secure connection mode using a unique certificate)**: Select this when performing a secure connection using a unique certificate provided by TMS.
 - **HTTPS (Secure connection mode using a public certificate)**: Select this when performing a secure connection using the public certificate.
5. Click the **Apply** button.

Install Public Certificate

If you have selected the Secure connection system of HTTPS (Secure connection mode using a public certificate), you need to install the public certificate.

1. Open the **Configuration Manager** menu page.
2. In the Menu list, click **System > Maintenance**.
3. In the **Maintenance** page, click the **HTTPS** tab.
4. Select the **Secure connection system** of HTTPS (Secure connection mode using the public certificate).

The screenshot shows the 'Maintenance' page in the Configuration Manager. The 'Domain' tab is selected, and the 'HTTPS' sub-tab is active. Under 'Secure connection system', three options are listed: 'HTTP (Do not use a secure connection)', 'HTTPS (Secure connection mode using a unique certificate)', and 'HTTPS (Secure connection mode using the public certificate)'. The third option is selected and highlighted with a red box. Below this, the 'Certificate information' section includes fields for 'Name for the certificate' and 'Expiration date'. The 'Install a public certificate' section has a 'Certificate file' field with a file selection button (three dots) and a 'Password' field. An 'Install' button is located at the bottom right of the form. An 'Apply' button is at the very bottom of the page.

5. On the right side of the **Certificate file**, click the  button to select the public certificate file to be installed.
6. Enter the password for the certificate and click the **Install** button.
7. Click the **Apply** button.

Appendix

System Requirements

TMS Console

	Minimum specifications	Recommended specifications
CPU	Intel i5-4670@3.40 GHz	Intel i7-4770@3.40 GHz Xeon E3-1275 v5 (8M Cache 3.6 GHz)
VGA	Geforce GTX 740 (RAM 1 GB) 6th-Generation Intel Processor Graphics	- Geforce GTX 960 (RAM 2 GB) or above when using CUDA H/W Decoder - HD Graphics P530 or above when using Intel Quick Sync H/W Decoder
RAM	8 GB or above	16 GB or above
OS	Windows 7/8/8.1/10 (64-bit) * Only 64-bit operating systems are supported.	Windows 10 (64-bit) * Only 64-bit operating systems are supported.
HDD	After installing the operating system and TMS Console , 20 GB of free space is required.	

Product Specifications

System		
Device management	Register up to 128 devices per server. Operate up to 10,000 cameras for the Domain.	
Archive bandwidth	Max. of 520 Mbps	
Software structure	Server/Client	Multiserver clustering, Max. of 28 servers
Client	Console Client	Support for simultaneous access by up to 35 units per server.
Support device	Wisenet Mobile NVR	
Basic components		
TMS Server	Server clustering	Server data sharing
	User management	Device connection permissions, function access authorization
	Central device settings	Automatic/Manual registration of the device and additional TMS Server
	Event settings	Set the 4-step importance level. Manage the color for each event.
TMS Console	Tab-based window	Route search, Video search, Report, External storage, Configuration manager
	Output channel	Max. of 64 channels for a single tab
	Decoding	Support for hardware accelerator (CUDA, Intel Quick Sync)
	Playback	Multichannel play
Languages supported	Korean, English, Croatian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Swedish, Taiwanese, Thai, Turkish	

Service Port

Refer to the list of ports used in Wisenet TMS.

Name	Port	Protocol
System Manager	9999, 61616, 9876 (PostgreSQL)	TCP for Web Service (9999) Active MQ (61616)
Media Server	4510-4517	TCP (4510, 4511) SSL (4512, 4513) RTSP (4515, 4516, 4517)

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