

March 3, 2021

**Publishing to UbiCast MediaServer from Extron SMP 300 Series**



The following notes provide guidance on setting up Extron SMP 300 Series for publishing to UbiCast MediaServer. For more information, please contact your Extron Application Engineer.

**Extron Products Affected:**

SMP 351	60-1324-01 / 60-1324-11
SMP 351 3G-SDI	60-1324-02 / 60-1324-12
SMP 352 - 400 GB SSD	60-1634-11
SMP 352 3G-SDI - 400 GB SSD	60-1634-12

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**SPECIAL NOTES**

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Publishing to 3<sup>rd</sup> party services requires a user to have an account with those services. Accounts with third party providers are the responsibility of those maintaining the stream and its content.

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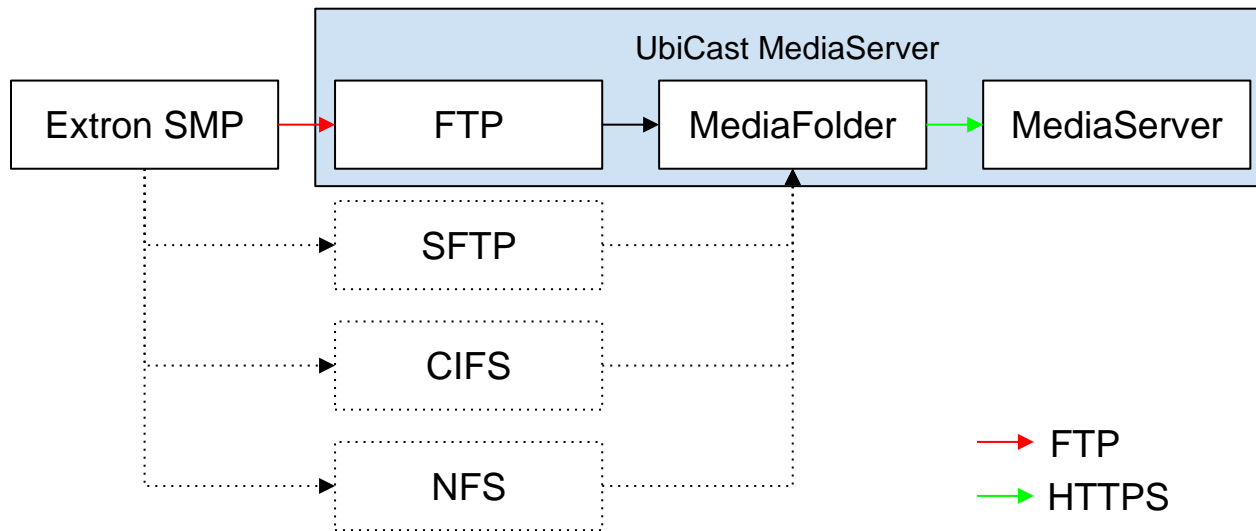
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# 1. Architecture

To enable publishing to UbiCast MediaServer from Extron SMP 300 Series, the optional MediaFolder component is required (except for a Cloud MediaServer, which still requires a one-time setup).

The MediaFolder component acts as watch folder, which will automatically republish video files that are being pushed to specific folders into the relevant MediaServer portal (e.g. customer.UbiCast.tv).



FTP is the preferred way of integrating, but other protocols may be used outside of a Cloud MediaServer.

UbiCast will provide you with the required FTP settings and credentials when deploying your MediaServer for you to configure the Extron SMP properly.

Additionally, this documentation describes the optimal device-specific configuration.

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## 2. Technical Prerequisites

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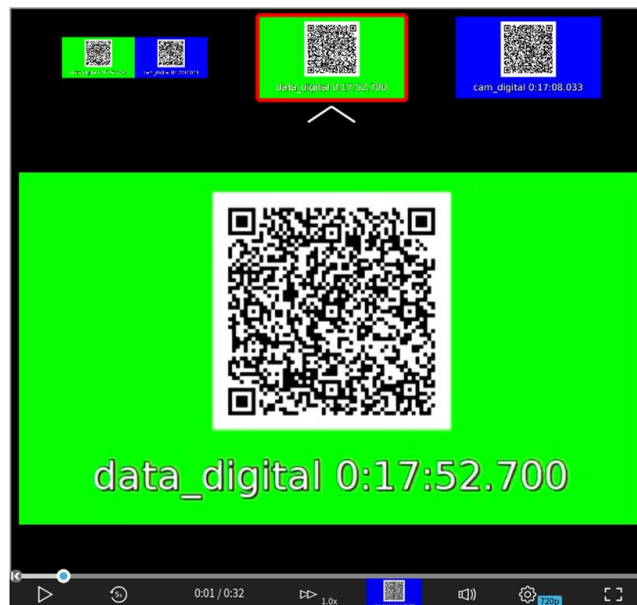
Please inform UbiCast about public IP address of the Extron Streaming Media Processors from which you need to publish media, so that they can authorize them to publish.

As the transfer uses FTP, the outgoing firewall must allow such traffic. Optimizing the premises' firewall for FTP is out of scope of this documentation and should be handled by your IT services.

The user created in MediaServer should use the "EasyCast" profile as well as the "Slides edit" permissions.

Even if the Extron SMP 300 Series allows it, do not change the layout after the initial deployment (especially not during recording), otherwise:

- the slides and the keywords will not be detected properly (they are expected to be in a preconfigured area)
- it will not be possible to allow the users to choose the channel they want to watch (see capture below)



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## 3.1 Extron SMP 300 Series – Supported features

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### Scheduling

- Create a specific user account on MirisManager for allowing the SMP device(s) to fetch the calendar

### Content upload and publishing

- The preferred protocol is FTP
- Metadata (See 3.1.2)
- Chapter Marks
- If the layout is properly setup by UbiCast in MediaFolder, the slides and keywords will be detected in the designated area related to the Content input
- Transcoding feature on UbiCast MediaServer is mandatory

### Live Streaming

- RTMP Push

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## 3.2 Publishing: Supported Metadata

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Supported metadata fields are <sup>[1]</sup>:

- **Title** → dc:title → video title
- **Description** → dc:description → description
- **Presenter** → dc:creator → speaker\_name;
  - if dc:creator contains an email address, the speaker\_email field will be mapped instead, and the speaker\_name will contain the email prefix with dots replaced by spaces (for instance, if dc:creator contains "[john.doe@domain.com](mailto:john.doe@domain.com)", speaker\_name will contain "john doe");
  - if dc:creator contains "John Doe <[john.doe@domain.com](mailto:john.doe@domain.com)>", the fields will be mapped accordingly too (speaker\_name will contain John Doe and speaker\_email will contain john.doe@domain.com)
- **Location** → location
- **SMP Date/Time** → dc:date (ISO 8601) → creation date
- **Course Name** (dc:course) → MediaServer channel

The MediaServer channel argument can take the following values:

- **"mscid-c1251427e17b7o2plfgw"**: the unique identifier of the channel (20 characters beginning with "c" and containing only letters and digits), see previous section
- **"mscpath-Main/Sub/Test"**: suffix is parsed and split on "/", and defines the path of the channels which will be recursively created if needed
- **"mscspeaker"**: if this value is provided in the "Course Name" field, the media will be placed into the personal channel of the speaker if and only if the email of the speaker has been provided in the "Presenter" field
- **"mscref-12345"**: suffix is an external reference field, used for special integration purposes

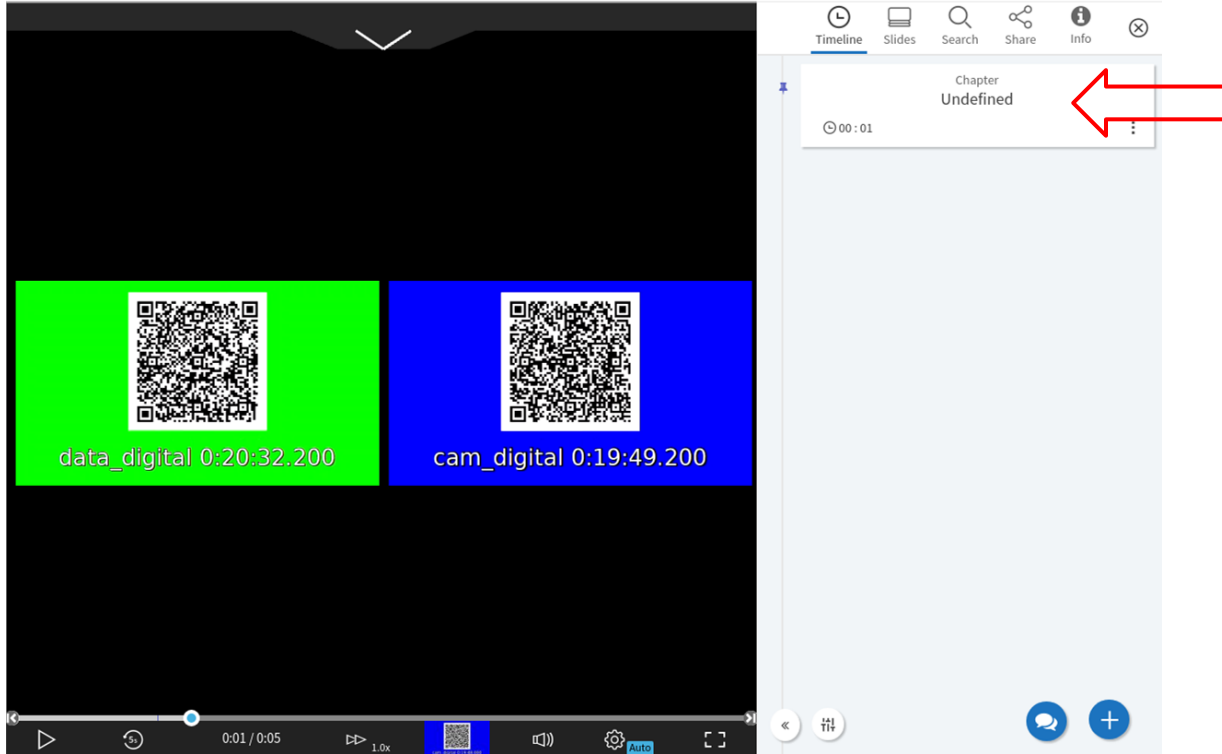
<sup>[1]</sup> Mapping format: SMP WebUI/SIS → SMP Manifest File → UbiCast MediaServer

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- **Markers will be imported as chapters.**



Note that, when creating a Marker with the button located on the unit, via the webUI or via SIS commands , no title is provided, which will result in a chapter named “Undefined” in the player.

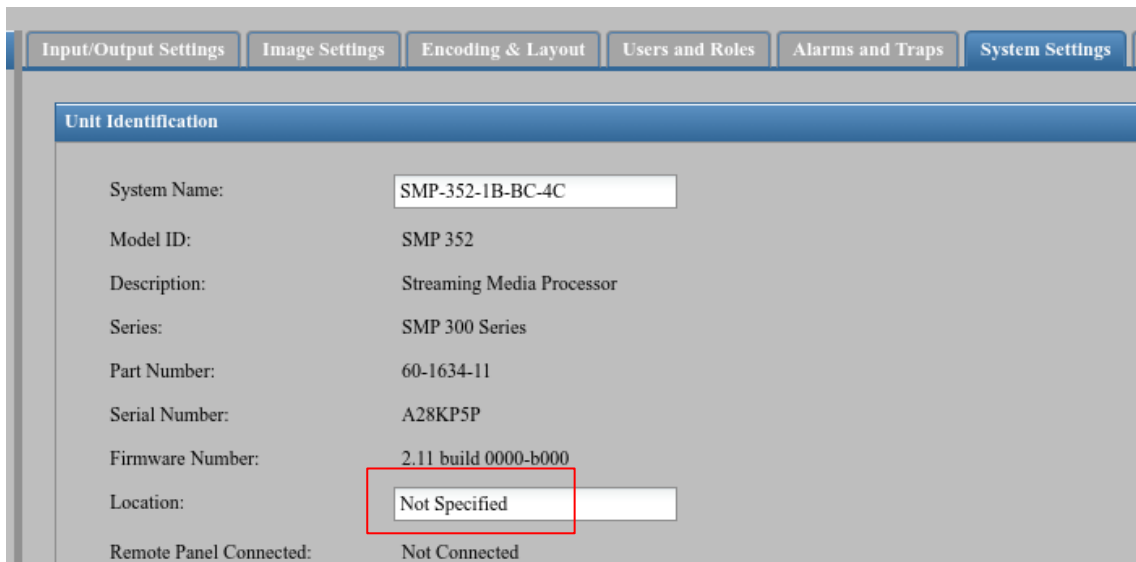
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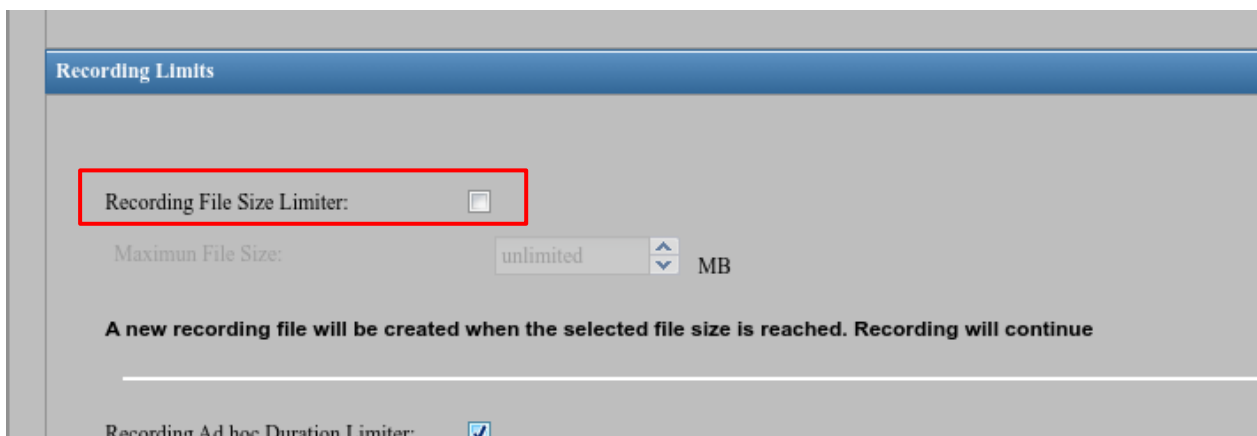
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### 3.3 Publishing: Configuration

- On the SMP WebUI → System Settings → Unit Identification, set the system default location:



- On the SMP WebUI → System Settings → recording limits, DISABLE the recording file size limiter

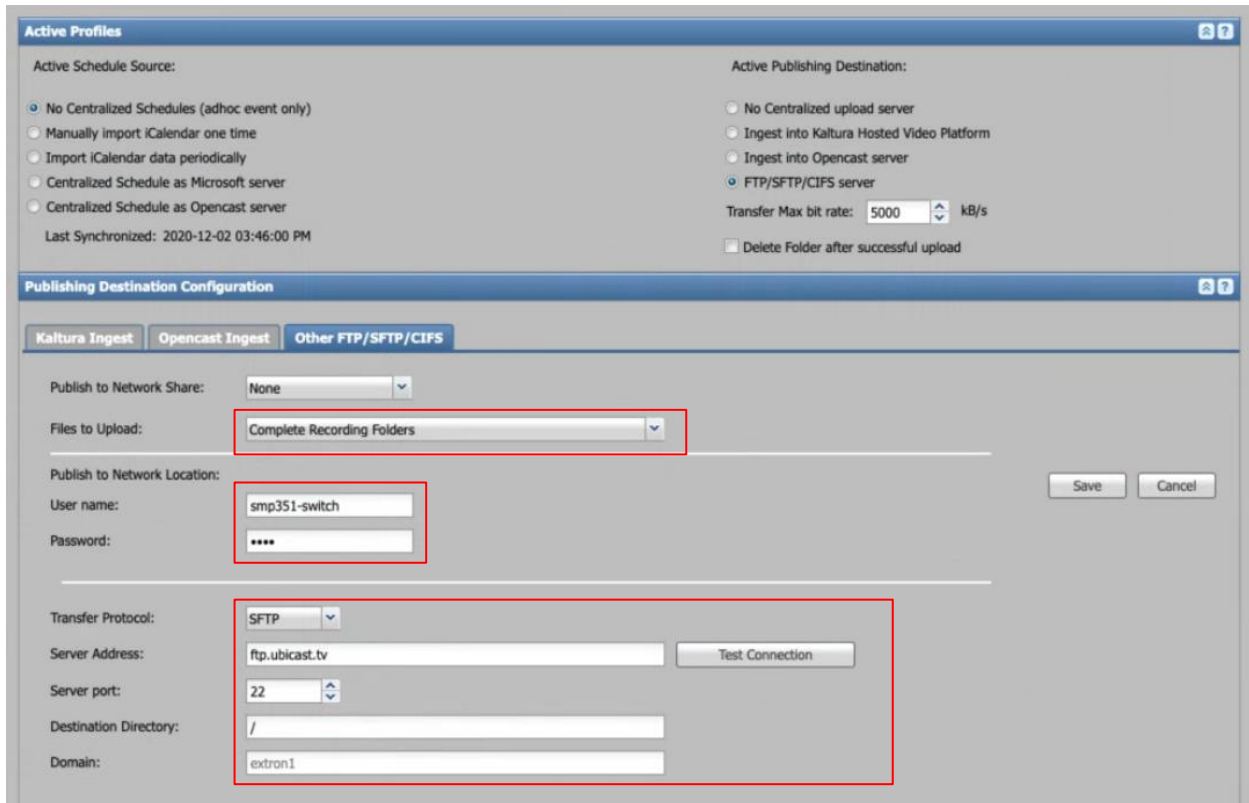


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- On the SMP WebUI → Scheduled events → Publish settings, select “ Other FTP/SFTP/CIFS “ and use provided settings



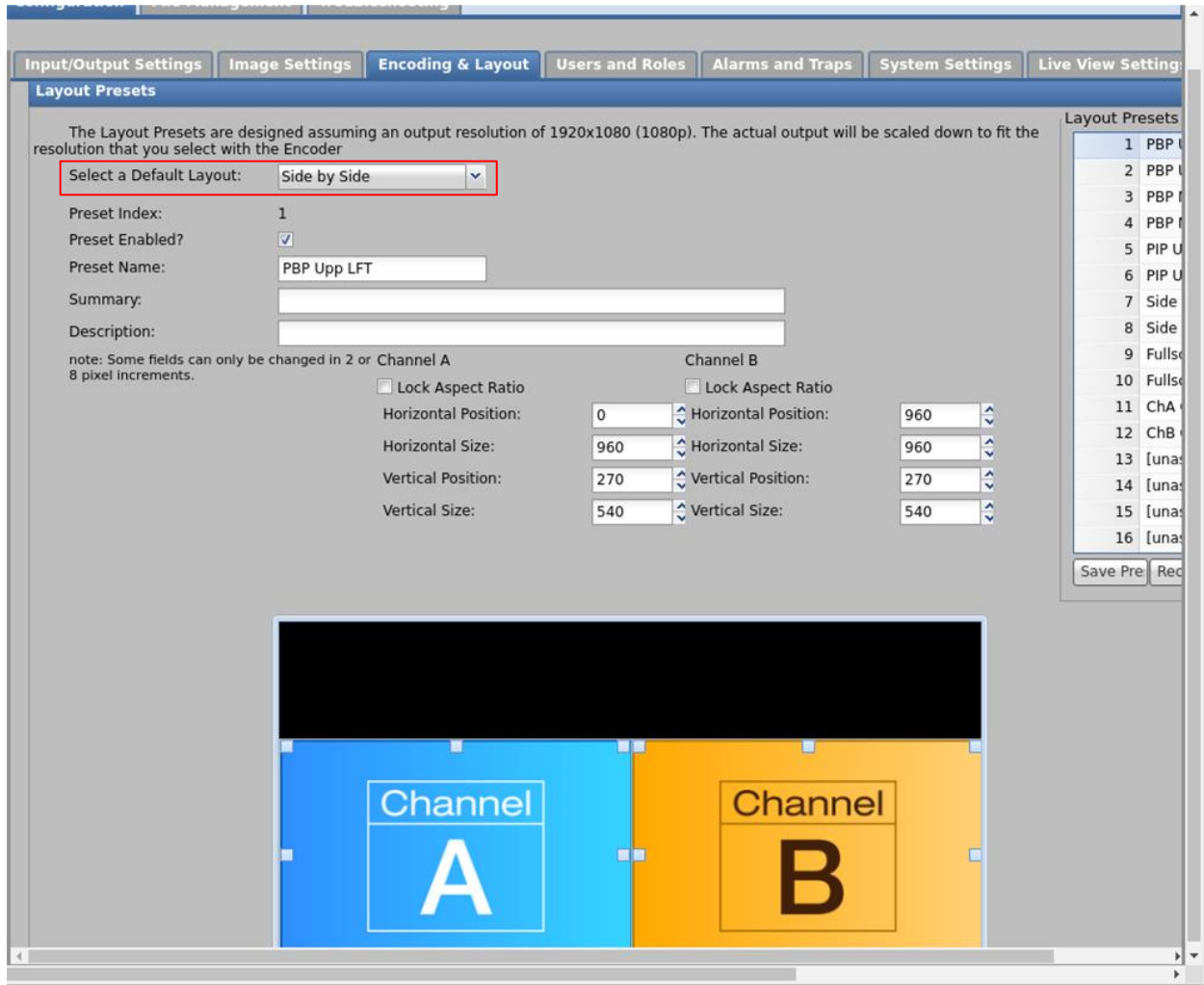
- Use the values provided by the UbiCast deployment service (usually available for you at <https://mirismanager.UbiCast.eu/fleet/passwords/>). Note that the domain field is not used, and the complete server URL should be in “server address” field.

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- On the SMP WebUI → Configuration → Encoding and Layout → Layout Presets, recall the “side by side” layout and set it as “default Layout Preset”



Note: The user could eventually create a 30/70 profile, but do not use an overlaying layout nor any logo, nor allow the users to dynamically change the layout during recording if you want to enable the user-selectable streams in the video player

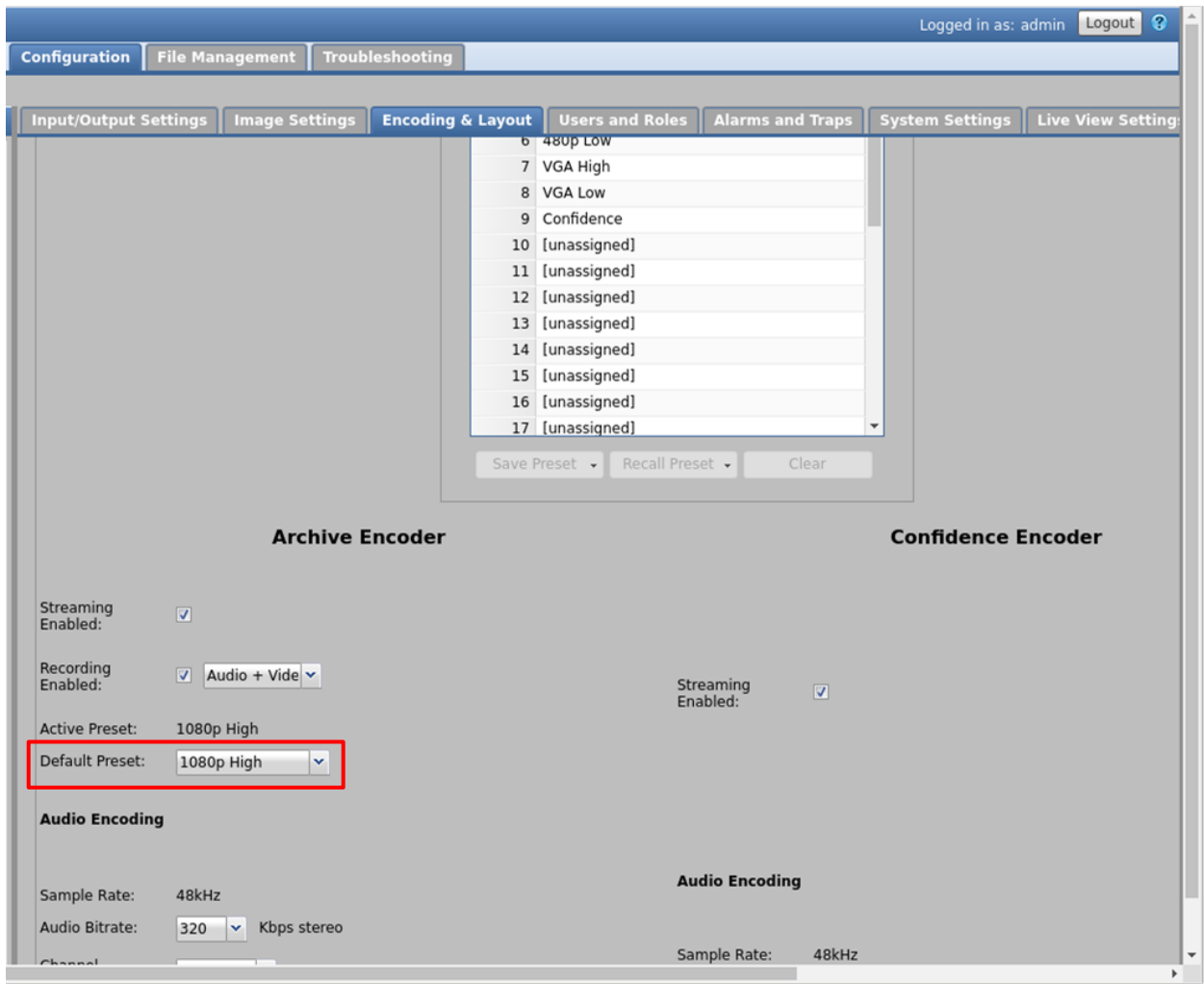
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- On the SMP WebUI → Configuration → Encoding and Layout → Encoding Preset, recall the “1080p High” preset and set it as default.

We recommend the highest quality profile because UbiCast MediaServer will transcode and produce several qualities automatically

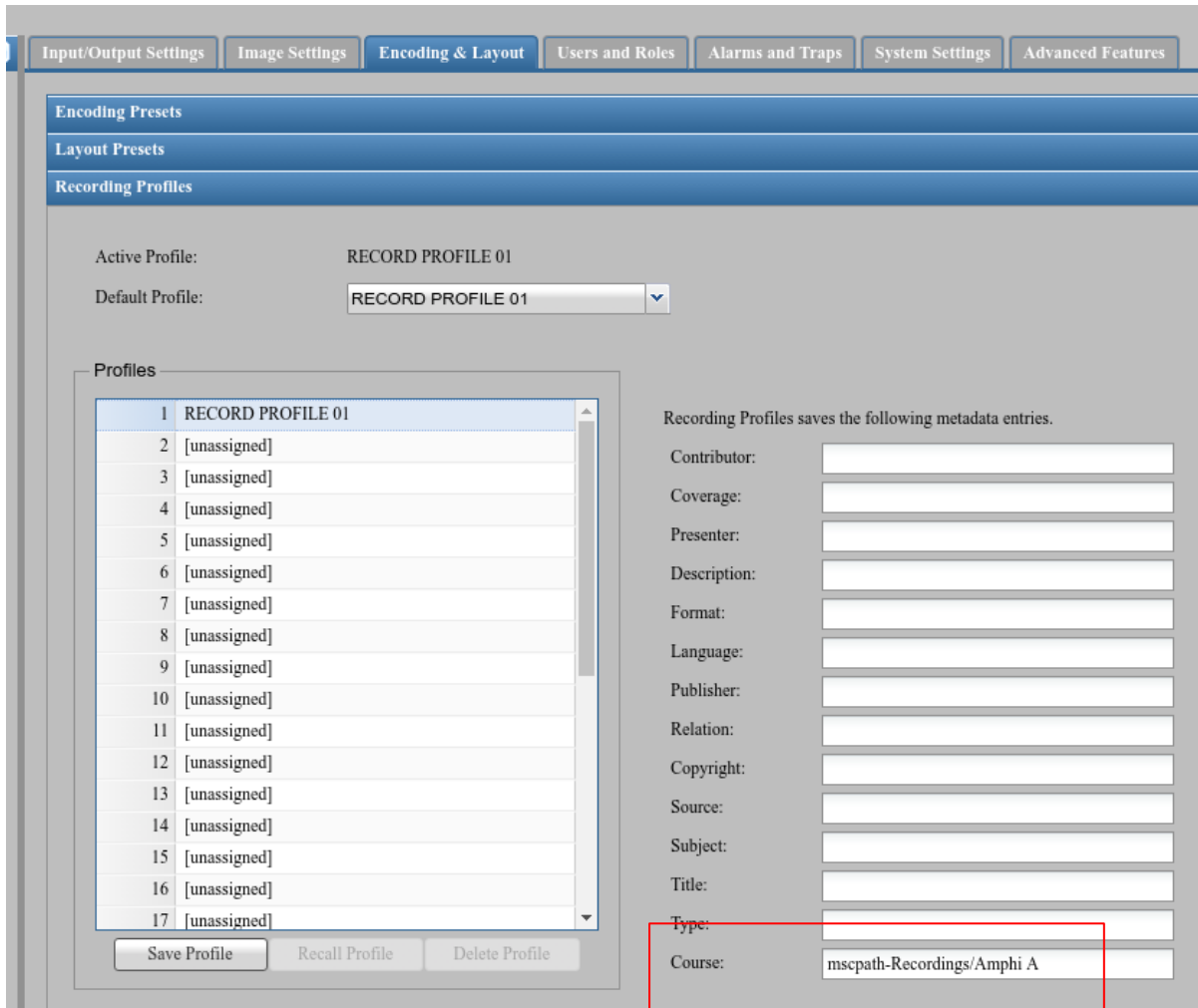


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- On the SMP WebUI → Configuration → Encoding and Layout → Recording Profiles, create a default recording profile with a Course default value set to a default channel dedicated to this system (e.g. mscpath-Recordings/Amphi A).  
 By doing this, all videos will be placed in the “Amphi A” subchannel of the “Recordings” MediaServer channel.



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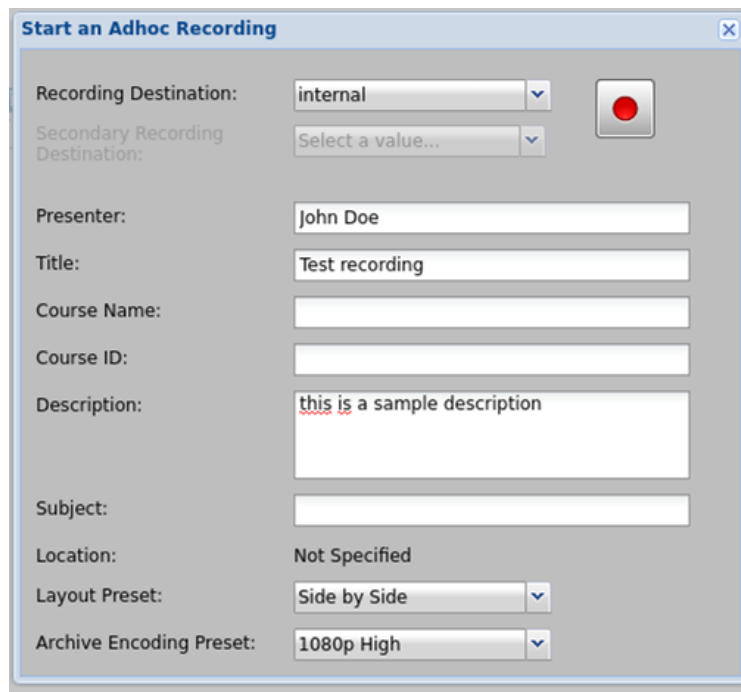
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## 3.4 Publishing: Usage

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- Start a recording via the web interface, front panel, or SIS commands.
- Depending on the passed metadata, they will automatically get mapped to the corresponding fields in MediaServer.
- Publishing will start automatically whenever the recording completes.



The screenshot shows a dialog box titled "Start an Adhoc Recording" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Recording Destination:** A dropdown menu set to "internal".
- Secondary Recording Destination:** A dropdown menu set to "Select a value...".
- Presenter:** A text input field containing "John Doe".
- Title:** A text input field containing "Test recording".
- Course Name:** An empty text input field.
- Course ID:** An empty text input field.
- Description:** A text area containing "this is a sample description".
- Subject:** An empty text input field.
- Location:** A dropdown menu set to "Not Specified".
- Layout Preset:** A dropdown menu set to "Side by Side".
- Archive Encoding Preset:** A dropdown menu set to "1080p High".

There is a red circular button with a white dot in the top right corner of the dialog, likely a "Start Recording" button.

Note: The recording must be done on the SMP Internal Drive

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### 3.5 Scheduling

- Create a specific user account on MirisManager for allowing the SMP device(s) to fetch the calendar; keep the login/password at hand

- Grant the permission to control all systems to this user; this will allow this user account to fetch calendars

- create a new system in the fleet

# Manager - Demo

Florent Thiery+admindemo



[Fleet](#)
[Calendar](#)
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[Admin](#)

[Systems](#)
[>\\_ Commands monitoring](#)
[Events monitoring](#)

[Display as blocks](#)
[Display settings](#)
[Static systems](#)
[Upgrade all systems](#)
[+ Add new system](#)

Location
 Online
 Last known status
 Last status update
 Remaining space
 Messages

- The User must define the Location to exactly the same value as the one you defined in the device or scheduling won't work.

[Systems](#)
[>\\_ Commands monitoring](#)
[Events monitoring](#)

**New system** [Back to fleet](#)

[Save all changes](#)

**Host name:**   
*Equivalent of system serial number. Should not be modified. The hostname cannot be changed once created.*

**Name:**

**Enabled:**   
*The system needs to be enabled (approved) by an admin to be allowed to receive commands.*

**Location:**

- Contact UbiCast Support to configure this special system for Extron; when done, the new system will expose a new "Planned commands" tab

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- Here's the "Planned commands" tab

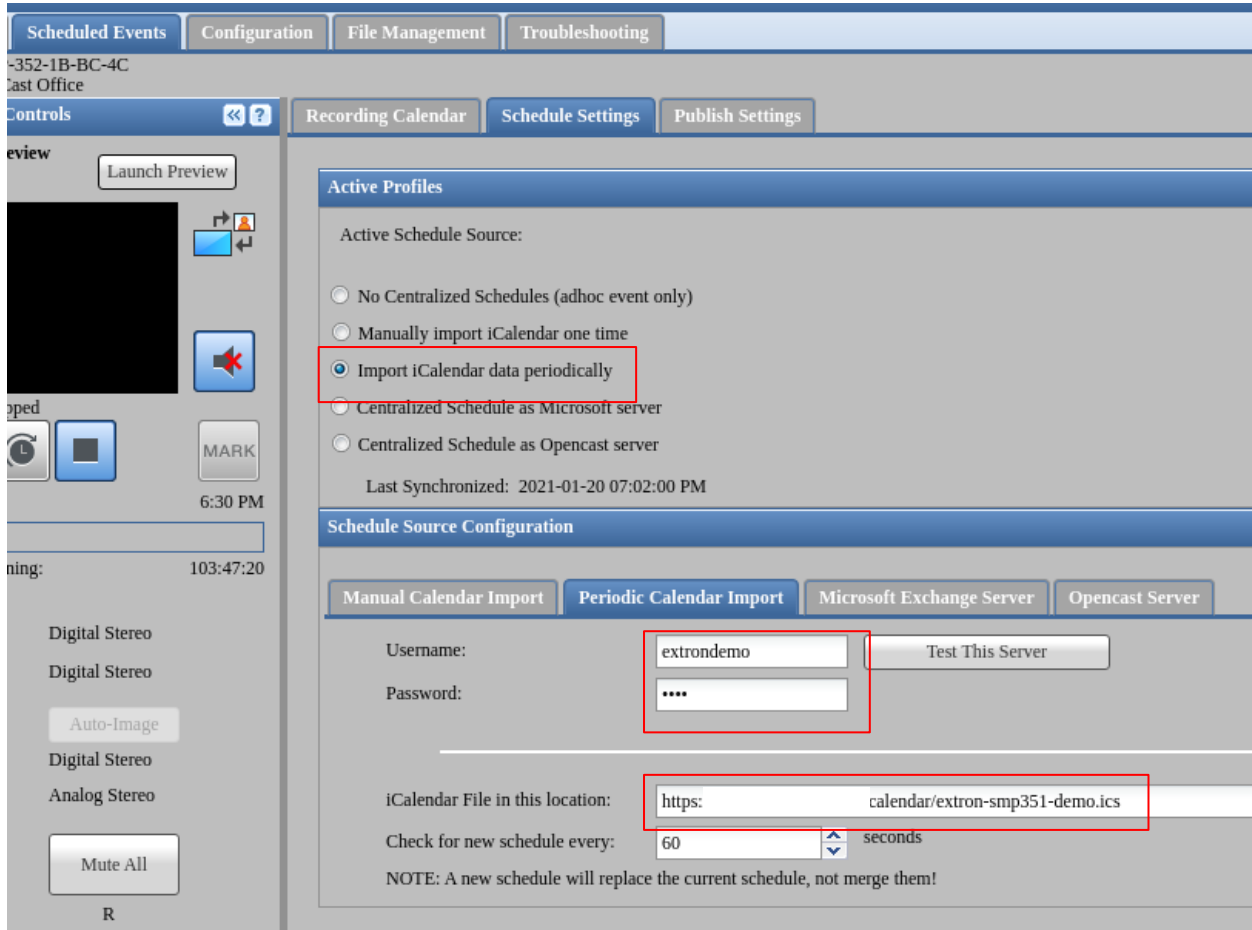
- At the bottom of the page is the calendar URL for SMP devices, copy this

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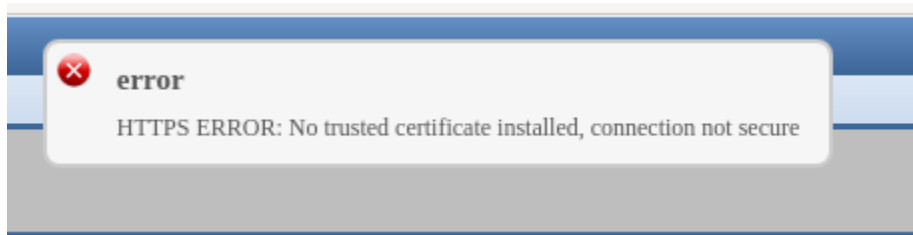
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- back to the device user interface, use the previously created login/password and URL to fill the “Periodic Calendar Import” settings, and select “Import iCalendar data periodically”



- If the “Test this server” reports the following error, you must upload an SSL CA certificate.



Note: CERTS folder under file management, you can load a standard cacert.pem like <https://curl.haxx.se/ca/cacert.pem>

If all goes well, the “Test this server” button should now trigger:

- From this point on, events created in the MirisManager calendar will be synced in the device's; in the example below, the videos will be uploaded in John Doe's personal channel.

**Add new planned command** X

All day:

Start: 2021-1-20 20 h 0

End: 2021-1-20 21 h 30

Timezone: Europe/Paris  replace with your timezone (Europe/Paris)

Repeat: Does not repeat

---

Command: record

Parameters: Enabled  *If disabled, the event command will be ignored.*

**⚠ Unable to get profiles.**

Profile to use: System default profile

Title: Test recording

Speaker: John Doe

Id:

Email: john.doe@ubicast.eu

Course Id: mscspeaker

Advanced parameters

Scheduled Events are automatically refetched every 300 seconds. Use the "Reload" button to force a manual refresh.-->

January 20, 2021

January 2021						
S	M	T	W	T	F	S
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

11am	
12pm	
1pm	
2pm	
3pm	
4pm	
5pm	5:30pm test titre
6pm	
7pm	
8pm	7:30pm Test recording
9pm	

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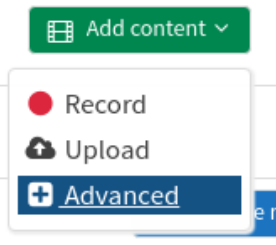
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## 4.1 Live Streaming: Preparing the MediaServer and configuring the SMP 300 Series

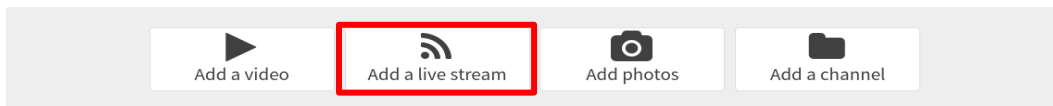
- To stream on the MediaServer using SMP 300 Series, the User must add a new Live video without resources.

- Select “Add content, Advanced”



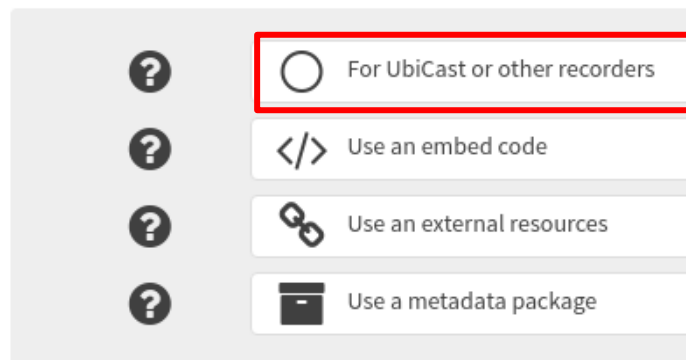
- Click on “Live stream”

### Add content



- Select “For UbiCast or other recorders”

### Add a live stream:



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- The User will land on this page:

Add a live stream:

Title:

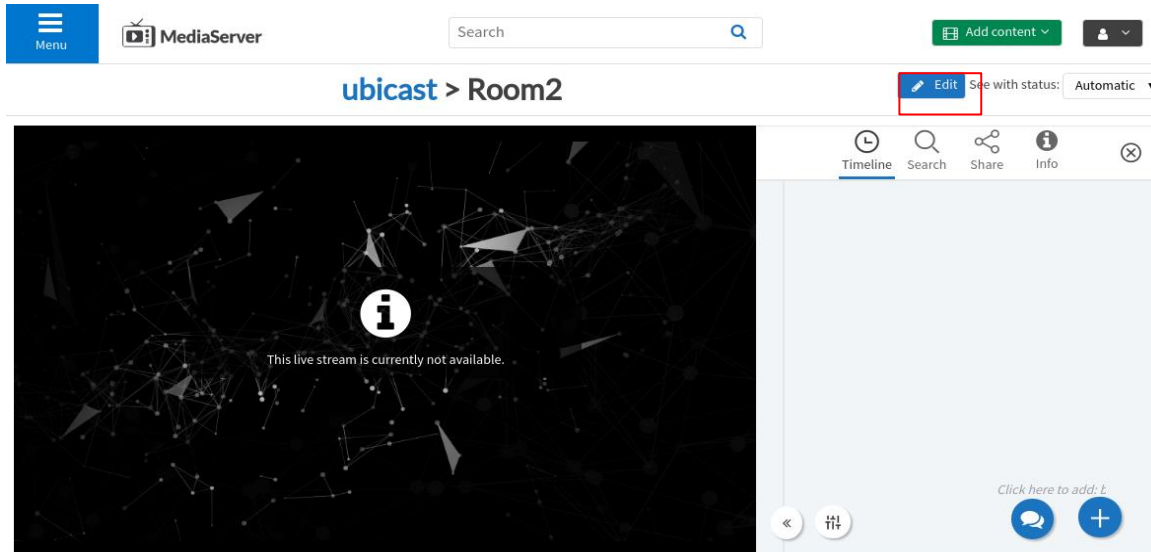
Channel: **ubicast**

Own this media:

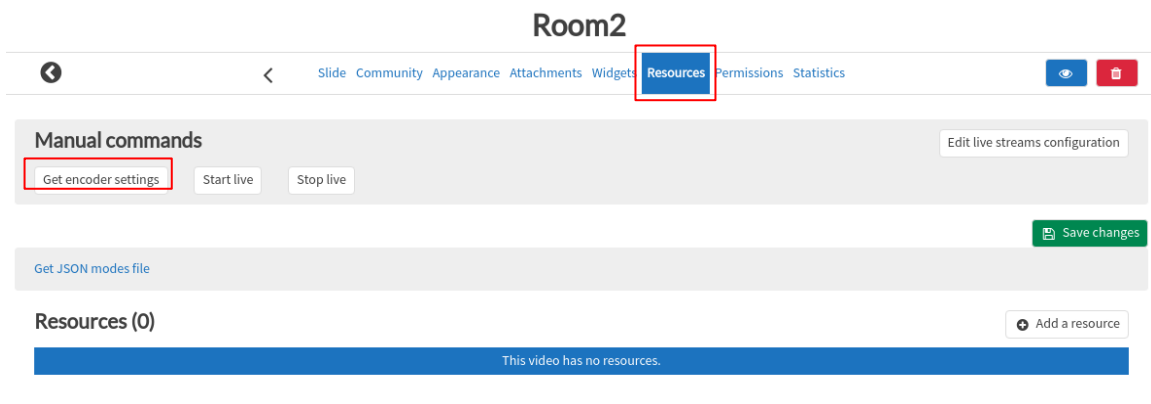
Previous

Add live stream

- Add a title for the live stream (e.g. "Room2") choose a channel to stream in and click on "Add stream". On the newly created live page media, click on "Edit" and seek the "Resources" tab.



- Click on "Get encoder settings":



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- Copy/paste the RTMP Server, Stream Name & Key to the required fields of the SMP 300 Series, via the webUI, Configuration → Encoding & Layout →

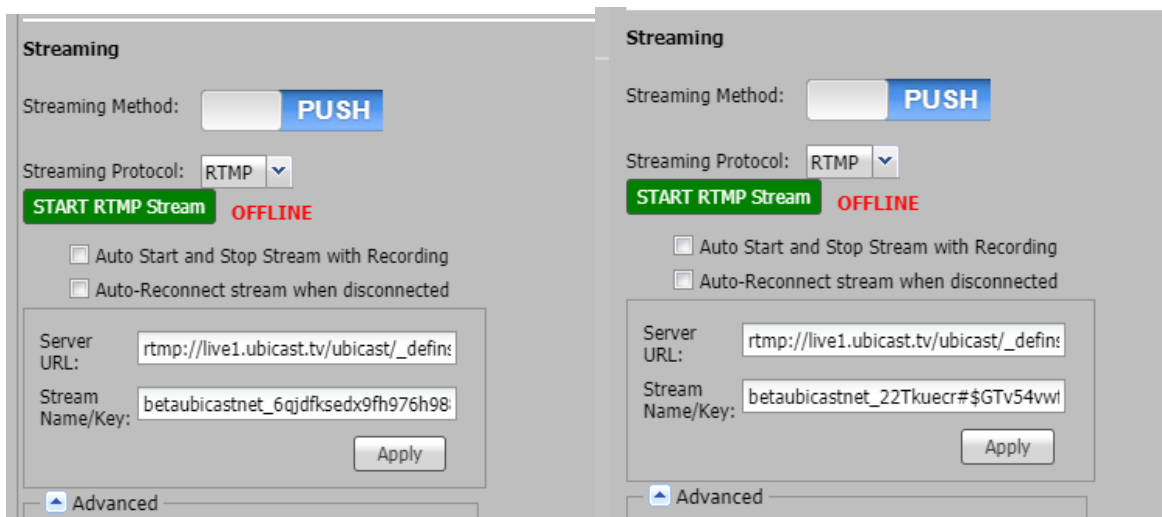
*Note that by default, 2 streams are required (for automatic bitrate switching).*

*Note That the SMP must be set to stream using RTMP Push (TCP:1935)*

```
Use the following parameters to setup your encoder:

Stream 720p:
Resolution: 1280 x 720
Video bitrate: 1000000
Audio bitrate: 128000
Framerate: 30
RTMP server: rtmp://live1.ubicast.tv/ubicast/_definst_?doPublish=
RTMP stream: betaubicastnet_6q1AmwQGukAdn5D8fJP2kYnjErDsS8_720

Stream 360p:
Resolution: 640 x 360
Video bitrate: 500000
Audio bitrate: 96000
Framerate: 30
RTMP server: rtmp://live1.ubicast.tv/ubicast/_definst_?doPublish=
RTMP stream: betaubicastnet_6q1AmwQGukAdn5D8fJP2kYnjErDsS8_360
```

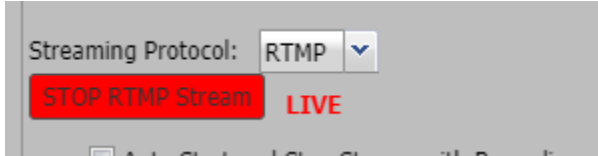


- Click on the SMP WebUI → START RTMP STREAM

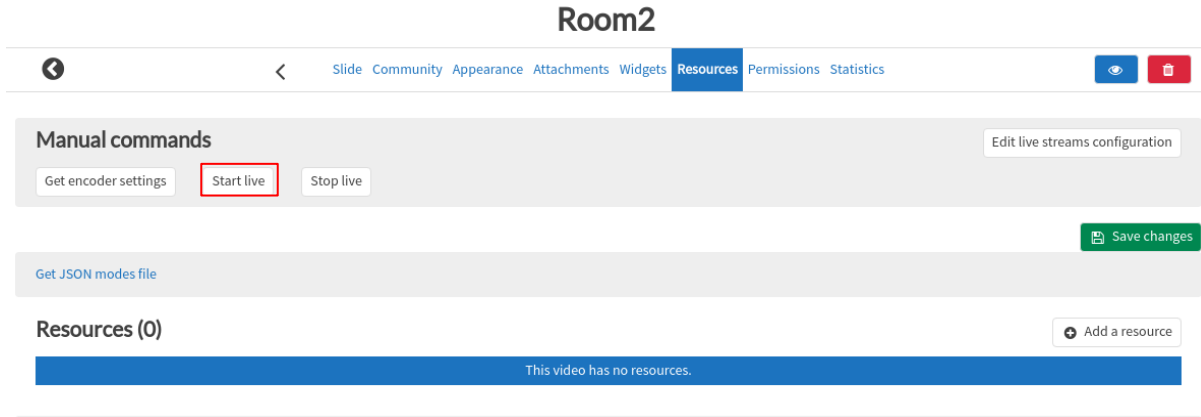
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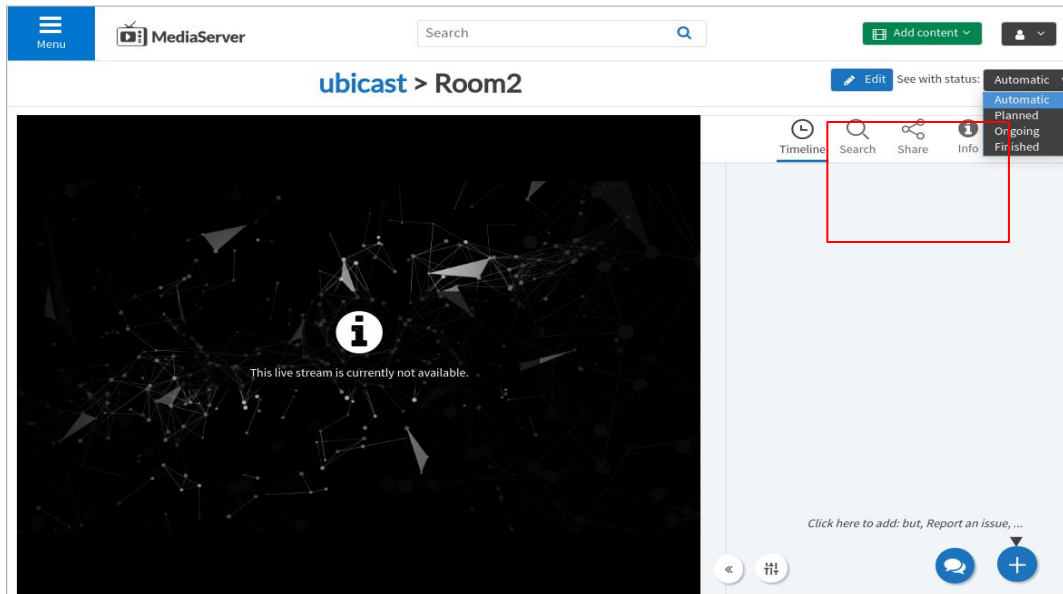
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- Once the RTMP stream has started, the User can open the webpage by clicking on “Start live”



- A preview is available on UbiCast by going back to the Preview mode and selecting “see with status / ongoing”



**Note:** Each time a User clicks on the “Get encoder settings” link, a new RTMP stream will be generated so once the live stream is set, **don’t click again** on the “Get encoder settings” or

your live stream will return an error on the player.

The User You can disable the live stream random URL generation by disabling the “Randomize live URL” in the Player settings (/admin/player), but that this will reduce security.

Save changes

<b>?</b> Default player type:	HTML5	Default value: HTML5
<b>?</b> Default quality used:	Auto	Default value: Auto
<b>?</b> RTMP protocol:	RTMP	Default value: RTMP
<b>?</b> Allow RTMP resources:	Videos on demand and live streams	Default value: Both
<b>?</b> Allow HTTP resources:	Videos on demand and live streams	Default value: Both
<b>?</b> Allow HLS video stream:	Videos on demand and live streams	Default value: Both
<b>?</b> HLS maximum buffer:	0	Default value: 30
<b>?</b> Statistics sendings interval:	0	Default value: 15
<b>?</b> Live properties refresh time:	0	Default value: 4
<b>?</b> Viewers refresh time:	0	Default value: 30
<b>?</b> Annotations refresh time:	0	Default value: 10
<b>?</b> Maximum concurrent viewers:	0	Default value: 0
<b>?</b> Randomize live url:	<input checked="" type="checkbox"/> Default value: Enabled	
<b>?</b> Resources secret key:		
<b>?</b> Resources expiry:	0	Default value: 4 h

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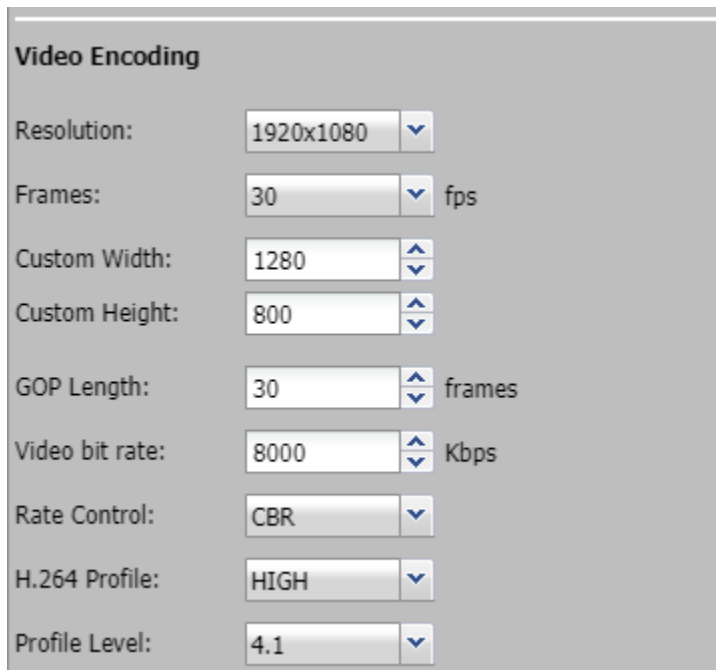
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## 4.2 Recommended encoding settings

- The “1080p High” encoding profile should be active when the live stream is combined with a recording for publishing

SMP 300 Series Video Encoding preferred settings:

- Rate Control: CBR
- GOP: 30
- H.264 Profile: High
- Profile Level: 4.1



The screenshot shows a 'Video Encoding' configuration panel with the following settings:

Setting	Value	Unit
Resolution	1920x1080	
Frames	30	fps
Custom Width	1280	
Custom Height	800	
GOP Length	30	frames
Video bit rate	8000	Kbps
Rate Control	CBR	
H.264 Profile	HIGH	
Profile Level	4.1	

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