XMPie Video Service (XVS)

Quick Guide

Version 1.6

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For information, contact XMPie Inc.
485 Lexington Avenue
25th. Floor
New York, NY 10017

More information can be found at www.xmpie.com

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Overview

XMPie Video Service (XVS) is a video personalization solution which enables the creation of variable content videos. It consists of two main components:

- **uMerge Video:** A plug-in to Adobe After Effects which enables to define video variability and to upload video projects (including resources and data that define the variability) to the cloud.
- **XVS Dashboard and API:** A cloud service on Amazon AWS which renders the videos for streaming, streams the final videos and manages the users and the projects of the service. The cloud service can be used via the Dashboard or the API. See XMPie Video Service API.

Read the Best practices and guidelines for motion designers article to learn how to prepare and organize your After Effects project for deployment and rendering on the cloud.

Watch XMPie Video Service video training for an introduction of the XMPie Video Service, including uMerge Video, which enables the tagging of an Adobe After Effects file, and XMPie Video Service Dashboard which manages, renders, and streams the personalized videos.

Minimum system requirements for uMerge Video

Processor	Multicore Intel processor with 64-bit support
Operating system	• PC workstation: Microsoft Windows 10 (64 bit) versions 1703 (Creators Update) and later • Mac: macOS Catalina and above
RAM	16 GB minimum (32 GB recommended)
GPU	2GB of GPU VRAM. XMPie recommends you have a graphics processor (GPU) certified by Adobe. For a list of certified cards, see Photoshop graphics processor (GPU) card FAQ
Hard disk space	6GB of available hard-disk space; additional free space required during installation (cannot install on removable flash storage devices) Additional disk space for disk cache (10GB recommended)
Monitor resolution	1280x1080 or greater display resolution
3rd-Party software	Adobe After Effects CC-2020 and above
Internet	High-speed internet

XMPie Video workflow

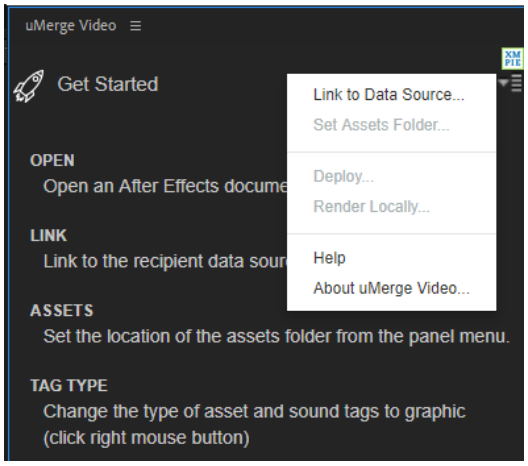
The XMPie video solution workflow is divided into the following phases: design and rendering.

Design

This phase consists of connecting to a data source and attaching tags to text or graphic elements in the video. Graphic elements can be either image, video or audio files.

To link to a data source and tag design elements:

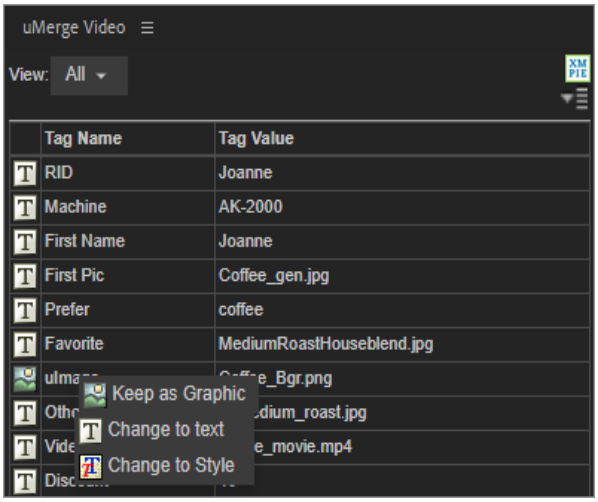
1. In After Effects, open your project.
2. From the **Window** menu, select **Extensions > uMerge Video** to open the uMerge Video panel.
3. From the **Options** menu, select **Link to Data Source**.



4. Select a CSV file and click **Open**.

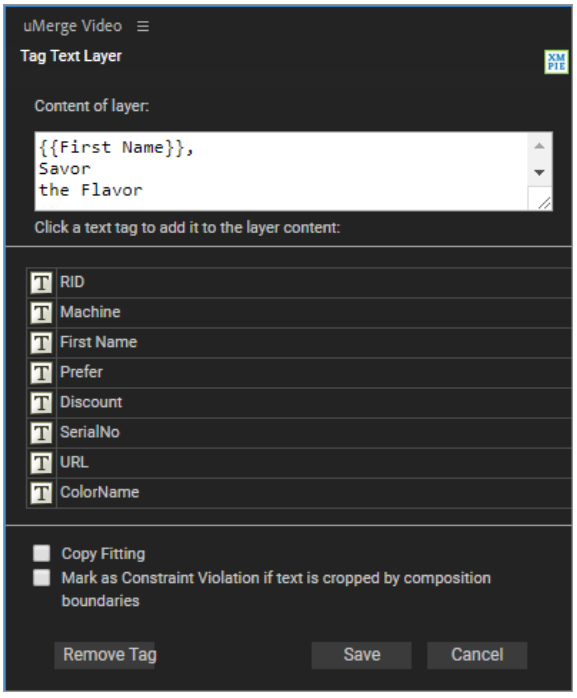
   The **uMerge Video** panel opens, displaying the available tags.

5. If you wish to tag a **graphic** element (image, video or audio), perform the following:
   - Modify the data field type by right clicking the text icon and selecting **Change to Graphic**.



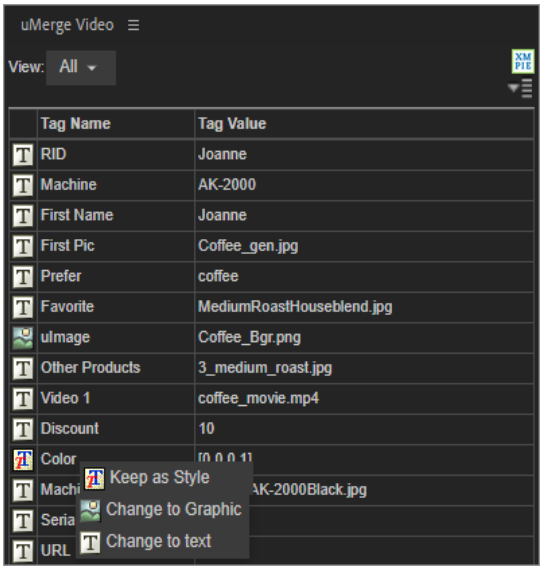
   - Define the location of the asset folder by selecting **Set Assets Folder** from the **Options** menu.

6. To tag a **text** layer with text data fields:
   - Select the text layer to which you wish to apply variability.
   - On the uMerge Video panel, click the **Edit tag** icon.



   - Click the desired text tag to add it to the **Content of layer** area.
   - If you wish to apply copy fitting, display the record that represents the width you wish to maintain for all other records (e.g. a six-letter name), and then select the **Copy Fitting** checkbox.
     All records will maintain the same width.
   - Click **Save**.

7. The Style tag controls the font color. To tag text with a Style property:
   - Change the field type to **Style**.
   - Select the text layer.
   - Click the **Style** field.



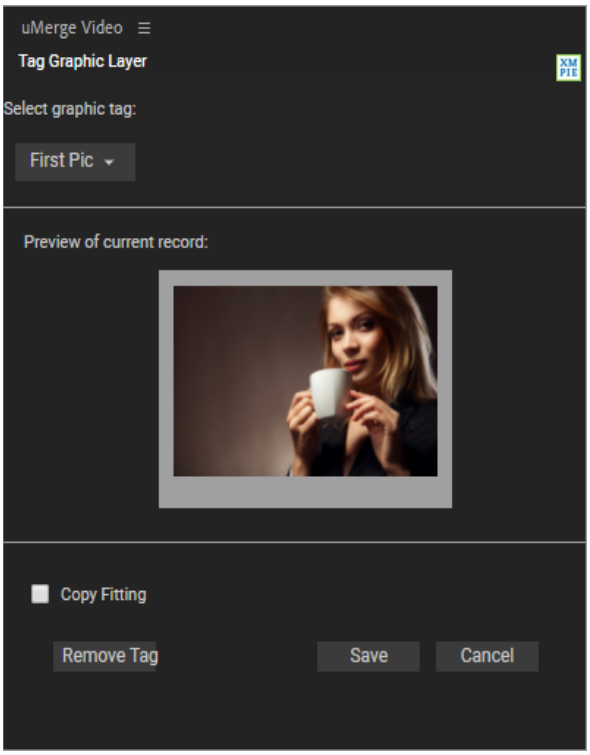
   The text color varies according to the data of the Style field.

   Note that the tag value can appear either in a hex format or as an array of values.

   A hex color is expressed as a six-digit combination of numbers and letters defined by its mix of red, green and blue (RGB). The hex format is #RRGGBB. Example: #F17471.

   The format for an array of values is [R,G,B, A], where R, G, B and A (alpha) are numbers between 0-1 that represent the mix of red, green, blue and alpha. Example: [0.6,0.3,0,0].

8. To tag a graphic layer with graphic data fields:
   - Select the image, video or audio layer to which you wish to apply variability.
   - On the uMerge Video panel, click the **Edit tag** icon.



- From the **Select graphic tag** list, select the graphic tag to which you wish to associate your layer.
- If you wish to apply copy fitting, display the record that represents the size you wish to maintain for all other records (e.g. a 300px x 500px rectangle), and then select **Copy Fitting**.
  All records will maintain the same rectangle size.
- Click **Save**.

Note: To each layer that is tagged a maker (#XVS#) is added, denoting that it is a dynamic layer. Do not touch these markers.

Rendering

Two rendering options are available:

- **Local rendering:** Creation of individual videos one by one. These videos are created and saved locally.
- **Deployment:** This is the preferred option. It allows quick rendering of multiple videos, hosted on AWS cloud.

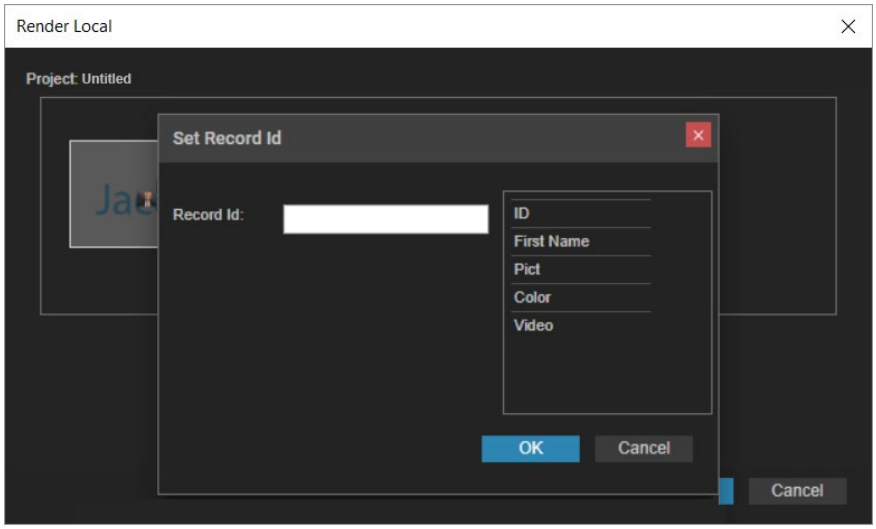
Important!
In order to save on rendering time, it is strongly recommended that you first deploy from After Effects a sample CSV file, including fonts and assets, to the XVS. You should then render all in the Dashboard. Only after you verify that all went well should you upload the final CSV file from the Dashboard, add the assets and render the full project.

Local rendering

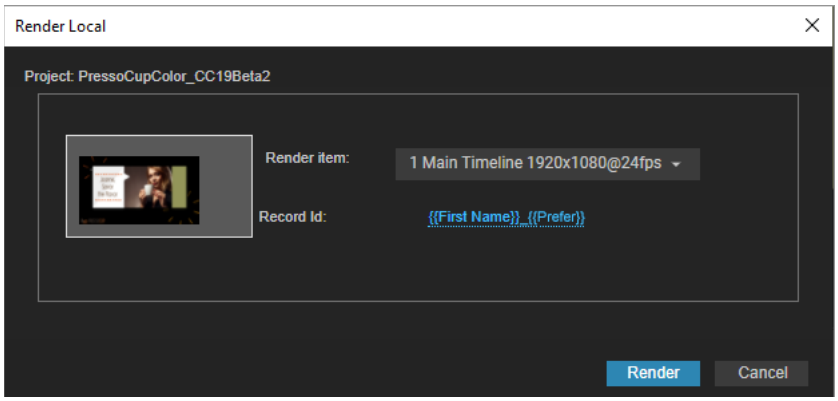
You may render a single full record locally. This is mainly for testing purposes or when you wish to produce a very small number of videos without uploading them to the cloud.

To perform local rendering:

1. Open your project in After Effects.
2. From the **Options** menu, select **Render Locally**.
   The **Render Local** window opens with the **Set Record Id** popup above.



3. In the **Record Id** field, compose the variability of the name of the final video, e.g. {{First Name}}_{{Prefer}}, and click **OK**.
4. From the **Render item** list, select the composition you wish to render.



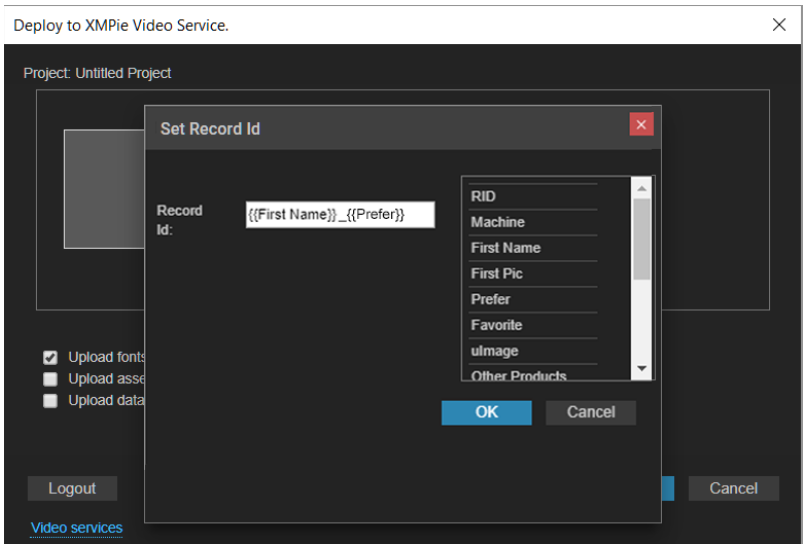
5. Click **Render**.
   Once rendering has ended, you can access the rendered video.

Deployment

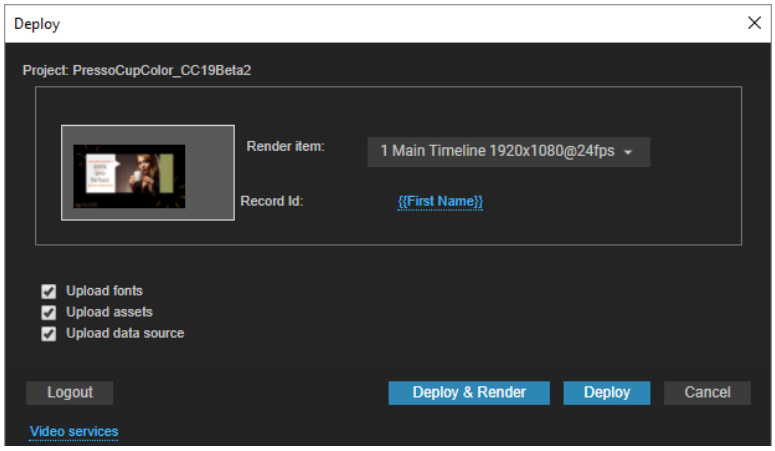
Use the **XMPie Video Service (XVS)** to deploy the videos on the cloud and serve the videos over the internet. This is particularly useful when you wish to render multiple records. In order to use the service, you must first log on to it.

To perform XVS rendering:

1. Open your project in After Effects.
2. From the **Options** menu, select **Deploy**.
3. Log in to the XMPie Video Service.
   The **Deploy to XMPie Video Service** window opens with the **Set Record Id** popup above.



4. In the **Record Id** field, compose the variability of the name of the final video, e.g. {{First Name}}_{{Prefer}}, and click **OK**.
5. From the **Render item** list, select the composition you wish to render.



6. Select any of the following parameters:

   - **Upload fonts** – To use the project fonts in the final video, copy all fonts used by the project to the following folder:
     - Windows - C:\Program Files\Common Files\Adobe\Fonts\Xipamide
     - Mac - ~/Library/Application Support/Adobe/Fonts/XMPUVideo
   - **Upload assets** – Uploads only the assets represented by the graphic fields in the current data source.
   - **Upload data source** – Uploads the current data source.

7. Click the **Deploy** or **Deploy & Render** button as follows:

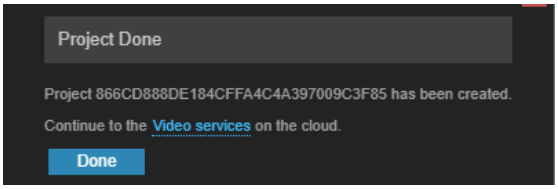
   - Use **Deploy** to upload the project, its resources and optionally the assets and data source to the XVS service.

     Use this option if you plan to generate HTTP Live Streaming (HLS) output.
   - Use **Deploy & Render** to additionally trigger rendering of the project according to the uploaded data source. This option is available only if the **Upload fonts**, **Upload assets** and **Upload data source** checkboxes are selected.

     Note: When using **Deploy & Render**, it is advisable **not** to work with the final CSV file that contains all records. Instead, use a relatively small (less than 50) set of records.
     In order to complete rendering of all records, use the XVS Dashboard to upload and render the rest of the records.

     At this point deployment or deployment and rendering takes place in the background. You can quit After Effects and continue with any other work that you may have.

Once the process has ended, a status window appears, providing you a link to the XVS dashboard.



If you've only deployed the project, go to the dashboard, upload the required materials and then render.

If you deployed and rendered, the rendering process may still be taking place. Go to the dashboard to follow the rendering process. When done, you can view the videos and copy the personalized video URL.

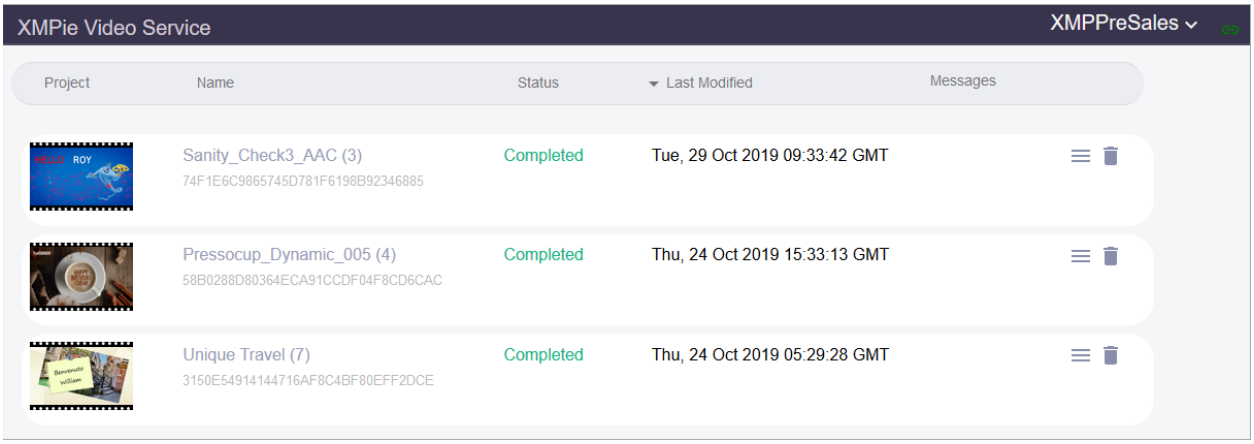
Service Management

The XMPie Video Service comes with a web management application known as **XVS Dashboard**, which enables you to render records, view your projects and rendered videos, and delete projects.

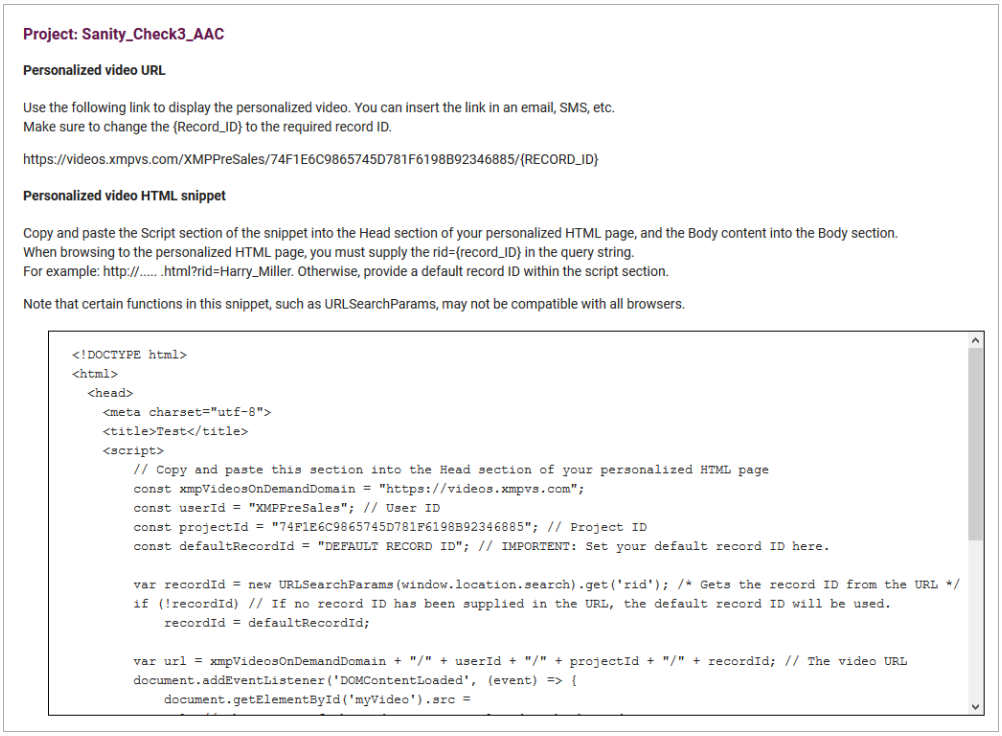
Log in to the Dashboard at https://dashboard-eu.xmpvs.com

View projects

You may view the various projects that have been rendered to the service.



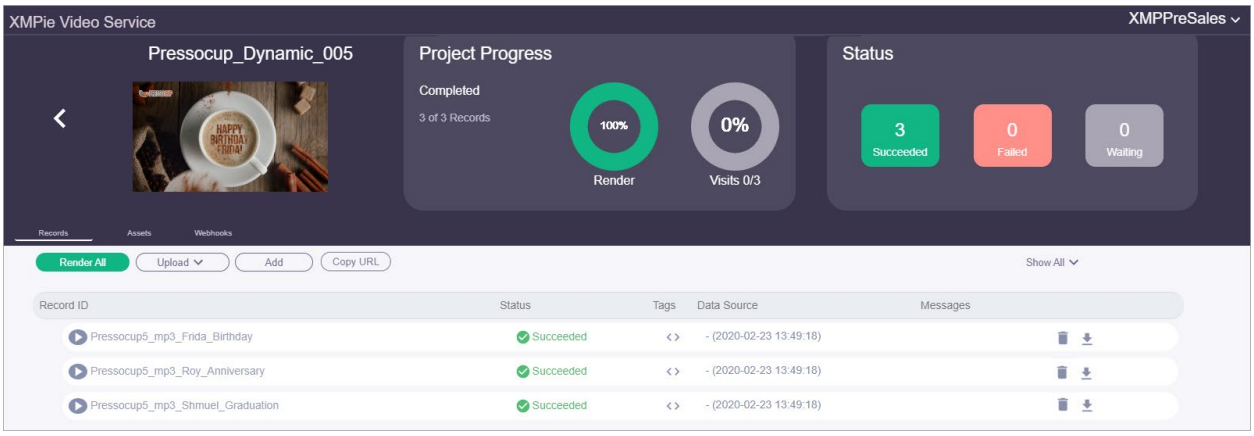
For each project, click the icon ☰ to view the relevant snippet or personalized video URL, which can be used to insert a link to the complete personalized video in your HTML page or email.



You can also copy the personalized video URL from within the project page using the **Copy URL** button.

View records

Click a project to view its records, and then select the record you wish to run.



Define webhooks

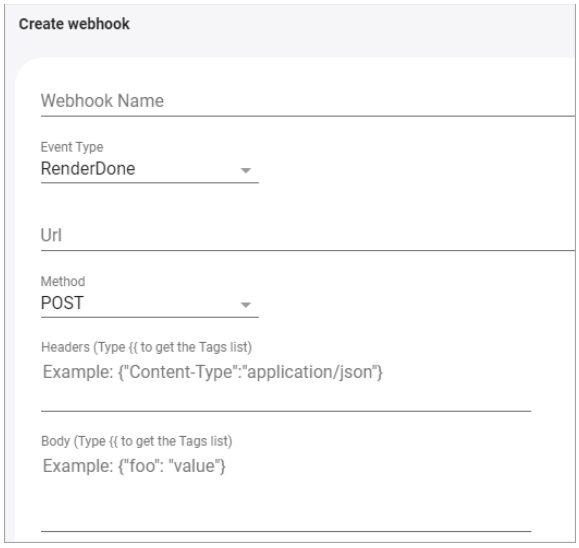
Webhooks allow XVS to communicate with external services in order to broaden its customer communication capabilities.

For example, XVS creates a new video and when the rendering is completed, a webhook is called. The webhook can be a call to a REST API, which in turn triggers an email to the records with a link to the video. One option is to use the API of XMPie Circle, XMPie's platform for cross-media campaigns.

Another example is to use Zapier to send notifications to Facebook. Developers can also create any REST API to be executed following record rendering.

To create a webhook:

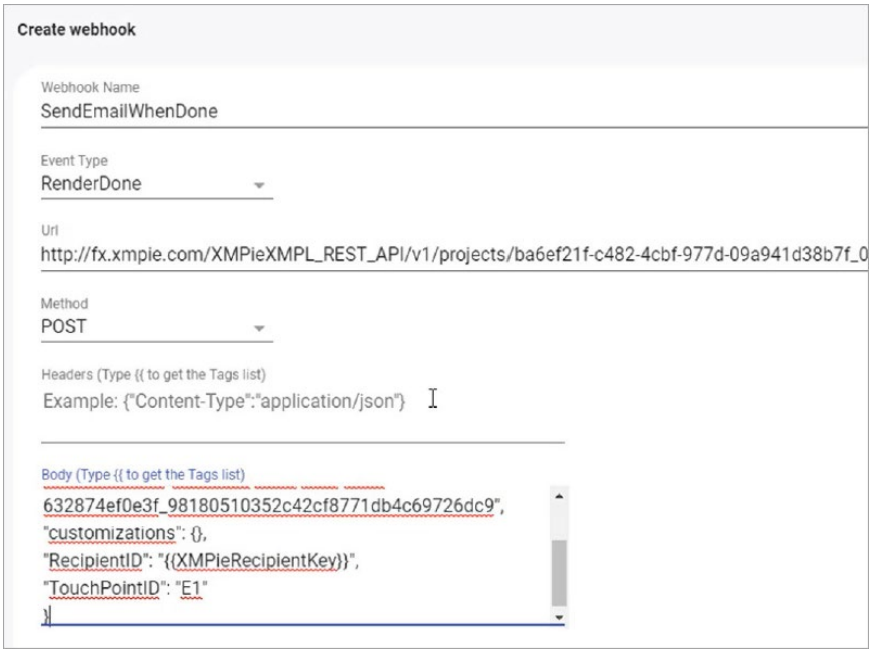
1. Click the **Webhooks** link, and then click **Add** to create a new webhook.
2. Give the webhook a name.
3. Enter the following information:



- **URL:** The URL to which data is sent when the trigger occurs. This can either be a URL that you've set up in Circle, Zapier or other service, or a REST API.
- **Method:** GET, PUT or POST method.
- **Header:** The API header JSON data.
- **Body:** The JSON data that is sent to the URL. The data can include static text, or any of the tag values.

4. Test the configuration by clicking **Add & Test** and selecting a sample record. This executes the webhook and allows you to check that it is valid.

The following is an example of an XVS webhook feature used to trigger an email to be sent to the recipient when the personalized video has been created and is ready to be viewed.



Create adaptive bitrate streaming (HLS) output

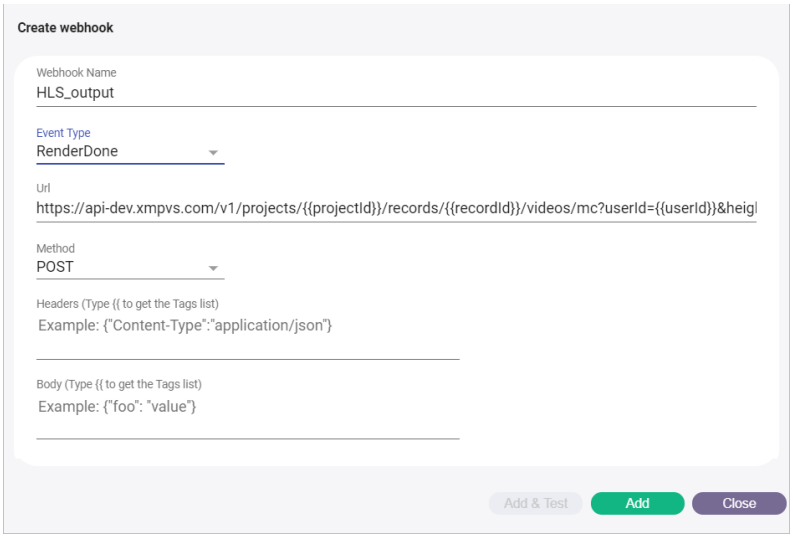
HTTP Live Streaming (HLS) is an HTTP-based adaptive bitrate streaming communications protocol developed by Apple Inc. Currently it is the most popular and recommended streaming protocol.

HLS is designed for reliability and dynamically adapts to network conditions by optimizing playback for the available speed of landline, wifi, and cellular connections. A viewer watching a video stream over a network of 10 Mbps and above would get the highest resolution and quality video. On the other hand, a viewer watching the same video stream over a 0.8 Mbps connection would view it in lower resolution and quality. However, in both cases the video would play smoothly with minimal or no buffering, for the best experience possible on the available connection bandwidth.

To generate HLS stream, you need to create an HLS webhook.

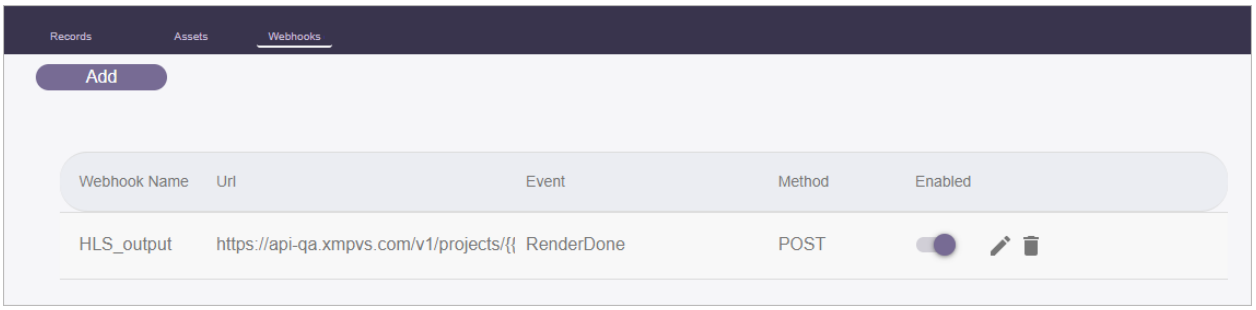
To create an HLS webhook:

1. Click the **Webhooks** tab, and then click **Add** to create a new webhook.



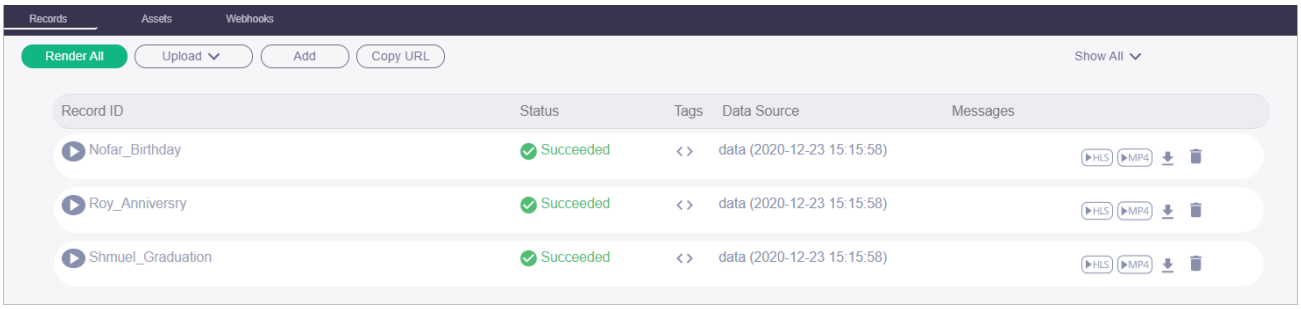
2. Give the webhook a name. Use the **HLS_** prefix and then press the **<Tab>** key for the remaining fields to be automatically filled in.

3. Click **Add**.
   The webhook is added to the list.



The output of each record that you will render from this point onward will be in HLS, in addition to MP4.

To view a record in HLS format, click the HLS button. The HLS video player opens.

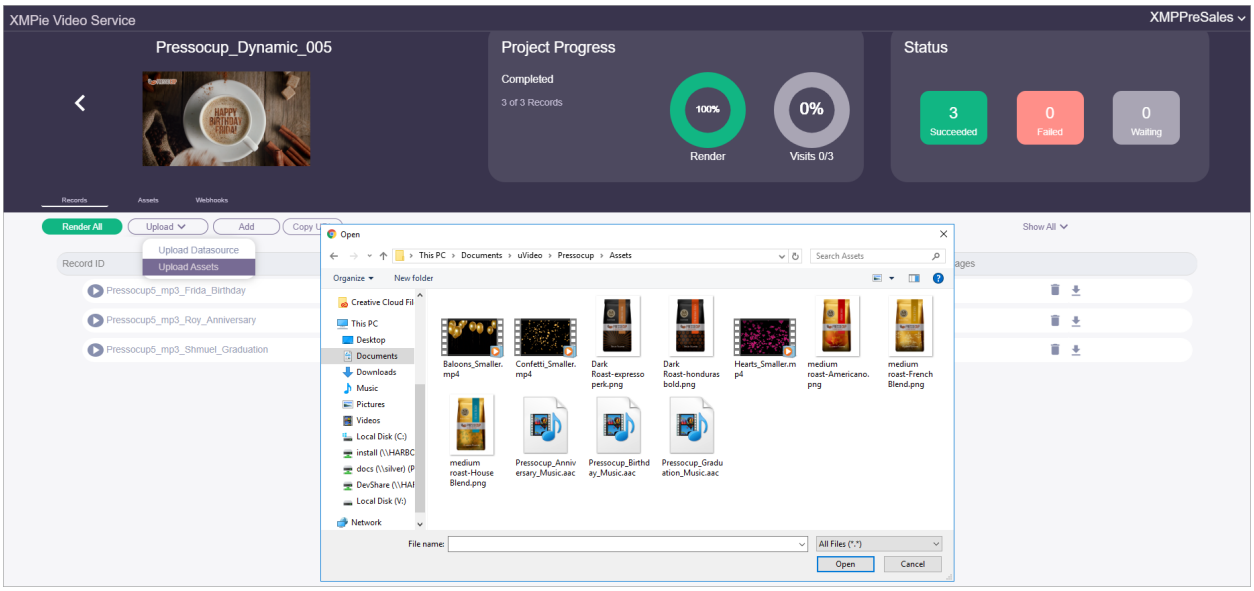


If a record has both the HLS and MP4 formats, clicking will open by default the HLS player, similar to the clicking the HLS button.

Render records

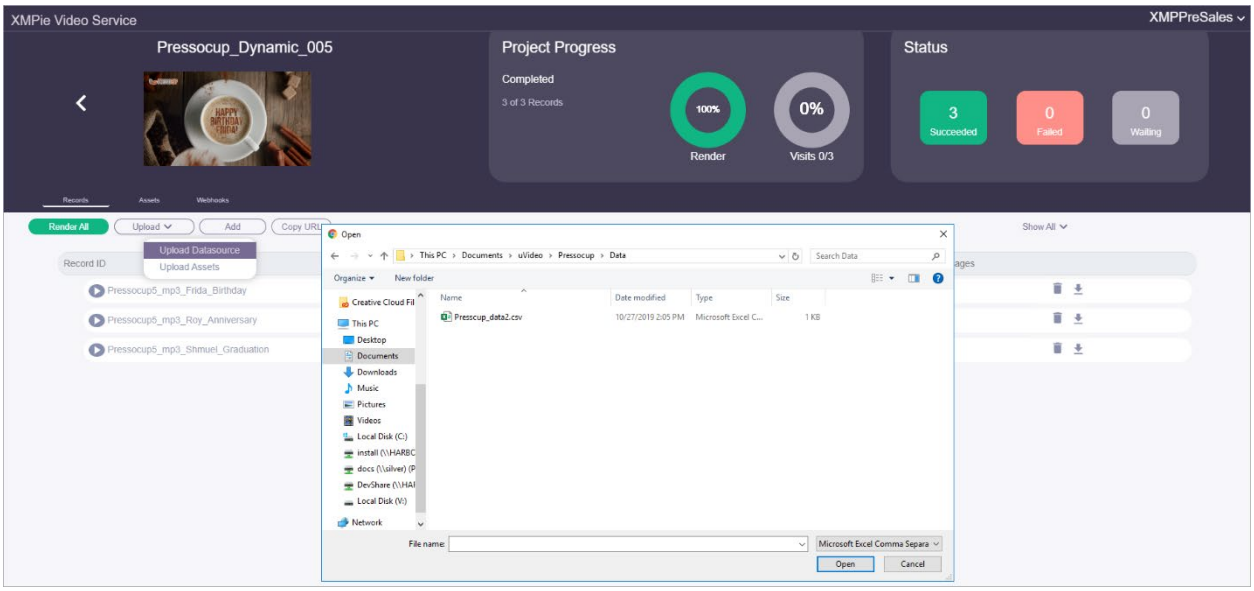
After a project is deployed, you can render it from the Dashboard to create videos.

You may first need to upload the relevant assets. Simply click **Upload > Upload Assets** and select the necessary assets.



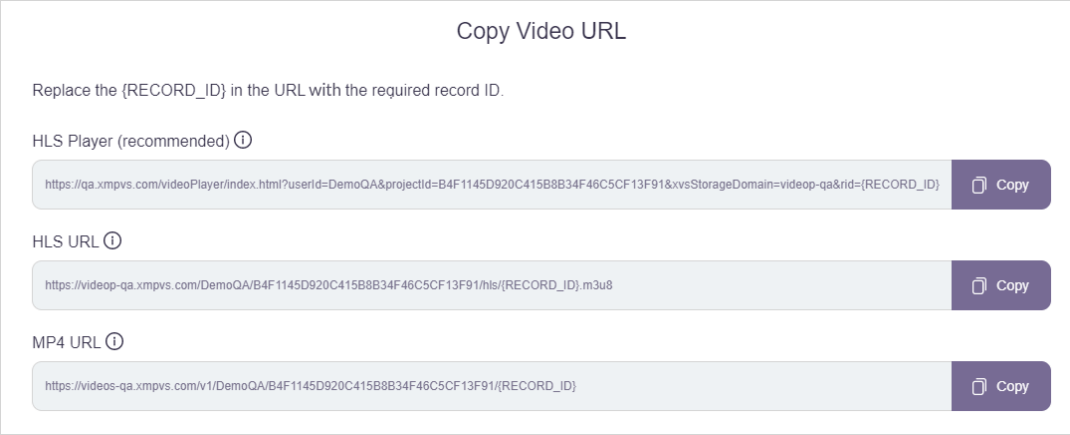
After the upload, you may review the assets in the **Assets** tab.

You may also add records that you wish to render. Simply click **Upload > Upload Datasource**, select the relevant data source and click **Render**.



To use the videos in your applications you would need a URL to the video. The URL can be to a player that plays the specific video, or to the video itself, and can be used in 3rd party video players.

Click the **Copy URL** button to get the personalized video URL. You can insert this URL in an email, HTML page or SMS. Make sure to change the {Record_ID} to the specific record records ID, as you defined during the deployment phase.



Note that the HLS options will only appear if HLS rendering is configured.

You can choose any of the following options:

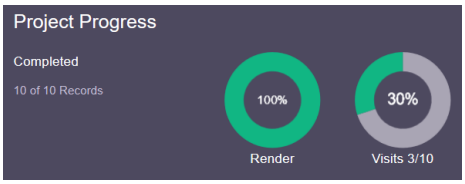
- **HLS Player:** This option adjusts the viewing quality to suit the viewers' network bandwidth. It minimizes latency and buffering on mobile and low bandwidth networks.

  This URL opens a player that plays the video. It can be used as a link in an email or HTML page. This is a general-purpose URL that should be used unless high bandwidth is guaranteed or unless using your own HLS player.
- **HLS URL:** This option adjusts the viewing quality to suit the viewers' network bandwidth. It minimizes latency and buffering on mobile and low bandwidth network.

  This URL points to an HLS file that can be used in third party HLS players.
- **MP4 URL:** This URL points at the source video, which is the highest quality video. It is not suitable for use on low bandwidth networks.

View unique visits

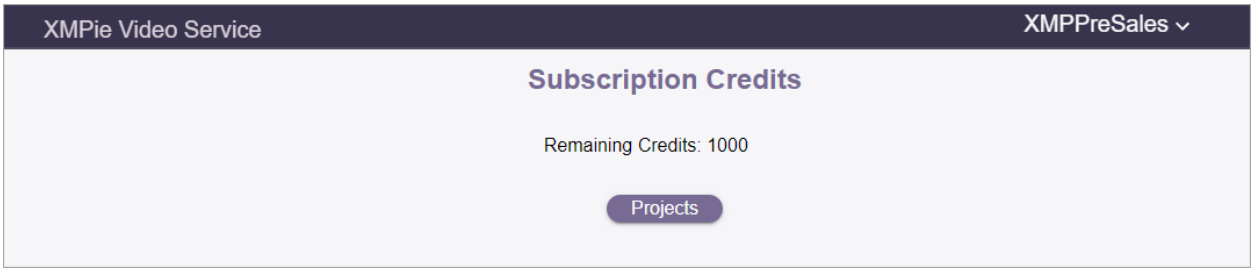
The Visits chart shows for each project the number of unique playbacks of video records.



View remaining credits

You may view how many rendering credits remain in your subscription.

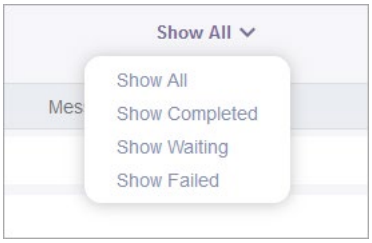
At the top right-hand corner of the screen click your username, and from the menu select **Credits**.



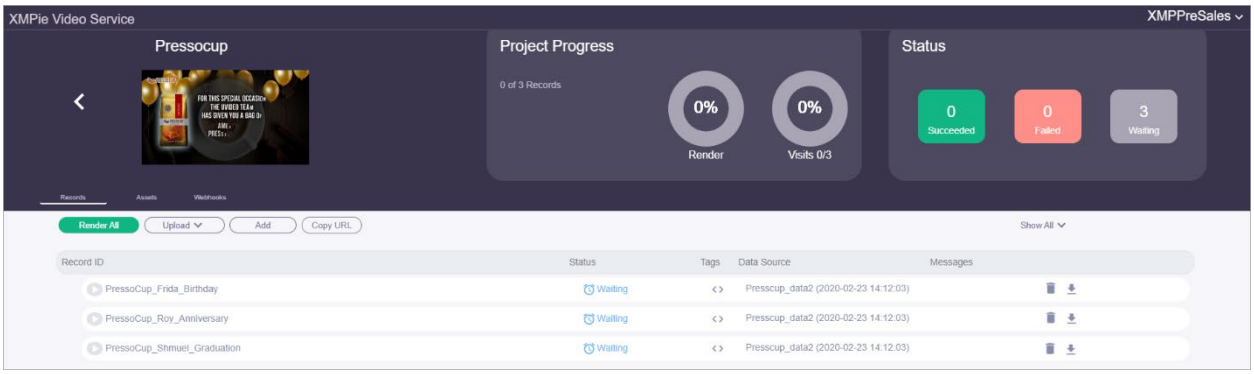
Filter the list of records

You may filter the list of records to view:

- All records
- Completed records
- Records waiting to be rendered
- Records that failed to render



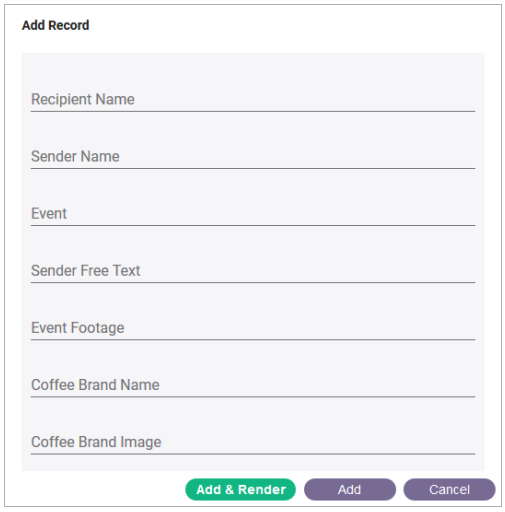
Once selected, you can render the filtered records. For example, render all records waiting to be rendered, as can be seen in the following example:



On-demand video render

If you wish to render a video for an additional record, you may use this option.

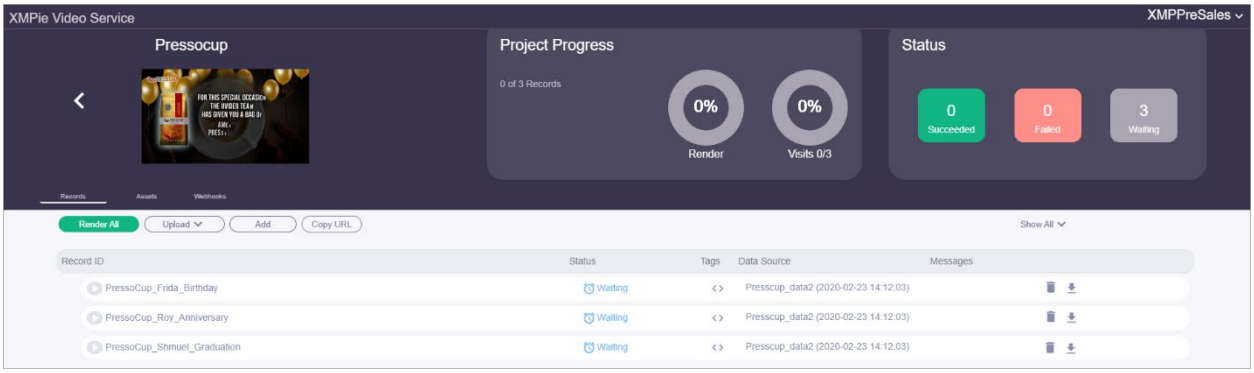
- Click the **Add** button and fill in the form.

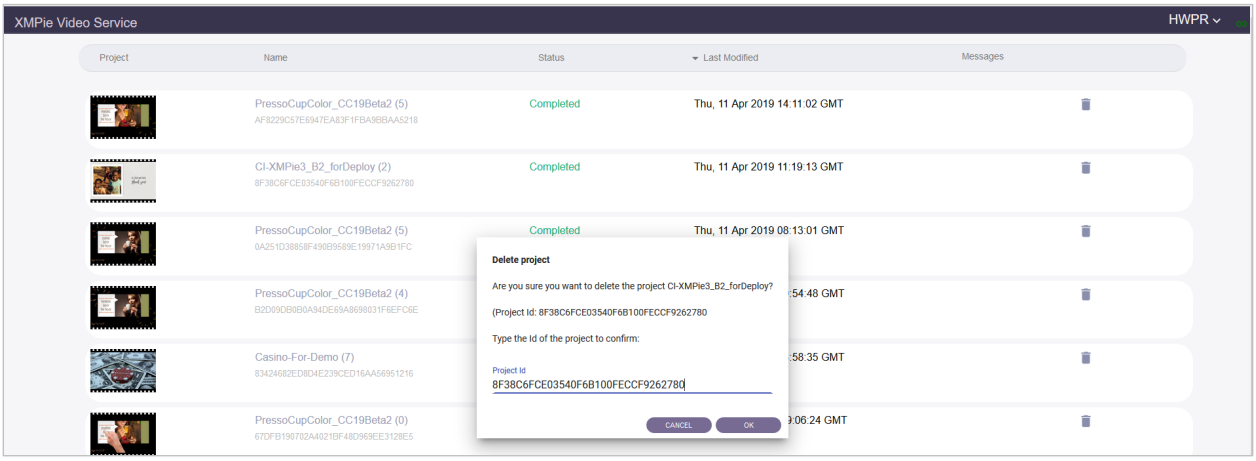


- Click **Add** to add a record to be rendered later or **Add & Render** to start rendering now.

Delete records

Records may be deleted by clicking the bin icon.



Delete projects

Projects may be deleted by clicking the bin icon.