Grandstream Networks, Inc.

Wavestore Video Recorder System Configuration Guide
Surveillance IP cameras & IP video Encoders/Decoders

Contents

INTRODUCTION

The purpose of this document is to guide you to configure/monitor Grandstream IP cameras & IP Video Encoders/Decoders using Wavestore server.

This guide is applicable to Wavestore version 5.18.876 and higher and to the following Grandstream IP cameras (GXV3651_FHD, GXV3662, GXV3615WP_HD with firmware 1.0.1.71 or higher; GXV3615, GXV3611_HD, GXV3611_LL, GXV3601, GXV3601_HD, GXV3601_LL with firmware 1.0.4.38 or higher) and IP Video Encoders/Decoders (GXV3501 with firmware 1.0.4.38, GXV3504 with firmware 1.0.4.39 or higher; GXV3500 with firmware 1.0.1.71 or higher – Decoding functionality is available on GXV3500 only)

Be aware that different firmware revisions may have different web interface formats and functionality.

ACCESS WAVESTORE SERVER

Wavestore server can be reached from the server directly or from a different computer using "WaveView".

1. Accessing from server directly :

   a. Server : localhost
   b. User name : install
   c. Password : a
   d. Connect to server group : Keep it checked
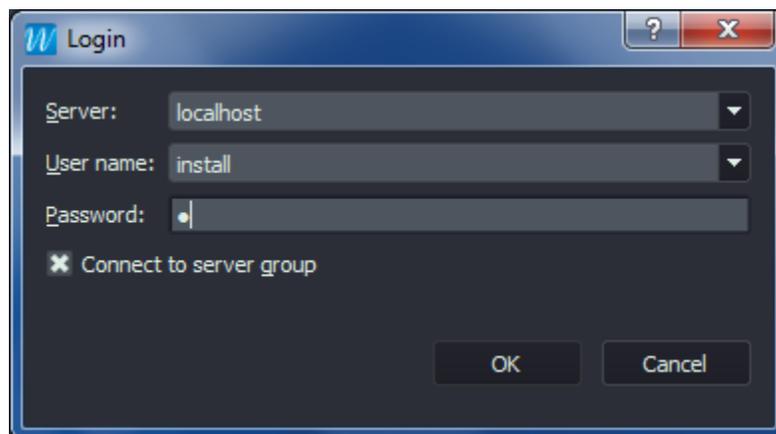
- Figure 1: Login window (Wavestore server) -

2. Accessing from a different computer using "WaveView" :

   a. Server : IP address of your Wavestore server (i.e. 192.168.50.3)
   b. User name : install
   c. Password : a
   d. Connect to server group : Keep it checked
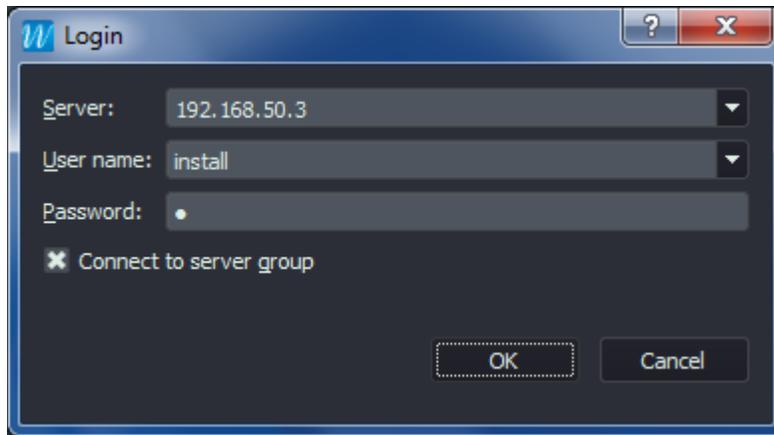
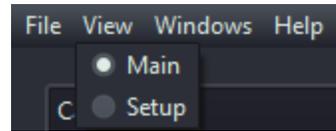- **Figure 2: Login window (WaveView)** -

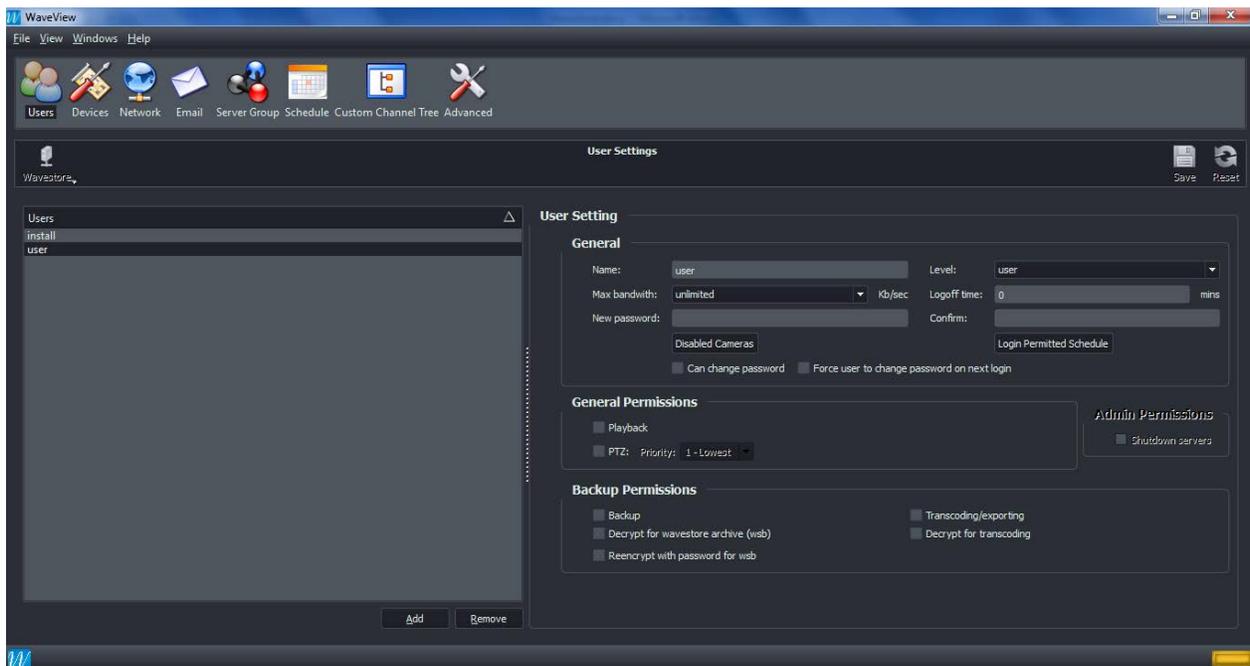3. Once successfully logged in, the main screen will be displayed as shown in figure 3.
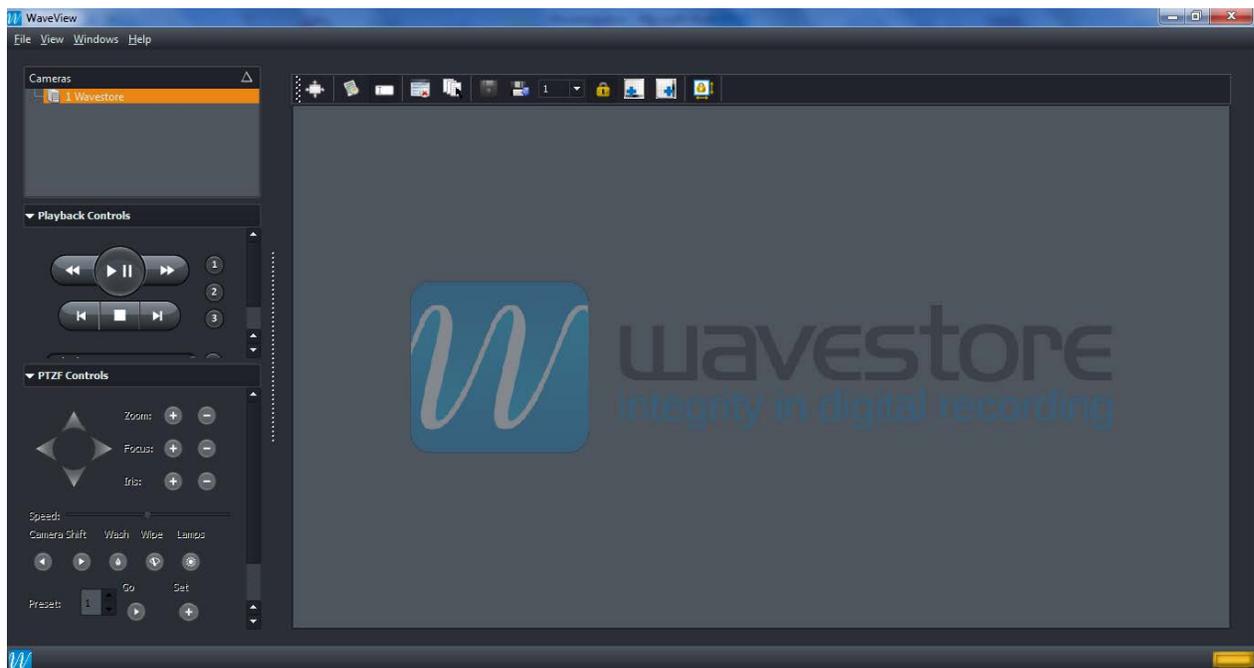
- **Figure 3: Wavestore main screen** -

ADDING IP CAMERAS AND/OR IP VIDEO ENCODERS/DECODERS

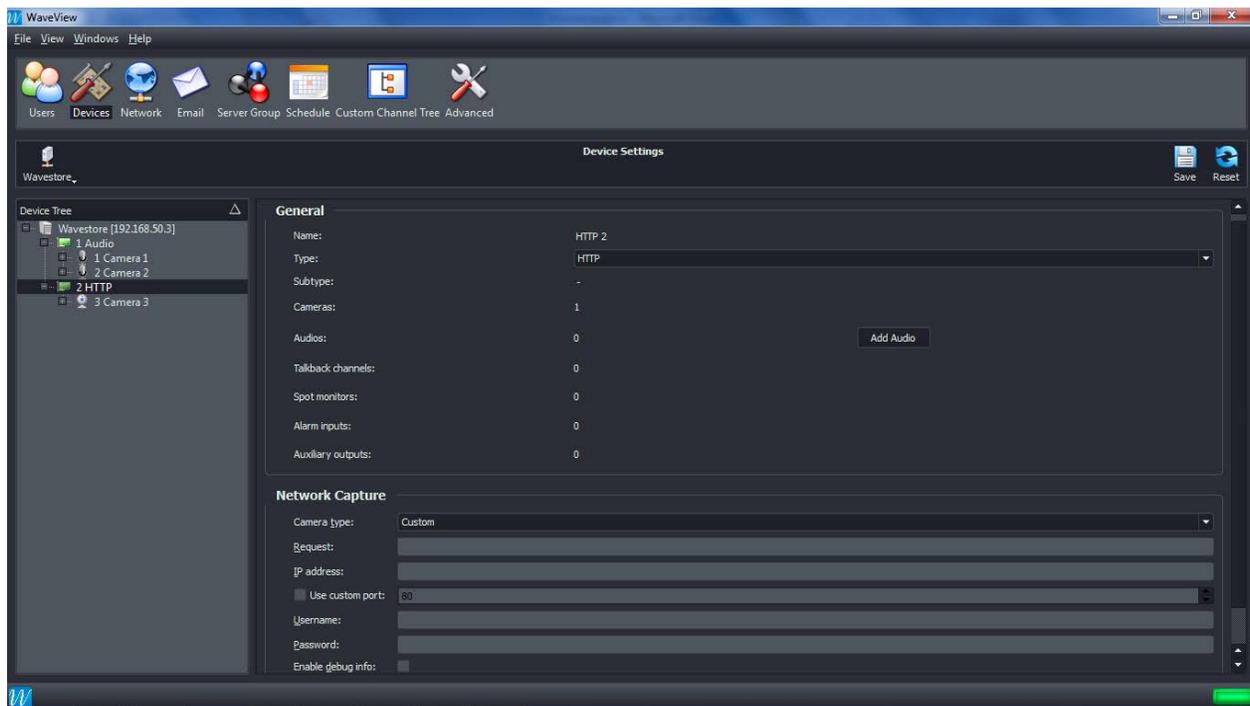1. Enter to "Setup" mode, from **View** > **Setup**

Setup screen will be displayed as shown in figure 4.

- Figure 4: Wavestore Setup screen -

2. Click on "**Devices**" in the top bar
3. In the new window, click on "**Add IP Capture**" (Button in right bottom of the page)
4. Device settings window will be displayed (Figure 5)

- Figure 5: Device settings page -

5. In **General** section; Select **Type** to use from the list

   Notes:
   RTSP can be used when configuring the cameras to use H.264 or MJPEG
   HTTP can only be used when configuring the camera to use MJPEG.
   When using HTTP, Audio cannot be used.

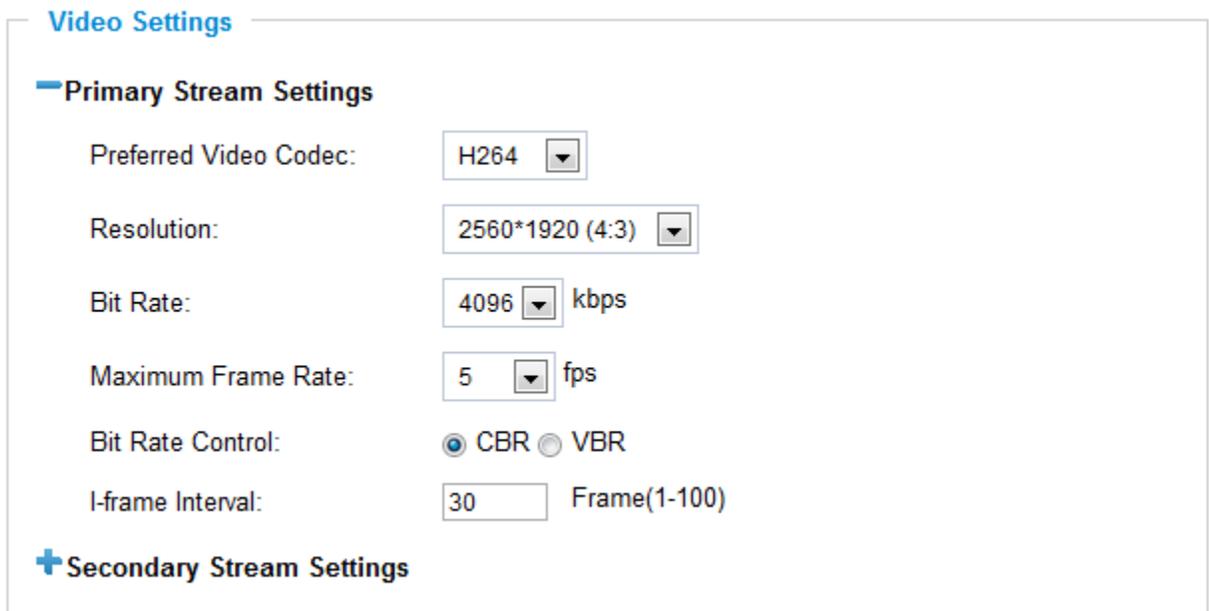6. In **Network Capture** section, enter the following :

   a. **Camera Type** : Select **Grandstream** from the list (when using RTSP type)
      If using HTTP, you will need to select **Custom** *(Please refer to example 2)*

   b. **Request** : This field will change automatically to **<B>/0**
      This will use TCP as transport protocol, if you want to use UDP, change this request to
      <BU>/0 or **<UB>/0**

   c. **IP address** : Enter the IP address of your Grandstream IP camera
      (Example: 192.168.50.143)

   d. **Use custom port** : This field will change automatically to 554 when using RTSP or to 80 when
      using HTTP (By default, this field is unchecked)
      If your Grandstream IP camera is configured to use a different port instead, you will need to check
      this field and specify the port used.

   e. **Username** : Enter Grandstream IP camera's username (Default is *admin*)

f. **Password** : Enter Grandstream IP camera's password (Default is *admin*)

Example 1: Adding Grandstream IP camera using RTSP

1- Preparing the IP camera

a. Login to your IP camera web interface.
http://<IP_address_of_your_camera> (Login : admin ; Password : admin (by default))

b. Under "Video & Audio" adjust your settings for Primary and/or secondary stream.
In this example, we will use H.264 (MJPEG can also be used, following same steps)
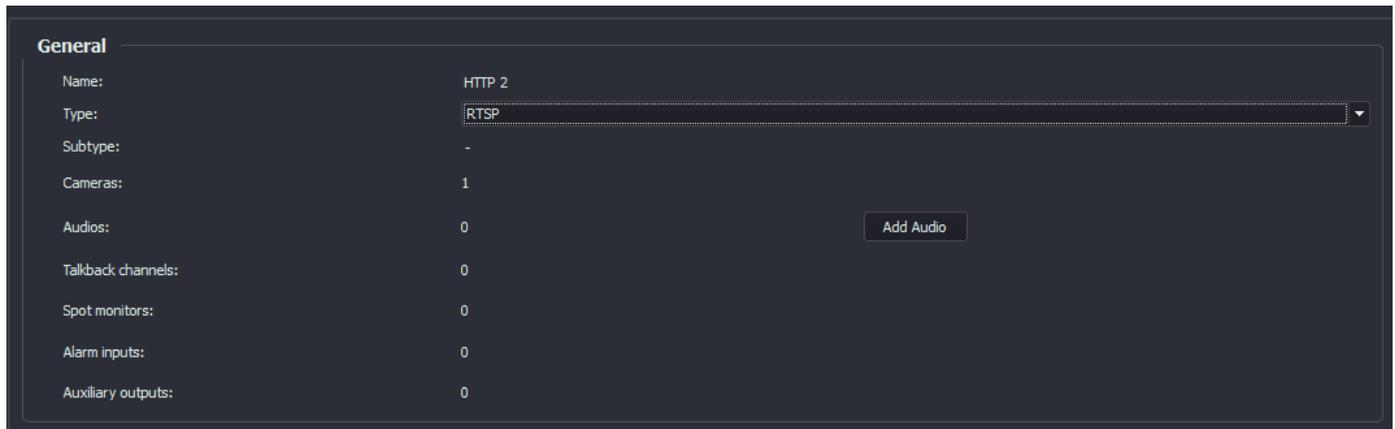

- Figure 6: Video Settings (Primary Stream Settings) -

c. Save to apply your settings.

2- Configuring your Wavestore server

a. Starting from step 5 (described above), select **RTSP** in *Type* list under ***General section***

- **Figure 7: General section, Device settings -**

    b.   In **Network Capture** section, configure the following :

        i.   <u>**Camera Type**</u> : Select "**Grandstream**"
            By selecting Grandstream, Wavestore will stream video from Primary Stream.

            When using Grandstream IP Video Encoder GXV3504; **Camera Type** can be
            Grandstream : First channel/port
            Grandstream ch2 : Second channel/port
            Grandstream ch3 : Third channel/port
            Grandstream ch4 : Fourth channel/port

        ii. <u>**Request**</u> : This field will change automatically depending on which channel you selected previously.
            By default, the streaming will be over TCP, if you need to use UDP, add **U** in the request as follow : **<UB>/0** or **<BU>/0** (when using first channel)

            <u>**Notes :**</u> Each Grandstream IP camera has 2 video streams, Primary and secondary stream.
            To stream from the Secondary stream, you will need to change the request to **/4**
            (For example : **<B>/4** or **<UB>/4**)
            /0 is Primary stream
   **/4** is Secondary stream

        iii. <u>**IP Address**</u> : Enter the IP address of your IP camera or IP Video Encoder (for example : 192.168.50.143)

        iv. <u>**Use Custom Port**</u> : By default, this option is not checked and the field will be configured automatically to use default RTSP port 554. If you are using a different port on your IP camera, you need to check this option and specify the port used.

        v. <u>**Username**</u> : Enter "**admin**"

vi. **Password** : Enter "**admin**" (if using default password)
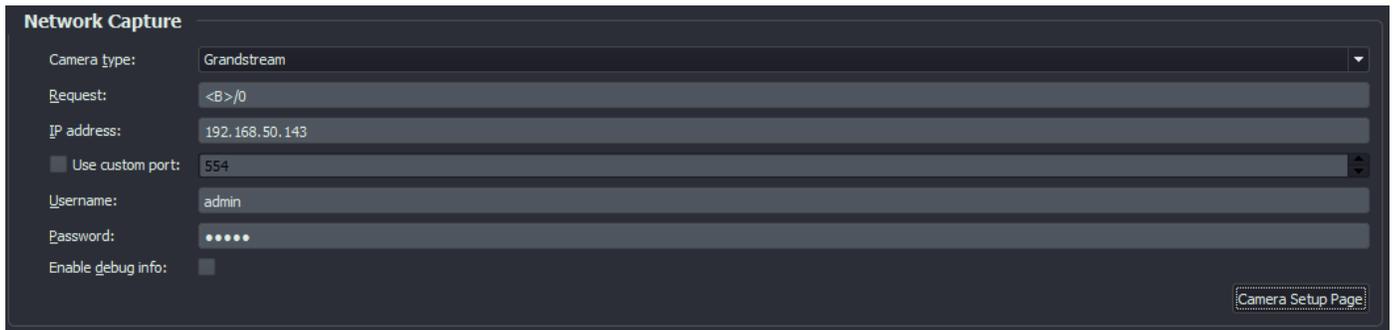
Network Capture

Camera type:	Grandstream
Request:	<B>/0
IP address:	192.168.50.143
☐ Use custom port:	554
Username:	admin
Password:	•••••
Enable debug info:	☐

Camera Setup Page

- Figure 8: Network Capture section, Device settings -

c. Press **Save** button in the top right corner of the page to save your settings.

d. Once you save the settings, the camera will be added to **Device Tree** as shown in figure 9

Device Tree

- Wavestore [192.168.50.3]
  - 1 Audio
    - 1 Camera 1
    - 2 Camera 2
  - 2 RTSP
    - 3 Camera 3
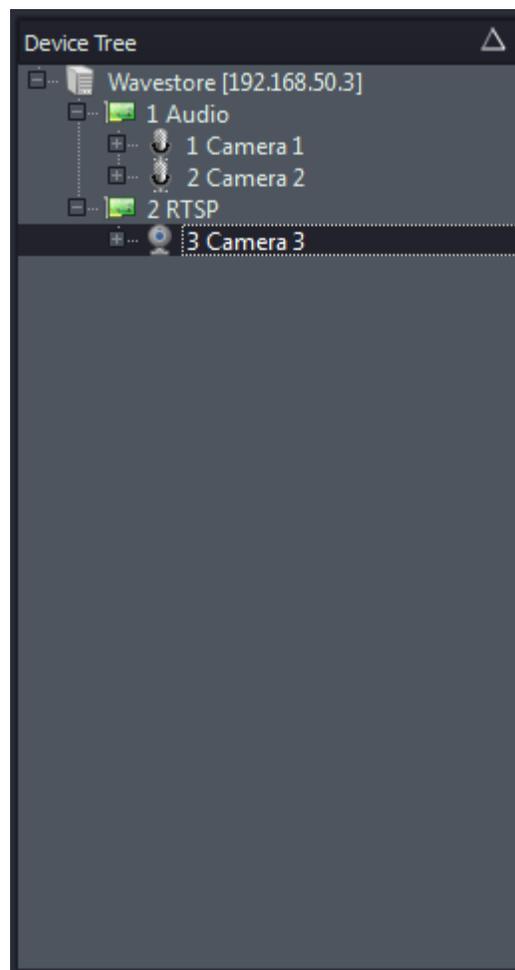
- Figure 9: Device Tree -

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e. In **Device Tree** panel, click on your IP camera (camera 3 in this example)
f. In **General** section, enable the added IP camera by Checking **_Enabled_** option to be able to display this IP camera stream on the main screen. (By default, this option is unchecked)
g. You can rename your camera using **_Name_** field (for example : GXV3651_FHD)
h. Press **Save** button in the top right corner of the page to save your settings
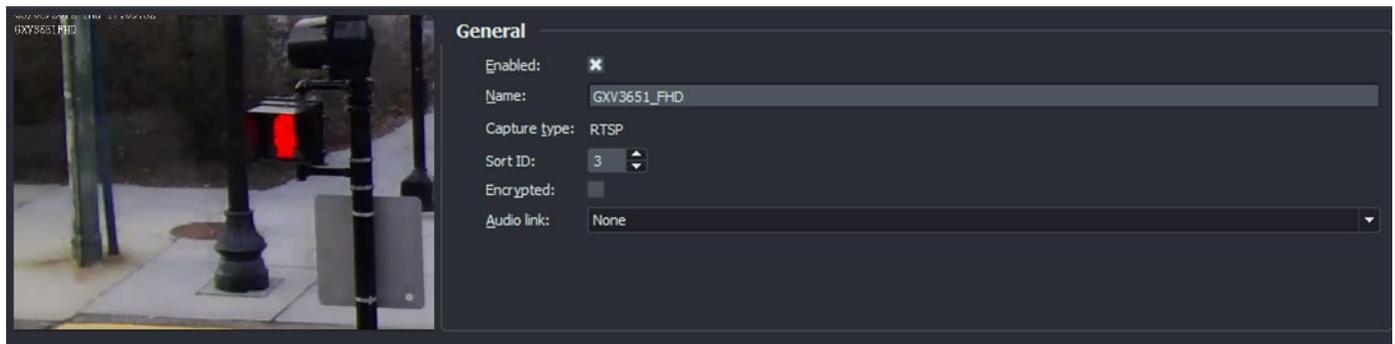
- Figure 10: Enabling IP camera, General section -

Example 2: Adding Grandstream IP camera using HTTP

1- Preparing the IP camera

a. Login to your IP camera web interface.
http://<IP_address_of_your_camera> (Login : admin ; Password : admin (by default))

b. Under "Video & Audio" adjust your settings for Primary and/or secondary stream.
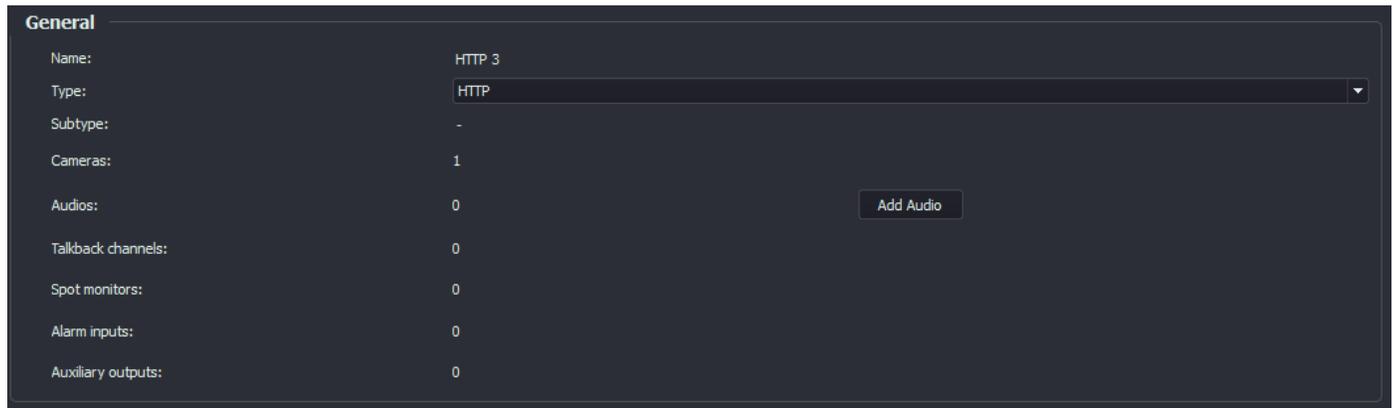In this example, we can use MJPEG **only**
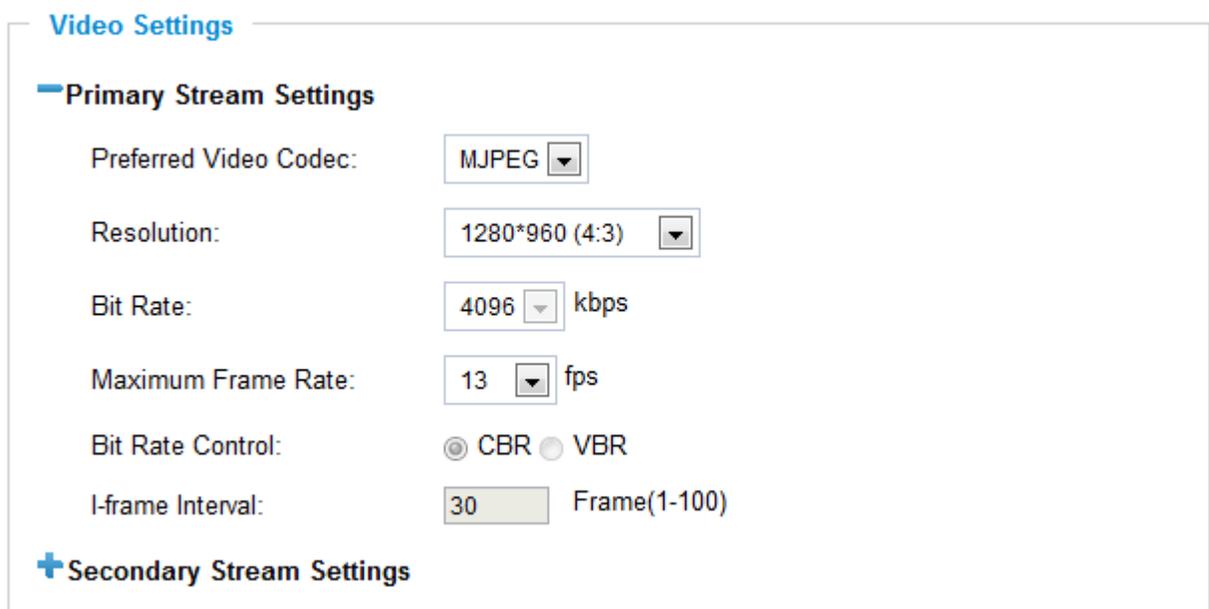
- Figure 11: Video Settings (Primary Stream Settings) -

c. Save to apply your settings.

2- Configuring your Wavestore server

a. Starting from step 5 (described above), select **HTTP** in *Type* list under *General section*

- Figure 12: General section, Device settings -

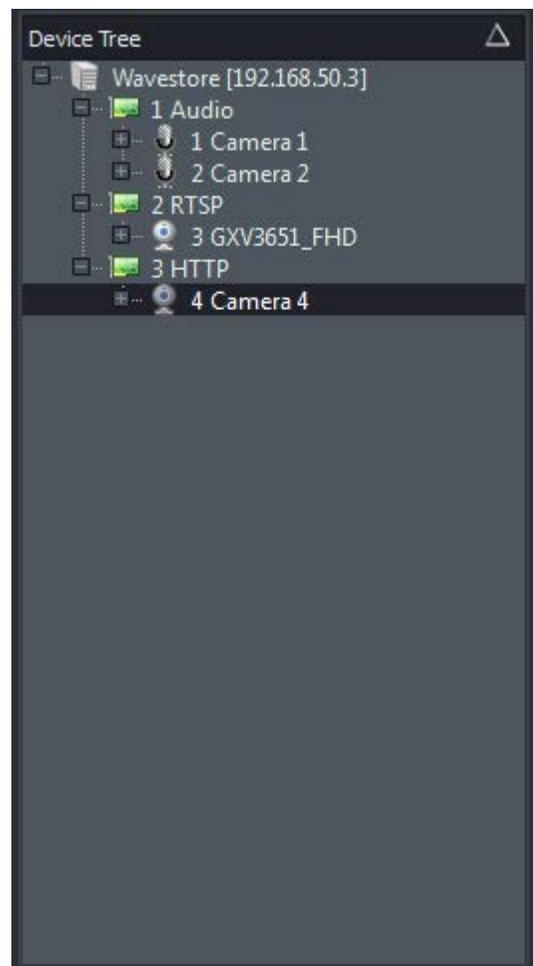b. In *Network Capture* section, configure the following :

i. **Camera Type** : Select "**Custom**"

ii. **Request** : In this field you will need to enter the following :

   /goform/stream?cmd=get&channel=0
   Channel=0 is for Primary stream, for Secondary stream use channel=4

iii. **IP Address** : Enter the IP address of your IP camera or IP Video Encoder (for example : 192.168.50.143)

iv. **Use Custom Port** : By default, this option is not checked and the field will be configured automatically to use default HTTP port 80. If you are using a different port on your IP camera, you need to check this option and specify the port used.

v. **Username** : Enter "**admin**"

vi. **Password** : Enter "**admin**" (if using default password)
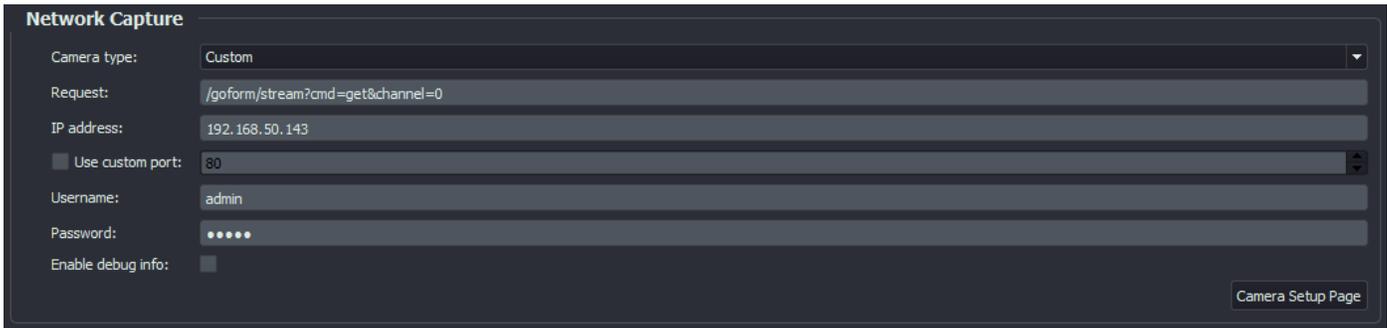
**- Figure 13: Network Capture section, Device settings -**

c. Press **Save** button in the top right corner of the page to save your settings.

d. Once you save the settings, the camera will be added to **Device Tree** as shown in figure 14

- Figure 14: Device Tree -

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www.grandstream.com   **IP cameras and IP Video Encoders/Decoders**   *Last Update : 04/2013*

e. In **Device Tree** panel, click on your IP camera (camera 4 in this example)
f. In **General** section, enable the added IP camera by Checking ***Enabled*** option to be able to display this IP camera stream on the main screen. (By default, this option is unchecked)
g. You can rename your camera using ***Name*** field (for example : GXV3651_FHD_HTTP)
h. Press **Save** button in the top right corner of the page to save your settings
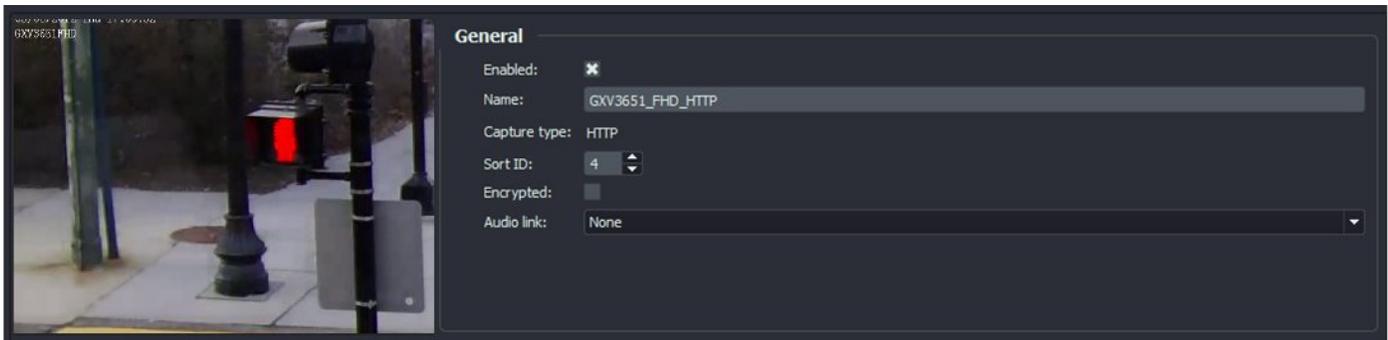
- Figure 15: Enabling IP camera, General section -

ADDING AUDIO TO IP CAMERAS AND/OR IP VIDEO ENCODERS/DECODERS (USING RTSP ONLY)

1- Enabling Audio on your IP camera

a. Login to your IP camera web interface.
   http://<IP_address_of_your_camera> (Login : admin ; Password : admin (by default))

b. In "Configuration -> Video & Audio" page, enable Audio under "Audio Settings" section.

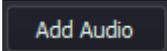c. Select "**PCMU**" as "***Preferred Audio Codec***" and press "**Save**" button.
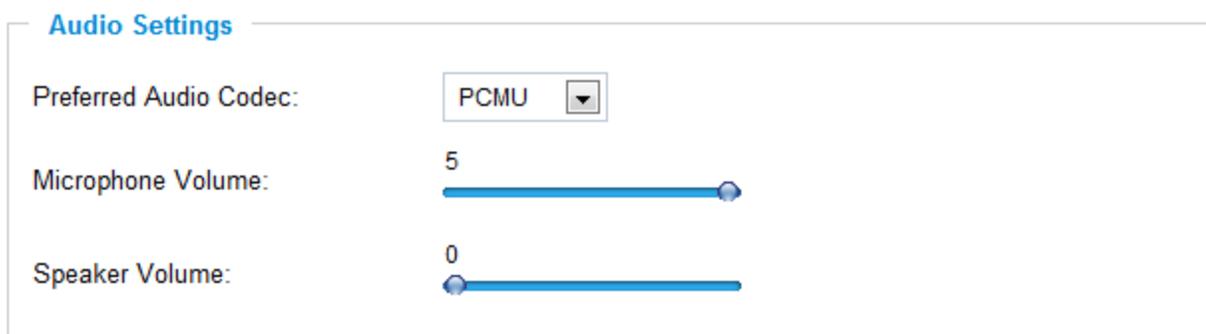
- Figure 16: IP camera Audio Settings -

2- Add Audio channel for your IP camera on Wavestore

    a. Click on **View** > **setup** > **Devices** and go to the Capture of your Camera

    b. Then Click on **RTSP** (Device Tree panel) and click on **Add Audio** button

    c. Then you will need to enable the **Audio** and then click on **Save**
       (You can also rename the audio channel using **Name** field as shown in figure 17, in this example, we renamed audio channel to GXV3651_FHD_Audio

- **Figure 17: Enabling Audio channel -**

    d. Then click on the camera name (for example: GXV3651_FHD) in **Device Tree** panel and click on **Audio link** and choose the Audio channel you enabled (GXV3651_FHD_Audio in our example) and click on **Save**.
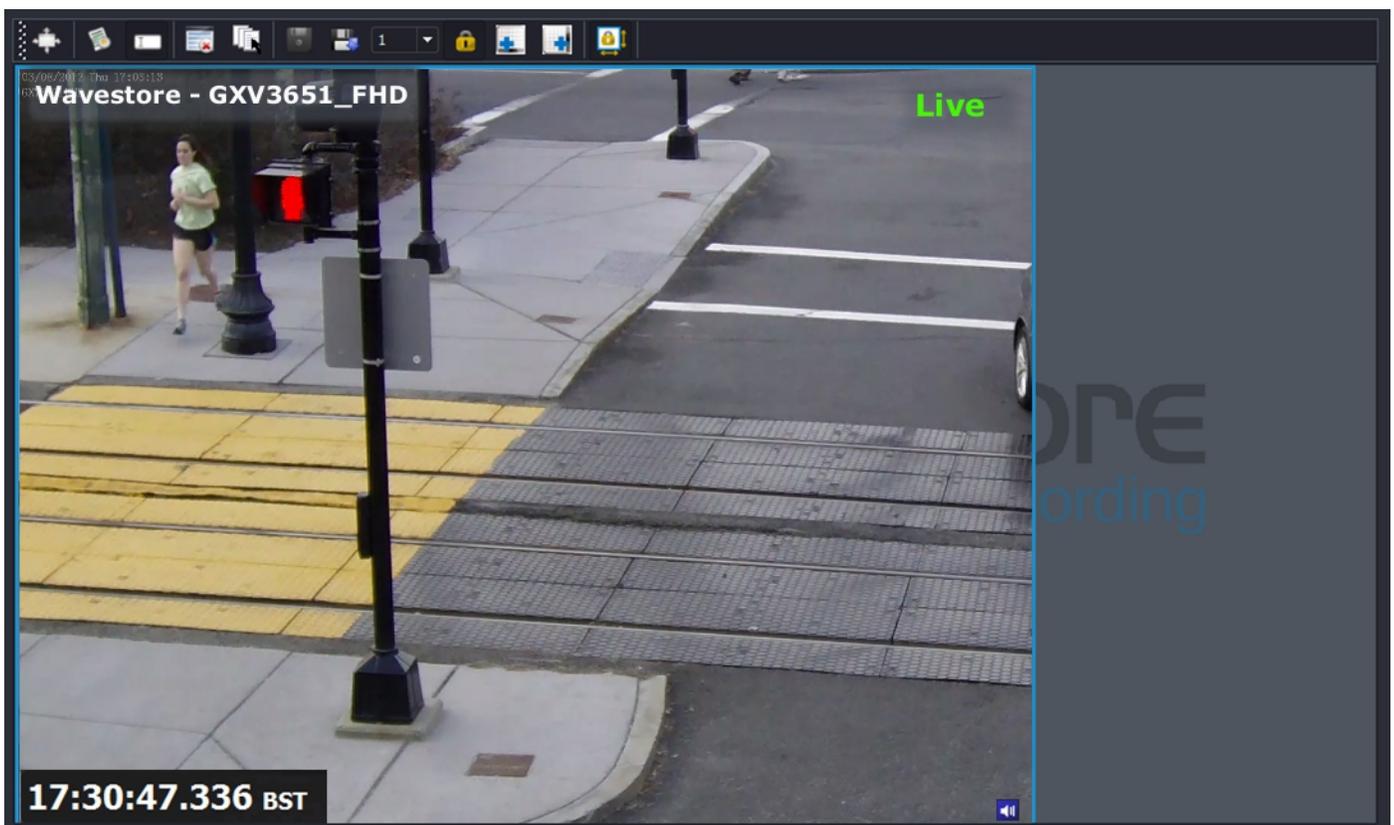
- **Figure 18: Selecting Audio channel -**

## MONITORING IP CAMERAS ON WAVESTORE
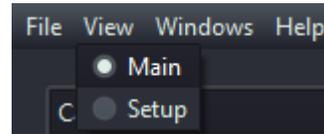
1- After completing the above steps, click on **View** > **Main**

2- In **Device Tree** panel, double-click or drag and drop the camera you want to display on the main screen. Video stream will be displayed on the main screen including Audio if configured.
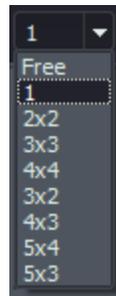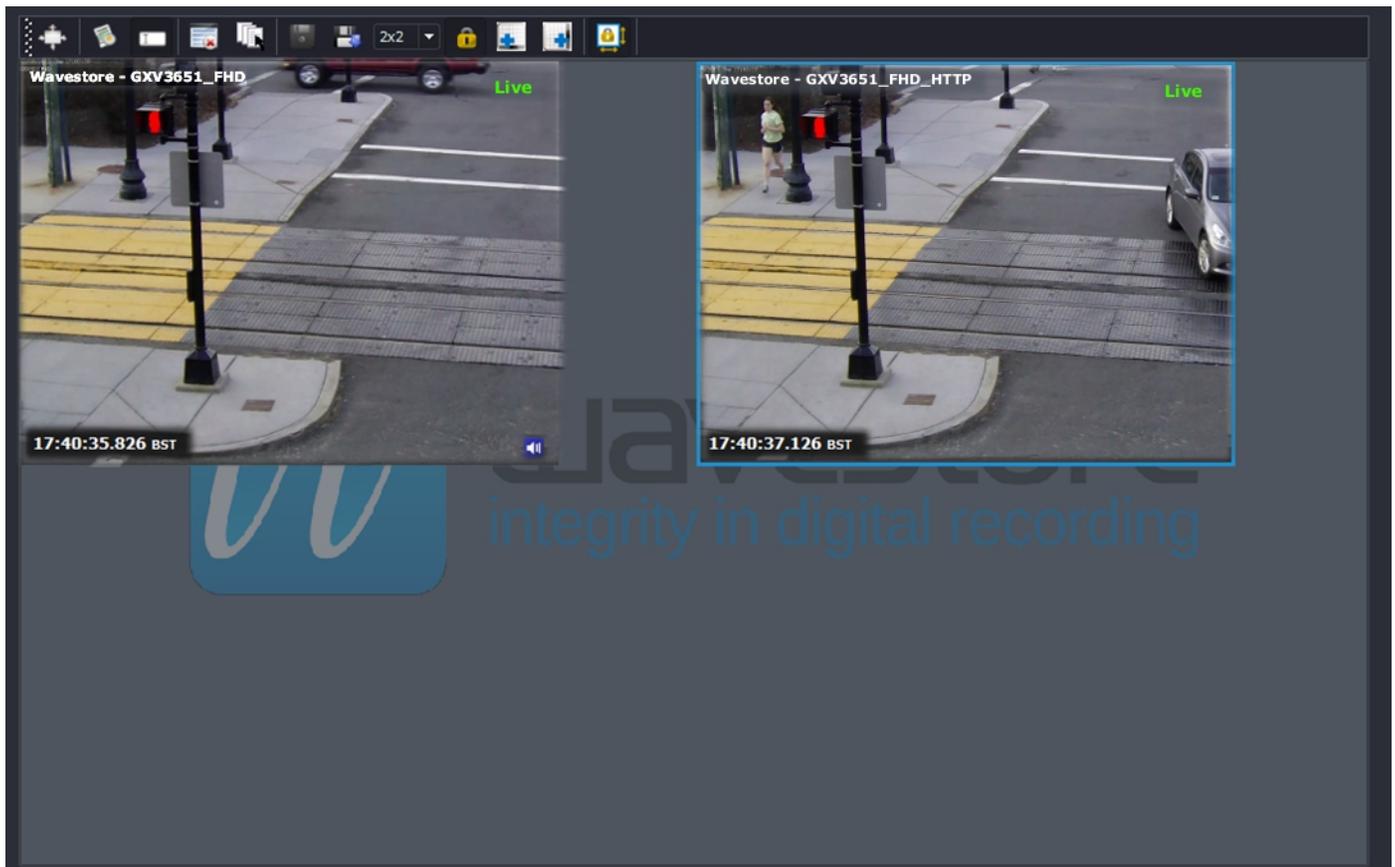

- Figure 18: Wavestore View screen (Layout 1) -

3- The layout display can be adjusted to display more streams at same time, using **Layouts** list in the *Toolbar*
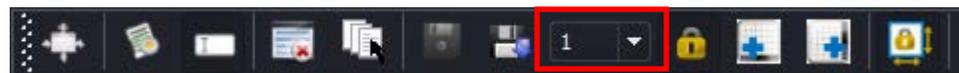
Available layouts are:

For example, if you want to display to IP cameras at same time, choose Layout 2x2 and add your cameras from **Device Tree** panel.

- Figure 19: Wavestore View screen (Layout 2x2) -

References:

For more information about the Grandstream IP Cameras and other products capabilities, please visit http://www.grandstream.com or contact us at esupport.grandstream.com

For more information about Wavestore server please refer to http://www.wavestore.com