Client administration

ELO Java Client

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ELO Java Client administration

Introduction

Target audience

This documentation describes how to set up, configure, and administer the ELO Java Client. For more information on using the ELO Java Client, refer to the ELO Java Client user documentation.

Use

The ELO Java Client, also referred to as client in the following, enables you to file, search, and find documents. In addition, you can use the client to create workflows and reminders, and to display documents.

Operating system

In this manual, the functions and examples are displayed based on a Microsoft Windows operating system.

The ELO Java Client can also be used on other operating systems provided a corresponding Java environment is available for the operating system.

Installation

This chapter contains information on installing the ELO Java Client.

Installation with ISO file

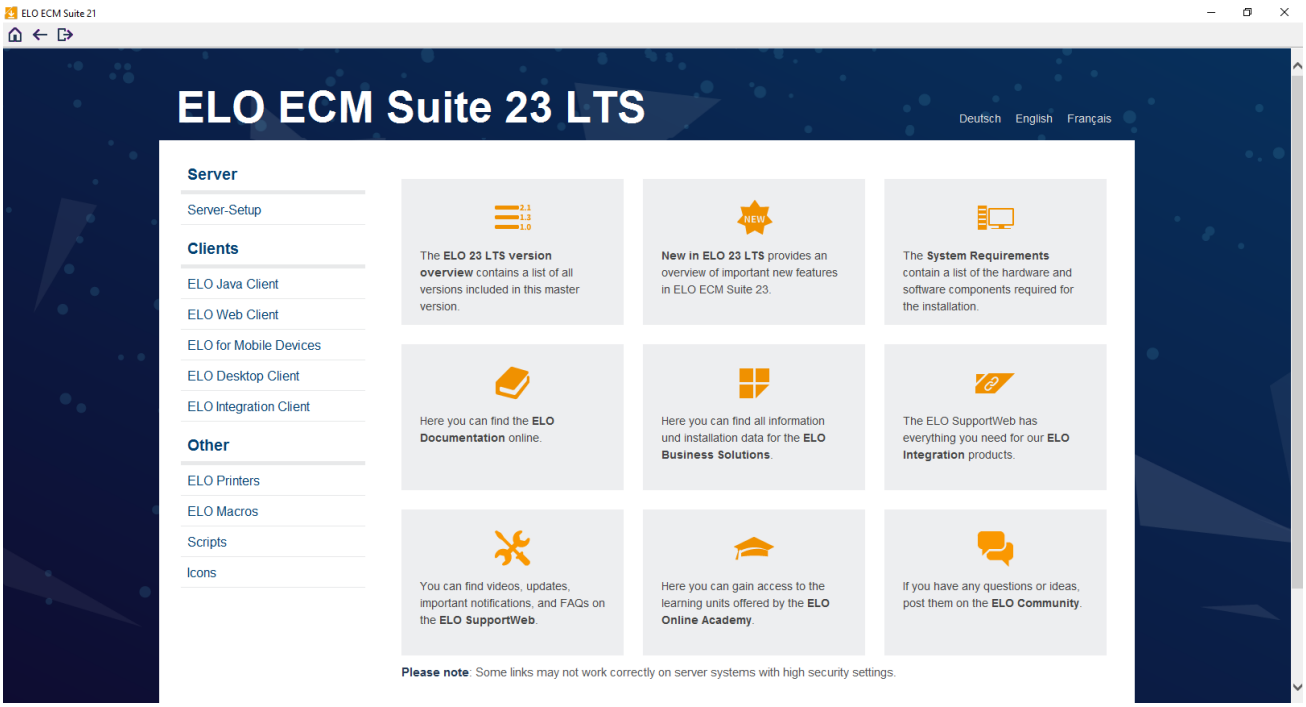
Requirements

You will find a list of the system requirements for the ELO Java Client in the ELO system requirements documentation.

You need Windows administrator rights on the local computer to install the ELO Java Client.

Method

There are different ways to install the ELO Java Client. The following method describes how to install ELO from the ISO file.

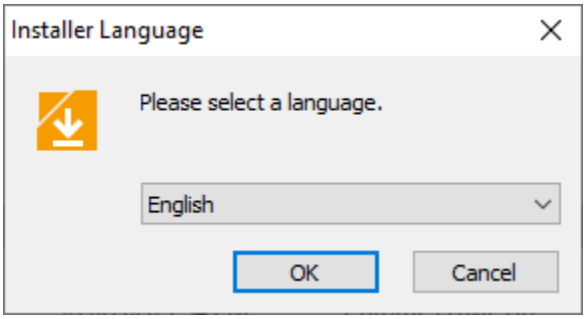


1. Select *ELO Java Client* under *Clients*.

The *ELO Java Client* page opens.

2. Select *ELO Java Client Windows (64-bit)*.

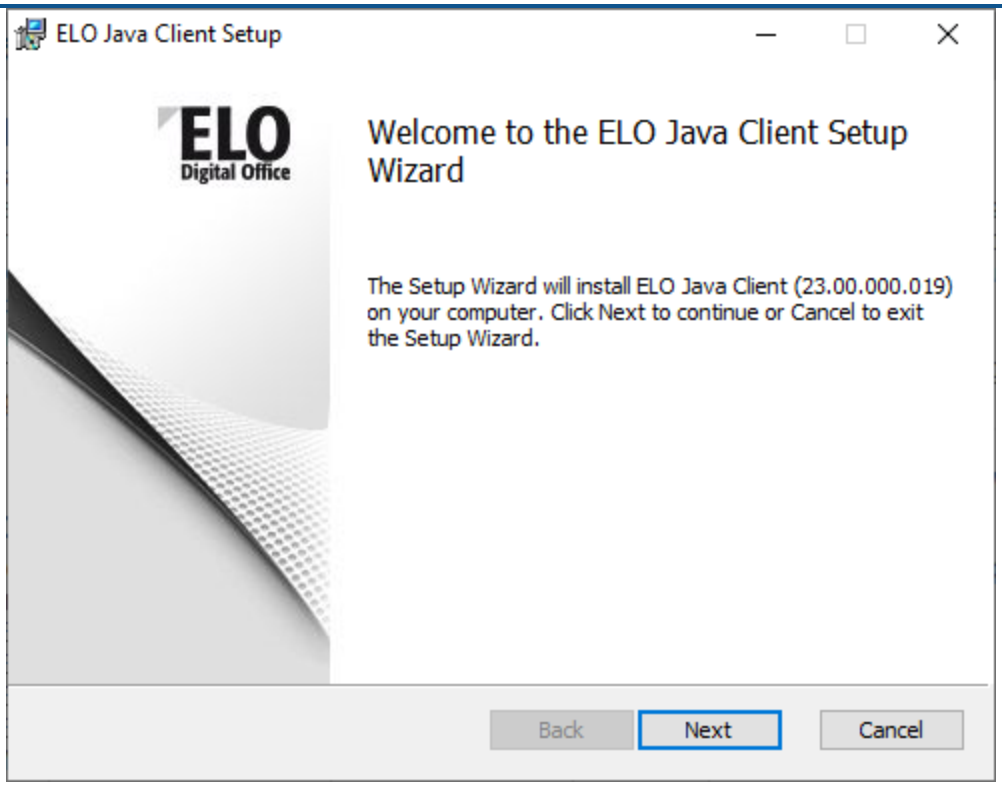
   Optional: If the *Windows User Account Control* window appears, confirm with *Yes*.



   The *ELO Java Client Setup* dialog box appears.

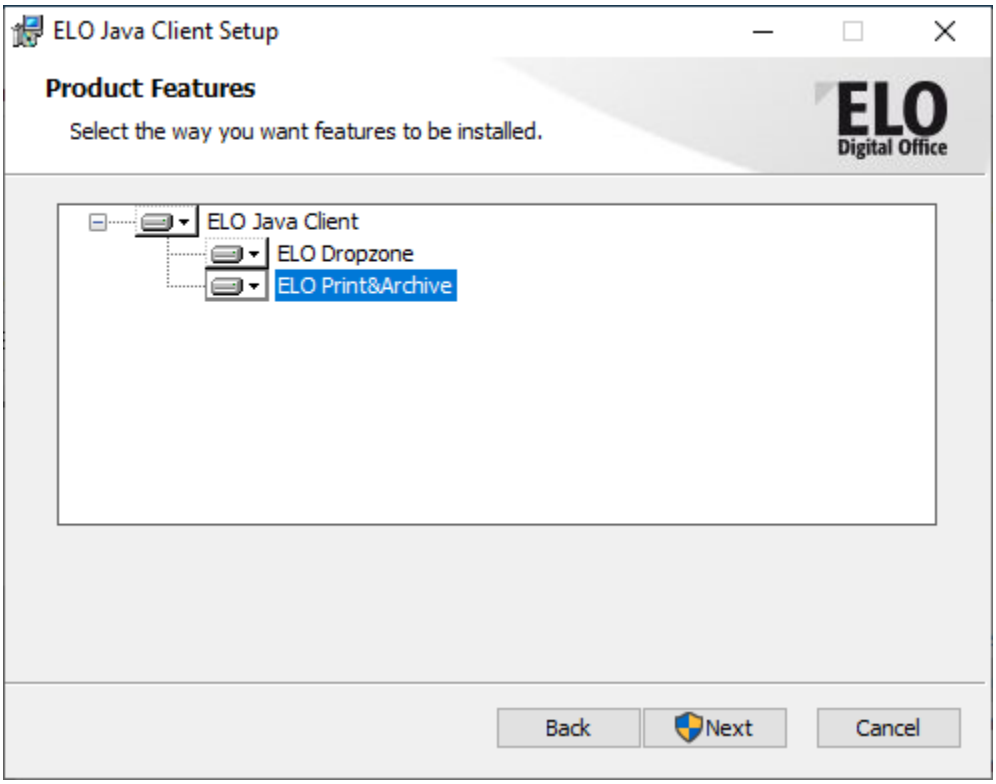
3. Choose the language for the installation in the drop-down menu and select *OK*.

> **Information**
>
> The language you select only applies to the language used during the installation. The user can select the language of the ELO Java Client interface in the logon dialog box.



The *ELO Java Client Setup* dialog box appears.

4. Select *Next*.



The *Product Features* page appears.

Optional: Select which additional components you want to install.

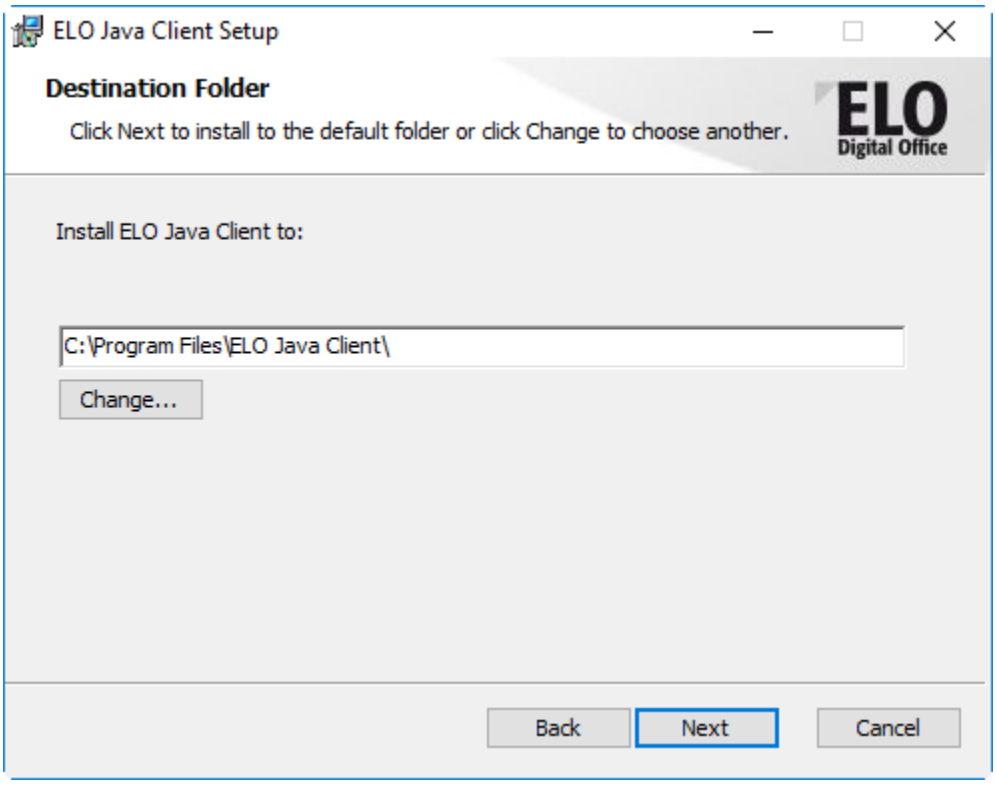
The following components are available:

- ELO Dropzone: ELO Dropzone allows users to drag and drop documents to ELO using customizable tiles.
- ELO Print&Archive: ELO Print&Archive enables users to transfer documents via a virtual printer from a third-party program to ELO.

> **Please note**
>
> ELO Print&Archive is no longer being developed. It is nevertheless compatible with the current versions of the ELO Java Client.

> **Information**
>
> You will find additional information about these components in the ELO Dropzone, Filing via ELO Dropzone, and ELO Print&Archive documentation.

5. Select *Next*.



The *Destination Folder* screen appears.

Optional: Select *Change* to change the suggested target folder and choose a different installation directory.

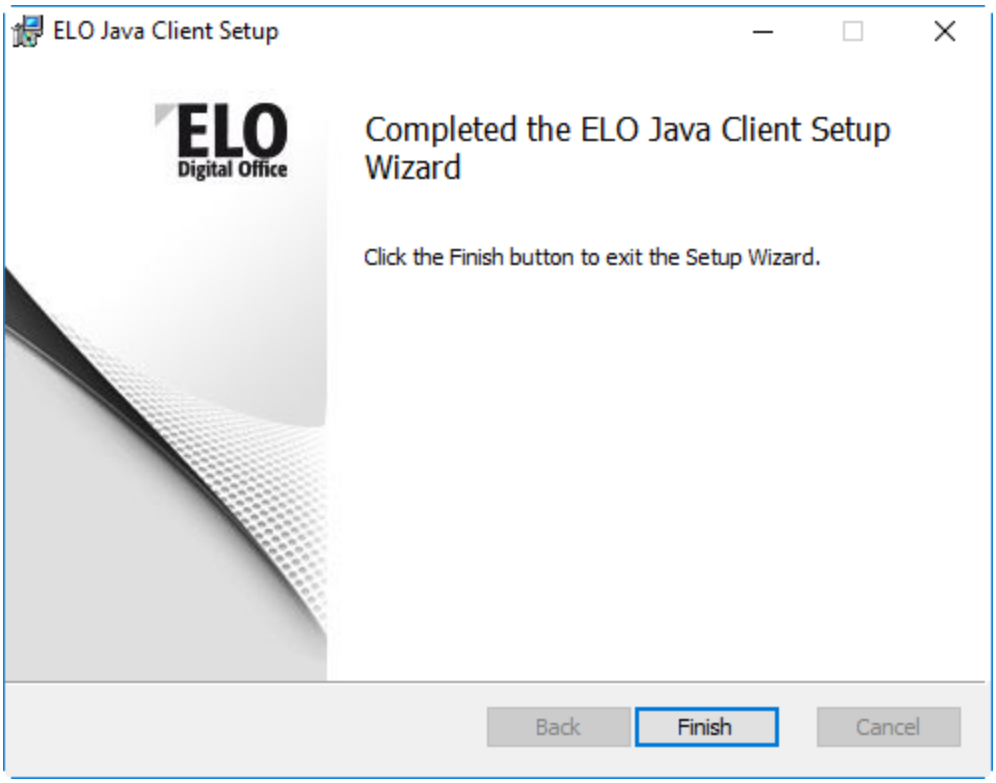
6.

Select *Next*.

The *Ready to install ELO Java Client* screen opens.

7. Select *Install*.

   The installation starts.



   A message appears when the installation is completed.

8. Select *Finish* to complete the installation.

Result

The ELO Java Client is installed.

Configure ELO Indexserver

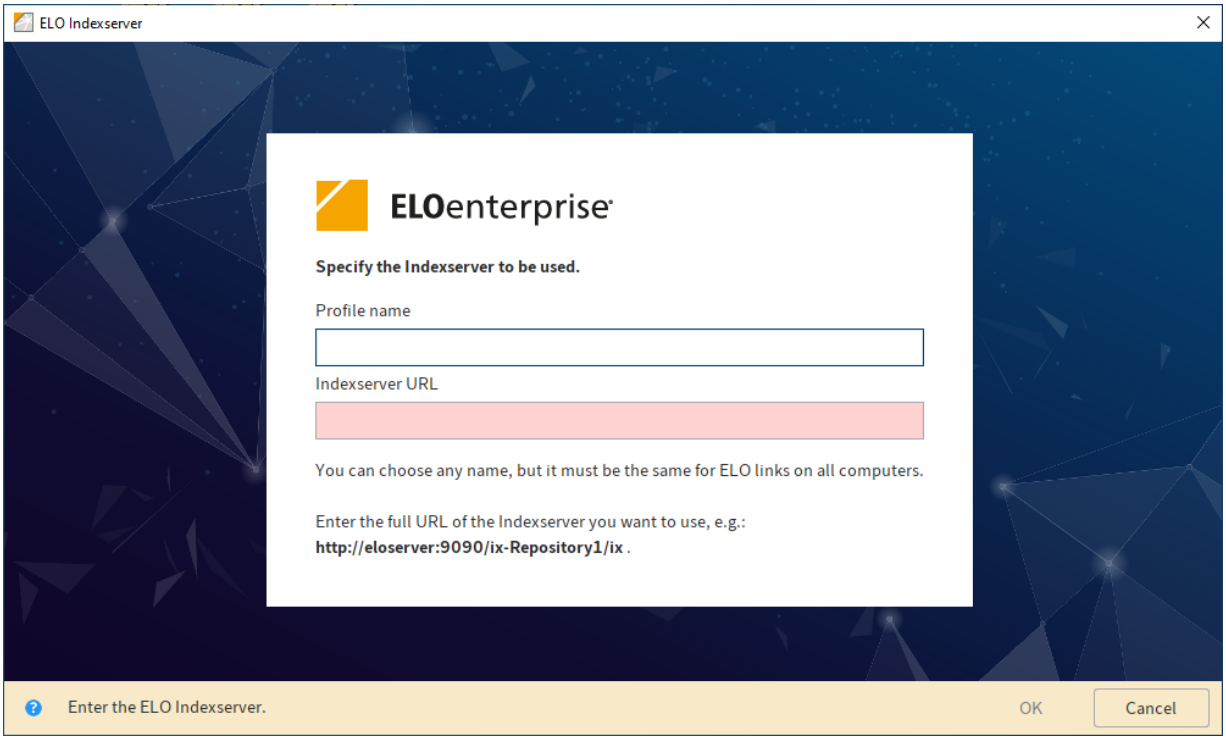
The ELO Java Client needs to connect to an ELO Indexserver to access a repository. When you run the client for the first time, there is no ELO Indexserver connection registered and the *ELO Indexserver* dialog box appears.

> **Information**
>
> The *ELO Indexserver* dialog box is also displayed when you remove all existing ELO Indexserver connections, since at least one connection must be entered.

Method

1.

Start the client.



The *ELO Indexserver* dialog box appears.

2. Enter a name for the first profile in the *Profile name* field.

   The name is displayed during logon and is used as the name in ELO link files.

   This is why you should enter the same name for all computers. The repository name is normally used here.

3. Enter the ELO Indexserver URL.

   URL example:

   ```
   http://<server name>:<port>/ix-<repository name>/ix
   ```

   > **Information**
   >
   > You can find the ELO Indexserver URL in the ELO Application Server Manager. Open the ELO Application Server Manager in your browser. Select the ELO Indexserver you want to use from the list of applications. You will find the corresponding repository name on the left.

   You can also use HTTPS if the server is configured accordingly.

   If the URL you entered was found, the color of the *Indexserver URL* field turns to green.

4.

Select *OK*.

Result

The logon dialog box opens and you can log on the client.

Outlook

Go to the Create new profile section to learn how to add additional repositories or to edit an existing connection.

Optional: Logging

The ELO Java Client logger is set up via the configuration. You can configure a special logger in the registry for a more detailed log output. In this case, the logger settings in the configuration of the ELO Java Client are inactive and are not used.

1. Start the Windows Registry Editor (*regedit*).
2. Open the following directory:

   ```
   HKEY_CURRENT_USER\Software\JavaSoft\Prefs\ELO Digital Office\eloenterprise
   ```

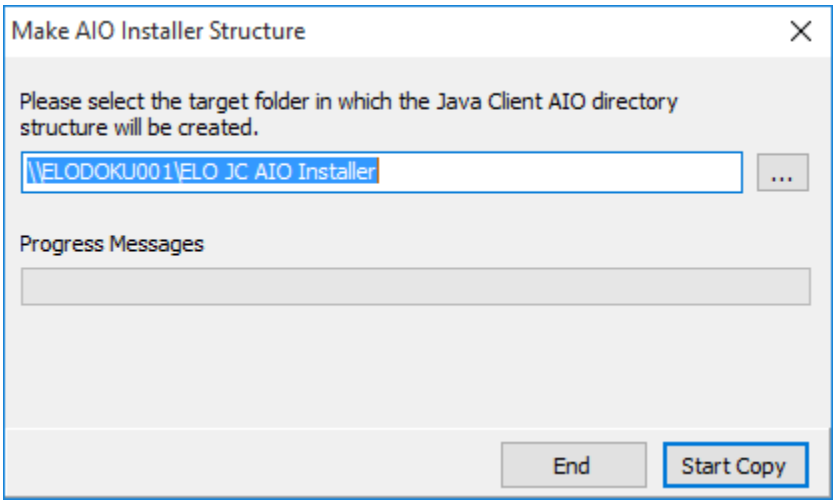
3. Create the *logger* entry by selecting *New > String value* from the context menu.
4. Enter `logger` as the name for the new string.
5. Enter the path to the file with the logger configuration.

   > **Information**
   >
   > The installation directory of the ELO Java Client contains a predefined *log4j1.xml* file.

   > **Important**
   >
   > You need to specify the storage location of the log file in the *log4j1.xml* file in the ELO Java Client directory.

6. If you need a log output before setting up the logger, start the *EloClient.bat* batch file stored in the ELO Java Client installation directory.

ELO Java Client with additional components



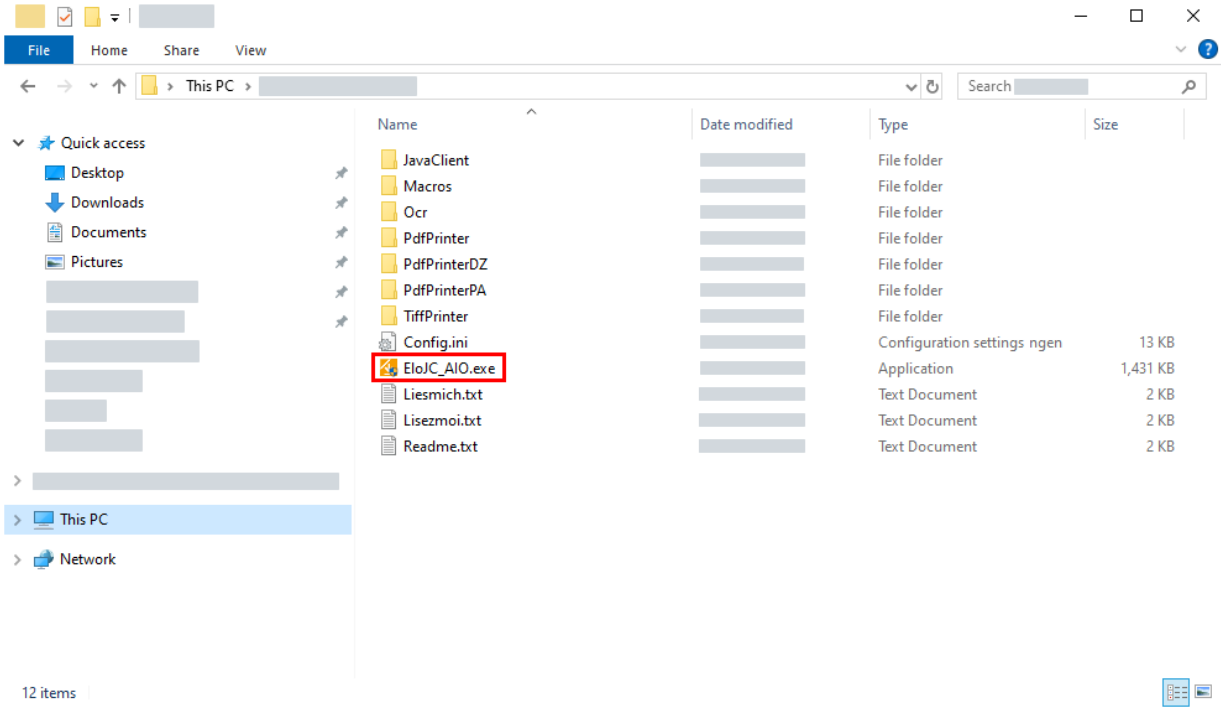
If you select the *Installation Program for ELO Java Client (Windows) with Additional Components* menu item, the *Make AIO Installer Structure* program opens. By default, the program selects a directory shared as *ELO JC AIO Installer* on the local computer. If you attempt to start copying files and the directory does not exist, you will get an error message.

Method

1. Select a directory on the local computer or network.
2. Select *Start Copy* to copy the files.

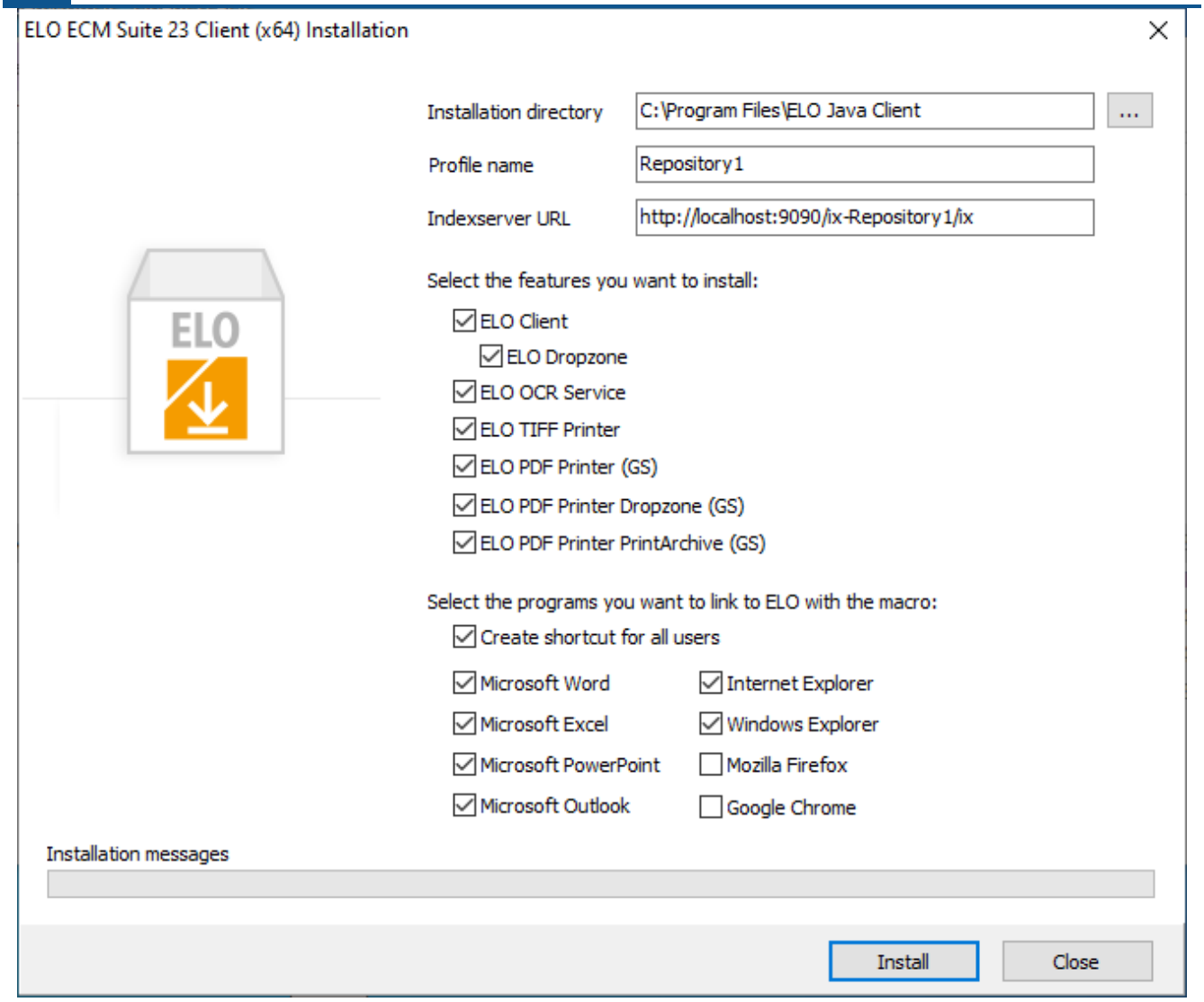
   After all files have been copied successfully, you will see the status message *Copying finished*.
3. Select *End* and navigate to this directory in a file browser.

   You will see several files and folders in this directory that allow you to customize the installer for the ELO Java Client. Immediately after copying the files, the *EloJC_AIO.exe* file appears.



4. Run the EXE file.

Result



The *ELO ECM Suite Client Installation* window opens.

This installs the ELO Java Client along with all available optional components by default.

> **Information**
>
> The default entries for installation directory, profile name, and ELO Indexserver URL are just examples of valid entries and usually need to be adjusted for your specific requirements.

Outlook

You can select or remove all the options in this window.

You can also modify the default settings by changing the parameters of the *config.ini* file. The latter option is particularly useful for network rollouts. You can find more information in the Configuration via the 'config.ini' file section.

The following is a list of possible installation options.

Installation directory

The ELO Java Client is installed to this directory when you run the program on a local computer. You can change the default directory by specifying `INSTALLDIR="<path>"` as the command line parameter when you run the file.

Profile name

This is the name of the profile that the user sees when logging on to the repository with the ELO Java Client. You can enter any name here, but it is recommended to specify a name that helps the user identify the repository they are about to use. It is recommended to specify a name that helps the user identify the repository they are about to use.

> **Note**
>
> The AIO Installer sets up global profile names for all users. If the same profile name already exists in the user profiles, only this name appears in the ELO Java Client profile list.

ELO Indexserver URL

This is the URL to the ELO Indexserver for your repository. Change the default URL by altering the URL from `http://server:9090/ix-database/ix` to `<http(s)>://<server name>:<Port>/<repository name>/ix`.

Select what you want to install: The ELO OCR service performs text recognition on image files, usually from the ELO Intray. The TIFF and PDF printer options install printer drivers that allow documents to be printed from or to ELO in each of the respective output formats.

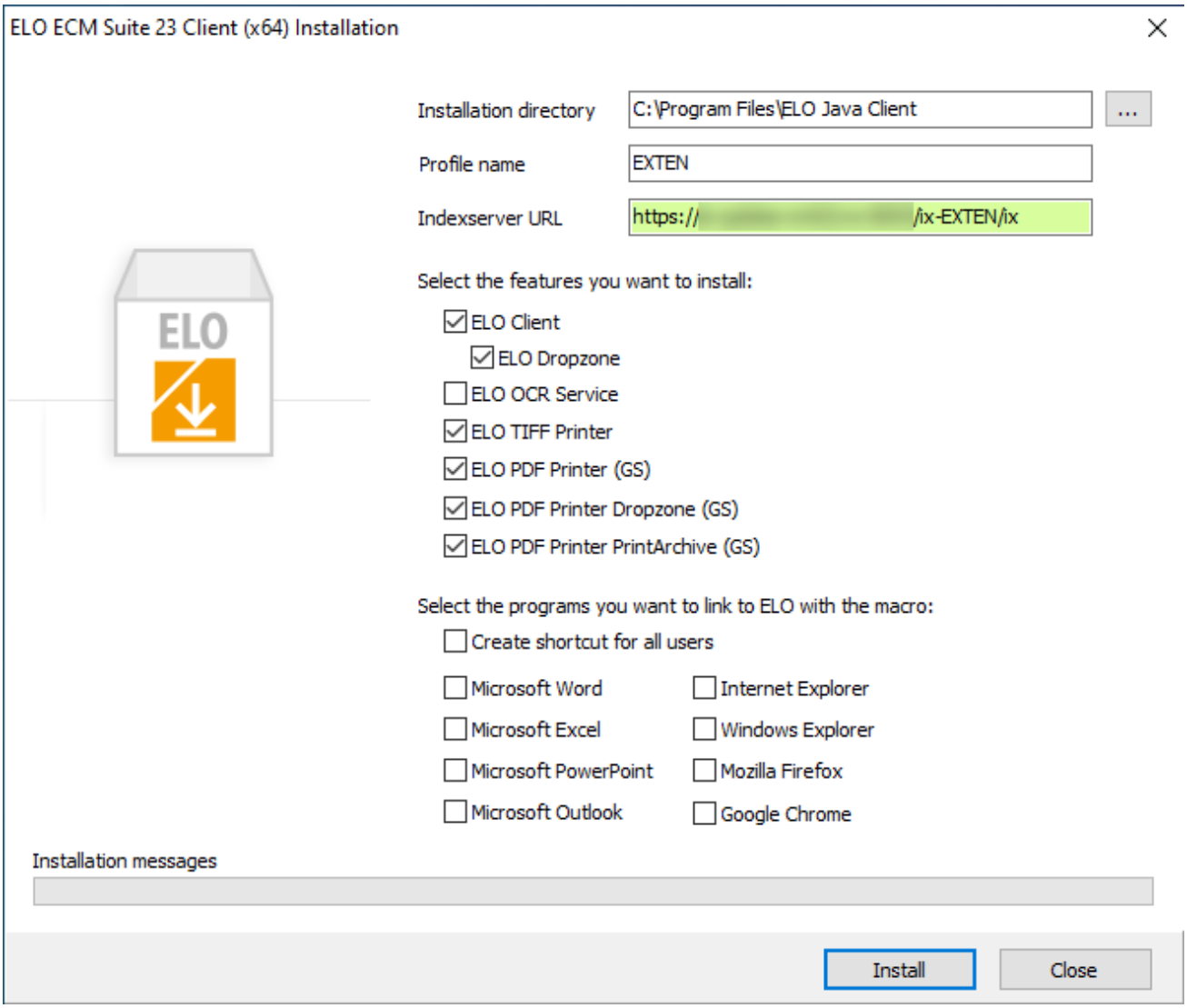
Select the programs you want to link to ELO with the macro: In this area, define which programs in Windows you want to install an ELO add-in to. The add-in provides you with additional in-program buttons that send documents directly to the ELO repository or Intray.

Configuration via the 'config.ini' file

You can configure the AIO program via the *config.ini* file. This offers several options for a rollout installation with predefined values.

> **Please note**
>
> You can find more information on configuration in the AIO Installer directory in the *Readme* file. Several options are explained in this file.

Example



The settings shown correspond to the following values in the *config.ini* configuration file:

```
[SETTINGS]
Language=de
SilentInstallation=0
InstallationDir=%ProgramFiles%\ELO Java Client


[clients]
EloClient=1
XMX=
XMS=
SERNO_BARCODE=
Dropzone=1
Ocr=0


[REPOSITORIES]
ServerUrl_1=https://<server>:<port>/ix-EXTEN/ix
ProfileName_1=EXTEN
...


[Macros]
AllUserInstallation=0
Word=0
Excel=0
PowerPoint=0
Outlook=0
WindowsExplorer=0
Firefox=0
Chrome=0


[Printer]
PdfPrinter=1
PdfPrinterDropzone=1
PdfPrinterPrintArchive=1
TiffPrinter=1
PsConverter=1
PdfPrinterRestartSpooler=0
PdfPrinterDropzoneRestartSpooler=0
PdfPrinterPrintArchiveRestartSpooler=0
PsConverterInstaller=ELO_PS_Converter40.msi
PsConverterInstallVcRedist=0
```

Terminal server operation

It is also possible to run the ELO Java Client in a terminal server environment.

Memory

Each instance of the Java Client is assigned 1 GB of RAM by default. This may require excessive amounts of system RAM in terminal server environments. It is possible to reduce this value to 500 MB in most environments without drawbacks.

1. To do so, open the Windows Registry and search for `ELOJavaClientw.exe`.

   The registry key where this is stored also contains the parameter `-Xmx1000m`.

2. Change this value to `-Xmx500m`.

> **Please note**
>
> Do not change the memory settings for the ELO Java Client without first testing performance with different document types in the actual repository. Reducing this value to less than 500 MB is not recommended.

macOS

If you are installing the ELO Java Client on macOS, you need to consider the following information.

> **Please note**
>
> In rare cases, the macOS Gatekeeper prevents the execution of the ELO Java Client or functions such as PDF conversion even if a signature is valid. Apple sets a quarantine flag on the app, which can be removed with the following command:
>
> ```
> sudo xattr -r -d com.apple.quarantine /Applications/ELOClient/ELOClient.app
> ```

Java Runtime Environment

The ELO Java Client for macOS includes a Java Runtime Environment package. This means you don't need to install the Java Runtime Environment separately.

Installation

The installation files are provided as a disk image file (*DMG*). If you downloaded the installation package from the ELO SupportWeb, the DMG file comes in a ZIP file. If you have already copied the *InstallELOClient* DMG file to your Mac, continue reading from the *Start installation* section.

ZIP file

1.

Download the latest version of the ZIP file for macOS.

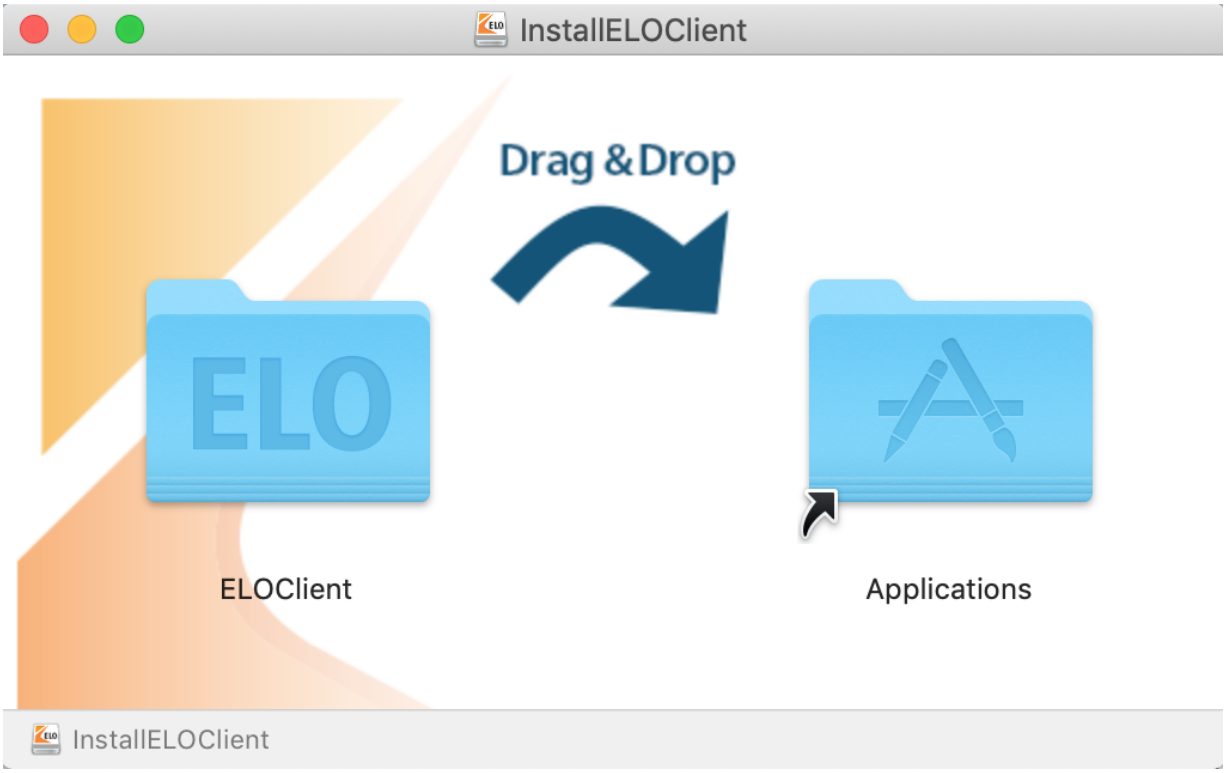
2. Extract the ZIP file to your Mac.

The *InstallELOClient* DMG file is now available.

Start installation

You can now proceed with the installation.

1. Double-click to open the DMG file.



The DMG file is executed. The *InstallELOClient* finder window appears.

2. Drag the *ELOClient* folder to the *Applications* folder.

> **Information**
>
> A confirmation dialog appears if there is an update. Click *Replace* to confirm that you want to overwrite existing files.

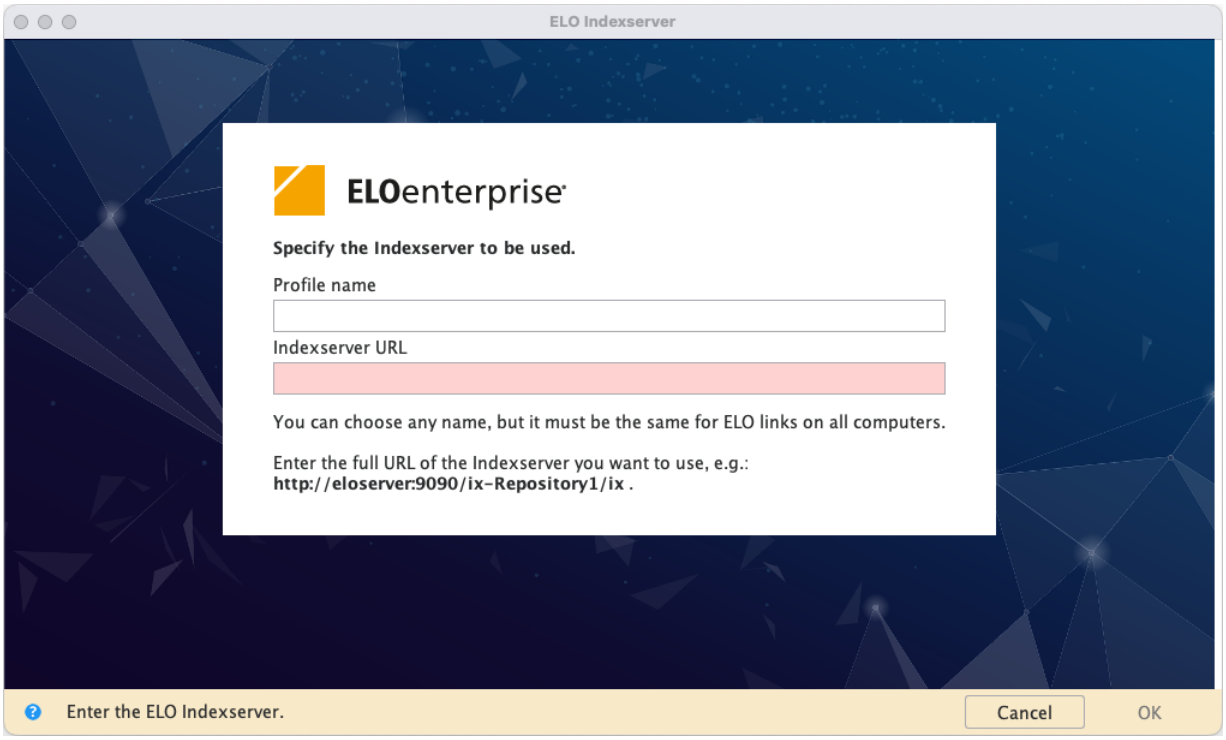
Installation starts. When installation is completed, the *ELOClient* folder is located in the *Program files* directory.

Start the ELO Java Client

1. Open the *ELOClient* folder.

2.

Double-click *ELOClient.app* to start the ELO Java Client.



The *ELO Indexserver* dialog box appears. If you have already entered an ELO Indexserver, the logon dialog box appears immediately.

The ELO Java Client needs to connect to an ELO Indexserver to access a repository. Learn how to establish this connection in the Configure ELO Indexserver section.

Logging

If you want to use parameters when you start the ELO Java Client, you can do this via the terminal.

1. Execute the following command to see which parameters you can use:

```
/Applications/ELOClient/ELOClient.app/Contents/MacOS/ELOClient -h
```

2. To run the ELO Java Client with the desired parameters, adjust the command as required.

   Example:

```
/Applications/ELOClient/ELOClient.app/Contents/MacOS/ELOClient -logging DEBUG
```

Linux

If you want to install the ELO Java Client on a Linux system, you need to consider the following information.

Install Java

If you are using Linux, there are two different methods for installing the required Java components. Select one of the following methods.

- Install the latest version of Oracle JDK.

OR

- Install the latest versions of OpenJDK and OpenJFX.

Check Java installation

To check if Java already is installed, proceed as follows:

1. Start a terminal.
2. Enter the following command:

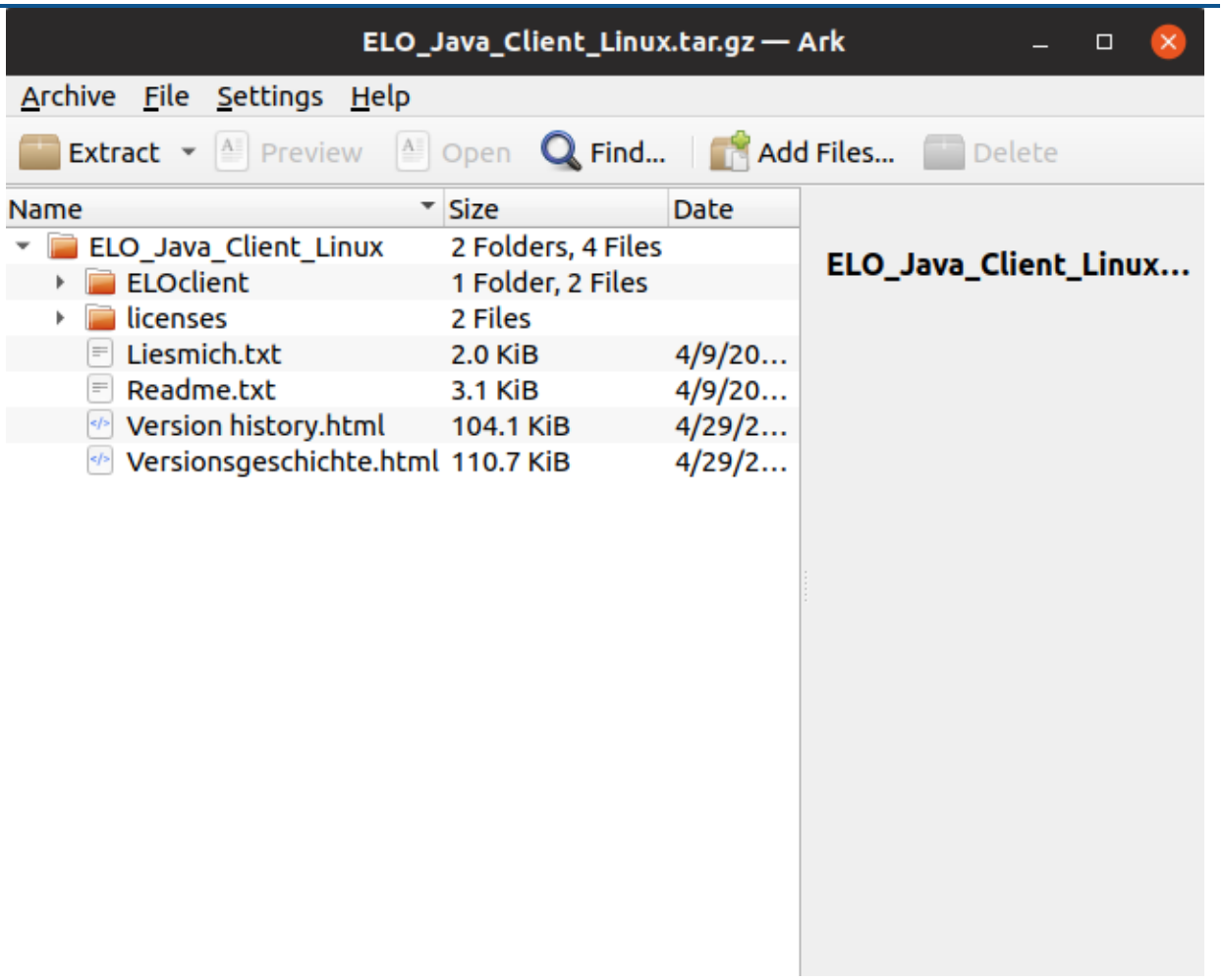
   ```
   java -version
   ```

3. Check whether the Java version is identical to or higher than the one listed in the version history.

Install the ELO client

The installation package for Linux comes in a compressed TAR repository (*TAR.GZ* format).

1. Download the latest installation package for Linux.



2. Extract the directory to your Linux computer.
3. Copy the folder *ELOclient* in the directory on your Linux computer.

   This is the installation directory of the ELO Java Client that the client is run from.

Start the ELO Java Client

In Linux, the ELO Java Client is started with the *ELOclient.sh* shell script.

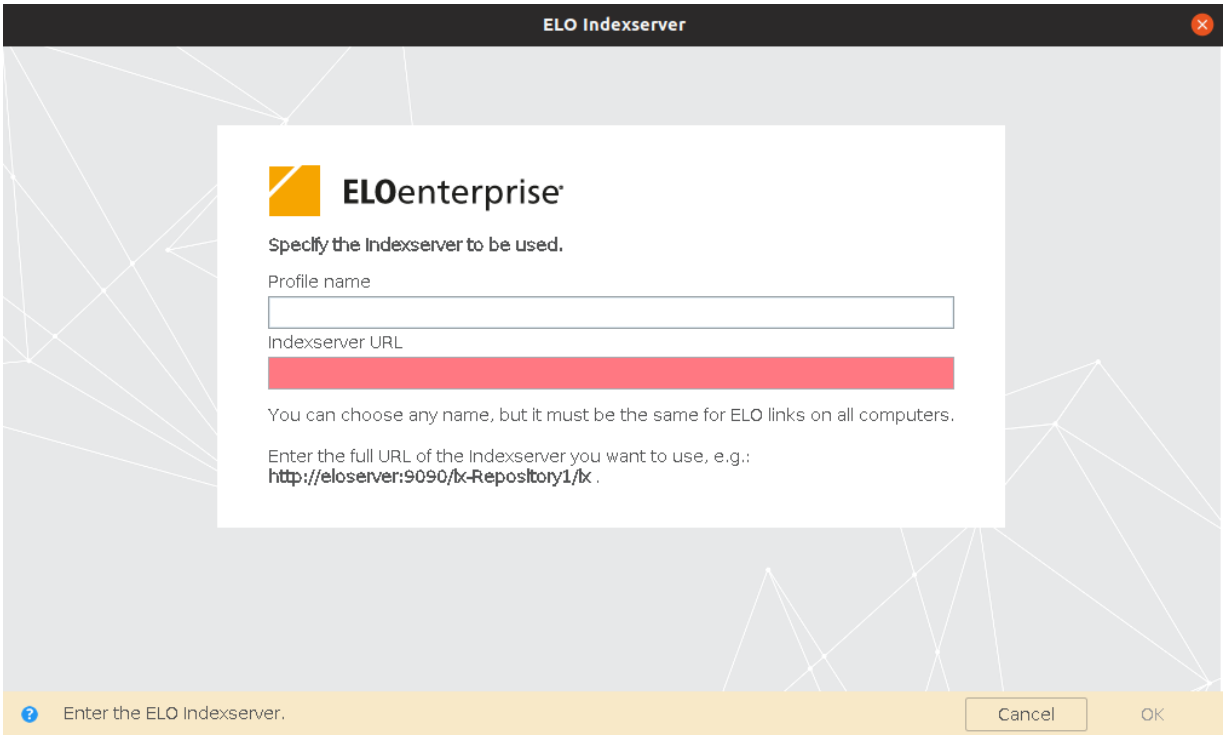
1. Open the *ELOClient* folder.
2. Double-click to open the *ELOClient.sh* file.

   Alternative: Start the shell script with the following terminal command:

   ```
   ./ELOclient.sh
   ```

Information

If you do not have permission to run the command, run the command `sudo ./ELOclient.sh`. You will be asked for the user's password.



The *ELO Indexserver* dialog box appears. If you have already entered an ELO Indexserver, the logon dialog box appears immediately.

The ELO Java Client needs to connect to an ELO Indexserver to access a repository. Learn how to establish this connection in the Configure ELO Indexserver section.

Profile

The name of the server connection is the same as the profile for the repository. The name is displayed during logon under the available repositories and is used as the name in ELO link files.

This is why the same name must be entered for all computers. The repository name is normally used here.

Logging

If you want to use parameters when you start the ELO Java Client, you can do this via the terminal.

1. Execute the following command in the installation directory of the ELO Java Client to see which parameters you can use:

   ```
   ./ELOclient.sh -h
   ```

2. To run the ELO Java Client with the desired parameters, adjust the command as required.

Example:

```
./ELOclient.sh -logging DEBUG
```

Logon

This chapter describes options for logging on to ELO and setting up different logon profiles.

Single sign-on

Single sign-on (SSO) enables the user to log on to the computer once and use all applications without having to log on again.

Due to security issues, single sign-on is not available to system administrators.

If single sign-on is not available, the logon dialog box appears and you can log on with your user ID.

Requirements

The following requirements must be met before you can use single sign-on:

- The ELO Java Client must be installed
- A Windows user must be created
- Windows users must have administrator rights

Choose from the following options to set up single sign-on:

- Registry entry in Windows
- Start parameters in Linux
- SSO with SPNEGO
- SSO with NTLM

Registry entry in Windows

1. Open the Registry Editor.
1. Open the following path:

   `HKEY_CURRENT_USER\Software\JavaSoft\Prefs\ELO Digital Office\eloenterprise`

2. Set up a new `issinglesignon` entry with the value `true`.
3. Restart your computer.

> **Information**
>
> If SSO fails, create a new entry `httpFactory` with the value `ASF`.

SSO in Linux

Enable SSO in the client with *EloClient.sh-ssoON*.

Please note

You must have configured the Indexserver in advance. For more information, refer to the section ELO Indexserver SSO, SPNEGO configuration in the *Optimization* documentation.

SSO with SPNEGO and NTLM

To configure SSO with SPNEGO or NTLM, refer to the section ELO Indexserver SSO in the *Optimization* documentation.

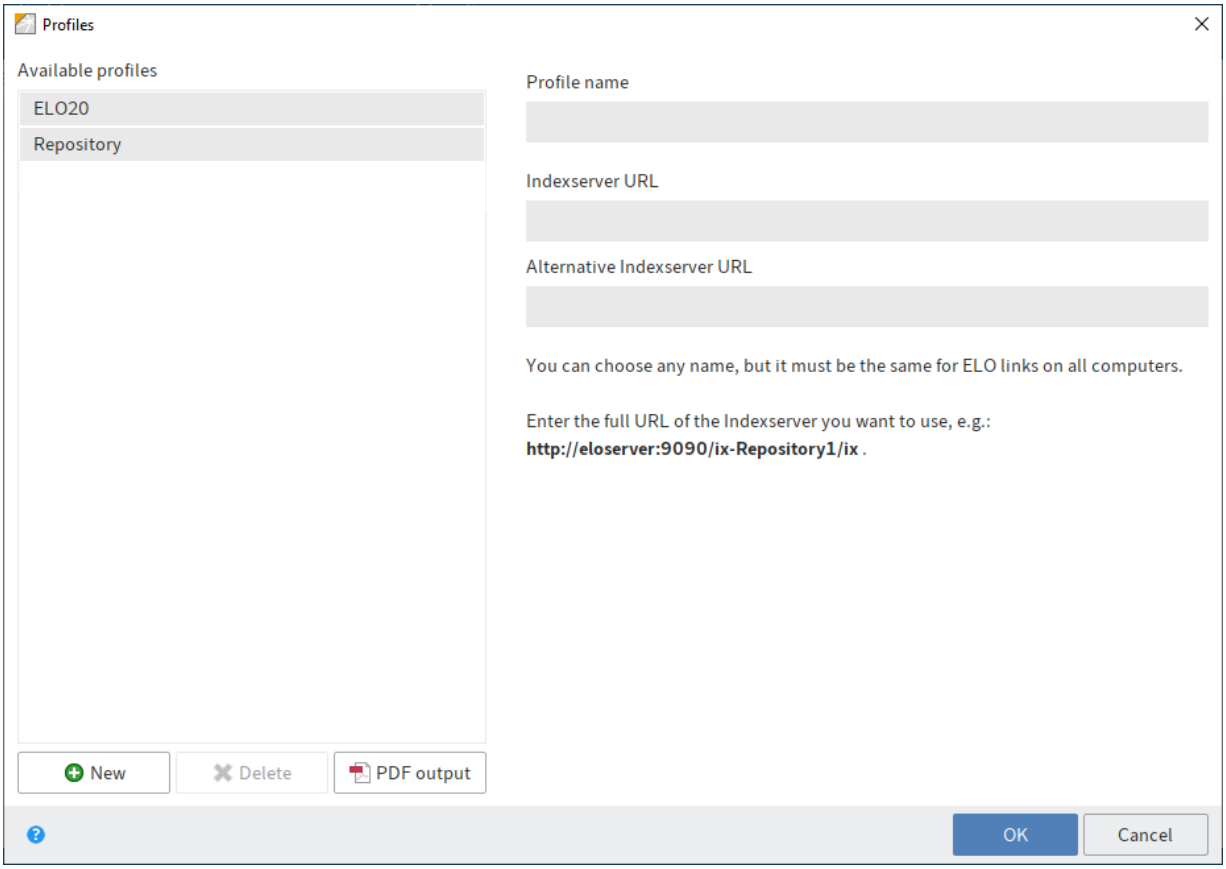
Create new profile

Repositories are managed in the *Profiles* dialog box. The following section describes how to set up a new profile.

1. Start the client.

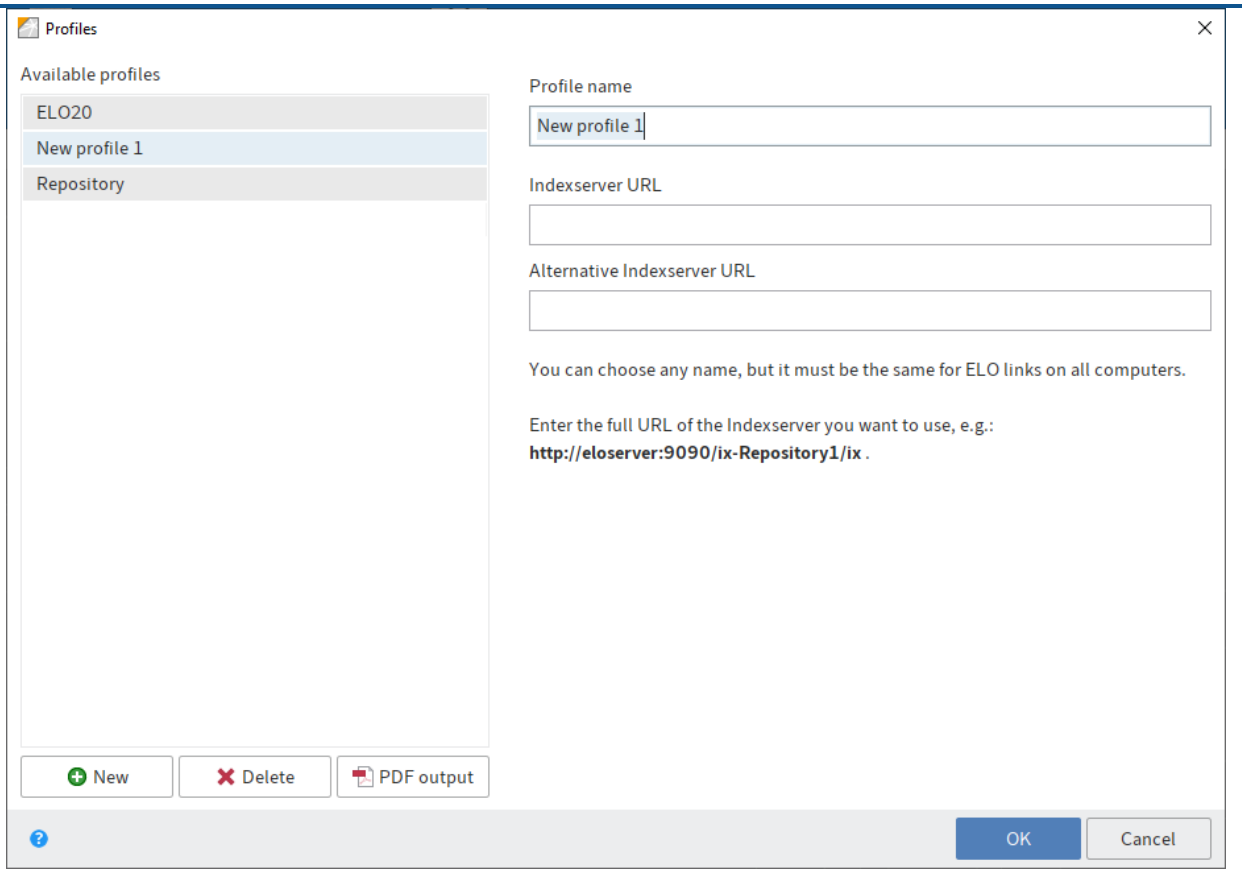
   The logon dialog box appears.

2. Press the keyboard shortcut CTRL+P.



   The *Profiles* dialog box appears. The existing profiles are displayed.

3. Select *New*.



4. Enter a name for the new profile in the *Profile name* field.
5. Enter the Indexserver URL for the new repository in the *Indexserver URL* field.

   You must use the following format:

   ```
   http(s)://<server name>:<port>/ix-<repository name>/ix
   ```

   > **Information**
   >
   > The ELO Indexserver URL of a repository can be determined via the ELO Application Server Manager.

   If a connection to the Indexserver is established, the *Indexserver URL* field turns green.

   Optional: Enter a second ELO Indexserver URL to the *Alternative Indexserver URL* field. ELO automatically connects to this URL if a connection cannot be established to the first URL.
6. Select *OK* to save the settings and close the dialog box.

Result

You can select the newly registered repository via the *Repository* drop-down menu in the logon dialog box. *Show logon options* must be enabled for this to work.

Information

The new repository is now also stored as an entry in the Windows registry under `HKEY_CURRENT_USER\Software\Javasoft\Prefs\ELO Digital Office\eloenterprise`. In macOS, you will find the ELO Java Client profiles in the `/Library/Preferences/com.apple.java.util.prefs.plist` file and in Linux under `home/<username>/.java/.userPrefs/elo digital office/eloenterprise/prefs.xml`. The numbers at the end of the entries are incremented automatically. They correspond to the number of existing repositories.

Registry entries for the ELO Java Client

Create a string named `archive1` and a string value of the ELO Indexserver URL with the forward slashes (`/`) replaced by backslashes(`\`). The value could read:

```
http:\\localhost:9090\ixelo\ix.
```

Next, create a second string named `name1` and enter the name of the profile into the field. Capital letters must have a forward slash, e.g. `/E/L/O repository`. There are additional rules for special characters. If you need them in the repository name, create a profile in the ELO Java Client and check the result in the registry.

You can add profiles in the same way: repository2/name2, repository3/name3, and so on.

Additional possible entries:

Name (string)	Value
language	The value `en`, `de`, `fr`, etc. determines the default language of the ELO Java Client at logon. If you enter an invalid language code, the fallback language English is used.
lastlogin	User name shown by default in the logon window.
lastselected	The name of the profile selected by default in the logon window.
serno	This registry entry is displayed at the bottom left of the logon window. It will be overwritten by the value from the Indexserver at next logon.
usecacerts	Define whether certificates are used from the JRE (`true`) or the internal certificate store (`false`). In Windows and Linux, certificates are used from the certificate store by default (default: `false`), in macOS, the certificates are from the JRE (default in macOS: `true`). Please note that in macOS, certificates must be filed in the keychain under *Logon*.

Windows

You can configure the server settings for your users by making an entry to the Windows Registry. Open the Registry Editor and navigate to the following key:

`HKEY_CURRENT_USER\Software\JavaSoft\Prefs\ELO Digital Office\eloenterprise`

Linux

In Linux, the ELO Java Client profiles are stored in the following file:

`home/<username>/.java/.userPrefs/elo digital office/eloenterprise/prefs.xml`

macOS

The local Java Client settings are stored in the following files (same as for the Windows registry):

- User nodes: `~/Library/Preferences/com.apple.java.util.prefs.plist`
- System nodes:`/Library/Preferences/com.apple.java.util.prefs.plist`

We recommend using *XCode* to edit these files.

> **Information**
>
> After editing, you need to reboot the system so that the changed files are used.
>
> Alternative: Instead of restarting, you can also end any Java application. Then restart the *prefs system* with the following command: `killall cfprefsd`

Configuration

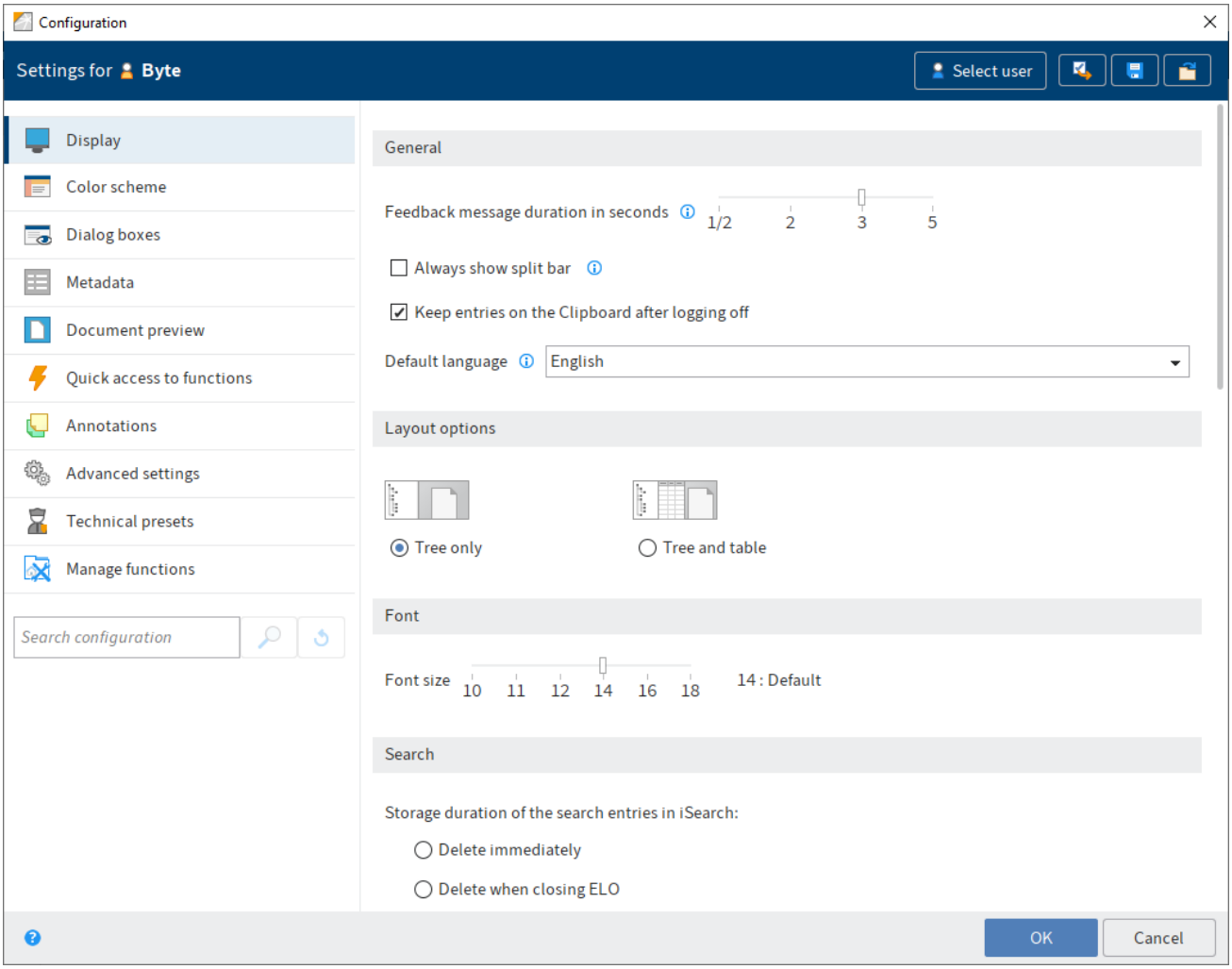
In this chapter, you will learn how you can change the settings for the ELO Java Client in the *Configuration* dialog box as administrator and which additional information you should pay attention to for specific settings.

You will find more information about all the settings in the configuration in the ELO Java Client user documentation.

Overview

Use the *Configuration* dialog box to change the local user settings.

Open this dialog box under *Ribbon > User menu [your name] > Configuration*.

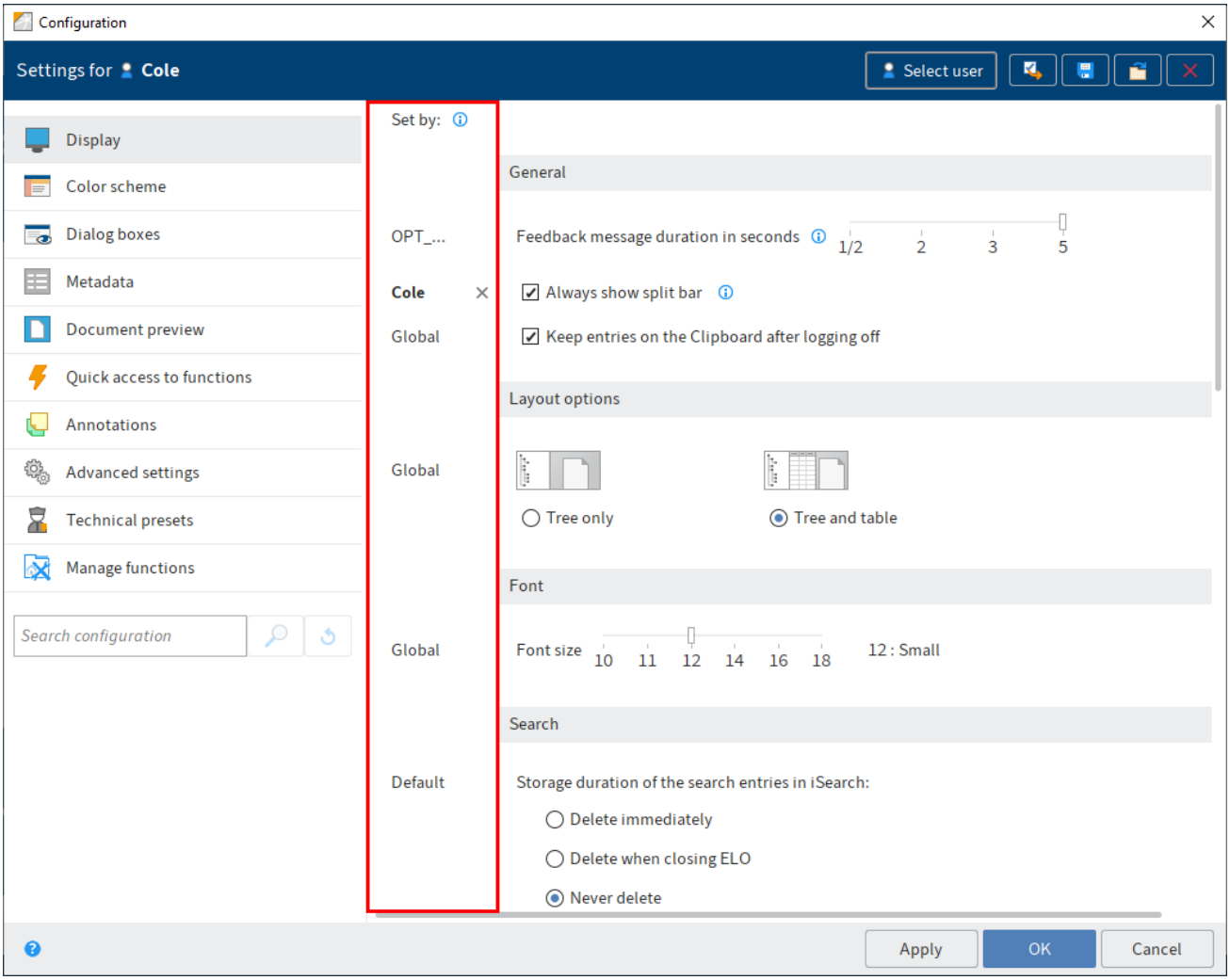


This dialog box is divided into multiple areas. For users with administrative rights, the Manage functions area is also shown.

Additional functions you can use to define settings for other users and groups appear in the header.

Levels concept in the configuration

There are different levels in the configuration: *User*, *option group*, *global*, *default*. In the *Set by* column, you can see the level at which settings have been made. This column appears if you make settings for another user or group.



If the settings are configured differently at two or more levels (conflicting settings), the following hierarchy applies:

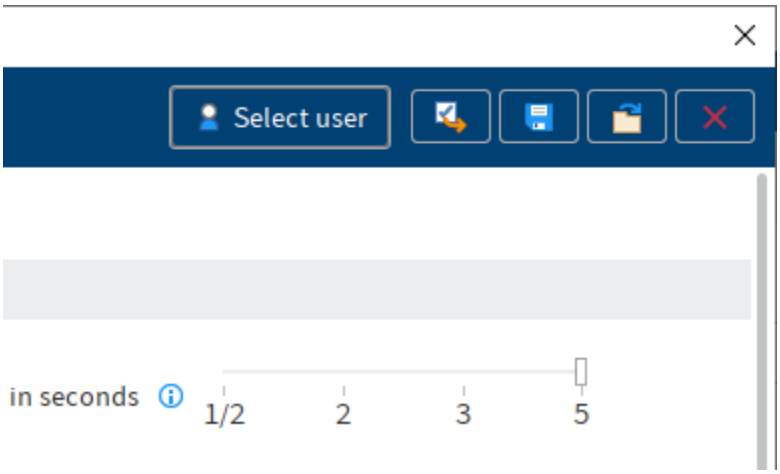
Level	Description	Hierarchy
User	Settings that a user has made or that an administrator has made on a user's behalf.	The settings for all other levels can be overridden at the *User* level.
Option group	Settings that an administrator has made on behalf of an option group. Members of the option group are assigned these settings.	The settings for the levels *Global* and *Default* can be overridden at the *Option* group level.

Level	Description	Hierarchy
Global	Settings that an administrator has made for all users (the *Everyone* group).	The settings for the *Default* level can be overridden at the *Global* level.
Default	The default settings in the ELO Java Client	The *Default* level applies if no settings have been made at any of the other levels.

Please note

Option groups cannot be used to transfer permissions.

General functions



Select user: Select a user or option group via the *Select user* button to assign the user or option group specific settings in the configuration.

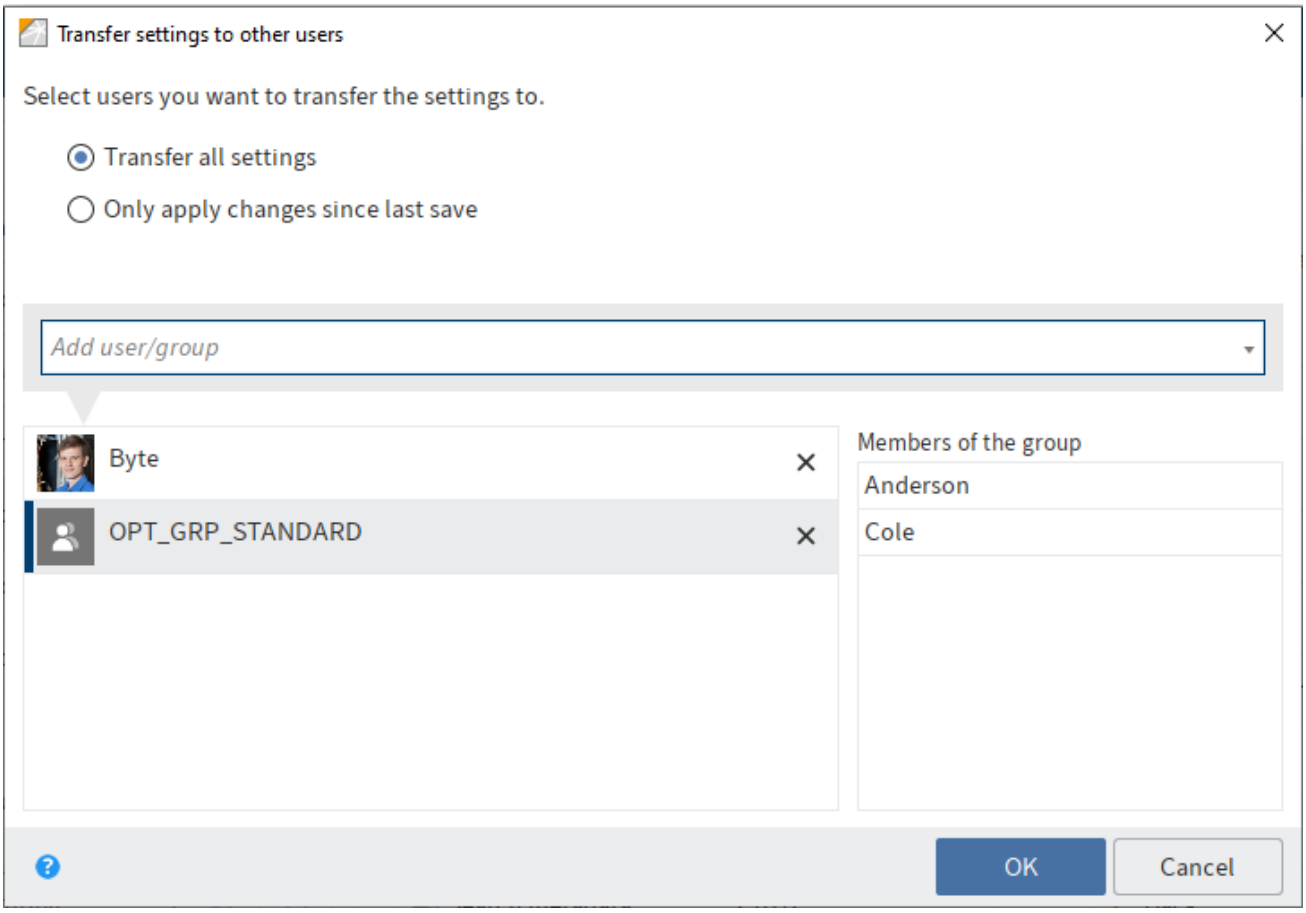
Transfer settings to other users (arrow icon): Transfer the settings you made to one or multiple users or an option group.

Save the settings of the configuration as a file (disk icon): This option saves the settings of the configuration as an INI file.

Load existing settings for the configuration (folder icon): Load the settings from an INI file.

Delete settings (X icon): Click here to delete all settings you made for an option group or other users. This restores the default settings.

Transfer settings to other users



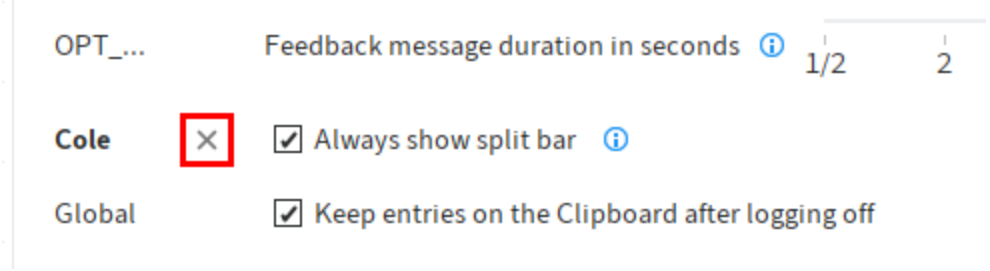
In this dialog box, you add users or option groups and select which settings from the configuration to transfer. The following options are available:

- Transfer all settings
- Only apply changes since last save

> **Information**
>
> If you select a group, a list of members appears. Double-click the corresponding user in the *Members of the group* column to select a member of a group.

Override settings

You can modify and override settings at all levels.



For example, to delete the settings for a user, select the X icon in the *Set by* column.

> **Information**
>
> The user can override these settings again.

Additional information for the administrator

The following settings are only available to users with administrative rights or they contain additional information for administrators.

Display

Show contents of priority fields in the tree view: If you enable this option, the contents of the fields marked as priority fields are displayed after the short name in the tree view.

You will find the setting for priority fields in the ELO Administration Console under *System settings > Field templates > Properties > Field with high priority*.

Number of priority fields in the table columns: Define the maximum number of columns with high priority that may be displayed in tree view. A column with high priority is used to display a field of a metadata form.

You will find the setting for priority fields in the ELO Administration Console under *System settings > Field templates > Properties > Field with high priority*.

> **Information**
>
> Having a large number columns will mean it takes longer to load the view.

Metadata

In *Metadata forms for different file types*, you can link extensions to metadata forms. The file extension is recognized when you file a document. The associated metadata form is set by default. When filing without metadata, the linked metadata form is used automatically.

By default, the *.js* and *.vbs* file extensions are linked to the *ELOScripts* metadata form and the *.eml* and *.msg* file extensions are linked to the *E-mail* metadata form.

Information

It is not possible to remove the predefined file extensions *eml*, *js*, *msg*, and *vbs* for individual users or option groups.

Document preview

In *Preview plug-ins*, you can link extensions to preview plug-ins.

New: Creates a new row for linking the file type and preview plug-in. Enter a file extension and the corresponding OLE object ID.

Please note

For the plug-ins to work, the *ActiveX plug-in preview* method must be set for the respective file extensions (*Preview configuration for different file types* area). If a preview method was not selected, the *ActiveX plug-in preview* method is set automatically.

Remove mapping (X icon): Removes the corresponding line.

Advanced settings

Automatically file documents assigned a metadata form with existing filing definitions: Select this option to automatically file documents if you have entered all metadata and the documents have a valid filing definition. The documents are filed as soon as you close the *Metadata* dialog box by clicking *OK* or *Apply and next*. You do *not* need to run the Automatic filing function.

Information

You cannot create or edit metadata forms in the ELO Java Client. You need to do this in the ELO Administration Console. Metadata forms must be created by users with appropriate administrative rights and permissions.

Technical presets

Barcode serial number: Enter a valid barcode serial number here if you want to use the barcode function at your workstation.

Information

This setting is only available to administrators with the rights *Main administrator* and/or *Edit user data*.

Please note

Barcode serial numbers are unique to each workstation and may not be used multiple times.

Start search immediately when clicking a search favorite: The *Search favorites* function on the *Search* tab enables you to save search favorites and use them repeatedly. Select the *Start immediately when clicking a search favorite* option to immediately start the search when clicking a search favorite. If this option is disabled, the search favorite is added without starting the search.

Information

The sort order of the search results always applies to the currently selected page.

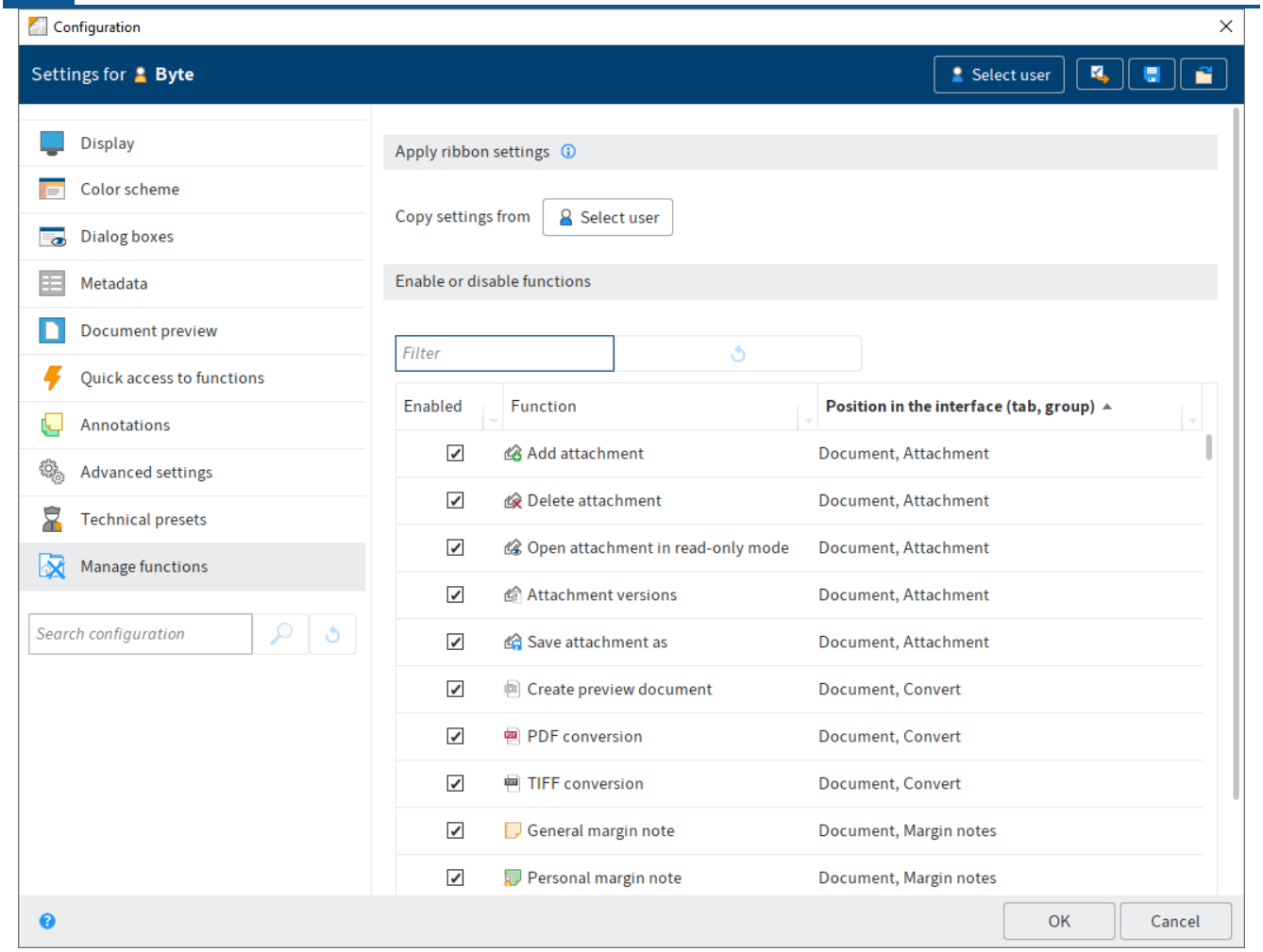
Available languages: From the list on the left, select the languages for text recognition that will be used to analyze the documents in ELO.

Information

The OCR service and languages are only available if the ELO OCR Service has been installed. ELO OCR installed when you install the ELO Java Client with the AIO installer.

Manage functions

In the *Manage functions* area, you can set the ribbon for other users or option groups and define which functions are available to them.



Apply ribbon settings

To transfer the settings and favorites from the ribbon of a user or option group to another, select *Select user*, then select the desired user/option group.

Enable or disable functions

You can enable or disable the functions in the list via the corresponding check box. The function is available if the check box is selected. If the check box is not selected, the corresponding function is not displayed in the user interface.

> **Please note**
>
> Disabling/enabling functions does not remove any permissions associated with the function.

- Filter: Use this field to filter the list of functions. The column is refreshed as soon as you enter a character.
- Reset filters: Deletes the current filter term from the *Filter* field. All functions are displayed.
- PDF output: Creates an overview of the functions as a PDF file
-

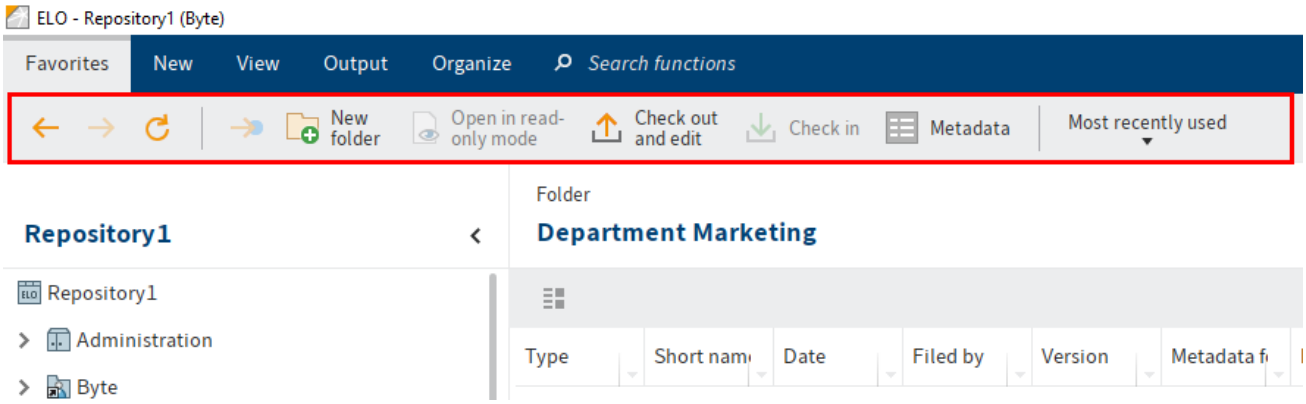
Enable all: Enables all functions

- Disable all: Disables all functions

> **Information**
>
> If you make changes here, the ELO Java Client restarts automatically when you close the *Configuration* dialog box.

Configure favorites for other users

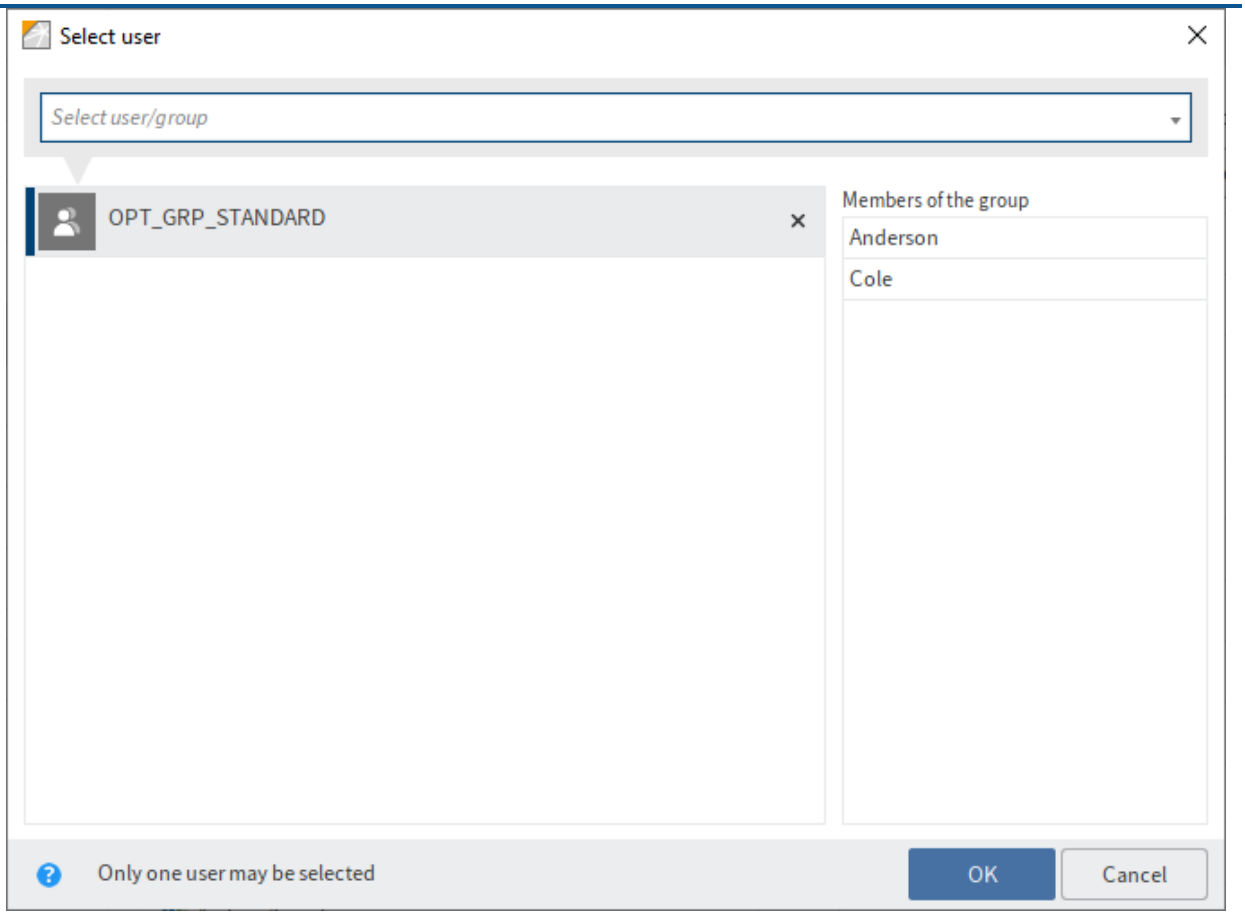
You can use the *Favorites* tab on the ribbon to obtain quick access to frequently used functions.



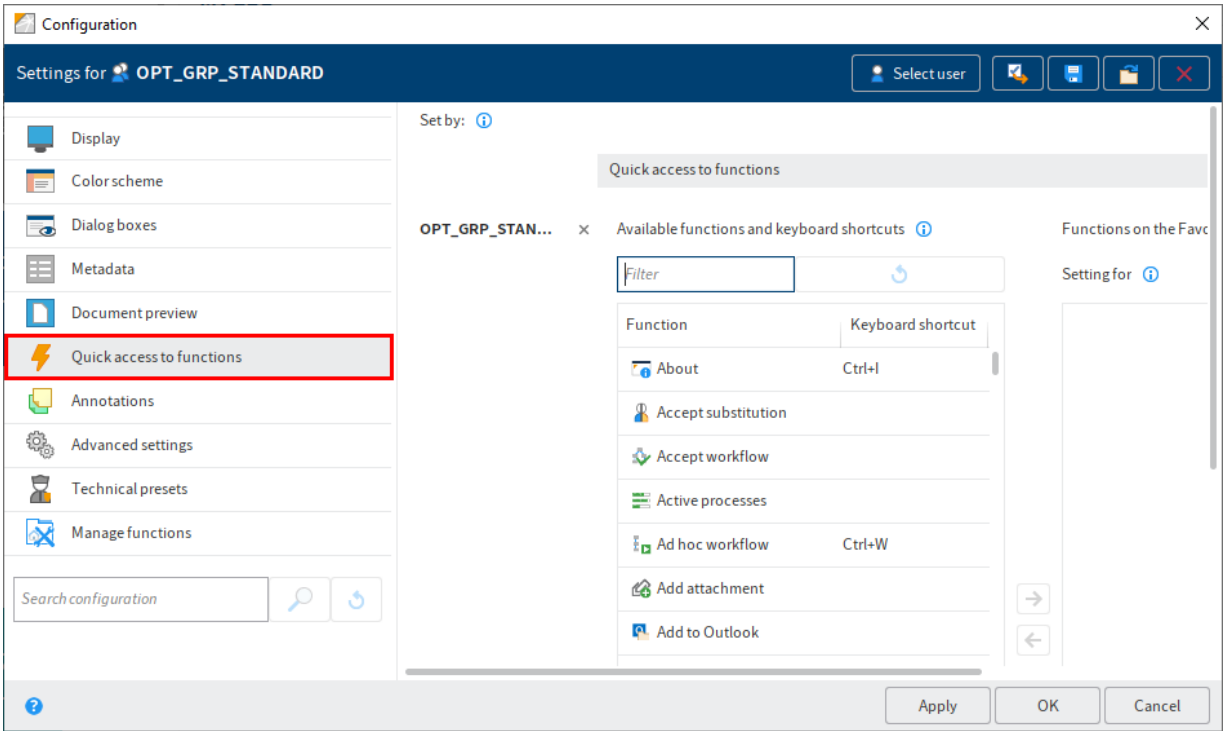
Users can customize this part of the ribbon themselves but administrators can also assign a set of functions for the users.

Method

1. Open the *Configuration* dialog box.

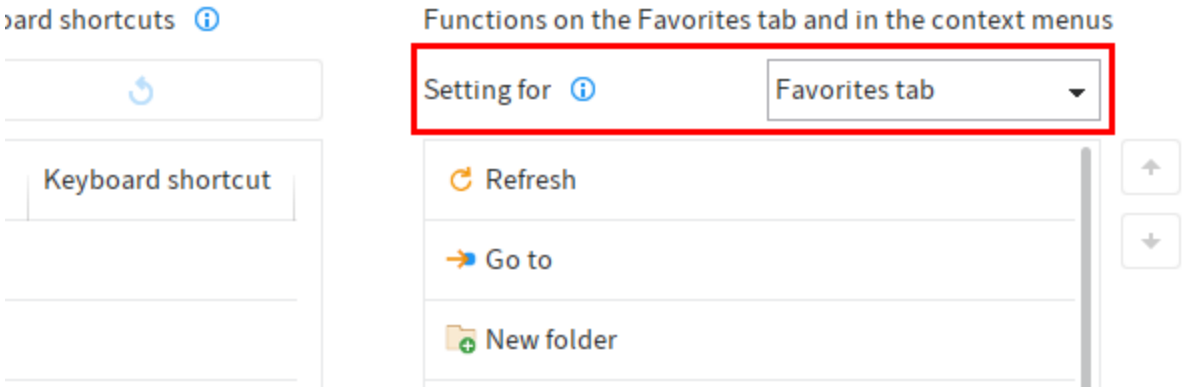


2. In the *Select user* dialog box, select the user or option group you want to add functions for on the *Favorites* tab.



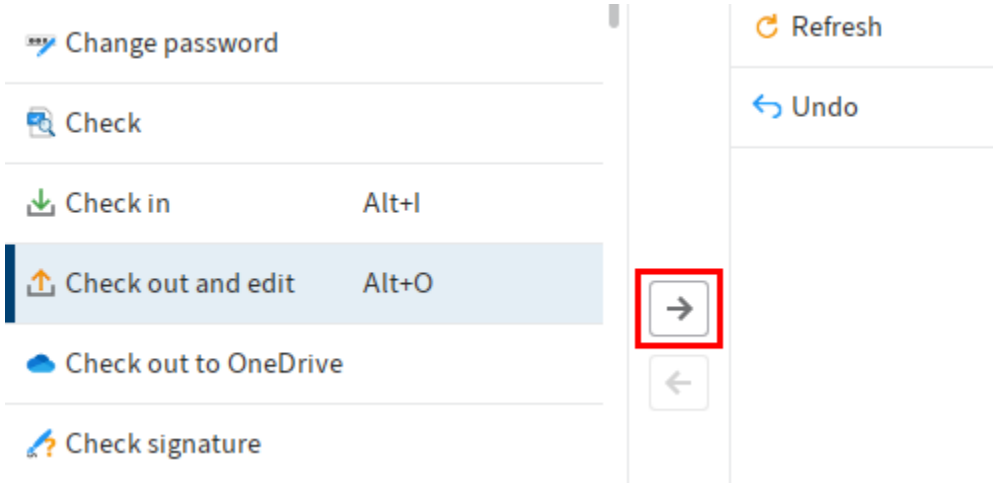
3.

Select the menu item *Quick access to functions*.



Under *Functions on the Favorites tab and in the context menus*, the default settings for the Favorites tab are already selected.

> **Information**
>
> In addition to the *Favorites* tab, you can also customize the right-click context menus in the *Repository*, *Tasks*, and *Intray* work areas.



4. To add a function to the *Favorites* tab, select the function in the left column and then *Add function* (right arrow).

> **Information**
>
> You can change the order of functions with the arrow buttons next to the column.

Alternative 1: To remove a function from the *Favorites* tab, select the function in the *Functions on the Favorites tab and in the context menus* column and select *Remove function* (left arrow).

Alternative 2: To restore the default functions on the *Favorites* tab, select *Use default* (below the column *Functions on the Favorites tab and in the context menus*).

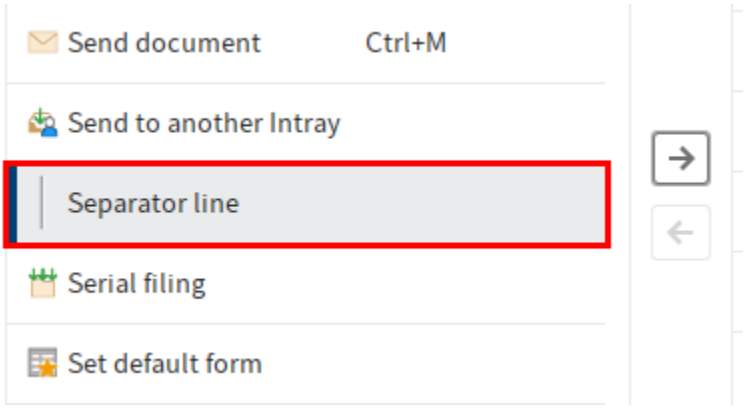
5. Select *OK*.

Result

The changes are applied for the selected user or option group.

> **Information**
>
> Users are still able to customize these settings themselves.

Insert separator line



You can add separator lines to get a better overview of the functions on the *Favorites* tab. You will find the *Separator line* function in the *Available functions and keyboard shortcuts* column.

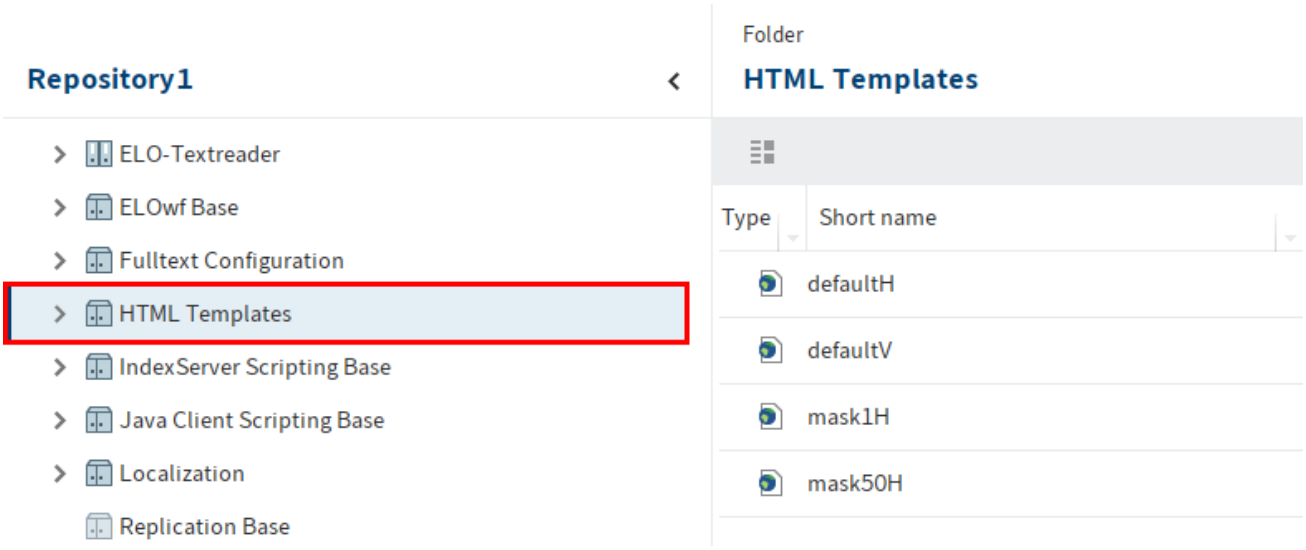
> **Information**
>
> The *Separator line* function can be added as often as you like.

HTML templates for the metadata preview

The HTML templates are used for configuring how metadata is displayed for a document or folder.

You can define HTML templates for each metadata form. There is also a default template that is used if a specific template has not been defined for a metadata form.

Folder for HTML templates



Custom HTML templates must be stored in ELO under *Administration//HTML Templates*.

File format for HTML templates

You must apply the following naming convention: `defaultH` or `defaultV`. The file extension is *htm*.

Convention: `form{no.}{H|V}.htm`

The following applies:

- {no.}: Replace this placeholder with the metadata form ID.
- {H|V}: Replace this placeholder with `H` (= horizontal) OR `V` (= vertical).

Example: `form3H.htm`

Alternative: To edit the default values for all metadata forms, store the *defaultH.htm* and *defaultV.htm* files in ELO and modify them according to your requirements.

> **Information**
>
> To view changes to the files directly, you must execute the CTRL+ALT+R keyboard shortcut after saving the respective HTM file. This command reloads the scripts and templates.

Variables

You can use the following variables in the HTML templates. They will be automatically evaluated by the ELO Java Client.

`<!--ELO_T_A-->`: Filing date

`<!--ELO_T_B-->`: Internal file attachment ID

<!--ELO_T_D-->: File date

<!--ELO_T_E-->: Owner

<!--ELO_T_I-->: Document ID

<!--ELO_T_K-->: Short name

<!--ELO_T_M-->: Name of the metadata form

<!--ELO_T_O-->: ELO object ID

<!--ELO_T_T-->: Document type ID

<!--ELO_T_V-->: Retention period

<!--ELO_T_D-->: File date

<!--ELO_T_...-->: Content of the field. You must replace the (...) placeholder with the number of the desired field.

<!--ELO_N_...-->: Name of a field. You must replace the (...) placeholder with the number of the desired field.

Correct syntax

To ensure that the contents of variables are displayed correctly, every code block must start with the following variable:

<!--ELO_B_...-->: You must replace the (...) placeholder with the number of the desired field or the identifier for one of the variables specified above.

The code block must end with the following variable:

<!--ELO_E_...-->: You must replace the (...) placeholder with the number of the desired field or the identifier for one of the variables specified above.

Examples

Example: Owner

```
<!--ELO_B_E--><tr class="odd">
<th class="index"><!--ELO_N_E--></th>
<td class="index"><!--ELO_T_E-->
</tr><!--ELO_E_E-->
```

Example: Standard variables

```
<table cellspacing="0" cellpadding="3" width="100%">
```

```
<!--ELO_B_D--><tr class="oddeven">
<th class="index"><!--ELO_N_D--></th>
<td class="index"><!--ELO_T_D--></td>
</tr><!--ELO_E_D-->

<!--ELO_B_1--><tr class="oddeven">
<th class="index"><!--ELO_N_1--></th>
<td class="index"><!--ELO_T_1--></td>
</tr><!--ELO_E_1-->

<!--ELO_B_2--><tr class="oddeven">
<th class="index"><!--ELO_N_2--></th>
<td class="index"><!--ELO_T_2--></td>
</tr><!--ELO_E_2-->

<!--ELO_B_3--><tr class="oddeven">
<th class="index"><!--ELO_N_3--></th>
<td class="index"><!--ELO_T_3--></td>
</tr><!--ELO_E_3-->
```

Additional variables

A number of additional variables and information are also available in the ELO Java Client.

```
<h1><!--ELO_T_K--></h1>¶
¶
<!--ELO_B_CurrentVersionDate-->¶
<table cellspacing="0" cellpadding="0" border="0" style="padding-bottom:2px;">¶
<tr><th class="version"><!--ELO_N_CurrentVersionName--></th></tr>¶
<tr><td class="version"><!--ELO_T_CurrentVersionName--></td></tr>¶
<tr><th class="version"><!--ELO_N_CurrentVersionDate--></th></tr>¶
<tr><td class="version"><!--ELO_T_CurrentVersionDate--></td></tr>¶
<tr><th class="version"><!--ELO_N_CurrentVersionOwner--></th></tr>¶
<tr><td class="version"><!--ELO_T_CurrentVersionOwner--></td></tr>¶
<tr><th class="version"><!--ELO_N_CurrentVersionComment--></th></tr>¶
<tr><td class="version"><!--ELO_T_CurrentVersionComment--></td></tr>¶
</table>¶
<!--ELO_E_CurrentVersionDate-->¶
¶
<!--ELO_B_ArchivingMode-->¶
<p style="padding-bottom:12px; font-size:<!--ELO_FONTSIZE_1-->pt; font-weight:bold;">
<!--ELO_E_ArchivingMode-->¶
```

These are some examples of additional information that can be displayed:

`<!--ELO_N_CurrentVersionName-->`: Display name of the *Current version* field

`<!--ELO_T_CurrentVersionName-->`: Contents of the *Current version* field

`<!--ELO_N_CurrentVersionComment-->`: Display name of the *Comment* field

<!--ELO_T_CurrentVersionComment-->: Contents of the *Comment* field

<!--ELO_N_CurrentVersionOwner-->: Display name of the *Editor* field

<!--ELO_T_CurrentVersionOwner-->: Contents of the *Editor* field

<!--ELO_N_CurrentVersionDate-->: Display name of the *Version date* field

<!--ELO_T_CurrentVersionDate-->: Contents of the *Version date* field

<!--ELO_T_ArchivingMode-->: Document status (*Version control disabled*, *Version control enabled*, or *Non-modifiable*)

> **Information**
>
> To temporarily disable an HTML template, change the short name of the template so that it no longer corresponds to the above format (see the section File format for HTML templates).

Collaboration

This chapter describes how to manage the profile image and profile data for other users.

Change profile image as administrator

Every ELO user and ELO user group has a profile for the ELO feed. You can upload an image of the user/group for this profile.

There are two ways to edit the profile image:

- In the Administration folder
- In the profile

For more information about editing the profile image in the profile, refer to the ELO Java Client user documentation.

The following describes the method using the Administration folder.

> **Information**
>
> You require the appropriate permissions for this method.

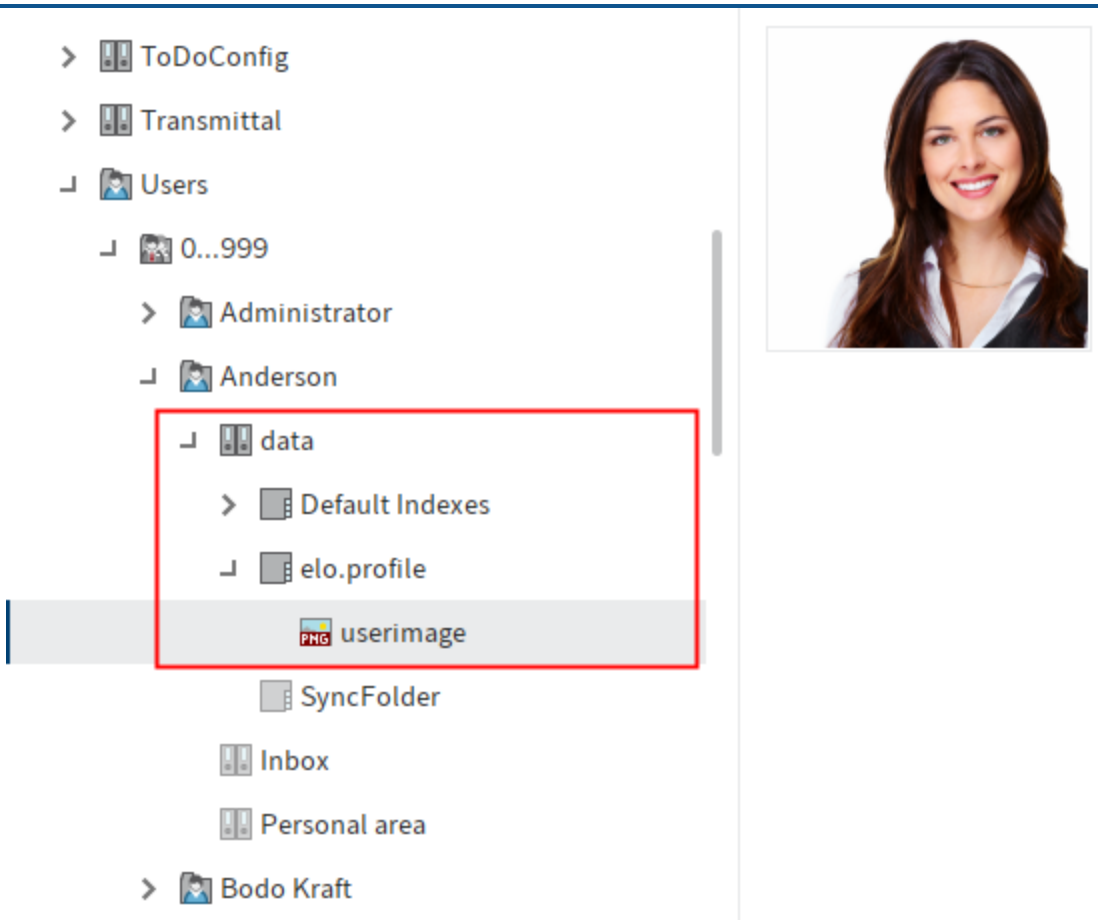
Storage location

The path of the storage location for profile images is as follows:

Administration // Users // <Folder with corresponding number range> // <user name>/<group name> // data // elo.profile

> **Information**
>
> The profile image must have the short name *userimage*. Use PNG, JPG, or GIF image files with a minimum of 280 x 280 pixels.

1. Open the folder for the respective user/group (see above).



2. Save the image to the *elo.profile* folder of the respective user/group.
3. Enter *userimage* as the *short name*.
1. Close the *Metadata* dialog box with *OK*.

   The profile image is displayed in the feed.

Edit profile data as administrator

Every ELO user and ELO user group has their own profile. You can add data to this profile.

There are two ways to edit profile data:

- In the Administration folder
- In the profile

The following describes the method using the Administration folder.

> **Information**
>
> You require the appropriate permissions for this method.

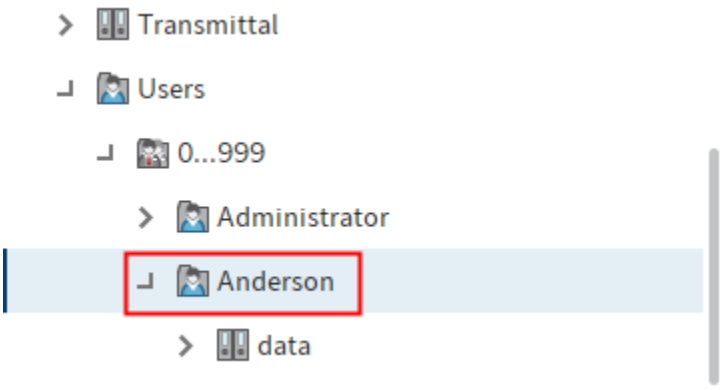
Storage location

The profile data is saved in the metadata of the respective user/group folder. The path to the folder is as follows:

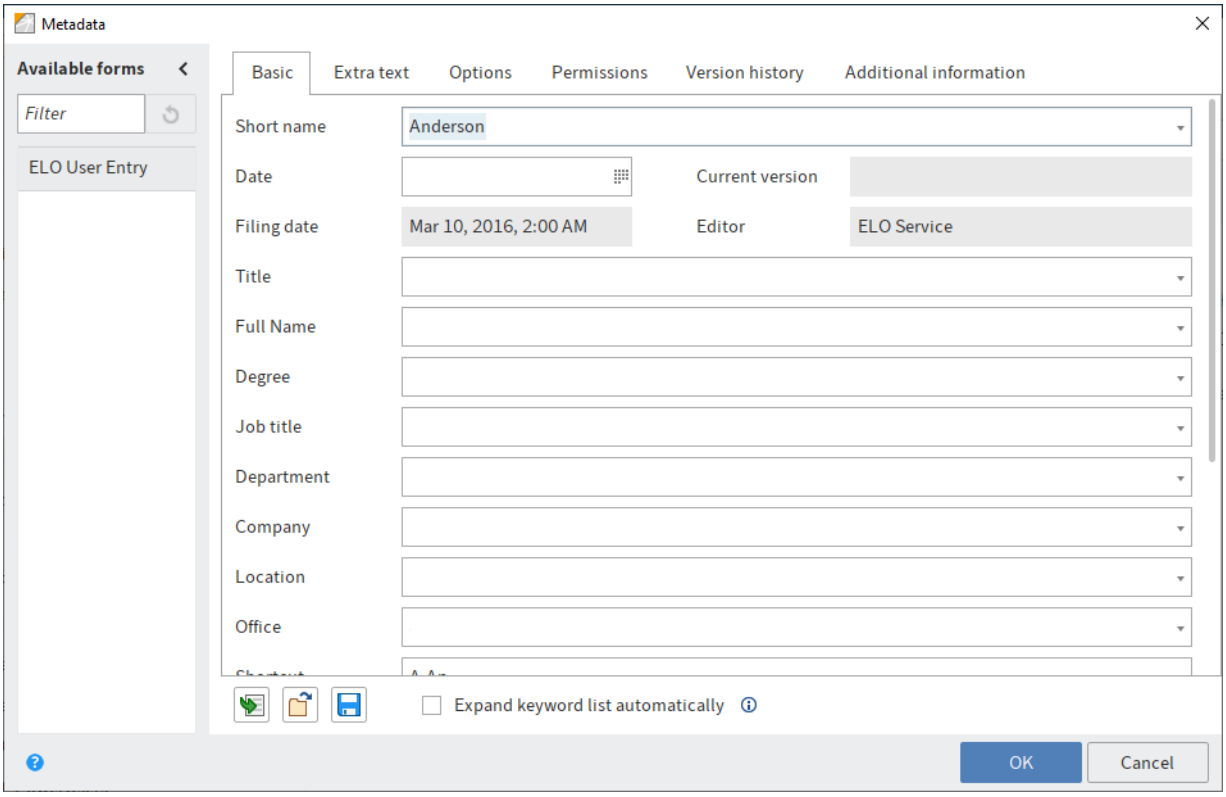
Administration // Users // <Folder with corresponding number range> // <user name>/<group name>

Step by step

1. Select the folder for the respective user/group.



2. Open the *Metadata* dialog box.

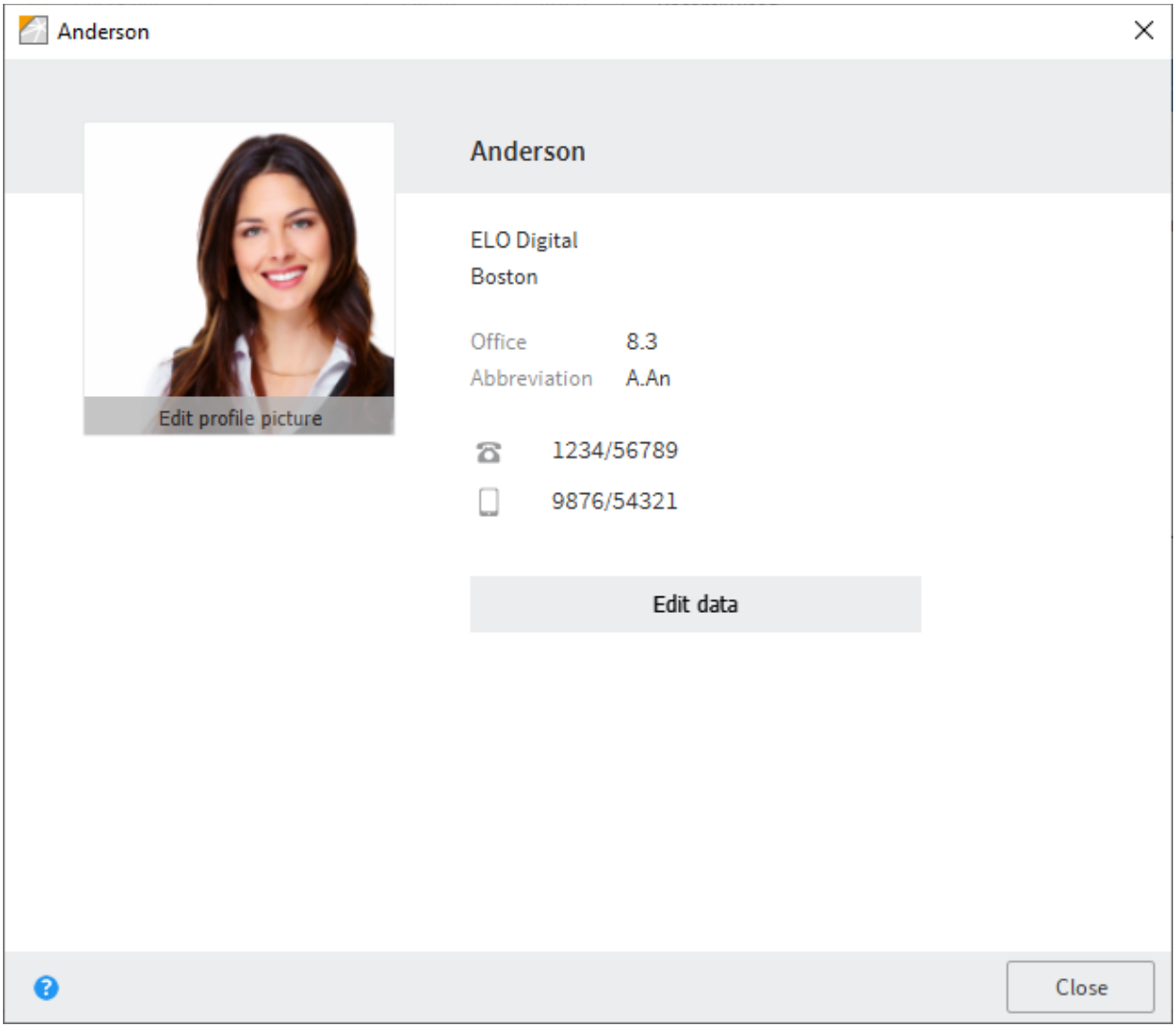


The *ELO user folder* metadata form must be selected.

3.

Enter the required information in the fields.

4. Click *OK* to close the dialog box.



The information you entered is shown in the user/group profile.

Translation

This chapter describes options for translating interface texts that are not included in the standard language package.

Translation files

ELO provides a number of options for translating texts with the help of translation files. This section explains how you can do this.

You can use variables from translation files in:

- Names of fields in metadata
- Names of forms in metadata
- Keyword lists
- Node names in workflows
- Name when forwarding workflows
- In scripts and forms

The translation files are stored as the file type *PROPERTIES*. The following conditions apply:

- Character encoding: UTF-8
- Path in ELO: Administration//Localization//custom
- One for each language: A properties file with the corresponding country code (de, en, fr, etc.)

The following example describes how to work with translation files using translated fields in the metadata. In principle, this method works for the other points listed above.

You will find more information on using translations in workflows and forms in the ELO workflow documentation.

Example

In the following example, we use a metadata form named *Photo*.

Method

1. Create a text file. You can enter any name for this file. However, you must add an underscore between the end of the name and the language abbreviation and use the file extension *.properties*. In our example, this is:

   ```
   masksAndFields_en.properties
   ```

masksAndFields_de.properties

```
field.MODELL=Kameramodell
field.HERST=Kamerahersteller
field.DATFOTO=Erstellungsdatum
field.ORTFOTO=Ort
field.THEMFOTO=Thema
field.AUFTRAGGEBER=Auftraggeber
```

2. For each field, enter a variable and the name of the field in the respective language. You must use the following format:

   `<prefix>.<variable>=<text>`

   - Prefix: You can choose any prefix you like. However, you should use the same prefix for one specific purpose.
   - Variable: You can choose any variable you like. In this example, we use the group name of the corresponding field to make it easier to map.
   - Text: The text is displayed as the name of the field. The language should correspond to the respective language abbreviation.

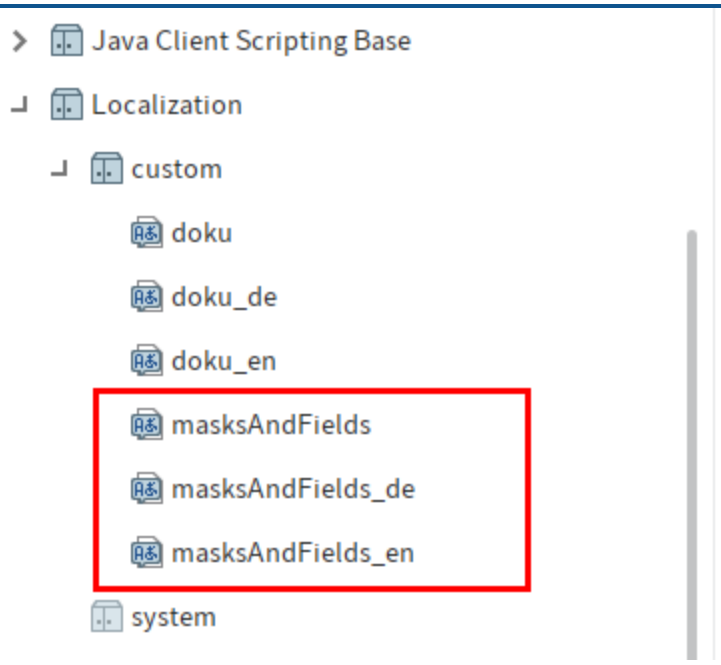
3. For each language, create a copy of the first properties file with the corresponding language abbreviation. Otherwise, the name of the file must match that of the first file. In our example, this is:

   `masksAndFields_de.properties`

masksAndFields_de.properties | masksAndFields_en.properties

```
field.MODELL=Camera model
field.HERST=Camera manufacturer
field.DATFOTO=Creation date
field.ORTFOTO=Location
field.THEMFOTO=Subject
field.AUFTRAGGEBER=Customer
```

4. Replace the texts in the corresponding language.

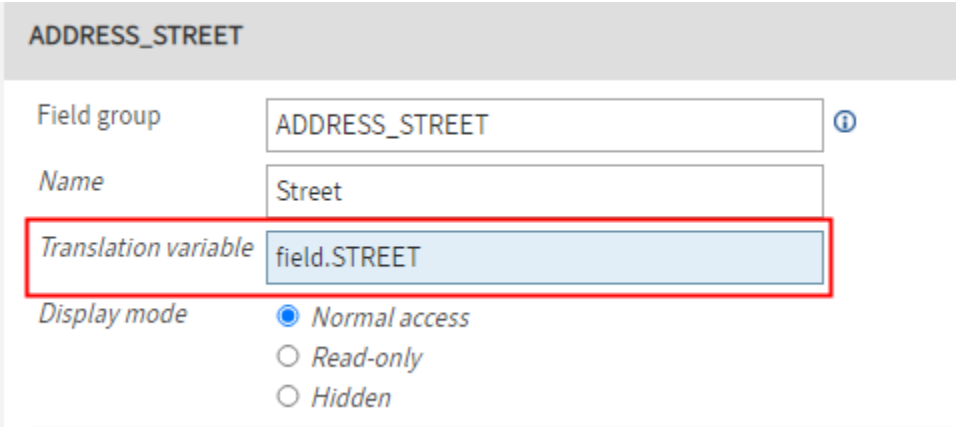


5. Save the files in ELO. Use the following path:

   Administration//Localization//custom

   Optional: To provide a default language if a language file is not found, save a corresponding file without the language abbreviation.

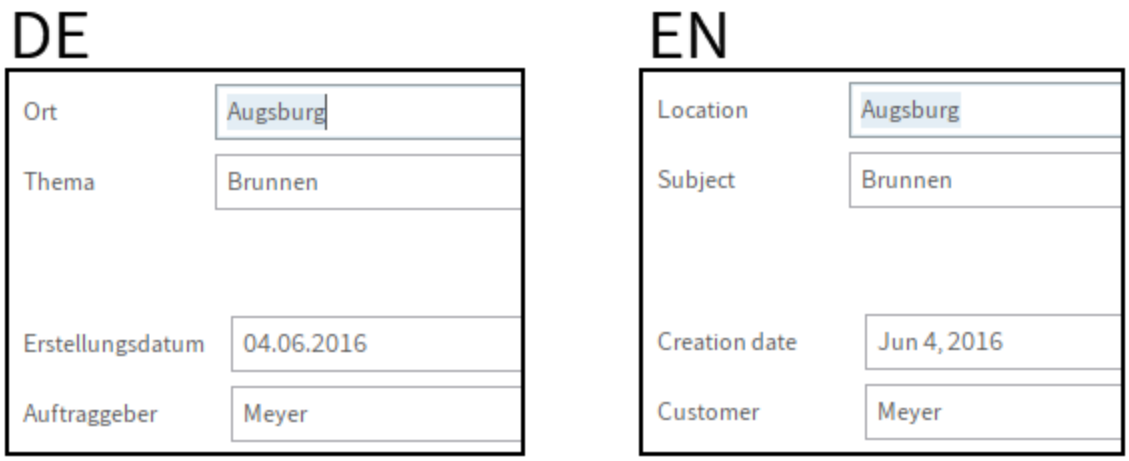
6. Open the ELO Administration Console.
7. Go to the *Field templates* area.
8. Select a field of the selected form.



9. Enter the variable for the corresponding field in the *Translation variable* field. The variable must match the variable in the properties files.
10. Save the changes.
11. Repeat steps 8 to 11 for all fields of the form.
12.

Reload the ELO Indexserver.

Result



The field names are displayed in the respective language.

Translation table

You can use the translation table to translate interface texts such as the short names of entries.

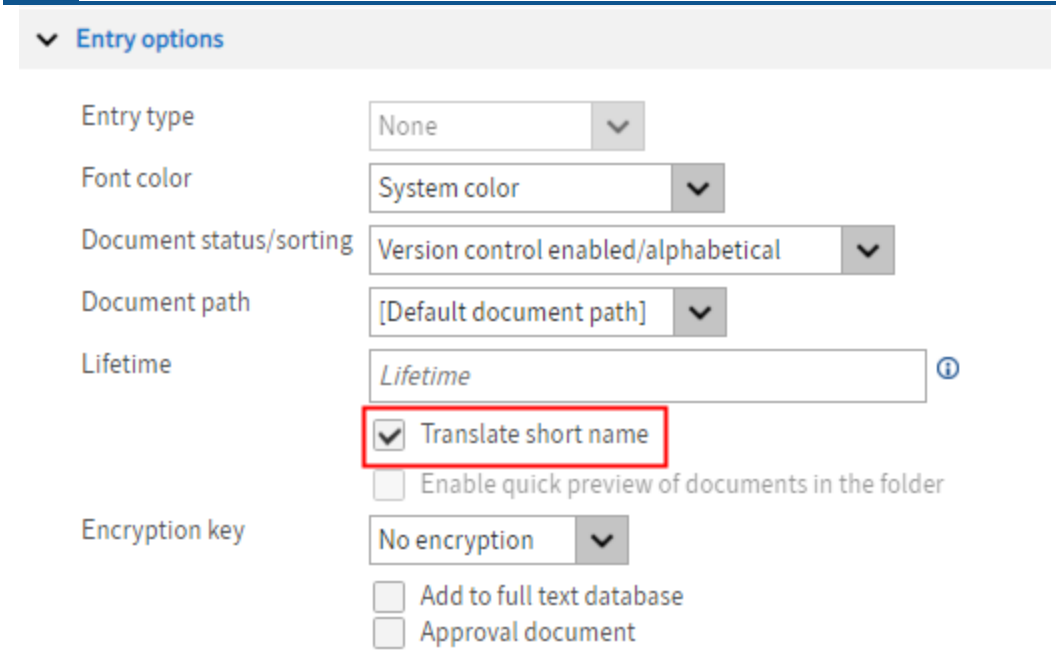
The following instructions are an example that can be applied to other scenarios.

Example

This example explains how to translate the short names of folders.

Requirement

The respective entries must have been filed with a metadata form in which the *Translate short name* option is enabled.



The option must have been set globally in the ELO Administration Console under (*Metadata forms and fields > Entry options*). If you enable the option later, you must set the option manually for existing entries in the client using the *Options* tab in the metadata form.

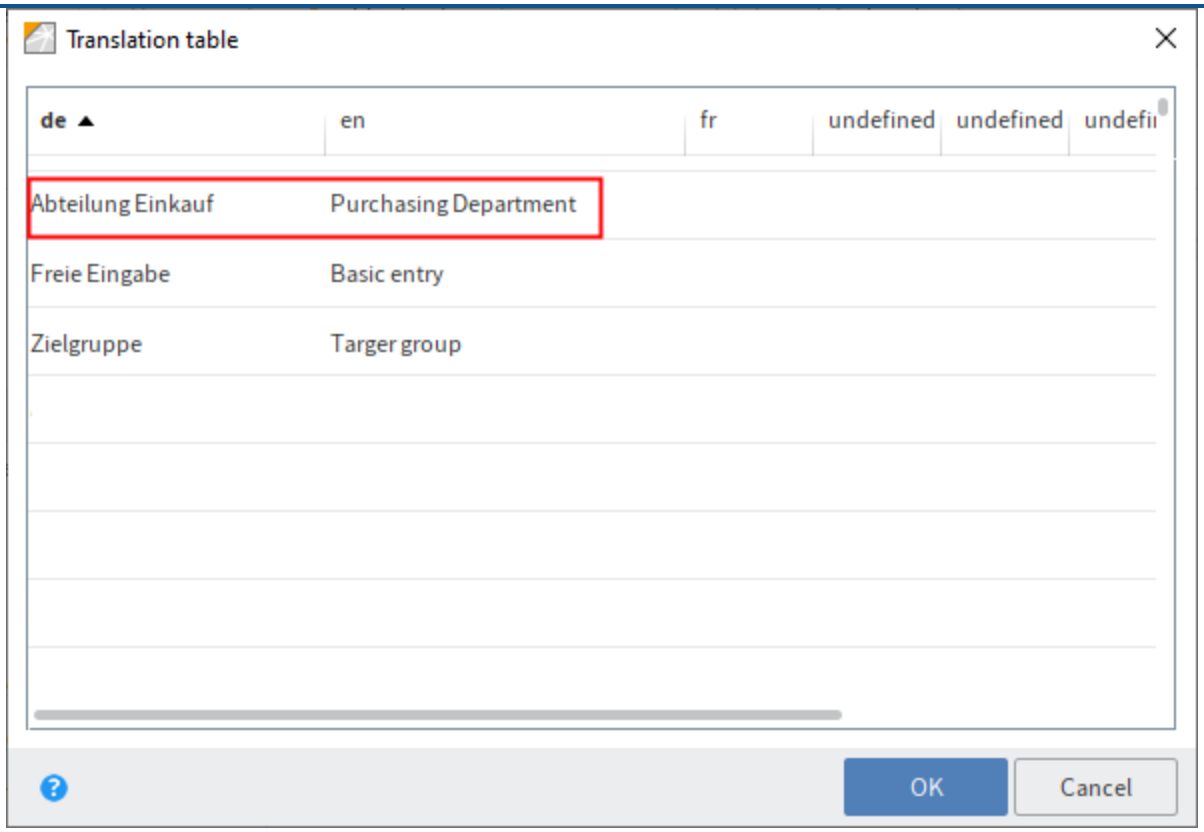
Method

1. Open the metadata of the folder whose short name you want to translate.
2. Copy the short name of the folder.
3. Open the translation table (*Organize tab > System > Translation table*).

   In the translation table, automatically recognized texts are listed in the system language.

   > **Information**
   >
   > You can change the sort order of the table using the table headers. You can only enter new terms if the table has not been sorted manually and there is no triangle icon next to a column header.

4. Scroll down until you reach the last entry in the table.
5. Right-click to open the context menu.

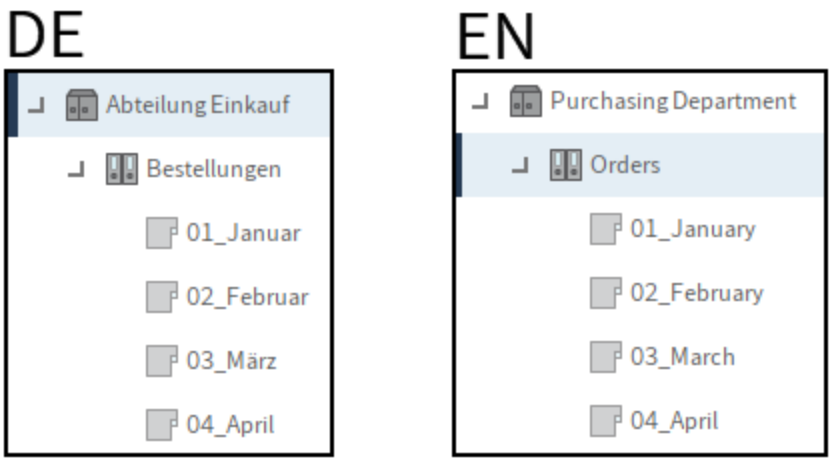


6. To insert the copied short name below the last entry, select *Paste* from the context menu.

> **Information**
>
> It is not always possible to translate merged strings. For example, if you want to translate the short name *January 01*, you cannot just enter *January* in the translation table. You need to enter the whole string.

7. Enter the translation you want in the column with the respective language abbreviation.

8. Select *OK*.



Result

You have entered a translation for the short name.

Outlook

As soon as you change the language, the translated texts are displayed.

Change storage location for user data

The storage location and structure of the client user data can be configured differently from the default using the `ELO_USER_HOME` environment variable. Keep in mind that these should still remain on a local drive. Fast access to files in *temp* or *doccache* are especially important for client performance.

Since ELO 12.04, the Intray and In use work areas can be stored separately using the variables `ELO_USER_INTRAY` and `ELO_USER_CHECKOUT`. This ensures that there is significantly less impact on network path performance, for example.

Configuration

In order to configure the environment variables, the following items need to be taken into account:

1. The name of the environment variable must be `ELO_USER_HOME`, `ELO_USER_INTRAY` or `ELO_USER_CHECKOUT`.
2. The variable should always be defined in the user area of the environment variables and not in the machine area.
3. The variables must always be written in uppercase.
4. The variables must begin and end with a `%` sign.
5. You should ensure that the resolved file paths do exceed the maximum length allowed in Windows of 255 characters.

   If the environment variable is defined in a different way than by using the interface in Windows, please ensure that the registry entry is of the type `REG_EXPAND_SZ` since otherwise it will not be possible to resolve the corresponding variable.

> **Information**
>
> If the environment variable is defined in a different way than by using the interface in Windows, please ensure that the registry entry is of the type `REG_EXPAND_SZ` since otherwise it will not be possible to resolve the corresponding variable.

Variables

Variable	Result	Comment
%APPDATA%	C:\Users{Username}\AppData\Roaming	Windows 7/Vista, the equivalent will be used in XP
%TEMP%	C:\Users{Username}\AppData\Local\Temp	Windows 7/Vista, the equivalent will be used in XP

Variable	Result	Comment
%ELOPROFILENAME%	Profile name of the currently connected ELO profile	Is required
%ELOUSERID%	User ID of the user logged on to ELO	Is required
%ELOUSERNAME%	User name of the user currently logged on to ELO	Please ensure these are unique

Please note

The variables `%ELOPROFILENAME%` and `%ELOUSERID%` are required in the definition. The value `%APPDATA%\ELO Digital Office\%ELOPROFILENAME%\%ELOUSERID%` is recommended as the default for the environment variable.

Example

Variable: `%APPDATA%\ELO Digital Office GmbH\%ELOPROFILENAME%\%ELOUSERID%\`

If Ms. Meier (Windows user name: *Meier*) logged on with the ELO user *Administrator* (user ID=0) and the profile *DEMOSERVER02*, then the environment variable would look like this:

```
C:\Users\Meier\AppData\Roaming\ELO Digital Office GmbH\DEMOSERVER02\0\
```

Please note

Due to this uniqueness, the user name should not be used for the file paths. If the user name is changed later, the user will no longer be able to find any files that it checked out. The specific structure for the ELO Java Client will be created within this folder.

Please note

As soon as the environment variable has been defined, the ELO Java Client will access the new checkout directory. The old files will no longer be displayed.

You must therefore ensure that all users have checked in their documents before the variables are defined, as otherwise the files must be manually moved.

'Check out to OneDrive' function

The *Check out to OneDrive* function allows the user to check out Microsoft Office documents from ELO to Microsoft OneDrive and edit them there. This is similar to the local checkout process. The interface with Microsoft 365 allows for use of Microsoft Office Online and collaborative working.

For information about administrative configuration and deployment of the *Check out to OneDrive* function, refer to the Connect ELO to Microsoft OneDrive documentation.

ELO Barcode

Getting started

This section contains information on how to set up ELO Barcode. Follow the links for more detailed information about the individual steps.

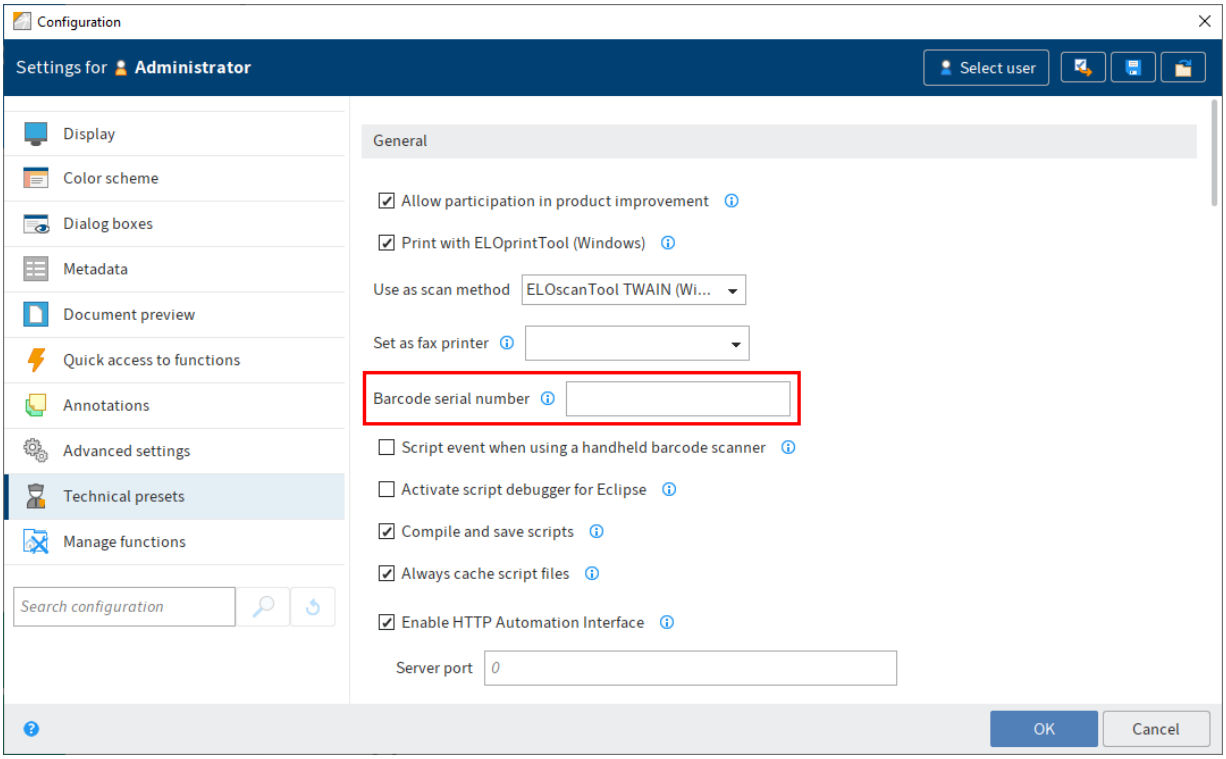
The ELO Barcode module automatically reads barcode information, which makes it easier to file documents and enter metadata. You will find an overview of the supported barcode types in the Table of supported barcode types chapter.

Activate license

ELO Barcode is automatically installed along with the ELO Java Client. To activate the module, you need an ELO Barcode serial number.

1. Log on to the ELO Java Client as administrator.

> **Please note**
>
> Barcode serial numbers are unique to each workstation and may not be used multiple times.



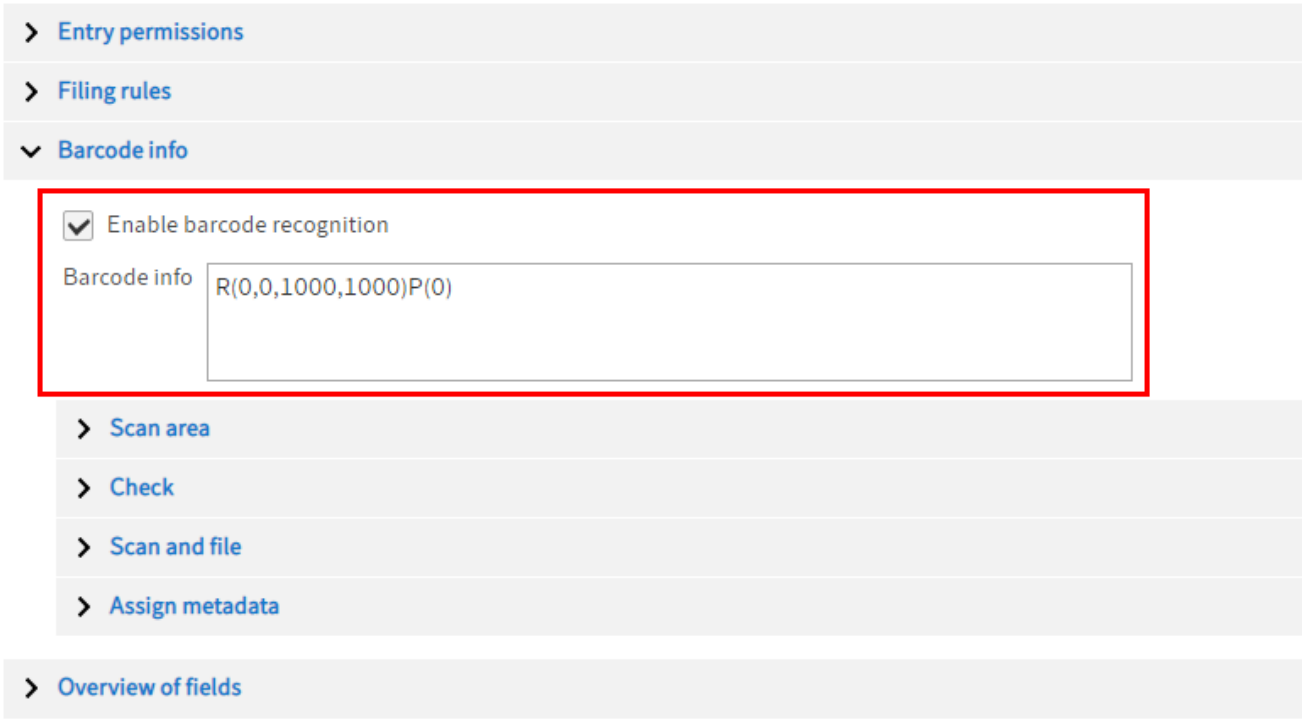
2. Enter the barcode serial number in the *Technical presets* area of the configuration.

For more information, refer to the Enable barcode recognition chapter.

Configure metadata form for barcode recognition

Create a metadata form for barcode recognition in the ELO Administration Console under *Metadata forms and fields*.

You will find the settings for barcode recognition in the Barcode info part of the metadata form.



1. Enable the option *Enable barcode recognition*.

   The *Barcode info* field is completed automatically. With the default settings, the entire page is searched for barcodes (`R(0,0,1000,1000)`) and all pages of a document (`P(0)`).

   Barcodes are read via instructions. Instructions for targeted processing of barcode information are defined in the *Barcode info* input field.

2. Set your preferences under the options Scan area, Check, Scan and file, and Assign metadata. Your settings are automatically entered as instructions into the *Barcode info* input field.

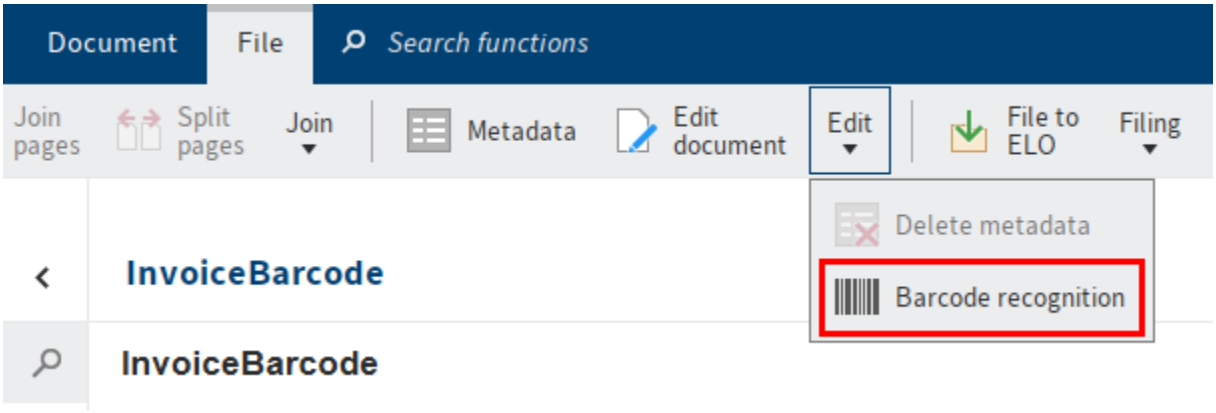
   > **Please note**
   >
   > Only a complete barcode instruction in the metadata form guarantees that barcode information is read. Each barcode requires one R instruction, one T instruction, and one or more S instructions.

For more information, refer to the chapter Configuration.

Start barcode recognition

In the ELO Java Client, you can start barcode recognition in the *Intray* work area.

1. Select the document with the barcode information in the Intray.



2. On the ribbon, select *File > Edit > Barcode recognition*.

The barcode is read and the metadata is created. The barcode information is now located in the assigned fields. To view the metadata, select *File > Metadata* on the ribbon.

Outlook

In the second step, you can automatically file the documents if the metadata form has valid index information.

On the ribbon, select *File > Filing > Automatic filing*.

> **Information**
>
> If the metadata form does not have a filing definition, you must select the filing location manually. Use the function *File to ELO* (available in: *Ribbon > File*).

For more information, refer to the Barcode recognition in the ELO Java Client chapter.

Basics

Barcodes are used to encode characters and numerals. This enables you to uniquely assign information that the ELO Barcode module can read quickly and reliably, and then use this information to index documents.

One important aspect in filing documents electronically is assigning them the correct metadata so that you can access the document without any problems at a later point in time. Errors in manual entry, such as entering incorrect customer or invoice numbers, result in unsuccessful searches. ELO Barcode simplifies and speeds up metadata entry and indexing processes.

Overview of functions

The main functions of ELO Barcode include:

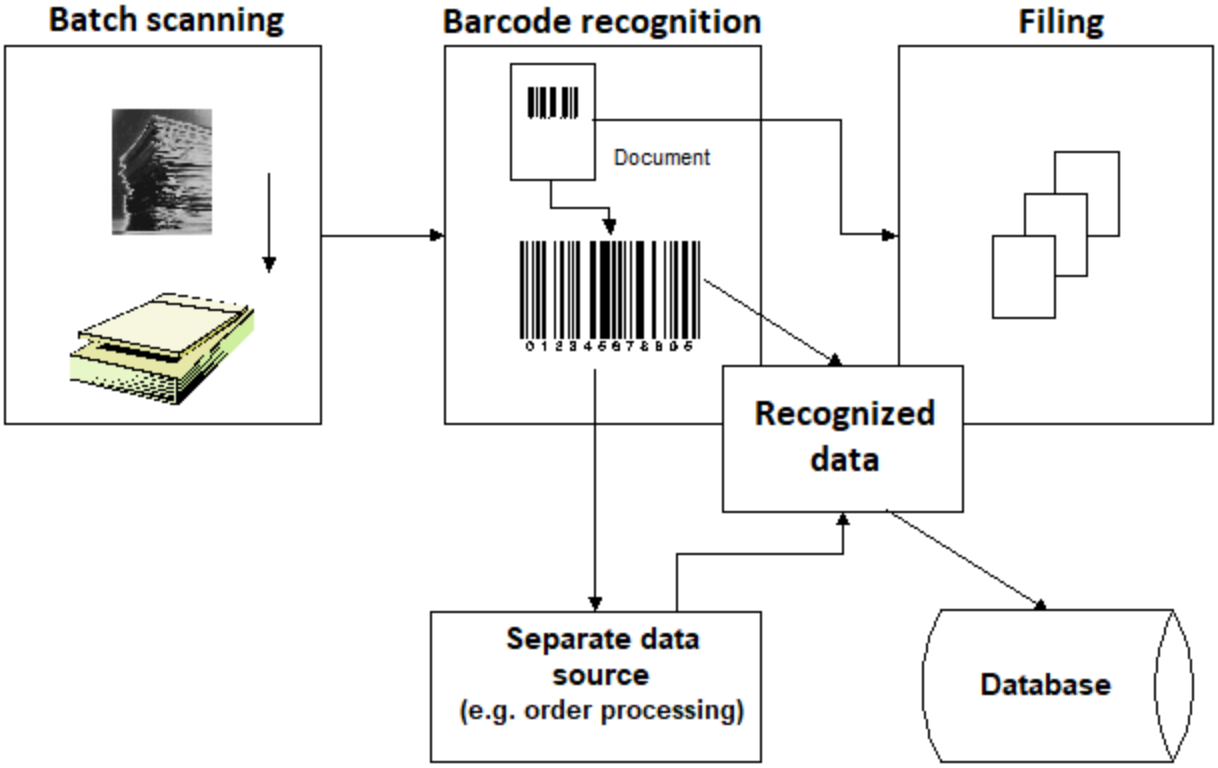
- Automatic barcode recognition for scanned documents
- Converting barcodes into search terms (indexing)

The barcode is read during filing from the Intray to ELO. The following options are available:

- Defining a rectangular area in which the barcode is located (barcode area)
- Searching an entire document

You can assign parts of the barcodes to different fields in the metadata form. You can also define the characters of the barcode as a verification feature. During barcode conversion, ELO turns this barcode content into searchable attributes (metadata).

Assign metadata with automatic barcode recognition



Factors that affect barcode recognition

Quality

Scanners are grid-oriented devices that usually work with 200 to 400 dpi (dots per inch). If a grid-oriented device scans a symbol without a grid, valuable information is lost. There are many other factors resulting in additional loss of data or even in data distortion. Poor recognition results can only be avoided if all the factors are considered to the fullest extent. The following factors must be taken into account to guarantee reliable barcode recognition:

- Barcode type
- Resolution (dpi)
- Barcode width
- Vertical barcode height
- Barcode symbol alignment
- Quiet zones
- Scanner settings
- Document quality
- Barcode label quality

Barcode recognition characteristics

Barcode recognition is primarily used to assign documents metadata. You can automate this process to prevent any errors from occurring. System performance and data integrity depend on the reliability of the device for barcode recognition as well as on the image quality. ELO Barcode uses the best possible scanning algorithms. However, this alone does not automatically ensure a high rate of recognition. The preceding list therefore explains the individual factors that will help you achieve reliable barcode recognition.

> **Information**
>
> Distorted or damaged barcodes can cause errors in barcode recognition.

Barcode type

The structure and design of a barcode symbol frequently lead to poor readability. Barcode type *Code 39* seems to have the highest tolerance with a marginal corruption of the input data. This is why we recommend using *Code 39*.

Resolution in dots per inch (DPI)

Barcodes can be scanned reliably at a resolution of 200, 300, and 400 dpi. Lower dpi values require larger barcode symbols to achieve reliable recognition. For good results, we recommend you select the character density of the barcode symbols according to the values listed below.

Recommended barcode width

The width of the barcode is one of the most important factors for reliable barcode recognition. The wider the barcode is, the better the symbol resolution and recognition.

There is no formula to determine the best width for a barcode symbol. The general rule is not to exceed the following values:

- 6 characters per inch (one inch = 2.54 cm) at a resolution of 300 dpi
- 4 characters per inch (one inch = 2.54 cm) at a resolution of 200 dpi

These values include all the characters of a barcode symbol, such as synchronizing, data, start, and stop characters as well as the optional check digit.

Vertical barcode height

Theoretically, ELO Barcode is capable of recognizing a barcode that is only one scan line high. However, in reality the barcode symbols have different alignments, i.e., the barcode does not run parallel to the vertical and horizontal margins of a document. This is caused, for example, when barcode labels are applied manually, when the printer is not aligned correctly, or when the scanner is not aligned properly. Under normal circumstances, ELO Barcode reads the barcode from left to right.

The highest degree of reliability is achieved when the barcode is placed such that one horizontal scan line comprises the entire barcode symbol from start to stop character. To recognize the left and right margins of the symbol in a single line, the barcode's vertical size needs to be large enough to allow for a maximum angle ("angular position").

Barcode symbol alignment

If a barcode is placed on the document at an angle, this could cause a single scan line to miss information (from start to stop character) of a barcode. ELO Barcode offers an alignment correction option for reading barcode symbols placed at an angle. The alignment correction function helps recover information from barcodes place at an angle. However, using the correction feature has a definite impact on scanning speed. It can also cause scan errors. This is why we recommend only using the function as a backup and not in normal operation.

Quiet zones

Most barcode standards require a "quiet zone" to the left and right of the barcode symbol. In a bitmap image, this quiet zone should be entirely white. Noise ("dirty" pixels in the image) or text "shimmering through" and label edges often result in corrupted quiet zones. This can cause errors in barcode recognition.

A quiet zone at the top or bottom of a barcode symbol must have a height of greater than three pixels. The quiet zones to the left and right of the barcode symbol must be a minimum of eight pixels wide.

Scanner settings

Many scanners feature a contrast setting option. This threshold-value setting determines the shade of gray when a pixel is no longer interpreted as white but as gray or black. This option allows you to adjust the scanner to the individual properties of the respective documents.

Changing the threshold value could cause the black areas in the barcode symbols to appear wider or narrower than they really are. This process is also called "distortion". The barcode symbols may become illegible even if they look perfectly acceptable to the human eye.

Barcode quality

Keep the following in mind when placing barcode labels:

- The width of the labels should allow for quite zones around the barcode.
- The barcode resolution and display should be sufficiently dimensioned.
- The printing resolution should be 300 dpi or higher.
- Labels printed with matrix printers are not permitted.
- Label printers with ink ribbons are problematic.
- The glue must be of high enough quality to prevent the labels from rolling up or peeling off.
- The label paper must be thick enough to avoid "shimmering through" of text that is covered by the label.

Enable barcode recognition

Requirement

ELO Barcode is automatically installed along with the ELO Java Client. To activate the module, you need an ELO Barcode serial number.

Please note

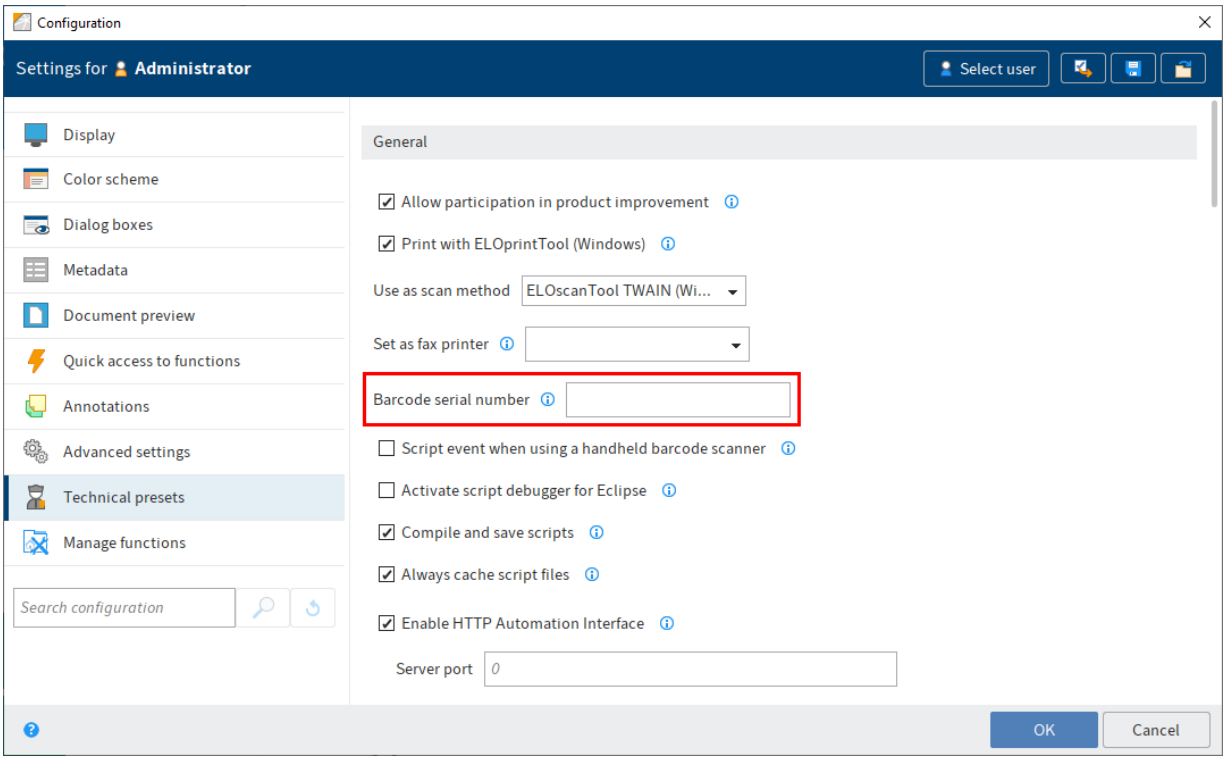
Barcode serial numbers are unique to each workstation and may not be used multiple times.

Information

The input field for the ELO Barcode serial number is only visible to administrators.

Method

1. Open the ELO Java Client.
2. Press F12 to open the configuration.



3. Enter the ELO Barcode serial number in the *Technical presets* area.
4. Select *OK* to save your entry.

Result

Barcode recognition is activated.

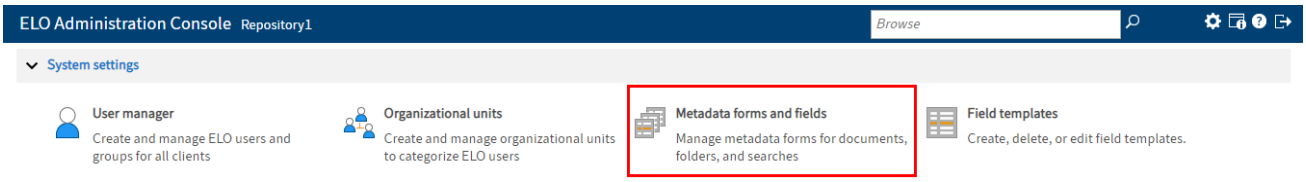
Configuration

The ELO Barcode interface works on two levels. The first level is contained entirely within ELO and is responsible for the recognition of the barcodes and the distribution of the recognized text to the fields of the metadata form. This is usually sufficient for most applications.

If additional processing steps are required, a program can be run via the Microsoft VB-Scripting Host interface, where these steps can be performed.

Configure metadata form

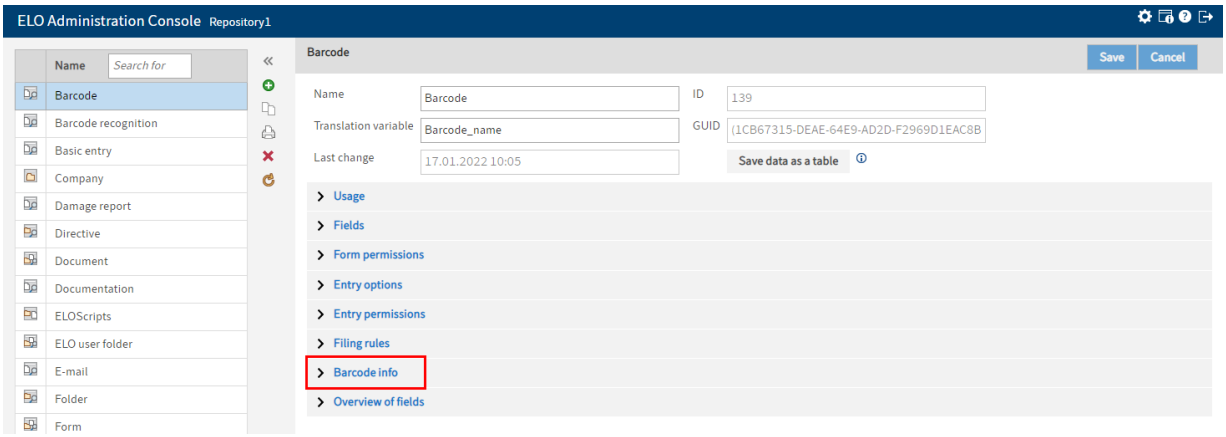
To process barcode documents with the ELO Java Client, you have to define a metadata form for capturing barcode information in the ELO Administration Console.



1. Go to *Metadata forms and fields* in the ELO Administration Console.
2. Select the metadata form for barcode documents from the list.

   In our example, this is the *Barcode* metadata form.

   Optional: Create a new metadata form for barcode documents.



3. Select the *Barcode info* area to edit the barcode data.

'Barcode info' input field

Brief overview

1. Enable the option *Enable barcode recognition*.

   The *Barcode info* field is completed automatically. With the default settings, the entire page is searched for barcodes (`R(0,0,1000,1000)`) and all pages of a document (`P(0)`).

   Barcodes are read via instructions. Instructions for targeted processing of barcode information are defined in the *Barcode info* input field.

2. Set your preferences under the options Scan area, Check, Scan and file, and Assign metadata. Your settings are automatically entered as instructions into the *Barcode info* input field.

   > **Please note**
   >
   > Only a complete barcode instruction in the metadata form guarantees that barcode information is read. Each barcode requires one R instruction, one T instruction, and one or more S instructions.

   Each entry group – referred to as R group in the following – is preceded by an R instruction. This instruction determines the area scanned for barcodes. This instruction may be followed by an L instruction, which can check minimum and maximum input lengths. This is followed by a T instruction that determines the barcode type and how barcode-free pages are handled. V instructions can then check certain barcode positions for fixed characters that

you have defined previously. A sequence of S instructions determines how the barcode is broken down and assigned to the fields in the metadata form. The P instruction defines which page of a document is scanned for barcodes. Another R group can follow after this.

> **Information**
>
> Group names must not be used multiple times in the metadata form.

The instructions are explained in detail in the following.

R instruction

With the R instruction, you define the area on a page where the barcode information is located. Determine which area of the page is scanned for barcodes.

Syntax: `R(<left>,<top>,<width>,<height)`

The four coordinates of the R instruction define the checked area in per-thousandths of the total scan area. An entry of form `R(100,200,300,400)` defines the area from the left = 2.1 cm, top = 6 cm, width = 6.3 cm and height = 12 cm on an A4 page (21*30 cm). Only this zone is scanned for barcodes. If you want to check the entire input area, you can select the entire area by entering `R(0,0,1000,1000)`.

> **Information**
>
> If you need multiple barcode areas on a page, add additional new R parameters to the *Barcode info* field.

L instruction

Use the L instruction to check the minimum and maximum length of a barcode.

Syntax: `L(<minimum>, <maximum)`

Barcodes usually have a fixed length (e.g., a 6-digit document number) per document. When you limit the allowed area (such as `L(6,6)`) here, you can avoid incorrect recognition caused by incomplete or other barcodes.

T instruction

The T instruction defines the barcode type.

Syntax: `T(<type)`

Use the T instruction to define which barcode types you want the program to recognize. The value is binary and entered as a hexadecimal value. The following options are available:

Codabar	1	(0x1)

Code 128	2	(0x2)
Code 39	4	(0x4)
I 2 of 5	8	(0x8)
EAN 13	16	(0x10)
EAN 8	32	(0x20)
UPC A	64	(0x40)
UPC E	128	(0x80)
Data Matrix	2048	
QR code	512	
PDF 417	536870912	
GS1 Databar	1073741824	

You can create any combination by adding the corresponding values (e.g., for Code 128 and Code 39 = 2 + 4 = 6).

Pages with no barcode: There are also pseudo-types with values 4096 and 8192 (0x1000 and 0x2000). Type 4096 (0x1000) defines what to do with pages without barcode. If this type is not set, the page is ignored by the barcode manager. If this type is set, a barcode-free page is appended to the previous page that has a recognized barcode (for multi-page documents).

Consecutive pages: Type 8192 (0x2000) decides what happens with consecutive pages that have identical barcodes. With this type, such pages are summarized automatically. If this type is not used, all pages remain independent documents. These pseudo-types are only recognized in the first R group and are then valid for all the forms used in a barcode process. You cannot use types 4096 and 8192 at the same time. Either use type 4096 (collating pages without barcodes), type 8192 (collating pages with identical barcodes), or none at all.

Add blank pages	4096	(0x1000)
Add identical pages	8192	(0x2000)
Create checksum	16384	(0x4000)

Scan direction: Last, a T instruction defines the scan direction of the barcode. If you do not use any special settings, the default setting is left to right. In addition, you can use any combination of the four options:

Left to right	65536	(0x10000)
Right to left	131072	(0x20000)
Bottom to top	262144	(0x40000)
Top to bottom	524288	(0x80000)

V instruction

You can use certain characters for validating barcodes with the V instruction.

Syntax: `V(<pos>='<character>')`

You can check certain barcode positions for fixed characters using the V instruction. If you scan delivery notes, and your barcode consists of a delivery note ID ("DE" in the first two positions) and a delivery note number, you can avoid incorrect scans using the `V(1='L') V(2='F')` control. Within an R group, you can define as many V instructions as required. Note that apostrophes (') must be placed in front of and behind the check character.

S instruction

The S instruction assigns barcode information to a field in the metadata form. The group name of the field is used for the assignment. Multiple S instructions can be used.

Syntax:

`S(<group name field>=<Startpos>,<number)`

The barcode is assigned to the fields using one or multiple S instructions. The S instruction defines which part of the barcode is transferred to which field (<group name of the field) via <startpos> and <number>. The group name of the field provides you with every field that has been assigned a group name in the current metadata form definition.

> **Information**
>
> Group names specified in the metadata form must be unique. Group names must not be used multiple times in the barcode metadata form.

If you fill a metadata form with multiple S instructions, these entries are saved without a separator directly one after another. If you have entered an ISO date (YYYYMMDD) in the barcode and want to transfer it to ELO, you must first change it to ELO format (DD.MM.YYYY or short DDMMYYYY). You can enter `S(DLDATE=7,2) S(DLDATE=5,2) S(DLDATE=1,4)`. This is assuming that the date field is assigned to the first 8 characters of the barcode and that it will be entered into the DLDATE field.

P instruction

The P instruction defines which page of a document is scanned for barcodes.

Syntax: `P (<number of pages)`

> **Information**
>
> To scan all pages of a document for barcodes, enter `P (0)` as the P instruction.

Example

`R(0,0,1000,1000)T(1610685183)S(BAR1=1,50)S(BAR2=1,18)P(0)`

For the above example, the following information is evaluated and assigned:

-

The R instruction defines the zone on a page where the barcodes are located. The entire page is marked.
- The HEX value of the T instruction is 1610685183. This value corresponds to the binary value 11000000000000100011010111111111. This is how the barcode types are defined that should be evaluated in the document.
- The two S instructions determine that two barcodes are applied to the fields with the corresponding group name.
- The P instruction defines that all pages of the document are scanned for barcodes.

Scan area

Page only

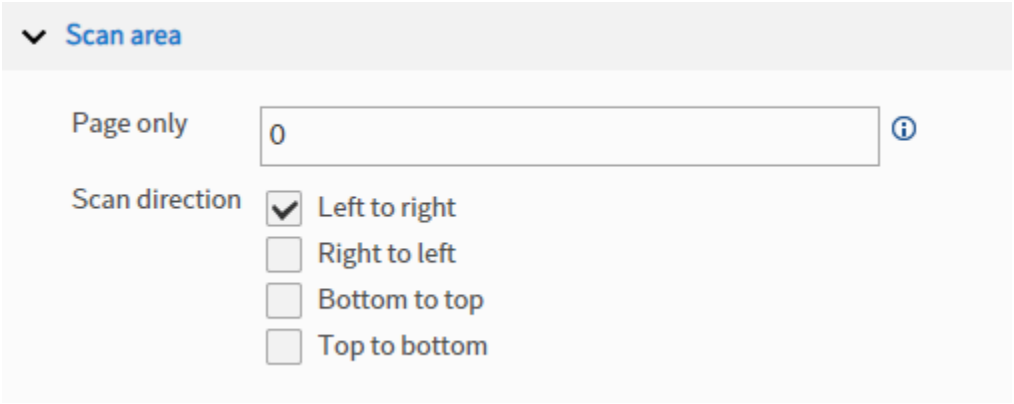
Determine what page of a document should be scanned for a barcode.

To search all pages, enter the value `0`. A P instruction based on your entry is automatically created in the *Barcode info* field.

Scan direction

You can determine the scan direction of a barcode during recognition.

The default is *Left to right*. This means if you do not use any special settings, barcode recognition always scans from left to right.



Check

Minimum/maximum length

To filter out unknown barcodes, you can define a minimum and maximum length.

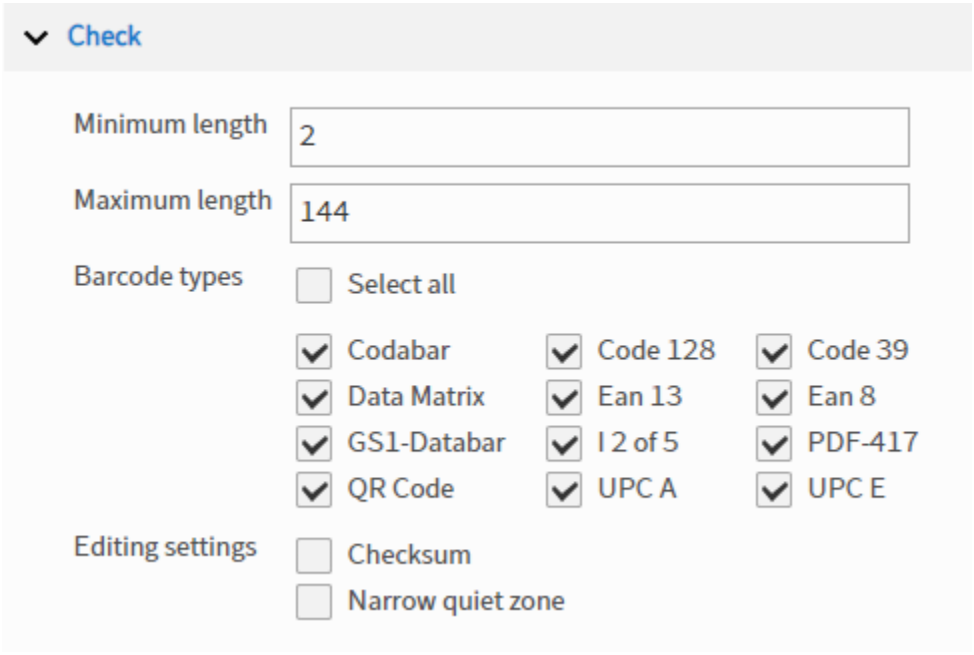
Barcodes usually have a fixed length (e.g., a 6-digit document number) per document. If you limit the allowed area here, you can prevent detection of unwanted or incomplete barcodes.

Barcode types

Select the barcodes in the *Barcode types* list that are used on the documents with barcode information.

> **Information**
>
> You will find more information on the different barcodes in the Barcode types chapter.

Select all barcode types used in this way. You can enable all types with the *Select all* option.



> **Information**
>
> If you restrict the possible barcode types to a small number, this increases the processing speed and reduces the error rate when recognizing the barcodes.

Editing settings

Checksum: Use this option to determine whether the checksum should be evaluated for a barcode. When you deactivate the option, the checksum of the barcode is ignored. The checksum is returned when you enable this option. This option only works with barcodes that have a "built in" checksum, such as *Code 128*.

Narrow quiet zone: Barcodes need free space around the barcode so it can be recognized. When you enable this option, a border of 10 pixels is entered, otherwise the quiet zone is 10% of the image resolution.

Scan and file

Filing settings

Ignore non-compliant barcodes: Exclude barcodes of the same type from the check. Documents with multiple pages are read even more precisely to guarantee correct joining in ELO.

You need to activate this option to exclude third-party barcodes.

Add page without barcode to the previous page: Determine what will happen with barcode-free pages within a document with barcode information.

This option adds a barcode-free page to the last page with a recognized barcode. If this option is disabled, ELO Barcode will ignore pages without a barcode.

Join pages with identical barcodes: Determine what happens to consecutive pages with identical barcodes. If this option is enabled, pages with identical barcodes are joined automatically. If this option is disabled, all the pages remain as separate documents.

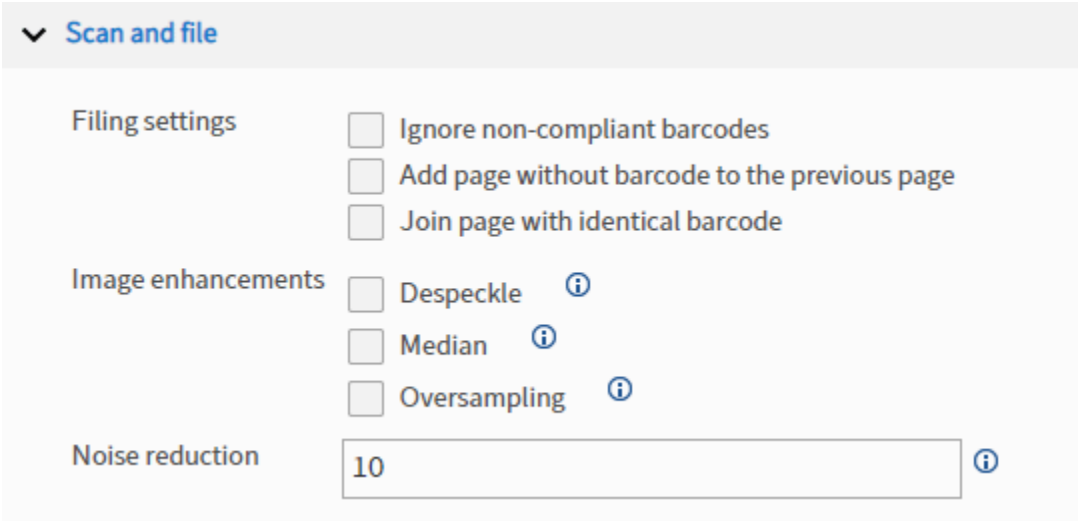


Image enhancements

There are several options available to improve the quality of the scanned barcode.

Despeckle: Removes scan noise.

Median: Removes image noise in high-resolution scans.

Oversampling: Improves the image quality in low-resolution scans.

Noise reduction

Noise reduction removes characters that are probably not part of the barcode. If the value is too large, parts of the barcode may be removed. A typical value is 10.

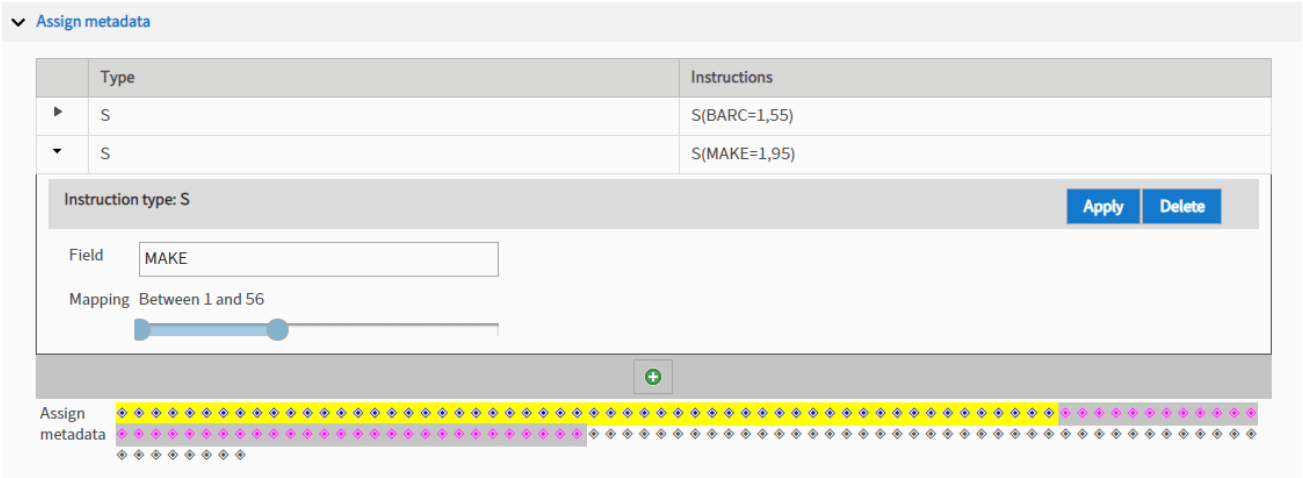
Assign metadata

Information

The recognized barcode can be distributed over multiple metadata fields. Assign fields here.

> **Information**
>
> Assign fields using an S instruction. The group name of the field is used for assignment. For more detailed information on S instructions, refer to the Barcode info input field section.

Step by step



1. On the left, select the arrow to expand the assignment options.
2. Select a field you created under *Fields*.
3. In the *Assignment* area, define what section of the barcode is applied to which field.

   The selected section is assigned to the selected field during filing.
4. Select *Apply*.

   The field assignment is shown as an *S instruction*.
5. Finish defining the metadata form by selecting *Save*.

Result

You have defined all barcode parameters. The barcode instructions are now in the *Barcode info* field.

Barcode recognition in the ELO Java Client

In the ELO Java Client, you can start barcode recognition in the *Intray* work area.

Method

1. Switch to the *Intray* work area.
2. Select the document with the barcode information in the Intray. You can also select multiple documents by holding down the CTRL key.

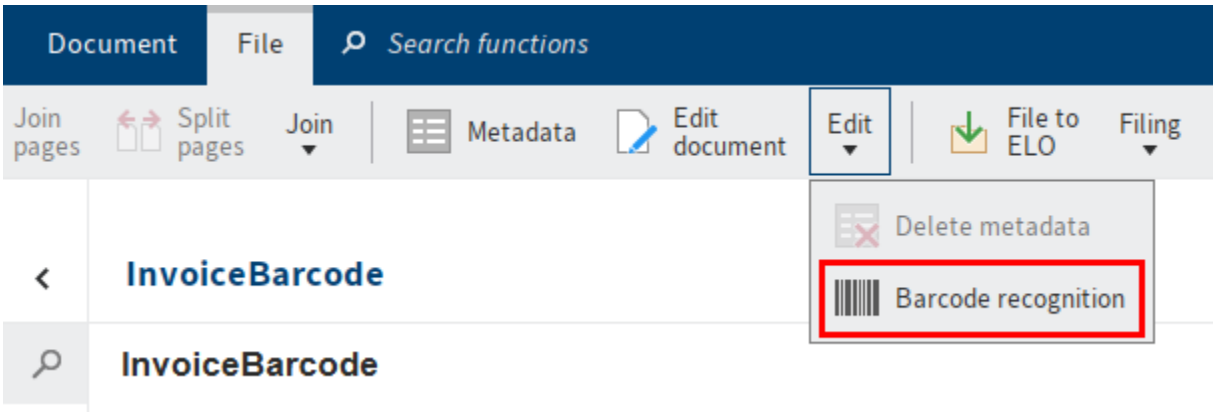


Fig.: Barcode recognition in the ELO Java Client

3. On the ribbon, select *File* > *Edit* > *Barcode recognition*.

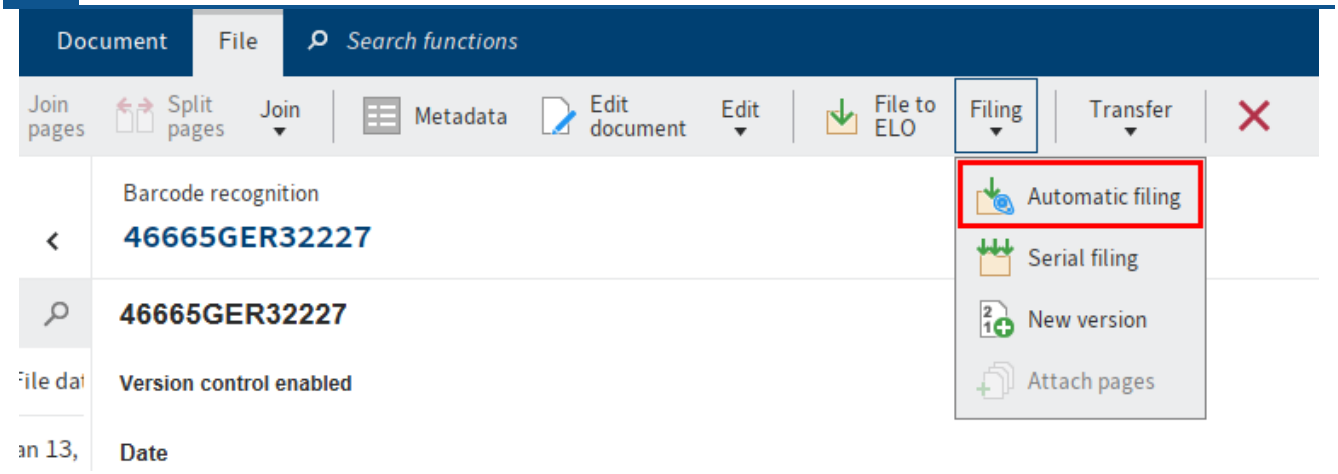
> **Information**
>
> If barcode recognition has been enabled in multiple metadata forms in the ELO Administration Console, a dialog box for selecting the form appears.

Result

The barcode is read and the metadata is created. The barcode information is now located in the assigned fields. To view the metadata, select *File* > *Metadata* on the ribbon.

Outlook

In the second step, you can automatically file the documents if the metadata form has valid index information.



On the ribbon, select *File > Filing > Automatic filing*.

> **Information**
>
> If the metadata form does not have a filing definition, you must select the filing location manually. Use the function *File to ELO* (available in: *Ribbon > File*).

Barcode types

This chapter contains detailed explanations on some of the supported barcode types. We do not guarantee that this information is complete.

EAN 13/EAN 8

EAN is the abbreviation for: European Article Numbering.

Basic structure of an EAN barcode

Two-digit country code + five-digit manufacturer + five-digit product no. + 1 check digit (for EAN13).

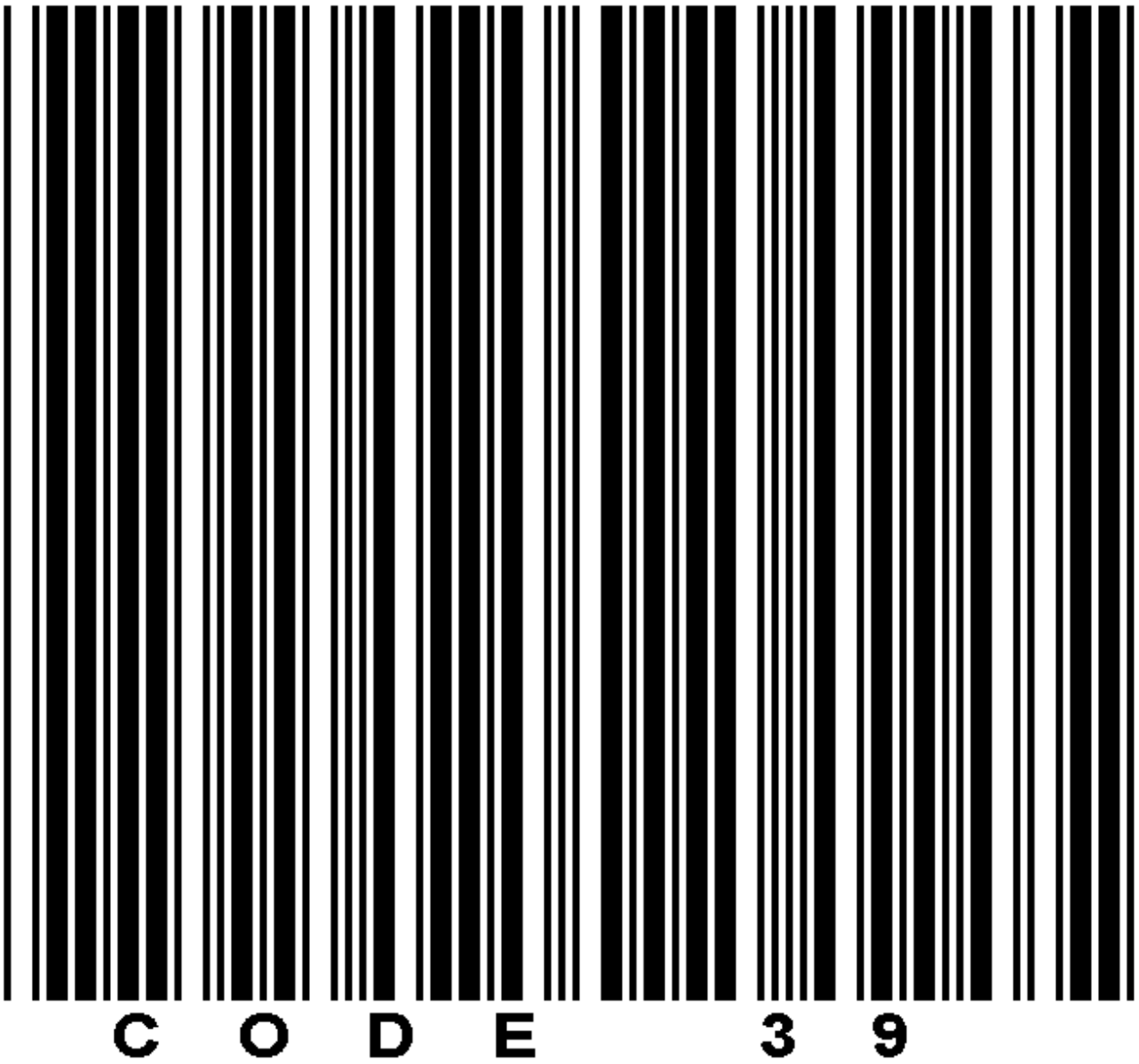
The EAN barcode can only describe the numbers 0-9. Each character has 11 times the module width. This barcode type basically provides ten different, defined sizes. EAN is used, for instance, in supermarkets because their data collection is extremely labor-intensive due to the large number of articles per customer.

The European Article Number is printed on the packaging material of the product encoded as barcode. Normally, an article number consists of 13 digits. However, an additional eight-digit short symbol was created for smaller articles (EAN 8).

The first two digits of an EAN 13 code identify the country of origin (country code). Numbers 40-43 stand for Germany. The next five digits identify the product's manufacturer. The next five digits comprise the individual article number and classify the manufacturer’s product. This number is assigned directly by the manufacturer. The final digit is the check digit and is determined by calculating. EANs are assigned by GS1 Germany GmbH (www.gs1-germany.de).

Code 39

This barcode is an alphanumeric code whose character set comprises the digits 0 to 9, 26 upper-case letters (A-Z), a space character as well as several special characters ($ – + / . % ,). In the following example, a barcode created with Code 39, contains the word "CODE 39:



Every character consists of nine elements (five lines and four gaps). Of these nine elements, three are wide and six are narrow. This feature allows for a self-test of Code 39. There is a gap between the individual characters for separation purposes. The advantage of this code is the large character set. Character combinations allow additional character representations. The drawbacks are the low information density (8 mm) and the low error tolerance.

Interleaved 2 of 5 (Code 25 Interleaved)

This code is a variation of the original Code 25 which also has a character set of only digits 0 to 9. The objective is to save space by representing coded digits in pairs. Code 25 Interleaved has no integrated check digit. Each digit is represented by five symbols (two wide and three narrow ones). The first character consists of lines, the second of gaps, the third of lines, then the fourth of gaps, etc.

Code 25 Interleaved offers, similarly to Code 39, advantages such as self-testing as well as high information density and the therefore resulting low storage requirement. The low tolerance and representation of the usable symbols in pairs could be considered as a drawback. The start and stop characters contain only two symbols, which may lead to incorrect or partial recognition because only an even number of characters can be represented.

If an uneven number of characters is required, you have to place a zero in front of the code (123 becomes 0123) or add a check digit.

UPC A

UPC (Universal Product Code) A is the 12-digit standard version of the UPC code. It is similar to the EAN code and is also referred to as UPC 12. The UPC is a numeric code that can display the digits 0-9. Each symbol contains two bars and two gaps.

The first digit of the UPC A shows the contents of the code:

- 0: Normal, standard UPC code
- 1: Reserved (possibly for later use)
- 2: Products charged by weight. The barcode is created in the store to price a product.
- 3: National Drug Code (NDC) and National Health Related Items Code (HRI)
- 4: UPC code that can be used without formatting restrictions.
- 5: Coupon
- 6: Normal, standard UPC code
- 7: Normal, standard UPC Codex
- 8: Reserved for later use
- 9: Reserved for later use

The second to sixth digits of the UPC identify the manufacturer of the product (UPC ID number). This number is assigned by GS1 US Inc. (www.gs1us.org). Digits seven to eleven of the UPC comprise the individual part number and classify the manufacturer’s product. The last digit (twelve) is the check digit which is determined by calculation.

UPC E

The UPC E is a numeric code that can display the digits 0-9. A UPC E has eight digits. The first digit is the system identifier and is always set to "0". The eight digit is the check digit.

The coded digits are written in plain text below the code.

Table of supported barcode types

The table shows an overview of the barcode types supported by ELO.

Barcode type	Numeric characters (numbers)	Alphabetic characters (letter)	Special characters	Length (+check digit)	Check digit
EAN - 13	0-9	-	-	12+1	Optional
EAN - 8	0-9	-	-	7+1	Optional
UPC A (GTIN 12)	0-9	-	-	11+1	Always
UPC E	0-9	-	-	6+1	Always
Code 39	0-9	-	-	No limit	Optional
Code 128	All ASCII characters	All ASCII characters	All ASCII characters	No limit	Always
Code I 2 of 5	0-9	-	-	No limit (even numbers)	Optional
Codabar	0-9	a, b, c, d (Must be the first or last digit)	-.$:+/	No limit	Optional
Data Matrix	0-9	A-Z, a-z	Yes	No limit	-
QR code	0-9	A-Z, a-z	Yes	No limit	-
PDF417	0-9	A-Z, a-z	Yes	-	Yes
GS1 DataBar	0-9	A-Z, a-z	Yes	-	-

ELO SANE scan

Introduction

This documentation describes how to set up scan functionality with the ELO Java Client in Linux.

The SANE interface enables you to scan documents in the ELO Java Client when using Linux. See the SANE project page for additional information on SANE.

> **Information**
>
> macOS
>
> The SANE interface is no longer supported in macOS. You can use JSON scan instead. To scan with JSON scan, change the scan method in the configuration. You do not need to install anything else.You will find more information on how to configure the scan method in the ELO Java Client user documentation under User menu [your name] > Configuration > Technical presets > General.

Installation and configuration

Installation of SANE backends

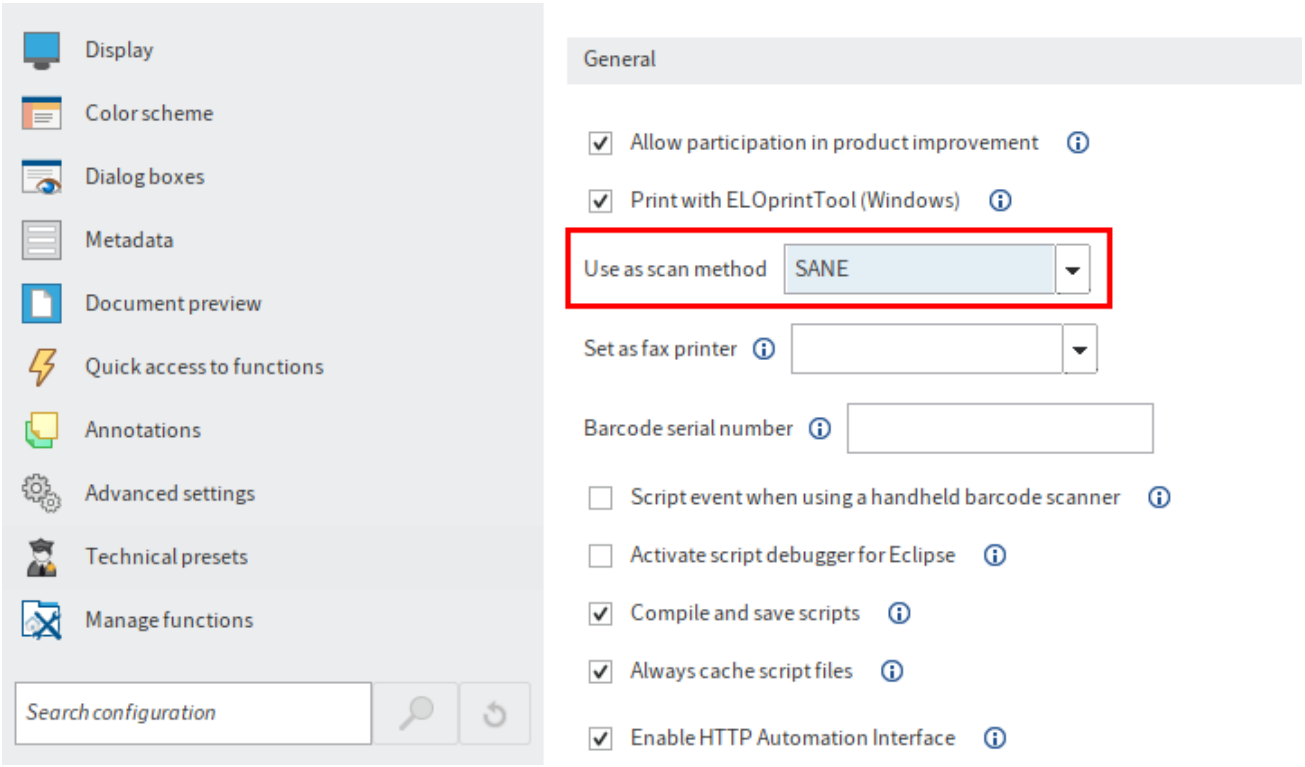
The basic requirement to scan in macOS and Linux is the installation of the *SANE backends* package. The installation can be verified by entering `scanimage –L` in the command line. You should then see a list of the available scanners.

Linux

In Linux, *SANE backends* can be installed using the appropriate package manager. Consult the documentation for your Linux distribution for more information on this point.

Configuration in the ELO Java Client

In the configuration dialog box, *SANE* must be selected as the scan method in the *Technical presets > General* area.



Notes

- Some options in the scan profiles may not work with certain scanner models.
- Scanning after preview is not available with SANE.
- Only the connected scanners are shown under *Select scanner* instead of all installed scanners.

ELO Macros (HTTP)

Installation

This documentation describes how to install and set up the ELO Macros using the ELO Java Client HTTP Automation Interface.

The ELO Macros integrate several functions of the ELO Java Client into external programs. The following external programs are supported:

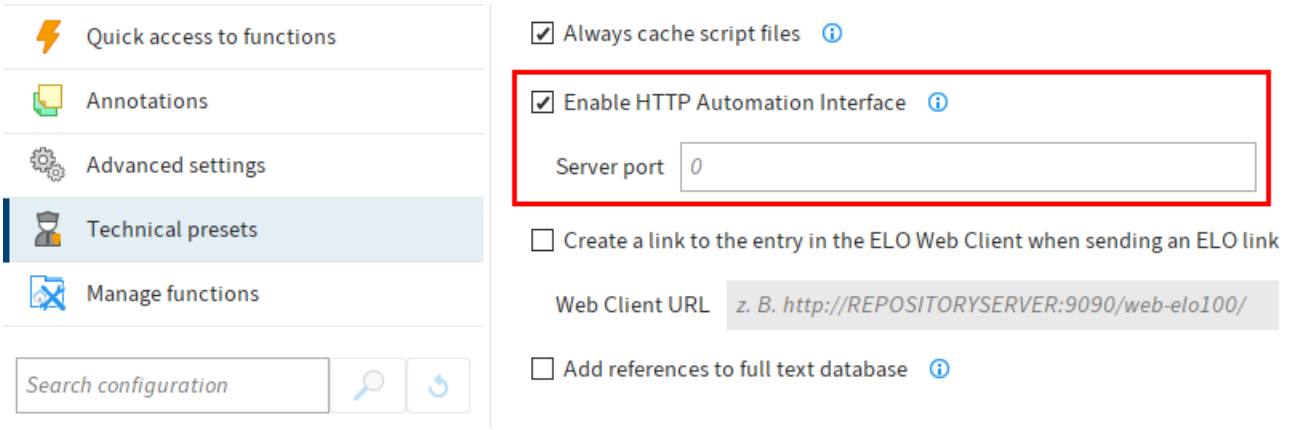
- Microsoft Windows Explorer
- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Outlook
- Microsoft Internet Explorer
- Mozilla Firefox
- Google Chrome

Installation can only be performed by users with administrator rights.

Enable HTTP Automation Interface

To use the ELO Macros, the HTTP Automation Interface must be enabled.

> **Please note**
>
> The following settings must be made for all users using the ELO Macros.



You will find the setting in the ELO Java Client configuration under *Technical presets* > *General*.

You also have to assign a free server port that the HTTP Automation Interface can use to communicate the with the ELO Macros.

The server port *0* is set by default. As a result, ELO automatically identifies and assigns a free port.

Set up the ELO Macros

To install the ELO Macros, start the setup installer on the ELO master.

You will find the setup under the menu item *ELO Macros* in *ELO Macros for the ELO Java Client*.

> **Please note**
>
> To install the ELO Macros in a terminal server environment, you must use the *setup.exe file*.

Installation in Microsoft Windows

To install the ELO Macros in Microsoft Windows, select *ELO Macros Java Client* and follow the instructions in the wizard.

Installation in macOS

Download the setup zip file from the ELO SupportWeb. Install the macros with the file *Install ELO Macros for Mac.pkg*. You can uninstall the macros with *Uninstall ELO Macros for Mac.app*.

> **Information**
>
> For technical reasons, you have to click the *Install for me only* menu item under *Select a Destination*, even though it already appears to be selected.

Install script

The ELO Macros also require the script file *OfficeMacro.eloinst* as an additional component. This file has to be installed in the ELO repository.

You will find the *OfficeMacro.eloinst* script file in the ELO Macros installation directory.

You will find the macros script under *Communication between Office applications and ELO* on the ELO add-on modules – installation overview page.

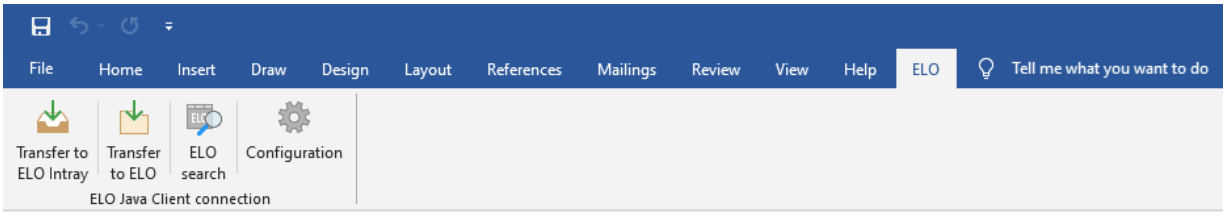
To install the file, log on to the ELO Java Client as administrator and drag and drop the file to the ELO Java Client.

Configuration

After installing the ELO Macros, you have to configure them.

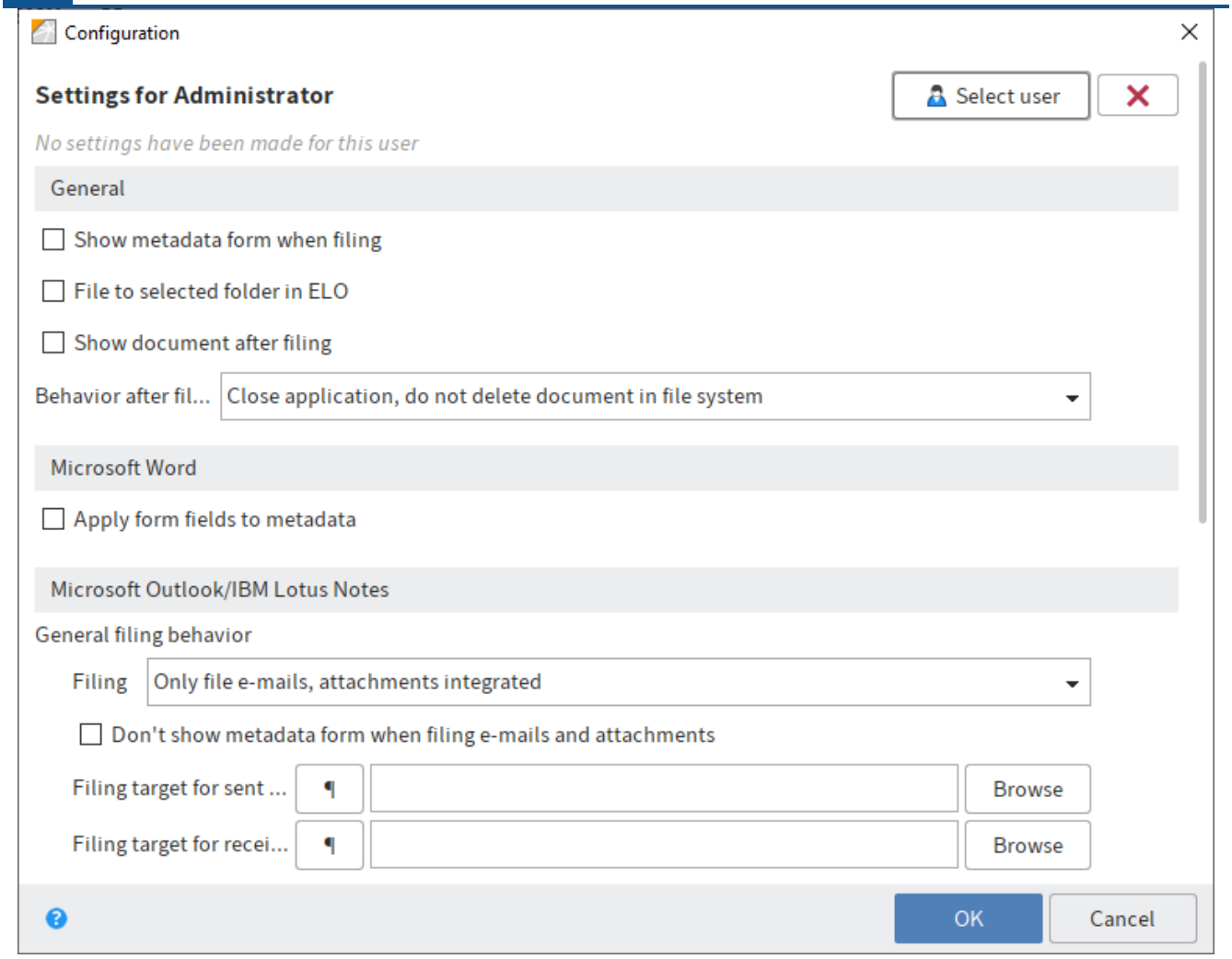
> **Please note**
>
> The ELO Java Client must be running to configure the ELO Macros.

1. Start one of the programs you installed the ELO Macros for.



2. Select *ELO > Configuration*.

> **Please note**
>
> At least one document must be open.



The *Configuration* dialog box opens in the ELO Java Client.

You can make settings for yourself or for another user or option group via *Select user*.

> **Information**
>
> It is not possible to select multiple users or option groups.

For a more detailed explanation of the settings, refer to the dialog box help feature.

> **Please note**
>
> Depending on the operating system, not all functions may be available.

Functions

The following sections describe where you can find the ELO Macros functions and provides an overview.

> **Information**
>
> Depending on the external program and configuration, some functions may not be available.

Call functions

The location of the functions varies depending on the operating system.

Microsoft Windows

In Microsoft Windows, you will find the functions on the extra *ELO* tab in Microsoft Office programs.

macOS

In macOS, you will find the functions on the menu bar at the top edge of the screen. After the ELO Macros are installed, a scroll icon appears in the menu bar. The scroll icon opens a drop-down menu containing the ELO Macros functions.

IBM Notes

In IBM Notes, you will find the functions in the *File to ELO* area.

Overview of functions

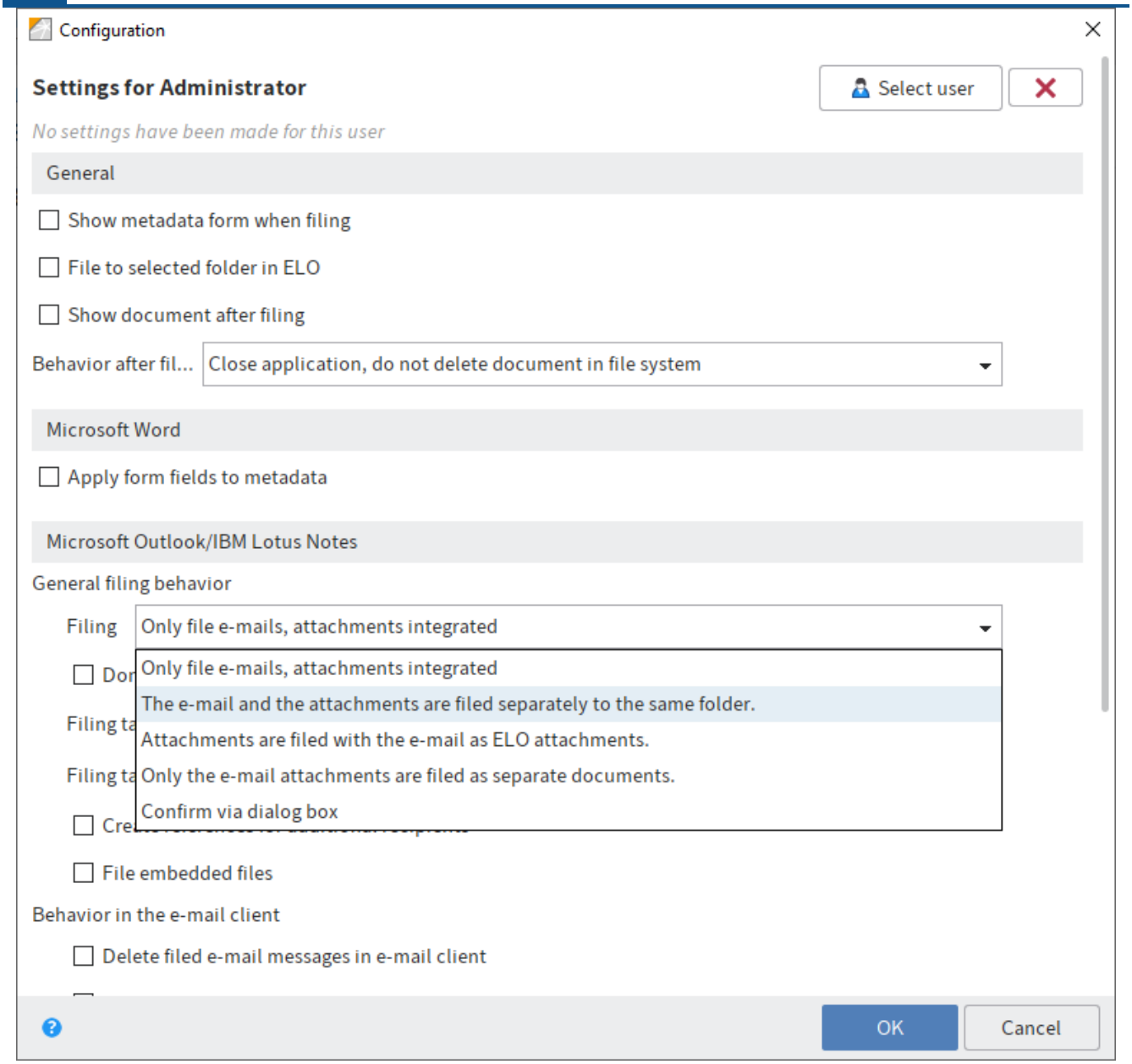
The ELO Macros provide the following functions.

> **Information**
>
> Depending on the operating system, the names and icons for the functions may differ.

ELO Transfer

The *ELO Transfer* function files documents to ELO. You can set the filing location for the document in the *File new document* dialog box. Select *New folder* to create a new folder for the document. Depending on the configuration, you must enter metadata for the document.

E-mails that contain attachments with special characters in the name can be filed as separate documents.



Automatically file to ELO

The *Automatically file to ELO* function is intended for e-mails. This function allows you to automatically file documents to ELO. To file e-mails automatically, you have to set the *Filing target for sent e-mails* and *Filing target for received e-mails* paths in the ELO Macros configuration.

Transfer to ELO Intray

The *Transfer to ELO Intray* button files documents to the ELO Intray. In the ELO Intray, you can edit the metadata and file the documents to the ELO repository.

ELO search

The *ELO search* function opens the *Search* work area in the ELO Java Client. The ELO Macros automatically transfer available metadata to the ELO search field. Selecting *Start search* begins the search.

Configuration

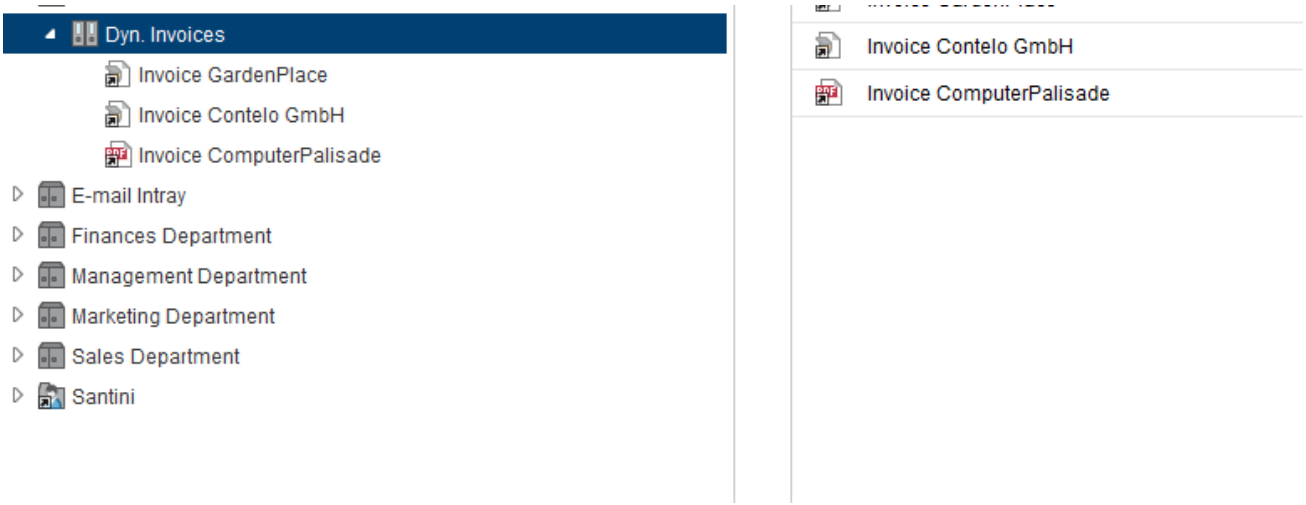
The *Configuration* function is where you configure the ELO Macros (see also chapter Configuration).

Dynamic folders

What are dynamic folders?

Dynamic folders are folders in ELO whose contents are generated dynamically. In principle, these show the results of a search. This search is performed using a specific SQL query. You can use different search criteria (e.g. specific metadata). Every time something changes in ELO that is relevant to the query, the contents of the dynamic folder change as well.

> **Please note**
>
> If you want to create dynamic folders, always test them first in a small test repository. An incorrectly worded command can generate hits in the range of (total number of documents) * (total number of fields for all documents). A test repository may result in several thousand hits, while the hits in a productive repository could quickly reach into the millions.



> **Please note**
>
> If you want to use a dynamic folder in a live repository, you should give some thought to performance. If the folder will be accessed on a regular basis, you need to make sure that access does not trigger any full table scans. To ensure this, you should analyze the SQL statement (e.g. in SQL Server Management Studio).

Dynamic folders in the ELO Java Client

The ELO Java Client provides the option to save a search query as a dynamic folder.

You will find this function under *Search > Result > Dynamic folder*. This documentation does not go into detail on the function. You will find more information in the ELO Java Client documentation.

Dynamic folders in the ELO Web Client

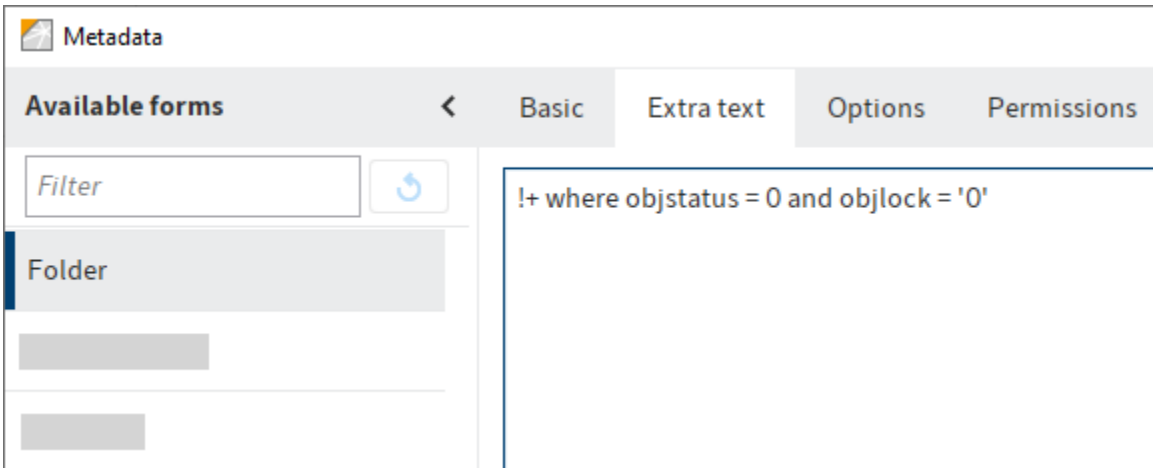
The ELO Web Client also provides the option to save a search request as a dynamic folder.

You will find this function under *Search > Result > Dynamic folder*. This documentation does not go into detail on the function. You will find more information in the ELO Web Client documentation.

> **Please note**
>
> Queries may vary depending on the database system. So you may have to make adjustments to the change examples shown here.

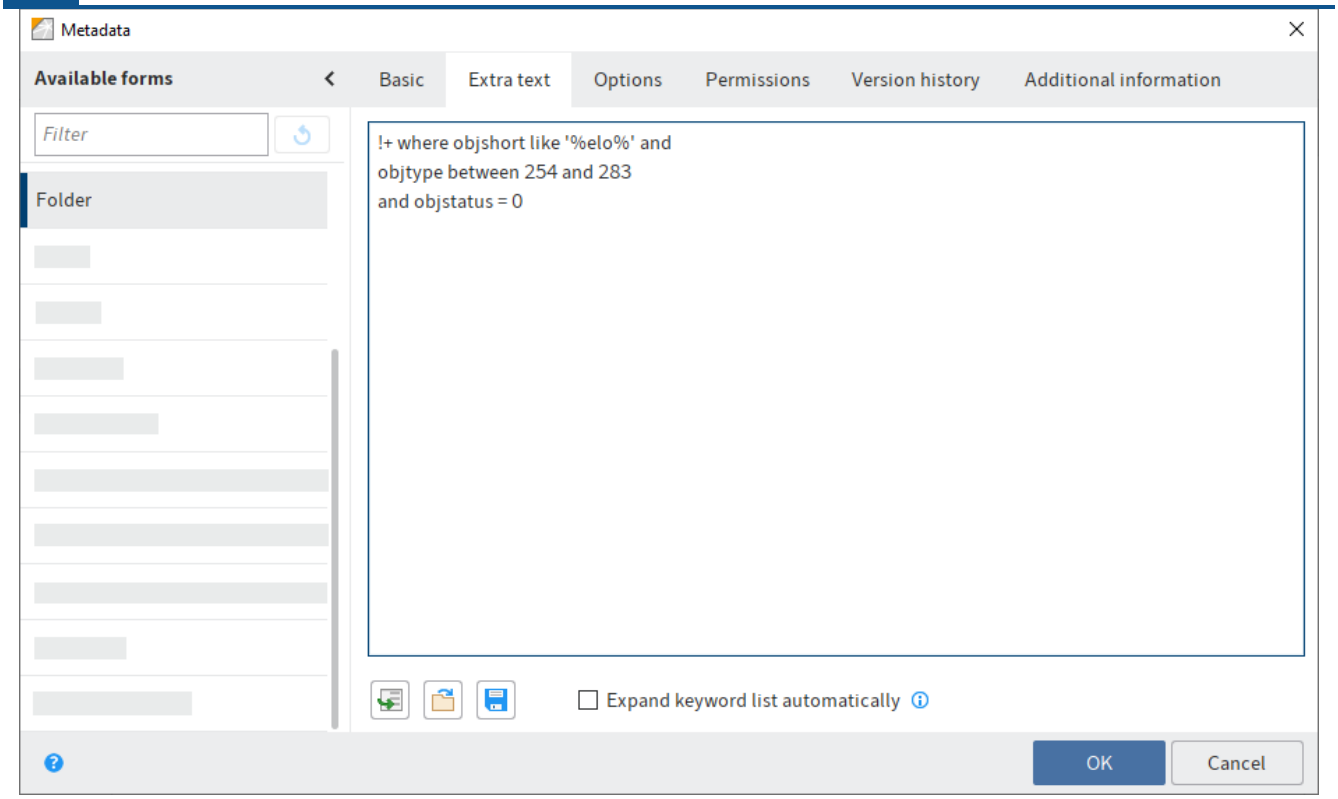
Create dynamic folders

A dynamic folder is created by making a specific entry to a folder's extra text tab. This text must be placed at the very beginning of the field and no other text can be entered there. To prevent the folder definition from being changed by mistake, only administrators should have write access to the folder. Other users can be given read access to it. This restriction also helps you avoid child entries being manually stored in the folder, since they would not be displayed.



!+[command]

The *!+* command is replaced at runtime with the SQL statement `SELECT * FROM` for the database table *dbo.objects*. You can define the WHERE part of the query following the *!+* command.



Make sure you restrict your WHERE clause to the desired object types (assuming that they are not defined by the other search restrictions anyway). You should also exclude deleted entries, which are all entries with an *objstatus* not equal to *0*.

Query multiple tables

You can add other tables besides the objects table to the query. To do so, enter the other tables following a comma.

Example 1

In this example, the query is restricted to the *EMail* metadata form (here: `objmask = 2`). The query also only searches for documents that have a specific name (here: *Sorglos*) in the *From* field (group name: `EL00UTL1`).

```
!+ , objkeys WHERE objid = parentid
AND objmask = 2
AND (okeyname LIKE 'EL00UTL1' AND okeydata LIKE '%sorglos')
```

Example 2

The following example runs a query that sorts the entries by two different fields. This means the *objkeys* table must be read twice.

```
!+ , objkeys ok1, objkeys ok2 WHERE
objid=ok1.parentid AND objid=ok2.parentid AND
ok1.okeyno=0 AND ok2.okeyno=1 AND
objtype=254 AND objmask=5 AND
ok1.okeydata LIKE 'p1%'
ORDER BY ok2.okeydata, ok1.okeydata
```

An explanation of the individual lines of code:

The table *objkeys* is entered twice under the names *ok1* and *ok2*. Remember to insert the leading comma, otherwise you will get a syntax error at the SQL level and the target folder will remain empty.

The *objects* base database table is linked to the two tables with the unique key *objid*.

We want to read two specific fields, rather than any two fields (the internal field numbers *0* and *1* correspond to the first and second fields in the form).

You only want to find documents with form type *5* that contain the value *p1* in the first field.

The documents are then sorted by the second field. All identical entries are sorted by the first field.

> **Please note**
>
> The example searches for the contents of any field that start with *p1*, i. e. that a result is also generated if *p1* occurs in a hidden field. However, the user will not see the corresponding field. In a production system, you should give the field a specific name.

> **Please note**
>
> The `objid=parentid` part of the query is required in any case. This connects the basic data table with the fields table. If you leave it out, you will get a long list of hits with entries that are wrong.

!?[command]

A registered function must follow the *!?* command. The registered function must return a collection of IDs or GUIDs that correspond to a repository entry. You can learn what a registered function is and how to create them in the documentation Adding functionality with registered functions.

Example of a dynamic folder:

```
!?RF_getSordIdsForDynamicWhere
```

A script file could look like this:

```
function RF_getSordIdsForDynamicWhere(ec, args)
{
        log.info("RF_getSordIdsForDynamicWhere(");

        var sord = args[0];
        log.info("sord=" + sord);
        var folderId = parseInt(args[1]);
        log.info("folderId=" + folderId);

        var db = new Packages.de.elo.ix.jscript.DBConnection();
        var ret = db.query("select objectid from relation where parentid=? order by objectid des

        log.info(")RF_getSordIdsForDynamicWhere" + ret);
        return ret;
}
```

!=[command]

You can pass a saved search to the *!=* command. However, the folder should be created automatically instead of manually. In the ELO Java Client, you can create a dynamic folder following a search via *Ribbon > Search > Result > Dynamic folder*.

To create a dynamic folder in your own ELOix application, you need to perform a search first. You will find the corresponding text in the field *FindResult.dynamicFolder*, which is provided through the ELOix interface.

Example:

```
FindResult fr = ixConnection.ix().findFirstSords(…);
ixConnection.ix().findClose(fr.getSearchId());

Sord sord = ixConnection.ix().checkoutSord(…);
sord.setDesc(fr.getDynamicFolder());
ixConnection.ix().checkinSord(sord, …);
```

Obsolete commands

The commands *!!* and *!** are obsolete and are no longer supported in current ELO versions.

Additional notes

Performance

A search is initiated every time a dynamic folder is opened. With small databases (<50,000 entries), you do not need to give any consideration to performance, as the SQL server optimizes all problems away here.

As soon as the database becomes larger, though, a badly formed search query will instantly generate a massive load on the database. This will result in lowered performance for all clients. You need to take the following into account:

Is an appropriate index available for the selection criterion? If not, can one be created? If the answer to both of these questions is no, you should probably avoid using dynamic folders. A full table scan can take over a half an hour on a large database.

Does the SQL server use an index at all? Sometimes, the optimizer has a very different idea of how to process the query than the administrator. If the SQL server selects an unfavorable index, it may lead to long response times.

Does the list of search results stay within reasonable limits? If you create a statement that collects all documents filed within a month, this might work on a test system. However, if you want to view 50,000 documents in a single folder on a production system, this will lead to poor results.

Available columns

The following columns are available in the base data:

Column name	Contents
objtype	Entry type, top-level folder=1, 2nd level=2… folders=253, document=254
objshort	Short name
objidate	Filing date in numeric format (number of minutes since Dec. 31, 1899)
objxdate	Document date in numeric format
objkind	Color
objmask	Document type
objuser	Document creator
objstatus	0: not deleted, all other values indicate deleted entries
objdeldate	Expiration date in numeric format

The *objkeys* table contains the following entries:

Column name	Contents
parentid	Internal unique ELO entry number, connected to *objid* in the *objects* base table.

Column name	Contents
okeyno	Number of the field, starting with 0. There are a number of hidden fields starting with index field 50.
okeyname	Group name of the field. If you want to search independent of document type, use the group name instead of the field number for selection.
okeydata	Content of the field
okeyudata	Content of the field in uppercase (Oracle databases only)

Specific to Oracle SQL

There are a number of aspects specific to Oracle SQL databases that you will need to take into account. Otherwise, you will get incomplete search results or syntax errors.

Oracle SQL distinguishes between upper and lowercase letters. If you search for "ELO" and the database contains "Elo", Oracle will not find the entry. The *okeyudata* field enables you to search in metadata fields.

The repository name must be placed before the table names. Both parts are separated with a period.

Example

In Oracle SQL databases, you need to enter `okeydata ok1` as `repository1.okeydata ok1` in the query.

Usage examples

> **Please note**
>
> Queries may vary depending on the database system. So you may have to make adjustments to the following examples.

Show documents added to the repository in the last 30 days

Enter the following SQL query to the extra text field of the folder that you want to configure as a dynamic folder.

```
!+ WHERE objtype>=254 AND objstatus=0 AND DATEADD(mi, objidate, '18991230') >= DATEADD(day, -30,
```

The individual components of the query:

- objtype>=254: Restricts the query to documents
- objstatus=0: Restricts the query to documents that are not deleted
- DATEADD(mi, objidate, '18991230'): Searches for the filing date (objidate) in minutes (mi) since the reference date (December 30, 1899).

> **Information**
>
> The ISO date was selected here to avoid possible conversion problems. In English-language installations, MM/DD/YYYY usually works as well.

- >=: The operators restrict the search to documents with a filing date later than or equal to the current date minus 30 days.
- DATEADD(day, -30, SYSUTCDATETIME()): Here the system date is read out in UTC format (SYSUTCDATETIME()) in days (day). 30 days are then subtracted from that.

> **Information**
>
> The *SYSUTCDATETIME* function was not available until SQL Server 2005. If you are using an earlier version of the software, use the function *GETDATE()*.

Other usage examples

Task	Entry to Extra text tab
All documents that use the *Basic Entry* metadata form. The list of results is sorted in descending order (DESC) by the document date (objxdate).	`!+ WHERE objmask=0 AND objtype>=254 AND objstatus=0 ORDER BY objxdate DESC`

Task	Entry to Extra text tab
All folders with the *Basic Entry* metadata form, sorted descending by document date	`!+ WHERE objmask=0 AND objtype<254 AND objstatus=0 ORDER BY objxdate DESC`
All objects with a specific color (objkind)	`!+ WHERE objkind = 12 ORDER BY objxdate DESC`
Documents with a specific document path with a filing date within a specific time frame A-B (in minutes since December 30, 1899).	`!+ WHERE objpath =3 AND objidate BETWEEN 60587305 AND 60587308`
All objects with "invoice" in the short name	`!+ WHERE objshort LIKE '%invoice%'`
All documents with "ELO" and "xc" in the short name (sorted descending by filing date)	`!+ WHERE objtype>=254 AND objshort LIKE '%ELO%' AND objshort LIKE '%xc%' AND objstatus=0 ORDER BY objidate DESC`
Warning: All objects with access by "Everyone" – this dynamic folder should ideally always be empty.	`!+ WHERE objacl='75PYJA' AND objstatus=0`
Show all checked out/locked folders and documents (sorted by editor)	`!+ WHERE (objlock <> - 1) ORDER BY objuser`
Search the entire contents of the chaos folder in ELO, e. g. you can add the contents of the chaos folder to a search view and transfer the documents to the repository.	`!+ WHERE objparent = 0`

elodms links

Introduction

elodms links are URLs that take you straight to a destination in the ELO Java Client. This documentation describes the various formats available for these links and how to use them.

elodms links are available in the ELO Java Client starting with version 9.01. They can be used as standard URLs in scripts and websites, or as part of custom ECD files (ELO links). When the ELO Java Client is installed, links starting with `elodms://` are automatically associated with *EloActivateJC.exe*.

> **Information**
>
> elodms links do not work in Linux or macOS versions of the program.

elodms links can be used to open the following destinations:

- GUID of an entry in ELO
- Page of a document with a specific annotation in ELO
- Specific page of a document in ELO
- Specific workflow and/or workflow node in ELO
- ELO Java Client import package. For more information, refer to the ELO automatic script installation documentation.

The elodms links described in the following sections are constructed as URLs that are opened from an HTML document. If you wish to use an elodms link in an ELO file, first create a text file in UTF-8 format with the following contents:

```
EP
WTOPU
U<elodms link>
```

Save the file with the extension **.ECD*.

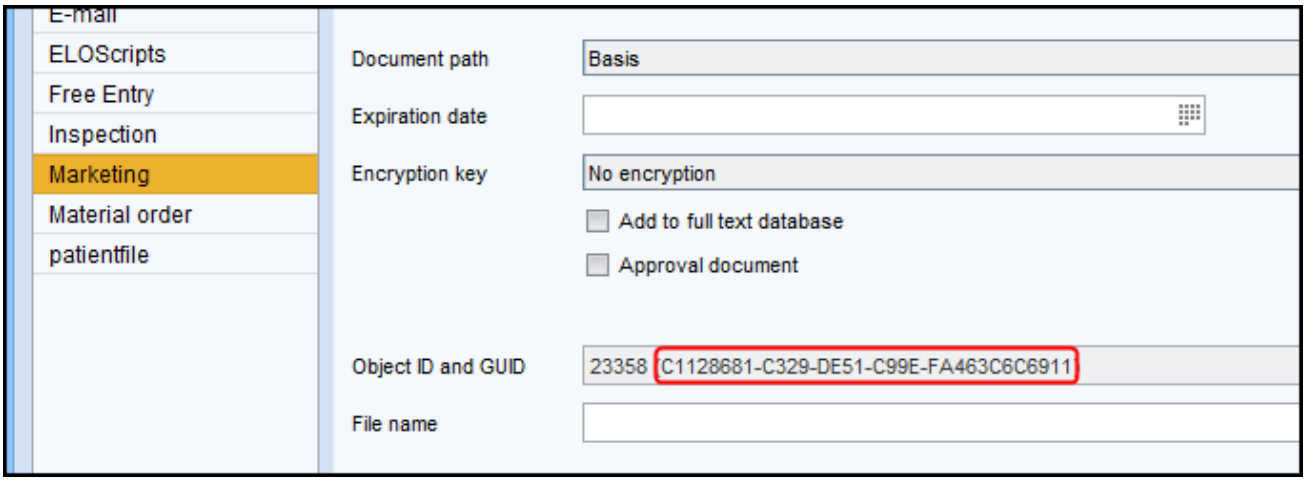
Use

elodms GUID links

This section describes how to create elodms links to jump to an entry in the current repository. The basic syntax is as follows:

```
elodms://<ELO GUID>
```

You can find an entry's GUID on the *Options* tab of the metadata form.



Enter the GUID enclosed in parentheses, such as:

```
elodms://(C1128681-C328-DE51-C99E-FA463C6C6911)
```

An entry's GUID can be called in the internal scripting with the following:

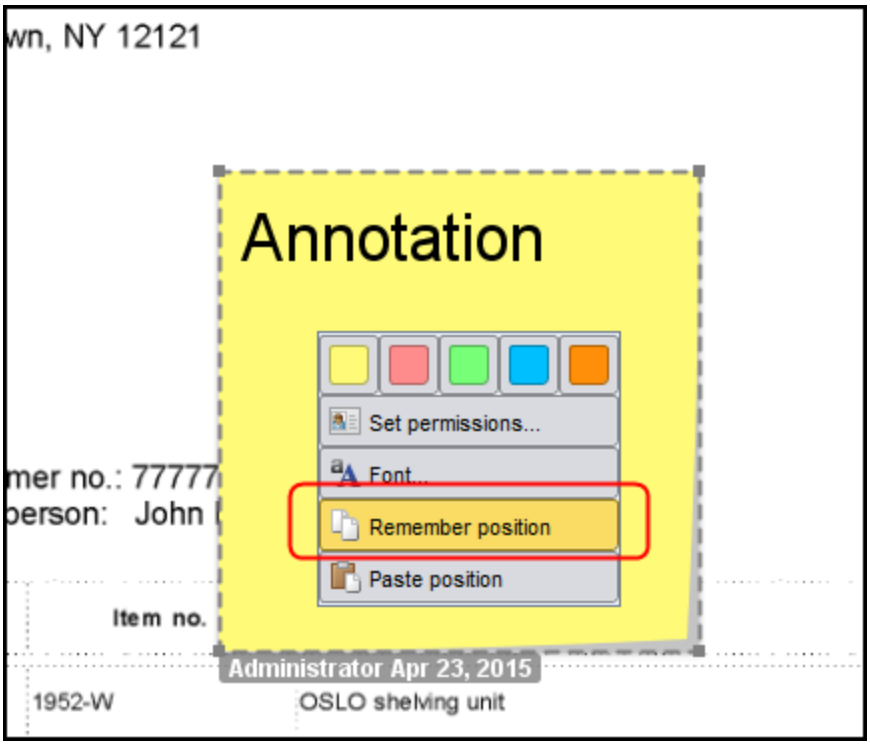
```
var item = … // arbitrary code to select an ArchiveElement

var sord = item.sord;

var guid = sord.guid;

…
```

elodms links with annotation number

An elodms GUID link can be constructed with an instruction to jump to the page number of a specific annotation. The basic syntax is as follows:

```
elodms://<ELO GUID>@A<annotation ID>
```

The easiest way to get this information is to right-click an annotation and select *Remember position* from the context menu. This copies the name of the document and the annotation's position to the system clipboard. Delete the part of the string before `elodms://` to get the required link.



elodms links with page number

elodms GUID links can also be instructed to jump to a document page. The basic syntax is as follows:

```
elodms://<ELO GUID>@P<Page number>
```

In this case, the numbering starts at `1`. If an invalid page number is specified, the link automatically goes to the first page of the document.

elodms object ID links

The ELO object ID can also be used instead of the GUID:

```
elodms://<ELO object ID>
```

If the object ID is used, it is not possible to set anchors for annotations and page numbers.

elodms workflow links

elodms links with `wf` at the start jump automatically to a specific workflow in the client. The basic syntax is as follows:

```
elodms://wf/<workflow ID (int)>/<node ID (int)>
```

If the node ID is `0` or missing, the link attempts to go to the first available (unprocessed) node in the workflow.

The ELO Java Client does not display the workflow ID or node ID using built-in functions. These values can be retrieved using either the ELO Java Client script *GotoId* or by using the following the following (sample) code:

```
var item = … // random code to select a TaskElement
var workflow = item.task.wfNode;
var workflowId = workflow.flowId;
var workflowNodeId = workflow.nodeId;
...
```

Script installer URLs

Script installer URLs are used to install/import scripts as used on *install.myelo.net*. The basic syntax is as follows:

`elodms://im/<URL>`

The URL is encoded in Base64.

You require administrator rights for the call. The call triggers a query in the client.

OpenOffice preview

Introduction

You need to integrate a number of OpenOffice/LibreOffice libraries for the OpenOffice preview to function in the ELO Java Client.

The following chapters explains the procedure in Microsoft Windows and Linux.

> **Information**
>
> The OpenOffice preview requires an Apache OpenOffice or LibreOffice version compatible with the Java version used in the ELO Java Client.
>
> Integration in Apple macOS is not currently supported by OpenOffice/LibreOffice.

Microsoft Windows

The following steps are required with Microsoft Windows:

Set environment variables

For OpenOffice

```
UNO_PATH=C:\Program Files (x86)\OpenOffice 4\program
```

For LibreOffice

```
UNO_PATH=C:\Program Files (x86)\LibreOffice 4\program
```

Modify the 'EloClient.bat' file (only up to ELO Java Client 9.02.xxx)

> **Please note**
>
> The following changes may no longer be made when using ELO Java Client version 9.03.000 and higher.
>
> Up to ELO Java Client 9.02.xxx, the OpenOffice preview can only be used in Microsoft Windows if the ELO Java Client is started using *EloClient.bat*.

For OpenOffice

```
cd /D %~dp0
java -Xms200m -Xmx1000m -classpath EloClient.jar;lib/*;"C:\Program Files (x86)\OpenOffice
4\program\classes\officebean.jar";"C:\Program Files (x86)\OpenOffice
4\program\classes\unoil.jar";"C:\Program Files (x86)\OpenOffice
4\program\classes\juh.jar";"C:\Program Files (x86)\OpenOffice 4\program\classes\ridl.jar"
de.elo.client.main.Start %*
```

For LibreOffice

```
cd /D %~dp0
java -Xms200m -Xmx1000m -classpath EloClient.jar;lib/*;"C:\Program Files
(x86)\LibreOffice 4\program\classes\officebean.jar";"C:\Program Files (x86)\LibreOffice
4\program\classes\unoil.jar";"C:\Program Files (x86)\LibreOffice 4\URE\java\juh.jar";" C:
\Program Files (x86)\LibreOffice 4\URE\java\ridl.jar" de.elo.client.main.Start %*
```

Linux (OpenSuse)

The following steps are required for Linux (OpenSuse):

Set environment variables

For OpenOffice

```
UNO_PATH=/opt/openoffice4/program
```

For LibreOffice

```
UNO_PATH=/usr/lib64/libreoffice/program
```

Modify the 'EloClient.sh' file (only up to ELO Java Client 9.02.xxx)

> **Please note**
>
> The following changes may no longer be made when using ELO Java Client version 9.03.000 and higher.

For OpenOffice

```
java -Xms200m -Xmx1000m -classpath
/opt/openoffice4/program/classes/officebean.jar:/opt/openoffice4/program/classes/
unoil.jar:/opt/openoffice4/program/classes/juh.jar:/opt/openoffice4/program/classes/
ridl.jar:EloClient.jar:lib/* -Dlog4j.properties de.elo.client.main.Start
```

For LibreOffice

```
java -Xms200m -Xmx1000m -classpath
/usr/lib64/libreoffice/program/classes/officebean.jar:/usr/lib64/libreoffice/program/
classes/unoil.jar:/usr/lib64/libreoffice/URE/java/juh.jar:/usr/lib64/libreoffice/URE/
java/ridl.jar:EloClient.jar:lib/* -Dlog4j.properties de.elo.client.main.Start
```

Platforms

Basics

This documentation provides an overview of the operating systems and other platforms supported by the ELO Java Client. The functional limitations and differences between the platforms are also mentioned, as are the ELO add-on modules required for some functions.

Installation and rights

Microsoft Windows

Installing the client via MSI package requires, administrator rights to the computer. In later operation, only normal user rights are required.

System requirements

Required

You will find a list of the system requirements for the ELO Java Client in the ELO system requirements documentation.

Recommended

- 2 GB of RAM
- Dual core processor

OpenJDK uses its own memory management system. The ELO Java Client is configured to allow it to use up to 1 GB of RAM. This is a fixed upper limit which can be reached temporarily when working with large image files. During normal operation, usually only 200-300 MB of RAM will be in use.

Platforms and modules

The following tables provide an overview of the functions that are still limited on supported platforms. Another column specifies whether an additional ELO module is required for the function.

The restrictions for the operating system and the module add up.

Client functions

The following table lists only the functions that differ between platforms. All other client functions exist on all platforms without requiring additional modules.

Function	Windows	macOS	Linux	Module
Send	✔	✔	✖	
Send as link	✔	✔	✖	
Send as PDF	✔	✔	✖	ELO PDF Printer
Scan	✔	✔	✖	
Multipage scan	✔	✖	✖	
Select scanner	✔	✔	✖	
Scan profiles	✔	✔	✖	
Create signature	✔	✖	✖	SignLive
Check signature	✔	✖	✖	SignLive
Barcode recognition	✔	✖	✖	
OCR	✔	✖	✖	ELO OCR
Create preview document	✔	✖	✖	ELO TIFF Printer
TIFF conversion	✔	✖	✖	ELO TIFF Printer
PDF conversion	✔	✔	✖	ELO PDF Printer (only in Windows)
Microsoft Office integration	✔	✔	✖	ELO macros Java Client
Internal scripting	✔	✔	✔	
COM interface	✔	✖	✖	
ECD activator	✔	✔	✖	

Document preview

To display documents in the client preview, different classes are available. These can be configured for various file formats. Some of these preview classes are permanently implemented in the client, while others use external programs, such as a browser or an Office application, for embedded display.

Many other file formats can be displayed via the browser preview (or Microsoft Internet Explorer preview) if a corresponding plug-in is installed in the browser.

Preview	Windows	macOS	Linux	Module
PDF, MSG, EML, TXT	✔	✔	✔	
JPEG, GIF, TIFF	✔	✔	✔	
EMF, WMF, MMF	✔	✔	✔	
Browser	✔	✔	✔	
Internet Explorer	✔	✖	✖	Microsoft Internet Explorer
OpenOffice	✔	✖	✔	OpenOffice/LibreOffice
Microsoft Office	✔	✔	✖	Microsoft Office

File formats

Introduction

This documentation gives an overview of the file formats supported by the viewer in the ELO clients. It also explains functional limitations and differences between the ELO clients, as well as requirements and additional software.

The following chapters explains the procedure in the ELO Java Client and ELO Web Client.

ELO Java Client

The ELO Java Client assigns file formats to different previews in order to show these file formats in the viewer.

The ELO Java Client viewer supports the following formats:

- Browser preview:
  - HTML, HTM, MHT
  - Internet Explorer ActiveX Plug-ins (only Windows, e. g. PDF with Adobe Acrobat Reader)
  - MSG/EML with HTML display
- Text preview
  - JS, TXT, LOG, text formats
- EML e-mail preview, MSG e-mail preview
  - MSG/EML without HTML display
- OpenOffice preview (up to ELO 11, if Libre/Open Office is installed)
  - Office formats depending on the installed Office Suite components
- MS Office preview (Windows, with Microsoft Office version 2007 and higher, and with the components matching the formats)
  - DOC, DOCX, DOCM, DOT, DOTX, XLS, XLSM, XLSX, XLT, XLTX, PPT, PPTX, POT, POTX, VSD, VST, VSS, ODT, ODS, ODP, RTF
- Microsoft Office web preview (with ELOimo)
  - Office formats, PDF depending on the installed ELOimo components
- Windows Media Player preview (Windows)
  - Various A/V formats
- Media player preview
  - MP3, MP4, WAV
- PDF preview
  - PDF
- Image preview
  - BMP, PNG, JPG, GIF (with animations), ICO, SVG, TIFF, PSD, MMF, WMF
  - PNM, HDR, PCX, IFF, PICT, SGI, TGA, ICNS, CUR
- Code preview
  - Various text formats
  - Syntax highlighting only for CSS, JS, JSON, Java, INI, ES8, ESW, HTML, HTM, properties, and XML
- ZIP preview
  - ZIP
- DXL preview
  - DXL

Information on configuring the viewer in the ELO Java Client

The image preview also supports less well-known formats; Java ImageIO plug-ins can be installed as necessary.

The browser preview supports additional formats if corresponding plug-ins have been installed in Internet Explorer.

When Open Office has been installed and integrated, the Open Office preview supports the majority of Office formats.

The ActiveX plug-in preview supports the ELO plug-ins also used in the ELO Windows Client – these just have to be configured.

The Apple OS X preview represents an alternative to the Microsoft Internet Explorer-based browser preview; no detailed list of supported formats is available.

Selecting *Show preview document* forces the system to display a preview document instead of the document. The configuration appropriate for the preview document then applies (PDF, TIFF).

ELO Web Client

The ELO Web Client assigns file formats to different previews in order to show these file formats in the viewer.

The ELO Web Client viewer supports the following formats:

- BMP
- EML
- GIF
- ICO (web preview only)
- JPG
- MSG
- PDF
- PNG
- TIFF
- TXT (unformatted text formats)

The individual file formats can be assigned to different previews in the configuration.

Image preview: The graphic formats are shown via the ELO Indexserver.

Web preview: With the web preview, the file to be shown is embedded in an IFRAME element. The display options of the current browser are used.

Microsoft Office documents: Microsoft Office documents can be viewed using Microsoft Web Apps or the ELO Interface for Microsoft Office Online Server (ELOimo), provided that a corresponding Microsoft Office Online Server is available.