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# Playout Integration Guide

Wurl's standard integration specifications for playout customers.

Updated Jan 7, 2019

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## Document Scope

This document explains the processes and formats a video provider needs to use in order to create a playout channel on Wurl. The document covers upload of content and metadata, as well as the accepted input formats.

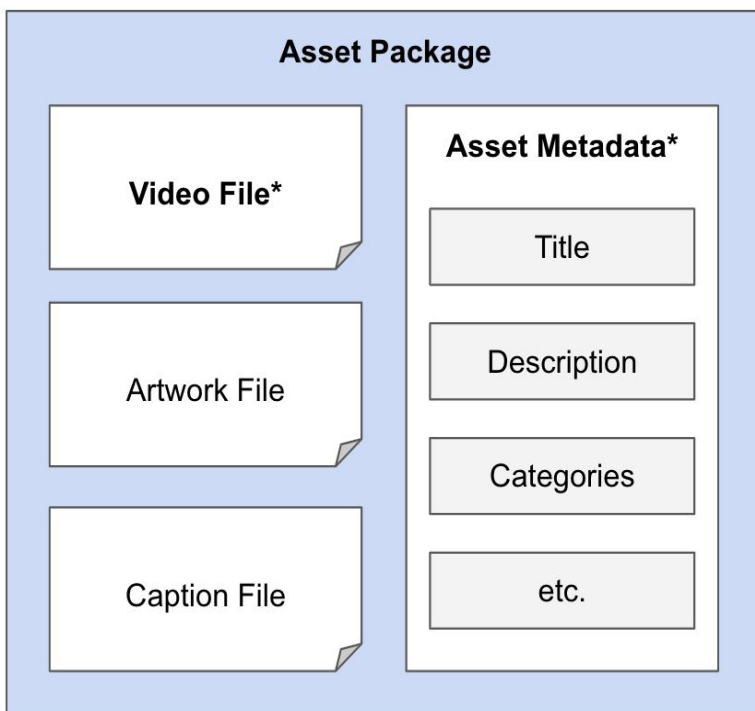
## Content Delivery Options

There are two ways of delivering content to Wurl:

- A. **File Delivery.** Send all your media files as well as your metadata sheet via one of the below delivery methods:
  - a. SFTP (preferred)
  - b. Signiant Upload Portal
  - c. Direct S3 Transfer
- B. **MRSS.** Deliver one or more MRSS feeds containing all your content data in accordance with Wurl's required specs.

## File Delivery

The file delivery method is a manual process of associating video files with their corresponding components and metadata to create schedulable assets. An asset is a collection of *asset components* as outlined below:



- **Video File\* (Required)**
- **Asset Metadata\* (Required)**
- Artwork File (*Required for most connectors*)
- Caption File (*Required for most connectors*)

## Submitting Metadata

Metadata drives the ingestion process, making accuracy critical. The benefits of submitting precise and robust metadata include:

- More rapid availability for programming
- Better organization and searchability of your content on Wurl

To begin the content delivery process, download the [Wurl File Upload Metadata template](#). Below are the specs for each individual metadata field.

The metadata must be provided as a **CSV file**. Wurl currently does not support XLS or Google Sheet formats.

Field	Description
Title <b>(Required)</b>	Title of the video or episode, displayed to the viewer on the Video Service's UI.
Description <b>(Required)</b>	The description of the video or episode, usually displayed to the viewer on the services you distribute to.
Video Filename <b>(Required)</b>	The <b>EXACT</b> filename of the video file for the asset. Our automation uses this to link the asset components together. If it's not exactly correct, the content will fail to register with Wurl.  Filenames must <b>not</b> include spaces or special characters (i.e. %, \$, #, @, etc.).
Artwork Filename	The <b>EXACT</b> filename of the artwork or thumbnail file for the asset. Preferred format is JPG in a 16x9 aspect ratio at a resolution of 1920x1080 pixels or larger.
Keywords	Used for searching across your content within Wurl. This data may be made available to distribution services for use in their search tools.
Categories	Specify a category for your video.
Series Name	Name of series if the video is part of a series of content.
Season Number	The season number if the video is part of a series.
Episode Number	The episode number if the video is part of a series.

Series Artwork Filename	The <b>EXACT</b> filename of the artwork or thumbnail file for the series if the video is part of a series. Preferred format is JPG in a 16x9 aspect ratio at a resolution of 1920x1080 pixels or larger.
Closed Caption File Name	<b>EXACT</b> filename of the closed caption file for the asset. Captions <b>must</b> contain 0-aligned timecodes in order to properly sync with audio.
Cut Points	Timecodes within the video file where you wish for the content to break and an ad marker to be placed ( <i>format: 00:00:00.000 [HH:MM:SS.MSS], with comma-separated timecodes</i> )
Is Ad?	Indicates that the asset is an ad slate. If it is, mark field as "yes". Ad slates are used for automatic insertion of markup used for ad insertion/substitution at playback.

## SFTP Upload Instructions

Below is a step-by-step guideline for SFTP package uploads.

- 1) Download a file transfer application like FileZilla, Cyberduck, or Transmit.
- 2) Locate the email you received from Wurl containing your SFTP credentials: Host, Username, Password.
- 3) Once connected, you'll see your "Uploads" folder appear. This folder is the bridge between your local storage and Wurl.
- 4) Drag all your asset package components (including its metadata CSV) into this folder to begin uploading your files. Upload all assets in either no folder at all or in a single folder (no folders within folders).
- 5) Be sure to upload your metadata CSV and all corresponding assets via SFTP and to include **every** asset listed in the CSV, *no more and no less*.
- 6) **Please double-check your CSVs to ensure all filenames in the CSVs are correct as incorrect file names will stall the upload process.**
- 7) You're all set! As long as there are no metadata errors that require manual resolution, your assets will be available for linear and VOD scheduling on Wurl within 6 hours.

For questions, please reach out to [contentops@wurl.com](mailto:contentops@wurl.com).

## MRSS Feed Delivery Specifications

The most efficient way to build your program library within Wurl is by delivering assets via an MRSS feed.

**Send your high-priority content first:** Delivery of your entire library doesn't have to happen all at once. Consider the content you intend to distribute soonest after launch and prioritize the delivery of that content first. This will alleviate the stresses of delivering huge quantities of content in a single delivery.

**Organize your feeds:** Separating content logically between multiple MRSS feeds is strongly suggested as it can expedite workflows when scheduling content on Wurl. Organize your feeds by series, show, or however you choose.

**Validate your feeds:** Validate your feed before sending it to Wurl by passing it through a tool such as [feedvalidator.org](http://feedvalidator.org) to avoid overseen XML errors.

### MRSS Feed Elements

Elements in <channel> section:	
Element	Description
<title> <b>Required</b>	The title of your video series. Recommended length is 50 characters or less.
<description> <b>Required</b>	Brief description of your video series. Recommended length is 200 characters or less.
<link> <b>Required</b>	URL of your website or app. (Required for feed validation, but not used by Wurl.)
<pubDate> <b>Required</b>	Date and time of last feed update in RFC-822 date-time format.
<media:keywords> <b>Required</b>	Highly relevant keywords describing your feed with typically a maximum of 10 words. The keywords and phrases should be comma-delimited. Keywords are used by Wurl search APIs.
<image>	URL of a thumbnail image (or "cover art") to be associated with

	your video series or movie.
--	-----------------------------

The `<channel>` section of the feed should contain multiple `<item>` groups, one for each video.

Elements in <code>&lt;item&gt;</code> sections:	
Element	Description
<code>&lt;title&gt;</code> or <code>&lt;media:title&gt;</code> <b>Required</b>	Title of the video. Recommended length is 50 characters or less.
<code>&lt;description&gt;</code> or <code>&lt;media:description&gt;</code> <b>Required</b>	Brief description of your video. Recommended length is 200 characters or less.
<code>&lt;pubDate&gt;</code> <b>Required</b>	Your video's release date and time in RFC-822 date-time format.
<code>&lt;media:content&gt;</code> <b>Required</b>	The URL of a high-quality encoding of your video asset.  Include your video's duration in seconds and as much metadata about the video you have available using the attributes as shown in the <a href="#">example MRSS</a> .
<code>&lt;media:captions&gt;</code>	The URL of your corresponding caption asset.  Include the caption file format as show in the <a href="#">example MRSS</a> .
<code>&lt;media:keywords&gt;</code> <b>Required</b>	Highly relevant keywords describing the video. Recommended limit of 10 keywords or phrases. The keywords and phrases should be comma-delimited. Keywords are used to search and find content within the Wurl Scheduler interface and may be sent to video services s for search or display within their platforms.
<code>&lt;media:thumbnail&gt;</code> <b>Required</b>	URL of a thumbnail image to be associated with your video. See the <a href="#">Content Requirements</a> page.

<code>&lt;guid&gt;</code>	A string that uniquely identifies the item, may be an alphanumeric string or a URL.
<code>&lt;media:category scheme="urn:iab:categories"&gt;</code>	Specify a category for your video.
<code>&lt;media:credit&gt;</code>	Notable entity that contributed to the creation of the media object. May include actors, producers, studios, etc. <a href="#">More...</a>
<code>&lt;media:copyright&gt;</code>	Copyright information for the video. <a href="#">More...</a>
<code>&lt;wurl:cuepoints&gt;</code> <b>Required if mid-rolls are present</b>	Comma separated list of ad break tags, in one of these timecode formats: - HH:MM:SS.MSS (Hours: Minutes: Seconds. Milliseconds) - 3700, 781.626669999 (Seconds)

## Example MRSS

```
<?xml version="1.0" encoding="UTF-8"?>
<rss version="2.0" xmlns:media="http://search.yahoo.com/mrss/"
xmlns:atom="http://www.w3.org/2005/Atom"
xmlns:wurl="http://api.wurl.com/wurlrss/1.0">
  <channel>
    <atom:link href="http://mysite.com/rss/my-series.rss" rel="self"
type="application/rss+xml"/>
    <title>MySite: Gaming Channel</title>
    <description>Latest gaming videos from mysite.com</description>
    <link>http://www.mysite.com</link>
    <image>
      <url>http://mysite.com/thumbnails/series-1.png</url>
      <title>MySite: Gaming Channel</title>
      <link>http://www.mysite.com</link>
    </image>
    <pubDate>Mon, 18 May 2015 18:56:21 +0000</pubDate>
    <media:keywords>kitty, cat, big dog, yarn, fluffy</media:keywords>
    <wurl:series>
      <wurl:officialTitle><![CDATA[Gaming Channel]]></wurl:officialTitle>
```



```

        <wurl:startYear>2011</wurl:startYear>
        <wurl:season>
            <wurl:seasonNumber>3</wurl:seasonNumber>
            <wurl:seasonTitle>Point and Shoot</wurl:seasonTitle>
        </wurl:season>
        <wurl:studio>GamingGalore</wurl:studio>
    </wurl:series>
    <item>
        <guid>http://mysite.com/videos/456.mp4</guid>
        <title>Gaming video Y</title>
        <description>A walk-through of the new Y game</description>
        <pubDate>Mon, 18 May 2015 18:56:21 +0000</pubDate>
        <!-- duration in seconds -->
        <media:content url="http://mysite.com/videos/456.mp4" type="video/mp4"
            medium="video" duration="120" lang="en" fileSize="12216320"
            bitrate="128" framerate="25" samplingrate="44.1" channels="2"
            height="200" width="300"/>
        <wurl:closedCaptions type="SCC" lang="en-us"
            href="http://mysite.com/gamingvideo.scc"/>
        <media:keywords>gaming y</media:keywords>
        <media:thumbnail url="http://mysite.com/thumbnail/video-456.png"
            width="320" height="180"/>
        <media:category>gaming</media:category>
        <media:category scheme="urn:iab:categories"
            label="Video and Computer Games">IAB9-30</media:category>
        <wurl:episode>
            <wurl:officialTitle><![CDATA[Gaming video Y]]></wurl:officialTitle>
            <wurl:seasonNumber>3</wurl:seasonNumber>
            <wurl:episodeNumber>2</wurl:episodeNumber>
            <wurl:firstAired>Sun, 17 Apr 2011 00:00:00 +0000</wurl:firstAired>
        </wurl:episode>
        <wurl:cuepoints>39,91</wurl:cuepoints>
    </item>
    <item>
        <guid>http://mysite.com/videos/123.mp4</guid>
        <title>Gaming video X</title>
        <description>A walk-through of the new X game</description>
        <pubDate>Wed, 1 Apr 2015 18:56:21 +0000</pubDate>
        <!-- duration in seconds -->
        <media:content url="http://mysite.com/videos/123.mp4" type="video/mp4"
            medium="video" duration="120" lang="en" fileSize="12216320"
            bitrate="128" framerate="25" samplingrate="44.1" channels="2"
    
```

```

        height="200" width="300"/>
        <media:keywords>gaming x</media:keywords>
        <media:thumbnail url="http://mysite.com/thumbnail/video-123.png"
            width="320" height="180"/>
        <wurl:episode>
            <wurl:officialTitle><![CDATA[Gaming video X]]></wurl:officialTitle>
            <wurl:seasonNumber>3</wurl:seasonNumber>
            <wurl:episodeNumber>1</wurl:episodeNumber>
            <wurl:firstAired>Sat, 16 Apr 2011 00:00:00 +0000</wurl:firstAired>
        </wurl:episode>
        <wurl:cuepoints>00:04:50.450, 00:12:25.038</wurl:cuepoints>
    </item>
</channel>
</rss>

```

## Content Requirements

It's desirable to deliver the highest quality version of your video library to work within Wurl.

- **Minimum** supported formats: Video files that do not meet these levels may have noticeable quality issues when your programming airs on the video service.
- **Recommended** formats: It's best if you meet or exceed these levels.

Type	Minimum Supported Formats	Recommended
Video	MP4 or MOV container HD 720p, h.264, Main profile, 3.0  * No Edit Lists * Closed GOP, 1 second long * Chroma subsampling: 4:2:0	MP4 or MOV container HD 1080p, h.264, High profile, 4.1
Aspect Ratio (16:9)	16:9, 1920x1080  * Wurl distributes to 16:9 aspect ratio players. Other aspect ratios will be processed and black bars will be added on the left/right (pillar boxes) or at the top/bottom (letter boxes) to make a 16:9 ratio on playout	16:9, 1920x1080
Video Frame Rate	23.98, 24, 25, 29.97, 30, 48, 50, 60 fps	29.97 fps or 30 fps

	<p>* Keep the frame rate in the format in which it was recorded</p> <p><b>* Interlaced content must be deinterlaced</b></p>	
Video Bitrate	1080p at 6 mbps, 720p at 3 mbps	1080p at 15 mbps (or higher), 720p at 9.5 mbps (or higher)
Audio	PCM 16-bit, AAC, AAC-LC	AAC, AAC-LC
	<b>* All content must have an audio track</b>	
Audio Setting	2-channel stereo	2-channel stereo
Audio Sample Rate	44.1 Khz	48 Khz
Audio Bit Rate	Stereo at 128kbps (or higher)	Stereo at 384kbps
Audio Level	All audio levels must be below 0db. Overall audio level should be normalized to -24db.	
Captions	SCC, SRT, ASS	SCC

## Channel Information

Creating a channel requires the following information:

Field	Description
Title <b>Required</b>	Title of the channel, either the same or different from the studio name, displayed to the viewer on the Video Service's UI.
Description <b>Required</b>	The description of the channel, displayed to the viewer on the services you distribute to.
Channel Image <b>Required</b>	1280x720 minimum thumbnail image Accepted formats: JPEG, JPG, PNG