



**The Intelligent Surveillance Solution**

# **Crystal Titan v2.1.4**

Upgrade Guide

## **Table of Contents**



1	Before upgrade .....	1
2	Upgrade Process.....	1
2.1	The Crystal Titan will be Management Server .....	2
2.1.1	Upgrade.....	2
2.1.2	Activate license.....	3
2.1.3	Set Up Volume Group .....	7
2.2	The Crystal Titan will not be Management Server.....	8
2.2.1	Upgrade.....	8
2.2.2	Assign Name to Recording Server.....	9
2.2.3	Export Server Configuration.....	9
2.2.4	Activate 4CH embedded license.....	10
2.2.4.1	Online activate 4ch embedded license .....	11
2.2.4.2	Offline activate 4ch embedded license .....	12
2.2.5	Transfer 4ch Embedded License (Optional) .....	14
2.2.5.1	Disable Devices Before Transfer License.....	14
2.2.5.2	Online License Transfer.....	15
2.2.5.3	Offline License Transfer .....	15
2.2.6	Enable Necessary Service.....	16
2.2.7	Import Camera Config to Remote Management Server.....	17
2.2.8	Set up Volume Group.....	19

# 1 Before upgrade

This document is a guide for upgrading Crystal Titan system from Crystal Titan 1.x to Crystal Titan v2.x

## Note before upgrade:

- ✓ After upgrade, the system will reserves camera configuration. Other configuration, ex. schedule or privilege, will be set to default.
- ✓ User needs to manually activate 4ch embedded licenses. None-embedded licenses (manually activated licenses on Titan 1.x) will be upgraded automatically.
- ✓ If the system is main- sub structure under Titan 1.x, user would needs to manually transfer the embedded 4ch licenses from original server to Management Server.
- ✓ Once upgrading system to Crystal 2.x, it cannot be downgraded to Titan NVR 1.x anymore.

	<p>After upgrading Crystal Titan to Crystal Titan v2.x, the video file on Crystal Titan 1.x will be inherit to Crystal Titan v2.x.</p> <p>From one camera, the video from Titan 1.x and from Crystal Titan v2.x will be displayed on one timeline on NuClient <i>Playback, Export, and Backup</i> interface. However, on <i>backup player</i>, the video from Titan 1.x and Crystal Titan v2.x will be displayed as two devices.</p>
	<p>After upgrading Crystal Titan to Crystal Titan v2.x, the activated license on Titan 1.x will be inherit to Crystal v2.x automatically, but the 4ch embedded license shall be manually activate.</p>

# 2 Upgrade Process

There are two kinds of situation:

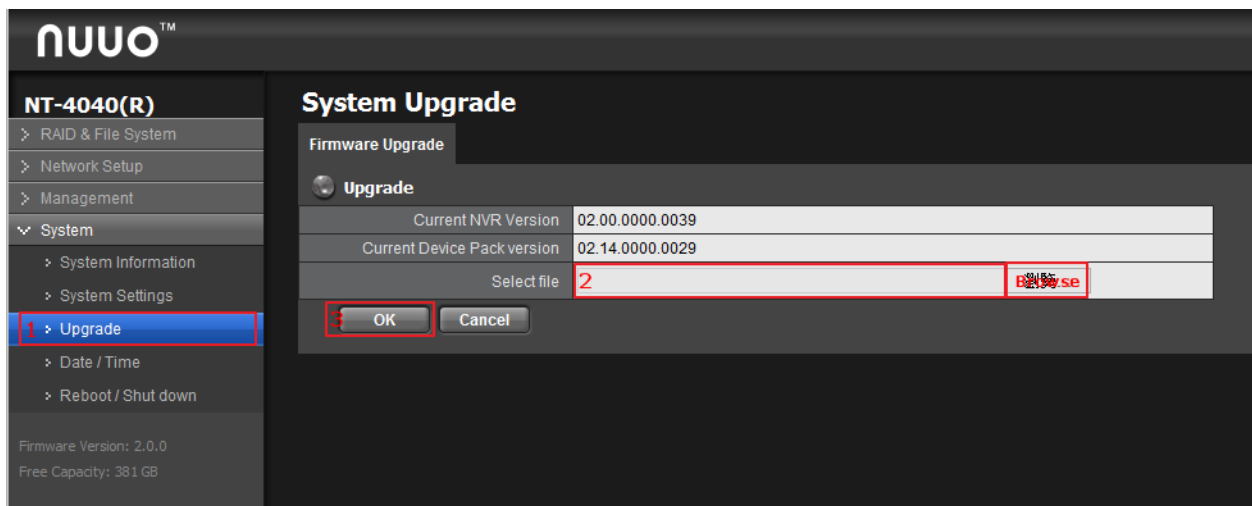
1. After upgrading, the Crystal Titan will be Management Server, please see [2.1](#)
2. After upgrading, the Crystal Titan will not be Management Server—it will be Recording Server or Metadata Server, and assign to remote Management Server. Please see [2.2](#)

## 2.1 The Crystal Titan will be Management Server

This situation will happen when the Crystal Titan is **Main Server** or only **single server** in v1.x system.

### 2.1.1 Upgrade

Upgrade Titan to v1.99 and then v2.x on Web FW upgrade page.



- ➔ Login web hardware settings page.
- ➔ Go to System -> Upgrade
- ➔ Load Titan FW v1.99, and then click **OK**.
- ➔ After upgrade success, load Crystal Titan FW v2.x, and then click **OK**.
- ➔ Upgrade success!



After upgrading Crystal Titan to Crystal Titan v2.x on hardware settings page. The Crystal Titan will default be both Management Server and Recording Server.

## 2.1.2 Activate license

After upgrade, the next step is to activate license.

On Crystal Titan v2.x, there are **no embedded licenses** in the Crystal Titan, and the 4ch embedded licenses on Titan 1.x machine can be manually activated as Enterprise license after upgrading, so that the licenses will be available on Crystal Titan v2.x system.

Please select **Config** Tabbed window to continue.

The **License** tabbed page opens in the **Configuration Pane**.

License Type	Total Quantity	Used Quantity	Available Quantity
VMULT Falco access control channel	600	0	600
Generic POS channel	600	320	280
Ultimate video channel	2094	483	1581

Serial	SN	Type	Channel
	8004-8699-8000-8000	Ultimate video channel	64
	8000-8000-8000-8000	Ultimate video channel	2000
	8400-8000-8400-8000	Generic POS channel	300
	8000-8000-8000-8000	Generic POS channel	300

Online / Offline:  Online  Offline  
Activate type:  Activate  Transfer  
 Enter license:   
 Import license file:

© 2014-2025 | Time: 17:21:09 | Username: admin | Server address: 172.17.161.44:5051 | CPU loading: 3% | Memory usage: Total 4045MB Free 3699MB | Network Outgoing streaming bitrate: 0.00 Mbps



After upgrade, the activated license on Titan v1.x will be inherit to Crystal Titan v2.x system and become Enterprise level license.



There are two level of video channel license types—Ultimate and Enterprise. On each system, only one level of licenses can be chosen. Therefore, if one user wants to activate Ultimate level license in a Management Server, please **activate upgrade license** for all Enterprise licenses, or **transfer all Enterprise license** before activating Ultimate licenses.

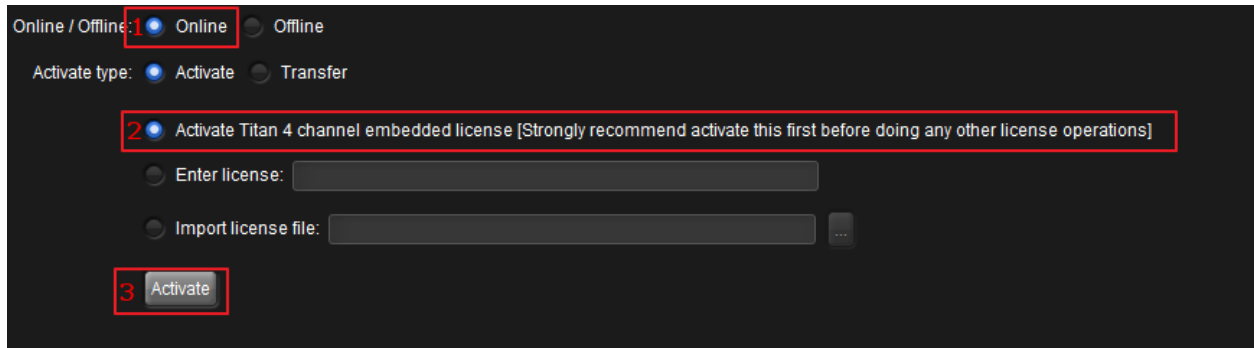
There are two ways to activate 4ch embedded license on Crystal Titan v2.x. [Online activate](#) and [offline activate](#).

### 2.1.2.1 Online activate 4ch embedded license

If the **Management Server is “online”** (, which means it is connected to the Internet), activate the license online by the following guide:



If Management Server is under LAN, please operate “[Offline activation](#)” process even NuClient is connected to the Internet.



1. Launch Crystal NuClient and login Management Server.
2. Open the **License** tabbed page for the **Management Server**.
3. Select **Online** for the **Online/Offline** setting.
4. Select **Activate** for the **Activate type** setting.
5. Select **Activate Crystal Titan 4 channels embedded license**.
6. Click the **Activate** button.

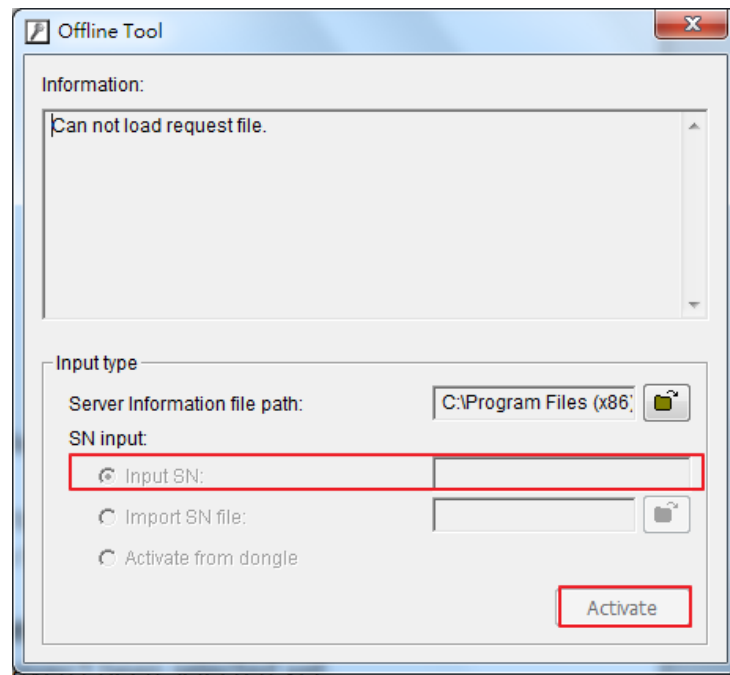
The 4CH embedded licenses will be activated on the server computer. Once activated, the 4ch embedded licenses will become normal **Enterprise** license type which can be transfer to other system.

## 2.1.2.2 Offline activate 4ch embedded license

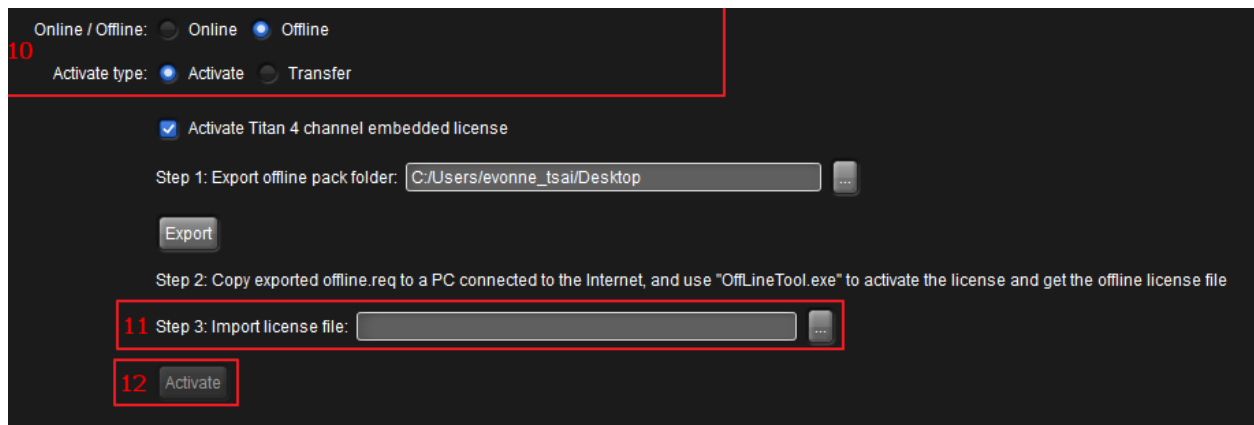
If the **Management Server** is “offline” (, which means it isn’t connected to the Internet), activate the 4ch embedded license offline by the following guide:

The screenshot shows a software interface for license activation. At the top, there are two radio buttons for 'Online / Offline', with 'Offline' selected. Below this, there are two radio buttons for 'Activate type', with 'Activate' selected. A list of license types is shown, with 'Activate Titan 4 channel embedded license' selected. Below the list, there is a text field for 'Step 1: Export offline pack folder:' containing the path 'C:/Users/evonne\_tsai/Desktop' and an ellipsis button. Below the text field is an 'Export' button. Below the 'Export' button, there is a text field for 'Step 3: Import license file:' and an ellipsis button. At the bottom, there is an 'Activate' button. Red boxes highlight the 'Offline' radio button, the selected license type, the 'Step 1' text field, the 'Export' button, and the 'Step 3' text field.

1. Launch Crystal NuClient and login Management Server.
2. Open the **License** tabbed page for the **Management Server**.  
Select **Offline** for the **Online/Offline** setting.
3. Select **Activate** for the **Activate type** setting.
4. Click the ellipsis (...) button besides the **Step 1: Export offline pack folder** field to browse for the directory to export the server information file to.
5. Click the **Export** button.  
The server information file is exported the directory assigned.
6. Copy the “offlineEmbedded.req” that is exported in **step 5** to a computer that is connected to the Internet.
7. Run the **OfflineTool.exe** on that computer.



8. Click the **Activate** button.  
The license is activated and an offline license file is generated on that computer.
9. Copy the offline license file back to the server computer.



10. On the server computer, re-open the **License** tabbed page for the **Management Server**
11. Select **Offline** for the **Online/Offline** setting, and select **Activate** for the **Activate type** setting if they haven't been selected yet.
12. Click the ellipsis (...) button besides the **Step 3: Import license file** field to browse for the offline license file on the server computer.
13. Click the **Activate** button. The license will be activated on the server



computer. After activate licenses, your settings are done.

The 4CH embedded licenses will be activated on the server.

Once activated, the 4ch embedded licenses will become normal **Enterprise** license type which can be transfer to other system.

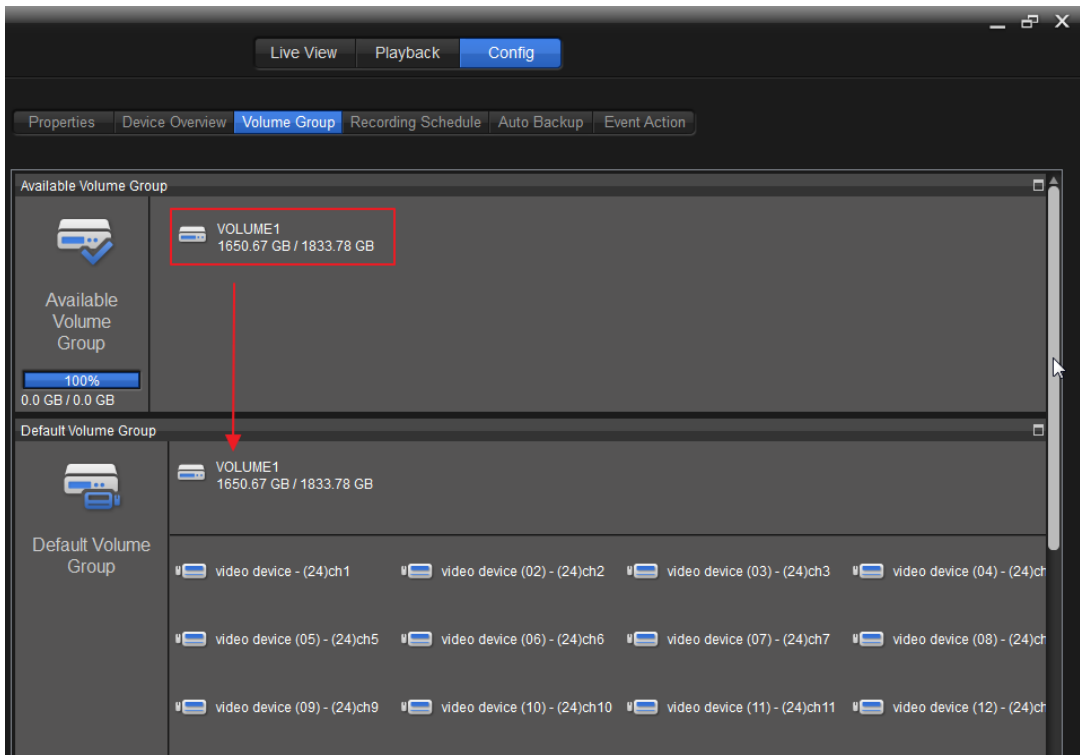


There are two level of licenses—Ultimate and Enterprise level. After upgrade, the license activated will be inherited as **Enterprise** level license.

### 2.1.3 Set Up Volume Group

Video from Titan v1.x will be inherited to Crystal Titan v2.x, but user needs to assign volumes to default volume group to start recording process.

Go to Recording Server -> Volume Group setting, and then drag and drop all volumes from available volume group to default volume group.



After upgrading, please check the configuration including licenses, camera settings, schedule, role and user group to make sure the system can operate

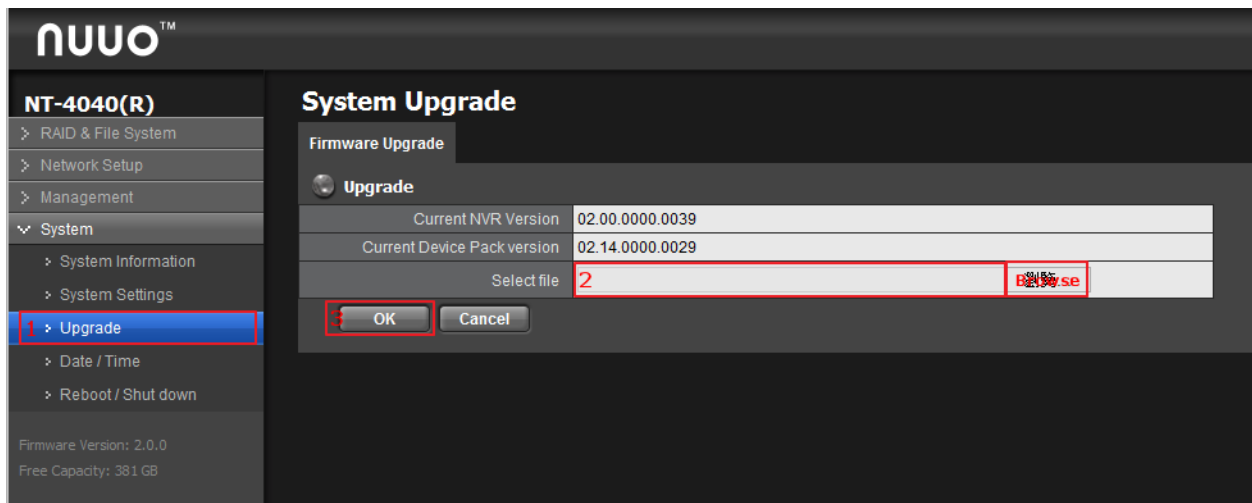
correctly.

## 2.2 The Crystal Titan will not be Management Server

This situation will happen when the Crystal Titan is **Sub Server** in v1.x system.

### 2.2.1 Upgrade

Upgrade Crystal Titan to v1.99 and then v2.x on Web FW upgrade page.



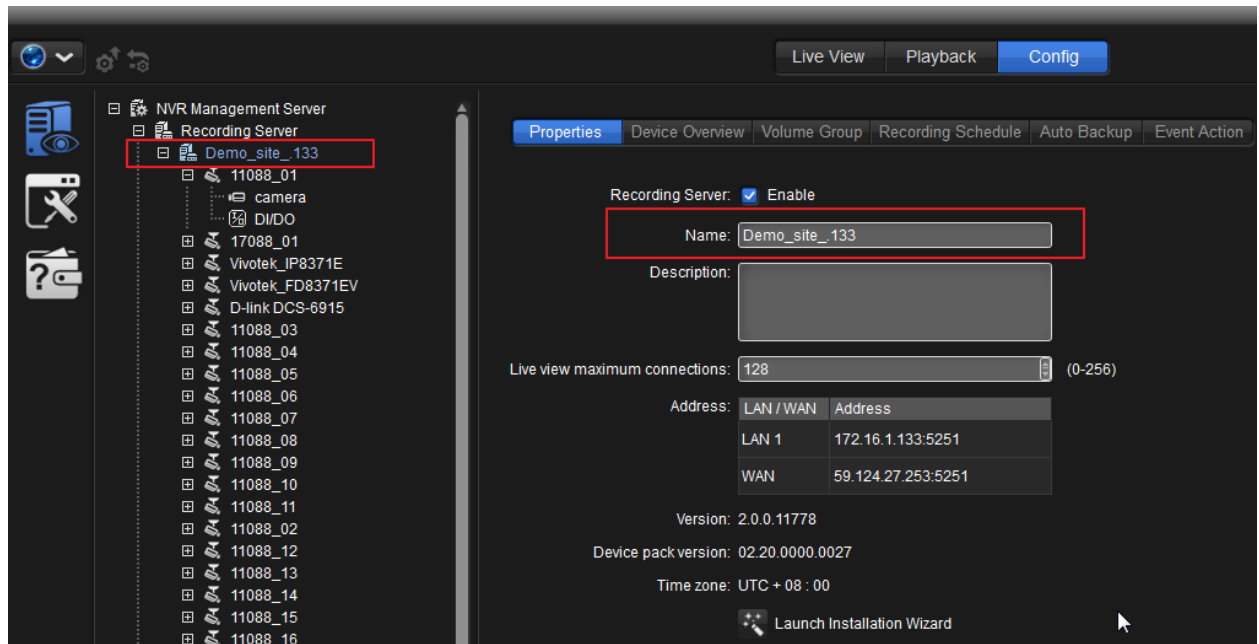
- ➔ Login NuClient on web hardware settings page.
- ➔ Go to System -> Upgrade
- ➔ Load Crystal Titan FW v1.99, and then click **OK**.
- ➔ After upgrade success, load Crystal Titan FW v2.x, and then click **OK**.
- ➔ Upgrade success!



After upgrading Crystal Titan to Crystal Titan v2.x on hardware settings page. The Crystal Titan will default be both Management Server and Recording Server

## 2.2.2 Assign Name to Recording Server

1. Launch Crystal NuClient and login Management Server.
2. Go to Recording Server -> Properties page
3. Fill in the assigned name for the Recording Server.

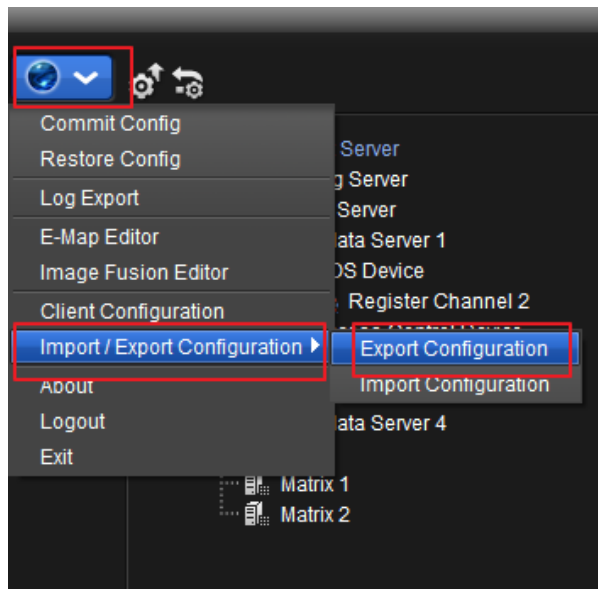


## 2.2.3 Export Server Configuration

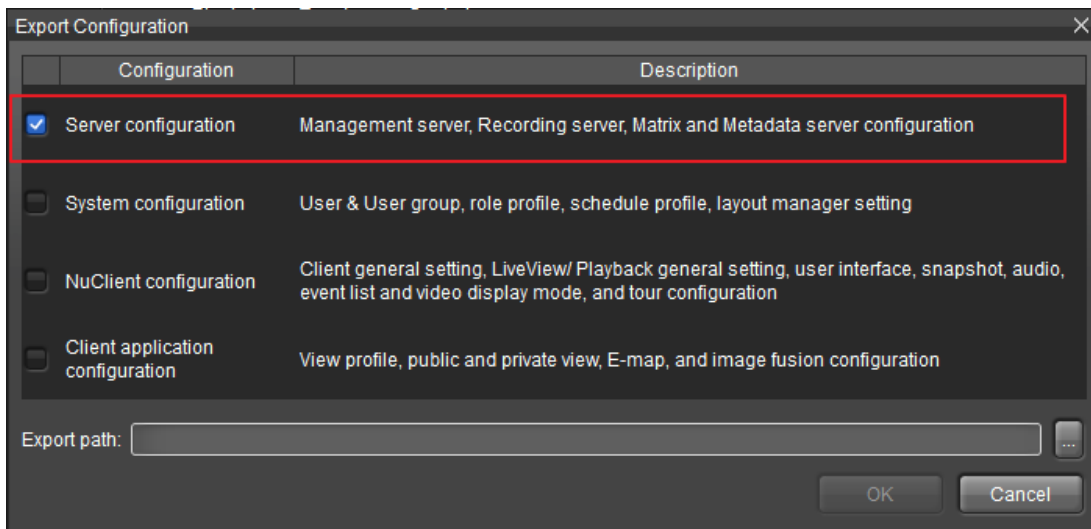
If you want to remain camera settings from this Crystal Titan, you should manually export the server configuration and then import to Management Server.

Please note that only camera parameter settings will remain, so **this process is not necessary if new project or this Crystal Titan is going to be Metadata Server only.**

1. Launch Crystal NuClient and login Management Server.
2. Go to "Global" -> Import/Export Configuration -> Export Configuration



3. On export configuration page, choose "Server Configuration".
4. Assign export path, then click on "OK".



## 2.2.4 Activate 4CH embedded license

On Crystal Titan v2.x, there are **no embedded licenses** in the Crystal Titan, and the 4ch embedded licenses on Titan 1.x machine can be manually activated as Enterprise license after upgrading, so that the licenses will be available on Crystal Titan v2.x system.



After upgrade, the activated licenses on Titan v1.x will be inherit to Crystal Titan v2.x system and become Enterprise level license.



There are two level of video channel license types—Ultimate and Enterprise. On each system, only one level of licenses can be chosen. Therefore, if one user wants to activate Ultimate level license in a Management Server, please **activate upgrade license** for all Enterprise licenses, or **transfer all Enterprise license** before activating Ultimate licenses.

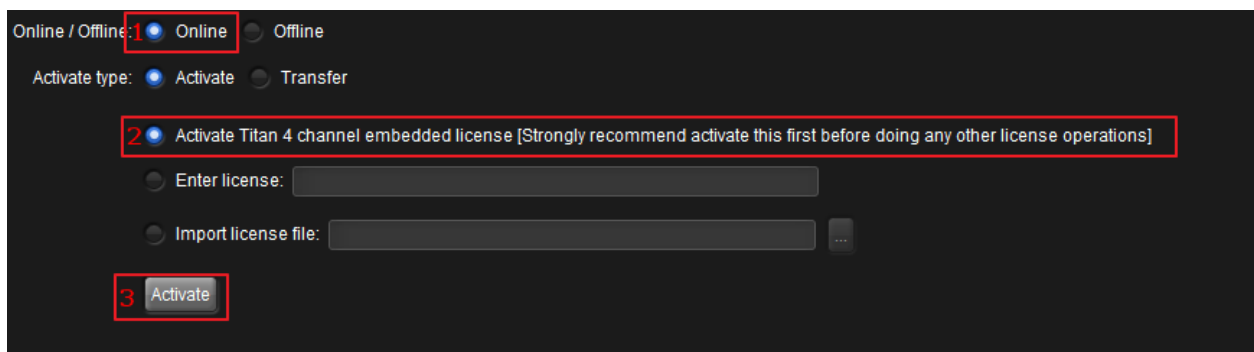
There are two ways to activate 4ch embedded license on Crystal Titan v2.x. [Online activate](#) and [offline activate](#).

### 2.2.4.1 Online activate 4ch embedded license

If the **Management Server is "online"** (, which means it is connected to the Internet), activate the license online by the following guide:



If Management Server is under LAN, please operate "[Offline activation](#)" process even NuClient is connected to the Internet.



1. Launch Crystal NuClient and login Management Server.
2. Open the **License** tabbed page for the **Management Server**.
3. Select **Online** for the **Online/Offline** setting.
4. Select **Activate** for the **Activate type** setting.
5. Select **Activate Crystal Titan 4 channels embedded license**.
6. Click the **Activate** button.

The 4CH embedded licenses will be activated on the server computer. Once activated, the 4ch embedded licenses will become normal **Enterprise** license type which can be transfer to other system.

## 2.2.4.2 Offline activate 4ch embedded license

If the **Management Server** is “offline” (, which means it isn’t connected to the Internet), activate the 4ch embedded license offline by the following guide:

1 Online / Offline:  Online  Offline

Activate type:  Activate  Transfer

2  Activate Titan 4 channel embedded license

3 Step 1: Export offline pack folder: C:/Users/evonne\_tsai/Desktop

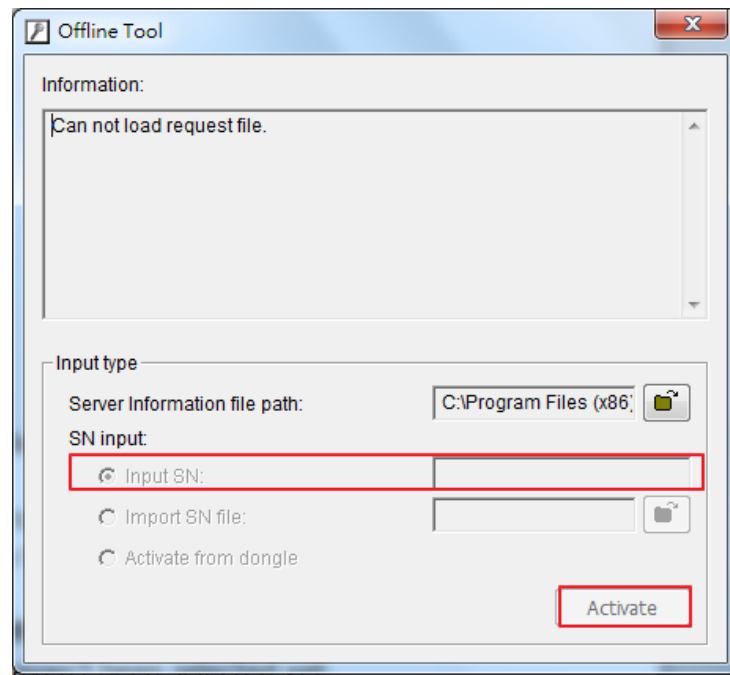
4 Export

Step 2: Copy exported offline.req to a PC connected to the Internet, and use "OffLineTool.exe" to activate the license and get the offline license file

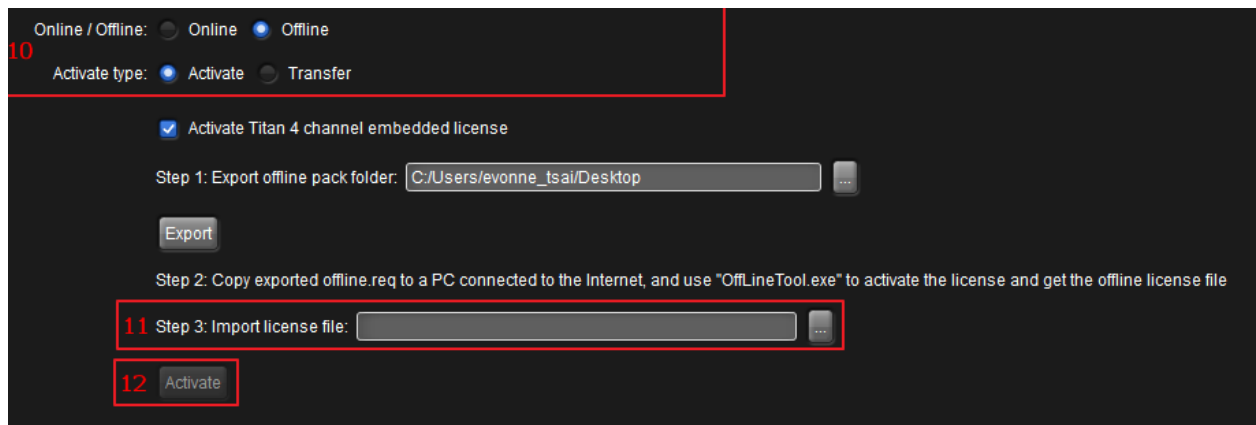
Step 3: Import license file:

Activate

1. Launch Crystal NuClient and login Management Server.
2. Open the **License** tabbed page for the **Management Server**.
3. Select **Offline** for the **Online/Offline** setting.
4. Select **Activate** for the **Activate type** setting.
5. Click the ellipsis (...) button besides the **Step 1: Export offline pack folder** field to browse for the directory to export the server information file to.
6. Click the **Export** button.  
The server information file is exported the directory assigned.
7. Copy the “offlineEmbedded.req” that is exported in **step 5** to a computer that is connected to the Internet. Run the **OfflineTool.exe** on that computer.



8. Click the **Activate** button.  
The license is activated and an offline license file is generated on that computer.
9. Copy the offline license file back to the server computer.



10. On the server computer, re-open the **License** tabbed page for the **Management Server**
11. Select **Offline** for the **Online/Offline** setting, and select **Activate** for the **Activate type** setting if they haven't been selected yet.
12. Click the ellipsis (...) button besides the **Step 3: Import license file** field to browse for the offline license file on the server computer.

13. Click the **Activate** button. The license will be activated on the server computer. After activate licenses, your settings are done.

The 4CH embedded licenses will be activated on the server.

Once activated, the 4ch embedded licenses will become normal **Enterprise** license type which can be transfer to other system.

## 2.2.5 Transfer 4ch Embedded License (Optional)

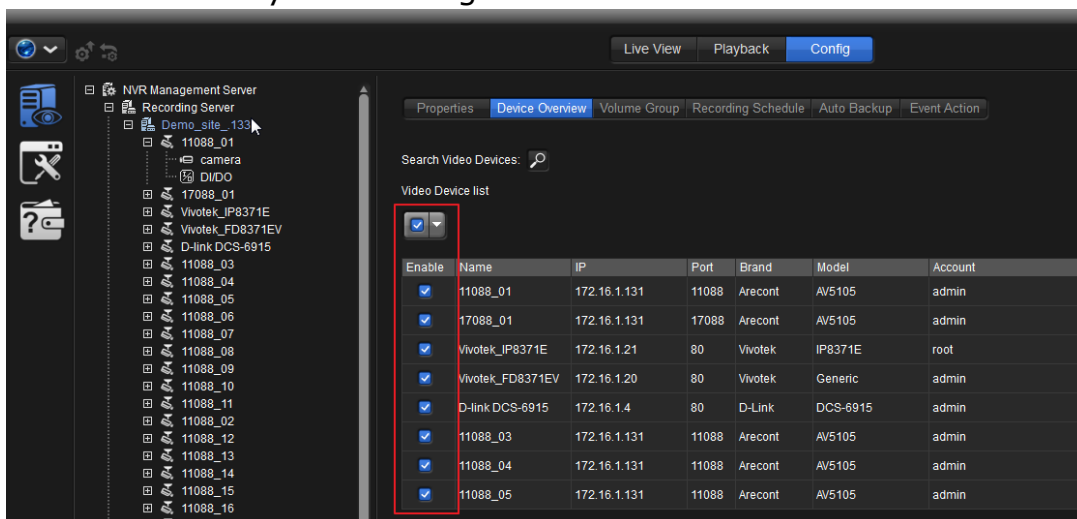
On Crystal Titan v2.x, all licenses are collected on Management Server, so if the Crystal Titan doesn't have Management Server service, the licenses should be transferred to Management Server.

The transfer process is the same as normal license transfer process. [Online license transfer](#) and [offline license transfer](#) are available.

### 2.2.5.1 Disable Devices Before Transfer License

Please disable devices on device overview page before transfer license to release license to available license type.

1. Launch Crystal NuClient and login Management Server.
2. Go to Recording Server -> Device Overview page.
3. Disable devices by unchecking the video devices.





## 2.2.5.2 Online License Transfer

If the Management Server is “online” (, which means it is connected to the Internet), transfer the by an online manner by the following guide:

1. Launch Crystal NuClient and login Management Server.
2. Open the **License** tabbed page for the **Management Server**
3. Select **Online** for the **Online/Offline** setting.
4. Select **Transfer** for the **Activate type** setting.
5. Click the **Transfer** button, then the license will be transferred.

## 2.2.5.3 Offline License Transfer

If the Management Server is “offline” (, which means it isn’t connected to the Internet), transfer the license to other computer with an offline manner by the following guide:

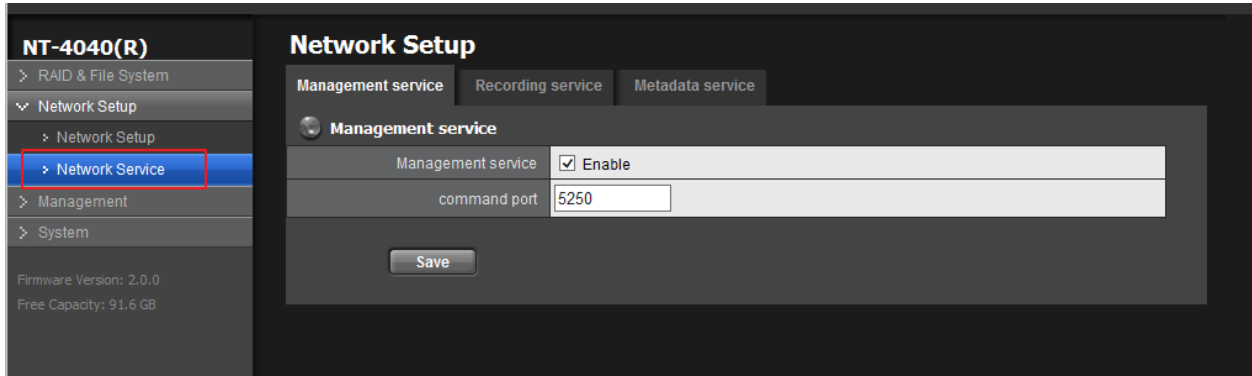
1. Launch Crystal NuClient and login Management Server.
2. Open the **License** tabbed page for the **Management Server**.
3. Select **Offline** for the **Online/Offline** setting.
4. Select **Transfer** for the **Activate type** setting.
5. Click the **Transfer** button.
6. Save the request file that is generated.
7. Copy the request file generated in **step 5** to some other computer that is connected to the internet.
8. Run the **Offline Tool.exe** on the computer.
9. The **OfflineTool** launches.
10. Click the serial number and click the **Transfer** button.

After transfer license, the 4ch embedded license can be released to be activated on other Management servers.

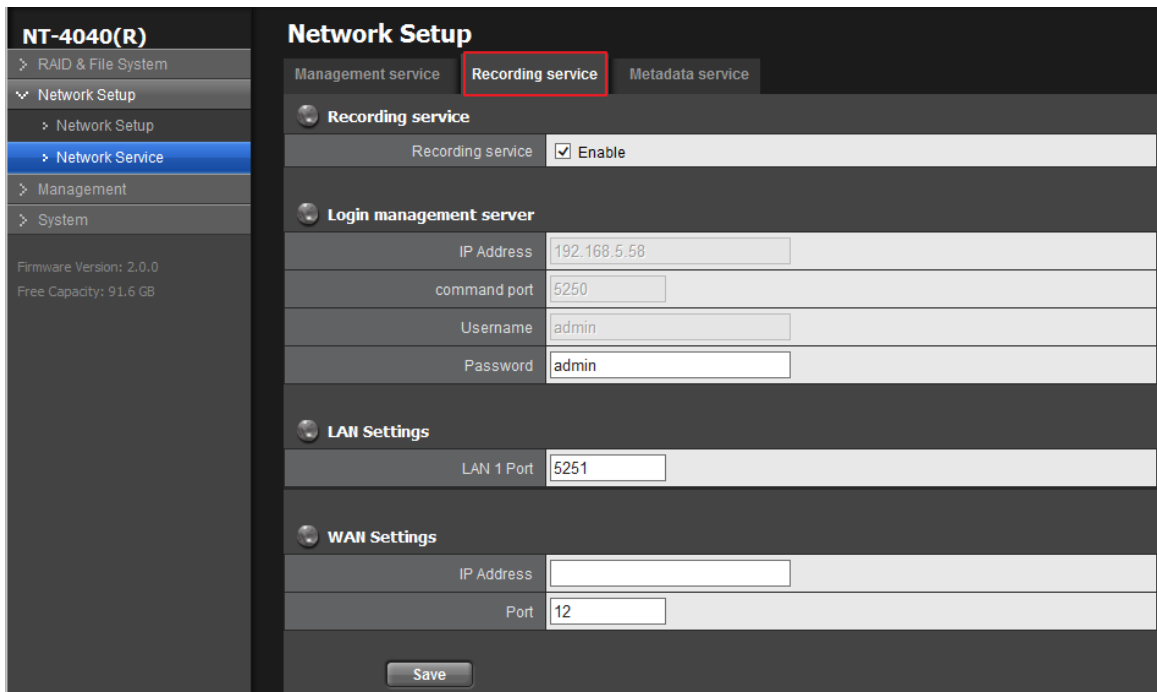
## 2.2.6 Enable Necessary Service

Until now, this Crystal Titan plays the role of Management Server. Now we can disable Management Server service, and enable Recording Server or Metadata Server service as you need.

1. Go to Web hardware settings page -> Network service



2. Disable Management Server Service
3. Enable Recording or Metadata Service as you need on each page.
4. Assign the server to remote Management Server by filling in remote Management Server IP, port, username and password.
5. Fill in LAN port for the Recording Server.



**If this Crystal Titan will be Metadata Server, the upgrade process is done.** You can start to set up the system.

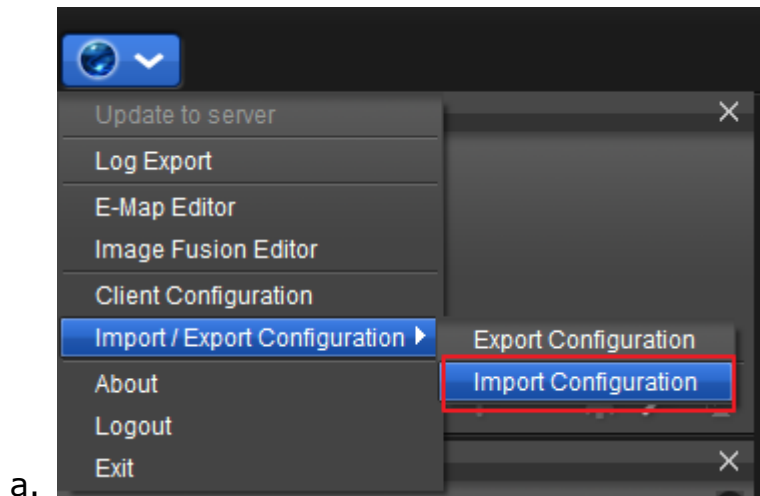
**If This Crystal Titan has enabled Recording Server services and assigned to Management Server:**

## 2.2.7 Import Camera Config to Remote Management

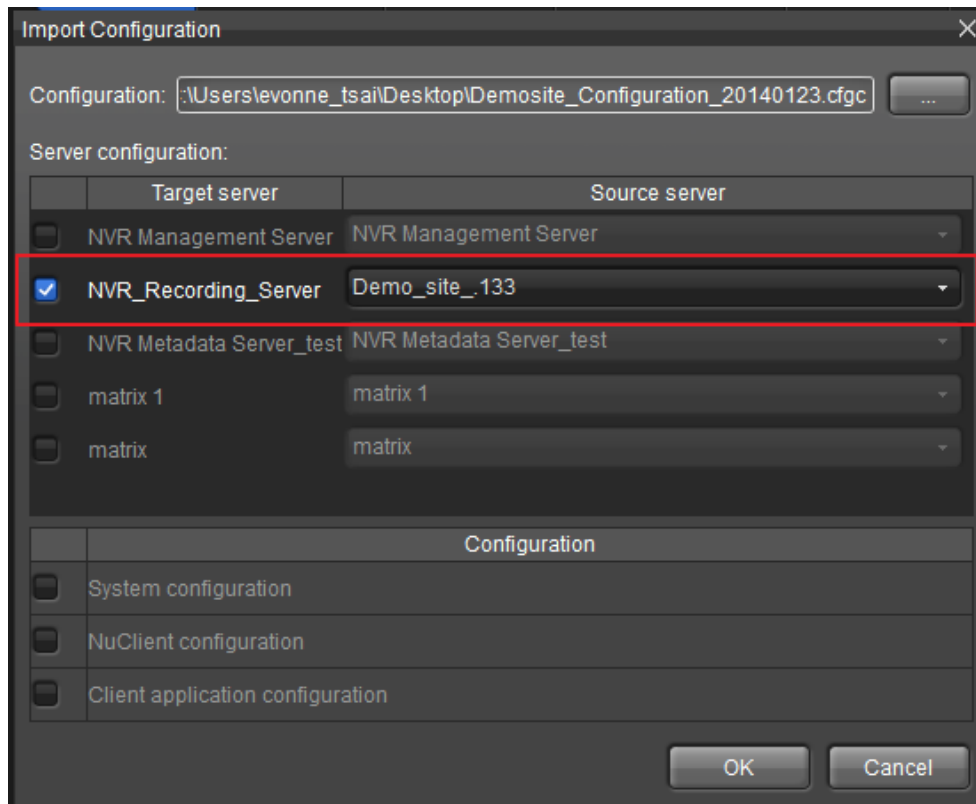
### Server

If this Crystal Titan will be Recording Server, and you want to remain camera settings from previous Crystal Titan, the next step is to import camera configuration.

1. Login the remote Management Server by launching NuClient, and filling in the IP and username/ password.
2. Go to "Global" -> Import/Export Configuration -> Import Configuration



3. On import configuration page, load the configuration files.



4. **Only** choose the recording server configuration, and assign the corresponding Recording Server to apply the settings.

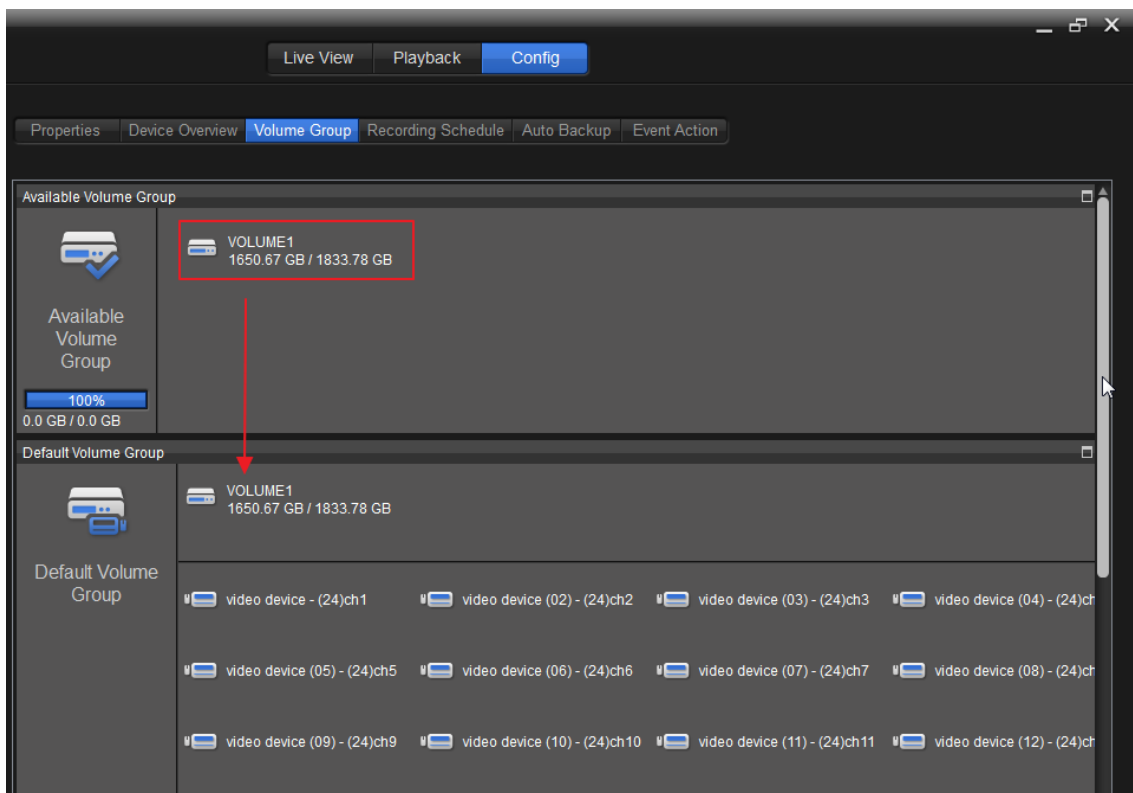
5. Click on "OK" to load to configurations to system.

6. Check the configuration including licenses, camera settings, schedule, role and user group to make sure the system can operate correctly.

## 2.2.8 Set up Volume Group

Video from Titan v1.x will be inherited to Crystal Titan v2.x, but user needs to assign volumes to default volume group to start recording process.

Go to Recording Server -> Volume Group setting, and then drag and drop all volumes from available volume group to default volume group.



Please check the configuration including licenses, camera settings, schedule, role, and user group to make sure the system can operate correctly.