

PDF Automation Server User Guide

Affordable, Powerful PDF Software for Windows, macOS, Linux

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PDF Automation Server – PDF Processing Server

PDF Automation Server is a modular server product that provides a rich set of PDF processing functions for different environments. Use PAS as an essential tool to streamline your PDF processing, document workflows and web service orchestration in your organization.

Workflow Module

Automate your business and document workflows with an easy to use graphical interface. Design and build complex automation flowcharts that easily integrates into 3rd party services.

Jobs Module

PAS can receive documents in various formats from multiple sources concurrently, including email, ftp servers and local or network folders. Processes can then be defined independently for each document source to perform a number of functions on the documents, including conversion, data merging, assembly, encryption, printing, preflighting and more.

REST API Module

PDF Automation Server provides a complete set of PDF processing and conversion functions in a robust REST server environment that can easily integrate into your existing document workflows and work with 3rd party integration and orchestration products.

HTML PDF Markup Module

PDF Automation Server provides a module to enable markup of PDF documents in the browser. PAS can convert documents to HTML on-the-fly and can serve them to an HTML/Javascript module in the browser that allows end users to navigate and add and edit annotations on the PDF. On save, markups are sent back to the server to merge back into the PDF document.

Integration with Workflow Modules and ESB Servers

All workflow servers can easily integrated with PDF Automation Server through its REST API module. Most enterprise software provide modules to handle workflows, with PAS you can add PDF functionality to your document processes. Additionally, there are a number of software products, such as ESB and BPM servers whose sole function is to run workflows. These servers can make calles to 3rd party systems through REST APIs, including making calls to our PDF Automation Server.

Mule ESB Integration Samples

Proven Robust PDF Technology

PAS is built using Qoppa's industry leading PDF technology, developed over more than 10 years and used by thousands of customers worldwide. Qoppa's PDF technology is mature, robust, a leader in performance, and requires no third party software. PAS is a multi-platform product, it can be deployed on Windows, Linux, Unix (AIX, HP-UX, Solaris, etc), z/OS, Mac OS X and others.

PAS Features

- **Powerful, Easy** - Our goal is to simplify PDF for you. PDF Automation Server (PAS) is a server product which is powerful, easy to set up and affordable. It doesn't require any programming and can be up and running in a few minutes only.
- **PDF Processing** - PAS provides a large number of PDF processing functions to manipulate PDF documents.
- **Reliability** - PAS has been produced and tested with the utmost care so that uptime is maximized and your documents are always processed reliably. Intelligent error handling and recovery is done at multiple levels in the software so that the server can recover from transient error conditions. Additionally, different processes are independent, so errors in one process will not affect other processes.
- **Multiple Sources** - PAS can receive documents from multiple sources concurrently. Documents from different sources can be handled in the same manner or unique processes can be defined for individual sources.
- **Multiple Destinations** - After processing documents, PAS can deliver the documents to multiple destinations. Each process in the server can send the resulting document to multiple destinations and different processes can send output to unique destinations.
- **Event Logging** - PAS keeps a complete log of events in the server, including informational, warning and error events. With the event log, users can track document processing and pinpoint causes of problems.
- **Notification** - PAS can send notification emails based on a number of criteria, including error conditions as well as successful processing of documents.
- **Platform Independence** - PAS is platform independent and can run on Windows, Linux, Mac OSX and several Unix flavors.

PDF Processing Functions


- Convert from other formats to PDF (from images, Microsoft Word & Excel, text files)
- Convert PDF to other formats (to images, HTML/SVG, text files)
- Convert PDF to PDF/A for archival storage
- Convert PDF documents to HTML5 and serve directly to browsers
- Preflight documents to check compliance against various profiles
- Document security and encryption RC4 or AES encryption, set passwords and permissions
- Redact PDF documents to remove confidential information
- Sign PDF documents and create new signature fields
- Apply and verify digital signatures

- Import, export, flatten and fill interactive form data
- Import, export, flatten annotation data
- Automated printing of PDF documents
- Optimize PDF files reducing PDF file size by compressing images and streams and removing unused objects.
- Extract text content
- Apply OCR text recognition to recognize and add searchable text to PDF documents.
- Linearize PDF documents for fast web viewing
- Assemble/Merge/Split documents with ease
- Set Crop, Trim, Bleed and Art Box margins for PDF documents.
- Move, transfer or route files of all types, even when PDF specific process is not required.
- Stamp documents with watermarks, page headers and footers, images or any other text content. Text can be formatted and can include variables such as current date and time, file names, page numbers and others.

Release notes

For documentation updates and release notes, refer to our knowledge base here ([PDF Automation Server change log](#))

Download PDF Guide

User Guide -  PDF

Minimum System Requirements

Installation requirements




Service

- 500 MB free hard disk space (In addition to space needed for processed files)
- Network connection (remote server management)
- Service: 2 GB RAM - User Adjustable
- CPU: multi-core highly recommended

Client

- 400 MB free hard disk space
- Network connection (remote server management)
- PAS Manager: 1024MB RAM
- Screen resolution of 1024 x 768 or higher is highly recommended
- Pointing device and keyboard

Supported Operating Systems

	Platform
	Windows (32 or 64 bit) - Windows 10, Windows 8 & 8.1, Windows 7, Vista, XP, Server, NT, etc...
	Mac (64 bit only) - 10.15 (Catalina), 10.14, 10.13, 10.12
	Linux: Mint, Ubuntu, Elementary OS, Fedora, Arch Linux, Debian, OpenSuse, CentOS, etc... Not sure which Linux?
	Other Unix* – AIX, Solaris Intel, Solaris Sparc, HP-UX

PDF Automation Server Installation Instructions

To install PDF Automation server first download the appropriate installer from the website [HERE](#). Then follow the instructions below to install PDF Automation Server on your machine.

Windows 32-bit Instructions:

- Instructions
 - After downloading, double-click QoppaPAS_vXX_win32.exe (where XX should be replaced with the current version number).
-

Windows 64-bit Instructions:

- Instructions
 - After downloading, double-click QoppaPAS_vXX_win64.exe (where XX should be replaced with the current version number).
-

Mac OS X Instructions:

- Instructions
 - After downloading, the installer should launch automatically and create an icon on the desktop.
 - The installer is a standard PackageMaker installer packaged inside a disk image. The operating system should recognize the files and launch the installer automatically.
 - If the installer doesn't start on its own:
 - Double click on the installation file QoppaPAS_vXX_mac64.dmg (where XX should be replaced with the current version number) to mount the disk image, then double click on the mounted image.
 - Finally double click on the PDF Automation Server Installer.
 - Notes
 - PDF Automation Server v2020R2 works on Mac OS X 10.11 (El Capitan), Mac OS X 10.10 (Yosemite), Mac OS X 10.9 (Mavericks), 10.8 (Mountain Lion), 10.7 (Lion).
-

- After installation, the installer should remove the downloaded files automatically. If this does not happen, you can manually drag the files to the trash.
-

Linux 32-bit Instructions:

- Instructions
After downloading the installer, open a Terminal window and type the following two commands:
 - **cd Downloads** to go to the directory where you downloaded the installer.
 - **sh ./QoppaPAS_vXX_linux32.sh** (where XX should be replaced with the current version number). This will start the installer.
-

Linux 64-bit Instructions:

- Instructions
After downloading the installer, open a Terminal window and type the following two commands:
 - **cd Downloads** to go to the directory where you downloaded the installer.
 - **sh ./QoppaPAS_vXX_linux64.sh** (where XX should be replaced with the current version number). This will start the installer.
-

Other Unix Instructions: AIX, Solaris, HP-UX

- Instructions
 - After downloading the installer, open a shell and, cd to the directory where you downloaded the installer.
 - At the prompt type: **sh ./QoppaPAS_vXX_unix.sh** (where XX should be replaced with the current version number). This will start the installer.

The PDF Automation Server runs as a service on Windows, and as a daemon on other operating systems. By default, the server will use port 8093 to communicate with the PAS Manager. In order to run the server on a different port, stop the server and modify HttpPort attribute (HttpsPort for secured server) in the PASProp.xml settings file. The PASProp.xml is located in the directories below based on your OS.

- Windows: will be located in the QoppaPAS folder in the Program Data directory
- Linux/Unix/Mac: will be located in the PAS installation directory

Note: *The server must be stopped to edit the PASProp.xml settings file. Any edits to this file while the server is running will be overwritten when the server restarts.*

Windows

During installation, there is an option to run the QoppaPAS service automatically on startup. This can be modified later in the Windows Service Manager Console, as well as start and stop the QoppaPAS service. Additionally, there is a command-line executable in the installation folder named QoppaPAS.exe that allows you to start, stop, and get the status of the QoppaPAS service.

Usage: QoppaPAS.exe {-start|-stop|-status}

Note: *In Windows, due to permissions issues, you will need to run the command line shell (cmd) as administrator to stop and start QoppaPAS.*

Linux/Unix/Mac

During installation, the start/stop script for the QoppaPAS daemon is copied to the installation folder.

Usage: sudo service QoppaPAS {start|stop|status}

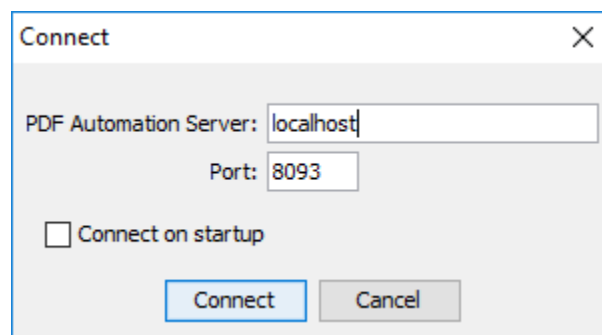
What's Next?

Once the server has been started you can begin working with the [PAS Manager Console](#) to start processing documents for your needs.

Connecting to PAS Service

PAS Manager is the graphical interface that connects to the server used to create [Workflows](#), [Jobs](#) & update [Server Settings](#). The PAS Manager can be started from the desktop icon or from the PAS Manager launcher in the installation folder. After starting the PAS Manager, the Connection Dialog is displayed to set the server you wish to connect to.

Enter the IP address or HostName and Port of the server you wish to connect to. If you installed both the server and manager this will default to "localhost". If you just installed the manager you will need to use the IP address or HostName and Port (default 8093) of the remote server.



Note: *If you are connecting to the localhost and the PDF Automation Server is not running, you will be prompted to start the server. By default, the server uses port 8093. If the server has been modified to use a different port, enter the new port number.*

Once connected to the PDF Automation Server, the [PAS Manager Console](#) is displayed showing the primary Dashboard panel.

PAS Manager - Version v2020R1 (Evaluation)

PAS Manager

Connected To:
10.0.0.111

Dashboard

Workflows

Jobs

REST API Module

Preferences

Connect to Server

Exit

Old Client

CPU Usage
0.0%

Memory
100.0 MB / 1.8 GB

License
Evaluation
[Register](#) [Pricing](#)

Workflows

Name	Status ^	Processed
------	----------	-----------

Jobs

Name	Status ^	Processed
------	----------	-----------

All Recent Events

Date/Time	Name	Type	Message
03/27/2020 06:22:18	SERVER	INFO	License Validated - Running in Production Mode
03/27/2020 06:22:18	SERVER	INFO	PDF Automation Server - Version v2020R1
03/27/2020 06:22:18	SERVER	INFO	Deleted database records older than 2/26/20 6:22 AM
03/27/2020 06:22:20	MANAGER	INFO	Manager HTTP server started...
03/27/2020 06:22:21	REST	INFO	REST HTTP server started...
03/27/2020 13:32:58	SERVER	INFO	License Validation Failed - Running in Evaluation Mode

View Full Log
Clear Recents

PAS Manager Console

The PAS Manager is the graphical interface that connects to the PAS server. Once connected it can be used to create [Workflows](#), [Jobs](#), [REST API](#) and edit [Server Settings](#).

Menu

Use the menu on the left side of the PAS Manager Console to access each of the following panels:

[Dashboard](#)

The primary informational dashboard for the console providing a quick look at server load, process statuses and recent events.

[Workflows](#)

Use the [Workflow Module](#) to automate your business and document workflows with an easy to use graphical interface. Design and build complex automation flowcharts that easily integrates into 3rd party services. Advanced logic tools allow automatic document routing to different outputs. Multiple inputs into single flow prevents duplicate work for the same process. Easily scales to fit future processing needs.

[Jobs](#)

Automate the receiving, processing and routing of documents with the [Jobs Module](#). PAS can receive documents in various formats from multiple sources concurrently, including email, ftp servers and hot folders. Processes can then be defined independently for each document source to perform automated processing and handling of documents.

[REST API](#)

Use the [REST API Module](#) to integrate PDF processing into your own and 3rd party applications. PDF Automation Server provides a complete set of PDF processing and conversion functions that can be accessed through standard REST calls. By providing a RESTful API interface, you can orchestrate PDF processing with your applications and other web services, to be able to provide end-to-end handling of documents.

[Preferences](#)

Access to server preferences including [General Settings](#), [REST Settings](#), [Office Conversion Settings](#) & [License](#)

Connect to Server

Used to [Connecting to PAS Server](#). Make sure the [QoppaPAS Service](#) is started before attempting to connect.

Exit

Exits the PAS Manager - Leaving the server process running.

PAS Dashboard

The Dashboard is the primary informational dashboard for the console providing a quick look at server load, registration, process statuses and recent events. Information is divided into tiles showing the specific details for each of the below items.

CPU & Memory Usage



CPU Usage - displays the CPU usage in percent by the QoppaPAS service relative to the total CPUs available to the OS.



Memory - displays the current memory use by the QoppaPAS service relative to the total amount allocated to the process.

- The installation default is 2048MB
- To increase the amount of memory allocated to the QoppaPAS service see the knowledgebase here <https://kbdeveloper.qoppa.com/allocate-more-memory-to-pdf-automation-server/>

License

The License tile displays the current registration status of the server. The statuses are as follows:

Evaluation - When running in demo mode, a watermark will be added to documents upon saving them. To run in full production mode, PDF Automation Server needs to be activated with a license key. If you have not yet purchased a license please [Contact Us](#) for purchase or see [Registration](#) to activate your product and remove watermarks.

Valid - License is valid and running in full production mode.

Expired Grace - License has expired and server is running grace mode. Once grace period expires all processes will automatically stop. [Contact Us](#) to purchase renewal and prevent service interruption.

Expired - License has expired and no grace period remains. All processes will stop in order to prevent watermarks. [Contact Us](#) to purchase renewal and prevent service interruption.

Workflows & Jobs


The Workflow and Job tiles display a list of processes on the server and their current status. There are four statuses, each associated with an icon that will be displayed next to each of the Workflows.



Active: The Workflow or Job is currently active and watching the folders for files to process

 **Stopped:** The Workflow or Job is currently stopped and not running

 **Processing:** The Workflow or Job is currently processing files

 **Incomplete:** One or more of the Workflow or Job settings are currently incorrect and need to be corrected before the Workflow can be started. Double click to view open the editor and correct any issues.

All Recent Events Log

The [Recent Events Log](#) panel displays the last 100 events logged in the server. This includes events for both the Workflow & REST API modules.

Note: *As you are setting up your first projects, you can add to PAsprop.xml settings file an additional entry Verbose = "true" so the log will be more verbose.*

Recent Event Log Options

Clear: Clears only the log items in the [Recent Events](#) list

Note: *Clearing the recent events list does not delete the actual log entries from the database. You can delete logs from the [Full Events Log](#) window.*

Full Log: Displays the [Full Events Log](#) window

PAS Workflow Module

Automate your business and document workflows with an easy to use graphical interface. Design and build complex automation flowcharts that easily integrates into 3rd party services.

The Workflow List

The [Workflows List](#) panel displays a list of workflows on the server as well as their current status. It also allows you to manage and create new workflows.

Workflow Options

New: Starts the [Workflow Editor](#) tool

- From Template: Creates a new workflow using the selected template
- Import: Allows you to import exported workflows


Edit: Opens the Workflow Editor tool

Start/Stop: Starts or Stops the selected workflow on the server

Delete: Deletes the selected workflow from the server


Statuses

There are four types of statuses, each associated with an icon that will be displayed next to each of the Workflows.

 **Active:** The Workflow is currently active and watching the folders for files to process

 **Stopped:** The Workflow is currently stopped and not running

 **Processing:** The Workflow is currently processing files

 **Incomplete:** One or more of the Workflow settings are currently incorrect and need to be corrected before the Workflow can be started. See [Creating & Editing a Workflow](#) for more information.

The Recent Events Log

The [Recent Events Log](#) panel displays the last 100 workflow events logged in the server.

Note: *As you are setting up your first projects, you can add to PASprop.xml settings file an additional entry `Verbose = "true"` so the log will be more verbose.*

Event Log Options

Full Log: Displays the [Full Events Log](#) window

Clear Recents: Clears only the log items in the [Recent Events](#) list

Note: *Clearing the recent events list does not delete the actual log entries from the database. You can delete logs from the [Full Events Log](#) window.*

PAS Jobs Module

Automate the receiving, processing and routing of documents with the PDF Automation Server's Jobs Module. PAS can receive documents in various formats from multiple sources concurrently, including email, ftp servers and hot folders. Processes can then be defined independently for each document source to perform automated processing and handling of documents

The Jobs List

The [Jobs List](#) panel displays a list of jobs on the server as well as their current status. It also has buttons to manage and create new jobs (new, edit, start/stop, delete).

Job Options

New: Starts the [New Job Wizard](#) to create a new automation job

Edit: Opens the job properties to begin [Editing a Job](#)

Start/Stop: Starts or Stops the selected job on the server

Delete: Deletes the selected job from the server

The Recent Events Log

The [Recent Events Log](#) panel displays the last 100 events logged in the server. This includes events for both the Workflow & REST API modules.

Note: *As you are setting up your first projects, you can add to PASprop.xml settings file an additional entry `Verbose = "true"` so the log will be more verbose.*

Event Log Options

Clear: Clears only the log items in the [Recent Events](#) list

Note: *Clearing the recent events list does not delete the actual log entries from the database. You can delete logs from the [Full Events Log](#) window.*

Full Log: Displays the [Full Events Log](#) window

PAS REST API Module

Integrate PDF processing into your own and 3rd party applications. PDF Automation Server provides a complete set of PDF processing and conversion functions that can be accessed through standard REST calls. By providing a RESTful API interface, you can orchestrate PDF processing with your applications and other web services, to be able to provide end-to-end handling of documents.

What is REST?

REST is based on the HTTP protocol and is a simple way to provide services over the web. Since it is widely supported, REST integrates easily with existing workflows and processes. It can be called from any language (.NET, Java, PHP, Ruby, Rails, Python, jQuery) and any platform (Salesforce, Amazon Web Services, Google App Engine) that supports REST.

What PDF Processing functions are supported?

- Convert from other formats to PDF (from images, Microsoft Word & Excel, text files)
- Convert PDF to other formats (to images, HTML/SVG, text files)
- Convert PDF documents to HTML5 and serve directly to browsers
- Document security and encryption RC4 or AES encryption, set passwords and permissions
- Redact PDF documents to remove confidential information
- Sign PDF documents and create new signature fields
- Apply and verify digital signatures
- Import, export and fill interactive form data
- Automated printing of PDF documents
- Optimize PDF files
- Extract text content
- Apply OCR text recognition
- Linearize PDF documents for fast web viewing
- Integrate with ESB servers, such as Mule ESB.
- Integrate with [Mobile Apps](#)
- [Alfresco Document Management Server Integration](#)

How to Access the REST Module?

The REST server is automatically started as a part of the PAS service. The rest module runs as a part of the PAS service. Once the PAS service is running (see [Getting Started](#)) open a browser and navigate to the address below to view the REST module including APIs and HTML Viewer / Notes samples.

- Open your browser and navigate to "[Server IP or hostname]:[Rest Server Port]"
 - port default: 8090
- Enter REST server address below

(i.e. "IP or hostname:port")

Note: Make sure that the fire wall settings on the server are not blocking the "QoppaPAS" process or the port being used by PAS (default 8090). See [REST Settings](#) to determine your Rest server IP and Port.

License

When running in demo mode, a watermark will be added to documents upon saving them. To run in full production mode, PDF Automation Server needs to be activated with a license key. If you have not yet purchased a license please [Contact Us](#) for purchase.

Otherwise follow the steps below to activate your product.

To view the Registration Settings: **Preferences Panel > License Tab**

Step 1: Generating a License Request

After you make your purchase, you will need to first generate a license request so that the license key can be created for the specific server. To generate a license request follow the steps below.

1. Start PAS Manager and connect to the server that needs to be registered. (See [Getting Started with PAS](#) for more info)
2. Once connected to the server you will see the Registration dialog. Click on **"Register"**
 - Alternatively if already connected go to **Preferences -> License Tab**
3. Choose to either **"Save"** or **"Email"** the license request. and then click on **"Generate"**
 - **Generate and Save Request:** Use this option if you do not have a connection to the internet. This will generate the license request file that you will then need to send to Qoppa via email to keys@qoppa.com for your license to be generated.
 - **Generate and Email Request:** Use this option if you have connection to the internet. This will generate and email the license info directly to Qoppa. Make sure to enter your correct email address in the following screen when sending the request as this is what will be used to validate your purchase and send back the license key.

Step 2: Activating / Registering PAS

1. Once you receive the license key, launch the PAS Manager, and a dialog will show up where you can click on the "Register" button.
 - Alternatively if already connected go to **Preferences -> License Tab**
2. Click on the **Upload License File** and select the registration file that you received.
3. Once the license is validated the PAS log will display *"License validated - running Production Mode"* confirming that PAS is now activated.

PDF Automation Server Preferences

The Preferences Panel allows customization of various PDF Automation Server settings. The settings selected will be modifying the settings for the currently connected server (NOT the PAS manager)

General Settings: displays the Email, CMYK and Log settings for the server.

REST Settings: displays the REST connection and directory settings for the server

Office Conversion: displays the Word to PDF & Excel to PDF font settings for the server

Trusted Certificates: Define server trusted certificates for signature validation in PDF documents

Signatures: Digital ID and default signature settings

License: displays the licensing and registration details for the server

Font Options: Defines custom font replacement rules for document conversion

General Settings

The General settings are where you set the email, CMYK and Log settings settings to be used by the server.

To view the General Settings: Go to **Preferences Panel > General Tab**

Flow Settings

Flow Threads - The number of threads on the server to be used for flow processing. This setting is applied immediately and does not require a server restart.

Outgoing Email Settings

Outgoing Mail Server - outgoing mail server address

From E-mail Address - the name that will be displayed in the "From:" field to the recipients that receive the email

SMTP Port: SMTP port for the email server

Server Information

Protocol - the connection protocol to use for the email server

- SMTP - standard simple mail transfer protocol
- SMTPS - secured simple mail transfer protocol

Complete this section if your SMTP server requires additional authentication

User Name - user name needed to login to the STMP server

Password - password needed to login for the user name set above

TLS/SSL - check this box if your server requires TLS or SSL encryption

CMYK Settings

Use custom CMYK profile - check this option to use the custom CMYK profile set in the below option instead of the PAS defaults

CMYK file - enter the complete file path to the location of the CMYK file on the server.

***Note:** This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Log Settings

Keep Records (days) - Number of days log records will be kept in the database. Records older than the specified number of days will be automatically deleted.

Delete Interval (hours) - The interval at which log records older than the specified number of days will be automatically deleted.

REST Settings

The REST settings allows you manage REST API specific settings including connection options, storage directory, number of threads used by processes when making [REST API](#) calls to the server.

To view the REST Settings: Go to **Preferences Panel > REST Tab**

Settings

General

Rest Server - Sets the IP address to receive REST calls from on the server. When set to a specific address calls can only be made to the server from that address. If 0.0.0.0 is selected the server will serve REST resources on all available network interfaces.

Content Provider: Sets the content provider (where the files are stored and managed) for the PAS service

- **PAS Storage:** The default value that uses the directory set in the "Storage Directory" option. This directory is local to where the server is running.
- **Alfresco:** Integrates with an Alfresco Document Management server. The Alfresco provider is configured with alfresco.properties in the QoppaPAS directory within Program Data. The server must be restarted to access new properties. See [Alfresco Setup](#) for more information

Storage Directory - enter the complete file path to the directory you wish to have all of the REST files stored on the server.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

- **Delete files from storage and sub-folder older than _ Days :** When checked sets the number of days files uploaded to the storage directory will be kept. Files with a creation date older than the specified number of days will be automatically deleted once per day.

REST threads - the number of threads (cores) on the server you want to be used by REST processes. The number to the right of the field will display the total number of cores available on the server.

Allow Origin - Setting that lets you access REST services from another domain. It will set the value of the "Access-Control-Allow-Origin" response header.

HTTP

Enable HTTP - enables HTTP access to a specified port

HTTP Port - port to be used for HTTP access. The default setting is 8090.

Note: *The HTTP Port cannot match the HTTPS or RMI (default 1099) port settings*

HTTPS

Enable HTTPS - enables HTTPS access to a specified port

HTTPS Port - port to be used for HTTPS access. The default setting is 8091.

Note: *The HTTPS Port cannot match the HTTP or RMI (default 1099) port settings*

PKCS#12 File - enter the complete file path to the PKCS#12 file (.pfx or .p12) used by HTTPS calls made to the server.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Password - The password to access the keystore file

Office Conversion Settings

The Font settings allows you to set whether fonts are embedded or not when converting word documents (.doc or .docx) to PDFs. It also allows you to set a fallback font to be used when the font does not exist on the server.

Note: *By default PAS will use the DroidSansFallbackFull.ttf font that has been packaged with the installer as a fallback font.*

To view the Font Settings: **Preferences Panel > Office Conversion Tab**

Settings

Word Convert

Do not embed fonts - fonts will not be embedded in the document when converted. Instead fonts will be referenced by name within the document and it will be up to the PDF viewer to find the font on the system to be displayed when viewing the document.

Embed fonts - fonts will be embedded into the PDF document when converted.

When embedding fails - Determines what PAS will do if the font named in the Word document does not exist on the server.

- **Throw error:** if the font is not found on the system the document conversion will fail and display an error in the PAS log
- **Use fallback font:** will attempt to find the characters within the fallback font set below.

Note: *When converting a word document PAS will first look for the font on the system, then will attempt to find the characters within the fallback font set. If no characters are found within either the system or fallback font the entire document will fail conversion. It's important that, when selecting a fallback, a font is chosen with as many characters as possible to avoid conversion failures.*

Fallback font - enter the complete file path to the location of the font file (.ttf) on the server.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Create bookmarks using headings - This option will create bookmarks using the Word heading styles (Header 1, Header 2, etc...)

Image DPI resolution - Images with resolution greater than the selected resolution will be converted down. DPI below 150 is not recommended as this could severely degrade images. Typical resolutions are 150 and 300. Going above 600 DPI can potentially cause memory issues.

Excel Convert

Add a Bookmark for each sheet - Creates a bookmark in the PDF for each sheet in the workbook

Scaling - Determines how the spreadsheet will be broken up into pages when converting to PDF. PAS will use page size and margin settings set within the Excel document when creating the PDF document.

- **Fit to Page:** shrinks the entire worksheet so that it all fits on a single page
- **Fit to Width:** shrinks the worksheet so that all columns fit on a single page. Rows will continue onto additional pages as needed
- **Actual Size:** no scaling, when the data does not fit on one page it will be broken up into pages using the Page Order set within the Excel file.

Max page count - Extremely large worksheets may take a very long time or run out of memory during conversion. This sets the max number of pages to attempt when converting a worksheet. The default setting is 2,000 pages.

Do not embed fonts - fonts will not be embedded in the document when converted. Instead fonts will be referenced by name within the document and it will be up to the PDF viewer to find the font on the system to be displayed when viewing the document.

Embed fonts - fonts will be embedded into the PDF document when converted.

When embedding fails - Determines what PDF Studio will do if the font named in the Excel document does not exist on the system.

- **Throw error:** if the font is not found on the system the document conversion will fail and display an error message in PDF Studio.
- **Use fallback font:** will attempt to find the characters within the fallback font set below.

Note: *When converting an Excel document PDF Studio will first look for the font on the system, then will attempt to find the characters within the fallback font set. If no characters are found within either the system or fallback font the entire document will fail conversion. It's important that, when selecting a fallback, a font is chosen with as many characters as possible to avoid conversion failures.*

Fallback font - The full path to the font file (.ttf) to use. Click on the "Browse..." button to open a file chooser and navigate to the font file (.ttf) you wish to use .

PowerPoint Convert

Do not embed fonts - fonts will not be embedded in the document when converted. Instead fonts will be referenced by name within the document and it will be up to the PDF viewer to find the font on the system to be displayed when viewing the document.

Embed fonts - fonts will be embedded into the PDF document when converted.

When embedding fails - Determines what PAS will do if the font named in the Word document does not exist on the server.

- **Throw error:** if the font is not found on the system the document conversion will fail and display an error in the PAS log
- **Use fallback font:** will attempt to find the characters within the fallback font set below.

***Note:** When converting a word document PAS will first look for the font on the system, then will attempt to find the characters within the fallback font set. If no characters are found within either the system or fallback font the entire document will fail conversion. It's important that, when selecting a fallback, a font is chosen with as many characters as possible to avoid conversion failures.*

Fallback font - enter the complete file path to the location of the font file (.ttf) on the server.

***Note:** This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Trusted Certificates Settings

The Trusted Certificates Preferences section contains all of the trusted certificate settings for PDF Automation Server

To view the Trusted Certificate Settings: Go to **Preferences Panel > Trusted Certificates Tab**

Settings

System Certificates - Displays a list of certificates from the system to be used when validating digital signatures.

- Trust System Root Certificate Authorities: Enable using the certificate authorities that are currently installed on your system.

Java Certificates - Displays a list of certificates packaged in Java to be used when validating digital signatures.

- Trust Java Root Certificate Authorities: Enable using the certificate authorities that come packaged within Java.


My Trusted Certificates - Allows you to Import and Manage additional trusted certificates to be used when validating digital signatures.

My Trusted Certificates

My Trusted Certificates allows you to import, view, or delete any additional trusted certificates added to PDF Automation Server.


Note: *When a digital ID is created or imported, its issuing authority is automatically added to the "My Trusted Certificates" list.*

Importing Trusted Certificates


Click on the Import  button. Then navigate to the certificate you wish to import and click on Open to import the certificate and add the digital ID as a trusted certificate

Note: *Only .cer or .crt formats can be imported*

Viewing Trusted Certificate Details

Click on the Details  button to display the additional details of the selected certificate

Deleting Trusted Certificates

Click on the Delete  button to delete the selected certificate

Note: *This cannot be undone. You will need to reimport the certificate if you wish to trust it again.*

Signature Settings

In order to sign documents using the REST API, you must first have a digital ID accessible to PDF Automation Server. You can either use any existing ID installed on the system or Import a digital ID to be used only by the PAS service. Once the ID is available you can

My Digital IDs

Lists the available digital IDs that can be used by PAS when applying digital signatures.

Enable signing with System Digital IDs - when checked allows PAS to also use digital IDs installed on the system.

- **NOTE:** *In order to access the system IDs the PAS service must be setup to run as the same user the ID is installed on or the system Admin account.*



Import - Select Import my existing digital ID from a file and click Next

Note: *Only .pfx or .p12 formats can be imported*

Change ID - allows you to change the ID name used to reference the selected digital signature certificate in REST calls to the server

Set Default - sets the default ID to be used when making REST calls to the server



Delete - deletes the selected certificate from PAS

Importing IDs

Signature File - The full path to the Digital ID file used in the signature on the server. Accepted formats are .p12 & .pfx.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Password - The password needed to open the Digital ID file

Default Signature

The below settings apply to the default signature selected for signing.

Signature Information

Format: The format to be used when encrypting the signature

Signature - A digital signature contains encrypted information that is unique to the signer so it cannot be forged. The signer's certificate or issuing third-party Certificate Authority will need to be trusted by the user receiving the PDF in order for the signature to be considered valid. Once signed, if the document is modified in any way the signature will no longer be considered valid.

Certifying Signature - A certified signature provides additional document security options to prevent the document from being modified. When choosing certifying signature, a combo box will show, allowing to specify which changes are permitted on the certified document.

- Disallow Changes: Does not allow any further changes to the document once signed
- Allow Form fill and Signatures: Allows users to fill forms and complete signatures once signed
- Allow Form fill, Signatures, and Comments: Allows users to fill forms, complete signatures, and add comments to the document once signed

Reason - Select a reason the document was signed from the list from the below options

- I approve this document
- I am the author of this document
- I have reviewed this document
- I attest to the accuracy and integrity of this document
- I agree to the terms defined by this document

Location - Enter additional location details

Contact Information - Enter additional contact information for the signature

Timestamp Server

Use Timestamp Server: Check this option to use a timestamp server during the signing process

URL - the URL of the timestamp server

TSA Requires Authentication - check this box if the server requires authentication

User name - the user name for authentication on the timestamp server

Password - the password for authentication on the timestamp server

Signature Appearance

Image

Show Image - When checked an image can be added to the background of the digital stamp appearance

File - The full path to the image file used in the signature on the server. Accepted formats are jpg, png, gif, & tiff.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Align - Allows you to align the image on the left, center, or right of the signature

Transparency - Transparency setting for the image

Text

Show - The options below, when checked, set which digital signature properties will be displayed on the signature

- **Name:** The large text that will display the name
- **Digitally signed by:** Adds the text "Digitally signed by" before the Common Name
- **Date:** Date the signature was completed
- **Common Name:** The name associated with the digital ID
- **Organizational Unit:** The organizational unit associated with the digital ID
- **Organization Name:** The organization name associated with the digital ID
- **Locality/City:** the locality/city associated with the digital ID
- **State:** The state associated with the digital ID
- **Country:** The country associated with the digital ID
- **Email:** The email associated with the digital ID

Orientation - Sets the digital signature text to be displayed with one of two options

- **Left to Right:** Displays the Name on the left and all other properties in smaller text on the right
- **Right to Left:** Displays the Name on the right and all other properties in smaller text on the left

License

When running in demo mode, a watermark will be added to documents upon saving them. To run in full production mode, PDF Automation Server needs to be activated with a license key. If you have not yet purchased a license please [Contact Us](#) for purchase.

Otherwise follow the steps below to activate your product.

To view the Registration Settings: **Preferences Panel > License Tab**

Step 1: Generating a License Request

After you make your purchase, you will need to first generate a license request so that the license key can be created for the specific server. To generate a license request follow the steps below.

1. Start PAS Manager and connect to the server that needs to be registered. (See [Getting Started with PAS](#) for more info)
2. Once connected to the server you will see the Registration dialog. Click on **"Register"**
 - Alternatively if already connected go to **Preferences -> License Tab**
3. Choose to either **"Save"** or **"Email"** the license request. and then click on **"Generate"**
 - **Generate and Save Request:** Use this option if you do not have a connection to the internet. This will generate the license request file that you will then need to send to Qoppa via email to keys@qoppa.com for your license to be generated.
 - **Generate and Email Request:** Use this option if you have connection to the internet. This will generate and email the license info directly to Qoppa. Make sure to enter your correct email address in the following screen when sending the request as this is what will be used to validate your purchase and send back the license key.

Step 2: Activating / Registering PAS

1. Once you receive the license key, launch the PAS Manager, and a dialog will show up where you can click on the "Register" button.
 - Alternatively if already connected go to **Preferences -> License Tab**
2. Click on the **Upload License File** and select the registration file that you received.
3. Once the license is validated the PAS log will display *"License validated - running Production Mode"* confirming that PAS is now activated.

Font Options

Font Options Preferences allow you to define the custom font replacement rules for document conversion. During conversion, if the source document contains a font that is not available, the following table can be used to define your preferred replacement font.

Use the "Always" option to replace the specified font regardless of whether or not it is available.

For Word to PDF conversion with font embedding, the Fallback Font set in Office Conversion preferences will be used as a last resort if no matching font defined here is available.

NOTE: *Font substitution can cause text layout differences if the substituted font's metrics differ from the original.*

Font Substitution Rules

Enabled - turns on or off the custom font substitution rules

Add - create a new font substitution rule

Edit - edit the selected font rules

Remove - removes the selected custom font substitution

Restore Defaults - Resets the PAS font substitution settings back to installation defaults

Font Replacement Settings

Original Font - The font to be substituted if found

Replacement Font - the font to use in place of the selected font.


PDF Automation Server Help

Users who have purchased PDF Automation Server receive free online and e-mail technical support.

Online

PDF Automation Server Online Knowledge base

Within PDF Automation Server

Contact us from within PDF Automation Server by clicking on the Help Icon  in the top right corner and choosing the **Support** option and sending us an email or question. This is the most effective way for us to assist you as it will provide us a copy of the PDF Automation Server logs which will help us to resolve any problems you may have.

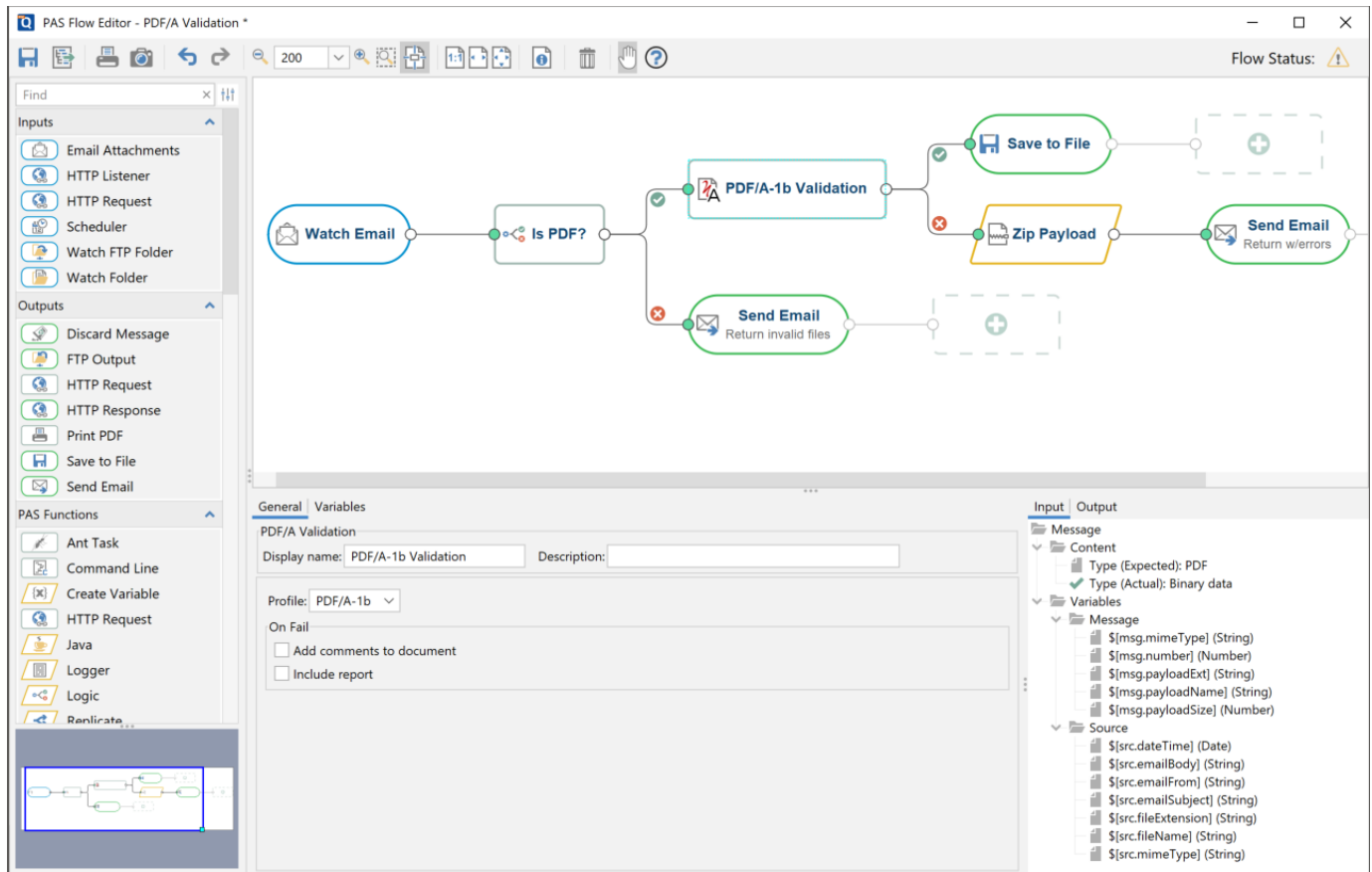
Email

support@qoppa.com

Only e-mail Technical Support directly if you encounter problems while using PDF Automation Server and are unable to send us an e-mail from Within PDF Automation Server as listed above. When you contact us, please have a clear description of the problem, PDF Automation Server version, name and version of your operating system, as well as include any documents or screenshots showing the issue. To find the PDF Automation Server version and serial number, start PDF Automation Server and select About from the Help menu.

Workflow Editor

The workflow editor is a user friendly graphical interface used to create & design your workflows. The editor contains a primary Graph area where the workflow will be designed. Surrounding the graph are additional panes such as the Node Palette and Properties Pane used to create your flow. All panes are re-sizable as needed by dragging the dividers if needed.



Toolbar

The **Toolbar** is located at the top of the workflow editor window and includes the basic functions such as Saving, Printing and view navigation options.

Node Palette

The **Node Palette** is located on the left side of the workflow editor. The **Node Palette** contains an organized list of the available **Nodes** or processors to be used on the graph. To use them just select a node from the palette and drag it onto the appropriate location of the **Graph**. See [Creating & Editing Workflows](#).

Graph

The central area of the Workflow Editor contains the [Graph](#) where the workflow is designed and created. It provides a visual representation of the document workflow showing each node and process through the flow and their connections. As the **graph** grows it will you can pan & zoom to adjust the view.

Properties Pane

The [Properties Pane](#) displays the settings or options available for the currently selected node on the graph.

When no nodes are selected on the graph it will display the [Workflow Properties](#) with options such as Name and Startup as well as the [Trouble Handling](#) settings for the flow.

Node Metadata Pane

The [Node Metadata Pane](#) displays the input and output properties of the currently selected node on the graph. These can be used to debug or diagnose validation issues as well as provide a list of current [Variables](#) in the flow.

Workflow Editor Toolbar

The Workflow Toolbar is located at the top of the workflow editor window. Use these tools when creating & editing your workflows.





Flow Status

Tools


The following tools are available in the Workflow Editor


File

 **Save:** Save the current workflow.


 **Export:** allows you to export the flow to a file to transfer to another PAS server if needed

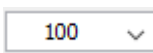
Export


 **Print:** Prints the current workflow


 **Snapshot Tool:** Used to save a portion of the graph as an image the your clipboard.


Zoom

 **Zoom Out:** Zoom out to view the graph smaller.

 **Zoom To/Current Zoom:** Displays the current zoom value. You can also select a preset zoom percentage or type in the field for a custom zoom value.

 **Zoom In:** Zoom in to view the graph larger.

 **Zoom Tool:** Zooms to a selected area within the graph. Click and drag to select the rectangle area you wish to zoom to.

 **Pan and Zoom:** Toggles the Full Graph View panel (lower left corner under the Node Palette). A window showing the portion of the graph currently on screen. Drag the box to adjust the view on the main graph.

Graph View



Actual Size: Displays the document with a 1:1 ratio to match how the document would look if printed without any scaling.



Fit to Width: Scales the view to fit the width of the document in the PDF Studio frame.



Fit to Page: Scales the view to fit the entire document within the PDF Studio frame.

Workflow



Properties: Displays workflow properties panel

Node



Delete: Deletes the selected node

Flow Status

Displays the current overall flow status. When clicked it will show a detailed list of all the Workflow Problems



Valid: the flow has no validation errors and can be started



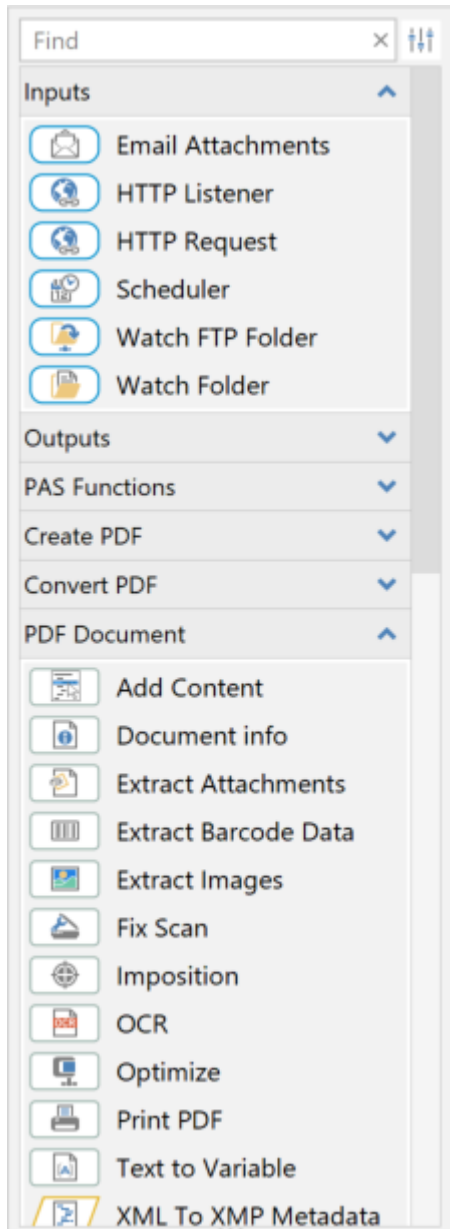
Warning: the flow is valid but recommended settings are missing or incomplete (i.e. [Trouble Handling](#))



Incomplete: Workflow is missing settings that are required for it to run. See the [Workflow Validation](#) for additional details.

Node Palette


The Node Palette is located on the left side of the workflow editor. The Node Palette contains an organized list of the available **Nodes** or processes to be used on the graph. Nodes are grouped by categories and can also be filtered using the search box at the top of the panel.



Search

The search field on the palette allows you to filter out the nodes based on the search term entered. As you type the results will be filtered out to show only nodes that match the entered word(s).

Panel Options

You can customize the node palette by using the options button  on the top right of the panel.



Expand: Expands all of the node group headings

Collapse: Collapses all of the node group headings

Show / Hide: Toggle to turn individual node groups on or off.

Note: *Groups that are off will NOT appear in search results.*

Groups

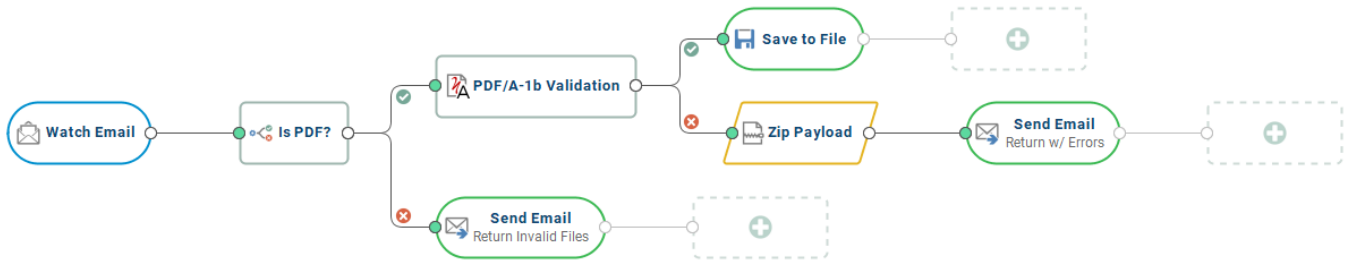
Available nodes are separated into groups divided by headers. Click on the  to collapse and  to expand the groups.

Nodes

To use a node just select it from the palette and drag it onto the appropriate location of the Graph. See [Creating & Editing Workflows](#).

Workflow Graph

The Workflow Graph is central area of the [Workflow Editor](#) where your flow will be created.



Graph Elements

The graph is where you will place nodes to create your document workflow and contains the following elements.

Nodes

Nodes are the primary elements of the graph and function as the individual processors for your workflow. Node functions are designated by their shape and color.

Inputs

Nodes that begin or start the processing through the flow. All flows must start with an [Input](#) node.



Exports / Outputs

Nodes that exports the current payload, whether it's writing the file or sending to remote source. All flows must have at least one [Output](#) node.



PAS Functions

Nodes that perform standard PAS [Functions](#).



Processing

The primary [Processing](#) nodes used to perform most of the main operations to documents in the workflow.



Validation

As the workflow is being created the graph will check basic validation to ensure that the flow will run correctly. The following markers are displayed showing the current status of the flow.

Connections

The nodes in the workflow will validate connections based on input & output mimetypes. This is used to show if there will be a problem processing the payload in the next message due to the file type being output. Connection information can also be validated by checking the [Node Metadata Pane](#).

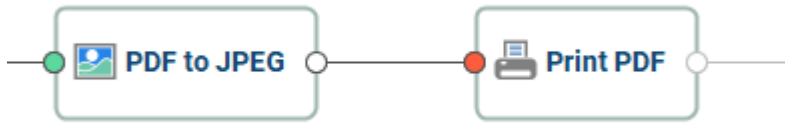
Valid Connection

If do match the connection validation marker will show as GREEN showing the connection is valid. For example: The "Word to PDF" node will output a PDF document that is accepted by the "Watermark PDF" node



Invalid Connection

If they do not match the connection validation marker will show as RED showing there is an issue. For example: The "PDF to JPEG" node will output a .jpg image file that cannot be processed by the "Print PDF" node.



Node Properties

Individual nodes in the flow will also validate their own properties to avoid issues when the flow is running. Each node has its own set of required fields and if the field is not properly completed a validation marker ☐ will show on both the field in the [Node Properties Pane](#) and on the node.

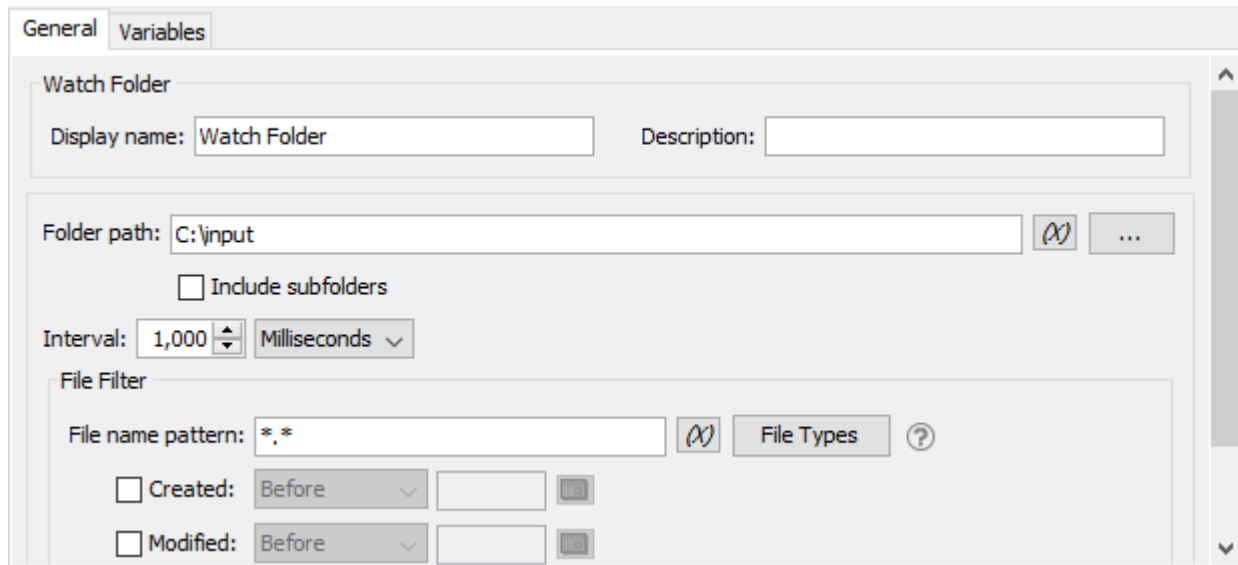
If you see the marker, click on the node to and check the properties pane to resolve the issue.



Properties Pane

The Properties Pane displays the settings or options available for the currently selected node on the graph.

Note: When no node is selected on the graph it will display the [Workflow Properties](#)



The screenshot shows the 'Properties Pane' with the 'General' tab selected. The 'Watch Folder' section contains the following fields and controls:

- Display name:** A text box containing 'Watch Folder'.
- Description:** An empty text box.
- Folder path:** A text box containing 'C:\input', followed by a 'Go' button and a 'Browse' button (three dots).
- Include subfolders:** An unchecked checkbox.
- Interval:** A numeric spinner set to '1,000' and a dropdown menu set to 'Milliseconds'.
- File Filter:**
 - File name pattern:** A text box containing '*.*', followed by a 'Go' button and a 'File Types' button with a help icon.
 - Created:** An unchecked checkbox, a dropdown set to 'Before', an empty text box, and a 'Go' button.
 - Modified:** An unchecked checkbox, a dropdown set to 'Before', an empty text box, and a 'Go' button.

Options

The pane options will be set based on the current selected [Node](#) on the graph and organized into the following tabs.

General

Available in every node and contains all the primary settings for the node. All required fields will be found in this tab and will be marked with validation marker if the field is required.


Advanced

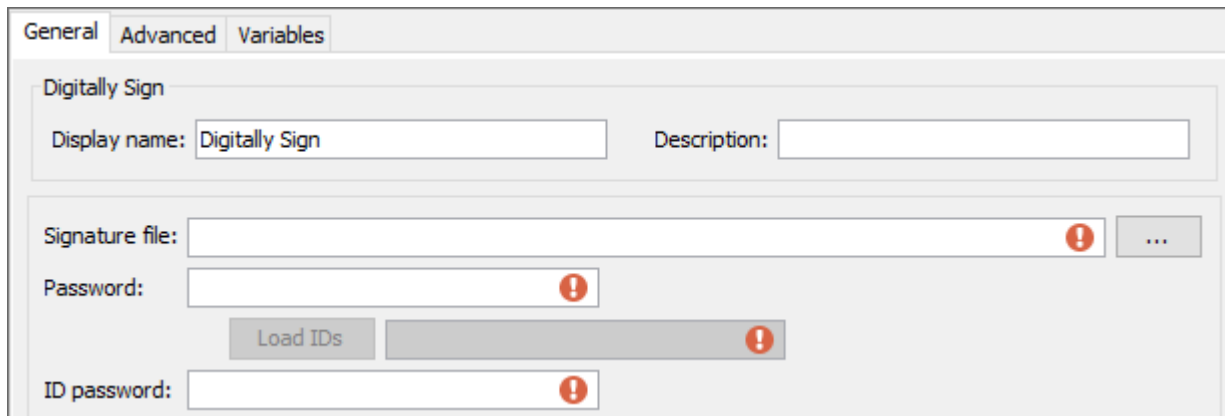
Contains additional options for the node if needed (*Not available in all nodes*)

Variables

The variables tab functions the same as the [Create Variable Node](#) only it allows you to create variables at any point during the flow if needed. Created variables are immediately available to be used in the currently selected node if needed.

Validation

Node properties that require a value to be entered will be marked with a  to designate it as a required field. Hover over the icon to see a tooltip showing what the error is.



The screenshot shows a configuration window for a 'Digitally Sign' node. It has three tabs: 'General', 'Advanced', and 'Variables'. The 'General' tab is active. Inside the 'Digitally Sign' section, there are two input fields: 'Display name:' (containing 'Digitally Sign') and 'Description:'. Below these, there are three more input fields, each with a red exclamation mark icon to its right, indicating they are required: 'Signature file:', 'Password:', and 'ID password:'. The 'Signature file:' field has a file selection button with three dots. Below the 'Password:' field is a 'Load IDs' button, followed by another input field with a red exclamation mark icon.

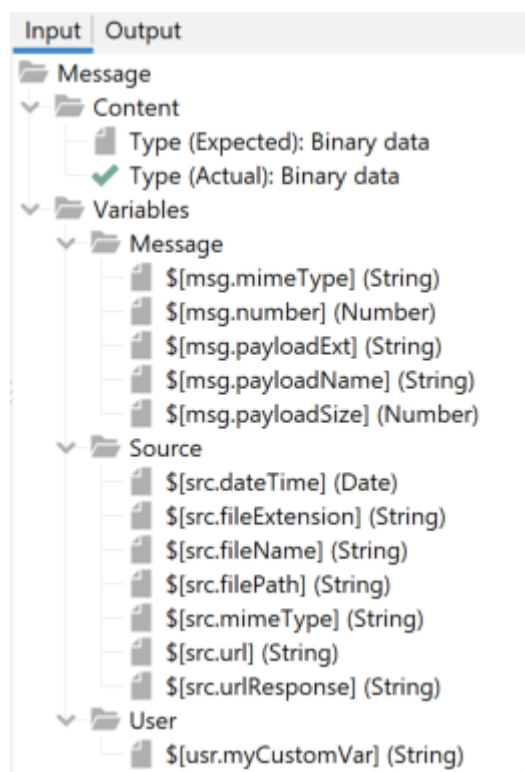
Note: *All required fields must be completed in order to run the flow.*

Node Metadata Pane

The Node Metadata Pane is used to display the current property and variable information for the workflow message. These properties will update and change based on the selected node in the workflow editor to show how the message is changing as it moves through the flow.

The pane has 2 separate tabs to show the message details coming from the previous node and what will be output by the currently selected node.

The information is organized in a tree based structure that can be collapsed or expanded as needed.



Metadata Details

The following information is provided for the message

Content

Contains information on the content of the message being processed.

Type: displays the Expected and Actual mimetype of the message content to be processed at that point.

✓ **Valid:** means the connection is valid. For example: The "Word to PDF" node will output a PDF document that is accepted by the "Watermark PDF" node

✗ **Invalid:** means there is an issue. For example: The "PDF to JPEG" node will output a .jpg image file that cannot be processed by the "Print PDF" node.

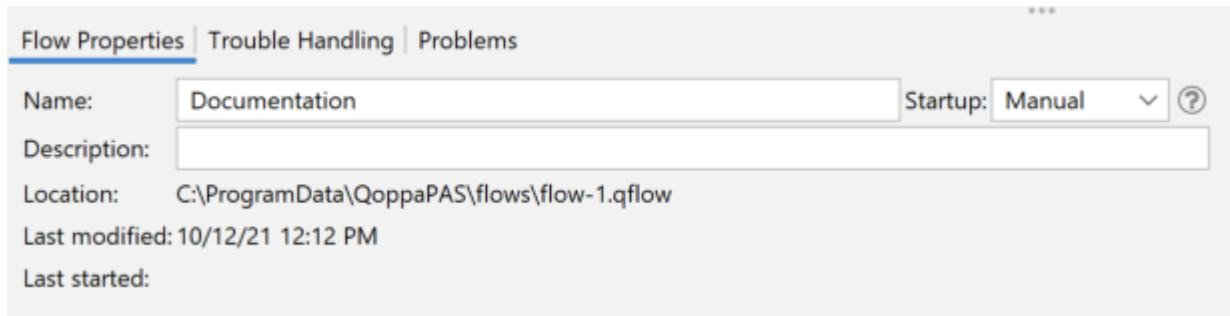
Variables

Displays the current variables available to the selected node in the flow. Variables shown can also be used in any field within the [Properties Pane](#) for the node.

Workflow Properties

The Workflow Properties Pane displays the settings and options available for the workflow. See [Workflow Trouble Handling](#) for additional workflow options.

Note: *The workflow properties pane is only displayed when NO node is selected on the graph*



The screenshot shows a 'Flow Properties' dialog box with three tabs: 'Flow Properties' (selected), 'Trouble Handling', and 'Problems'. The 'Flow Properties' tab contains the following fields:

- Name:** A text box containing 'Documentation'. To its right is a 'Startup:' label followed by a dropdown menu set to 'Manual' and a help icon (?)
- Description:** An empty text box.
- Location:** A text box containing 'C:\ProgramData\QoppaPAS\flows\flow-1.qflow'.
- Last modified:** A text box containing '10/12/21 12:12 PM'.
- Last started:** An empty text box.

Options

Name: The name of the workflow. This name will be used when showing the job on the [Workflow List](#) and should be descriptive enough to identify the job.

Description: A longer description for the job. This field can be used to enter more detail about the job for future reference.

Startup: This field is used to decide whether to start this job when PAS boots up or to let the user start it as needed.

- **Manual:** when set to manual the job will NOT start automatically if the server is restarted. You will have to use PAS Manager to start the job again if the server stops for any reason.
- **Automatic:** will automatically restart the job if the server is restarted.

Note: *If you set this value and have not carefully tested the job information, then you may see unpredictable results the next time this job is reloaded.*

Location: The storage location of the .qflow file. This is only needed if transferring the workflow to a new server.

Last Modified: The date and time the workflow was last modified

Last Started: The date and time the workflow was last started

Creating & Editing Workflows

The [Workflow Editor](#) allows you to easily create or edit workflows in the visual interface. Follow the steps below to create your workflow.


Starting the editor

1. With the [PAS Manager](#) running go to the [Workflows](#) module.
2. Then click on "New" to launch the [Workflow Editor](#) and create a new workflow and begin creating your flow.

Adding Nodes

1. Using the [Node Palette](#), search for the nodes you wish to use. At minimum the following 3 nodes types should be added:
 - [Input Node](#)
 - [Processing / Function Node](#)
 - [Output Node](#)
2. Click and drag the desired node onto the [Graph](#) making sure to place it on the input node placeholder.
3. Using the [Node Properties Pane](#) set the options for the node placed
4. Repeat steps 1-3 until all nodes are added to the flow

Save & Run the Flow

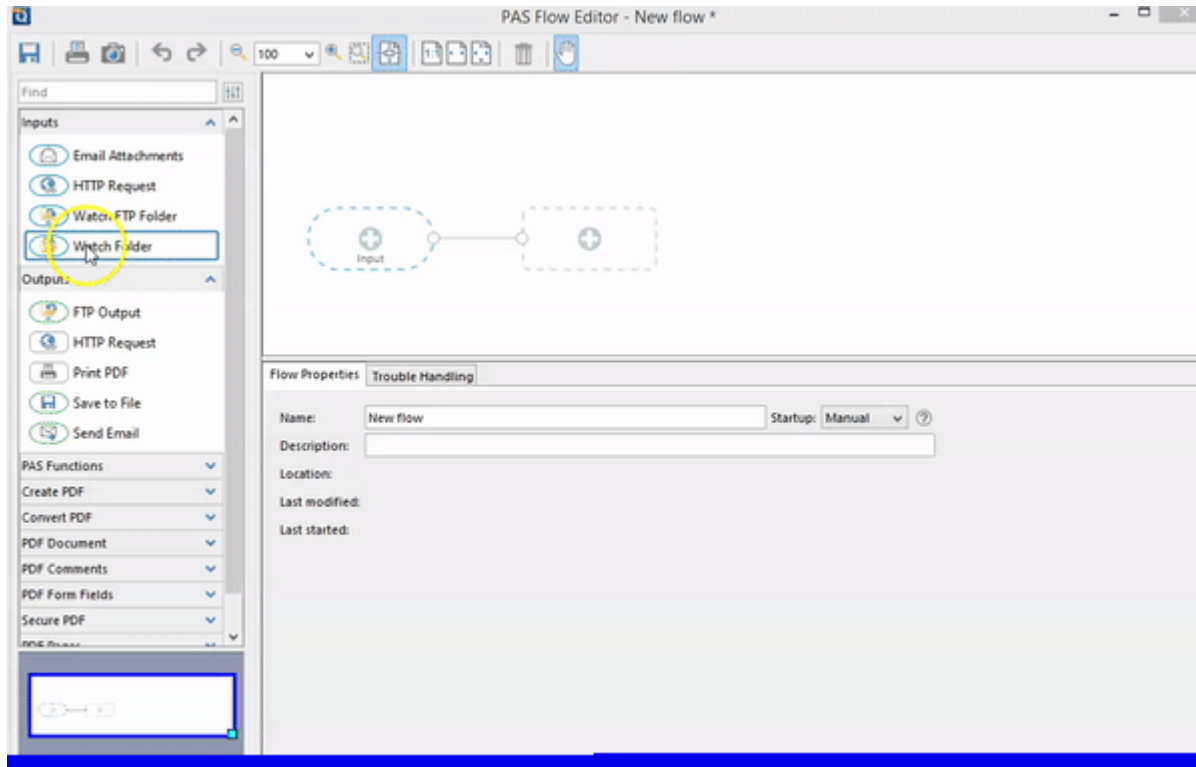
1. Click on  to save the current workflow
2. Close the workflow editor
3. In the PAS Manager Console go to the Workflows panel
4. Click on the **Start** to begin the flow and begin processing documents

Troubleshooting

- If the flow won't start check the [Recent Events log](#) for any errors.
- Make sure to also check the [Workflow Validation](#) as the flow will not start if any of the node settings or connections are invalid.

Adding Nodes to the Graph

Nodes are the primary elements of the graph and function as the individual processors for your workflow. Nodes are easily added to the workflow graph by following the directions below.



How to Add Nodes

1. Using the [Node Palette](#), search for the nodes you wish to use. At minimum the following 3 nodes types should be added:
 - [Input Node](#)
 - [Processing / Function Node](#)
 - [Output Node](#)
2. Click and drag the desired node onto the [Graph](#) making sure to place it on the input node placeholder.
3. Using the [Node Properties Pane](#) set the options for the node placed
4. Repeat steps 1-3 until all nodes are added to the flow

Editing Node Properties

When a node is selected you can edit any of it's settings using the [Properties Pane](#). This displays the settings or options available for the currently selected node on the graph. Only a single node can be selected at a time.

Note: *When no node is selected on the graph it will display the [Workflow Properties](#)*

Node Properties

The pane options will be set based on the current selected [Node](#) on the graph and organized into the following tabs.

General

Available in every node and contains all the primary settings for the node. All required fields will be found in this tab and will be marked with validation marker if the field is required.


Advanced

Not available in all nodes and contains additional options for the node if needed.

Variables

The variables tab functions the same as the [Create Variable Node](#) only it allows you to create variables at any point during the flow if needed. Created variables are immediately available to be used in the currently selected node if needed.

Node Property Validation

Individual nodes in the flow will also validate their own properties to avoid issues when the flow is running. Each node has it's own set of required fields and if the field is not properly completed a validation marker  will show on both the field in the [Node Properties Pane](#) and on the node.

If you see the marker, click on the node to and check the properties pane to resolve the issue.



Workflow Validation

As the workflow is being created the graph will check basic validation to ensure that the flow will run correctly. The following markers are displayed on the graph showing the current validation status of the flow.

In order for a flow to be complete and able to run, all validation issues must first be resolved.

Flow Status

The top right corner of the Workflow Editor displays an icon indicating the current overall flow status. Click to view a detailed list of all the workflow problems.



Valid: the flow has no validation errors and can be started



Warning: the flow is valid but recommended settings are missing or incomplete (i.e. [Trouble Handling](#))

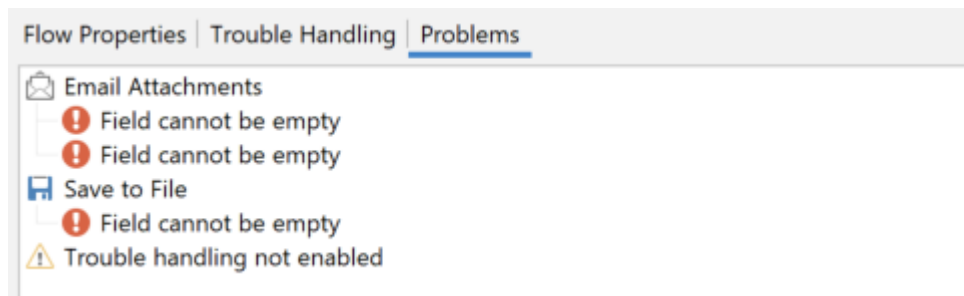


Incomplete: Workflow is missing settings that are required for it to run. See the Problems Panel for additional details.

Problems Panel

The Panel Pane displays a list of the current workflow validation issues. Each of the validation issues will be listed individually per node.

Double click on the error in the list to open the selected node properties pane and resolve the listed issues.



Connections

The nodes in the workflow will validate connections based on input & output mimetypes. This is used to show if there will be a problem processing the payload in the next message due to the file type being output. Connection information can also be validated by checking the [Node Metadata Pane](#).

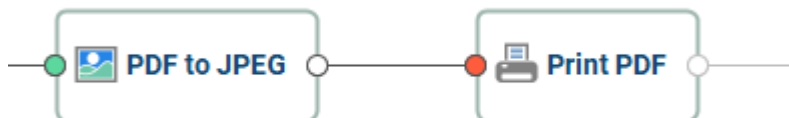
Valid Connection

If do match the connection validation marker will show as **GREEN** showing the connection is valid. For example: The "Word to PDF" node will output a PDF document that is accepted by the "Watermark PDF" node




Invalid Connection

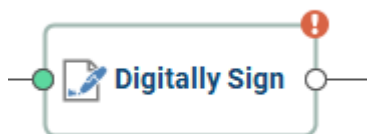
If they do not match the connection validation marker will show as **RED** showing there is an issue. For example: The "PDF to JPEG" node will output a .jpg image file that cannot be processed by the "Print PDF" node.



Node Properties

Individual nodes in the flow will also validate their own properties to avoid issues when the flow is running. Each node has it's own set of required fields and if the field is not properly completed a validation marker  will show on both the field in the [Node Properties Pane](#) and on the node.

If you see the marker, click on the node to and check the properties pane to resolve the issue.



Node Metadata Pane

The Node Metadata Pane is used to display the current property and variable information for the workflow message. These properties will update and change based on the selected node in the workflow editor to show how the message is changing as it moves through the flow.

The pane has 2 separate tabs to show the message details coming from the previous node and what will be output by the currently selected node.

Contains information on the content of the message being processed.

Type: displays the Expected and Actual mimetype of the message content to be processed at that point.

✓ **Valid:** means the connection is valid. For example: The "Word to PDF" node will output a PDF document that is accepted by the "Watermark PDF" node

✗ **Invalid:** means there is an issue. For example: The "PDF to JPEG" node will output a .jpg image file that cannot be processed by the "Print PDF" node.

Workflow Trouble Handling

The Trouble Handling tab is used to tell PAS what to do in case there are any errors during processing. The error is packaged into a single zip file containing any file and error information needed for debugging. Qoppa PAS is then able to save or send the file with a notification message when there are any errors in processing.

Flow Properties Trouble Handling

☐ Save error <Folder> ...

☐ Email error

Send list: <Send list> Copy list: <Copy list>

Subject:

Message

Error Zip File

Any errors that occur will now be zipped into a single file that will contain the payload and additional error information. Below is the following information that will be included.

Zip File Name: {flowID}_error_{date/time string}.zip (i.e. "flow_3_error_20190725191531.zip")

File Contents: What is packed into the zip file

Flowchart File: copy of the flow xml file for help with debugging (i.e. "flow_1.qflow")

Message Payload: Copy of the current payload that was being processed. This file will always be named message_payload.{extension}

Message Properties: export the current message metadata properties to an XML file - message_properties.xml

Error: errors, full stack trace, and any other info (i.e. date / time) in a text file error.txt

NOTE: *the error details will still always be logged in the [Recent Events](#) & [Full Events log](#) as well.*

Options

Save Error

Use this section to save the file that had an error to a local directory on the server.

Folder Path: the full path to a local directory (on the server) to watch for files.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Email Error

Use this section to send an e-mail with information about the error to an e-mail address.

Note: *SMTP settings must be set in [General Preferences](#) in order to send email notifications*

To: Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

CC: Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

Subject: subject line of the email being sent

FTP Error

Use this section to send the error a directory on an FTP server.

Server: URL to the directory on the FTP server

User: User name required to access the server

Password: Password for the user to access the server

Destination Folder: the directory on the FTP server

Nodes

Nodes are the processors that perform a specific function on each message that passes through the flow. The nodes allow you to define events in your flow without the need to write any code.

Below is a list of nodes and their primary functions:

Inputs

- [Email Attachments](#) - Watch emails for file attachments
- [HTTP Listener](#) - Use REST calls to trigger PAS workflows
- [HTTP Request](#) - Make HTTP requests and process the responses
- [Scheduler](#) - Set trigger to begin flows based on specific date / time intervals
- [Watch Folder](#) - Watch folders for files based on specified filters
- [Watch FTP Folder](#) - Watch remote FTP folders for files based on specified filters

Outputs

- [Discard Message](#) - Discards unneeded message information
- [FTP Output](#) - Save payload to remote FTP server
- [HTTP Request](#) - Send payload as body in HTTP request
- [HTTP Response](#) - Send back a response to received HTTP requests
- [Print PDF](#) - Prints PDF document (if exists in the payload)
- [Save to File](#) - Save the contents of the payload to file
- [Send Email](#) - Send the contents of the payload as an email attachment

Functions

- [ANT Task](#) - Runs an ANT task process
- [Command Line](#) - Make command line or terminal calls to the server
- [Create Variables](#) - Create workflow variables
- [HTTP Request](#) - Make HTTP requests and process the responses
- [Java](#) - Create custom node function using Java
- [JSON to XML](#) - Converts JSON data to XML format
- [Logger](#) - Log message details for debugging
- [Logic](#) - Automatically route the workflow message based on variable arguments
- [Replicate](#) - Duplicate the message contents to send along 2 separate paths of the flow
- [Unzip Payload](#) - Unzip the contents of the message payload
- [XML Extract](#) - Extract data from XML
- [XML to JSON](#) - Converts XML data to JSON format
- [XML to Variable](#) - Extract XML data and set as variable
- [Zip Payload](#) - Zip or compress contents of the message payload

Create PDF

- [Excel to PDF](#) - Convert Excel files to a PDF documents
- [Image to PDF](#) - Convert image files (jpg, png, tiff, gif) to PDF documents
- [PowerPoint to PDF](#) - Converts PowerPoint files to PDF documents
- [Text PDF](#) - Convert plain text files to PDF documents
- [Word to PDF](#) - Convert Word files to PDF Documents

Convert PDF

- [Linearize](#) - Create a Fast Web (linearized) version of a PDF document
- [PDF to GIF](#) - Convert PDF document to .gif image files
- [PDF to HTML](#) - Convert PDF document to HTML web pages
- [PDF to JPEG](#) - Convert PDF document to .jpeg image files
- [PDF to PDF/A](#) - Convert PDF document to the specified ISO PDF archival formats
- [PDF to PNG](#) - Convert PDF document to .png image files
- [PDF to PostScript](#) - Converts PDF document to PostScript format
- [PDF to SVG](#) - Convert PDF document to .svg vector image files
- [PDF to TIFF](#) - Convert PDF document to .tiff image files
- [PDF to Text](#) - Extracts text from a PDF document
- [Rasterize PDF](#) - Re-creates the document using images of the pages instead of vector commands

PDF Document

- [Add Content](#) - Add text or image content to a PDF document
- [Document Info](#) - Add or edit the document information of a PDF file
- [Extract Attachments](#) - Extract attachments from PDF documents
- [Extract Barcode Data](#) - Extracts Barcode data from PDF documents
- [Extract Images](#) - Extract all images stored within PDF document
- [Fix Scan](#) - Fix alignment and rotation issues on scanned documents
- [Imposition](#) - Create industry standard imposition layouts including: including: 2, 4, & 8 up booklets; cut stacks; sequential, step and repeat
- [OCR](#) - Add text to scanned documents or images
- [Optimize](#) - Reduce the file size of PDF documents
- [Print PDF](#) - Send PDF document to the printer
- [PDF Text to Variable](#) - create variables from text content stored within the PDF
- [XML to XMP Metadata](#) - Imports XML data into PDF document XMP metadata
- [XMP Metdata to XML](#) - Exports PDF document XMP metadata to XML

PDF Comments

- [Delete Comments](#) - Deletes comments / annotations from a PDF
- [Export Comments](#) - Exports comments / annotations from a PDF
- [Flatten Comments](#) - Flattens comments / annotations into the page content
- [Import Comments](#) - Imports comments / annotations into a specified PDF document
- [Search & Markup](#) - Adds text markups to all the search results found within a PDF document

PDF Form Fields

- [Export Form Fields](#) - Export PDF form field data
- [Flatten Form Fields](#) - Flattens form field data into page content so it is no longer editable
- [Import Form Fields](#) - Import form field data into the specified PDF document
- [Reset Form Fields](#) - Resets all form fields to their default values

Secure PDF

- [Apply All Redactions](#) - Applies any redaction annotations in a PDF document
- [Clear Security](#) - Removes all security & permissions from PDF documents
- [Digitally Sign](#) - Apply digital signatures to PDF documents
- [Fast sign](#) - Create electronic signature stamps that can be easily applied to documents
- [Redact Area](#) - Redacts a specified area of a PDF document
- [Sanitize](#) - Remove all hidden sensitive information from PDF documents
- [Search & Redact](#) - Adds text markups or redactions to all the search results found within a PDF document
- [Secure with Passwords](#) - Set the security or permissions of a PDF document

PDF Pages

- [Crop Pages](#) - Adjust the crop box, bleed box, trim box, and art box on PDF documents
- [Delete Pages](#) - Delete or remove specified pages from PDF documents
- [Extract Pages](#) - Extract the specified pages from a PDF document to be processed
- [Header & Footer](#) - Apply headers and/or footers to PDF documents
- [Insert Pages](#) - Insert pages into the specified PDF document
- [Resize Pages](#) - Scale pages so that the content better fits the page or increase borders and margins
- [Reverse Pages](#) - Automatically reverses the order of the pages within a PDF
- [Rotate Pages](#) - Rotate the specified pages within the PDF document
- [Split Pages](#) - Split PDF documents in a variety of ways including: blank pages, bookmarks, before & after text
- [Split by Barcode](#) - Splits a PDF document at the specified barcode
- [Watermark](#) - Apply text or image watermarks to PDF documents

PDF Preflight

- [Convert to PDF/A](#) - Convert PDF documents to the specified ISO PDF archival formats
- [PDF/A Validation](#) - Preflight and compliance verification to ensure the document meets ISO 19005 PDF standards
- [PDF/UA Validation](#) - Preflight and compliance verification to ensure the document meets ISO 14289 PDF standards
- [PDF/X Validation](#) - preflight and compliance verification to ensure the document meets ISO 15930 PDF standards

- [ZUGFeRD Validation](#) - Preflight and compliance verification to ensure the document meets German Electronic Invoice Forum Standards

File Operations

- [Copy File](#) - Makes a copy of a specified file on the system
- [Create Directory](#) - Creates a new directory / folder on the system
- [Delete File](#) - Deletes a specified file from the system
- [Move File](#) - Moves a file to a new location on the system
- [Read File](#) - Reads a specified file from the system into the message payload
- [Read Files from Folder](#) - Reads multiple files from a directory / folder into the message payload
- [Rename File](#) - Renames a specified file on the system

Input / Source Nodes

Input nodes are the starting point for any workflow. These nodes watch or make requests for files to be processed through the workflow based on a specified criteria. All flows must contain at least one input / source node to run.

Input nodes are designated with a **Blue Oval** shape:



Input Nodes

- [Email Attachments](#) - Watch emails for file attachments
- [HTTP Listener](#) - Use REST calls to trigger PAS workflows
- [HTTP Request](#) - Make HTTP requests and process the responses
- [Scheduler](#) - Set trigger to begin flows based on specific date / time intervals
- [Watch Folder](#) - Watch folders for files based on specified filters
- [Watch FTP Folder](#) - Watch remote FTP folders for files based on specified filters



Watch Email Node

The Watch Email node is an input node that monitors a designated email address based on a specified interval and file filter. Once criteria is met, the email is marked as "Read" and then it's contents are processed through the flow.

General Settings

Mail Service

Server name: The name to the mail server

Server type: Select either POP3 or IMAP

SSL: check this box if your server requires SSL encryption

Email: The Email address that will be watched by the server

Password: Password needed to access the email address account on the server

Interval: Frequency which the specified folder is scanned for newly arrived files. The server measures this interval from the end of the last watch cycle.

Delete messages on server: IMAP ONLY - check this option to delete the message from the server once the file attachment has been processed.

File Filter

Options that define the properties of the files to be picked up

File name pattern: List of allowed extensions separated by a comma and a space. For example: .png, .jpeg, .jpg, .tiff You may select a file name pattern, including the asterisk character. The server will limit its view to those files which match the pattern.

Note: Use the File Types chooser to easily insert file name patterns for common file types

Sent: Picks up files that are modified Before or After the specified date

File size: Picks up files that are Less Than or Greater Than specified size

Advanced Settings

Timeout

Timeout in seconds: If no data is sent or received during an operation for the specified time, the connection will be retried.

Reconnection Settings

Maximum number of retries: Sets the maximum number of retry attempts before the server gives up.

Delay between failed attempts: Time to wait between retry attempts.

When reconnection attempts fail: Determines what to do once the retry limit has been reached:

- Continue - The workflow remains active and logs the connection issue and just continues processing the flow based on watch settings.
- Stop Workflow - Trouble handling is triggered to notify user using the settings they chose then the flow is stopped to prevent further files from being processed.

HTTP Request Node

The HTTP Request node is an input node that makes an HTTP request (for example a REST call to a service) to a server and then takes the response and sets it as the payload of the message to be processed through the flow.

General Settings

Interval: Frequency which the specified folder is scanned for newly arrived files. The server measures this interval from the end of the last watch cycle.

Type: The type of the request.

- GET (used for downloading data)
- POST (used for uploading with extra parameters)
- PUT (used for uploading data)
- DELETE (used for removing resources on external services)

URL: The URL call to make. The URL string must be URI-encoded (in a URI-encoded string a space is shown as %20).

Headers

Some APIs require HTTP calls to send particular headers along with requests, typically to provide additional metadata about the operation you are performing. You can set these up in the Headers tab. Enter any key-value pairs to send along with the HTTP request.

- To add more than one header, click on the "Add header" button.
- To remove unneeded headers click on the "-" next to the row you wish to remove.

Body

The Body tab allows you to specify the data you need to send with a request. You can send various different types of body data based on the needs of the HTTP request being made.

You will need to send body data with requests whenever you need to add or update structured data. For example, if you're sending a request to add a new customer to a database, you might include the customer details in JSON. Body options are only available for PUT or POST requests.

Send Payload: This option uses the current workflow message payload as the body for the HTTP request.

Note: *If you're sending body data, make sure you have the correct headers selected to indicate the content type your API may need to process the received data correctly.*

Authorization

The HTTP Request node supports basic authorization which involves sending a verified username and password with your request. In the request Authorization tab, select Basic Auth from the Type drop down list and enter the user name and password required for the URL endpoint.

Response

The Response tab contains the status code validation settings for the node. These determine what responses are considered valid to continue processing through the flow. Any responses considered invalid will be passed to the workflow trouble handling.

Follow Redirects (3xx responses): HTTP requests that return 3XX Redirection status codes will be followed using the maximum number of redirects set.

Default: HTTP status codes less than 300 are considered successful. All other response codes will be processed through the flow trouble handling.

Custom: Specify the HTTP status codes that are considered valid responses. All other response codes will be processed through the flow error handling.

Advanced Settings

Timeout

Timeout in seconds: If no data is sent or received during an operation for the specified time, the connection will be retried.

Reconnection Settings

Maximum number of retries: Sets the maximum number of retry attempts before the server gives up.

Delay between failed attempts: Time to wait between retry attempts.

When reconnection attempts fail: Determines what to do once the retry limit has been reached:

- Continue - The workflow remains active and logs the connection issue and just continues processing the flow based on watch settings.
- Stop Workflow - Trouble handling is triggered to notify user using the settings they chose then the flow is stopped to prevent further files from being processed.

HTTP Listener Node

The HTTP Listener node is an input source that creates an additional REST endpoint on the PAS server that can be called to perform the specified workflow. Once the flow is completed the [HTTP Response Node](#) is used create a response to send back to the source of the HTTP request. Responses can be customized so that different status codes can be returned based on the outcome of the processed flow.

This feature allows creation of basic REST APIs without the need for difficult coding or advanced server tools. With basic REST interface knowledge, users can implement powerful workflows for business integrations and document processing workflows.

General Settings

Service

Protocol: Enables either HTTP or HTTPS (secured) protocol. When using HTTPS an SSL/TLS certificate is required in the Advanced settings section below.

Type: The required method type of the incoming request. Standard use cases are noted after the available method options.

- GET - used for downloading data
- POST - used for uploading data
- PUT - used for uploading data
- DELETE -used for removing resources on external services

Host: Sets the IP address to receive REST calls from on the server. When set to a specific address calls can only be made to the server from that address. If 0.0.0.0 is selected the server will serve REST resources on all available network interfaces.

Port: port to be used for HTTP access. The default setting is 8081.

Base path: URL path to use for all requests. Determines the full endpoint location from which clients can access this flow.

URL: Shows a sample of the full path (endpoint) that will be listened to by the flow

Advanced

PKCS#12 File - enter the complete file path to the PKCS#12 file (.pfx or .p12) used by HTTPS calls made to the server.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Password - The password to access the key store file

Timeout in seconds: The timeout determines when a "408 timeout" response will be sent. i.e. if the workflow hasn't completed within the allotted 30 seconds the client will receive a 408 timeout response. (It's up to the client to determine how/when to retry the request)

Query Parameters

Query parameters received in the specified REST call will be stored in user variables and can be referenced in subsequent nodes.

Variable Name: The name of the query parameter to listen for from the REST call. Names must match exactly and are case sensitive.

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Default Value: The default value for the newly created variable. Can be left empty if required.

Headers

Headers received in the specified REST call will be stored in user variables and can be referenced in subsequent nodes.

Variable Name: The name of the header parameter to listen for from the REST call. Names must match exactly and are NOT case sensitive.

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Default Value: The default value for the newly created variable. Can be left empty if required.

Body

The following settings determine how the body (or payload) of the message received is handled.

Set body as payload: By default the body of the received REST call will be set as the workflow message payload. This can then be further processed as needed by the workflow nodes.

Multipart Form Data: This option enables processing REST calls that contains multiple data content items to be processed separately throughout the flow.

Text Parts

Text parts received in the specified REST call will be stored in user variables and can be referenced in subsequent nodes.

Variable Name: The name of the text part parameter to listen for from the REST call. Names must match exactly and are case sensitive.

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Default Value: The default value for the newly created variable. Can be left empty if required.

File Parts

These settings determine how file parts of the payload will be handled when received.

Variable Name: The name of the file part parameter to listen for from the REST call. Names must match exactly and are case sensitive.

Set body as payload: When checked will use the specified file part as the workflow message payload.

Zip files as payload: When checked will take all specified file parts and create a single zip file that will then be set as the workflow message payload.

Do not send payload: When checked all file part data will be ignored.



Scheduler Node

The Scheduler Node is an input node that triggers a flow based on a specific date / time interval. This can be useful when needing to perform [File Operations](#) or other processes that don't need to constantly be checking the input source. Due to the nature of the node, it will not pass any content in the message body when starting the flow.

General Settings

Interval

Frequency: Interval that the the flow will be started based on number of minutes, seconds, hours, etc... The server measures this interval from the time that the workflow is started.

Daily

Every __ days: starts the workflow at the specified number of days interval

Every Weekday: runs the workflow every day of the week starting at the specified time

Start Date: choose the day and time you wish for the flow to begin the daily intervals. The specified time will be the same for each instance the flow is triggered.

Weekly

Every __ week(s): starts the workflow at the specified number of weeks interval

Days of the Week: select the specific days of the week to run

Start Date: choose the day and time you wish for the flow to begin the weekly intervals. The specified time will be the same for each instance the flow is triggered.

Monthly

Every __ month(s): starts the workflow at the specified number of months interval

Day: Choose either a specific day of the month or specific weekly day to run the interval

Start Date: choose the day and time you wish for the flow to begin the monthly intervals. The specified time will be the same for each instance the flow is triggered.

Watch Folder Node

The watch folder node is an input node that monitors a designated folder based on a specified interval and file filter. Once criteria is met, the file is then processed through the flow.

General Settings

Folder: the full path to a local directory (on the server) to watch for files.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

Include Subfolders: Check the this option to include any files found in folders within the specified folder.

Interval: Frequency which the specified folder is scanned for newly arrived files

File Filter

Options that define the properties of the files to be picked up

File Name Pattern: List of allowed extensions separated by a comma and a space. (For example: .png, .jpeg, .jpg, .tiff). You may select a file name pattern, including the asterisk character. The server will limit its view to those files which match the pattern.

Note: *Use the File Types chooser to easily insert file name patterns for common file types*

Created: Picks up files that are created Before or After the specified date

Modified: Picks up files that are modified Before or After the specified date

File Size: Picks up files that are Less Than or Greater Than specified size

Watch FTP Folder Node

The watch FTP folder node is an input node that monitors a designated folder based on a specified interval and file filter. Once criteria is met, the file is then processed through the flow.

General Settings

Protocol: Security protocol to use when connecting to the server

- FTP - standard security
- FTP or TLS - enhanced security protocol using TLS

Server: URL to the directory on the FTP server

User: User name required to access the server

Password: Password for the user to access the server

Folder: the full path to a local directory (on the server) to watch for files.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

Include Subfolders: Check the this option to include any files found in folders within the specified folder.

Interval: Frequency which the specified folder is scanned for newly arrived files. The server measures this interval from the end of the last watch cycle.

File Filter

Options that define the properties of the files to be picked up

File Name Pattern: List of allowed extensions separated by a comma and a space. (For example: .png, .jpeg, .jpg, .tiff). You may select a file name pattern, including the asterisk character. The server will limit its view to those files which match the pattern.

Note: *Use the File Types chooser to easily insert file name patterns for common file types*

Created: Picks up files that are created Before or After the specified date

Modified: Picks up files that are modified Before or After the specified date

File Size: Picks up files that are Less Than or Greater Than specified size

Advanced Settings

Timeout

Timeout in Seconds: If no data is sent or received during an operation for the specified time, the connection will be retried.

Reconnection Settings

Maximum number of retries: Sets the maximum number of retry attempts before the server gives up.

Delay between failed attempts: Time to wait between retry attempts.

When reconnection attempts fail: Determines what to do once the retry limit has been reached:

- Continue - The workflow remains active and logs the connection issue and just continues processing the flow based on watch settings.
- Stop Workflow - Trouble handling is triggered to notify user using the settings they chose then the flow is stopped to prevent further files from being processed.

Output Nodes

Output nodes are the final step in any workflow. These nodes send the completed processed file to be saved, printed or emailed. All workflows must contain at least one export / output node to run.

Output nodes are designated with a **Green Oval** shape:



Output Nodes

Discard Message - Discards unneeded message information

FTP Output - Save payload to remote FTP server

HTTP Request - Send payload as body in HTTP request

HTTP Response - Send back a response to received HTTP requests

Print PDF - Prints PDF document (if exists in the payload)

Save to File - Save the contents of the payload to file

Send Email - Send the contents of the payload as an email attachment

Discard Message Node

This node discards the message and stops any further processing.

For workflows to be valid and able to start they must contain both an Input and Output node. However, in some circumstances an output node may not be needed.

- **For example:** *on the logic node you may only care about the result when it's true and just want to discard the "False" result.*

This node allows you to inform the flow that the message is to be discarded so that the workflow validation will allow the server to run.

General Settings

There are no settings for this node.

FTP Output Node

The FTP output node exports the current message payload to a designated FTP server.

General Settings

Protocol: Security protocol to use when connecting to the server

- FTP - standard security
- FTP or TLS - enhanced security protocol using TLS

Server: URL to the directory on the FTP server

User: User name required to access the server

Password: Password for the user to access the server

Destination Folder: the directory on the FTP server

Create Parent Directories: When checked, if the target path does not exist then it will be created. Otherwise an error will be thrown.

File Name: Set the name of the file when writing out the message payload

***Note:** At RUNTIME if PAS attempts to write out a file or create a directory it checks to make sure it does not contain any invalid characters (i.e. |?:* etc...). If it does all invalid characters will be replaced with an underscore "_"*

Options

Write Mode: Determines whether a create new file or append to an existing file such as updating a .csv record.

- Create new file: Always create a new file in the directory.
- Append: If the file name already exists, add the message content to the end of the existing file. This should only be used for example when adding to simple files such as adding additional rows to a log or csv file. Complex files such as PDFs can not simply be appended in this way.

Name Collision Logic: When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have an unused name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- Add unique numeric suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- Add unique alphabetic suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _a, _b, etc...)
- Overwrite Files: Overwrites the existing file in the original storage location that contains the exact same name
- Fail: Sends the message payload to trouble handling

Advanced Settings

Timeout

Timeout in Seconds: If no data is sent or received during an operation for the specified time, the connection will be retried.

Reconnection Settings

Maximum number of retries: Sets the maximum number of retry attempts before the server gives up.

Delay between failed attempts: Time to wait between retry attempts.

When reconnection attempts fail: Determines what to do once the retry limit has been reached:

- Continue - The workflow remains active and logs the connection issue and just continues processing the flow based on watch settings.
- Stop Workflow - Trouble handling is triggered to notify user using the settings they chose then the flow is stopped to prevent further files from being processed.

HTTP Request Node

The HTTP Request node is an Output node that makes an HTTP request (for example a REST call to a service) to a server and then takes the response and sets it as the payload of the message to be processed through the flow.

General Settings

Interval: Frequency which the specified folder is scanned for newly arrived files. The server measures this interval from the end of the last watch cycle.

Type: The type of the request.

- GET (used for downloading data)
- POST (used for uploading with extra parameters)
- PUT (used for uploading data)
- DELETE (used for removing resources on external services)

URL: The URL call to make. The URL string must be URI-encoded (in a URI-encoded string a space is shown as %20).

Headers

Some APIs require HTTP calls to send particular headers along with requests, typically to provide additional metadata about the operation you are performing. You can set these up in the Headers tab. Enter any key-value pairs to send along with the HTTP request.

- To add more than one header, click on the "Add header" button.
- To remove unneeded headers click on the "-" next to the row you wish to remove.

Body

The Body tab allows you to specify the data you need to send with a request. You can send various different types of body data based on the needs of the HTTP request being made.

You will need to send body data with requests whenever you need to add or update structured data. For example, if you're sending a request to add a new customer to a database, you might include the customer details in JSON. Body options are only available for PUT or POST requests.

Send Payload: This option uses the current workflow message payload as the body for the HTTP request.

Note: *If you're sending body data, make sure you have the correct headers selected to indicate the content type your API may need to process the received data correctly.*

Authorization

The HTTP Request node supports basic authorization which involves sending a verified username and password with your request. In the request Authorization tab, select Basic Auth from the Type dropdown list and enter the user name and password required for the URL endpoint.

Response

The Response tab contains the status code validation settings for the node. These determine what responses are considered valid to continue processing through the flow. Any responses considered invalid will be passed to the workflow trouble handling.

Replace message payload with response: When checked the contents of the http request will completely replace the contents of the workflow message payload

Follow Redirects (3xx responses): HTTP requests that return 3XX Redirection status codes will be followed using the maximum number of redirects set.

Default: HTTP status codes less than 300 are considered successful. All other response codes will be processed through the flow trouble handling.

Custom: Specify the HTTP status codes that are considered valid responses. All other response codes will be processed through the flow error handling.

Advanced Settings

Timeout

Timeout in seconds: If no data is sent or received during an operation for the specified time, the connection will be retried.

Reconnection Settings

Maximum number of retries: Sets the maximum number of retry attempts before the server gives up.

Delay between failed attempts: Time to wait between retry attempts.

When reconnection attempts fail: Determines what to do once the retry limit has been reached:

- **Continue** - The workflow remains active and logs the connection issue and just continues processing the flow based on watch settings.

- Stop Workflow - Trouble handling is triggered to notify user using the settings they chose then the flow is stopped to prevent further files from being processed.

HTTP Response Node

The HTTP Response Node is used create a response to send back to the source of the HTTP request. Responses can be customized so that different status codes can be returned based on the outcome of the processed flow.

General Settings

The response node has settings to return information based on whether or not the workflow process from the [HTTP Listener](#) node succeeded.

Success

A success response is returned if no errors occur during the processing of the payload from the start of the HTTP Listener node.

Status: a 3-digit integer result code of the attempt to understand and satisfy the request. Intended to be used by automated processes.

Reason: Value to return as the reason for the specified status code. Intended to give a short textual description of the set status code. Intended for the human user but can also be used for automated systems.

Body: Data that is to be sent with the response. Can be set as one of the following:

- Payload - attaches the current workflow payload to the HTTP response
- Custom - Allows you to set custom formatted data as the body of the response. Workflow variables can also be inserted for more dynamic response data.
- None - sends an empty body with the HTTP response

Headers

The response-header fields allow the server to pass additional information about the response which cannot be placed in the Status or Reason line. These header fields can be used to provide information about the response or process that was completed if necessary.

Name: Header name to be sent with the response

Value: Key value to be sent with he specified header. Variables from the flow can be used if needed for dynamic header responses.

Error

If any error or problems occur in between the HTTP Listener the Response Node it will instead return the following separate message. This setup so that the client making the REST call can be correctly informed of any issues that occurred during the processing of the initial request.

Status: a 3-digit integer result code of the attempt to understand and satisfy the request. Intended to be used by automated processes.

Reason: Value to return as the reason for the specified status code. Intended to give a short textual description of the set status code. Intended for the human user but can also be used for automated systems.

Body: Data that is to be sent with the response. Can be set as one of the following:

- Payload - attaches the current workflow payload to the HTTP response
- Custom - Allows you to set custom formatted data as the body of the response. Workflow variables can also be inserted for more dynamic response data.
- None - sends an empty body with the HTTP response

Headers

The response-header fields allow the server to pass additional information about the response which cannot be placed in the Status or Reason line. These header fields can be used to provide information about the response or process that was completed if necessary.

Name: Header name to be sent with the response

Value: Key value to be sent with the specified header. Variables from the flow can be used if needed for dynamic header responses.

Print PDF Node

The Print PDF node is used when PDF documents need be sent to a printer as a part of the workflow. Different options can be set such as choosing the printer to send the document to, setting page ranges and more.

General Settings

Printer - The name of the printer you wish to print to

Copies - The number of copies of the document to be printed

Collate: Keeps pages in order when printing multiple copies. For example, if unchecked, two copies of a three-page document will print in this order: 1,1,2,2,3,3. If checked, the order will be 1,2,3,1,2,3. This option is not available when printing only one copy.

Print to File - Use this option to send the printer output to the payload instead of the printer.

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using [Page Labels](#) will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Reverse Pages: reverse the order in which the pages will come out of the printer

Options

Paper Size - The size of the paper to be printed on. This sizes in the list are determined by the printer that is selected

Paper Tray - The tray on the printer where the paper will be coming from

Duplex - The options to print pages either one sided or on both sides of the paper

- Single: prints only one page on the front of each sheet of paper
- Duplex(long edge): prints two pages, one on front and one on back, per sheet of paper flipping the page on the long edge
- Tumble (short edge): prints two pages, one on front and one on back, per sheet of paper flipping the page on the short edge

Center In Page: center the page in the paper. No effect if the pages in a document are larger than the paper they are being printed on.

Shrink To Margins: shrink pages so that they fit in the paper. No effect if the pages in a document are smaller than the paper they are being printed on.

Expand To Margins: expand pages to fill the paper they are being printed on. No effect if the pages in a document are larger than the paper they are being printed on.

Orientation

The layout and direction of the content being placed on the page

- Auto Rotate pages: rotate the printout to match the width and length with the paper. The portrait / landscape settings cannot be set by the user when this option is selected.
- Portrait: print the page portrait
- Landscape: print the page landscape
- Reverse Landscape: print the page landscape but reversed

Save to File Node

The Save to File node exports the current message payload to a designated local folder on the server.

General Settings

Destination Folder: the full path to a local directory (on the server) to watch for files.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

Create Parent Directories: When checked, if the target path does not exist then it will be created. Otherwise an error will be thrown.

File Name: Set the name of the file when writing out the message payload.

Note: *At RUNTIME if PAS attempts to write out a file or create a directory it checks to make sure it does not contain any invalid characters (i.e. |?:* etc...). If it does all invalid characters will be replaced with an underscore "_"*

Options

Write Mode: Determines whether a create new file or append to an existing file such as updating a .csv record.

- Create new file: Always create a new file in the directory.
- Append: If the file name already exists, add the message content to the end of the existing file. This should only be used for example when adding to simple files such as adding additional rows to a log or csv file. Complex files such as PDFs can not simply be appended in this way.

Name Collision Logic: When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have an unused name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- Add unique numeric suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- Add unique alphabetic suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _a, _b, etc...)
- Overwrite Files: Overwrites the existing file in the original storage location that contains the exact same name
- Fail: Sends the message payload to trouble handling

Send Email Node

The Send Email node appends the current message payload to an email that will be sent by the server.

General Settings

To: Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

CC: Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

Subject: subject line of the email being sent

Importance: sets the importance of the email being sent. Can be set to Low, Normal, or High

Sensitivity: sets the sensitivity of the email being sent. Can be set to Normal, Personal, Private, or Confidential

Attach Payload: When checked will attach the workflow payload to the email being sent

Attachment name: sets the file name for the attached file.

Message

Message: message to be sent with the email. The message will be sent as plain text in the body of the email.

Function nodes

Function nodes provide additional advanced processing tools for workflows. These nodes provide functionality such as variables & logic routing, debugging and custom Java nodes.

Function nodes are designated with a **Yellow Parallelogram** shape:



Function Nodes

ANT Task - Runs an ANT task process

Command Line - Make command line or terminal calls to the server

Create Variables - Create workflow variables

HTTP Request - Make HTTP requests and process the responses

Java - Create custom node function using Java

JSON to XML - Converts JSON data to XML format

Logger - Log message details for debugging

Logic - Automatically route the workflow message based on variable arguments

Replicate - Duplicate the message contents to send along 2 separate paths of the flow

Unzip Payload - Unzip the contents of the message payload

XML Extract - Extract data from XML

XML to JSON - Converts XML data to JSON format

XML to Variable - Extract XML data and set as variable

Zip Payload - Zip or compress contents of the message payload



Ant Task Node

The Ant Node adds Apache Ant support to PDF Automation Workflows. Apache Ant is a software tool for automating software build processes implemented using the [Java](#) language. Ant uses [XML](#) to describe the code build process and its dependencies.

For additional information on creating Ant projects see <https://ant.apache.org/>

NOTE: *PDF Automation server comes packaged with Apache Ant version 1.10.11.*

General Settings

Build File: file path to the ant project XML file to run.

Targets: Specify a list of Ant targets to be invoked. Each target should be on a separate line, or leave empty to execute the project "default" target.

Variables Tab

The Variables tab allows you to create / define user variables at any point during the flow. It functions the same as the [Create Variable Node](#). Created variables are immediately accessible by the current node and all future nodes.

Variable Name: The name of the variable to be created

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Default Value: The default value for the newly created variable. Can be left empty if required.

Variable Formatting

Variables require a default format to be set in order for to be used by the workflow. You can use one of the predefined formats in the drop down or write your own using the following formatting symbols

String

NO formatting options, plain text strings only

Numbers

0 = digit placeholder (000 = 001)

= digit no placeholder (### = 1)

. = decimal separator (#.# = 0.5)

, = grouping separator (#,### = 1,000)

Dates

yy = two-digit year

yyyy = four-digit year

m = month (1-12)

mm = two-digit month (01-12)

mmm = three letter month abbreviation (01=Jan)

mmmm = full month name (01=January)

d = day of month (1-31)

dd = two-digit day of month (01 - 31)

H = hours (1-23)

HH = two digit hour (00 - 23) (AM/PM NOT allowed)

M = minutes (0-59)

MM = two digit minute (00 - 59)

s = seconds (0-59)

ss = two digit second (00 - 59)

h = hour (0 - 12 | 12-hour AM/PM format)

hh = two digit hour (00 - 12 | 12-hour AM/PM format)

tt = AM/PM based on the time

zz = time zone (Pacific Daylight Time = PDT)

zzzz = time zone (Pacific Daylight Time)

Boolean

True / False

1 / 0 = binary format

yes / no



Command Line Node

The Command Line node allows the PDF Automation server to make terminal / command line calls to the system. This can be used to trigger system events or when integrating with external resources.

General Settings

Output

Any responses returned from the command line / terminal will be set as the message body and passed through the flow.

Single File: responses will be stored in a single text file

Separate Files: Each line of output will be stored in a separate text file passed on as separate messages in the flow

Exit Code

Default: Exit code 0 is considered successful. All other exit codes will be processed through the flow error handling.

Custom: Specify the exit codes that are considered successful, separated by commas. All other exit codes will be processed through the flow error handling.

Timeout In Seconds: If no data is received during an operation for the specified time, the command line / terminal call will be exited and the flow sent to trouble handling

Variables Tab

The Variables tab allows you to create / define user variables at any point during the flow. It functions the same as the [Create Variable Node](#). Created variables are immediately accessible by the current node and all future nodes.

Variable Name: The name of the variable to be created

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number

- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Default Value: The default value for the newly created variable. Can be left empty if required.

Variable Formatting

Variables require a default format to be set in order for to be used by the workflow. You can use one of the predefined formats in the drop down or write your own using the following formatting symbols

String

NO formatting options, plain text strings only

Numbers

0 = digit placeholder (000 = 001)

= digit no placeholder (### = 1)

. = decimal separator (#.# = 0.5)

, = grouping separator (#,### = 1,000)

Dates

yy = two-digit year

yyyy = four-digit year

m = month (1-12)

mm = two-digit month (01-12)

mmm = three letter month abbreviation (01=Jan)

mmmm = full month name (01=January)

d = day of month (1-31)

dd = two-digit day of month (01 - 31)

H = hours (1-23)

HH = two digit hour (00 - 23) (AM/PM NOT allowed)

M = minutes (0-59)

MM = two digit minute (00 - 59)

s = seconds (0-59)

ss = two digit second (00 - 59)

h = hour (0 - 12 | 12-hour AM/PM format)

hh = two digit hour (00 - 12 | 12-hour AM/PM format)

tt = AM/PM based on the time

zz = time zone (Pacific Daylight Time = PDT)

zzzz = time zone (Pacific Daylight Time)

Boolean

True / False

1 / 0 = binary format

yes / no

Create Variable Node

The Create Variable node allows you to define one or more custom variables that can be used in the flow. Any variable that is created will be available in all following nodes for the workflow and used in any field by using the [Variable Insert Tool](#) or manually typing the variable using the [Variable Syntax](#) "\${usr.variableName}"

General Settings

Variable Name: The name of the variable to be created

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Default Value: The default value for the newly created variable. Can be left empty if required.

Variable Formatting

Variables require a default format to be set in order for to be used by the workflow. You can use one of the predefined formats in the drop down or write your own using the following formatting symbols

String

NO formatting options, plain text strings only

Numbers

0 = digit placeholder (000 = 001)

= digit no placeholder (### = 1)

. = decimal separator (#.# = 0.5)

, = grouping separator (#,### = 1,000)

Dates

yy = two-digit year

yyyy = four-digit year

m = month (1-12)

mm = two-digit month (01-12)

mmm = three letter month abbreviation (01=Jan)

mmmm = full month name (01=January)

d = day of month (1-31)

dd = two-digit day of month (01 - 31)

H = hours (1-23)

HH = two digit hour (00 - 23) (AM/PM NOT allowed)

M = minutes (0-59)

MM = two digit minute (00 - 59)

s = seconds (0-59)

ss = two digit second (00 - 59)

h = hour (0 - 12 | 12-hour AM/PM format)

hh = two digit hour (00 - 12 | 12-hour AM/PM format)

tt = AM/PM based on the time

zz = time zone (Pacific Daylight Time = PDT)

zzzz = time zone (Pacific Daylight Time)

Boolean

True / False

1 / 0 = binary format

yes / no



HTTP Request Node

The HTTP Request node makes an HTTP request (for example a REST call to a service) to a server and then takes the response and sets it as the payload of the message to be processed through the flow.

General Settings

Interval: Frequency which the specified folder is scanned for newly arrived files. The server measures this interval from the end of the last watch cycle.

Type: The type of the request.

- GET (used for downloading data)
- POST (used for uploading with extra parameters)
- PUT (used for uploading data)
- DELETE (used for removing resources on external services)

URL: The URL call to make. The URL string must be URI-encoded (in a URI-encoded string a space is shown as %20).

Headers

Some APIs require HTTP calls to send particular headers along with requests, typically to provide additional metadata about the operation you are performing. You can set these up in the Headers tab. Enter any key-value pairs to send along with the HTTP request.

- To add more than one header, click on the "Add header" button.
- To remove unneeded headers click on the "-" next to the row you wish to remove.

Body

The Body tab allows you to specify the data you need to send with a request. You can send various different types of body data based on the needs of the HTTP request being made.

You will need to send body data with requests whenever you need to add or update structured data. For example, if you're sending a request to add a new customer to a database, you might include the customer details in JSON. Body options are only available for PUT or POST requests.

Send Payload: This option uses the current workflow message payload as the body for the HTTP request.

Note: *If you're sending body data, make sure you have the correct headers selected to indicate the content type your API may need to process the received data correctly.*

Authorization

The HTTP Request node supports basic authorization which involves sending a verified username and password with your request. In the request Authorization tab, select Basic Auth from the Type dropdown list and enter the user name and password required for the URL endpoint.

Response

The Response tab contains the status code validation settings for the node. These determine what responses are considered valid to continue processing through the flow. Any responses considered invalid will be passed to the workflow trouble handling.

Replace message payload with response: When checked the contents of the http request will completely replace the contents of the workflow message payload

Follow Redirects (3xx responses): HTTP requests that return 3XX Redirection status codes will be followed using the maximum number of redirects set.

Default: HTTP status codes less than 300 are considered successful. All other response codes will be processed through the flow trouble handling.

Custom: Specify the HTTP status codes that are considered valid responses. All other response codes will be processed through the flow error handling.

Advanced Settings

Timeout

Timeout in seconds: If no data is sent or received during an operation for the specified time, the connection will be retried.

Reconnection Settings

Maximum number of retries: Sets the maximum number of retry attempts before the server gives up.

Delay between failed attempts: Time to wait between retry attempts.

When reconnection attempts fail: Determines what to do once the retry limit has been reached:

- **Continue** - The workflow remains active and logs the connection issue and just continues processing the flow based on watch settings.

- Stop Workflow - Trouble handling is triggered to notify user using the settings they chose then the flow is stopped to prevent further files from being processed.

Java Node

The Java Node allows you to define your own node function with all the flexibility provided by Java programming language. This also give access to all the advanced PDF functions available in Qoppa's [jPDFProcess PDF library](#) making it possible to inspect or manipulate the PDFs as part of the process. You can also import your own additional libraries to be used if needed.

PDF Automation Server Custom Job API

Note: *Java code is limited ot the version being used by PDF Automation server. PAS comes packaged with Java 1.8.0_202.*

How to use the Java Node

Defining your own custom node function will require Java programming. After placing the node, you will need to use the built in code editor to define the function of the node.

The [JavaNode](#) interface allows executing Java™ code inside of a Flow in the PDF Automation Server with [process\(PASContext, Message\)](#)

The [Message](#) provides access to the current [Payload](#) file content and Flow variables. The [PASContext](#) provides access to the current running process.

The Code Editor provides sample implementations of the [JavaNode](#) interface.

process(PASContext, Message)

This method is called during the Flow execution in the PDF Automation Server. If no modification needs to be done to the [Payload](#) content, the return [Message](#) array can just contain the same [Message](#) passed to this method. Otherwise, if the implementation will modify the [Payload](#) content (ie. create new data to be processed in the Flow), a new [Message](#) along with a new [Payload](#) needs to be returned instead.

In order to create a new [Payload](#), a [File](#) is required. If the [File](#) should be deleted when the Flow completes processing of the [Message](#), the [File](#) should be created using [PASContext.createTempFile\(String, String\)](#)

```
File output = pasContext.createTempFile("prefix", ".ext");  
  
// TODO - write new data to the output  
  
Payload payload = pasContext.createPayload(output);  
  
Message newMessage = message.deriveMessage(payload);  
  
return new Message[]{ newMessage };
```

Importing Your Own Jar Files

To add additional jar files for your [JavaNode](#) implementation, add all required jar files to the PDF Automation Server installation directory in the "**userlib**" folder.

Note: *The installation directory is local to where the server is running not the PAS Manager.*

Java Node Sample

Below is a small example showing how to search a PDF for text and delete that page:

```
/**
 *
 * @author Qoppa Software
 */
import java.io.File;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.Vector;
import com.qoppa.pas.api.flow.FlowException;
import com.qoppa.pas.api.flow.JavaNode;
import com.qoppa.pas.api.flow.Message;
import com.qoppa.pas.api.flow.PASContext;
import com.qoppa.pas.api.flow.Payload;
import com.qoppa.pdf.PDFException;
import com.qoppa.pdf.TextPosition;
import com.qoppa.pdfProcess.PDFDocument;
public class SearchPDFDeletePages implements JavaNode {
    @Override
    public Message[] process(PASContext pasContext, Message message)
        throws FlowException {
        try {
            InputStream inStream =
                message.getPayload().getInputStream();

            // Create a PDF Document
            PDFDocument pdfDoc = new PDFDocument(inStream, null);

            inStream.close();

            int pageIndex = pdfDoc.getPageCount() - 1;

            while (pageIndex >= 0) {
                // Search the page for specific text
                Vector<TextPosition> textPositions =
                    pdfDoc.getPage(pageIndex).findText("search text", false,
                        true);

                // If search results were found, delete the page
                if (textPositions.size() > 0) {
                    pdfDoc.deletePage(pageIndex);
                }
                --pageIndex;
            }

            // Create a new Payload with the new PDFDocument
            File tempFile = pasContext.createTempFile("del_pages", ".pdf");
```

```
        FileOutputStream outStream = new
        FileOutputStream(tempFile);
        pdfDoc.saveDocument(outStream);
        outStream.close();
        Payload payload = pasContext.createPayload(tempFile);

        // Create a new Message with the Payload
        Message returnMessage = message.deriveMessage(payload);

        return new Message[] { returnMessage };
    } catch (IOException e) {
        throw new FlowException(e.getMessage(), e);
    } catch (PDFException e) {
        throw new FlowException(e.getMessage(), e);
    }
}
```

Need Help? Let Us Create a Custom Job for You!

If you need help with defining your own custom process, we can do the coding for you. Please contact us using the form found on our [PDF consulting page](#).

JSON to XML Node

The JSON to XML Node converts a JSON file into a well-formed, element-normal XML string. The following rules will be applied during the conversion process:

- A default root element is created
- JSON array entries are converted to individual XML elements
- All JSON property values will be converted to #text item types
- Offending characters will be XML escaped

General Settings

There are no settings for this node



Logger Node

The Logger node is used to help monitor and debug workflows by logging important information on the message payload, properties, etc... A logger node can be placed anywhere in the flow and custom message can also be specified to provide further details if needed.

General Settings

Log Level: Defines the logging level the message will be insert at.

- Information: General information on the event that was performed (i.e. acquiring file, processing file, etc...)
- Warning: Events that were able to complete but with warnings
- Error: Events that completely failed to complete

Message: Your custom message to be logged. You can also insert any of the workflow variables if needed.

Log Variables: When checked will output all variables and their values in the current workflow state when the log occurs

Logic Node

The Logic Node allows you to automatically route the workflow message based on variable arguments. The node supports simple logic operators based on the data type selected and multiple can be combined together using AND or OR statements.

General Settings

Variable: Use the drop down to select an available variable to test against

comparison Operator: Choose a predefined operator to test the variable. Operators are based on the data type of the variable selected

- String - tests are case sensitive (for example, "Computer" and "computer" are two different words because the "C" is uppercase)
 - = Equal to
 - ≠ Not equal
 - Contains - checks if the variable contains the string specified
- Number
 - = Equal to
 - ≠ Not equal
 - > Greater than
 - < Less than
 - ≥ Greater than or equal to
 - ≤ Less than or equal to
- Date
 - Before
 - After
 - On
- Boolean
 - True
 - False

Value: The value to be compared. This field will change based on the data type selected

AND: Click on the "+ AND" button to add an AND condition. "AND" condition signifies that BOTH conditions will be required for the result to return TRUE

OR: Click on the "+ OR" button to add an OR condition. "OR" condition signifies that only ONE of the conditions must be met for the result to return TRUE

Replicate Node

The Replicate Node makes a duplicate of the current message contents and sends it along 2 separate paths. This node is useful if you need to perform two separate operations on a single message.

For example: Sending an email and saving the payload to an FTP server.

General Settings

This node has no additional settings.

Variables Tab

The Variables tab allows you to create / define user variables at any point during the flow. It functions the same as the [Create Variable Node](#). Created variables are immediately accessible by the current node and all future nodes.

Variable Name: The name of the variable to be created

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Default Value: The default value for the newly created variable. Can be left empty if required.

Variable Formatting

Variables require a default format to be set in order for to be used by the workflow. You can use one of the predefined formats in the drop down or write your own using the following formatting symbols

String

NO formatting options, plain text strings only

Numbers

0 = digit placeholder (000 = 001)

= digit no placeholder (### = 1)

. = decimal separator (#.# = 0.5)

, = grouping separator (#,### = 1,000)

Dates

yy = two-digit year

yyyy = four-digit year

m = month (1-12)

mm = two-digit month (01-12)

mmm = three letter month abbreviation (01=Jan)

mmmm = full month name (01=January)

d = day of month (1-31)

dd = two-digit day of month (01 - 31)

H = hours (1-23)

HH = two digit hour (00 - 23) (AM/PM NOT allowed)

M = minutes (0-59)

MM = two digit minute (00 - 59)

s = seconds (0-59)

ss = two digit second (00 - 59)

h = hour (0 - 12 | 12-hour AM/PM format)

hh = two digit hour (00 - 12 | 12-hour AM/PM format)

tt = AM/PM based on the time

zz = time zone (Pacific Daylight Time = PDT)

zzzz = time zone (Pacific Daylight Time)

Boolean

True / False

1 / 0 = binary format

yes / no



Unzip Payload

The Unzip Payload node extracts the contents of a zipped archive and sends the files as individual messages through the flow. Options include extracting all files or only those that match a specified criteria.

General Settings

Include Subfolders: Check the this option to include any files found in folders within the archive being unpacked.

Order: Specifies the order in which files within the zip files will be extracted (and thus to be processed).

- **Alphabetical:** processes the files in order by name
- **Last Modified:** processes files based on the creation timestamp

File Filter

Options that define the properties of the files to be picked up

File Name Pattern: List of allowed extensions separated by a comma and a space. For example: .png, .jpeg, .jpg, .tiff You may select a file name pattern, including the asterisk character. The server will limit its view to those files which match the pattern.

Note: Use the File Types chooser to easily insert file name patterns for common file types

Modified: Picks up files that are modified Before or After the specified date

File Size: Picks up files that are Less Than or Greater Than specified size

Zip Archive Passwords to Try

Password: Set the password to use when attempting to open password protected archives. Use that "Add" button set multiple passwords to try. If all attempts to open the archive fail it will be sent to [Workflow Trouble Handling](#).



XML Extract Node

The XML Extract node allows you to extract XML data using XPath expressions. XPath (XML Path Language) is a query language for selecting and processing XML data. XPath includes over 200 built-in functions, and include functions for string values, numeric values, booleans, date and time comparison, node manipulation, sequence manipulation, and much more.

General Settings

XPath: The XPath expression/query to run on the XML document in the message contents.

Multiple Results Output: When the XPath returns multiple results they can be written to a single file with a top level root node, or they can be written to separate files.

Single file: A single XML file will be generated with all XPath results and replace the current workflow message contents

Separate files: A separate workflow message will be created for each XPath result that is found



XML to JSON Node

The XML to JSON Node converts a well-formed XML document into a JSON String. Some information may be lost in this transformation because JSON is a data format and XML is a document format. The following rules will be applied during the conversion process:

- XML uses elements, attributes, and content text, while JSON uses unordered collections of name/value pairs and arrays of values
- JSON does not like to distinguish between elements and attributes
- Sequences of similar elements are represented as JSONArrays
- Content text may be placed in a "content" member
- Comments, prologs, DTDs, and `<[]>` are ignored
- All values are converted as strings, for 1, 01, 29.0 will not be coerced to numbers but will instead be the exact value as seen in the XML document

General Settings

There are no settings for this node



XML to Variable Node

The XML to Variable node allows you to extract specific XML node data into workflow variables using XPath expressions. XPath (XML Path Language) is a query language for selecting and processing XML data. XPath includes over 200 built-in functions, and include functions for string values, numeric values, booleans, date and time comparison, node manipulation, sequence manipulation, and much more.

General Settings

XPath: The XPath expression/query to run on the XML document in the message contents.

Variable Name: The name of the variable to be created

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Required: Sets whether a value is required in the variable to continue the flow. When set to true if no variable is created on this node it will trigger Trouble Handling. When set to false and no value is found it will pass through an empty string.



Zip Payload Node

The Zip Payload node takes the current message contents and compresses it into a zip file.

General Settings

Comment: Optional text information that is embedded in a Zip file.

Compression Level: Sets the compression level of the created zip file with 1 being the lowest and 9 being the highest.

Create PDF Nodes

Create PDF nodes are standard processing nodes that convert various document file types into PDF documents.

Processing nodes are designated with a **Grey Rectangle** shape:



Create PDF Nodes

[Excel to PDF](#) - Convert Excel files to a PDF documents

[Image to PDF](#) - Convert image files (jpg, png, tiff, gif) to PDF documents

[PowerPoint to PDF](#) - Converts PowerPoint files to PDF documents

[Text PDF](#) - Convert plain text files to PDF documents

[Word to PDF](#) - Convert Word files to PDF Documents

Excel to PDF Node

The Excel to PDF node converts Microsoft® Excel files to PDF files. Only .xlsx files (Office 2007 or later) are currently supported.

General Settings

Add a Bookmark for each sheet - Creates a bookmark in the PDF for each sheet in the workbook

Scaling - Determines how the spreadsheet will be broken up into pages when converting to PDF. PDF Automation Server will use page size and margin settings set within the Excel document when creating the PDF document.

- **Fit to Page:** shrinks the entire worksheet so that it all fits on a single page
- **Fit to Width:** shrinks the worksheet so that all columns fit on a single page. Rows will continue onto additional pages as needed
- **Actual Size:** no scaling, when the data does not fit on one page it will be broken up into pages using the Page Order set within the Excel file.



Image to PDF

The Image to PDF node accepts any of the [Supported Image File Types](#) and automatically converts them to a PDF using the most efficient image format.

General Settings

Process zip files: When checked will also look for any images inside zip files and combine them into a single PDF document.

Order: Specifies the order in which files within the zip files will be extracted (and thus to be processed).

- **Alphabetical:** processes the files in order by name
- **Last Modified:** processes files based on the creation timestamp

Include Subfolders: Check the this option to include any files found in folders within the archive being unpacked.

Default Image Conversion Settings

Below are the image format conversion rules used when creating the PDF.

JPEG - remain as JPEGs & DPI from image (if not present default to 72)

JPEG2000 - remain as JPEG2000 & 72 DPI

GIF - recompressed to FLATE at 72 DPI

PNG - recompressed to FLATE & DPI from image (if not present default to 72)

TIFF - recompressed to FLATE & DPI from image (if not present default to 72)

B&W - recompressed to JBIG2 & DPI from image (if not present default to 72)



PowerPoint to PDF Node

The PowerPoint to PDF node converts Microsoft® PowerPoint files to PDF files. Only .pptx files are currently supported.

General Settings

This node currently has no flow specific settings.

Font embedding options can be set at the server level in [Office Conversion Preferences](#)



Text to PDF Node

The Text to PDF node converts standard .txt files to PDF documents.

General Settings

Font

Font - The font for the header and footer

Font Size - The font size for the header and footer

B - Makes all of the text **Bold**

I - Makes all of the text *Italic*

Page Size

Units - Units to use when calculating the position of the header and footer. This can be inches, points, centimeters, or millimeters. Points are calculated in the PDF standard, 72 points per inch.

Width - The width of the newly created PDF document

Height - The height of the newly created PDF document

Margins

Top - The distance of the margin from the top

Bottom - The distance of the margin from the bottom

Left - The distance of the margin from the left

Right - The distance of the margin from the right

Background

Use Background - Sets an image to be used as the background on the newly created document. Enter the full path to the image file on the server. Accepted formats are jpg, png, & tiff.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Word to PDF Node

The Word to PDF node converts Microsoft® Word files to PDF files. Both .doc & .docx files are currently supported.

General Settings

This node currently has no flow specific settings.

Font embedding options can be set at the server level in [Office Conversion Preferences](#)

Convert PDF Nodes

Create PDF nodes are standard processing nodes that convert PDF documents into various other file types.

Processing nodes are designated with a **Grey Rectangle** shape:



Convert PDF Nodes

Linearize - Create a Fast Web (linearized) version of a PDF document

PDF to GIF - Convert PDF document to .gif image files

PDF to HTML - Convert PDF document to HTML web pages

PDF to JPEG - Convert PDF document to .jpeg image files

PDF to PDF/A - Convert PDF document to the specified ISO PDF archival formats

PDF to PNG - Convert PDF document to .png image files

PDF to PostScript - Converts PDF document to PostScript format

PDF to SVG - Convert PDF document to .svg vector image files

PDF to TIFF - Convert PDF document to .tiff image files

PDF to Text - Extracts text from a PDF document

Rasterize PDF - Re-creates the document using images of the pages instead of vector commands



Linearize PDF Node

The Linearize node converts the document to a web optimized format sometimes also called "Fast Web View".

General Settings

Linearization (Fast Web View) restructures the documents internal structure and content so that the pages load in order. When linearizing the content is just reorganized internally. No content is altered or removed so the PDF will be displayed exactly the same as it was prior to conversion.

This allows large documents to load faster when downloading from a web. Having the document structure and content in a linearized (from beginning to end) order allows a browser to immediately display the first page as the remainder of the document is still being loaded.

Note: *In order to see the complete speed benefits the server where the PDF is being hosted must also support page by page loading.*



PDF to GIF Node

The PDF to GIF node converts a PDF document to a .gif image format. When converting a PDF page to an image all of the content will be flattened and rasterized into a separate image for each page of the document. Each page that is created can be sent as individual messages in the workflow or a single packaged zip file.

General Settings

DPI Resolution – Choose the desired resolution in DPI used to render the page. 72 is the PDF native resolution. When selecting a DPI it's best to follow the below guidelines

Black-and-white documents

- Lowest acceptable resolution = 200 DPI (equal to “high” fax quality)
- Conventional resolution = 300 DPI
- Highest conventional resolution = 600 DPI

Color documents (and color compression)

- Lowest acceptable resolution = 150 DPI
- Conventional resolution = 200 DPI
- Highest conventional resolution = 300 DPI
- Archive resolution = 600 DPI

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter “2-4, 6-12, 20”. Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Output

Separate Files: send an individual message payload for each page of the document being converted

Single zip file: send all converted pages packaged in a in a single zip file to the message payload

File name pattern: Enter a filename for the files added to the zip archive. Each name will have the document page number appended to the name entered in this field. Variables may also be used to further distinguish each of the file separations.

PDF to HTML Node

The PDF to HTML node converts a PDF documents to an HTML5 web page. This makes it possible to easily publish the content of PDF document onto any website, as HTML5 is supported by all browsers, without the need of a viewer plug-in. The PDF to HTML5 conversion engine preserves fonts and uses the SVG format to preserve vector graphics. Sample PDF documents that have been converted to HTML5 can be found [HERE](#). Each page that is created can be sent as individual messages in the workflow or a single packaged zip file.

General Settings

Show page border - adds a single pixel black border on the PDF page.

Compress Images - will convert images to JPEG lossy compression that will reduce image quality and size

JPEG quality - This is the quality of JPEG compression. It varies from 0 (very high compression, very low quality), to 10 (low compression, very high quality) based on the quality parameter. Some guidelines for the quality value: 8 high quality, 5 medium quality, 2 low quality.

Whole Document: Creates a single HTML output file with all pages inline.

Individual Pages: Creates separate HTML file for each page of the selected range

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Output

Separate Files: send an individual message payload for each page of the document being converted

Single zip file: send all converted pages packaged in a in a single zip file to the message payload

File name pattern: Enter a filename for the files added to the zip archive. Each name will have the document page number appended to the name entered in this field. Variables may also be used to further distinguish each of the file separations.

PDF to JPEG Node

The PDF to JPEG node converts a PDF document to a .jpg image format. When converting a PDF page to an image all of the content will be flattened and rasterized into a separate image for each page of the document. Each page that is created can be sent as individual messages in the workflow or a single packaged zip file.

General Settings

DPI Resolution - Choose the desired resolution in DPI used to render the page. 72 is the PDF native resolution. When selecting a DPI it's best to follow the below guidelines

Black-and-white documents

- Lowest acceptable resolution = 200 DPI (equal to “high” fax quality)
- Conventional resolution = 300 DPI
- Highest conventional resolution = 600 DPI

Color documents (and color compression)

- Lowest acceptable resolution = 150 DPI
- Conventional resolution = 200 DPI
- Highest conventional resolution = 300 DPI
- Archive resolution = 600 DPI

JPEG Quality - This is the quality of JPEG compression. It varies from 0 (very high compression, very low quality), to 10 (low compression, very high quality) based on the quality parameter. Some guidelines for the quality value: 8 high quality, 5 medium quality, 2 low quality.

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter “2-4, 6-12, 20”. Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Output

Separate Files: send an individual message payload for each page of the document being converted

Single zip file: send all converted pages packaged in a in a single zip file to the message payload

File name pattern: Enter a filename for the files added to the zip archive. Each name will have the document page number appended to the name entered in this field. Variables may also be used to further distinguish each of the file separations.

PDF to PDF/A Node

The PDF to PDF/A node converts PDF documents to the specified ISO PDF archival formats. These document formats were designed so that they will always render exactly the same as when they were saved.

Below are the available PDF archival standards that PDF Studio is able to convert.

- PDF/A-1b
- PDF/A-2b
- PDF/A-3b

General Settings

Profile: Select the PDF/A format you wish to convert the documents to.

PDF/A-1b: Use of PDF 1.4 to create a “minimal compliance” level for PDF/A. PDF/A-1b requirements are meant to ensure that the rendered visual appearance of the file is reproducible over the long-term. It requires exact visual reproduction only.

PDF/A-2b: A new development of PDF/A to address some of the new feature added with versions 1.5, 1.6 and 1.7 of the PDF Reference. PDF/A-2 is backwards compatible, i.e. all valid PDF/A-1 documents should also be compliant with PDF/A-2. However PDF/A-2 compliant files will not necessarily be PDF/A-1 compliant. Based on PDF 1.7 (as defined in ISO 32000-1) which supports a range of improvements in document technology such as JPEG2000 compression, transparency effects and layers, the embedding of OpenType fonts, and provisions for digital signatures in accordance with the PDF Advanced Electronic Signatures standard. PDF/A-2 also allows archiving of sets of PDF/A compliant documents as individual documents in one file.

Note: *The PDF/A-2 support for JPEG 2000 is restricted in ways that increase compatibility with PDF/X, e.g., constraining the number of color channels (to 1, 3, or 4)*

PDF/A-3b: adds one feature to PDF/A-2. Permitting the embedding within a PDF/A file (or files) in any other format, not just other PDF/A files (as permitted in PDF/A-2). This has important implications for archival

Note: *In a PDF/A-3 file, any embedded files should be considered 'non-archival'. In other words, the embedded file is considered as only of short-term or temporary use. Only the primary PDF content with its visible page display should be considered as 'archived' for the long term.*

PDF/A conversion options

Unsupported Annotations - Choose whether to "Delete" any unsupported annotations or to "Fail" (i.e. do not convert the original PDF to PDF/A).

Transparency - Choose whether to "Remove" any transparency in the document or to "Fail" (i.e. do not convert the original PDF to PDF/A).

Embedded Files - Choose whether to "Delete" any embedded file in the document or to "Fail" (i.e. do not convert the original PDF to PDF/A).

If conversion fails

Use this section to set the settings to apply when the conversion of the document to PDF/A fails:

Add annotations to document - Check this box to add annotations when there were specific issues with the document that prevented it from being converted to PDF/A.

Append report to document - Choose this box to add a report at the end of the document with issues that prevented it from being converted to PDF/A.



PDF to PNG Node

The PDF to PNG node converts a PDF document to a .png image format. When converting a PDF page to an image all of the content will be flattened and rasterized into a separate image for each page of the document. Each page that is created can be sent as individual messages in the workflow or a single packaged zip file.

General Settings

DPI Resolution – Choose the desired resolution in DPI used to render the page. 72 is the PDF native resolution. When selecting a DPI it's best to follow the below guidelines

Black-and-white documents

- Lowest acceptable resolution = 200 DPI (equal to “high” fax quality)
- Conventional resolution = 300 DPI
- Highest conventional resolution = 600 DPI

Color documents (and color compression)

- Lowest acceptable resolution = 150 DPI
- Conventional resolution = 200 DPI
- Highest conventional resolution = 300 DPI
- Archive resolution = 600 DPI

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter “2-4, 6-12, 20”. Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Output

Separate Files: send an individual message payload for each page of the document being converted

Single zip file: send all converted pages packaged in a in a single zip file to the message payload

File name pattern: Enter a filename for the files added to the zip archive. Each name will have the document page number appended to the name entered in this field. Variables may also be used to further distinguish each of the file separations.



PDF to PostScript Node

The PDF to PostScript node converts any PDF payload to standardized PostScript file format.

This postscript file format is widely used by publishers primarily for printing purposes. PS files contain text and images on the same page. Instructions for printing the document can be given from the file script. The image format is actually a programming language within graphic contents.

General Settings

Page Size - Allows you to select a page size from a list of predefined standard document sizes that will be stored within the PostScript file



PDF to SVG Node

The PDF to SVG node converts a PDF documents to a vector based SVG image file. The PDF to SVG conversion engine preserves fonts and uses the SVG format to preserve vector graphics. Each page that is created can be sent as individual messages in the workflow or a single packaged zip file.

General Settings

Show page border - adds a single pixel black border on the PDF page.

Compress Images - will convert images to JPEG lossy compression that will reduce image quality and size

JPEG quality - This is the quality of JPEG compression. It varies from 0 (very high compression, very low quality), to 10 (low compression, very high quality) based on the quality parameter. Some guidelines for the quality value: 8 high quality, 5 medium quality, 2 low quality.

Whole Document: Creates a single HTML output file with all pages inline.

Individual Pages: Creates separate HTML file for each page of the selected range

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Output

Separate Files: send an individual message payload for each page of the document being converted

Single zip file: send all converted pages packaged in a in a single zip file to the message payload

File name pattern: Enter a filename for the files added to the zip archive. Each name will have the document page number appended to the name entered in this field. Variables may also be used to further distinguish each of the file separations.



PDF to TIFF Node

The PDF to TIFF node converts a PDF document to a .tiff image format. When converting a PDF page to an image all of the content will be flattened and rasterized into a separate image for each page of the document. Each page that is created can be sent as individual messages in the workflow or a single packaged zip file. The TIFF image format also allows all pages to be exported into a single multipage tiff file if needed.

General Settings

DPI Resolution – Choose the desired resolution in DPI used to render the page. 72 is the PDF native resolution. When selecting a DPI it's best to follow the below guidelines

Black-and-white documents

- Lowest acceptable resolution = 200 DPI (equal to “high” fax quality)
- Conventional resolution = 300 DPI
- Highest conventional resolution = 600 DPI

Color documents (and color compression)

- Lowest acceptable resolution = 150 DPI
- Conventional resolution = 200 DPI
- Highest conventional resolution = 300 DPI
- Archive resolution = 600 DPI

Compression – Choose the compression to use when exporting pages. The most standard one is Group 4 Fax, which is optimized for faxing.

- CCIT RLE
- Group 3 Fax
- Group 4 Fax
- Pack Bits
- LZW
- ZLib
- Deflate
- No Compression

Export all pages as a Single TIFF - The TIFF image format allows multiple images to be stored within a single document. When the image is opened in a supported viewer the image viewer will display page navigation tools just like in the document. This makes it easier to send a large number of pages as a single file instead of multiple files.

Individual Pages: Creates separate HTML file for each page of the selected range

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Output

Separate Files: send an individual message payload for each page of the document being converted

Single zip file: send all converted pages packaged in a in a single zip file to the message payload

File name pattern: Enter a filename for the files added to the zip archive. Each name will have the document page number appended to the name entered in this field. Variables may also be used to further distinguish each of the file separations.

PDF to Text Node

The PDF to Text node extracts all text contained within a PDF document. During this process PAS will extract all text in the document and insert the raw text data into the message payload as a .txt file. The text will be exported with no formatting except for return characters (designates move to the next line).

Note: *Only documents that contain text using font characters can be extracted. If the PDF contains scanned images of documents or text created using path content you will first need to use the [OCR Node](#) in order to be able to extract text.*

General Settings

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range convert to text. Choose from the below options

- All pages in range: all the pages in the set range
- Even pages only: only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Rasterize PDF Node

The Rasterize PDF node re-creates the document using images of the pages instead of vector commands. It functions the same as exporting a PDF to images and then re-importing the images into a new PDF.

General Settings

DPI Resolution - Choose the desired resolution in DPI used to render the page. 72 is the PDF native resolution. When selecting a DPI it's best to follow the below guidelines

Black-and-white documents

- Lowest acceptable resolution = 200 DPI (equal to “high” fax quality)
- Conventional resolution = 300 DPI
- Highest conventional resolution = 600 DPI

Color documents (and color compression)

- Lowest acceptable resolution = 150 DPI
- Conventional resolution = 200 DPI
- Highest conventional resolution = 300 DPI
- Archive resolution = 600 DPI

Compression - Sets the image format. Only images compatible with the PDF format can be chosen.

- JPEG - lossy compression that will reduce image quality and size
- JPEG2000 - less lossy compression that will reduce size and some quality
- Flate - Lossless compression does not reduce quality but may not always reduce file size
- JBIG2 B&W - Lossless compression that can only support black and white color space. Color images will be converted to black and white. Best for scanned documents with no images

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter “2-4, 6-12, 20”. Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

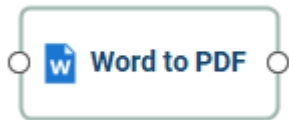
Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

PDF Document Nodes

PDF Document nodes are standard processing nodes that perform various modifications / conversions to PDF documents.

Processing nodes are designated with a **Grey Rectangle** shape:



PDF Document Nodes

Add Content - Add text or image content to a PDF document

Document Info - Add or edit the document information of a PDF file

Extract Attachments - Extract attachments from PDF documents

Extract Barcode Data - Extracts Barcode data from PDF documents

Extract Images - Extract all images stored within PDF document

Fix Scan - Fix alignment and rotation issues on scanned documents

Imposition - Create industry standard imposition layouts including: including: 2, 4, & 8 up booklets; cut stacks; sequential, step and repeat

OCR - Add text to scanned documents or images

Optimize - Reduce the file size of PDF documents

Print PDF - Send PDF document to the printer

PDF Text to Variable - create variables from text content stored within the PDF

XML to XMP Metadata - Imports XML data into PDF document XMP metadata

XMP Metadata to XML - Exports PDF document XMP metadata to XML



Add Content Node

The Add Content node is used to add a text or image content to PDF files.

General Settings

You have the option to add either a text or image content to the document. The options will change based on whether or not text or image is selected.

Text Content Options

Font - The font for the content being added

Font Size - The font size for the content being added

Font Color - The font color for the content being added

B - Makes all of the text **Bold**

I - Makes all of the text *Italic*

Text - Enter the text to be added

Insert - Use these options to insert custom variables within the content sections. Place the cursor where you would like the text and then click on the variable option you want to insert. These variables will be used when the headers and footers are placed on the document

- Page Label - The page label for the page the content is being added
- Date - creates a date variable
- Page Number - creates a page number variable
- (x) - [Variable Insert Tool](#)

Image Content Options

File - The path to the image file. Accepted formats are jpg, png, gif, & tiff.

Scale - The scale to apply to the image (100% for the full-size image)

Appearance

Units - Units to use when calculating the position of the watermark. This can be inches, centimeters, millimeters, or points. Points are calculated in the PDF standard, 72 points per inch.

Horizontal – The horizontal location is relative to the left, right, or center of the page according to the choice in the drop down box. The number entered here is interpreted in units.

Vertical – The vertical location is relative to the top, bottom, or center of the page according to the choice in the drop down box. The number entered here is interpreted in units.

Rotation – Rotate the watermark (text or image) by the given degrees clockwise.

Transparency – Transparency of the watermark. 100% is invisible and 0% is opaque.

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter “2-4, 6-12, 20”. Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Document Info Node

The Document Info node is used to modify the property information and initial view properties of a PDF document. Advanced features include the ability to add document level JavaScript as well.

Some fields have the following update methods. Choose the appropriate option when modifying property data.

- No change - retains the existing value with no change
- Add to existing - appends the entered value to the END of the existing property value
- Replace all with - completely replaces existing value
- Clear property - erases the current property value leaving it empty
- Find and remove - searches for and removes the text string from the property value

General Settings

The following standard document properties are available.

- Title
- Author
- Author Title
- Subject
- Writer
- Keywords

Initial View

Navigation tab - Sets the default behavior for the navigation tab when the document is opened

- Default: Uses the default settings for the application the document is opened in
- None (Document Only): No navigation tab will be displayed
- Bookmarks Panel: Displays the bookmarks panel when the document is opened
- Pages Panel: Displays the pages panel when the document is opened
- Attachments Panel: Displays the attachments panel when the document is opened
- Full Screen Mode: Displays the document in full screen mode when opened

Page Layout - Sets the default behavior for the page layout when the document is opened

- Default: Uses the default settings for the application the document is opened in
- Single: Displays only a single individual page at a time
- Single Continuous: Displays all of the document's pages in a single column that can be continuously scrolled

- Facing: Displays only two pages at a time side by side with odd pages on the left and even pages on the right
- Facing Continuous: Displays all of the documents pages in two columns with odd pages on the left and even pages on the right
- Cover: Displays the document just as when using Facing only the first page will be displayed alone
- Cover Continuous: Displays the document just as when using Facing Continuous only the first page will be displayed alone

Magnification - Sets the default magnification for the document when opened

- Default: Uses the default settings for the application the document is opened in
- Actual: Displays the document with a 1:1 ratio to match how the document would look if printed without any scaling
- Fit to Page: Scales the view to fit the width of the document in the PDF Studio frame
- Fit to Width: Scales the view to fit the entire document within the PDF Studio frame
- %: Sets the zoom to the specified number value

Open to Page - Sets the page number to be displayed when the document is opened

Reading Options

Binding - Sets the order to display the pages in Facing or Cover view modes.

- Left Edge: For documents that read from Left to Right (i.e. English, French, etc...)
- Right Edge: For documents that read from Right to Left (Arabic, Hebrew, etc...)

Note: *This does not affect page order in the thumbnails pane.*

Language - Sets the language for the entire documents. See Tagging PDFs for details on setting the language for specific text within the document.

Note: *If the language doesn't appear in the drop-down list, you can enter the ISO 639 code for the language in the Language field.*

Advanced Settings

JavaScript Actions

Add - Opens the action dialog to add an action to the document

Edit - Edits the currently selected action from the list

Remove - Removes the currently selected action from the list

Events

Open: Open actions will be triggered when the document is opened

Close: Close actions will be triggered when the document is closed

Before Save: Before save actions will be triggered when the document is saved but before the file on the system is actually updated. For example, if you wanted to update a date value with the exact time saved

After Save: After save actions will be triggered once the file has been saved

Before Print: Before print actions will be triggered when the document is printed but before the file is actually sent to the printer. For example, if you wanted to update a date value with the exact time printed

After Print: After print actions will be triggered after the document is printed

JavaScript

Sets the Document Action to perform a custom [Supported PDF Document JavaScript](#) action that can be typed into the field. Type the JavaScript you wish to be used into the text box.

Custom Metadata Properties

Allows you to add custom document properties that store additional metadata, such as the version number, company name, or any other values directly in the PDF.

Options

Add: Opens the action dialog to add a new custom property to the document

[-]: Removes the property row for the list

Variable Name: Name of the property stored within the PDF

Value: Value associated with the named property



Extract Attachments Node

The Extract Attachments node searches for file attachments in PDF documents to extract based on a specified file filter. Once criteria is met, the file is extracted then processed through the flow. If a document contains multiple attachments each file will be sent as individual messages in the flow.

General Settings

Options that define the properties of the files to be picked up

File Filter

File Name Pattern: List of allowed extensions separated by a comma and a space. (For example: .png, .jpeg, .jpg, .tiff). You may select a file name pattern, including the asterisk character. The server will limit its view to those files which match the pattern.

Note: *Use the File Types chooser to easily insert file name patterns for common file types*

Modified: Picks up files that are modified Before or After the specified date

File Size: Picks up files that are Less Than or Greater Than specified size



Extract Barcode Data Node

The Extract Barcode Data Node allows you to extract barcode information from various supported barcode formats into workflow variables. These can then be used later in the workflow as needed for further document processing.

General Settings

Barcode Format - Select the barcode format to be recognized. Only one barcode type can be recognized per node. The following barcode formats are supported:

- AZTEC
- CODABAR
- CODE_39
- CODE_93
- CODE_128
- DATA_MATRIX
- EAN_8
- EAN_13
- ITF
- MAXICODE
- PDF_417
- QR_CODE
- RSS_14
- RSS_EXPANDED
- UPC_A
- UPC_E
- UPC_EAN_Extension

DPI - The DPI to use when converting the document pages to be scanned for barcodes. The DPI value does not alter the original document and is only used to set the quality of the image being sent to the barcode engine. From our testing, a resolution of 300 DPI produces the best results. To improve performance, you can try using a lower DPI setting but it may reduce accuracy.

Search

Defines how the document will be searched for barcodes.


Single Page - Extracts data from the first barcode found on the specified page.

Entire Document - Extracts data from the first barcode found in the document starting at page 1.

Selected Area - Create variables by selecting areas on a template PDF document. When processing documents the variables will be populated with the barcode data found on documents using the location information for the variables.

Creating Variable Locations

To set the regions in a PDF you will need to launch the Barcode Area tool and select a template document to use as a reference to create the locations to extract the barcode data. The template document is for reference only and will not be used when the workflow is running.

1. Click on "Select Template PDF" to launch the file chooser
2. Select the PDF document you would like to use as your template document
 - **Note:** *For best results the template must be exactly the same as the documents that will be processed through the flow.*
3. Use the document preview window to create the areas to search for barcodes
4. Drag the cursor over the area you wish to extract barcode data from. This will display an Add Variable dialog with options for the barcode data
5. Set the variable options in the Add Variable dialog and click OK to create the new variable.
6. To add additional areas click on the  Plus Sign on the toolbar and repeat the process until all areas have been selected.
7. Once you have completed creating all areas click on OK to close the dialog and finish the variable creation process

Variable Settings

Variable Name: The name of the variable to be created

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Required: Sets whether a value is required in the variable to continue the flow. When set to true if no variable is created on this node it will trigger Trouble Handling. When set to false and no value is found it will pass through an empty string.

Template text: Preview of the text found in the area selected

Variable Formatting

Variables require a default format to be set in order for to be used by the workflow. You can use one of the predefined formats in the drop down or write your own using the following formatting symbols

String

NO formatting options, plain text strings only

Numbers

0 = digit placeholder (000 = 001)

= digit no placeholder (### = 1)

. = decimal separator (#.# = 0.5)

, = grouping separator (#,### = 1,000)

Dates

yy = two-digit year

yyyy = four-digit year

m = month (1-12)

mm = two-digit month (01-12)

mmm = three letter month abbreviation (01=Jan)

mmmm = full month name (01=January)

d = day of month (1-31)

dd = two-digit day of month (01 - 31)

H = hours (1-23)

HH = two digit hour (00 - 23) (AM/PM NOT allowed)

M = minutes (0-59)

MM = two digit minute (00 - 59)

s = seconds (0-59)

ss = two digit second (00 - 59)

h = hour (0 - 12 | 12-hour AM/PM format)

hh = two digit hour (00 - 12 | 12-hour AM/PM format)

tt = AM/PM based on the time

zz = time zone (Pacific Daylight Time = PDT)

zzzz = time zone (Pacific Daylight Time)

Boolean

True / False

1 / 0 = binary format

yes / no

Extract Images Node

The Extract Images node searches for any image stored in a PDF document and then extracts it using the specified settings. Each image is extracted separately and sent as individual messages in the flow.

General Settings

Format - The image format used when extracting the images from the PDF

JPEG - lossy compression that will slightly reduce image quality and size

PNG - Lossless compression does not reduce quality

TIFF - Lossless compression does not reduce quality

GIF - Lossless compression format for image files that does not reduce quality

DPI Resolution - Choose the desired resolution in DPI used to render the page. 72 is the PDF native resolution. When selecting a DPI it's best to follow the below guidelines

Black-and-white documents

- Lowest acceptable resolution = 200 DPI (equal to “high” fax quality)
- Conventional resolution = 300 DPI
- Highest conventional resolution = 600 DPI

Color documents (and color compression)

- Lowest acceptable resolution = 150 DPI
- Conventional resolution = 200 DPI
- Highest conventional resolution = 300 DPI
- Archive resolution = 600 DPI



Fix Scan Node

The Fix Scan Node allows you to perform various repair functions on scanned documents. This is useful if you do not have access to the original document or scanner to rescan and fix alignment or size issues.

General Settings

Auto deskew images - When checked, if the document's text/images are slanting too far in one direction or is misaligned, PDF Studio will attempt to auto-rotate the document so that the alignment is corrected.

Reduce Noise - This filter reduces light noise in an image. It tries to move each pixel closer in value to its neighbors. As it only has a small effect, you may need to apply it several times. This is good for removing small levels of noise from an image but does give the image some fuzziness.

Despeckle - This filter smooths areas in which noise is noticeable while leaving complex areas untouched. The effect is that grain or other noise is reduced without severely affecting edges.

Imposition Node

The Imposition node allows you to create PDF Imposition Layouts. Imposition layouts can be created using many different industry standard layout and binding methods including: 2, 4, & 8 up booklets; cut stacks; sequential, step and repeat.

What is Imposition?

Imposition is one of the fundamental steps in the prepress printing process. It consists in the arrangement of the printed product's pages on the printer's sheet, in order to obtain faster printing, simplify binding and reduce paper waste.

Correct imposition minimizes printing time by maximizing the number of pages per sheet of paper, reducing cost of press time and materials. To achieve this, the printed sheet must be filled as fully as possible.

General Settings

Layout

Type - the imposition layout choices available

- 2-Up Booklet: fits 2 pages side by side on a sheet
- 4-Up Booklet: fits 4 pages (2 rows & 2 pages per row) on a sheet
- 8-Up Booklet: fits 8 pages (2 rows & 4 pages per row) on a sheet
- Cut stacks: fits the pages per sheet using the column and row settings so that once cut each stack can be placed on each other maintain the page order for binding
- Sequential: fits multiple pages per sheet using the column and row settings in sequential order from right to left top to bottom
- Step and Repeat: creates multiple copies of the each page on separate sheets based on the number rows and columns set

Columns - Sets the number of vertical columns for Cut Stacks, Sequential, & Step and Repeat

Rows - Sets the number of horizontal rows for Cut Stacks, Sequential, & Step and Repeat

Units - Select the measurement unit for the imposition

Binding

Type - determines how the pages will be bound together once printed

- **Saddle-Stitching:** staples each of the pages along a center fold such as a magazine, or catalog.
- **Perfect Binding:** the sheets are split into stacks designated by the "Sheets per fold". Then the spine edge is trimmed from each stack and then glue is applied to the spine so the cover can be adhered to spine to create a book.

Sheets per fold - designates the number of pages per stack when using Perfect Binding

Binding (left/right) - Determines whether the binding (folded edge) of the booklet when folded should be on the left or the right

Double Sided - Rearranges the pages so that pages are printed on the front and back per imposition sheet based on the binding type selected

Media

Autosize Media - Resizes the sheet to fit the pages at their original size in the layout chosen

Fit to Media Size - Allows you to select a sheet size from a list of predefined standard sizes or set a sheet custom size.

- **Portrait:** sets the selected page orientation size to portrait
- **Landscape:** sets the selected page size orientation to landscape

***Note:** Portrait and Landscape options are not available when selecting a "Custom" media size*

Width - Width of the page in the units selected

Height - Height of the page in the units selected

Auto-rotate - Rotates each individual page so that the width and length best fit on the sheet.

Auto Scale - shrink pages so that they fit in the paper. No effect if the pages in a document are smaller than the paper they are being printed on.

Advanced Settings

Margins

Top - The distance of the margin from the top

Bottom - The distance of the margin from the bottom

Left - The distance of the margin from the left

Right - The distance of the margin from the right

Gutters

Vertical - The space between each column of pages

Note: *for 8-up pages the "Spread" value is used for the center column between the 2nd & 3rd column.*

Horizontal - The space between each row of pages

Spread - Used only for 8-up layout, this is the space between the 2nd & 3rd columns

Creep - Specifies the distance pages move away from the spine to accommodate paper thickness and folding in Saddle Stitch and Perfect Bound layouts

Printer Marks

Trim Marks - Horizontal and vertical marks that define where the page should be trimmed.

Bleed Marks - Displays the bleed crop box on the page. Useful when a document has images or elements that touch the edge of the page, extending beyond the trim edge and leaving no white margin.

Registration Marks - Small targets outside the page area for aligning pages and colors separations in a document.

Page Information - Labels the sheet in the top left corner with the document name, page number, date & time.



OCR Node

The OCR node allows you to add text to scanned documents or images so that the document can be searched or marked up as you would any other text document.

What is OCR?

Optical character recognition (OCR) is the mechanical or electronic conversion of images of typed or printed text into machine-encoded searchable text data.

General Settings

Language - Select the language to OCR the documents with

DPI Resolution: From our testing, a resolution of 300dpi produces good OCR results for most images. When dealing with scans containing noise, you may try using a lower dpi setting to get rid of the noise and obtain better OCR results.

Discard Invisible Text - Removes any previous OCR text that has been added to the page.

Auto Deskew Images - When checked, if the document's text/images are slanting too far in one direction or is misaligned, PAS will attempt to auto-rotate the document so that the alignment is corrected.

Optimize Node

The Optimize node can compress images or remove objects in order to reduce the PDF file size.

General Settings

Image Processing

PAS can process images contained within the document using a variety of settings:

Image Compression	<p>Convert any image to either a JPEG, JPEG2000, FLATE, or JBIG2.</p> <ul style="list-style-type: none"> • JPEG - lossy compression that will reduce image quality and size • JPEG2000 - less lossy compression that will reduce size and some quality • FLATE - Lossless compression does not reduce quality but may not always reduce file size • JBIG2 - Lossless compression that can only support black and white color space. Color images will be converted to black and white. Best for scanned documents with no images <p>Note: - Anytime a change is made to "Color Space" or "DPI" the image will have to be re-compressed. When the "No Change" option is selected, PDF Studio will attempt to keep the current image compression format. If it is not supported, PDF Studio will re-compress to the closest matching supported compression.</p>
Image Quality	<p>Allows the image quality to be adjusted between 10-100%.</p> <ul style="list-style-type: none"> • This will only affect JPEG or JPEG2000 images as these are the only formats that support image quality settings.
Image Color Space	<p>Choose to either retain or convert the image colors to Grayscale or B&W.</p> <ul style="list-style-type: none"> • Grayscale - Only supported with JPEG, JPEG2000, or FLATE. Best for full color images • B&W - Only supported by FLATE or JBIG2. Best for scanned documents with no images

	<p>Note: When the "No Change" option is selected, PDF Studio will attempt to keep the current image color space. If it is not supported, PDF Studio will re-compress to the closest matching supported color space. When the retain option is selected JPEG images with CMYK color space will be converted to RGB due to a regression bug in Java.</p>
DPI (Dots per Inch) Resolution	<p>Adjust the image resolution of all images that are larger than the option selected</p> <ul style="list-style-type: none"> • Preset options include retain, 50, 100, 150, 200, 300, & 600 DPI • Custom option allows user to set any value between 50-1200 DPI

Advanced Settings

Object Removal

PDF Studio can remove the following objects from within a PDF:

Alternate Images	Removes alternate embedded image dictionaries that are used for high resolution printing to reduce file size. Only visible images displayed on the PDF while viewing will be kept in the document.
Bookmarks	Removes all bookmarks from the PDF document
Document Info	<p>Removes any document information located in the document properties that would include the following:</p> <ul style="list-style-type: none"> • Title • Author • Subject • Keywords • Producer
JavaScript Actions	This will remove all JavaScript actions from the PDF document but retain any objects that may have had JavaScript actions such as form fields, push buttons, etc...

Embedded Thumbnails	Removes page thumbnails that are stored in the PDF document. Once removed the page thumbnails will just be rendered each time the document is loaded.
Unused Resources	Removes resources that are located within the document but are never referenced by any objects in the PDF document.
Comments	Removes all annotations and comments from the PDF document
Links	Removes all links from the PDF document
Attachments	Removes any attachments that are stored within the document
Form Fields	Removes all form fields that are on the PDF document
Advanced Metadata	Removes all additional or extra Metadata from the PDF Document

Other Options

PDF Studio has the following additional options available to further compress the PDF document:

Flatten All Comments	<p>Flattens all annotations including text boxes, shapes, highlights, and stamps directly onto the document so that they can no longer be edited.</p> <ul style="list-style-type: none"> Annotations such as the sticky note will have comments removed but the image will still be placed on the document <p>Note: <i>The following annotations (file attachment annotations, links, sounds, and redaction annotations) will NOT be removed when flattening annotations. Even though technically file attachment annotations, links, sounds, and redaction annotations are annotations, they contain actions that would also be removed if the annotation was flattened and so they remain to not interfere with the functions placed in the PDF.</i></p>
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Flatten All Fields	Flattens all fields including text boxes, check boxes, radio buttons, combo boxes, list boxes, buttons, and signature fields directly onto the document so that they can no longer be edited. All values within the fields will be flattened as well
Flatten All Layers	Merges all of the currently visible layers onto the main page content.
Merge Duplicate Images	Merges any duplicate images within the PDF so that all objects are referencing the same image resource rather than multiple of the same resource
Merge Duplicate Fonts	Merges any duplicate fonts within the PDF so that all objects are referencing the same font resource rather than multiple of the same resource
Compress Streams	Compresses any additional PDF elements within the document such as page descriptions that have not been optimized by any other process to further reduce file size
Compress Document Objects	This option will compress any other document objects that can be compressed into object streams. An object stream contains a sequence of PDF objects. The purpose of object streams is to allow a greater number of PDF objects to be compressed, thereby substantially reducing the size of PDF files. The objects in the stream are referred to as compressed objects.
Clear Signatures	Removes all signatures that are on the PDF Document but will leave the signature field

Fast Web View

Convert to Fast Web View	<p>When checked, converts the document to Fast Web View.</p> <p>Converting to fast web view allows large documents to load faster when downloading from a web. Having the document structure and content in a linearized (from beginning to end) order allows a browser to immediately display the first page as the remainder of the document is still being loaded.</p>
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Print PDF Node

The Print PDF node is used when PDF documents need be sent to a printer as a part of the workflow. Different options can be set such as choosing the printer to send the document to, setting page ranges and more.

General Settings

Printer - The name of the printer you wish to print to

Copies - The number of copies of the document to be printed

Collate: Keeps pages in order when printing multiple copies. For example, if unchecked, two copies of a three-page document will print in this order: 1,1,2,2,3,3. If checked, the order will be 1,2,3,1,2,3. This option is not available when printing only one copy.

Print to File - Use this option to send the printer output to the payload instead of the printer.

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using [Page Labels](#) will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Reverse Pages: reverse the order in which the pages will come out of the printer

Options

Paper Size - The size of the paper to be printed on. This sizes in the list are determined by the printer that is selected

Paper Tray - The tray on the printer where the paper will be coming from

Duplex - The options to print pages either one sided or on both sides of the paper

- Single: prints only one page on the front of each sheet of paper
- Duplex(long edge): prints two pages, one on front and one on back, per sheet of paper flipping the page on the long edge
- Tumble (short edge): prints two pages, one on front and one on back, per sheet of paper flipping the page on the short edge

Center In Page: center the page in the paper. No effect if the pages in a document are larger than the paper they are being printed on.

Shrink To Margins: shrink pages so that they fit in the paper. No effect if the pages in a document are smaller than the paper they are being printed on.

Expand To Margins: expand pages to fill the paper they are being printed on. No effect if the pages in a document are larger than the paper they are being printed on.

Orientation

The layout and direction of the content being placed on the page

- Auto Rotate pages: rotate the printout to match the width and length with the paper. The portrait / landscape settings cannot be set by the user when this option is selected.
- Portrait: print the page portrait
- Landscape: print the page landscape
- Reverse Landscape: print the page landscape but reversed




PDF Text to Variable Node

The PDF Text to Variable Node allows you to create variables from text content stored within the PDF. You will first need to set the areas or region to extract text from a template PDF document. Once set, as the documents are processed the variables will be populated with the text found in the PDF documents using the location information set for each variable.

Creating Variable Locations

To set the regions in a PDF you will need to launch the Text to Variable tool and select a template document to use as a reference to create the locations to extract text. The template document is for reference only.

1. Click on "Select Template PDF" to launch the file chooser
2. Select the PDF document you would like to use as your template document
 - **Note:** *For best results the template must be exactly the same as the documents that will be processed through the flow.*
3. Use the document preview window to create the areas to search for text
4. Drag the cursor over the area you wish to extract text from. This will display an Add Variable dialog with a preview of the text that is extracted
 - **Note:** *If no text is found it means the document contains no text content. To properly extract text you will need to use OCR node BEFORE this node in order to extract text.*
5. Set the variable options in the Add Variable dialog and click OK to create the new variable.
6. To add additional text areas click on the  Plus Sign on the toolbar and repeat the process until all areas have been selected.
7. Once you have completed created all areas click on OK to close the dialog and finish the variable creation process

Variable Settings

Variable Name: The name of the variable to be created

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Required: Sets whether a value is required in the variable to continue the flow. When set to true if no variable is created on this node it will trigger Trouble Handling. When set to false and no value is found it will pass through an empty string.

Template text: Preview of the text found in the area selected

Variable Formatting

Variables require a default format to be set in order for to be used by the workflow. You can use one of the predefined formats in the drop down or write your own using the following formatting symbols

String

NO formatting options, plain text strings only

Numbers

0 = digit placeholder (000 = 001)

= digit no placeholder (### = 1)

. = decimal separator (#.# = 0.5)

, = grouping separator (#,### = 1,000)

Dates

yy = two-digit year

yyyy = four-digit year

m = month (1-12)

mm = two-digit month (01-12)

mmm = three letter month abbreviation (01=Jan)

mmmm = full month name (01=January)

d = day of month (1-31)

dd = two-digit day of month (01 - 31)

H = hours (1-23)

HH = two digit hour (00 - 23) (AM/PM NOT allowed)

M = minutes (0-59)

MM = two digit minute (00 - 59)

s = seconds (0-59)

ss = two digit second (00 - 59)

h = hour (0 - 12 | 12-hour AM/PM format)

hh = two digit hour (00 - 12 | 12-hour AM/PM format)

tt = AM/PM based on the time

zz = time zone (Pacific Daylight Time = PDT)

zzzz = time zone (Pacific Daylight Time)

Boolean

True / False

1 / 0 = binary format

yes / no



XML to XMP Metadata

The XML to XMP Metadata node takes an XML file and imports the properties into the PDF document Metadata.

Metadata is any data that helps describe the content or characteristics of the PDF document. This information is normally viewed through the Document Properties dialog in most PDF software applications and some operating systems. Document metadata can also be used with a content management system (CMS) to organize and display the file properties within the CMS software.

With an XMP enabled application, you can view additional meaningful information about a project (such as titles and descriptions, searchable keywords, and up-to-date author and copyright information) in a format that is easily understood by various software and tools. With XMP, desktop applications and back-end publishing systems gain a standardized method for capturing, sharing, and leveraging this valuable metadata.

Key benefits

- Create smart assets that retain their context when traveling across software, devices, and databases.
- Enable powerful search and retrieval of rich media across diverse file formats and database systems.
- Manage relationships of assets throughout their lifecycle of content creation and consumption.

General Settings

Insert: XML Metadata can be imported one of 2 ways:

- an XML file from the MESSAGE PAYLOAD into static local PDF document
- from a static LOCAL file into the PDF in the message payload

File - Sets the file to be inserted into the PDF

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*



XMP Metadata to XML Node

The XMP Metadata to XML node converts all the document Metadata stored with a PDF into an XML format that can be used by other software if needed.

Metadata is any data that helps describe the content or characteristics of the PDF document. This information is normally viewed through the Document Properties dialog in most PDF software applications and some operating systems. Document metadata can also be used with a content management system (CMS) to organize and display the file properties within the CMS software.

General Settings

This node has no flow specific settings.

PDF Comments Nodes

PDF Comments nodes are standard processing nodes that perform various modifications / conversions to annotations / comments in PDF documents.

Processing nodes are designated with a **Grey Rectangle** shape:



PDF Comments Nodes

Delete Comments - Deletes comments / annotations from a PDF

Export Comments - Exports comments / annotations from a PDF

Flatten Comments - Flattens comments / annotations into the page content

Import Comments - Imports comments / annotations into a specified PDF document

Search & Markup - Adds text markups to all the search results found within a PDF document



Delete Comments Node

The Delete Comments node allows you to delete the specified types from a PDF document.

General Settings

Check the option to select the type of annotations that will be removed from the document

Text: Typewriter, text box, callout and sticky note comments

Text Markups: Highlights, cross outs, underlines, squiggly underlines, replace & insert text comments

Shapes: circle, square, polyline, polygons, clouds, lines, arrows & pencil annotations

Stamps: rubber / image stamps annotations

Measurements: distance, perimeter & area annotations

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Export Comments Node

The Export Comments node is used to extract annotations from PDF documents.

General Settings

Format - Choose the export format (.fdf, .xfdf)

FDF: File format created by Adobe that is supported by most PDF applications

XFDF: Extended FDF file format created by Adobe that is supported by most PDF applications

Flatten Comments Node

The Flatten Comments node is used to flatten comments in PDF documents.

General Settings

Paint Non Printable Annotations - Check this box to paint non-printable annotations in the output flattened PDF document. Non-printable annotations are those with the "Printable" flag set to false or visibility set to "Show/Do not Print".

Note: *There are specific types of annotations that will never be flattened:*

- *Redaction Annotations (the markings before redactions are applied)*
- *Links*
- *File Attachment Annotations*
- *Sound Annotations*

Import Comments Node

The Import Comments node is used to import comments into a PDF document. When the source is a comment data file (.fdf or .xfdf) it will be imported into a static local PDF. When the source is a PDF, a local comment data file will be imported into the source PDF.

General Settings

Import: Comments can be imported one of 2 ways:

- from a static LOCAL comments file into the PDF in the message payload
- comments data from the MESSAGE PAYLOAD into static local PDF document

File - Sets the source file for the form data import. When the source is a comment data file (.fdf, .xfdf or .pdf) it will be imported into a static local PDF. When the source is a PDF, a local comment data file will be imported into the source PDF.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Supported Comment Formats

Comments can be imported using the following formats

FDF: File format created by Adobe that is supported by most PDF applications

XFDF: Extended FDF file format created by Adobe that is supported by most PDF applications

PDF: Takes any comments found in the selected PDF file and duplicates them in the current PDF

Search & Markup Node

The Search & Markup node adds text markups or redactions to all the search results found within a PDF document. Searches can be performed using standard text strings or regular expressions.

General Settings

Word or Phrase: Enter the text you wish to search for

Use Regular Expression: Allows you to user a regular expression to perform more advanced search queries

Examples:

- US phone number: `((\d{3}\-)?)(\d{3}\-)?\d{3}\-\d{4}`
- US Social Security number: `\d{3}\-\d{2}\-\d{4}`
- Email address: `[\w-]+@([\w-]+\.)+[\w-]+`
- For more information: <https://en.wikipedia.org/wiki/Regex>

Case-Sensitive: If checked, searching for the string "The" will not return the same results as searching for the string "the".

Whole words only: If checked, searching for "the" will not return occurrences of "they". But when this option is left unchecked, all occurrences of "they" will appear in the occurrence list.

Markup Options

The following comments and markups are available as options to be applied to any matching results



Highlight Text - applies Text Highlight markups to the results



Cross Out Text - applies Cross Out text markups to the results



Underline Text - applies Underline text markups to the results



Squiggly Underline Text - applies Squiggly Underline text markups to the results



Mark for Redaction - creates a Redaction Annotation for each for the results found

Markup Properties

Color - Sets the color of the text markup

Transparency - Sets the transparency of the text markup

Outline Color - Sets the color of the border for only the redaction annotation

Fill Color - Sets the fill color for only the redaction annotation

Export Form Fields Node

The Export Form Fields node is used to extract form field data from PDF documents.

General Settings

Forms can be exported in the following formats:

FDF: File format created by Adobe that is supported by most PDF applications

XFDF: Extended FDF file format created by Adobe that is supported by most PDF applications

XDP: An XML Data package created by Adobe that is supported by most PDF applications

XML: File format that is similar to an Excel file that will contain all of the annotation information

Flatten Form Fields Node

The Flatten Form Fields node is used to flatten any form data in a PDF document. Once flattened the form data is no longer editable and becomes a part of the actual PDF content.

General Settings

Paint buttons - Check this option to paint form field buttons directly on the document.

Paint image buttons only - when checked will only draw buttons that contain an image

Paint non printable fields- Check this box to paint non-printable fields in the output flattened PDF document. Non-printable fields are those with the "Printable" flag set to false or visibility set to "Show/Do not Print".



Import Form Fields Node

The Import Form Fields node is used to import form data into a PDF document. When the source is a form data file (.fdf, xfdf, or .xdp) it will be imported into a local PDF. When the source is a PDF a local form data file will be imported into the source PDF.

General Settings

Import: Form data can be imported one of 2 ways:

- from a static LOCAL form data file into the PDF in the message payload
- form data from the MESSAGE PAYLOAD into static local PDF document

File - Sets the source file type for the form data import. When the source is a form data file (.fdf, xfdf, or .xdp) it will be imported into a local PDF. When the source is a PDF a local form data file will be imported into the source PDF.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Supported Comment Formats

Comments can be imported using the following formats

FDF: File format created by Adobe that is supported by most PDF applications

XFDF: Extended FDF file format created by Adobe that is supported by most PDF applications

XDP: An XML Data package created by Adobe that is supported by most PDF applications



Reset Form Fields Node

The Reset Form Fields node allows you to reset the specified form field types from a PDF document.

General Settings

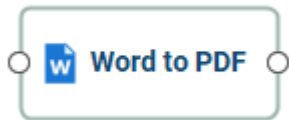
Check the option to select the type of form fields that will be reset to defaults in the document

- Text fields
- Check boxes
- Radio buttons
- Combo boxes (drop downs)
- List boxes
- Signatures

Secure PDF Nodes

Secure PDF nodes are standard processing nodes that allows PDF documents to be protected using passwords, signatures, and more.

Processing nodes are designated with a **Grey Rectangle** shape:



Secure PDF Nodes

[Apply All Redactions](#) - Applies any redaction annotations in a PDF document

[Clear Security](#) - Removes all security & permissions from PDF documents

[Digitally Sign](#) - Apply digital signatures to PDF documents

[Fast sign](#) - Create electronic signature stamps that can be easily applied to documents

[Redact Area](#) - Redacts a specified area of a PDF document

[Sanitize](#) - Remove all hidden sensitive information from PDF documents

[Search & Redact](#) - Adds text markups or redactions to all the search results found within a PDF document

[Secure with Passwords](#) - Set the security or permissions of a PDF document

Apply All Redactions Node

The Apply All Redactions node "burns in" any redaction annotations found in a PDF document and removes any text, image, or drawing from the document that is underneath the annotation's area. Applying the redaction is an important step to ensure that the selected content will actually be removed.

Note: *If you wish you can further sanitize any hidden information within the document using the [Sanitize PDF Node](#).*

General Settings

This node has no flow specific settings.

Note: *When redacting part or all of an image sometimes the redaction square will become a part of the image and you will not be able to move or delete the actual square. During the redaction process if an image does not have a transparency value the removed data will just be converted to a solid black color. As long as the black square is now a part of the image and moves with the image it is properly redacted.*

Clear Security Node

The Clear Security node is used when the permissions and passwords in a PDF file need to be removed. The node is very simple as there are no options on how to clear the security. This node must be used before any PDF processing node that could be affected by security permissions.

General Settings

Permissions password: Also known as the owner password, it is the password that will be required when trying to clear the permissions from the document.

Open document password: Also known as the user password, it is the password that will be required when the documents are opened.

Document Permissions

Allow Printing High Res – Print the document at high resolution. When this permission is granted, the following permission 'Printing' is also automatically granted.

Allow Printing - Allow printing the document

Allow Text & Graphics Extraction – Copy or otherwise extract text and graphics from the document. When this permission is granted, the following permission 'Extraction for Accessibility' is also automatically granted.

Allow Extraction for Accessibility – Extract text and graphics in support of accessibility to disabled users or other purposes

Allow Document Changes – Modify the document. When this permission is granted, the following 3 permissions (Document Assembly, Comments and Form Filling) are also automatically granted. When this permission is not granted, the following 3 permissions (Document Assembly, Comments and Form Filling) can independently be granted.

Allow Document Assembly – Assemble the document: insert, rotate or delete pages and create bookmarks or thumbnail images

Allow Annotations & Comments – Add or modify text annotations. When this permission is granted, the following permission 'Filling Form Fields & Signing' is automatically granted. When this permission is not granted then the following permission 'Form Filling & Signing' can be granted independently. And when this

permission is granted and the 'All Changes' permission is also granted, creating or modifying interactive form fields (including signature fields) is allowed.

Allow Filling Form Fields & Signing - Fill in existing interactive form fields including signature fields.

Digitally Sign Node

The Sign PDF node is used to apply digital signatures to PDF documents.

Note: *It's important to also understand that an "Electronic Signature" ([Fast Sign](#)) is not the same as a "Digital Signature". An electronic signature ([Fast Sign](#)) is a graphical representation of a signature on pen and paper such as an image or drawing. A digital signature (which may also have a graphical representation) contains a unique encrypted ID to verify its authenticity.*

General Settings

Signature File - The full path to the Digital ID file used in the signature on the server. Accepted formats are .p12 & .pfx.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Password - The password needed to open the Digital ID file

Load IDs - When clicked will display the Digital IDs stored within the file

Digital IDs - Displays a list of all the digital IDs stored within the signature file

ID Password - The password for the selected digital ID. You must enter the correct password in order to be able to digitally sign the document

Signature Type

Format: The format to be used when encrypting the signature

Signature - A digital signature contains encrypted information that is unique to the signer so it cannot be forged. The signer's certificate or issuing third-party Certificate Authority will need to be trusted by the user receiving the PDF in order for the signature to be considered valid. Once signed, if the document is modified in any way the signature will no longer be considered valid.

Certifying Signature - A certified signature provides additional document security options to prevent the document from being modified. When choosing certifying signature, a combo box will show, allowing to specify which changes are permitted on the certified document.

- **Disallow Changes:** Does not allow any further changes to the document once signed
- **Allow Form fill and Signatures:** Allows users to fill forms and complete signatures once signed

- Allow Form fill, Signatures, and Comments: Allows users to fill forms, complete signatures, and add comments to the document once signed

Signature Information

Reason - Select a reason the document was signed from the list from the below options

- I approve this document
- I am the author of this document
- I have reviewed this document
- I attest to the accuracy and integrity of this document
- I agree to the terms defined by this document

Location - Enter additional location details

Contact Information - Enter additional contact information for the signature

Location

Units: Units to use when calculating the position of the signature. This can be inches, centimeters, millimeters, or points. Points are calculated in the PDF standard, 72 points per inch.

X: the "X" location of the top left corner of the signature

Y: the "Y" location of the top left corner of the signature

Width: the width in pixels of the signature

Height: the height in pixels of the signature

Advanced Settings

Use Timestamp Server: Check this option to use a timestamp server during the signing process

URL - the URL of the timestamp server

TSA Requires Authentication - check this box if the server requires authentication

User name - the user name for authentication on the timestamp server

Password - the password for authentication on the timestamp server

Appearance

Image

Show Image - When checked an image can be added to the background of the digital stamp appearance

File - The full path to the image file used in the signature on the server. Accepted formats are jpg, png, gif, & tiff.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Align - Allows you to align the image on the left, center, or right of the signature

Transparency - Transparency setting for the image

Text

Show - The options below, when checked, set which digital signature properties will be displayed on the signature

- Name: The large text that will display the name
- Digitally signed by: Adds the text "Digitally signed by" before the Common Name
- Date: Date the signature was completed
- Common Name: The name associated with the digital ID
- Organizational Unit: The organizational unit associated with the digital ID
- Organization Name: The organization name associated with the digital ID
- Locality/City: the locality/city associated with the digital ID
- State: The state associated with the digital ID
- Country: The country associated with the digital ID
- Email: The email associated with the digital ID

Orientation - Sets the digital signature text to be displayed with one of two options

- Left to Right: Displays the Name on the left and all other properties in smaller text on the right
- Right to Left: Displays the Name on the right and all other properties in smaller text on the left

Fast Sign Node

The Fast Sign node allows you to create electronic signature stamps that can be easily applied to documents. The stamps can be created using a signature font, drawing with your mouse, or importing an existing scanned image of your signature. Once the document is saved PAS will flatten all form fields within the document to prevent further editing.

Note: *It's important to also understand that an "Electronic Signature" (Fast Sign) is not the same as a "Digital Signature". An electronic signature (Fast Sign) is a graphical representation of a signature on pen and paper such as an image or drawing. A [digital signature](#) (which may also have a graphical representation) contains a unique encrypted ID to verify its authenticity.*

General Settings

Type - Select what type of signature stamp you would like to create

Type My Signature: Type your name and use one of the available fonts that resemble handwriting to create the signature.

Draw My Signature: Use your mouse (also supports computer stylus) to draw your signature

Import Signature Image: Import an existing scanned image of the your signature

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Location

Units: Units to use when calculating the position of the signature. This can be inches, centimeters, millimeters, or points. Points are calculated in the PDF standard, 72 points per inch.

X: the "X" location of the top left corner of the signature

Y: the "Y" location of the top left corner of the signature

Width: the width in pixels of the signature

Height: the height in pixels of the signature




Redact Area Node

The Redact Area node applies redactions to the selected areas of PDF based on an existing template PDF document. When the workflow is running it will immediately redact all selected areas on the PDF.

Note: *If you wish you can further sanitize any hidden information within the document using the [Sanitize PDF Node](#).*

General Settings

To set the regions in a PDF you will need to first click on Select Template PDF and launch the redaction area tool to select a template document to use as a reference to create the locations to redact. The template document is for reference only and will not be used when the workflow is running.

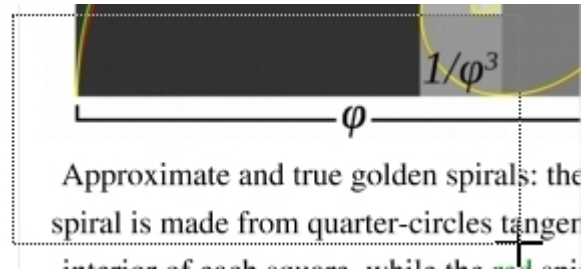
1. Click on "Select Template PDF" to launch the file chooser
2. Select the PDF document you would like to use as your template document
 - **Note:** *For best results the template must be exactly the same as the documents that will be processed through the flow.*
3. Use the document preview window to create the areas to to redact on the PDF
4. Begin marking the content that you wish to be redacted. This can be done in 3 different ways:
 - Text: Text can be marked for redaction by using the cursor to highlight the text you wish to be redacted.
 - Other Objects/Images: Other objects that cannot be selected (for example: images, scanned text, paths) can be marked for redaction by using Ctrl + Click (⌘ + Click on Mac) and dragging to create a box over the content you would like redacted.
 - Alternate Selection Method: Double click on a word or image to highlight just that word or image for redaction.
5. To add additional areas click on the  Plus Sign on the toolbar and repeat the process until all areas have been selected.
6. Once you have completed creating all areas click on OK to save the areas and close the dialog

Note: *When the mouse pointer is a cursor, you can select text to be redacted. When the pointer is a plus sign, you can drag a rectangle to encompass sections of images, drawings, and text in the area.*

Cursor selection

Rectangle selection

The polar equation for a golden s
logarithmic spirals, but with a special





Sanitize PDF Node

The Sanitize PDF node is capable of sanitizing PDF documents to remove all hidden sensitive information from the PDF. This can be very useful when working with sensitive documents that you want to ensure have any possible hidden information removed.

Note: *All document changes must be completed BEFORE sanitizing the document. Once sanitization is complete it will no longer be possible to edit items on the pages as they will be converted to images.*

The sanitize function will convert all pages of the document to images removing sensitive information including the following:

- Metadata
- Document Info
- Attachments
- JavaScript Actions
- Links
- Form Fields
- Comments
- Unused Resources
- Unreferenced Data
- Hidden Layers
- Hidden Data
- Overlapping Objects
- Embedded Search Indexes

General Settings

This node currently has no flow specific settings.



Search & Redact PDF Node

The Search & Markup node adds text markups or redactions to all the search results found within a PDF document. Searches can be performed using standard text strings or regular expressions.

General Settings

Mark for Redaction: Adds redaction annotations to the document that offer a preview of what the document will look like after redaction, and also allows you to adjust Redaction Properties before being applied.

Redact Immediately: This "burns in" the annotations and removes any text, image, or drawing from the document that is underneath the annotation's area. If "Include Comments" or "Include Form Fields" option is selected the text will be replaced with the chosen character.

Word or Phrase: Enter the text you wish to search for

Use Regular Expression: Allows you to user a regular expression to perform more advanced search queries

Examples:

- US phone number: `((\\(\\d{3}\\)\\?)|(\\d{3}-))\\d{3}-\\d{4}`
- US Social Security number: `\\d{3}-\\d{2}-\\d{4}`
- Email address: `[\\w-]+@[\\w-]+\\.\\d{3}-\\d{4}`
- For more information: <https://en.wikipedia.org/wiki/Regex>

Case-Sensitive: If checked, searching for the string "The" will not return the same results as searching for the string "the".

Whole words only: If checked, searching for "the" will not return occurrences of "they". But when this option is left unchecked, all occurrences of "they" will appear in the occurrence list.

Include Comments:

Include Form Fields:

Replace with: Search results found in comments and fields will be replaced with the given character. For example: 'search' replaced with 'XXXXX'.

Comment Options

Outline Color - Sets the color of the border for only the redaction annotation

Fill Color - Sets the fill color for only the redaction annotation

Transparency - Sets the transparency of the shape for only the redaction annotation

Redaction Options

Fill Color - Sets the fill color of the redaction once it is applied

Note: *Selecting the No Color option erases the content and will not place any square where the content used to be once the redaction has been applied.*

Text - This will apply text on top of the redaction square once applied

Font - The font of the text placed on top of the redaction

Font Size - The font size of the text placed on top of the redaction

Font Color - The color of the text placed on top of the redaction

Alignment - The alignment of the text placed on top of the redaction

Repeat Text - Weather or not to continuously repeat the text placed on top of the redaction

Secure PDF Node

The Change Permissions tab is used in jobs that want to set the permission settings of a PDF file.

General Settings

Encryption: The encryption format used to secure the document.

Permissions password – Also known as the owner password, it is the password that will be required when trying to change permissions and passwords on the documents.

Set open document password – Also known as the user password, it is the password that will be required when the documents are opened.

Permissions

Allow High Resolution Printing – Print the document at high resolution. When this permission is granted, the following permission 'Printing' is also automatically granted.

Allow Printing - Allow printing the document

Allow Text & Graphics Extraction – Copy or otherwise extract text and graphics from the document. When this permission is granted, the following permission 'Extraction for Accessibility' is also automatically granted.

Allow Extraction for Accessibility – Extract text and graphics in support of accessibility to disabled users or other purposes

Allow Document Changes – Modify the document. When this permission is granted, the following 3 permissions (Document Assembly, Comments and Form Filling) are also automatically granted. When this permission is not granted, the following 3 permissions (Document Assembly, Comments and Form Filling) can independently be granted.

Allow Document Assembly – Assemble the document: insert, rotate or delete pages and create bookmarks or thumbnail images

Allow Annotations & Comments – Add or modify text annotations. When this permission is granted, the following permission 'Filling Form Fields & Signing' is automatically granted. When this permission is not granted, then the following permission 'Form Filling & Signing' can be granted independently. And when this permission is granted and the 'All Changes' permission is also granted, creating or modifying interactive form fields (including signature fields) is allowed.

Allow Filling Form Fields & Signing - Fill in existing interactive form fields including signature fields.

PDF Pages Nodes

PDF Pages nodes are standard processing nodes that perform various modifications to pages in PDF documents.

Processing nodes are designated with a **Grey Rectangle** shape:



PDF Pages Nodes

Crop Pages - Adjust the crop box, bleed box, trim box, and art box on PDF documents

Delete Pages - Delete or remove specified pages from PDF documents

Extract Pages - Extract the specified pages from a PDF document to be processed

Header & Footer - Apply headers and/or footers to PDF documents

Insert Pages - Insert pages into the specified PDF document

Resize Pages - Scale pages so that the content better fits the page or increase borders and margins

Reverse Pages - Automatically reverses the order of the pages within a PDF

Rotate Pages - Rotate the specified pages within the PDF document

Split Pages - Split PDF documents in a variety of ways including: blank pages, bookmarks, before & after text

Split by Barcode - Splits a PDF document at the specified barcode

Watermark - Apply text or image watermarks to PDF documents

Crop Pages Node

The Crop Pages node can adjust the crop box, bleed box, trim box, and art box on PDF documents. Documents may be cropped using the cropping dialog or the cropping tool. Units can be specified in inches, points, centimeters or millimeters. Cropping can be applied to a single page, a range of pages, or all pages.

General Settings

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Crop Settings

Crop box – the region to which the contents of the page are to be or cropped when displayed or printed.

Bleed box – the bounds to which the contents of the page should be clipped when output in a production environment.

Trim box – the intended dimensions of the finished page after trimming.

Art box – the extent of the page's meaningful content (including potential white space) as intended by the document creator.

Margins

Units - Select the measurement unit for the crop margins in either Inches, Points, Centimeters, or Millimeters

Top - The distance of the margin from the top

Bottom - The distance of the margin from the bottom

Left - The distance of the margin from the left

Right - The distance of the margin from the right

Delete Pages Node

The Delete Pages node allows you to remove the specified page (or pages) from a PDF document.

General Settings

Pages

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Extract Pages Node

The Extract Pages node exports pages from a PDF to a new PDF. This is useful if you need to extract a section of a PDF into a separate document. Each extracted page is sent as individual messages through the flow.

General Settings

Pages

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Header & Footer Node

The Header & Footer node adds custom headers and footers to a PDF. This can be used to add page numbers to a document or add a custom label to pages within the document.

General Settings

Font - The font for the header and footer

Font Size - The font size for the header and footer

Font Color - The font color for the header and footer

B - Makes all of the text **Bold**

I - Makes all of the text *Italic*

Line border - Sets a border around the header and footer text

Border color - Sets the color of the border

Width - Sets the width of the border

Background - Background color settings for the header and footer text

Header & Footer

This section defines the text content for the different mark areas in the document

Header Left - Text placed in the left of the header

Header Center - Text placed in the center of the header

Header Right - Text placed in the right of the header

Footer Left - Text placed in the left of the footer

Footer Center - Text placed in the center of the footer

Footer Right - Text placed in the right of the footer

Insert - Use these options to insert custom variables within the content sections. Place the cursor where you would like the text and then click on the variable option you want

to insert. These variables will be used when the headers and footers are placed on the document

- Page Label - The page label for the page the content is being added
- Page Number - creates a page number variable
- Bates Number - creates bates number variable
- (x) - [Variable Insert Tool](#)

Margins

Units - Units to use when calculating the position of the header and footer. This can be inches, centimeters, or points. Points are calculated in the PDF standard, 72 points per inch.

Shrink Document - Shrinks the document based on Top and Bottom margins to prevent the Header or Footer from overlapping original document content.

Top - The distance of the margin from the top

Bottom - The distance of the margin from the bottom

Left - The distance of the margin from the left

Right - The distance of the margin from the right

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Insert Pages Node

The Insert Pages node is used to insert pages into a PDF document. Any of the [Supported Files Types](#) can be chosen and will be automatically converted to PDF prior to being inserted.

General Settings

Insert: pages can be imported one of 2 ways:

- a page from the MESSAGE PAYLOAD into static local PDF document
- from a static LOCAL file into the PDF in the message payload

File - Sets the file to be inserted into the PDF

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Insert at: Where to insert the pages from the chosen document

- End of the Document: Inserts the pages at the end of the document
- Beginning of the Document: Inserts the pages at the beginning of the document
- After page: Inserts the pages after the specified page number
- Interleave: This option can be used to insert them at every other page. This is especially useful on two-sided documents.

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Resize Pages Node

The Resize Pages node can resize a page to a specified dimension. This tool can be used to scale pages so that the content better fits the page or to increase borders and margins. Units can be specified in inches, points, centimeters or millimeters. Resizing can be applied to a single page, a range of pages, or all pages.

General Settings

New Page

Page Size - Allows you to select a page size from a list of predefined standard document sizes.

- Portrait: sets the selected page orientation size to portrait
- Landscape: sets the selected page size orientation to landscape

Note: *Portrait and Landscape options are not available when selecting a "Custom" media size*

Units - Select the measurement unit for the crop margins in either Inches, Points, Centimeters, or Millimeters

Width - Width of the page in the units selected

Height - Height of the page in the units selected

Current Page

Location - Choose the location of the current page within the new page size.

Center - Will center the original page content in the new page size

Custom - Set the location of the page using the x & y coordinates

- x - Sets the left position of the original document content relative to the left side of the page
- y - Sets the top position of the original document content relative to the bottom of the page

Rotation - The angle in degrees to rotate the original page content

Note: *Comments and forms will not be rotated.*

Scale - Set the scale of the current page within the new page size

- Custom - Scale the page using a set percentage value
- Scale to Fit - Resizes the page content to best fit the new page size

Fit Crop to Page - Sets the crop box equal to the media box

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Reverse Pages Node

The Reverse Pages Node automatically reverses the order of the pages within a PDF. This can be useful for example if a document was scanned in reverse.

General Settings

This node currently has no flow specific settings.

Rotate Pages Node

The Rotate Pages node can rotate a single or multiple pages of a document. This is useful if the document was scanned upside down or is currently being displayed in the wrong direction. Pages can only be rotated in 90 degree increments.

General Settings

Direction - The direction and amount to rotate the pages

- Clockwise 90 degrees: Rotates the pages 90 degrees (1/4 turn) to the right
- 180 degrees: rotates the pages 180 degrees
- Counterclockwise 90 degrees: Rotates the pages 90 degrees (1/4 turn) to the left

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter "2-4, 6-12, 20". Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

Split Pages Node

The Split Pages node can split PDF documents in a variety of ways. The available split options are listed below:

- **Equal Size Documents:** Splits the document into equal number of pages
- **Page Ranges:** Splits the document by a set of defined page ranges
- **By Blank Page:** Splits the documents by blank page
- **By Bookmarks:** Splits the document by bookmarks
- **Before Text:** Splits the document before specified text
- **After Text:** Splits the document after specified text

General Settings

Equal size documents

Use this method to split the document into equal size documents of a given number of pages. Enter the page count in the text field.

Page range

Use this method to split the document into multiple documents based on page range. Enter the page range in the text field. Dash is used for a page range, comma to separate pages within the same document, semicolon to separate documents. So for instance, 1, 3-5; 7-10 will output two documents, the first document with pages 1, 3, 4, and 5, and the second document with pages 7, 8, 9, and 10.

Blank page

Use this method to split the document when a white page is encountered. The white page will be used as a separator between documents and will be discarded. There are two methods of detecting white pages:

Tolerance - This value increases the tolerance for artifacts on the page. Increase this value if the blank pages contain marks such as scan lines or fold lines to get better results.

Bookmarks at level

Use this method to split the document based on bookmarks at level 1. You can also choose to split up to a higher level, for instance up to level 3. In this case, the document will be split at bookmark level 1, level 2, and level 3. In this method, we assume that the bookmarks contain Go To Page actions within the PDF document itself and that the bookmarks have been created in ascending page order.

Before text

Use this method to split the document when specific text in the document is encountered. When the text is encountered in a page, this page will become the first page of the next document.

After text

Use this method to split the document when specific text in the document is encountered. When the text is encountered in a page, this page will become the last page of the document and the following page will become the first page of the next document.

Output

Separate Files: send an individual message payload for each split of the document created

Single zip file: send all created document split files packaged in a in a single zip file to the message payload

File name pattern: Enter a filename for the files added to the zip archive. Each name will have the document page number appended to the name entered in this field. Variables may also be used to further distinguish each of the file separations.

Split by Barcode Node

The Split by Barcode node allows you to split a PDF document into separate groups of pages based on various supported barcode formats. For example, this can be useful when processing individual parts of a mortgage application that need to be sent to different departments for processing.

General Settings

Barcode Format - Select the barcode format to be recognized. Only one barcode type can be recognized per node. The following barcode formats are supported:

- AZTEC
- CODABAR
- CODE_39
- CODE_93
- CODE_128
- DATA_MATRIX
- EAN_8
- EAN_13
- ITF
- MAXICODE
- PDF_417
- QR_CODE
- RSS_14
- RSS_EXPANDED
- UPC_A
- UPC_E
- UPC_EAN_Extension

DPI - The DPI to use when converting the document pages to be scanned for barcodes. The DPI value does not alter the original document and is only used to set the quality of the image being sent to the barcode engine. From our testing, a resolution of 300 DPI produces the best results. To improve performance, you can try using a lower DPI setting but it may reduce accuracy.

Split: Choose to split the document Before or After the barcode when found

Search

Defines how the document will be searched for barcodes.

Entire Page - Search the document page by page and split on any barcode found.

Selected Area - Search the document page by page and split only if a barcode is found in the specified area of the page.

Output

Separate Files: send an individual message payload for each split of the document created

Single zip file: send all created document split files packaged in a single zip file to the message payload

File name pattern: Enter a filename for the files added to the zip archive. Each name will have the document page number appended to the name entered in this field. Variables may also be used to further distinguish each of the file separations.

Watermark Node

The Watermark node is used to add a text or image watermark to PDF files.

General Settings

You have the option to add either a text or image content to the document. The options will change based on whether or not text or image is selected.

Text Content Options

Font - The font for the watermark

Font Size - The font size for the watermark

Font Color - The font color for the watermark

B - Makes all of the text **Bold**

I - Makes all of the text *Italic*

Border - Sets a border around the watermark text

Border Color - Sets the color of the border

Width - Sets the width of the border

Background - Background color settings for the watermark text

Text - Enter the text to be displayed on the watermark

Insert - Use these options to insert custom variables within the content sections. Place the cursor where you would like the text and then click on the variable option you want to insert. These variables will be used when the headers and footers are placed on the document

- Page Label - The page label for the page the content is being added
- Date - creates a date variable
- Page Number - creates a page number variable
- (x) - [Variable Insert Tool](#)

Image Watermark Options

File - The path to the image file. Accepted formats are jpg, png, gif, & tiff.

Scale – The scale to apply to the image (100% for the full-size image)

Appearance

Units - Units to use when calculating the position of the watermark. This can be inches, centimeters, millimeters, or points. Points are calculated in the PDF standard, 72 points per inch.

Horizontal – The horizontal location is relative to the left, right, or center of the page according to the choice in the drop down box. The number entered here is interpreted in units.

Vertical – The vertical location is relative to the top, bottom, or center of the page according to the choice in the drop down box. The number entered here is interpreted in units.

Rotation – Rotate the watermark (text or image) by the given degrees clockwise.

Transparency – Transparency of the watermark. 100% is invisible and 0% is opaque.

Show on Screen - Whether or not to show the watermark when viewing the document

Show on Print - Whether or not to show the watermark when the document is printed

Behind Page Content - Places the watermark under the page content instead of on top

Pages

All Pages: all pages in the document

Page Range: set custom range of pages if needed using values separated by commas. For example, to print only pages 2 to 4 & 6 to 12 & 20 of a 30 page document enter “2-4, 6-12, 20”. Documents using Page Labels will require the exact page label to be entered (i.e. iv, v, etc...)

First Page: the first page of the document

Last Page: the last page of the document

Subset: Subset of the currently set page range to print. Choose from the below options

- All pages in range: prints all the pages in the set range
- Even pages only: prints only the even pages in the set range (i.e. 2, 4, 6, etc...)
- Odd pages only: prints only the odd pages in the set range (i.e. 1, 3, 5, etc...)

PDF Preflight Nodes

PDF Preflight nodes are standard processing nodes that can both verify document compliance and convert PDFs to meet various ISO PDF archival compliance standards.

Processing nodes are designated with a **Grey Rectangle** shape:



PDF Preflight Nodes

[Convert to PDF/A](#) - Convert PDF documents to the specified ISO PDF archival formats

[PDF/A Validation](#) - Preflight and compliance verification to ensure the document meets ISO 19005 PDF standards

[PDF/UA Validation](#) - Preflight and compliance verification to ensure the document meets ISO 14289 PDF standards

[PDF/X Validation](#) - preflight and compliance verification to ensure the document meets ISO 15930 PDF standards

[ZUGFeRD Validation](#) - Preflight and compliance verification to ensure the document meets German Electronic Invoice Forum Standards

PDF to PDF/A Node

The PDF to PDF/A node converts PDF documents to the specified ISO PDF archival formats. These document formats were designed so that they will always render exactly the same as when they were saved.

Below are the available PDF archival standards that PDF Studio is able to convert.

- PDF/A-1b
- PDF/A-2b
- PDF/A-3b

General Settings

Profile: Select the PDF/A format you wish to convert the documents to.

PDF/A-1b: Use of PDF 1.4 to create a “minimal compliance” level for PDF/A. PDF/A-1b requirements are meant to ensure that the rendered visual appearance of the file is reproducible over the long-term. It requires exact visual reproduction only.

PDF/A-2b: A new development of PDF/A to address some of the new feature added with versions 1.5, 1.6 and 1.7 of the PDF Reference. PDF/A-2 is backwards compatible, i.e. all valid PDF/A-1 documents should also be compliant with PDF/A-2. However PDF/A-2 compliant files will not necessarily be PDF/A-1 compliant. Based on PDF 1.7 (as defined in ISO 32000-1) which supports a range of improvements in document technology such as JPEG2000 compression, transparency effects and layers, the embedding of OpenType fonts, and provisions for digital signatures in accordance with the PDF Advanced Electronic Signatures standard. PDF/A-2 also allows archiving of sets of PDF/A compliant documents as individual documents in one file.

Note: *The PDF/A-2 support for JPEG 2000 is restricted in ways that increase compatibility with PDF/X, e.g., constraining the number of color channels (to 1, 3, or 4)*

PDF/A-3b: adds one feature to PDF/A-2. Permitting the embedding within a PDF/A file (or files) in any other format, not just other PDF/A files (as permitted in PDF/A-2). This has important implications for archival

Note: *In a PDF/A-3 file, any embedded files should be considered 'non-archival'. In other words, the embedded file is considered as only of short-term or temporary use. Only the primary PDF content with its visible page display should be considered as 'archived' for the long term.*

PDF/A conversion options

Unsupported Annotations - Choose whether to "Delete" any unsupported annotations or to "Fail" (i.e. do not convert the original PDF to PDF/A).

Transparency - Choose whether to "Remove" any transparency in the document or to "Fail" (i.e. do not convert the original PDF to PDF/A).

Embedded Files - Choose whether to "Delete" any embedded file in the document or to "Fail" (i.e. do not convert the original PDF to PDF/A).

If conversion fails

Use this section to set the settings to apply when the conversion of the document to PDF/A fails:

Add annotations to document - Check this box to add annotations when there were specific issues with the document that prevented it from being converted to PDF/A.

Append report to document - Choose this box to add a report at the end of the document with issues that prevented it from being converted to PDF/A.

PDF/A Validation Node

The PDF/A Validation node provides PDF/A preflight and compliance verification to ensure the document meets various archival compliance formats defined by ISO 19005 PDF standards. Once verification is complete the results or report can be appended to the document. The document will be routed based on whether or not the verification passes or fails.

General Settings

Profile - Select the standard that you wish to verify

- PDF/A-1a - Level A (accessible) conformance
- PDF/A-1b - Level B (basic) conformance
- PDF/A-2b - Level B (basic) conformance
- PDF/A-2u - Level B (unicode) conformance
- PDF/A-3b - Level B (basic) conformance

On Fail

Add comments to document: When checked, will add an annotation for each preflight error with the details of the error in the annotation comment

Append report to document: When checked, appends a Preflight Results report to the end of the document

PDF/UA Validation Node

The PDF/UA Validation node (User Accessibility) provides PDF/A preflight and compliance verification to ensure the document meets user accessible compliances defined by ISO 14289 PDF standards. Once verification is complete the results or report can be appended to the document. The document will be routed based on whether or not the verification passes or fails.

General Settings

Profile - Fixed as there are no other PDF/UA profiles available

On Fail

Add comments to document: When checked, will add an annotation for each preflight error with the details of the error in the annotation comment

Append report to document: When checked, appends a Preflight Results report to the end of the document

What is PDF Accessibility

PDF Accessibility (typically called PDF/UA which stands for “User Accessibility” or ADA stands for “Americans with Disabilities Act”) means the PDF document contains features that make it more accessible for people with disabilities, such as mobility impairments, blindness, and low vision.

PDF/UA

PDF/UA is the informal name for ISO 14289, the International Standard for accessible PDF technology. A technical specification intended for developers implementing PDF writing and processing software, PDF/UA provides definitive terms and requirements for accessibility in PDF documents and applications. For those equipped with appropriate software, conformance with PDF/UA ensures accessibility for people with disabilities who use assistive technology such as screen readers, screen magnifiers, joysticks and other technologies to navigate and read electronic content.

- Wikipedia: [PDF/UA](#)

ADA Compliance

ADA compliance refers to the Americans with Disabilities Act requirements that companies and organizations make every effort to make education accessible to those with disabilities including those who are visually and audibly impaired.

Format Details

PDF/UA and ADA Compliance is not a separate file-format, but instead uses the PDF format and features invented by Adobe Systems to ensure documents are accessible to all users.

Some of the features of a PDF/UA or ADA compliant PDF include:

- Searchable text
- Bookmarks for documents over 9 pages
- Document tags
- Alt Text used to describe an image to one visually impaired
- Logical reading order (left-to-right) in tables
- No background images or watermarks
- Table rows that don't split across pages
- Document Title
- Form fields with tool-tips (descriptions)

PDF/X Validation Node

The PDF/X Validation node provides PDF/X preflight and compliance verification to ensure the document meets various archival compliances defined by ISO 15930 PDF standards. Once verification is complete the results or report can be appended to the document. The document will be routed based on whether or not the verification passes or fails.

General Settings

Profile - Select the standard that you wish to verify

- PDF/X-1a:2001 – ISO 15930-1
- PDF/X-1a:2003 – ISO 15930-4
- PDF/X-3:2002 – ISO 15930-3
- PDF/X-3:2003 – ISO 15930-6

On Fail

Add comments to document: When checked, will add an annotation for each preflight error with the details of the error in the annotation comment

Append report to document: When checked, appends a Preflight Results report to the end of the document

ZUGFeRD Validation Node

The ZUGFeRD Validation node provides PDF/A preflight and compliance verification to ensure the document meets the compliances defined by the German Electronic Invoice Forum. Once verification is complete the results or report can be appended to the document. The document will be routed based on whether or not the verification passes or fails.

General Settings

Profile - Fixed as there are no other ZUGFeRD profiles available

On Fail

Add comments to document: When checked, will add an annotation for each preflight error with the details of the error in the annotation comment

Append report to document: When checked, appends a Preflight Results report to the end of the document

File Operation Nodes

Files Operation nodes are standard processing nodes that can perform basic system file operations if needed during workflow processing.

Processing nodes are designated with a **Grey Rectangle** shape:



File Operation Nodes

Copy File - Makes a copy of a specified file on the system

Create Directory - Creates a new directory / folder on the system

Delete File - Deletes a specified file from the system

Move File - Moves a file to a new location on the system

Read File - Reads a specified file from the system into the message payload

Read Files from Folder - Reads multiple files from a directory / folder into the message payload

Rename File - Renames a specified file on the system

Copy File Node

The Copy File Node is used to copy local files on the system. Files can also be renamed during the copy process if needed.

General Settings

Source File - the full path to the file to be copied

Target Directory - the full path of the directory the file will be copied to

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

Rename File - Check this option if you wish to rename the file after it is copied

Create Parent Directories: When checked, if the target path does not exist then it will be created. Otherwise an error will be thrown.

File Name - New file name to use when the "Rename File" option is selected.

Options

Write Mode: Determines whether a create new file or append to an existing file such as updating a .csv record.

- Create new file: Always create a new file in the directory.
- Append: If the file name already exists, add the message content to the end of the existing file. This should only be used for example when adding to simple files such as adding additional rows to a log or csv file. Complex files such as PDFs can not simply be appended in this way.

Name Collision Logic: When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have an unused name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- Add unique numeric suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- Add unique alphabetic suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _a, _b, etc...)

- Overwrite Files: Overwrites the existing file in the original storage location that contains the exact same name
- Fail: Sends the message payload to trouble handling

Create Directory Node

The Create Directory Node allows you to create custom directories local to the server if needed for document processing.

General Settings

Directory Path - the full path of the directory to be created

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

Options

Name Collision Logic: When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have an unused name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- Add unique numeric suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- Add unique alphabetic suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _a, _b, etc...)
- Overwrite Files: Overwrites the existing file in the original storage location that contains the exact same name
- Fail: Sends the message payload to trouble handling



Delete File Node

The Delete File Node allows you to delete a specified file from the server. This is useful when working with temp files or other local files on the server that may no longer be needed after being processed.

General Settings

File Path - the full path to the file to be deleted

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*



Move File Node

The Move File Node is used to move local files on the system. Files can also be renamed during the copy process if needed.

General Settings

Source File - the full path to the file to be moved

Target Directory - the full path of the directory the file will be moved to

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

Rename File - Check this option if you wish to rename the file after it is copied

Create Parent Directories: When checked, if the target path does not exist then it will be created. Otherwise an error will be thrown.

File Name - New file name to use when the "Rename File" option is selected.

Options

Write Mode: Determines whether a create new file or append to an existing file such as updating a .csv record.

- Create new file: Always create a new file in the directory.
- Append: If the file name already exists, add the message content to the end of the existing file. This should only be used for example when adding to simple files such as adding additional rows to a log or csv file. Complex files such as PDFs can not simply be appended in this way.

Name Collision Logic: When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have an unused name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- Add unique numeric suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- Add unique alphabetic suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _a, _b, etc...)

- Overwrite Files: Overwrites the existing file in the original storage location that contains the exact same name
- Fail: Sends the message payload to trouble handling

Read File Node

The Read File Node takes the specified file and loads it into the message payload. This will replace any existing payload in the message.

General Settings

File Path - the full path to the file that is to be loaded into the message body

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

Delete source file - when checked will delete the original source file once successfully loaded into the message.



Read Files from Folder Node

The Read Files from Folder Node allows you to read multiple files at once to then be inserted into the message payload. This will replace any existing payload in the message. It will load files based on a specified file filter. Once read the files can be sent as separate individual messages or a single payload containing all of the files in a zipped folder.

General Settings

Directory Path: the full path to a local directory (on the server) to read files from

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

Delete source file - when checked will delete the original source file once successfully loaded into the message.

Include Subfolders: Check the this option to include any files found in folders within the specified folder.

File Filter

Options that define the properties of the files to be picked up

File Name Pattern: List of allowed extensions separated by a comma and a space. (For example: .png, .jpeg, .jpg, .tiff). You may select a file name pattern, including the asterisk character. The server will limit its view to those files which match the pattern.

Note: *Use the File Types chooser to easily insert file name patterns for common file types*

Created: Picks up files that are created Before or After the specified date

Modified: Picks up files that are modified Before or After the specified date

File Size: Picks up files that are Less Than or Greater Than specified size

Output

Separate Files: send an individual message payload for each file found in the specified directory

Single zip file: send all files found in the directory packaged in a single zip file to the message payload



Rename File Node

The Rename File Node allows you to rename a local file on the system.

General Settings

File Path - the full path to the file to be renamed

Note: *This file is local to where the server is running not the PAS Manager and so the file path must follow the format set by the operating system of the server.*

New File Name - the new name to change the above file to

Options

Write Mode: Determines whether to create a new file or append to an existing file such as updating a .csv record.

- Create new file: Always create a new file in the directory.
- Append: If the file name already exists, add the message content to the end of the existing file. This should only be used for example when adding to simple files such as adding additional rows to a log or csv file. Complex files such as PDFs can not simply be appended in this way.

Name Collision Logic: When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have an unused name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- Add unique numeric suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- Add unique alphabetic suffix: appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _a, _b, etc...)
- Overwrite Files: Overwrites the existing file in the original storage location that contains the exact same name
- Fail: Sends the message payload to trouble handling

Workflow Variables

PDF Automation Server allows you to create and use variables throughout the flow. Variables allow you to create more dynamic workflows by providing access to additional information without the need for coding. This information can include: information on the message being processed, system details (i.e. date/time) and custom created values.

See the topics below for more information:

Creating Variables - how to create custom variables for your flow

Variable Syntax - using variables within flow properties

Variable Formatting - defining formats for specific variables

Variable Insert Tool - user friendly tool to insert variables into property fields

Create Variable Node

The Create Variable node allows you to define one or more custom variables that can be used in the flow. Any variable that is created will be available in all following nodes for the workflow and used in any field by using the [Variable Insert Tool](#) or manually typing the variable using the [Variable Syntax](#) "\${usr.variableName}"

General Settings

Variable Name: The name of the variable to be created

Type: PAS currently supports the following user defined data types for variables

- String: a plain text string
- Number: a floating point number
- Boolean: single binary value such as true or false
- Date: A moment in time, including date and/or time information

Format: Sets the default format for the variable. The format can also be set dynamically at output time using [Variable Formatting](#)

Default Value: The default value for the newly created variable. Can be left empty if required.

Variable Formatting

Variables require a default format to be set in order for to be used by the workflow. You can use one of the predefined formats in the drop down or write your own using the following formatting symbols

String

NO formatting options, plain text strings only

Numbers

0 = digit placeholder (000 = 001)

= digit no placeholder (### = 1)

. = decimal separator (#.# = 0.5)

, = grouping separator (#,### = 1,000)

Dates

yy = two-digit year

yyyy = four-digit year

m = month (1-12)

mm = two-digit month (01-12)

mmm = three letter month abbreviation (01=Jan)

mmmm = full month name (01=January)

d = day of month (1-31)

dd = two-digit day of month (01 - 31)

H = hours (1-23)

HH = two digit hour (00 - 23) (AM/PM NOT allowed)

M = minutes (0-59)

MM = two digit minute (00 - 59)

s = seconds (0-59)

ss = two digit second (00 - 59)

h = hour (0 - 12 | 12-hour AM/PM format)

hh = two digit hour (00 - 12 | 12-hour AM/PM format)

tt = AM/PM based on the time

zz = time zone (Pacific Daylight Time = PDT)

zzzz = time zone (Pacific Daylight Time)

Boolean

True / False

1 / 0 = binary format

yes / no

Variable Syntax

The variable syntax is the programming language used to access or reference a specified variable. The correct syntax must be used when referencing variables or the flow could fail to run.

Basic Syntax

The basic variable syntax is:

`$(category.variable)`

- Variables are surrounded by dollar sign & square brackets. This helps PAS to recognize it as a variable
- No spaces are used in the variable syntax
- Variables are defined in two parts:
 - category - the first part referencing the group the variable belongs to, see Variable Categories below
 - variable - the second part is the actual variable to be used

Variable Categories

msg = Message

Variables related to the message currently being processed through the flow. These variables are dynamic and can change based on what actions a node performs on the message.

src = Source

Variables related to the source of the original payload that started the flow. These variables are static and never change once the process begins

sys = System

System variables return basic information from the operating system or PAS server details

usr = User

User variables display a list of flow specific variables created by the user. These are only displayed if a variable has been created.

pdf = PDF Document

Specific variables related to PDF processing. These will only return a value if the payload contains a PDF document.

Variable Formatting

Variables that require formatting can be formatted using the variable functions.

Note: At RUNTIME if PAS attempts to write out a file or create a directory it checks to make sure it does not contain any invalid characters (i.e. |?:* etc...). If it does, all invalid characters will be replaced with an underscore "_"

How to Apply formatting

By default variables will be resolved using the default formatting that is defined when creating the variable. However, additional formatting can be applied later in the flow by using the **Format** variable function.

1. Place the cursor in any text field at the location you wish to apply formatting
 - Note: You can also highlight entire text to replace on insert as well
2. Click on the $f(x)$ button next to the field to launch the variable / function insert tool
3. On the second "Functions" tab use the search and select the **Format** function for the variable type being formatted and click Insert
4. The preformatted function will be inserted into the field.
5. Then replace the template **\$(myVar)** text with the variable you wish to be formatted.

Examples

Below are some formatting examples for each data type:

Number

A string representing the formatted number

Examples

- `$(format($(myVar), "0.00"))`
- `$(format($(myVar), "#.##"))`
- `$(format(01234.678, "$###,###.##"))`

Outputs

- 0.60
- .6
- \$1,234.67

Boolean

A portion of the string argument, depending on if the boolean argument is true or false

Examples

- `$(format($[myVar], "Accepted/Rejected"))`
- `$(format($[myVar], "$[myVar2]/$[myVar3]"))`
- `$(format($[myVar], "$[myVar2]"))`

Outputs

- True = "Accepted" / False = "Rejected"
- True = "myVar2" / False = "myVar3"
- True = "myVar"

Date

A string representing the formatted date

Examples

- `$(format($[myVar], "MM-dd-yy"))`
- `$(format($[myVar], "MMM, yyyy"))`
- `$(format(now(), "hh:mm aa"))`

Outputs

- 08-29-21
- Aug, 2021
- 01:22 PM

Formatting Options

Numbers

0 = digit placeholder (000 = 001)

= digit no placeholder (### = 1)

. = decimal separator (#.# = 0.5)

, = grouping separator (#,### = 1,000)

Dates

yy = two-digit year

yyyy = four-digit year

m = month (1-12)

mm = two-digit month (01-12)

mmm = three letter month abbreviation (01=Jan)

mmmm = full month name (01=January)

d = day of month (1-31)

dd = two-digit day of month (01 - 31)

H = hours (1-23)

HH = two digit hour (00 - 23) (AM/PM NOT allowed)

M = minutes (0-59)

MM = two digit minute (00 - 59)

s = seconds (0-59)

ss = two digit second (00 - 59)

h = hour (0 - 12 | 12-hour AM/PM format)

hh = two digit hour (00 - 12 | 12-hour AM/PM format)

tt = AM/PM based on the time

zz = time zone (Pacific Daylight Time = PDT)

zzzz = time zone (Pacific Daylight Time)

Variable / Function Insert Tool

The variable / function insert tool provides a visual interface to insert workflow variables or functions into fields as needed. All workflow variables or functions get resolved to a dynamic value when the flow is being executed. The dynamic value is recalculated each time in the context of the job being processed.

Variables and functions can be mixed in with any text in workflow property data fields. Variables can be manually typed however the variable insert tool makes it easy to search for and insert variables as needed.

How to Use the Variable / Function Insert Tool

1. Place the cursor in any text field at the location you wish to insert the variable or function
 - Note: *You can also highlight entire text to replace on insert as well*
2. Click on the $f(x)$ button next to the field to launch the variable / function insert tool
3. Use search and select the variable or function you wish to use and click Insert
4. The preformatted variable or function will be inserted into the field.

Variable Categories

The variables available are separated into predefined categories and groups. A description of each section can be found below. For additional details on each variable see the description in the tool.

Message

Variables related to the message currently being processed through the flow. These variables are dynamic and can change based on what actions a node performs on the message.

Source

Variables related to the source of the original payload that started the flow. These variables are static and never change once the process begins

System

System variables return basic information from the operating system or PAS server details

User

User variables display a list of flow specific variables created by the user. These are only displayed if a variable has been created.

PDF

Specific variables related to PDF processing. These will only return a value if the payload contains a PDF document.

Function Categories

The functions available are separated into predefined data types. For additional details on each function see the description in the tool.

String

Strings are used for storing plain text and can contain letters & numbers. Functions in this category manipulate or get information about String variables.

Number

Numbers store values in floating point numerical format. Functions in this category manipulate or get information about Number variables.

Boolean

Booleans store values in one of two states: true or false. Functions in this category manipulate Boolean variables.

Date

Stores a specific instance in time with millisecond precision. Functions in this category manipulate or get information about Date variables.

The Workflows List

The Workflows List panel displays a list of workflows on the server as well as their current status. It also has buttons to manage and create new Workflows.

Workflow Options

New: Starts the [Workflow Editor](#) tool

- From Template: Creates a flow using one of the template options
- Import: Imports an exported flow file

Edit: Opens the [Workflow Editor](#) tool

Note: *Workflows can only be edited when not actively running.*

Start/Stop: Starts or Stops the selected Workflow on the server

Delete: Deletes the selected Workflow from the server

Note: *Workflows can only be deleted when not actively running.*

Right Click


The following additional options are available when right clicking on a workflow in the table

Duplicate - duplicates the flow creating a new version with "_copy" appended to the name

Export - allows you to export the flow to a file to transfer to another PAS server if needed


Statuses

There are four types of statuses, each associated with an icon that will be displayed next to each of the Workflows.

 **Active:** The Workflow is currently active and watching the folders for files to process

 **Stopped:** The Workflow is currently stopped and not running

 **Processing:** The Workflow is currently processing files

 **Incomplete:** One or more of the Workflow settings are currently incorrect and need to be corrected before the Workflow can be started. See [Creating & Editing a Workflow](#) for more information.

ID

This is the name of the XML file used to store the Workflow information. This name must be completely unique to all other Workflow IDs on the server.

Name

A descriptive name set for the Workflow either when creating or editing the task

Startup

Indicates whether the Workflow is started manually or automatically when the server is started or restarted.

Manual: If the server is started or restarted you will need to manually start the Workflow again in order for it to run

Automatic: The Workflow will automatically attempt to start the Workflow anytime the server is started or restarted

***Note:** If set to automatic and you have not carefully tested the Workflow information, then you may see unpredictable results the next time this Workflow is reloaded.*

Last Started

Displays the date and time of when the Workflow was last started

Processed

Displays the number of files that have been processed since the Workflow was originally created.

The Recent Events Log

The recent events log is used to view recent events on the server. It will display the last 100 events logged in the server. This recent events list is updated every 5 seconds. Double click on an event to display additional details of that log entry.

Recent Event Log Options

Clear: Clears only the log items in the Recent Events list

Note: *Clearing the recent events list does not delete the actual log entries from the database. You can delete logs from the [Full Events Log](#) window.*

Full Log: Displays the [Full Events Log](#) window

Log Types

The log contains three types of messages associated with each event. To see additional details double click on the event.

Information: General information on the event that was performed (i.e. acquiring file, processing file, etc...)

Warning: Events that were able to complete but with warnings

Severe: Events that completely failed to complete

The Full Events Log

The Full Events Log allows you to view and search all of the logged events recorded in the database. By default the Full Log will display all logs within the database. To narrow down the results use the search function at the top of the window. Log columns can also be sorted in order by clicking on the column title.

Note: *The number of events available will be based on the [Log Settings](#).*


Full Event Log Options

Delete All: Deletes ALL logs from the database

Delete Selection: Deletes only the currently selected logs. Multiple events can be selected at once by holding down CTRL (Command on Mac) and then clicking on each file in the list.

Log Types

The log contains three types of messages associated with each event. To see additional details double click on the event in the list.

 **Information:** General information on the task that was performed (i.e. acquiring file, processing file, etc...)

 **Warning:** Tasks that were able to complete but with warnings

 **Error:** Tasks that completely failed to complete

Search Options

Job Name: Searches for any matching text for the name in the event log. This is not case sensitive

Message: Searches for any matching text for the description of the event log. This is not case sensitive

Type: Searches for events based on the types listed above

Date: Select a date range to search within the log

Reset: Resets all of the search options to default displaying all of the logs found in the database

Supported File Types

PDF Automation Server supports converting certain non-PDF file types into PDF Documents. The current supported types are:

- Image Files: *.png, *.jpg, *.jpeg, *.jpe, *.gif, *.tif & *.tiff.
- Word Files: *.doc and *.docx
- Excel Files: *.xlsx
- PowerPoint Files: *.pptx
- Text Files: *.txt

The Jobs List

The Jobs List panel displays a list of jobs on the server as well as their current status. It also has buttons to manage and create new jobs.

Job Options

New: Starts the [New Job Wizard](#) to create a new automation job

Edit: Opens the job properties to begin [Editing a Job](#)

***Note:** Jobs can only be edited when not actively running.*

Start/Stop: Starts or Stops the selected job on the server


Delete: Deletes the selected job from the server

***Note:** Jobs can only be deleted when not actively running.*


Statuses

There are four types of statuses, each associated with an icon that will be displayed next to each of the jobs.

 **Active:** The job is currently active and watching the folders for files to process

 **Inactive:** The job is currently stopped and not running

 **Processing:** The job is currently processing files

 **Incomplete:** One or more of the job settings are currently incorrect and need to be corrected before the job can be started. See [Editing a Job](#) for more information.

ID

This is the name of the XML file used to store the job information. This name must be completely unique to all other job IDs on the server. It is possible to use the operating system to change the file name when the server is not running. Never attempt this while the server is running the job.

***Note:** After changing the file name the server must be restarted in order for PAS to pick up the new ID.*

Name

A descriptive name set for the job either when creating or editing the task

Type

Displays the actual job type that was selected when it was created

Startup

Indicates whether the job is started manually or automatically when the server is started or restarted.

Manual: If the server is started or restarted you will need to manually start the job again in order for it to run

Automatic: The job will automatically attempt to start the job anytime the server is started or restarted

Note: *If set to automatic and you have not carefully tested the job information, then you may see unpredictable results the next time this job is reloaded.*

Start Time

Displays the date and time of when the job was started

Processed

Displays the number of files that have been processed since the job was originally created.

The Recent Events Log

The recent events log is used to view recent events on the server. It will display the last 100 events logged in the server. This recent events list is updated every 5 seconds. Double click on an event to display additional details of that log entry.

Recent Event Log Options

Clear: Clears only the log items in the Recent Events list

Note: *Clearing the recent events list does not delete the actual log entries from the database. You can delete logs from the [Full Events Log](#) window.*

Full Log: Displays the [Full Events Log](#) window

Log Types

The log contains three types of messages associated with each event. To see additional details double click on the event.

Information: General information on the event that was performed (i.e. acquiring file, processing file, etc...)

Warning: Events that were able to complete but with warnings

Severe: Events that completely failed to complete

The Full Events Log

The Full Events Log allows you to view and search all of the logged events recorded in the database. By default the Full Log will display all logs within the database. To narrow down the results use the search function at the top of the window. Log columns can also be sorted in order by clicking on the column title.

Note: *The number of events available will be based on the [Log Settings](#).*


Full Event Log Options


Delete All: Deletes ALL logs from the database

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Log Types

The log contains three types of messages associated with each event. To see additional details double click on the event in the list.

 **Information:** General information on the task that was performed (i.e. acquiring file, processing file, etc...)

 **Warning:** Tasks that were able to complete but with warnings

 **Error:** Tasks that completely failed to complete

Search Options

Job Name: Searches for any matching text for the name in the event log. This is not case sensitive

Message: Searches for any matching text for the description of the event log. This is not case sensitive

Type: Searches for events based on the types listed above

Date: Select a date range to search within the log

Reset: Resets all of the search options to default displaying all of the logs found in the database

Creating a New Job

To create a new job, simply press the "New Job" button to start the New Job Wizard. The wizard will guide you through the Job creation process, allowing you to view and enter the most commonly used features for a particular Job type. To enter additional information or to view the full features of the PDF Automation Server Job properties, select the Edit Job properties check box on the Output Page at the end of the wizard.

Note: *At each step the wizard will check to make sure that all fields have been correctly filled out and you will be prevented from going to the next step until all options validate correctly.*

How to Create a New Job

Step 1: Select a job

Select the **Job Type** and some initial settings for the new job you wish to create.

Job Types: Use this list to choose the type of job that you would like to create.

Name: Enter a descriptive name for the job.

Delay: Enter the approximate delay (in seconds) between each scan of the source directory.

Source: Choose whether you want to monitor/watch a folder, email account, or ftp server for incoming files.

Watch a local folder for files: Choose the local directory to watch for files

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Watch an FTP server for files: Set the FTP settings for the folder to watch

- FTP Server: the URL of the FTP server
- Path: the directory on the FTP server to watch for files
- User: the user name to access the server
- FTP Password: the password for the user set above

Check E-mail for attached files: Set the settings for the email address to check for file attachments. These settings will need to be obtained from your email service provider.

- Server Name: The email server name
- Server Type: POP3 or IMAP

- SSL: Check if the server requires SSL encryption
- Recipient: the email address used to access the server
- Email Password: the password for the user set above

Password: Enter a password to use when opening any source PDF documents that are password protected

Step 2: Store the Original File

Select the options for storing the original files. Using the New Job Wizard, the available options include saving a the file to a folder and posting the file using FTP.

Save the File to a Folder: Select the local folder to store the original files

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Post the file using FTP: Set the FTP server options to store the original files

- FTP Server: the URL of the FTP server
- Path: the directory on the FTP server to watch for files
- User: the user name to access the server
- FTP Password: the password for the user set above

Step 3: Job specific settings

This screen allows you to set some basic settings for the job selected in Step 1.

- [Add Headers & Footers](#)
- [Add Watermarks](#)
- [Clear Security](#)
- [Convert Excel Documents](#)
- [Convert PDF to HTML5](#)
- [Convert PDF to Images](#)
- [Convert PDF to PDF/A](#)
- [Convert Text to PDF](#)
- [Convert Word Documents](#)
- [Crop Pages](#)
- [Custom Job](#)
- [Digitally Sign PDF](#)
- [Edit Document Properties](#)
- [Export Annotations](#)
- [Export Field Values](#)
- [Extract Text](#)
- [Flatten Annotations](#)
- [Flatten Fields](#)
- [Import Annotations](#)
- [Import Field Values](#)
- [Insert Pages](#)

- [Move Files with No Processing](#)
- [Optimize PDF](#)
- [Preflight](#)
- [Print PDF Files](#)
- [Recognize Text Using OCR](#)
- [Set Passwords & Permissions](#)
- [Split PDF](#)

Step 4: Output/Finish options

The final step allows you to set the output folder and also select a printer and printing options for the processed output file. The final option also allows you to start the Job immediately. If not started immediately you will have to start the job manually when ready.

Output File Options

Save the output file to a folder: Set the location to save the output files.

Print the output file: When checked the output file will be printed using the options set

Printer: Select the printer on the attached to the server machine to print from

Note: *This list will only display printers attached to the server not the PAS Manager.*

Auto Rotate: rotate the printout to match the width and length with the paper.

Center In Printable Area: center the page in the paper. No effect if the pages in a document are larger than the paper they are being printed on.

Shrink Large Pages to Printer Margins: shrink pages so that they fit in the paper. No effect if the pages in a document are smaller than the paper they are being printed on.

Expand Small Pages to Printer Margins: expand pages to fill the paper they are being printed on. No effect if the pages in a document are larger than the paper they are being printed on.

Start the Job

Select this option to immediately start and run the job on the server.

PDF Automation Server has the following job types available when processing PDF documents.

- [Add Headers and Footers](#): Options when adding headers and footers to PDF documents.
- [Add Watermarks](#): Options when adding watermarks to PDF documents.
- [Clear Security](#): Options when clearing security on PDF documents.
- [Convert Excel Documents](#): Options when converting Excel documents to PDFs
- [Convert PDF to HTML5](#): Options when converting a PDF to HTML5
- [Convert PDF To Images](#): Options when converting a PDF to images.
- [Convert PDF To PDF/A](#): Options when converting a PDF to PDF/A sub-format.
- [Convert Text to PDF](#): Options when converting text documents to PDF.
- [Convert Word Documents](#): Options when converting Word documents to PDF and images.
- [Crop Pages](#): Options when cropping PDF documents including Crop Box margins and page numbers.
- [Custom Job](#): Allows you to setup a custom job created by Qoppa
- [Digitally Sign PDF](#): Options when applying digital signatures to PDF documents.
- [Edit Document Properties](#): Options when editing PDF document properties.
- [Export Annotations](#): Options when exporting PDF annotations.
- [Export Field Values](#): Options when exporting field values from PDF forms.
- [Extract Text](#): Options when extracting text from PDF documents.
- [Flatten Annotations](#): Options when flattening annotations in PDF documents.
- [Flatten Fields](#): Options when flattening interactive fields in PDF forms.
- [Import Annotations](#): Options when importing annotations into PDF documents.
- [Import Field Values](#): Options when importing field data into interactive PDF forms.
- [Insert Pages](#): Options when inserting pages into PDF documents.
- [Move Files with No Processing](#): Options when moving or transferring (PDF) documents.
- [Optimize PDF](#): Options when optimizing PDF documents.
- [Preflight](#): Options when checking preflight document compliance (PDF/X and PDF/A)
- [Print PDF Files](#): Options when printing PDF documents such as what printer to send it to.
- [Recognize Text Using OCR](#): Options when recognizing and adding text to PDF documents using OCR.
- [Set Security \(Passwords and Permissions\)](#): Options when setting passwords & permissions on PDF documents.
- [Split PDF](#): Options on how to split PDF documents by page, bookmarks, text or blank page.

Add Headers & Footers

The Add Header Footer tab is used to add headers and footers to PDF files. The tab allows the user to set options regarding the headers and footers and then allows for routing of the output file after optionally changing its name. The tab has the following sections:

Headers / Footers Settings

Use this section to set options regarding the headers and footers that will be applied to the PDF documents when being processed.

Margins

Units - Units to use when calculating the position of the header and footer. This can be inches, centimeters, or points. Points are calculated in the PDF standard, 72 points per inch.

Top - The distance of the margin from the top

Bottom - The distance of the margin from the bottom

Left - The distance of the margin from the left

Right - The distance of the margin from the right

***Note:** The top margin applies to headers only, the bottom margin applies to footers only.*

Appearance

Font - The font for the header and footer

Font Size - The font size for the header and footer

Font Color - The font color for the header and footer

B - Makes all of the text **Bold**

I - Makes all of the text *Italic*

Border - Sets a border around the header and footer text

Background - Background color settings for the header and footer text

Pages

Page Range - The range of pages to apply headers and footers.

- All Pages: all pages in the document
- First Page: only adds headers and footers to the first page of each document
- Last Page: only adds headers and footers to the last page of each document
- Page Range: set the page range using the From and To options
- Even Pages Only: only adds headers and footers the even pages
- Odd Pages Only: only adds headers and footers the odd pages

Header & Footer

This section defines the text content for the different mark areas in the document

Header Left - Text placed in the left of the header

Header Center - Text placed in the center of the header

Header Right - Text placed in the right of the header

Footer Left - Text placed in the left of the footer

Footer Center - Text placed in the center of the footer

Footer Right - Text placed in the right of the footer

Insert - Use these options to insert custom variables within the content sections. Place the cursor where you would like the text and then click on the variable option you want to insert. These variables will be used when the headers and footers are placed on the document

- Date - creates a date variable
- Page Number - creates a page number variable
- Bates Number - creates a bates number variable
- Other - displays a list of other supported variables
 - \$page - The page number
 - \$totalpages - The number of pages in the document
 - \$filename - The file name that the document was opened from
 - \$filepath - The full file path that the document was opened from
 - \$date - The current date formatted as Nov 28, 2007
 - \$shortdate - The current date formatted as 11/28/07
 - \$time - The current time
 - \$day - The current day of the month
 - \$month - The current month, using two digits
 - \$year - The current year, using four digits
 - \$shortyear - The current year, using two digits
 - \$second - The current second
 - \$minute - The current minute

- \$hour – The current hour, 1-12
- \$ampm – AM or PM
- \$longhour – The current hour, 0-23

Preview

Allows you to see how the header and footer will look on a PDF document of your choice. Click "Browse" to select a document to use for the preview. You can use the arrow buttons and drop down to navigate and preview a different page in the document. Once complete click on "Go Back" to return to the header & footer settings.

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Add Watermarks

The Add Watermark tab is used to add a text or image watermark to PDF files. The tab allows the user to set options regarding the watermark and then allows for routing of the output file after optionally changing its name. The tab has the following sections:

Watermark Settings

Use this section to set options regarding the watermark that will be applied to the PDF documents.

Appearance

Units - Units to use when calculating the position of the watermark. This can be inches, centimeters, millimeters, or points. Points are calculated in the PDF standard, 72 points per inch.

Horizontal – The horizontal location is relative to the left, right, or center of the page according to the choice in the drop down box. The number entered here is interpreted in units.

Vertical – The vertical location is relative to the top, bottom, or center of the page according to the choice in the drop down box. The number entered here is interpreted in units.

Rotation – Rotate the watermark (text or image) by the given degrees clockwise.

Transparency – Transparency of the watermark. 100% is invisible and 0% is opaque.

Pages

Page Range - The range of pages to add watermarks to.

- All Pages: adds watermarks to all pages in the document
- First Page: only adds a watermark to the first page of each document
- Last Page: only adds a watermark to the last page of each document
- Page Range: set the page range using the From and To options
- Even Pages Only: only adds watermarks the even pages
- Odd Pages Only: only adds watermarks the odd pages

Watermark

You have the option to add either a text or image watermark to the document. The options will change based on whether or not text or image is selected.

Text Watermark Options

Text - Enter the text to be displayed on the watermark

Insert - Use these options to insert custom variables within the content sections. Place the cursor where you would like the text and then click on the variable option you want to insert. These variables will be used when the headers and footers are placed on the document

- Date - creates a date variable
- Page Number - creates a page number variable
- Bates Number - creates a bates number variable
- Other - displays a list of other supported variables
 - \$page - The page number
 - \$totalpages - The number of pages in the document
 - \$filename - The file name that the document was opened from
 - \$filepath - The full file path that the document was opened from
 - \$date - The current date formatted as Nov 28, 2007
 - \$shortdate - The current date formatted as 11/28/07
 - \$time - The current time
 - \$day - The current day of the month
 - \$month - The current month, using two digits
 - \$year - The current year, using four digits
 - \$shortyear - The current year, using two digits
 - \$second - The current second
 - \$minute - The current minute
 - \$hour - The current hour, 1-12
 - \$ampm - AM or PM
 - \$longhour - The current hour, 0-23

Font - The font for the watermark

Font Size - The font size for the watermark

Font Color - The font color for the watermark

B - Makes all of the text **Bold**

I - Makes all of the text *Italic*

Border - Sets a border around the watermark text

Background - Background color settings for the watermark text

Alignment - choose how the text should be aligned




-  Aligns the text to the left
-  Aligns the text in the center
-  Aligns the text to the right

Image Watermark Options

File – the full path to the image file on the server to watch for files. Accepted formats are jpg, png, gif, & tiff.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Scale – The scale to apply to the image (100% for the full-size image)

Preview

Allows you to see how the header and footer will look on a PDF document of your choice. Click "Browse" to select a document to use for the preview. You can use the arrow buttons and drop down to navigate and preview a different page in the document. Once complete click on "Go Back" to return to the header & footer settings.

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Clear Security

The Clear Security tab is used when the permissions and passwords in a PDF file need to be removed. The tab is very simple as there are no options on how to clear the security. After the security is cleared, there are options for routing of the output file after optionally changing its name. The tab has the following sections:

- **Unlock the Permissions** - Use this section to enter passwords to open the document if the document is password protected. If the document is not password protected, leave this section un-selected.
- **Clear Security** - There are no options in this section, the section is displayed for information only.

Clear Security Settings

This function will open PDF files and clear any permission security present in the file. There are no options to this function.

Clear Security

Clears all permissions and grants all permissions if the file is unlocked successfully.

Unlock the Permissions

Enter a password to use when attempting to clear the document security.

Passwords to Try: To set a password click in the password field or on the Edit button. Then enter the password you want to be used. Do this for up to four passwords to try on password protected PDFs during the process.

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Convert Excel Documents to PDF

The Convert Excel tab is used to convert Microsoft® Excel files to PDF files. It also allows to export the files to images and to send them to the printer. The tab allows the user to set security and permissions on the output PDF file, convert it to images and route it after optionally changing its name. The tab has the following sections:

Add Permissions

Compatibility

Compatibility - Sets the compatibility for the PDF security in the converted document. The options are either Acrobat 5.0 (High 128-bit RC4) and later or Acrobat 7.0 (High 128-bit AES) and later.

Security for Document

Set the "Document Open" Password – also known as the user password, it is the password that will be required when the documents are opened.

Security for Permissions

Set the "Change Permissions" Password – also known as the owner password, it is the password that will be required when trying to change permissions and passwords on the documents.

Permissions

Allow High Resolution Printing – Print the document at high resolution. When this permission is granted, the following permission 'Printing' is also automatically granted.

Allow Printing - Allow printing the document

Allow Text & Graphics Extraction – Copy or otherwise extract text and graphics from the document. When this permission is granted, the following permission 'Extraction for Accessibility' is also automatically granted.

Allow Extraction for Accessibility – Extract text and graphics in support of accessibility to disabled users or other purposes

Allow Document Changes – Modify the document. When this permission is granted, the following 3 permissions (Document Assembly, Comments and Form Filling) are also automatically granted. When this permission is not granted, the following 3 permissions (Document Assembly, Comments and Form Filling) can independently be granted.

Allow Document Assembly – Assemble the document: insert, rotate or delete pages and create bookmarks or thumbnail images

Allow Annotations & Comments – Add or modify text annotations. When this permission is granted, the following permission 'Filling Form Fields & Signing' is automatically granted. When this permission is not granted, then the following permission 'Form Filling & Signing' can be granted independently. And when this permission is granted and the 'All Changes' permission is also granted, creating or modifying interactive form fields (including signature fields) is allowed.

Allow Filling Form Fields & Signing - Fill in existing interactive form fields including signature fields.

Convert to Images

In addition to converting the Microsoft® Word files to PDF an image of the file can also be created. This section sets the options when converting the document to images.

Image Creation Rules

DPI Resolution - Resolution in DPI used to render the page, 72 is the PDF native resolution.

Format - The image format used when converting the PDF documents to images

JPEG - lossy compression that will reduce image quality and size

- **Quality:** This is the quality of JPEG compression. It varies from 0 (very high compression, very low quality), to 10 (low compression, very high quality) based on the quality parameter. Some guidelines for the quality value: 8 high quality, 5 medium quality, 2 low quality.
- **Extension:** Choose to save the file as either .jpeg or .jpg

PNG - Lossless compression does not reduce quality and has no additional options

TIFF - Lossless compression does not reduce quality but allows for more than one image per file and additional compression formats

- **Compression:** Select the specific compression type for the TIFF image. The available TIFF compressions are: CCITT_RLE(B&W), Group 3 Fax (B&W), Group 4 Fax (B&W), Pack Bits, LZW, ZLib, Deflate, JPEG, No Compression.
- **One TIFF Per Page:** By default TIFF images will be created into a single file containing multiple images. Check this option to instead generate a separate TIFF image for each page.

Page Range

All - Converts all the pages of the document

Pages in the range - Converts only the pages in the designated range (if the pages exist)

File Naming Rules

Start with the PDF file name - Check this option to have the file name start with the file name of the PDF document

Add - Enter additional text to append to the end of the file name

***Note:** Page number and file extension will be appended to the pattern to create the file name.*

Minimum Digits in Page Number (Zero Pad) - the number of digits to use in the counter using zeros as padding. For example: if set to 4 digits and the current count value is 15 it will display as "0015"

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Convert PDF to HTML5

The Convert To HTML5 tab allows the user to set options when converting a PDF document to either an SVG document or an HTML wrapped around the SVG. The tab has the following sections:

Conversion Settings

This section sets the options when converting the document to images.

Convert whole document to SVG - converts the PDF document to a single .svg file

Convert pages to SVG and wrap in HTML - converts the PDF document to an SVG image and then wraps the image in HTML so that it can be displayed in any web browser

Compress Images - will convert images to JPEG lossy compression that will reduce image quality and size

JPEG quality - This is the quality of JPEG compression. It varies from 0 (very high compression, very low quality), to 10 (low compression, very high quality) based on the quality parameter. Some guidelines for the quality value: 8 high quality, 5 medium quality, 2 low quality.

Show page border - adds a single pixel black border on the PDF page.

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

[Print the PDF Document](#)

[Change the Output File Name](#)

[Save the Output File to a Folder](#)

[FTP the Output File](#)

[E-Mail the Output File](#)

Convert PDF to Images

The Convert To Images tab allows the user to set options when converting a PDF document to a series of images. The tab has the following sections:

Conversion Settings

This section sets the options when converting the document to images.

Image Creation Rules

DPI Resolution - Resolution in DPI used to render the page, 72 is the PDF native resolution.

Format - The image format used when converting the PDF documents to images

JPEG - lossy compression that will reduce image quality and size

- **Quality:** This is the quality of JPEG compression. It varies from 0 (very high compression, very low quality), to 10 (low compression, very high quality) based on the quality parameter. Some guidelines for the quality value: 8 high quality, 5 medium quality, 2 low quality.
- **Extension:** Choose to save the file as either .jpeg or .jpg

PNG - Lossless compression does not reduce quality and has no additional options

TIFF - Lossless compression does not reduce quality but allows for more than one image per file and additional compression formats

- **Compression:** Select the specific compression type for the TIFF image. The available TIFF compressions are: CCITT_RLE(B&W), Group 3 Fax (B&W), Group 4 Fax (B&W), Pack Bits, LZW, ZLib, Deflate, JPEG, No Compression.
- **One TIFF Per Page:** By default TIFF images will be created into a single file containing multiple images. Check this option to instead generate a separate TIFF image for each page.

Page Range

All - Converts all the pages of the document

Pages in the range - Converts only the pages in the designated range (if the pages exist)

File Naming Rules

Start with the PDF file name - Check this option to have the file name start with the file name of the PDF document

Add - Enter additional text to append to the end of the file name

Note: *Page number and file extension will be appended to the pattern to create the file name.*

Minimum Digits in Page Number (Zero Pad) - the number of digits to use in the counter using zeros as padding. For example: if set to 4 digits and the current count value is 15 it will display as "0015"

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Convert to PDF/A

The PDF/A tab is used to convert PDF files to PDF/A. It also allows to save the files, print them or send them. The tab has the following sections:

PDF/A Conversion Settings

Profile

Select the PDF/A format you wish to convert the documents too.

PDF/A-1b: Use of PDF 1.4 to create a “minimal compliance” level for PDF/A. PDF/A-1b requirements are meant to ensure that the rendered visual appearance of the file is reproducible over the long-term. It requires exact visual reproduction only.

PDF/A-2b: A new development of PDF/A to address some of the new feature added with versions 1.5, 1.6 and 1.7 of the PDF Reference. PDF/A-2 is backwards compatible, i.e. all valid PDF/A-1 documents should also be compliant with PDF/A-2. However PDF/A-2 compliant files will not necessarily be PDF/A-1 compliant. Based on PDF 1.7 (as defined in ISO 32000-1) which supports a range of improvements in document technology such as JPEG2000 compression, transparency effects and layers, the embedding of OpenType fonts, and provisions for digital signatures in accordance with the PDF Advanced Electronic Signatures standard. PDF/A-2 also allows archiving of sets of PDF/A compliant documents as individual documents in one file.

Note: *The PDF/A-2 support for JPEG 2000 is restricted in ways that increase compatibility with PDF/X, e.g., constraining the number of colour channels (to 1, 3, or 4)*

PDF/A-3b: adds one feature to PDF/A-2. Permitting the embedding within a PDF/A file (or files) in any other format, not just other PDF/A files (as permitted in PDF/A-2). This has important implications for archival

Note: *In a PDF/A-3 file, any embedded files should be considered 'non-archival'. In other words, the embedded file is considered as only of short-term or temporary use. Only the primary PDF content with its visible page display should be considered as 'archived' for the long term.*

PDF/A conversion options

Unsupported Annotations - Choose whether to "Delete" any unsupported annotations or to "Fail" (i.e. do not convert the original PDF to PDF/A).

Transparency - Choose whether to "Remove" any transparency in the document or to "Fail" (i.e. do not convert the original PDF to PDF/A).

Embedded Files - Choose whether to "Delete" any embedded file in the document or to "Fail" (i.e. do not convert the original PDF to PDF/A).

If conversion fails

Use this section to set the settings to apply when the conversion of the document to PDF/A fails:

Add annotations to document - Check this box to add annotations when there were specific issues with the document that prevented it from being converted to PDF/A.

Append report to document - Choose this box to add a report at the end of the document with issues that prevented it from being converted to PDF/A.

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Convert Text to PDF

This tab is used to convert text documents to PDF and then allows for routing of the output file after optionally changing its name. The tab has the following sections:

Text to PDF Settings

These options set the formatting for the PDF that is created from the text document.

Page Size

Width - The width of the newly created PDF document

Height - The height of the newly created PDF document

Units - Units to use when calculating the position of the header and footer. This can be inches, points, centimeters, or millimeters. Points are calculated in the PDF standard, 72 points per inch.

Margins

Top - The distance of the margin from the top

Bottom - The distance of the margin from the bottom

Left - The distance of the margin from the left

Right - The distance of the margin from the right

Font

Font - The font for the header and footer

Font Size - The font size for the header and footer

B - Makes all of the text **Bold**

I - Makes all of the text *Italic*

Background

Use Background - Sets an image to be used as the background on the newly created document. Enter the full path to the image file on the server. Accepted formats are jpg, png, & tiff.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Convert Word Documents to PDF

The Convert Word job is used to convert Microsoft® Word files to PDF files. It also allows to export the files to images and to send them to the printer. The tab allows the user to set security and permissions on the output PDF file, convert it to images and route it after optionally changing its name. The tab has the following sections:

Add Permissions

Compatibility

Compatibility - Sets the compatibility for the PDF security in the converted document. The options are either Acrobat 5.0 (High 128-bit RC4) and later or Acrobat 7.0 (High 128-bit AES) and later.

Security for Document

Set the "Document Open" Password – also known as the user password, it is the password that will be required when the documents are opened.

Security for Permissions

Set the "Change Permissions" Password – also known as the owner password, it is the password that will be required when trying to change permissions and passwords on the documents.

Permissions

Allow High Resolution Printing – Print the document at high resolution. When this permission is granted, the following permission 'Printing' is also automatically granted.

Allow Printing - Allow printing the document

Allow Text & Graphics Extraction – Copy or otherwise extract text and graphics from the document. When this permission is granted, the following permission 'Extraction for Accessibility' is also automatically granted.

Allow Extraction for Accessibility – Extract text and graphics in support of accessibility to disabled users or other purposes

Allow Document Changes – Modify the document. When this permission is granted, the following 3 permissions (Document Assembly, Comments and Form Filling) are also automatically granted. When this permission is not granted, the following 3 permissions (Document Assembly, Comments and Form Filling) can independently be granted.

Allow Document Assembly – Assemble the document: insert, rotate or delete pages and create bookmarks or thumbnail images

Allow Annotations & Comments – Add or modify text annotations. When this permission is granted, the following permission 'Filling Form Fields & Signing' is automatically granted. When this permission is not granted, then the following permission 'Form Filling & Signing' can be granted independently. And when this permission is granted and the 'All Changes' permission is also granted, creating or modifying interactive form fields (including signature fields) is allowed.

Allow Filling Form Fields & Signing - Fill in existing interactive form fields including signature fields.

Convert to Images

In addition to converting the Microsoft® Word files to PDF an image of the file can also be created. This section sets the options when converting the document to images.

Image Creation Rules

DPI Resolution - Resolution in DPI used to render the page, 72 is the PDF native resolution.

Format - The image format used when converting the PDF documents to images

JPEG - lossy compression that will reduce image quality and size

- **Quality:** This is the quality of JPEG compression. It varies from 0 (very high compression, very low quality), to 10 (low compression, very high quality) based on the quality parameter. Some guidelines for the quality value: 8 high quality, 5 medium quality, 2 low quality.
- **Extension:** Choose to save the file as either .jpeg or .jpg

PNG - Lossless compression does not reduce quality and has no additional options

TIFF - Lossless compression does not reduce quality but allows for more than one image per file and additional compression formats

- **Compression:** Select the specific compression type for the TIFF image. The available TIFF compressions are: CCITT_RLE(B&W), Group 3 Fax (B&W), Group 4 Fax (B&W), Pack Bits, LZW, ZLib, Deflate, JPEG, No Compression.
- **One TIFF Per Page:** By default TIFF images will be created into a single file containing multiple images. Check this option to instead generate a separate TIFF image for each page.

Page Range

All - Converts all the pages of the document

Pages in the range - Converts only the pages in the designated range (if the pages exist)

File Naming Rules

Start with the PDF file name - Check this option to have the file name start with the file name of the PDF document

Add - Enter additional text to append to the end of the file name

***Note:** Page number and file extension will be appended to the pattern to create the file name.*

Minimum Digits in Page Number (Zero Pad) - the number of digits to use in the counter using zeros as padding. For example: if set to 4 digits and the current count value is 15 it will display as "0015"

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Crop Pages

The Crop/Resize Pages tab is used to crop the PDF document. The tab has options to modify the Crop, Trim, Bleed, and Art boxes and to also specify the page range that should be modified. After the document is cropped, there are options for routing of the output file after optionally changing its name. The tab has the following sections:

Crop Pages Settings

Box

Crop box – the region to which the contents of the page are to be or cropped when displayed or printed.

Bleed box – the bounds to which the contents of the page should be clipped when output in a production environment.

Trim box – the intended dimensions of the finished page after trimming.

Art box – the extent of the page's meaningful content (including potential white space) as intended by the document creator.

Margins

Units - Select the measurement unit for the crop margins in either Inches, Points, Centimeters, or Millimeters

Top - The distance of the margin from the top

Bottom - The distance of the margin from the bottom

Left - The distance of the margin from the left

Right - The distance of the margin from the right

Page Range

All - Converts all the pages of the document

Pages in the range - Converts only the pages in the designated range (if the pages exist)

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Custom Job

The Custom Job allows you to define your own workflow with all the flexibility provided by Java programming language. Custom jobs also give access to all the advanced PDF functions available in Qoppa's [jPDFProcess PDF library](#) making it possible to inspect or manipulate the PDFs as part of the process.

[PDF Automation Server Custom Job API](#)

How to Define your Own Custom Job

Defining your own custom job will require some programming in Java. After creating the Custom Job using the [Job Creation Wizard](#), you will need to edit the job properties and use built in code editor to define the job.

To get you started, follow the link below to our knowledgebase with examples of implementations of custom processes:

[PDF Automation Server Custom Job Examples](#)

Note: *More custom process samples will be added to the knowledgebase to show how the concept can be extended to process PDF documents based on anything in the documents including Metadata or document info, form field data, text content, security or digital signatures contained in the PDF.*

Let Us Create a Custom Job for You

If you need help with defining your own custom process, we can do the coding for you. Please contact us using the form found on our [PDF consulting page](#).

Digitally Sign PDF

The Sign PDF tab is used to digitally sign PDF documents as they are received. After the document is signed, there are options for routing of the output file. The tab has the following sections:

Digital Signature Settings

The following options are available to choose the signature, set a timestamp server, or modify the appearance.

Signature File - The full path to the Digital ID file used in the signature on the server. Accepted formats are .p12 & .pfx.

***Note:** This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Password - The password needed to open the Digital ID file

View Digital IDs - When clicked will display the Digital IDs stored within the file

Digital IDs - Displays a list of all the digital IDs stored within the signature file

Signature Information

ID Password - The password for the selected digital ID. You must enter the correct password in order to be able to digitally sign the document

Reason for Signing Document - Select a reason the document was signed from the list from the below options

- I approve this document
- I am the author of this document
- I have reviewed this document
- I attest to the accuracy and integrity of this document
- I agree to the terms defined by this document

Location - Enter additional location details

Contact Information - Enter additional contact information for the signature

Create signature when missing - Check this option to create a signature even if there is no signature field present in the document

Create invisible signature - will create an invisible signature within the document

Create visible signature at - will create a signature at the location specified below

- **X**: the "X" location of the top left corner of the signature
- **Y**: the "Y" location of the top left corner of the signature
- **Width**: the width in pixels of the signature
- **Height**: the height in pixels of the signature
- **Page**: the page to place the signature in the document. You can set the First Page, Given Page, or Last Page.

Timestamp Server

Use Timestamp Server - the URL of the timestamp server

TSA Requires Authentication - check this box if the server requires authentication

User name - the user name for authentication on the timestamp server

Password - the password for authentication on the timestamp server

Signature Appearance

Image

Show Image - When checked an image can be added to the background of the digital stamp appearance

Transparency - Transparency setting for the image

File - The full path to the image file used in the signature on the server. Accepted formats are jpg, png, gif, & tiff.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Align - Allows you to align the image on the left, center, or right of the signature

Text

Show - The options below, when checked, set which digital signature properties will be displayed on the signature

- **Name**: The large text that will display the name
- **Digitally signed by**: Adds the text "Digitally signed by" before the Common Name
- **Date**: Date the signature was completed
- **Common Name**: The name associated with the digital ID
- **Organizational Unit**: The organizational unit associated with the digital ID
- **Organization Name**: The organization name associated with the digital ID
- **Locality/City**: the locality/city associated with the digital ID
- **State**: The state associated with the digital ID
- **Country**: The country associated with the digital ID
- **Email**: The email associated with the digital ID

Orientation - Sets the digital signature text to be displayed with one of two options

- Left to Right: Displays the Name on the left and all other properties in smaller text on the right
- Right to Left: Displays the Name on the right and all other properties in smaller text on the left

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Edit Document Properties

The Edit Document Properties tab is used to modify the document property information and its initial view properties. After the document properties are edited, there are options for routing of the output file. The tab has the following sections:

Document Property Settings

Title - Displays the current Title of the document. Can also be edited if desired

Author - Displays the current Author of the document. Can also be edited if desired

Subject - Displays the current Subject of the document. Can also be edited if desired

Keywords - Displays the current Keywords of the document. Can also be edited if desired

Initial Page Mode - Sets the default behavior for the navigation tab when the document is opened

- Default: Uses the default settings for the application the document is opened in
- Page Only: No navigation tab will be displayed
- Bookmarks Panel and Page: Displays the bookmarks panel when the document is opened
- Pages Panel and Page: Displays the pages panel when the document is opened
- Attachments Panel and Page: Displays the attachments panel when the document is opened
- Full Screen Mode: Displays the document in full screen mode when opened

Initial Page Layout - Sets the default behavior for the page layout when the document is opened

- Default: Uses the default settings for the application the document is opened in
- Single: Displays only a single individual page at a time
- Single Continuous: Displays all of the document's pages in a single column that can be continuously scrolled
- Facing: Displays only two pages at a time side by side with odd pages on the left and even pages on the right
- Facing Continuous: Displays all of the documents pages in two columns with odd pages on the left and even pages on the right

Initial Magnification - Sets the default magnification for the document when opened

- Default: Uses the default settings for the application the document is opened in
- Actual Size: Displays the document with a 1:1 ratio to match how the document would look if printed without any scaling
- Fit to Page: Scales the view to fit the width of the document in the PDF viewer frame

- Fit to Width: Scales the view to fit the entire document within the PDF viewer frame
- %: Sets the zoom to the specified number value

Open to Page - Sets the page number to be displayed when the document is opened

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Export Annotations

The Export Annotations tab is used when extracting annotations from PDF documents. After the annotations are exported, there are options for routing of the output file. The tab has the following sections:

Export Annotation Settings

Export Format - Choose the export format (.fdf, .xfdf)

FDF: File format created by Adobe that is supported by most PDF applications

XFDF: Extended FDF file format created by Adobe that is supported by most PDF applications

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Export Fields

The Export Field Values tab is used when extracting fields values from interactive PDF forms. After the field values are exported, there are options for routing of the output file. The tab has the following sections:

Export Field Value Settings

Export Format - Choose the export format (.fdf, .xfdf, .xdp, .xml)

FDF: File format created by Adobe that is supported by most PDF applications

XFDF: Extended FDF file format created by Adobe that is supported by most PDF applications

XDP: An XML Data package created by Adobe that is supported by most PDF applications

XML: File format that is similar to an Excel file that will contain all of the annotation information

Use field value as filename - Check this option if you wish to use a value from a field within the document to name the exported file

Field - The EXACT name of the field to use for the filename

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Extract Text

The Extract Text tab is used when extracting text from PDF documents to text files. After the text has been extracted, there are options for routing of the output file. The tab has the following sections:

Export Text Settings

Extract Range - Use this section to specify the range of pages text will be extracted from.

All - Converts all the pages of the document

Pages in the range - Converts only the pages in the designated range (if the pages exist)

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

[Print the PDF Document](#)

[Change the Output File Name](#)

[Save the Output File to a Folder](#)

[FTP the Output File](#)

[E-Mail the Output File](#)

Flatten Annotations

The Flatten Annotations tab is used when flattening annotations in PDF documents. After the annotations have been flattened, there are options for routing of the output file. The tab has the following sections:

Flatten Annotation Settings

Paint Non Printable Annotations - Check this box to paint non-printable annotations in the output flattened PDF document. Non-printable annotations are those with the "Printable" flag set to false or visibility set to "Show/Do not Print".

Note: *There are specific types of annotations that will never be flattened:*

- *Redaction Annotations (the markings before redactions are applied)*
- *Links*
- *File Attachment Annotations*
- *Sound Annotations*

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

[Print the PDF Document](#)

[Change the Output File Name](#)

[Save the Output File to a Folder](#)

[FTP the Output File](#)

[E-Mail the Output File](#)

Flatten Fields

The Flatten Fields tab is used when flattening fields in PDF interactive forms. After the fields have been flattened, there are options for routing of the output file. The tab has the following sections:

Flatten Fields Settings

Paint Buttons - Check this option to paint form field buttons directly on the document.

Paint Non Printable Fields- Check this box to paint non-printable fields in the output flattened PDF document. Non-printable fields are those with the "Printable" flag set to false or visibility set to "Show/Do not Print".

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

[Print the PDF Document](#)

[Change the Output File Name](#)

[Save the Output File to a Folder](#)

[FTP the Output File](#)

[E-Mail the Output File](#)

Import Annotations

The Import Annotations tab is used to import annotations into a PDF. After the annotations have been imported, there are options for routing of the output file. The tab has the following sections:

Import Annotation Settings

Import Annotations

Annotations File - The full path to the annotations file used to import to the PDFs on the server. Accepted formats are .fdf & .xpdf

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Flatten Annotations

Paint Non Printable Annotations - Check this box to paint non-printable annotations in the output flattened PDF document. Non-printable annotations are those with the "Printable" flag set to false or visibility set to "Show/Do not Print".

Note: *There are specific types of annotations that will never be flattened:*

- *Redaction Annotations (the markings before redactions are applied)*
- *Links*
- *File Attachment Annotations*
- *Sound Annotations*

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Import Field Values

The Import Field Values tab is used to import form data into a specific PDF form. The job will take any found field values (.fdf, .xfdf, .xdp, .xml) and import them into the selected PDF document. After the field values have been imported, there are options for routing of the output file. The tab has the following sections:

Import Field Values Settings

Import Field Values

Merge PDF - The full path to the source PDF form that the fields values should be imported to.

***Note:** This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Use field value as filename - Check this option if you wish to use a value from a field within the document to name the exported file. Click on "Choose Field" to pick from a list of available fields in the document.

Flatten Fields

Paint Buttons - Check this option to paint buttons directly on the document.

Paint Non Printable Fields- Check this box to paint non-printable fields in the output flattened PDF document. Non-printable fields are those with the "Printable" flag set to false or visibility set to "Show/Do not Print".

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Insert Pages

The Insert Pages tab is used to insert PDF pages into the documents when they are processed. After the pages have been merged, there are options for routing of the output file. The tab has the following sections:

Insert Pages Settings

Merge PDF - The full path to the source PDF form that you wish to insert pages from.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Insert location - Specifies where to insert the pages of the Merge PDF in the document that is processed.

- **Start of document:** inserts the pages from the Merge PDF in the beginning of the document
- **End of document:** inserts the pages from the Merge PDF in the end of the document
- **After page:** inserts the pages from the Merge PDF after a designated page number

Insert Page Range

Use this section to specify the pages from the Merge PDF to insert into the PDF documents being processed.

Extract Range - Use this section to specify which pages from the merge document to insert.

All - inserts all pages from the merge document into the PDF

Pages in the range - inserts only the pages in the designated range (if the pages exist)

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Move Files with No Processing

The Move Files tab is used to specify actions that are useful when moving or transferring files. This Job can be used when PDF specific processing is not required. The options available when moving files with no processing are as follows:

Move Files Settings

Change the File Name

Use this section to change the name of the PDF file before saving.

Renaming Options

Start with the current file name: You may use a file name based on the existing file name with some simple modifications. You may specify one string of characters to be removed. If that string is found and deleted, then the replace string will be inserted at the same location. You may also specify a prefix to use at the start of each name, and a suffix to place at the end.

- **If Present Remove:** the text you wish to be removed from the file name if present
- **And Replace With:** the text you wish to replace the text removed above with
- **Add a Prefix:** the text you wish to add to the beginning of the file name
- **Add a Suffix:** the text you wish to add to the end of the file name

Replace with new file name: You may replace every incoming file name with a new name. This is useful in some E-Mail situations. If you use this option in other situations, consider appending a counter or time stamp to prevent name conflicts.

- **File Name to Use:** The exact file name you wish to use (excluding extensions such as .pdf, .jpg, etc... as these will automatically be added by the process)

Tracking Options

Append date and time stamp: You can add a date a timestamp to the file name as well. This will be added to the very end of the file name based on the options set above.

- **_YYMMDD_HHMMSS:** appends a 2 digit year, 2 digit month, 2 digit day, hour (in 24 hour format), minutes, & seconds (i.e. Mar 4th, 2016 02:05:39 = "_160304_140539")
- **_YYMMDD:** appends a 2 digit year, 2 digit month, & 2 digit day (i.e. Mar 4th, 2016 02:05:39 = "_160304")
- **_HHMMSS:** appends the hour (in 24 hour format), minutes, & seconds (i.e. Mar 4th, 2016 02:05:39 = "140539")

Append an incriminating counter: If you have elected to append a counter, then as long as this value is zero (0) the counter will continue to increment as each file name is prepared. If you set this to any positive integer, then the next time a file name is prepared the new value will be used and the counter will increment from there.

- **Start Value:** the starting number of the incremental counter when the task is started
- **Total Digits (zero pad):** the number of digits to use in the counter using zeros as padding. For example: if set to 4 digits and the current count value is 15 it will display as "0015"

Save the File to a Folder

Use this section to save the file to a folder after setting the permissions.

Location

Folder Path: the full path to a local directory (on the server) to watch for files.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Save

In one ZIP file: when checked all processed files will be placed into a single .ZIP file in the directory chosen.

Name Collision Logic

When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have a unique name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- **Add a Unique Numeric Suffix:** appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- **Add a Unique Alphabetic Suffix:** appends a unique letter to the end of the file for each occurrence (i.e. _A, _B, etc...)
- **Overwrite the Previous File:** Overwrites the existing file in the original storage location that contains the exact same name

Post the File using FTP

Use this section to send the file to an FTP server after setting the permissions.

Destination

Server: the host name of the FTP server, such as *ftp.example.com*

Folder: the directory on the FTP server to watch for files

User: the user name to access the server

Password: the password for the user set above

Save

In one ZIP file: when checked all processed files will be placed into a single .ZIP file in the directory chosen.

Name Collision Logic

When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have a unique name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- **Add a Unique Numeric Suffix:** appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- **Add a Unique Alphabetic Suffix:** appends a unique letter to the end of the file for each occurrence (i.e. _A, _B, etc...)
- **Overwrite the Previous File:** Overwrites the existing file in the original storage location that contains the exact same name

Send the File in an E-Mail

Use this section to send the file by e-mail after setting the permissions.

Recipients

Send List: the "To:" field when sending the email. Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

Copy List: the "Cc:" (carbon copy) field when sending the email. Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

Importance: sets the importance of the email being sent. Can be set to Low, Normal, or High

Sensitivity: sets the sensitivity of the email being sent. Can be set to Normal, Personal, Private, or Confidential

Content

Subject: subject line of the email being sent

Message: message to be sent with the email. The message will be sent as plain text in the body of the email.

Optimize PDF

The Optimize PDF tab is used to optimize PDF documents and reduce file size. After the document has been optimized, there are options for routing of the output file. The tab has the following sections:

Optimize Settings

Image Processing

PDF Automation Server can process images contained within the document using a variety of settings:

Image Compression - Convert any image to either a JPEG, JPEG2000, FLATE, or JBIG2.

- **JPEG** - lossy compression that will reduce image quality and size
- **JPEG2000** - less lossy compression that will reduce size and some quality
- **FLATE** - Lossless compression does not reduce quality but may not always reduce file size
- **JBIG2** - Lossless compression that can only support black and white color space. Color images will be converted to black and white. Best for scanned documents with no images

Image Quality - Allows the image quality to be adjusted between 10-100%.

Note: *This will only affect JPEG or JPEG2000 images as these are the only formats that support image quality settings.*

Image Color Space - Choose to either retain or convert the image colors to Grayscale or B&W.

- **Grayscale** - Only supported with JPEG, JPEG2000, or FLATE. Best for full color images
- **B&W** - Only supported by FLATE or JBIG2. Best for scanned documents with no images

Note: *When the retain option is selected CMYK images will be converted to RGB due to a regression bug in Java 1.7.*

DPI (Dots per Inch) Resolution - Adjust the image resolution of all images that are larger than the option selected

- Preset options include retain, 50, 100, 150, 200, 300, & 600 DPI
- Custom option allows user to set any value between 50-1200 DPI

Object Removal

PDF Automation Server can remove the following objects from within a PDF:

Alternate Images - Removes alternate embedded image dictionaries that are used for high resolution printing to reduce file size. Only visible images displayed on the PDF while viewing will be kept in the document.

Bookmarks - Removes all bookmarks from the PDF document

Document Info - Removes any document information located in the document properties (Document->Document Properties) that would include the following:

- Title
- Author
- Subject
- Keywords
- Producer

JavaScript Actions - This will remove all JavaScript actions from the PDF document but retain any objects that may have had JavaScript actions such as form fields, push buttons, etc...

Embedded Thumbnails - Removes page thumbnails that are stored in the PDF document. Once removed the page thumbnails will just be rendered each time the document is loaded.

Comments - Removes all annotations and comments from the PDF document

Links - Removes all links from the PDF document

Attachments - Removes any attachments that are stored within the document

Form Fields - Removes all form fields that are on the PDF document

Metadata - Removes all additional or extra Metadata from the PDF Document

Unused Resources - Removes resources that are located within the document but are never referenced by any objects in the PDF document.

Other Options

PDF Automation Server has the following additional options available to further compress the PDF document:

Flatten Comments - Flattens all annotations including text boxes, shapes, highlights, and stamps directly onto the document so that they can no longer be edited.

Note: *Annotations such as the sticky note will have comments removed but the image will still be placed on the document*

Flatten Fields - Flattens all fields including text boxes, check boxes, radio buttons, combo boxes, list boxes, buttons, and signature fields directly onto the document so that they can no longer be edited. All values within the fields will be flattened as well

Merge Duplicate Images - Merges any duplicate images within the PDF so that all objects are referencing the same image resource rather than multiple of the same resource

Merge Duplicate Fonts - Merges any duplicate fonts within the PDF so that all objects are referencing the same font resource rather than multiple of the same resource

Compress Document Objects - Compresses any additional PDF elements within the document such as page descriptions that have not been optimized by any other process to further reduce file size

Clear Signatures - Removes all signatures that are on the PDF Document but will leave the signature field

Fast Web View

Convert to Fast Web View - Fast web view restructures the documents internal structure and content so that the pages load in order. When converting to Fast Web View the content is just reorganized internally. No content is altered or removed so the PDF will be displayed exactly the same as it was prior to conversion.

Converting to fast web view allows large documents to load faster when downloading from a web. Having the document structure and content in a linearized (from beginning to end) order allows a browser to immediately display the first page as the remainder of the document is still being loaded.

Note: *In order to see the complete speed benefits the server where the PDF is being hosted must also support page by page loading.*

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

[Print the PDF Document](#)

[Change the Output File Name](#)

[Save the Output File to a Folder](#)

[FTP the Output File](#)

[E-Mail the Output File](#)

Preflight

The user can set separate logic to handle output documents differently, depending on whether they pass or fail preflighting. After the document has passed or failed, there are options for routing of the output file. The tab has the following sections:

Preflight Settings

Preflight Profile - Select the standard that you wish to verify

- PDF/X-1a:2001 - ISO 15930-1
- PDF/X-1a:2003 - ISO 15930-4
- PDF/X-3:2002 - ISO 15930-3
- PDF/X-3:2003 - ISO 15930-6
- PDF/A-1b - ISO 19005-1 Level B

If Preflighting Passes

Determines what happens to the document if it passes the selected Preflight Profile.

Result Options

- **Add as annotations:** When checked, will add an annotation for each preflight error with the details of the error in the annotation comment
- **Append report to this document:** When checked, appends a Preflight Results report to the end of the document

If Preflighting Fails

Determines what happens to the document if it fails the selected Preflight Profile.

Note: *This only applies to failing preflighting specifically. Any issues that fail being processed or preflighted will use the settings set in the [Trouble Handling](#) tab.*

Result Options

- **Add as annotations:** When checked, will add an annotation for each preflight error with the details of the error in the annotation comment
- **Append report to this document:** When checked, appends a Preflight Results report to the end of the document

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Print PDF Files

The Print PDF tab is used when PDF documents will be sent to a printer as they are received. The tab allows the user to set different options such as choosing the printer to send the document to, setting page ranges and more.

Print PDF Settings

Printer

Select the printer you wish to use here. When the job is running and the printer you selected now is not available, then the current system default printer will be selected instead.

Print Range

All: prints all the pages in the document

Page Range: enter a single page, a page range, or multiple pages and ranges, separated by commas.

Page Handling

Auto Rotate: rotate the printout to match the width and length with the paper. The portrait / landscape setting set by the user will be ignored.

Center In Printable Area: center the page in the paper. No effect if the pages in a document are larger than the paper they are being printed on.

Reduce Large Pages to Printer Margins: shrink pages so that they fit in the paper. No effect if the pages in a document are smaller than the paper they are being printed on.

Expand Small Pages to Printer Margins: expand pages to fill the paper they are being printed on. No effect if the pages in a document are larger than the paper they are being printed on.

Options

Number of Copies: the number of copies of the document to be printed

Collate Sheets: keeps pages in order when printing multiple copies. For example, if unchecked, two copies of a three-page document will print in this order: 1,1,2,2,3,3. If checked, the order will be 1,2,3,1,2,3. This option is not available when printing only one copy.

Duplex Processing: the options to print on the front and back of pages

- **Single (no duplex):** prints only one page per sheet
- **Duplex (long edge):** prints two pages per sheet flipping the page on the long edge
- **Tumble (short edge):** prints two page per sheet flipping the page on the short edge

Print to File: Use this option to send the printer output to a file instead of the printer. When the option is checked, an output folder is necessary to know where to save the printer output files.

Output Folder: the full path to a local directory (on the server) to send the file

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Specify Paper Source: Use this option to select a specific tray for paper source on the selected printer. When this option is left unchecked, the default tray on the printer will be used.

Recognize Text Using OCR

The OCR tab is used to recognize and add searchable text in PDF documents. After the document has been OCR'd, there are options for routing of the output file. The tab has the following sections:

OCR Settings

Language - Select the language to use when recognizing text.

Note: *Additional OCR languages can be installed manually by following the instructions here <https://kbdeveloper.qoppa.com/?p=5688>.*

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead route the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Set Passwords & Permissions

The Change Permissions tab is used in jobs that want to set the permission settings of a PDF file. After the document permissions have been set, there are options for routing of the output file. The tab has the following sections:

Unlock the Permissions

Use this section to set the passwords to try when unlocking the permissions before setting the new permission settings.

Passwords to Try: To set a password click in the password field or on the Edit button. Then enter the password you want to be used. Do this for up to four passwords to try on password protected PDFs during the process.

New Security Settings

Compatibility

Compatibility - Sets the compatibility for the PDF security in the converted document. The options are either Acrobat 5.0 (High 128-bit RC4) and later or Acrobat 7.0 (High 128-bit AES) and later.

Security for Document

Set the "Document Open" Password – also known as the user password, it is the password that will be required when the documents are opened.

Security for Permissions

Set the "Change Permissions" Password – also known as the owner password, it is the password that will be required when trying to change permissions and passwords on the documents.

Permissions

Allow High Resolution Printing – Print the document at high resolution. When this permission is granted, the following permission 'Printing' is also automatically granted.

Allow Printing - Allow printing the document

Allow Text & Graphics Extraction – Copy or otherwise extract text and graphics from the document. When this permission is granted, the following permission 'Extraction for Accessibility' is also automatically granted.

Allow Extraction for Accessibility – Extract text and graphics in support of accessibility to disabled users or other purposes

Allow Document Changes – Modify the document. When this permission is granted, the following 3 permissions (Document Assembly, Comments and Form Filling) are also automatically granted. When this permission is not granted, the following 3 permissions (Document Assembly, Comments and Form Filling) can independently be granted.

Allow Document Assembly – Assemble the document: insert, rotate or delete pages and create bookmarks or thumbnail images

Allow Annotations & Comments – Add or modify text annotations. When this permission is granted, the following permission 'Filling Form Fields & Signing' is automatically granted. When this permission is not granted, then the following permission 'Form Filling & Signing' can be granted independently. And when this permission is granted and the 'All Changes' permission is also granted, creating or modifying interactive form fields (including signature fields) is allowed.

Allow Filling Form Fields & Signing - Fill in existing interactive form fields including signature fields.

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Split PDF

The Split PDF tab allows the user to set options when splitting a PDF document to multiple PDF documents. After the document has been split, there are options for routing of the output file. The tab has the following sections:

Split Settings

This section sets the options when splitting the document into multiple documents:

Split Method

Use this section to tell PAS how to split the document into multiple documents. The available options in this section are:

Split into documents of - Use this method to split the document into equal size documents of a given number of pages. Enter the page count in the text field.

Split by page range - Use this method to split the document into multiple documents based on page range. Enter the page range in the text field. Dash is used for a page range, comma to separate pages within the same document, semicolon to separate documents. So for instance, 1, 3-5; 7-10 will output two documents, the first document with pages 1, 3, 4, and 5, and the second document with pages 7, 8, 9, and 10.

Split by blank page - Use this method to split the document when a white page is encountered. The white page will be used as a separator between documents and will be discarded.

Tolerance - This value increases the tolerance for artifacts on the page. Increase this value if the blank pages contain marks such as scan lines or fold lines to get better results.

Split by bookmark at level - Use this method to split the document based on bookmarks at level 1. You can also choose to split up to a higher level, for instance up to level 3. In this case, the document will be split at bookmark level 1, level 2, and level 3. In this method, we assume that the bookmarks contain Go To Page actions within the PDF document itself and that the bookmarks have been created in ascending page order.

Split before text - Use this method to split the document when specific text in the document is encountered. When the text is encountered in a page, this page will become the first page of the next document.

Split after text - Use this method to split the document when specific text in the document is encountered. When the text is encountered in a page, this page will

become the last page of the document and the following page will become the first page of the next document.

File Name Pattern

Use this section to tell PAS how to name the output PDF files (the PDF documents obtained by splitting the incoming document):

Append - For each output PDF file, you can choose to append the page range or an incremental counter starting at any given number. PAS will start with the original PDF file name.

***Note:** The original PDF file name can first be altered using the [Change the PDF File Name](#) section below).*

- **Page Range:** When selected, PAS will append a string containing the page range. (for example: test_p4-p6.pdf). When the "Split by page range" option is selected, the page range formula will be appended as a string (for example: the page range formula "1,3,5-10" will name the file test_1_3_5-10.pdf).

***Note:** An underscore character precedes the page range formula and commas are replaced with an underscore character.*

- **Incremental Counter Starting at:** When selected, PAS will append an incremental counter. The counter will be reset for each new incoming PDF file.

Append bookmark name - This option is only available when the "Split by bookmarks" option is selected. This will append the name of the starting bookmark to the output documents names. So for instance if "Cover Page" is the first bookmark name, the first output document will could be named test_p1-p1_CoverPage.pdf. Only letters, numbers, hyphen and underscore characters are preserved in the bookmark name to guarantee that all operating systems will accept this file name. Commas are replaced with an underscore.

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

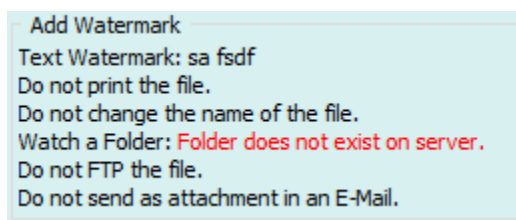
E-Mail the Output File

Editing a Job

In PAS Manager select the job you wish to edit and then click on the "Edit" button to view and edit information about the job. When the button is pressed, a new window will open containing all of the job information and settings.

Job Information Panel

The Job Information Panel is located on the left side of the edit job window. This panel will display a short summary of the job settings. If any of the settings are incorrect a message will be displayed in **RED** text next to the setting. Click on the section in the panel to go directly to the settings tab to adjust those specific settings.



Job Settings Tabs

The Job Settings Tabs are grouped into sections that contain each of the settings for the job. To change any of these settings click on the appropriate tab name in the Job editor dialog.

- **Job Information:** This tab contains general job information, such as the name and description and whether the job should be started when the server is started.
- **Source Settings:** This tab contains information about where to look for incoming PDF documents. The tab allows you to set the polling interval and parameters as well as information specific to the source type. For instance, if the documents are coming in via email, this tab allows for configuration of the email address and server.
- **Storage of Originals:** Use this tab to tell the automation server what to do with the original PDF documents, before processing. The documents can be renamed and then saved to different folders, sent over FTP, or via email.
- **Job Specific Settings:** Contains the specific settings based on the **Job Type** selected when creating the job.
- **Trouble Handling :** This tab contains information about how to handle errors when processing a PDF document. PAS can send notification emails whenever there is an error. Additionally, the server can save or send the file that caused the problem to a location so that it can be reviewed and the problem resolved.

Job Information Details

The Job Information tab contains general job information, such as the name and description and whether the job should be automatically started when the server is started. This tab has the following settings available.

Job Information Settings

Sets the basic details of the job.

Descriptive Data

Name: The name of the job. This name will be used when showing the job on the [Job List](#) and should be descriptive enough to identify the job.

Saved as: This is the name of the XML file used to store the job information. It is possible to use the operating system to change the file name when the server is not running. Never attempt this while the server is running the job.

Description: A longer description for the job. This field can be used to enter more detail about the job for future reference.

Job Type: Displays the [Job Type](#) selected at creation.

Startup: This field is used to decide whether to start this job when PAS boots up or to let the user start it as needed.

- **Manual:** when set to manual the job will NOT start automatically if the server is restarted. You will have to use PAS Manager to start the job again if the server stops for any reason.
- **Automatic:** will automatically restart the job if the server is restarted.

Note: *If you set this value and have not carefully tested the job information, then you may see unpredictable results the next time this job is reloaded.*

Performance Data

Most Recent Launch By Server: The start date and time the task was started by the server.

Most Recent Error-Free Launch: The start date and time of the last launch started without any errors.

Source Settings

The Source Settings tab is used to define where the PDF documents are coming from and how often to look for them. This tab has the following settings available.

Establish Job Scheduling

Set the job scheduling options in this section.

Basic Functions

Delay (in seconds) before the next watch: This delay in seconds tells PAS how often to look for PDF documents from a source. This roughly determines how often the server should check to see if there are any files at the watched source. If the server is currently processing an incoming file, it will finish with that file before it attempts to obtain any other files. The server measures this interval from the end of the last watch cycle. If the server is working through several files, it will still check to see if this time has elapsed after finishing each individual file.

Look Inside Zip Files:

Select this option to open any incoming file with a ".zip" extension and extract files within it to be processed as part of the job.

Pattern: Only the immediate internal files which match the pattern will be submitted for processing, and only those with an extension which is appropriate to the job type. After obtaining the matching files, the zip file, in its entirety, will be deleted. This feature is for implementing a specifically designed process flow that encapsulates the incoming files within transient zip files.

Order: Specifies the order in which files within the zip files will be extracted (and thus to be processed).

- **Alphabetical:** processes the files in order by name
- **Timestamp:** processes files based on the creation timestamp

Look Inside PDF for Embedded Files:

PDF files such as portfolios can contain embedded files as attachments. Select this option to open any incoming PDF file and extract embedded files within it to be processed as part of the job.

Pattern: Only the immediate embedded files which match the pattern will be submitted for processing, and only those with an extension which is appropriate to the job type.

All embedded files: Will process all files embedded within the PDF that is able to be processed by the selected job type.

Selected embedded files: Enter a range of indices to process only specific embedded files within the incoming PDF files. Enter a single index, an index range, or multiple indices and ranges, separated by commas. For instance 1,3-5,8 will process the first embedded file, files 3 to 5 and file 8.

Ignore PDF container when portfolio: Check this if PAS should ignore the PDF container file when it's a portfolio. Most PDF portfolios are indeed only containers and do not need to be processed themselves as part of the job.

Recovery Options

Set the number of recovery attempts if there are any errors (such as not being able to connect to an email server) and the interval between recovery attempts.

Recovery Attempts: the number of attempts the server will make to reach the source folder if an error occurs

Interval (in minutes): the amount of time in minutes between each of the recovery attempts

Watch a Local Folder for Files

Use this section when the PDF document will be placed in a folder on a local or network drive. The section requires the name of the folder and the file pattern to look for.

Folder Path: the full path to a local directory (on the server) to watch for files.

***Note:** This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

File Pattern: You may select a file name pattern, including the asterisk character. The server will limit its view to those files which match the pattern. To be processed, a file must make it through this filter, and also have a file extension that matches with the processing capabilities of the job type. You do not need to specifically limit the pattern to the appropriate extensions as the server will check this. If you specify an extension in the pattern that does not match with the process, then no files will make it through to be processed.

Watch an FTP Server

Use this section if PAS is picking up PDF documents from an FTP server. On every watch interval, PAS will log into the FTP server and check for any files that match the given file pattern. After the files are transferred to a local working folder, they are deleted in the FTP server folder.

Server: the URL of the FTP server

Folder: the directory on the FTP server to watch for files

File Pattern: You may select a file name pattern, including the asterisk character. The server will limit its view to those files which match the pattern. To be processed, a file must make it through this filter, and also have a file extension that matches with the processing capabilities of the job type. You do not need to specifically limit the pattern to appropriate extensions as the server will check this. If you specify an extension in the pattern that does not match with the process, then no files will make it through to be processed.

User: the user name to access the server

Password: the password for the user set above

Check E-Mail for Attached Files

Use this section if PDF documents are being delivered via e-mail. On every watch interval, PAS will log into the E-Mail server and check all incoming emails for a given e-mail address. If any e-mails have PDF documents attached, they will be processed by the server and deleted from the email address once processed.

Server Name: The email server name

Recipient: the email address used to access the server

Server Type: POP3 or IMAP

SSL: Check if the server requires SSL encryption

Password: the password for the user set above

Set Passwords to Open

Enter a password to use when opening source PDF documents that are password protected

Passwords to Try: To set a password click in the password field or on the Edit button. Then enter the password you want to be used when attempting to open a password protected PDF. Do this for up to four passwords to try on password protected PDFs during the process.

Storage of Originals

The Storage of Originals tab tells PAS what to do with the original PDF files before processing them. Use this tab to save copies of the PDF files locally or to route them to another location before processing them. This tab has the following settings available:

Note: *If you do not set a location for the original file it will be deleted once processing has been completed.*

Change the File Name

Use this section to set how the file name of the original file is handled before being saved to a new location.

Renaming Options

Start with the current file name: You may use a file name based on the existing file name with some simple modifications. You may specify one string of characters to be removed. If that string is found and deleted, then the replace string will be inserted at the same location. You may also specify a prefix to use at the start of each name, and a suffix to place at the end.

- **If Present Remove:** the text you wish to be removed from the file name if present
- **And Replace With:** the text you wish to replace the text removed above with
- **Add a Prefix:** the text you wish to add to the beginning of the file name
- **Add a Suffix:** the text you wish to add to the end of the file name

Replace with new file name: You may replace every incoming file name with a new name. This is useful in some E-Mail situations. If you use this option in other situations, consider appending a counter or time stamp to prevent name conflicts.

- **File Name to Use:** The exact file name you wish to use (excluding extensions such as .pdf, .jpg, etc... as these will automatically be added by the process)

Tracking Options

Append date and time stamp: You can add a date a timestamp to the file name as well. This will be added to the very end of the file name based on the options set above.

- **_YYMMDD_HHMMSS:** appends a 2 digit year, 2 digit month, 2 digit day, hour (in 24 hour format), minutes, & seconds (i.e. Mar 4th, 2016 02:05:39 = "_160304_140539")
- **_YYMMDD:** appends a 2 digit year, 2 digit month, & 2 digit day (i.e. Mar 4th, 2016 02:05:39 = "_160304")
- **_HHMMSS:** appends the hour (in 24 hour format), minutes, & seconds (i.e. Mar 4th, 2016 02:05:39 = "_140539")

Append an incriminating counter: If you have elected to append a counter, then as long as this value is zero (0) the counter will continue to increment as each file name is prepared. If you set this to any positive integer, then the next time a file name is prepared the new value will be used and the counter will increment from there.

- **Start Value:** the starting number of the incremental counter when the task is started
- **Total Digits (zero pad):** the number of digits to use in the counter using zeros as padding. For example: if set to 4 digits and the current count value is 15 it will display as "0015"

Save the File to a Folder

Use this section to have the original file saved to a local directory on the server.

Location

Folder Path: the full path to a local directory (on the server) to watch for files.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Name Collision Logic

When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have a unique name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- **Add a Unique Numeric Suffix:** appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- **Add a Unique Alphabetic Suffix:** appends a unique letter to the end of the file for each occurrence (i.e. _A, _B, etc...)
- **Overwrite the Previous File:** Overwrites the existing file in the original storage location that contains the exact same name

Post the File using FTP

Use this section to send the original file to a directory on an FTP server.

Destination

Server: the host name of the FTP server, such as *ftp.example.com*

Folder: the directory on the FTP server to watch for files

User: the user name to access the server

Password: the password for the user set above

Name Collision Logic

When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have a unique name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- **Add a Unique Numeric Suffix:** appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- **Add a Unique Alphabetic Suffix:** appends a unique letter to the end of the file for each occurrence (i.e. _A, _B, etc...)
- **Overwrite the Previous File:** Overwrites the existing file in the original storage location that contains the exact same name

Send the File in an E-Mail

Use this section to send the original file in an e-mail.

Recipients

Send List: the "To:" field when sending the email. Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

Copy List: the "Cc:" (carbon copy) field when sending the email. Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

Importance: sets the importance of the email being sent. Can be set to Low, Normal, or High

Sensitivity: sets the sensitivity of the email being sent. Can be set to Normal, Personal, Private, or Confidential

Content

Subject: subject line of the email being sent

Message: message to be sent with the email. The message will be sent as plain text in the body of the email.

Job Specific Details

The fourth tab of the Job editor will contain the specific settings for the Job selected as well as the Output Routing options. Each job will have their own set of specific settings that will be shown for that job type. Follow the links below to see the settings available for each job type.

- [Add Headers and Footers](#)
- [Digitally Sign PDF](#)
- [Insert Pages](#)
- [Add Watermarks](#)
- [Edit Document Properties](#)
- [Move Files](#)
- [Clear Security](#)
- [Export Annotations](#)
- [OCR](#)
- [Convert PDF To Images](#)
- [Export Field Values](#)
- [Optimize PDF](#)
- [Convert PDF To PDF/A](#)
- [Extract Text](#)
- [Preflight](#)
- [Convert Text to PDF](#)
- [Flatten Annotations](#)
- [Print PDF](#)
- [Convert Word to PDF](#)
- [Flatten Fields](#)
- [Set Security \(Passwords and Permissions\)](#)
- [Crop Pages](#)
- [Import Annotations](#)
- [Split PDF](#)
- [Custom Job](#)
- [Import Field Values](#)

Output Routing Options

This section determines what happens once the PDF document has successfully been processed. If the processing fails for any reason the document will instead rout the document using the settings set in the [Trouble Handling](#) tab.

Print the PDF Document

Change the Output File Name

Save the Output File to a Folder

FTP the Output File

E-Mail the Output File

Trouble Handling

The Trouble Handling tab is used to tell PAS what to do in case there are any errors during processing. Qoppa PAS is able to send notification messages when there are any errors in processing and can save problem PDF documents separately to be able to troubleshoot problems. The tab has the following sections:

Send an Error Report in an E-Mail

Use this section to send an e-mail with information about the error to an e-mail address. A copy of the servers log file will be attached to the email which can be used to help diagnose the issue.

Recipients

Send List: the "To:" field when sending the email. Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

Copy List: the "Cc:" (carbon copy) field when sending the email. Multiple email addresses can be entered by using a comma and a space (i.e. john@example.com, jane@example.com)

Importance: sets the importance of the email being sent. Can be set to Low, Normal, or High

Sensitivity: sets the sensitivity of the email being sent. Can be set to Normal, Personal, Private, or Confidential

Content

Subject: subject line of the email being sent

Message: message to be sent with the email. The message will be sent as plain text in the body of the email.

Rename the Original File

Use this section to set how the file name of the file that had an error is handled before being saved to a new location.

Note: *If you do not set a location for the original file it will be deleted once processing has been completed.*

Renaming Options

If Present Remove: the text you wish to be removed from the file name if present

And Replace With: the text you wish to replace the text removed above with

Add a Prefix: the text you wish to add to the beginning of the file name

Add a Suffix: the text you wish to add to the end of the file name

Tracking Options

Append date and time stamp: You can add a date a timestamp to the file name as well. This will be added to the very end of the file name based on the options set above.

- **_YYMMDD_HHMMSS:** appends a 2 digit year, 2 digit month, 2 digit day, hour (in 24 hour format), minutes, & seconds (i.e. Mar 4th, 2016 02:05:39 = "_160304_140539")
- **_YYMMDD:** appends a 2 digit year, 2 digit month, & 2 digit day (i.e. Mar 4th, 2016 02:05:39 = "_160304")
- **_HHMMSS:** appends the hour (in 24 hour format), minutes, & seconds (i.e. Mar 4th, 2016 02:05:39 = "_140539")

Save the Original File

Use this section to save the file that had an error to a local directory on the server.

Location

Folder Path: the full path to a local directory (on the server) to watch for files.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Name Collision Logic

When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have a unique name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- **Add a Unique Numeric Suffix:** appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- **Add a Unique Alphabetic Suffix:** appends a unique letter to the end of the file for each occurrence (i.e. _A, _B, etc...)
- **Overwrite the Previous File:** Overwrites the existing file in the original storage location that contains the exact same name

Post the Original File using FTP

Use this section to send the file that had an error a directory on an FTP server.

Destination

Server: the host name of the FTP server, such as *ftp.example.com*

Folder: the directory on the FTP server to watch for files

User: the user name to access the server

Password: the password for the user set above

Name Collision Logic

When a prepared output file has the same name as an existing file the existing file could be overwritten. You may choose to have a unique name created by appending a numeric or alphabetic counter to the end of the file name. Be careful when using the overwrite option.

- **Add a Unique Numeric Suffix:** appends a unique number to the end of the file that will increment by 1 for each occurrence (i.e. _1, _2, etc...)
- **Add a Unique Alphabetic Suffix:** appends a unique letter to the end of the file for each occurrence (i.e. _A, _B, etc...)
- **Overwrite the Previous File:** Overwrites the existing file in the original storage location that contains the exact same name

Supported File Types

PDF Automation Server supports converting certain non-PDF file types into PDF Documents. The current supported types are:

- Image Files: *.png, *.jpg, *.jpeg, *.jpe, *.gif, *.tif & *.tiff.
- Word Files: *.doc and *.docx
- Excel Files: *.xlsx
- PowerPoint Files: *.pptx
- Text Files: *.txt

Supported Document JavaScript

In PAS when creating custom functions/actions for specific items such as document actions you will need to use JavaScript for the commands. JavaScript can perform calculations, button actions (adding images, submitting forms, or populating other fields), validate field input, and set field formatting, among many other things.

You will need to have advance knowledge in programming JavaScript in order to create the actions for the buttons. For additional details on how to use these functions, take a look at the tutorials and lessons on this site http://www.w3schools.com/js/js_intro.asp

The following JavaScript commands are supported.

Supported JavaScript

Annotation

Properties:

- author
- page
- points
- strokeColor
- type
- width

Doc

Methods:

- addAnnot
- addField
- calculateNow
- closeDoc
- flattenPages
- getAnnots3D

getDataObjectContents

getField

getNthFieldName

getOCGs

getPageBox

getPageRotation

getTemplate

gotoNamedDest

importAnFDF

mailDoc

print

resetForm

spawnPageFromTemplate

submitForm

Properties:

URL

calculate

info

numFields

numPages

Field

Methods:

buttonGetCaption

buttonImportIcon

buttonSetCaption

checkThisBox

clearItems

deleteItemAt

getArray

getItemAt

insertItemAt

isBoxChecked

setAction

setFocus

setItems

signatureInfo

Properties:

borderColor

borderStyle

borderWidth

calcOrderIndex

charLimit

comb

commitOnSelChange

currentValueIndices

defaultValue

delay

display

doNotScroll

doNotSpellCheck

doc

editable

exportValues

fileSelect

fillColor

hidden

lineWidth

multiline

multipleSelection

name

numItems

page

password

readonly

rect

required

strokeColor

style

submitName

textColor

type

userName

value

valueAsString

Global

Methods:

setPersistent

Identity

Properties:

corporation

email

loginName

name

Matrix2D

Methods:

fromRotated

transform

MenuItem

Properties:

bEnabled

bMarked

cName

cReturn

oSubMenu

OCG

Methods:

getIntent

setAction

setIntent

Properties:

initState

locked

name

state

ReadStream**Methods:**

read

SignatureInfo**Properties:**

date

reason

Template**Methods:**

spawn

Util**Methods:**

printd

printf

printx

scand

stringFromStream

REST Settings

The REST settings allows you manage REST API specific settings including connection options, storage directory, number of threads used by processes when making [REST API](#) calls to the server.

To view the REST Settings: Go to **Preferences Panel > REST Tab**

Settings

General

Rest Server - Sets the IP address to receive REST calls from on the server. When set to a specific address calls can only be made to the server from that address. If 0.0.0.0 is selected the server will serve REST resources on all available network interfaces.

Content Provider: Sets the content provider (where the files are stored and managed) for the PAS service

- **PAS Storage:** The default value that uses the directory set in the "Storage Directory" option. This directory is local to where the server is running.
- **Alfresco:** Integrates with an Alfresco Document Management server. The Alfresco provider is configured with alfresco.properties in the QoppaPAS directory within Program Data. The server must be restarted to access new properties. See [Alfresco Setup](#) for more information

Storage Directory - enter the complete file path to the directory you wish to have all of the REST files stored on the server.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

- **Delete files from storage and sub-folder older than _ Days :** When checked sets the number of days files uploaded to the storage directory will be kept. Files with a creation date older than the specified number of days will be automatically deleted once per day.

REST threads - the number of threads (cores) on the server you want to be used by REST processes. The number to the right of the field will display the total number of cores available on the server.

Allow Origin - Setting that lets you access REST services from another domain. It will set the value of the "Access-Control-Allow-Origin" response header.

HTTP

Enable HTTP - enables HTTP access to a specified port

HTTP Port - port to be used for HTTP access. The default setting is 8090.

Note: *The HTTP Port cannot match the HTTPS or RMI (default 1099) port settings*

HTTPS

Enable HTTPS - enables HTTPS access to a specified port

HTTPS Port - port to be used for HTTPS access. The default setting is 8091.

Note: *The HTTPS Port cannot match the HTTP or RMI (default 1099) port settings*

PKCS#12 File - enter the complete file path to the PKCS#12 file (.pfx or .p12) used by HTTPS calls made to the server.

Note: *This directory is local to where the server is running not the PAS Manager and so the file path must follow the format set by the OS of the server.*

Password - The password to access the keystore file

REST User Authentication

The PAS REST service has built in user authentication that can be enabled to prevent users from calling specific methods such as GET, PUT, POST, & DELETE. Once user authentication has been enabled all calls to the server will need to be authenticated by passing through the user name and password within the REST call.

Note: *When user authentication is enabled the HTML PDF Viewer/Notes will prompt with a dialog for the REST authentication credentials before the document is served. If the document also has an "Open Password" the user will be prompted twice, first for the REST server and then again for the document password.*

Setting up REST User Authentication

To enable user authentication follow the steps below.

1. Stop the PAS service
 - Windows: Use the Windows Service Manager to stop the "QoppaPAS" service or using the command prompt navigate to the installation directory and enter the following command **"QoppaPAS.exe -stop"**
 - Linux/Unix/Mac: Navigate to the installation directory and stop the daemon service by using **"QoppaPAS stop"** or **"sudo service QoppaPAS stop"**
2. Navigate to the installation directory and locate the "rest-users.xml" and open it in any xml/text editor
3. Replace the sample users with the users for your server. Create each user on a separate line using the following format: **<user username="user" password="password" roles="roles" />** replacing "user" with the user name, "password" with the password for the user, and "roles" with REST call methods that the user has permission to separated by commas (i.e. GET, POST, PUT). See the example at the bottom of this page.
 - **Note:** *Make sure to remove the comment out tags "<!--" and "-->" and examples included in the initial installation file*
4. Start the PAS service
 - Windows: Use the Windows Service Manager to start the "QoppaPAS" service or using the command prompt navigate to the installation directory and enter the following command **"QoppaPAS.exe -start"**
 - Linux/Unix/Mac: Navigate to the installation directory and start the daemon service by using **"QoppaPAS start"** or **"sudo service QoppaPAS start"**

IMPORTANT: *In order to enable the user authentication the service must be stopped and started. Modifying the "rest-users.xml" while the service is running will not load the user authentication changes as the user authentication is only loaded into the service at startup.*

Example REST users

Below is an example showing how sample users added to the "rest-users.xml" file.

<users>

<user username="john" password="password" roles="GET" />

<user username="jane.doe" password="12345678" roles="GET, POST, PUT" />

<user username="admin" password="admin" roles="GET, POST, PUT, DELETE" />

</users>

PAS Custom Content Providers

When the PDF Automation Server has to read and write document files, it uses an interface called a Content Provider. By default, the server is delivered with two Content Provider implementations, the File System Content Provider and the Alfresco Content Provider.

File System Content Provider

The File System Content Provider accesses files in a given folder in the local file system where the server is running. By default, this folder is set to a folder named “storage” in the Program Data folder. All files in the storage folder and subfolders will be accessible to any REST calls. The location of the storage folder is stored in the settings file for the server, and can be accessed through the PAS Manager, in **Preferences** -> **REST** -> **Storage Directory**.

Alfresco Content Provider

The Alfresco Content Provider allows the server to work with documents stored in an Alfresco server. The properties to access the server, such as the server URL and the base folder are stored in a file called alfresco.properties in the Program Data folder.

Additoinal information on setting up Alfresco can be found in [Alfresco Setup](#)

Custom Content Providers

In addition to the default Content Providers, PDF Automation Server has the ability to use custom Content Providers. Custom made Content Providers allow the server to access documents that are stored in any system, local or remote, such as database systems, Amazon S3 buckets, etc. To achieve this, the server defines two interfaces that need to be implemented in Java and then registered with the server, to do this follow these steps:

1. Create a Java project with your favorite IDE.
2. Add the QoppaPAS.jar file that comes with the server to the project's classpath.
3. Create a class that implements `com.qoppa.spi.ContentProvider`, and implements all of its methods.
4. Create a class that implements `com.qoppa.spi.Session`, and implements all of its methods.
5. Build a jar file from these classes and any dependencies, and include a services folder in the jar file's META-INF, with an entry for `com.qoppa.spi.ContentProvider`.
This mechanism is the standard Java mechanism to register services with the JVM.
6. Place your jar file in the lib folder under the PDF Automation Server installation folder.
7. Restart the server

After restarting the server, you can verify that your custom Content Provider was registered correctly by opening PAS Manager, and navigating to **Preference -> REST**. In this panel, there is a drop down called “Content provider” that will list all the Content Providers registered with the server.

You can download source code that implement sample Content Providers that work with the file system or with Amazon S3 from here:

<https://www.qoppa.com/files/pdfautomation/PAS-ContentProvider.zip>

For the Amazon S3 sample, you will need Amazon’s S3 client connector, the Maven dependency is:

```
< dependency >  
  < groupId > software.amazon.awssdk </ groupId >  
  < artifactId > s3 </ artifactId >  
  < version > LATEST </ version >  
</ dependency >
```

PAS Alfresco Setup

The PAS REST module comes with built in integration with the Alfresco Document Management server. This integration allows the PAS REST service to provide permission based access at the user level to documents.

Note: *the Alfresco storage integration is only available for the PAS REST services NOT the Automation Server.*

Setup Instructions

1. You will need to already have an Alfresco Document Storage server setup and running. This can be on the same server as PAS or on a different server that the PAS server has access to. Learn more at www.alfresco.com/.
2. Create a file called "alfresco.properties" that contains 2 entries:
 - **baseDir:** The base directory that will be appended to all REST calls
 - **serverUrl:** The API URL needed to integrate with the Alfresco service. This will be dependent on the version of your instance.
 - **auth (optional):** Base64 encoded "username:password" string to set a single set of Alfresco credentials for any user accessing the server.

For example the values in the alfresco.properties file may look like this:

```
baseDir=/  
  
serverUrl=http://host:port/alfresco/api/-default-/public/cm
```

```
is/versions/1.1/atom
```

```
auth=Basic yKk3hos4dhoSsdF52Df72
```

Note: *Make sure to replace the **host & port** with the values for your Alfresco server*

3. Place the properties file in the directory below based on your OS.
 - **Windows:** in the QoppaPAS folder in the Program Data directory
 - **Linux/Unix/Mac:** in the PAS installation directory
4. Restart the QoppaPAS service to load the new properties file (or new changes to the file)
5. In PAS Manager go to Settings -> REST Settings -> General and choose "Alfresco" as the content provider. Then click OK to apply the settings.
6. Once complete, all REST calls to the PAS server going forward will use the Alfresco storage instance

Examples

Root Directory

With the above example, the baseDir is set to the root Alfresco directory. A file in a user directory would be accessed at a URL like this:

`http://host:port/qoppapdf/v1/documents/User Homes/username/userdoc.pdf`

User Directory

If you only want to serve files in a certain directory, you can set the "baseDir" property to that directory (i.e. baseDir=/User Homes/username/) and then files would be accessed at a URL like this instead:

`http://host:port/qoppapdf/v1/documents/userdoc.pdf`

HTML5 PDF Viewer

The PAS REST Module comes packaged with a ready to go HTML5 PDF Viewer that uses the REST server to view/modify documents directly in the browser with no plug-ins required. The HTML5 viewer can be added to any page with minimal coding by simply creating an iframe element on the page with the path to the document stored on the server.

There are two separate viewers packaged the REST server depending on your needs:

[HTML5 PDF Notes](#) - This viewer allows users to add annotations and save the document directly in the browser.

[HTML5 PDF Viewer](#) - This is the simple HTML page that is for viewing PDFs only.

HTML5 PDF Notes Viewer

The HTML5 PDF Notes Viewer is a PDF viewer that is developed using HTML5 and JavaScript. It allows you to add annotations to the document. It works in tandem with the PDF Automation Server to convert supported files (.pdf, .doc, .docx, .jpeg, .png, gif, .tiff) directly to SVG format and then serve the document to the viewer.

Below are instructions on how to get started using the web viewer. The HTML5 viewer can be added to the page with minimal coding by simply creating an iframe element on the page with the URL to the document.

HTML5 PDF Notes Viewer

The standard viewer is designed to run on any desktop browser. The standard viewer can be loaded by itself as a full page viewer or embedded directly within the page using an iframe. A sample of the viewer embedded in an iframe can be found in the installation directory under "/html/viewer".

Creating a Direct Link to the Viewer

1. Create a link to serve a PDF to the user in the following format:
 - "http://{host}:{port}/viewer/pdfnotes.html?filePath={path}" replacing {host} with the hostname or IP address of the PAS server, {port} with the Port set for the rest service (default 8090), and {path} with the relative path of the file stored within the "storage" directory of the PAS server. See [REST Settings](#) in the user guide for details on managing the hostname, port, and storage directory settings.
2. Navigate to the created URL to test the standard viewer.

Embedding the Viewer Within a Page

1. Create a new HTML page or choose an existing page to add the PDF Viewer to.
2. Add styling for the iframe to fit the area that you need. The below example creates a frame that fills most the page.
 - **Note:** *The toolbar will resize automatically based on width but recommended 1,000px minimum.*

```

<style>
    body, html {
        margin: 0;
        padding: 15px;
        height: 96%;
        overflow: hidden;
    }

    /* Style the iframe: toolbar will resize automatically based on width but
    recommended 1,000px mininum */
    iframe {
        width: 100%;
        height: 100%;
        border: none;
    }

    /* Required to make the full screen button work */
    .iframe-fullscreen {
        position: absolute;
        left:0px;
        top:0px;
        width: 100%;
        height: 100%;
        border: none;
        z-index: 999;
    }
</style>

```

3. Add an iframe element to the page where you would like the viewer to appear.
4. Set the attributes & additional options for the iframe. The iframe source (src) to the viewer URL must follow the below format:
 - "http://{host}:{port}/viewer/pdfnotes.html?filePath={path}" replacing {host} with the hostname or IP address of the PAS server, {port} with the Port set for the rest service (default 8090), and {path} with the relative path of the file stored within the "storage" directory of the PAS server. See [REST Settings](#) in the user guide for details on managing the hostname, port, and storage directory settings.

```

<html>
<body>
    <!-- Set the attributes & additional options for the iframe. ID must be set
    to "viewerFrame" -->
    <iframe id="viewerFrame" src="http://localhost:8090/viewer/
    pdfnotes.html"></iframe>
</body>
</html>

```

- **NOTE:** *If embedding the viewer in an iframe, the origin (domain, protocol, and port) MUST match the parent page. If not the iframe may not load due to browser security settings. Use the following code instead for Cross-Origin iframe.*

```
<html>
<body>
  <!-- Set the attributes & additional options for the iframe. ID must be set
  to "viewerFrame" -->
  <iframe id="viewerFrame" src="http://host:port/viewer/pdfnotes.html"
  name="pdfviewer"></iframe>
  <script>
    setTimeout(function(){
      var url = window.location.href;
      window.frames.pdfviewer.postMessage(url, "*");
    }, 500);
  </script>
</body>
</html>
```

5. Load the web page on your server to test the viewer

HTML5 Mobile PDF Notes Viewer

The mobile viewer is designed specifically to run on mobile devices with smaller screens. The mobile viewer has been optimized to make the best use of the entire area on smaller screens as well as touch enhanced navigation. You will need to either create a direct link to the mobile viewer ("mpdfnotes.html") or add code to automatically redirect the user to the mobile viewer page if a mobile device is detected.

NOTE: *For best results the mobile viewer should NOT be loaded within an iframe and should instead be served directly to the user as it's own page. It's recommended that instead of using redirect code, you should provide a direct link to the mobile viewer is created for mobile users. This will prevent unnecessary page flashing and shorten loading times on mobile browsers.*

Creating a Direct Link to the Mobile Notes Viewer

1. Create a link to serve the PDF to the mobile user in the following format:
 - "http://{host}:{port}/viewer/mpdfnotes.html?filePath={path}" replacing {host} with the hostname or IP address of the PAS server, {port} with the Port set for the rest service (default 8090), and {path} with the relative path of the file stored within the "storage" directory of the PAS server. See [REST Settings](#) in the user guide for details on managing the hostname, port, and storage directory settings.

2. Load the webpage on your server using a mobile device to test the mobile viewer

Using JavaScript to Redirect to the Mobile Viewer

Below are instructions on how to setup a page redirect for mobile devices using JavaScript.

1. Follow the instructions for Setting Up the HTML5 PDF Viewer above.
2. Add the following JavaScript code to redirect the browser if a mobile device is detected to the header of the page (or create your own).
3. NOTE: Make sure to replace {host} with the hostname or IP address of the PAS server, {port} with the Port set for the rest service (default 8090). See [REST Settings](#) in the user guide for details on managing the hostname & port settings.

```
<script type="text/javascript">
  window.onload = function() {
    var docUrl = "http://{host}:{port}/viewer/mpdfnotes.html?filePath="
    + getFilePath();
    if (navigator.userAgent.match(/Android/i) ||
        navigator.userAgent.match(/webOS/i) ||
        navigator.userAgent.match(/iPhone/i) ||
        navigator.userAgent.match(/iPod/i) ||
        navigator.userAgent.match(/iPad/i) ||
        navigator.userAgent.match(/Touch/i) ||
        navigator.userAgent.match(/IEMobile/i) ||
        navigator.userAgent.match(/Silk/i)){

      window.location.replace(docUrl);
    } else {
      window.onbeforeunload = function(e) {
        var dialogText = e.returnValue;
        return dialogText;
      };
    }
  }
}
```

- ```
function getFilePath() {
 var url =
 window.document.getElementById("viewerFrame").getAttribute("src");
 var docPath = url.split("#");
 return docPath[docPath.length - 1];
}
</script>
```
4. Load the webpage on your server using a mobile device to test the automated redirect and mobile viewer

# HTML5 PDF Viewer

The HTML5 PDF Viewer is a PDF viewer that is developed using HTML5 and JavaScript. It works in tandem with the PDF Automation Server to convert supported files (.pdf, .doc, .docx, .jpeg, .png, gif, .tiff) directly to SVG format and then serve the document to the viewer.

Below are instructions on how to get started using the web viewer. The HTML5 viewer can be added to the page with minimal coding by simply creating an iframe element on the page with the path to the document.

## HTML5 PDF Viewer

The standard viewer is designed to run on any desktop browser. The standard viewer can be loaded by itself as a full page viewer or embedded directly within the page using an iframe. A sample of the viewer embedded in an iframe can be found in the installation directory under "/html/viewer".

### Creating a Direct Link to the Viewer

1. Create a link to serve a PDF to the user in the following format:
  - "http://{host}:{port}/viewer/pdfviewer.html?filePath={path}" replacing {host} with the hostname or IP address of the PAS server, {port} with the Port set for the rest service (default 8090), and {path} with the relative path of the file stored within the "storage" directory of the PAS server. See [REST Settings](#) in the user guide for details on managing the hostname, port, and storage directory settings.
2. Navigate to the created URL to test the standard viewer.

### Embedding the Viewer Within a Page

1. Create a new HTML page or choose an existing page to add the PDF Viewer to.
2. Add styling for the iframe to fit the area that you need. The below example creates a frame that fills most the page.
  - **Note:** *The toolbar will resize automatically based on width but recommended 1,000px minimum.*

```
<style>
 body, html {
 margin: 0;
 padding: 15px;
 height: 96%;
 overflow: hidden;
 }

 /* Style the iframe: toolbar will resize automatically based on width but
 recommended 1,000px mininum */
 iframe {
 width: 100%;
 height: 100%;
 border: none;
 }

 /* Required to make the full screen button work */
 .iframe-fullscreen {
 position: absolute;
 left:0px;
 top:0px;
 width: 100%;
 height: 100%;
 border: none;
 z-index: 999;
 }
</style>
```

3. Add an iframe element to the page where you would like the viewer to appear.
4. Set the attributes & additional options for the iframe. The iframe source (src) to the viewer URL must follow the below format:
  - "http://{host}:{port}/viewer/pdfviewer.html?filePath={path}" replacing {host} with the hostname or IP address of the PAS server, {port} with the Port set for the rest service (default 8090), and {path} with the relative path of the file stored within the "storage" directory of the PAS server. See [REST Settings](#) in the user guide for details on managing the hostname, port, and storage directory settings.

```
<html>
<body>
 <!-- Set the attributes & additional options for the iframe. ID must be set
 to "viewerFrame" -->
 <iframe id="viewerFrame" src="http://localhost:8090/viewer/
 pdfviewer.html"></iframe>
</body>
</html>
```

1. **NOTE:** *If embedding the viewer in an iframe, the origin (domain, protocol, and port) MUST match the parent page. If not the iframe may not load due to browser security settings. Use the following code instead for Cross-Origin iframe.*

```
<html>
<body>
 <!-- Set the attributes & additional options for the iframe. ID must be set
 to "viewerFrame" -->
 <iframe id="viewerFrame" src="http://host:port/viewer/pdfviewer.html"
 name="pdfviewer"></iframe>
 <script>
 setTimeout(function(){
```

5. Load the web page on your server to test the viewer
- ```
    var url = window.location.href;
    window.frames.pdfviewer.postMessage(url, "*");
  }, 500);
</script>
```

HTML5 Mobile PDF Viewer

The mobile viewer is designed specifically to run on mobile devices with smaller screens. The mobile viewer has been optimized to make the best use of the entire area on smaller screens as well as touch enhanced navigation. You will need to either create a direct link to the mobile viewer ("mpdfviewer.html") or add code to automatically redirect the user to the mobile viewer page if a mobile device is detected.

NOTE: *For best results the mobile viewer should NOT be loaded within an iframe and should instead be served directly to the user as it's own page. It's recommended that instead of using redirect code, you should provide a direct link to the mobile viewer is created for mobile users. This will prevent unnecessary page flashing and shorten loading times on mobile browsers.*

Creating a Direct Link to the Mobile Viewer

1. Create a link to serve the PDF to the mobile user in the following format:
 - "http://{host}:{port}/viewer/mpdfviewer.html?filePath={path}" replacing {host} with the hostname or IP address of the PAS server, {port} with the Port set for the rest service (default 8090), and {path} with the relative path of the file stored within the "storage" directory of the PAS server. See [REST Settings](#) in the user guide for details on managing the hostname, port, and storage directory settings.
2. Load the webpage on your server using a mobile device to test the mobile viewer

Using JavaScript to Redirect to the Mobile Viewer

Below are instructions on how to setup a page redirect for mobile devices using JavaScript.

1. Follow the instructions for Setting Up the HTML5 PDF Viewer above.
2. Add the following JavaScript code to redirect the browser if a mobile device is detected to the header of the page (or create your own).
3. NOTE: Make sure to replace {host} with the hostname or IP address of the PAS server, {port} with the Port set for the rest service (default 8090). See [REST Settings](#) in the user guide for details on managing the hostname & port settings.

```
<script type="text/javascript">
    window.onload = function() {
        var docUrl = "http://{host}:{port}/viewer/mpdfviewer.html?filePath="
        + getFilePath();
        if (navigator.userAgent.match(/Android/i) ||
            navigator.userAgent.match(/webOS/i) ||
            navigator.userAgent.match(/iPhone/i) ||
            navigator.userAgent.match(/iPod/i) ||
            navigator.userAgent.match(/iPad/i) ||
            navigator.userAgent.match(/Touch/i) ||
            navigator.userAgent.match(/IEMobile/i) ||
            navigator.userAgent.match(/Silk/i)){

            window.location.replace(docUrl);
        } else {
            window.onbeforeunload = function(e) {
                var dialogText = e.returnValue;
                return dialogText;
            };
        }
    }

    function getFilePath() {
        var url =
            window.document.getElementById("viewerFrame").getAttribute("src");
        var docPath = url.split("#");
        return docPath[docPath.length - 1];
    }
</script>
```

4. Load the webpage on your server using a mobile device to test the automated redirect and mobile viewer.

Customize the HTML5 Editor / Viewer

PDF Automation Server comes packaged with a ready to go HTML5 PDF Viewer that uses the REST server to view/modify documents directly in the browser with no plug-ins required. The HTML5 viewer can be added to any page with minimal coding by simply creating an iframe element on the page with the path to the document stored on the server. If you wish to customize the HTML5 PDF Viewer Toolbar follow the instructions below.

First follow the below instructions to setup the HTML5 PDF Markup or Viewer on your server:

- [HTML5 PDF Markup](#) – This viewer allows users to add annotations and save the document directly in the browser.
- [HTML5 PDF Viewer](#) – This is the simple HTML page that is for viewing PDFs only.

Once setup edit the HTML viewer files found in html\viewer directory:

- **Windows:** will be located in the QoppaPAS folder in the ProgramData directory - C:\ProgramData\QoppaPAS\html\viewer
- **Linux/Unix/Mac:** will be located in the PAS installation directory - {installation directory}/html/viewer

Using any HTML or Text editor (such as Notepad++) edit the HTML file for the product you wish to use:

- pdfnotes.html – contains annotation, text markup, & redaction functionality
 - mpdfnotes.html – mobile version of notes viewer
- pdfviewer.html – PDF viewer only
 - mpdfviewer.html – mobile version of viewer only

All of the buttons are in the first part of the <body> in the <div class="toolbar"> element. You can follow the instructions below to add or remove buttons. Once you have completed the changes and save the file to the server they will take affect the next time the HTML5 Markup or Viewer is loaded.

Toolbar

The toolbar buttons can be customized to hide or show buttons using the **qviewersettings.js** file. New buttons can be added or existing buttons can be rearranged by modifying the HTML directly.

Hide Buttons

To hide buttons edit the following in the **qviewersettings.js** file.

The **ToolbarProperties** object consists of visibility flags that are all turned on by default. To hide a single button or group of buttons, set the flag to false.

For example to hide the **Print** button set the flag to false:

```
// Toolbar configuration
// Set to false to hide buttons from the toolbar
const ToolbarProperties = {
  printVisible: false,
```

Add New Buttons

To add new buttons, you can just add new lines to the anywhere in the element. For example you can add a new button by inserting the code below next to one of the other buttons on the toolbar. Once you have added the button you will need to attach either JavaScript or a Listener to perform the action you wish the button to do.

see https://www.w3schools.com/jsref/event_onclick.asp for one example of how to do this

```
<span class="buttonGroup">
  <button id="myNewButton" class="viewerbtn" title="myToolTip"></button>
</span>
```

TIP: Buttons can also be rearranged or organized differently by just reordering the HTML code.

Panels

The **PaneProperties** object in **qviewersettings.js** consists of flags that are all turned on by default. To disable (hide) pane, set the corresponding flag to false.

Hide Thumbnails

To hide the thumbnail pane edit the following in the **qviewersettings.js** file.

```
PaneProperties = {
  // Set to false to hide the thumbnail pane
  thumbnailPaneEnabled: false,
```

Hide Bookmarks

To hide the thumbnail pane edit the following in the **qviewersettings.js** file.

```
PaneProperties = {  
  // Set to false to hide the thumbnail pane  
  bookmarkPaneEnabled: false,
```

Annotation Defaults

To customize the default annotation properties, edit the **qviewersettings.js** file.

There is a global **AnnotationProperties** object that sets default values for all editable properties and annotation types. To change default properties for all annotations, update the **AnnotationProperties** object.

A few annotations override some of these default properties, so you may need to edit those Properties objects separately. To change a default setting for a single annotation type, modify the corresponding Properties object. By default the individual Properties objects only contain the most common properties, but you can copy additional flags from the main **AnnotationProperties** object to modify additional settings.

For example: to change the pencil default color to **blue** edit the "color" property like below.

```
const PencilProperties = {  
  lineWidth: AnnotationProperties.lineWidth,  
  color: blue,  
  opacity: AnnotationProperties.opacity  
}
```

Note: All edits must follow standard JavaScript formatting. For example Color can accept both standard basic color names as well as HEX color codes.

Additional Flag Options

- lineWidth
- color
- interiorColor
- opacity
- contents
- flags
- noRotate

- noZoom
- date
- creationDate
- title
- fontSize
- fontColor
- font
- fontStyle
- fontWeight
- align
- rotation
- shadow
- border

Log Settings

The Log settings allows you to set how long the logs are stored within PAS and how often they are cleared. By default PAS will keep log records for the last 30 days deleting the oldest logs at 24 hour intervals.

To open the Log Settings dialog:

1. Go to **Settings > Log Settings**

Settings

Keep Records (days) - Number of days log records will be kept in the database. Records older than the specified number of days will be automatically deleted.

Delete Interval (hours) - The interval at which log records older than the specified number of days will be automatically deleted.

Processing Nodes

Processing nodes are the primary nodes to perform most of the operations to documents within the workflow. These include a wide range of tools and operations to fit almost any need. For any additional functionality not found in the processing nodes use the [Java Node](#) to create more customized tools.

Function nodes are designated with a **Grey Rectangle** shape:



Processing Nodes

Create PDF

- [Excel to PDF](#) - Convert Excel files to a PDF documents
- [Image to PDF](#) - Convert image files (jpg, png, tiff, gif) to PDF documents
- [Text PDF](#) - Convert plain text files to PDF documents
- [Word to PDF](#) - Convert Word files to PDF Documents

Convert PDF

- [Linearize](#) - Create a Fast Web (linearized) version of a PDF document

- [PDF to GIF](#) - Convert PDF document to .gif image files
- [PDF to HTML](#) - Convert PDF documents to HTML web pages
- [PDF to JPEG](#) - Convert PDF documents to .jpeg image files
- [PDF to PDF/A](#) - Convert PDF documents to the specified ISO PDF archival formats
- [PDF to PNG](#) - Convert PDF documents to .png image files
- [PDF to SVG](#) - Convert PDF documents to .svg vector image files
- [PDF to TIFF](#) - Convert PDF documents to .tiff image files
- [Rasterize PDF](#) - Re-creates the document using images of the pages instead of vector commands

PDF Document

- [Add Content](#) - Add text or image content to a PDF document
- [Document Info](#) - Add or edit the document information of a PDF file
- [Extract Attachments](#) - Extract attachments from PDF documents
- [Extract Images](#) - Extract all images stored within PDF document
- [Imposition](#) - Create industry standard imposition layouts including: including: 2, 4, & 8 up booklets; cut stacks; sequential, step and repeat
- [OCR](#) - Add text to scanned documents or images
- [Optimize](#) - Reduce the file size of PDF documents
- [PDF Text to Variable](#) - create variables from text content stored within the PDF
- [Print PDF](#) - Send PDF document to the printer

PDF Comments

- [Delete Comments](#) - Deletes comments / annotations from a PDF
- [Export Comments](#) - Exports comments / annotations from a PDF
- [Flatten Comments](#) - Flattens comments / annotations into the page content
- [Import Comments](#) - Imports comments / annotations into a specified PDF document
- [Search & Markup](#) - Adds text markups to all the search results found within a PDF document

PDF Form Fields

- [Export Form Fields](#) - Export PDF form field data
- [Flatten Form Fields](#) - Flattens form field data into page content so it is no longer editable
- [Import Form Fields](#) - Import form field data into the specified PDF document
- [Reset Form Fields](#) - Resets all form fields to their default values

Secure PDF

- [Clear Security](#) - Removes all security & permissions from PDF documents
- [Fast sign](#) - Create electronic signature stamps that can be easily applied to documents
- [Sanitize](#) - Remove all hidden sensitive information from PDF documents
- [Search & Redact](#) - Adds text markups or redactions to all the search results found within a PDF document
- [Secure](#) - Set the security or permissions of a PDF document

- [Sign](#) - Apply digital signatures to PDF documents

PDF Pages

- [Crop Pages](#) - Adjust the crop box, bleed box, trim box, and art box on PDF documents
- [Delete Pages](#) - Delete or remove specified pages from PDF documents
- [Extract Pages](#) - Extract the specified pages from a PDF document to be processed
- [Header & Footer](#) - Apply headers and/or footers to PDF documents
- [Insert Pages](#) - Insert pages into the specified PDF document
- [Resize Pages](#) - Scale pages so that the content better fits the page or increase borders and margins
- [Reverse Pages](#) - Automatically reverses the order of the pages within a PDF
- [Rotate Pages](#) - Rotate the specified pages within the PDF document
- [Split Pages](#) - Split PDF documents in a variety of ways including: blank pages, bookmarks, before & after text
- [Watermark](#) - Apply text or image watermarks to PDF documents

PDF Preflight

- [Convert to PDF/A](#) - Convert PDF documents to the specified ISO PDF archival formats
- [PDF/A Validation](#) - Preflight and compliance verification to ensure the document meets various archival compliances defined by ISO 19005 PDF standards
- [PDF/UA Validation](#) - Preflight and compliance verification to ensure the document meets user accessible compliances defined by ISO 14289 PDF standards
- [PDF/X Validation](#) - preflight and compliance verification to ensure the document meets various archival compliances defined by ISO 15930 PDF standards
- [ZUGFeRD Validation](#) - Preflight and compliance verification to ensure the document meets the compliances defined by the German Electronic Invoice Forum