



# Technical Release Notes

## enaio®

Version 9.10

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OPTIMAL SYSTEMS GmbH  
Cicerostraße 26  
D-10709 Berlin

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# Technical Release Notes enaio® version 9.10

This document contains information about new developments since the release of version 9.0.

[Service releases](#) with function upgrades are also included in version 9.10. You can also find the status of them here.

Information about the status of support calls can be obtained from OPTIMAL SYSTEMS by sending an e-mail to the Professional Services department based in Berlin: [support@optimal-systems.de](mailto:support@optimal-systems.de).

**Hinweis:** Please also note all the relevant Technical Release Notes and system requirements from the version you are updating to the current version.

# Update Notes

As usual, all components must be updated by setup or MSI simultaneously – server, clients, services, and microservices.

Both functional and security-related errors may occur when accessing data if some components have not been updated.

The installation data can be obtained via the [Service Portal](#). There, you can also request test licenses.

## enaio® server 64-Bit

enaio® server 64-bit can only be used against an Oracle database with a native 64-bit ODBC database driver from Oracle if the following registry entry is added to the `DataBase` key: String: `AlternativeODBC` / value: 1

## Database Adjustments

Adjustments to the database are necessary for the update and are carried out automatically. Depending on the data, these adjustments can take much longer than usual due to the separation of links and notes in hit lists and database.

While the enaio® setup executes the adjustments, a log is made in the `%temp%` directory, and when finished, the log is saved in the `\ server\log` directory.

## Full text: Elasticsearch

Elasticsearch needs to be installed in the 7.2.1 version with the version 9.10. Likewise, the existing index data needs to be [migrated](#). Installation and migration take place before the update.

As of this version, the integration of Elasticsearch requires the configuration of user and password. It is no longer possible to configure an IP filter before Elasticsearch, as in previous versions.

## Encryption of Client-server Communication

The update automatically encrypts client-server communication.

Make sure that all installed clients of the previous version are closed before carrying out the update. This can be achieved either via server notification to all logged-in clients of a server via enaio® enterprise-manager or network-wide using Windows tools.

Failure to do so can cause significant performance issues with enaio® server and an overflow of error logs.

When planning the update, it is important to consider whether third-party applications are connected to the enaio® system, for example, via the Java JDL interface. These are to be dealt with separately and may need to be adjusted individually before the update.

Old components cannot communicate with enaio® server after the update due to the encryption.

### TLS 1.0 and 1.1

TLS 1.0 and TLS 1.1 are still supported by default due to backwards compatibility issues although these logs do not meet criteria set out in the latest security policies. Connections can be restricted to TLS 1.2 by changing the configuration of enaio® server and enaio® gateway. TLS 1.3 is still not supported.

- enaio® server: Modify the `osssl.cfg` file in the server directory: `MinProtocol = TLSv1.2`
- enaio® gateway: Integrate the `security.properties` file in enaio® gateway.

### enaio® http-service

enaio® http-service was not converted to encrypted client-server communication and is therefore no longer available. Projects that use this service can be converted to enaio® appconnector.

#### Endpoints:

Retrieve original file – `DocumentFileService (/documentfiles) - /osrest/api/documentfiles/[id]/[page]`

Retrieve PDF – `DocumentFileService (/documentfiles) - /osrest/api/documentfiles/[id]/pdf`



If you have any questions, contact [Product Management](#). This will be discontinued starting from Version 10.

## 'organization' Microservice

The 'organization' microservice, which had previously been available as a beta version, will no longer be available. Its functions have been integrated into the DMS service.

If the service was installed, it must be disabled via the `servicewatcher-sw.yml` configuration file:

```
name: organizationservice / instances: 0
```

Afterwards, the `organizationservice` directory can be deleted.

## 'archive' Microservice

Archiving via the 'archive' microservice needs to be reconfigured; the structure of the configuration file was changed.

The 'archive' microservice was previously used for archiving with 64-bit servers; as of enaio® version 9.10 it can be used with 32-bit servers.

## enaio® appconnector

enaio® appconnector serves as an interface to mobile applications and as a communication component that allows any application via REST structured access to enaio® server, among other things.

For an external connection of enaio® appconnector

- you previously used standard HTTP authentication up to and including enaio® version 9.0 SP1 (NTLM, HTTP SPNEGO Negotiate (Kerberos), and HTTP Basic Authentication (RFC2617)).
- As of enaio® version 9.10 the connection must be made via enaio® gateway. Standalone operation of enaio® appconnector with direct access is no longer possible.

## enaio® webservice

Authentication: the 'EcmWsMtomWsSecurity' endpoint is no longer available and needs to be changed to 'EcmWsMtomServiceAuth'.

## SAP Integration

The following activities must be performed and observed when updating installations with the SAP components enaio® data2ecm/jump2ecm:

- Connections to enaio® are made exclusively via enaio® gateway; the connection data in SAP are to be switched to enaio® gateway.
- Authentication to enaio® gateway needs to be done using the 'basic authentication' authentication method.
- The network rules used (firewalls, NAT) need to be checked and potentially switched from the previously used port (default: 8050) to the port of enaio® gateway (default: 443).
- An up-to-date SAP transport for enaio® data2ecm/jump2ecm, Version 3.4C, needs to be imported into all connected SAP systems.

## enaio® documentviewer

The following hotfixes must be installed for enaio® documentviewer:

- enaio® documentviewer 9.10 Hotfix 3 from 14 August 2020
- enaio® gateway 9.10 Hotfix 13 from 17 August 2020

It was possible to call up the administration page without logging in due to errors in the integration.

The call is made via the following address:

`http://<gateway-address>/osdocumentviewer/admin`

## Read-only Mode and Crosscheck Property in enaio® webclient

You can assign the **Controlled by crosscheck** property for text fields in index data forms in enaio® editor so they will be prepopulated when a value is selected in a structure tree catalog or when an add-on is selected. It is not possible to also assign read-only status at the object definition level to text fields with this property due to technical reasons. If you need to assign read-only status to these fields, it must be performed in an event script at the level of the deployed clients. If you are using both clients (mixed operation of enaio® webclient and enaio® client), then you need to create the corresponding event scripts for each one.

- Properties of text fields:

[enaio® editor](#)

- Event scripts:

[enaio® editor-for-events](#)

[enaio® webclient](#)

## Events

OnCreateCopy/OnMove: it was previously the case that the events did not run if the object already existed at the new location. They will be run now. The handoff file contains the new parameter 'OBJECTEXISTONTARGETLOCATION' that indicates whether this is the case or not.

Workflow scripts: scripts that previously specified the color of index data via the 'Flags2' parameter need to be switched to the 'TextColor' parameter.

## Debugging Event Scripts

The components needed to debug scripts were removed from enaio® setup and client MSI starting from Version 9.10. These are not necessary in the general workstation environment and can lead to irresolvable interference with software packages of other manufacturers. If debugging is to be enabled on a single workstation, enaio® client must be installed at this workstation via MSI with the parameter REGISTER\_MSDEBUGGER=1.

## Access Rights with Clauses

Clauses on access rights in the clause syntax up to Version 8.10 are not correctly evaluated in some specific cases and also not converted. This only affects clauses on the date/time fields with operators '<', '<=', '>' and '>='. Other operators and fields are not affected.

If you use these types of clauses in your system, please update enaio® server, enaio® administrator, and enaio® client to the latest versions dated September 2020 or later. After you have done this, the clauses will be evaluated correctly and can also be converted to the up-to-date format.

## enaio® client Network Setup

The enaio® setup is no longer able to run a network installation to access the shared network folder of a client installation.

Instead, a network installation is performed via the MSI package `enaio_client_netsetup.msi`. A reinstallation via the MSI package is required for an existing network installation.

## 'XSLT Directory Synchronization' Action

The 'XSLT directory synchronization' action synchronizes Active Directory data with the enaio® user administration. DSDE is installed and integrated for the AD connection by default. Since DSDE cannot be converted to LDAP-S, we recommend integrating the Softerra LDAP Browser:

- Download Softerra LDAP Browser from the [manufacturer's website](#) and install it.
- The PATH system variable must be modified to include the path to the installation.
- The AD call also has to be modified.

**Hinweis:** No changes are necessary for existing installations that are not to be converted to LDAP-S.

## MSI enaio® capture

enaio® capture can be installed via an MSI package as an alternative to a setup installation.

**Hinweis:** Setup installations cannot be updated via the MSI package; installations via the MSI package cannot be updated through the setup.

## enaio® pdfa-dispatcher

Previously, the installation file for enaio® pdfa-dispatcher was copied to the server directory when installing enaio® server 32-bit.

The `axvbdispatcher.exe` installation file will now be copied to the desired location via an MSI. Updates are also performed via a reinstallation using MSI.

## MSI Administration Components 64-bit

The 9.10 version provides administration components in a 64-bit version. enaio® enterprise-manager and enaio® administrator-for-workflow are installed to access a Unicode database.

The installation is performed via the `enaio_administration_x64.msi` MSI package.

**Hinweis:** These administration components are only used for specific projects for new installations with a Unicode database.

## MSI Outlook Add-in for Drag and Drop

The new 'Outlook Add-in for Drag and Drop' add-in enables the drag and drop feature for moving e-mails from Microsoft Outlook to other applications. The e-mails are output in the 'EML' format.

The installation is performed via MSI packages:

`OS_32bit_outlook_add-in_dd.msi` for Microsoft Windows 32-bit and Microsoft Outlook 32-bit.

`OS_64bit_outlook_add-in_dd.msi` for Microsoft Windows 64-bit and Microsoft Outlook 32-bit or Microsoft Outlook 64-bit.

## Migration of the Full-text Index

The enaio® version 9.10 integrates Elasticsearch in the version 7.2.1 instead of 6.2.4. Updates require a migration.

A new full-text index must be created from the existing full-text index for Elasticsearch 7.2.1. The new full-text index is created before the update while enaio® 9.0/8.50/8.10 is running. It does not affect running operations and is immediately operational after the migration.

To do so, Elasticsearch 7.2.1 will be installed on a separate computer with its own full-text index.

A migration tool then creates the new index from the existing index. Thereafter, the update will be carried out by the enaio® including the microservices and Elasticsearch 7.2.1 will be integrated with a new index in enaio® version 9.10.

The new full-text index does not become larger than the existing one when migrating from 9.0 to 9.10; for migrations from the previous version, the new full-text index can become significantly larger.

Time estimates are not only dependent on the number of objects and the hardware, but also on the object types. After initial experience, we expect up to two hours for one million objects.

## Migrating from 9.0 to 9.10

Elasticsearch 7.2.1 must be installed for migration on a separate computer. Enough space must be available for the extensive full-text index. This should be on a logical drive with high performance and fast access.

The installation directory and the HTTP port as well as the index directory are specified during the installation. The service requires an administrative account.

When Elasticsearch 7.2.1 is launched, the file `built-in usr` in the `\config` installation directory is created with a password for user 'elastic' via the batch file `elasticsearch-set-initial-passwords.bat` from the `\bin` installation directory. The password is required for the migration tool and for configuring the microservices.

In addition, the connection data for the existing Elasticsearch installation is entered in the configuration file `elasticsearch.yml` from the `\ config` installation directory:

`reindex.remote.whitelist: <es6host>:<httpport>`. Elasticsearch must be relaunched afterwards.

## Migration tool

The migration tool is located in an archive in the following directory:

`\Win32\Disk1\Microservices\prepareFulltextIndexUpdate\`

It is unpacked on the computer with the new full-text index of Elasticsearch 7.2.1 and contains the following files:

- `application-prod.yml`

Configuration file in which the IP and HTTP port of the Elasticsearch installations need to be entered and the password for user 'elastic': `target.elasticsearch.pwd: password`

Optionally, the number of shards and replicas can be specified. Parameters with default values:

```
enaioblue.number_of_shards=4
enaioblue.number_of_replicas=0
```

- `migration-9.10.0.jar`

Executable JAVA file that is started from the batch file.

- `prepareFulltextIndexUpdate.bat`

Batch file into which the path to the JDK of Elasticsearch 7.2.1 needs to be entered before starting.

For example: `D:\Elasticsearch7.2.1\jdk\bin\java`

Access from this IP to Elasticsearch 6.2.4 must be allowed before starting the migration tool from the batch file:

- via the configuration file `elasticsearch.yml` from the `\config\` directory of Elasticsearch 6.2.4, add the IP of the migration tool to the parameter `intrafind.security.subnet` and restart Elasticsearch 6.2.4.

Then the Elasticsearch 7.2.1 service can be started and the batch file can be executed. The migration logs into the subdirectory `\log\`.

**Hinweis:** The migration tool should be started several times. This migrates the data that has been newly created in the meantime.

### Integration in enaio® version 9.10

After the update to enaio® version 9.10, Elasticsearch 6.2.4 will continue to be integrated with the old full-text index via the 'index' and 'search' microservices.

Before starting the microservices, the configuration file `application-es.yml` is used to enter the IP and port of Elasticsearch 7.2.1 and the password for user 'elastic': `elasticsearch.pwd: password`.

## Migrating from 8.50 to 9.10

The migration from 8.50 to 9.10 is similar to the migration from 9.0 to 9.10 with the following differences:

- the entry `reindex.remote.whitelist` in the configuration file `elasticsearch.yml` is not needed.
- The configuration file `elasticsearch.yml` is used to add the IP of the migration tool to the `intrafind.security.subnet` parameter from the `\config` directory of Elasticsearch 6.2.4.

## Migrating from 8.10 to 9.10

The migration from 8.10 to 9.10 has the following differences:

- the entry `reindex.remote.whitelist` in the configuration file `elasticsearch.yml` is not needed.
- The configuration file `osfts.properties` is used to add the IP of the migration tool to the `security.allowedhosts` parameter from the `\configuration` directory of the Elasticsearch installation.
- The microservices 'index' and 'search' are reinstalled and configured. The configuration file `application-es.yml` for them is used to enter the IP and port of Elasticsearch 7.2.1 and the password for user 'elastic': `elasticsearch.pwd: password`.

## Checking the Migration

The update to enaio® version 9.10 cannot be done until migration is complete. Migration status can be viewed using the logs in the `\log` directory of the migration tool and the following URLs:

- `http://<es7host>:<httpport>/_cat/indices?v`  
Shows the indexing progress.
- `http://<es7host>:<httpport>/systeminfo/_search`  
Shows the status of the actions performed by the migration.



# Unicode Installations

Projects in which any characters can be used for indexing and searched accordingly, including full-text searches, can now be realized with version 9.10 for new installations.

For these projects, there are enaio® webclient, enaio® webclient as a desktop application, and enaio® for mobile available as clients.

The administrative components have not been changed:

- only ANSI characters are still used for names and also for catalog entries in enaio® editor and enaio® editor-for-workflow.
- Unicode characters for user names and group names are not possible in enaio® administrator. Clauses for access rights to object types cannot refer to Unicode indexing values.
- Automatic actions are not available, including archiving and importing and exporting data. Data exports and imports can be integrated via TALEND.
- enaio® client is used exclusively as an administrative component and does not allow the editing of index data. Events can be integrated; however, the scripts cannot refer to Unicode indexing values. Profiles can be created; however, saved searches can only be created without reference to Unicode values.
- enaio® capture cannot be used.

enaio® enterprise-manager and enaio® administrator-for-workflow can be installed in versions for accessing Unicode data in the database.

**Hinweis:** The database currently only supports Microsoft SQL Server.

The installation for Unicode projects differs from the standard installation in a few points:

- Microsoft SQL Server is required as database.
- enaio® server 64-bit is installed.

The option **Unicode** is activated in the dialog during server installation. This option is only offered for new installations.

- enaio® enterprise-manager and enaio® administrator-for-workflow are installed via the MSI package `enaio_administration_x64.msi`.

- The enaio® setup installs the administrative components in their own directory structure, and enaio® client as an administrative component, as well.
- The default installation means the installation of Elasticsearch, microservices, core services, enaio® webclient, and enaio® webclient as a desktop application.
- The add-ins NG can be used; they are installed via MSI packages.
- The workflow models 'Standard ad-hoc workflow' and 'Taskflow' are still in ANSI format; however, they can be converted. enaio® editor-for-workflow offers the conversion of these models during import. The converted models can then be imported.

With the release 10.0, the administrative components are also expected to be completely redesigned, allowing in particular Unicode characters on data forms and Unicode user names and providing automatic actions.

# Administration

## System Roles for enaio® client

The following system roles are new:

- Client: scan documents.

This new system role simplifies the administrative aspect of handling licenses. Every enaio® client was assigned a scan license at startup; now the new system role is checked first.

Every user with the system role 'Client: Start' receives this system role after updating.

- Client: show the number of objects in the register tree.

This display can be deactivated by removing this system role since the display of the number of objects in the register tree does not fully analyze the rights system.

Every user with the system role 'Client: Start' receives this system role after updating.

## System Role 'Client: Export Objects'

The system role 'Client: Export from hit list' has been renamed: Client: Export objects. It is now also required for exporting images from image modules.

In addition, system roles cannot prevent actions for documents opened in external applications.

## System Role 'Editor: Define Visibilities'

This system role is required for setting up specialist administrators in enaio® editor.

Every supervisor receives this system role after updating.

## Specialist Administration for enaio® editor

You can set up specialist administrators to edit the object definition, including the customization of the database in enaio® editor. Specialist administrators can be granted access to single or multiple cabinets. Within these cabinets, specialist administrators can create, edit, and delete objects and make the necessary adjustments to the database.

Cabinets other than the ones assigned will not be shown. Specialist administrators who have opened enaio® editor lock access to the object definition. The object definition is only shown to other users in enaio® editor as read-only.

Reference catalogs referring to other cabinets are shown, and changes to the catalog data are allowed and are applied universally. Add-ons related to other cabinets can be created. Languages cannot be added, and database indexing cannot be performed.

Specialist administrators can be created by users with the system role 'Start editor' and the new system role 'Editor: Define visibility' in enaio® editor.

## enaio® Outlook Add-In NG

Attachments: attachments can be created as documents separately from the e-mail.

Workflows: workflows can be started from the add-in. The configuration takes place via the configuration file `ems-prod.yml`: the input parameters of a workflow are assigned to extraction fields of the e-mail.

The configuration of a workflow integration has the following structure:

<code>mapping</code>	
<code>emsTypes:</code>	
<code>...</code>	
<code>workflows:</code>	
<code>- name: "wfname"</code>	Configuration section for the workflow model.
<code>familyId: "GUID"</code>	Specification of the GUID of the workflow family. The GUID is entered in the properties dialog of the workflow family in enaio® editor-for-workflow.

<code>fileTarget: INFO</code>	Entry for the file: INFO: The e-mail is placed in the file. NONE: The e-mail will not be included in the file.
<code>inputVariables:</code>	List of input parameters of the workflow to which data is assigned.
<code>-name: "parameter1"</code>	Name of the input parameter.
<code>extractionName: "OS:Subject"</code>	Name of the data to be assigned for the 'extraction' service.
<code>-name: "parameter2"</code>	Name of a further input parameter.
<code>extractionName: "OS:MailFrom"</code>	Name of the data to be assigned for the 'extraction' service.
<code>-name: "parameter3"</code>	Name of a further input parameter.
<code>extractionName: "OS:MailCc"</code>	Name of the data to be assigned for the 'extraction' service.
<code>defaultValue: "noCc"</code>	Assignment of a default value that is only entered if assigned data for the extraction is not available.
<code>-name: "parameter4"</code>	Name of a further input parameter.
<code>fixedValue: "fix"</code>	Assignment of a fixed value instead of an extraction value.

## Login Dialog

The default is the Windows user name is used in the login dialog of enaio® client. As an alternative, this can be prepopulated with the user name of the last user at the workstation. To do so, the file `as.cfg` from the `\etc` directory of the data directory in the [SYSTEM] section is appended to include the following: `STORELASTLOGINUSER=1`

## Help Desk Address for enaio® Outlook Add-In NG

enaio® Outlook Add-In NG allows users to send information via e-mail in case of errors. An address that is prepopulated can be entered in enaio® enterprise-manager for this feature: **Server properties > Category: General > General parameters > Help desk e-mail address**

## enaio® administrator

Filter: user management dialogs have been enhanced with filters so that the desired entry can be found faster in long user and group lists.

Sorting: settings in dialogs for sorting can be personalized and saved. The feature is activated via the menu **Tools**.

## enaio® editor

Hierarchy catalog: the keyboard control for configuring hierarchy catalogs, especially for moving entries, has been expanded.

Multiline: rights group control fields have been expanded to include the property 'multiline.'

Other: the former database type 'm/w' for 'male/female' has been expanded to include 'd' for 'other.' The change is made automatically in an update.

## Archiving

The microservice 'archive' was introduced with 9.0 for archiving via 64-bit servers. The microservice is now also available for 32-bit servers and can be integrated with the following archiving solutions:

iCAS / HCP-Archive / Cloudian HyperStore / Dell EMC ECS / S3 (AWS)

## AD Synchronization

The new attribute 'ADSync' was added for objects with the 'Role' class ' in enaio® editor-for-workflow in order to simplify workflow assignments.

## Rights Group Fields

Fields are checked for clauses when converting the rights group add-ons via the automatic 'rights group conversion' action – axacrgcnv.dll – and they may not be offered for conversion.

## LDAP-S

SSL can be used for the connection in LDAP configuration contexts.

## Core Services

SQL: core services no longer execute SQL. The current exception to this is still enaio® appconnector with few call ups.

Tomcat: the Tomcat servers integrated into the core services have been upgraded to the latest version.

## enaio® watch-dog

The administrative component enaio® watch-dog, used to control the FineReader integration, is no longer needed and no longer installed.

## Scripts

### General

#### Internal names

Additional parameters are available with the internal names of the folder type and the object type for the 'OnObjectHistoryEntry' general server event:

`oscabinetinternalname/ostypeinternalname`

### enaio® client: New Script Features

#### Encrypted Scripts

Event scripts for enaio® client are no longer being encrypted. Encrypted scripts can still be imported.

#### Mandatory Fields via Scripts

Text fields can be marked as a mandatory field via event scripts.

For example: `asfile.ActivePage.ASFields.Item("feld").Required = true`

**Hinweis:** Existing mandatory field properties from enaio® editor cannot be suspended.

#### Colors for Index Data

Index data of text fields on forms can be color coded via scripts. The RGB value is entered.

For example: `asfile.ActivePage.ASFields("feld").TextColor = RGB(33,255,59)`

**Hinweis:** Workflow scripts that previously specified the color via the 'Flags2' parameter need to be switched to the 'TextColor' parameter.

#### OnCreateCopy/OnMove

It was previously the case that the 'OnCreateCopy' and 'OnMove' events did not run if the object already existed at the new location. Now the events are executed. The handoff file contains the new parameter `OBJECTEXISTONTARGETLOCATION`. Values: 1 (object exists)/0 (object does not exist).



### OnValueChanged

The event will now be executed if users have already selected a value from a catalog or add-on dialog, and not just after leaving the field.

## enaio® webclient: New Script Features

Some of the events and new features have already been introduced with service releases for enaio® webclient 9.0.

### File Names Can Be Read Out when Creating New Files (SR)

Whether customers do not want to lose file names during storage or the original name of the file contains important information, the [formHelper.getFileInfo\(\)](#) method returns file names in the 'AfterValidate' and 'BeforeValidate' events and can be written to index data fields, for example. This only applies to the creation of new documents, but not e-mails.

### Opening the Hit List for Multiple Objects (SR)

A hit list can be opened for a list of objects using the [openResultListByIds](#) method.

#### Parameters

- Open a hit list in the active tab or in a new browser tab (in enaio® mobile always in the active tab)
- List of IDs: with information about the object ID and the object type ID for each object
- Optional: specify the title and description of the hit list window
- Optional: for hit lists with one entry, execute the standard action (default) or open the hit list

### Bugfixes in Scripts (SR)

- It is generally not possible to open more than one tab in a mobile environment. If it is defined in a script that another tab should open, then enaio® mobile will always open the display in the currently opened tab
- The [AfterValidate](#) event is executed after the index data has been validated. Previously, this action could only transfer or cancel the action, not make further changes to the data. Now, changed data can be transferred with a return value of '2'.

## Events

The following events are now available for enaio® webclient:

- AfterLogin: after login and before enaio® webclient is shown.
- OnAddLocation: before another location is added to a document.
- OnCreateCopy: before creating the copy of a register or document.
- BeforeOpen: before opening a folder, register, or document.
- BeforeStartQuery: before starting a query.
- OnMove: before moving a register or document.

## Global Scripts

Two types of global scripts can be included for enaio® webclient:

- GlobalWebClientScript: global script for which all object type scripts can access the contents.
- GlobalWebClientObjectTypeScript: global script for which all scripts of the object types of the folder type can access the contents.

## Notification by Toaster

Events can be used to output notifications via toaster via the 'formHelper' object:

```
formHelper.showToast({type}, {message}, {title}, {timeout})
```

## Mandatory Fields

Text fields can be marked as mandatory fields via event scripts.

```
setRequired({isRequired})
```

**Hinweis:** Existing mandatory field properties from enaio® editor cannot be suspended.

## Page Controls

The pages of page controls can be addressed by internal name:

```
formHelper.getFieldsFromPageControl({internal}, {pageIdentifier})
```

## Index Data

A script allows access to initial index data of a field, even if it has been edited:

```
getInitialValue({transformValues})
```

## Environment

Scripts can determine on which device and operating system the application is running and respond to differences:

```
formHelper.getPlatformInfo()
```

## Preview Area

The object that is shown in the preview area can be specified via scripts:

```
formHelper.updateViewer({objectId})
```

## Accessing Executable Programs

Executable programs on client machines can be accessed from enaio® webclient as a desktop application:

```
formHelper.execProgramAsync({pathToProgram}, {programArguments},  
{returnResult})
```

## Catalogs via Scripts

The function `createPseudoCatalog({catalogConfig},{dataCallback})`, which assigns catalog functions to fields, has been extended by the 'hideValues' parameter via which values from gathered data can be hidden.

## Marking Table Rows

It is possible to react to the marking of a table row and to changes of the marking via a script:

```
addSelectionChangeListener(fn)
```

# enaio® client

## Hit Lists

The configuration of static columns has been expanded and the file size of documents added as a field, and date fields of object types offered as facets in order to provide a clearer view of hits.

## Statistic Columns

Static columns for hit lists are activated/deactivated via **Setting > Fields** in enaio® client.

Columns for text notes, preview notes, and favorites have been added.

The static column 'Link' only shows links and no longer the text notes.

Documents with variants have a new icon: 

## File Size in Hit Lists

The file size of documents can be shown in hit lists.

The display of the file size is configured via **Setting > Fields > Document basic parameters > Hit list**. The setting is valid cabinet-specific for all document types.

The file size can also be used for the window title and sending.

Size ranges are shown for groupings of hit lists.



## Facets

Facets are shown in hit lists of full-text queries. Previously, the basic facets for the 'Created' and 'Edited' date fields were automatically offered. The possibility of activating date fields as facets for each object type in addition to list catalogs has been added.

In addition, all date fields for showing facets can be configured by administrators. In this manner, it is possible to assign the hits any time period, such as quarters.

## Link Area

Previously, the link area was shown/hidden in a cabinet-specific way via a folder type option. Now it is shown/hidden via **Setting > Result window** and applies to all hit lists, including to history, portfolios, and favorites.

The link area is shown to all users who had it shown for at least one folder type after updating to version 9.10.

## Subscriptions

New options have been added for subscribing to objects and queries: 'Object moved' for documents and registers and the request for documents and registers, the 'Active variant modified' and 'Variant created' status for W-Documents.

Object subscriptions:

	Folders	Registers	Documents
Index data modified	x	x	x
Content changed	-	-	x
Object marked for deletion	x	x	x
<b>New:</b> Object moved	-	x	x
New location added	-	-	x

<b>New:</b> 'Active variant' status changed	-	-	W-Documents <b>Hinweis:</b> For W-Document with variants via the original in variant administration
<b>New:</b> Another variant created	-	-	W-Documents <b>Hinweis:</b> For W-Document with variants via the original in variant administration

Request subscriptions:

	Folders	Registers	Documents
Index data modified	x	x	x
Content changed	-	-	x
Object created	x	x	x
Object marked for deletion	x	x	x
<b>New:</b> Object moved	-	x	x
New location added	-	-	x

## Sending E-mail: Content as Password-protected \*.zip Files

The content of a document can be sent as a \*.zip file. The possibility to protect the \*.zip file with a password has been added.

## Recycle Bin: Location of Deleted Items

The previous filing location can be shown, if still available, for objects in the recycle bin.

## Variant Administration

When opening a reference to an inactive variant, the user is now also offered the option of opening variant administration.

## Index Data of the Database Type 'm/w'

The index data of the database type 'm/w' for 'male/female' has been expanded to include 'd' for 'other.'

## Workflow: Inactive Users

Users can be marked as 'inactive' in enaio® editor-for-workflow. Inactive users will no longer appear in workflow contexts, such as in the workflow user add-on.

## Changing the Password

If the password does not match the specifications, the user will now receive instructions when changing the password.

## Field Settings for Sending

Users can now also select folder fields, in addition to the file size, in the field settings for sending.

The file size and folder fields are included as part of the document basic parameters.

Settings for the hit list are also automatically adopted for sending and window titles if no fields are specified there.

## Copy/Paste

The following spaces are sometimes copied to the clipboard when copying strings in external applications. These spaces are now removed when inserting from the clipboard into index data forms.

## Online Help

Online help, which used to be included as \*.chm files, is now accessed in the browser via the documentation portal on [help.optimal-systems.com](https://help.optimal-systems.com).

# enaio® webclient

## Hit Lists – Additional Information via Additional Icon Columns

Hit lists and object lists (for example, in inboxes, folders, registers, or favorites) now have the following additional icon columns:

- **File format**

Shows the corresponding icon of the file format.

- **Links**

Shows whether the corresponding object has links created in enaio® client. The display of the links has been separated from the display of notes.

- **Signature**

Shows whether the corresponding object has signatures.

- **Notes**

Now shows whether the corresponding object has notes using an icon. Links and notes had previously been shown together; now they have been separated. Links are now shown in a separate icon column.

- **Preview annotations**

Shows whether the corresponding object has annotations in the content preview.

- **Favorites**

Shows whether the corresponding object was added to the favorites.

This will give you additional information about objects. You can set individually whether icon columns are shown or not by column in the user settings of enaio® webclient.

**Hinweis:** The settings apply to both enaio® webclient and enaio® client and vice versa.



## Workflows for Specific Object Types Only

A process model defined in enaio® editor-for-workflow can now only refer to very specific object types depending on business processes. The permitted object types are specified during the configuration. If an enaio® user starts a workflow with an object, only the allowed workflows are shown for selection; a failed start is no longer possible. Only objects of the permitted types may be added to the workflow file. This also applies to workflows that were started without an object reference and to which objects should be added to the workflow file in later work items.

**Hinweis:** This function is analyzed by enaio® client already starting with version 9.0.

## One-click Access – Flexible Exchange via Links

The **Copy link...** command has been added to the context menu with the following options to help enaio® users communicate and share information with each other:

- **Preview URL**


This well-known feature creates a link to open a preview of the content and object data of an object in the browser and copies it to the operating system's clipboard (Windows, Android, iOS).

- **Webclient URL**

This new feature creates a link to open the location of an object in the browser in enaio® webclient and copies it to the operating system's clipboard (Windows, Android, iOS).

- **Reference**

This well-known function creates \*.os reference files of documents, folders, and registers and stores them in the local file system. The reference files can be saved or inserted as usual in the file system, in Microsoft Office applications, or in e-mails. Double-clicking (Windows) or long-pressing (Android, iOS) on \*.os reference files can open again the linked documents, folders, or registers in enaio® webclient as a desktop application and in enaio® mobile.

**Hinweis:** The previous context menu command  **Preview link** has been adopted by the context menu command **Copy link...** and renamed to **Preview URL**. The **Webclient URL** will also be shown when sending an e-mail.

## Changing the Color Scheme

You can now choose between a light and a dark color scheme. The color scheme can be changed in the user settings of enaio® webclient.

## Query Behavior

As an option, documents that are not in any register can be shown in the hit list for combined searches with register and document data. This setting can be made in the user settings of enaio® webclient.

**Hinweis:** The settings for query behavior are synchronized between enaio® client and enaio® webclient. This means that the setting for the **Always include objects without register assignment** option, which you make in enaio® webclient, also applies to enaio® client and vice versa.

## enaio® webclient as a desktop application

### Integration with Microsoft Outlook

enaio® Outlook Add-In NG now allows you to copy e-mails from Microsoft Outlook directly to enaio® webclient as a desktop application. An index data form can now be provided for the automatic transfer and manual processing of metadata during the transfer. E-mail-specific standard index data fields are automatically populated with content from the e-mails. Further individual index data fields that the administrator has defined for the object type on the form can be edited manually. In this manner, you can control the use of rights group controls at this point in the process to determine which persons will have access permissions in enaio® to the stored e-mails, for example.

The e-mails stored in enaio® are categorized accordingly in Microsoft Outlook.

### Integration with SAP

enaio® 9.10 allows you to integrate enaio® webclient as a desktop application in SAP scenarios. To do so, enaio® jump2s is used to map document management scenarios via the anchor from a enaio® file directly to the corresponding SAP business object (business partner, posting document, billing document, etc.) and enaio® jump2ecm for the reverse entry point of SAP into enaio® webclient as a desktop application.

## enaio® webclient as a desktop application and enaio® mobile

### Offline Mode

enaio® webclient and enaio® webclient as a desktop application support offline working since enaio® mobile 9.0 SP1 SR3. This gives you access to folders, registers and documents, index data, and content for reading at any time, even without connecting to the enaio® server or the enaio® database. Simply add to favorites your registers, folders, and documents and start offline synchronization. The status of the offline synchronization is visualized in a user-friendly way that makes synchronization errors immediately recognizable and can be assessed thanks to error categorization.

You can export the index data, the preview PDF, or the original file for synchronized documents in offline mode as needed. If you edit the exported original file, you can import it into the enaio® system as soon as the connection to the enaio® server is restored.

### External Tray

The external tray manages documents that you created with local applications for later saving in enaio®. The handling while working in the external tray has been expanded for release 9.10. When filing or checking in a document from the external tray again, the user is now presented with a list of corresponding object types and a list of all checked-out documents, including checked-out document variants.

**Hinweis:** The external tray is available in enaio® webclient as a desktop application and in enaio® mobile since the release 9.0.

## enaio® mobile

### enaio® mobile – Always and Everywhere

We round off our product portfolio and also open enaio® mobile for use on smartphones with the release 9.10. A specially adapted layout supports the operation on smartphones, for example, in the settings, in variant administration, and in running workflows. Now the preview and the location can be opened via a single touch on smartphones. The app automatically detects whether enaio® mobile is running on a tablet or smartphone, and adjusts accordingly how it is operated.

enaio® mobile is backwards compatible with release 9.10. That means that the app can be used in both 9.0 and 9.10 system environments. Features that were not implemented until enaio® mobile 9.10 are not shown by the app when using 9.0.

The enaio® mobile 9.10 app will be available for download in the corresponding stores. Managing and distributing the app using [mobile device management tools](#) is easy.

**Hinweis:** Currently, enaio® webclient and enaio® mobile cover 90 percent of the functionality of enaio® app. The plan is to replace enaio® app when enaio® 10.0 is released by implementing the remaining features such as offline workflows.

# Documentation Portal

As of enaio® version 9.10, the software documentation of OPTIMAL SYSTEMS presents itself in a new look at [help.optimal-systems.com](https://help.optimal-systems.com).

In addition to online help for enaio® webclient, the central documentation portal of OPTIMAL SYSTEMS now offers you online help for enaio® client, enaio® administrator, enaio® capture, enaio® editor and much more. All documentation in PDF format is available as a PDF download from the help portal, unless it has already been converted to HTML format.

You will also find release information, system requirements, and information on administration and installation in the central documentation portal in the future. [help.optimal-systems.com](https://help.optimal-systems.com) also allows you to get started with the developer documentation and provides initial insights in the future plans for OPTIMAL SYSTEMS GmbH using roadmaps.

Redirects for your bookmarks have been set up. The online help can also be made available offline on request.

**Hinweis:** The documentation is removed from the product setup of 9.10. There is only a link to the home page of the documentation portal in the documentation directory included with the installation data.

# Service Releases

OPTIMAL SYSTEMS publishes regular service releases for current versions. Service releases include new features, function upgrades, and new components.

These new features are documented below, divided into components and service releases. In addition to the information on installation and requirements, further detailed descriptions of the new features can also be found here.

Service releases and updates for Version 9.10:

- [enaio® webclient and enaio® mobile](#)
- [enaio® Outlook Add-In NG](#)
- [Outlook Add-In for Drag & Drop](#)
- Services
  - [enaio® appconnector](#)
- Microservices
  - [DMS service](#)
  - [EMS service 'mailstorage'](#)

The installation data can be obtained via the [Service Portal](#). The SP file available there contains a list with all changes such as bugfixes and hotfixes for the individual components (Software > enaio 9.10 > SP.txt).

**Hinweis:** If possible, please install all available hotfixes for enaio® to ensure that the overall system runs as reliably as possible.

## enaio® webclient and enaio® mobile

On the following pages, you will find information about enaio® webclient and enaio® mobile.

## Installation Requirements

The following hotfixes must be installed to ensure the system functions properly:

- enaio\_outlook\_addin\_ng.msi 9.10.12
- enaio\_office\_addin\_ng.msi 9.10.29
- enaio\_groupwise\_addon\_ng.msi vom 9.10.9

You can find the history of the installation requirements [here](#).

## Installation

enaio® webclient is installed via the `oswebclient_setup.exe` setup and updated to Version 9.10 SR13 hotfix 2.

The latest version of enaio® webclient as a desktop application will automatically be available and installed following the update. Existing profiles will be imported.

The MSI packages are available in the same version for installation via MSI with administrative rights.

enaio® mobile can be downloaded from the respective app stores.

## Changes

A detailed list of changes for all components can be found in the [Service Portal](#) in the SP file (Software > enaio 9.10 > SP.txt)

## Service Release 1

Here, you will find an overview of the new features in enaio® webclient and enaio® mobile service release 1.

### Same Functionality as enaio® client

New Actions in the History (SR)

enaio® not only logs changes to the index data but also actions such as signing, outputting, and changing.

This data is displayed to the user in the history:



- in the preview area in the document details or
- in the content preview (send preview URL)

These actions for changes to the document lifecycle are new in the history:

- Location removed
- Status 'active variant' changed
- Additional variant created
- Register moved
- Document moved

#### New Subscription Actions on Objects (SR)

Transaction: moved documents or registers are to be processed or checked, for example

Use the following subscription actions to set up a useful change management system:

- Register moved
- Document moved

#### Workflow File – Workspace and Info Area (SR)

The following can be set in the properties of a workflow model:

- whether both areas are used in the file
- or only the workspace is required – if so, the info area is not visible.

This attribute cannot be changed using a script.

If the info area is not visible:

- all objects in the info area are displayed in the common workflow file.
- Newly added objects appear in the workspace automatically.

**Hinweis:** In enaio® mobile, both areas are displayed in separate tabs

## E-mail Management

### E-mail Filing Made Easy (SR)

Our improved drop zone – for filing e-mails in 'EML' format – provides customers who want to create e-mails independently of enaio® Outlook Add-In NG using a different e-mail program or via the browser version of enaio® with the best possible support.

When creating new objects, users drag and drop an e-mail into the drop zone:

- The e-mail file, including attachments, is uploaded to the drop zone,
- the e-mail-specific fields are pre-filled in the index data form (automatic extraction by our EMS service 'mailstorage'),
- if the configuration allows it, further index data can be entered or modified manually before the object is created,
- if [Outlook Add-In for Drag & Drop](#) is installed, the e-mail can be dragged and dropped directly from Microsoft Outlook.

#### Voraussetzung:


The e-mail object types are integrated via the [configuration](#) of the EMS service 'mailstorage'.

## User-friendliness

### Improved Visibility of Functions (SR)

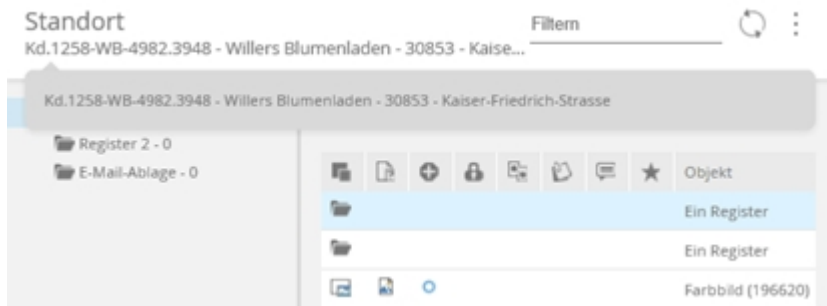
Users who are not yet very familiar with the enaio® webclient in particular may find filing new documents a less than intuitive process – we are working to improve this area and are creating a frequently used function that is visible from the context menu:

- A button is displayed at the location (the same as **New** entry in the context menu),
- A mouse click or touch lists all selectable object types.

In the object search, the  icon for creating a new folder is visible by default – not only when moving the mouse.

### Visualization of Long Titles (SR)

Long titles that are cut off in dialogs can be displayed in full in a tooltip with a single click.



## Internal Logging (SR)

The internal log and information on the versions in use provide basic information to support evaluations and analyses.

The 'Info' window, which is opened via the user menu:

- Displays the version of the specific application for enaio® webclient as a desktop application and enaio® mobile,
- enables a log file to be downloaded:
  - containing all data from the 'Info' window,
  - containing the log of the agent and the browser,
  - containing user agent information such as device, operating system, and browser including corresponding versions,
  - containing the native log of the electron framework used from enaio® webclient as a desktop application.

## For Our Scripters

### File Names Can Be Read Out when Creating New Files (SR)

Whether customers do not want to lose file names during storage or the original name of the file contains important information, the `formHelper.getFileInfo()` method returns file names in the 'AfterValidate' and 'BeforeValidate' events and can be written to index data fields, for example. This only applies to the creation of new documents, but not e-mails.

### Opening the Hit List for Multiple Objects (SR)

A hit list can be opened for a list of objects using the `openResultListByIds` method.

## Parameters

- Open a hit list in the active tab or in a new browser tab (in enaio® mobile always in the active tab)
- List of IDs: with information about the object ID and the object type ID for each object
- Optional: specify the title and description of the hit list window
- Optional: for hit lists with one entry, execute the standard action (default) or open the hit list

## Bugfixes in Scripts (SR)

- It is generally not possible to open more than one tab in a mobile environment. If it is defined in a script that another tab should open, then enaio® mobile will always open the display in the currently opened tab
- The [AfterValidate](#) event is executed after the index data has been validated. Previously, this action could only transfer or cancel the action, not make further changes to the data. Now, changed data can be transferred with a return value of '2'.

## New in enaio® webclient as a desktop application

### Single Sign-on via NTLM Login (SR)

Rely fully on single sign-on (SSO) and relieve your system administrators through automated access data management – the enaio® webclient is here to help.

#### Voraussetzung:

- Ensure that enaio® server, enaio® gateway, and the client computer are in the same Windows domain or that the different domains trust each other (domain controller)
- Disable login with user name and password (basic authentication) in enaio® gateway and enable NTLM
- Use official certificates for https connections
- Create all Windows users as enaio® users in the enaio® user management (AD sync, identical user name is important; password does not matter)

What does single sign-on (SSO) mean for the individual user?

The user starts the enaio® webclient as a desktop application after successfully logging on to the Windows client computer.

If **Windows login** is active and at the last login **automatic login**:

- was enabled, the user will be automatically logged in without being shown the login dialog.
- was disabled, the login dialog opens, the **user name** and **password** fields are empty and read-only.

#### MSI Package with Profile Allocation (SR)

##### Software distribution – made more flexible

When rolling out enaio® webclient as a desktop application, provide additional information about profiles that helps users to log in.

- Create a configuration file `init-profiles.json` with the desired profile data,
- copy it into the directory containing the MSI package during software distribution,
- install the MSI package – this copies the configuration file into the corresponding local user directory  
`C:\Users\<User name>\AppData\Roaming\enaio-webclient,`
- the configuration is loaded when starting enaio® webclient as a desktop application,
- the profile data is added and can be selected by the user,
- the configuration file is deleted.

A [configuration file](#) that you can use as a template is available for downloading:

[init-profiles.json](#)

## New in enaio® mobile

#### Creating Image Files (SR)

The creation of image files has been expanded for mobile devices, such as smartphones and tablets that use Android as their operating system.

Up to now, image files have been uploaded in the following ways:

- Creation from the gallery or the file system via **Share | Send** to enaio®,
- by starting to create a new image file in a location that is already open,

- directly in the drop zone of a new image file, the creation of which has already been started,
- in the external tray of the device to be created in enaio® later,
- from enaio® by selecting a file from the file system.

It is now also possible to access the device's camera directly from the new image file.



## Service Release 2

The service release 2 for enaio® webclient and enaio® mobile is primarily a service release for troubleshooting.

## Service Release 3

The service release 3 for enaio® webclient and enaio® mobile is primarily a service release for troubleshooting.

New features in the service release:

### Flexible Installation Path for enaio® webclient as a desktop application (SR)

The [MSI installation](#) of enaio® webclient as a desktop application can be performed as a global installation available to all users by specifying an installation path via the WEBCLIENT\_INSTALLDIR parameter.

Example: `C:\>D:\enaio-webclient-app-x64.msi WEBCLIENT_INSTALLDIR="C:\enaio webclient"`

This means that enaio® webclient as a desktop application can also be installed in an application directory such as `C:\Program Files\OPTIMAL SYSTEMS\enaio\enaio webclient` for all users.

**Hinweis:** Existing MSI installations must be uninstalled in advance. The saved user-specific profiles used for login will be retained.

When installing via 'enaio-webclient-app.exe', which can be downloaded from enaio® webclient, the [user](#) can specify the installation path and, if they have administrative rights, install enaio® webclient as a desktop application globally for all users.

**Hinweis:** enaio® webclient as a desktop application must be uninstalled in advance to switch to global installation. The saved user-specific profiles used for login will be retained.

### File Export (SR)

The number of files that can be exported via the enaio® webclient context menu as content in a ZIP archive or in a PDF file is limited to 200 files by default.

The maximum number can be adjusted via the enaio® appconnector [osrest.properties](#) configuration file.

Parameter: `maxFilesInZip/maxFilesInPdf`

## Service Release 4

The service release 4 for enaio® webclient and enaio® mobile contains bug fixes and the following new features:

## Same Functionality as enaio® client

### Creating Reference Documents (SR)

Reference documents in enaio® refer to the content of already filed objects, but have their own index data.

You can now also create a reference document in enaio® webclient, enaio® webclient as a desktop application, and enaio® mobile via the **Create reference document** context menu option after a selected object has been copied. A reference document can be created at the selected filing location in a different object type, and therefore also across cabinets.

This function is not available for objects in workflow files and in offline mode.

Reference documents were previously not recognizable as such in enaio® mobile. This is now no longer the case.

### Creating Links (SR)

Links are cross-references between filed objects (documents, registers, and folders).

You can now create links in enaio® webclient, enaio® webclient as a desktop application, and enaio® mobile. First, the source object is copied. Then, the target object is selected and the link between the two objects is created via the **Insert > Link object** context menu option.

Links cannot be created for typeless objects in workflow files or in offline mode.

When creating a link, you can also enter text containing information such as the reason for the link. Any text you enter can be edited later in the overview display of filing locations, links, and references.

Linked objects are indicated by an icon in the static column for links. The tooltip displays the number of existing links for the object.

### Showing Filing Locations, Links, and References (SR)

The context menu contains a new function called **Locations, links, and references**, which gives you a complete overview of all filing location relationships of an object. This function allows users to see which filing locations, links, and references a selected object has. The information is displayed as a mixed hit list and all of the familiar default functions can be used.

Functions for editing and deleting the respective link text are available for displayed link objects.

This function is not available in offline mode.



### Searching with the Not-equal Operator (SR)

You can now use the not-equal operators ('<>' or '!=') to search for objects that do not meet the search criteria in enaio® webclient, enaio® webclient as a desktop application, and enaio® mobile. Not-equal operators can be combined with placeholders ('\*' or '?') and used in text, number, date/time, and catalog fields, but not in table fields.

### Searching for Empty Fields (SR)

You can search for empty fields in enaio® webclient, enaio® webclient as a desktop application, and enaio® mobile by using the special value '#NULL#'. You can use the not-equal operators '<>' or '!=' to invert the value. If you enter '<>#NULL#' in a text field, only those objects will be found for which this field is not empty, i.e., which contain data.

### Column Configurations for Workflow Inboxes (SR)

The user can configure how system columns in workflow inboxes are displayed in enaio® webclient, enaio® webclient as a desktop application, and enaio® mobile. Previously, this was only possible in enaio® client.

A tab to configure the system columns has been added to the user menu settings. Here, users can show and hide the **Work item**, **Created**, **Workflow**, **Subject**, **Due on**, and **Personalized by** system columns. The settings are saved on a user-specific basis.

## E-mail Management

### Showing E-mail Content (SR)

E-mails filed in enaio® ('EML' format) can be opened directly with the mapped e-mail program (Windows computer) or apps (tablet/smartphone) using the **Show content** command in the context menu. This allows you to quickly access e-mail attachments that are not rendered in enaio® and therefore not shown in the content preview, for example. Depending on the e-mail program, actions such as reply and forward are available for the displayed e-mail.

When the command is run in enaio® webclient as a desktop application and enaio® mobile, the e-mail will be opened using the corresponding programs configured in the local operating system. In enaio® webclient, you can download the e-mail attachment and individually transfer it directly to the e-mail program via browser settings.

## User-friendliness

### Decimal and Thousands Separators (SR)

Decimal numbers are often used in accounting and finance in particular. This means decimal and thousands separators need to be displayed correctly according to the language.

Unlike enaio® client, date, time, and decimal values in enaio® webclient, enaio® webclient as a desktop application, and enaio® mobile are displayed based on the language selected by the user:

German	Date:	TT.MM.JJJJJ   HH:mm:ss
	Decimal number:	10983,30 (comma)
English	Date:	DD/MM/YYYY   HH:mm:ss
	Decimal number:	10983.30 (point)
French	Date:	JJ/MM/AAAA   HH:mm:ss
	Decimal number:	10983.30 (point)

To improve the readability of longer decimal numbers, a thousands separator can be configured per user language via the [Administration Console](#). Default values:

- German: point
- English: comma
- French: space

When indexing decimal fields, users must not enter thousands separators. They are automatically displayed in read-only index data forms according to the language setting when the focus is cleared, as are the decimal separators.

## Setting Up Index Data Forms

### Quickfinder Add-on in the Workflow (SR)

This add-on imports data from the fields of another object and is now also supported in workflow forms.

### Workflow Recipient Add-on with Tree Structure (SR)

You can use the workflow-recipient add-on to assign participants to an activity of a process.

Previously, the add-on always displayed the values as a list. The configuration is now evaluated as a tree structure.

## enaio® webclient: New Script Features

### Managing Scripts (SR)

Event scripts are created, edited, and saved in the database with enaio® editor-for-events, which is part of enaio® client.

Script files for events in enaio® service-manager can be integrated to simplify script processing and management, especially for comparing development, test, and productive systems. The event scripts in enaio® editor-for-events can then only consist of integrating and executing a script file from the configuration area of enaio® service-manager.

The configuration area can also be integrated into [Git](#) and managed via branches.

### Requirement

- enaio® webclient 9.10 SR4
- enaio® gateway 9.10 Hotfix 13
- DMS service 9.10 Version 3.0.2
- enaio® service-manager 9.10 Hotfix

### Configuration Area of enaio® service-manager

The configuration files of the microservices are located in the `\service-manager\config` directory.

Public directories can be created in this directory, which can be accessed by enaio® webclient via enaio® gateway.

The following directory structure must be created:

```
\service-manager\config\apps\<project>\public
```

Example: `\service-manager\config\apps\osweb\public`

The path can contain multiple project directories with respective subdirectories before the public directory.

The scripts are then saved in the `\public` directory.

## Integrating Scripts

The scripts in public directories must be integrated via enaio® editor-for-events in event scripts or in `GlobalWebClientScript`:

```
formHelper.getPublicResource("<projekt>/public/eventscripname.js").then  
(result =>  
{  
  eval(result);  
})
```

Further information can be found in the [developer documentation](#).

### API: Table Columns (SR)

Table columns in forms can be hidden:

```
hideColumn(colId)
```

Table columns can be marked as mandatory fields:

```
setColumnRequired({columnIndex})
```

### API: Content Editing (SR)

A modal dialog with further creation options can be opened to edit the content of an enaio® document.

```
formHelper.showEditContentDialog({osid})
```

### API: Save Workflow Data (SR)

Saving the workflow data: The optional `closeWorkflowMask` parameter is new and can be used to control the closing of the form.

```
formHelper.save({closeWorkflowMask?})
```

## Service Release 5

The service release 5 for enaio® webclient and enaio® mobile is a service release for troubleshooting.

## Service Release 6

Service release 6 for enaio® webclient and enaio® mobile contains bug fixes and the following new features:

### E-mail Management

#### Module-spanning Document Types

The filing of e-mails is supported by the automatic extraction of mail-specific fields by the EMS service 'mailstorage'. This feature was previously only available for standard document types.

Module-spanning document types – types where the user chooses which type of file to file (for example, Windows document, grayscale image, or e-mail) – are now offered by all clients for e-mail creation if corresponding [configurations](#) of the EMS service 'mailstorage' are available. They are also automatically indexed with the extracted mail-specific data. In this case, the user no longer needs to handle indexing.

#### E-mail Deduplication and Indexing

The user has various options for filing e-mails in enaio®: manually using drag and drop, by uploading a file, or by storing one or more e-mails using enaio® Outlook Add-In NG. The EMS service 'mailstorage' via whose configuration index data processing could previously be activated is always used centrally for the filing process.

The [configurations](#) of e-mail deduplication is also evaluated by enaio® webclient as a desktop application together with enaio® Outlook Add-In NG now.

We currently provide e-mail deduplication exclusively for filing via enaio® Outlook Add-In NG. There is no check performed yet when filing manually using drag and drop or uploading to the drop zone.

### Time Limit for the Creation of E-mails

A time limit to create e-mails has been included in enaio® webclient as a desktop application together with enaio® Outlook Add-In NG. The remaining amount of time is displayed to the user. No further e-mails from enaio® Outlook Add-In NG will be accepted during this time period. The creation is canceled upon expiration.

## Offline mode

### Offline Synchronization

The synchronize feature for working in offline mode of enaio® webclient as a desktop application and enaio® mobile checks if previews need to be created again. For performance reasons, only default file formats for which it is assumed that previews can be created are checked. If you are using additional file formats for which previews can be created, then specify such file formats in the [administration console](#) using the

`com.os.osdrt.offline.rendition.additional.suffixes` parameter as a comma-separated list of formats. All file formats will be checked if you enter the '\*' placeholder.

#### Default file formats

bmp	csv	dib	doc	docm	docx	dot
dotx	dwg	dxf	emf	eml	epdf	epi
eps	epsf	epsi	exr	gif	ico	jpeg
jpg	mim	mpp	mpt	msg	odg	odp
ods	odt	pbm	pcx	pdf	png	pnm
pot	potm	potx	pps	ppsm	ppsx	ppt
pptm	pptx	ps	ps2	ps3	psd	ptif
rtf	svg	svgz	sxc	sxi	sxw	tif
tiff	wbmp	wmf	wps	xbm	xcf	xls
xlsb	xlsm	xlsx	xltm	xltx	xmind	xml

## Integration into Other Systems

### Calling with Configured Hit List

Links to an enaio® webclient URL can be integrated wherever URLs are evaluated, primarily in web pages. Parameters in the URL are used to specify the actions to be executed and the enaio® object with which the action is to be executed.

enaio® webclient is then opened with a configured hit list when called. The object IDs are specified for the hit list and a main heading and subheading for the hit list:

```
http://<DOMAIN>/osweb/#/entry?hitlist=<Objekt-ID1,Objekt-ID2,Objekt-IDn>&title=<text>&subtitle=<text>
```

## Links to External URLs or External Applications

### External URLs

External web applications can be called via embedded URLs in enaio® webclient, enaio® webclient as a desktop application and enaio® mobile. The call is made via links in the context menu.

The configuration is done via the `tools.json` file that has to be created in the `\service-manager\config\apps\osweb\public\external_tools` directory.

We provide a configuration file as a template for [downloading](#).

The [configuration](#) specifies object types, client types, localizable labels, icons, and the URL.

### External Applications for enaio® webclient as a desktop application

External applications can be called in enaio® webclient as a desktop application similar to enaio® client, in addition to URLs. It is also configured via the `tools.json` file.

The path to the application and parameters for the transfer of data is specified in the [configuration](#). Files can be transferred to the application via the context menu depending on the application.

## Service Release 7

Service release 7 for enaio® webclient and enaio® mobile contains bug fixes and the following new features:

## Integration into Other Systems

### Calling with Filtered Hit List

Hit lists can now also be filtered for links to an enaio® webclient URL.

Strings for the filter field can be transferred using a parameter in the URL.

The [parameter](#) is available for opening a location as well as retrieving saved searches and full-text searches.

Example: `/#/entry?fulltextsearch=<search term>&filter=<filter value>`

## Links to External URLs or External Applications

### Links for Users and Groups

External web applications can be called via embedded URLs in enaio® webclient, enaio® webclient as a desktop application and enaio® mobile. The call is made via links in the context menu.

External applications can also be called by transferring data in enaio® webclient as a desktop application.

The function has been expanded. Users and groups to which the link is made available can now be specified.

Example:

```
{
  "objectTypes": "*",
  "users": ["ANN,BOB"],
  "groups": ["DEV,CON"],
```

The configuration is done via the `tools.json` file that has to be created in the `\service-manager\config\apps\osweb\public\external_tools` directory.

We provide a configuration file as a template for [downloading](#).

The [configuration](#) specifies authorized users, object types, client types, localizable labels, icons, and URLs, as well as paths to applications.



### External URLs with Placeholders

Embedded URLs for calling external web applications can be specified for the current user (\$username\$) and the object ID (\$osid\$) of the object used for the call using placeholders. The IDs are output in comma-separated format for multiple objects.

Example:

```
"path": "https://app.optimal-systems.com?soos=$username$&osid=$osid$",
```

Example call for enaio® coLab:

```
"path": "http://<ip>:<port>/#/wizard/$osid$/username$",
```

The configuration is done via the `tools.json` file that has to be created in the `\service-manager\config\apps\osweb\public\external_tools` directory.

We provide a configuration file as a template for [downloading](#).

The [configuration](#) specifies authorized users, object types, client types, localizable labels, icons, and URLs, as well as paths to applications.

## Office Integration

### Checking In as a New PDF Variant

The enaio® Office Add-In NG **Save and check in > As new PDF variant** feature is now also supported by enaio® webclient as a desktop application for editing documents that have been transferred.

## E-mail Management

### E-mail Deduplication

If e-mails have already been created in enaio®, reference documents or further filing locations can be created via enaio® Outlook Add-In NG when creating them again.

If multiple e-mails are created, the user can now apply the selected setting for all subsequent deduplications of the created e-mail in the first deduplication dialog.

## enaio® webclient: New Script Features

### Loading Scripts

It has been possible to manage scripts and other resources in a public directory using enaio® service-manager since [SR 4](#).

However, integrating scripts via 'formHelper.getPublicResource' does not enable the scripts to be debugged.

Scripts integrated via 'formHelper.includePublicScript' can be debugged.

Further information can be found in the [developer documentation](#).

## Service Release 8

The service release 8 for enaio® webclient and enaio® mobile is a service release for troubleshooting.

## Service Release 9

The service release 9 for enaio® webclient and enaio® mobile is primarily a service release for troubleshooting.

New features in the service release:

The following new feature is available for enaio® webclient as a desktop application:

### Printing Documents in enaio® webclient as a desktop application

The **Print document** function for individual documents opens a printing dialog with the following options:

- Select printer or Find printer
- Select printer-specific settings
- Select number of prints
- Specify pages to be printed

**Hinweis:** The **Current page** option always prints the first page.

The printing dialog is only offered for documents for which a PDF preview can be rendered.

## Service Release 10

The service release 10 for enaio® webclient and enaio® mobile is a service release for troubleshooting.

## Service Release 11

The service release 11 for enaio® webclient and enaio® mobile is a service release for troubleshooting.

## Service Release 12

The service release 12 for enaio® webclient and enaio® mobile is a service release for troubleshooting.

## Service Release 13 / Hotfix 1 / Hotfix 2

The service release 13, the service release 13 hotfix 1 and the service release 13 hotfix 2 for enaio® webclient and enaio® mobile are service releases for troubleshooting.

## Installation Requirements Service Releases

### Installation Requirements SR 13 Hotfix 1

- ax.exe 9.10.740
- osappconnector\_hotfix.exe 9.10.0.142
- enaio\_outlook\_addin\_ng.msi 9.10.11
- enaio\_office\_addin\_ng.msi 9.10.26

### Installation Requirements SR13

- ax.exe 9.10.739
- osappconnector\_hotfix.exe 9.10.0.140

- enaio\_outlook\_addin\_ng.msi 9.10.10
- enaio\_office\_addin\_ng.msi 9.10.22

## Installation Requirements SR13

- ax.exe 9.10.737
- osappconnector\_hotfix.exe 9.10.0.140
- enaio\_outlook\_addin\_ng.msi 9.10.7
- enaio\_office\_addin\_ng.msi 9.10.22

## Installation Requirements SR11

- ax.exe 9.10.732
- osappconnector\_hotfix.exe 9.10.0.132
- enaio\_outlook\_addin\_ng.msi 9.10.4
- enaio\_office\_addin\_ng.msi 9.10.21
- enaio-webclient-app-<x64/x86>.msi 9.10.0.11

## Installation Requirements SR10

- ax.exe 9.10.731
- osappconnector\_hotfix.exe 9.10.0.129
- enaio\_outlook\_addin\_ng.msi 9.10.4
- enaio\_office\_addin\_ng.msi 9.10.20

## Installation Requirements SR9

- ax.exe 9.10.726
- osappconnector\_hotfix.exe 9.10.0.125

- enaio\_outlook\_addin\_ng.msi 9.10.0.27
- enaio\_office\_addin\_ng.msi 9.10.16

## Installation Requirements SR8

- ax.exe 9.10.723
- osappconnector\_hotfix.exe 9.10.0.124
- enaio\_outlook\_addin\_ng.msi 9.10.0.27
- enaio\_office\_addin\_ng.msi 9.10.14

## Installation Requirements SR7

- ax.exe 9.10.721
- osappconnector\_hotfix.exe 9.10.0.120
- enaio\_outlook\_addin\_ng.msi 9.10.0.27
- enaio\_office\_addin\_ng.msi 9.10.14

## Installation Requirements SR6

- ax.exe 9.10.720
- osappconnector\_hotfix.exe 9.10.0.116
- enaio\_outlook\_addin\_ng.msi 9.10.0.26
- enaio\_office\_addin\_ng.msi 9.10.13

**Hinweis:** To use service release 6, it is mandatory that enaio® Outlook Add-In NG (enaio\_outlook\_addin\_ng.msi 9.10.0.26), if used, the EMS service (mailstorageservice-app.jar 9.10.1 [6]), and enaio® client (ax.exe 9.10.720), if used, are updated at the same time because there are dependencies between them. Previous versions can no longer be used due to these dependencies.

## Installation Requirements SR5

- ax.exe 9.10.717
- osappconnector\_hotfix.exe 9.10.0.115
- enaio\_outlook\_addin\_ng.msi 9.10.0.19
- enaio\_office\_addin\_ng.msi 9.10.12

## Installation Requirements SR4

- ax.exe 9.10.717
- osappconnector\_hotfix.exe 9.10.0.114
- enaio\_outlook\_addin\_ng.msi 9.10.0.19
- enaio\_office\_addin\_ng.msi 9.10.10

## Installation Requirements SR3

- ax.exe 9.10.713
- osappconnector\_hotfix.exe 9.10.0.112
- enaio\_outlook\_addin\_ng.msi 9.10.0.15
- enaio\_office\_addin\_ng.msi 9.10.9

## Installation Requirements SR2

- ax.exe 9.10.711
- osappconnector\_hotfix.exe 9.10.0.104
- enaio\_outlook\_addin\_ng.msi 9.10.0.12
- enaio\_office\_addin\_ng.msi 9.10.7

## Installation Requirements SR1

- ax.exe 9.10.708
- osappconnector\_hotfix.exe 9.10.0.102
- oxjobwfm.dll 9.10.526
- enaio\_outlook\_addin\_ng.msi 9.10.0.9
- enaio\_office\_addin\_ng.msi 9.10.6
- EMS service 'mailstorage' 9.10.1

## enaio® Outlook Add-In NG

On the following pages, you will find information about enaio® Outlook Add-In NG.

### Installation Requirements

enaio® Outlook Add-In NG requires the current version of [EMS service 'mailstorage'](#).

### Installation

enaio® Outlook Add-In NG is installed and updated via the MSI package in the following directory:

```
\Win32\Disk1\components\enaio Outlook Add-In NG
```

### Changes

A detailed list of changes for all components can be found in the [Service Portal](#) in the SP file (Software > enaio 9.10 > SP.txt)

### Service Release 1

Here, you will find an overview of the new features in enaio® Outlook Add-In NG 9.10.0.9.

### Opening Locations (SR)

E-mails can have more than one location – if an e-mail is marked in Outlook and has more than one location, then the application is opened via **Open location** in enaio® webclient as a desktop application:

- in a new tab,
- a corresponding hit list is opened containing all the locations of the e-mail,
- and information about the e-mail (from the subject line) is displayed in the title of the hit list.

### Creating E-mail Attachments as Documents (SR)

E-mail attachments can be created as documents in enaio® via the enaio® Outlook Add-In NG:

- Mark an attachment,
- Select the **Create attachment in enaio** function in the ribbon,
- Select a location and document type.

**Hinweis:** The add-in configuration dialog can be opened via the arrow icon in the **enaio** ribbon group. In the **More settings** tab, it can be specified that the attachment should then be removed and replaced by a reference in the Outlook e-mail. This behavior can be specified [administratively](#). The user cannot then disable the option.

### Deduplication (SR)

Before creating an e-mail via enaio® Outlook Add-In NG, you can check whether the e-mail has already been created.

Users will then receive a corresponding message and can:

- specify the location as an additional location for the e-mail or create a reference document,
- recreate the e-mail,
- cancel the creation.

**Hinweis:** The check and action must be set up [administratively](#) per document type.

## Service Release 2

Here, you will find an overview of the new features in enaio® Outlook Add-In NG 9.10.0.21.



## Client Preselection

You can create user-specific settings at workstations on which enaio® client and enaio® webclient as a desktop application are installed to determine to which of these clients enaio® Outlook Add-In NG connects. Users configure these settings via the add-in settings in the **General** tab.

A preselection can be made via an [MSI installation parameter](#). Users can change this setting.

MSI parameter	Values
RichClientPriority	0: enaio® client (default) 2: enaio® webclient as a desktop application

## Deleting E-Mails from Outlook After Creation

Users can set e-mails to be automatically deleted from Outlook after they have been created in enaio® via the add-in settings in the **Client settings** tab. They are moved to the deleted objects folder. This behavior can be specified [administratively](#). The user cannot then disable the option.

## Size Limit for Creating E-Mails

Registry entries on the workstations can be used to limit the maximum number of e-mails that can be created together and the maximum size of e-mails.

**Hinweis:** High values may lead to errors during the creation process.

Key	String	Value
\HKLM\SOFTWARE\<WOW6432Node>\OPTIMAL SYSTEMS\enaio\enaio Outlook Add-In NG	MaxMailBulkStorageCount	Maximum number Default: 50
	MaxMailBulkStorageSize	Maximum size in MB Default: -1 (no limit)

## Restoring E-Mails

E-mails transferred via enaio® exchange can be replaced in Outlook by enaio® reference files. The original versions of these e-mails can be temporarily restored for display purposes.

This function must be enabled via a registry entry on the workstations. The **Restore e-mail** function will then be added to the ribbon in Outlook.

Key	String	Value
\HKLM\SOFTWARE\<WOW6432Node>\ OPTIMAL SYSTEMS\enaio\enaio Outlook Add-In NG	ShowRestore	No value

Additional requirements:

- enaio® exchange web service must be accessible via the URL from the following registry entry:  
  \HKLM\SOFTWARE\<WOW6432Node>\OPTIMAL SYSTEMS\Services\OSExchange\API
- The user is authenticated via NTLM by default. If this is not possible, a login dialog for basic authentication will open. In this case, enaio® webservices must be accessible via the URL from the following registry entry:  
  \HKLM\SOFTWARE\<WOW6432Node>\OPTIMAL SYSTEMS\Services\ECMWS\API

## Service Release 3

You will find an overview of the new features in enaio® Outlook Add-In NG 9.10.0.26 [here](#).

**Hinweis:** To use service release 3, it is mandatory that the EMS service (`mailstorageservice-app.jar 9.10.1 [6]`), enaio® webclient (`oswebclient_setup.exe 9.10.0.6`) if used, and enaio® client (`ax.exe 9.10.720`), if used, are updated at the same time because there are dependencies between them. Previous versions can no longer be used due to these dependencies.

### Cooperation with enaio® webclient as a desktop application

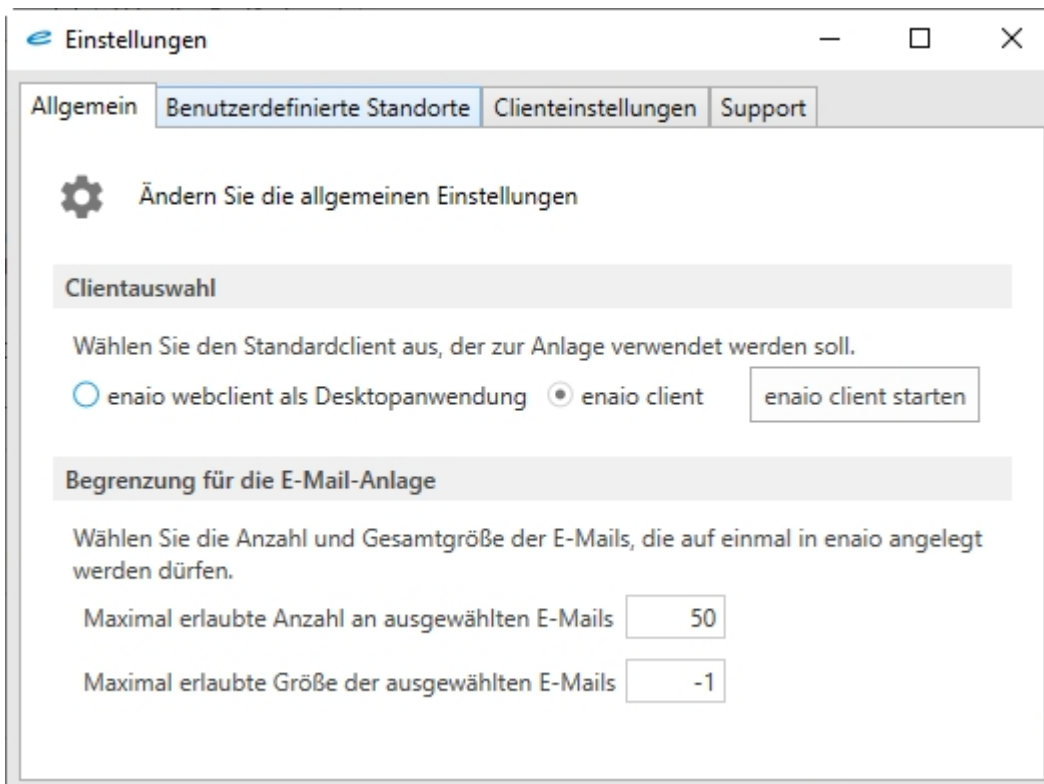
enaio® Outlook Add-In NG now also supports deduplication and creation as a module-spanning document type including automatic extraction of mail-specific index data, in addition to the already evaluated configuration for index data processing when working with enaio® webclient as a desktop application.

Corresponding [configurations](#) of the EMS service 'mailstorage' must be available for deduplication as well as for module-spanning document types and indexing.

#### Size Limit for Creating E-Mails

As of service release 2, [registry entries](#) on workstations can be used to limit the maximum number of e-mails that can be created together and the maximum size of e-mails.

Users can now configure this setting via the add-in settings in the **General** tab.



## Outlook Add-In for Drag & Drop

On the following pages, you will find information about Outlook Add-In for Drag & Drop.

**Hinweis:** OPTIMAL SYSTEMS creates updated MSI packages on a regular basis for licensing reasons. Only use the most recent version for each new installation. Existing installations do not need to be updated for licensing reasons.

## Installation

The MSI packages are located in the installation data in the \Win32\Disk1\components\enaio Outlook Add-in for Drag and Drop directory.

OS\_32bit\_outlook\_add-in\_dd.msi for Microsoft Windows 32-bit and Microsoft Outlook 32-bit.

OS\_64bit\_outlook\_add-in\_dd.msi for Microsoft Windows 64-bit and Microsoft Outlook 32-bit or Microsoft Outlook 64-bit.

## Service Release 1

Here, you will find an overview of new features connected to Outlook Add-In for Drag & Drop Version 9.10.0.5 and later.

### Outlook Add-In for Drag & Drop

The new add-in allows e-mails to be dragged and dropped from Microsoft Outlook into any (browser) application:

- E-mails are extracted in 'EML' format as a complete file with all attachments.
- The add-in can be used to create e-mails independently of enaio® Outlook Add-In NG.
- It allows drag and drop during the creation and content editing of the new object in enaio® webclient and drag and drop into a location in enaio® client.
- Third party add-in (OEM) with OS MSI packages.
- The add-in is immediately enabled after restarting Outlook.
- This function is not visibly integrated. The add-in can be deactivated/activated via add-in management in Microsoft Outlook.
- E-mails in 'EML' format can be opened without restrictions by other operating systems and with different browsers.

## Core Services

On the following pages, you will find information about service updates:

- [enaio® appconnector](#)

## enaio® appconnector

Here, you will find information about enaio® appconnector.

### Installation Requirements

An overview of all installation requirements for enaio® appconnector can be found in the developer documentation.

### Installation

enaio® appconnector can be installed and updated via the `SETUP.osappconnector_hotfix.exe` in the `\Win32\Disk1\SP` directory can be used for updates.

### Changes

A detailed list of changes for all components can be found in the [Service Portal](#) in the SP file (Software > enaio 9.10 > SP.txt)

enaio® appconnector Version 9.10.0.102

#### OSREST – Links (SR)

Links between documents, registers, and folders can be created in enaio® client and allow users to quickly access linked objects.

enaio® webclient shows if and how many links are currently available – further functions are still pending.

Links can be accessed via enaio® appconnector/OSREST-API.

[/osrest/api/documents/links/{id}](#)

- Query all links to an object
- The access rights to the linked objects are taken into account (and are not displayed in the result)
- Link texts are displayed

```
{
```

```
"relatedObjectId": 58585,  
"relatedObjectType": 262236,  
"text": "link text"  
},  
{  
  "relatedObjectId": 58652,  
  "relatedObjectType": 262236,  
  "text": ""  
}
```

enaio® appconnector Version 9.10.0.104

#### E-Mail Indexing (SR)

When transferring index data from the EXTRACTION service, only data up to the maximum length of the assigned database field is entered. Previously, data that was too long was interpreted as an error.

The [/osrest/api/documentfiles/processmetadata](#) method has been adapted accordingly.

**Hinweis:** A warning is logged whenever data is shortened.

#### New Endpoints (SR)

- Request, create, and edit links: [/osrest/api/documents/links/{id}](#)
- Create reference documents: [/osrest/api/documents/insert/{locationId}](#) Parameter: `isgreenarrowreference`
- Retrieve reference document: [/osrest/api/documents/greenarrowlinks/{id}](#)

enaio® appconnector Version 9.10.0.112

#### File Export (SR)

The number of files that can be exported via the enaio® webclient context menu as content in a ZIP archive or in a PDF file is limited to 200 files by default.

The maximum number can be adjusted via the [osrest.properties](#) configuration file.

Parameter: `maxFilesInZip/maxFilesInPdf`

## Microservices

On the following pages, you will find information about the microservices updates:

- [DMS service](#)
- [EMS service 'mailstorage'](#)

### DMS service

Here, you will find information about the DMS service.

### Installation Requirements

An overview of the installation requirements can be found in the [developer documentation](#).

### Installation

Services are installed via the `os_service-manager_setup.exe` file in the `\Win32\Disk1\Microservices\Service-Manager` directory. Updates take place via `enaio_services_versionfix.exe` in the `\Win32\Disk1\SP\Microservices` directory.

#### DMS service 9.10 Version 3.0.0

##### Release of DMS Service Version 3.0.0

The DMS service for enaio® is the new REST API (including API project) for Version 9.10 and is already included in enaio® coLab. The first official version is available now. More features and bugfixes will be released regularly.

Our new DMS service means that an alternative is available in addition to enaio® appconnector (OSRest). Although it currently has a significantly reduced scope in terms of functionality, it does feature a new technology stack: a scalable, cloud-enabled microservice built for large systems. The long-term goal is to let this REST API grow steadily and to align its range of functions with those in enaio® appconnector.

Version 3.0.0 of the DMS service for enaio® is the first official release of the new microservice. The REST API consists of the Core API and an enaio-specific part: the Native API. It is identical to the 'yuuviz-core' codebase and allows you to use plug-ins developed for both the enaio® and yuuviz® product lines. The detailed range of functions and further information can be found in the [developer documentation](#).

The first batch of functions were taken from enaio® appconnector (OSRest). The roadmap for further versions is in progress. Should you have any specific requests regarding new projects or would like to receive an up-to-date comparison list of the two REST APIs, please contact [pm@optimal-systems.de](mailto:pm@optimal-systems.de) directly.

DMS service 9.10 Version 3.0.2

### Object History: New Endpoints

- GET dms/objects/{objectId}/history – returns the history of a document
- POST dms/objects/search – query for system:history is possible

**The following endpoints have been corrected. The return values have a slightly changed [structure](#).**

- POST dms/objects/search
- POST dms/objects/search/native
- GET dms/objects/{objectId}
- POST dms/objects

Some system fields now return an integer value as a bit combination instead of the description, for example 'system:OBJECT\_FLAGS'. The reason for this is that multiple values are possible rather than just one.

Further information can be found in the [developer documentation](#).

**Hinweis:** If you are already using the DMS service, please check the processing.



DMS service 9.10 Version 3.1.0

### Variant Administration: New Endpoints

- POST dms/objects/{objectId}/native/variants
- PUT dms/objects/{objectId}/native/variants/{activateId}
- GET dms/objects/{objectId}/native/variants

### Moving Objects: Extensions

- PATCH api/dms/objects/{objectId}
- Typeless documents in the external tray can be typed.

### Setting Retention with the new 'OBJECT\_RETENTION\_PLANNED' Parameter

- POST dms/objects
- POST dms/properties/{objectId}
- PATCH dms/properties/{objectId}

### New Query Parameter

- GET dms/objects/{objectId}
- A query parameter for querying the insertable child object types has been added.

### Schema Returns Child Objects

- GET dms/schema
- The schema returns static insertable child object types by default.

### POST, PATCH api/dms/objects/{objectId}

- Previously, a single object was accepted as an input, contrary to the documentation. This is no longer the case. As has been already documented, the input must be an array.
- The result is now output as a JSON with a result list instead of a single DMS object. In the future, the DMS service will always return result lists by default. The documentation refers to this fact.

**Hinweis:** If you are already using the DMS service, please check the processing. Further information can be found in the [developer documentation](#).

DMS service 9.10 Version 3.2.1

## Changes in Parameters

- [GET dms/objects/{objectId}](#)

The spelling of one parameter has been changed. Please note the camel case:

`includeallowedchildobjecttypeids -> includeAllowedChildObjectTypeIdS`

The `rights` parameter has been renamed to `includePermissions`.

A few optional parameters have been added. The default settings do not cause any changes in the return values.

- [POST /api/dms/objects](#)

The multipart 'data' section now requires the 'application/json' content type.

- [POST /api/dms/objects/<objectId>](#)

The multipart 'data' section now requires the 'application/json' content type.

- [PATCH /api/dms/objects/<objectId>](#)

The request body requires the 'application/json' content type.

## System Information: New Endpoints

- [GET api/dms/info](#)

enaio® version and DMS version

- [GET /api/dms/info/native](#)

enaio® version, DMS version, and detailed information on the user and the service URIs

## Editing History: Extensions

- [GET /api/dms/objects/{objectId}/history](#)

`size` – number of returned entries per page

`page` – page number of page returned

## New Parameter 'minimalResponse'

The following endpoints now use the `minimalResponse` parameter for faster operation:

- [POST /api/dms/objects?minimalResponse=true](#)  
[POST /api/dms/objects/<objectId>?minimalResponse=true](#)
- [PATCH /api/dms/objects/<objectId>?minimalResponse=true](#)

## Tables

Column names are also returned for tables in index data forms.

**Hinweis:** If you are already using the DMS service, please check the processing. Further information can be found in the [developer documentation](#).

DMS service 9.10 Version 3.2.2

## Changes in Parameters

The `system:versionSeriesCheckedOutBy` parameter has been replaced by `system:versionSeriesLockedBy`.

## Marking Documents as Checked Out/Checked In

- [PATCH /dms/objects/<objectId>/contents/native/locked](#)  
Mark document as checked out
- [PATCH /dms/objects/<objectId>/contents/native/unlock](#)  
Mark document as checked in

## Expanding Searches

- [POST /dms/objects/search](#)

Search for all checked-out documents

```
SELECT * FROM system:locked
```

It is currently still not possible to limit this search using clauses.

**Hinweis:** If you are already using the DMS service, please check the processing. Further information can be found in the [developer documentation](#).

DMS service 9.10 Version 3.3.0

## History entries

- [POST /api/dms/objects/{objectId}/history](#)

Entries can be written to the editing history of objects.

## EMS service 'mailstorage'

Here, you will find information about the EMS service 'mailstorage'.

### Installation

Services are installed via the `os_service-manager_setup.exe` file in the `\Win32\Disk1\Microservices\Service Manager` directory. Updates take place via `enaio_services_versionfix.exe` in the `\Win32\Disk1\SP\Microservices` directory.

### Changes

A detailed list of changes for all components can be found in the [Service Portal](#) in the SP file (Software > enaio 9.10 > SP.txt)

EMS service 'mailstorage' Version 9.10.1

#### E-mail Attachments as Links (SR)

E-mail attachments can be created as documents directly from the current version of enaio® Outlook Add-In NG. You can configure the EMS service 'mailstorage' to specify that the attachment from the Outlook e-mail should then be deleted and replaced by a reference to the document in enaio®.

The configuration is done via the `ems-prod.yml` configuration file and applies to all document types.

### EMS Deduplication (SR)

When creating an e-mail via enaio® Outlook Add-In NG, it can be checked whether an e-mail that a user wants to create has already been created. If this is the case, the user can create a reference document instead, select another location, or recreate the e-mail.

Checks and actions are configured per document type via the `ems-prod.yml` configuration file.

**Hinweis:** Deduplication is currently only supported when creating e-mails via enaio® Outlook Add-In NG.



Head Office

Cicerostraße 26

10709 Berlin

Telefon: +49 30 895708-0

[kontakt@optimal-systems.de](mailto:kontakt@optimal-systems.de)