# Luno Tools Flow Links

Description

Flow links allows you to connect parts of flows without a direct connection. Use cases are:

- Making flows easier to read by making connections in the same flow.
- Let jobs move from one flow to another without intermediate hotfolders.

This can be done by having a "Flow Links Send" element with a specific value for the "Channel" property. When a job arrives in a "Flow Links Send" element, the App will send a notification to a "Flow Links Receive" element which has the same value for the "Channel" property. The Receive element will move the job from before the Send element to the Receive element, including metadata and datasets. In this way, you can move jobs from one place in the flow to another, or to different flows.

Example setup 1:
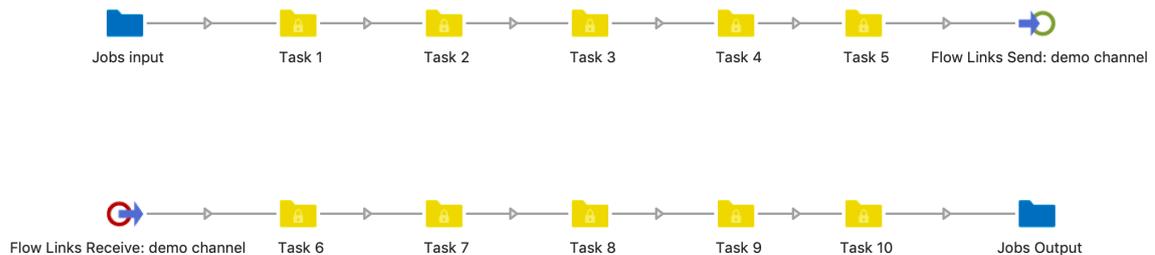
In this setup, a visually better result is created when you send jobs from the top right to the lower left of the flow. The alternative is a diagonal connection from the top right to the lower left, which is visually less appealing.

Example setup 2:
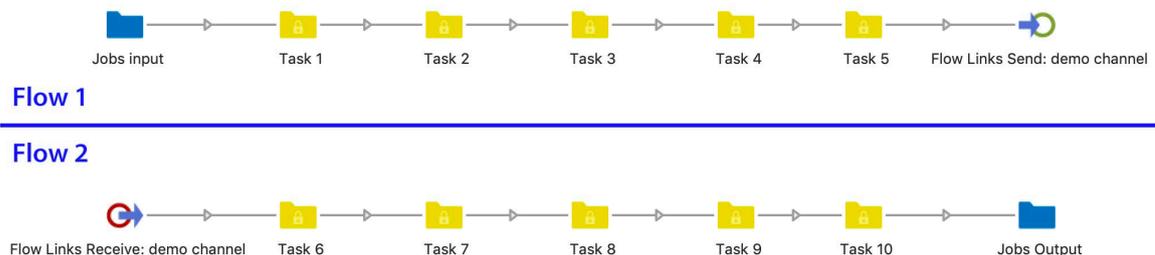

This setup is similar to the first example, except that the two flow pieces are located in different flows. Multiple smaller flows instead of one big flow has several benefits:

- No need to scroll or zoom to find flow elements.
- Each small flow can be activated and deactivated separately. Activation of a small subflow is a lot faster compared to activating a huge masterflow.

Example setup 3:
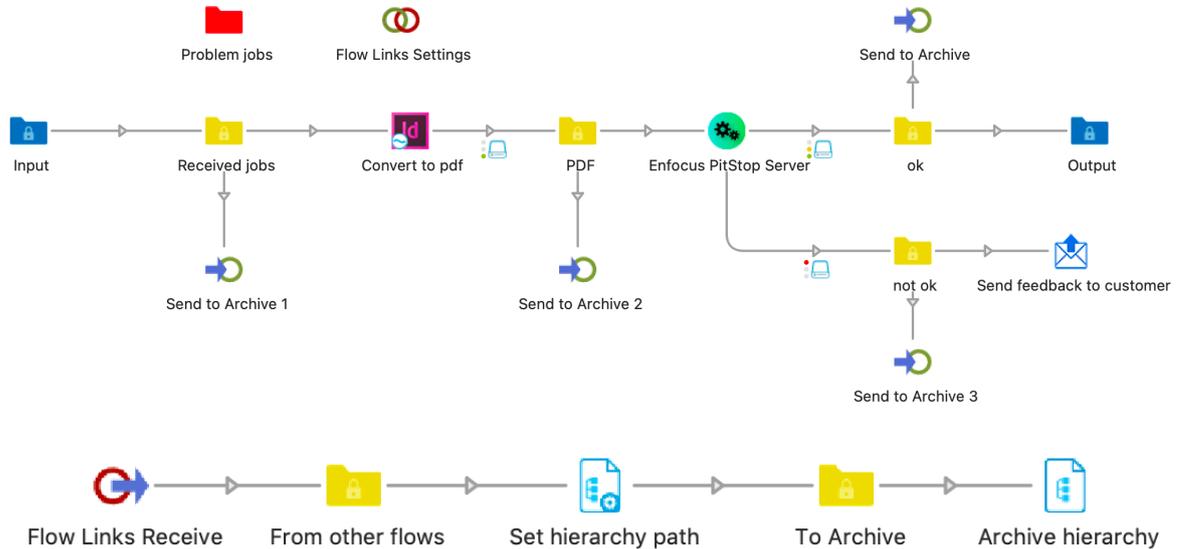
In this setup we receive InDesign files, convert them to PDF and preflight them. We want to have an Archive where we keep the input file, created PDF and preflighted PDF together in one jobfolder, like this:
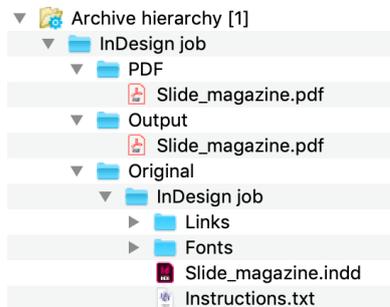
At each point in the flow where the job is sent to the archive, a copy of the job is sent to a Flow Links Send element. In this Flow Links Send element we set the subfolder location where we want the job to end up.
By example, we set "Original" for the jobs original files, "PDF" for the original files which are converted to PDF and so on.

In another flow we have a single "Flow Links Receive" element with channel "Archive" setup. In this flow we use "Set hierarchy path" like this:
- First section is the identifier of the job, for example a job name or job number
- Second section is the private data field which we have set in the "Flow Links Send" element.

Then the Archive Hierarchy uses the information added by "Set hierarchy path" to archive the job.

The benefits of this setup are:
- You don't have to repeat the logic to archive the job on each place where you want to archive.
- If you want to change something to the logic of the archiving (by example change the location of the archive), then you only must do this in one location. This avoids bugs caused by adjusting a setting in different places.

All these flows can be downloaded from the Flow Links page on the Enfocus Appstore.

Please note that while it is supported to have multiple Send elements pointing to the same Receive element (by using the same value in the channel property), it is not supported to have multiple Receive elements with the same channel property!

Compatibility
Switch 2022 Spring

Connections
Flow Links Send requires one incoming connection. Flow Links Receive requires one outgoing connection. Flow Links Settings needs no incoming our outgoing connections.

Properties detailed info

Flow Links Send Properties
- **Channel**
  Jobs sent to a Flow Links Send instance will appear on a Flow Links Receive instance with the same value for this property.
- **Add metadata to**
  Choose if you wish to map the data to Private Data, an XML dataset or both.

  Private Data can be used with only the Core Switch Module, however it requires you to remember the name of the Private Data tag when using it again.

  An XML dataset requires the Metadata Module to be licensed. It has the additional benefit that you can use the Switch dataset browser to choose the right field from the dataset.
- **XML dataset tag**
  Choose the name of the XML dataset tag.

- **Info map lines**
  In this property you can add data maps. Please check the default value for the structure of the property.

  Adding data maps with this method works best if the data map doesn't have any of the following limitations:
  - The value of the data map contains multiple lines.
  - The value of the data map contains an equal sign.
  - The value of the data map is calculated using a script expression or condition with variables.

  If you wish to add data maps with any of the above limitations, please use the 'Data Mapper' app before the Flow Links Send Element.

Flow Links Settings Properties
These settings apply for all Flow Links elements. If the Flow Links Settings element is not used, then default settings will be used. If you wish to change defaults, add this element to a flow, change the settings and activate the flow. Once the flow has been activated once the element can be removed again.

- **Switch web service protocol (Switch Preferences)**
  Flow Links uses the Switch web service for communication. Therefore, it is necessary to tell the "Flow Links Send" element what the webservice settings are in Switch.

- **Switch web service port (Switch Preferences)**
  Flow Links uses the Switch web service for communication. Therefore, it is necessary to tell the "Flow Links Send" element what the web service settings are in Switch.

If you did not change the web service settings in the general Switch preferences, then please keep these settings on their default values.

Version 1-6 uses the webhook settings in Switch. In version 7 the new web service settings in Switch are used, these are in the Web services category of the Switch preferences.

- **Retry Interval (seconds)**
  If a job arrives in a Flow Links Send element and the job can't be sent to a Receive element (because there is no Receive element with the same channel in an active flow), then the job will be retried after this interval.

Flow Links Receive Properties
- **Channel**
  Jobs sent to this Flow Links Receive instance originate from the Flow Links Send instance with the same value for this property.

Architectural changes and known issues
Version 1-6 of Flow Links are written in legacy JavaScript. Version 7 of Flow Links is a complete rewrite using the new Nodejs scripting engine. This way we can support the newly introduced JSON datasets.

The usage of the new scripting engine gives a speed increase on Windows compared to previous versions. On Mac the new design in resulted in a speed decrease compared to previous versions. The speed decrease is best noticeable when there are lots of jobs being processed simultaneously. The actual amount of the speed decrease will depend on your setup, the only way to know is to test.

The upcoming Switch version 2022 fall will have new scripting possibilities which will allow for even faster processing for both Mac and PC. There will be a new version of Flow Links created to make use of these new scripting possibilities.