



Integrating Vantage with Frame.IO

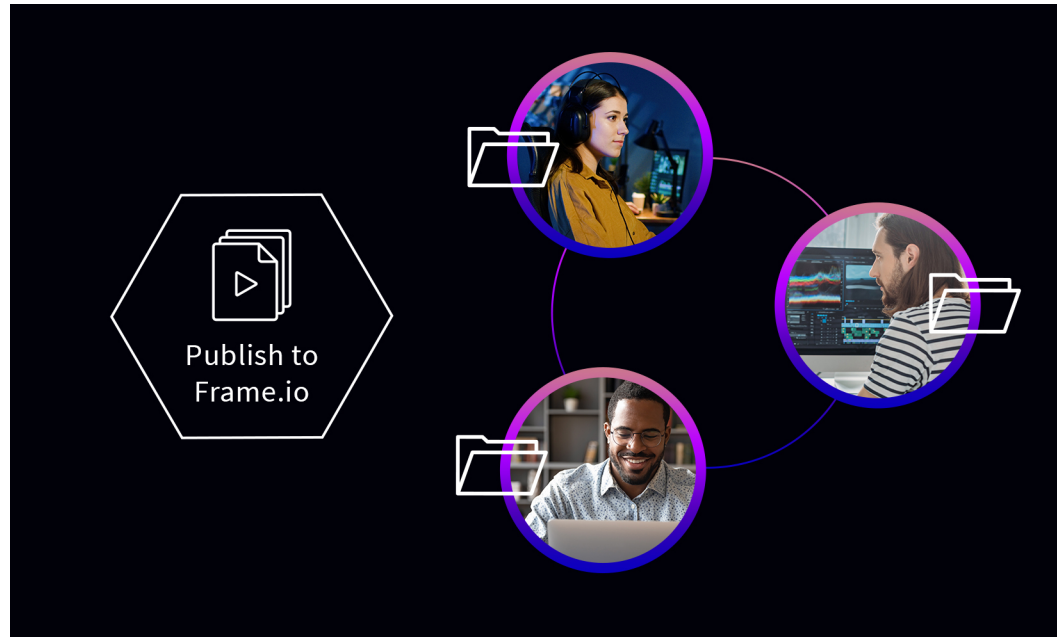


Synopsis	2
Connector for Frame.io Operates in Two Modes.....	3
Getting Started	4
Prerequisites	4
Vantage	4
Frame.io	4
Installing and Licensing the Frame.io Connector	4
Obtaining and Adding the Frame.io License	4
Obtaining and Installing the Connector for Frame.io	5
Up and Running	6
Prototype Interactive Mode Workflow	10
Using Frame.io Workflows in Programmatic Mode	15
Contacting Telestream	17
Copyright and Trademark Notice.....	18

Note: This guide is written for video professionals who are familiar with using Vantage. To design and implement media processing applications in Vantage, you should know how to create workflows and submit jobs. If you aren't familiar with Vantage, we suggest that you review the *Vantage User's Guide* and *Vantage Domain Management Guide* as needed.

Synopsis

Telestream's Vantage Connector for Frame.io is an optional, licensed Vantage feature designed to integrate Vantage with Frame.io—the cloud-based visual media collaboration platform—to automatically upload video assets directly from Vantage to Frame.io.



With the Vantage Connector for Frame.io, editors and assistants no longer have to waste valuable time with mundane, manual tasks—transcoding media into the proper format and uploading them to Frame.io. Vantage workflow automation ensures media is uploaded to Frame.io automatically, minimizing errors and improving efficiency for seamless collaboration, by review and approval teams.

The Vantage Connector for Frame.io is implemented in Vantage as the Frame.io action. You can create custom workflows to ingest and prepare media (optional transcoding, metadata processing, etc.). Include the Frame.io action to connect to Frame.io, authenticate, and upload the media to a specific team's project in Frame.io.

You can add a Message action to the workflow after the Frame.io action, to automatically email team members and let them know the asset is ready for collaboration and review, and perform other tasks, as required.

Workflows that include publication to Frame.io may be designed for the primary or exclusive purpose of uploading media to Frame.io. However, the Frame.io action can also be included in larger-scope workflows that include prepping content for on-air and archival storage, where publication to Frame.io is simply one task in the workflow.

Commonly, after collaboration, other Vantage workflows are utilized for production transcoding and distribution of the final media.

Connector for Frame.io Operates in Two Modes

The Frame.io action operates in two different modes, but performs essentially the same function: uploading media to Frame.io. Each mode is designed for a specific submission method—interactive mode for direct file submission—and programmatic mode for file submission via a custom program using the Vantage SDK and the Frame.io SDK.

Interactive Mode

Interactive mode is the mode to choose for a workflow that is intended for directly submitting media to the workflow for publication. You can drag and drop media directly on the workflow, add it to a watched folder using a Watch, or batch-process many files at once, using a Workorder action.

When you configure the Frame.io action in interactive mode, you choose the team, project and folder using the visual, end-user names that display in the Frame.io web app. For details, see [Up and Running](#).

Programmatic Mode

Configuring the Frame.io action to operate in programmatic mode enables the Frame.io workflow to upload files submitted by a custom program or to be integrated into a larger, web services-based system, where jobs are also submitted programmatically.

Instead of identifying teams, projects and folders by their visual names in the web app, their UUIDs are used instead—which must be acquired via the Frame.io SDK. The UUIDs are passed in as metadata along with the media file, and the workflow is designed to pass the UUIDs in variables through the actions in the workflow for utilization as required.

In all other aspects, the configuration is the same as in interactive mode.

For details, see [Using Frame.io Workflows in Programmatic Mode](#).

Getting Started

Telestream recommends that you review [Prerequisites](#) and then follow the steps in [Installing and Licensing the Frame.io Connector](#) to make sure your systems are updated and operative.

Next, read [Up and Running](#) to create and configure a Frame.io workflow and use it to upload your media for collaboration in Frame.io.

Two prototype workflows—[Prototype Interactive Mode Workflow](#) and [Using Frame.io Workflows in Programmatic Mode](#)—with descriptions, are provided as a template for your own workflows.

Prerequisites

Before you can create and use a Vantage workflow to upload media to Frame.io, you should meet the following requirements:

Vantage

Vantage 8.0 + Update Pack 4 must be installed, licensed, and operating properly, with a maintenance agreement in place as of January 21, 2021. If your maintenance agreement expired before that date, do not install this patch, as it will cause some portions of Vantage to cease functioning.

The Vantage Connector for Frame.io patch must be installed, along with the Connector for Frame.io license. See [Installing and Licensing the Frame.io Connector](#).

Frame.io

You should have an account with Frame.io and be familiar with its operation.

Installing and Licensing the Frame.io Connector


A Connector for Frame.io license enables the Frame.io action in Vantage, and allows it to execute the Vantage Publish service—which implements the Vantage Connector for Frame.io—on a specific number of Vantage servers in a given domain.

Installing and licensing the Vantage Connector for Frame.io involves obtaining the patch installer and license, installing the Frame.io Connector components in Vantage and adding the license to your Vantage domain.

Obtaining and Adding the Frame.io License

Vantage licenses are managed using the Domain Management Console.

Instructions for installing the license are in the license email that you received.

Topics for adding and managing licenses are also in the Domain Management Guide—In the Licenses panel, click the  button at the far right in the title bar. Or, select Help > Contents | Index | Search to display the Console guide.

Obtaining and Installing the Connector for Frame.io

The Frame.io Connector is provided as a Vantage patch, which you should install only on Vantage 8.0 + UP4 with current maintenance as of January 21, 2021. This patch installs the Vantage Publish service and adds the Frame.io action to Workflow Designer.

To review the release notes, and download and install the patch, follow these steps:

1. Visit the [Vantage Customer Center](#) on the Telestream web site and log in with your credentials.
2. At the bottom of the page in the Updates tab, under the category Additional Patches—click the *Frame.io Connector Release Notes* link to the right of the *Frame.io Connector* link to open the Release Notes PDF.
3. Read the Release Notes to familiarize yourself with this software update, and take any action required to satisfy the requirements before proceeding.
4. Also under Additional Patches, click the *Frame.io Connector* link to download the patch and save the Vantage_8.0_FrameIO_Service_8.0.XXX.X.exe file.
5. Quiesce the Vantage domain—stop submitting jobs and wait for all jobs to execute, and close all client programs (Vantage Domain Console, Workflow Designer, etc.) and web apps.
6. Copy this EXE file to each Vantage server where you want the Publish service installed as the license permits, and run the EXE file to perform installation.
7. Re-open your client programs and continue with your work.

If you need assistance, contact our support team—see [Contacting Telestream](#).

Up and Running

The process of integrating Vantage with Frame.io involves the creation of a workflow in Vantage that includes the Frame.io action. Activate your new workflow and then you can submit media to the workflow for automated uploading.

Note: This topic assumes that you already have Vantage installed with the Connector for Frame.io licensed and operating, and you have a Frame.io account. See [Prerequisites](#) and [Installing and Licensing the Frame.io Connector](#).

This topic focuses on the big picture: creating a workflow and configuring its Frame.io action, and then using it to upload media to your account in Frame.io.

The goal is to submit media that you want uploaded, to a Vantage workflow which automatically uploads it to a specific project's folder within an account, and then (optionally) notify your team that it is ready for review. The steps are described below.

1. Obtain a Frame.io Bearer Token

Frame.io integration of course requires authentication. To get started, log into your Frame.io account and create a bearer token, if you don't already have one. You'll need it so that Frame.io can authenticate the Vantage workflow and access your Frame.io account. Copy and paste the token and save it in a file or an email; once you create it, you can't display it again in Frame.io for security reasons.

Note: Make certain that the account you use to create the bearer token is the owner of the project/projects that you intend to reference via Vantage. Also insure that the bearer token is created with All Scopes (this is an option when creating the token).

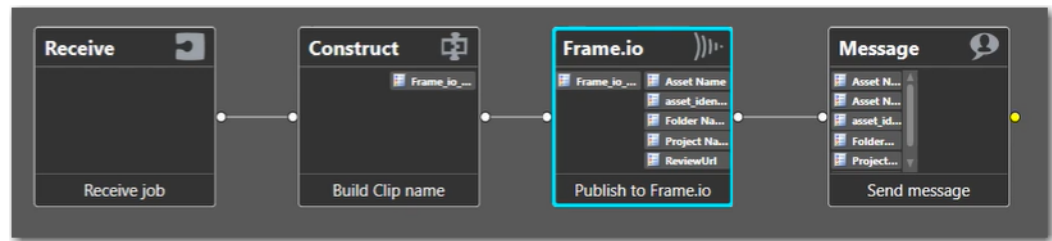
It is important that the project owner creates the bearer token. If the token is created by a member of the project who is not the owner, then the token's authority will not be sufficient to list all other components of the project (or other members of sub-projects).

2. Create a Frame.io Workflow

Next, turn your attention to Vantage: specifically, creating a workflow in Vantage Workflow Designer to prepare and upload media to Frame.io.

Vantage Workflow Designer is a Windows program where you create, manage, utilize, and monitor workflows to process media. If you don't know how to create workflows and submit jobs, we suggest that you review the *Vantage User's Guide* as needed.

Create a sample workflow in your Vantage domain with these actions.



This prototype workflow is designed to receive a media file, upload it to a specific project in Frame.io, and notify the team, using variables holding details about the job: job name, Frame.io media link, etc. In this workflow, the Frame.io action operates in interactive mode (see [Interactive Mode](#)), configured to use the teams and projects in your Frame.io account.

To configure the Frame.io action, you'll need to know the names of the team, project and folders you're using in Frame.io.

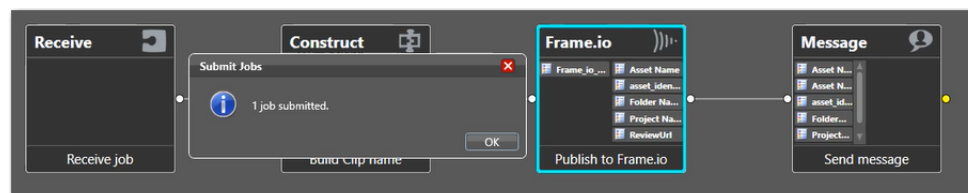
A complete, detailed description of how to construct and configure this workflow is described in [Prototype Interactive Mode Workflow](#).

3. Activate Your Workflow

In Workflow Designer, activate the workflow so that it is ready to receive media and submit a job for processing. Display the workflow and click the Activate button at the base of the workflow design space.

4. Submit Your Media to the Workflow

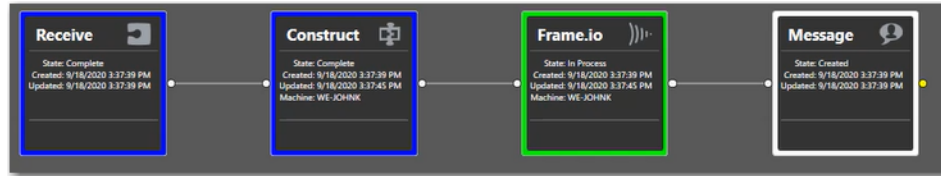
Select the media you want to upload and drag it directly on to the Receive action in Workflow Designer. Vantage displays a confirmation dialog:



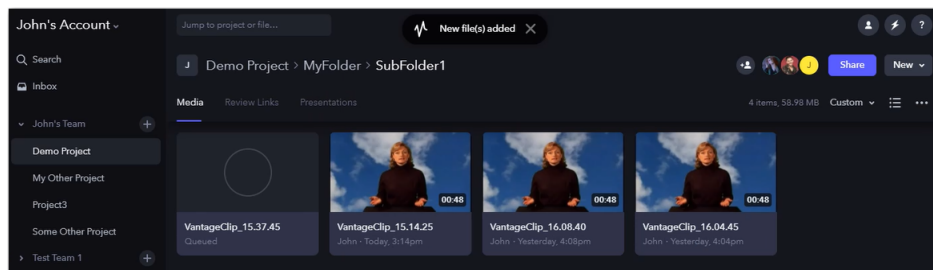
Note: You might also upload supporting files to the project: spreadsheets, scripts, planning documents, etc. Each Frame.io uploads one file.

5. Monitor the Job

Now, in the Job Status tab, watch the job execute, action by action. Blue borders indicate success; green borders indicate the action is currently executing:

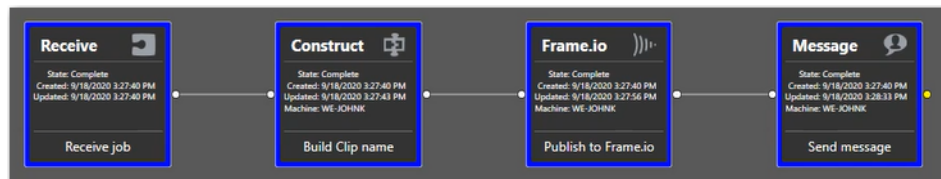


In Frame.io, you can also watch as Vantage uploads the file in real time:



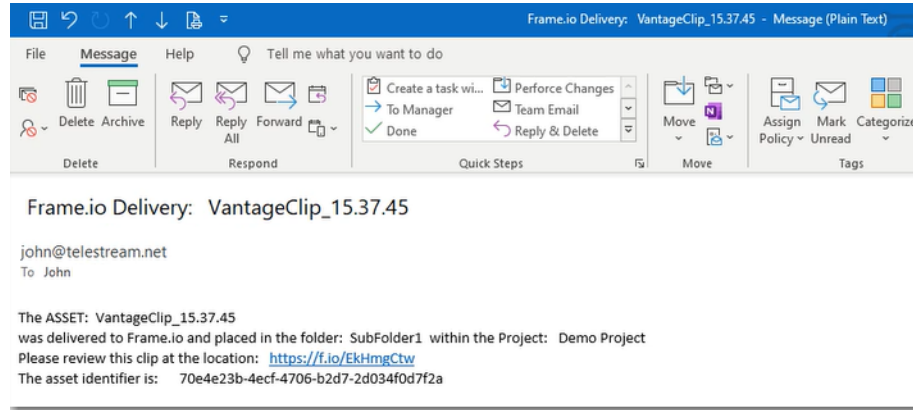
The new file entry displays, along with the new file's name—*VantageClip_15.37.45* in this example—which you assigned in the Frame.io action.

Back in Vantage Workflow Designer, the job completed successfully:



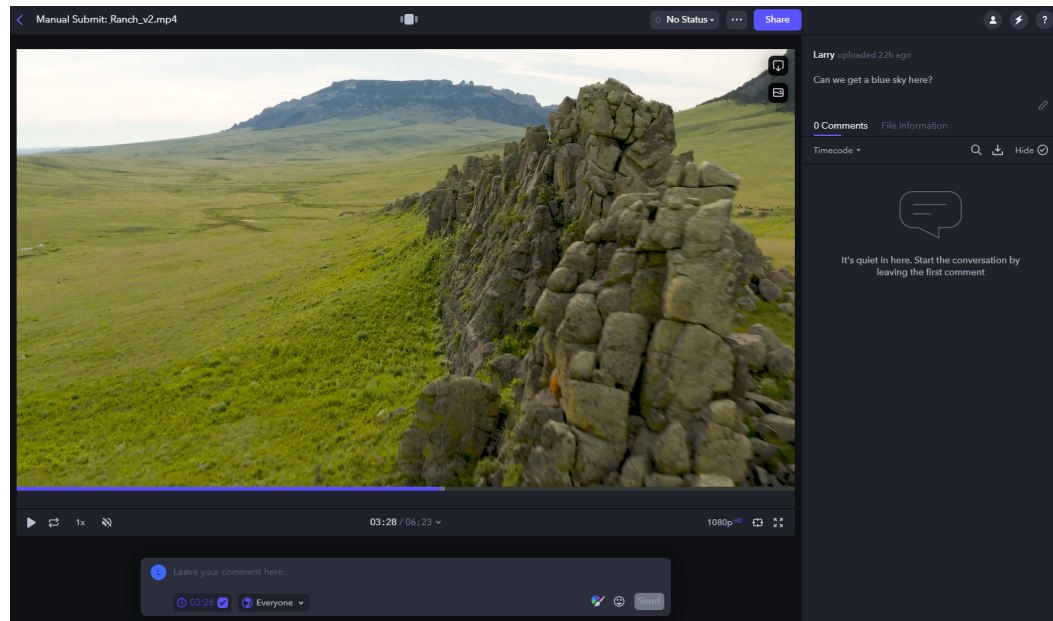
6. Begin Collaborating in Frame.io

The workflow's Message action generated an email based on the template and the variables, and delivered it to intended recipients.



The variables provided the asset name, the folder and project, along with the asset's URL in Frame.io as a link, plus the asset identifier.

Click the asset to open the clip in Frame.io, and begin collaborating with your team.

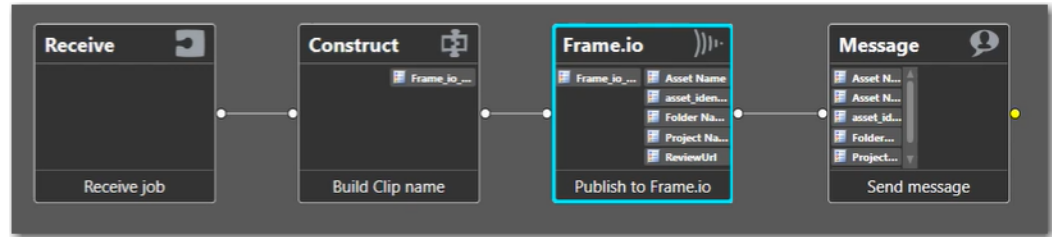


You can scrub the video, jog and shuttle, and comment and participate in other aspects of collaborative activities.

Note: When collaboration is complete, you can also use other Vantage workflows you've create to transcode and produce your production media.

Prototype Interactive Mode Workflow

This topic describes a simple, prototype workflow designed for manual media submission and how to configure the Frame.io action to operate in interactive mode.



This workflow illustrates the basic requirements for using Frame.io in interactive mode, plus an optional email generation in the Message action. Your workflow, of course, is likely to be configured differently, with more complexity, to meet your organization's requirements. For example, this workflow does not perform any prep work or transcoding prior to uploading, or saving the job binder in a catalog to retain assets after execution.

1. **Create the workflow.** In Workflow Designer, create a workflow with the actions depicted.
2. **Configure the Receive action** Configure it to ingest one media file. Check the nickname *Original* to receive the media file and start the job.
 The Receive action starts a job when a file is dragged and dropped on the workflow. Receive is an appropriate origin action to use when you want to manually process media.

Note: You can also use a Watch action to monitor folders for new files or a Workorder action for bulk submissions.

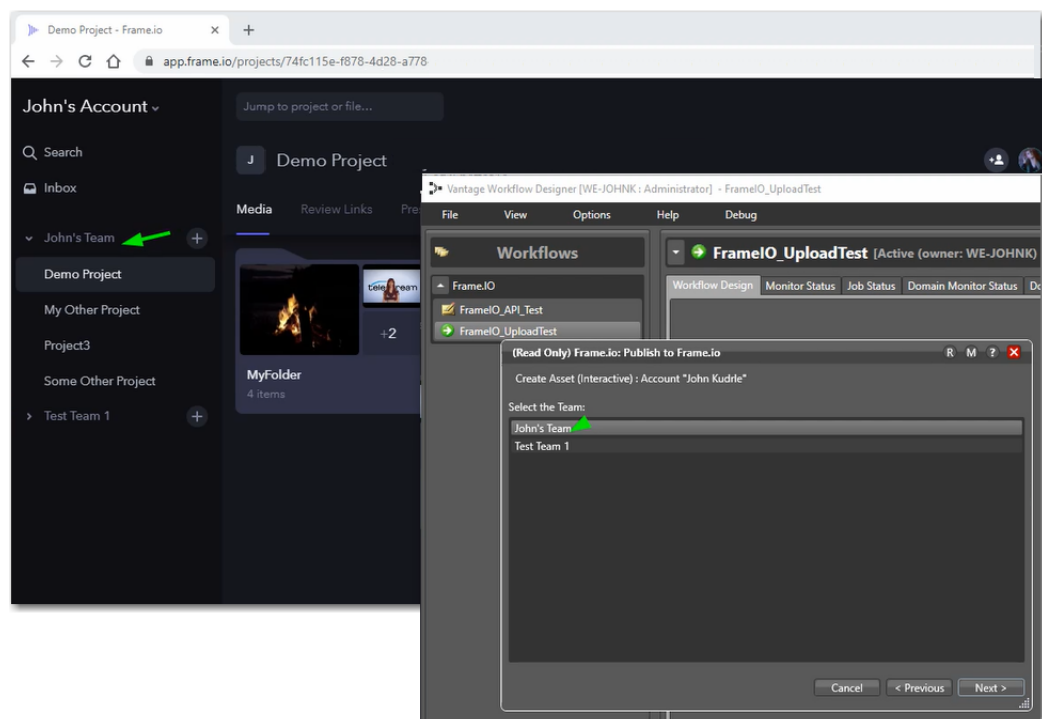
3. **Configure the Construct action.** Configure it generate a variable with the name of the file that was submitted for this job so that the name of the file uploaded to Frame.io is guaranteed to be unique:
 - **Operation.** *Construct a String*
 - **Format.** *Job Name*
 - **Result.** *File Name*
 The File Name variable is automatically updated with the name of the file that is submitted (which, by default is the name of the job as well), and is passed downstream for utilization in the Frame.io action and the Message action.
4. **Configure the Frame.io action.** Configure the Frame.io action, using information from the Frame.io web app.

5. Use the inspector wizard to specify the action type and bearer token:

- **Frame.io action type:** Create Asset (Interactive)
- **Bearer Token.** Paste a Frame.io bearer token into this field, obtained from the Frame.io web app (see [1. Obtain a Frame.io Bearer Token](#)) to authenticate the transaction.

Note: The bearer token enables Vantage to communicate with your account in Frame.io. If you enter an invalid token, Vantage displays an error message. Resolve and retry.

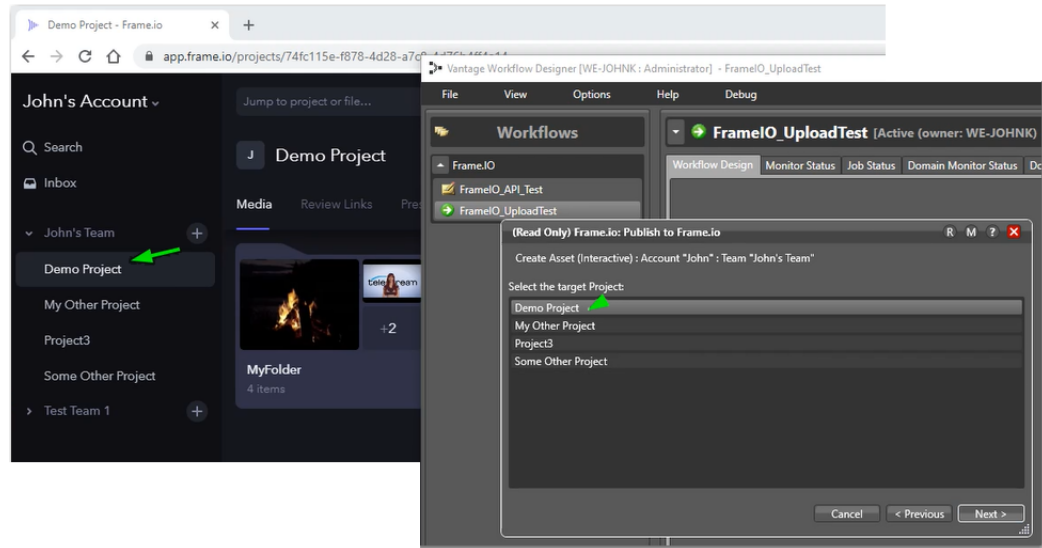
Here, Vantage has successfully connected to your account in Frame.io.



Workflow Designer—shown here super-imposed over the Frame.io web app where you have opened the Frame.io action inspector—illustrates the parallel presentation of account, team, and project information in both products: the Frame.io platform, and Vantage.

6. Select a team. Vantage queries Frame.io as you configure the action. Select a team to use for this job and click Next to continue.

Vantage queries the selected team for its projects and displays them:

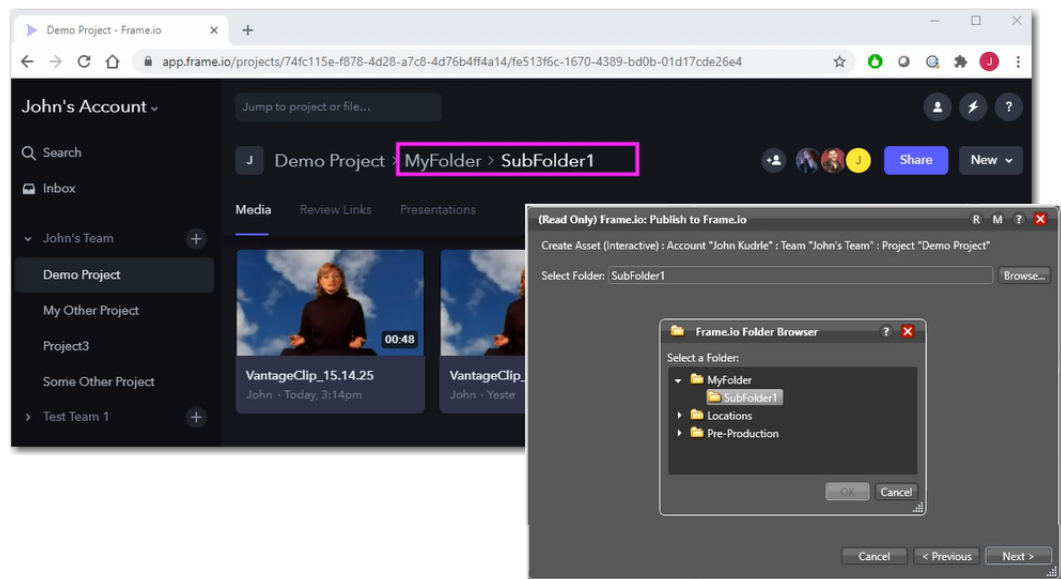


7. Select the project. Select a project, as shown here—super-imposed against Frame.io to illustrate the corollary between the Frame.io web app and the Frame.io action in your Vantage workflow:

8. Click Next to continue.

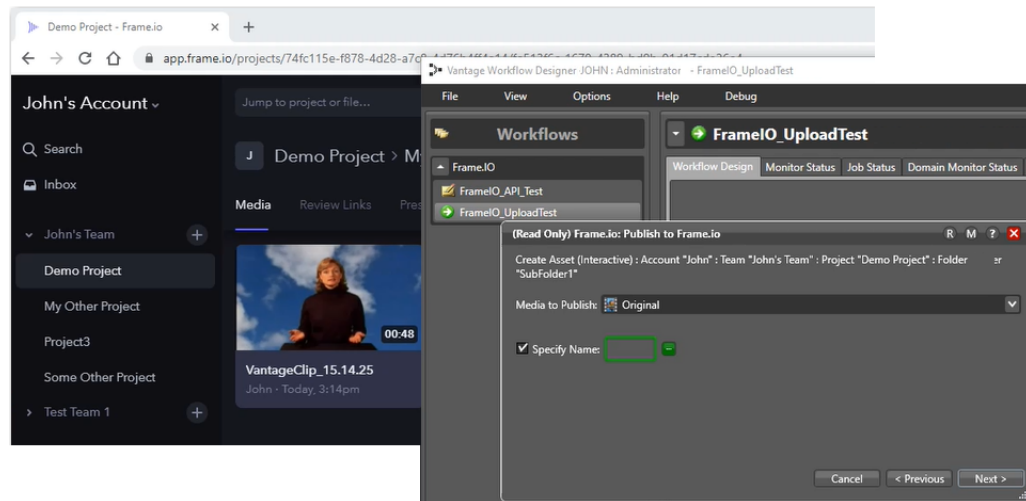
Vantage queries the project for its folders, if any.

9. Select the Folder. Now, browse and select the folder where you want to upload the media. See the Demo Project in Frame.io and simultaneously, the same organization and files displayed in the Frame.io action inspector:



10. Click Next to continue.

The inspector displays the next panel:

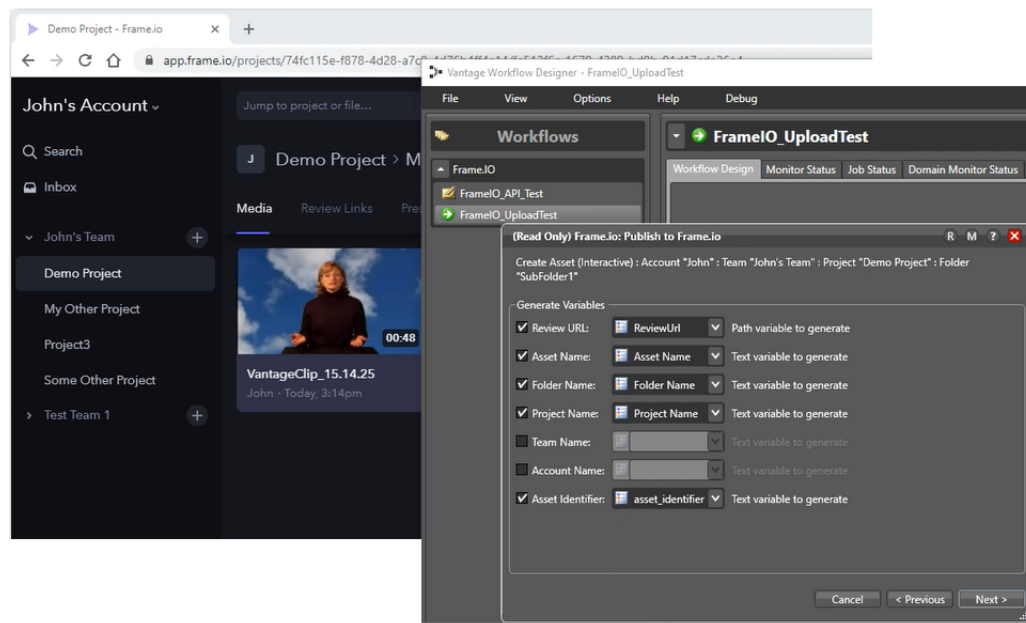


11. Choose the file to send.

Select *Original*, the nickname you chose for the media you are submitting, so that downstream actions in this workflow can utilize the file as well.

Also specify the file name you want to use for the file, when uploading it to Frame.io, so that you can avoid filename collisions. Bind this field to the File Name variable which you set in the Construct action.

In the Create Variables panel, check all of the variables you want to update:




12. Specify the variables to generate.

This includes the URL users can use to access the media, and the name, folder, and project associated with it, along with an asset

identifier. The information in these variables can be used to compose an email, delivered to users on this team. They can also be used in any other actions downstream. Or, you can add them to a label and register the media and label in a catalog, for persistence and potential re-use outside the context of the job.

13. Configure the Message action to generate an email. Configure Message to generate an email that the job sends to team members so that they are notified the job has executed and the media can be reviewed. The details of the email are collected in the variables pass to it from Construct and Frame.io actions.

Note: Configuring Vantage to process email is beyond the scope of this app note. See the man page (click on the  icon in the inspector) for details. If Vantage is not configured to email utilization, see the Settings & Options > Email tab in the Vantage Management Console as well.

Using Frame.io Workflows in Programmatic Mode

A Frame.io workflow where the Frame.io action is configured in programmatic mode should be implemented when you are submitting media to the workflow by an external program or as part of a larger, web services-based system. With the Frame.io action in programmatic mode, media must be submitted by a program or system rather than manually.

The program should utilize the Frame.io SDK to obtain team, project, and folder UUIDs. Then, the program should generate metadata values that meet the workflow requirements in Vantage. Finally, using the bearer token, utilize the Vantage SDK to submit the media via a fully-qualified path and the metadata label to the Frame.io workflow for processing.

Note: Make certain that the account you use to create the bearer token is the owner of the project/projects that you intend to reference via Vantage. Also insure that the bearer token is created with All Scopes (this is an option when creating the token).

It is important that the project owner creates the bearer token. If the token is created by a member of the project who is not the owner, then the token's authority will not be sufficient to list all other components of the project (or other members of sub-projects).

This is a simple, prototype workflow designed for programmatic media submission via the Vantage SDK:



The workflow should be designed and configured to perform the following tasks:

Configure the Receive action. The Receive action is required to start jobs programmatically via the Vantage SDK. You'll supply a fully-qualified path to the media file, and metadata in some form.

Extract metadata and update variables. The Frame.io action requires the following metadata:

- Bearer Token
- Team UUID
- Project UUID
- Folder UUID

You can use actions in the Metadata category (Extract | Lookup | Populate | Transform) to extract and populate variables with these values, depending on how you supply

them to the workflow with the media. For example, you may supply a JSON or XML file, or a CSV file, etc. The Frame.io requires this data to execute.

Configure the Frame.io action. The Frame.io action should be configured in the same manner as described in interactive mode, with the exception of assigning the bearer token and UUID fields to the variables you are using.

Contacting Telestream

To obtain product information, technical support, or provide comments on this guide set, contact us using our web site, email, or phone number as listed in the table below:

To obtain the Vantage Connector for Frame.io license, please contact your Telestream sales representative or your regional authorized Telestream distributor.

Resource	Contact Information
Vantage Technical Support	Web Site: http://www.telestream.net/telestream-support/vantage/support.htm Support Web Mail: http://www.telestream.net/telestream-support/vantage/contact-support.htm US Enterprise Product Support: (877) 257-6245 International Enterprise Support: +49 228 280 9141
Telestream	Web Site: www.telestream.net Sales and Marketing Email: info@telestream.net Telestream, LLC 848 Gold Flat Road Nevada City, CA. USA 95959
International Distributor Support	Web Site: www.telestream.net See the Telestream Web site for your regional authorized Telestream distributor.
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