



Get started with eScriptorium

Documents

- eScriptorium source code: <https://gitlab.inria.fr/scripta/escriptorium>

Prerequisites

- Have an account on an eScriptorium instance;
- Or operate a local installation of eScriptorium ([with Docker](#) or [without Docker](#)).

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1. Step by step

1.1. Logging In to eScriptorium

You connect to eScriptorium with an individual account accessed by entering your login name and password. This account can be created after you receive an invitation or by the site administrator:



The screenshot shows the eScriptorium login page. At the top, there is a dark navigation bar with the eScriptorium logo and links for Home, About, and Contact. On the right side of this bar is a 'Login' link. Below the navigation bar, the main content area has the heading 'Please Sign In'. There are two input fields: the first contains the text 'demo_general' and the second contains a series of asterisks representing a password. Below these fields is a prominent green button labeled 'login'. Underneath the login button is a blue link that says 'Lost password?'.

Login form

Once you are logged in you will land on the dashboard which allows you to manage all the projects created by you or shared with your account. On your first login, this dashboard is empty:



The screenshot shows the eScriptorium dashboard. At the top, there is a dark navigation bar with the eScriptorium logo and links for Home and Contact. On the right side of this bar are links for 'My Projects', 'My Models', and 'Hello demo_general'. Below the navigation bar, the main content area has the heading 'My Projects' on the left and a green button labeled 'Create new Project' on the right.

Dashboard preview, blank

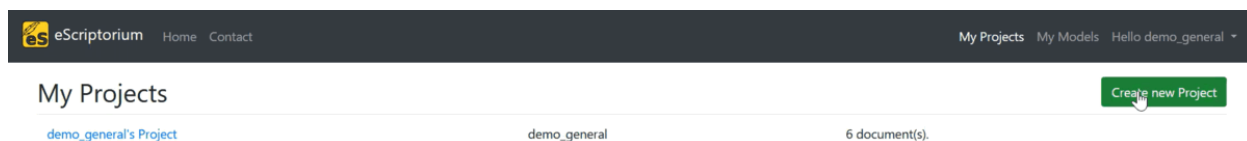
1.2. Creating a new project and a new document

1.2.1. Terminology review

- A “ **project** ” is a collection of documents which share in specific parameters (users, tags, etc);
- A “ **document** ” is a collection of images forming a whole;
- A “ **document-part** ” is an image—a page—belonging to a document.

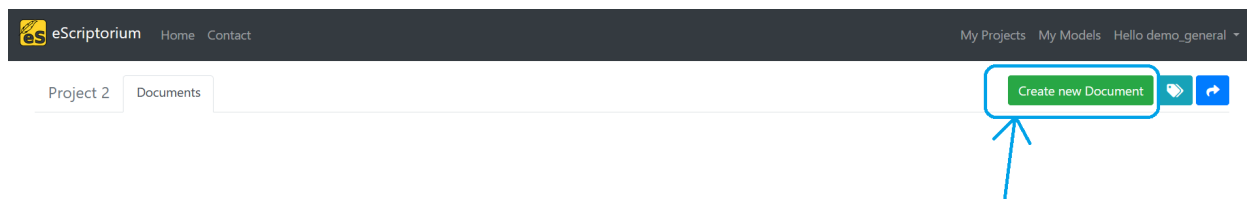
1.2.2. Instructions

To create a **project**, go to “My Projects” and click on the “Create new project” button; a new page is displayed, in which a single field is used to name the project. The project is created as soon as the “Create” button is activated. The project is now displayed in the list of projects.



Creating a new project.

To create a **document**, click on a project, then on the “**Create new Document**” button; a new page will be displayed as well as an entry form.



Create a new document by clicking on “Create new Document”.

The “Description” tab of a document, the location in which metadata is entered.

The “Name” field is required. The other fields are optional and can be completed at another time. We will come back to the “Ontology” section later.

Once the information has been entered, click on “Create” to create the document. A message will then be displayed: “Document created successfully!”.

You can still modify the data you entered; the “Create” button has now been replaced by an “Update” button. If you modify or add new data, be sure to click “Update” before navigating away from the tab.

Two entry points for editing a document.

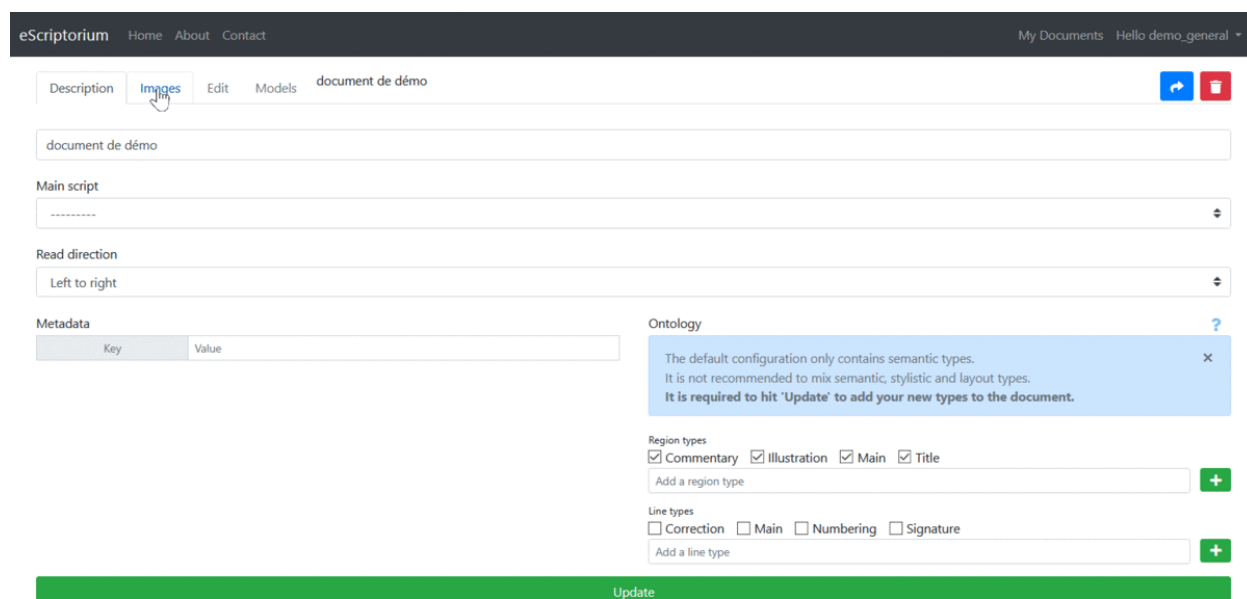
To return to this form from the dashboard, click on the document in the list then once the “Images” tab is open click on the “Description” tab. Or, if the document already contains images, click on the “Edit last updated image” icon then on the “Description” tab.

1.3. Loading images

1.3.1. Accessing the interface

The “Images” interface is used to manage most of the tasks related to automatic image processing and imports/exports.

To access the image loading interface, click on the “Images” tab.



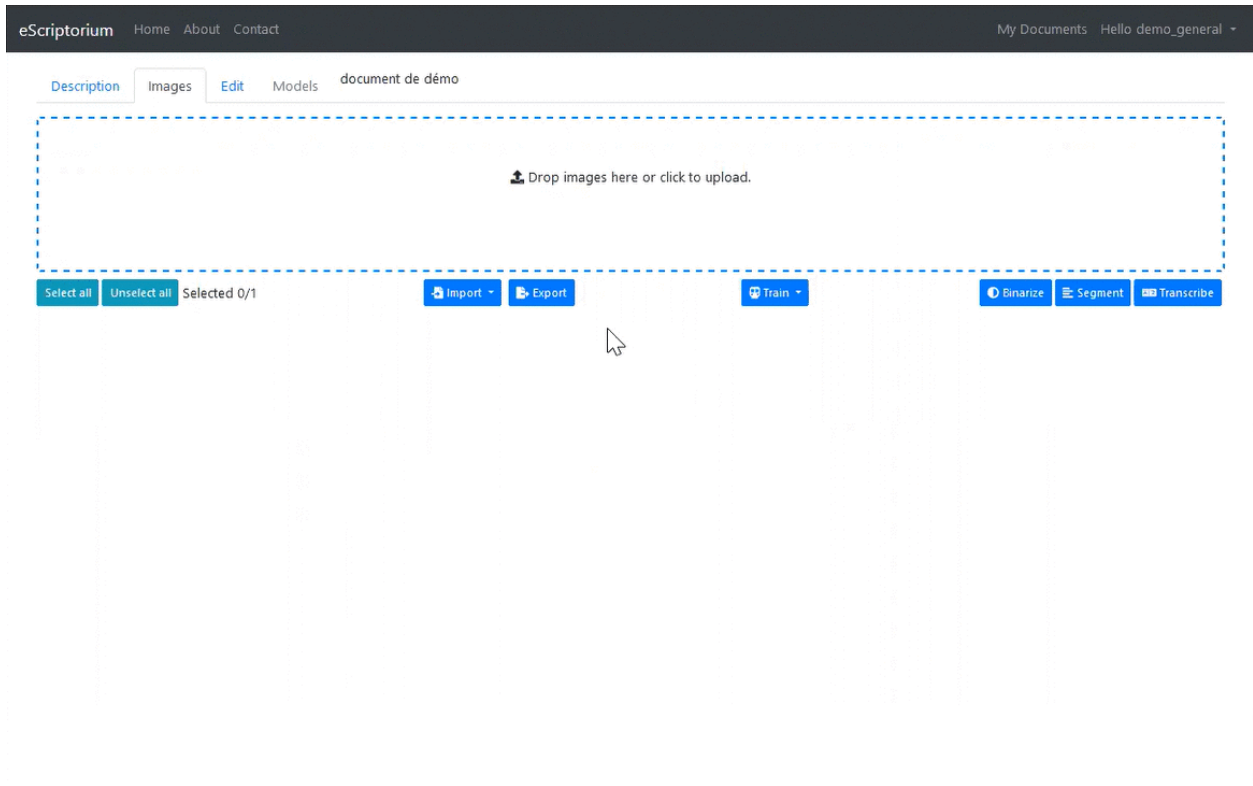
Navigation between the “Description” and “Images” tabs.

There are several ways to import images into the platform.

1.3.2. Importing local files

Simply upload files using drag and drop or click in the area to open the file explorer.

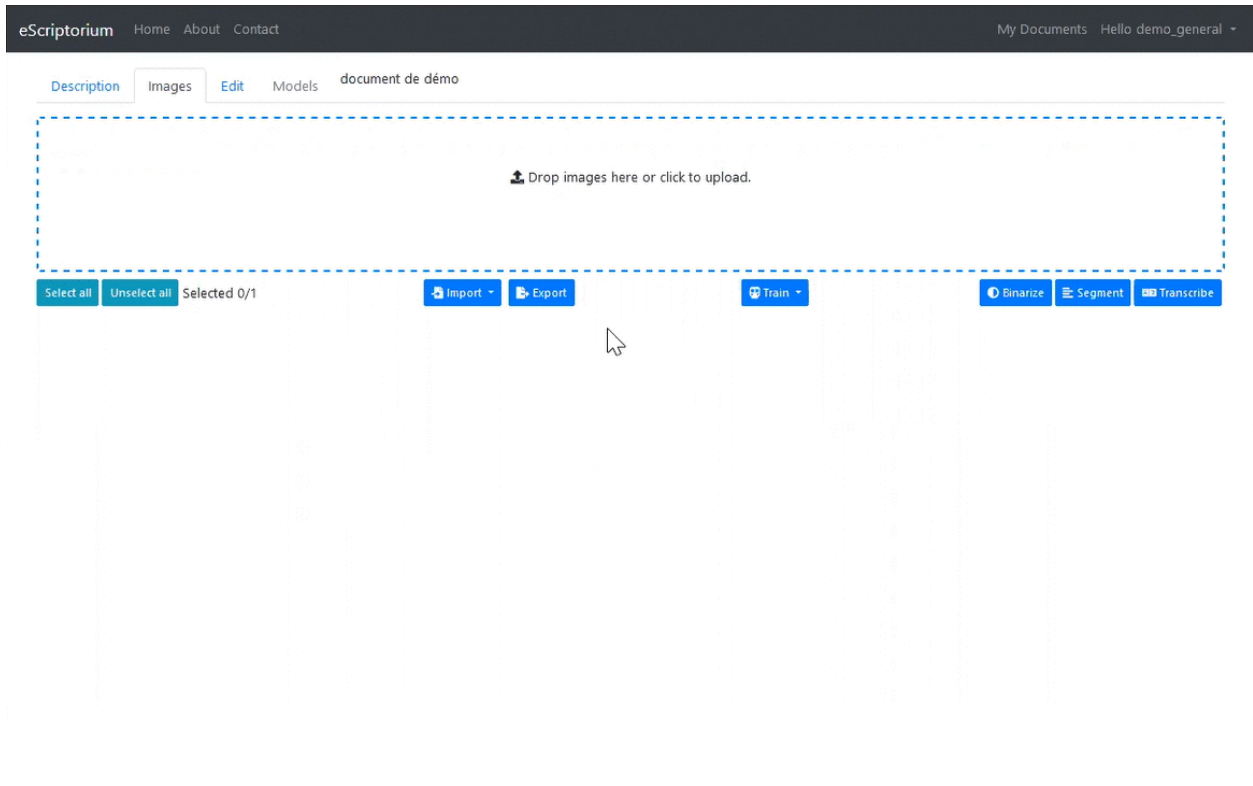
Caution: you have to wait for all the images to be loaded before refreshing the page!



Demonstration of importing images from a local file system.

1.3.3. Importing images from a PDF file

Click on the “Import/Images (PDF)” option then load a PDF file to import the images. Note that only the images are imported. If the PDF contains a text layer corresponding to the transcription, it is not imported.

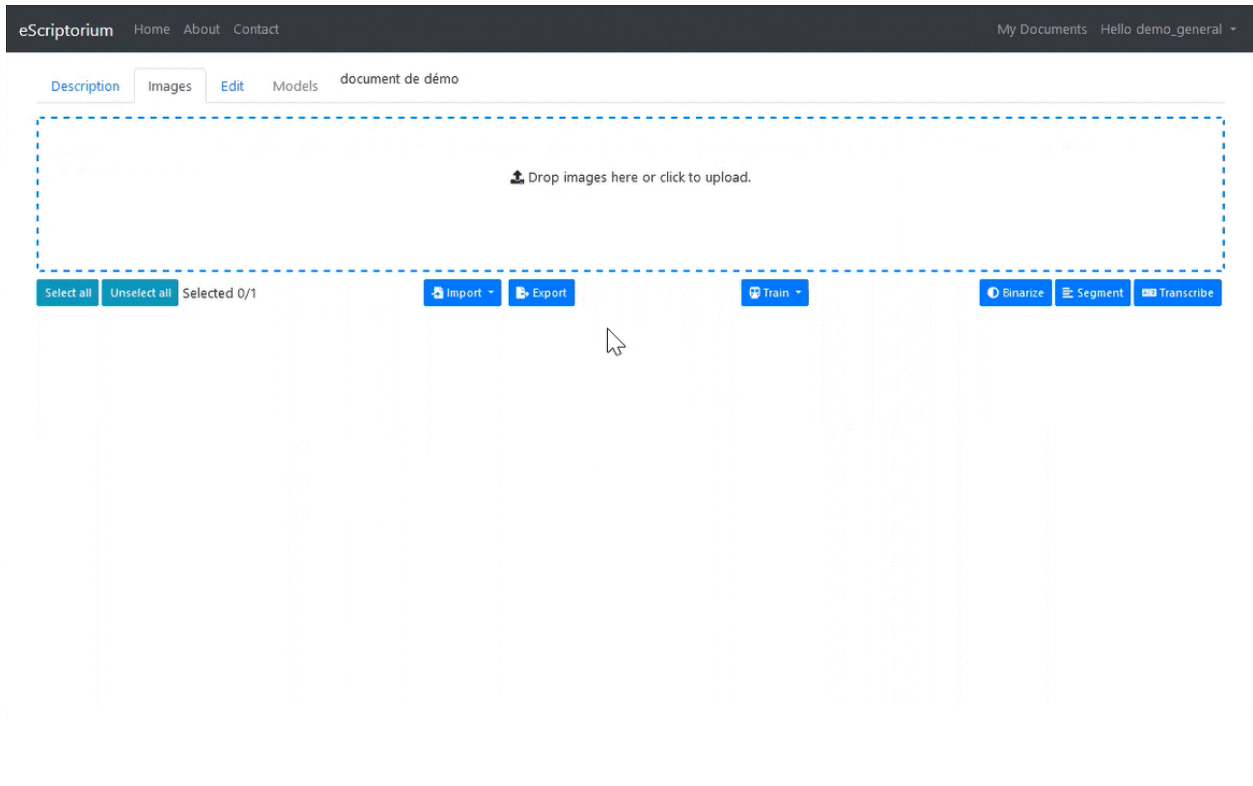


Demonstration of importing images from a PDF.

1.3.4. Using an IIIF manifest

Click on the “Import/Images (IIIF)” option then enter the URL of an IIIF manifest. All the images associated with the manifest will then be copied locally as well as the metadata, which will be visible in the “Description” tab.

Example: `https://gallica.bnf.fr/iiif/ark:/12148/btv1b53026595r/manifest.json`



Demonstration of importing images through an IIIF manifest.

1.4. Manually annotating documents

1.4.1. Accessing the interface

Manual annotation is necessary to generate the ground truth data used to train models, or to correct the result of these operations. It can also be used within the framework of an annotation project which does not make use of Kraken models (eScriptorium then only serves as an input environment).

The edit *document-parts* tab allows you to create or modify annotation elements manually. It is accessed by clicking on the “Edit” tab at the top of the page or by clicking on the “Edit” button found on each “card” which represents a document-part. There are several viewing panes in this tab corresponding to each possible editing task.

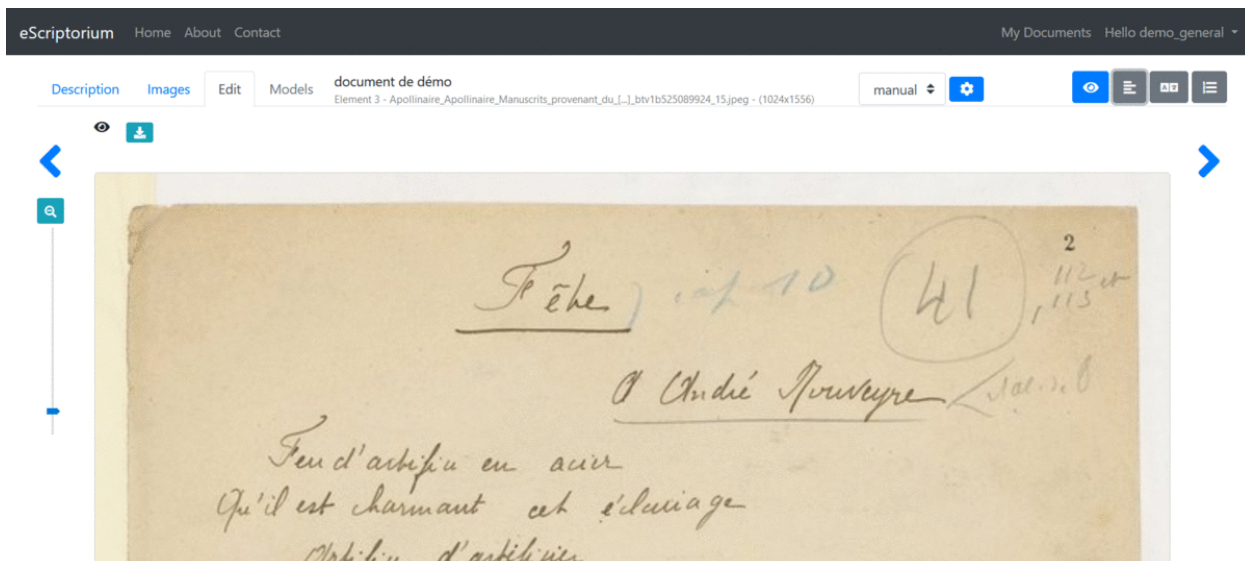


Several viewing panes can be activated within the “Edit” tab



Another way to access the “Edit” tab

- “Image Source” displays the source image;
- “Segmentation” displays the segmentation editing pane;
- “Transcription” displays the transcription editing pane in diplomatic view;
- “Text-Annotation” allows you to display the editing pane of the transcription in text mode and to modify the order of the lines or (in the near future) to annotate the text.



Enabling and disabling edit panes.

1.4.2. Annotating segments and areas on the image

The segment editing pane allows you to perform several essential operations:

- Draw baselines corresponding to the location of the text on the image in accordance with two modes:
 - free drawing (not recommended);
 - plotted point by point.
- Add points on a line (select the line then double-click at the location of the desired point);
- Move one or more point(s) with a simple select-drag;
- Delete one or more point(s) on a line;
- Cut one or more lines using the scissors tool;
- Join one or more lines;
- Set the reading direction of a line;
- Activate the calculation of the polygons associated with each line (this task is automatic and managed asynchronously without action on the part of the user after the first use);
- Associate one or more rows with a region.

In this pane, it is also possible to create regions (also known as “zones”) and to associate segments with them. A segment located within the perimeter of a region is therefore not automatically associated with it.

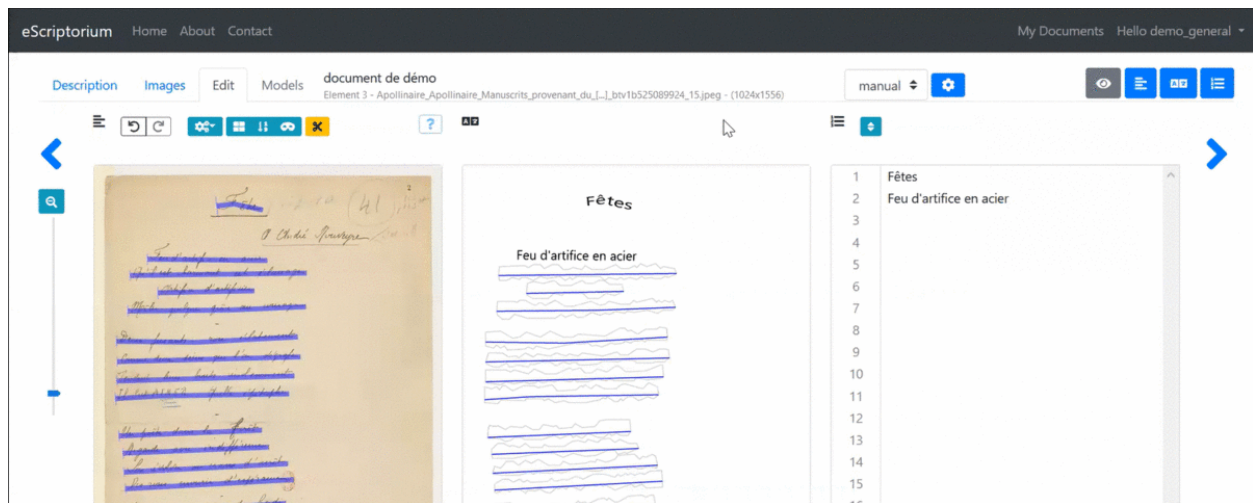
All of the operations that can be performed in this pane are described in detail in a help window (to display it, click on “?” icon). Note that there are many shortcuts to simplify all these operations.

1.4.3. Annotating a transcript

It is only when there are segments and masks on the image that it is possible to use the functionalities associated with the “Transcription” and “Text” tabs.

To add or modify a transcription associated with a segment from the “Transcription” pane, click on the corresponding zone. An input window appears. To save a transcription, hit “Enter”: the transcription interface automatically displays the input field for the next segment.

As you type in the “Transcription” pane, the crenellated areas are replaced by text and the content of the “Text” pane changes. It is therefore also possible to modify the text from the “Text” pane and even to copy-paste several lines at once.

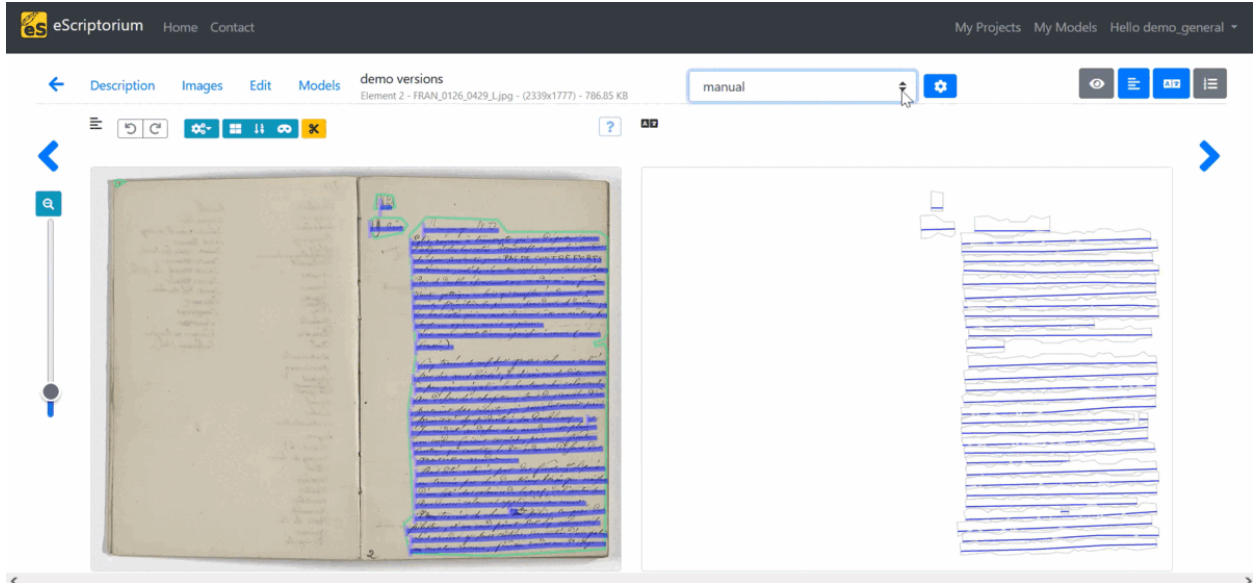


Manually edit the transcript from the “Transcription” pane.

1.4.4. Transcription version management

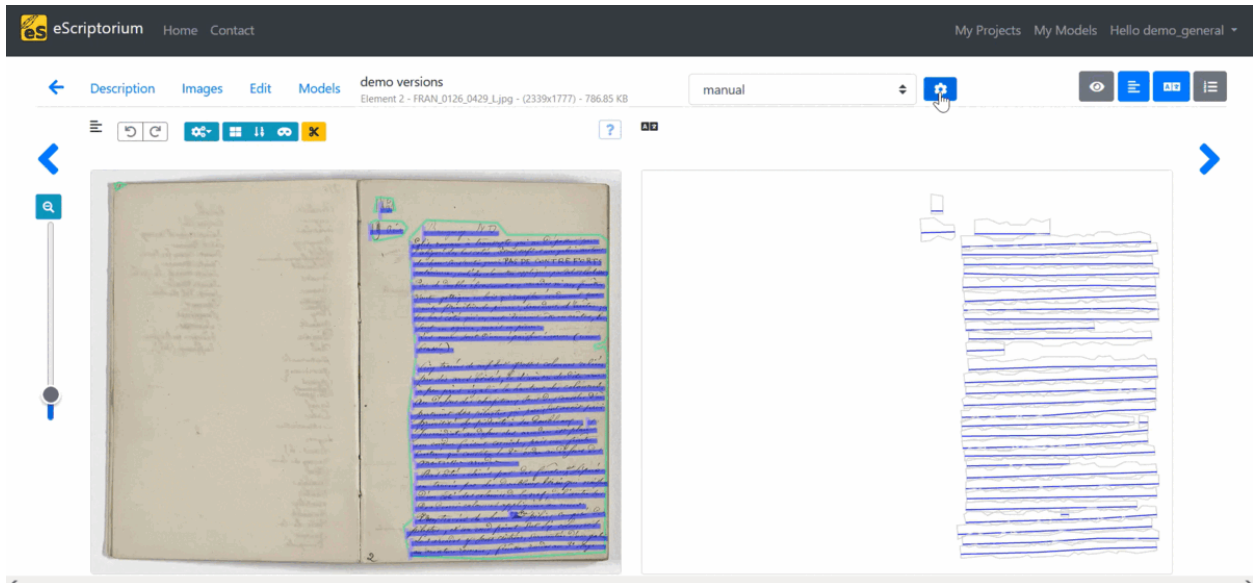
A document can be associated with several transcription versions simultaneously. Each version has a name. There is always one by default, called “manual.” A new version is created whenever a new transcription model is applied to a document. This new version is then automatically named after the transcription model used.

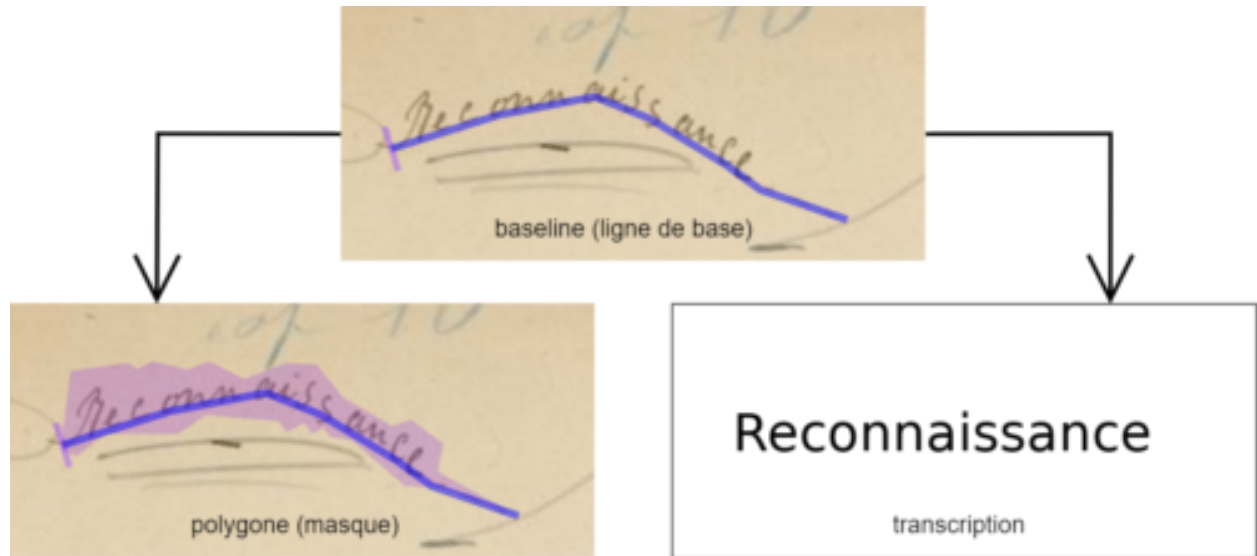
The display of the list of available transcription versions is manifested from the “Edit” tab. At the top of the tab, in the center of the window, a drop-down menu allows you to change the version of the text displayed.



Be careful: even when a transcription template is only applied to some of the images contained in a document, all of the document-parts will now be associated with the new transcription version. This means that even if the display is done at the document-part level creating **or deleting a transcription version impacts the whole document**.

To delete a transcription version, click on the “Transcription Management” button next to the drop-down menu. The “Delete” button will irreversibly delete the version in quest for **all** the pages of the document.





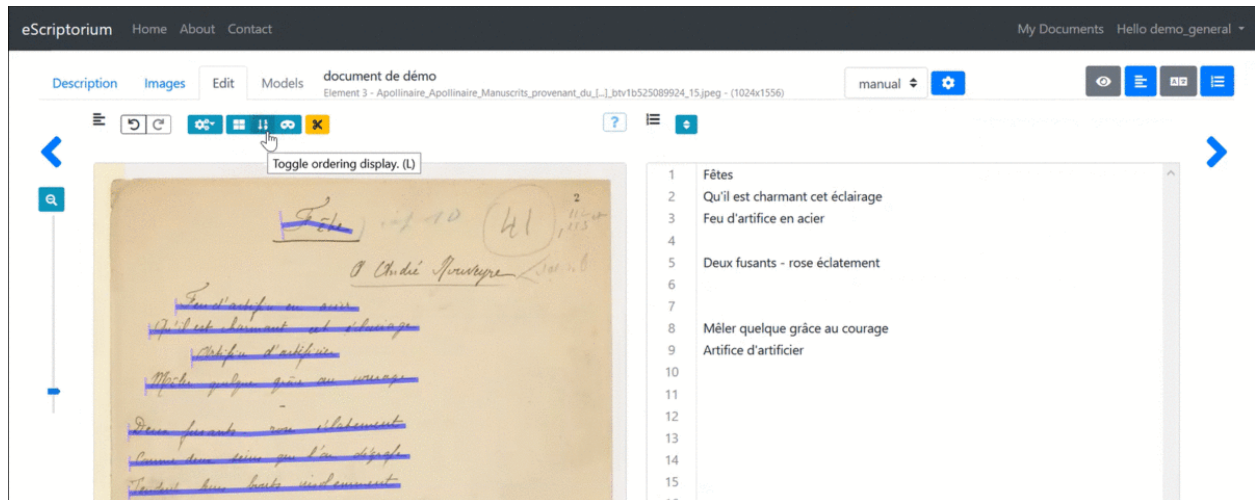
During the training of Kraken models, the reinitialization of the calculation of the polygons can be activated: the user therefore has an interest in intervening little with the polygons and to ensure instead that the baselines are drawn in such a way that the automatically generated polygons are correct. When manually entering ground truth data, care should generally be taken to transcribe only what is inside the polygon.

1.4.7. Changing the order of segments

The segment reading order is calculated automatically. You can display the order number of each segment from the “Segmentation” pane by clicking on “Toggle ordering display (L)” or from the “Text” pane where the lines are displayed following the reading order.

It is possible to modify this order from the “Text” pane by clicking “Toggle sorting mode.” A simple drag and drop of the lines will then be enough to carry out the modification.

Note: it is advisable to ensure the quality of the segmentation before changing the order of the lines, because adding or deleting lines systematically restarts the calculation of this order, overwriting the manual modifications in the process.



Edit the order of the segments from the “Text” pane.

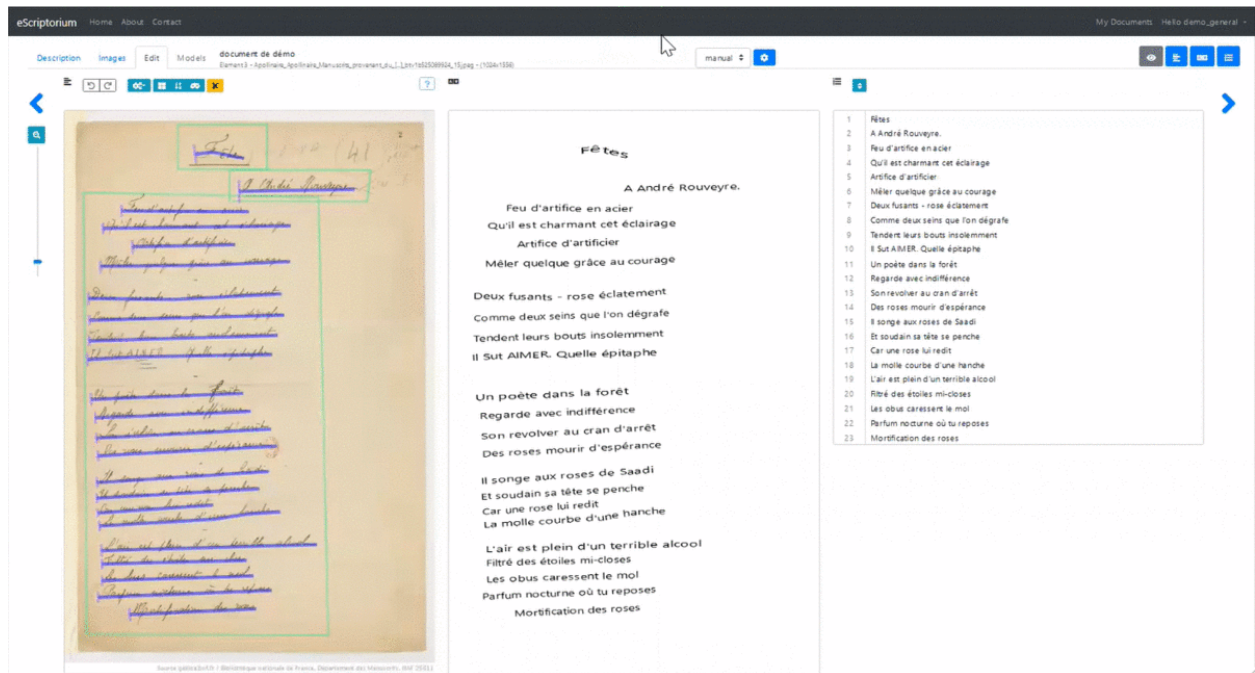
1.4.8. Semantic annotation

It is possible to associate labels with segments and regions by following an ontology which is pre-defined by the user starting from the “Description” tab. There are default labels included in every new document, but it is also possible to add new labels using the input field (click on “+” then “Update” to add the new label to the list) or to delete some (uncheck the box in front of the label then click on “Update”).

From the “Segmentation” pane, select an area or a segment, then click on “Set the type on all selected lines/regions (T)” and choose the appropriate label. The color of the box or line will change.

It is possible to apply a label to several regions or segments at once: just select several of them (Ctrl + click-drag or hold Ctrl down and click the targeted segments/regions).

It is possible to adopt a standardized terminology based, for example, on the framework proposed by [SegmOnto](#) .



Adding elements to the ontology from the “Description” pane then applying the tags to the segments/regions from the “Edit” pane.

1.4.9. Virtual keyboard

A virtual keyboard is accessible from the transcription input interface. To activate it, click on the “Toggle Virtual Keyboard for the document” icon then click in the input area.

The virtual keyboard allows you to pre-define a set of keyboard shortcuts and virtual buttons to facilitate the entry of frequent special characters. The “Manage Keyboard” button allows you to manage this setting, or even import a configuration in the form of a JSON file or a link to a JSON file.



1.5. Importing annotations

1.5.1. Importing structured annotations in XML

It is possible to import segments and/or a transcription generated in a digital environment outside of eScriptorium. To do this click on the “Import/Transcription (XML)” option in the “Images” tab.

A form will appear allowing you to specify a name so as to identify the version to import and to load the file to import. This can be an ALTO XML file, an XML PAGE file or a ZIP containing several ALTO or PAGE XML files.

It is not necessary to select beforehand which document-parts are dealt with by the import: the link is made automatically according to the information contained in the XML files.

See the [import documentation](#) for details. ×

Import segmentation & transcriptions from XML.

Name

The name of the target transcription. Will default to '{format} Import'.

Override existing segmentation.
Destroys existing regions, lines and any bound transcription before importing.

Aucun fichier sélectionné.
A single AltoXML, PageXML file, or a zip file.

Configuration form for segmentation and/or transcription imports

Note: after [importing segments generated without Kraken/eScriptorium](#), it is essential to **reset the polygons (ie masks)** before using these documents to train a transcription model. Another solution is to use [Layout Segmentation Simplifier \(LSS\)](#) before importing the data into eScriptorium.

1.5.2. Importing annotations from plain text

It is possible to manually import a transcription from a plain text version using the “Text” pane of the “Edit” tab. Each line break then indicates the transition to a new segment. It is therefore necessary to ensure that the reading order of the lines corresponds.

1.6. Automatically annotating documents

1.6.1. Instructions

Automatic document annotation is managed via the “Images” tab.

- Select the images to annotate;
 - Click on the “Segment” button (for automatic detection of baselines, polygons and/or zones) or on “Transcribe” button (for automatic transcription);
 - A form will then be displayed: it allows you to load a Kraken model or to use a model already available in eScriptorium and, for the segmentation, to configure the annotation parameters.
-

1.6.2. Segmentation settings

- “Segmentation steps” allows you to manage what level of segmentation you wish to perform:
 - “Line and Regions” will generate areas (provided the model you use has been trained for this), baselines, and associated polygons.
 - “Line Baselines and Masks” will generate baselines and associated polygons.
 - “Only line Masks” does not require loading a template; this option is used to reset on the fly the calculation of the polygons associated with the baselines already present on the images.
 - “Regions” makes it possible to keep intact the baselines and the polygons already present on the images and to generate only the zones.
- “Text direction” is used to indicate the reading direction of the lines.

1 image(s) selected. ?

(PLACEHOLDER) x

Upload a model

Parcourir... Aucun fichier sélectionné.

Or select an existing one

Model
default (cBAD_27.mlmodel)

Segmentation steps
Lines and regions

Text direction
Horizontal l2r

Override
If checked, deletes existing segmentation and bound transcriptions first!

Close Segment

Overview of the options

available in the automatic segmentation configuration form.

1.7. Training models

1.7.1. Starting a training process

Kraken model training is launched from a document via the “Images” tab. Its running status can be monitored from the “Models” tab of the document or from the “My Models” page. The “Models” tab is inactive as long as no model other than the default model is associated with the document.

Access to training features may be subject to authorization and is managed from the administration interface.

To train a model, all mobilized images/annotations must be in the same document.

- Select the document-parts containing the ground truth;
- Click on “Train” then select the type of model to train: “Segmenter” for a segmentation model, “Recognizer” for a transcription model;
- Fill in the form then click on “Train”;

- Now the training task is launched; sometimes you will have to wait before it is displayed.

When the training is complete, the user receives a notification and can access the final model from the “Models” tab or from the “My Models” page. It is then possible to download the template, share it with other users, or use it on the document.

1.7.2. Importing a model

Model import is done from the “My Models” page. The file format must be compatible with the OCR/HTR engine used in the background; Kraken in the default configuration. A file compatible with import is therefore a “.mlmodel” file. Pay attention to what version of Kraken is being used to train the model: for example, a model produced with Kraken 2 will not work with Kraken 3.

On the “My Models” page, click on “Upload a model” to display a form from which to upload the file from the local system and to modify the file name if necessary. The rest of the metadata is extracted automatically.

1.7.3. Refining a model or start from scratch?

The training configuration form allows you to choose:

- If you want to start from scratch (to do simply indicate the name to give to the new model that you will create);
 - If you instead want to refine a template (this option can be loaded from the file manager, or may already be present in the list of templates associated with the current document).
-

1.8. Exporting annotations

Annotations are exported from the “Images” tab.

- Select the document-parts concerned;
- Click on “Export” then fill in the form:
 - Specify the version of the transcript to export;
 - Specify the export format (“Alto” for ALTO XML, “Pagexml” for PAGE XML, or “Text” for plain text);
 - Check “Include Images” if you also want to export the images;
- Click on Export and save the generated ZIP file.

1.9. Adding tags to documents

Adding tags to documents activates the filter function and makes it easier to explore the documents gathered within a project.

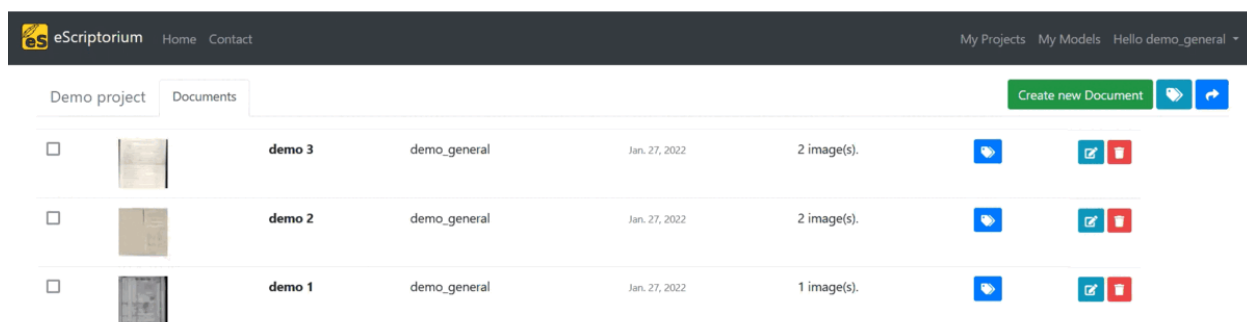
Adding tags is done from the list of documents:

- for simultaneous processing on several documents, click on the “Manage tags” button at the top right after selecting the documents concerned;
- for processing a single document by clicking on the “Manage tags” button directly in the list.













To create a new label, enter its name in the input field, choose the desired color, then click “Save.”

To add to a document or to remove an existing tag from it, click on “Manage tags” then on the drop-down menu: the active tags for the document must be checked. A document can have several labels at the same time.

To filter the list of documents based on tags, simply activate the tag in the “filters” section. It is possible to tick several values. Only documents with all the selected labels will be displayed.



The screenshot displays the eScriptorium web interface. At the top, there is a navigation bar with the eScriptorium logo, 'Home', and 'Contact' on the left, and 'My Projects', 'My Models', and 'Hello demo_general' on the right. Below the navigation bar, there are two tabs: 'Demo project' and 'Documents'. To the right of the tabs is a green button labeled 'Create new Document' and two social media icons. The main content area shows a table of documents:

	Image	Document Name	Project	Date	Description	Actions
<input type="checkbox"/>		demo 3	demo_general	Jan. 27, 2022	2 image(s).	  
<input type="checkbox"/>		demo 2	demo_general	Jan. 27, 2022	2 image(s).	  
<input type="checkbox"/>		demo 1	demo_general	Jan. 27, 2022	1 image(s).	  

2. Managing a collaborative annotation campaign

2.1. Creating a user group (admin)

It is possible to create user groups via the administrator's dashboard (provided you have the associated rights). These groups allow you to define work teams or assign certain rights to a set of users.

It will soon be possible for a user with sufficient rights to create a team and invite other users to it.

2.2. Sharing a project or document with another user or with a group

A user can share an entire project or a single document with several users, including outside the group(s) to which he/she belongs.

To share a project:

- Click on the project in the list of projects then on the “Share this Project” button
- Enter the name of the users with whom to share the project, or check their name in the list that appears
- To confirm, click on “Share”

When a project is shared with users, all the documents it contains are accessible to all the users concerned.

To share a document:

- Click on the project and, from the “Description” tab, click on the “Share” button
- Enter the name of the user with whom to share the document, or check his name in the list that appears
- To confirm, click on “Share”

When a document is shared individually, the user involved in the sharing sees the project in his list of projects but can only see the document shared with him.

The screenshot shows the eScriptorium web interface. At the top, there is a navigation bar with 'eScriptorium', 'Home', 'About', and 'Contact' on the left, and 'My Documents' and 'Hello demo_general' on the right. Below the navigation bar, there are tabs for 'Description', 'Images', 'Edit', and 'Models', with 'document de démo' selected. A 'Share' button is visible in the top right corner. The main content area includes a text input field for 'document de démo', a 'Main script' dropdown menu, a 'Read direction' dropdown menu set to 'Left to right', and a 'Metadata' table with columns 'Key' and 'Value'. To the right of the metadata table is an 'Ontology' section with a blue warning box that reads: 'The default configuration only contains semantic types. It is not recommended to mix semantic, stylistic and layout types. It is required to hit 'Update' to add your new types to the document.' Below the warning box are 'Region types' and 'Line types' sections, each with a list of checkboxes and an 'Add a region type' or 'Add a line type' input field with a green '+' button. At the bottom of the configuration area is a large green 'Update' button.

Share a document with a group or a user.

2.3. Sharing a model with another user or with a group

Managing model sharing is done from the “My Models” page. For the desired model, click on the “share model” button then add as many users or groups as desired. To save a new share, after selecting the user name or the group, click on the “Add right” (+ green) button.

To share a model with a user who is not connected to the same instance or working locally, simply download the file from the “My Models” page and share it via any exchange system.