



# Ezserver Signage User Guide

[www.ezhometech.com](http://www.ezhometech.com)

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# 1. Introduction

Ezserver is the **FASTEST** and **STABLE** video server to **NON-STOP** restream live channels to players.

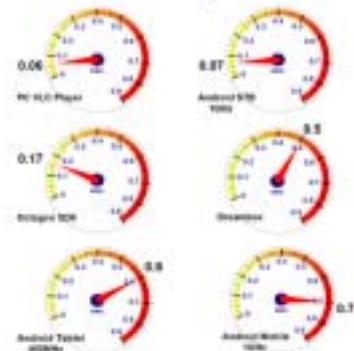
It receives live video from UDP, HTTP, RTMP and HLS links, *ecording* and *streaming* them into players on PC, Android, iOS, STB and Smart TV. EZhometech also provides Channel/Movie/User Management, Security, Statistics and REST API with Ezserver. Additional, Ezserver can support a lot of famous players on PC, Google android app, Apple app, STB and Smart TV. Specially, we are proud to provide the fastest video response to let our customers provide the best video streaming.

## Ezserver version 2.0

Ezserver is software video server for IPTV and VOD market.

- |                              |   |
|------------------------------|---|
| ✓ Time Delay TV              | ✓ REST API for Middleware Integration                     |
| ✓ Channel on demand          | ✓ <a href="#">VSPanel</a> for content and user management |
| ✓ Time Shift TV              | ✓ Reseller panel  |
| ✓ Catch up TV                | ✓ Fastest Channel Zap Time                                |
| ✓ Security Encrypted HLS     | ✓ MAC Address Authorization                               |
| ✓ Multicast MPTS/SPTS Input  | ✓ Channel / Movie Auto-Reconnection                       |
| ✓ Unlimited User connections | ✓ Auto Alert for Longer Connections                       |

### Channel Zap Time



## 2. System requirement

### Hardware requirement

#### **Minimum requirement**

- Processor: Dual-Core
- RAM: 8GB
- Network Interface: 1G BASE
- **Hard Disk Space: 150MB**

#### **800 connection requirement**

- Processor: Quad-Core (Intel i7 4970)
- RAM: 16GB
- Network Interface: 1G BASE
- **Hard Disk Space: 150MB**

#### **4500 connection requirement**

- Processor: 2x Intel Six-Core Xeon E5-2620v3
- RAM: 128GB
- Network Interface: Upload 10G BASE / Download 10G BASE
- **Hard Disk Space: 150MB**

### Software requirement

#### **Windows platform**

- 32-bit / 64-bit
- Windows XP / 7 / 10
- Windows server 2003, 2008, 2013 (recommended)

### 3. System installation

#### Windows platform

- **unzip ezserver\_signage zip**
- **go to ezserver\_signage**
- **double click Ezserver12.exe**
- **send serial\_number.txt to sales@ezhometech.com for license activation.**
- **click Action: Open Panel to open Ezserver Digital Signage panel in a browser.**



## 4. Digital Signage Panel

### Introduction

Digital Signage Panel is based on Ezserver API to provide managements for administrators, It supports Internet browser such as *Internet Explore, Chrome, Firefox* or *Safari* to login by the below URL path.

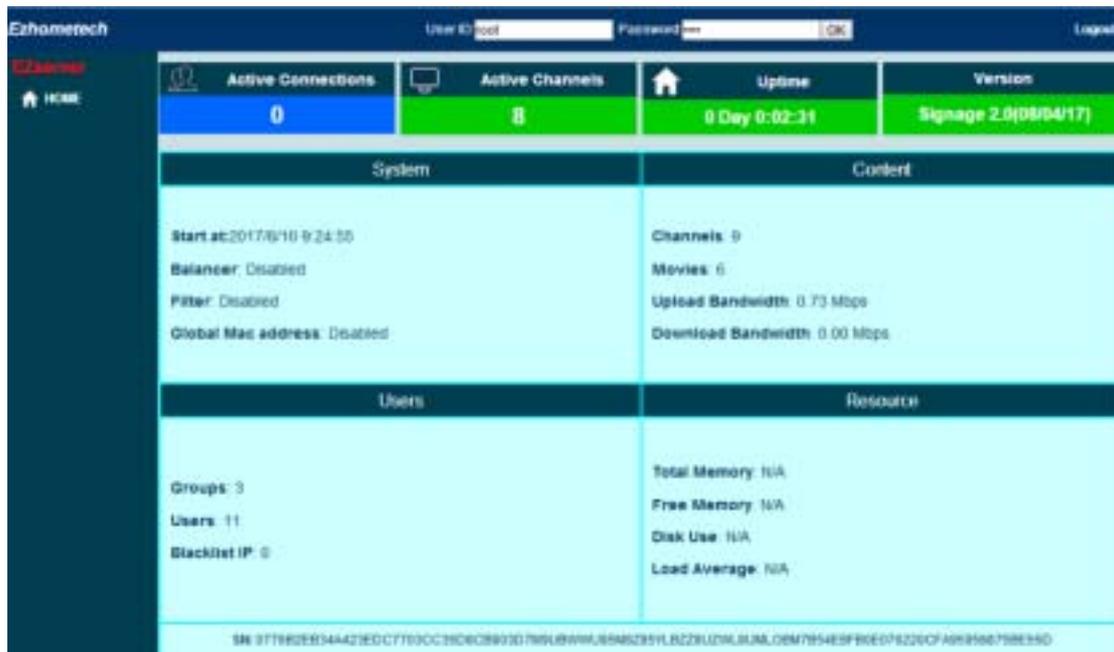
[http://Ezserver\\_IP:18000/admin/index.htm](http://Ezserver_IP:18000/admin/index.htm)

The screenshot displays the Ezhometech administration interface. At the top, there are fields for 'User ID' (set to 'root') and 'Password', along with a 'Login' button. Below this is a navigation menu on the left with options like HOME, USER, GROUP, LAYOUT, PLAYER, CHANNEL, MOVIE, ALERT, BLACKLIST, SETTING, STATISTICS, LOG, and SHUTDOWN. The main content area is divided into four sections: 'Active Connections' (0), 'Active Channels' (8), 'Uptime' (0 Day 0:02:31), and 'Version' (Signage 2.0(08/04/17)). Below these are four panels: 'System' (Start at: 2017/6/16 9:24:55, Balancer: Disabled, Filter: Disabled, Global Mac address: Disabled), 'Content' (Channels: 9, Movies: 6, Upload Bandwidth: 0.73 Mbps, Download Bandwidth: 0.00 Mbps), 'Users' (Groups: 3, Users: 11, Blacklist IP: 0), and 'Resource' (Total Memory: N/A, Free Memory: N/A, Disk Use: N/A, Load Average: N/A). A long alphanumeric string is visible at the bottom of the interface.

Digital Signage Panel provides the below management

- Home: **System Information.**
- User: **Subscriber Management**
- Group: **Group Management**
- Layout: **Screen Layout Generation.**
- Player: **Online Player Information**
- Channel: **Channel Management**
- Movie: **Movie Management**
- Alert Player: **Alert Player Information**
- Blacklist: **Automatic blacklist management**
- Setting: **Protocol port setting**
- Statistics: **Channel Statistics**
- Shutdown: **Shutdown Ezserver**
- Log: **System Log**

Home

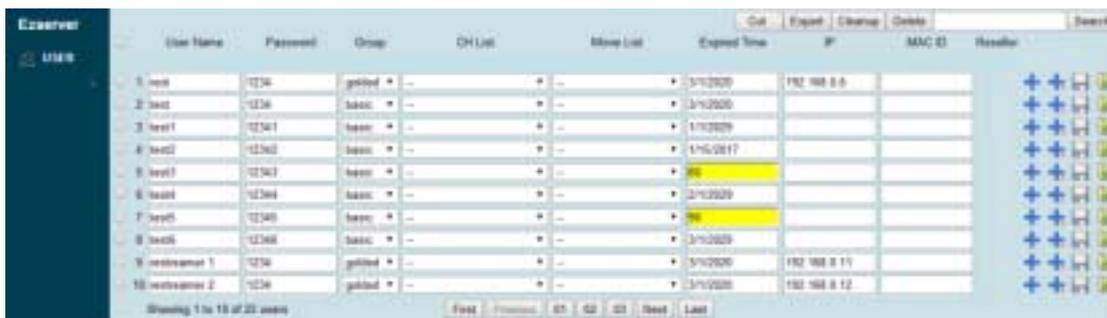


Version	• <b>Ezserver Version</b>
Start at	• <b>EZserver Starting time</b>
Uptime	• <b>Ezserver Uptime</b>
Group	• <b>Total Group No.</b>
Subscriber	• <b>Total Subscriber No.</b>
Streaming Connection	• <b>Total Active Player No.</b>
Blacklist IP	• <b>Total Blacklist No..</b>
Channels	• <b>Total Channel No.</b>
Active Channels	• <b>Total Active Channel No.</b>
Movie	• <b>Total Movie No.</b>
Upload Bandwidth	• <b>Total Upload Bandwidth</b>
Download Bandwidth	• <b>Total Download Bandwidth</b>

## User

Each user can be used by User/Password mode or Top-up Card mode. User/Password mode has at least 4 fields that include user name, password, belonged group, expired time for Channels, Top-up Card mode has at least 3 fields that include PIN No., belonged group, expired time for Channels, and 2 more fields (Moive Paid Model, Points) for Video on Demand.

Each subscriber needs to be belonged to one group, so Ezserver Administrator has to define groups for users first.



### Menu Bar

Cut / Paste	<b>Cut / Paste checked users</b>
Export	<b>Export User List</b>
Cleanup	<b>Cleanup Expired Users</b>
Delete	<b>Delete checked users</b>
Search	<b>Search User name</b>

### Button

Add	<b>Add a new user,</b>
Add Multiple Users	<b>Create multiple users with 10-digital-no username and password.</b>
Save	<b>Save user definition.</b>
More	<b>Refer the below "User More window".</b>

### Content

User Name / PIN No.	<b>User Name is for User/Password mode, PIN No. is for Top-up Card</b>
Password	<b>Only for User/Password mode</b>
Group	<b>Defined in Group Management window</b>
CH List	<b>Create Ch list for Enigma, M3u8, XBMC, etc.</b>
Movie List	<b>Create Movie list for Enigam and M3U.</b>
Expired Time / Paid Days	<b>Date Format: MM/DD/YYYY. Ex. 12/31/2014</b> <b>Date Format: xxxx. Ex. 180 means 180 days</b>
IP	<b>Predefined allowed IP for each user.</b>
MAC ID	<b>Predefined allowed MAC Address for each user.</b>

Command	<b>Add, Save, Del, More</b>
---------	-----------------------------

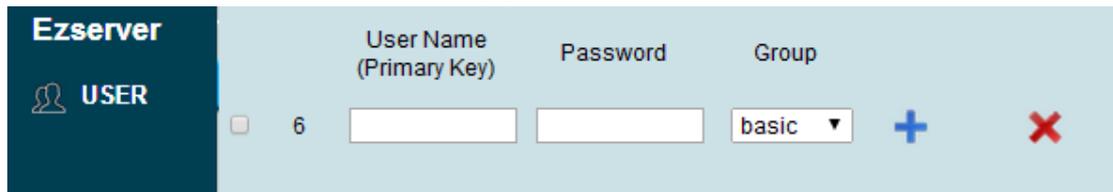
## Create new user

- Click User button and click + button.



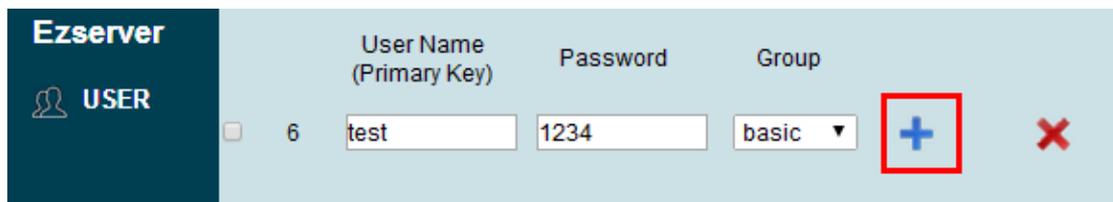
The screenshot shows the 'Ezserver' interface with a dark sidebar containing a 'USER' button. The main panel has a light blue background with two columns: 'MAC ID' and 'Reseller'. Below these columns are two empty text input fields. To the right of the 'Reseller' field, there is a blue '+' button, a blue '+' button with a small red 'x' next to it, and a floppy disk icon. The blue '+' button is highlighted with a red square.

- Panel will show the empty user fields



The screenshot shows the 'Ezserver' interface with a dark sidebar containing a 'USER' button. The main panel has a light blue background with four columns: 'User Name (Primary Key)', 'Password', 'Group', and an empty field. Below these columns are four input fields: a checkbox, the number '6', an empty text input field, another empty text input field, and a dropdown menu with 'basic' selected. To the right of the dropdown menu, there is a blue '+' button and a red 'X' button. The blue '+' button is highlighted with a red square.

- Input user id, password and etc., then click + button to save it



The screenshot shows the 'Ezserver' interface with a dark sidebar containing a 'USER' button. The main panel has a light blue background with four columns: 'User Name (Primary Key)', 'Password', 'Group', and an empty field. Below these columns are four input fields: a checkbox, the number '6', a text input field containing 'test', a text input field containing '1234', and a dropdown menu with 'basic' selected. To the right of the dropdown menu, there is a blue '+' button and a red 'X' button. The blue '+' button is highlighted with a red square.

## Max. concurrent connections

Administrator can click User button and select More icon to set user max. connections as below:

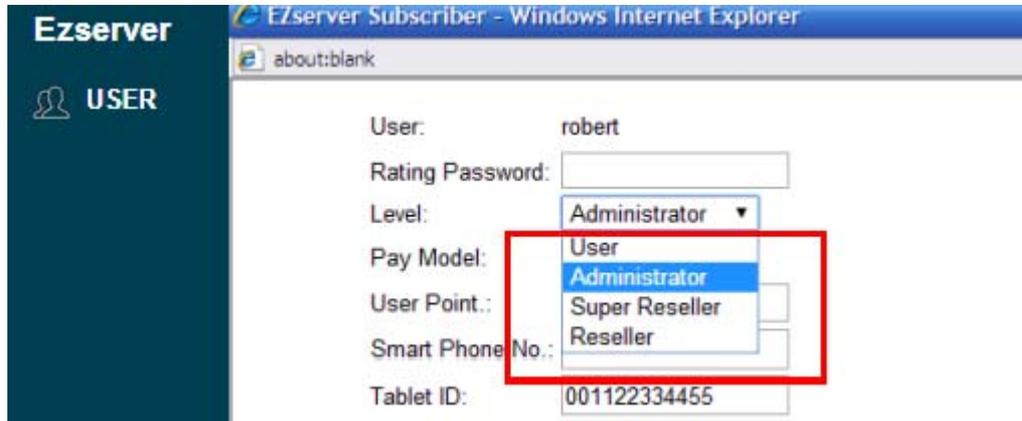
The screenshot shows a web browser window titled "EZserver Subscriber - Windows Internet Explorer" with the address bar showing "about:blank". On the left is a dark blue sidebar with the "Ezserver" logo and a "USER" button. The main content area displays a configuration form with the following fields:

User:	root
IP 2:	<input type="text" value="192.168.0.1"/>
IP 3:	<input type="text" value="192.168.0.2"/>
IP 4:	<input type="text" value="192.168.0.3"/>
IP 5:	<input type="text" value="192.168.0.4"/>
Rating Password:	<input type="text" value="marocco2"/>
Level:	<input type="text" value="Administrator"/>
Pay Model:	<input type="text" value="free"/>
Max. Connections:	<input type="text" value="1"/>
User Point:	<input type="text" value="2000.00"/>

The "Max. Connections" field is highlighted with a red rectangular box.

## User level

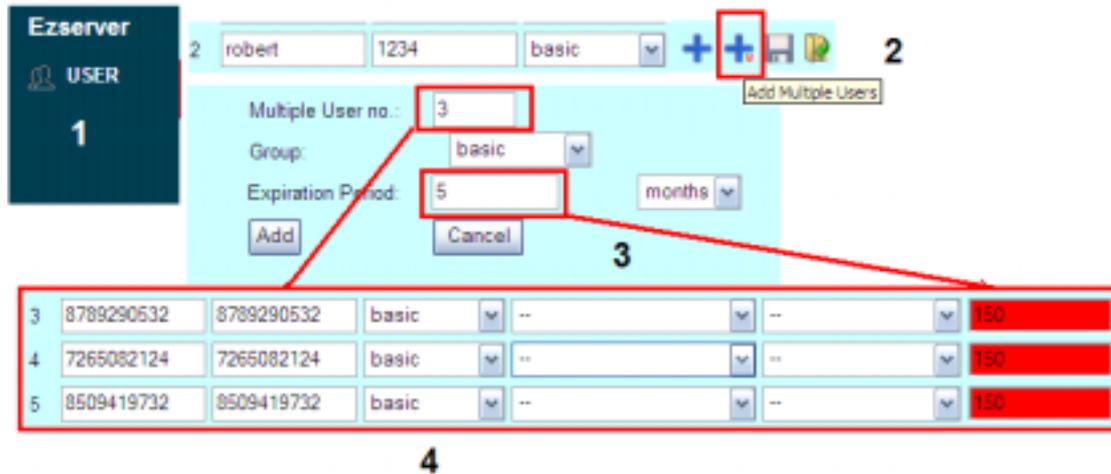
User Level has 4 levels including Administrator, Supper Reseller, Reseller and User. Administrator can click User button and select More icon to set user level as below:



- Administrator can login Ezserver Panel to configure Ezserver via a browser.
- Super Reseller can add resellers and users
- Reseller can add users
- Users can watch channels and movies

## Active Code Mode

- Set user\_authorization=2 and active\_code\_no=14 in ezserver\_config.txt to create 14- digital-no active code in username.
- Start Ezserver.
- Click User button and “Add Multiple Users” button to create new users with random username, group and expiration days.



User Name	Active code
Group	Defined in Group Management window
Paid Days	Date Format: xxxx. Ex. 150 means 150 days from the first watching.

## Add multiple users

Use “Add Multiple Users” button to create new users with 10-digital-no username, password, group and expiration days.

Multiple User no.: 3

Group: basic

Expiration Period: 5 months

3	8789290532	8789290532	basic	--	--	150
4	7265082124	7265082124	basic	--	--	150
5	8509419732	8509419732	basic	--	--	150

User extra setting

The screenshot shows a web browser window titled 'EZserver Subscriber - Windows Internet Explorer'. The address bar shows 'about:blank'. The page content is a configuration form for a user. On the left, there is a dark blue sidebar with the 'Ezserver' logo and a 'USER' profile icon. The main content area contains the following fields:

- User: root
- IP 2: 192.168.0.1
- IP 3: 192.168.0.2
- IP 4: 192.168.0.3
- IP 5: 192.168.0.4
- Rating Password: marocco2
- Level: Administrator (dropdown menu)
- Pay Model: free (dropdown menu)
- Max. Connections: 1
- User Point: 2000.00
- Smart Phone No.: 0988888888
- Tablet ID: 001122334455
- Desktop ID: 112233445566
- TV ID: 112233445566
- First Name: Admin
- Last Name: Admin
- Adress: 13F-1, No.189,Sec. 2 , Keelung Rd
- City: Taipei
- ZIP: 110
- Tel: 02-27354224
- Email: sales@ezometech.com

A 'Save' button is located at the bottom left of the form area.

User Name / PIN No.	<b>User Name is for User/Password mode, PIN No. is for Top-up Card</b>
IP2, IP3, IP4, IP5	<b>Defined allowed IP for the user</b>
Rating Password	<b>Password for Rating Movie</b>
Level	<p><b>User Level has 5 levels including Administrator, Supper Reseller, Reseller, User and Restreamer.</b></p> <ul style="list-style-type: none"> <li>• Administrator <b>can login Ezserver Panel to configure Ezserver via a browser.</b> And you need to set allowed folders for Administrator, more detail in HTML Access Protection section.</li> <li>• Super Reseller <b>can add resellers and users</b></li> <li>• Reseller <b>can add users</b></li> <li>• Users <b>can watch channels and movies</b></li> </ul>

	<ul style="list-style-type: none"><li>• Restreamer <b>can restream channels without "Alter Player Duration" limitation</b></li></ul>
Pay Model	<b>Has 3 model: Free, Pre-Paid, Post-Paid for Points</b>
Max. Connection	<b>Max. concurrent connections</b>
User Point	<b>Pay Per View Point</b>
Command	<b>Save</b>

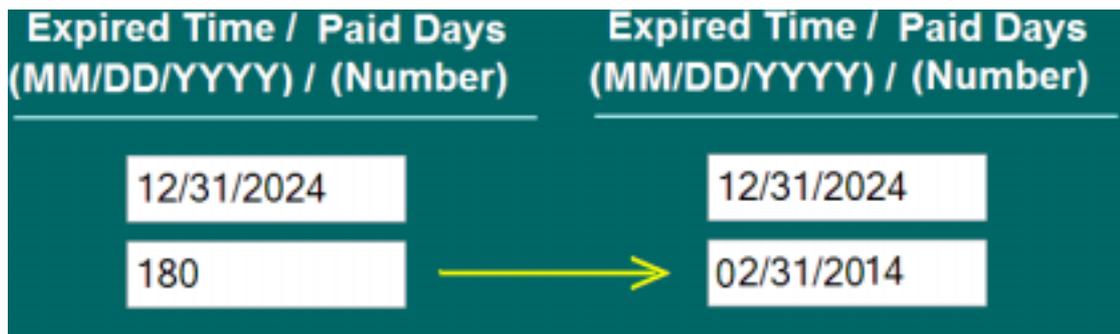
## Password mode and Top-up Card mode

Each subscriber can be used by User/Password mode or Top-up Card mode. User/Password mode has at least 4 fields that include user name, password, belonged group, expired time for Channels, Top-up Card mode has at least 3 fields that include PIN No., belonged group, expired time for Channels, and 2 more fields (Moive Paid Model, Points) for Video on Demand.

Each subscriber needs to be belonged to one group, so Ezserver Administrator has to define groups for subscribers first.

User Name / PIN No.	User Name is for User/Password mode, PIN No. is for Top-up Card
Password	Only for User/Password mode
Group	Defined in Group Management window
Expired Time /	Date Format: MM/DD/YYYY. ex. 12/31/2014
Paid Days	Date Format: xxxx. ex. 180 means 180 days
IP	Predefined allowed IP for each user.
MAC ID	Predefined allowed MAC Address for each user
Command	Save, Del, More

Expired Time / Paid Days field has two type, one is fixed expired time as 12/31/2014, the other is to define the available days as 180, it means when a subscriber starts to play the channel or video, then he has 180 available days. And Ezserver will change this field to fixed expired time as below example:



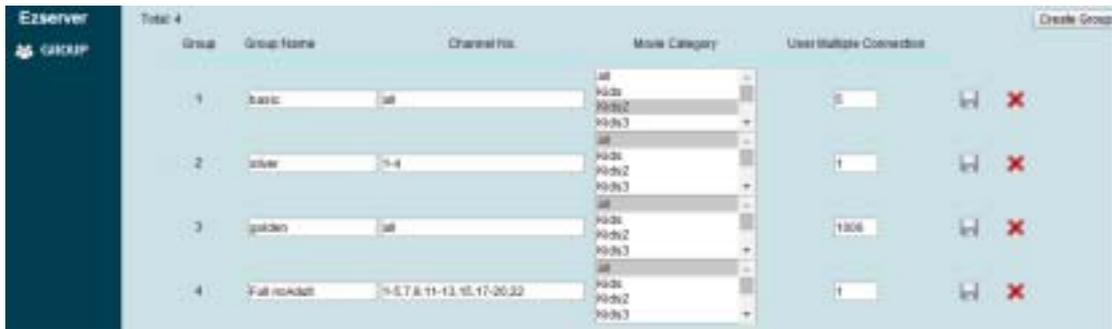
ex. If the subscriber has 180 available days and login on 09/01/2013, then the expired time field will be changed into 02/31/2014.

For User/Password mode, Ezserver administrator needs to set user\_authorization=1 of ezserver/ezserver\_config.txt. For Top-up Card mode, Ezserver administrator needs to set user\_authorization=2.

```
path=.
startmenu=index.htm
iptv_base_port=5544
http_base_port=18000
time_zone_diff=0
httpport=8000
rtmport=1935
igmpip=0.0.0.0
igmpport=9001
network_interface=eth1
iptv_time_shift_record_duration=5
tv_on_demand_record_duration=60
bitrate_constant=0
system_log=0
user_authorization=1
ovp_player_register=0
videopath=media/videos
picturepath=media/pictures
runningtextpath=media/runningtext
```

## Group

Group management can define allowed channels, allowed movie categories and multiple connection. For the below example, “golden” group can play all channels, but “sliver” group can only play ch1 to ch4. It also defines the “golden” group can has 1000 connections with the same user on different ip and “sliver” group only has one connection for one user at same time.



### Menu

Total	The total no of Group
Add Group	Add new Group

### Content

Group	N/A
Group Name	N/A
Channel No.	<p>Define allowed channel no. for the group. The keyword “all” is for all channels.</p> <p>Ex. 1,2,3 means the group users can watch ch1, ch2 and ch3</p> <p>Ex. 1-3,5-7,15 means the group users can watch ch1, ch2 , ch3, ch5, ch6, ch7 and ch15</p> <p>Ex. all means the group users can watch all channels.</p>
Movie Category	<p>Define allowed movie categories. "all" is for all movie categories. Hold down the Ctrl button to select multiple options.</p>
User Multiple Connection	Define the max concurrent connection for a user in the group

## Layout

Follow the below steps to add new layout.

Step1: Click "Layout" Button.

Step2: Click "<" or ">" Button to select one of screen layout.

Step3: Select resolution and video width and height.

Step4: press "Create layout" button

Step5: Add new video, image in Displayed windows.

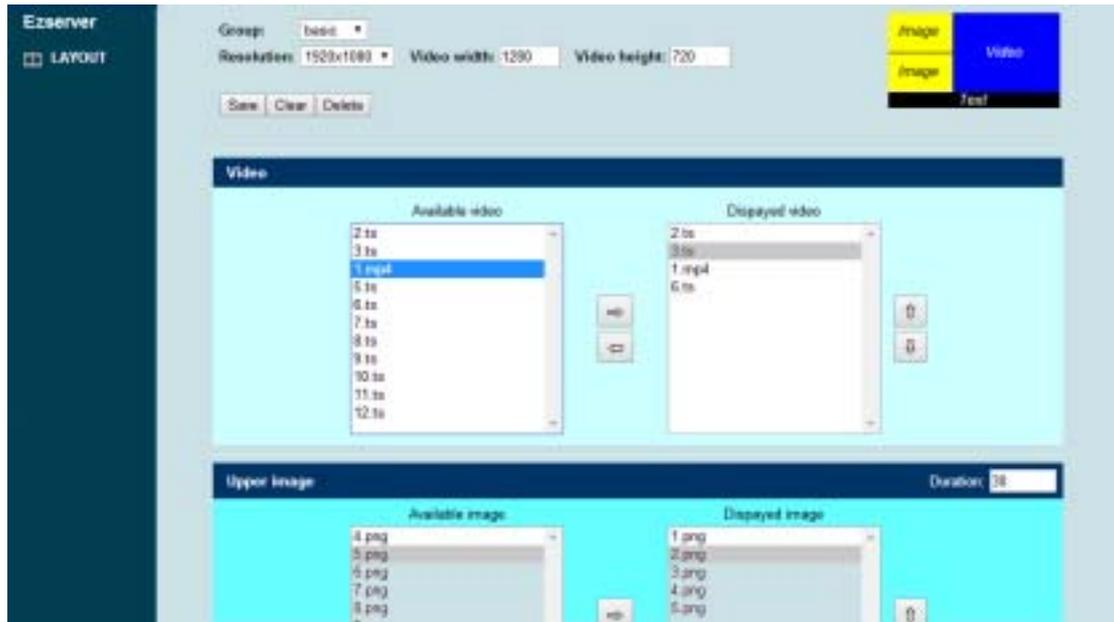


Button

Create layout	<b>Create new screen layout</b>
---------------	---------------------------------

Content

Group	<b>User group name</b>
Resolution	<b>Player screen resolution</b>
Video Width	<b>Player Video width</b>
Video Height	<b>Player Video height</b>
Screen Type	<p>The diagram illustrates five different screen layouts. The first layout shows a blue 'Video' area at the top and a black 'Text' area at the bottom. The second layout shows a blue 'Video' area in the center, with yellow 'Image' areas on the left and right sides, and a black 'Text' area at the bottom. The third layout shows a blue 'Video' area in the center, with yellow 'Image' areas on the top and bottom sides, and a black 'Text' area at the bottom. The fourth layout shows a blue 'Video' area in the center, with yellow 'Image' areas on the left and right sides, and a black 'Text' area at the bottom. The fifth layout shows a blue 'Video' area in the center, with yellow 'Image' areas on the top and bottom sides, and a black 'Text' area at the bottom.</p>



Button

Save	<b>Save screen layout</b>
Clear	<b>Clear current layout</b>
Delete	<b>Delete Group layout</b>

Content

Group	<b>User group name</b>
Resolution	<b>Player screen resolution</b>
Video Width	<b>Player Video width</b>
Video Heigth	<b>Player Video hieght</b>
Playlist	<b>Video, Image, Maquee</b>

## Player



### Menu Bar

Total	The total no of active player
Restart Player	Send reboot command to all players

### Button

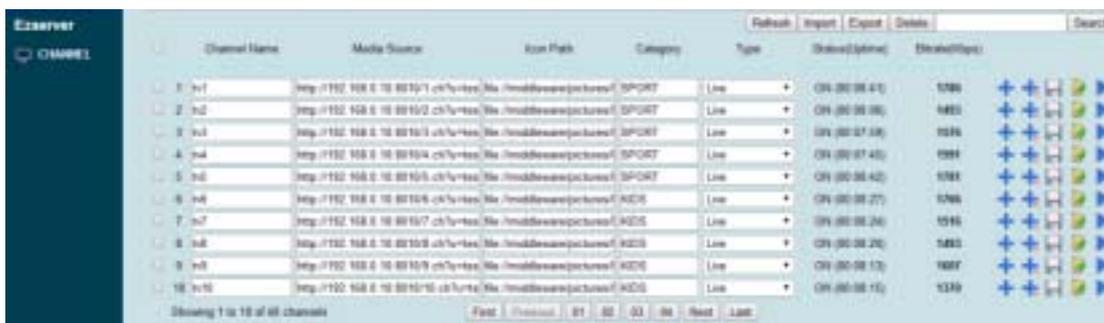
Stop	Stop the player
Block	Stop the player and block it into blacklist

### Content

Subscriber Name	N/A
Player Name	“signage player”
Watching CH	“Active”
Updated Time	Last Active Time
IP	Player IP
MAC Address	MAC Address or N/A
Country Name	Player Location
Protocol	“Web”

- Country Name has 3 types as below in users/user\_ip\_country.csv
  - Country\_Type=1 : 2 Letter Abbreviations.
  - Country\_Type=2: 3 Letter Abbreviations.
  - Country\_Type=3: Full County Name

## Channel



### Menu Bar

Refresh	Refresh checked channels
Import	Import Channel List from m3u list URL
Export	Export Channel List
Delete	Delete checked channels
Search	Search Channel Name

### Button

Add	Add a new channel
Copy	Copy 10 channels
Save	Save channel definition
More	More Channel information
Play	Play a channel

### Content

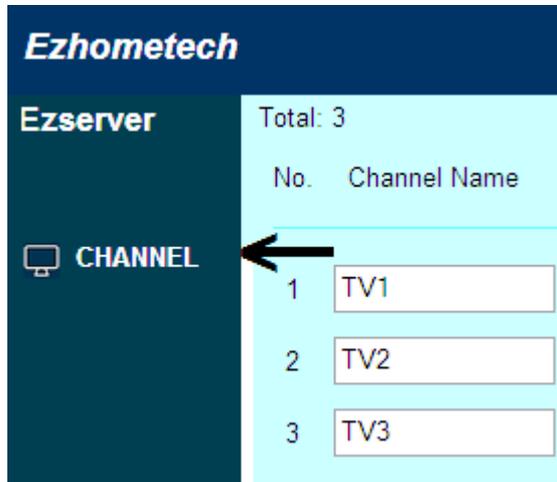
Channel No	For player input url by no, ex. <a href="http://192.168.0.8:18000/1.ch">http://192.168.0.8:18000/1.ch</a>
Channel Name	For player input url by name. Ex. <a href="http://192.18.0.8.1800/tv1">http://192.18.0.8.1800/tv1</a>
Media Source	<p>For RTP/UDP/HTTP/RTMP/Playlist input.</p> <ul style="list-style-type: none"> <li>○ Playlist syntax : “playlist:/folder_path” <ul style="list-style-type: none"> <li>▪ Supports TS, MP4, FLV, AVI, MKV, MP3, JPEG, PNG</li> <li>▪ The playing sequence of videos is by alphabetical order.</li> <li>▪ ex. if the url is “<b>playlist://middleware/videos/Movie</b>”, you have to create /ezserver_prof/middleware/videos/Movie folder. And upload videos or music into this folder.</li> </ul> </li> <li>• RTP syntax : “rtp://por_no” <ul style="list-style-type: none"> <li>• rtp://7001</li> </ul> </li> <li>• UDP syntax : “udp://por_no” <ul style="list-style-type: none"> <li>• udp://7001</li> </ul> </li> <li>• RTMP syntax : “rtmp://url” <ul style="list-style-type: none"> <li>• rtmp://207.182.149.36/live/live1</li> </ul> </li> <li>• HTTP syntax : “http://ip:port_no/path”</li> </ul>

	<ul style="list-style-type: none"> <li>• <a href="http://172.16.10.51:7001/1.ch">http://172.16.10.51:7001/1.ch</a></li> <li>• <a href="http://172.16.10.51:7001/1.mp4">http://172.16.10.51:7001/1.mp4</a></li> <li>• HLS m3u8 syntax : “<a href="http://ip:port_no/chx.m3u8">http://ip:port_no/chx.m3u8</a>”</li> <li>• <a href="http://172.16.10.51/ch1.m3u8">http://172.16.10.51/ch1.m3u8</a></li> <li>○ TS Playlist syntax : “dir:/folder_path”             <ul style="list-style-type: none"> <li>• <b>Supports TS Format</b></li> <li>• Needs to create the folder in ezserver media/videos folder first.</li> <li>• ex. if the url is “<b>dir://media/videos/Movie</b>”, you have to create /ezserver_prof/media/videos/Movie folder. And upload TS format videos into this folder</li> <li>• The playing sequence of videos is by alphabetical order.</li> </ul> </li> </ul>
Icon Path	The path of Channel icon for players
Category	The category for each channel.
Type	Support Live, Movie, Delay, DVR and Inactive channels.
Status (Uptime)	<ul style="list-style-type: none"> <li>• ON (Uptime)</li> <li>• OFF</li> <li>• Connecting</li> </ul>
Bitrate	<ul style="list-style-type: none"> <li>• <b>Channel Upload Bitrate</b></li> </ul>

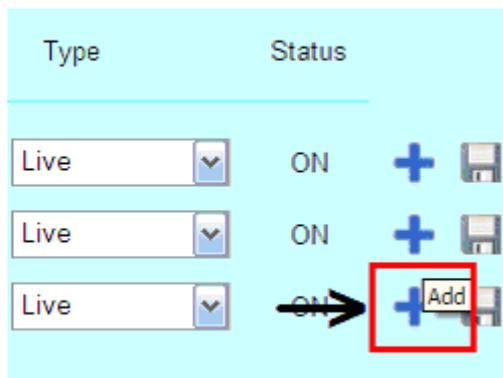
## Add new channel

Follow the below steps to add new channel.

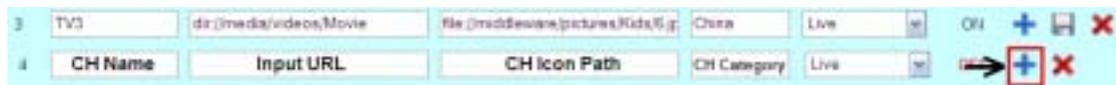
Step1: Click "Channel" Button.



Step2: Click "+" Button of a channel to add new channel.

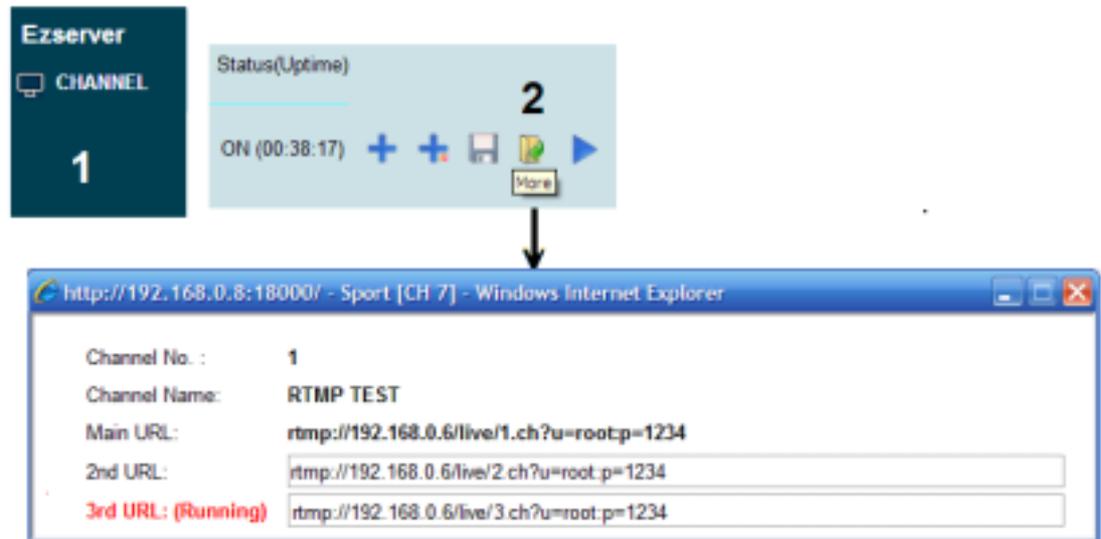


Step3: Input Channel Name, input URL, Channel Icon Path Catalog and Type, then click "+" button.



## Add Channel backup source URLs

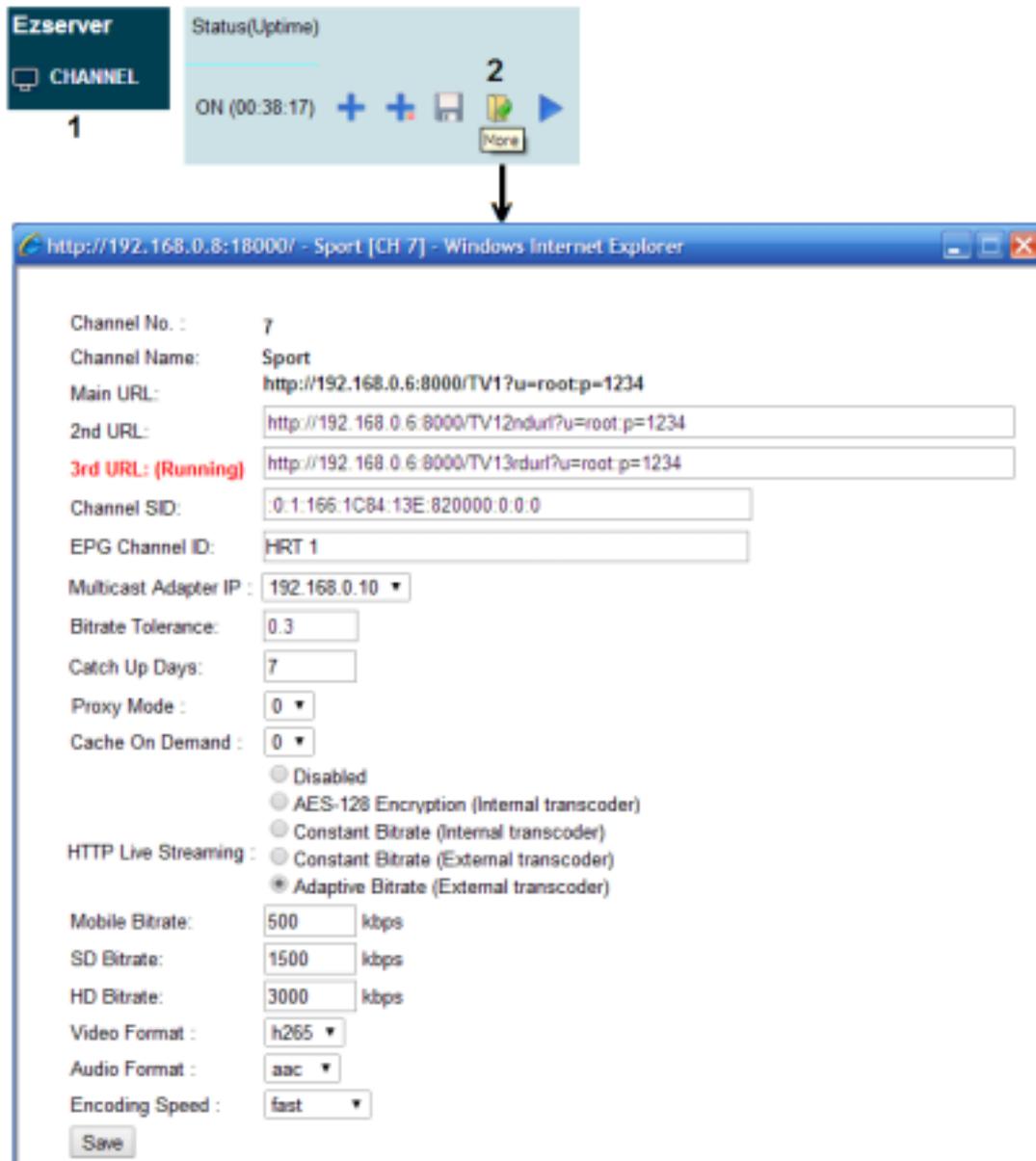
- Click Channel Button
- Click More Button of a channel
- Input URL into 2<sup>nd</sup> URL and 3<sup>rd</sup> URL



- Click Save Button

## Channel extra setting

Extra setting includes Channel Backup URLs, Enigma SID for EPG, Bitrate Tolerance for video streaming, Channel Forward for bandwidth saving.



Extra setting includes Channel Backup URLs, Enigma SID for EPG, Bitrate Tolerance for video streaming, Channel Forward for bandwidth saving.

Note 1. 2<sup>nd</sup> URL and 3<sup>rd</sup> URL: **for channel main URL is not available.**

Note 2. Multicast Adapter IP: **Multicast Stream from multiple network adapters.**

Note 3. Channel SID: **for enigma EPG use.**

Note 4. EPG Channel ID: **When the channel name of panel is different with channel id of EPG, It is for mapping them.**

Note 5. Bitrate Tolerance: **for video streaming performance of a channel, it is same as “Channel Streaming Bitrate Tolerance” of Setting Windows that is for all channels.**

Note 6. Catch Up Days: **days for channel recording. “0” is to disable recording.**

Note 7. Proxy mode: **The channel becomes a proxy server to forward the channel main url to player.**

Note 8. Caching on-demand: **if its value is 1, then when a player wants to watch a channel, ezserver checks the channel if is cached in memory. if the channel is cached, then ezserver streams the channel video from the cache to the player. If the channel is not cached, ezserver opens a connection to the input server and gets the video into cache memory, then ezserver streams the channel video from the cache to the player. If its value is 0, ezserver does not stop the connection of input server to get the video into cache memory.**

Note 9. HTTP Live Streaming: **Use DASH Transcoder.to provide adaptive bitrate streaming for H265/H264 video.**

## Create multiple channels

Use copy button to create 10 channels with the current channel information.

The screenshot shows the Ezserver interface with a table of channels. The table has three columns: No., Channel Name, and Media Source. The first row (No. 1) shows 'TV1' with the media source 'rtmp://192.168.0.6/live/1.ch?u=root;p'. The subsequent rows (No. 2-11) show '(1)-TV1' through '(10)-TV1' with the same media source. A red box highlights the first row. To the right of the table, there is a status indicator 'ON (02:17:10)', a plus sign, and a 'Copy 10 channels' button, which is also highlighted with a red box.

No.	Channel Name	Media Source
1	TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
2	(1)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
3	(2)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
4	(3)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
5	(4)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
6	(5)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
7	(6)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
8	(7)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
9	(8)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
10	(9)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p
11	(10)-TV1	rtmp://192.168.0.6/live/1.ch?u=root;p

## Import channel

### By command

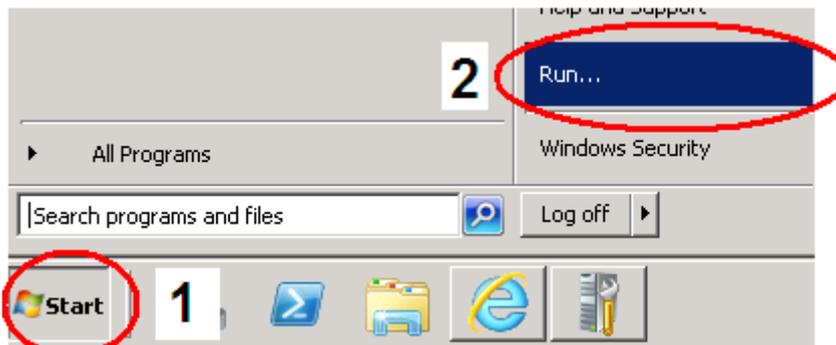
Convert m3u8 file into channel\_definition.xml

Command Options:

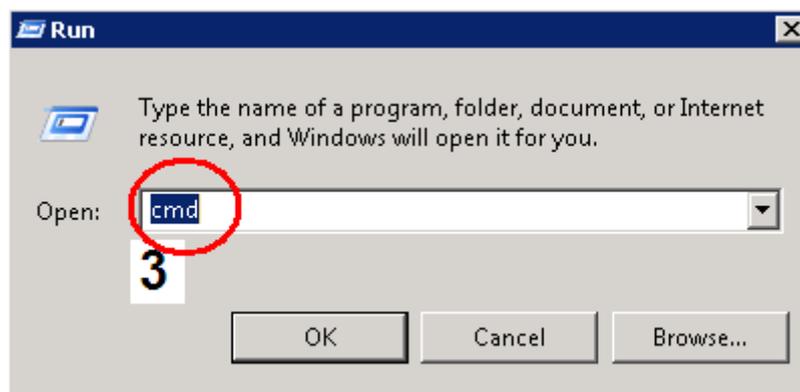
<b>Function:</b> Convert m3u file into Ezserver Channel database
<b>Usage:</b> ezchconverter [-c] filename(m3u)
<b>Options:</b> -c Convert m3u file to channel_definition.xml (Default)
<b>Examples:</b> >ezchconverter 1.m3u ... Convert 1.m3u to channel_definition.xml >ezchconverter -c 1.m3u ... Convert 1.m3u to channel_definition.xml

### Windows Version:

- Click Start: Run



- Typ "cmd"



- Run "ezchconverter.exe 1.m3u"

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\root>cd ezserver_prof
C:\Users\root\ezserver_prof>ezchconverter.exe 1.m3u_
4
```

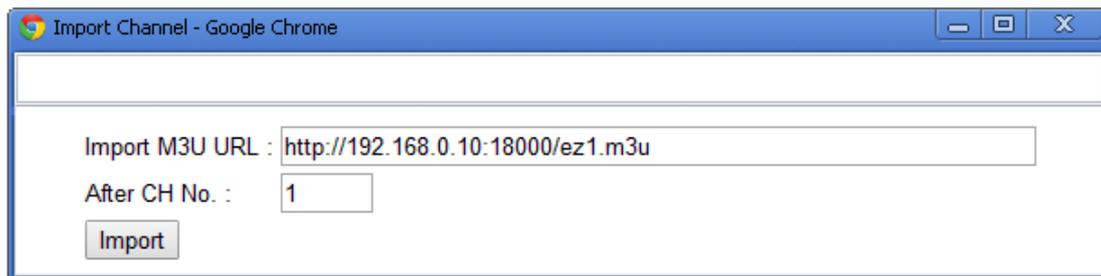
Linux Version:

- o cd ezserver\_prof/
- o ls ezchconverter
- o ./ezchconverter 1.m3u
- o cat channel\_definition.xml

```
1
root@debian:~# cd ezserver_prof/
root@debian:~/ezserver_prof# 2
ls ezchconverter
ezchconverter
root@debian:~/ezserver_prof# 3
./ezchconverter 1.m3u
root@debian:~/ezserver_prof# 4
cat channel_definition.xml
```

By Panel

Click import button



## Channel list download

Download channel list, Script by each user.

- Select one option of CH List filed in User panel to download it to your PC.
- The options are including enigma, m3u8, m3u, XBMC, Enigma Script and MAC Address Script etc.

The screenshot shows the Ezserver USER interface. On the left is a dark sidebar with the Ezserver logo and the word 'USER'. The main area has a light blue header with 'Total: 141' and a table with columns: 'User no', 'User Name (Primary Key)', 'Password', 'Group', and 'CH List'. The table lists 15 users. The 'CH List' column for each user has a dropdown menu. A red box highlights the dropdown menu for the first user (root), which is open and shows a list of channel list options: Enigma, Enigma 1.6, Enigma(RTMP), Enigma 1.6(RTMP), m3u(chno), m3u(chname), m3u(chno with suffix), m3u(chname with suffix), m3u(RTMP), octagon, ariva, XBMC, Pure, Optumuss, Amiko, Spark, Tiger, Bluestar, and nStreamVOD.

User no	User Name (Primary Key)	Password	Group	CH List
1	root	1234	golden	--
2	robert	1234	basic	--
3	5586688948	5586688948	basic	--
4	8698527291	8698527291	basic	--
5	4395840282	4395840282	basic	--
6	8789290532	8789290532	basic	--
7	7265082124	7265082124	basic	--
8	8509419732	8509419732	basic	--
9	9817122342	9817122342	basic	--
10	6428111621	6428111621	basic	--
11	4653669740	4653669740	basic	--
12	9006398696	9006398696	basic	--
13	4707250525	4707250525	basic	--
14	9292189360	9292189360	basic	--
15	3845085616	3845085616	basic	--

## Streaming performance adjustment

If a player watches a channel freezing, it can be network performance, internet download bandwidth or higher video bitrate, administrator can adjust Bitrate Tolerance to enhance the video streaming speed as below:

The image shows a two-step process. Step 1: A dark blue sidebar labeled 'Ezserver' contains a 'CHANNEL' icon and the number '1'. Step 2: A light blue control panel shows 'Status(Uptime)' with a large '2' and 'ON (00:38:17)'. Below are icons for volume, play, and a 'More' button. An arrow points from the 'More' button to a Windows Internet Explorer window. The browser window title is 'http://192.168.0.8:18000/ - Sport [CH 7] - Windows Internet Explorer'. The page content includes fields for Channel No. (7), Channel Name (Sport), Main URL, 2nd URL, 3rd URL (Running), Multicast Adapter IP (192.168.0.10), Channel SID, and Bitrate Tolerance (0.3, highlighted with a red box). Other settings include Proxy Mode (0), Cache On Demand (0), HTTP Live Streaming (Adaptive Bitrate selected), Mobile/SD/HD Bitrate (500/1500/3000 kbps), Video Format (h265), Audio Format (aac), and Encoding Speed (fast). A 'Save' button is at the bottom.

Note 1: Bitrate Tolerance: for video streaming performance of a channel, it is same as “Channel Streaming Bitrate Tolerance” of Panel Setting that is for all channels.

Note 2: Its value is between 0 and 0.999. (ex. 0.00: SD video, 0.999: HD 25Mbps)

## Movie

Movie Name	Media Source	Icon Path	Category	Duration	Size	Status
1. Movie1	file:///middleware/videos/Sports/1.mp4	file:///middleware/pictures/Sport1.jpg	SPORT	6:50	772.36	OK
2. Movie2	file:///middleware/videos/Sports/2.mp4	file:///middleware/pictures/Sport2.jpg	SPORT	6:50	772.36	OK
3. Movie3	file:///middleware/videos/Sports/3.mp4	file:///middleware/pictures/Sport3.jpg	SPORT	6:50	772.36	OK
4. Movie4	file:///middleware/videos/Sports/4.mp4	file:///middleware/pictures/Sport4.jpg	SPORT	6:50	772.36	OK
5. Movie5	file:///middleware/videos/Sports/5.mp4	file:///middleware/pictures/Sport5.jpg	SPORT	6:50	772.36	OK
6. Movie6	file:///middleware/videos/Kids/1.mp4	file:///middleware/pictures/Kids/1.jpg	KIDS	3:51	186.36	OK
7. Movie7	file:///middleware/videos/Kids/2.mp4	file:///middleware/pictures/Kids/2.jpg	KIDS	3:51	186.36	OK
8. Movie8	file:///middleware/videos/Kids/3.mp4	file:///middleware/pictures/Kids/3.jpg	KIDS	3:51	186.36	OK
9. Movie9	file:///middleware/videos/Kids/4.mp4	file:///middleware/pictures/Kids/4.jpg	KIDS	3:51	186.36	OK
10. Movie10	file:///middleware/videos/Kids/5.mp4	file:///middleware/pictures/Kids/5.jpg	KIDS	3:51	186.36	OK

### Menu Bar

Refresh	Refresh checked movies
Import	Import Movie List from m3u list URL
Export	Export Movie List
Delete	Delete checked movies
Search	Search Movie Name

### Button

Add	Add a new movie,
Copy	Copy 10 movies.
Save	Save movie definition.
More	More movie information
Play	Play a movie.

### Content

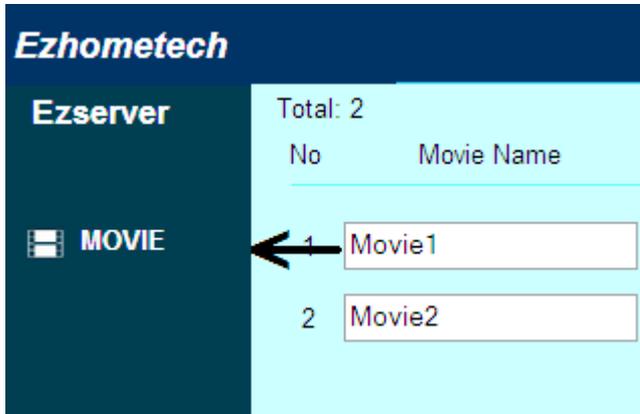
Movie No	N/A
Movie Name	For player input url by name. Ex. http://192.18.0.8.1800/MOVIE1
Media Source	<p>Local movies.</p> <ul style="list-style-type: none"> <li>• syntax : "file://path" <ul style="list-style-type: none"> <li>• file:///middleware/videos/Sports/1.mp4</li> <li>• file:///middleware/videos/Kids/1.flv</li> <li>• file:///middleware/videos/Kids/1.ts</li> <li>• file:///middleware/videos/Kids/1.mov</li> </ul> </li> </ul> <p>Remote movies</p> <ul style="list-style-type: none"> <li>• syntax : "http://url" <ul style="list-style-type: none"> <li>• http://192.168.0.6/films/1.mp4</li> <li>• http://192.168.0.6/films/1.ts</li> <li>• http://192.168.0.6/films/1.flv</li> <li>• http://192.168.0.6/films/1.avi</li> </ul> </li> </ul>
Icon Path	The path of Movie icon for players
Category	The category for each movie.

Duration	<b>The movie duration by min.</b>
Bitrate	<b>The movie bitrate by Kbps</b>
Status	<b>ON / OFF for the Input link.</b>

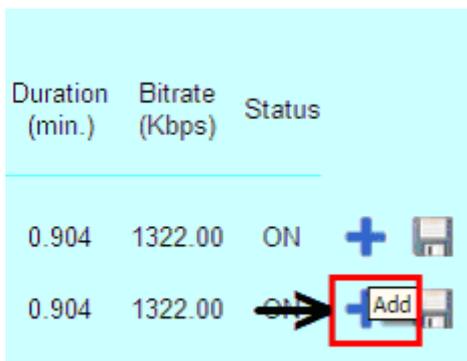
## Add new movie

Follow the below steps to add new movie.

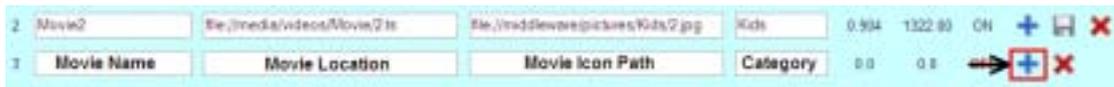
Step1: Click "Movie" Button.



Step2: Click "+" Button of a movie to add new movie.



Step3: Input Channel Name, input URL, Channel Icon Path Catalog and Type, then click "+" button.



## Create multiple movies

Use copy button to create 10 movies with the current movie information.

No	Movie Name	Media Source	Status
1	MOVIE1	file://middleware/videos/Sports/1.mp4	ON
2	(1)-MOVIE1	file://middleware/videos/Sports/1.mp4	
3	(2)-MOVIE1	file://middleware/videos/Sports/1.mp4	
4	(3)-MOVIE1	file://middleware/videos/Sports/1.mp4	
5	(4)-MOVIE1	file://middleware/videos/Sports/1.mp4	
6	(5)-MOVIE1	file://middleware/videos/Sports/1.mp4	
7	(6)-MOVIE1	file://middleware/videos/Sports/1.mp4	
8	(7)-MOVIE1	file://middleware/videos/Sports/1.mp4	
9	(8)-MOVIE1	file://middleware/videos/Sports/1.mp4	
10	(9)-MOVIE1	file://middleware/videos/Sports/1.mp4	
11	(10)-MOVIE1	file://middleware/videos/Sports/1.mp4	

## Import movie

### By command

Convert m3u8 file into channel\_definition.xml

Command Options:

#### Function:

Convert m3u file into Movie database

#### Usage:

ezchconverter [-m] filename(m3u)

#### Options:

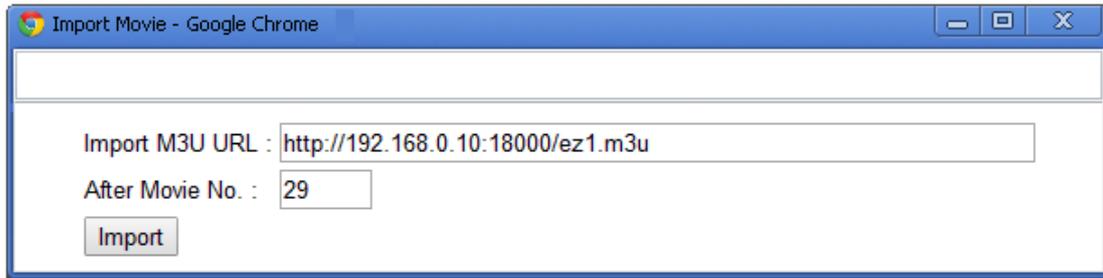
-m Convert m3u file to movie\_definition.xml

#### Examples:

>ezchconverter -m 1.m3u ... Convert 1.m3u to movie\_definition.xml

### By Panel

Click import button



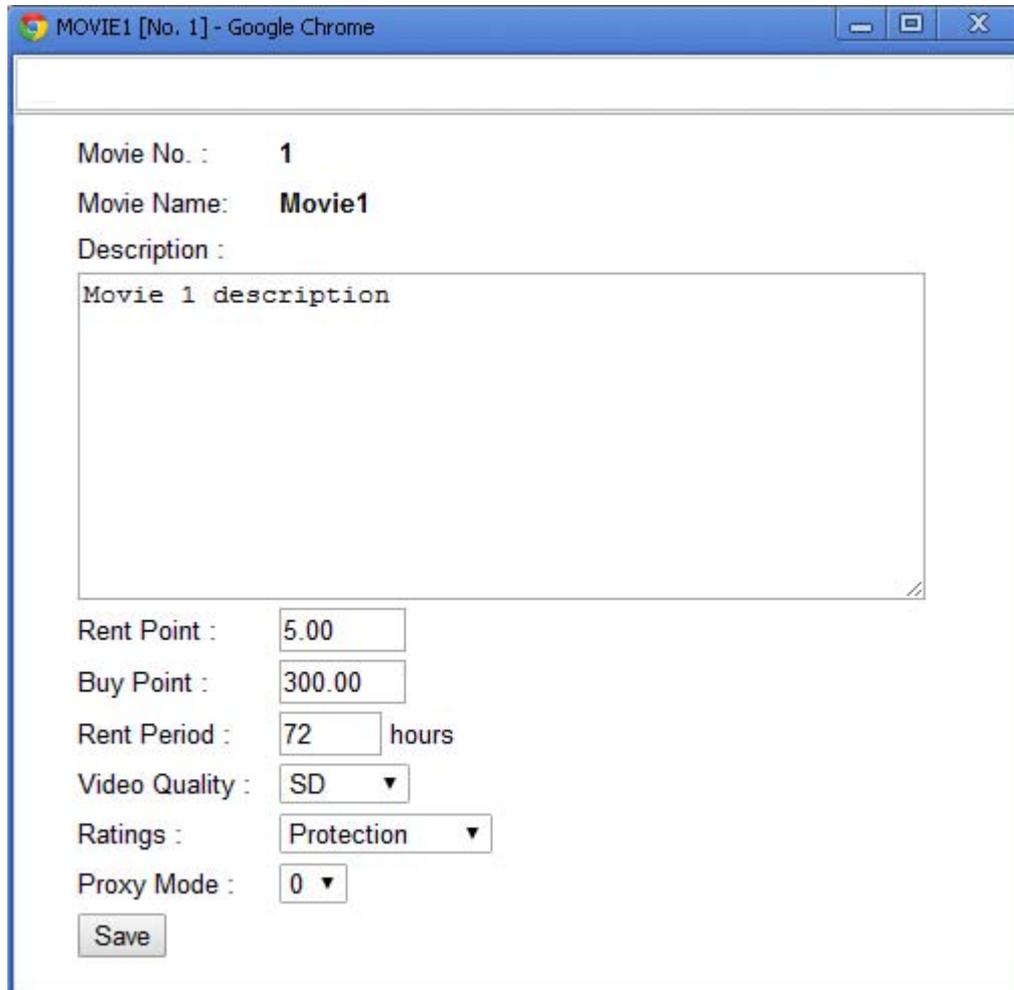
Import Movie - Google Chrome

Import M3U URL :

After Movie No. :

## Movie extra setting

Click more button to get the more setting including Description, Rent Point, Buy Point, Rent Period, Rating.



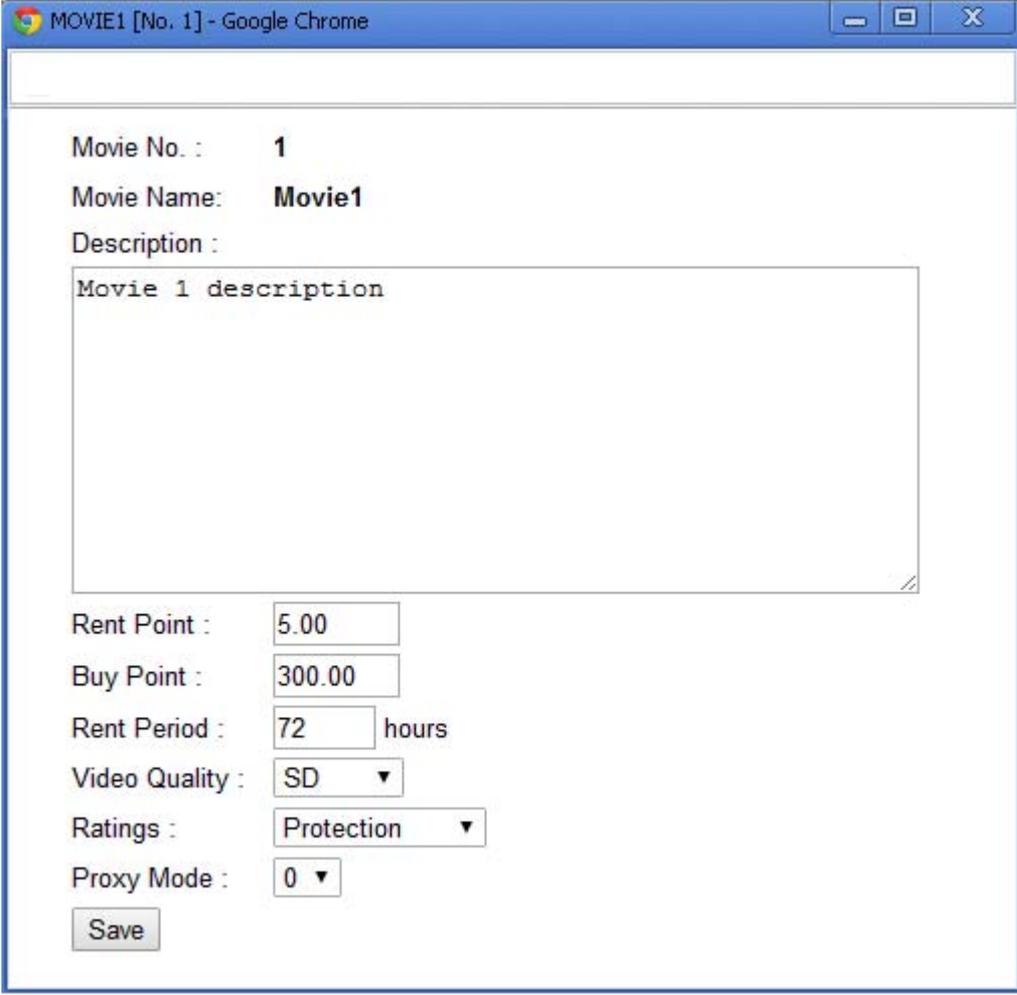
The screenshot shows a web browser window titled "MOVIE1 [No. 1] - Google Chrome". The page content includes the following fields and controls:

- Movie No. : 1
- Movie Name: **Movie1**
- Description :
- Rent Point :
- Buy Point :
- Rent Period :  hours
- Video Quality :  ▼
- Ratings :  ▼
- Proxy Mode :  ▼
-

## Pay Per View

### Set Movie Point

Click the more button of Movie Panel to set Rent Point, Buy Point, Rent Period, and Rating.



MOVIE1 [No. 1] - Google Chrome

Movie No. : 1

Movie Name: **Movie1**

Description :

Movie 1 description

Rent Point : 5.00

Buy Point : 300.00

Rent Period : 72 hours

Video Quality : SD

Ratings : Protection

Proxy Mode : 0

Save

- Set User Pay Mode
  - ◆ pre: **Prepaid mode is for internet video service.**
  - ◆ post: **Post-paid mode is special for Hotel PPV.**
  - ◆ free: **Free mode is for monthly subscription or free service.**

EZserver Subscriber - Google Chrome

about:blank

User: test

Rating Password: 2345

Level: User

Pay Model: pre

User Point.: pre

Smart Phone No.: post

Tablet ID: free

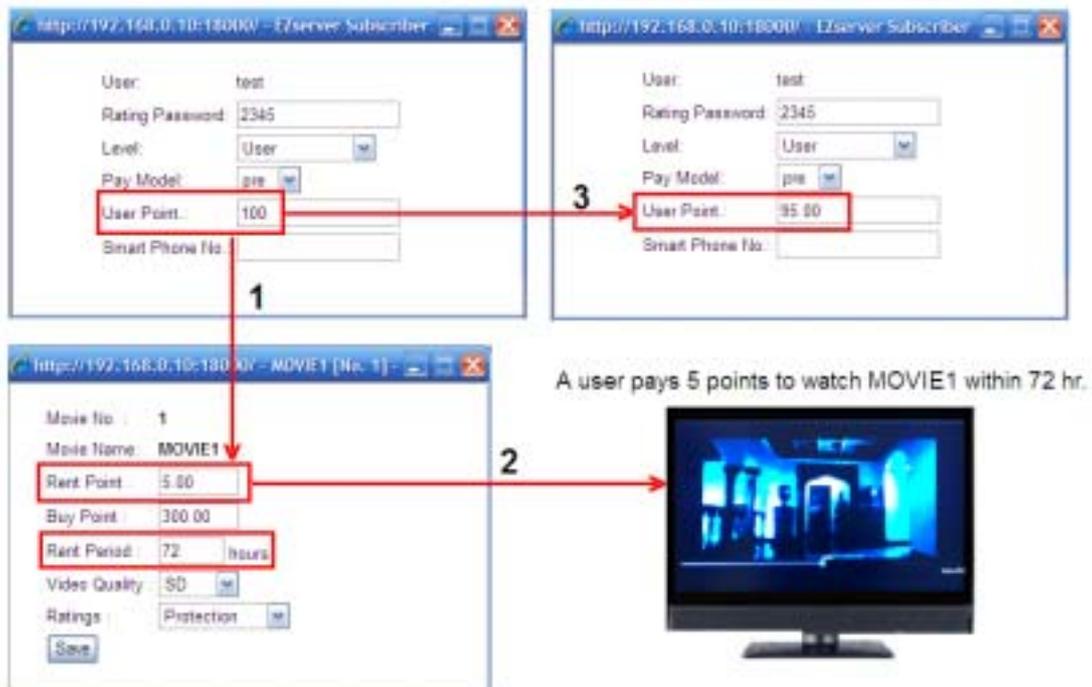
### Set User Point

- ◆ For Prepaid mode, Administrator needs to set the User Point first. Once the user rents or buys a movie, the User Point will be subtracted by the movie point.
- ◆ For Post-paid mode, Administrator needs to set the User Point to zero first. Once the user watches a movie, the User Point will be added by the movie point.
- ◆ For Free mode, the User Point is disabled.

The screenshot shows a web browser window titled "EZserver Subscriber - Google Chrome" with the address bar set to "about:blank". The form contains the following fields:

- User: test
- Rating Password: 2345
- Level: User (dropdown menu)
- Pay Model: pre (dropdown menu)
- User Point.: 100.00 (highlighted with a red box)
- Smart Phone No.: (empty field)

### PPV Flow



## PPV API

- ◆ createtokenbased64
- ◆ destroytoken
- ◆ check\_user\_ppv
- ◆ charge\_user\_ppv
- ◆ get\_movie\_ratings
- ◆ check\_user\_ratings\_password

## Movie subtitle

Ezserver supports HTML5 video tag for subtitle WebVTT. It supports mp4 file with subtitle. A movie needs a mp4 file and vtt file with the same filename in the same folder.

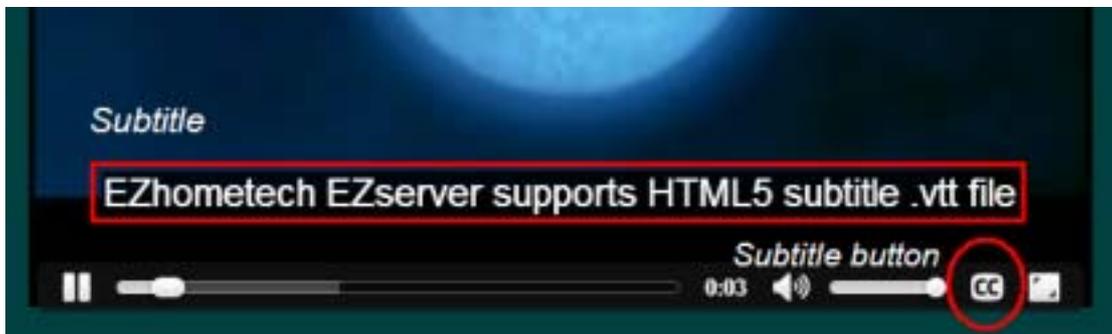
Ex.

When a movie Media Source is file://middleware/videos/Sports/1.mp4, then need to put a subtitle file in ezserver\_prof/middleware/videos/Sports/1.vtt

Movie Name	Media Source	File Path	Category	Duration	Size	Status
1 Movie1	file://middleware/videos/Sports/1.mp4	file://middleware/pictures/Sport1.jpg	SPORT	0:30	772 KB	OK
2 Movie2	file://middleware/videos/Sports/2.mp4	file://middleware/pictures/Sport2.jpg	SPORT	0:30	772 KB	OK
3 Movie3	file://middleware/videos/Sports/3.mp4	file://middleware/pictures/Sport3.jpg	SPORT	0:30	772 KB	OK
4 Movie4	file://middleware/videos/Sports/4.mp4	file://middleware/pictures/Sport4.jpg	SPORT	0:30	772 KB	OK
5 Movie5	file://middleware/videos/Sports/5.mp4	file://middleware/pictures/Sport5.jpg	SPORT	0:30	772 KB	OK
6 Movie6	file://middleware/videos/Kids/1.mp4	file://middleware/pictures/Kids1.jpg	KIDS	1:01	186 KB	OK
7 Movie7	file://middleware/videos/Kids/2.mp4	file://middleware/pictures/Kids2.jpg	KIDS	1:01	186 KB	OK
8 Movie8	file://middleware/videos/Kids/3.mp4	file://middleware/pictures/Kids3.jpg	KIDS	1:01	186 KB	OK
9 Movie9	file://middleware/videos/Kids/4.mp4	file://middleware/pictures/Kids4.jpg	KIDS	1:01	186 KB	OK
10 Movie10	file://middleware/videos/Kids/5.mp4	file://middleware/pictures/Kids5.jpg	KIDS	1:01	186 KB	OK

### Enable Subtitle Steps:

- Open a browser. (Chrome or IE10)
- Input <http://ezserverip:17000/radsplayer/index.htm> in URL field
- Login by “test” with password “1234”
- Play the movie and click “CC” to turn on/off the subtitle



## Alert Player



### Menu

Total	The total no of active player
Query	Query active players

### Button

Stop	Stop the player
Block	Stop the player and block it into blacklist

### Content

Subscriber Name	N/A
Player Name	User-Agent Name
Watching CH	The Channel Name and No. watching by each user
Stating Time	Starting Video Streaming Time
Watch Hours	Player watching hours
IP	Player IP
MAC Address	MAC Address or N/A
Country Name	Player Location
Protocol	Video Streaming Protocol

- Country Name has 3 types as below in users/user\_ip\_country.csv
  - **Country\_Type=1 : 2 Letter Abbreviations.**
  - **Country\_Type=2: 3 Letter Abbreviations.**
  - **Country\_Type=3: Full County Name**
- To block and stop players over Watching Hours, add alert\_player\_blacklist option in ezserver\_config.txt and restart ezserver.
  - alert\_player\_blacklist=1 : ezserver disconnects the player and blocks its IP.
  - alert\_player\_blacklist=2: ezserver just disconnects the player, not to block its IP.
  - If the user level is "Restreamer", ezserver ignores this option.

## Blacklist

Ezserver will automatically detects illegal connections and lock the IP into Blacklist.

No.	User	IP	MAC Address	Country	Failed Login times	Available Login times	Refresh	Remove All
1.	admin@	192.168.0.1	00:00:00:00:00:00	USA	1	10		X
2.	admin@	192.168.0.2	00:00:00:00:00:00	USA	1	10		X
3.	admin@	192.168.0.3	00:00:00:00:00:00	USA	1	10		X

### Menu

Total Blacklist No	The total no of Locked IP
Refresh	Refresh Locked IP
Remove All	Remove all Locked Ips.

### Button

Remove	Remove the Locked IP.
--------	-----------------------

### Content

IP	IPv4
MAC Address	MAC Address or N/A
Country	IP Location
Failed Login Times	Attempted ezserver times
Available Login Times	Available login times (The default value is 10)
Command	Remove

- Note: If a user IP is defined in user panel, then the IP does not appear in the blacklist.

Expired Time / Paid Days (MM/DD/YYYY) (Number)	IP	DRM Model	DRM Points
12/31/2024	<input type="text"/>	free	2000
12/31/2024	192.168.0.6	post	2000
12/31/2024	<input type="text"/>	pre	2000
12/31/2024	<input type="text"/>	pre	2000

## Setting

Ezserver
SETTING

---

### Setting

**Unicast Streaming Setting:**

1. Panel port:  --- Administrator Panel Port

2. API port:  --- Application Program Interface Port

3. HTTP port:  --- HTTP Streaming Port for players

4. RTMP port:  --- RTMP Streaming Port for players

5. RTSP port:  --- RTSP Streaming Port for players

---

**Multicasting Streaming Setting:**

6. Multicast IP:  --- Multicasting Streaming IP for players (0.0.0.0: disabled)

7. Multicast port:  --- Multicasting Streaming Port for players

---

**Channel Setting:**

8. Channel Input Buffer No.:  --- Panel will automatically refresh all channels after modification.

9. Channel Streaming Prebuffer No.:  --- The value must be smaller than Channel Input Buffer No.

10. Channel Streaming Bitrate Tolerance:  --- Value: 0.00-1.00 (ex. 0.00: SD video, 0.999: HD 25Mbps)

11. Channel Reconnection Interval:  sec.

12. DVR Duration:  min.

13. DASH Transcoder Path:

---

**EPG Setting:**

14. MPEG Transport Stream:  --- Value: 0 (disabled), 1 (Real Time Extraction)

15. XMLTV EPG URL: tech.com-karlo/pliepg.xml"/> (per day)

---

**System Setting:**

16. Max. Streaming No.:

17. System Log Lines:  --- Value: 0 (disabled), 1 (enabled), xxx (xxx lines)

18. Admin. System Log Lines:  --- Value: 0 (disabled), 1 (enabled), xxx (xxx lines)

19. Pagination Limit Number:  --- Pagination Limit Number for Channel/Movie/User Window

---

**Player Setting:**

20. Alert Player Duration:  Hours (ex. 5: 5 hours, 10.5: 10 hours 30 min.)

21. Blacklist Option:  --- Value: 0 (disabled), 1 (enabled)

### Content

Unicast Streaming Setting	
Panel port	<ul style="list-style-type: none"> <li>○ Web Panel Port for Ezserver System Management.</li> <li>○ The default value is 18000.</li> </ul>
API port	<ul style="list-style-type: none"> <li>○ Application Program Interface Port for integration via REST API.</li> <li>○ The default value is 17000</li> </ul>
HTTP port	<ul style="list-style-type: none"> <li>○ HTTP video streaming about IPTV/OTT/VOD</li> <li>○ The default value is 8000.</li> </ul>
RTMP port	<ul style="list-style-type: none"> <li>○ RTMP Live Encoder and Video Streaming.</li> <li>○ The default value is 1935</li> <li>○ The value = 0 is to disable service</li> </ul>
RTSP port	<ul style="list-style-type: none"> <li>○ RTSP video streaming about IPTV/OTT/VOD.</li> <li>○ The default value is 5544</li> <li>○ The value = 0 is to disable service</li> </ul>

Multicasting Streaming Setting	
Multicast IP/Port	<ul style="list-style-type: none"> <li>○ Multicast IP is 0.0.0.0 that means Ezserver stop broadcast channels to LAN.</li> <li>○ Multicast IP is 224.1.1.1 for Multicast IP and 9001 for Multicast Port, then Ezserver will broadcast all channels to 224.1.1.1~224.1.1.x : 9001.</li> </ul>
Channel Setting	
Channel Input Buffer No.	<ul style="list-style-type: none"> <li>○ It is for channel input cache, ex. 8000 means 1524*8000 =12M bytes in the cache each channel.</li> <li>○ Need to refresh all channels after modification.</li> <li>○ For channel input buffer (unit: 1K bytes).</li> <li>○ Value 8000, means RAM: 8M bytes for channel cache.</li> <li>○ There are 10 channels in panel, it occupies RAM: 80M bytes for channel cache.</li> <li>○ If the channel bitrate is 1Mbps, item#8: 8000 means 64-second video for channel cache.</li> </ul>
Channel Streaming Prebuffer No.	<ul style="list-style-type: none"> <li>○ The value must be smaller than Channel Input Buffer No</li> <li>○ For channel zapping time (unit: 1K bytes).</li> <li>○ Value 2000, means RAM: 2M bytes for channel I-frame search.</li> <li>○ There are 10 channels in panel, the last 20M of the 80M bytes is used for I frame search.</li> </ul>
Channel Streaming Bitrate Tolerance	<ul style="list-style-type: none"> <li>○ It is for SD/HD Streaming, its value is between 0.0 and 0.99,</li> <li>○ Value: 0.00~1.00 (ex. 0.00: SD video, 0.999: HD 25Mbps)</li> </ul>
Channel Reconnection Interval	<ul style="list-style-type: none"> <li>○ Once the channel input is down, then ezserver will reconnect the input stream after x seconds.</li> </ul>
DVR Duration	<ul style="list-style-type: none"> <li>○ The duration for recording live video to do timeshift functions as pause, resume, backward and forward</li> </ul>
DASH Transcoder Path	<ul style="list-style-type: none"> <li>○ External DASH Transcoder path</li> </ul>
EPG Setting	
MPEG Transport Stream	<ul style="list-style-type: none"> <li>○ option = 1 : Ezserver extracts EPG from MPEG Transport Stream of all channels, administrator can click EPG button of Panel to see the Program Title, Description and start/Stop time of EPG programs. Players can use Ezserver API: get_epg_info to get them, too.</li> <li>○ option = 0 : Disable the EPG extraction of channels.</li> </ul>
XMLTV EPG URL	<ul style="list-style-type: none"> <li>○ Get EPG from XMLTV URL.</li> </ul>
System Setting	
Max Streaming No.	<ul style="list-style-type: none"> <li>○ The Max. Connection no. for players.</li> </ul>

System Log Lines	<ul style="list-style-type: none"> <li>○ It is for log line no, ex. 1000 means 1000 log lines in log/system.log,</li> <li>○ If 1 means ezserver will write the all log in log/system.log,</li> <li>○ If 0 means no any log in log/system.log.</li> </ul>
Admin System Log Lines	<ul style="list-style-type: none"> <li>○ It is for channel input connection and panel</li> <li>○ It is for log line no, ex. 1000 means 1000 log lines in log/admin_system.log,</li> <li>○ If 1 means ezserver will write the all log in log/admin_system.log,</li> <li>○ If 0 means no any log in log/admin_system.log.</li> </ul>
Pagination Limit Number	<ul style="list-style-type: none"> <li>○ Pagination Limit Number for Channel / Movie / User window.</li> </ul>
Player Setting	
Blacklist Option	<ul style="list-style-type: none"> <li>○ disable/enable blacklist for illegal player connection.</li> </ul>
Alter Player Duration	<ul style="list-style-type: none"> <li>○ Set alert hours for connected players. It means if the player has been watching the same channels after x hours, it will be listed in Alert Player window that supports Stop and Block buttons</li> </ul>

## Statistics

Ezserver		Total: 7					
STATISTICS		No.	CH Name	Today Watched No.	Active Player No.	Uptime	Status(Buffer Index, Buffer Size)
1	Sport	0		0		0 days 00:03:24	ON (5552 6000)
2	ABSTRACT File	0		0		0 days 00:05:01	ON
3	体育新闻	0		0		0 days 00:03:25	ON (5557 6000)
4	Спортивные новости	0		0		0 days 00:05:01	ON
5	Sport Nouvelles	0		0		0 days 00:05:01	ON
6	スポーツニュース	0		0		0 days 00:05:01	ON
7	أخبار الرياضة	0		0		0 days 00:05:01	ON

## Menu

Total	Total Channel No
Auto Query	Automatically Get Statistics per 10 seconds.

## Content

No.	Channel No.
CH Name	Channel Name
Today Watched No.	The accumulated watched No. of a channel.
Active Player No.	The watching no.
Uptime	Channel Uptime
Status	ON, OFF, Connecting with Buffer Index and Size.

## Log

**Ezserver**

**LOG**

- [0000000011]: EZserver Starts at 2015/12/17 8:11:53
- [0000000012]: mac\_definition.xml Not found
- [0000000013]: System Message: The license is prof. version...
- [0000000014]: System Message: The license is prof. version...
- [0000000015]: System Message: There are [141] users in the Database
- [0000000016]: ezhometech (1.2(12/16/15))
- [0000000017]: System Warning: Reseller [robert] Username [susan] is not in User Database
- [0000000018]: System Message: There are [0] users in the reseller[robert]
- [0000000019]: System Message: There are [1] resellers in the Database
- [0000000020]: HTTP Panel Server Starting
- [0000000021]: channel\_definition.xml has [359] bytes
- [0000000022]: There are 1 active channels...
- [0000000023]: szFileName=[/ezhometech/development/SSP/package/Server Applications/ezs...
- [0000000024]: szFileName=[/ezhometech/development/SSP/package/Server Applications/ezs...
- [0000000025]: Open User Log...
- [0000000026]: System Message: There are [6] Protection Folders
- [0000000027]: Warning: IP 2 Country File enabled
- [0000000028]: System Management Server Starting

## Shutdown

**Ezserver**

**SHUTDOWN**

**System Information**

- \* ezhometech EZserver
- \* Version: Release 1.2(06/04/16)
- \* Serial Number: 076244D61D693281E50708214B438C041
- \* Start at: 2015/12/17 8:11:53
- \* Uptime: 0:00:00
- \* Subscriber: robert
- \* Channel No.: 1
- \* Online Play: 0
- \* Group No.: 1
- \* Blacklist IP No.: 0

**Message from webpage**

Shutdown EZserver?

確定 取消

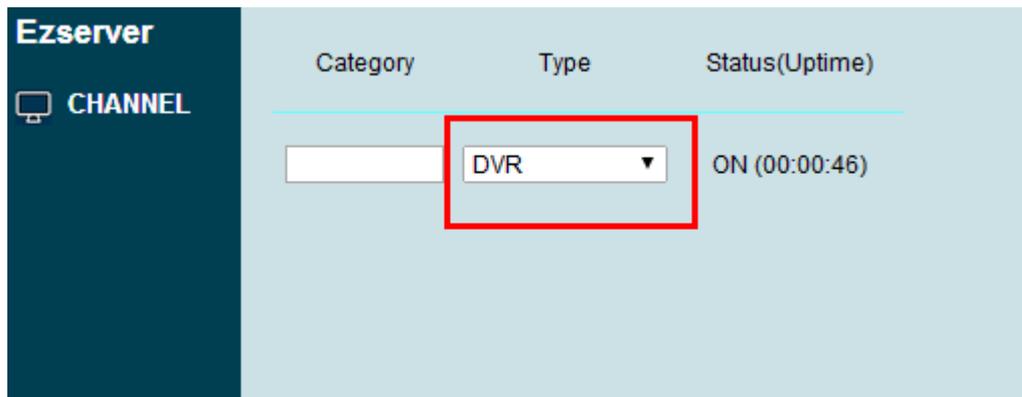
## 5. Advanced channel option

### Time-Shift TV

Time-Shift TV channel is to save live stream from source URL into server local storage. When a player wants to play it, Ezserver restreams its videos from server local storage to the player. The player can backward and forward the channel with timestamp.

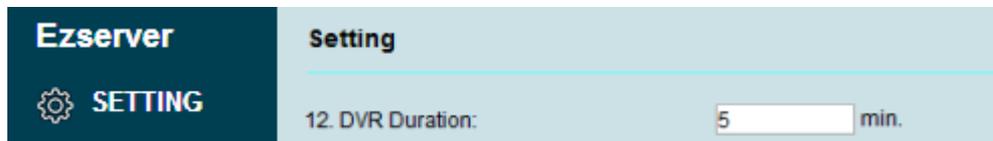
#### Set DVR type

Click Channel button and set Type to DVR, then click Save button.



#### Set DVR duration

Click Setting button and set DVR Duration, then click Save button.



The storage size of per channel depends on video bitrate and duration. For example,

- Channel video bitrate is 1Mbps and duration is 1 hour, the storage size needs 450M bytes. Ezserver uses triple space for one channel, so the total size is 1.35G bytes.
- 100 channels, 1Mbps bitrate, 1-hour duration, the storage size needs 45G bytes. Ezserver uses triple space for one channel, so the total size is 135G bytes.

#### Backword and forward by URL:

- URL Syntax: `http://serverip:port/xxx?u=xxx;p=xxx::timestamp=xxxxxxxx`
  - ◆ Timestamp unit is **millisecond**.
  - ◆ `http://192.168.0.6:8000/ch1.m3u8?u=test;p=1234:timestamp=600000`
  - ◆ `http://192.168.0.6:8000/sport.m3u8?u=test;p=1234:timestamp=600000`
  - ◆ The above links are to play video from the 600th second (10 min) of the DVR buffer.

A player can use .m3u8 URL without timestamp option for live (back to now) as below:

- URL Syntax: `http://serverip:port/xxx?u=xxx;p=xxx:`
  - ◆ `http://192.168.0.6:8000/ch1.m3u8?u=test;p=1234`

**Encrypted Time Shift TV setting:**

- Click Channel Button and Click More icon
- Select HLS option to AES-128 Encryption (internal transcoder)

Disabled  
 AES-128 Encryption (Internal transcoder)  
 Constant Bitrate (Internal transcoder)

HTTP Live Streaming :  Constant Bitrate (External transcoder)  
 Adaptive Bitrate (External transcoder)

Mobile Bitrate:  kbps  
SD Bitrate:  kbps  
HD Bitrate:  kbps

Video Format :  ▼  
Audio Format :  ▼  
Encoding Speed :  ▼

## Time-Delay TV

Delay TV channel is to save live stream from source URL into server local storage. When a player wants to play it, Ezserver restreams its videos from server local storage to the player. The player only watch delay video from Ezserver, but the player can not backward and forward the channel.

Click Channel button and set Type to Delay x sec., min., hr, then click Save button.



The storage size of per channel depends on video bitrate and delay time. For example,

- Channel video bitrate is 1Mbps and delay time is 1 hour, the storage size needs 450M bytes.
- 100 channels, 1Mbps bitrate, 1-hour delay time, the storage size needs 45G bytes.
- Use HLS link as <http://192.168.0.6:8000/ch1.m3u8?u=test;p=1234> to play channels.

Encrypted Time Delay TV setting:

- Click Channel Button and Click More icon
- Select HLS option to AES-128 Encryption (internal transcoder)

Disabled  
 AES-128 Encryption (Internal transcoder)  
 Constant Bitrate (Internal transcoder)

HTTP Live Streaming :

Constant Bitrate (External transcoder)  
 Adaptive Bitrate (External transcoder)

Mobile Bitrate:  kbps

SD Bitrate:  kbps

HD Bitrate:  kbps

Video Format :

Audio Format :

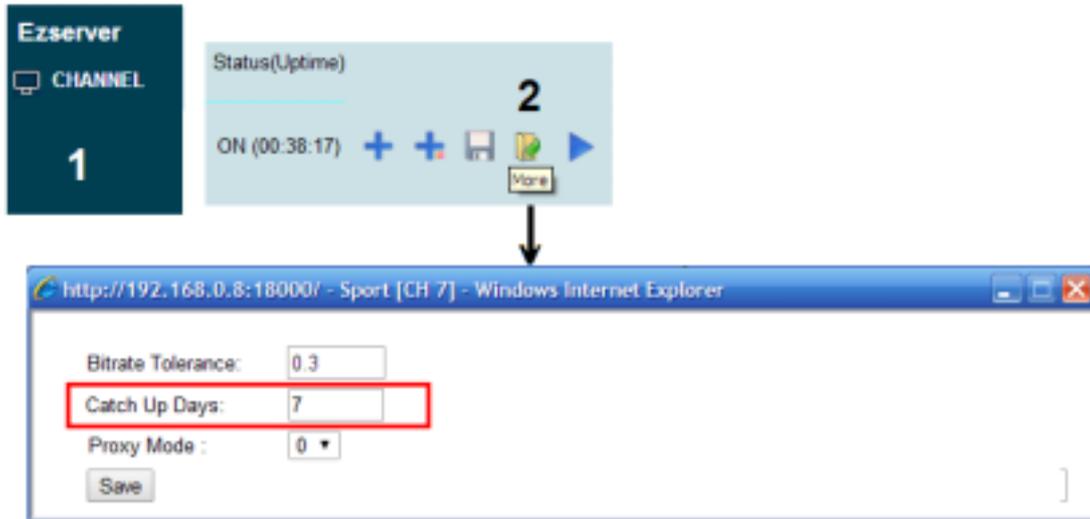
Encoding Speed :

## Catch up TV

This function is to record live channel into VOD movies by EPG information.

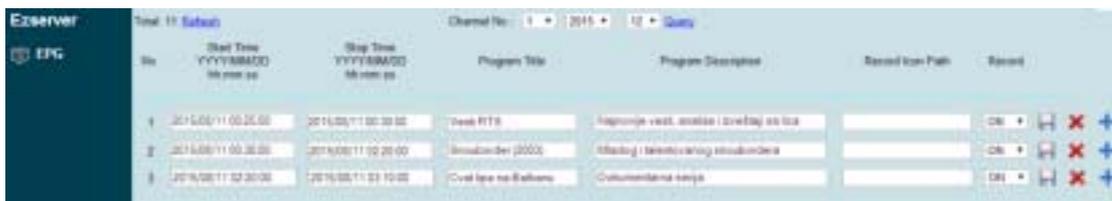
### Set Catch up days

- Click Channel Button and More icon to set Catch Up Days



### Set EPG time

- Click EPG button to add new program item
  - ◆ Start Time
  - ◆ Stop Time
  - ◆ Program Title
  - ◆ Program Description
  - ◆ Record Icon Path
  - ◆ Set Record Option to ON



- Ezserver add the record video information as below into Movie Panel after stop time automatically.
  - ◆ Program Title → Movie Name
  - ◆ Record Video Path → Media Source
  - ◆ Record Icon Path → Icon Path
  - ◆ Channel Category → Category

Movie Name	Media Source	Icon Path	Category	Duration (min)	State (Days)	Status
1 Movie1	file:///middlew.../movie/Sport1.mpl	file:///middlew.../pictures/Sport1.jpg	SPORT	6:30	7/2:30	ON
2 Movie2	file:///middlew.../movie/Sport2.mpl	file:///middlew.../pictures/Sport2.jpg	SPORT	6:30	7/2:30	ON
3 Movie3	file:///middlew.../movie/Sport3.mpl	file:///middlew.../pictures/Sport3.jpg	SPORT	6:30	7/2:30	ON
4 Movie4	file:///middlew.../movie/Sport4.mpl	file:///middlew.../pictures/Sport4.jpg	SPORT	6:30	7/2:30	ON
5 Movie5	file:///middlew.../movie/Sport5.mpl	file:///middlew.../pictures/Sport5.jpg	SPORT	6:30	7/2:30	ON
6 Movie6	file:///middlew.../movie/Kudu1.mpl	file:///middlew.../pictures/Kudu1.jpg	KIDS	3:30	1/3:30	ON
7 Movie7	file:///middlew.../movie/Kudu2.mpl	file:///middlew.../pictures/Kudu2.jpg	KIDS	3:30	1/3:30	ON
8 Movie8	file:///middlew.../movie/Kudu3.mpl	file:///middlew.../pictures/Kudu3.jpg	KIDS	3:30	1/3:30	ON
9 Movie9	file:///middlew.../movie/Kudu4.mpl	file:///middlew.../pictures/Kudu4.jpg	KIDS	3:30	1/3:30	ON
10 Movie10	file:///middlew.../movie/Kudu5.mpl	file:///middlew.../pictures/Kudu5.jpg	KIDS	3:30	1/3:30	ON

Catch up TV Example Flow:

**CHANNEL** Define Category in Channel

No	Channel Name	Media Source	Icon Path	Category	Type
1	ESS NEWS	http://url1.cwcast.com/1332/new	file:///middlew.../pictures/News1.jpg	India	Live
2	POSTE NEWS	http://url1.cwcast.com/gandhi	file:///middlew.../pictures/News2.jpg	USA	Live
3	AUC NEWS	http://url1.cwcast.com/india	file:///middlew.../pictures/News3.jpg	China	Live

**EPG** Define Program Title and Record Icon Path

No	Start Time YYYYMMDD hh:mm:ss	Stop Time YYYYMMDD hh:mm:ss	Program Title	Program Description	Record Icon Path	Record
1	2015/05/04 10:00:00	2015/05/04 10:05:00	Football News	Football News Description	file:///middlew.../pictures/	ON
2	2015/05/04 10:10:00	2015/05/04 10:20:00	Baseball News	Baseball News Description	file:///middlew.../pictures/	ON

**MOVIE** Automatically add Football News into Movie for VOD

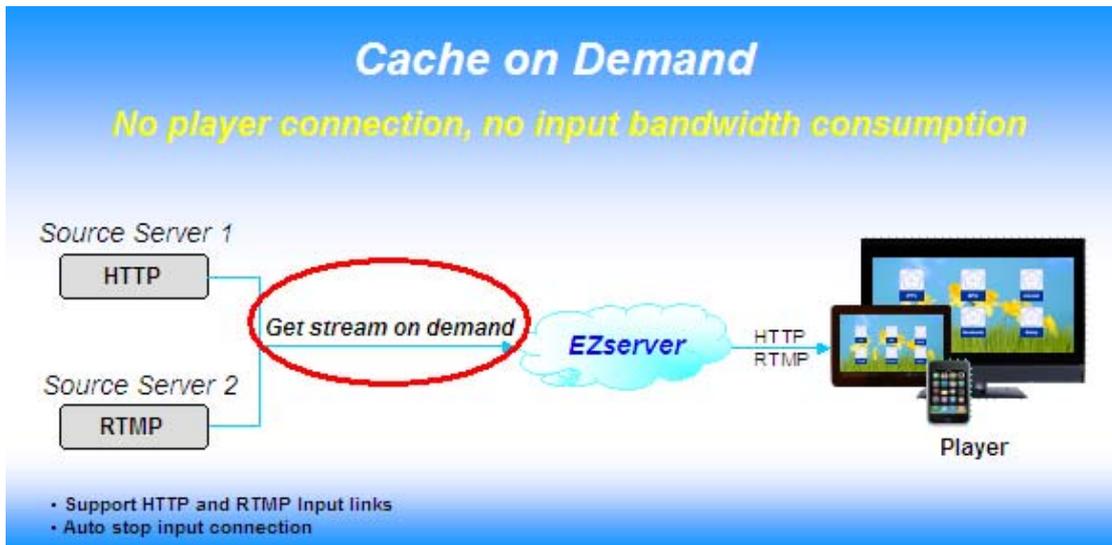
No	Movie Name	Media Source	Icon Path	Category	Duration (min)	State (Days)	Status
1	Football News	file:///program_archive/India/Football	file:///middlew.../pictures/Sports1.jpg	India	0:304	1/3:22:00	ON
2	Baseball News	file:///program_archive/India/Baseball	file:///middlew.../pictures/Sports1.jpg	India	0:064	1/3:22:00	ON

Note: The recorded file is ezserver\_prof/tv\_program\_archive/2015\_05\_04/CH0001\_10\_00.ts

**utc option in URL**

- URL Syntax: http://serverip:port/xxx?u=xxx:p=xxx:utc=xxxxxxxxx
  - http://192.168.0.6:8000/1.ch?u=test:p=1234:utc=1460763600
  - or use siptv EPG List to watch the video

Channel on demand (Cache on demand)



Channel on demand TV is that a player wants to watch a channel, ezserver checks the channel if is cached in memory. if the channel is cached, then ezserver streams the channel video from the cache to the player. If the channel is not cached, ezserver opens a connection to the input server and gets the video into cache memory, then ezserver streams the channel video from the cache to the player. Once, there is no any player to watch the channel, ezserver stops the connection of input server in order to save the incoming bandwidth of ezserver.



Additional, there are two options in ezserver\_config.txt, one is for enable/disable caching for all channels, the other is for caching off interval as below:

1. cache\_on\_demand\_channel :

- if its value is 1, then when a player wants to watch a channel, ezserver checks the channel if is cached in memory. if the channel is cached, then ezserver streams the channel video from the cache to the player. If the channel is not cached, ezserver opens a connection to the input server and gets the video into cache memory, then ezserver streams the channel video from the cache to the player.

- If its value is 0, ezserver does not stop the connection of input server to get the video into cache memory.

2. stop\_ch\_cache\_interval (unit: min.): is defined for cache\_on\_demand\_channel=1. Once, there is no any player to watch the channel, ezserver stops the connection of input server after stop\_ch\_cache\_interval value. For example, its value is 10 min, then ezserver stops the connection of input channel after 10 min.

## Apple HLS channel output

Enable one channel with HLS output:

- **Click Channel Button and Click More icon**
- **Select HLS option to Constant Bitrate (internal transcoder)**

Disabled  
 AES-128 Encryption (Internal transcoder)  
 **Constant Bitrate (Internal transcoder)**  
 Constant Bitrate (External transcoder)  
 Adaptive Bitrate (External transcoder)

HTTP Live Streaming :

Mobile Bitrate:  kbps  
 SD Bitrate:  kbps  
 HD Bitrate:  kbps  
 Video Format :  ▾  
 Audio Format :  ▾  
 Encoding Speed :  ▾

Enable/Disable all channels with HLS output:

**add `hls_disable=1/2` in `ezserver_config.txt` and restart ezserver.**

- **`hls_disable=1` means to disable all HLS channels**
- **`hls_disable=2` means to enable all channels to HLS**

Streaming URL:

- Single channel:  
 Syntax: `http://ip_address:port/chx.m3u8?u=xxxx;p=xxxx`  
 Ex.: `http://192.168.0.10:8000/ch1.m3u8?u=test;p=1234`
- All channels:  
 Syntax:  
`http://ip_address:port/server/get_user_chlist?username=xxxx;password=xxxx:`  
`ch_list_type=m3u8`  
 Ex.  
`http://192.168.0.8:17000/server/get_user_chlist?username=test;password=1234:ch_list_type=m3u8`

Download m3u8 ch list from panel:

**Ezserver** Total: 141

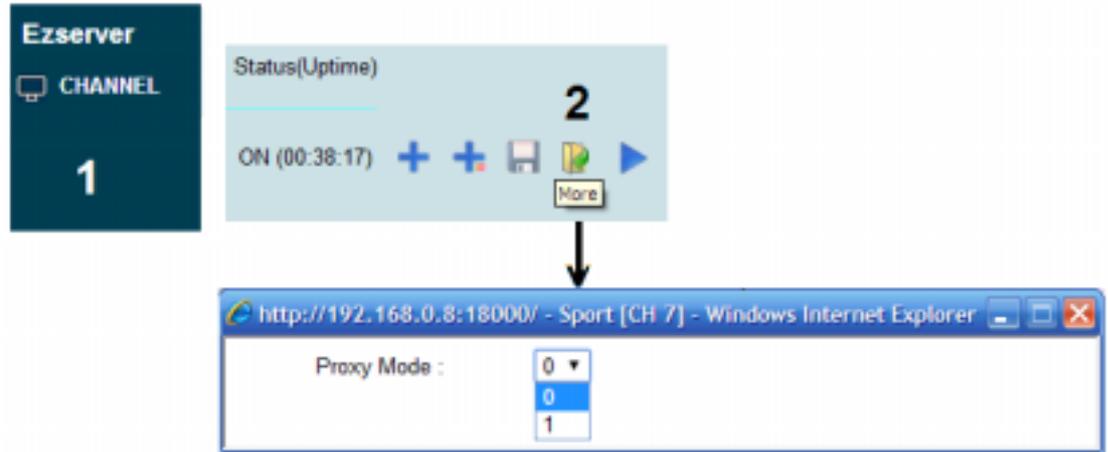
**USER**

User no	User Name (Primary Key)	Password	Group	CH List
1	root	1234	golden	--
2	robert	1234	basic	--
3	5586688948	5586688948	basic	--
4	8698527291	8698527291	basic	Enigma
5	4395840282	4395840282	basic	Enigma 1.6
6	8789290532	8789290532	basic	Enigma(RTMP)
7	7265082124	7265082124	basic	Enigma 1.6(RTMP)
8	8509419732	8509419732	basic	m3u
9	9817122342			m3u(MPEG TS)
10	6428111621			m3u(FLV)
11	4653669740			m3u(chno)
12	9006398696			m3u(chno with suffix)
13	4707250525	4707250525	basic	m3u(chname with suffix)
14	9292189360	9292189360	basic	m3u(RTMP)
15	3845085616	3845085616	basic	m3u8

**Select m3u8**

## Proxy Mode

- Click More Button of a channel
- Set Channel Proxy mode to 1



- Click Save Button

## Encrypted channel with AES-128

- Click Channel Button and Click More icon
- Select HLS option to AES-128 Encryption (internal transcoder)

Disabled

AES-128 Encryption (Internal transcoder)

Constant Bitrate (Internal transcoder)

HTTP Live Streaming :  Constant Bitrate (External transcoder)

Adaptive Bitrate (External transcoder)

Mobile Bitrate:  kbps

SD Bitrate:  kbps

HD Bitrate:  kbps

Video Format :

Audio Format :

Encoding Speed :

- Input URL into with VLC
    - Syntax: `http://ip_address:port/chx.m3u8?u=xxxx:p=xxxx`
    - Syntax: `http://ip_address:port/x.ch?u=xxxx:p=xxxx`
    - Syntax: `http://ip_address:port/channe_name?u=xxxx:p=xxxx`
- Ex.1: `http://192.168.0.10:8000/ch1.m3u8?u=test:p=1234`
- Ex.2: `http://192.168.0.10:8000/1.ch1?u=test:p=1234`
- Ex.3: `http://192.168.0.10:8000/TV1?u=test:p=1234`

## Adaptive Bitrate Streaming

Login Ezserver Panel and Click Setting Panel to set DASH Transcoder Path first.

- Set DASH Transcoder Path



Click Channel Button and More icon to set Channel HTTP Live Streaming as below:

- Option 1: Adaptive Bitrate Streaming

HTTP Live Streaming :

- Disabled
- AES-128 Encryption (Internal transcoder)
- Constant Bitrate (Internal transcoder)
- Constant Bitrate (External transcoder)
- Adaptive Bitrate (External transcoder)

Mobile Bitrate:	<input type="text" value="500"/>	kbps
SD Bitrate:	<input type="text" value="1500"/>	kbps
HD Bitrate:	<input type="text" value="3000"/>	kbps
Video Format :	<input type="text" value="h265"/>	▼
Audio Format :	<input type="text" value="aac"/>	▼
Encoding Speed :	<input type="text" value="fast"/>	▼

- Option2: Constant Bitrate Streaming:

HTTP Live Streaming :

Disabled

AES-128 Encryption (Internal transcoder)

Constant Bitrate (Internal transcoder)

Constant Bitrate (External transcoder)

Adaptive Bitrate (External transcoder)

Mobile Bitrate:  kbps

SD Bitrate:  kbps

HD Bitrate:  kbps

Video Format :

Audio Format :

Encoding Speed :

- Player URL Syntax4:

`http://ip_address:port/ChannelName?u=xxxx;p=xxxx`

`http://ip_address:port/chx.m3u8?u=xxxx;p=xxxx`

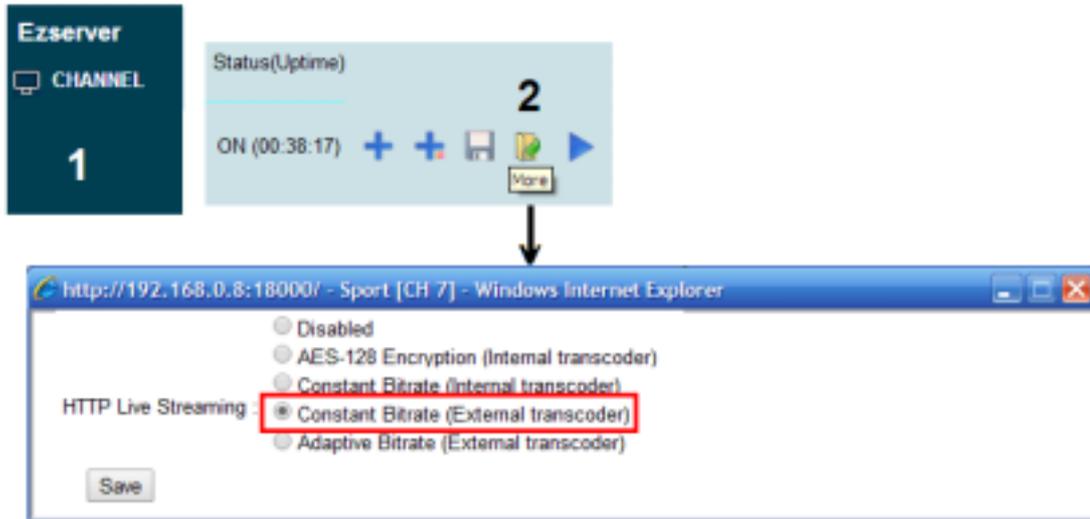
**Ex. 1:** `http://test:1234@172.16.10.50:8000/TV1`

**Ex. 2:** `http://test:1234@172.16.10.50:8000/ch4.m3u8`

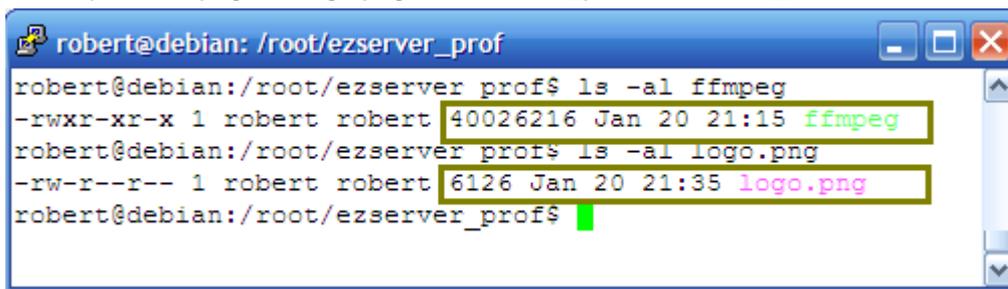
## Logo watermark

This function is to add a logo watermark on live channel. Administrator follows up the below steps to enable the live channel record:

- Click Channel Button and More icon to set Constant Bitrate(External transcoder)



- Add the below line into ezserver\_config.txt
  - Linux version
    - ◆ `transcoder_path=ffmpeg -i logo.png -filter_complex 'overlay=10:10'`
  - Windows version
    - ◆ `transcoder_path=ffmpeg.exe -i logo.png -filter_complex 'overlay=10:10'`
- Upload ffmpeg and logo.png into ezserver\_prof or ezserver\_standard folder.



- HLS URL for Players:
  - `http://serverip:port/chx.m3u8?u=xxxx;p=xxxx.`
    - ◆ `http://192.168.0.10:8000/ch1.m3u8?u=test;p=1234`
    - ◆ `http://test:1234@192.168.0.10:8000/ch1.m3u8`
  - `http://serverip:port/CannelName.m3u8?u=xxxx;p=xxxx.`
    - ◆ `http://192.168.0.10:8000/SportTV.m3u8?u=test;p=1234`
    - ◆ `http://test:1234@192.168.0.10:8000/SportTV.m3u8`

## MPEG MPTS Input

Ezserver receives MPTS streams by multicast IP/Port with a program number and generates SPTS streams for video streaming to players.

Ezserver		
<input type="checkbox"/>	Channel Name	Media Source
<input type="checkbox"/>	1 MPTS UDP1	udp://224.1.1.1:9001/301
<input type="checkbox"/>	2 MPTS UDP2	udp://224.1.1.1:9001/302
<input type="checkbox"/>	3 MPTS UDP3	udp://224.1.1.1:9001/303
<input type="checkbox"/>	4 MPTS UDP4	udp://224.1.1.1:9001/304
<input type="checkbox"/>	5 MPTS UDP5	udp://224.1.1.1:9001/305
<input type="checkbox"/>	6 MPTS UDP6	udp://224.1.1.1:9001/306
<input type="checkbox"/>	7 MPTS UDP7	udp://224.1.1.1:9001/307
<input type="checkbox"/>	8 MPTS UDP8	udp://224.1.1.1:9001/308
<input type="checkbox"/>	9 MPTS UDP9	udp://224.1.1.1:9001/309
<input type="checkbox"/>	10 MPTS UDP10	udp://224.1.1.1:9001/3010

For better network performance, you can use the 2nd network card for MPTS input, Please follow the below steps:

1. Click More icon of the channel as below:

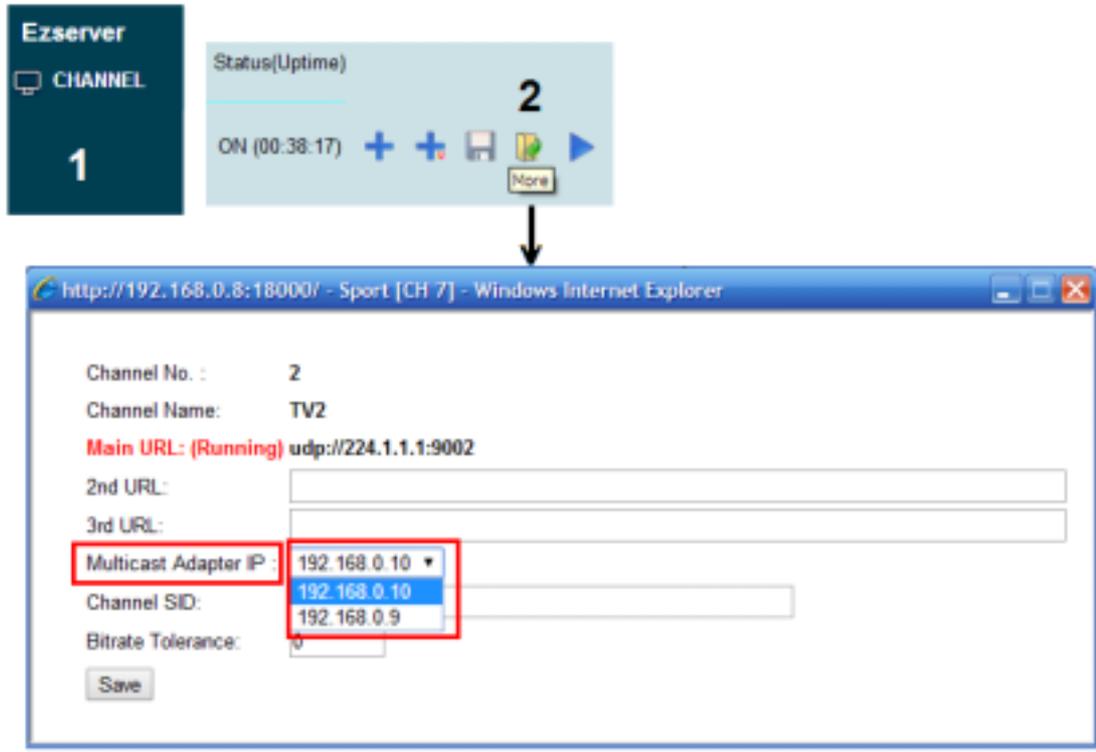
The screenshot shows the Ezserver interface. On the left, a sidebar shows 'CHANNEL 1' with a '1' icon. The main area shows 'Status(Uptime)' and 'ON (00:38:17)' with control icons. A 'More' icon is highlighted with a '2' above it. Below, a browser window shows the configuration page for channel 2. The 'Main URL' is 'udp://224.1.1.1:9002'. The 'Multicast Adapter IP' dropdown is set to '192.168.0.10'. The 'Channel SID' dropdown is set to '192.168.0.9'. A 'Save' button is at the bottom.

2. select one IP for multicast stream in the same LAN.

## Multiple network input cards

When a server has 2 network cards, you can set the 2<sup>nd</sup> card for multicast input from an encoder. Please follow the below steps:

1. Click More icon of the channel as below:



2. select one IP for multicast stream in the same LAN.
3. login panel to set UDP Multicast URL in channels.

For example:

An encoder can stream multicast videos by 224.1.1.1:9001, 224.1.1.2:9001 and 224.1.1.3:9001 to the LAN with the 2<sup>nd</sup> card.

Channel	Channel Name	Media Source
1	Local Stream 1	udp://224.1.1.1:9001
2	Local Stream 2	udp://224.1.1.2:9001
3	Local Stream 3	udp://224.1.1.3:9001

## 6. System maintenance

### Administrator password change

Use Internet browser such as *Internet Explore*, *Chrome*, *Firefox* or *Safari* to enter System Management by the URL path : [http://Server\\_IP:18000/admin/index.htm](http://Server_IP:18000/admin/index.htm)

Login Panel by user id "root" and password, then click User Button to change root password.

### System shutdown

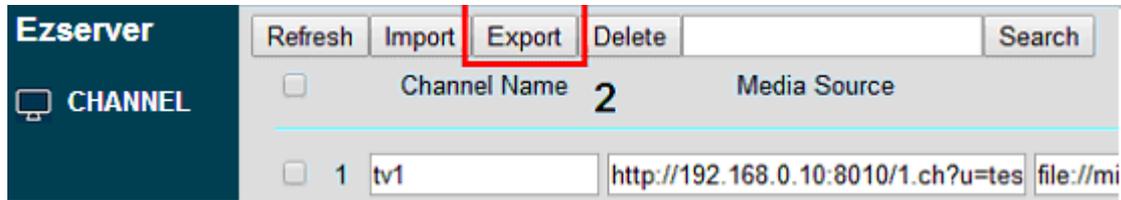
#### **Windows platform**

- **Select Action:Shutdown in Ezserver Window.**
- **Login Digital Signage Panel and click shutdown button**

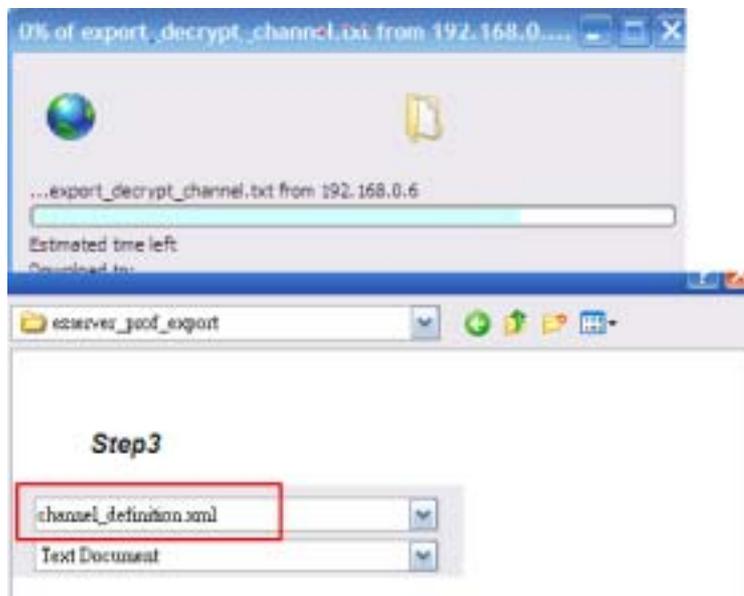
## Backup channel source URLs

Follow the below steps to export current channel definition to other ezservers:

Step1: Click "Channel", then click Export button



Step2: Save it by channel\_definition.xml



Step4: copy channel\_definition.xml to other ezserver folders

## System update

### Windows platform

go to [http://www.ezhometech.com/download\\_signage.htm](http://www.ezhometech.com/download_signage.htm) to download ezserver\_signage\_update.zip, then extract the files into ezserver directory.

## Channel Input Re-Connection

Sometimes HTTP or RTMP input of an Ezserver channel is dropped that is happened by some network failure or input server closed and etc..There are two ways for dropped channels, one is Ezserver will automatically re-connect the dropped channels after seconds, the other is by refresh channels via Ezserver panel manually.

1. For automatically reconnection, there are two options, one is by channel\_reconnection\_interval in ezserver\_config.txt , the other is default setting.

For example:

- If `channel_reconnection_interval=7`, Ezserver will reconnect the dropped channel after 7 seconds.
- The default option is that Ezserver reconnects it after 5 sec., if failed to get video stream from input link, it will try after 10 sec., 15 sec., 20 sec., 25 sec., 30 sec., 10 min.. If the link is still dropped after 10 min, Ezserver will try it again.

2. For manually re-connection, you can login Ezserver panel and use refresh button of the dropped channel to do re-connection.

## Notice video / image setting

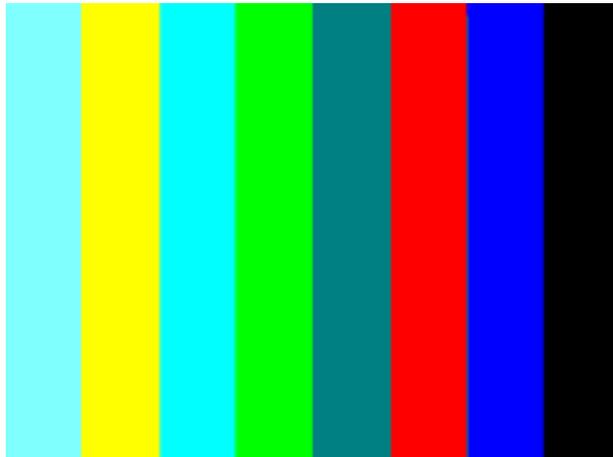
### Offline Channel Setting

When a channel is not available for players as source url fails, Administrator can set a default image (PNG or JPG format) or video for this case to let users know it. The default image is in `admin/channel_off.PNG`

Set `channel_off_video_path=path` in `ezserver_config.txt`, then start ezserver again.

Ex: `channel_off_video_path=media/videos/channel_off.flv`

or `channel_off_video_path=admin/channel_no_signal.PNG`



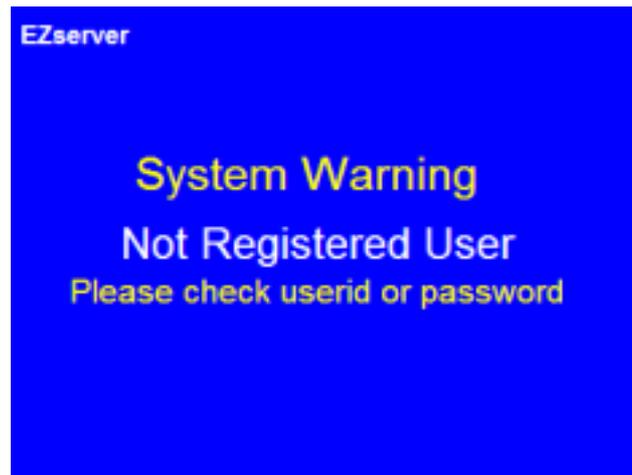
### Not Registered User Setting

When a user connects ezserver with wrong userid or password, administrator can set a default image (PNG or JPG format) or video to inform the user. The default image is in `admin/not_registered_user.PNG`.

Set `unregistered_user_video_path=path` in `ezserver_config.txt`, then start ezserver again.

Ex: `unregistered_user_video_path=media/videos/not_registered_user.flv`

or `unregistered_user_video_path=admin/not_registered_user.PNG`



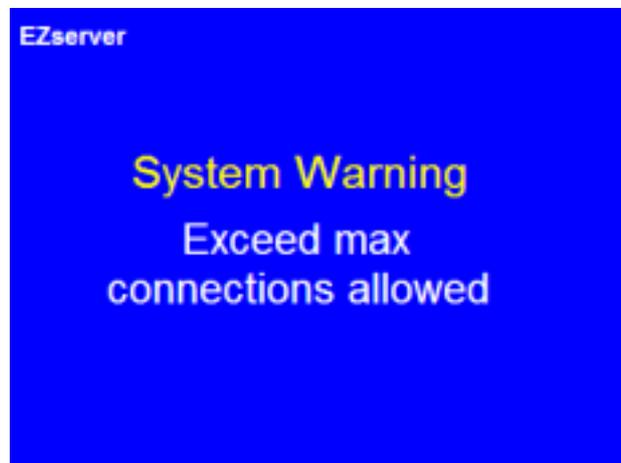
### Exceed max connections allowed

When a user connects ezserver with multiple connections at same time, administrator can set a default image (PNG or JPG format) or video to inform the user. The default image is in admin/ exceed\_max\_connections\_allowed.PNG.

Set `exceed_max_connects_allowed_video_path=path` in `ezserver_config.txt`, then start ezserver again.

Ex: `exceed_max_connects_allowed_video_path==media/videos/exceed_max_connections_allowed.flv`

or `exceed_max_connects_allowed_video_path==admin/exceed_max_connections_allowed.PNG`



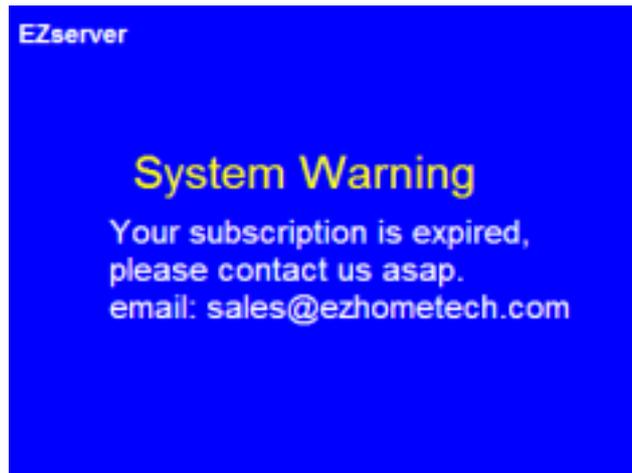
### Time-Expired Setting

When a user subscription is expired and need to notice him, Administrator can set a default image (PNG or JPG format) or video for this case to inform the user. The default image is in admin/time\_expired.PNG

Set `time_expired_video_path=path` in `ezserver_config.txt`, then start ezserver again.

Ex: `time_expired_video_path=media/videos/time_expired.flv`

or `time_expired_video_path=admin/time_expired.PNG`

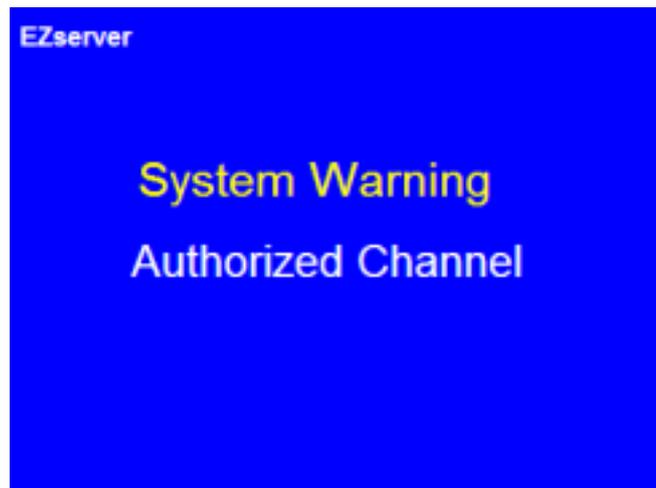


## Unauthorized Channel Setting

When a user wants to watch unauthorized channels, administrator can set a default image (PNG or JPG format) or video to inform the user. The default image is in admin/authorized\_channel.PNG.

Set `authorized_channel_video_path=path` in `ezserver_config.txt`, then start ezserver again.

Ex: `authorized_channel_video_path=media/videos/ authorized_channel.flv`  
or `authorized_channel_video_path=admin/authorized_channel.PNG`



## System diagnostics

Enable Ezserver system log as below:

- Replace "system\_log=0" by "system\_log=1" in `ezserver_config.txt`.
- Restart Ezserver, then it will create a system log file, called "system.log" in Ezserver folder.
- Shutdown Ezserver by Ezserver System Management to get the whole log information.
- If "system\_log=xxxx" : Ezserver logs xxx lines in system.log. e.g. "system\_log=1000" in `ezserver_config.txt`, Ezserver logs 1,000 messages in the file.
- When system checks any error, it will dump information to system.dump.

## 7. Encoder integration

### RTMP Encoder to Ezserver

Ezserver supports RTMP Encoder as Adobe FME, XSplit and etc..

First set the below setting in Ezserver,

- Define Channel Name and “rtmpencoder” keyword in Channel Management.
- The below example defines Channel Name : *robert* and Medis Source : *rtmpencoder*

Channel	Channel Name	Media Source
1	robert	rtmpencoder
2	CTV	rtmp://213.205.104.131/f24_live/f24_live

- Set rtmp port to 1935 in Streaming Ports Panel

### Ezserver

SETTING

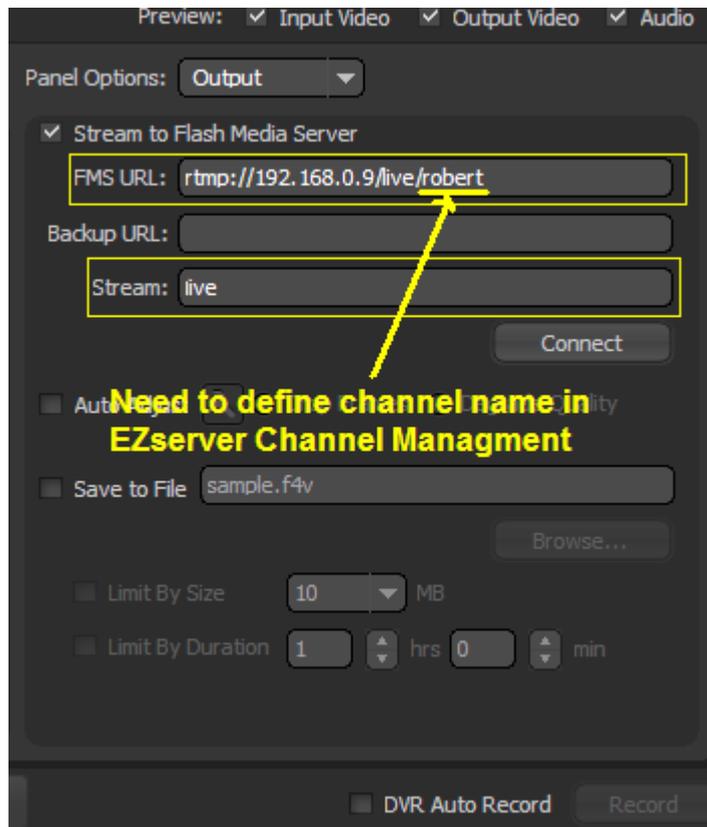
3. HTTP port:  -- HTTP Streaming Port for players

4. RTMP port:  -- RTMP Streaming Port for players

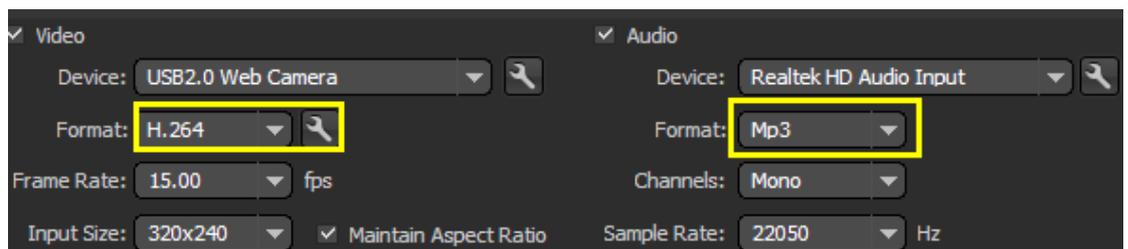
5. RTSP port:  -- RTSP Streaming Port for players

Adobe FME Setting:

- **Set FMS URL as the below**
  - ◆ **Syntax: rtmp://serverip:port/live/channel\_name.**
  - ◆ **ex. : rtmp://192.168.0.9/live/robert**
  - ◆ **ex. : rtmp://192.168.0.9:1938/live/robert (If rtmp port is not 1935 in Ezserver Panel Setting, it needs to assign port no. into FRM URL)**



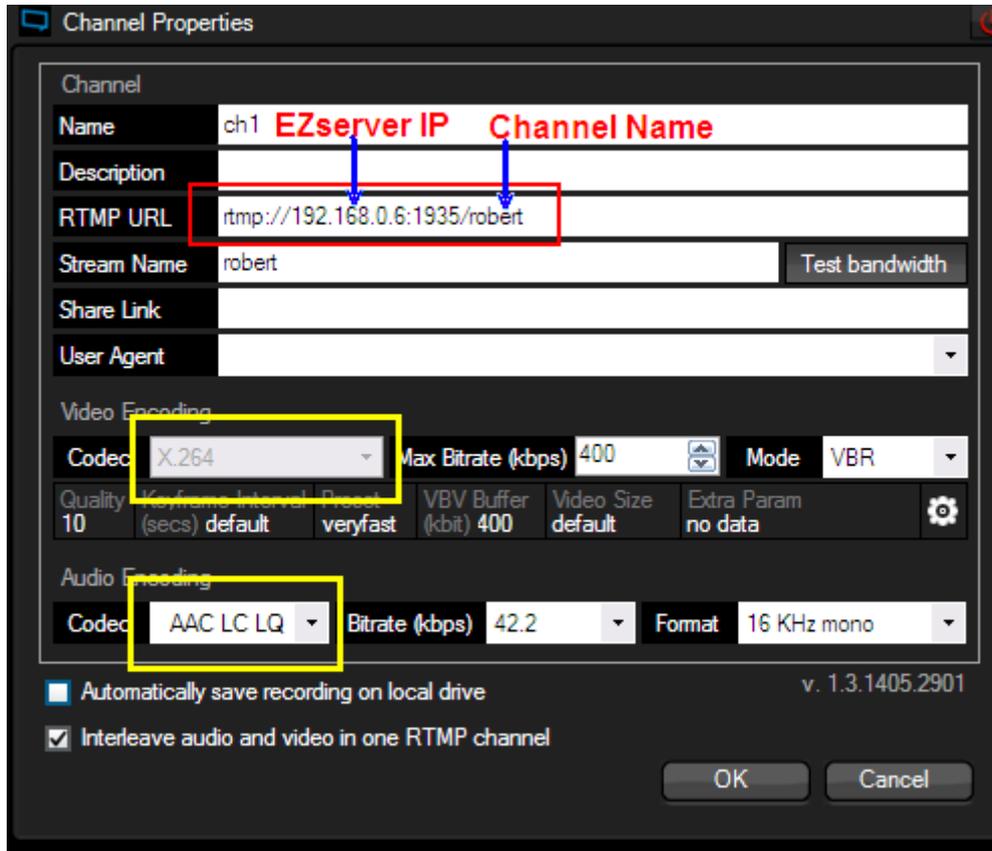
- **Select Video Format : H.264 and Audio format : Mp3/AAC, Stereo**



- **Select one of three bitrate options**

XSplit Setting:

- Set RTMP URL as the below
  - ◆ Syntax: `rtmp://serverip:port/channel_name`.
  - ◆ ex. : `rtmp://192.168.0.6/robert`
  - ◆ ex. : `rtmp://192.168.0.6:1938/robert` (If rtmp port is not 1935 in Ezserver Panel Setting, it needs to assign port no. into RTMP URL)



- Select Video Format : X.264 and Audio format : AAC, Stereo

## FFMPEG Encoder to Ezserver

Install ffmpeg first by `ffmepg.sh` and use `udp.sh` to send video into ezserver.

1. Install ffmpeg as below:

- Login your server by putty
- `cd /root/ezserver_prof`
- `chmod 777 ffmpeg.sh`
- `./ffmpeg.sh`

After above steps, ffmpeg is installed in `/ezserver_prof/transcoder` folder.

2. Create new channel in Ezserver Panel as below:

- Login Ezserver Panel
- Click Channel button
- Define Channel Name and udp port
- The below example defines Channel Name : **robert** and Medis Source :  
`udp://9001`

Channel	Channel Name	Media Source
1	robert	udp://9001
2	CTV	rtmp://213.205.104.131/f24_live/f24_live:

3. Change the below http url to your source url in `udp.sh` as below:

- `ffmpeg -i http://192.168.1.100:8001/1:0:1:135:2:1:5F0B1BF:0:0:0: -f mpegts  
udp://127.0.0.1:9001?pkt_size=1316`

4. Send transcoding stream into Ezserver as below:

- Login your server by putty
- `cd /root/ezserver_prof`
- `cd transcoder`
- `chmod 777 udp.sh`
- `./udp.sh`

5. Check channel status in Ezserver Panel as below:

- Login Ezserver Panel
- Click Channel button
- Check the channel status

More technical information for ffmpeg to ezserver as below:

- WebCam or Capture Card Input and RTMP Output
  - Define Channel Name and “rtmpencoder” keyword in Channel Management.
  - The below example defines Channel Name : **robert** and Medis Source : **rtmpencoder**

Channel	Channel Name	Media Source
1	robert	rtmpencoder
2	CTV	rtmp://213.205.104.131/f24_live/f24_live

- Use the below command to get the video/audio capture name from your window pc.

- ◆ `ffmpeg -list_devices true -f dshow -i dummy`

- Rtmp command syntax is below:

- ◆ `ffmpeg -f dshow -i video="video device name":audio="audio device name" -preset ultrafast -vcodec libx264 -b 300k -bt 300k -s 320x240 -acodec aac -ar 44100 -ab 128k -strict experimental -f flv rtmp://192.168.0.9/live/robert`

ex.

```
ffmpeg -f dshow -i video="USB2.0 Web Camera":audio="Realtek HD Audio Input" -preset ultrafast -vcodec libx264 -b 300k -bt 300k -s 320x240 -acodec aac -ar 44100 -ab 128k -strict experimental -f flv rtmp://192.168.0.9/live/robert
```

- RTMP Input and RTMP Output
  - Define Channel Name and “rtmpencoder” keyword in Channel Management.
  - The below example defines Channel Name : **robert** and Medis Source : **rtmpencoder**

Channel	Channel Name	Media Source
1	robert	rtmpencoder
2	CTV	rtmp://213.205.104.131/f24_live/f24_live

- Rtmp command syntax is below:
- `ffmpeg -i rtmp://input_server_ip:port/live/kid -preset ultrafast -vcodec libx264 -b`

```
300k -bt 500k -s 720x480 -acodec aac -ar 44100 -ab 128k -strict experimental -f
flv rtmp://ezserver_ip/live/robert
```

ex.

```
ffmpeg -i rtmp://211.23.12.11:1935/live/kid -preset ultrafast -vcodec libx264 -b 300k
-bt 500k -s 720x480 -acodec aac -ar 44100 -ab 128k -strict experimental -f flv
rtmp://192.168.0.8/live/robert
```

- RTMP input and UDP transport Stream Output
  - Define Channel Name and udp port in Channel Management.
  - The below example defines Channel Name : **robert** and Medis Source :  
udp://9001

Channel	Channel Name	Media Source
1	robert	udp://9001
2	CTV	rtmp://213.205.104.131/f24_live/f24_live:

ex.

```
ffmpeg -i rtmp://211.23.12.11:1935/live/kid -preset ultrafast -vcodec libx264 -b 300k
-bt 500k -s 720x480 -acodec aac -ar 44100 -ab 128k -strict experimental -f mpegts
udp://192.168.0.8:9001?pkt_size=1316
```

- RTMP Input and RTP transport Stream Output
  - Define Channel Name and udp port in Channel Management.
  - The below example defines Channel Name : **robert** and Medis Source :  
rtp://9001

Channel	Channel Name	Media Source
1	robert	rtp://9001
2	CTV	rtmp://213.205.104.131/f24_live/f24_live:

ex.

```
ffmpeg -i rtmp://211.23.12.11:1935/live/kid -preset ultrafast -vcodec libx264 -b 300k
-bt 500k -s 720x480 -acodec aac -ar 44100 -ab 128k -strict experimental -f mpegts
rtp://192.168.0.8:9001?pkt_size=1328
```

## Satellite Device to Ezserver

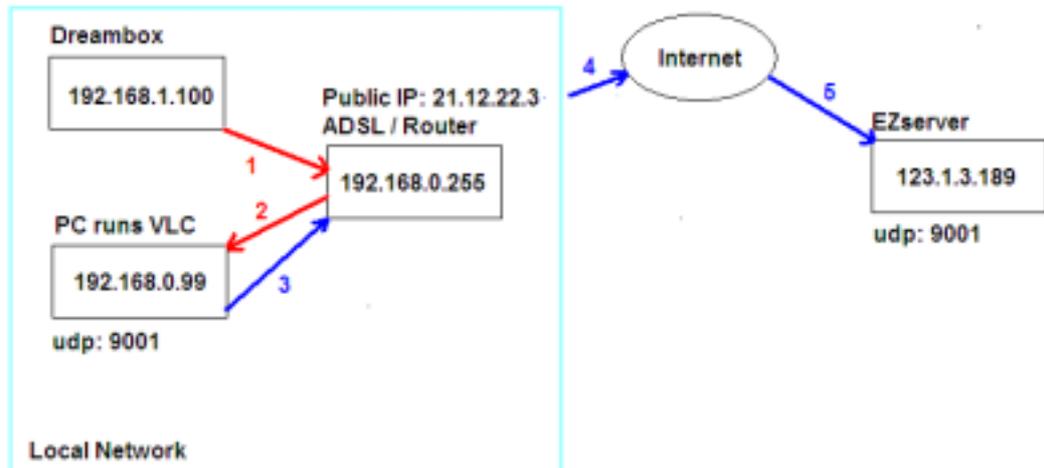
- Dreambox HTTP input and UDP transport Stream Output
  - Create a new channel with udp port in Meida Source in Channel Window.
  - The below example defines Channel Name : **robert** and Medis Source :  
udp://9001

Channel	Channel Name	Media Source
1	robert	udp://9001
2	CTV	rtmp://213.205.104.131/f24_live/f24_live:

- Run VLC command to get http stream and transcode it to Ezserver.
- Check Channel Status ON/OFF

ex.

- a. Ezserver IP: 123.1.3.189
- b. Dreambox IP is local IP (192.168.1.100)
- c. VLC PC IP is local IP (192.168.1.99)
- d. The stream flow is Dreambox->VLC PC->Ezserver.



- e. The vlc command is as below:

```
cvlc -vvv http://192.168.1.100:8001/1:0:1:135:2:1:5F0B1BF:0:0:0 --sout '#transcode{vcodec=h264,vb=750,fps=24,scale=1,acodec=mp4a,ab=96,channels=2,samplerate=44100}:udp{dst=123.1.3.189,port=9001,mux=ts}'
```

## Multicast Encoder to Ezserver

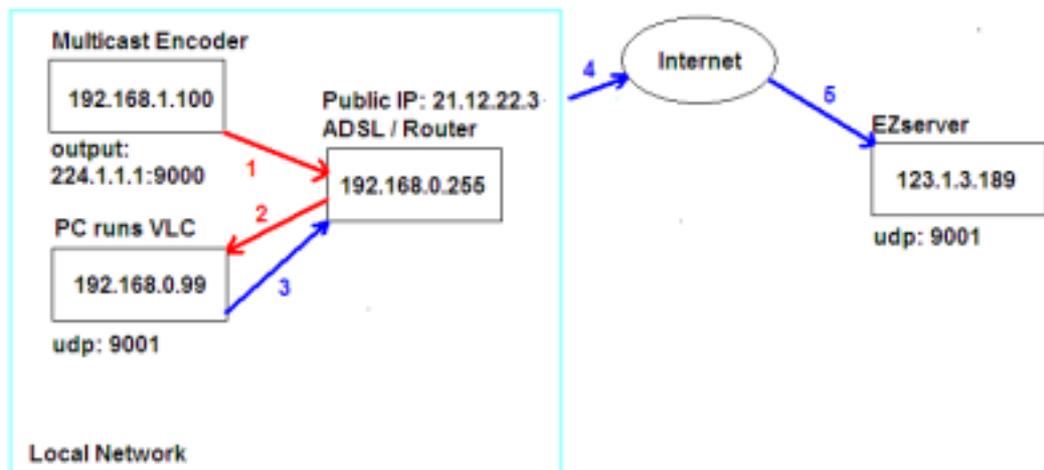
- Multicast UDP input and UDP transport Stream Output
  - Create a new channel with udp port in Meida Source in Channel Window.
  - The below example defines Channel Name : **robert** and Medis Source :  
udp://9001

Channel	Channel Name	Media Source
1	robert	udp://9001
2	CTV	rtmp://213.205.104.131/f24_live/f24_live:

- Run VLC command to get multicast udp stream and transcode it to Ezserver.
- Check Channel Status ON/OFF

ex.

- a. Ezserver IP: 123.1.3.189
- b. Multicast Encoder IP is local IP (192.168.1.100)
- c. VLC PC IP is local IP (192.168.1.99)
- d. The stream flow is Multicast Encoder->VLC PC->Ezserver.



- e. The vlc command is as below:

```
cvlc -vvv udp://224.1.1.1:9000 --sout
'#transcode{vcodec=h264,vb=750,fps=24,scale=1,acodec=mp4a,ab=96,channels=2,
samplerate=44100}:udp{dst=123.1.3.189,port=9001,mux=ts}'
```

## 8. Digital Signage Player

Android devices

### Software Requirement

Items	Version
EZserver Digital Signage Panel	Release 2.0
Google Android	Above 4.x, 5.x, 6.x

### Hardware Requirement

Items	Specification
Processor	Above 1.0GHz
Memory	At least 1GB for 200 channels
Network Interface	802.11 a/b/g/n
Disk Space	248K bytes

### Setting

When you start Digital Signage Player first time, you have to input EZserver Information into the Setting. The Setting includes User Name, Password, EZserver Domain Name / IP and Port No. as below:



**Signage Player**

User Name : test

Password : \*\*\*\*

EZserver IP : 192.168.0.10

Port No. : 1700

Save Cancel

[www.ezhometech.com](http://www.ezhometech.com)

## 9. HTML Access Protection

HTML Access Protection allows per-directory access control requiring a username or groupname to access the content. It defines them in a xml file that is stored in ezserver\_prof/security/folder\_access.xml that has 3 tags, <folder>, <userid> and <group>. It can define the folder accessed by a user or by a group.

### 1. Example

```
<?xml version="1.0" encoding="iso-8859-1" ?>
<folder>admin</folder>
<userid>root</userid>
<folder>security</folder>
<userid>root</userid>
<folder>users</folder>
<userid>root</userid>
<folder>middleware</folder>
<group>golden</group>
<folder>middleware</folder>
<group>basic</group>
```

## 10. Country Filter

Country Filter is to filter all players by Countries to access video from Ezserver.

Country Filter defines them in a xml file that is stored in ezserver\_prof/security/security\_definition.xml.

### 1. Example for accepted IP

```
<accepted_country>TAIWAN</accepted_country>
<accepted_country>USA</accepted_country>
<accepted_country>CHINA</accepted_country>
```

\* Country Name must be capital and defined in users/user\_ip\_country.csv

2. Use reload filter button in *Online Player panel* to reload new definition of the xml file.