enfocus

PDF REVIEW MODULE 01 update 1

User Guide

enfocus

Contents

1. About the PDF Review Module....4

2. Setting up the PDF Review Module....5
2.1. Before you start....5
2.2. Installing the PDF Review Module....6
2.3. Configuring the settings in the Administration area....6
2.3.1. Settings - Interface customization....7
2.3.2. Settings - Server Settings....9
2.3.3. Settings - Mail Settings....10
2.3.4. Settings - User Settings....10
2.3.5. Settings - Statistics....11
2.4. Activating the PDF Review Module....12
2.5. Installing the PDF Review app....13

3. Configuring Switch flows for the PDF Review Module....15
3.1. Introduction....15
3.2. Step-by-step procedure....16
3.3. PDF Review app - Properties Overview....17
3.4. Finding metadata (review comments, annotations,...) in Switch....22
3.4.1. Checking metadata through the Inspect jobs dialog....22
3.4.2. Exporting metadata....24

4. Reviewing a file using the PDF Review Module....26
4.1. Step-by-step procedure....26
4.2. User interface and functionality....26
4.2.1. UI & Functionality - Overview....26
4.2.2. Changing the language of the user interface....29
4.2.3. Changing the unit of measure....30
4.2.4. Viewing or hiding screen elements....30
4.2.5. Changing the zoom level of the PDF file....32
4.2.6. Zooming in on certain areas of the PDF file....34
4.2.7. Walking through a multi-page PDF....34
4.2.8. Viewing or hiding layers....35
4.2.9. Adding, editing and removing comments....36
4.2.10. Viewing page properties....38
4.2.11. Viewing document properties, fonts and separations....39
4.2.12. Viewing the properties of one or more objects....40
4.2.13. Moving the view horizontally or vertically....41
4.2.14. Approving or rejecting a document....41

5. Troubleshooting....43

5.1. Approval Service not available....43
5.2. Approval Service is busy....43
5.3. I don't remember the IP address or Port for the PDF Review Module....43
5.4. The approve/reject buttons are not shown in the correct order....44
5.5. Files are sent back to Switch without being reviewed....45
5.6. Notifications are sent as text instead of HTML....45
5.7. When reviewing a file, the browser response is very slow....46

6. Appendix....48
6.1. Creating a valid HTTPS certificate....48

7. Third-Party License Information....50

8. Copyrights....60

1. About the PDF Review Module

The PDF Review Module is a Switch module that enables the integration of a PDF review process in a Switch workflow.

The PDF Review Module consists of two application components: a web server and a Switch app. Once the server is installed and configured, you can use the app just like any other Switch app: add it to your flow, define the incoming and outgoing connections, set the properties, and activate the flow.

Files that arrive in the app are uploaded to the web server and made available for review in an HTML5 browser. The reviewer will receive a link to the file and can inspect the file in a user-friendly interface and (optionally) give feedback using a sticky note tool. Once reviewed, the reviewer must approve or reject the file by clicking the appropriate button, and that will bring the file back into the Switch flow and move it to the appropriate output folder.

Of course this approval workflow can be fully integrated in a bigger Switch flow: files can be prepared, approved and sent to the printer without manual intervention.

2. Setting up the PDF Review Module

2.1. Before you start

Important notice

The PDF Review Module is a Switch module, so the installation and activation of Switch 13 update 1 or higher (Core Engine) is assumed and not explained in this document. For the full procedure, refer to the Switch Reference Guide.

System requirements

Make sure to check the system requirements on the Enfocus website. You can find them in the Support section.

Online trial

It is possible to try the PDF Review Module (for a period of 30 days) without installing the web server component. Instead you use the Enfocus online trial server. In that case, the first three topics described below under *Setup* are not relevant; just make sure to *install the PDF Review app*.

Setup

Before you can start using the PDF Review Module, you must:

- *Install the PDF Review Module on a Windows server.*
- *Configure the settings in the Administration area of the PDF Review Module.* This page is displayed automatically in your default browser after you have installed the PDF Review Module.
- *Activate the PDF Review Module through the Local License Manager.* This allows Enfocus to check your licenses.
- *Install the PDF Review app*, so it becomes available in Switch.

Done? Next you should set up your flows for use with the PDF Review app.

Licensing

The PDF Review Module allows access for a fixed number of concurrent reviewers. By default, this number is set to 10. If you need more, you can buy additional user licenses as required.

As it's not always easy to estimate how many reviewers will use the PDF Review Module at the same time, we have built in some flexibility: during 2 hours a day (in total), it's allowed to have more users, with a maximum of two times the number of licensed users. For example, if you have a license for 10 users, during 2 hours a day, 20 reviewers are allowed to use the PDF Review Module at the same time. If this is the case for more than 2 hours, or if an 21st reviewer wants to access, access will be blocked. Switch will issue a log message to inform you.

Note: The current license count can be found on the *Statistics* tab in the Administration area.

2.2. Installing the PDF Review Module

The PDF Review Module must be installed on a Windows server. Make sure to check the system requirements on the Enfocus website. Note that the server must have enough disk space to store the (high res) PDF files.*

To install the PDF Review Module

1. Download and double-click the PDF Review Module installer (Enfocus_PDFReviewModule_01_update1.exe).

   You should have received the download link from your Enfocus Reseller.

2. Follow the on-screen instructions.

   You can choose the language of your choice (only applies to the installation wizard) and change the installation directory. The default installation folder for 64-bit Enfocus products is C:\Program Files\Enfocus.

The PDF Review Module is installed as a Service on Windows. This means that it will start automatically as soon as the system starts. For more information about Windows services, refer to *the Microsoft website*.

You are redirected to the PDF Review Module Administration area. You must log in and preferably also change the password to be able to continue.

** A copy of the PDF files that are sent out for review is kept on the server in the following folder: "C:\Windows\System32\config\systemprofile\AppData\Roaming\Enfocus Prefs Folder\PDF Review Module\files" (this is the folder "%appdata%\Enfocus Prefs Folder\PDF Review Module\files" that we get when running as a service). This location can not be changed. Once the files have been reviewed (approved or rejected), they are removed from the server.*

2.3. Configuring the settings in the Administration area

The Administration area enables an administrator to customize the application, for example to change the colors, to set up a secure connection, etc. Note that changing the user credentials after installation is recommended; all other configuration is optional and can be done later when it suits you best.

To configure the settings in the Administration area

1. Display the Administration login page:

   - If you've just installed the PDF Review module, the Administration login page will open automatically in your default browser.
   - Otherwise, on the server where you installed the PDF Review Module, open a browser and enter `<IP address>:<port number>/admin` in the address bar.

   If you haven't changed the Server settings yet, you can use: `localhost:8080/admin`; if you have changed the settings, the IP address and the port number should match the values entered on the *Server Settings tab*.

If you have forgotten the server settings, you can check the database file located at C:\Windows\System32\config\systemprofile\AppData\Roaming\Enfocus Prefs Folder\PDF Review Module\Settings.db. You can open this file using a data browsing tool, such as DB Browser for SQLite (*http://sqlitebrowser.org/*).

2. Enter your user name and credentials.

   The first time you log in, you should use 'Admin' as user name and password.

   Note that in order to use the **Forgot your password?** link, you need to configure the *mail settings* in the administration area. We highly recommend doing that the *first time you log in*.

3. Click **Log in**.
   The Administration area is displayed in the language of your browser. Note that you can change it via the icon in the top right corner of the screen. Note that you must **refresh** the page after having selected (and saved) a different language!

4. On the **User settings** tab, enter a new user name and a password if you haven't done so already and click **Save changes** to confirm.

5. Review all settings and change the defaults as required.

   For an overview, refer to:

   - *Settings - Interface customization* on page 7
   - *Settings - Server Settings* on page 9
   - *Settings - Mail Settings* on page 10
   - *Settings - User Settings* on page 10
   - *Settings - Statistics* on page 11

   If you have entered a value that is not allowed, a feedback message is displayed just underneath the title of the page.

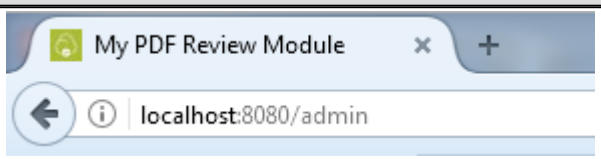
6. Before you leave a tab, make sure to click **Save changes**, otherwise your changes will be lost and set back to the default ones!

7. When you're done, click **Log out**.

2.3.1. Settings - Interface customization

With the settings in this part of the administration area you can 'brand' the PDF Review Module user interface (that will be shown to the reviewer) and provide a corporate look and feel.

Setting	Meaning
Interface Customization - Site Title	Title displayed on the browser tab and in the tooltip when you hover over the tab.

Setting	Meaning
	 Leaving this field empty is not allowed.
Company Information - Company Homepage	URL of the web page that is displayed when someone clicks the company logo. The URL must start with "http" or "https".
Company Information - Company Logo	Logo of your company. The logo will be displayed in the top left corner of the PDF Review Module interface. Supported file types are PNG, GIF and JPG. Files are scaled if wider than 300 px and higher than 50 px.
Company Information - Post-approval Page	URL of the web page that will be shown to the reviewer after having finished the review, i.e. after having clicked one of the buttons to approve or reject the file. The URL must start with "http" or "https". **Note:** If you want to show a different web page depending on the chosen button, you can add %option% to the URL, where "option" refers to the name of the button. For example, if there are two buttons ('Agree' and 'Disagree'): • Page for approval: https://www.mywebsite.com/agree • Page for disapproval: https://www.mywebsite.com/disagree • URL in the 'Post-approval Page' field: https://www.mywebsite.com/%option%
Company Information - Support Page	URL of the web page that will be shown to the reviewer in case of problems, such as: • The PDF Review module is not licensed. • The reviewer is not allowed access, because the number of licensed users has been exceeded. For more information about licensing, refer to *Activating the PDF Review Module* on page 12. • The reviewer has clicked the link of a file that has been reviewed already. The URL must start with "http" or "https".

Setting	Meaning
Color Customization - Primary and Secondary Accent Color, Primary Accent Text Color	The color patches show the colors that are used as primary and secondary color. The primary color is used for buttons, the secondary color is used for shadings, etc. You can also choose the text color. To choose a different color, click the color patch and pick one, or enter the HEX or RGB color code in the correct format, for example: • HEX: #abbe28 • RGB: rgb(171,190,40)

2.3.2. Settings - Server Settings

The settings on this tab allow you to change the server and server port on which the website is running. Changes require a restart of the server.

Setting	Meaning
Site Binding - IP Address	The chosen value determines which IP addresses can be used to access the PDF Review Module. Options: • **All Unassigned IP Addresses** = all IP addresses on the server (including local host) • **127.0.0.1** = only local host • **A particular IP address on the server** = only the selected IP address
Site Binding - HTTP Port	Upon installation, port 8080 is set, but we highly recommend changing the port number. The default HTTP value is 80. If 80 is used, it can be omitted in the server address; e.g. typing `<IP address>/admin` is sufficient to enter the Admin area.
HTTPS SITE Binding - Enable HTTPS Support	If enabled, a secure connection is made when connecting to the PDF Review Module. This triggers the following fields: • **IP Address**: See higher (Site Binding - IP Address). **Note:** To exclusively allow a secure connection, make sure to set the IP Address under Site Binding to localhost. • **HTTPS Port**: Port to be used for a secure connection. The default value is 443.

Setting	Meaning
	• **SSL Certificate Chain File**: Upload your SSL certificate chain file. This file lists the SSL certificates from the root certificate to the end-user certificate. • **SSL Private Key File**: Upload your private key file. The private key file is used to verify the connection using the SSL certificates. **Note:** More details on creating a valid certificate can be found *here*.

2.3.3. Settings - Mail Settings

These settings are required to be able to request a new password through the **Forgot your password?** link.

Setting	Meaning
SMTP Host	The URL or IP address of the SMTP email relay server of your company network, for example: smtpmail.mycompany.com Note that the PDF Review Module does not support the encryption and authentication protocols (such as SSL, TLS,...) required by most email providers. The solution is to set up a local SMTP server that can serve as SMTP email relay server (meaning that it is configured to accept email from inside your network, either anonymously or with basic authentication, over an unencrypted connection). Configure the PDF Review Module web server to send mail to this local SMTP server, which should then further pass on the mail with the correct credentials.
SMTP Port	Port used by the SMTP server. The default port number is 25.
Sender Name	The sender's name as shown in outgoing email messages e.g. in the "From" field.
Sender Address	The sender's *reply* address for outgoing email messages.

Note: First save your changes, then use the **Send Test Mail** button to verify the connection. The test mail is sent to the (mandatory) email address entered on the User Settings tab.

2.3.4. Settings - User Settings

These are the user credentials needed to log in to the Admin area. You can change them as required.

Setting	Meaning
Username	User name needed to log in to the Admin area (4 characters or more)

Setting	Meaning
Choose Password	Password needed to log in to the Admin area. Requirements: • At least 8 characters, a combination of at least three out of the four different types (listed below) • Lower case letters • Upper case letters • Numbers • Special characters (!@#$%^*_+={}[]:;?,.)
Repeat Password	The passwords must match.
Email Address	The email address of the administrator. Instructions in case of a forgotten password will be sent to this email address. Note that the email address entered in the Forgot password dialog must match this email address, otherwise no mail will be sent and you will not be able to recover your password.

2.3.5. Settings - Statistics

On this tab, you can find information with regard to your license.

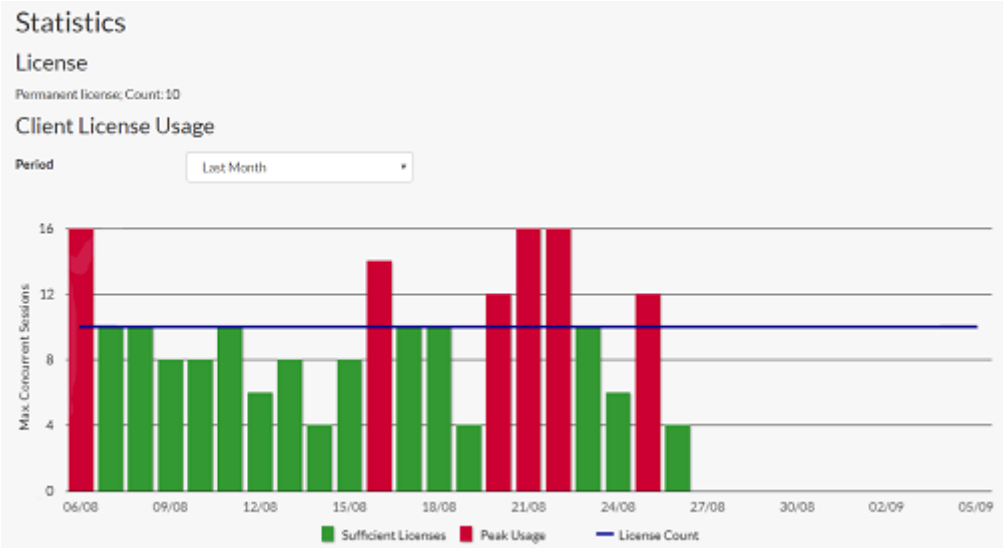
Under **License**, the type of your license (e.g. 'permanent') and the license count (e.g. 10) are mentioned. The license count indicates the number of users allowed to access the PDF Review Module concurrently.

Under **Client License Usage**, you get an overview of the actual number of users having accessed the PDF Review Module **at the same time** compared to the license count. You can visualize this information for a period of your choice (last day, last week, last month).

The green bars indicate that you had enough licenses available for all users trying to access the PDF Review Module ("Sufficient licenses").

The red bars indicate that there were more concurrent users than allowed according to your license ("Peak usage"). This includes the extra users that Enfocus allows on top of the license count (during 2 hours a day (in total), with a maximum of two times the number of licensed users).

If the number of concurrent users often exceeds the license count, you're advised to buy extra user licenses to avoid that reviewers get blocked when they try to use the application.



2.4. Activating the PDF Review Module

To enable Enfocus to check if you have licensed the software, you must enter the product key you received from your Enfocus reseller.

Before you start:

- Your system must have internet access to communicate with the Enfocus web server.
- You must have a product key.
- If you're using a firewall, make sure to allow the PDF Review Module to communicate with *https://licensingservices.esko.com* using ports 80 and 443.

To activate the PDF Review Module

1. Locate the Local License Manager.

   The Local License Manager is a small application that allows you to manage the licenses of all your Enfocus products. It's installed with the PDF Review Module. The default location is: C:\Program Files (x86)\Enfocus\Enfocus Local License Manager <version e.g. 15.0.0> \enfocusLMloc.exe

2. Double-click the executable.
   The Local License Manager main screen appears. It gives an overview of the Enfocus products you have licensed with their license status.

3. Click the **Activate** button (in the bottom left corner).
   The **Enfocus Software Activation** dialog box opens.

4. Make sure the **Off-Line Mode** option is disabled.

   This option is only relevant if you don't have internet access.

5. Enter your Enfocus ID and password.

   The Enfocus ID is a free account that is used for all communication with Enfocus. If you don't have one yet, click the **Create Enfocus ID** link and follow the on-screen instructions.

6. Enter your product key by doing one of the following:
   - Type or copy-paste your product key in the text field.
   - Browse to your product key license file (*.html) or drag it to the text field.
7. Click **Activate**.
   Your system communicates with the Enfocus web server and activates the PDF Review Module. If everything goes well, "PDF Review Server" is mentioned in the Activated Licenses pane, with a green checkmark next to it. If you have purchased extra user licenses, there will an extra entry: "PDF Review User".
8. To close the dialog, click **Close**.
9. Close the Local License Manager.

You have successfully activated the PDF Review Module. Note that you can find license information (such as the status and license count) on the *Statistics* tab in the Administration area of the PDF Review Module.

2.5. Installing the PDF Review app

The PDF Review app is a free Switch app available for download in the Enfocus Appstore.

Before you start: The PDF Review Module is a Switch module, so the installation and activation of Switch 13 update 1 or higher (Core Engine) is assumed. For the full procedure, refer to the Switch Reference Guide.

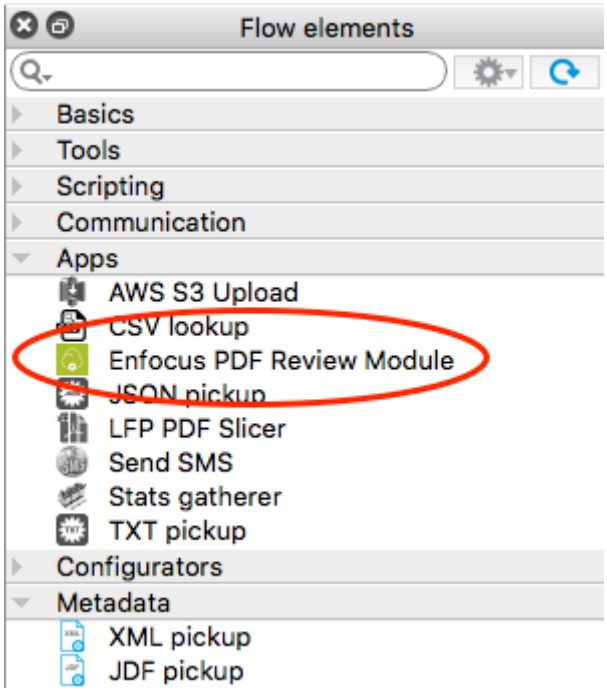
To install the PDF Review app in Switch

1. Go to the *Enfocus Appstore*.
2. Search for the PDF Review app and click the icon, to go to the detail page.
3. Click the **Get it now** button.
4. If you're not signed it yet, enter your Enfocus ID credentials.
5. Choose the number of licenses you need (one for each Switch installation that should have the app).
6. Click **Next**.
7. Select for each of the requested licenses a particular Switch installation.
8. Click **Assign now**.
   The app is downloaded to the selected Switch installation(s).
9. Do one of the following:
   - If Switch is running, you can start using the app immediately by clicking the **Refresh apps** button in the top right corner of the Flow elements pane. This will install the app in your local Switch.

     Note: If you don't click the **Refresh apps** button, the app will be installed automatically next time you start Switch.

- If Switch is not running, next time you sign in to Switch, the app is installed automatically in the background. You don't have to do anything.

You will find the PDF Review app in the Flow elements pane in the Apps category.



Note: When a new version of the app is available, you'll get a notification in Switch. In that case, we recommended updating the server too (see *Installing the PDF Review Module* on page 6), so you can make use of the new features. Note that version 3.0 of the app is compatible with 1.1 of the server.

3. Configuring Switch flows for the PDF Review Module

3.1. Introduction

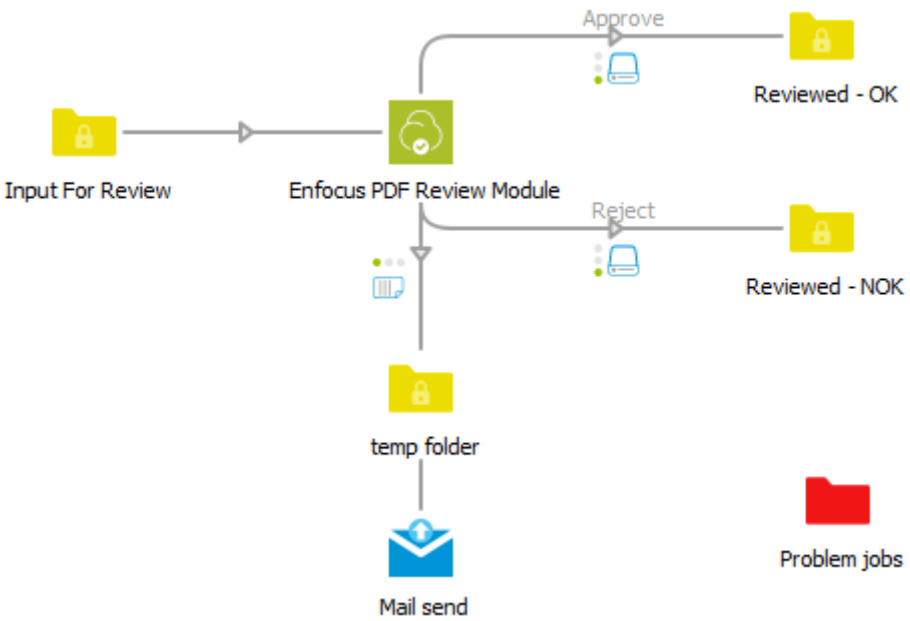
Once you have set up the PDF Review Module as described in the previous chapter, you can use the PDF Review app in your Switch flows.

Below you can see an example of a Switch flow and how a PDF submitted to this flow will be presented to the reviewer.

If you're new to Switch, you may want to check out the *step-by-step procedure*. Note that we also have a *Quick Start Guide on our website*, which explains the basic concepts of Switch.

If you're familiar with Switch, you will find all required information in the *app properties overview*.

Example Switch flow

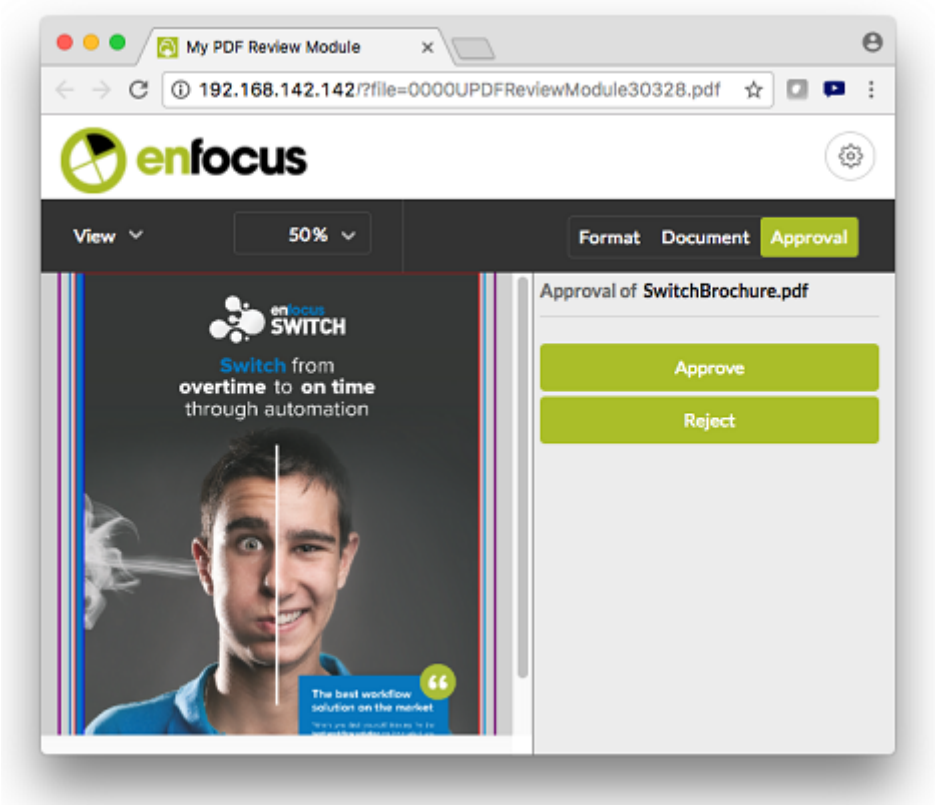


As soon as a PDF file arrives in the input folder, it is uploaded to the PDF Review Module server. After it has been uploaded to the server, it is sent to the outgoing log connection (Mail send in this example), so a notification can be sent.

The PDF file remains in the input folder until it has been processed by the server; as soon as a reviewer clicks a button in the HTML5 user interface, the file is sent to the corresponding outgoing data connection (Approve or Reject in this example).

Example of a file opened in the PDF Review Module user interface

Note the names of the buttons (determined by the connections).



3.2. Step-by-step procedure

The PDF Review app can be found in the Flow elements pane in Switch and should be configured just like any other Switch app.

Proceed as follows:

1. Create a new flow in Switch.
2. Add the PDF Review app to your Switch flow.
3. Make sure to define an incoming connection, for example a folder or an FTP receive flow element.
4. Make sure to define at least two outgoing connections for the output files (one for approved and one for rejected files). Each outgoing connection will be shown as a button in the HTML5 Browser/PDF Review Module Interface. If the connection has no name, the name of the output folder will be used.
   - The *Carry this type of jobs* property must be set to *Data*!
   - The order of the buttons in the PDF Review Module user interface is determined by the order in which you create the outgoing connections. If you want the "approve" button to be displayed first, make sure to create that connection first.

- The color of the buttons can be modified (see the 'Apply color' option in the *App properties*).
- The outgoing connections have 2 extra properties: *Enable review comments* and *Accept PDF with document comments*.

5. Define another outgoing connection that will take care of the notification to the reviewers:
   a. Drag a **Mail send** element to the canvas.
   b. Drag an outgoing connection from the app to the Mail send element (an intermediate folder is added automatically).
   c. Make sure the *Carry this type of jobs* property is set to *Log*!
   d. Configure the **Mail send** properties:
      - *Body template* must be set to *Associated with job* (to make sure that the correct link is sent to the approver).
      - *Message format* must have the *same value as Mail format* in the PDF Review app.

      For the other properties, refer to the *Switch Reference Guide*.
6. Configure the properties of the PDF Review app.

   Refer to *App properties*.

   Note: A file can be approved or rejected only once: as soon as one of the buttons has been clicked, the file moves to the next flow element in the Switch flow. As a consequence, if different people need to review the file, you need different instances of the app!
7. Save your flow, activate it, and check if it behaves as expected:
   - Upload a file to the flow.
   - Check if it moves correctly through the flow. Remember that you can find information in the Switch log messages as required.
   - Check if the mail is sent to the correct email address and if it looks OK.
   - Click the link. Does it open the file in the PDF Review Module?
   - Check if the enabled features match your configuration.
   - Approve or reject the file and check if the file moves to the appropriate folder.
   - Check if given comments can be found in the metadata.

3.3. PDF Review app - Properties Overview

Connections

The app expects at least one incoming connection, one (but usually more) outgoing data connection and one outgoing log connection.

The *incoming connection* is used to supply the PDF files that are ready for review.

The *outgoing **data** connections* are used to move the reviewed files to the appropriate folder. The *names* of the connections will be displayed as buttons to the reviewer. If the connections have no

names, the folder names will be used. Note that the order in which the connections have been made determines the order in which the buttons will be displayed in the HTML5 user interface.

The outgoing data connections have a number of properties that affect the PDF review functionality:

Property	Meaning
Color	The color of the connection can determine the color of the button in the HTML5 user interface, on condition that *Apply color* (in the PDF Review app) is set to *Yes* (see below).
Enable review comments	If this option is enabled, the reviewer is able to give review comments after clicking the decision button, on condition that *Use comment properties of outgoing connection* (in the PDF Review app) is enabled.
Accept PDF with document comments	If this option is set to No, documents with sticky notes, comments etc. cannot move through this connection (no matter if they are added before or during the review). This can be useful to avoid that files with annotations get printed by accident. This option is only taken into account when *Use comment properties of outgoing connection* (in the PDF Review app) is enabled.

The *outgoing **log** connection* is used to make sure that a notification is sent to the reviewer; the most obvious choice for the notification will be to use Mail send.

Properties detailed information

Property	Meaning
PDF Review web server	Options: • Online trial server: Select this option if you want to use the Enfocus web server to see how the PDF Review Module works. In that case, you don't have to install and configure the PDF Review Module on your own web server. The trial period is limited to 30 days and there's also a limit on the size (100MB) and the number of proofs (200). The trial starts with the first file upload. *This option is available as of version 2.0 of the app. Upgrade via the Enfocus Appstore if you want to use the online trial. It's free.* • Local PDF Review server: Select this option to connect to the server on which you have installed the PDF Review web server. This activates the *URL of the PDF Review web server*. **Format:** <http: or htpps:><IP address or localhost>:<port number> **Examples**: http://localhost:80 (for testing purposes), https://192.168.142.233:89 Refer to the *Server settings* in the Administration area.
Mail format	The format of the mail message that will be sent out to inform the reviewer that a file is ready to be reviewed. Options:

Property	Meaning
	• Plain text • HTML (in this case, the email message has two bodies. The first is in HTML format and the second is a plain text version of the HTML message) **Note:** Make sure to that the *Message format* property in the Mail send flow element has the same value (i.e. both plain text or both HTML).
Mail template	Text of the mail message to inform the reviewer that a file is waiting for review. Options: • Default: The default Enfocus template for the PDF Review Module is used. • Built-in: Define the message text using the *Body text* field that pops up. Choose **Edit multi-line text** (plain text) or **Define multi-line text with variables** (text with variables) to edit the body text. • Fixed file: Upload your own template file (*.txt, *.htm, or *.html) or choose **Define single-line text with variables** to construct the file path and file name using variables. **Note:** If you're not using the default template, make sure that your body text contains the link to the PDF on the server: [Job.PrivateData:Key="com.enfocus.PDFReviewModule.URL"] In case of a built-in text, it's present by default (so do not delete it!); in case of a fixed file you'll have to add it yourself!
View settings	Determines which features will be made available to the reviewer. By default, all features are enabled. Alternatively, you can choose to restrict the feature set by enabling or disabling particular features. Options: • All Enabled: The reviewer has access to the complete functionality of the PDF Review Module. • Advanced: Restrict the feature set by enabling or disabling particular features. Note that the preferred value (yes/no) can also be triggered by Switch variables. Following features can be turned on or off: • *View layers*: Ability to view layer properties of the document. • *View comments*: Ability to view comments in the document. • *View format tab*: Ability to view the Format tab. • *View document tab*: Ability to view the Document tab. • *View rulers*: Ability to show or hide the rulers as required.

Property	Meaning
	• *View page boxes*: Ability to show or hide the page boxes as required. • *View guides*: Ability to show or hide the guides as required. • *View wireframe*: Ability to display the document in wireframe mode. • *View ink coverage*: Ability to show or hide an ink coverage heatmap.
Fail jobs after timeout	Allows you to set a timeout for non-processed files, to make sure that files that were not reviewed after a certain period of time are moved to a particular folder. Options: • No: No timeout defined • Yes: Timeout defined If set to *Yes*, fill out the following properties: • *Unit*: Minutes, Hours, Days (unit for the next property) • *Timeout delay*: Number of minutes, hours, days (as set in Unit) that the PDF is allowed to stay in review mode. • *Fail connection*: Name of the connection or folder where the file will go to after the defined period of time. All valid output folders are listed; you can select the one of your choice. **Note:** If you have chosen the Problem jobs folder, make sure you have a Problem jobs folder in your workflow!
Apply color	Allows you to use the color of the outgoing data connections for the corresponding buttons in the HTML5 user interface. • Yes: Use the color of the connection for the corresponding button. • No: Ignore the color of the connections. The color of the decision buttons depends on the *Interface customization settings* in the Administration area of the PDF Review Module (*Color customization*).
Default unit	Determines the default unit of measurement in the HTML5 user interface. Options: • pt (points) • p (picas) • in (inches) • cm (centimeters) • mm (millimeters)

Property	Meaning
	Note: The reviewer can overrule the default by changing the unit via the Preferences button.
Allow download	Determines whether or not the reviewer has the right to download the PDF file (including review comments if any) to his local system. Note that the file must be downloaded before approving or rejecting it. Options: • Yes: The reviewer will get a download button in the top right corner of the user interface. • No: There will be no button to download the PDF.
Review dataset name	Review comments, annotations, the chosen connection etc. are stored in a dataset for which you must enter a name and select a type (next property). This option is mandatory.
Review dataset type	Type of the dataset that will contain the metadata (review comments, annotations, chosen connection, etc.) Options: • XML • Opaque **Note:** Not sure how to extract the review comments afterwards? Refer to *Finding review comments in Switch*.
Use comment properties of outgoing connection	Determines whether or not the values of *Enable review comments* and *Accept PDF with document comments* of the outgoing connections are taken into account. Options: • No: The properties of the outgoing connections are ignored. Review comments are not allowed (regardless of the *Enable review comments* property of the outgoing connections); PDFs with annotations are always accepted (regardless of *Accept with document comments*). • Yes: The properties of the outgoing connections are taken into acocunt. The ability to add review comments depends on *Enable review comments*; the ability to submit PDFs with annotations depends on *Accept PDF with document comments*.
Connection status	This property is used to verify if the connection to the PDF Review web server is valid. To be valid, at least one log and one data connection must be defined. The value is always 'None'; if something is wrong with the connection, the property will be displayed in red. You'll find more

Property	Meaning
	details in the Switch log messages (via the **Messages** button in the toolbar).

Mail send

A **mail send** flow element is required to make sure the reviewer is notified of the file that is ready for review.

If used with the PDF Review app, the following is mandatory:

- *Body template* must be set to *Associated with job* (to make sure that the correct link is sent to the approver).
- *Message format* must have the *same value as Mail format* in the PDF Review app (both plain text or both HTML).

For an overview of all properties, refer to the *Switch Reference Guide*.

3.4. Finding metadata (review comments, annotations, ...) in Switch

Review comments, annotations made during the review, the chosen connection etc. are stored as metadata in a Switch dataset. There are several methods to extract metadata; we'll explain two of them.

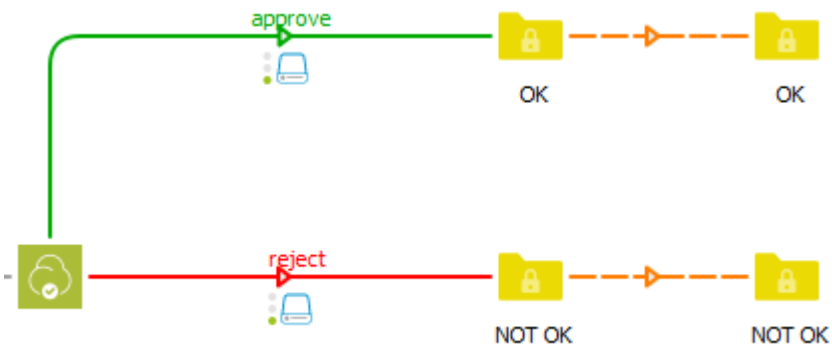
Both methods require that you make changes to your Switch flow BEFORE the files have been reviewed. Once the reviewed files have reached an output folder, the unique prefix has been removed and the metadata can no longer be accessed through the Inspect jobs dialog.

Note that more detailed information can be found in the Switch Reference Guide.

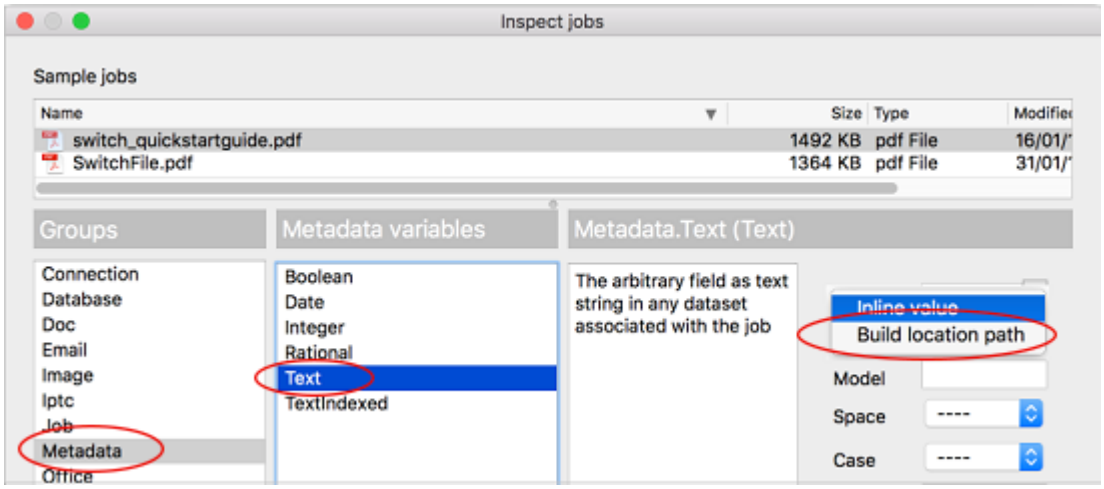
3.4.1. Checking metadata through the Inspect jobs dialog

Proceed as follows:

1. Add a connection between the output folder that contains the reviewed files and another, new folder.
2. Set the connection on hold.
3. Do this for all output connections for which you want to check the metadata.

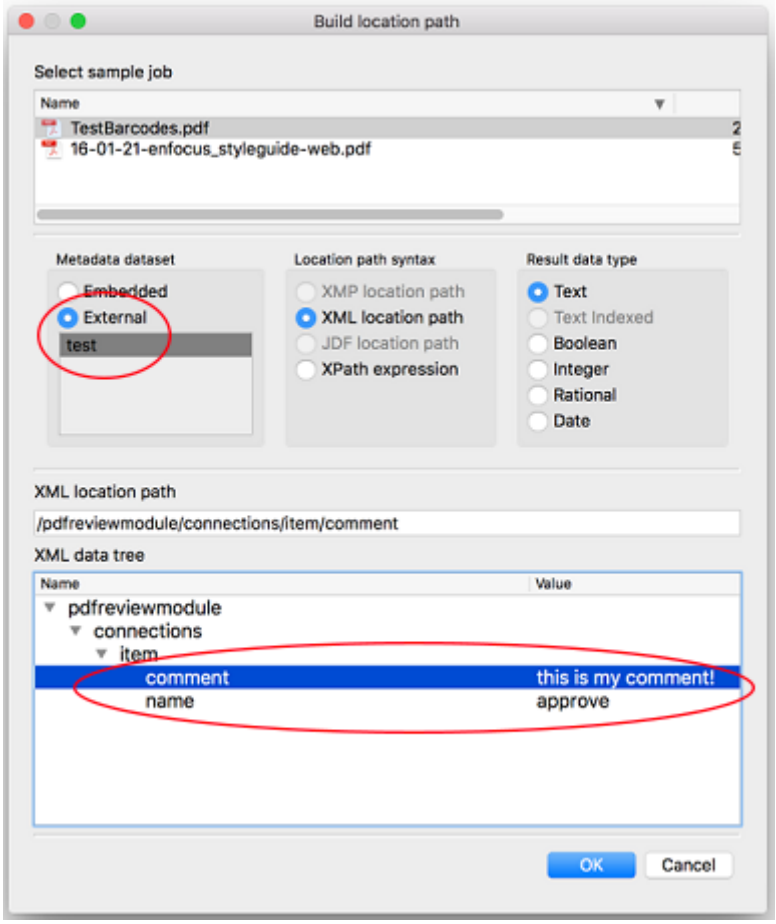


4. Activate and test the flow by dropping some PDF files on the input folder and reviewing them (for example with a comment, with a couple of sticky notes etc.).
5. Stop the flow.
6. Click the **Inspect jobs** button in the tool bar and click Metadata - Text - Path and choose Build location path.



7. In the upper part of the Build location path dialog, select one of the reviewed files.
8. Choose **External** as Metadata dataset.

   You'll find the name of the dataset (as entered in the app properties) in the field below 'External'.
9. Expand the XML data tree in the bottom field until you find the data you're looking for.
10. Repeat step 7 - 9 for all reviewed files.

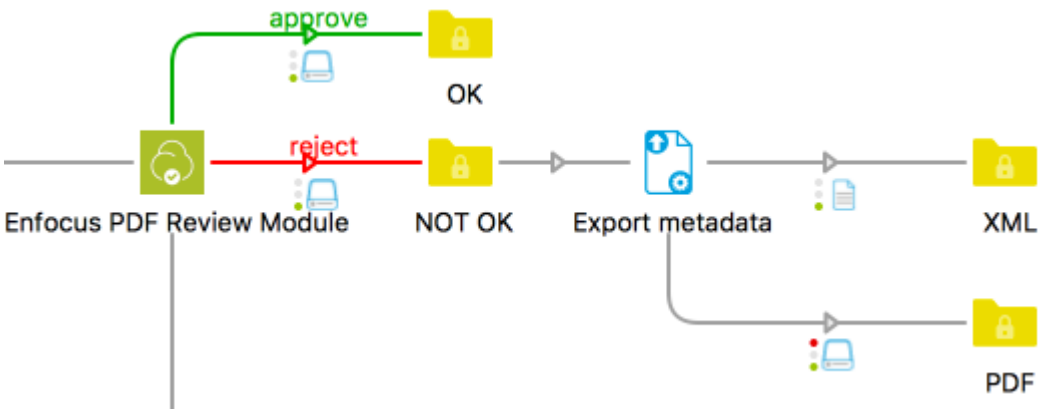


3.4.2. Exporting metadata

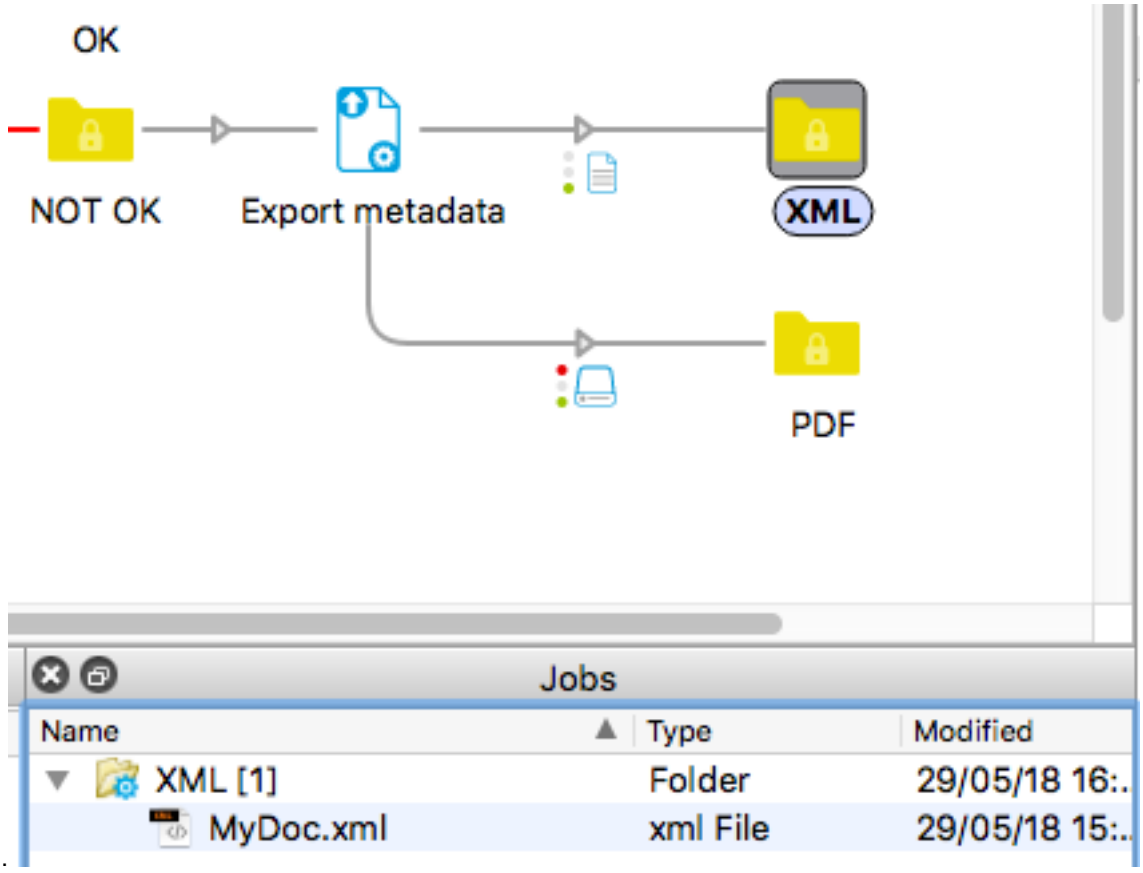
This method allows you to export the metadata to a separate metadata file (XML or opaque, depending on the chosen dataset type in the app properties).

Proceed as follows:

1. Add an **Export metadata** flow element to the right of the output folder that contains the reviewed files, and connect them.
2. Check the properties of **Export metadata**:
   - *Dataset name*: This should be the name of the dataset that contains the metadata = the name of the dataset entered in the PDF Review app properties.
   - *Filename body* and *Filename extension* refer to the name of the metadata file that will be created. *Filename body: Job name* means that the file name will be used; *Filename extension: Data model* refers to the chosen dataset type (see the properties of the PDF Review app): XML or opaque. You can change the default values or keep them as they are.
3. Configure the outgoing connections. **Export metadata** expects two outgoing connections:
   - One data connection for the reviewed PDF file.
   - One log connection for the metadata file.



4. Repeat steps 1 - 3 for all folders that contain files for which you want to export the metadata.
5. Activate and test the flow by dropping some PDF files on the input folder and reviewing them (for example with a comment, with a couple of sticky notes etc.).
6. Select the folder where you expect to find the metadata files.
   The metadata files (XML or opaque) can be found in the Jobs pane.



4. Reviewing a file using the PDF Review Module

4.1. Step-by-step procedure

To review a file in the PDF Review Module

1. Click the URL you received via email.
   Example: http://<IP address>/?file=5f7dccf64d0245df91350f677b07d6f4
   The PDF is displayed in an HTML5 browser, the PDF Review Module user interface.

   Note: The first time you're using the PDF Review Module in a particular browser, you'll be informed that cookies are used to save your personal preferences, such as your language choice. Note that we do not store any personal details. Click **I understand** to continue.

2. Inspect the file as required.

   You can inspect the document, page and object properties as required. For an overview of the options, refer to *UI & Functionality - Overview* on page 26. Note that is not possible to edit the file.

3. Optionally add your comments using the **Add comments** tool.

   For the full procedure, refer to *Adding, editing and removing comments* on page 36.

   Note: You cannot save intermediate results. If you add comments, you should approve or reject the file in the same session, otherwise your comments will be lost.

4. Click the **Approval** tab in the top right corner and click the button of your choice.

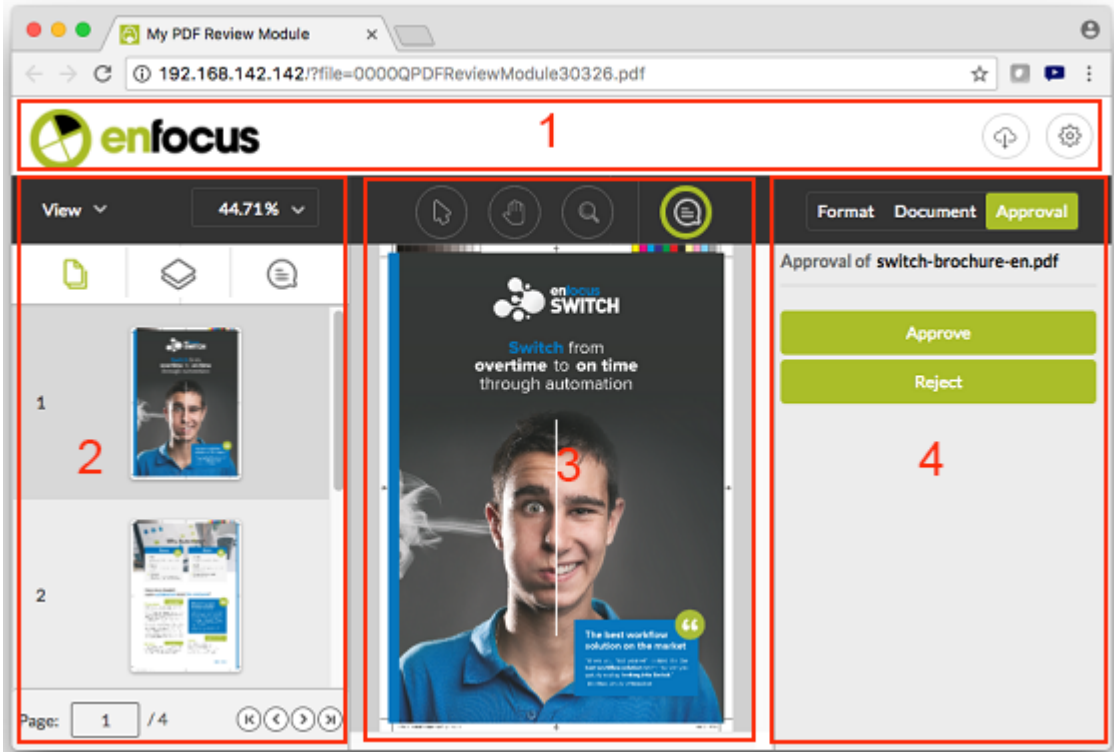
5. Confirm your choice and enter a comment if requested.
   Once you have clicked one of the buttons, you will be redirected to the website of the sender of the PDF. If you would try to open the file once more using the URL you received via email, you would notice that it is not possible anymore. As a consequence, it is not possible to send additional remarks afterwards.

4.2. User interface and functionality

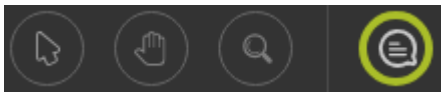
4.2.1. UI & Functionality - Overview

The table below gives an overview of the main screen areas and functionality.

Note that the UI may be customized, so the colors may be different, there may be fewer tabs in the right part of the UI, and the buttons may have a different text or color. All this depends on the configuration in Switch. The image below is an example with all functionality enabled.



#	Area	Functionality
1	**Title bar** with the logo of the company that provided you with the file. The button in the top right corner, gives access to the User Preferences dialog, where you can change the language and the unit of measure. There may be a second button that allows you to download the PDF file locally (including the review comments if any) before sending your approval decision.	*Changing the language of the user interface* on page 29 *Changing the unit of measure* on page 30
2	The left part of the screen is the **sidebar**. The sidebar can be collapsed or expanded (as in this example) and can contain 3 different tabs:	*Walking through a multi-page PDF* on page 34 *Viewing or hiding layers* on page 35 *Adding, editing and removing comments* on page 36

#	Area	Functionality
	• **Thumbnails** of all pages (this tab is always available) • **Layers** if any (available if there are no layers in the document, or if the function is disabled in Switch, this tab is absent) • **Comments** (available if the *View comments* functionality is enabled in Switch) The **View** menu above the tabs allows to hide or show certain screen elements, such as page boxes, rulers and guides, etc. (if enabled in Switch). You can also zoom in or zoom out as required.	*Viewing or hiding screen elements* on page 30 *Changing the zoom level of the PDF file* on page 32
3	The central part displays the PDF file. The **toolbar** gives access to four different tools:  • The first is a selection tool (which behaves like the PitStop Pro selection tool). • The second is a pan tool (for use on a tablet). • The third is a zoom tool (to take a closer look at specific areas). • The fourth is an *add comments* tool. The tool that is active is highlighted (in this example: the *add comments* tool).	*Viewing the properties of one or more objects* on page 40 *Moving the view horizontally or vertically* on page 41 *Adding, editing and removing comments* on page 36 *Zooming in on certain areas of the PDF file* on page 34
4	The **right panel** can contain 3 tabs: • **Format** provides information about the current page (size, orientation, page boxes) and any selected objects (text, art work, images), for example fill and stroke properties, position, ... • **Document** displays the document properties, and details about the fonts and separations used in the PDF.	*Viewing the properties of one or more objects* on page 40 *Viewing page properties* on page 38 *Viewing document properties, fonts and separations* on page 39 *Reviewing a file in the PDF Review Module* *Approving or rejecting a document* on page 41

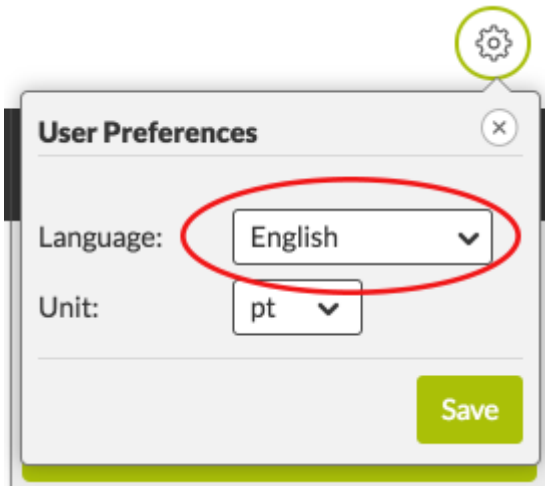
#	Area	Functionality
	• **Approval** contains the reject/approve buttons as configured in Switch. This tab is always present. The active tab is highlighted (in this example: the Approval tab). **Note:** To save space, this panel may be collapsed. It will be expanded automatically whenever you click one of the tabs at the top.	

4.2.2. Changing the language of the user interface

By default, the PDF Review Module is opened in the language of your browser.

To change the language of the PDF Review Module user interface

1. In the top right corner of the screen, click .
2. In the menu that appears, open the **Language** list.



3. Select the language of your choice.
4. Click **Save**.
5. Reload the page.

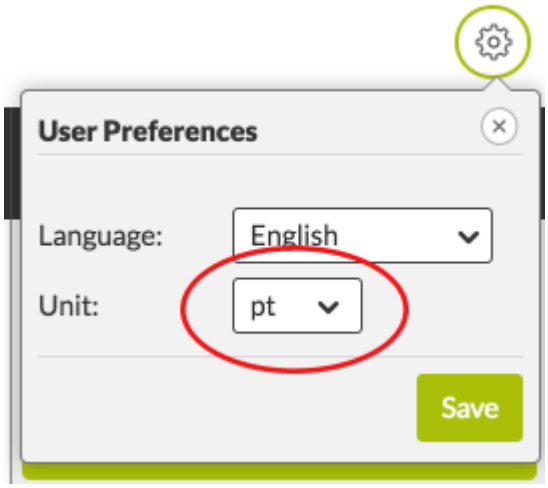
Next time you open the PDF Review Module (in the same browser and provided that your browser supports cookies), it will automatically be displayed in the language of your choice.

4.2.3. Changing the unit of measure

If you want information about dimensions and positions (e.g. the page size, the position of the page boxes), you may want the values to be expressed in a different unit.

To change the default measurement unit in the document/object properties

1. In the top right corner of the screen, click .
2. In the menu that appears, open the **Unit** list.



3. Select the unit of your choice.
   Choices are:
   - pt (points)
   - p (picas)
   - in (inches)
   - cm (centimeters)
   - mm (millimeters)
4. Click **Save**.

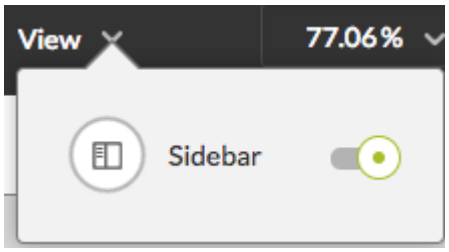
The unit and values are adjusted immediately.

4.2.4. Viewing or hiding screen elements

Depending on what you want to do, you may want to view or hide certain screen elements, such as page boxes, rulers, guides, ... Remember that some of the options mentioned below may not be present (depending on the configuration in Switch).

1. In the top left corner (below the company logo), click **View**.

2. Beside the screen element that you want to hide or view, move the slider as required:
   - Move the slider to the right to show the screen element.
   - Move the slider to the left to hide it.



Screen element	Meaning
Sidebar (always available)	The sidebar is the area on the left. It always contains a Thumbnail tab, and it may also have a Layers and a Comments tab (if enabled in Switch). You may hide the sidebar to have more space for the PDF. Note that showing and hiding the sidebar is default functionality; this option is always available.
Rulers (default off)	Rulers allow you to measure the size of the objects in the PDF.
Page Boxes (default on)	Page boxes define the physical size of a document, so you may want to check if they are OK. Each page box has its own color. To know which color represents which page box, click the **Format** tab in the right part of the user interface. On this tab, you'll also find information about the dimensions and the position of the page boxes. The colors used to draw the page boxes cannot be changed. The used colors are: • Media box: red • Crop box: green • Trim box: blue • Bleed box: pale blue • Art box: purple When the page boxes are not shown, the crop box is the page size at which your document is displayed. If they are shown, the media box is used to define the page size. This behavior is the same as in PitStop Pro (Show/hide Page Boxes view).
Guides (default on)	Guides are useful for lining up objects in the document. When you move the slider to the right, you have the possibility to add guides yourself.

Screen element	Meaning
	To add a guide **1.** Click in the ruler. The guide is added automatically. **2.** Keep your cursor in the ruler area and drag it to the desired position. To delete a guide, drag it outside de document area.
Wireframe Mode (default off)	Wireframe Mode shows the objects in the document as outlines. **Note:** If you're using Safari, you may encounter issues with large PDF files with a lot of text, or other objects that generate a lot of wireframe. If so, we recommend using a different browser (e.g. Google Chrome or Mozilla Firefox).
Ink coverage (default off)	You can use the slider or type a value of your choice to evaluate the impact of changed ink coverage. The fluorescent green color is used to show the areas with the highest ink coverage. You can pick a different color by clicking the color patch.

Your choices - except for wireframe mode and ink coverage - are remembered and used next time you open a document in the PDF Review Module.

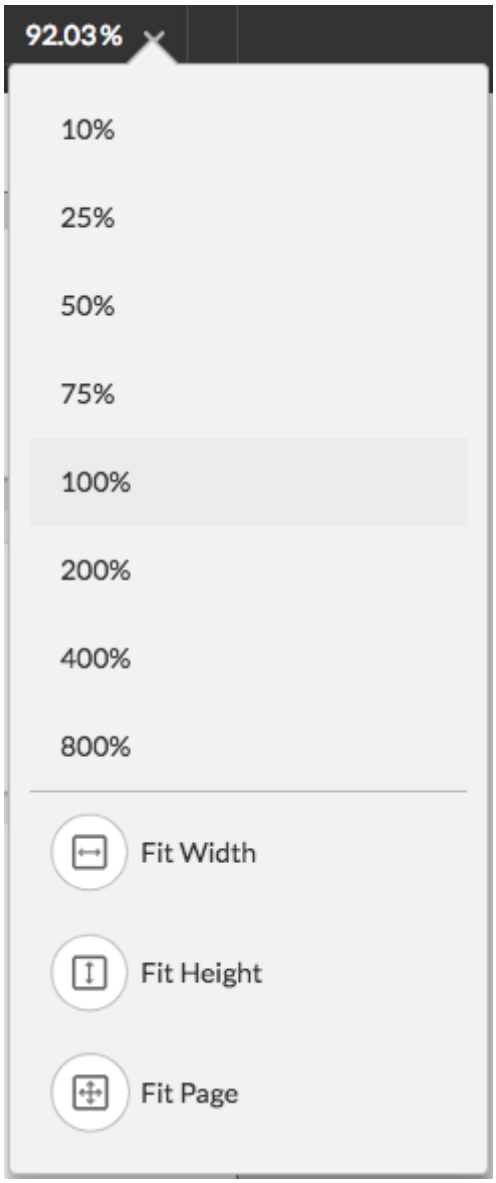
Note: Remember that the used unit for e.g. the rulers and guides, can be changed via the Preferences menu (see *Changing the unit of measure* on page 30).

4.2.5. Changing the zoom level of the PDF file

The zoom level is displayed below the company logo, in the top left corner of the user interface.

To change the zoom level of the PDF

1. Do one of the following:
   - Click in the **<number>%** field and type a different value.
   - Click the **<number>%** list in the toolbar and select the value of your choice. Alternatively, you can adjust the view to the available screen space (height or width of your screen), or to the size of one page.



2.

Alternatively, click the Zoom button in the toolbar and click somewhere in the document.

The zoom level is adjusted. The part of the page that is visible in the work area is marked on the thumbnail in the sidebar (with the Thumbnails tab enabled). Note that you can easily navigate on the zoomed page by moving the rectangle that marks the zoomed area.

Note:

- Edge and Internet Explorer do not support the functionality to navigate on the thumbnail.

- Invalid page boxes (e.g. crop box not completely inside the media box) may cause incorrect viewing results.

4.2.6. Zooming in on certain areas of the PDF file

The Zoom tool supports "click, drag, zoom" as commonly used in graphic arts software.

To zoom in on a particular area of the document, proceed as follows:

1. To activate the Zoom tool, click the Zoom button in the toolbar. The color of the border of the button changes, to indicate that the tool is activated and can be used. The cursor is adjusted as well - it looks like a magnifying glass.
2. Click and drag a rectangle around the area that you want to inspect, then release.
   The selected area is enlarged to fit the screen and marked on the thumbnail of the page, so you can see which part of the page is shown on screen. The zoom level is shown in the top left of the screen, beside the View list.
3. To view another part of the page with the same zoom level, click in the marked area on the thumbnail and move it as required.

Note:

- Edge and Internet Explorer do not support this functionality.
- Invalid page boxes (e.g. crop box not completely inside the media box) may cause incorrect viewing results.

Note that you can reset the zoom level by clicking the current zoom level displayed below the company logo, in the top left corner of the user interface. See also *Changing the zoom level of the PDF file* on page 32.

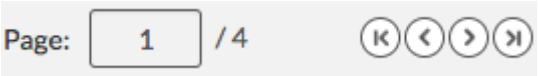
4.2.7. Walking through a multi-page PDF

To walk through a multi-page PDF

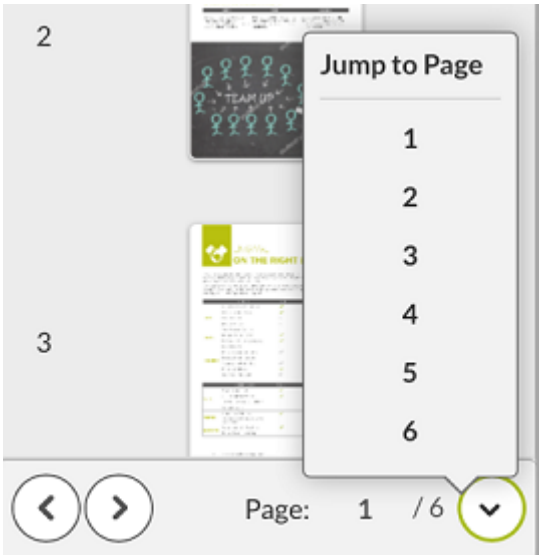
Do one of the following:

- Click the arrow buttons at the bottom of the sidebar.
- Enter a value in the Page field.
- *Desktop/laptop only*: Click the appropriate button to jump to a particular page
- *Tablet only*: Click the rightmost arrow button and click the page of your choice

Desktop/laptop:



Tablet:

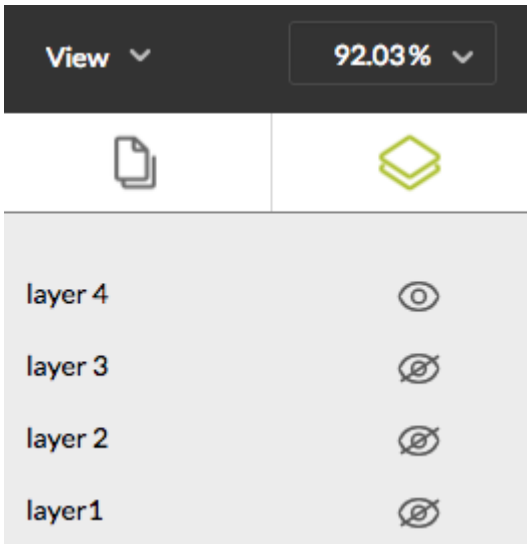


4.2.8. Viewing or hiding layers

This function is only available if it has been enabled in the configuration and if the file has layers.

To view or hide the layers in a document

1. Make sure the sidebar is displayed.
   See *Viewing or hiding screen elements* on page 30.
2. In the sidebar, click the **Layers** tab .
3. Click the eye icon to hide or display the layer(s) of your choice.
   In the example below, the document has 4 layers of which only layer 4 is visible.



4.2.9. Adding, editing and removing comments

Although it is not possible to make changes to the PDF, you do have the option to add comments, edit them afterwards and remove them as required. If the document contains a Comments tab, you can as well view comments that are already present in the document.

To add a comment

1. To activate the **Add comments** tool, click the button in the toolbar.
   The color of the border of the button changes, to indicate that the tool is activated and can be used. The cursor is adjusted as well - it looks like a text balloon (same behavior as Adobe Acrobat).
2. Click in the PDF, near the object or place where you want to put a comment.
3. In the dialog that pops up, type your name and comment.

4. Click **Save**.
   You will see a sticky note where you added your comment. Note that you can drag it to a different place in the document as required.
5. To view and/or edit your comments
   a. Click the **Comments** tab in the sidebar.
      The comments are listed one after the other. The author of the comment, the creation date and time and the page it applies to are mentioned. Note that new comments are added to the end of the list.
   b. To edit a particular comment, select it.
      The selected comment and the corresponding sticky note are highlighted.
   c. Click the button ooo in the top right corner.
   d. Click **Edit Comment**.
   e. Change the text as required.
   f. Click **Save**.

Note:

- Alternatively, as long as the Add comments tool is active, you can select the comment by clicking the corresponding sticky note in the document. To change its content, just click it once more.
- You can also edit comments that were already included in the document!

6. To remove a comment

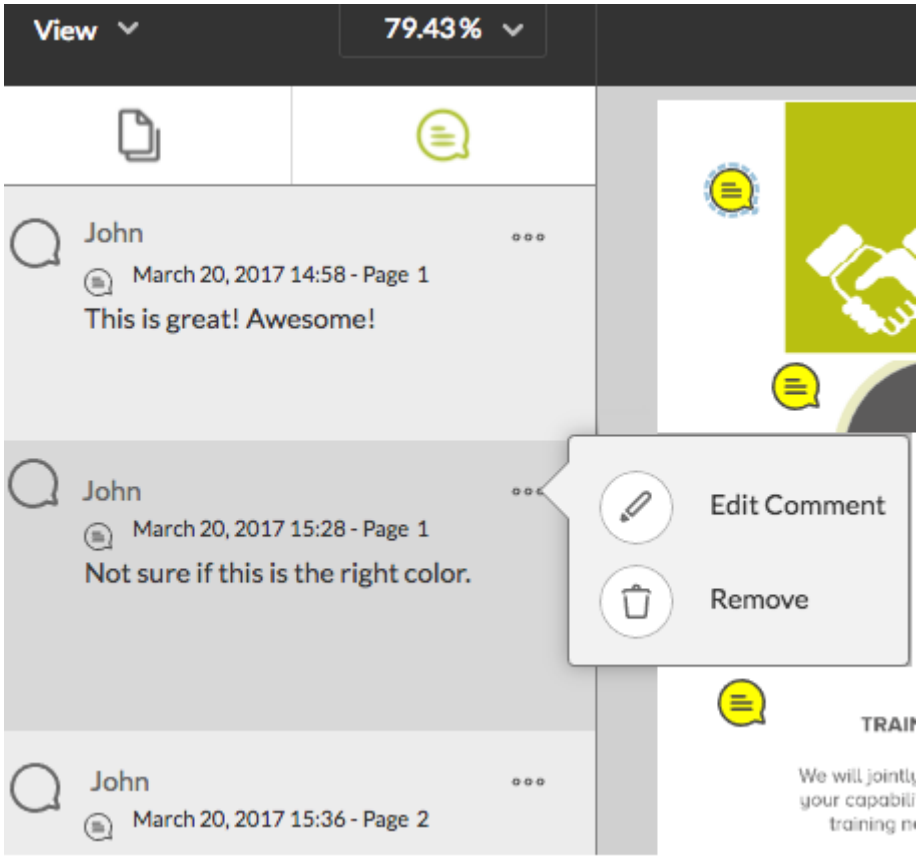
a. Select the comment you want to remove:

- Click the comment in the **Comments** tab of the sidebar, OR
- Click the sticky note in the document.

The selected comment and the corresponding sticky note are highlighted.

b. Do one of the following:

- In the **Comments** tab, click the button in the top right corner and click **Remove**.
- Press the **Delete** key on your keyboard. Note that this will only work if the sticky note is selected (displayed with a blue border); if the Add/Edit comment dialog is opened and the cursor is inside the input field, pressing the Delete key will remove the text, but not the sticky note itself.



4.2.10. Viewing page properties

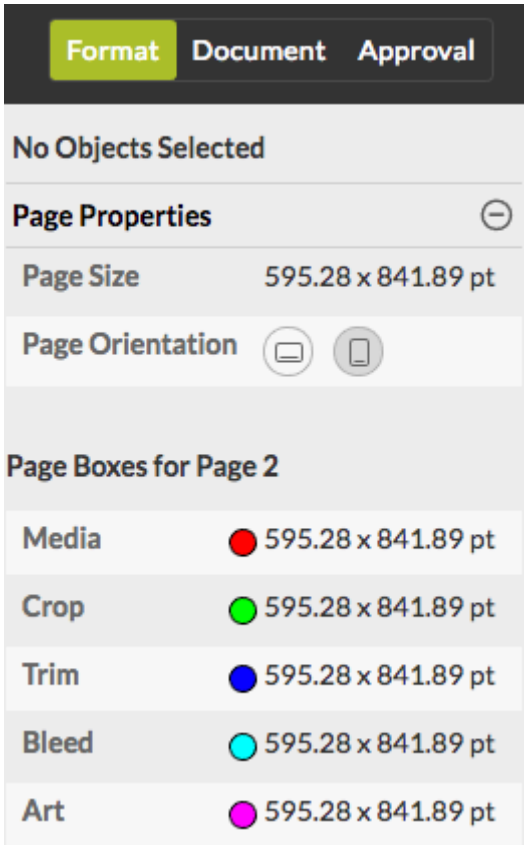
To view the properties of a particular page, such as the size, the page orientation and the dimensions of the page boxes

1. In the right part of the screen, click the **Format** tab.

   There's only one category: Page Properties. It may be collapsed.

2. Click the ⊕ button to expand the collapsed section as required.

   Remember that the unit used for the page size and the dimensions of the page boxes can be changed via the Preferences menu (see *Changing the unit of measure* on page 30) .



4.2.11. Viewing document properties, fonts and separations

To view the properties document properties, and the fonts and separations used in the document

1. In the right part of the screen, click the **Document** tab.

   There are three categories: Document separations, Document properties and Document Fonts. They may be collapsed.

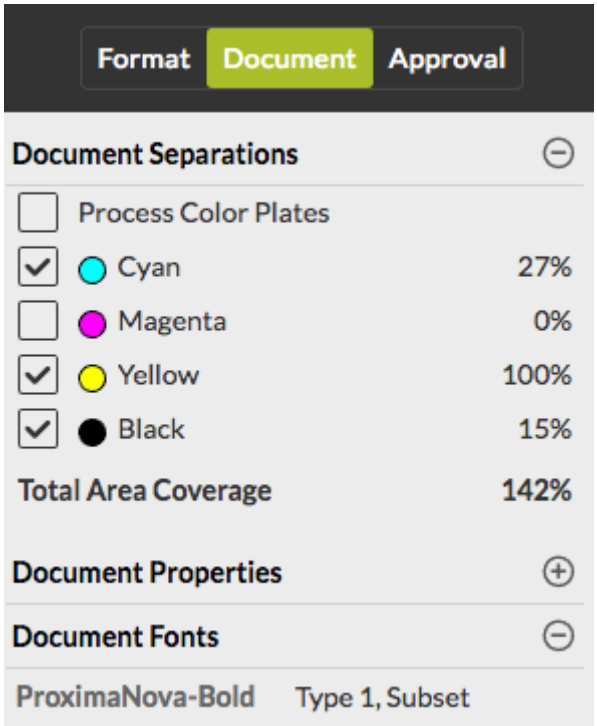
2. Click the ⊕ button to expand the collapsed sections as required.

   You can use the ⊖ button to collapse a section.

3. To display a particular separation, click the checkbox beside the separation concerned.

   - Process Color Plates and Spot Color Plates are grouped.
   - If only one separation is selected, it is shown in black.

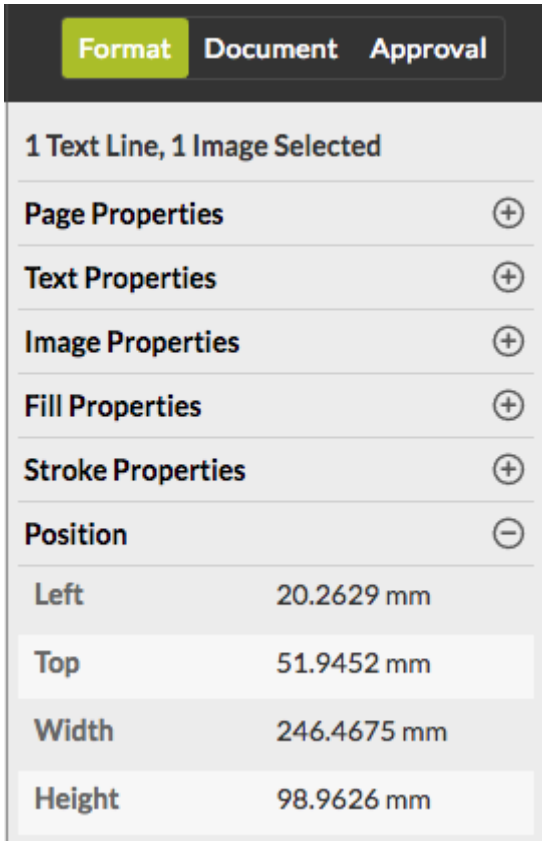
4. To get information about the ink coverage of a certain area, move your cursor over that area in the document.
   The total area coverage is mentioned and the ink coverage of each color is indicated next to the color plate.



4.2.12. Viewing the properties of one or more objects

To view the properties of one or more selected objects (image, text, art work), such as the fill and stroke properties, the position, and text or image properties such as image size, resolution, ...)

1. Make sure the selection tool is active. By default it is enabled, but if you have used the pan or add comments tool, you may have to activate it again. To do so, click the button in the toolbar.
   The color of the border of the button changes, to indicate that the tool is activated and can be used. The cursor changes into a pointer.
2. Do one of the following:
   - To select one object, click it.
   - To select multiple objects in one go, hold down the shift key while clicking the objects to include in the selection. Alternatively, you can drag a rectangle around the objects to select them.
3. Click the **Format** tab.
   At the top of the tab, it's mentioned what is contained in the selection. Depending on the selected objects, different categories are possible, such as Text Properties, Fill Properties, Image Properties, Position, etc.
4. Click the button to expand a category as required.



4.2.13. Moving the view horizontally or vertically

If your zoom level is very high and you cannot see the whole document, you may want to move the view. This is handy when the document is opened on a tablet.

To move the view horizontally or vertically

1. To activate the **pan** tool, click the button in the toolbar.
   The color of the border of the button changes, to indicate that the tool is activated and can be used. The cursor changes into a hand cursor.
2. Swipe or move the area that you want to see.

4.2.14. Approving or rejecting a document

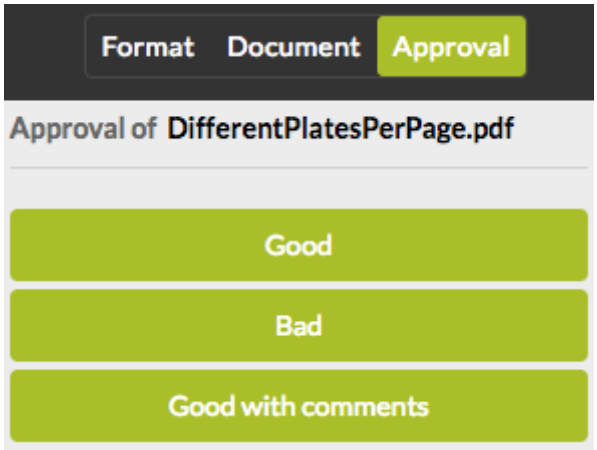
After inspection, you must decide whether or not to approve the file.

To do so

1. Click the **Approval** tab.
   The name of the file you're going to approve or reject is mentioned just below the tab name.
2. Click the button of your choice.

3. Give a comment if requested.

4. Confirm your choice.
   Once you have reviewed the file, you will be redirected to the website of the sender of the PDF. If you would try to open the file once more using the URL you received via email, you would notice that it is not possible anymore. As a consequence, it is not possible to send additional remarks afterwards.



Note: It is possible that the sender of the document has set a deadline. If so, the document link will become unavailable when the deadline expires.

5. Troubleshooting

5.1. Approval Service not available

Issue
A reviewer cannot access the file received via email. The error message says that the service is not available.

Solution
This message indicates that the PDF Review Module is not licensed correctly. For more information, check the license information on the *Statistics* tab in the Administration area or the log messages in Switch.

If you have no valid license, contact your Enfocus reseller. The list of resellers can be found on the Enfocus website.

If you have a license, but forgot to activate it, refer to *Activating the PDF Review Module* on page 12.

5.2. Approval Service is busy

Issue
A reviewer cannot access the file received via email. The error message says that the approval service is busy and has reached full capacity.

Solution
This message indicates that the number of concurrent users has exceeded the license count with twice the number of users during more than 2 hours a day. For more information refer to the paragraph on licensing in *Before you start* on page 5.

If this happens occasionally, you may advise the reviewer to try again later.

If this happens regularly, we recommend purchasing extra user licenses.

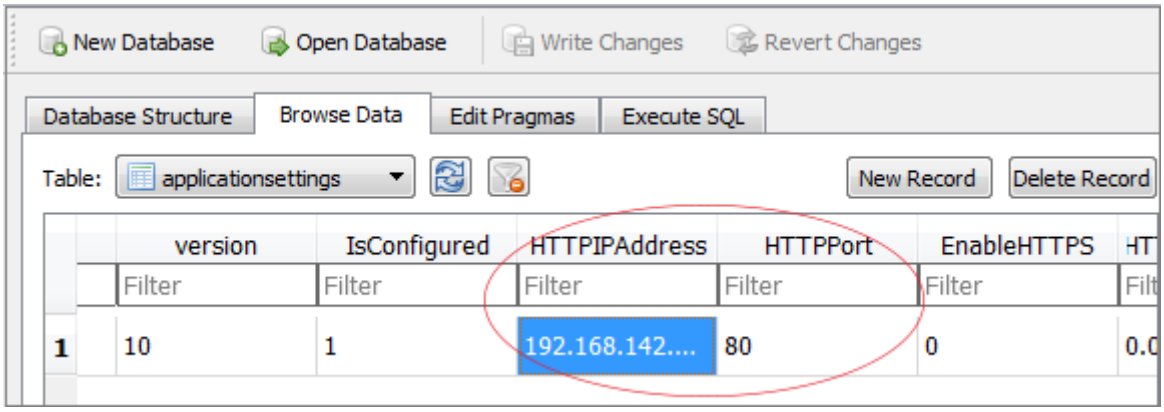
5.3. I don't remember the IP address or Port for the PDF Review Module

Issue
You can reach the Administration area by entering `<IP address>:<Port number>/admin` in the address bar of your browser. It may happen that you forgot the selected IP address or port number.

Solution

If you haven't changed the server settings, the default address is: `localhost:8080/admin`.

If you do have changed the server settings, you can check the database file located at C:\Windows\System32\config\systemprofile\AppData\Roaming\Enfocus Prefs Folder\PDF Review Module\Settings.db. You can open this file using a data browsing tool, such as DB Browser for SQLite (free download from *http://sqlitebrowser.org/*).



Note: If the IP address is *0.0.0.0*, you can use "localhost" as IP address. Note that this value matches the 'All Unassigned IP Addresses' option for the IP Address (in the *Server Settings section)*.

5.4. The approve/reject buttons are not shown in the correct order

Issue

The buttons in the user interface are shown to the reviewer in a different order than expected/wanted.

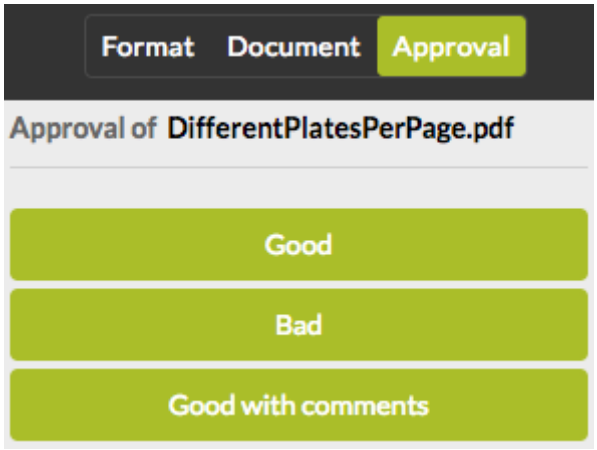
Solution

The order of the buttons is determined by the order in which they were created. There is no way to change the order afterwards.

To change the order, you must remove the outgoing connections (so the connections between the PDF Review app and the output folders) and create them again, starting with the folder that should be shown at the top.

In the example below, the output connections were created in the following order:

1. Good
2. Bad
3. Good with comments



5.5. Files are sent back to Switch without being reviewed

Issue

When a reviewer clicks the link to review a PDF file, he gets a warning that the file has been already reviewed and sent back to Switch. The reviewer is surprised because he has not yet reviewed the file.

Solution

Check the **Fail jobs after timeout** property in the PDF Review app. The timeout period you have set may be too short, causing the file to move to another folder in Switch before it is actually reviewed.

5.6. Notifications are sent as text instead of HTML

Issue

A reviewer complains that he receives the notifications in text instead of HTML format.

Solution

Check the PDF Review app property *Mail format* and the Mail send property *Message format*. Make sure they are both set to 'HTML'.

If that didn't solve the issue, ask the reviewer to check the mail settings of his mail application; it's possible that all incoming mail is converted to text by default. For example, in Outlook 2010 this is the case if **Read all standard mail in plain text** (a security setting in the Trust Center Settings) is enabled.

5.7. When reviewing a file, the browser response is very slow

Issue

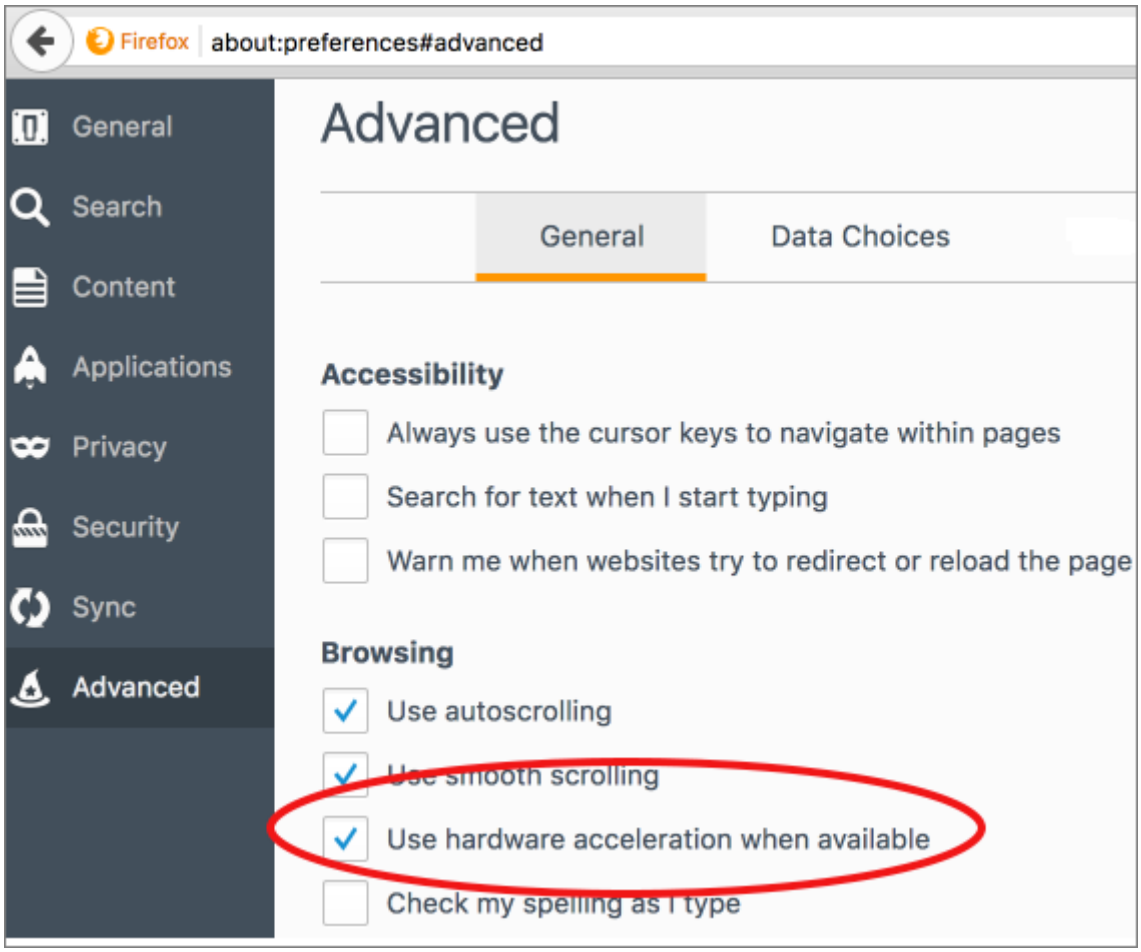
The PDF Review Module UI is very slow, e.g. when clicking a tab or a tool or when rendering a page, there is an annoying delay before something happens.

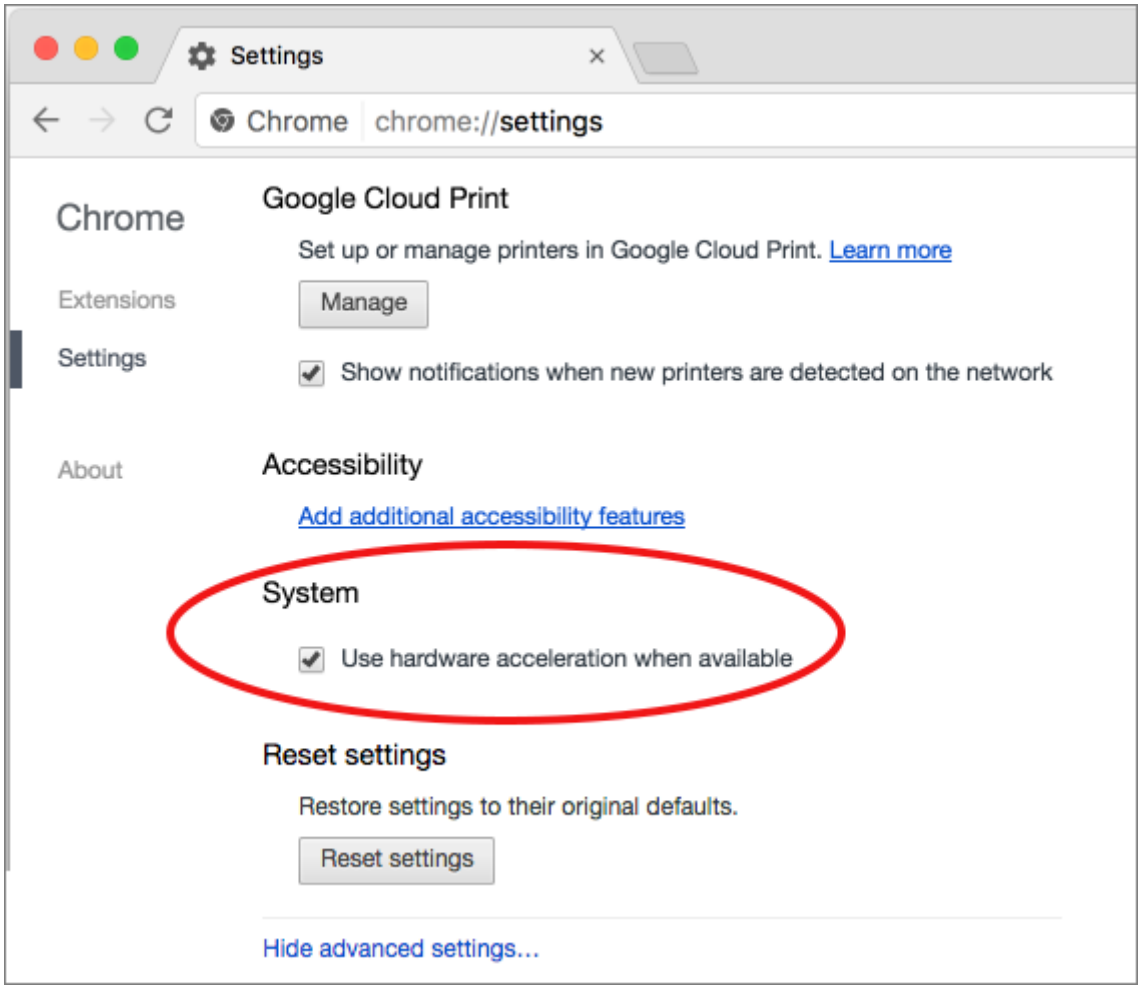
Solution

Check the settings of the (client) browser used to open the files for review.

For optimal performance, the **Use hardware acceleration when available** option in the browser settings should be enabled.

The exact location of this setting depends on the browser.




Settings
Chrome
chrome://settings
Chrome
Extensions
Settings
About
Google Cloud Print
Set up or manage printers in Google Cloud Print. Learn more
Manage
Show notifications when new printers are detected on the network
Accessibility
Add additional accessibility features
System
Use hardware acceleration when available
Reset settings
Restore settings to their original defaults.
Reset settings
Hide advanced settings...

6. Appendix

6.1. Creating a valid HTTPS certificate

This topic explains how you can create a valid HTTPS certificate for the PDF Review Module. This certificate should be uploaded to *the Server Settings tab* in the Administration area.

The certificate consists of two files:

- The SSL private key, which should be of the type PKCS #8 , unencrypted and PEM encoded.
- The SSL certificate chain, which should be of the type X.509, PEM encoded, and should contain the entire chain.

To create a valid certificate for the PDF Review Module

1. Download and install the KeyStore Explorer app (*https://keystore-explorer.org/downloads.html*) (or a similar app).
2. Do one of the following:
   - If you already have a certificate, open it in the KeyStore Explorer.
   - If you don't have a certificate yet, create one in the KeyStore Explorer. To do so, click **File** > **New** and enter the requested details.
3. To export the private key, proceed as follows:
   a. Right-click on the certificate to open the context menu and select **Export** > **Export Private key**.

      You may be asked to enter the private key's password.
   b. Select **PKCS #8** as the type of private key export required and click **OK**.
   c. Enter the correct export settings:
      - Leave the **Encrypt** checkbox unselected.
      - Select **PEM**.
      - Choose a name and a location for the exported key file.
   d. Click **Export**.
4. To export the certificate chain, proceed as follows:
   a. Right-click on the certificate to open the context menu and select **Export** > **Export Certificate Chain**
   b. Enter the correct export settings:
      - Set Export Length to **Entire Chain**.
      - Select **X.509** as export format. This will automatically enable PEM encoding.
      - Choose a name and a location for the exported certificate chain file.
   c. Click **Export**.

You have created two files (a public key and a certificate chain) that should be uploaded via the Administration area of the PDF Review Module. Note that changing the server settings will cause a server restart.

7. Third-Party License Information


```
This product includes Botan.

      Copyright (C) 1999-2009 Jack Lloyd
      2001 Peter J Jones
      2004-2007 Justin Karneges
      2004 Vaclav Ovsik
      2005 Matthew Gregan
      2005-2006 Matt Johnston
      2006 Luca Piccarreta
      2007 Yves Jerschow
      2007-2008 FlexSecure GmbH
      2007-2008 Technische Universitat Darmstadt
      2007-2008 Falko Strenzke
      2007-2008 Martin Doering
      2007 Manuel Hartl
      2007 Christoph Ludwig
      2007 Patrick Sona
      2010 Olivier de Gaalon
      All rights reserved.

      Redistribution and use in source and binary forms, with or without
      modification, are permitted provided that the following conditions are
      met:

      1. Redistributions of source code must retain the above copyright
      notice, this list of conditions, and the following disclaimer.

      2. Redistributions in binary form must reproduce the above copyright
      notice, this list of conditions, and the following disclaimer in the
      documentation and/or other materials provided with the distribution.

      THIS SOFTWARE IS PROVIDED BY THE AUTHOR(S) "AS IS" AND ANY EXPRESS OR
      IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
      WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE,
      ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR(S) OR CONTRIBUTOR(S) BE
      LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
      CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
      SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
      BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
      WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE
      OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN
      IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

------------------------------------------------------------

This product includes ICC Profiles.

    Some ICC Profiles were created by FFEI Ltd. (www.ffei.co.uk) using Fujifilm
    ColourKit Profiler Suite (www.colourprofiling.com)

------------------------------------------------------------

This product includes ICC Profiles.

    Some ICC profiles are copyright (C) by European Color Initiative, www.eci.org

------------------------------------------------------------

This product includes ICC Profiles.

    Some ICC profiles are copyright (C) of WAN-IFRA, www.wan-ifra.org

------------------------------------------------------------

This product includes ICC Profiles.

    Some ICC profiles are copyright (C) IDEAlliance(R). G7(R), GRACol(R) and
    SWOP(R) are all registered trademarks of IDEAlliance(C).

------------------------------------------------------------
```

This product includes PANTONE Color Libraries.

PANTONE© and other Pantone trademarks are the property of Pantone LLC.
Pantone is a wholly owned subsidiary of X-Rite, Incorporated.

This product includes curl.

Copyright (c) 1996 - 2015, Daniel Stenberg, <daniel@haxx.se>.
All rights reserved.

Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

This product includes LibTIFF.

Copyright (c) 1988-1997 Sam Leffler
Copyright (c) 1991-1997 Silicon Graphics, Inc.

Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that (i) the above copyright notices and this permission notice appear in all copies of the software and related documentation, and (ii) the names of Sam Leffler and Silicon Graphics may not be used in any advertising or publicity relating to the software without the specific, prior written permission of Sam Leffler and Silicon Graphics.

THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT SHALL SAM LEFFLER OR SILICON GRAPHICS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER OR NOT ADVISED OF THE POSSIBILITY OF DAMAGE, AND ON ANY THEORY OF LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

This product includes FreeType.

Portions of this software are copyright (C) 2014 The FreeType Project (www.freetype.org) licensed under the Freetype License.
All rights reserved.

This product includes gSOAP.

EXHIBIT B.

Part of the software embedded in this product is gSOAP software.
Portions created by gSOAP are Copyright (C) 2001-2007 Robert A. van Engelen, Genivia inc. All Rights Reserved.

THE SOFTWARE IN THIS PRODUCT WAS IN PART PROVIDED BY GENIVIA INC AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,

OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes iODBC.

Copyright (C) 1995-2006, OpenLink Software Inc and Ke Jin.
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of OpenLink Software Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL OPENLINK OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes JBIG2Lib.

Portions of this product copyrights (C) 2002 Glyph & Cog, LLC.

This product includes JPEGLib.
This software is copyright (C) 1991-2016, Thomas G. Lane, Guido Vollbeding.
All Rights Reserved.

This software is based in part on the work of the Independent JPEG Group.

This product includes Little CMS.

Little CMS
Copyright (c) 1998-2011 Marti Maria Saguer

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

This product includes libpng.

Copyright (c) 2000-2002 Glenn Randers-Pehrson

The PNG Reference Library is supplied "AS IS". The Contributing Authors and Group 42, Inc. disclaim all warranties, expressed or implied, including, without limitation, the warranties of merchantability and of fitness for any purpose. The Contributing Authors and Group 42, Inc. assume no liability for direct, indirect, incidental, special, exemplary, or consequential damages, which may result from the use of the PNG Reference Library, even if advised of the possibility of such damage. There is no warranty against interference with your enjoyment of the library or against infringement. There is no warranty that our efforts or the library will fulfill any of your particular purposes or needs. This library is provided with all faults, and the entire risk of satisfactory quality, performance, accuracy, and effort is with the user.

This product includes libxml2.

Copyright (C) 1998-2012 Daniel Veillard. All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

This product includes OpenJPEG.

Copyright (c) 2002-2012, Communications and Remote Sensing Laboratory, Universite catholique de Louvain (UCL), Belgium
Copyright (c) 2002-2012, Professor Benoit Macq
Copyright (c) 2003-2012, Antonin Descampe
Copyright (c) 2003-2009, Francois-Olivier Devaux
Copyright (c) 2005, Herve Drolon, FreeImage Team
Copyright (c) 2002-2003, Yannick Verschueren
Copyright (c) 2001-2003, David Janssens
Copyright (c) 2011-2012, Centre National d'Etudes Spatiales (CNES), France
Copyright (c) 2012, CS Systemes d'Information, France
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:
1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS `AS IS' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)

```
      ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
      POSSIBILITY OF SUCH DAMAGE.

-------------------------------------------------------------

This product includes OpenSSL.

      Copyright (c) 1998-2017 The OpenSSL Project.  All rights reserved.

      Redistribution and use in source and binary forms, with or without
      modification, are permitted provided that the following conditions
      are met:

      1. Redistributions of source code must retain the above copyright
         notice, this list of conditions and the following disclaimer.

      2. Redistributions in binary form must reproduce the above copyright
         notice, this list of conditions and the following disclaimer in
         the documentation and/or other materials provided with the
         distribution.

      3. All advertising materials mentioning features or use of this
         software must display the following acknowledgment:
         "This product includes software developed by the OpenSSL Project
         for use in the OpenSSL Toolkit. (http://www.openssl.org/)"

      4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
         endorse or promote products derived from this software without
         prior written permission. For written permission, please contact
         openssl-core@openssl.org.

      5. Products derived from this software may not be called "OpenSSL"
         nor may "OpenSSL" appear in their names without prior written
         permission of the OpenSSL Project.

      6. Redistributions of any form whatsoever must retain the following
         acknowledgment:
         "This product includes software developed by the OpenSSL Project
         for use in the OpenSSL Toolkit (http://www.openssl.org/)"

      THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY
      EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
      IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
      PURPOSE ARE DISCLAIMED.  IN NO EVENT SHALL THE OpenSSL PROJECT OR
      ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
      SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
      NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
      LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
      HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
      STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
      ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
      OF THE POSSIBILITY OF SUCH DAMAGE.

-------------------------------------------------------------

This product includes OpenSSL.

      Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
      All rights reserved.

      Redistribution and use in source and binary forms, with or without
      modification, are permitted provided that the following conditions
      are met:
      1. Redistributions of source code must retain the copyright
         notice, this list of conditions and the following disclaimer.
      2. Redistributions in binary form must reproduce the above copyright
         notice, this list of conditions and the following disclaimer in the
         documentation and/or other materials provided with the distribution.
      3. All advertising materials mentioning features or use of this software
         must display the following acknowledgement:
         "This product includes cryptographic software written by
         Eric Young (eay@cryptsoft.com)"
         The word 'cryptographic' can be left out if the rouines from the library
         being used are not cryptographic related :-).
      4. If you include any Windows specific code (or a derivative thereof) from
         the apps directory (application code) you must include an acknowledgement:
         "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
```

```
      THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
      ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
      IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
      ARE DISCLAIMED.  IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
      FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
      DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
      OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
      HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
      LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
      OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
      SUCH DAMAGE.

------------------------------------------------------------

This product includes patented technology.

      This product and use of this product is under license from Markzware
      under U.S. Patent No. 5,963,641.

------------------------------------------------------------
PostgreSQL is released under the PostgreSQL License, a liberal
Open Source license, similar to the BSD or MIT licenses.

          PostgreSQL Database Management System

(formerly known as Postgres, then as Postgres95)

          Portions Copyright © 1996-2018, The PostgreSQL
Global Development Group

          Portions Copyright © 1994, The Regents of the University of California


Permission to use, copy, modify, and distribute this software and its documentation
 for any purpose,
without fee, and without a written agreement is hereby granted, provided that the
 above copyright notice
and this paragraph and the following two paragraphs appear in all copies.

          IN NO EVENT SHALL
THE UNIVERSITY OF CALIFORNIA BE LIABLE TO ANY PARTY FOR DIRECT, INDIRECT, SPECIAL,
 INCIDENTAL, OR CONSEQUENTIAL
DAMAGES, INCLUDING LOST PROFITS, ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS
 DOCUMENTATION, EVEN
IF THE UNIVERSITY OF CALIFORNIA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

          THE UNIVERSITY
OF CALIFORNIA SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING, BUT NOT LIMITED TO,
 THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE SOFTWARE PROVIDED
 HEREUNDER IS ON AN "AS
IS" BASIS, AND THE UNIVERSITY OF CALIFORNIA HAS NO OBLIGATIONS TO PROVIDE MAINTENANCE,
 SUPPORT, UPDATES,
ENHANCEMENTS, OR MODIFICATIONS.
------------------------------------------------------------

This product includes Qt.

      The software uses Qt, licensed under LGPL v3. The Qt Toolkit is Copyright (C)
 2016 The Qt Company Ltd.

      Portions of this software are copyright (C) 2006-2015 The FreeType Project
 (www.freetype.org). All rights reserved.

      Copyright (C) 1991-2011, Thomas G. Lane, Guido Vollbeding.
      This software is based in part on the work of the Independent JPEG Group.

      Secure Hash Algorithm SHA-3 - brg_endian
      Copyright (c) 1998-2008, Brian Gladman, Worcester, UK. All rights reserved.

      LICENSE TERMS

      The redistribution and use of this software (with or without changes)
      is allowed without the payment of fees or royalties provided that:

       1. source code distributions include the above copyright notice, this
```

```
          list of conditions and the following disclaimer;

       2. binary distributions include the above copyright notice, this list
          of conditions and the following disclaimer in their documentation;

       3. the name of the copyright holder is not used to endorse products
          built using this software without specific written permission.

      DISCLAIMER

      This software is provided 'as is' with no explicit or implied warranties
      in respect of its properties, including, but not limited to, correctness
      and/or fitness for purpose.

-------------------------------------------------------------

This product includes QtCopyDialog.

      Copyright (c) 2009 Nokia Corporation and/or its subsidiary(-ies).
      All rights reserved.

      BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
      WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
      EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
      OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
      KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
      IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
      PURPOSE.  THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
      LIBRARY IS WITH YOU.  SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
      THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

-------------------------------------------------------------

This product includes QtMigration.

        Copyright (C) 2013 Digia Plc and/or its subsidiary(-ies).

        Redistribution and use in source and binary forms, with or without
        modification, are permitted provided that the following conditions are
        met:
          * Redistributions of source code must retain the above copyright
            notice, this list of conditions and the following disclaimer.
          * Redistributions in binary form must reproduce the above copyright
            notice, this list of conditions and the following disclaimer in
            the documentation and/or other materials provided with the
            distribution.
          * Neither the name of Digia Plc and its Subsidiary(-ies) nor the names
            of its contributors may be used to endorse or promote products derived
            from this software without specific prior written permission.

        THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
        "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
        LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
        A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
        OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
        SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
        LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
        DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
        THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
        (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
        OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE."

-------------------------------------------------------------

This product includes QtService.

        Copyright (C) 2010 Nokia Corporation and/or its subsidiary(-ies).

        Redistribution and use in source and binary forms, with or without
        modification, are permitted provided that the following conditions are
        met:
          * Redistributions of source code must retain the above copyright
            notice, this list of conditions and the following disclaimer.
          * Redistributions in binary form must reproduce the above copyright
            notice, this list of conditions and the following disclaimer in
            the documentation and/or other materials provided with the
            distribution.
```

```
          * Neither the name of Nokia Corporation and its Subsidiary(-ies) nor
            the names of its contributors may be used to endorse or promote
            products derived from this software without specific prior written
            permission.

        THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
        "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
        LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
        A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
        OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
        SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
        LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
        DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
        THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
        (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
        OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

------------------------------------------------------------

This product includes QtSingleApplication.

        Copyright (C) 2010 Nokia Corporation and/or its subsidiary(-ies). All rights
 reserved.

        Redistribution and use in source and binary forms, with or without
        modification, are permitted provided that the following conditions are
        met:
          * Redistributions of source code must retain the above copyright
            notice, this list of conditions and the following disclaimer.
          * Redistributions in binary form must reproduce the above copyright
            notice, this list of conditions and the following disclaimer in
            the documentation and/or other materials provided with the
            distribution.
          * Neither the name of Nokia Corporation and its Subsidiary(-ies) nor
            the names of its contributors may be used to endorse or promote
            products derived from this software without specific prior written
            permission.

        THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
        "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
        LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
        A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
        OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
        SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
        LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
        DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
        THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
        (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
        OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.


------------------------------------------------------------

This product includes Qt SQL driver plugin (qsqlodbc).

      Copyright (C) 1992-2008 Trolltech ASA. All rights reserved.

      Warranty Disclaimer: The Licensed Software is licensed to Licensee
      "as is". To the maximum extent permitted by applicable law, Trolltech on
      behalf of itself and its suppliers, disclaims all warranties and
      conditions, either express or implied, including, but not limited to,
      implied warranties of merchantability, fitness for a particular purpose,
      title and non-infringement with regard to the Licensed Software.

      Limitation of Liability: If, Trolltech's warranty disclaimer
      notwithstanding, Trolltech is held liable to Licensee, whether in
      contract, tort or any other legal theory, based on the Licensed
      Software, Trolltech's entire liability to Licensee and Licensee's
      exclusive remedy shall be, at Trolltech's option, either (A) return of
      the price Licensee paid for the Licensed Software, or (B) repair or
      replacement of the Licensed Software, provided Licensee returns to
      Trolltech all copies of the Licensed Software as originally delivered to
      Licensee. Trolltech shall not under any circumstances be liable to
      Licensee based on failure of the Licensed Software if the failure
      resulted from accident, abuse or misapplication, nor shall Trolltech
      under any circumstances be liable for special damages, punitive or
      exemplary damages, damages for loss of profits or interruption of
```

```
      business or for loss or corruption of data. Any award of damages from
      Trolltech to Licensee shall not exceed the total amount Licensee has
      paid to Trolltech in connection with this Agreement.

------------------------------------------------------------

This product includes QtSql.

      Copyright (c) 2009 Nokia Corporation and/or its subsidiary(-ies).

      BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
      WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
      EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
      OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
      KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
      IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
      PURPOSE.  THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
      LIBRARY IS WITH YOU.  SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
      THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

------------------------------------------------------------

This product includes LibTIFF.

      Copyright (c) 1988-1997 Sam Leffler
      Copyright (c) 1991-1997 Silicon Graphics, Inc.

      Permission to use, copy, modify, distribute, and sell this software and
      its documentation for any purpose is hereby granted without fee, provided
      that (i) the above copyright notices and this permission notice appear in
      all copies of the software and related documentation, and (ii) the names of
      Sam Leffler and Silicon Graphics may not be used in any advertising or
      publicity relating to the software without the specific, prior written
      permission of Sam Leffler and Silicon Graphics.

      THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND,
      EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY
      WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

      IN NO EVENT SHALL SAM LEFFLER OR SILICON GRAPHICS BE LIABLE FOR
      ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND,
      OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS,
      WHETHER OR NOT ADVISED OF THE POSSIBILITY OF DAMAGE, AND ON ANY THEORY OF
      LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE
      OF THIS SOFTWARE.

------------------------------------------------------------

This product includes XercesC.

    NOTICE file corresponding to section 4(d) of the Apache License, Version 2.0, in
 this case for the Apache Xerces distribution.

    This product includes software developed by
    The Apache Software Foundation (http://www.apache.org/).

    Portions of this software were originally based on the following:
     - software copyright (c) 1999, IBM Corporation., http://www.ibm.com.

------------------------------------------------------------

This product includes XMP Toolkit.

      Copyright (c) 1999 - 2010, Adobe Systems Incorporated
      All rights reserved.

      Redistribution and use in source and binary forms, with or
      without modification, are permitted provided that the following
      conditions are met:

      * Redistributions of source code must retain the above copyright notice,
      this list of conditions and the following disclaimer.
      * Redistributions in binary form must reproduce the above copyright notice,
      this list of conditions and the following disclaimer in the documentation
      and/or other materials provided with the distribution.
      * Neither the name of Adobe Systems Incorporated, nor the names of its
      contributors may be used to endorse or promote products derived from this
```

```
      software without specific prior written permission.

      THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
      "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
      LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
      A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR
      CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
      EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
      PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR
      PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
      LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
      NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
      SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

------------------------------------------------------------

This product includes zlib.

      Copyright (C) 1995-2004 Jean-loup Gailly and Mark Adler

      This software is provided 'as-is', without any express or implied
      warranty.  In no event will the authors be held liable for any damages
      arising from the use of this software.

------------------------------------------------------------
```

8. Copyrights

© 2019 Enfocus BV all rights reserved. Enfocus is an Esko company.

Certified PDF is a registered trademark of Enfocus BV.

Enfocus PitStop Pro, Enfocus PitStop Workgroup Manager, Enfocus PitStop Server, Enfocus Connect YOU, Enfocus Connect ALL, Enfocus Connect SEND, Enfocus StatusCheck, Enfocus CertifiedPDF.net, Enfocus PDF Workflow Suite, Enfocus Switch, Enfocus SwitchClient, Enfocus SwitchScripter and Enfocus Browser are product names of Enfocus BV.

Adobe, Acrobat, Distiller, InDesign, Illustrator, Photoshop, FrameMaker, PDFWriter, PageMaker, Adobe PDF Library™, the Adobe logo, the Acrobat logo and PostScript are trademarks of Adobe Systems Incorporated.

Datalogics, the Datalogics logo, PDF2IMG™ and DLE™ are trademarks of Datalogics, Inc.

Apple, Mac, Mac OS, Macintosh, iPad and ColorSync are trademarks of Apple Computer, Inc. registered in the U.S. and other countries.

Windows, Windows 7, Windows 8.1, Windows 10, Windows 2008 Server, Windows 2008 Server R2, Windows Server 2012, Windows Server 2012 R2 and Windows Server 2016 are registered trademarks of Microsoft Corporation.

PANTONE® Colors displayed here may not match PANTONE-identified standards. Consult current PANTONE Color Publications for accurate color. PANTONE® and other Pantone, Inc. trademarks are the property of Pantone, Inc. ©Pantone, Inc., 2006.

OPI is a trademark of Aldus Corporation.

Quark, QuarkXPress, QuarkXTensions, XTensions and the XTensions logo among others, are trademarks of Quark, Inc. and all applicable affiliated companies, Reg. U.S. Pat. & Tm. Off. and in many other countries.

This product and use of this product is under license from Markzware under U.S.Patent No. 5,963,641.

Other brand and product names may be trademarks or registered trademarks of their respective holders. All specifications, terms and descriptions of products and services are subject to change without notice or recourse.