



# Technical Release Notes

## enaio®

Version 10.0

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# Technical Release Notes enaio® version 10.0

These pages contain information about new developments since the release of version 10.0 as well as information about updates.

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.

## Service Releases

OPTIMAL SYSTEMS publishes regular [service releases](#) for current versions.

A detailed list of changes for all components can be found in the [Service Portal](#) in the release information and in the [release-info-10-00.json](#) file. There is a file in JSON format that contains detailed information about the component in each of the component downloads.

Current Service Releases:

- [DMS service 5.5.2](#) (09/29/2023)
- [enaio® webclient and enaio® mobile SR 7 hotfix 7](#) (17 August 2023)
- [enaio® repository-manager 4.3.2](#) (04/19/2023)
- [enaio® gateway](#) (06/09/2023)

# Update Notes

As usual, all components must be updated 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

The 32-bit application server has been [discontinued](#) as of version 10.0. [Adjustments](#) are necessary for updates to 64-bit servers. 64-bit servers of version 9.10/9.0 can be easily updated to version 10.0 via setup.

## enaio® version 10.0: Updates

The previous enaio® setup is no longer available with version 10.0. All updates and installations are made via MSI packages or individual component setups.

We provide a migration tool that adjusts the data from the previous enaio® setup and its previous installation directories in preparation of an update from versions 9.0 and higher. After the adjustments, updates of the installed components are possible via the new MSI packages or component setups in the existing directories. Configuration files are retained. The same holds true for files that were created there for specific projects.

The migration tool must be run on each workstation where components were installed via the previous enaio® setup.

```
\Tools\Migration\<Version>\Disk1\setup.exe
```

MSI packages and component setups can be found under the installation data in a new directory structure:

- Backend: server, services, optional services, Elasticsearch, FineReader.
- Frontend: administrative components, clients, add-ons.

The administrative components and enaio® client are available in 32-bit ANSI and 64-bit Unicode versions and can only be used in ANSI and Unicode installations, respectively. Clients in non-corresponding installations are stopped after startup with a corresponding message.

- Prerequisites: technical components that may be required for components to work together.
- Tools: applications used for specific updates and adjustments.

Updates within the version will be performed via updated MSI packages and component setups in the future. Patches are still delivered for enaio® server.

## Update Process

With the [discontinuation](#) of the 32-bit server, starting point of an update to version 10.0 is always version 9.10 or version 9.0 with 64-bit server. This means that the [migration](#) must be performed before the update in installations with 32-bit server.

These are the work items for the update:

- Copy the respective installation directories to the computers on which the update is to be performed. Installations via network directories can lead to errors.
- Migration tool

Run the migration tool `setup.exe` located in the `\Tools\Migration\<Version>\Disk1\` directory on the computers on which the components were installed with the previous enaio® setup.

**Hinweis:** Use the migration tool in a current version (creation date as of 24 April 2021, 5:12 p.m.; `setup.inx` as of 27 April 2021, 9:58 a.m.).

The migration tool adjusts the data in the existing installation directories and is a prerequisite for ensuring that configuration files, project-specific files, and customer-specific files are retained and correctly integrated in the existing installation directories during subsequent installations.

- Backend



Install the backend components using the component setups from the appropriate directories into the existing installation directories.

- Server

enaio® server must be started after the update.

- Services

enaio® gateway must be installed after all other services for new installations; however, it is not necessary for updates.

- Microservices/service manager

If necessary, install new or previously unnecessary services, for example, the DMS service for enaio® webclient.

- Webclient

- Elasticsearch

An [update](#) is only possible from version 9.10.

- FineReader

ABBYY FineReader needs to be [uninstalled](#) and reinstalled.

- Frontend

Install the frontend components using the MSI packages from the appropriate directories into the existing installation directories.

- ANSI/Unicode administration

enaio® administrator, enaio® editor, enaio® enterprise-manager, enaio® editor-for-workflow, and enaio® administrator-for-workflow will be installed.

The included `asinit.cfg` file does not need to be adjusted for updates; the existing file is retained with the connection data.

- ANSI/Unicode client

The included `asinit.cfg` file does not need to be adjusted for updates; the existing file is retained with the connection data.

- Capture

enaio® capture is not supported in Unicode installations.

- Add-ons/printer
- Webclient desktop app

enaio® webclient as a desktop application is automatically updated on startup with the update of enaio® webclient.

You will find other components in the directories that also need to be updated depending on your installation.

## Elasticsearch

version 10.0 integrates Elasticsearch in the version 7.9.3. The update of Elasticsearch 7.2.1 from version 9.10 will be performed by the current Elasticsearch setup. No further adjustments are required. A [migration](#) is necessary when updating earlier versions.

## ABBYY FineReader

ABBYY FineReader is updated to version 12.4 for version 10.0. To do so, ABBYY FineReader must be uninstalled from the setup it was installed with, and then reinstalled from the current FineReader setup. You will need a new license from OPTIMAL SYSTEMS. The version can be used temporarily with test license. No further adjustments are required.

## enaio® webclient

Installation requirement: enaio® webclient requires the 'dms' microservice, in addition to the previous installation requirements. The DMS service is installed via enaio® service-manager and requires no further configuration by default.

Settings for enaio® gateway: Additional [settings](#) are required for enaio® webclient.

Form design: The responsive form design for enaio® webclient introduced with version 9.0 can no longer be disabled. If you have not yet changed the forms, check them after the update.

## enaio® app for Smartphones and Tablets

The iOS version 7.1 is no longer supported. You need the iOS version 8 or higher.

## TLS 1.2.

Due to reasons of backward compatibility, TLS 1.0 and TLS 1.1 were still used by enaio® server by default. This is no longer the case for enaio® server after an update to version 10.0. Only TLS 1.2 will be supported. Check your projects, if necessary, for their compatibility with TSL 1.2.

enaio® gateway still needs to be manually adjusted.

## enaio® repository-manager

enaio® repository-manager was newly developed and will now be installed as a microservice. The [configuration](#) must be done again. The microservice provides configuration interfaces that simplify the configuration. It is not necessary to make changes within SAP and to the connectors. The SAP client component is now installed via an MSI package. Existing SAP client components need to be replaced.

Support for the ILM interface has been added.

**Hinweis:** An up-to-date SAP transport for enaio® data2ecm data2ecm/jump2ecm, Version 4.0A, needs to be imported into all connected SAP systems. enaio® jump2ecm

## Import/Export: Excel and Access

When importing and exporting Excel and Access data, it is necessary to update the Microsoft Access Database Engine on the enaio® administrator workstation. A version of the Database Engine can be found under the prerequisites directory in the installation data. Check if Microsoft provides a more recent version.

Excel 3 and 4 are no longer supported.

## DICOM import

The automatic action is no longer available.

## Debugging Components for enaio® client

Components for debugging scripts used to be installed together with the installation of enaio® client. For licensing reasons, this is no longer possible. Instead, Visual Studio can be installed on the corresponding workstations. Visual Studio is available with different licensing models. Recommendation: Visual Studio Community Edition with workload 'Cross-platform .NET Core Development' installed.

## enaio® client: Object Definition and Security System

enaio® client automatically updates the object definition and the security system at midnight every night. All hit lists are closed for this purpose.

## E-Mail Deduplication

Configurations for e-mail deduplication in the 'mailstorage' EMS service are now also used by enaio® client. This enables the user to create another location or reference document for e-mails there as well, provided that it has been configured accordingly.

## DMS service

Modifying functions and returns:

- GET dms/objects/{objectId}/native/variants

The original is now always returned, even if there are no variants.

- Tables: The data had previously been attached by default when tables were updated. Now it is replaced (default: REPLACETABLEFIELDS=1).

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

## SQL Queries in enaio® client

The action buttons of SQL queries used to execute scripts are active even if no hits are produced. This was not the case previously. Please note this change in behavior for scripts.

## Apache Formatting Objects Processor

FOP will now be installed in the updated 2.5 version and integrated. Will be installed in the `\etc\fop25` directory of the data directory. The corresponding registry key `\Conversion\FOPPath` will also be changed. The existing installation in the `\etc\fop` directory is retained. Adjustments also need to be made to projects using FOP.

## enaio® service-manager

Spring Boot will be updated to version 2.3 when enaio® service-manager is updated. This changes in the interface of enaio® services-admin. However, there are no functional differences for configurations.

**Hinweis:** If the 'Connection to server failed' error message appears when launching enaio® services-admin, then reload the page. It will generally be shown correctly after reloading.

## enaio® enterprise-manager

Some settings that are no longer evaluated were removed. For example, settings for the full text and for IMAP.

## Discontinuation of the 32-bit Application Server in enaio® version 10.0

We are officially discontinuing the 32-bit application server with enaio® version 10.0. There will only be a 64-bit server available. Why are we going this route?

- 32-bit servers are outdated as all server operating systems are now 64-bit.
- enaio® performs better with the 64-bit application server because it can address more memory. It is especially noticeable in systems with many users and processes.
- A significantly higher number of users can work on one system with the 64-bit application server, reducing operating and administrative costs.
- We want to improve the focus of our quality assurance.

There are no incompatibility issues or disadvantages for you. In short,

- server scripts (in the DMS and workflow area) are compatible under the following conditions (see the section on server scripts).
- The long-term archive systems that the product previously supported (according to the enaio® Storage Guide) can also continue to be used with the enaio® 64-bit server
- All officially supported APIs are compatible
- All action DLLs are available
- The client side is not affected
- Administrative components and core services are not affected

You only need to follow the update procedure listed below when updating a 32-bit server to a 64-bit server. The amount of effort involved in performing the update is equivalent to migrating the hardware of the enaio® server at the very most and it depends on the number of documents archived in the system.

We want to give you sufficient time to plan for this since the release of enaio® version 10.0 is slated for May 2021. No maintenance will be provided for enaio® version 9.10 by 2023 at the earliest. Until then, you have time to prepare and implement the update to the enaio® 64-bit server.

## Installing a 64-bit Server/Updating to a 64-bit Server

### New Installation

32-bit server can no longer be reinstalled from enaio® version 10.0.

### Updating an Existing System (32-bit to 64-bit)

The server is updated when the enaio® version is updated. The amount of additional effort involved is equivalent to migrating the hardware of the enaio® server. You can find the description of how to switch from a 32-bit server to a 64-bit system in the Documentation Portal [here](#). Please also note the information on database settings in the [system requirements](#).

Currently, it is not possible to update an ANSI 32-bit server to a UNICODE 64-bit server. For this reason, you always need to update an ANSI 32-bit server to an ANSI 64-bit server.

The following intermediate steps are required for updating the application server, starting from the existing enaio® installation:

Starting point: enaio® version earlier than version 8.50 SP1

- There is no direct update path when you update a system earlier than version 8.50 SP1. You need to first update to version 9.10.

Starting point: enaio® version 8.50 SP1

- First update your system to 32-bit version 9.10 using the setup.
- [According to instructions](#), you can migrate (switch from 32-bit to 64-bit) from 32-bit version 9.10 to 64-bit version 9.10.
- In the end, 64-bit version 10.0 will be updated to 64-bit version 9.10 using the setup.

Starting point: 32-bit enaio® version 9.0 SP1

- [According to instructions](#), you can migrate (switch from 32-bit to 64-bit) from 32-bit version 9.0 SP1 to 64-bit version 9.0 SP1.
- In the end, 64-bit version 10.0 SP1 will be updated to 64-bit version 9.0 using the setup.

Starting point: 64-bit enaio® version 9.0 SP1

- Can be updated to 64-bit version 10.0 using the setup.

Starting point: 32-bit enaio® version 9.10

- [According to instructions](#), you can migrate (switch from 32-bit to 64-bit) from 32-bit version 9.10 to 64-bit version 9.10.
- In the end, 64-bit version 10.0 will be updated to 64-bit version 9.10 using the setup.

Starting point: 64-bit enaio® version 9.10

- Can be updated to 64-bit version 10.0 using the setup.

## Server Scripts

Server scripts run in the 64-bit server in a 64-bit script engine on version 10.0 and later. For this reason, all COM libraries used in the script must be 64-bit capable. We assume that only 32-bit COM libraries are used and available at all in existing systems. Adjustments to the runtime environment are necessary in order to also use the "legacy" 32-bit COM libraries in the existing scripts now running in a 64-bit environment.

With Microsoft Windows you can use registry switches to embed the 32-bit DLLs in a 32-bit runtime environment, which is then used by the 64-bit script engine. We will perform this adjustment automatically via the setup for basic OS components that we do not provide in 64-bit. The adjustments are always related to the components. For project-specific 32-bit components, these registry adjustments must be made manually, as they are not known to the product setup. You can find detailed instructions under ["Using COM Components Between Different Platforms \(32-/64-bit\)"](#) on page 18.

Using these mechanisms, the compatibility of the server scripts is ensured for update projects and no further adjustments to the scripts themselves are required.

## Archiving

The storage systems previously supported by the product can also be used with the 64-bit enaio® server without any adjustments to the database, as long as they have not already been discontinued by the respective manufacturer. If this is the case, the customer needs to migrate to the current storage system. Specifically, this refers to the storage solutions listed in the following table.

### Supported Storage Systems

Manufacturer	Storage name	Storage version (up to and including)	Interface	Connection via the 'archive' microservice
Cloudian	HyperStore	7	Proprietary API	yes



Manufacturer	Storage name	Storage version (up to and including)	Interface	Connection via the 'archive' microservice
Dell EMC	Unity (replaces VNX/Centera)	5.x	file-based*	No
Dell EMC	ECS (replaces Centera)	3.5	Proprietary API	yes
FAST LTA 3404	Silent Bricks/Cube	2.3	file-based*	No
Grau Data	FileLock	2.3	file-based*	No
Hitachi	HCP	9.1.0	Proprietary API	yes
Hitachi	HCP	9.1.0	file-based*	No
iTernity	iCAS	3.7	Proprietary API	yes
iTernity	iCAS	FS	file-based*	No
NetAPP	Ontap	9.7	file-based*	No

\* CIFS/SMB/NFS

All other storage systems that are not included in the enaio® Storage Guide can be connected to the specific project using a custom driver.

Archiving with 64-bit servers is carried out either via the 'archive' microservice or via the file-based interface. Details on archiving via the 'archive' microservice are available in the documentation portal [here](#). There you can also find information about the transition of the old 32-bit virtual archive drivers to the microservice-based ones introduced in the version 9.0.

## Looking Forward Now

Plan an update to a 64-bit server in good time and test the update procedures. Unexpected side effects cannot be completely ruled out despite careful testing. Please contact technical support ([support@optimal-systems.de](mailto:support@optimal-systems.de)) with any questions or problems during an update.

## Using COM Components Between Different Platforms (32-/64-bit)

To allow COM components (DLL) to be used between different platforms (32-bit Windows DLL and 64-bit Windows EXE), the Windows Registry must be modified. For this, the COM components must already be registered. As part of the customization, Windows automatically creates a runtime environment for the COM component and communicates with COM-DLL and the calling application across processes. This approach is not normally possible with COM components such as OCX and ActiveX, but these are also not usually used for scripting. Therefore, please test the functionality of the corresponding COM component beyond the platform boundary.

By way of example, we will now show you how to use the OXVBBAS library (`Dim oxbas : Set oxbas = createObject("Oxvbbas.functions")`) in 64-bit server scripts, as required for the ad-hoc workflow.

Other examples concern the connection of the enaio® client (ANSI/32-bit) to an installed 64-bit Microsoft Office and of the enaio® client (Unicode/64-bit) to an installed 32-bit Microsoft Office. The latter examples are connected via the corresponding redemption libraries from the client installation directory for creating e-mails.

### OXVBBAS in the enaio® server 64-bit (9.10/10.0)

64-bit enaio® server and server-side workflow scripts, as in ad-hoc workflow, or DMS scripts using methods from `oxvbbas.dll`:

- Run `oxvbbas.reg` with administrative privileges to ensure that `oxvbbas.dll` can be used in 64-bit scripts.

Afterwards, restart the applications (enaio® server, enaio® client). Register `oxvbbas.dll` again to be on the safe side. The file is located in the `\win32` installation directory of enaio® server.

E-mail attachment with different bit widths between enaio® client and Microsoft Office

enaio® client (Unicode/64-bit) and 32-bit Microsoft Office

- Run the [redemption.reg](#) file and restart enaio® client. Register the `redemption.dll` again just to be safe. The file is located in the `\client64` installation directory of the enaio® client.

enaio® client (ANSI/32-bit) and 64-bit Microsoft Office

- Run the [redemption64.reg](#) file and restart enaio® client. Register the `redemption.dll` again just to be safe. The file is located in the `\client32` installation directory of enaio® client.

For project-specific components, these registry adjustments must be made according to the following schema.

To adjust the registry using a template file, follow these steps

1. First determine the CLSID (class id) of the COM server in the registry.
2. If it is a 32-bit component, download the template file [template.reg](#). Open this in an editor of your choice and change the CLSID. Import the file; you can also reuse it.  
If it is a 64-bit component, download the template file [template64.reg](#). Open this in an editor of your choice and change the CLSID. Import the file; you can also reuse it.
3. Register the COM component again to make sure.

## Migration of the Full-text Index

It is possible to update from version 9.10 to version 10.0, that is, from Elasticsearch 7.2.1 to 7.9.3, without any adjustments.

Updates from version 8.50 require migration and the intermediate step of updating to the version 9.10 with Elasticsearch 7.2.1.

A new full-text index will be created from the existing full-text index for Elasticsearch 7.9.3 when migrating from enaio® 9.0. The new full-text index is created before the update while enaio® 9.0 is running. It does not affect running operations and is immediately operational after the migration.

To do so, Elasticsearch 7.9.3 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 7.9.3 will be integrated with a new index in enaio® version 10.0.

Updates and migrations require space for temporary storage. There must be at least 25% free space on the disk/partition, as Elasticsearch automatically switches to read-only mode at 15% free space.

The new full-text index does not become larger than the existing one when migrating from 9.0/9.10 to 10; however, it requires space for the temp data during the update. When migrating from 8.50, the new full-text index can be permanently considerably larger, regardless of the temp data.

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

## Migrating from 9.0 to 10.0

Elasticsearch 7.9.3 must be installed for migration on a separate computer. Enough space must be available for the temp data and 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 7.9.3 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:

`\Tools\prepareFulltextIndexUpdate\`

It is unpacked on the computer with the new full-text index of Elasticsearch 7.9.3 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-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 7.9.3 needs to be entered before starting.

Example: `D:\Elasticsearch7.9.3\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 `intrafind.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 7.9.3 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. The migration can be stopped manually at any time without any data loss.

### Integration in enaio® version 10.0

After the update to enaio® version 10.0, 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 HTTP port of Elasticsearch 7.9.3 and the password for user 'elastic':

```
elasticsearch.pwd: password.
```

## Checking the Migration

The update to enaio® version 10.0 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:

- Indexing progress:

```
http://<es7host>:<httpport>/_cat/indices?v
```

- Status of the actions performed by the migration:

```
http://<es7host>:<httpport>/systeminfo/_search
```

The following message is displayed in the log each time the migration is completed:

```
updateDeltaIndexingTimerRoute : Delta indexing finished.
```

**Hinweis:** You can manually stop the migration tool if it does not stop automatically. There is no risk of data loss.

## Migrating from 8.50 to 10.0

Updates from version 8.50 require migration and the intermediate step of updating to the version 9.10 with Elasticsearch 7.2.1. Instructions for migrating from 8.50 to 9.10 can be found [here](#).

Afterward you can simply execute the 10.0 Elasticsearch setup.exe.

## Updating from 9.10 to 10.0

You can update to version 10.0 without any adjustments, starting from version 9.10.

**Hinweis:** Since Elasticsearch 7.9.3 changes the Java version to Java 11, the settings of the Elasticsearch service are reset after the update and must be reset accordingly after the update.

## enaio® repository-manager

enaio® repository-manager was newly implemented for version 10.0 as a microservice. Configuration dialogs can be called with the installation of the 'repositorymanager' microservices. For the most part, previous configurations via configuration files are no longer needed.

The previous SAP client component will now be installed much more easily via an MSI package. Existing installations need to be replaced by the MSI installation.

You do not need to make changes to the connectors 'data2ecm/jump2ecm/data2s/jump2s' or migrate data.

An up-to-date SAP transport for enaio® data2ecm / enaio® jump2ecm, Version 4.0A, needs to be imported into all connected SAP systems.

A new addition is the ILM interface for filing and managing data with retention management features. The object definition must be extended for the information lifecycle management. A corresponding object definition is available.

Corresponding adjustments in SAP have to be made.

## Update/Installation

The 'repositorymanager' microservice is installed via enaio® service-manager for enaio® repository-manager. The microservices 'dms' and 'license' and enaio® appconnector are also required.

You only need to adjust the configuration file `repositorymanager-prod.yml` if the microservices 'dms' and 'repositorymanager' are not installed on a server or if a different directory should be specified for the working directory (default: `<datadirectory_servicemanager>\rmworking-dir`). This working directory must be changed before the service is first launched if the default should not or cannot be used. If enaio® appconnector is installed on another server, then its address must be specified (parameter: `enaio.osrest.server`).

It is also possible to make further optional configuration settings in the configuration file `repositorymanager-prod.yml`. A commented template is also installed and can be found under `\<work-dir>\config-example*.*`.

It is configured via configuration dialogs, which are accessed under the following URL: `https://<service-manager>:8010/login` (default password: `optimal`). The default port is '8010.' If it is changed, the call must be made via the corresponding port.

Use the configuration dialog to enter the known values that already had to be entered for version 9.10 in configuration files: licenses, repository mappings, content server configuration.

You also open the KGS configuration dialog (default user: `admin`, password: `admin`) via the configuration dialog and enter again there the values that were already entered for version 9.10 in the KGS configuration.

## SAP Client Component

The new SAP client component is installed as an MSI package. The MSI package can be found under `\Prerequisites\RepositorymanagerClientComponents\` in the installation data. Existing installations need to be replaced by the MSI installation.

## ILM

The corresponding ILM parameters for the ILM interface are specified in the configuration dialog and KGS configuration dialog: `ILMLicenseKey`, `ILM Repository`, `ILM User/Password`.

The object definition must also be extended. A corresponding object definition file is installed in the `\obj-def\` directory in the working directory. The additional ILM object types are integrated via enaio® editor.

Corresponding adjustments in ILM have to be made.



# Unicode Installations

It was possible to implement first Unicode projects for new installations with version 9.10; with version 10.0, nearly complete Unicode installations are now possible, that is, installations additionally with enaio® client and all administrative components: enaio® enterprise-manager, enaio® administrator, enaio® editor, enaio® editor-for-workflow, enaio® administrator-for-workflow. In so doing, a system can be operated now completely also with the familiar enaio® client, for example, also with Russian object definition or with Greek index data. Even user names can be set up in the national language. Many new object definition languages, which you can use for country-specific naming of object types and fields, are available with this enaio® version.

enaio® capture is the major exception in a Unicode installation that remains. Other administrative limitations: Decentralized user administration and electronic signature are not available.

Only Microsoft SQL Server is supported as a database for Unicode installations.

Unicode installations are only possible as a new installation or as an update to a 9.10 Unicode installation.

## enaio® editor

**Database field length:** Please note that the maximum size for index data fields is now not the same as the maximum column width of the database. Data is filed as UTF-16, so only half the maximum size is available.

**Database types:** The 'Letters' database type can contain all characters except numbers, surrogates (such as smileys), and punctuation marks. It is now also possible to use '% -\*\_\' and space characters, unlike in previous versions.

'Uppercase letters' can be any letter or character of the respective language. Number characters are also allowed here as an extension to the 'Letters' database type. Please note that not all languages feature case sensitivity. In this case, the normal set of characters are allowed.

'Numbers' are still only Arabic numbers. Numeric characters of other languages (such as Japanese) are not allowed here.

**Internal names:** We recommend using a European language such as English as the default language and storing only English texts there. When creating new object types from any number of characters, it is technically not possible to automatically create internal names.

Add-on configurations should always be made using internal names.

**Regular expressions:** Please note that regular expressions in the world of Unicode are more complex. The expression `[a-zA-Z]{6}` will not produce any hits for Cyrillic characters/words, for example. `привет` does not match `[a-zA-Z]{6}`; however, `[a-я]{6}` does. There is not always a numeric sorting for the letters of all alphabets, so the letter 'ë' is not included in `[a-я]`. Certain languages, such as Egyptian hieroglyphs, contain characters with 4 bytes. Since such characters consist of 2 x 2 bytes, the expression `'` (check for one character) does not return a hit, but `..'` (check for two characters) does. Please refer to the corresponding literature, some of which is also available online, for more details on using regular expressions.

The test feature in enaio® administrator (Extras > Tools) was changed and features a clearer design now.

**Structure tree:** Structure trees can be integrated; however, the catalog values can only be ANSI characters.

**Catalog add-on:** The `axaddxmltree.dll` catalog add-on cannot be used in Unicode installation. Instead, the new Treeview add-on `axaddtreeview.dll` is available, for which the first release featured the ability to configure simple catalogs that combine properties of hierarchy and tree catalogs. An upcoming release will integrate further functions of the catalog add-on, such that it can replace it. The new Treeview add-on can also be used in ANSI installations.

**VBScript add-on:** If scripts are password-protected, then it can only consist of ANSI characters.

**Address add-on:** The add-on cannot be used in Unicode installations. It will be replaced by a similar add-on in the future.

## enaio® administrator

**'Data import/export' automatic actions:** It is not possible to import and export dBase in Unicode installations. This is because we have decided to deliver the Unicode clients and administration tools as 64-bit Windows applications. A corresponding dBase driver is not available.

The ASCII import/export has been renamed: Text import/export. Data – ANSI or UTF16 – can be imported and exported. For import data, if a BOM specifies the coding, then it will be automatically detected and used correctly. Field length specifications must adhere to the length difference between ASCII and Unicode characters.

**Actions to verify the archiving process:** The automatic actions of the `axactarc.dll` library are not available.

**'XML TagExtraction' automatic action:** Output files are UTF-16 encoded.

**COLD import:** The automatic action is not available.

**enaio® start:** Adjustments may be necessary when starting via command line parameters with Unicode characters in the path or in configuration names.

## enaio® editor-for-workflow

**Variables:** Unicode characters cannot be used for variable names since workflow variable names occur in the programming interfaces.

## Data Transfer

Data transfers are only possible without user interaction. With specifications for selection in case of multiple hits, data transfers cannot be executed.

## Scanning with Kofax

Scanning with Kofax is not possible in enaio® client. Scanning is only possible via the TWAIN interface.

# Administration

## System Roles for enaio® client

The 'Client: Undo the checkout for others' system role is new.

Users with this system role can undo checkout of other users' documents. The 'Write object' right for the document type is also required. Previously, only users with the 'Supervisor' system role could do this. This action can now be specifically enabled for specialist administrators.

## 'Client: Export objects' System Role

The 'Client: Export objects' system role has been split into the system roles: 'Client: Export document contents,' and 'Client: Export index data.' Users who had the 'Client: Export objects' system role will automatically get both system roles after the update.

## One-Time Password

The password of new users can be created as a one-time password. Users can log in to the enaio® using this one-time password; however, they must set a new password. This mechanism does not take effect if the user's authentication is against Windows.

This feature is enabled system-wide via the enaio® enterprise-manager: **Server > Server properties > Category: General > One-time password**.

It then applies to all contexts in which new users are created, including new imported users. This property is not part of the export and import data.

Technical users can be created without a one-time password in the enaio® administrator via the context menu.

## Kerberos

enaio® client and the administrative clients support Kerberos as an authentication service with the version 10.0.

If Kerberos is configured in the Windows domain and is to be used for client-side authentication, the enaio® server must be associated with a corresponding domain account. This account requires a service principal name (SPN) adhering to the schema 'enaio/host:port' (example: enaio/osecm.domain.de:4000). It may be necessary to change the client-side connection data in the `asinit.cfg` file to the qualified computer name instead of the previously possible IP notation.

The following configuration steps are necessary in the enaio® enterprise-manager:

**Server properties > Category: General > Login: SSP login: Windows/Security support provider: Kerberos**

## Office 365

The version 10.0 can be used to integrate [Office 365](#) for collaborative work with Word, Excel, and PowerPoint documents.

## enaio® java-api

As of version 10.0, enaio® java-api package is available for accessing the functionalities of enaio® server from applications in the Java programming language.

The previous JDL libraries were no longer adapted; in particular they do not support the TLS/SSL encryption introduced with enaio® version 9.10 for the RPC protocol. For this reason, existing Java applications need to be migrated from JDL to the enaio® java-api.

The enaio® java-api package can be used for enaio® versions 9.0 and higher.

More information can be found in the [developer area](#).

## enaio® exchange

The following requirements must be fulfilled in order to install the enaio® exchange:

- enaio\_server\_communication

You can find installations in the directory `\Prerequisites\Server-Communication-Ansi` for ANSI installations and `Server-Communication-Unicode` for Unicode installations.

- Microsoft Visual C++ 2015-2019 Redistributable

You can find installations in the directory \Prerequisites\Microsoft Visual C++ 2015-2019 Redistributable, depending on the operating system.

## enaio® documentviewer

### GraphicsMagick

enaio® documentviewer integrates with the version 10.0 instead of ImageMagick, now GraphicsMagick. No further changes to the configurations are required.

### Hard Disk Monitoring

Monitoring of the cache and temp directories is enabled by default. If the amount of free space falls below the threshold of 30 MB, then enaio® documentviewer only operates in read-only mode: No further CPB jobs are processed, no new OCR jobs are delivered, no new file jobs are processed, and no internal worker jobs are processed further.

The default settings can be adjusted via the configuration file `config.properties` of enaio® documentviewer:

Parameters:

```
system.checkDiskSpace=true
system.minFreeCacheSpaceInMB=30
system.minFreeTempSpaceInMB=30
```

The read-only mode is stopped automatically once there is more space available.

### Page Count

As of version 10.0, the page count is only created for the specified file formats. These are specified using the parameter `system.pageCountSupportedFor` of the `config.properties` configuration file from the ...\\webapps\\osrenditioncache\\WEB-INF\\classes\\config\\ directory.

Default setting:

```
system.pageCountSupportedFor=application/vnd.ms, application/vnd.visio,  
application/vnd.openxmlformats, application/ms, text/rtf,  
application/vnd.oasis.opendocument, application/pdf, image/
```

The setting can be changed. The content type does not need to be specified in its entirety.

## Determining the Cache Size

Determination of the cache size is preset to 'heuristic'; the size is calculated based on average values then. A change to an exact determination was possible, but was overwritten with each update so far. The change can now be made via the configuration file `config.properties` from the `...\\webapps\\osrenditioncache\\WEB-INF\\classes\\config\\` directory:

```
cacheCount.activeIndex=1
```

The value 0 is reverts to 'heuristic.'

## Determining the Content Type

The configuration file `extensionmapper.properties` located in the directory `\\renditionplus\\bin\\custom\\` for mapping the file extensions for content type now has the highest priority. This makes it possible to define user-specific content types based on file extensions and to provide targeted custom converters for these content types.

Examples:

```
tff=image/tiff  
adf=custom/compound
```

## Renditions from External Sources

enaio® documentviewer provides REST endpoints that external rendition creators can use to store their renditions in the DocumentViewer cache, thereby reducing the load on the system:

Post/ Get: `/osrenditioncache/app/api/dms/{id}/contents/renditions/{type}`

## Text Formats for OCR

The text formats that are to be sent to the OCR can be specified via the configuration file `config.properties` from the `...\webapps\osrenditioncache\WEB-INF\classes\config\` directory. Default:

```
rendition.ocrSelectionPredicate=image/tif,application/pdf
```

## Minimum Required Text Length

The minimum required text length that is used to detect whether a text extract is valid and sent to the OCR can now be changed via the configuration file `config.properties` from the `...\webapps\osrenditioncache\WEB-INF\classes\config\` directory.

```
rendition.textExtraction.minLength=5
```

## Logging

A new text format was introduced for logging. Logs in this format allow automatic evaluation of the logs by appropriate monitoring tools.

Logs in text format are configured with the same properties as EVN logs. The configuration must be done manually via the configuration files `oxrpt.cfg` of the respective directories.

'TEXT' is specified as 'Type,' and the file name gets the extension 'txt.'

Example:

```
[oxrpt\channels\Errors-txt]
Type=TEXT
ChannelID=8
Level=1
Suspended=0
LogFileName=err_%2_%4%6%7%5.txt
```

Logs in text format are always UTF-8 encoded without BOM.

Output format:



```
date time : level : threadid : eventid : computer : user : application :  
module : function : sourcefile : codeline : message
```

The data is output line by line and separated by the colon with leading and trailing space. The date format is 'DD/MM/YYYY hh:mm:ss,ms'. The messages are composed in English regardless of the language setting. Messages can be longer than one line.

enaio® enterprise-manager shows the server logs, offers the download options, and can provide access to the settings for TEXT logs, just as with EVN logs, as well as change them.

The `axrptcfg.exe` configuration tool shows the data. `axprotocolcfg.exe` has been discontinued.

The `KRN.LogConfigGet` job provides you access to the log configurations, and `KRN.LogConfigSet` enables you to dynamically change configurations during server runtime.

## enaio® editor

Changes to the object definition: Aside from having to restart the server/server engines, you will also need to reboot enaio® appconnector and the DMS service manually to ensure the changes are loaded in enaio® webclient.

Default language: Previously, German was set as the default language in the enaio® editor and could not be changed; now you can freely select the default language. We recommend a default language from the Latin character space. The default language can be changed only in an empty object definition. Please define it right after installation. It is not possible to change the default language later on. However, you can add additional languages to the object definition or remove them at any time. Languages that are in use by users cannot be deleted.

User add-on: You can use a new extra entry to configure the user add-on `axaddusr.dll` to show only users from specified groups: `EXTRAN=GROUPS=GROUP1, GROUP2`.

Catalog add-on: The catalog add-on `axaddxmldata.dll` is only compatible with ANSI installations and will be discontinued in an upcoming release. It should not be integrated again. Instead, the new Treeview add-on `axaddtreeview.dll` is available. The first release featured the ability to create simple catalogs that combine properties of hierarchy and tree catalogs. As with the catalog add-on, the configuration takes place in the enaio® client. It is necessary to have the 'Start editor' system role.

An upcoming release will integrate further functions of the catalog add-on, such that it can replace it. The new Treeview add-on can be used in ANSI and Unicode installations.

## Import and Export

Until now there had been restrictions for installations with more than one language. Configurations could only be edited and executed in the same language in which they were created. The internal names are also saved when you open configurations in the language in which they were created, navigate through the dialogs without making any changes, and then save them. Afterwards, the configurations can be edited and executed in all languages.

This also applies to enaio® capture configurations.

When importing and exporting Excel and Access data, it is necessary to update the Microsoft Access Database Engine.

Now configuration names must always be unique. Previously, they only needed to be unique for the same file formats.

## Automatic Actions 'Subscription maintenance' and 'Follow-up maintenance'

The actions can be limited to read notifications.

## Portfolios

The dialog is shown preset to 'Public portfolio' when creating portfolios in the enaio® client. This setting can be changed system-wide by adding an entry to the `as.cfg` configuration file located in the `\etc` directory of the data directory: `SETNEWPORTFOLIOPUBLIC = 0`

## Station Names

Station names in the enaio® enterprise-manager are no longer limited to 50 characters; they can now contain up to 248 characters.

## SMTP Password

The SMTP password in the enaio® enterprise-manager will be encrypted when saving and then masked when shown. It is no longer necessary to enter an encrypted string already.

## Events

The document preview can be updated from the following events:

DMS: OnShow/OnClickItem/OnFocusGained /

WMS: BeforeOpen/OnClickItem/OnFocusGained.

## Script Editor

The font size can be changed in the script editor using **Ctrl + mouse wheel**. The setting is saved for each user.

## Installation Data

You install and update the following components using MSI packages or component setups from the following directories:

Directory	Component	Comment
<b>Backend</b>		
\AppConnector	enaio® appconnector osappconnector_setup.exe	Core service
\Barcode	enaio_barcode.msi	Project-specific component
\Communicator	enaio® communicator enaio_communicator_ setup.msi	Project-specific component
\DocumentViewer	enaio® documentviewer osdocumentviewer_setup.exe	Core service

Directory	Component	Comment
\Elasticsearch	Elasticsearch 7.9.3 elasticsearch_setup.exe	Full text components
\Exchange	enaio® exchange enaio_exchange_x64.msi enaio_exchange_x86.msi	Project-specific component
\Finereader	ABBYY FineReader 12.4.7 setup.exe	OCR components
\Gateway	enaio® gateway osgateway_setup.exe	<b>Hinweis:</b> enaio® gateway must always be installed downstream from all core services.
\Pdfa-Dispatcher	enaio® pdfa-dispatcher enaio_pdfa_dispatcher_setup.msi	Project-specific component
\Server	enaio® server setup.exe	64-bit server <b>Hinweis:</b> Updating 32-bit servers requires a <a href="#">migration</a> Patches are still delivered for updates to the enaio® server.
\Service-Manager	enaio® service-manager os_service-manager_setup.exe	Installing the enaio® microservices
\Webclient	enaio® webclient oswebclient_setup.exe	Installing enaio® webclient on the web server.

Directory	Component	Comment
\WebServices	enaio® webservices oswebservices_setup.exe	Core service <b>Hinweis:</b> Discontinued as of the next version. The DMS service for the enaio® serves as a technical successor for customer-specific projects.
<b>Frontend</b>		
\Administration	Administration components ANSI: enaio_administration_ansi.msi Unicode: enaio_administration_unicode.msi	enaio® administrator, enaio® editor, enaio® enterprise-manager, enaio® editor-for-workflow, enaio® administrator-for-workflow. The <code>asinit.cfg</code> file can be changed before installation. This is not necessary for updates.
\Capture-Ansi	enaio® capture enaio_capture_ansi.msi	<b>Hinweis:</b> For ANSI installations only
\Client	enaio® client ANSI: enaio_client_ansi.msi Unicode: enaio_client_unicode.msi	The <code>asinit.cfg</code> file can be changed before installation. This is not necessary for updates.
\GroupWise Add-On NG	enaio® GroupWise Add-On NG enaio_groupwise_addon_ng.msi	GroupWise connection

Directory	Component	Comment
\Office Add-In NG	enaio® Office Add-In NG enaio_office_addin_ng-10.0.0.msi	Office connection
\Office-Utilities	enaio® office-utilities enaio_office_utilities.msi	Office connection
\Outlook Add-In for drag and drop	Outlook Add-In for Drag & Drop OS_64bit_outlook_add-in_dd.msi OS_32bit_outlook_add-in_dd.msi	Outlook add-in
\Outlook Add-In NG	enaio® Outlook Add-In NG enaio_outlook_addin_ng.msi	Outlook connection
\Printers	enaio® printer enaio_printers.msi	Printer drivers for the enaio®
\Search	enaio® search enaio_search.msi	Project-specific components in cooperation with Microsoft Outlook.
\Webclient-Desktop-App	enaio® webclient as a desktop application enaio-webclient-app-x64.msi enaio-webclient-app-x86.msi	A <a href="#">configuration file</a> with profiles for connecting and logging in can also be distributed.
<b>Tools</b>		
\Index-Manager	enaio® index-manager enaio_index_manager_ansi.msi enaio_index_manager_unicode.msi	Project-specific support and maintenance tool.

Directory	Component	Comment
\MailFix	MailFix.zip	Project-specific maintenance tool
\Medizin	enaio_labormodul.msi enaio_medicine.msi	Project-specific components
\Migration	setup.exe	<a href="#">Migration tool</a> required for updates to version 10.0.
\prepareFulltextIndexUpdate	prepareFulltextIndexUpdate-10.0.zip	<a href="#">Migration tool</a> required for the Elasticsearch update from 6.2.4. to 7.x
\url-cipher-tool	url-cipher-tool.jar	Tool for password <a href="#">encryption</a> .
The further directories 'Prerequisites', 'Samples,' and 'Tools' contain data and installation files that are referred to in the relevant context.		

## Office 365 Services

The 'office' and 'officedashlet' Office services can be used to integrate Office 365 as dashlets in enaio® client, enaio® webclient, and enaio® webclient as a desktop application to enable collaborative work. Documents can be created and processed.

The following Office formats are supported:

\*.ods, \*.xlsb, \*.xlsm, \*.xlsx, \*.one, \*.onetoc2, \*.odp, \*.ppsx, \*.pptx, \*.vsdx, \*.docm, \*.docx, \*.odt

**Hinweis:** The integrated Office versions do not support all features. If Office documents contain features that are not supported, they are open in read-only mode.

The Office versions require Office files in XML format. If previous file formats are to be edited, then conversion is offered and the converted files are created as variants.

The Office services are installed via enaio® service-manager and also require the 'dms' service.

**Voraussetzung:**

You must have one of the following Microsoft licenses: Microsoft 365 Business Standard or higher, Microsoft 365 Apps for Business, Microsoft 365 Apps for Enterprise, Office 365 E3 or Office 365 E5, and the corresponding Microsoft accounts for the users.

The Office versions require Office files in XML format. If previous file formats are to be edited, then conversion is offered and the converted files are created as variants.

Office documents are subject to the following limitations:

Application	Size
Word	<50 MB
Excel	<5 MB
PowerPoint	<150 MB Plus <100 MB for connected data
Timeout: If a document cannot be opened within a time period of 60 seconds, the action is aborted.	

## Configuration

You need the following data from OPTIMAL SYSTEMS GmbH for the configuration: Tenant-ID and Tenant-Secret. This data will be provided [at your request](#).

Follow these steps to configure the integration of Office 365:

- Services configuration via the configuration files `application-prod.yml` of enaio® gateway and `office365-prod.yml` of enaio® service-manager.
- Dashlet configuration for enaio® client in enaio® enterprise-manager.
- Enable the integration for enaio® webclient and enaio® webclient as a desktop application via the administration console.

## Services Configuration

The configuration file `application-prod.yml` of enaio® gateway is expanded to include the endpoints of the Office services:



```
proxy:
  services:
    endpoints:
      - endpoint:
          name: office365
          url: 'http://host:8099'
      - endpoint:
          name: dashlet365
          url: 'http://host:8091'
```

The configuration file `office365-prod.yml` of enaio® service-manager is populated with the tenant data you received from OPTIMAL SYSTEMS GmbH and a path to a working directory:

```
tenant:
  id: Tenant-ID
  secret: Tenant-Secret
  provider-url: https://provider.prod.enaio.io/
  host-url: https://host.prod.enaio.io/
  working-dir: path
  recovery:
    enable: true
```

## Dashlet Configuration

The dashlet configuration for enaio® client takes places via enaio® enterprise-manager:

**Application server > Server > Settings > Server properties > Category: Services > Dashletn:**

- Home URL:

```
http://localhost/dashlet365/?id={OBJECTIDENT}&allowedExtensions=&locale={localename}&sessionguid={sessionguid}
```

Copy the URL and enter it carefully.

- Title: Office 365

You can enter any title for the dashlet.

### Enabling for enaio® webclient and enaio® webclient as a desktop application

Set the parameter `com.os.osdrt.office365` to `true` via the [administration console](#).

**Hinweis:** Dashlets are currently not yet available in enaio® mobile and generally not on mobile devices, including enaio® webclient on mobile devices.

# enaio® client

## Unicode

The Unicode capabilities of the enaio® client (64-bit version) can be used in selected projects (all projects without digital signatures and capture requirement) with enaio® version 10.0. You can now use the familiar enaio® client Unicode characters and read descriptions of object types and their index data fields in any language when entering and maintaining index data. In the process, field names, labels, and buttons with Unicode characters are also supported, in addition to index data maintenance, index data, and workflow forms. The Unicode client can only be used against a enaio® Unicode installation (see [Unicode](#)).

## Public and Non-Public Portfolios

It was already possible to choose between public and non-public portfolios when working in the enaio® client. With the release of the enaio® version 10.0, it is now possible to use `as.cfg` to control system-wide whether 'public portfolios' is checked or unchecked during portfolio creation (see [Portfolios](#)).

**Hinweis:** Portfolios that are public can be queried by any user; private portfolios can only be opened by the creator and the users for whom the portfolio was created.

## Undoing Documents that Have Been Checked out by Other Users

A new system role that allows users to undo the check-out status of documents that have been checked out by other users will be introduced with the enaio® version 10.0. Documents for which this function will undo the check-out status must have corresponding properties in the object definition.

Previously, only users with the 'Supervisor' system role could do this. With the help of this new system role, it is possible for team leaders, for example, to undo the check-out status of their employees' documents (see [Checking in](#)).

## Automatic Depersonalization

The function of automatic personalization of a workflow when a user opens a work item can now be removed in the enaio® client settings. If you enable a checkbox in the settings menu, workflows will not remain automatically personalized if no data is entered and saved in the opened work item (see [Depersonalization](#)).

## Context Menu on Subscribed Searches

Now subscribed searches have a context menu for opening, deleting, and editing or creating new subscribed searches. As a result, functions that were frequently used in connection with subscribed searches are now accessed more easily (see [Context menu subscribed searches](#)).

## Deduplication of E-Mail Filing

The functional alignment between enaio® client and enaio® webclient regarding deduplication of e-mail filing has been established with the release of enaio® version 10.0. As the leading system for e-mail archiving, the 'mailstorage' EMS service (EMS) for e-mail management can now also be used to manage deduplication of e-mails in enaio® client. The corresponding settings in the EMS overwrite the previous settings in the **as.cfg**. For other document types (except e-mail) or if no corresponding settings are made in the EMS, the settings made in **as.cfg** remain in place.

## Logging in to enaio® Using Kerberos

Logging in to the enaio® system using Kerberos is possible since the release of the enaio® version 10.0.

## Automatic Updates

enaio® client automatically updates the object definition and the security system at midnight every night. Object type-dependent views will be closed for this purpose. We also recommend exiting the enaio® client and switching off the computer at night for reasons of environmental protection.

## New System Roles for Exporting Index Data and Document Contents

New system roles have been introduced in enaio® for the export function for index data and document contents. The previous *'Export objects'* system role is now called *'Export document contents'*. There is now a separate system role *'Export index data'* in order to export index data, in addition to this system role. Both actions can be managed separately in this manner. The *'Export index data'* system role enables enaio® client users to use copy and paste to export index data from a hit list or a filing location as well as export index data from a list via the context menu or the ribbon (see [Exporting](#)).

## Readability of Inactive Form Fields

We have made changes in the display contrast of read-only index data fields on data forms, in particular for the needs of users with visual impairments. The enhanced contrast can be enabled in the user settings (see [Enhanced Contrast](#)).

## Treeview Add-on

Authorized users can create catalogs that act as tree catalogs or hierarchy catalogs with the catalog add-on in the enaio® client. The former catalog add-on in the enaio® client is gradually being replaced by the new Treeview add-on as part of the transition to Unicode capability. The former catalog add-on can only be used in ANSI environments, whereas the Treeview add-on can be used in both ANSI and Unicode environments. The administrator is responsible for the deployment of the corresponding add-on. For the configuration of the Treeview add-on, users again need relevant rights, just as with the catalog add-on.

## Integrating Microsoft Office 365

It is possible to integrate Microsoft Office 365 in the enaio® client starting with the release of the enaio® version 10.0. This integration enables enaio® users to create and edit Office 365 documents individually and collectively in the enaio® client and file the changes directly in the enaio® filing system.

The administrator takes care of the integration. Office 365 functionality is made available via a dashlet in the content preview of the enaio® client. Simply mark a corresponding Office 365 document in a hit list or folder view in order to edit Office 365 documents. The corresponding editor (for example, Word or Excel) then opens in the dashlet. If you click a different document in the list, the document is saved and filed in enaio® (see [Integrating Microsoft Office 365](#)).

For other document types, the behavior of the content preview remains unchanged.

# enaio® webclient

## Unicode

The full scope of the Unicode capabilities of enaio® webclient, desktop application of enaio® webclient, and enaio® mobile can be used with enaio® version 10.0. In addition to the previously existing Unicode capabilities, support is now provided for multilingual index data forms and user names with Unicode characters.

Prerequisites for the use of Unicode characters are an appropriately configured operating system and customized databases.

## One-Time Passwords

It is now possible to create users who have to change the password the first time they log in to enaio® webclient, desktop application of enaio® webclient, or enaio® mobile with enaio® version 10.0. This one-time password only enables users to set a new password that will allow them to work in enaio® (see [One-Time Password](#)). The behavior can be controlled via the server settings in enaio® enterprise-manager.

## Expired Passwords

enaio® webclient, desktop application of enaio® webclient, and enaio® mobile detect when a password has expired with the release of enaio® version 10.0. In this case, users will be prompted to choose a new password.

## Language Selection

You can now control the language selection for the user interface and for the object definition separately in enaio® webclient, desktop application of enaio® webclient, and enaio® mobile, similar to in enaio® client. The functions for language selection can be found in the settings menu of enaio® webclient (see [Changing the Display Language](#)).

## New System Roles for Exporting Index Data and Document Contents

New system roles have been introduced in enaio® for the export function for index data and document contents. The previous *'Export objects'* system role is now called *'Export document contents'* (see ['Exporting Document Contents'](#)). There is now a separate system role *'Export index data'* in order to export index data, in addition to this system role. Both actions can be managed separately in this manner. The *'Export index data'* system role enables enaio® webclient, desktop application of enaio® webclient, and enaio® mobile users to export index data from a hit list or a filing location via the context menu (see ['Exporting Index Data'](#)).

## Integrating Microsoft Office 365

It is possible to integrate Microsoft Office 365 in enaio® webclient and in desktop application of enaio® webclient starting with the release of enaio® version 10.0. This integration enables enaio® users to create and edit Office 365 documents individually and collectively in enaio® webclient and in the desktop application of enaio® webclient and file the changes directly in the enaio® filing system.

The administrator takes care of the integration. Office 365 functionality is made available via a dashlet in the content preview of enaio® webclient and desktop application of enaio® webclient. Click a button in the dashlet to edit Office 365 documents. The corresponding editor (for example, Word or Excel) then opens in a new browser tab. When the browser tab is closed, the document is stored and filed in enaio® (see [Integrating Microsoft Office 365](#)).

For other document types, the behavior of the content preview remains unchanged.



# Service Releases

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

A detailed list of changes for all components can be found in the [Service Portal](#) in the release information and in the [release-info-10-00.json](#) file. There is a file in JSON format that contains detailed information about the component in each of the component downloads.

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.

Current service releases and updates for release 10.0:

- [DMS service](#)
- [enaio® webclient and enaio® mobile](#)
- [enaio® repository-manager](#)
- [enaio® gateway](#)

**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

You will find information about the current Service Release of enaio® webclient and enaio® mobile on the following pages.

## Installation Requirements

The current Service Release 7 and its hotfixes require the installation of the following updates to ensure the system functions properly:

Installation Requirements Service Release 7 Hotfix 4 / 5 / 6 / 7:

- enaio\_office\_ng 10.0.14  
  \10.0\Frontend\Office Add-In NG
- enaio\_outlook\_ng 10.0.21  
  \10.0\Frontend\Outlook Add-In NG
- enaio\_groupwise\_ng 10.0.7  
  \10.0\Frontend\GroupWise Add-On NG

Installation requirements service release 7 Hotfix 3:

- osappconnector\_setup.exe 10.0.0.142  
  \10.0\Backend\AppConnector
- enaio-server-patch-10.0.17.exe  
  \10.0\Backend\Server-Patch

Installation Requirements Service Release 7 Hotfix 1:

- osgateway\_hotfix.exe 10.0.0.9  
  \10.0\Backend\Gateway

Installation Requirements Service Release 7:

- osgateway\_setup.exe 10.0.0.8  
  \10.0\Backend\Gateway
- osappconnector\_setup.exe 10.0.0.140  
  \10.0\Backend\AppConnector
- dmsservice-app.jar 5.2.3  
  \10.0\Backend\Service-Manager-Update

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

## Installation

The installation data can be obtained via the [Service Portal](#).

The latest version of enaio® webclient as a desktop application will be available and automatically installed following the update. Existing profiles will be imported. The MSI packages for the installation have also been updated.

enaio® mobile can be downloaded from the app stores for your mobile OS: [Android/iOS](#)

## Changes

A detailed list of changes for all components can be found in the [Service Portal](#) in the release information and in the [release-info-10-00.json](#) file. There is a file in JSON format that contains detailed information about the component in each of the component downloads.

## Service Release 1

The service release 1 for enaio® webclient and enaio® mobile is primarily a service release for troubleshooting.

New features in the service release:

### 'High contrast' Color Scheme

The new 'High contrast' color scheme has been provided to improve accessibility for users with visual impairments. Alongside the high contrast mode available in Windows, the user can also select this color scheme in enaio® webclient and enaio® webclient as a desktop application via the Settings menu (see [Changing the Color Scheme](#)).

### Zoom Factor 400%

The maximum zoom factor has also been increased to 400% for improved accessibility for visually impaired users. Depending on the window size as well as the zoom level, the enaio® mobile GUI is activated at a zoom factor of 200% or higher. The enaio® system also displays a message indicating that enaio® webclient will need to be restarted. The user can then decide whether or not to reboot the system. All data must be stored beforehand since it would otherwise be lost when the system restarts (see [User Interface](#)).

## 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 print dialog is only available for documents for which a PDF preview can be created (see [Printing a Document](#)).

## Service Release 2

Service release 2 for enaio® webclient and enaio® mobile contains bug fixes and the following new features:

### Dashlets

Dashlets can be integrated in enaio® webclient and enaio® webclient as a desktop application, which was already possible in enaio® client version 7 and higher. Dashlets are customizable, freely configurable areas that support you in implementing a wide array of business processes and scenarios. They are a flexible way to provide further information and interaction options for users based on the relevant context. Dashlets can include information sources like Google Maps and Wikipedia as well as entire web applications.

We offer our newly developed [dashlet API](#) for [communication](#) between a dashlet and enaio® webclient or enaio® webclient as a desktop application. Special events and methods arrange for the exchange of information and offer various interactions, with more being added all the time. The backend services along with the DMS service and enaio® appconnector can also be used.

Dashlet are integrated into the preview area. Dashlets can be assigned to client types, object types, and users and/or groups during the [configuration](#) process.

**Hinweis:** Dashlets are currently not yet available in enaio® mobile and generally not on mobile devices, including enaio® webclient on mobile devices.

Dashlets that were developed for enaio® client cannot be used in enaio® webclient and enaio® webclient as a desktop application and vice versa due to the different way they are integrated and communicate with enaio®.

## Keyboard Operation

It is possible for most people to use either a physical or virtual keyboard to operate a piece of software. Reflecting the importance of user accessibility, OPTIMAL SYSTEMS will gradually begin rolling out accompanying options. The goal is to allow users to operate and access all functions and content via the keyboard without making the controls/navigation unnecessarily complicated in the process.

As part of phase one, the following options are now available in enaio® webclient and enaio® webclient as a desktop application in this release:

- users can use their keyboard to operate the main menu;
- the user menu can be accessed via the main menu and operated via the keyboard.

## Customizable Color Scheme for User Interface

Accent colors for customizing the color scheme of the user interface have been provided to improve accessibility for users with visual impairments.

Up until now, it was possible to customize the user interface in the settings menu in enaio® webclient, in enaio® webclient as a desktop application, and in enaio® mobile by selecting one of the various color schemes available. A new option is now available in the settings menu that allows users to combine the **Light** and **Dark** color schemes with seven accent colors (see [Customizing Color Schemes](#)).

The **High contrast** color scheme cannot be combined with accent colors.



## Service Release 3

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

## Service Release 4

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

### Avatar Images

Administrators can now integrate user-specific avatar images instead of the  User menu icon for the user menu and the note features of the details preview. The avatar images can be integrated via [enaio® appconnector](#) .

JPG image formats are supported. The avatar images must be stored by enaio® appconnector in the following directory:

```
...\services\appconnector\configuration\avatar\.
```

### Transferring Several Changes to Settings at the Same Time

It was not possible in enaio® webclient to change multiple settings at the same time before now. If a user wanted to change multiple settings, it had to be done in enaio® webclient one at a time. It may have also been necessary to restart the client several times. With this service release, users can make multiple changes to settings at the same time. In the settings dialog the **Apply** button is pressed and then all changed settings are applied at the same time. If necessary, enaio® webclient restarts. Changes to settings that refer to the hit list or the inbox will cause the hit list or the inbox to update.

### Logon Message if CAPS Lock Is On

For security reasons, the password entered is not generally displayed when logging on to enaio® webclient. Now an error message appears if the CAPS lock key was accidentally activated when entering the password in an effort to avoid the repetition of incorrect entries.

## For Our Scripters

### Checking documents in

The [formHelper.showCheckinContentDialog\({osid}, {showExternalTrayItems?}\)](#) method is available for checked out documents to open the **Check in content** modal dialog by script for the user.

### Customizing tooltips

The [setTooltip](#) method is available to dynamically customize tooltips for fields of objects and workflows to the context by script.

### Customizing field names

The [setTitle](#) method is provided to dynamically customize field names of objects and workflows to the context by script.

### Dashlet method – open hit list

The [openHitListByIds](#) method is available for enaio® webclient to open one or more objects in the hit list from the dashlet.

### Dashlet method – refresh hit list

The [refreshHitListObjects](#) method is available for enaio® webclient to refresh one or more objects in the hit list from the dashlet.

### Querying filing locations – extension

The [formHelper.dms.getLocations](#) method to query for all filing locations of a document provides an alternative way to return DmsDocument instances including index data instead of IDs.

### Clipboard events

The [OnAddLocation](#), [OnCreateCopy](#), and [OnMove](#) events return both the DmsDocument structure and the model structure of an object for the sake of consistency. Note that with versions after 10.10, the historical [model structure](#) will be discontinued and removed.

## Service Release 5

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

## Service Release 6

The service release 6 for enaio® webclient and enaio® mobile is a service release for troubleshooting.

## Service Release 7 / Hotfix 1 / 2 / 3 / 4 / 5 / 6 / 7

The service release 7 of enaio® webclient and its hotfixes are service releases for troubleshooting.

## Installation Requirements Service Releases

### Installation Requirements SR 7 Hotfix 3

- osappconnector\_setup.exe 10.0.0.142  
  \10.0\Backend\AppConnector
- enaio-server-patch-10.0.17.exe  
  \10.0\Backend\Server-Patch

### Installation Requirements SR 7 Hotfix 1 and 2

- osgateway\_hotfix.exe 10.0.0.9  
  \10.0\Backend\Gateway

### Installation Requirements SR7

- osgateway\_setup.exe 10.0.0.8  
  \10.0\Backend\Gateway
- osappconnector\_setup.exe 10.0.0.140  
  \10.0\Backend\AppConnector
- dmsservice-app.jar 5.2.3  
  \10.0\Backend\Service-Manager-Update



## Installation Requirements SR4, SR5, and SR6

- enaio-server-patch-10.0.0009.exe  
  \10.0\Backend\Server-Patch
- osappconnector\_setup.exe 10.0.0.136  
  \10.0\Backend\AppConnector
- dmsservice-app.jar 5.1.0  
  \10.0\Backend\Service-Manager-Update

## Installation Requirements SR2 and SR3

- enaio-server-patch-10.0.0007.exe  
  \10.0\Backend\Server-Patch
- osgateway\_setup.exe 10.0.0.2  
  \10.0\Backend\Gateway
- osappconnector\_setup.exe 10.0.0.128  
  \10.0\Backend\AppConnector
- dmsservice-app.jar 5.0.0  
  \10.0\Backend\Service-Manager-Update

## Installation Requirements SR1

- osgateway\_setup.exe 10.0.0.1
- osappconnector\_setup.exe 10.0.0.1
- dmsservice-app.jar 4.0.4

## DMS service

You will find information about the latest service releases of the DMS service [here](#).

## Installation

Services are installed via the `os_service-manager_setup.exe` file in the `\Backend\Service-Manager` directory.

Service updates take place via `enaio_services_versionfix.exe` in the `\Backend\Service-Manager-Update` directory. Copy the directory to the computers where the microservice installations are located prior to carrying out the updates.

### DMS Service Version 5.0

#### Object Type Relations

The results will have a different structure when the `includeAllowedChildObjectTypes` parameter for the object type relations is used to query a [folder or register](#). The object type IDs will be [returned](#) along with information on how many objects of a specific type can be created.

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

#### Deletion of Objects

The `HARDDELETE` and `DELETEDASCADING` parameters used to delete objects will be discontinued in an upcoming version. Use the corresponding parameters in the current [structure](#).

#### Server Job Options

All but a few [server job options](#) are available for adding, updating, deleting, moving, and copying objects. This includes, for example, `ARCHIVEIMMEDIATELY` to archive objects immediately.

**Hinweis:** Please follow the instructions on using use server job options.

#### Retrieving Renditions

Renditions for objects can be retrieved (PDFs, OCR texts, quicklooks).

- [GET /api/dms/objects/{objectId}/content/renditions/pdf](#)
- [GET /api/dms/objects/{objectId}/content/renditions/text](#)
- [GET /api/dms/objects/{objectId}/content/renditions/thumbnail/{index}?size={size}](#)

### Approved/not Approved for Archiving

The following endpoints can be used to set the 'Approved/not approved for archiving' property for documents:

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

### Reference Documents

Reference documents can be created.

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

### DMS Service Version 5.1

#### CMIS for Queries

From now on multiple object types can be queried in one query using the [CMIS SQL query language](#) of the DMS microservice. This makes it possible to query parent fields of the parent register or folder as well as to set conditions on these parent objects. Furthermore, multiple child objects can also be requested with their desired fields based on the defined export depth.

Please note that this function will only be fully available with the release of version 5.3.

### DMS Service Version 5.2

#### Spring Framework

The integrated Spring framework was updated.

### DMS Service Version 5.3

**Hinweis:** The DMS Service 5.3 requires the installation of server patch 10.0.13.

#### UNION Syntax for Search Requests

The endpoint for search requests – `POST/dms/objects/search` – accepts the [UNION syntax](#), making it possible to efficiently request field information for multiple object types simultaneously within a single request.

## Internal Names for Insert and Update

In addition to the object type ID, the internal name can also be specified in the JSON field 'system:objectTypeld' for insert and update functions.

## Recycle Bin

New endpoints allow access to the recycle bin with the options to [Restore](#) and [Delete](#) objects permanently.

## Multipage TIFF

Multipage TIFFs are no longer transferred as \*.zip files but as \*.tiff files via the renditions as of version 5.3.

### DMS service Version 5.3.2

The service release 5.3.2 is a service release for troubleshooting.

### DMS Service Version 5.4

## Creating Variants

[POST] /variants: When creating [variants](#), the `objectTypeId`, `variantType`, and `transferPlannedRetention` parameters can be specified directly in the payload.

## Searching for Variants

[GET] /variants: The [endpoint](#) for retrieving the index data of all variants of an object provides the `fields` and `systemFields` parameters, which can be used to request index data fields as well as system fields for each variant.

## Full-text Search: Quality

[POST] /search: The `SCORE()` function is available to return the [quality](#) of the full-text result in the JSON.

## Full-text Search: System Fields

[POST] /search: CMIS SQL search provides the following special [fields](#) as part of system-wide full-text queries: `system:objectId` and `system:objectTypeId`.

## Conditions on Table Controls

[POST] /search: CMIS SQL search supports [conditions](#) when searching for table controls.

## Field Settings for Hit Lists

[POST] /native/names: Provides an [endpoint](#) to retrieve the names according to the field settings for hit lists, window titles, and sending.

## Field Settings for an Object Type

[GET] /name: Also provides an [endpoint](#) to retrieve the names according to the field settings for hit lists, window titles, and sending for an object type.

### DMS service Version 5.4.1

Service Release 5.4.1 is a service release for troubleshooting.

### DMS Service Version 5.5

The service release contains a new endpoint, in addition to bug fixes.

## Deleting a Content File

[DELETE] /file: The new [endpoint](#) allows the contents of a document to be deleted.

### DMS Service Version 5.5.1

Service Release 5.5.1 is a service release for troubleshooting.

### DMS Service Version 5.5.2

Service Release 5.5.2 is a service release for troubleshooting.

## enaio® repository-manager

You will find information about the latest service releases of enaio® repository-manager here.

## Installation

Services are installed via the `os_service-manager_setup.exe` file in the `\Backend\Service-Manager\` directory.

Service updates take place via `enaio_services_versionfix.exe` in the `\Backend\Service-Manager-Update\` directory. Copy the directory to the computers where the microservice installations are located prior to carrying out the updates.

The current `repositorymanager-app.jar` can also be copied to the `\service-manager\update\` directory. `enaio® service-manager` then automatically updates `enaio® repository-manager`.

## enaio® repository-manager 4.3.1

### KGS Content Server

If the upgrade to version 4.2.2 has not already been carried out, then for the new version of the KGS Content Server, the `\working-dir\` working directory must be emptied and the configuration recreated via the [KGS administration page](#).

### Barcode Errors

For easier troubleshooting, the object definition of the ArchiveLink cabinet can be extended by a dialog element of the 'checkbox' type with the internal name 'Barcodeprocessingerror'. The checkbox is enabled when errors occur during barcode processing.

The object definition file from the `\working-dir\obj-def\` installation directory has been updated accordingly.

### Connection Parameters

The connection to the DMS service and to `enaio® appconnector` can be made via `enaio® gateway` and – if `enaio® gateway` is configured accordingly – encrypted.

The [connection parameters](#) must be specified.

## enaio® repository-manager 4.3.2

### Connection with enaio® appconnector

The connection to enaio® appconnector is established via the address

`http://127.0.0.1:8060/` by default. If enaio® appconnector is installed on a different host or port, then the address must be specified via the new `enaio.app-connector.uri` parameter in `repositorymanager-prod.yml`.

The user and password of the technical user in the `application-blue.yml` file of enaio® service-manager are used for the connection by default. If you want to use a different technical user, then you can specify this in the `repositorymanager-prod.yml` file via the `enaio.dms.username` parameter.

The previous parameters `enaio.osrest.uri`, `enaio.osrest.username` and `enaio.osrest.password` are no longer evaluated and can be deleted.

### IP Filter for Management Endpoints

Access to the following endpoints can be restricted via IP filters: `info`, `health`, `env`, `loggers`, and `metrics`.

For this purpose, addresses that allow access are specified via the new `management.trusted.ipPattern` parameter in the `repositorymanager-prod.yml` file.

In general, IP filters can also be [configured](#) for both the management endpoints and the services.

## enaio® gateway

Here, you will find information about the enaio® gateway hotfix 10.0.21.

enaio® gateway uses Spring Boot 2.7.7 as of hotfix 10.0.17.

If the logging configuration for enaio® gateway was adjusted in the `application-prod.yml` file located in the `\apps\os_gateway\config` installation directory, then the [parameters](#) must be adjusted.

If not, you do not need to make any changes and enaio® gateway will continue to log to the default directory.



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