ELO XC

Operation

Table of contents

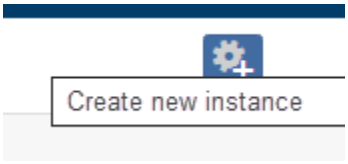
Operation

ELO XC Manager

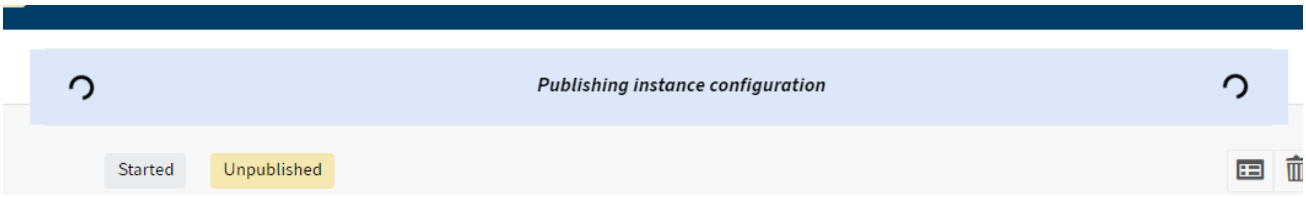
Overview

ELO XC Manager is a browser-based interface that is integrated into ELO XC. To access the interface, the service must be running. It provides functions for managing and configuring the service and contains these areas:

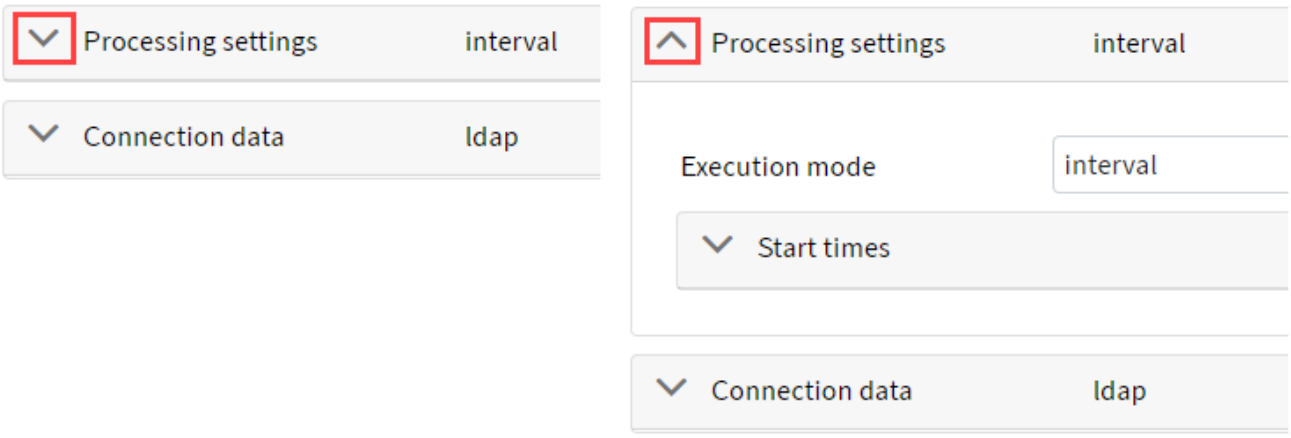
- Logon screen: This screen is where you can log on as an ELO user.
- Menu: The ribbon contains status indicators and additional functions.
- Instance overview: This page contains an overview of all instances that are registered for the selected Indexserver.
- Instance configuration: This page contains the configuration of a single instance.
- Miscellaneous: This includes different tools, additional functions and/or notifications.



The display texts and icons in the manager often have tooltips. If you move the cursor over a text or icon and remain there, the information will appear. Configuration parameters always feature a tooltip.

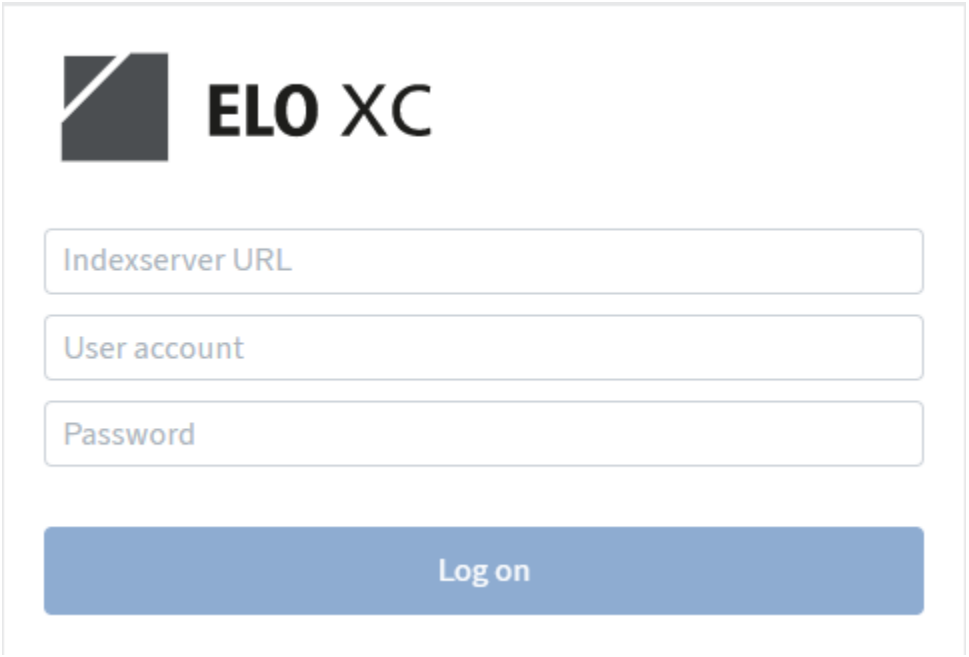


Many ELO XC functions that you can access in the Manager trigger complex actions and can therefore take a few moments. The Manager indicates the execution status of the function.



Many areas of the interface are first displayed in a minimized view during a Manager session. These areas feature vertical arrow icons that enable you to show or hide the options.

Authentication



An Indexserver needs to be available so that you can log on to ELO XC Manager. If instances have already been registered, you can double-click to view a list of the Indexservers already in use. The ELO user account must have main administrator permissions.

Menu

1 Home: Navigation on the instance overview page

2 ELO XC version number

3 Server type (values: PROD, TEST, DEV)

4 Indexserver you are connected to

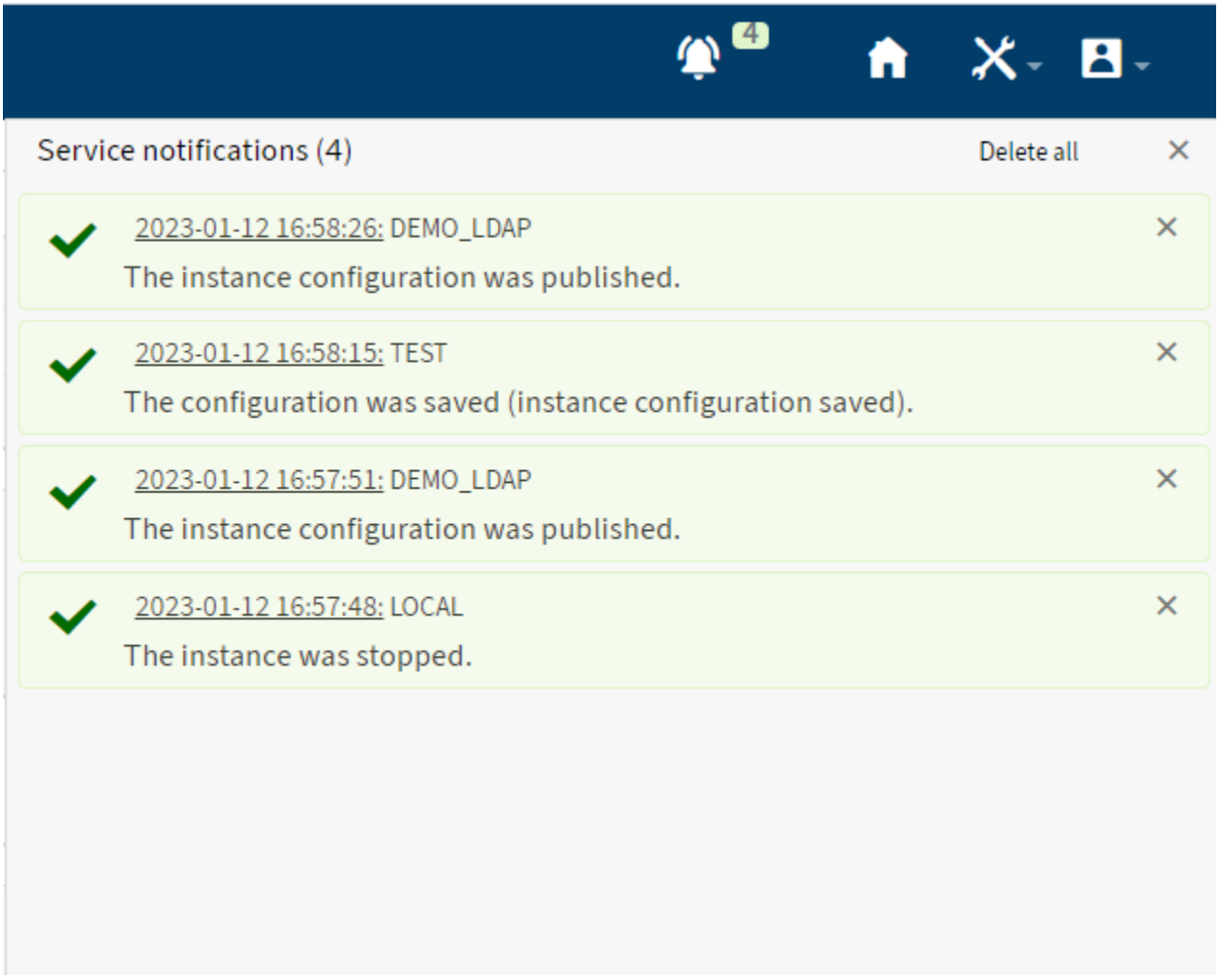
5 Version number of the Indexserver you are connected to

6 Service notification: All service notifications

7 Tools drop-down menu: Access to various functions

8 User drop-down menu: Log out and help options

Service notifications



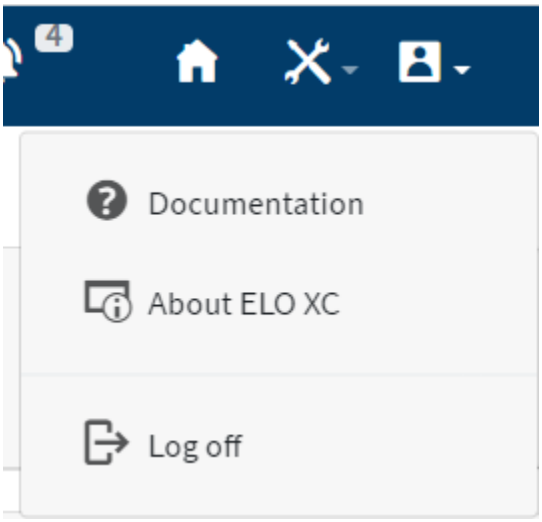
Function calls in the manager are usually acknowledged with status messages that you can view in the list of service notifications. These notifications are only kept for a certain time if they have been displayed at least once.

Green: If there are new success notifications, the counter is green.

Yellow: If there are notifications with at least one new warning, the counter is yellow.

Red: If the list contains at least one error notification, the counter is red. If all notifications have been displayed at least once, the counter will not be shown with a color.

'User' drop-down menu

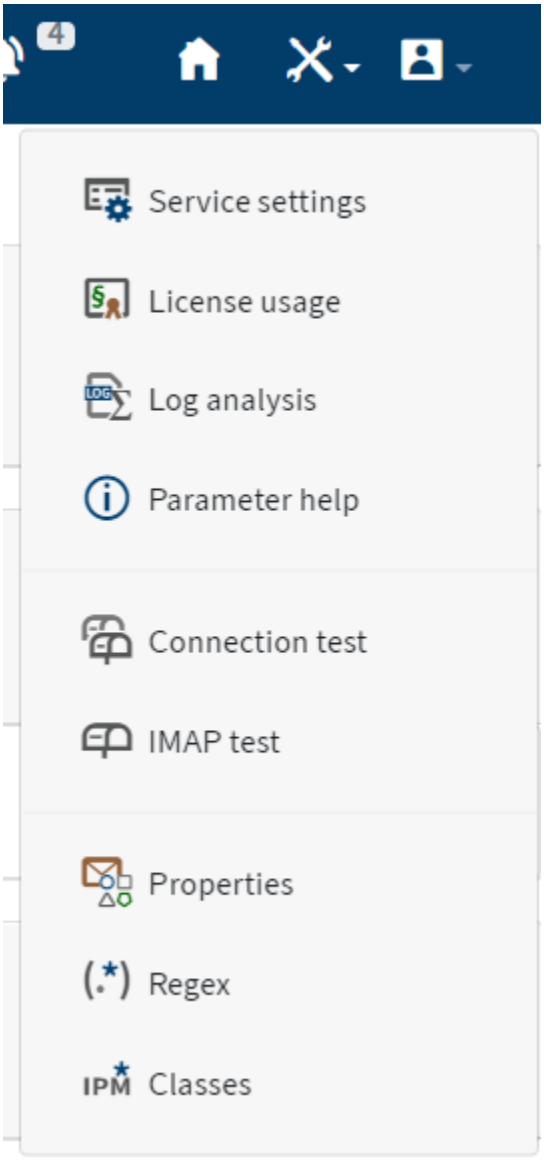


Documentation: Opens this documentation (ELO Docs).

About ELO XC: Displays additional information about the product.

Log off: Ends the current session.

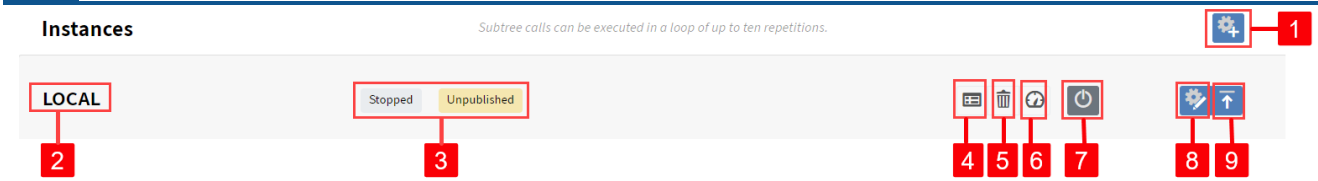
'Tools' drop-down menu



The *Tools* drop-down menu provides access to various functions. You will find more information about these in the *Tools and help* section.

Instance overview

The instance overview is the home screen in ELO XC Manager. This is where you will find all registered Indexserver instances. To switch Indexservers, you have to end the current session and log on to ELO XC Manager again.



The registered instances are shown in a list.

1 Register instance: Add an instance to *ELOxc.xml*.

2 Unique name of the instance

3 Status of the instance

4 Edit registration: Edit the ELO user and password.

5 Delete registration: Removes the registration from *ELOxc.xml*.

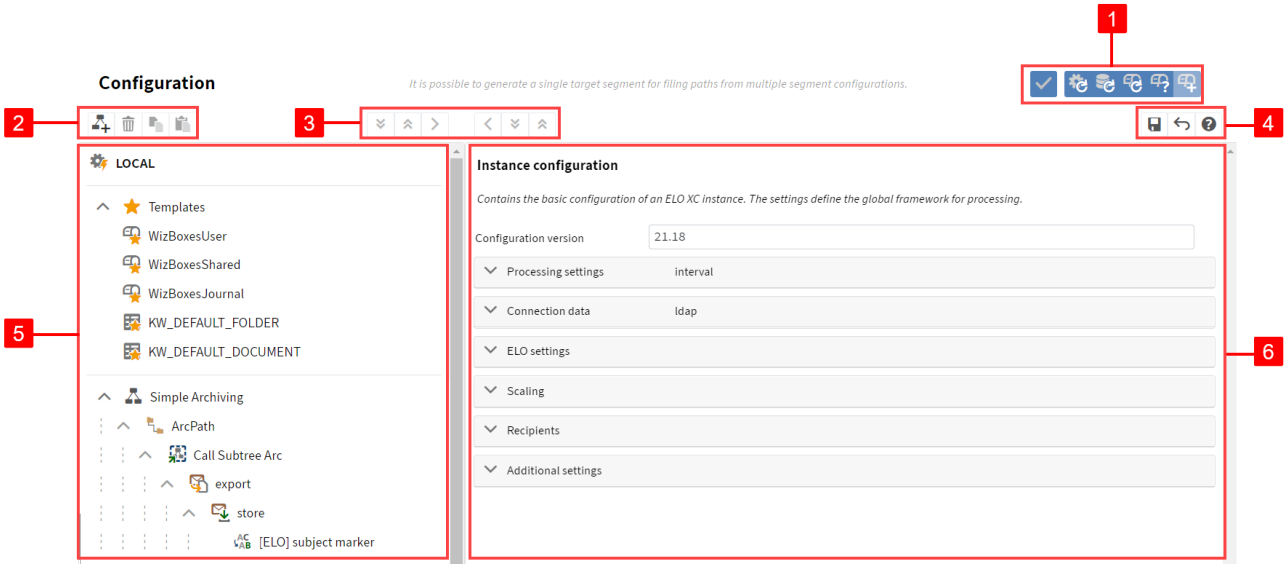
6 Start processing: Activates the instance and starts processing according to the configuration.

7 Processing statistics: Displays the processing statistics of the instance.

8 Edit configuration: Opens the instance configuration.

9 Publish configuration: Activates the working version of the service configuration.

Instance configuration



1 Configuration functions: Functions for the entire instance configuration.

2 Tree functions: Functions for action trees

3 Tree view/Form view: Functions for displaying the tree/form

4 Form functions: Functions for form parameters

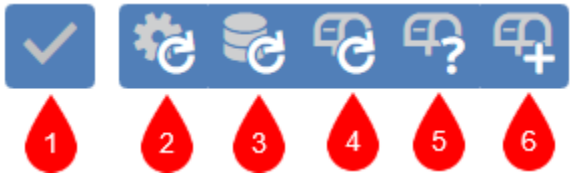
5 Configuration structure: Tree view area

6 Parameters: Form view area

All processing parameters of an instance are defined in the instance configuration.

The instance configuration is divided into two areas. The left side contains the tree view structure. All configuration nodes of the instance are displayed here. When you select a node, you see the corresponding paramaters in the form view on the right.

Configuration functions



1 Validation: The current instance configuration is checked for plausibility errors.

2 Load service configuration: If no mailbox catalog has been loaded once the configuration page opens, this function is also executed once.

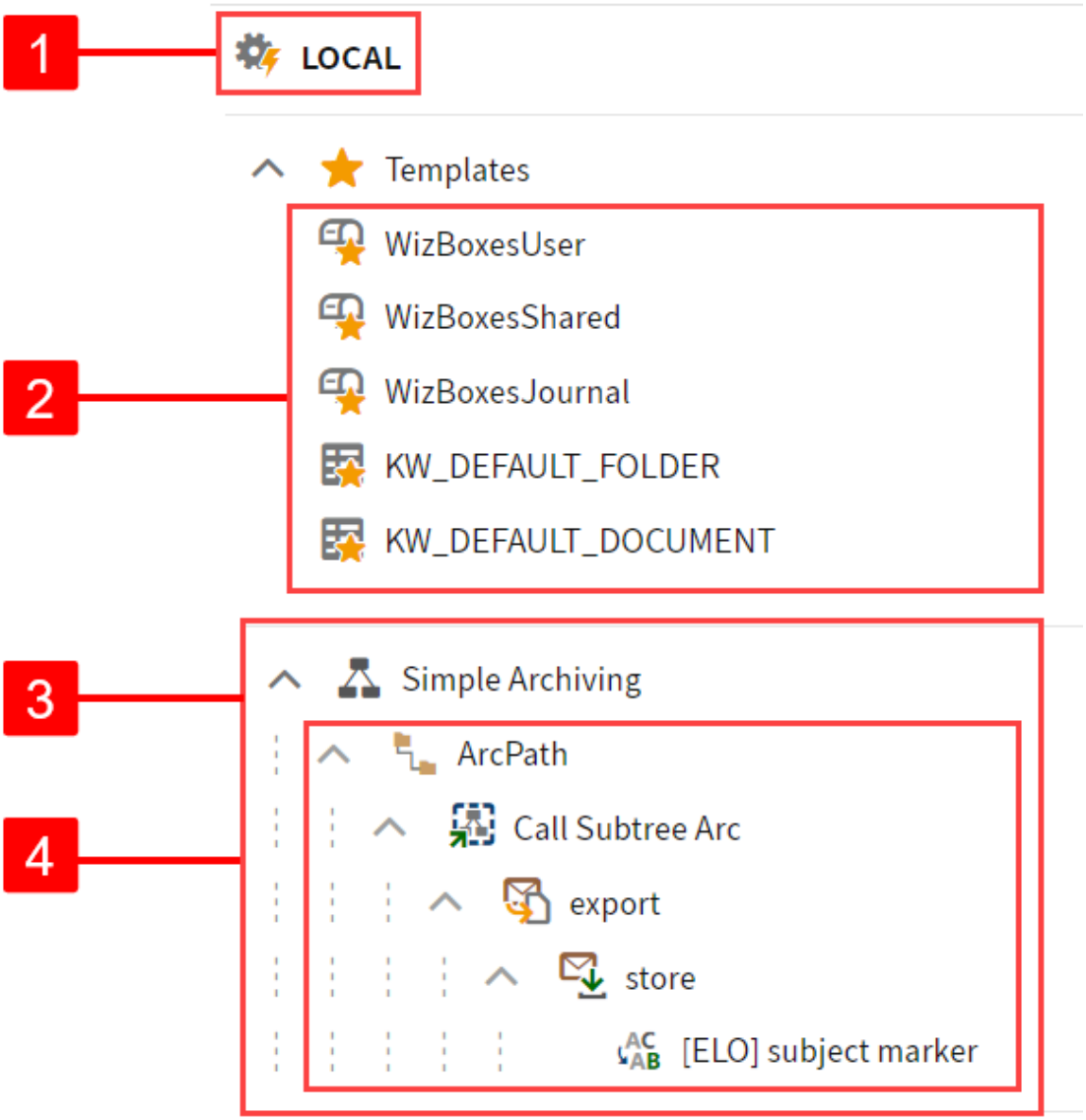
3 Load master data: The master data of the ELO repository (e.g. users, metadata forms, encryption keys) are reloaded.

4 Load mailbox catalog: The mailbox catalog is reloaded with the current connection parameters.

5 Mailbox usage: The usage of catalog mailboxes in the current configuration is displayed in a separate dialog box. You can also assign mailboxes to list templates here.

6 Mailbox registrations: This is where you can manage mailboxes statically configured by mailbox owners and save them to the configuration.

Configuration structure



1 Configuration level: Instance: Configuration node of the current instance

2 Configuration level: Templates: Configuration nodes of the current templates

3 Configuration level: Action trees: Configuration node of the action trees

4 Configuration level: Actions: Configuration nodes of the actions

Tree functions

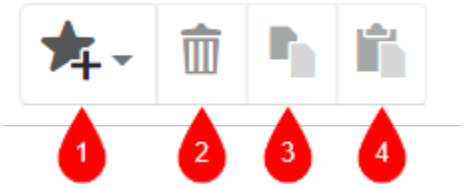
Functions

1 Add action tree: You can add action trees when you select an instance node.

2 Delete: The current configuration is deleted.

3 Copy: The current configuration node is copied to the clipboard.

4 Insert copy: The configuration node on the clipboard is pasted at the selected position.

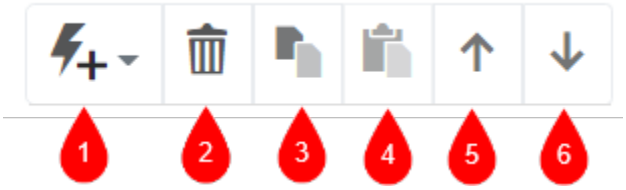


1 Add template: When you select the template node, you can add individual templates.

2 Delete

3 Copy

4 Insert copy



1 Add action: You can add actions when you select an action tree or an action.

2 Delete

3 Copy

4 Insert copy

5 Move action tree forward: The selected action tree is moved forward by one position.

6 Move action tree back: The selected action tree is moved back by one position.

Functions

1 Add action

2 Delete

3 Copy

4 Insert copy

5 Invert action logic: The execution condition of the current action is inverted. If it is *true*, it changes to *false*, and vice versa.

Some tree functions depend on the selected node type, while others apply universally for all nodes.

Form functions

1 Save: Changes to parameters are saved.

2 Undo: Changes to parameters are reversed.

3 Parameter help: Displays the parameter help for the current configuration type.

Display functions

1 Expand configuration nodes :The nodes below the selected node are displayed.

2 Collapse configuration nodes :The nodes below the selected node are hidden.

3 Expand tree view: Widens the view of the configuration.

4 Expand form view: Widens the view of the form.

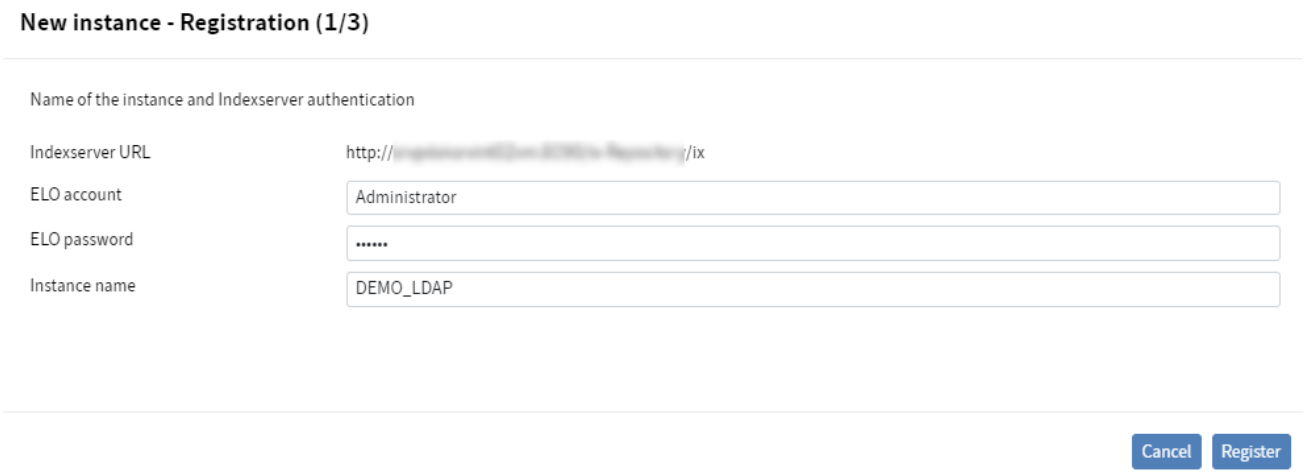
5 Expand form level: Displays another form level.

6 Collapse form level: Hides the lowest form level.

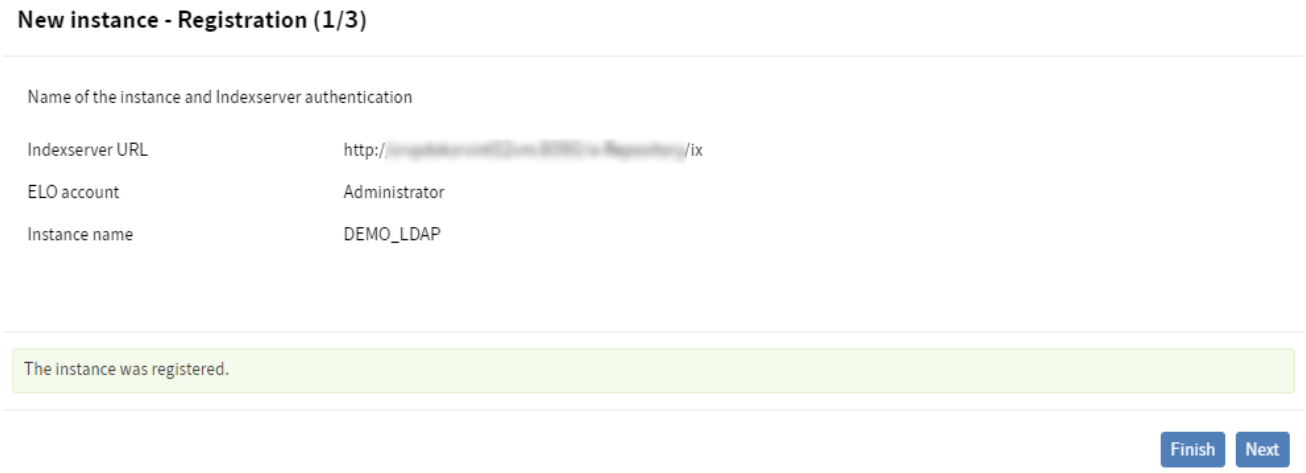
Instance overview

Register instance

To register a new instance, you need to run the *Register new instance* function in the instance overview.



A dialog box opens where you must first enter the ELO account and a unique name for the instance.



When you click *Register*, your entries are transferred to the *ELOxc.xml* file. A success message is displayed in the dialog box.

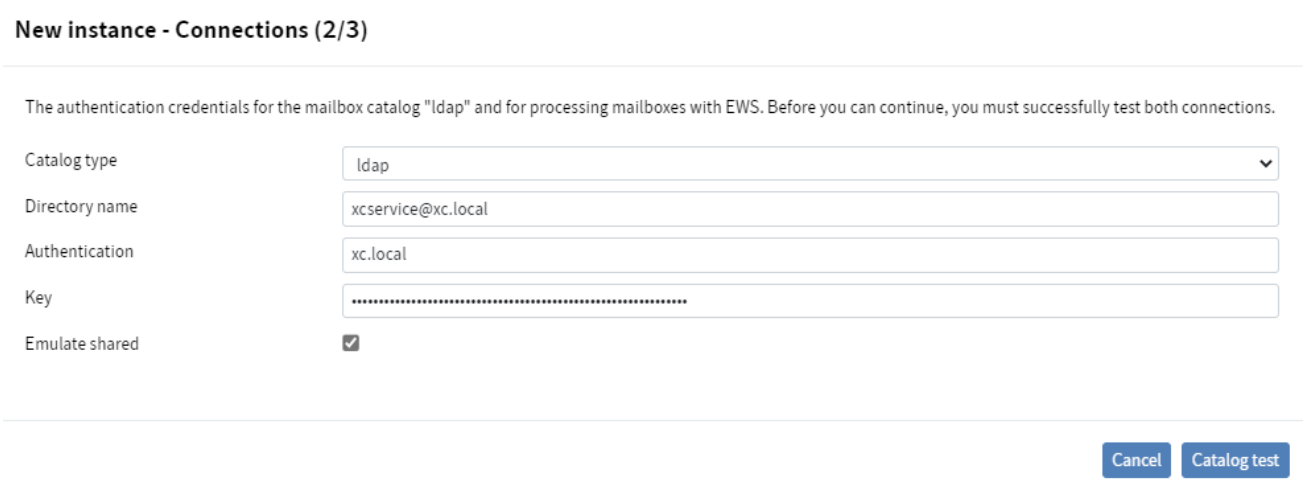
If you select *Finish* at this point of the registration, you will get an empty instance configuration that you have to configure before it can be used.

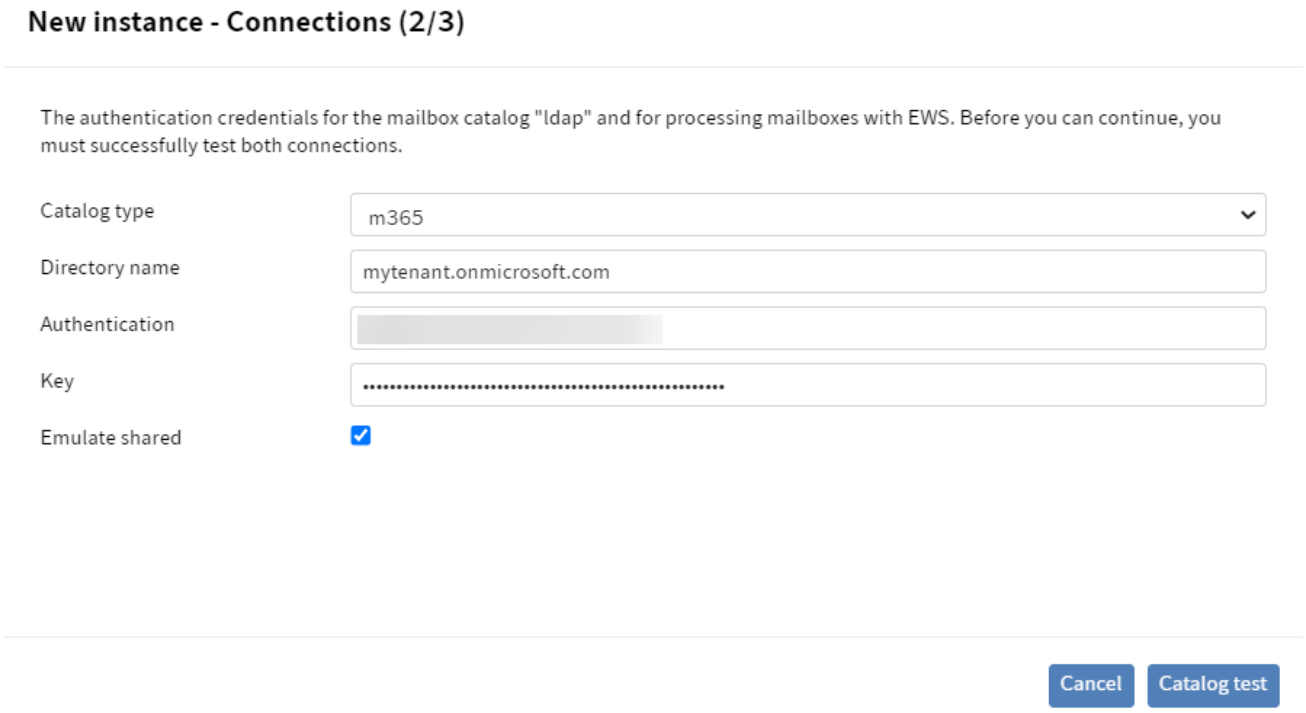
If you continue by clicking *Next*, you can create a standard, fully configured and executable instance in the following steps. First, you need to select a catalog type:

-

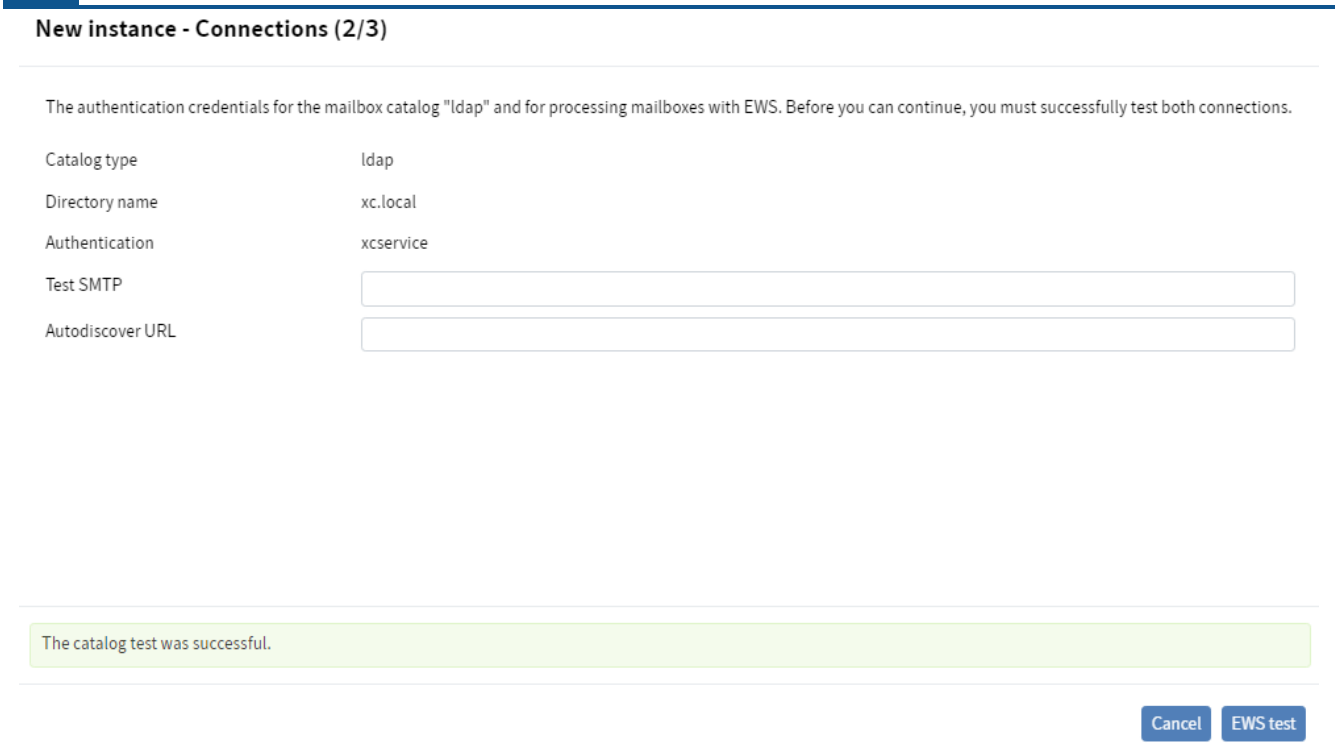
For on-premises Exchange servers, choose the *ldap* type.

- If you want to process mailboxes in the Microsoft Cloud, you need *m365*.

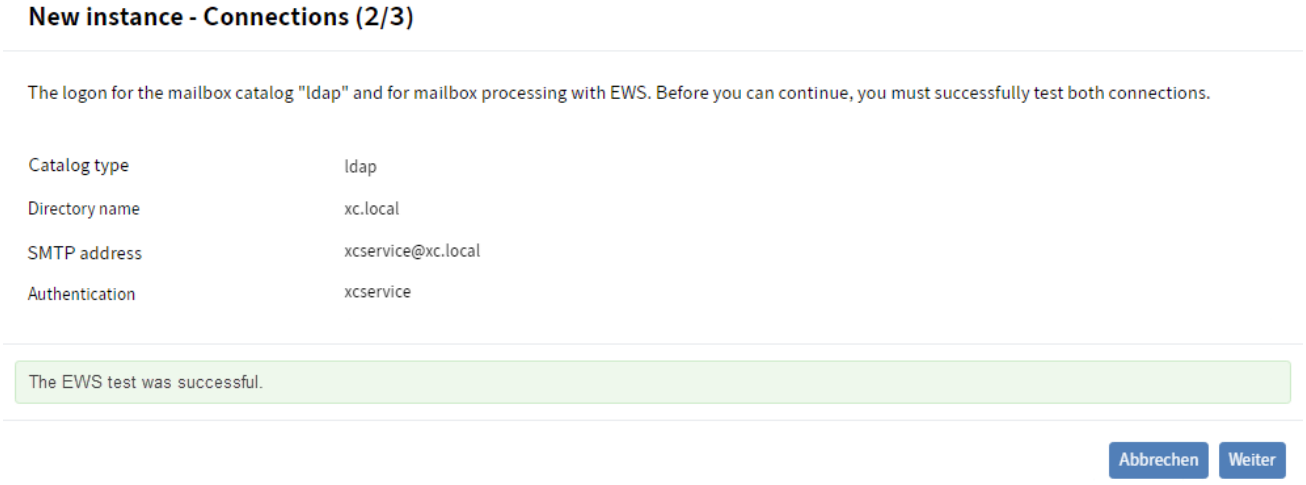




You must run a *catalog test* for the connection parameters to be accepted. You will see a corresponding message if it is successful.

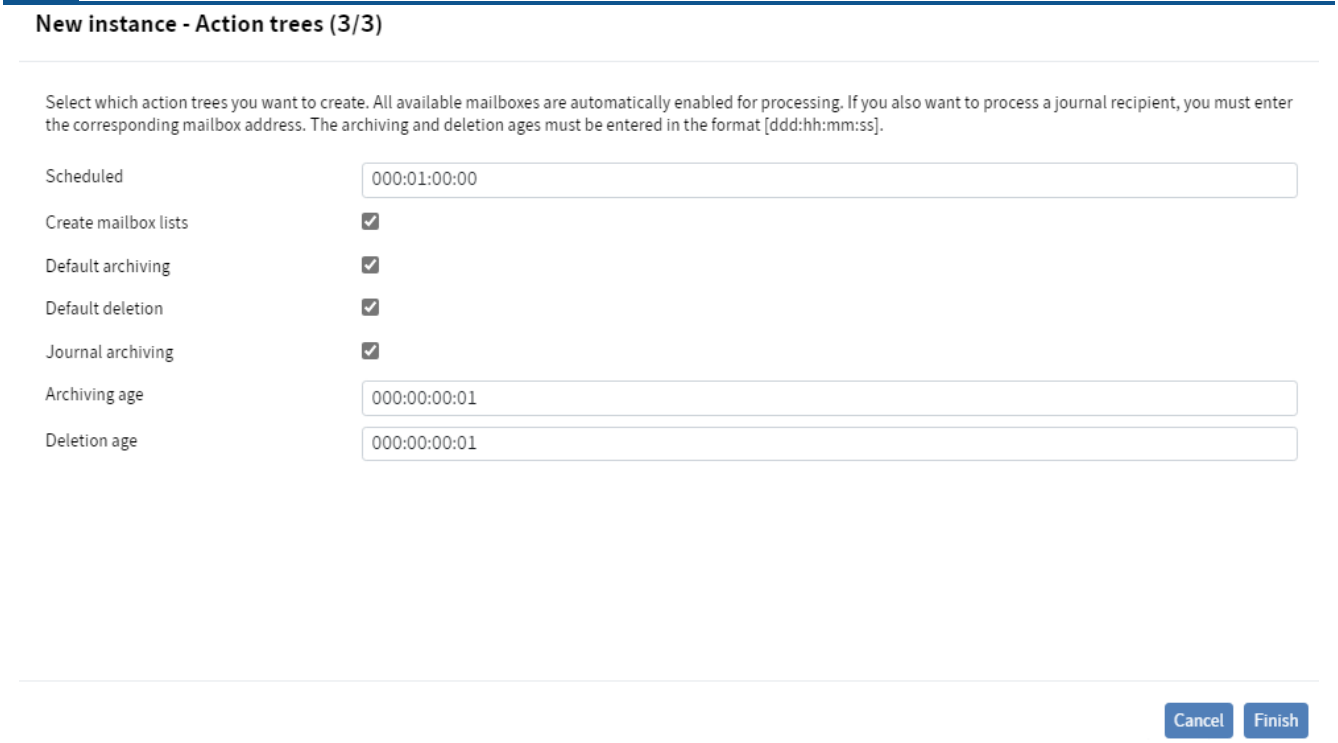


You can now enter a mailbox of the catalog to run an *EWS test*.



If the EWS test is successful, you will get a corresponding message.

Click *Next* to specify details of the instance configuration.



Scheduled: Instances are always scheduled. Include a scheduled pause in processing if required.

Create mailbox lists: When you create mailbox lists, all cataloged mailboxes are included in list templates and assigned to action trees.

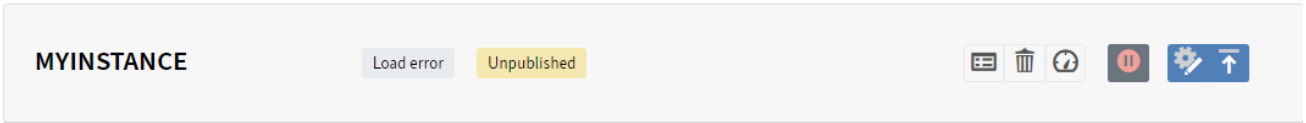
Standard archiving: With the *Standard archiving* option, a simple action tree for processing user mailboxes is created.

Standard deletion: The *Standard deletion* option allows you to create an action tree for deleting stored messages.

Journal archiving, journal deletion: Action trees for processing journal mailboxes can be generated in the same way as for the *Standard archiving/Standard deletion* option.

Archiving age, deletion age: The *Archiving age* and *Deletion age* options determine the minimum age of messages so that they can be selected respectively by the Archive and Delete action trees.

Select *Finish* to generate the configuration.



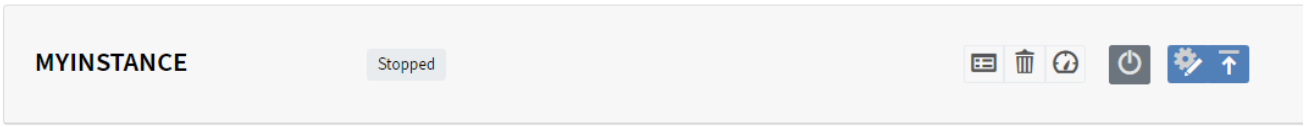
Afterwards, the newly registered instance appears in the overview.

The instance state is automatically *Load error* for newly created instances. This means that the service configuration could not be loaded because the new instance configuration is in the workspace and must be published before it can be put into operation.

Publish configuration

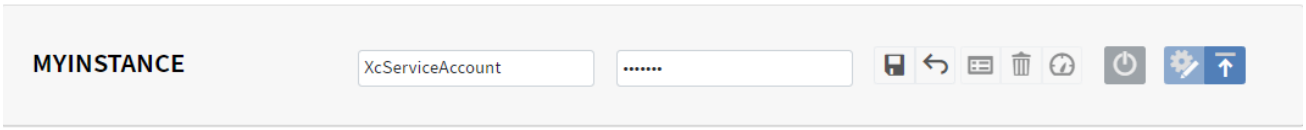
If there are differences between the service configuration and the working version in the manager, the instance state is marked as unpublished.

To activate a working version, it must be published. If the instance was started, you need to stop it before you can publish the configuration. You cannot change the configuration of a service once it is running.



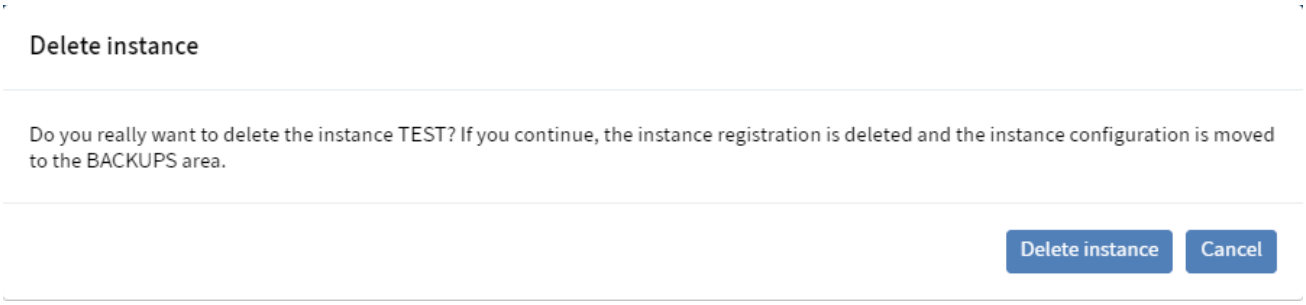
Publish allows you to commit the working version to the service. Once it is successfully published, the *unpublished status* tag disappears.

Change registration



With the *ELO logon* option, you can change the account used for registration at any time. However, keep in mind that the account must always be one that has main administrator privileges.

Delete registration



If you no longer need an instance, you can use *Delete* to remove the registry entry from *ELOxc.xml*. Before this process is completed, you must confirm the deletion.

Start/stop instance

You can manually start a stopped instance. Click the *instance stopped* button.

Depending on the selected mailbox catalog, the instance can take a few moments to start. A started instance in wait mode is marked with the *started* status.

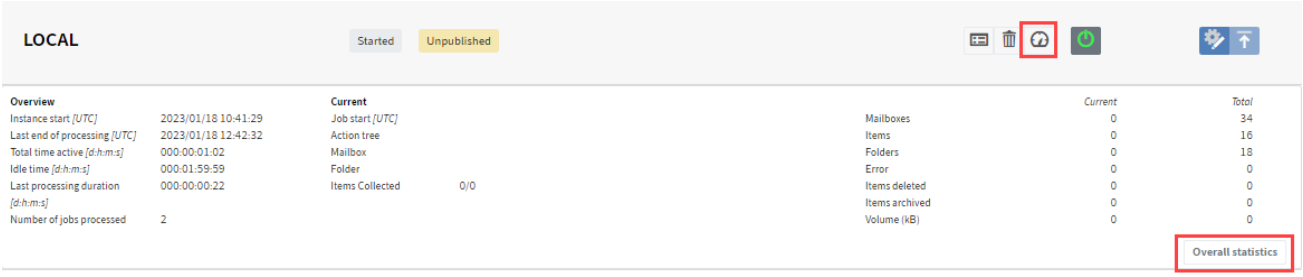
A started instance that is currently executing a job is marked with the *processing* status.

If you click the button when the instance is started, the instance will be stopped at the next possible time. This process may take a few moments depending on the current instance activity.

You can view the processing status of an active instance (*processing* state) at any time. Open the processing statistics with this button:

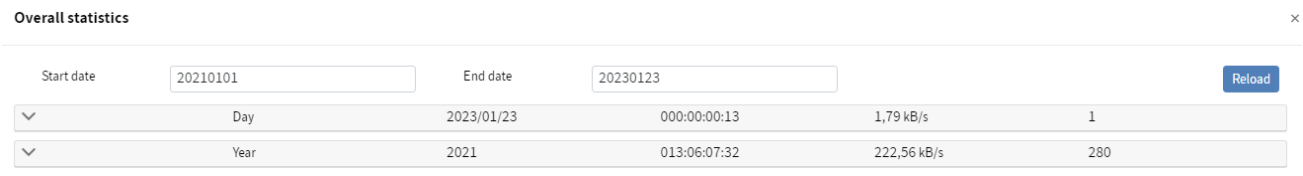
Processing statistics

The processing statistics are divided into two parts. The first part can be opened as a short overview below each instance.



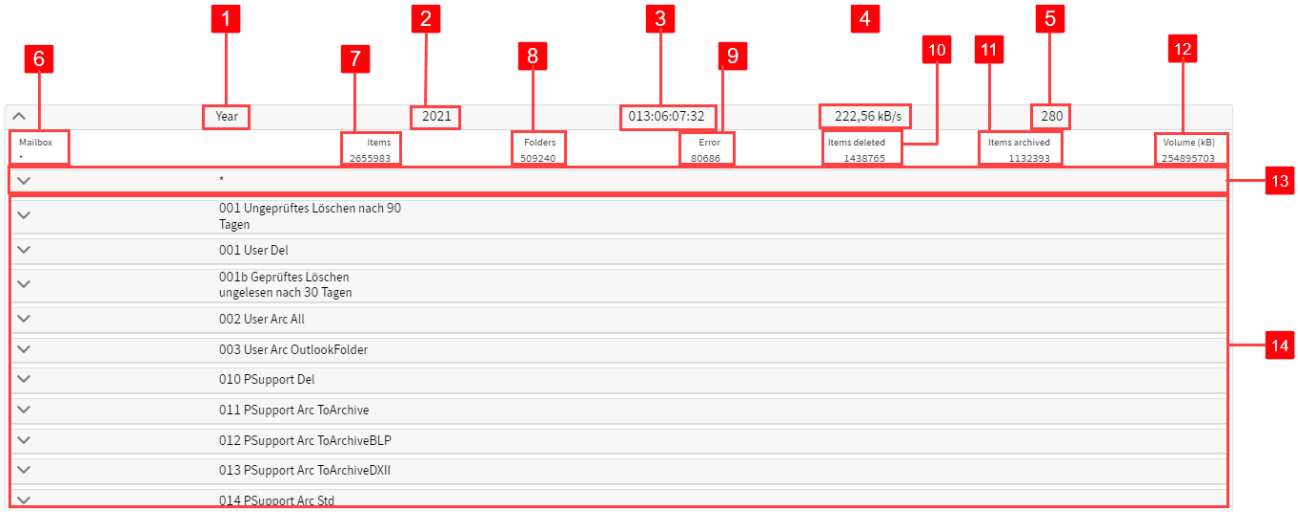
The values are valid as long as an instance is active. They are displayed as cumulative values. The current values are determined from the job that is currently running. At the end of the job, they are added to the total values.

The total statistics are stored as a collection of documents in the ELO repository under *//Administration//XC Base//STATS//<instance name>* and are updated by each job.



By clicking on *Overall statistics*, you can view the recorded values. The values recorded for jobs are grouped into days, months, and years. Completed units are always grouped into the next larger unit. The jobs of a single day are grouped into daily statistics. When all daily statistics in a month are completed (because a new month has started), these daily statistics are grouped into monthly statistics. When a new year starts, all monthly statistics are combined into the annual statistics of

the previous year. In the figure, this relationship is shown in the second and third columns of the area header.



If you expand an area, you will get the values grouped by action trees.

1 Period covered – Day, month, year

2 Period as calendar value

3 Total duration of jobs in the period

4 Average data transfer rate to ELO repository

5 Number of jobs in the period

6 Mailboxes or * for all

7 Number of items selected

8 Number of folders processed

9 Number of processing errors

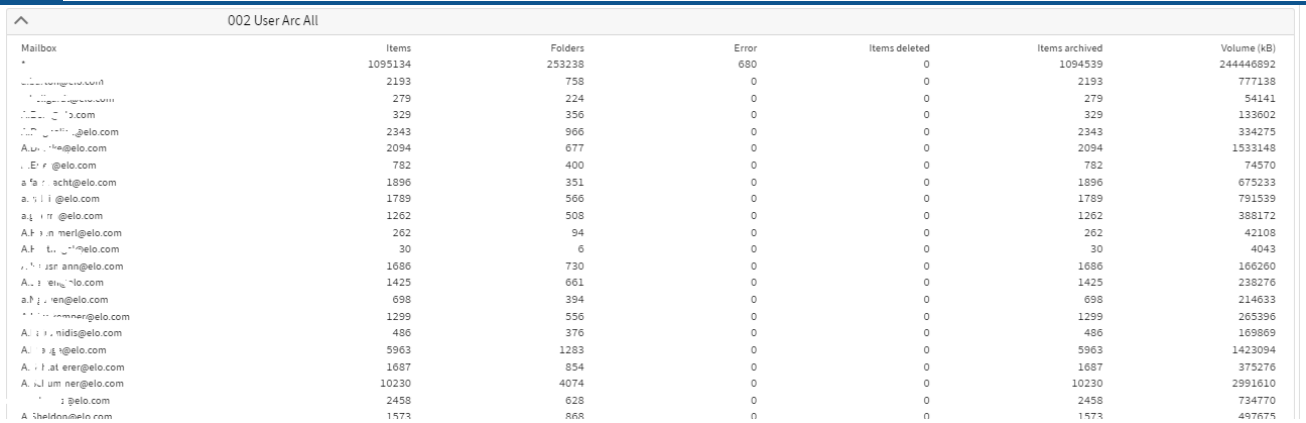
10 Number of deleted items

11 Number of archived items

12 Volume archived

13 Wildcard as name for *all action trees*

14 Name of an action tree



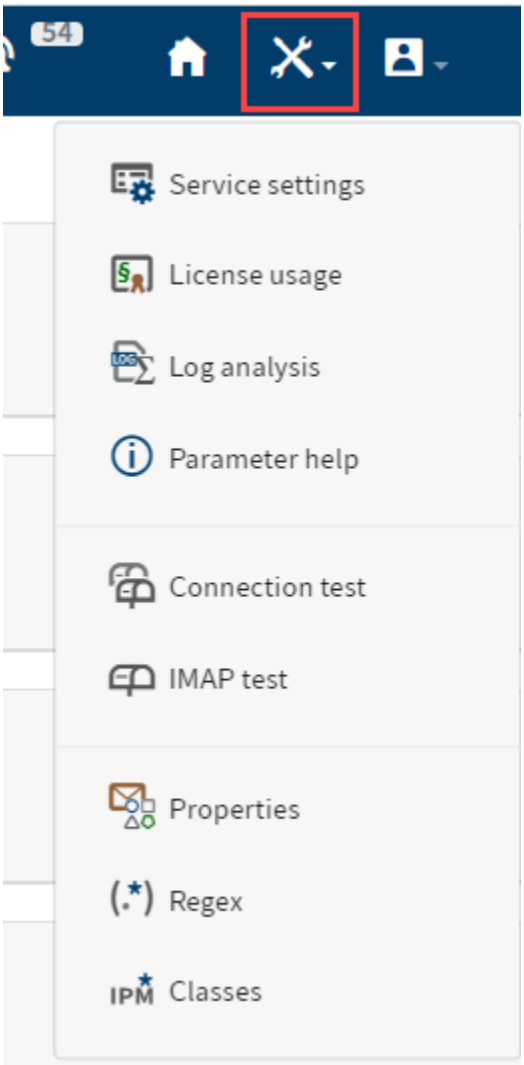
002 User Arc All

Mailbox	Items	Folders	Error	Items deleted	Items archived	Volume (kB)
*	1095134	253238	680	0	1094539	244446892
[illegible]	2193	758	0	0	2193	777138
[illegible]	279	224	0	0	279	54141
[illegible].com	329	356	0	0	329	133602
[illegible]@elo.com	2343	966	0	0	2343	334275
A[illegible]@elo.com	2094	677	0	0	2094	1533148
[illegible]@elo.com	782	400	0	0	782	74570
a[illegible]acht@elo.com	1896	351	0	0	1896	675233
a[illegible]@elo.com	1789	566	0	0	1789	791539
a[illegible]@elo.com	1262	508	0	0	1262	388172
A[illegible]merl@elo.com	262	94	0	0	262	42108
A[illegible]@elo.com	30	6	0	0	30	4043
[illegible]ann@elo.com	1686	730	0	0	1686	166260
A[illegible]@elo.com	1425	661	0	0	1425	238276
a[illegible]@elo.com	698	394	0	0	698	214633
[illegible]@elo.com	1299	556	0	0	1299	265396
A[illegible]@elo.com	486	376	0	0	486	169869
A[illegible]@elo.com	5963	1283	0	0	5963	1423094
A[illegible]@elo.com	1687	854	0	0	1687	375276
A[illegible]@elo.com	10230	4074	0	0	10230	2991610
[illegible]@elo.com	2458	628	0	0	2458	734770
A[illegible]@elo.com	1573	868	0	0	1573	497675

If you expand the action tree area, you will get the statistical values for each mailbox. The total statistics of the action tree are marked with * in the first line.

Tools

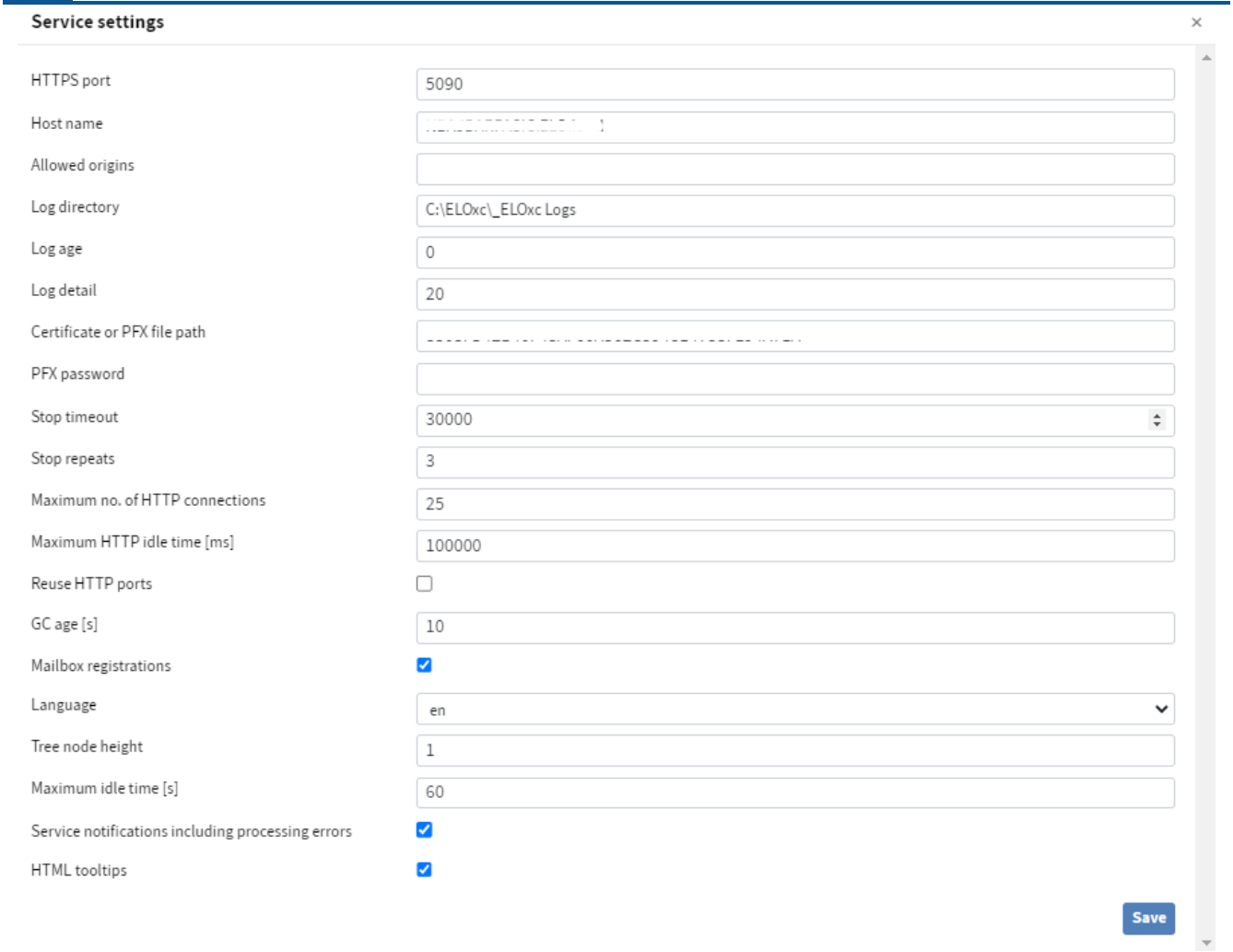
The ELO XC Manager tools are a collection of useful functions to help you configure and manage instances. They can be accessed from the tools menu.



Service settings

You can change the values of the *ELOxc.xml* in the *Service settings* dialog box.

> **Information**
>
> In most cases, you will need to restart ELO XC for the changes to take effect.

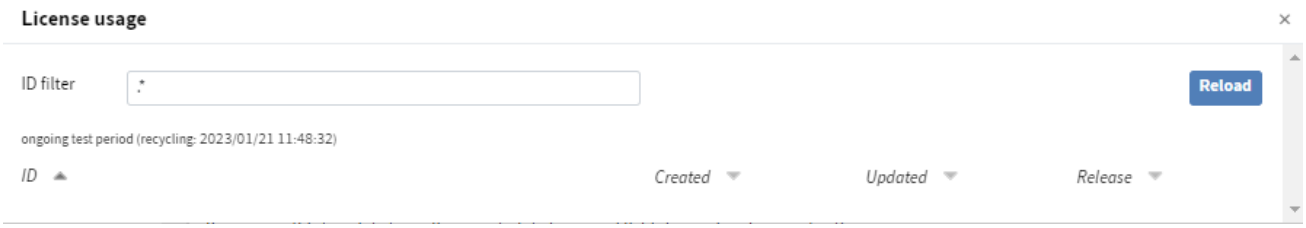


- HTTPS port, Host name: *Host name* and *HTTPS port* determine the base URL of ELO XC.
- Log directory, Log age, Log detail: *Log directory*, *Log age*, and *Log detail* determine the log settings.
- Certificate or PFX file path/PFX password: *Certificate or PFX file path*/*PFX password* configure the SSL certificate of the internal ELO XC web host.
- Stop timeout, Stop repeats: *Stop timeout* and *Stop repeats* can be changed if the service does not respond on stop attempts.
- Maximum number of HTTP connections, Maximum HTTP idle time [ms], Reuse HTTP ports: *Maximum number of HTTP connections*, *Maximum HTTP idle time (milliseconds)* and *Reuse HTTP ports* define the behavior of ELO XC when using web requests (e.g. IX, EWS). This mainly affects the use of system resources. The higher the number and idle time of the connections are, the longer it takes to free up system resources. It only makes sense to utilize a high amount of resources if the ports are also being reused (reducing overhead on initialization). The default settings should deliver stable, efficient results in most environments.
- GC age [s]: *GC age* (seconds) specifies the maximum wait time before ELO XC frees up orphaned memory segments (garbage collection).
- Mailbox registrations: *Mailbox registrations* can optionally be used if mailbox owners want to independently configure mailbox data for the list of static connections.
-

Language, Tree node height, Maximum idle time [s], Service notifications including processing errors, HTML tooltips: These parameters affect various aspects of ELO XC Manager.

License usage

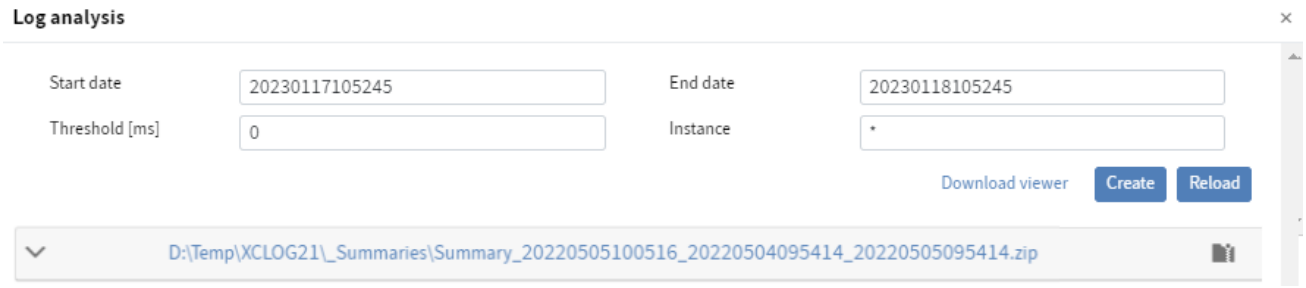
Licenses are used when messages from a mailbox/SMTP address are stored in the ELO repository. The total number of all licenses used is known as *license usage*.



You can use filters to narrow down long lists. The filter is a regex search pattern.

The program records for each ID/mailbox address when the license was first used and when it was used last. If no new messages are stored for a longer period, a date on which the license can be freed up may be displayed.

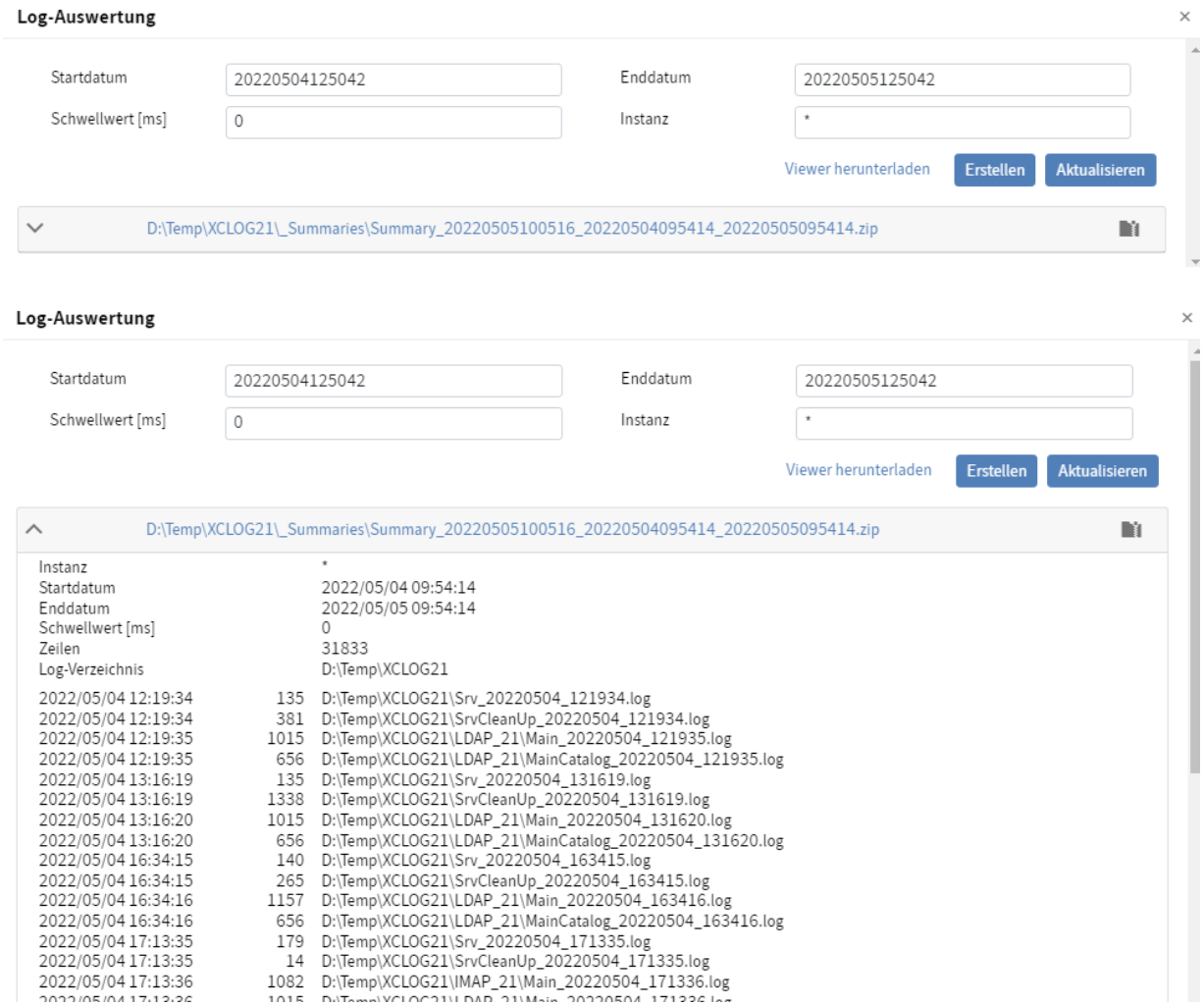
Log analysis



This tool allows you to summarize and subsequently evaluate ELO XC logs. The results are written to the *_Summaries* child folder of the log directory.

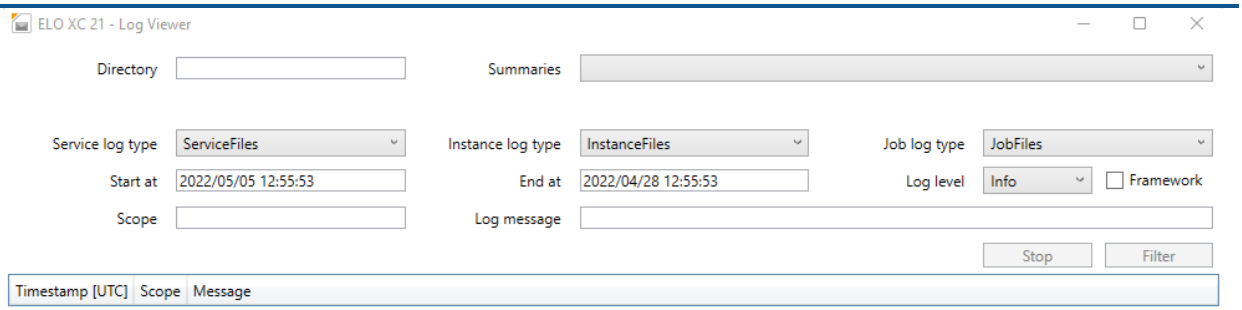
- Start date, End date: *Start date* and *End date* determine the time frame of the summary. It only takes includes log outputs with timestamps in this interval. Since all log times are in UTC, both search parameters must also be entered accordingly.
- Threshold: The *threshold* can be used as an optional restriction for values greater than 0 to only extract lines whose duration is higher than the entered number of milliseconds.
- Instance: The *Instance* parameter can be used for values other than * to restrict the summary to the logs of a specific *instance*.
- Create: This function calls the separate ELOxcLS.exe program, which processes the currently available logs based on the selected parameters. This process depends on the number of log files and the specified time interval so it may take some time.
-

Reload: The *Reload* option reloads the available summaries in *_Summaries* and displays them.

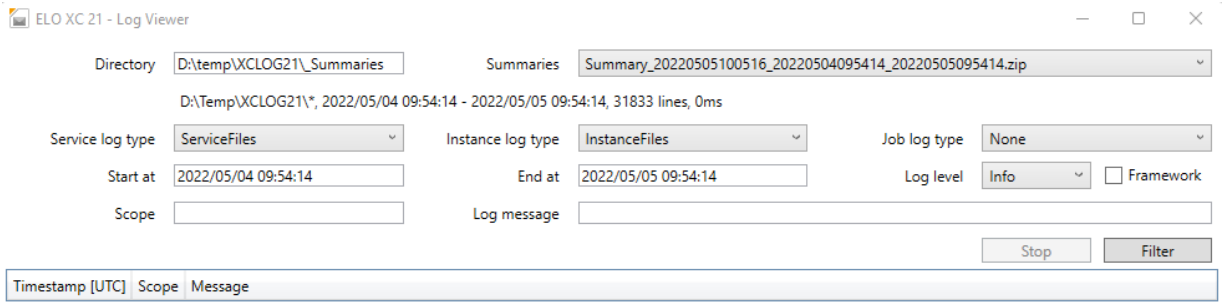


You can open this area to view the package contents.

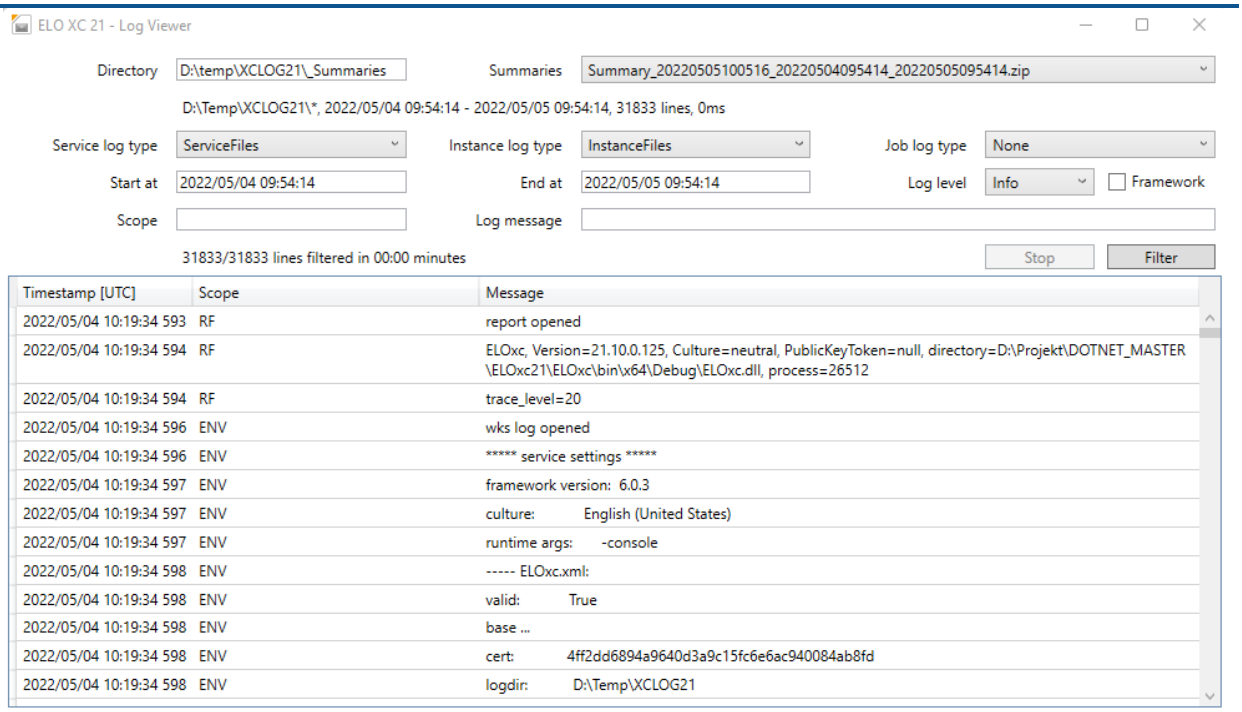
- Download viewer: To view the summary details, you need to use the log viewer and install it locally. The *Download viewer* option downloads a package which can be extracted to any directory and started with *ELOxcLV.exe*. You may be required to install NET6. This window opens:

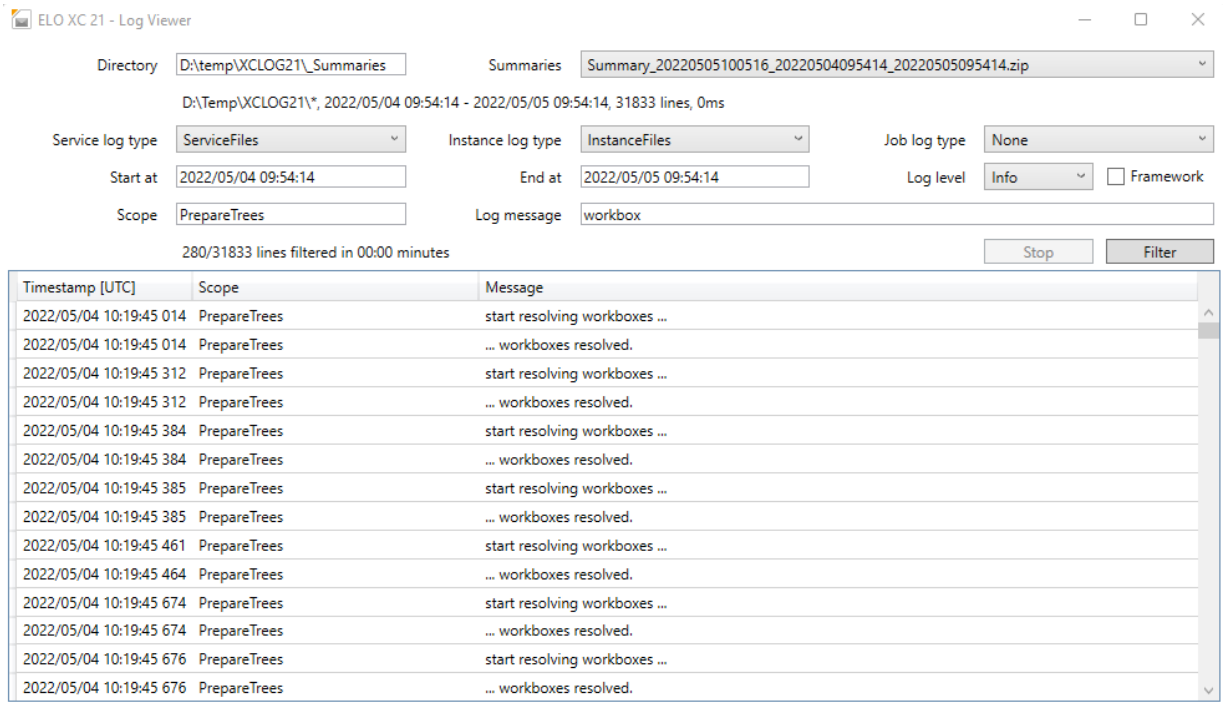


In order to be able to view the summaries, the directory of the summaries must be entered into the parameter directory. Afterwards, the available summaries appear under *Summaries*.



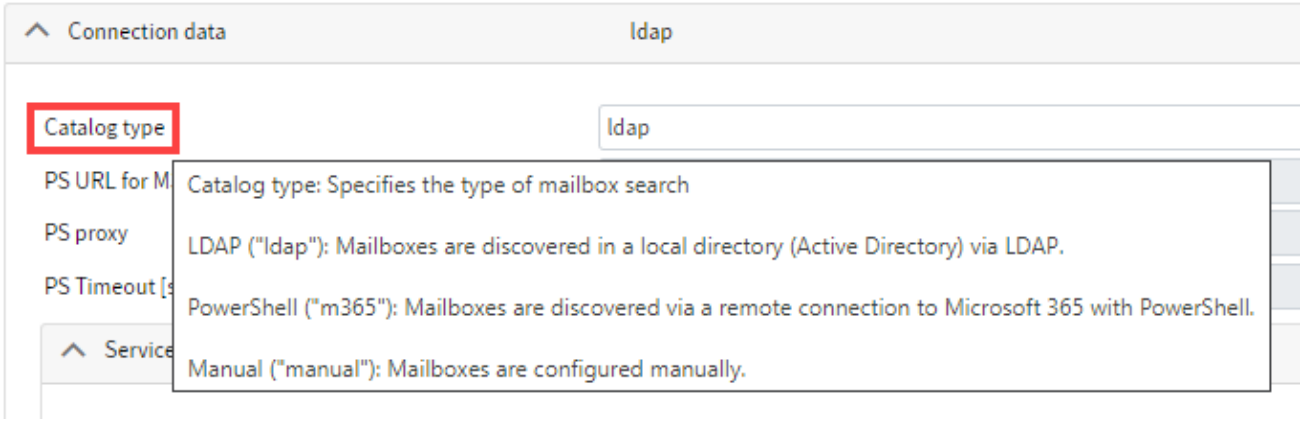
- Service log type, Instance log type, Job log type: *Service*, *Instance*, and *Job log type* are additional filters for specific log types.
- Start at and End at: *Start at* and *End at* can be used to define the analysis period.
- Log level: Log level is the type of log message.
- Framework: The Framework option can be enabled to view Kestrel messages.
- Scope: The log scope is an internal designation and helps to locate the log message. If you do not want to filter by a specific scope, you can leave the field blank.
- Log message: The log message contains information about the current execution position. If you do not want to filter by a term in the log messages, you can leave the field blank.
- Stop: Logs of bulk jobs can grow to several MB in size. In such cases, it can take a while for the information to load. You can cancel these operations with *Stop*.
- Filter: By clicking *Filter*, all log lines with the specified filter settings are displayed. Examples with and without filters:



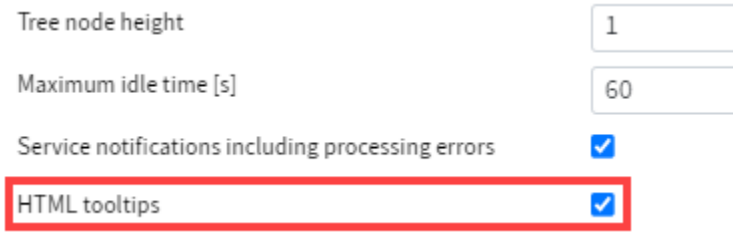


Parameter help

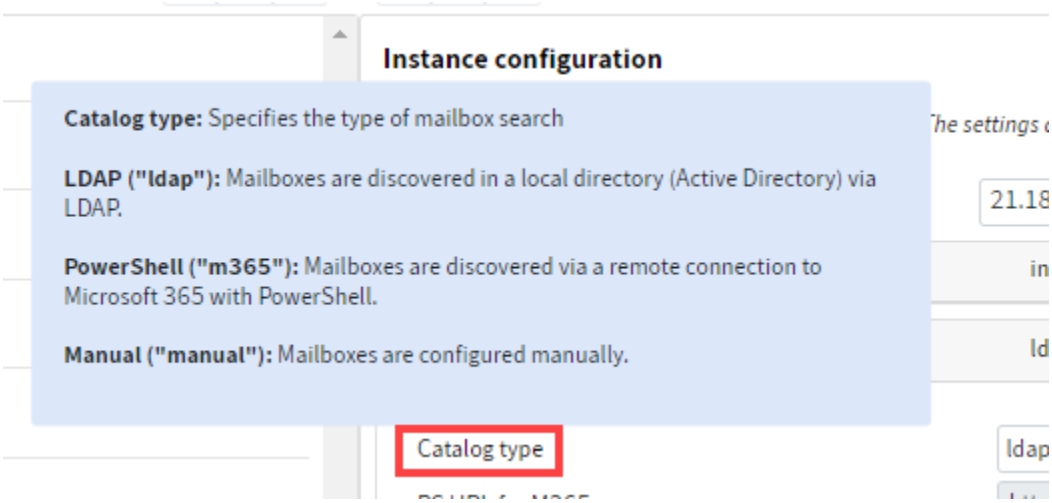
ELO XC Manager provides tooltips for most places in the interface.



For example, if you move the mouse pointer over the *Catalog type* parameter name in the instance configuration, you will see the corresponding tooltip for this parameter. This view corresponds to the default settings of the browser.

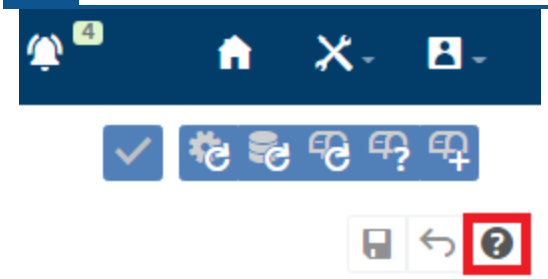


You can have the tooltips displayed as HTML instead. Open the *Service settings* dialog box in the tools menu and check the *HTML tooltips* box.

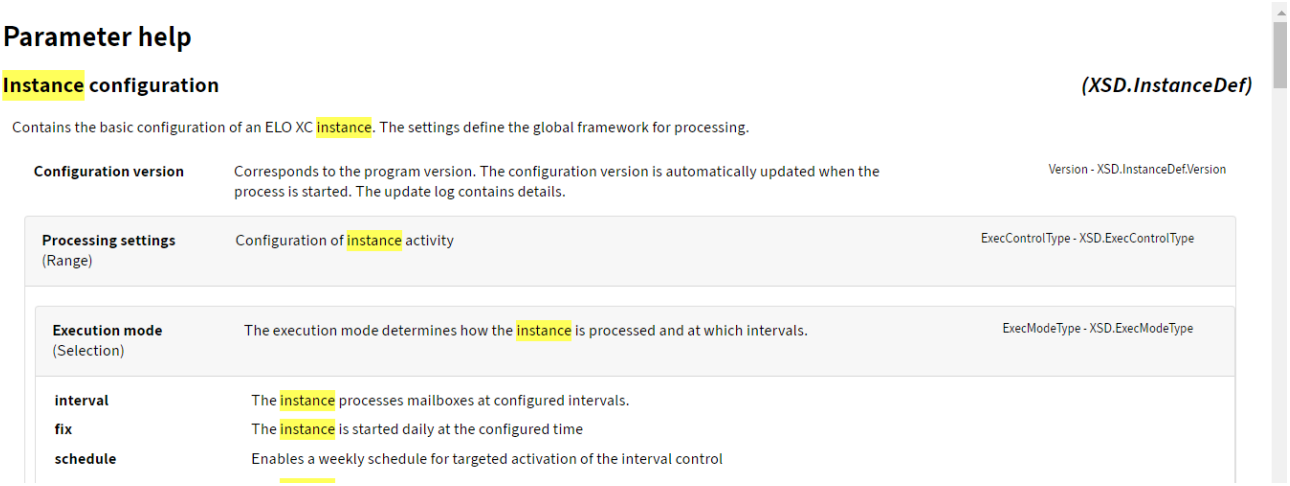


This option improves the readability of tooltips.

However, the HTML view of tooltips requires additional internal JavaScript calls between the browser and ELO XC, which may also prove to be a disadvantage depending on the browser.

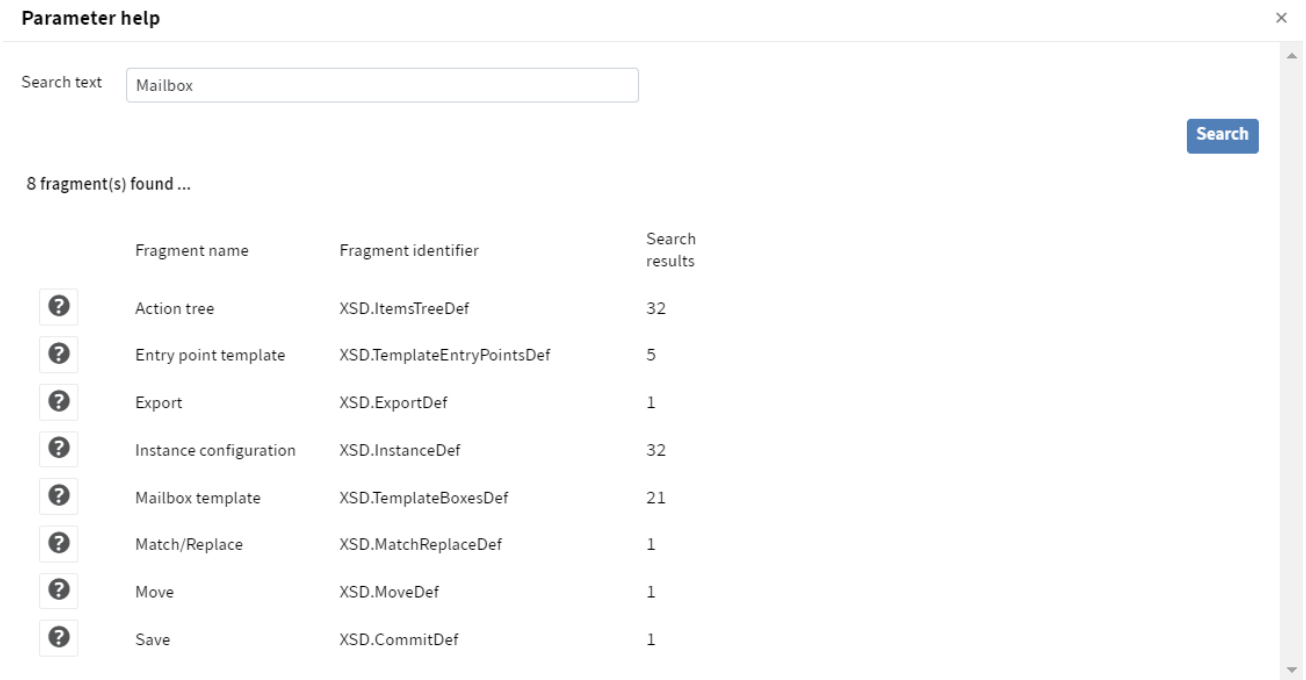


You get all tooltips of the current parameters directly above the form view.



Clicking the button opens the parameter help in a new browser tab.

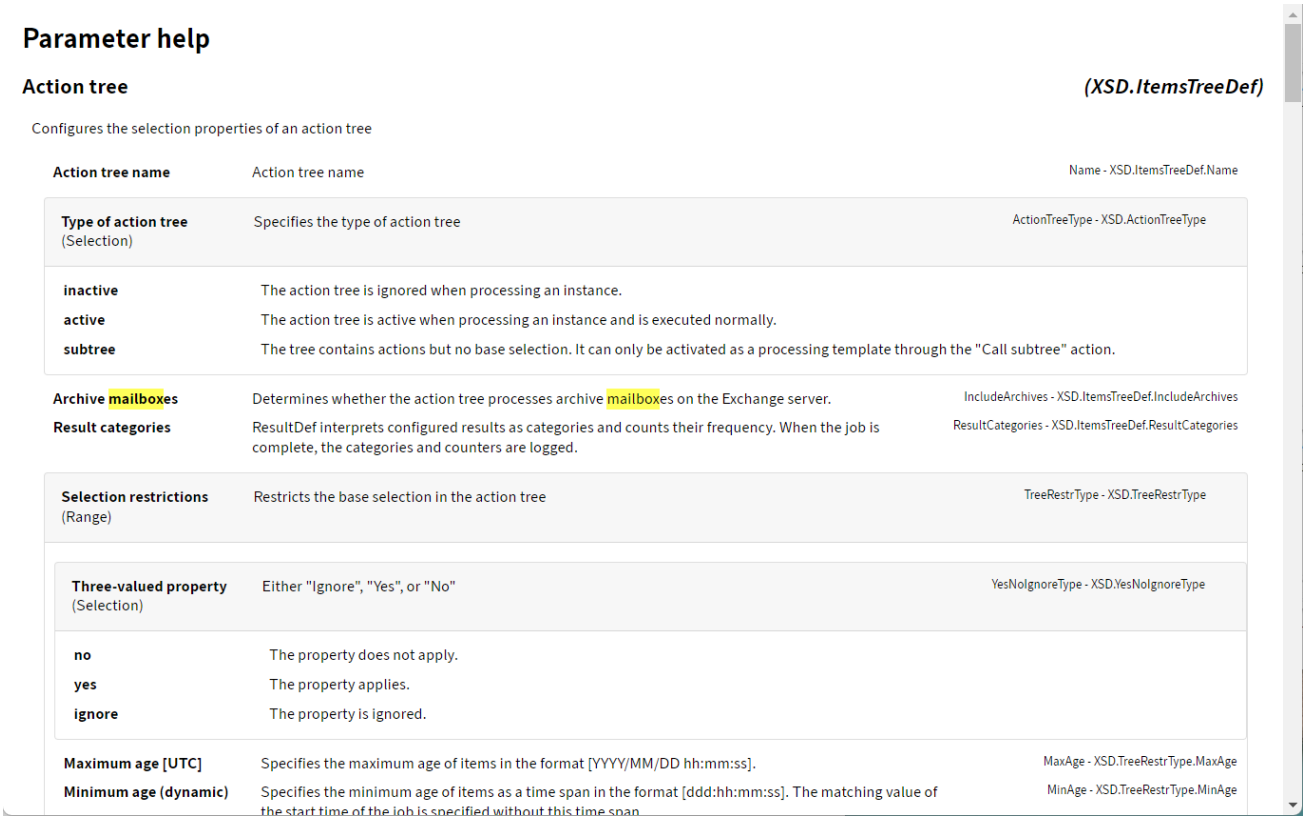
You get the full, structured description of the instance configuration fragment (technical name: *InstanceDef*). In addition, the associated XML schemas of the fragment are displayed after the parameter descriptions. The technical names of parameters are marked blue.



Suppose that you don't remember where to find a parameter but only know that it had something to do with the term *mailbox*. In this case, you can search the tooltips using the *Parameter help* function in the tools menu.

Open the *Parameter help* dialog box, enter *mailbox*, and click search.

You get a list of all occurrences of the term *mailbox*.



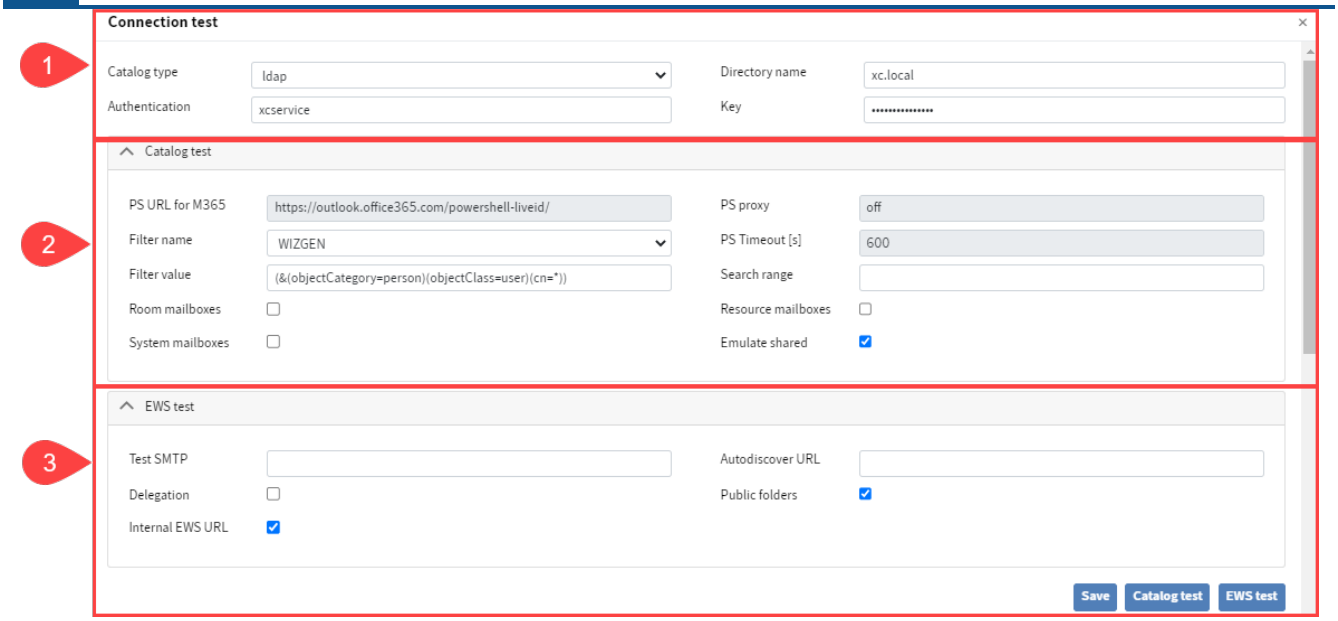
You decide to use the fragment *CommitDef* and want to read the corresponding parameter help. Click the question mark icon at the beginning of the line.

The parameter help page opens again in a new browser tab.

Each occurrence of the term *mailbox* is highlighted.

Connection test

The *connection test* is the tool you should use to test the connection parameters of an instance if creating an ldap or m365 catalog automatically.



1 Connection parameters: The top part of the dialog box contains the connection parameters that are used for both the mailbox catalog and the EWS connection.

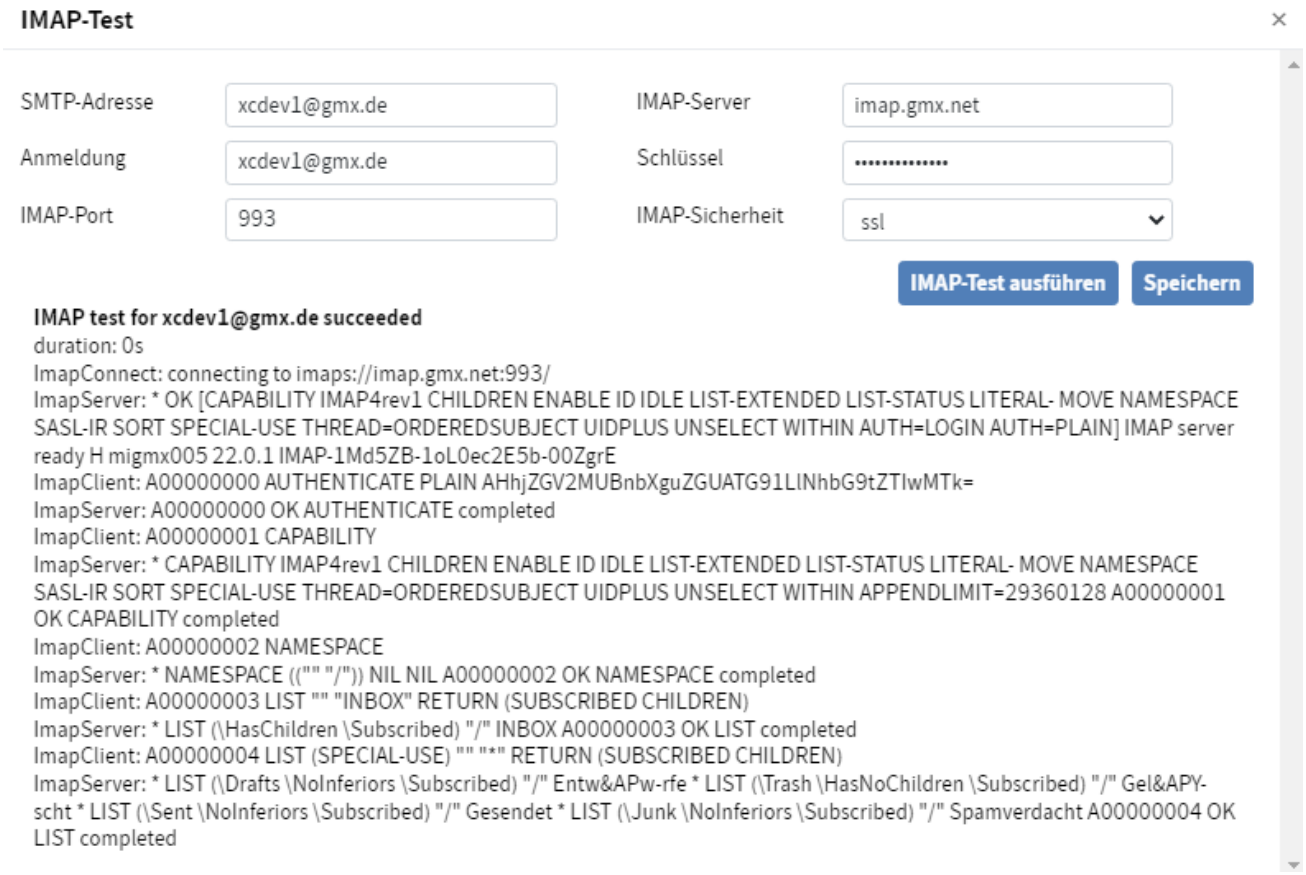
2 *Catalog test* options

3 *EWS test* options

Clicking on the *Catalog test* or *EWS test* button displays the respective results. A list of found mailboxes is returned for the catalog tests and the connection log is displayed for the EWS tests.

If you open this tool while configuring the instance for ldap or m365, it is initialized with the current parameters. You can apply changes to the configuration by clicking *Save*.

IMAP test

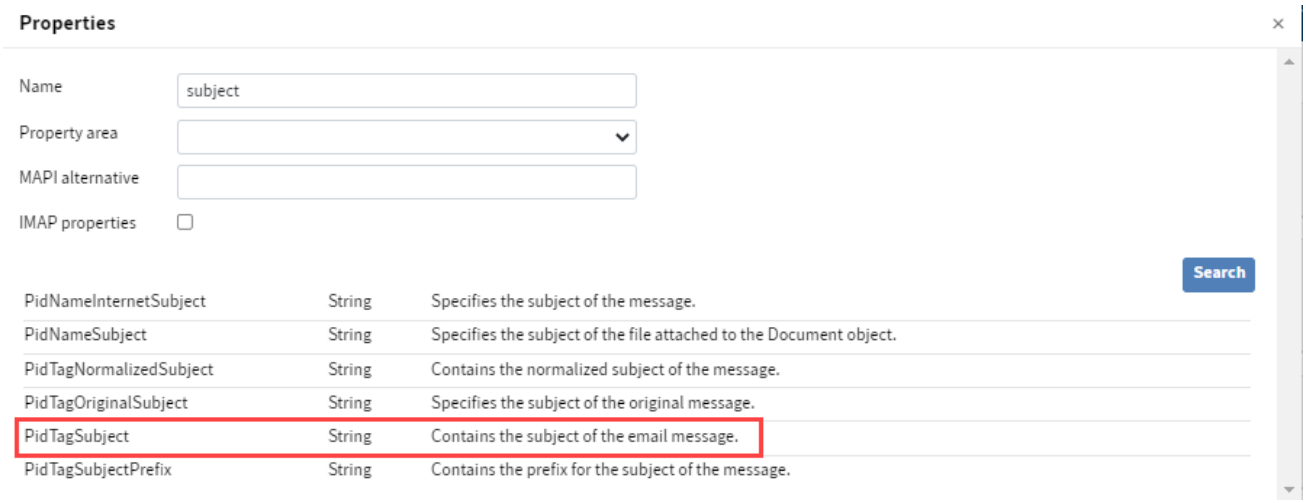


Similar to the test for automatic catalogs, the IMAP test enables you to check whether ELO XC can connect to an IMAP mailbox.

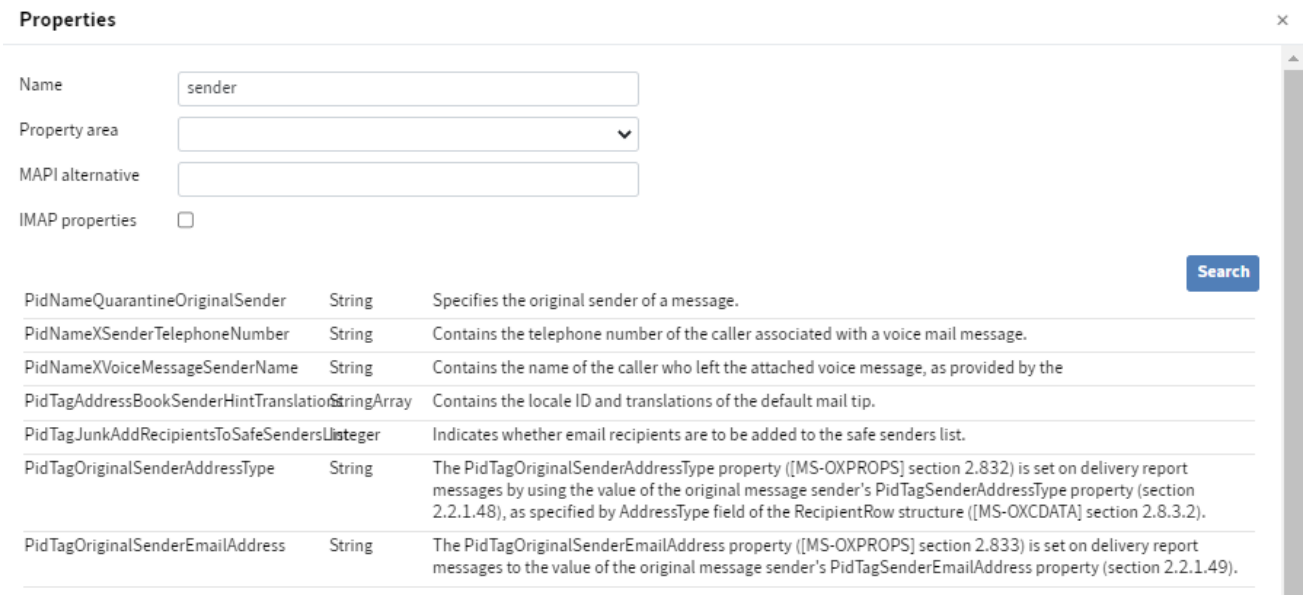
If you open this tool from a corresponding instance configuration, it is initialized with the available parameters. After the test is completed, you can apply customized parameters to the instance configuration with *Save*.

> **Please note**
>
> Only the first entry from the list of static connections is tested.

Properties

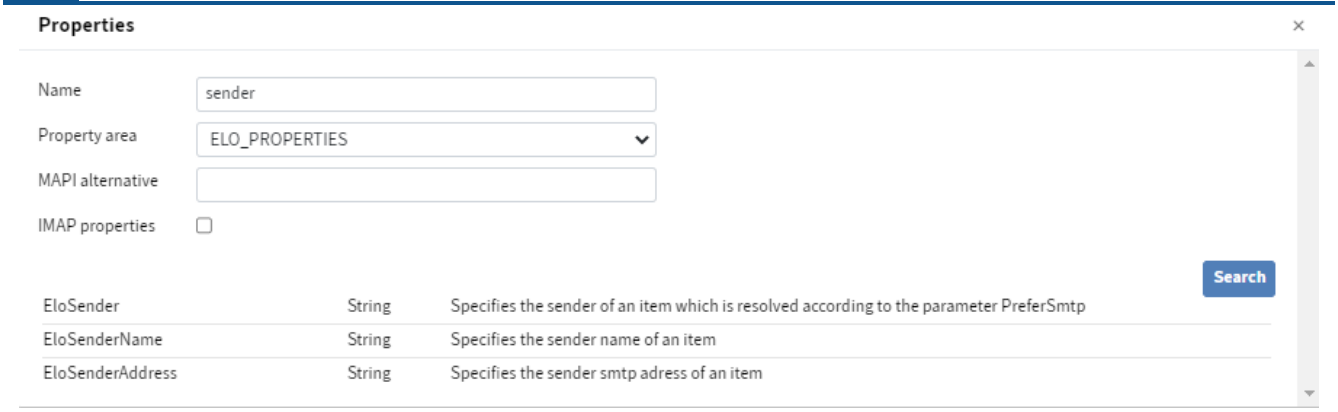


The *Properties* tool helps you to find properties for processing messages. If you don't enter a name, all properties are displayed. However, you will usually search for specific terms and ranges.

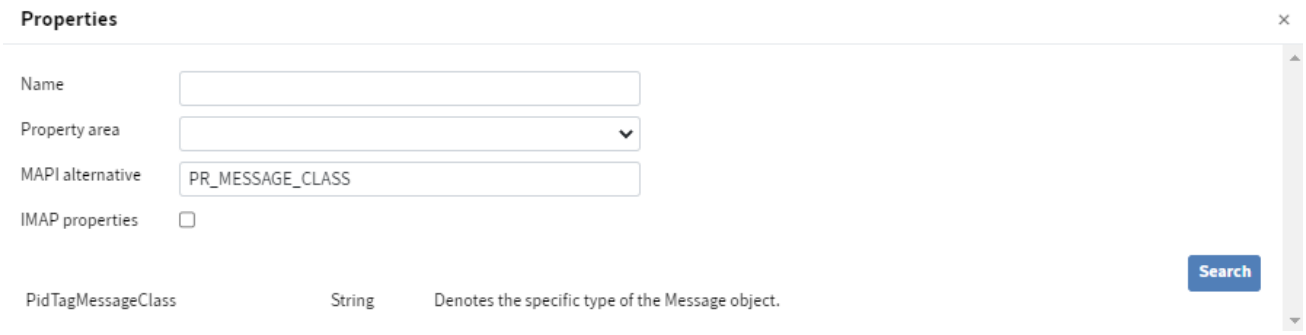


If you want to include senders in the metadata, you can search for sender.

The returned list of defined Exchange properties is too large and contains irrelevant properties (see Basics > Properties chapter).

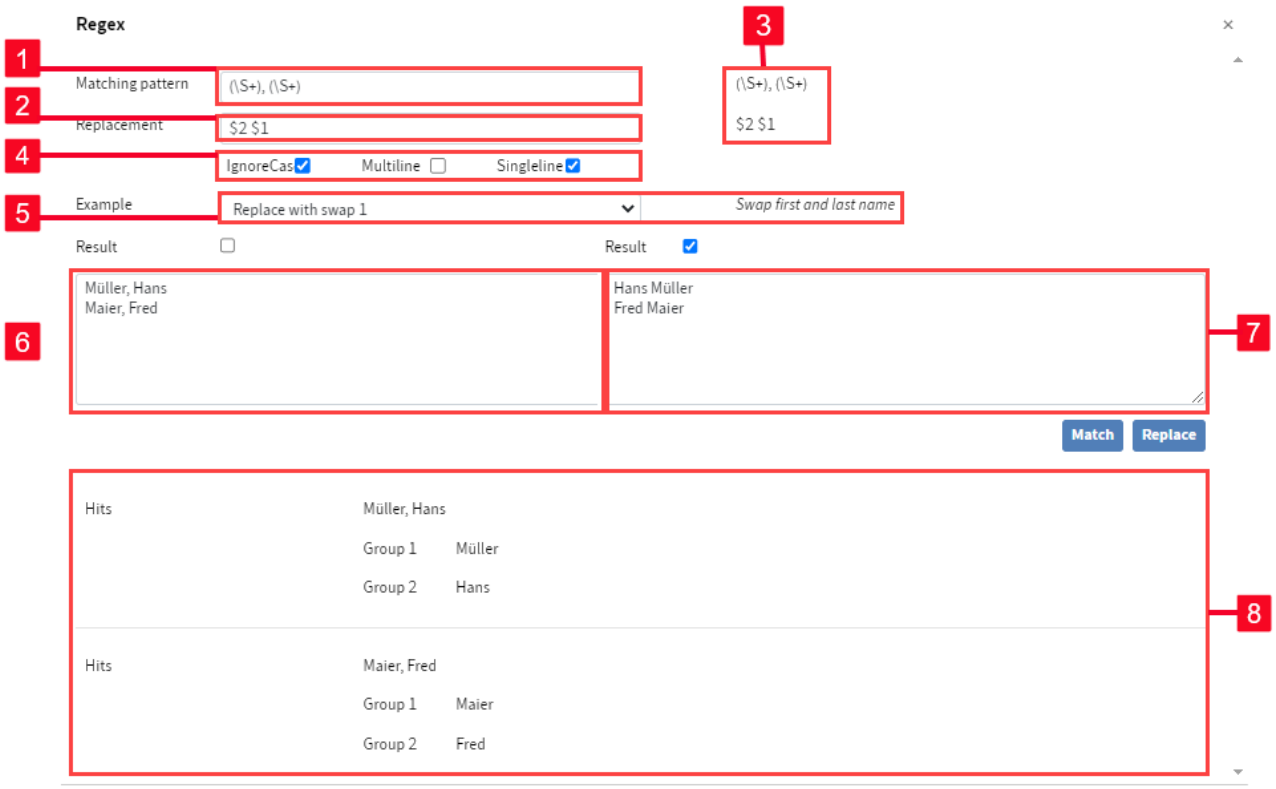


The relevant properties are defined by ELO XC and are located at the end of the list of hits. Restricting the property range would show the hits immediately.



When you are using property editors, it is possible that only MAPI names are available, which are not automatically recognized by ELO XC.

Regex



1 Matching pattern

2 Replacement

3 XML-compatible view of search and replace patterns

4 Options

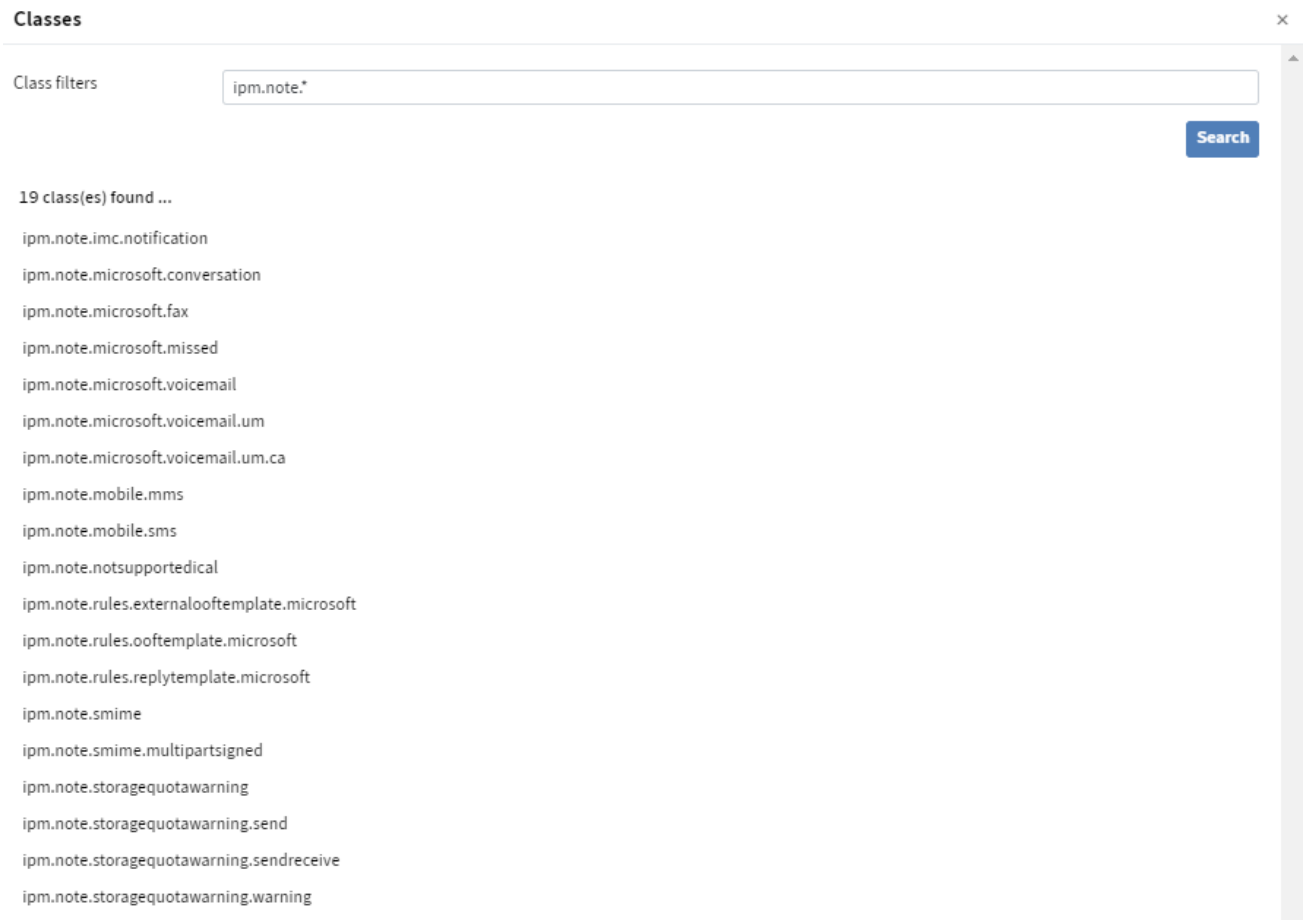
5 Example with comment

6 Text entry

7 Result after replacement

8 Results of the search

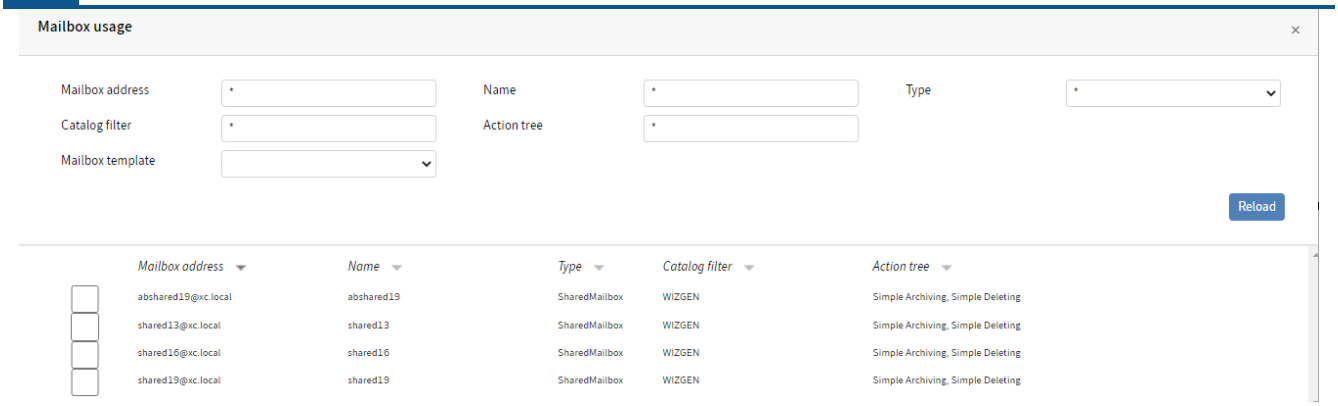
Classes

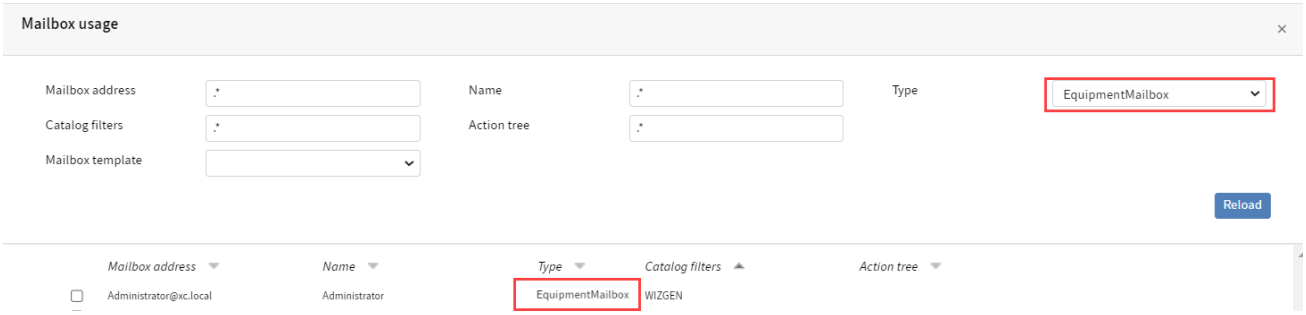


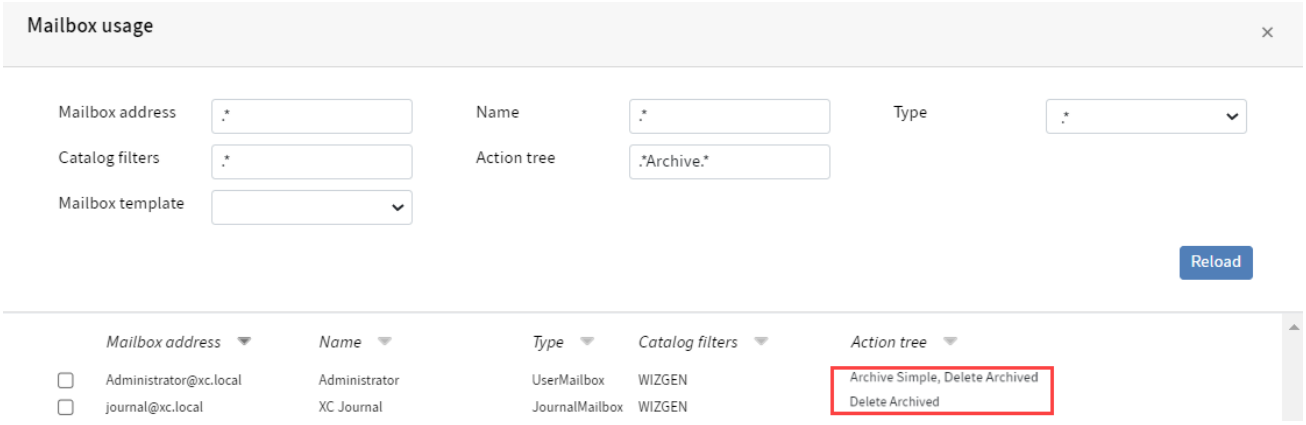
The *Classes* tool displays the set of supported message classes. The *class filters* enable you to search for specific classes. If you leave this field empty, all available classes are displayed.

Mailbox usage

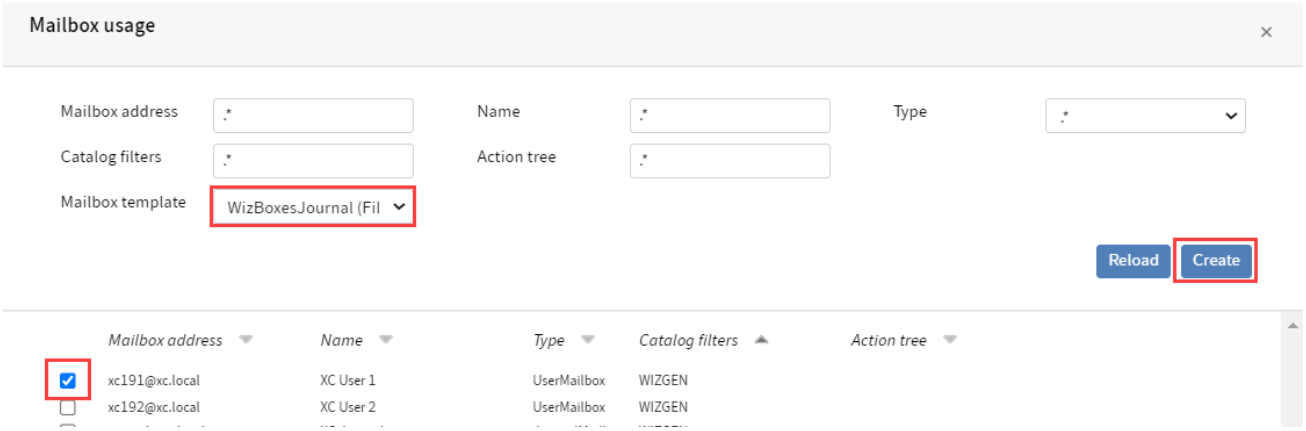
The current mailbox usage is displayed in a dialog box. For this to work, the mailbox catalog must have been loaded at least once in the active instance configuration. This is done with the *Load mailbox catalog* function or automatically while validating the configuration.







You can also use wildcards as display filters. If you want to see all mailboxes used in an action tree that has archive in the name, for example, you can use the *Archive* parameter.



Displayed mailboxes can also be added to a mailbox template.

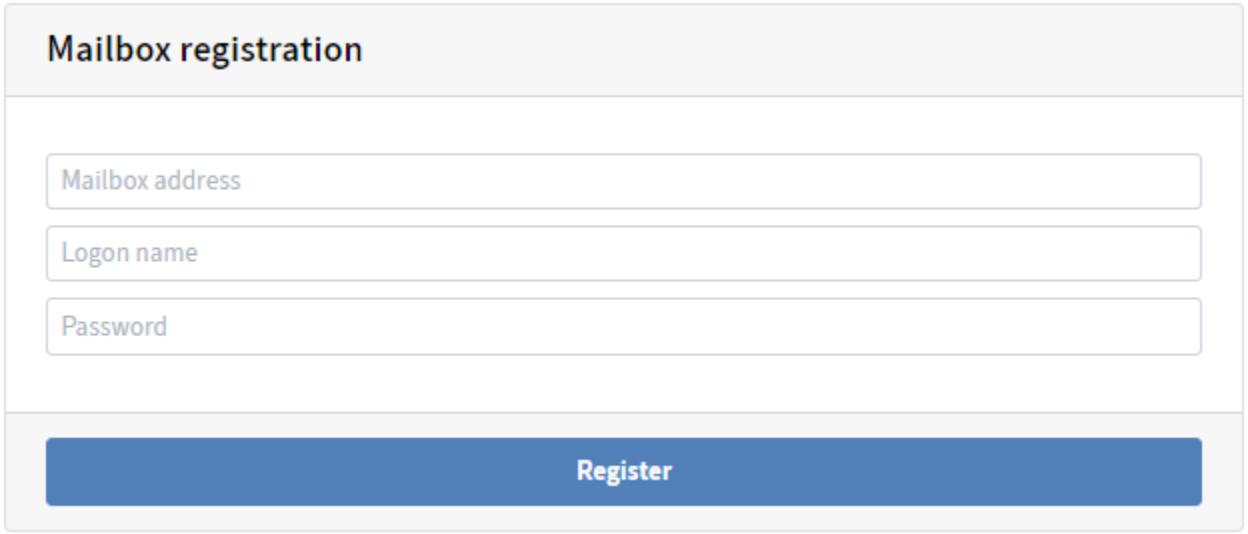
Static mailbox registration

Manually created mailbox catalogs are static since the associated connection data is not automatically determined and is therefore unchangeable. This also means that access credentials must be entered manually, which is acceptable for functional mailboxes such as a premium journal. As soon as personal mailboxes have to be configured statically, security-relevant data can be compromised, since mailbox owners are usually not the people who manage ELO XC.

In this section, we will show you how mailbox owners can enter the connection details for their own mailboxes in ELO XC.

This function is optionally enabled with a service parameter. You can use the service settings in the tools menu for this.

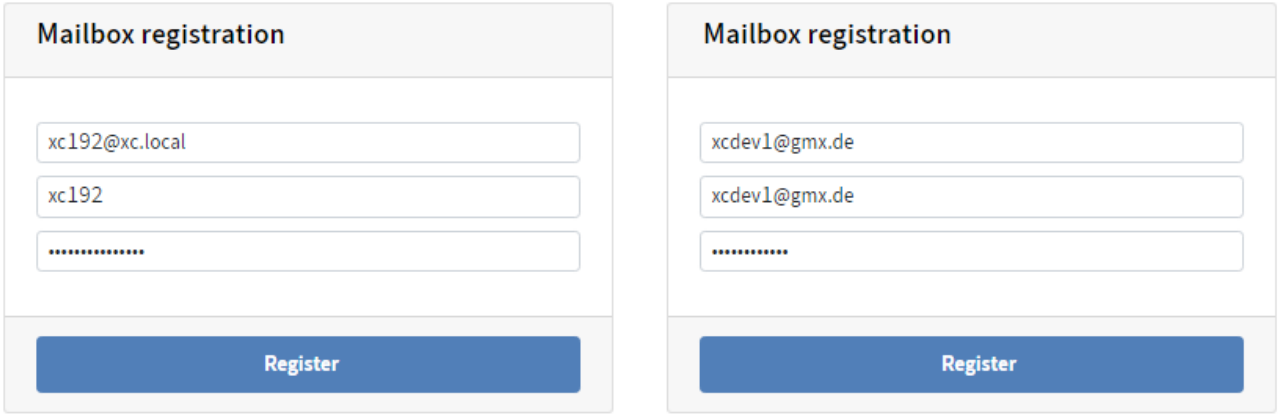
Alternatively, you can set the *StaticBoxReg* property to *true* in the *ConfServiceDef* part of the *ELOxc.xml* file. If this option is changed, you need to restart ELO XC for the changes to take effect.



Mailbox owners can use the function via the URL `http://xc-host.domain:port/statreg`.

- SMTP address: The email address mailbox owners enter as the *SMTP address*.
- Authentication: The authentication name is authentication.
- Key: The password is key.

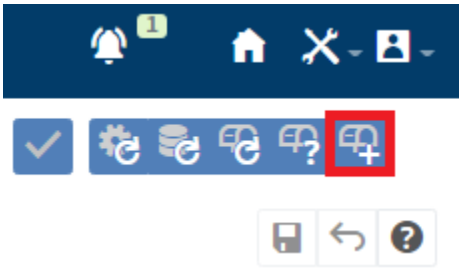
As soon as you click *Register*, ELO XC transfers the connection data to the *ELOxcBoxReg.xml* file in the installation directory.



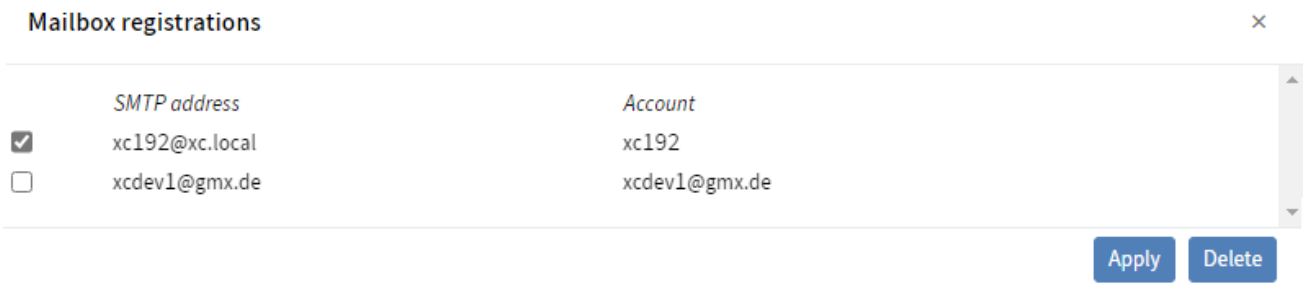
In our example we use two instances, one for a local Exchange server, and one for an IMAP server.

```
<MailboxRegistrations>
  <BoxReg Smtp="xcdev1@gmx.de" Login="xcdev1@gmx.de" Pwd="1a1Ix2a30xM9TWgGjkVdGvi00Cbs5yXHBbGuOz7KMXxYQcUiBZKuuuzza9liIkMm" />
  <BoxReg Smtp="xc192@xc.local" Login="xc192" Pwd="fBXGp2j7hDOGhJmlSJBpmc5B/PJOULZ/nDfX2h6e0YD4qY0Nw5RdBE1FiBGRnMwj" />
</MailboxRegistrations>
```

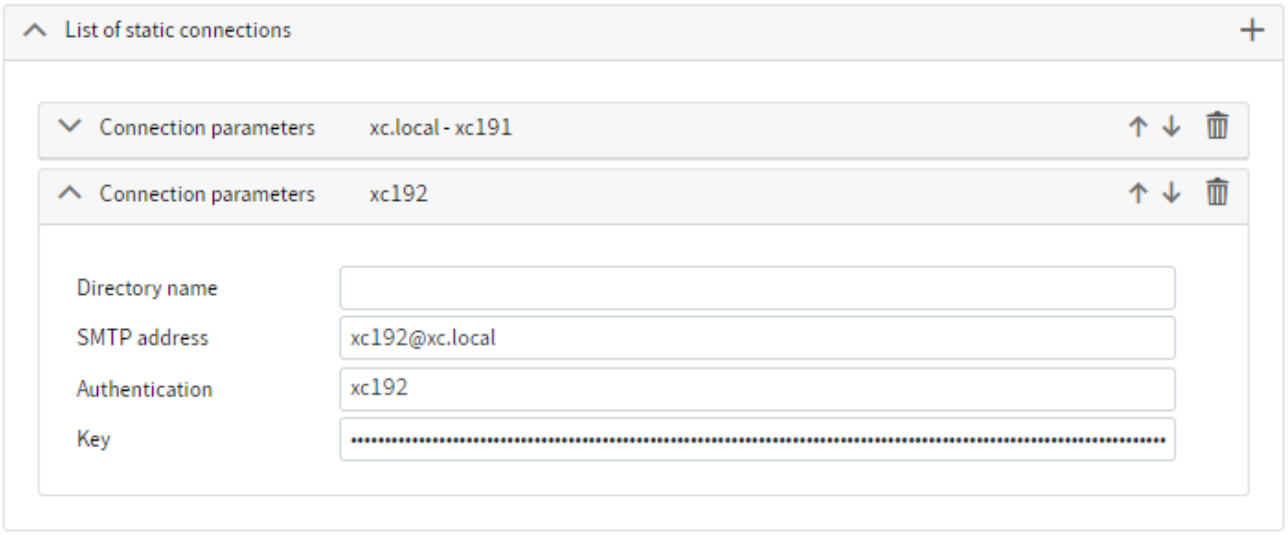
Once we have registered both mailboxes, their entries can be found in *ELOxcBoxReg.xml*.



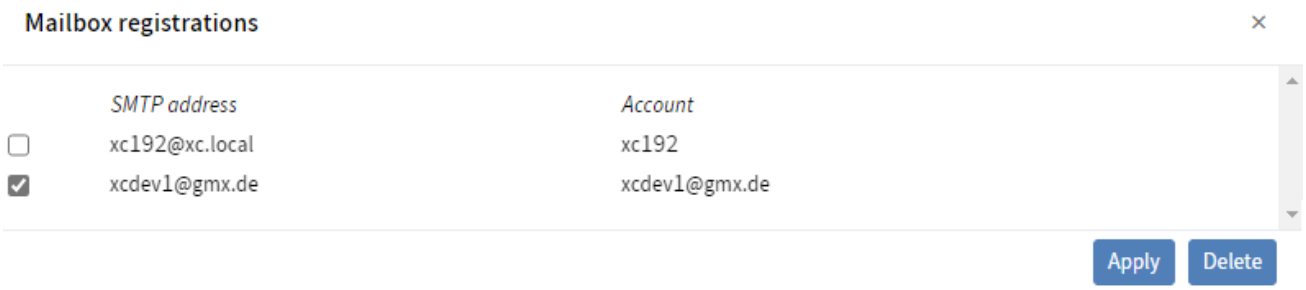
The ELO XC administrator can now transfer this connection data to an instance configuration.



We now transfer the local mailbox to the local Exchange server instance.



Click *Apply* to transfer the connection data to the list of static mailboxes.



Next, switch to the IMAP server instance and open the mailbox registrations window again.

Now you can select the IMAP mailbox and transfer it to the list of static connections.

The local mailbox is still listed in the mailbox registrations even though already transferred the data. This is because you have the option to repeat the process for any number of instances. If you are sure that you no longer need the data, you can delete the entry.

> **Information**
>
> The registration process can be repeated for an SMTP address at any time. ELO XC recognizes the registered connections by address and updates authentication names or passwords in both the *ELOxcBoxReg.xml* file and the instance configuration as required.