

Setting up the Enfocus Switch HP Digital Front End JDF Control App



A Brief overview of how to configure flows in Enfocus Switch with the
HP Digital Front End JDF Control App

Before starting

There are a number of things to consider before setting up the HP Digital Front End JDF Control App:

Supported DFE platforms:

- The HP Digital Front End JDF Control App is intended to work with the Production Pro DFE versions 6.0 and later. However, some features in the App are not supported on older versions of the Production Pro DFE.

App versions:

- Version 12 of the JDF Control App is intended as a replacement for version 11 of the configurator. They are functionally the same. Upgrading from older versions (specifically version 8 and earlier) of the configurator to the App may cause some compatibility issues.



Basic flow layout



The App requires one input and one output folder.

Input Folder:

- Can contain either the asset file (i.e. a .pdf file) to be used for producing this job, or a folder of files.

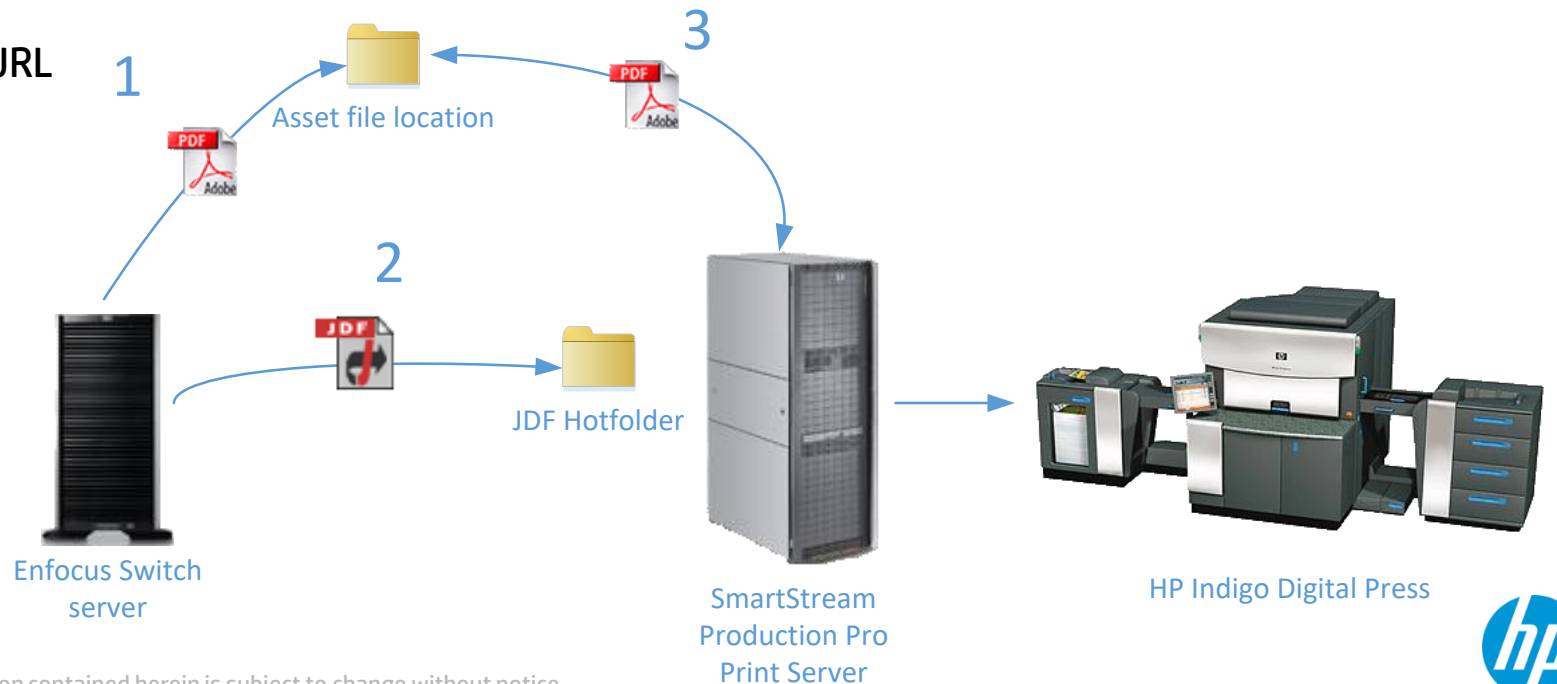
Output Folder:

- Will receive the output from the App (either a JDF ticket, or MIME package) based on property setting in the App.
- For automation purposes can be pointed at the JDF hotfolder on the Production Pro Digital Front End server (\\DFEServerHostname\Jobs\JDF)
 - **NOTE:** for debugging purposes it is recommended to insert at least one auto-managed folder between the App and the JDF hotfolder.

Asset File Management

Configuring the asset file location (i.e. the PDF file to be printed), is the most complicated part of setting up the App. To understand how the various components involved must be configured it is helpful to get a basic understanding on how asset files in the JDF workflow are handled with the Production Pro DFE.

1. The HP Digital Front End JDF Control App will first move any incoming asset files to the location defined in the “Asset file location” property.
2. The App will then generate a JDF ticket and move it to the output folder (and ultimately on to the JDF hotfolder of Production Pro. Inside the JDF ticket will be a generated URL to the asset file. This URL will be generated based on the file name and the value in the “Asset location URL” property (more on this later).
3. The HP Production Pro Digital Front End will download the asset file at the URL provided in the JDF ticket from the App



App asset file settings:

There are 4 key settings that determine how The HP Digital Front End JDF Control App handles movement of files and generation of JDF URLs:

Properties	
Property	Value
Name	HP Digital Front End JDF Control
Description	
Output format	JDF Ticket
<i>Asset file location</i>	\\DFEHostname\Jobs\Configurator_Out
<i>Asset location URL</i>	FILE://DFEHostname/Jobs/Configurator_Out
<i>File move method</i>	Switch Copy

- 1. Output Format** – Determines if the App will output a JDF ticket, or create a MIME package. A MIME package is a collection of multiple files contained in one file including the JDF ticket and the asset file(s).
 - NOTE:** Although the MIME setting can make asset downloads easier since the Production Pro DFE doesn't need to go out and download the asset file(s), it is not a recommended setting. It negatively affects performance by creating and extracting the MIME file, and the App can have unexpected failures if multiple instances of the App are trying to create MIME packages at once.
- 2. Asset file location** – This is the folder location where Switch will attempt to copy any files that were input into the App. Enfocus Switch must have write access to this location if it is a remote file share.
- 3. Asset location URL** – URLs in the JDF ticket will be generated with this URL plus the name of the file. For example, given the property settings above and a file named “MyFile.pdf” the App would create a URL of FILE://DFEHostname/Jobs/App_Out/MyFile.pdf The Production Pro DFE would attempt to download the asset file at that URL location. Typically Asset file location and Asset location URL reference the same location in different formats.
- 4. File move method** – the internal method that Switch uses to copy files to the Asset file location. If “Asset referenced (don't copy)” is selected the App assumes the Asset location URL contains a complete path to the asset file and doesn't need to move the file. This Asset URL can be set through metadata pickup/text with variables and will have the best performance.



User access

By default, the HP Digital Front End JDF Control App will create a FILE:// based URL in the JDF ticket. This will cause the download client on the application to use standard Windows file system controls for downloading asset files.

In addition to this, the Production Pro will use the local user rights for the “unicorn” user to download these files

What does this mean?

1. Asset files need to be located on a file share that can be accessed by the local unicorn user on the Production Pro DFE in order to download them. For example if the URL in the generated JDF looks like this: <FILE://FileStorage/Assets/MyFile.pdf> then the Production Center server must have read/write access to the <\\FileStorage\Assets> share for the local unicorn user.
 - **NOTE:** It is not enough to be able to log in to the remote share from the Production Pro server, the local “unicorn” user must have access by creating a user with the same credentials that has access to that file share. If you log-in as the local unicorn user on the Production Pro server and try to open a browser to the remote location and are prompted to for credentials then you most likely do not have the user access set up properly.
2. Enfocus Switch must have write access to this same share in order to copy files from the Switch server to this location. Many people get around the local unicorn access issue by having Switch copy asset files to a share on the Production Pro server.

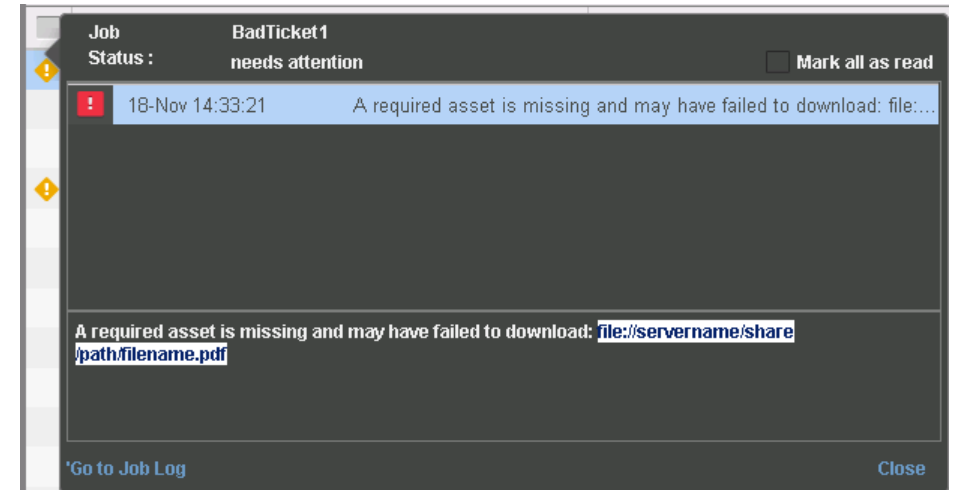


Troubleshooting asset file downloads

If the Production Pro DFE is unable to download the asset file, jobs will go into a “needs attention” state in the “Pre-RIP” with an error in the job log similar to “A required asset is missing and may have failed to download...”

If this happens, try the following steps:

1. Copy the URL from the job log message (highlighted below) and copy it into a web browser on the Production Pro DFE system. If the file is opened, or the web browser tries to open it, then the URL is valid. This is most likely a sharing rights issue between the local unicorn user and the asset location share.
2. If you paste the URL into a web browser and get an error that the file can't be found, then one of two things is most likely happening:
 1. The file is not at the location specified:
 - Check that the “Asset file location” and “Asset location URL” properties are pointing to the same location.
 - Make sure Switch actually moved the file to the “Asset location URL” location.
 2. The URL is bad:
 - URL should look something like this:
<file://servername/sharename/path/file.pdf>
 - Make sure there are no extra '/' characters in the URL or the Asset location URL property
 - Check for invalid URL characters (e.g. " < > # % { } | \ ^ ~ [] `)



Metadata and asset files



The App can be setup to accept XML files which contain references to external asset files instead of accepting PDF or other PDLs. In order to do this you need to provide a full path URL in the **Asset location URL** property and set **File move method** to “Asset referenced (don’t copy)”, so that Switch doesn’t try to copy the file from this location. **NOTE:** the **Asset file location value** will be ignored in this case.

In this scenario the **Asset location URL** is typically set through a “Multi-line text with variables defined” where the variable defined is a path to some metadata in the incoming XML file.

The XML pickup module which loads this information into internal metadata should be set to “Metadata is asset” so that the App receives the XML file as input. Currently “Metadata alongside asset” is not supported.

App settings

Properties	
Property	Value
Name	HP Digital Front End JDF Control
Description	
Output format	JDF Ticket
<i>Asset file location</i>	\\Server\Share\Path
<i>Asset location URL</i>	Multi-line text with variables defined
<i>File move method</i>	Asset referenced (don't copy)
Job name	Use asset file name
Copies	1

Example text with variables setting

Text with variables

```
[Metadata.Text:Path="/XML/AssetFileLocation",Dataset="Xml",Model="XML"]
```

Sample value `http://localhost/prodflow/tests/assets/static/simple8.pdf`

Example input XML file

```
<?xml version="1.0" encoding="utf-8"?>
<XML>
  <JobName>My Job Name</JobName>
  <JobDetails Quantity="200" Priority="Low" />
  <AssetFileLocation>http://localhost/prodflow/tests/assets/static/simple8.pdf</AssetFileLocation>
</XML>
```



Asset cleanup

- The HP Digital Front End JDF Control App does not clean up asset files that are moved to the Asset file location. These files should be monitored and cleaned regularly.
- Once the Production Pro DFE has downloaded the asset file(s) successfully, files can safely be deleted from the Asset file location directory.



Batching

With Production Pro version 5.1 and later multiple files can be grouped together with individual copy counts assigned to each file.

The HP Digital Front End JDF Control App can create simple batches in this way by providing a job folder with multiple asset files (instead of a single file) as input to the App.

Restrictions/Limitations:

- Production Pro version 5.1 or later required
- Files in job folder must all be of the same type, and must be of type PDF, JPEG, TIFF or GIF
- Quantity must be contained in the individual file name in some way
- Most JDF settings are still applied at a job level, so settings like duplex, imposition template etc. will apply to all files in the input job folder



The screenshot shows a software interface titled "Documents Details: PDF_Samples". It features a document icon and summary statistics: "Job Copies: 1" and "Document Count: 3". Below this is a table with three columns: a checkbox, "Document Name", and "Document Copies". The table lists three files: "simple8.pdf" (8 copies), "simple3.pdf" (3 copies), and "simple2.pdf" (2 copies). The "simple8.pdf" row is highlighted in blue.

	Document Name	Document Copies
<input checked="" type="checkbox"/>	simple8.pdf	8
<input type="checkbox"/>	simple3.pdf	3
<input type="checkbox"/>	simple2.pdf	2

Batching continued

App setup:

- **Copy count collection method** – This will determine how the App will attempt to pull the individual quantity value for each file. There are three methods:
 1. **First n digits** – will take the first number of defined digits from the file name and convert that into the copy value (removing any leading zeros). **Example:** filenames “010FirstFile.pdf”, “100SecondFile.pdf” and “002ThirdFile.pdf” would create copy counts of 10, 100 and 2 respectively if **First n digits** was set to “3”. If **First n digits** was set to “2” these same file names would create copy counts of 1, 10 and 0.
 2. **Delimiter** – allows you to define a delimiter and take the value immediately before or after that delimiter. **Example:** setting a **Delimiter** of ‘_’ and **Before / after** value of “Before” with file names of “10_FirstFile.pdf”, “023_Second_File.pdf” and “000005_Third_File.pdf” would create copy counts of 10, 23 and 5.
 3. **RegExp** – define a regular expression to parse the copy count out of the file name. **Example:** Setting a **RegExp** value of “\d+” will parse the first string of digits out of the file name. With file names of “First10File.pdf”, “20Second30File.pdf” and “Third0056File.pdf” will create copy counts of 10, 20 and 56.

Copy count collection method	First n digits
<i>First n digits</i>	3
<i>Remove from filename</i>	No

Copy count collection method	Delimiter
<i>Delimiter</i>	-
<i>Before / after</i>	Before
<i>Remove from filename</i>	No

Copy count collection method	RegExp
<i>RegExp</i>	\d+
<i>Remove from filename</i>	No



Batching continued

App setup:

- **Remove From File Name** – If a copy count collection method was selected, selecting “**Yes**” in the Remove from filename property will attempt to remove the copy count values (and defined delimiter) from the file name after they are collected. The default value of “**No**” will leave files as they were.
- **File sort method** – This property defines the order of the files in the incoming folder as they will be printed on the Indigo Digital Press. There are 5 built-in sorting methods:
 1. **No sort** – The App will not attempt to sort the files and they will be processed in the default order that Switch provides them in.
 2. **Time Ascending (New – Old)** – Files will be sorted in the order of when they were last modified with most recently modified files first and least recently modified files last.
 3. **Time Descending (Old – New)** – Files will be sorted in the order of when they were last modified with oldest files first and newest files last.
 4. **Name Ascending (0-9, A-Z)** – Files will be sorted by their file name with digits first followed by alpha characters.
 5. **Name Descending (Z-A, 9-0)** – Files will be sorted by their file name in reverse alphabetical order followed by digits large to small.

Remove from filename

Yes

File sort method

No Sort
Time Ascending (New - Old)
Time Descending (Old - New)
Name Ascending (0-9 A-Z)
Name Descending (Z-A, 9-0)
No Sort



Other properties

Other properties in the App are pretty straight forward to define, but they will be each be covered briefly here:

- **Job Name** – will define the overall job name on the Production Pro DFE. If this is left at the default setting of “Use asset file name” then the job name will be set to the name of the input file (minus the extension).
- **Copies** – sets the copy count for the overall job. (Note: for batched jobs this will multiply all individual file quantities).
- **Comment** – Defines the special comments to be displayed in the job properties for this job.
- **Internet Input Method** – defines an Internet Input Method to be used for this job. Internet Input Methods are a way to link ticket templates to a JDF job. By selecting an Internet Input Method the incoming job will use all settings with the associated ticket template unless defined in another App property (JDF will override Ticket Template settings). If no Internet Input Method is defined the system will use the templateStaticDoc and it’s associated ticket template by default. This value must match the name of an existing Internet Input Method exactly or the JDF ticket will be rejected.
- **Job Priority** – Set the priority of this job. Valid options are integer Rush, High, Medium and Low.
- **Due Date method** –
 - **Select from calendar** – Allows you to select a date on a calendar for the Due Date. All due dates will be set with time of 17:00 (5:00 PM). If you want to define a value through Script/Variable expression it will need to be in this field and must be in a valid ISO 8601 timestamp format (YYY-MM-DDTHH:MM:SS)
 - **Set offset from submit time** – Allows you to select a number of Days/Hours/Minutes from the current time that this job will be due in.



Other properties continued

- **Destination device** – If set this job will automatically route to the defined destination (Press or Press Group) after RIP. The Destination device value must exactly match the **Network Location** value for the press or the JDF ticket will be rejected.
- **Press queue** – Defines which queue the job will route to when it reaches the press (e.g. Held (Loaded) queue or Print queue)
- **Duplexing** – Turns the duplex setting on for this job (**Note**: if an imposition template is selected it will override this setting with the setting defined in the imposition). If this setting is set to “Yes” it will enable the **Tumble** property.
 - **Tumble** – If set to “Yes” the Tumble setting will be selected for this job.
- **Collate** – Select “**Yes**” to turn on collation for this job, and “**No**” to disable it.
- **Stacker destination** – Select an output stacker for this job to print to or select the Proof Tray if jobs should route there.
- **Face up – down** – Selects whether this job will print face up or face down in the output tray. (**Note** that Duplexing can affect this setting.)
- **Page order** – Select the print order (first to last, or last to first) that the job will print to the output tray. (**Note** that Duplexing can affect this setting.)
- **Default media** – Select a media for this job to print on by default.
- **Define additional medias** – If set to “Yes” this will allow you to define media exceptions to the default media.



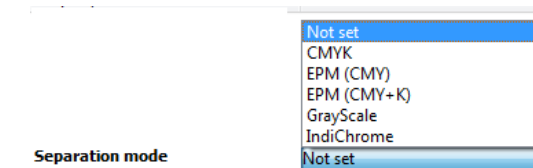
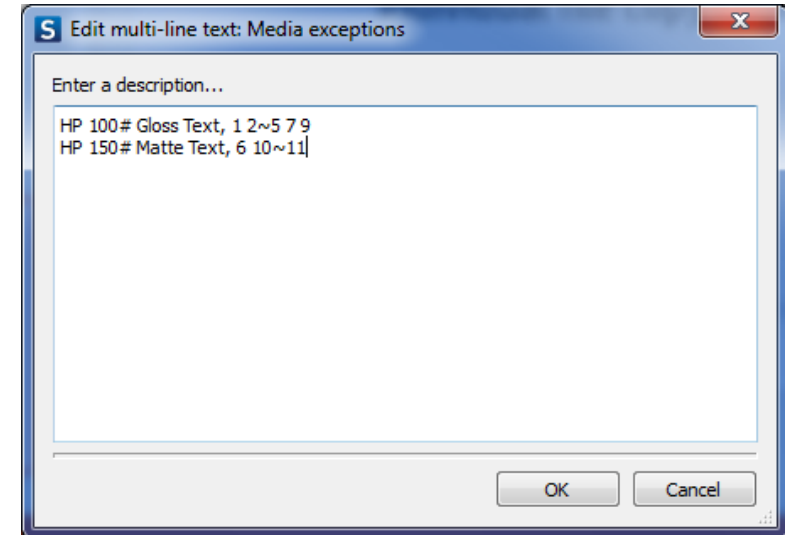
Other properties continued

- **Media exceptions** – Define a list of media exceptions to the default media in this field. Each line in the editor box should be formatted as: Substrate Name, Sheet Ranges. For example, the image to the right will set a media exception for:

- *HP 100# Gloss Text: on sheets 1, 2, 3, 4, 5, 7 and 9*
- *HP 150# Matte Text: on sheets 6, 10 and 11*
- All other sheets in the print job will print on the default media

Note: media names must match a defined media name on press, or jobs will go into a “Needs Attention” state and will require an operator to modify the substrates manually.

- **Overprint black** – If set to “Yes” the overprint black setting will be selected.
- **Screen frequency** – Select a screen set from the drop-down menu.
- **Separation mode** – Select a pre-defined separation mode.
- **Rotation** – Select a rotation for the spreads in the job, valid values are 0, 90, 180 and 270.
- **Retain time (minutes)** – Enter the amount of time (in minutes) for the job to stay in the retain queue on press after printing. Selecting a value of -1 will retain the job indefinitely. Selecting a value of 0 will remove the job immediately after printing.



Other properties continued

- **Imposition template** – select a pre-defined imposition template on the DFE to impose this job.
- **Include banner sheet** – If set to “Yes” the built-in banner sheet for Series III (7X00) and IV (1X,000) presses will be printed
 - **Border color** – select the boarder color for the banner sheet
 - **First page/Last page** – select whether the banner is printed as the first sheet in a job or last
 - **Use imposition template for banner sheet** – If “Yes” is selected the banner page will be imposed along with the remainder of the job.
 - **Banner page text color** – select a color for the text on the banner sheet to print
 - **Substrate for banner sheet** – You can override the default substrate for the banner sheet to print on by defining a media here.
- **Add divider sheet(s)** - If set to “Yes” divider sheets can be inserted into this job.
 - **Divider type** – Default image will select a default image to print on the divider sheets, Blank sheet will just insert a blank sheet.
 - **Divider interval number** – Define an integer value for the divider sheets to be inserted at (i.e. every “5” copies).
 - **Divider boundary** – Define the boundary value for dividers to be inserted on (Copies, Sheets or Documents)
 - **Substrate for divider sheet** - You can override the default substrate for the divider sheets to print on by defining a media here.



Other properties continued

- **Stack with jog offset** – If set to “Yes” will enable printed stack of paper to jog on certain intervals (Stacker output only)
 - **Jog interval** - Define an integer value for the stack to jog on (i.e. every “5” copies).
 - **Jog boundary** – Define the boundary value the printed stack to be jogged on (Copies or Documents)
- **Add customer info** – If set to “Yes” you can define various customer data field to be populated in the job properties.
 - **Note:** not all customer info fields will be detailed here



“Not set” – default property value

Most properties in the HP Digital Front End JDF Control App (version 8 and later) have a default value of “**Not set**”. When “**Not set**” is selected the App will add nothing into the generated JDF for this property. This will cause the DFE to default to the associated ticket template value for this setting. Only when a value other than “**Not set**” is selected will JDF be modified for this property value and override the associated ticket template setting.



Metadata and App properties



Almost all App properties can be driven through Switch variables, or with a script expression. This allows you to have very flexible automation capabilities on a per-job basis.

This also allows you to convert non-standard XML formats or even 3rd party JDF files into a format that can be consumed by the HP Digital Front Ends

The XML, JDF or XMP pickup modules can be used to pull upstream data formats in this way. The example below shows how you can drive the Copies setting from a simple XML file.

Example text with variables setting

Text with variables

```
[Metadata.Text:Path="/XML/JobDetails/@Quantity",Dataset="Xml",Model="XML"]
```

Sample value 200

Example input XML file

```
<?xml version="1.0" encoding="utf-8"?>
<XML>
  <JobName>My Job Name</JobName>
  <JobDetails Quantity="200" Priority="Low" />
  <AssetFileLcation>http://localhost/prodflow/tests/assets/static/simple8.pdf</AssetFileLocation>
</XML>
```

Metadata and App properties



When more complex logic is involved to convert from one data source to something that is relevant for the App, script expressions may be needed. In the example below the incoming XML file has Duplexing set to “**On**”, but the App only accepts “**Yes**” or “**No**” values for this property, so a scripting expression could be used here:

Example text with variables setting

```
1 //Get XML dataset
2 var xmlDataset = job.getDataset("Xml");
3
4 //Get duplexing value
5 var duplex = xmlDataset.evalToString("/XML/JobDetails/@Duplexing");
6
7 //Convert to Configurator value
8 if (duplex == "On"){
9     duplex = "Yes";
10 }
11 else {
12     duplex = "No";
13 }
14 //the last line of any script expression needs to be the return variable
15 duplex;
```

Example input XML file

```
<?xml version="1.0" encoding="utf-8"?>
<XML>
  <JobName>My Job Name</JobName>
  <JobDetails Quantity="200" Priority="Low" Duplexing="On"/>
  <AssetFileLcation>http://localhost/prodflow/tests/assets/static/simple8.pdf</AssetFileLocation>
</XML>
```

