

Dynamic Document Generator

Which Smart Service Should I Use?

- **PDF from Multiple DOCX (No Fonts)** if font is not important OR fonts are embedded in the documents
- **PDF from Single DOCX (with Fonts)** if specific fonts need to be supported, and they are not embedded in the document
- **PDF from XSL FO Transformation (with Fonts)** if you are comfortable with a high-code template, familiar with xsl-fo, or are having a lot of trouble with the docXToPdf conversion. It should be a last resort.
- **PDF from EML** if needing to convert an email into a PDF.
- **PDF from HTML** if you need to convert HTML to PDF
- **PDF from XHTML Transformation** if you need to convert HTML to PDF
- **DOCX from XHTML** if you need to convert HTML to DOCX (for example it will be edited before converting to PDF).
- **DOCX Merge** if you need to combine multiple documents together. However, if you simply need to merge together to then convert to PDF and fonts are embedded, simply use PDF from Multiple DOCX
- **Text Doc from Transformation** if you need to transform an XML doc into a text doc using an XSL template

PDF from Multiple DOCX (No Fonts) Smart Service

This smart service will convert 1:M word documents into a single PDF. It will not respect any fonts within the document, unless they are embedded.

Data Tab

Input	Data Type	Required	Multiple	Description
Source Documents	Document	Yes	Yes	A list of Microsoft Word Documents (DOCX) to merge and convert to PDF.
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.

Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.

Output	Data Type	Multiple	Description
New Document Created	Document	No	A PDF document created from the Source Microsoft Word Documents

PDF from Single DOCX (with Fonts) Smart Service

This smart service will convert a single word document into a PDF. Any fonts used in the document that are also included in the fonts parameter will appear in the generated document.

Data Tab

Input	Data Type	Required	Multiple	Description
Source Document	Document	Yes	No	A single Microsoft Word Document (DOCX) to convert to PDF.
Font Documents	Document	Yes	Yes	A list of font documents loaded into Appian - create a constant for this. If using windows fonts, the file names must match the filenames found in the C:\Windows\Fonts directory
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.

Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.

Output	Data Type	Multiple	Description
New Document Created	Document	No	A PDF document created from the Source Microsoft Word Document

Text Doc from Transformation Smart Service

This smart service converts and XML document using an XSL document returning a text document.

Data Tab

Input	Data Type	Required	Multiple	Description
Xml Document	Document	Yes	No	The XML data structure to transform
Xsl Document	Document	Yes	No	The XSL template that transforms the XML
Xsl Parameters	XslParameters	No	Yes	The XSL template parameters
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.

Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.
New Document Created	Document	No	The document that was created from the XSL transformation

PDF from XSL FO Transformation (with Fonts) Smart Service

This smart service is used to convert XSL-FO into a PDF while also providing a single font-family.

Data Tab

Input	Data Type	Required	Multiple	Description
Xml Document	Document	Yes	No	The XML data structure to transform to XSL-FO
Xsl Document	Document	Yes	No	The XSL template that transforms the XML to XSL-FO
Xsl Parameters	XslParameters	No	Yes	The XSL template parameters
Font Document	Document	No	No	A basic font document for a given font (e.g. gothic.ttf) loaded into Appian. If provided, this file's name should be used as the font-family in your xsl.
Font Italic Document	Document	No	No	An italic font document for a given font (e.g. gothici.ttf) loaded into Appian. If provided without a basic font, this file's name should be used as the font-family in your xsl.
Font Bold Document	Document	No	No	A bold font document for a given font (e.g. gothicb.ttf) loaded into Appian. If provided without a basic or bold font, this file's name should be used as the font-family in your xsl.
Font Bold Italic Document	Document	No	No	A bold, italic font document for a given font (e.g. gothicbi.ttf) loaded into Appian. If provided with no other fonts, this file's name should be used as the font-family in your xsl.
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.

Output	Data Type	Multiple	Description
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Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.
New Document Created	Document	No	A PDF of the XSL-FO document created by the XSL transformation

PDF from HTML Smart Service

This smart service converts an HTML document to a PDF.

Data Tab

Input	Data Type	Required	Multiple	Description
HTML Document	Document	Yes	No	The HTML document to convert to a single page PDF
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.

Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.
New Document Created	Document	No	A PDF of the HTML document

PDF from HTML Transformation Smart Service

This smart service converts an XML document transformed via XSLT to HTML into to a PDF. It uses a different conversion engine than **PDF from HTML** so it could be worth trying both. If you would like to try the other conversion style, first create an HTML document using **Text Doc from Transformation** then use **PDF from HTML**.

Data Tab

Input	Data Type	Required	Multiple	Description
Xml Document	Document	Yes	No	The XML data structure to transform to HTML
Xsl Document	Document	Yes	No	The XSL template that transforms the XML to HTML
Xsl Parameters	XslParameters	No	Yes	The XSL template parameters
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.

Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.
New Document Created	Document	No	A PDF of the HTML document created by the XSL transformation

DOCX from XHTML Smart Service

This smart service converts xhtml into a docx file retaining the style settings from a provided template.

The conversion from XHTML to DOCX can be improved by performing the following:

- Include XHTML strict doc type
- Use W3C Validator to check the document is XHTML strict
- Use style attribute and CSS to define styling, do not use other attributes (color, size, face, etc)

Data Tab

Input	Data Type	Required	Multiple	Description
Source Document	Document	Yes	No	An XHTML file to convert to Microsoft Word Document (DOCX).
Template Document	Document	Yes	No	A DOCX file whose styles will be copied to the generated document.
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.

Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.
New Document Created	Document	No	A DOCX created from the Source XHTML file.

DOCX Merge Smart Service

This smart services combines multiple docx files into a single docx files using "parts" which are essentially embedded docx files inside the original. If there are settings that need to apply to the entire doc such as protection, headers, or footers, they need to be part of the initial doc in the merge.

Data Tab

Input	Data Type	Required	Multiple	Description
Source Documents	Document	Yes	Yes	A list of Microsoft Word Documents (DOCX) to merge together.
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.

Input	Data Type	Required	Multiple	Description
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.
Separator	Text	Yes	No	Set to NONE, LINE BREAK, or PAGE BREAK
RetainHeaderFooter	Boolean	Yes	No	If false, headers and footers will be removed

Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.
New Document Created	Document	No	The merged document.

PDF from EML Smart Service

This smart service will convert and email document (EML) into a pdf. Fonts will not be converted.

Data Tab

Input	Data Type	Required	Multiple	Description
Source Documents	Document	Yes	Yes	A list of Microsoft Word Documents (DOCX) to merge together.
Create New Document	Boolean	Yes	No	Whether to create a new document, or update an existing one.
New Document Name	Text	No	No	If creating a new document, use this as the name.
New Document Desc	Text	No	No	If creating a new document, use this as the description.
Save In Folder	Folder	No	No	If creating a new document, save into this folder.
Existing Document	Document	No	No	If not creating a new document, overwrite this one.
Pause On Error	Boolean	Yes	No	When set to false the process flow will continue when an error occurs.

Output	Data Type	Multiple	Description
Error Occurred	Boolean	No	Returns true if an error has occurred. Save this value to a process variable to enable exception processing on the subsequent activity in the process flow.
Error Text	Text	No	Lists the text of the error message if one occurred.
New Document Created	Document	No	The merged document.

DOCX Template Generation Tips

The conversion from DOCX to PDF is often not 1:1, the source document may need to be tweaked or simplified to achieve the desired results.

- Use tables for positioning and layouts. Do not use tabs and absolutely positioned elements.
- Keep headers and footer to the default sizes. Do not exceed 5 lines of text.
- Do not use images in the header and footer, they are not supported properly.
- Use current page number references only. Total page count references do not work.
- Convert mail merge fields to text: 1. Select all text, 2. Ctrl + Shift + F9
- Missing Elements
 - If elements of the document are being generated by rules using OO-XML they may display properly in Microsoft Word, but be missing or broken in the PDF.
 - This is usually due to the XML not being well formed. Microsoft Word is more forgiving and will display it as expected.
 - This can be tested by re-saving the generated DOCX using Microsoft Word and attempting to convert it to PDF using the Smart Service. If it converts properly, the OO-XML is not well formed.
- Reduce Split Hashtags (####tag#### being modified by Word)
 - File > Options. The Word Options dialog is displayed.
 - Click Proofing in the left navigation.
 - Clear the Check spelling as you type checkbox.
 - Clear the Mark grammar errors as you type check box.
 - Click Trust Center in the left navigation. Select Trust Center Settings.
 - Clear the Store random numbers to improve Combine accuracy check box