

Enfocus Switch - HP PrintOS Composer app

for HP Indigo Digital Presses

How-to Guide



April 2020

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1 Overview

Who can benefit from reading this document?

This document provides information on the Enfocus Switch application that automates the workflow of VDP (Variable Data Printing) templates utilizing the HP PrintOS Composer cloud service. No hardware or software other than a computer and the Enfocus Switch application are necessary.

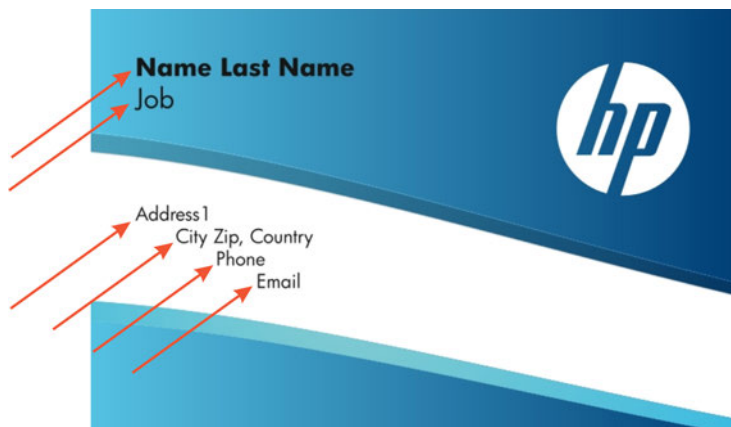
The job is composed in the cloud (by the HP PrintOS Composer service), thereby not requiring a dedicated HP SmartStream Composer server.

This application can help the DFE production manager to more efficiently manage the creation of VDP PDFs for sending to the press for printing.

Introduction

HP PrintOS Composer generates variable data PDFs by binding data with a graphic template. The graphic template can be generated by Adobe InDesign with HP SmartStream Designer or Adobe Illustrator with HP SmartStream Designer.

For example, the following is a business card template that has 6 VDP channels:



For the above example, there might be the following data file (as a csv file):

```
Title,Name,Last Name,Address1,Address2,City,Zip,Country,Phone,Email
Ms,Marilyn,Jones,Database Administrator,5 Graceland Point,Brody,61727-338,Ukraine,380-(372)188-7182,mj@mjrdata.com
Mrs,Ryan,Pierce,Pharmacist,6 Crescent Oaks Plaza,Toliara,50181-003,Madagascar,261-(492)865-3125,rpi@megapharm.com
Rev,James,Henderson,Structural Analysis Engineer,4495 Graedel Drive,Karafao,40028-512,Indonesia,131(342)618-9274,jhenderson@skywayeng.org
Rev,Benjamin,Parker,Accountant IV,2675 Beilfuss Street,Liujia,64735-020,China,86-(598)904-6153,benparker@beckwayhawthorn.com
Mrs,Earl,Cooper,Assistant Manager,151 Tomscot Lane,Lutoryz,0264-7885,Poland,46-(232)389-6524,ecooper46@andj.com
Mrs,Carlos,Martin,Account Representative II,4617 North Road,Tarbagatay,0378-5525,Russia,7-(780)164-9029,cmartin5@jollytimes.com
```

Composer binds the data to the PDF to produce the following:



You can repeat the process, each time with different data file inputs and get different results, with different data binding each time.

Using the PrintOS Composer Switch app streamlines the process by automating most of the actions necessary.

Composition features

The composition supports:

- Variable text.
- Variable images based on the image file name within the database.
- Variable barcodes based on text in the data file (Barcode Studio and IDAutomation).
- Variable map images based on the address text (locr maps).
- Variable auto-generated images using HP Mosaic and Collage.
- Image or Text rules to generate variable data.

In addition to VDP, Composer also enables applying imposition with records distribution.

HPD graphic template

Graphic templates can be created using the HP SmartStream Designer plugin, available for both InDesign and Illustrator.

Using Designer, you can create an HPD file containing a template with the required assets packed inside.

Data file

The data file containing the variable data is a delimiter-separated values file. The Composer service supports CSV, or TXT with tab-delimiters. The data file can be created by any operating system with any end-of-line characters.

The easiest way to create a data file would be with Microsoft Excel, although any tool generating a delimiter-separated file can be used.

Imposition template

Composer supports IMPP imposition template files. Such templates can be created by HP SmartStream Designer for InDesign.

The imposition template can be packed as part of the VDP template (HPD file) or by attaching it to composition processing separately.

Either way, when imposition is available, the Composer service applies the imposition to the generated PDF result per request.



NOTE: Only record-distribution imposition templates are supported. Attempting to use page-distribution results in a system error.

Assets library

As mentioned above, the VDP template can include variable images. In such cases, the data file should include references to the images by their filenames. The image files themselves need to be available when the Composer service creates the PDF.

You can supply the image files using one of following two options:

- Pack the images as part of the template file – HPD file.
- Zip the images and upload the ZIP file separately.

This option might be more convenient since it enables creating the HPD once and then processing it again with different images later.

Printing quota

HP PrintOS Composer allows processing of up to 10,000 records per month for free.

If the above quota is reached, jobs will fail with an error message saying that the quota was reached. The quota is reset once a month.

To check what your current records quota is, or if your records quota was reached and/or you want to increase your quota, see [Quota for printing with HP PrintOS Composer on page 43](#).

Prerequisites

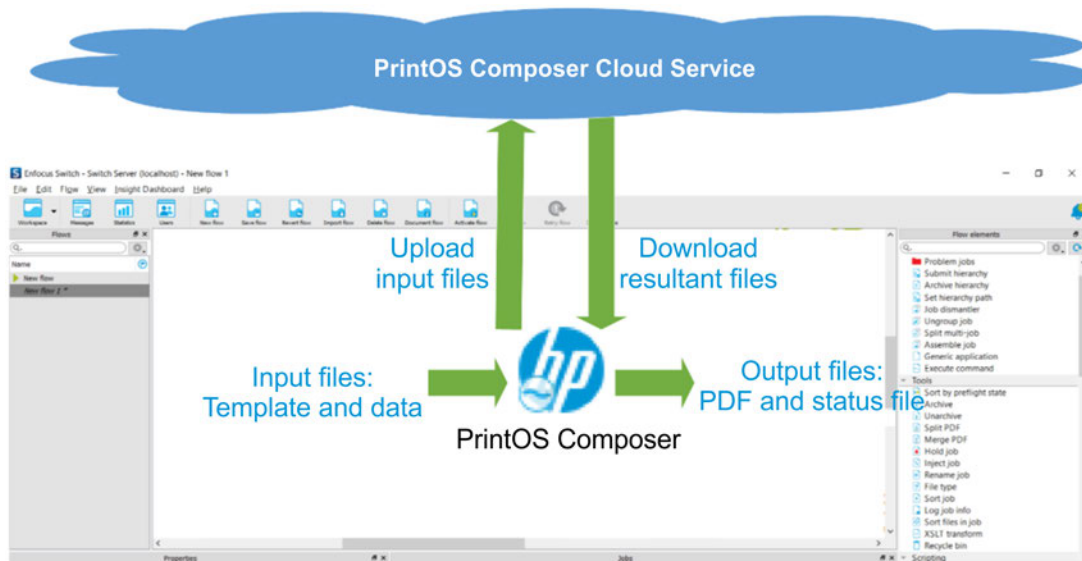
- Good, stable, and high-speed internet connection for fast file transfer to and from the Composer service cloud.
- Enfocus Switch software installed. Knowledge of how to use the software.

Switch documentation can be found at:

- Quick Start Guide: <https://www.enfocus.com/manuals/QuickStartGuide/SW/19.1/home.html#about.html>
- Reference Guide: <https://www.enfocus.com/manuals/UserGuide/SW/19.1/home.html#about.html>
- PC or Mac to run the Enfocus Switch software.
- Active account in HP PrintOS. PrintOS includes the Composer service.
- (optional) Adobe InDesign or Illustrator, with the HP SmartStream Designer plugin.

Workflow

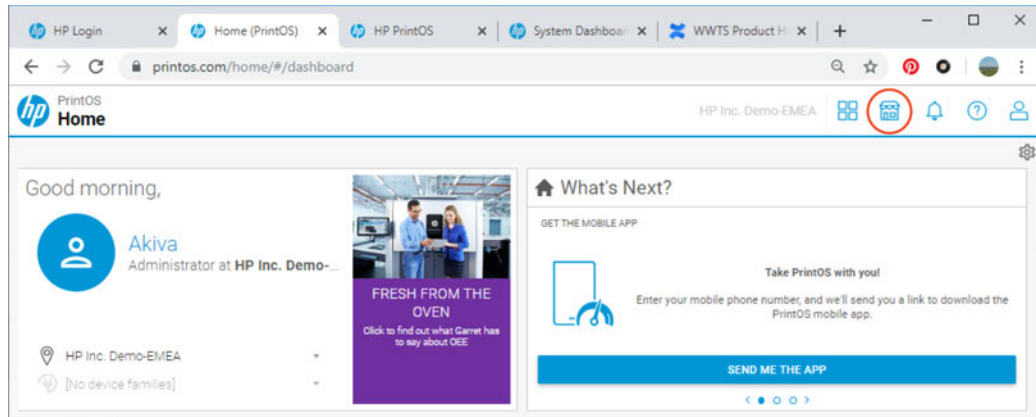
The PrintOS Composer app receives input files, uploads the files to the PrintOS Composer cloud service for processing, and when done, downloads the resultant PDF to its output destination.



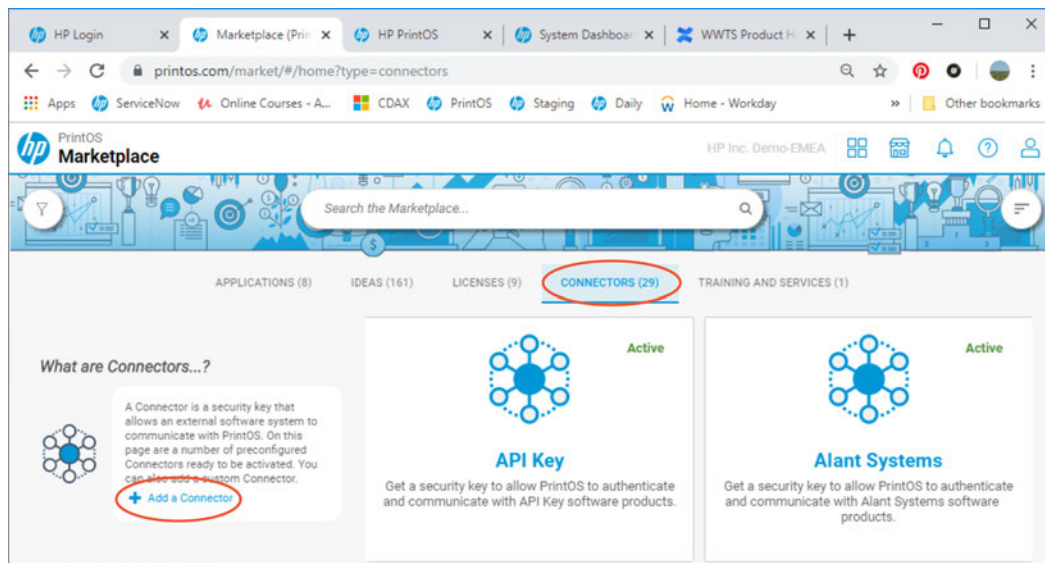
2 Installation and configuration

Acquiring the HP PrintOS Composer key and secret

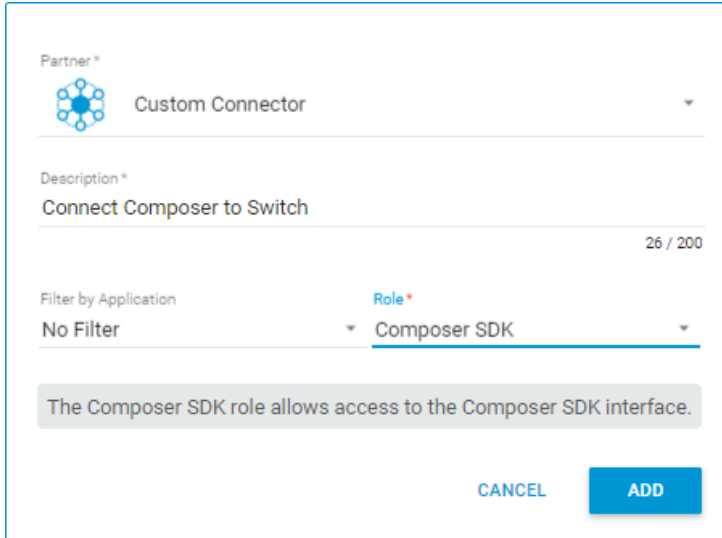
1. Log into your PrintOS account.
2. At the top right icon bar, click the **Marketplace** icon.



3. Select the **CONNECTORS** tab and click **Add a Connector**.



4. In the *Custom Connector* popup window that appears, do the following:



Partner *
Custom Connector

Description *
Connect Composer to Switch
26 / 200

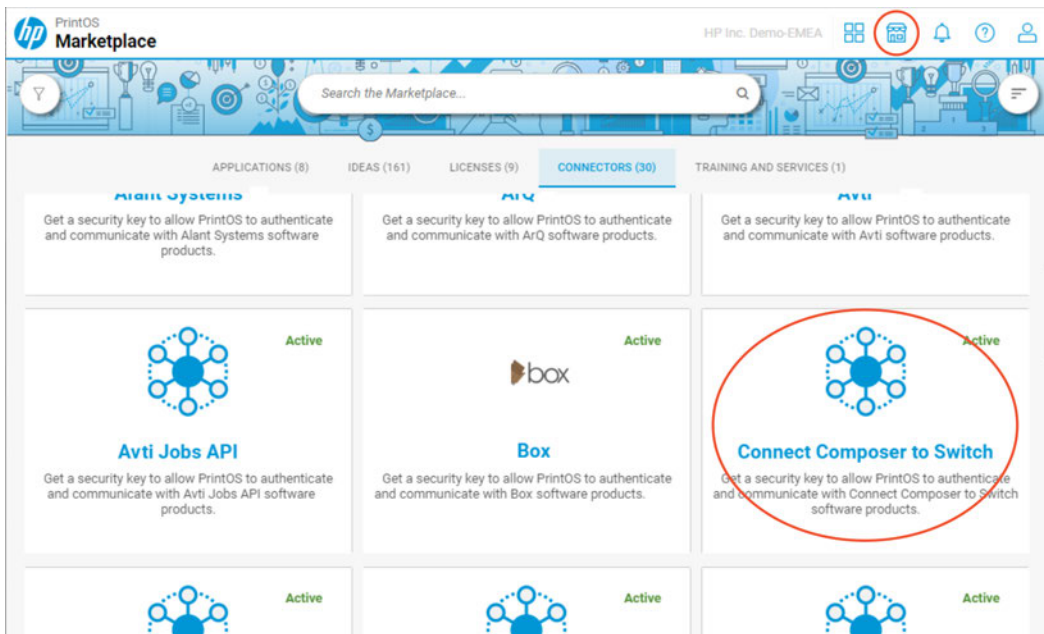
Filter by Application
No Filter

Role *
Composer SDK

The Composer SDK role allows access to the Composer SDK interface.

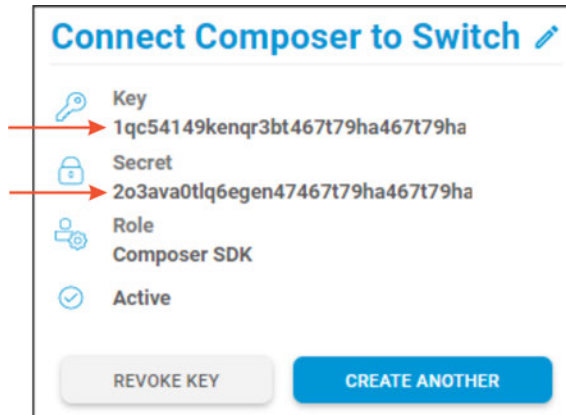
CANCEL ADD

- Leave the *Partner* dropdown as **Custom Connector**.
 - In the *Description* field, enter a description (such as **Connect Composer to Switch**).
 - Leave the *Filter by Application* dropdown as **No Filter**.
 - From the *Role* dropdown list, select **Composer SDK**.
 - Click **ADD**.
5. A new *Connector* tile is created. Click the **Marketplace** icon as you did in step 2 above. You might need to scroll down until the new tile appears. In our example, the tile name is the description (*Connect Composer to Switch*) you gave to the *Description* field in the previous step.



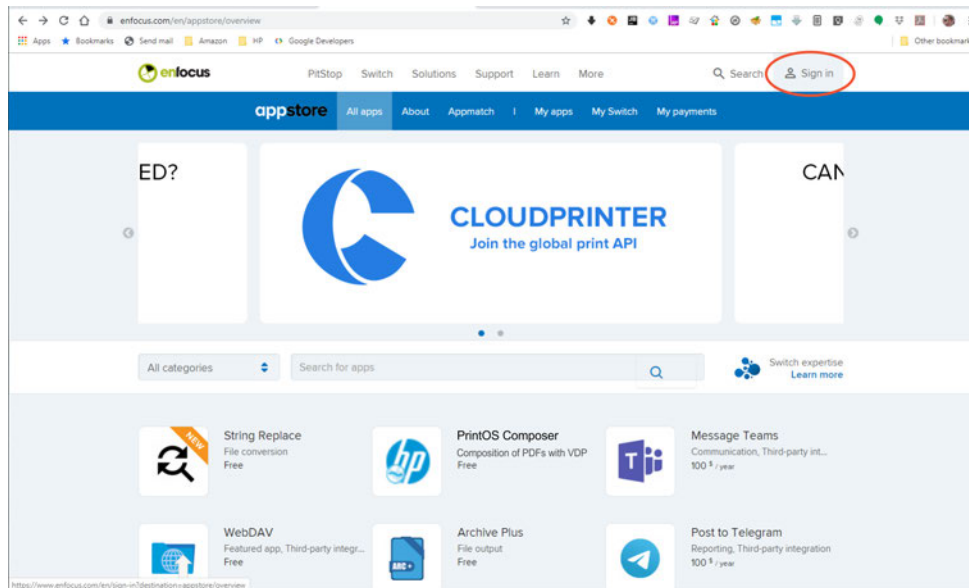
6. Click the tile.

7. In the popup window that appears, select and copy the *Key* and *Secret* strings, and save them to a text file for later use.

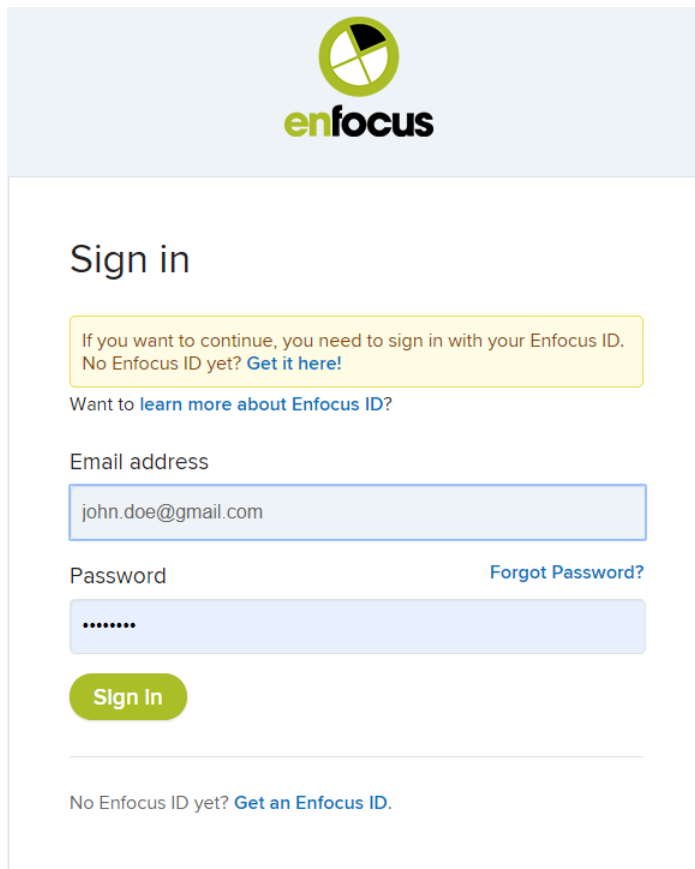


Installing the HP PrintOS Composer app into Enfocus Switch

1. In a web browser, go to <https://www.enfocus.com/en/appstore/product/hp-printos-composer>



2. In the top menu bar, click **Sign in**, enter your credentials in the *Sign in* window that appears, and then click **Sign In**.

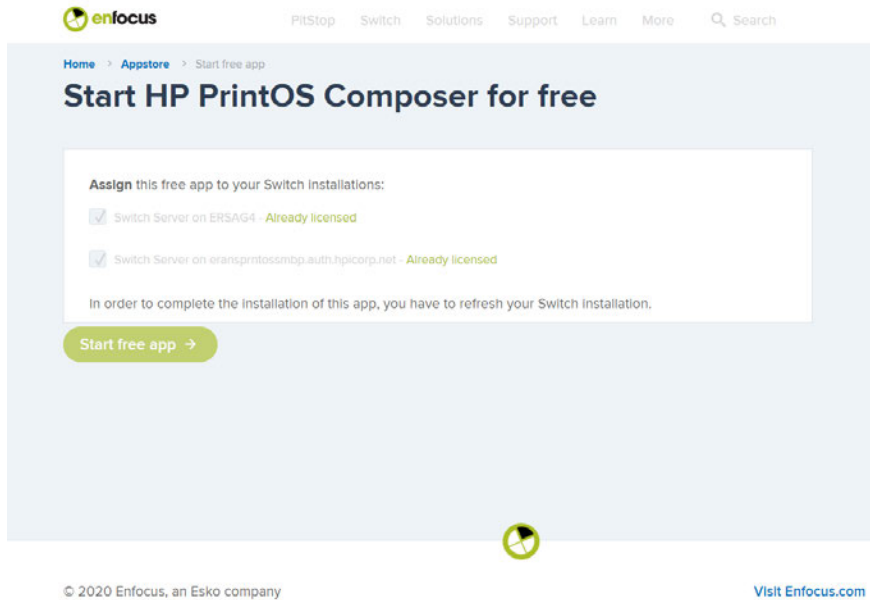


The screenshot shows the Enfocus Sign in page. At the top, there is the Enfocus logo, which consists of a green circle with a black and white quadrant and the word "enfocus" in lowercase. Below the logo, the heading "Sign in" is displayed. A yellow warning box contains the text: "If you want to continue, you need to sign in with your Enfocus ID. No Enfocus ID yet? [Get it here!](#)". Below this, a link says "Want to [learn more about Enfocus ID?](#)". The "Email address" field contains "john.doe@gmail.com". The "Password" field is masked with "....." and has a "Forgot Password?" link to its right. A green "Sign In" button is positioned below the password field. At the bottom, a link says "No Enfocus ID yet? [Get an Enfocus ID.](#)".

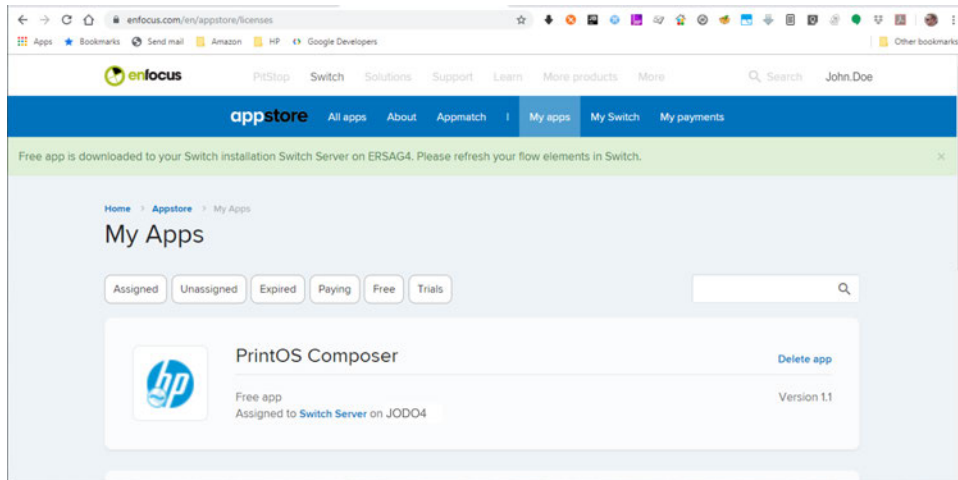
3. In the *HP PrintOS Composer* screen, click **Get It now**.

The screenshot shows the HP PrintOS Composer app page in the Enfocuse appstore. The page features the Enfocuse logo at the top left, navigation links for 'PrintShop', 'Switch', 'Solutions', 'Support', 'Learn', and 'More', and a search bar. The appstore header includes 'appstore' and links for 'All apps', 'About', 'Appmatch', 'My apps', 'My Switch', and 'My payments'. The breadcrumb trail reads 'Home > Appstore > HP PrintOS Composer'. On the left, there is a sidebar with the HP logo, 'File conversion' and 'File output' categories, and 'App creator' information for HP, including 'Support', 'Send an email', and 'Online support'. The main content area displays the app title 'HP PrintOS Composer' with '0 reviews' and an 'Add review' link. A 'Download for free' section contains a prominent green 'Get it now' button with a right-pointing arrow. Below this, the app description states: 'Automate your Variable Data Printing (VDP) Workflow, by converting your VDP templates to a ready-to-print PDF without a single human touch point. This HP PrintOS Composer app for Enfocuse Switch automatically sends your HP SmartStream Designer templates to HP PrintOS Composer in the cloud, to make sure you get the PDF you want, faster than ever before. The completed PDF is then pushed back into Enfocuse Switch for further processing.' A list of benefits follows: 'Some of the benefits of integrating HP PrintOS Composer with Enfocuse Switch include: • A completely automated VDP process • Up to 50x faster variable PDF creation compared to using Mac/PC • Compatible with all of HP VDP templates, including HP Mosaic and HP Collage • Enables creating jobs from dozens to millions of records • Create 10,000 records every month at no charge'. A note at the bottom states: 'To learn more about HP PrintOS Composer visit the HP PrintOS Marketplace page Note: to use this app, HP PrintOS credentials are required. To learn more, visit HP PrintOS homepage.' At the bottom of the page, there are three image thumbnails: a printer, a workflow diagram, and a collection of printed beverage labels.

4. Select your server and then click **Start free app**.



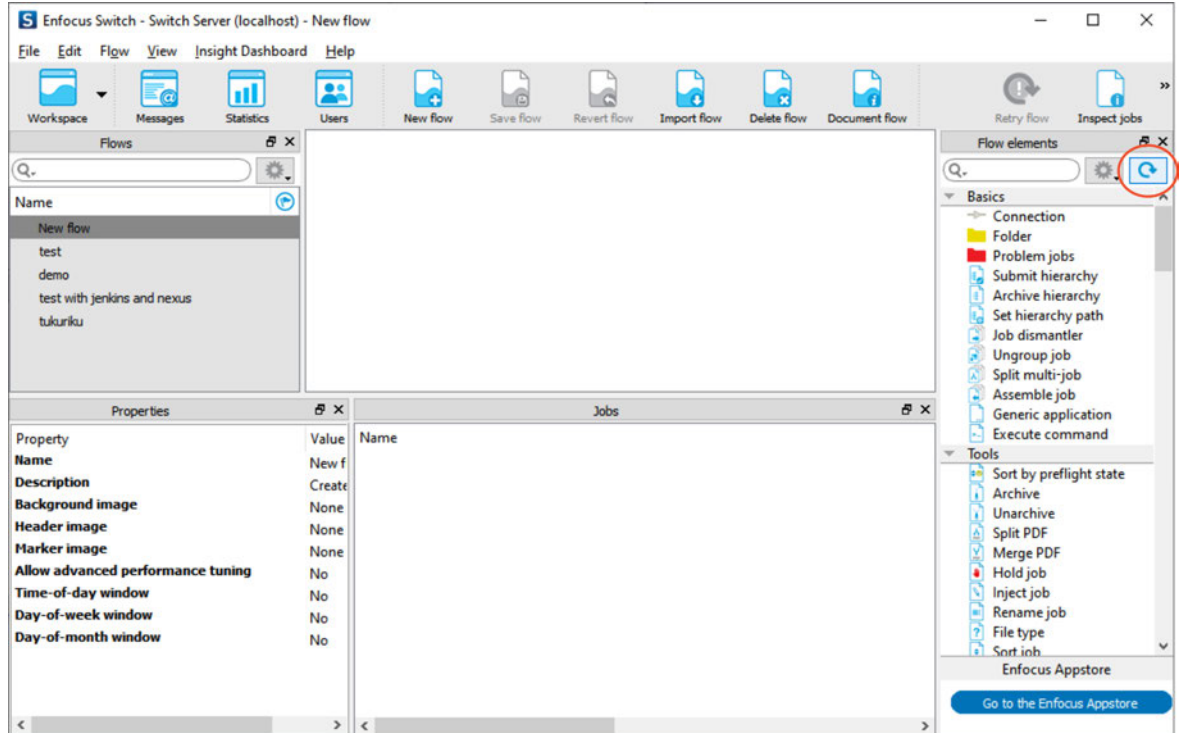
The *My Apps* screen appears, displaying *PrintOS Composer* as an app that was downloaded to your Switch software. This screen is for information only and nothing needs to be done in this screen.



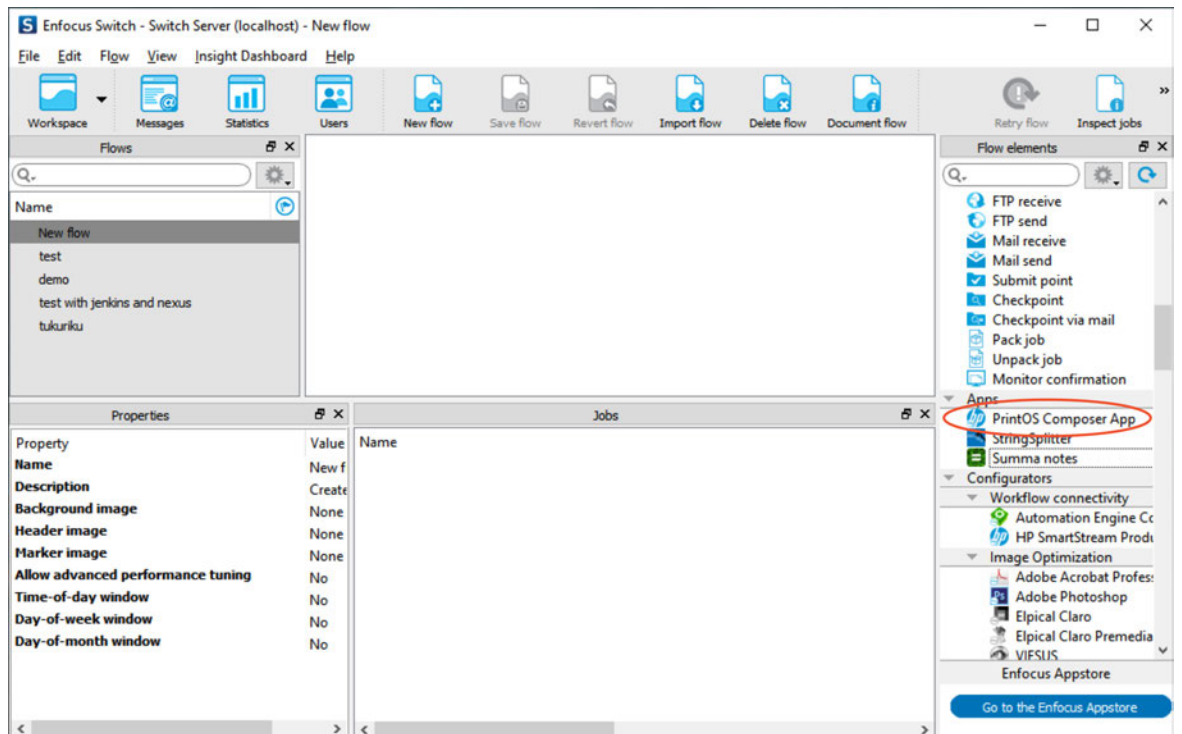
5. Open Switch by double-clicking its icon.



- Click the **Refresh apps** icon at the top right.

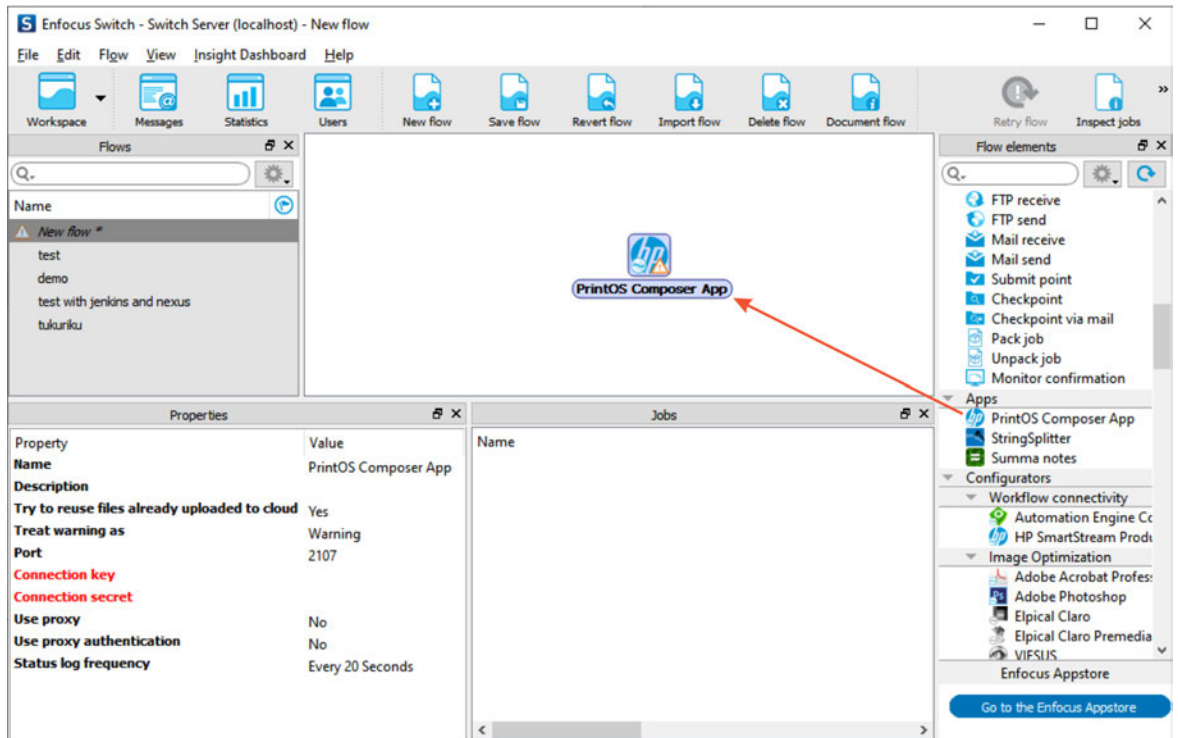


The *PrintOS Composer app* is added to the *Flow elements > Apps* pane at the right.



- Click and drag the *PrintOS Composer app* from the *Apps* pane to the canvas.

 **NOTE:** The *PrintOS Composer app* that appears in the canvas is selected. If it is not selected, select it in order to be able to set its properties in the *Properties* pane at the bottom left.



Configuring the HP PrintOS Composer app

In the *Properties* pane that was open in step 7 above, set the values of the properties as described below.

Property	Value
Name	PrintOS Composer App
Description	
Try to reuse files already uploaded to cloud	Yes
Treat warning as	Warning
Port	2107
Connection key	
Connection secret	
Use proxy	No
Use proxy authentication	No
Status log frequency	Every 20 Seconds

For each property, click its value in the *Value* column and change it if necessary, as follows:

- *Name* – Enter a relevant name, such as **PrintOS Composer**.
- *Description* – Enter a description (optional).

- *Try to reuse files already uploaded to cloud* – Select **Yes** if you want to be able to reuse an input file in many jobs that might use different data files. The input file is already in the cloud and does not need to be uploaded again for each job.

Select **No** if you do not want to activate this option.

- *Treat warning as* –

The Composer app creates output with 3 different statuses:

- *Warning* – A process that ends in this status is sent to the *Warning* folder. The process might have completed the job with (for example) missing fonts, missing assets, or other possible results.
- *Success* – A process that ends in this status is sent to the *Success* folder.
- *Error* – A process that ends in this status is sent to the *Error* folder.

You can override the behavior of a job that ends with a *Warning* status but selecting either **Success** (to have the job sent to the *Success* folder) or to **Error** (to have the job sent to the *Error* folder).

- *Port* – The PrintOS Composer app uses a local service in the same computer that runs Switch. For this local service to work, it requires a free socket port. The Composer app defines a default port. However, if the default port is not free, you must set this field to an alternative free port.
- *Connection key and Connection secret* – Copy/paste the key and secret that you saved in step [7](#) at the end of [Acquiring the HP PrintOS Composer key and secret on page 5](#).
- *Use proxy and Use proxy authentication* –

Often, an organization’s network is situated behind a proxy server. In this case, proxy details might be necessary, so set *Use proxy* to **Yes**. More fields appear. Get the proxy details from your network administrator and enter them into the relevant *Proxy* fields. See the example below.

Use proxy	Yes
Proxy schema	http
Proxy host	proxy.corp.com
Proxy port	8080

Sometimes, the proxy server might require authentication with a username and password. In this case, set *Use proxy authentication* to **Yes**, and fill in the username and password. See the example below.

Use proxy authentication	Yes
Proxy username	my.user
Proxy password	●●●●●●●●●●

If none of the above is relevant to your network, set both fields to **No**.

- *Status log frequency* – The PrintOS Composer app sends job progress and status information to the Switch log. With this field, you can define the frequency that the app reports progress and status to the log for each of the jobs.

Status log frequency	<div style="border: 1px solid gray; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px;">Every 20 Seconds</div> <div style="background-color: #0070c0; color: white; padding: 2px;">Every 20 Seconds</div> <div style="padding: 2px;">Every 1 Minute</div> <div style="padding: 2px;">Every 15 Minutes</div> <div style="padding: 2px;">Every 30 Minutes</div> <div style="padding: 2px;">Every 1 Hour</div> </div>
-----------------------------	--

3 Creating a flow for use with PrintOS Composer

A flow consists of input and output folders. The procedures below describe how to create output folders and input folders.

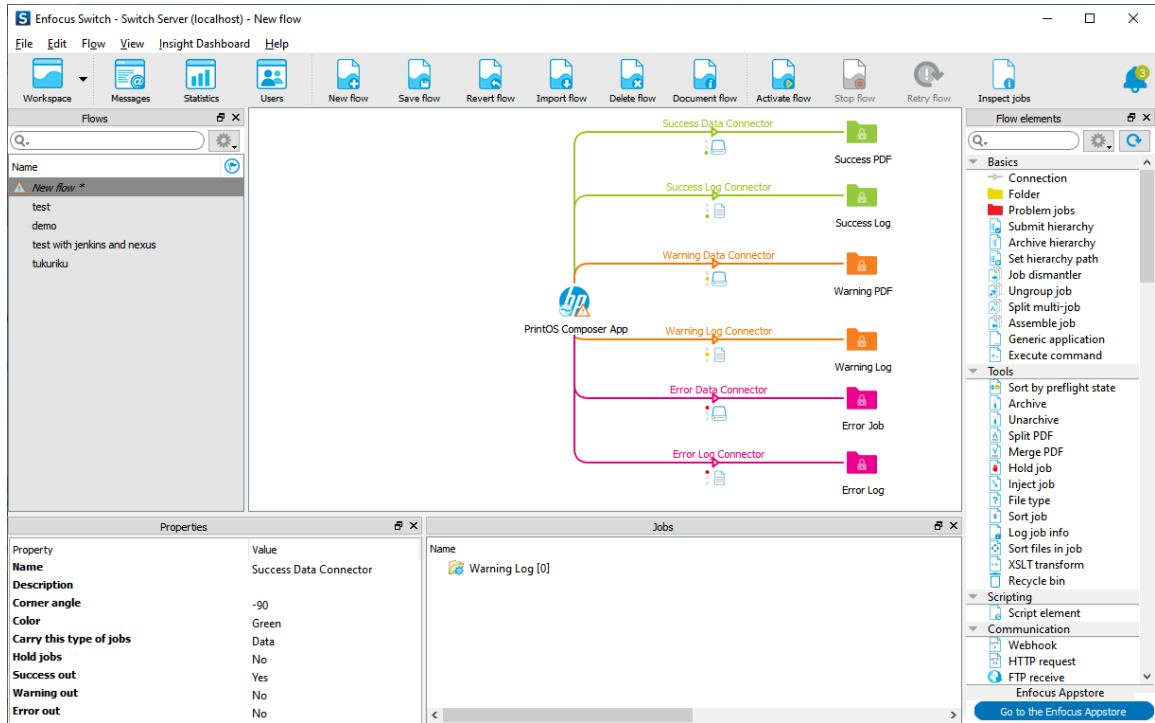
Creating output folders

PrintOS Composer app requires the following 6 output folders for PDFs that are processed by the Composer cloud service and for their respective log files.

- **Success PDF** – For successfully processed PDFs.
- **Success Log** – Log file in JSON format (see [Examining the results of a job on page 33](#)). It includes results received from the Composer cloud service. The original job (such as JSON single file or folder) is also put into this folder.
- **Warning PDF** – For PDFs that were successfully processed but with warnings. If the *Treat warning as* field in [Configuring the HP PrintOS Composer app on page 12](#) was set to *Success* or *Error*, the PDFs are sent to the relevant folder.
- **Warning Log** – Log file in JSON format (see [Examining the results of a job on page 33](#)). It includes results received from the Composer cloud service. The original job (such as JSON single file or folder) is also put into this folder.
- **Error Job** – For jobs with errors that prevented successful processing. The unprocessed job is copied from the input folder to this folder.
- **Error Log** – Log file in JSON format (see [Examining the results of a job on page 33](#)). It includes results received from the Composer cloud service.

Create output folders as follows:

1. Create the following output folders and configure them as described in the next step.



2. Select the connectors one at a time and set the values in their respective *Properties* pane, as shown below.

Figure 3-1 Success Data Connector

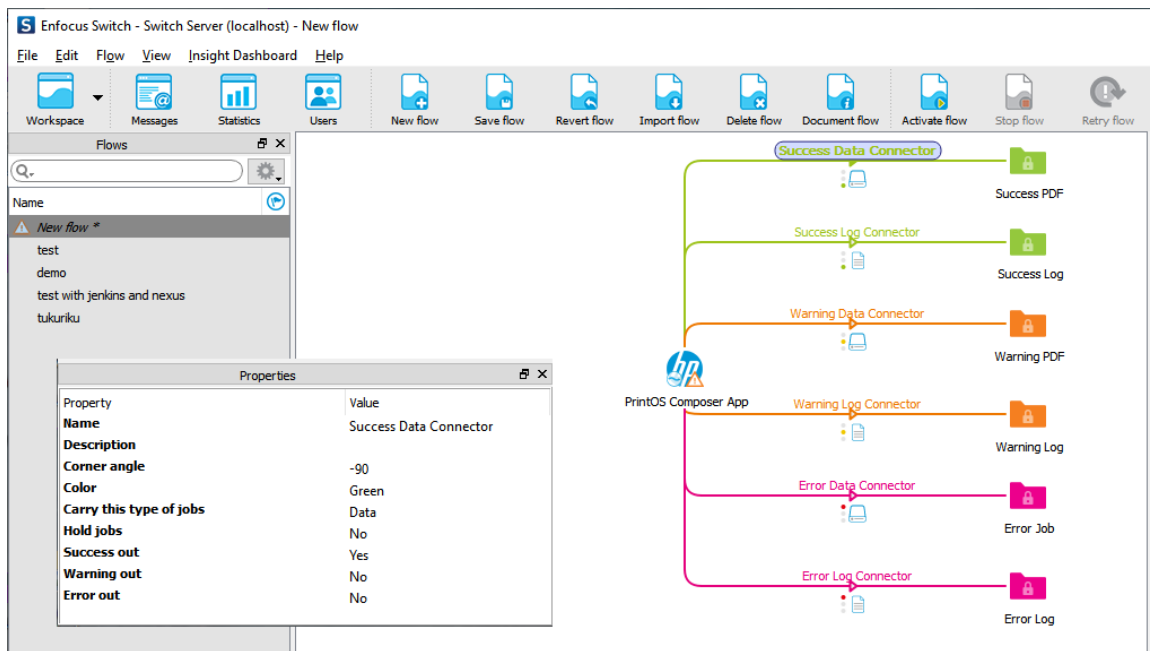


Figure 3-2 Success Log Connector

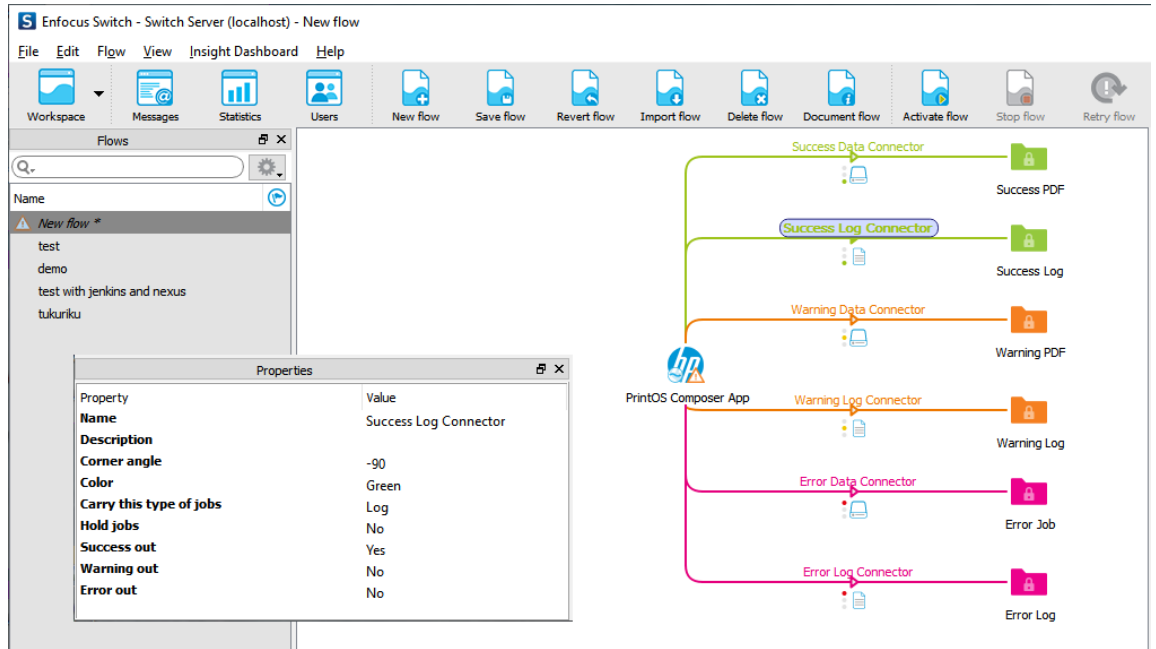


Figure 3-3 Warning Data Connector

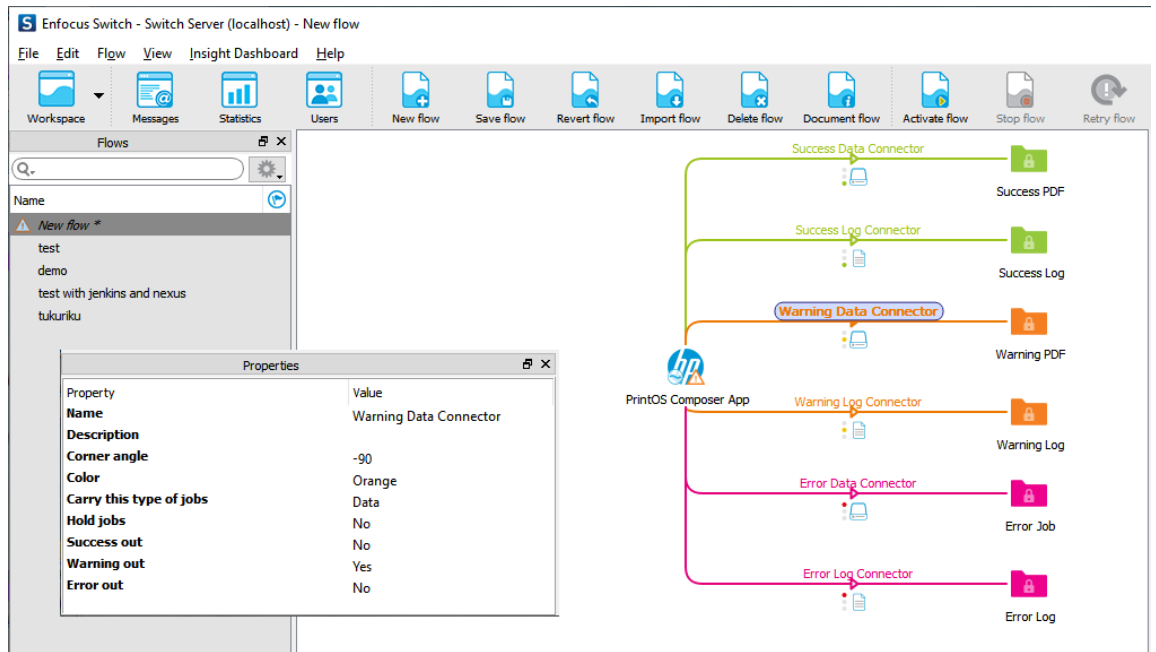


Figure 3-4 Warning Log Connector

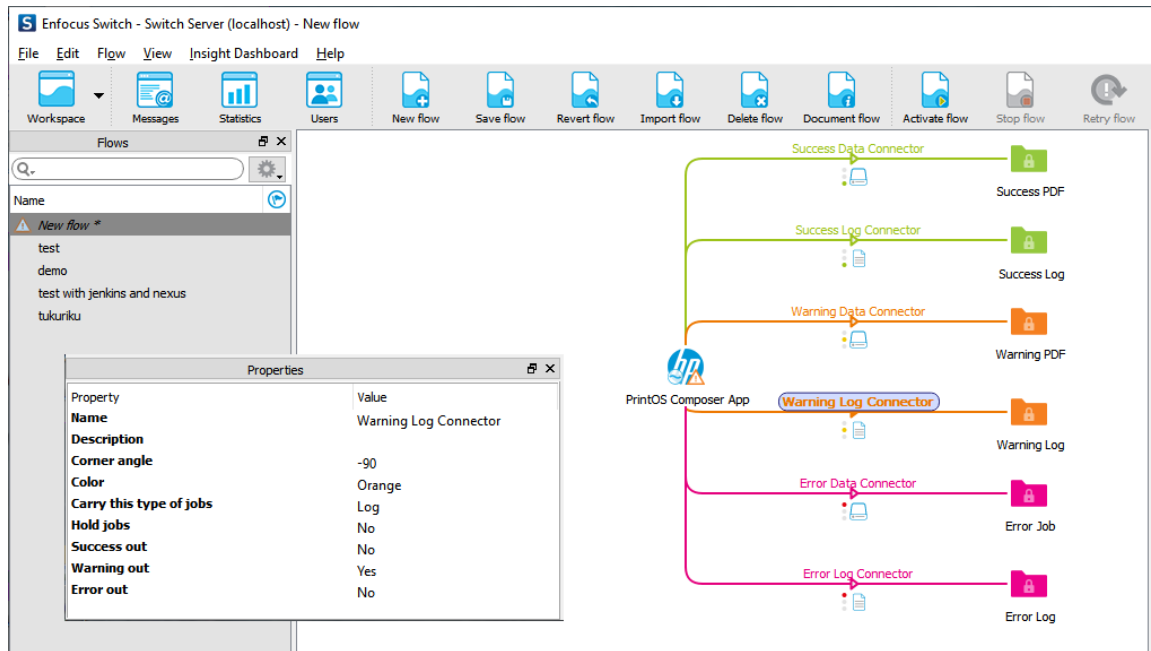


Figure 3-5 Error Data Connector

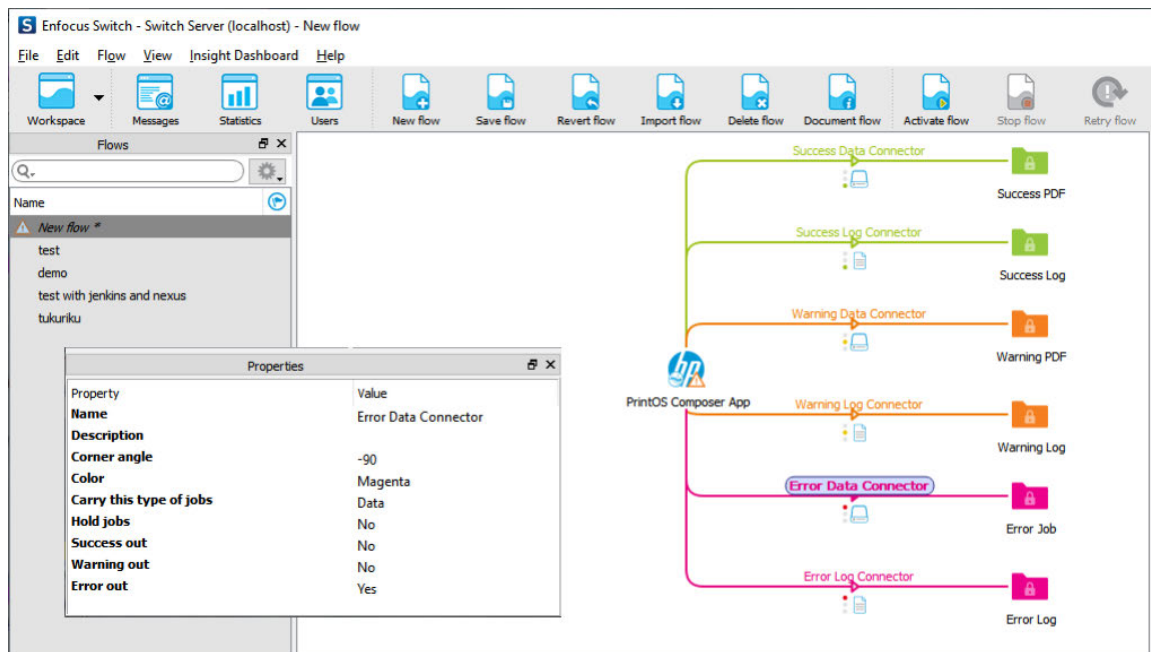


Figure 3-6 Error Log Connector

The screenshot displays the Enfocus Switch software interface for configuring a workflow. The title bar reads "Enfocus Switch - Switch Server (localhost) - New flow". The menu bar includes "File", "Edit", "Flow", "View", "Insight Dashboard", and "Help". The toolbar contains icons for "Workspace", "Messages", "Statistics", "Users", "New flow", "Save flow", "Revert flow", "Import flow", "Delete flow", "Document flow", "Activate flow", "Stop flow", and "Retry flow".

On the left, the "Flows" panel shows a list of flows under the name "New flow *": "test", "demo", "test with jenkins and nexus", and "tukuriku". The "Properties" window for the selected "Error Log Connector" is open, showing the following details:

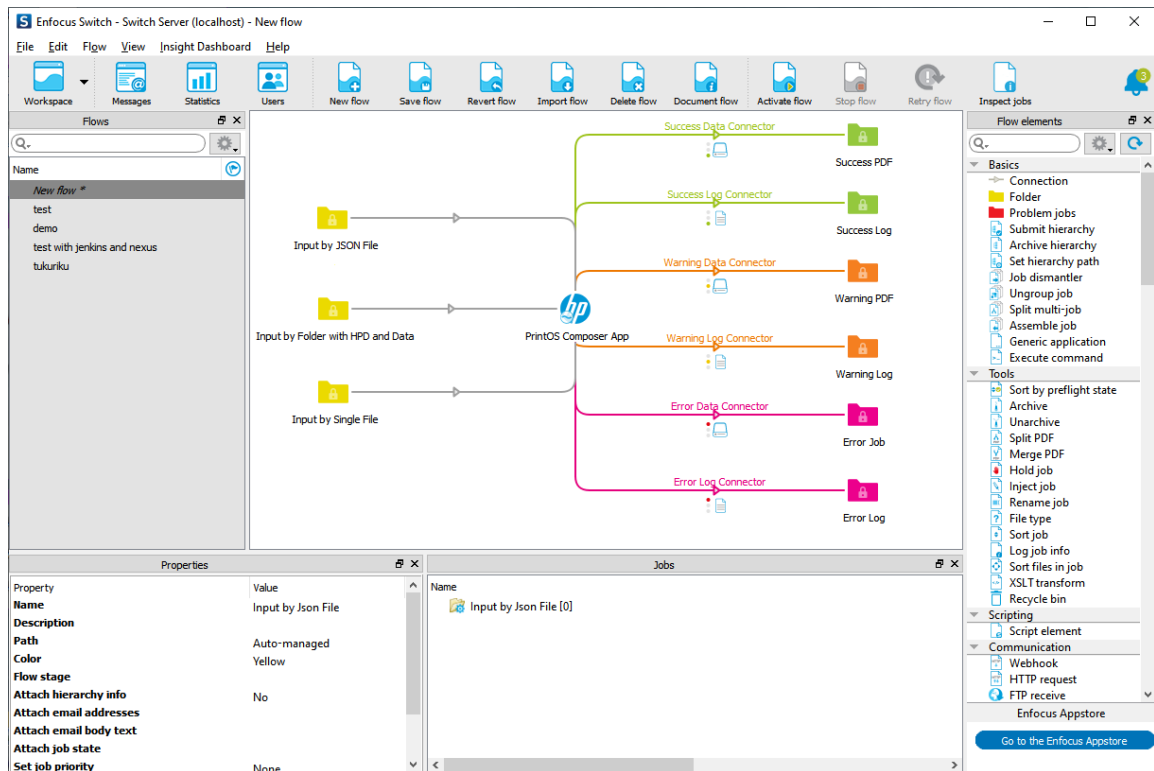
Property	Value
Name	Error Log Connector
Description	
Corner angle	-90
Color	Magenta
Carry this type of jobs	Log
Hold jobs	No
Success out	No
Warning out	No
Error out	Yes

The main workspace shows a workflow diagram starting with a "PrintOS Composer App" connector. It branches into six output connectors:

- Success Data Connector (green) leading to "Success PDF"
- Success Log Connector (green) leading to "Success Log"
- Warning Data Connector (orange) leading to "Warning PDF"
- Warning Log Connector (orange) leading to "Warning Log"
- Error Data Connector (magenta) leading to "Error Job"
- Error Log Connector (magenta) leading to "Error Log"

Creating input folders

Create the following input folders and configure them as described in the following sections.



Configure the input folders by selecting them one at a time and setting the values in their respective *Properties* pane, as described below.

Input by JSON File

Besides changing the name of the folder, there are no changes to the default *Properties*.

Input by Folder with HPD and Data

In the *Properties* pane, do the following:

1. Change the *Value* of the *Name* property.
2. For the *Set job private data* property, click the right arrow button that appeared and select **Define multi-text with variables**.

The screenshot displays the HPD configuration interface. At the top, a flow diagram shows the 'Input by Folder with HPD and Data' job connected to the 'PrintOS Composer App'. Three connectors are shown: 'Warning Log Connector' (orange), 'Error Data Connector' (pink), and 'Error Log Connector' (pink). Each connector is linked to a corresponding output folder: 'Warning PDF', 'Warning Log', 'Error Job', and 'Error Log'. Below the diagram, the 'Properties' pane is open, showing the following details:

Property	Value
Name	Input by Folder with HPD and ...
Description	
Path	Auto-managed
Color	Yellow
Flow stage	
Attach hierarchy info	No
Attach email addresses	
Attach email body text	
Attach job state	
Set job priority	None
Set job private data	None
Show in statistics	None

The 'Jobs' pane shows the job name: 'Input by Folder with HPD and Data [0]'.

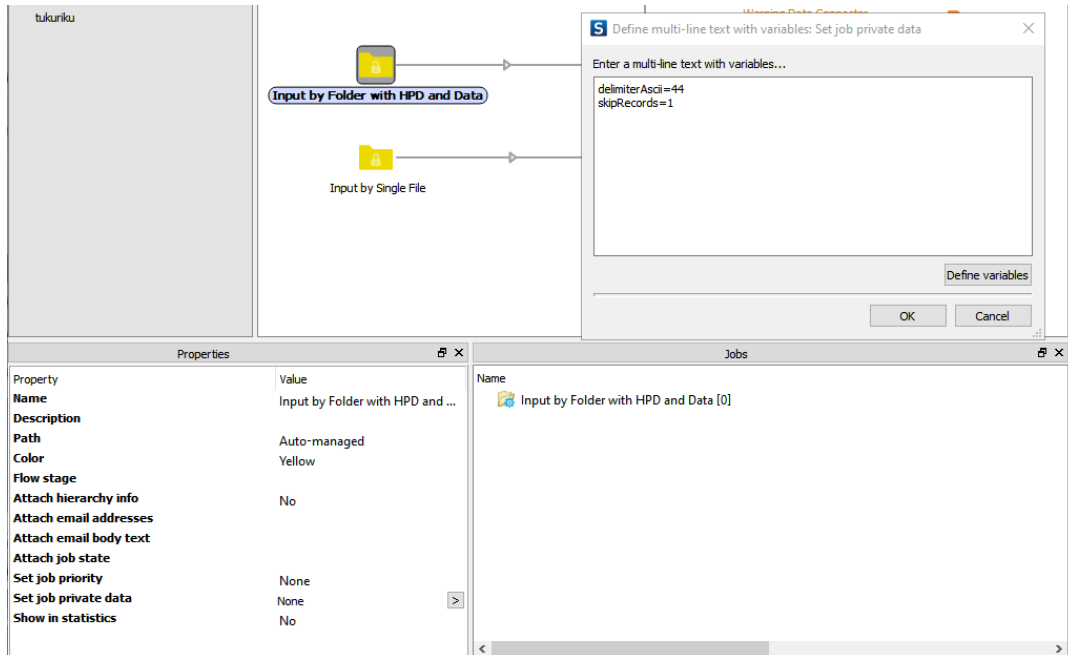
3. Click the right arrow button that appeared and select **Define multi- text with variables**.

This screenshot is identical to the one above, showing the HPD configuration interface. The 'Properties' pane is open, and the 'Set job private data' dropdown menu is expanded, showing the option 'Define multi-line text with variables' selected.

Property	Value
Name	Input by Folder with HPD and ...
Description	
Path	Auto-managed
Color	Yellow
Flow stage	
Attach hierarchy info	No
Attach email addresses	
Attach email body text	
Attach job state	
Set job priority	None
Set job private data	None
Show in statistics	None

The 'Jobs' pane shows the job name: 'Input by Folder with HPD and Data [0]'.

4. The *Define multi-line text...* popup appears.



In the popup, type the following:

vdpTemplateFile=c:/jobs/myVdpTemplate.hpd This is the path of the HPD file, which is the VDP template file that is used. This property can be used if an HPD file is not in the job folder.

dataFile=c:/jobs/myData.csv This is the path of the data file. The data file can be a TXT file with tab delimiters, or a CSV file with comma or semicolon delimiters. This property can be used if a data file is not in the job folder.

impositionTemplateFile=c:/jobs/impo.impp (Optional) This is the path of the imposition template file. This property can be used if an HPD file is not in the job folder. This property can be used if an imposition template file is not in the job folder.

assetsLibraryFile=c:/jobs/myAssets.zip (Optional) This is the path of assets library file packed as a ZIP file. For example, JPG files packed in a ZIP file to be referenced by the data file. This property can be used if an HPD file is not in the job folder. This property can be used if an assets library file is not in the job folder.

delimiterAscii=xx where xx is the ASCII code for the separator that is used in the CSV or TXT data file. The commonly used separators and their ASCII code are comma (44) and semicolon (59) for CSV files, and tab (9) for TXT files.

skipRecords=yy (Optional) yy is a number greater than or equal to 1. The process skips the first yy records of the data file. For example, if the first record of the data file contains field names (that is, header fields) that should be skipped (ignored), type skipRecords=1

outputFileName=myPdfName (Optional) This is the name of the PDF (or ZIP) that is sent to the output folder. If this parameter is not set (that is, this line is deleted), the app creates a name for the PDF (or ZIP) that is the name of the HPD and the data file.

applyImposition=true or **false** (Optional) This variable can be *true* or *false*, indicating whether to apply imposition or not. If the parameter is not given or given as *true*, the system applies imposition if imposition exists (either embedded in the template or referenced by the *impositionTemplateFile* parameter). If the parameter is given as *false*, the system does not apply imposition.

The following two optional properties can be added to the popup:

numberOfChunkedProcessing (Optional) This is the number of chunks that HP PrintOS processes in parallel, for faster processing. This property can be used if the input data file is large.

chunkedProcessingMergeFormat (Optional) This is the type of output that is produced when chunking: Either PDF (default if this property is not specified) whereby the chunked PDFs are concatenated into one PDF, or ZIP whereby all the chunked PDFs are zipped into one ZIP file.

5. Click **OK**.

Input by Single File

In the *Properties* pane, do the following:

1. Change the *Value* of the *Name* property.
2. For the *Set job private data* property, select its value **None**. The right arrow button appears.

The screenshot shows the PrintOS Composer App interface. The top part is a flow diagram with a yellow folder icon labeled 'Input by Folder with HPD and Data' and a yellow padlock icon labeled 'Input by Single File'. Both point to the 'PrintOS Composer App' (HP logo). From the app, three connectors lead to output folders: 'Warning Log Connector' (orange) to 'Warning PDF' and 'Warning Log', 'Error Data Connector' (pink) to 'Error Job', and 'Error Log Connector' (pink) to 'Error Log'. Below the flow diagram are two panes: 'Properties' and 'Jobs'. The 'Properties' pane shows the following table:

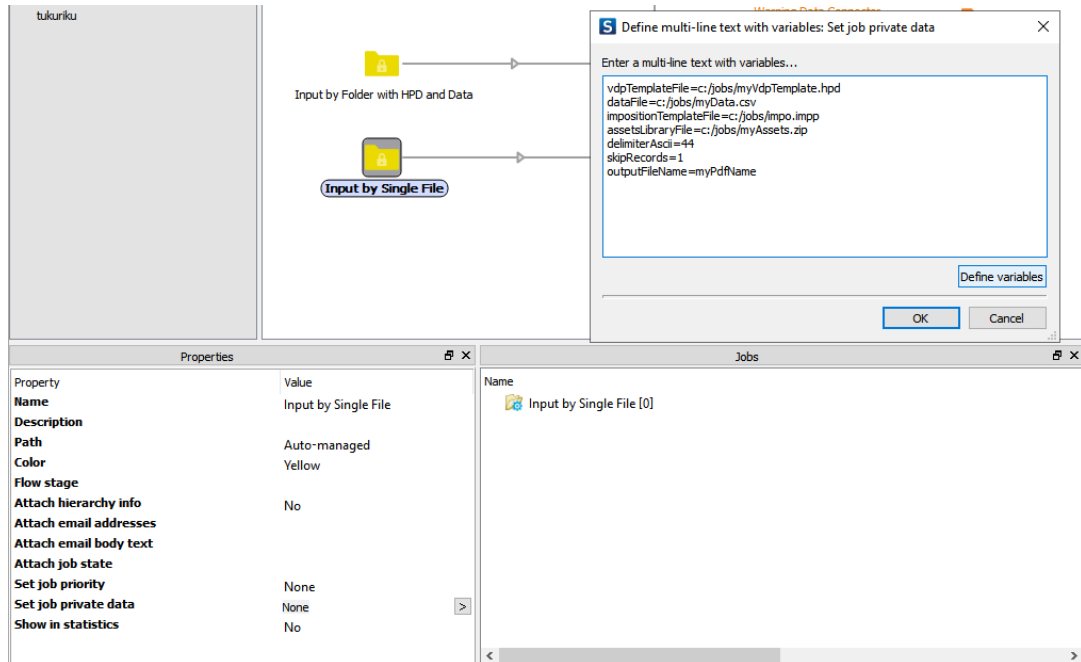
Property	Value
Name	Input by Single File
Description	
Path	Auto-managed
Color	Yellow
Flow stage	
Attach hierarchy info	No
Attach email addresses	
Attach email body text	
Attach job state	
Set job priority	None
Set job private data	None
Show in statistics	No

The 'Jobs' pane shows the 'Name' property with the value 'Input by Single File [0]'.

3. Click the right arrow button that appeared and select **Define multi- text with variables**.

This screenshot is identical to the previous one, but the 'Set job private data' property in the 'Properties' pane now has a dropdown menu open. The menu shows 'None' and 'Define multi-line text with variables', with the latter option highlighted in blue.

4. The *Define multi-line text...* popup appears.



In the popup, type the following:

vdpTemplateFile=c:/jobs/myVdpTemplate.hpd This is the path of the HPD file, which is the VDP template file that is used.

dataFile=c:/jobs/myData.csv This is the path of the data file. The data file can be a TXT file with tab delimiters, or a CSV file with comma or semicolon delimiters.

impositionTemplateFile=c:/jobs/impo.impp (Optional) This is the path of the imposition template file.

assetsLibraryFile=c:/jobs/myAssets.zip (Optional) This is the path of assets library file packed as a ZIP file. For example, JPG files packed in a ZIP file to be referenced by the data file.

delimiterAscii=xx where **xx** is the ASCII code for the separator that is used in the CSV or TXT data file. The commonly used separators and their ASCII code are comma (44) and semicolon (59) for CSV files, and tab (9) for TXT files.

skipRecords=yy (Optional) **yy** is a number greater than or equal to 1. The process skips the first **yy** records of the data file. For example, if the first record of the data file contains field names (that is, header fields) that should be skipped (ignored), type **skipRecords=1**

outputFileName=myPdfName (optional) This is the name of the PDF (or ZIP) that is sent to the output folder. If this parameter is not set (that is, this line is deleted), the app creates a name for the PDF (or ZIP) that is the name of the HPD and the data file.

applyImposition=true or **false** (Optional) This variable can be *true* or *false*, indicating whether to apply imposition or not. If the parameter is not given or given as *true*, the system applies imposition if imposition exists (either embedded in the template or referenced by the *impositionTemplateFile* parameter). If the parameter is given as *false*, the system does not apply imposition.

Two of the 4 files (HPD, CSV or TXT, IMPP, ZIP) that can be listed in the popup are optional (that is, IMPP and ZIP are optional), meaning that if you choose not to set them, you do not type the entire line.

One of the files that are listed in the popup is a variable file, meaning that when you run the job, you drag the variable file from elsewhere onto the *Input by Single File* folder. The job retrieves the other files from the locations that are listed in the popup. The line in the popup for the variable file should be deleted.

The following two optional properties can be added to the popup:

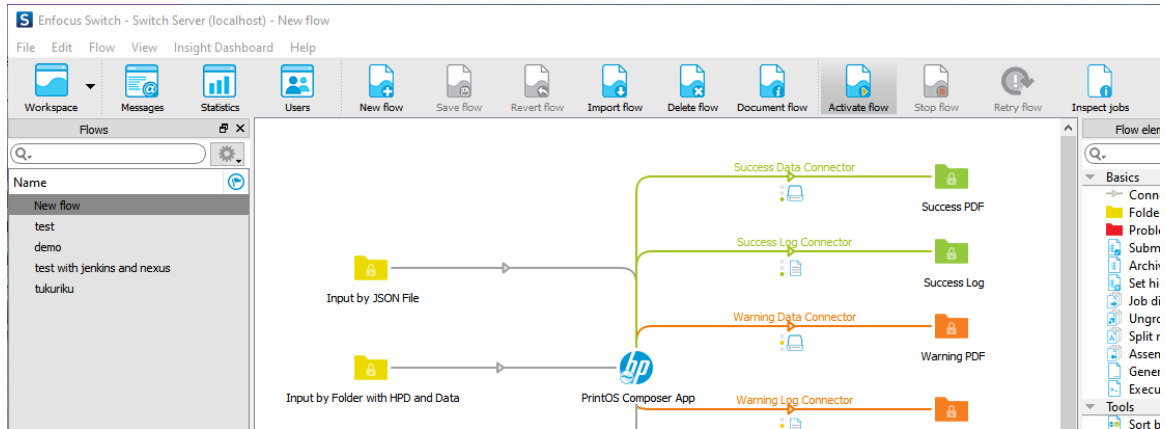
numberOfChunkedProcessing (Optional) This is the number of chunks that HP PrintOS processes in parallel, for faster processing. This property can be used if the input data file is large.

chunkedProcessingMergeFormat (Optional) This is the type of output that is produced when chunking: Either PDF (default if this property is not specified) whereby the chunked PDFs are concatenated into one PDF, or ZIP whereby all the chunked PDFs are zipped into one ZIP file.

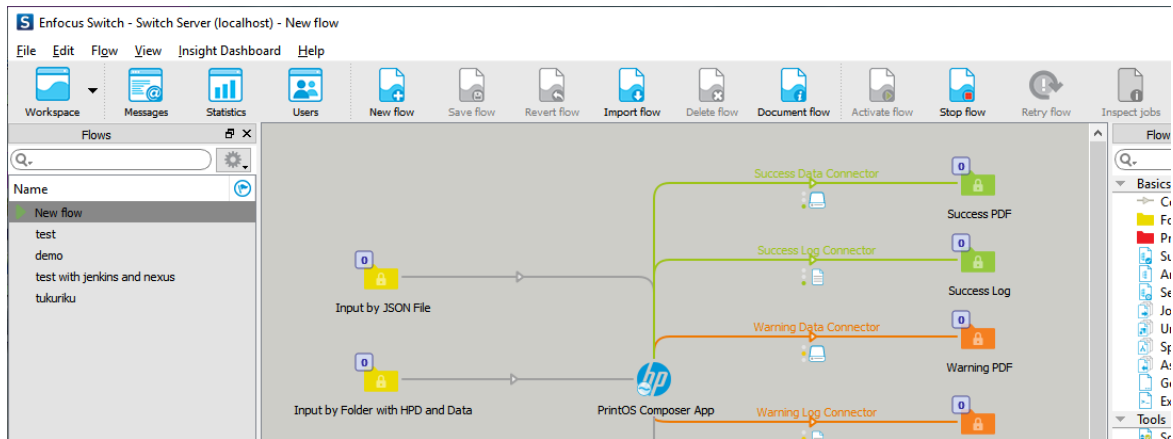
5. Click **OK**.

4 Submitting jobs

Before submitting a job, start Switch and in the menu bar, click **Activate flow**.



The *Activate flow* button becomes inactive and the *Stop flow* button becomes active (for future use).



There are 3 methods for submitting jobs, as described in the following sections:

- [Input by JSON File on page 28](#)
- [Input by Folder with HPD and Data on page 30](#)
- [Input by Single File on page 31](#)

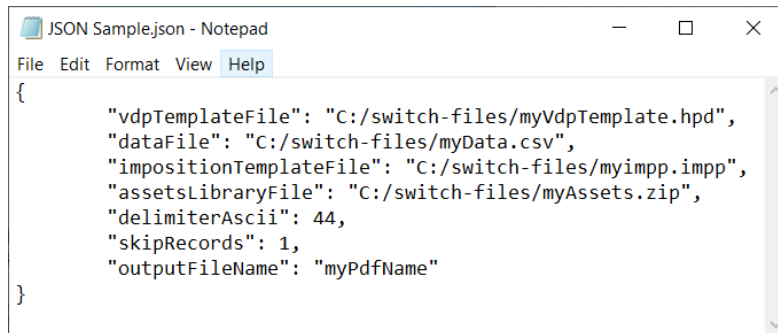
Many different files/folders can be submitted (that is, dragged onto an input folder) at one time. The jobs are processed a few at a time until all of them are processed.

Input by JSON File

Preparing a JSON file


Use a text editor (such as Notepad) to create a JSON file. The suffix of the file should be JSON and not TXT.

Figure 4-1 Example of a JSON file



```
{
  "vdpTemplateFile": "C:/switch-files/myVdpTemplate.hpd",
  "dataFile": "C:/switch-files/myData.csv",
  "impositionTemplateFile": "C:/switch-files/myimpp.impp",
  "assetsLibraryFile": "C:/switch-files/myAssets.zip",
  "delimiterAscii": 44,
  "skipRecords": 1,
  "outputFileName": "myPdfName"
}
```

In the above example, the lines are as follows:

 **NOTE:** Each line ends with a comma (,) except the last line, which has no ending punctuation mark.

"vdpTemplateFile": "c:/switch-files/myVdpTemplate.hpd" This is the path of the HPD file, which is the VDP template file that is used.

"dataFile": "c:/switch-files/myData.csv" This is the path of the data file. The data file can be a TXT file with tab delimiters, or a CSV file with comma or semicolon delimiters.

"impositionTemplateFile": "c:/switch-files/myimpp.impp" (Optional) This is the path of the imposition template file.

"assetsLibraryFile": "c:/switch-files/myAssets.zip" (Optional) This is the path of assets library file packed as a ZIP file. For example, JPG files packed in a ZIP file to be referenced by the data file.

"delimiterAscii": xx where xx is the ASCII code for the separator that is used in the CSV or TXT data file. The commonly used separators and their ASCII code are comma (44) and semicolon (59) for CSV files, and tab (9) for TXT files.

"skipRecords": yy (Optional) yy is a number greater than or equal to 1. The process skips the first yy records of the data file. For example, if the first record of the data file contains field names (that is, header fields) that should be skipped (ignored), type `skipRecords=1`

"outputFileName": "myPdfName" (Optional) This is the name of the PDF (or ZIP) that is sent to the output folder. If this parameter is not set (that is, this line is deleted), the app creates a name for the PDF (or ZIP) that is the name of the HPD and the data file.

"applyImposition": true or false (Optional) This variable can be *true* or *false*, indicating whether to apply imposition or not. If the parameter is not given or given as *true*, the system applies imposition if imposition exists (either embedded in the template or referenced by the *impositionTemplateFile* parameter). If the parameter is given as *false*, the system does not apply imposition.

Two of the 4 files (HPD, CSV or TXT, IMPP, ZIP) are optional (that is, IMPP and ZIP are optional), meaning that if you choose not to set them, you do not type the entire line. In the example below, the IMPP line is removed since it is not needed by the job.

Figure 4-2 Example of JSON file without IMPP line

```
json-no-impp.json - Notepad
File Edit Format View Help
{
  "vdpTemplateFile": "C:/switch-files/myVdpTemplate.hpd",
  "dataFile": "C:/switch-files/myData.csv",
  "assetsLibraryFile": "C:/switch-files/myAssets.zip",
  "delimiterAscii": 44,
  "skipRecords": 1,
  "outputFileName": "myPdfName"
}
```

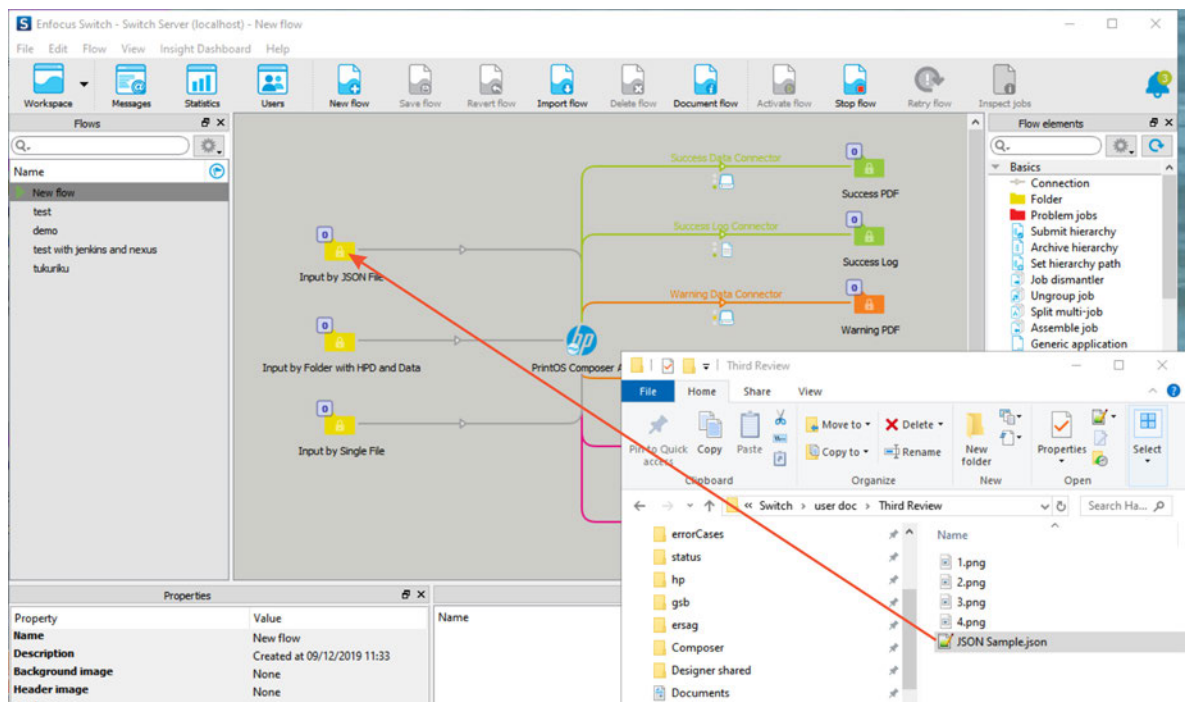
The following are two additional optional properties that can be added to the JSON file:

"numberOfChunkedProcessing": x (Optional) x is the number of chunks that HP PrintOS processes in parallel, for faster processing. This property can be used if the input data file is large.

"chunkedProcessingMergeFormat": "ZIP" (Optional) This is the type of output that is produced when chunking: Either **PDF** (this is the default if this property is not specified) whereby the chunked PDFs are concatenated into one PDF, or **ZIP** whereby all the chunked PDFs are zipped into one ZIP file.

Submitting a JSON job

1. Click and drag the JSON file onto the **Input by JSON File** input folder.



2. During processing of the job, progress entries are added to the Switch log. Proceed to [Examining the results of a job on page 33](#).

Input by Folder with HPD and Data

Preparing the job folder

Create a job folder with the following files:

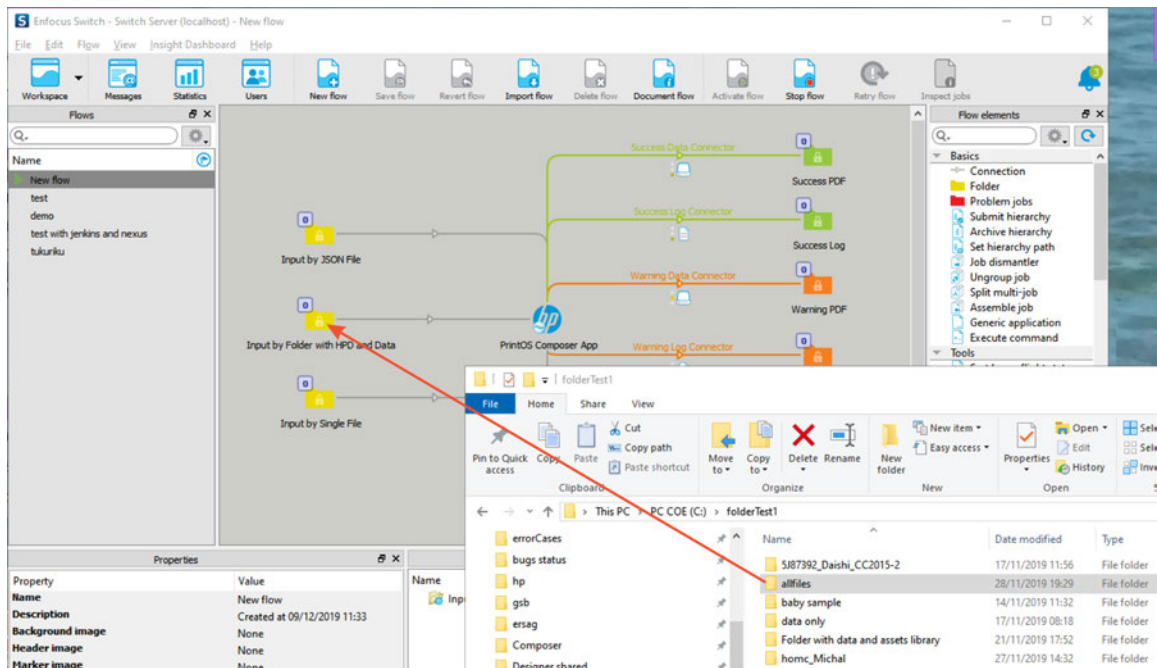
- An HPD file, which is the VDP template file that is used.
- A data file as a TXT file with tab delimiters, or a CSV file with comma or semicolon delimiters. The type of delimiter is set in the *Input by Folder with HPD and Data* input folder Properties, as described in [Input by Folder with HPD and Data on page 21](#). To change the delimiter, click the **Stop flow** button in the menu bar and then change **delimiterAscii=xx** in the *Set job private data* property as described there in step 4. After it is set, click the **Activate flow** button in the menu bar
- (Optional) An IMPP file, which is the imposition template file.
- (Optional) An assets library file packed as a ZIP file. For example, JPG files packed in a ZIP file to be referenced by the data file.

The number of records to skip in the data file (such as header records) is set in the *Input by Folder with HPD and Data* input folder Properties, as described in [Input by Folder with HPD and Data on page 21](#). To change the number of records to skip, change **skipRecords=xx** in the *Set job private data* property as described there in step 4.

If you want to give a name to the output PDF file, set it in the *Input by Folder with HPD and Data* input folder Properties, as described in [Input by Folder with HPD and Data on page 21](#). To change the name of the PDF, change **outputFileName=XXX.pdf** in the *Set job private data* property as described there in step 4.

Submitting the job folder

1. Click and drag the folder onto the *Input by Folder with HPD and Data* input folder.



2. During processing of the job, progress entries are added to the Switch log.
Proceed to [Examining the results of a job on page 33](#).

Input by Single File

Preparing the file

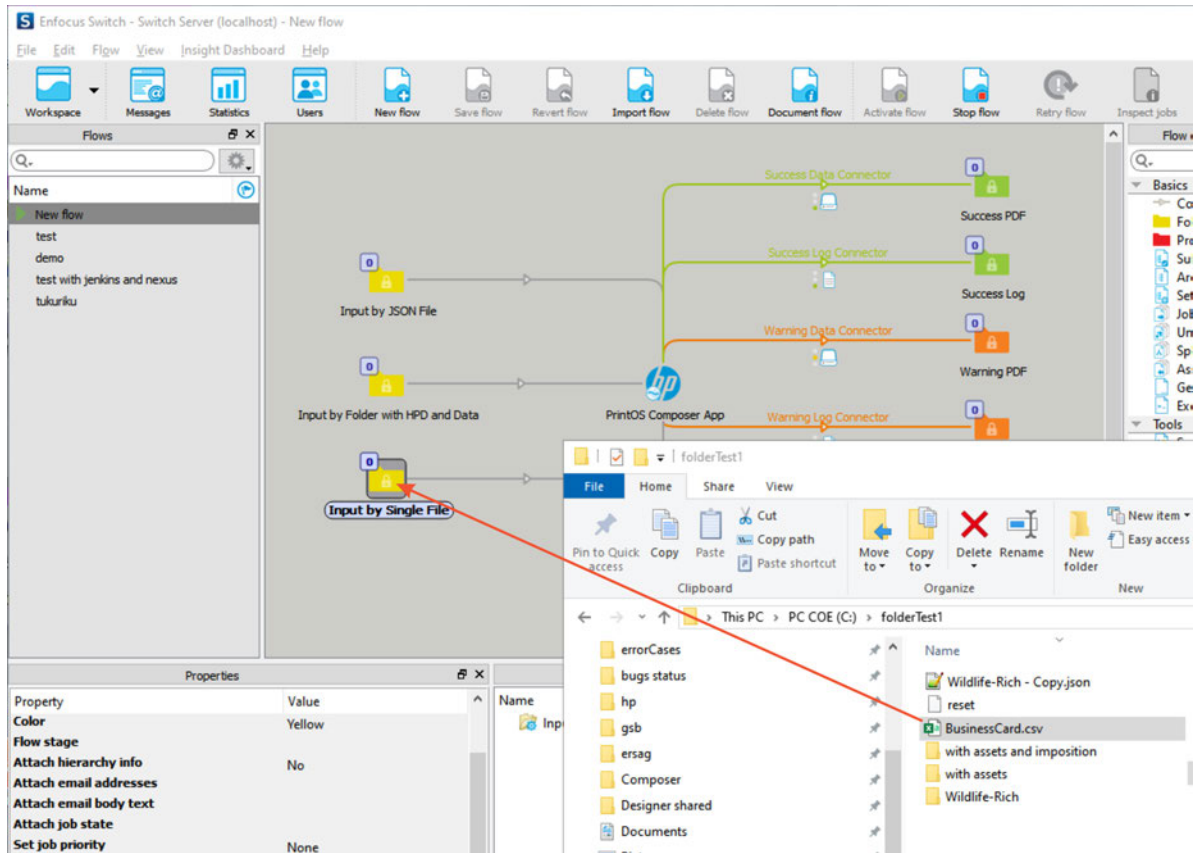
Paths to the following files were set in the Properties of the *Input by Single File* input folder in [Input by Single File on page 24](#), step 4:

- An HPD file, which is the VDP template file that is used.
- A data file as a TXT file with tab delimiters, or a CSV file with comma or semicolon delimiters. The type of delimiter is set in the *Input by Folder with HPD and Data* input folder Properties, as described in [Input by Single File on page 24](#). To change the delimiter, click the **Stop flow** button in the menu bar and then change **delimiterAscii=xx** in the *Set job private data* property as described there in step 4. After it is set, click the **Activate flow** button in the menu bar.
- (Optional) An IMPP file, which is the imposition template file.
- (Optional) An assets library file packed as a ZIP file. For example, JPG files packed in a ZIP file to be referenced by the data file.

Since one of the above files will be dragged and dropped onto the *Input by Single File* folder, that file will not be in the properties of the input folder. An HPD file and a data file must be either set in the properties of the input folder or be the file that is dragged onto the input folder.

Submitting the file job

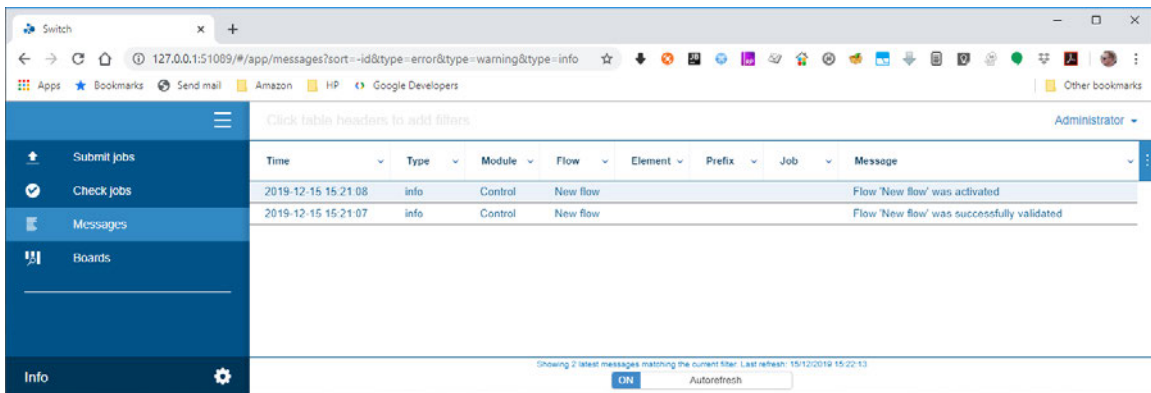
1. Click and drag the file onto the **Input by Single File** input folder.



2. During processing of the job, progress entries are added to the Switch log.
Proceed to [Examining the results of a job on page 33](#).

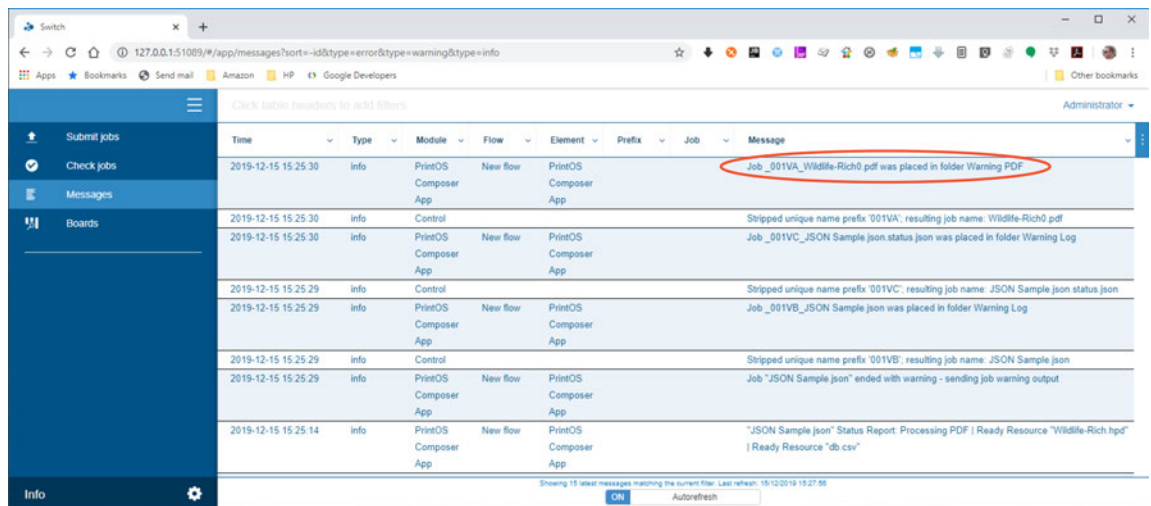
Examining the results of a job

Open the Switch log in a web browser by going to: **http://127.0.0.1:51089/** and selecting the Messages tab.

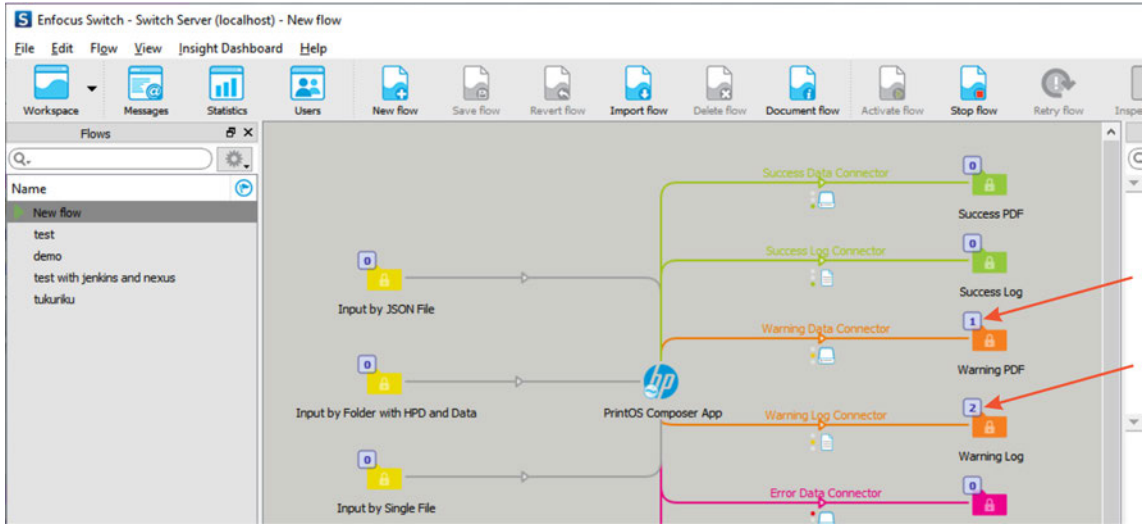


You can know when the job has completed in either of the following ways:

- The Switch log displays an entry that notifies you that a PDF was placed in an output folder.



- One of the output folders shows an increase in the number of items in the folder.



For a descriptions of the Success, Warning, and Error output folders, see [Creating output folders on page 15](#).

The *Jobs* pane contains the files that are in a particular output folder. Double-click an output file to view it.

Figure 4-3 Example of *Warning PDF* output folder contents

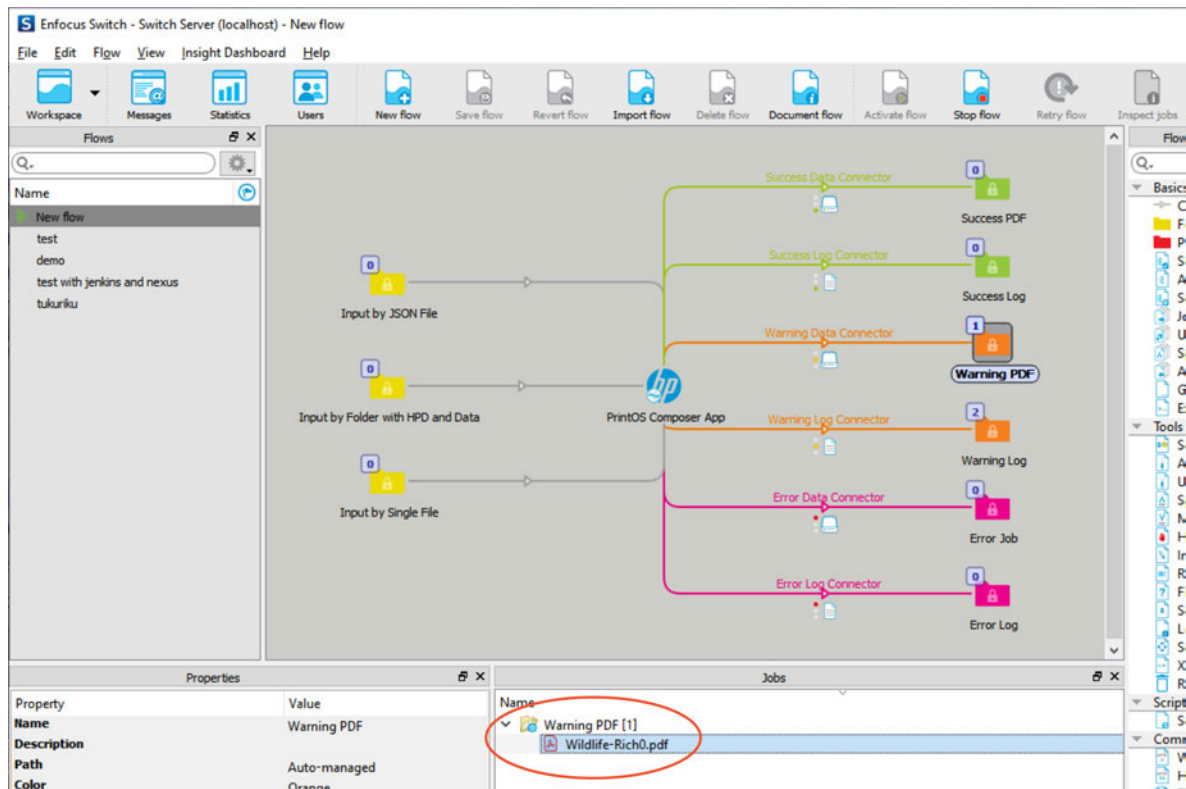
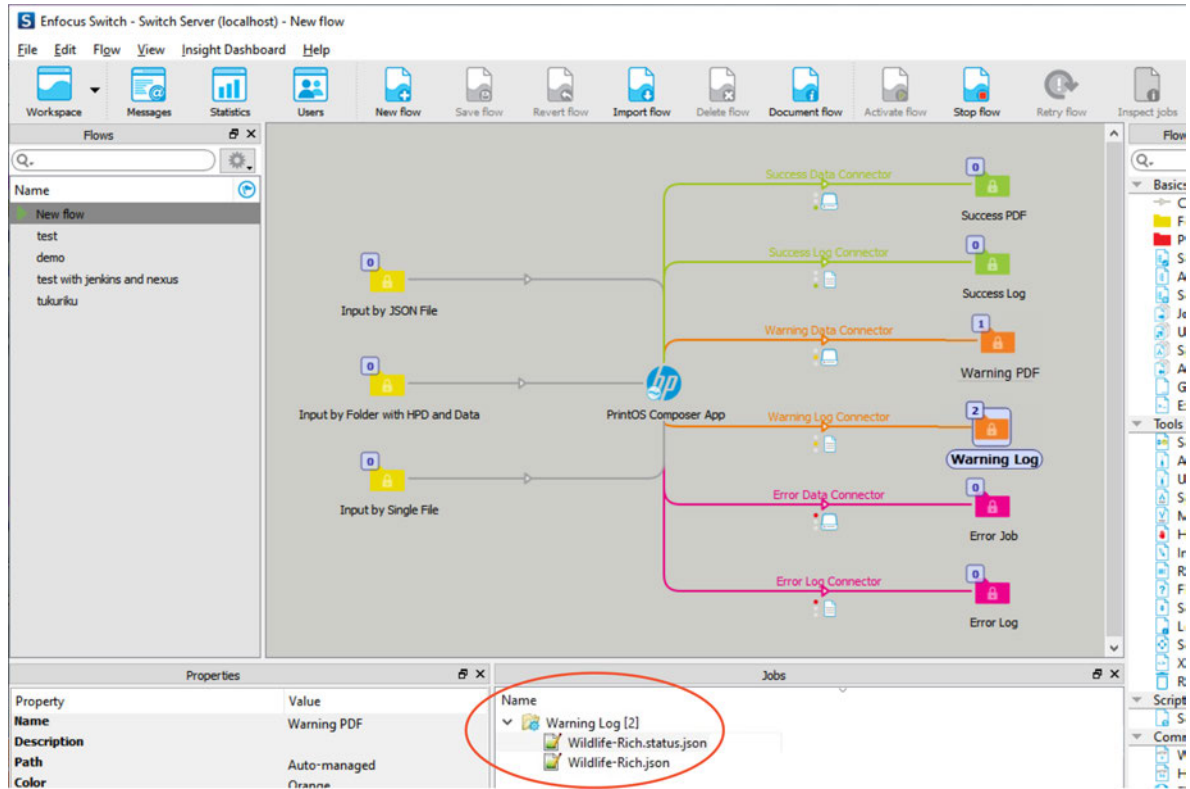


Figure 4-4 Example of *Warning Log* output folder contents



The Log folder contains the original JSON file and a status file (as shown below). The status file in the *Warning Log* and *Error Log* output folders shows the relevant warning or error message.

Figure 4-5 Example of status file showing warning message

```

"templateInputResourceStatus": {
  "success": true
},
"dataInputResourceStatus": {
  "success": true
},
"pdfOutputResourceStatus": {
  "success": true,
  "serverOutput": {
    "resourceId": "8e21829e-223a-472c-a928-537494cbf18f",
    "status": "Ready",
    "uploadCompleted": true,
    "errorType": null,
    "expirationTime": 1577021110281,
    "warningMessages": [
      "The font 'ITC Galliard (Galliard-Roman)' is missing, defaulting to font MinionPro-Regular"
    ],
    "errorMessages": [],
    "startWaitingTime": 1576416294629,
    "startProcessingTime": 1576416300549,
    "endProcessingTime": 1576416310281,
    "resourceCreationTime": 1576416294614,
    "downloadUrl": "https://d32ddi2h1u3kmm.cloudfront.net/amazon_genesis.pressqanext/be-storage-76d8dbd4b6",
    "progress": 100
  }
},
"success": true,
"jobRequest": {
  "_vdpTemplateFile": "C:/git/hp/printos-composer-switch/test/test-resources/Wildlife-Rich/Wildlife-Rich.hpd",
  "_dataFile": "C:/git/hp/printos-composer-switch/test/test-resources/Wildlife-Rich/db.csv",
  "_impositionTemplateFile": null,
  "_assetsLibraryFile": null,
  "_additionalData": "some text la la la",
  "_delimiterAscii": 44,
  "_outputFileName": "Wildlife-Rich0.pdf",
  "_skipRecords": 1,
  "_reset": null
}
}

```

Correct the warnings or errors in the input job file/folder and resubmit it.

Stopping a job

To stop a job or jobs while it/they is/are running, click the **Stop flow** button in the menu bar.

To restart the job(s), click the **Activate flow** button in the menu bar. The jobs that were previously stopped will continue from where they left off.

A Examples

CSV as Single File Job input, with fixed HPD

Create a flow with a fixed HPD template file and data changing for each job, that is, a different CSV (comma delimiter = 44) file, with different records, for each job. The template is fixed while the data changes each time.

For such a flow, define the following private data for the Input folder:

- vdpTemplateFile=C:/SomePath/template.hpd
- delimiterAscii=44
- skipRecords=1

Drag and drop different CSV files onto the Input folder.

The screenshot displays the Enfocus Switch software interface for configuring a flow. The main workspace shows a flow diagram starting with a folder named "Fixed HPD - CSV as Job Input" connected to the "PrintOS Composer App" connector. From this connector, four output connectors are visible: "Success Data Connector" (Success PDF), "Success Log Connector" (Success Log), "Warning Data Connector" (Warning PDF), and "Warning Log Connector". A dialog box titled "Define multi-line text with variables: Set job private data" is open, showing the following configuration:

```
vdpTemplateFile=C:/Some Path/template.hpd
delimiterAscii=44
skipRecords=1
```

The Properties panel at the bottom left shows the following details for the "Fixed HPD - CSV as Job Input" folder:

Property	Value
Name	Fixed HPD - CSV as Job Input
Description	Fixed HPD - CSV as Job Input [0]
Path	Auto-managed
Color	Yellow

TXT as Single File Job input, with fixed HPD and fixed Imposition

Imposition can be included in an HPD if the template was created by Adobe InDesign with HP SmartStream Designer. If imposition is included, the PDF processing automatically uses it.

However, the HPD template might not include imposition and you want to add one to the PDF processing. Alternatively, imposition might be in the HPD and you want to override it with another imposition template to match a different paper size.

For those scenarios, you can add an IMPP imposition template file reference to be used as the imposition definition.

In this example, create a flow with a fixed HPD template file and a specific fixed imposition file. A different TXT file (tab delimiter = 9), with different records, is used each time. The template is fixed while the data changes each time.

For such a flow, define the following private data for the Input folder:

- vdpTemplateFile=C:/SomePath/template.hpd
- impositionTemplateFile=C:/SomePath/imposition.impp
- delimiterAscii=9
- skipRecords=1

Drag and drop different TXT files onto the Input folder.

The screenshot displays the PrintOS Composer App interface. The main workspace shows a flow diagram with a 'Fixed HPD, Fixed Imposition - TXT as Job Input' component connected to a 'PrintOS Composer App' component. The 'PrintOS Composer App' component is connected to a 'Success Log Connector' and a 'Warning Data Connector'. The 'Success Log Connector' is connected to a 'Success Log' component, and the 'Warning Data Connector' is connected to a 'Warning PDF' component. A dialog box titled 'Define multi-line text with variables: Set job private data' is open, showing the following text: `vdpTemplateFile=C:/Some Path/template.hpd`, `impositionTemplateFile=C:/Some Path/Imposition.impp`, `delimiterAscii=9`, and `skipRecords=1`. The dialog box has 'OK' and 'Cancel' buttons.

Folder as Job input, with fixed HPD

Create a flow with fixed HPD template file. The HPD template expects to receive a data file that includes references to image files. Occasionally, there are different data files with references to different images. In this case, pack the images into a single assets library ZIP file.

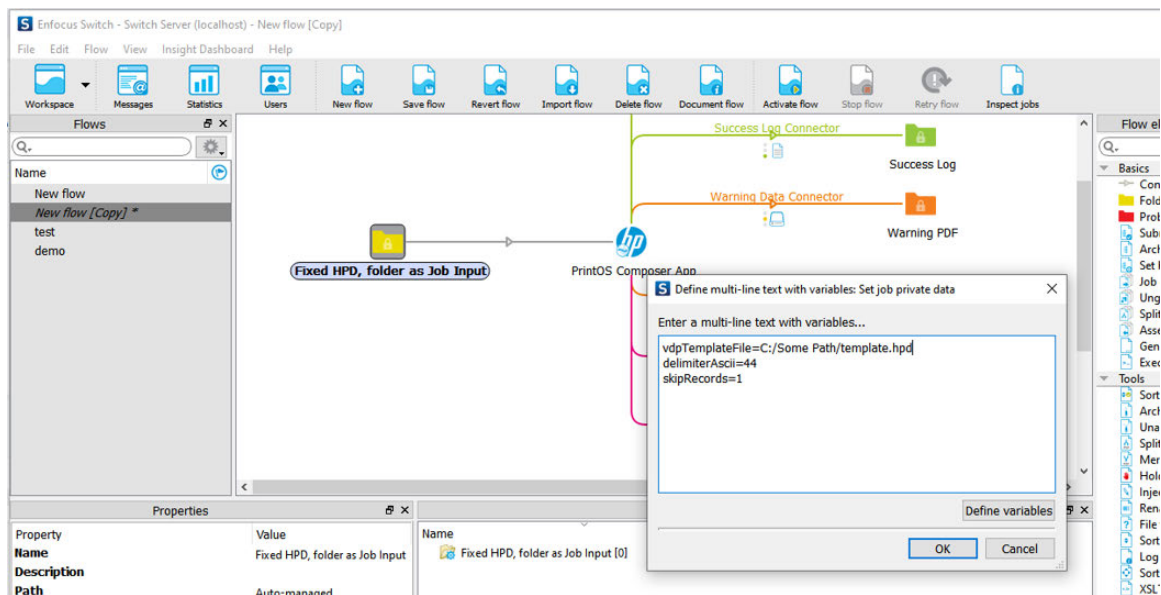
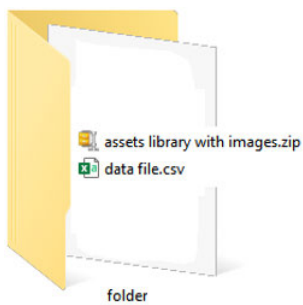
To the input folder you might want to get different assets library ZIP files and their matching data files.

In this case, use Folder as Job Input, where the folder contains both the assets library and the data file.

For such a flow, define the following private data for the Input folder:

- vdpTemplateFile=C:/SomePath/template.hpd
- delimiterAscii=44
- skipRecords=1

For such a flow, drag and drop different folders (each one with a CSV file and a ZIP file) onto the Jobs input folder.



The screenshot shows the Enfocus Switch software interface. The main workspace displays a flow diagram with a 'Fixed HPD, folder as Job Input' connector leading to a 'PrintOS Composer App' connector. The 'PrintOS Composer App' connector is connected to two output connectors: 'Success Log Connector' and 'Warning Data Connector'. The 'Success Log Connector' is connected to a 'Success Log' folder, and the 'Warning Data Connector' is connected to a 'Warning PDF' folder. A dialog box titled 'Define multi-line text with variables: Set job private data' is open, showing the following text:

```
vdpTemplateFile=C:/Some Path/template.hpd  
delimiterAscii=44  
skipRecords=1
```

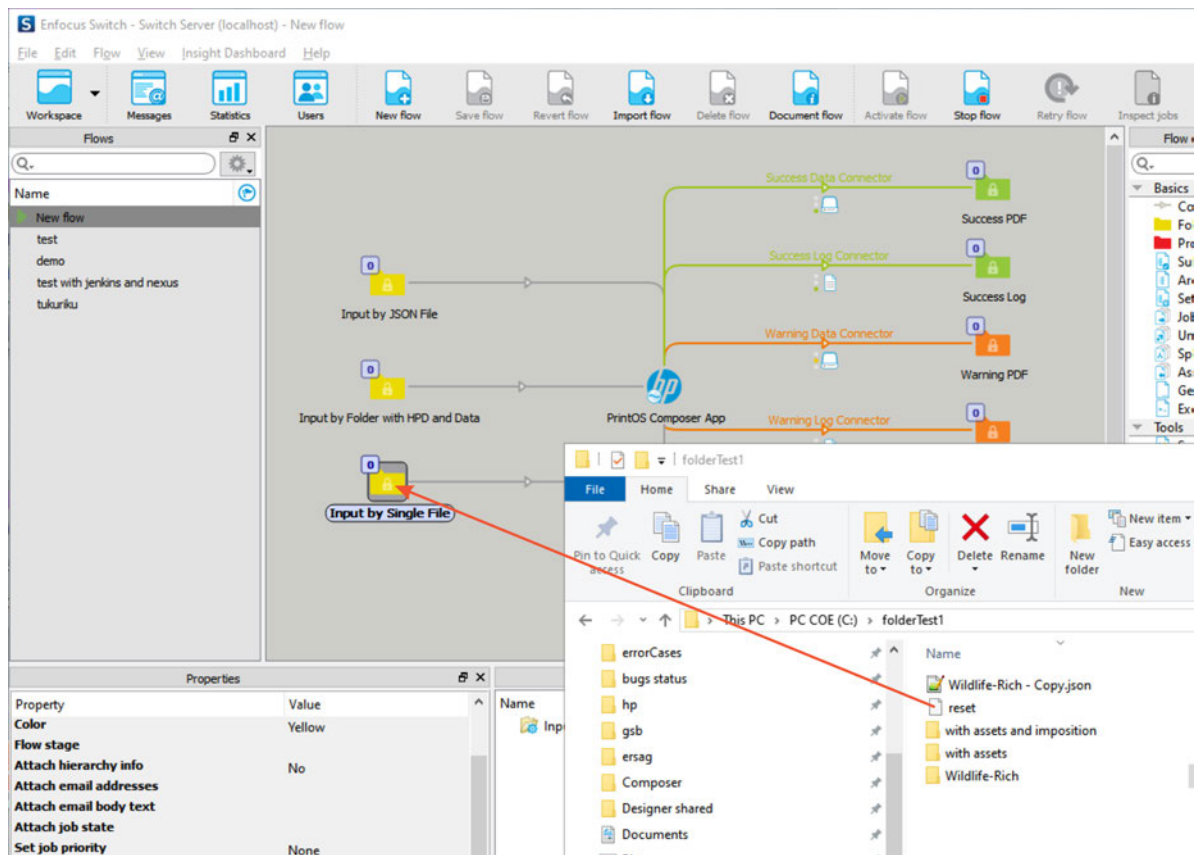
The dialog box has 'OK' and 'Cancel' buttons. The Properties panel at the bottom left shows the following information:

Property	Value	Name
Name	Fixed HPD, folder as Job Input	Fixed HPD, folder as Job Input [0]
Description		
Path	Auto-managed	

B Troubleshooting

The HP PrintOS Composer app uses a service running on the local computer for communications with the cloud service. If there are persistent malfunctions, do the following to reset the local service:

1. Create an empty file and name it **reset** (without a suffix).
2. Click the **Activate flow** button in the menu bar.
3. Click and drag the reset file onto any of the input folders. The server will reset.



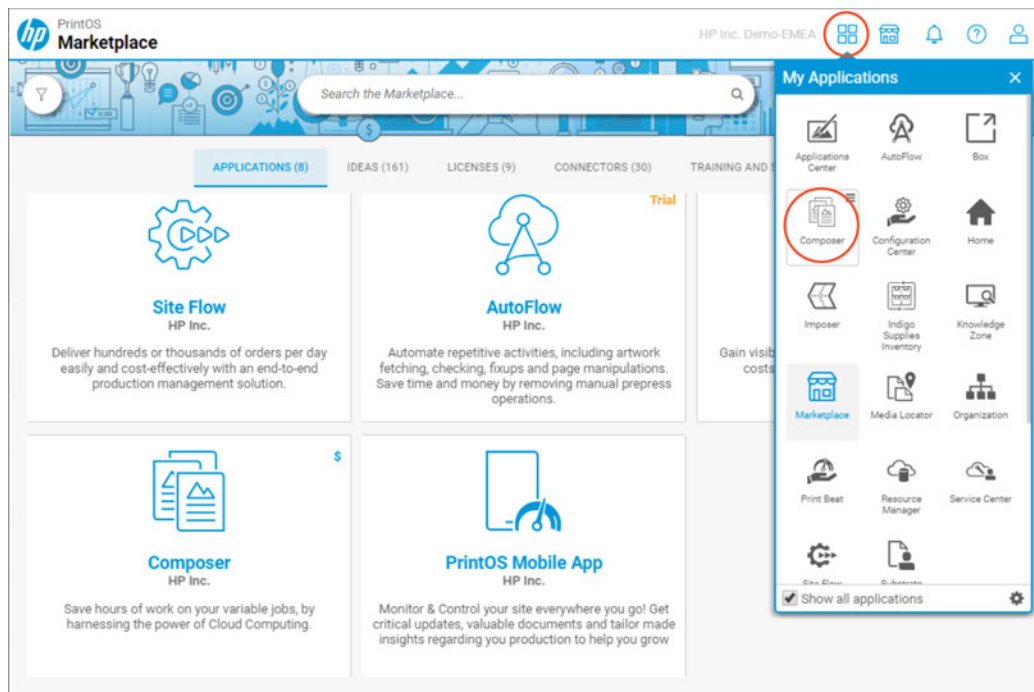
This reset does not clean cloud resources.

C Quota for printing with HP PrintOS Composer

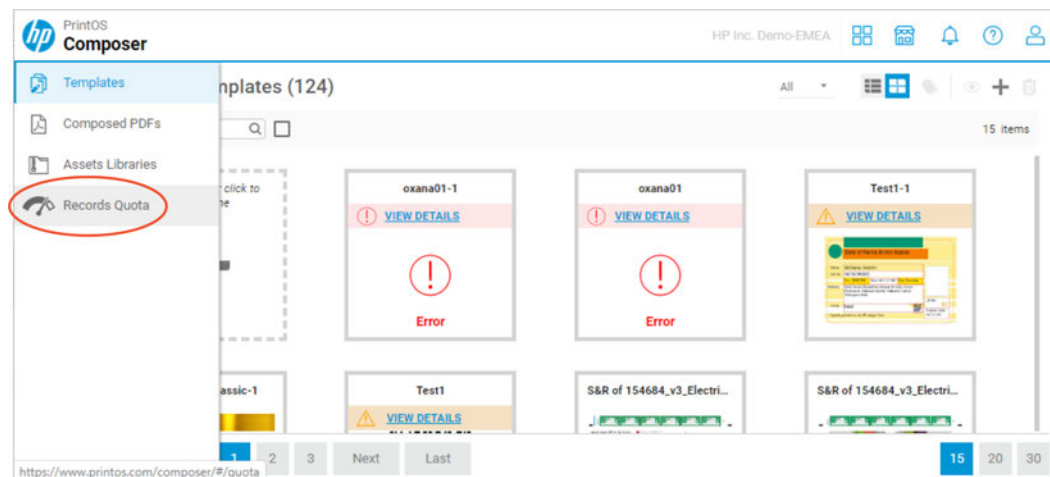
HP PrintOS Composer allows processing of up to 10,000 records per month for free.

To check what your current records quota is, do the following:

1. At the top right icon bar, click the **My Applications** icon and from the dropdown window, select **Composer**.



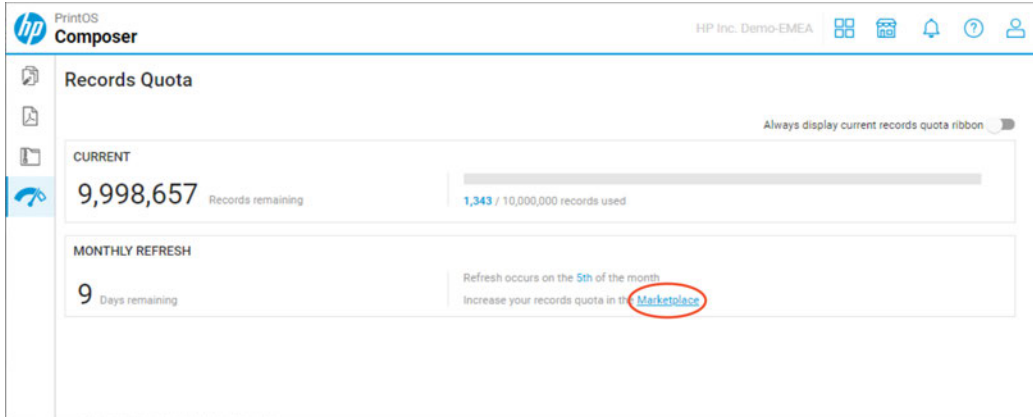
2. At the left icon bar, click the **Records Quota** icon.



The *Records Quota* window appears, displaying the following information:

- How many records were used since the beginning of the current quota month.
- How many records remain until the end of the current quota month.

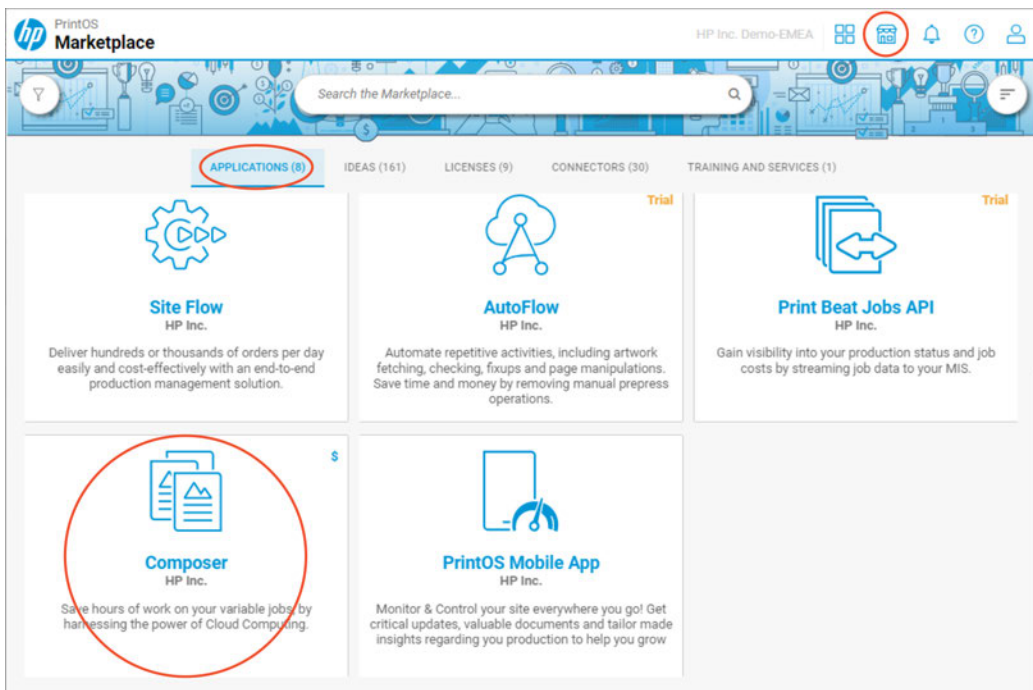
- How many days remain in the current quota month.
- On which day of the month the quota is refreshed.



If your records quota was reached and/or you want to increase your quota, do the following:

1. If the *Records Quota* window is open (see above), click **Marketplace**.

Alternatively, click the **Marketplace** icon and select the **APPLICATIONS** tab.



2. Click **Composer**. The various licensing and purchasing options are displayed.

D Service and support

To obtain service, please contact the customer care center within your country/region:

Europe:	
Belgium:	+32 (0)2 626 4803
France:	+33 (0)1 57 32 41 07
Germany:	+49 (0)69 38 07 89 193
Ireland:	+353 (0)1 656 9760
Italy:	+39 02 69430637
Luxembourg:	+352 (0)24 87 13 98
Netherlands:	+31 (0)20 547 6870
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COVER	
Paper weight	250 g
Page size	8.27 x 11.00 in (21 x 27.94 cm)
Printing	HP Indigo digital press
Simplex/duplex	Front cover - duplex Rear cover - simplex
Color	Full color - high resolution
Coating	Lamination - shiny front and rear covers
INSIDE PAGES	
Paper weight	80 g
Page size	8.27 x 11.00 in (21 x 27.94 cm)
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Coating	None
FINISHING	
Stitch	2 saddle stitch on left side

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