d.velop

d.velop archivelink services for SAP Solutions: Administrator

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1. d.velop archivelink services for SAP Solutions: Administrator

1.1. Basic information about the application

This chapter contains product information and general information.

1.1.1. About d.velop archivelink services for SAP Solutions

d.velop archivelink services for SAP Solutions is a web-based application (app) that provides you with services for connecting your SAP systems to d.velop documents using the SAP Archivelink interface. The interface functions for verifying the import and the display of documents comply with the certification required by SAP.

There are suitable reports and customizing options for your SAP system to ensure the correct mapping of properties of documents in d.velop documents that you have saved from an SAP system. These enhancements have been developed in the SAP namespace of d.velop AG and are also available for download in the configuration of the app. You can define the properties (metadata) in SAP that you want to link to your documents in d.velop documents. This is known as indexing of the documents and is generally carried out automatically in the background when the interface is run. An additional function for later follow-up indexing is available for the Archivelink documents in d.velop documents. This means you can synchronize the properties in d.velop documents with the SAP data at any time.

To use the barcode scenarios available in SAP Archivelink for saving incoming documents (early or late saving with barcode), this solution provides corresponding reports for your SAP system. You can use them to create barcode links in your SAP system and save the associated documents in d.velop documents using the d.velop archivelink for SAP Solutions app.

1.2. Install and Uninstall

This chapter contains information about installing the application.

1.2.1. System requirements

Please refer to the central system requirements for d.velop products (on-premises). You can find deviating or more extensive system requirements in this documentation.

Requirements for your SAP system:

- SAP ERP ECC 6.0 EHP 7
- SAP S/4HANA 1809 or higher
- SAP NetWeaver 7.40 SP12 or higher

Server operating systems:

- Windows Server 2019 or higher

Applications:

- Microsoft Edge (Chromium)
- Microsoft Edge WebView2
- Google Chrome 120 or higher
- d.3 server (Annual 2022, 8.1.0 HF 62 or latest Current version)

1.2.2. Installing d.velop archivelink services for SAP Solutions

You install the software exclusively using d.velop software manager. d.velop software manager automatically installs all components which you require to operate the software.

You can find more information in the documentation for d.velop software manager.

You will find d.velop archivelink services for SAP Solutions in d.velop software manager under **Add-on components**.

1.2.3. Uninstalling d.velop archivelink for SAP Solutions

The software you installed using d.velop software manager can only be uninstalled with d.velop software manager. If the software to be uninstalled has dependencies with other software packages, you must resolve these conflicts accordingly.

You can find more information in the documentation for d.velop software manager.

You will find d.velop archivelink services for SAP Solutions in d.velop software manager under **Add-on components**.

1.3. Configuring d.velop archivelink services for SAP Solutions

This chapter contains information on the configuration of d.velop archivelink services for SAP Solutions.

1.3.1. Managing mappings

This chapter provides more information about creating mappings.

Creating mappings for storage

To store a document with d.velop archivelink services for SAP Solutions, you must first create a mapping for the category **SAP document (sapdo)** (default mapping). In addition, you can provide a separate source for each content repository in the mappings. This allows you to store documents in a separate target category for each content repository.

Providing a separate source for a content repository – this is how it works

1. On the d.velop documents start page, click **Configuration**.
2. Navigate to **ArchiveLink for SAP Solutions > Manage content repositories**.
3. Select the relevant content repository.
4. Activate **Provide a separate source for mapping for this content repository**.

After saving, the source **d.velop archivelink services for SAP Solutions (SAP document <name of content repository>)** is made available for this content repository. You can use this source independently of the default mapping for targeted storage of documents in a separate target category.

> **Note**
> The target category must contain the properties to which **document ID** (**docId**) and **component ID** (**compId**) are assigned in the default mapping.

Creating a mapping – this is how it works

1. Click **Mappings** on the start page of your d.velop cloud tenant.

> **Note**
> If you run d.velop archivelink services for SAP Solutions with SharePoint Online, you will find the mappings in the configuration under **Integrations and interfaces > Microsoft SharePoint > Mappings**.

2. Create a new mapping using the plus symbol.
3. Enter a name.
4. Proceed as follows, depending on the mapping type:
   - If you are creating the default mapping, use the source **SAP document**.
   - If you are using a separate source for a content repository, select the corresponding source named **d.velop archivelink services for SAP Solutions (SAP document <name of content repository>)**.
5. Proceed as follows, depending on the mapping type:
   - If you are creating the default mapping, use the source category **SAP document** (**sapdo**).
   - If you are using a separate source for a content repository, select the corresponding source category named **SAP document <name of content repository> (sapdo-<name of content repository>)**.
6. Assign the source category to a target category. All mappings that are made available are displayed under **Properties**. The properties **document ID (docId)** and **component ID (compId)** are mandatory, as these properties correspond to **ArcDocID** and **CompID** from SAP.
7. Assign the relevant properties to the target category.

> **Note**
> Ensure that the target category in the destination system is created and assigned identically to the source category.
>
> Avoid assigning the **document ID (docId)** to the **document number** property in d.velop documents, as this property is limited to 30 characters. The properties **TenantId** and **SAP SystemId** are not filled from SAP but instead are adopted from the configuration in d.velop documents.

8. Save the mapping to complete the process.

You have successfully created a mapping. Once you have saved the mapping, the documents with the corresponding properties will be archived in the category you defined.

Creating a mapping for indexing

In order to use the indexing, properties must first be configured in SAP and transferred to d.velop documents. More information: Configuring the SAP customizing.

This is how it works

1. Open the mappings in d.velop documents.

> **Note**
> If you run d.velop archivelink services for SAP Solutions with SharePoint Online, you will find the mappings in the configuration under **Integrations and interfaces > Microsoft SharePoint > Mappings**.

2. Create a new mapping using the plus symbol.
3. Enter a name.
4. Select the configuration created in SAP as the source.
5. Assign the source to a target category you created in the destination system.
6. Assign the properties according to the required target properties of your target category.

> **Note**
> The target category must contain the properties to which **document ID** (**docId**) and **component ID** (**compId**) are assigned in the default mapping.

7. Save the mapping to complete the process.

1.3.2. Managing content repositories

This chapter contains information about managing content repositories.

Creating a destination system

A destination system is the system in which files and documents are stored. A repository in your document management system (DMS) can be a destination system, for example.

This is how it works

1. On the d.velop documents start page, click **Configuration**.
2. Navigate to **ArchiveLink for SAP Solutions > Manage destination systems.**
3. Click **Create**.
4. Enter a name and a description for the new destination system.
5. Enter the type of the destination system.

> **Warning**
> If you want to use the destination system type **Export directory**, be aware that d.velop archivelink services for SAP Solutions does not create file backups in the configured directory. Therefore, the process does not constitute audit-proof archiving. Only use this export system type if your requirements do not allow for any other destination system. For more information, see More information about the destination system type "Export directory".

6. Enter credentials for the destination system.

> **Note**
> The available fields will vary depending on the type of destination system. You can manage the required API keys in the configuration under **Infrastructure and security > Login > API key**.

7. Save your changes.

You have successfully created a destination system. The system appears in the list of configured destination systems.

You can delete existing destination systems as needed. In order to delete a destination system, it must not be in use by any content repository.

More information about the destination system type "Export directory"

The destination system type **Export directory** saves files and documents as well as associated JPL files with metadata in a configurable directory. To ensure audit-proof archiving, you require a process that transfers a document together with the metadata **CompID** and **DocID** to d.velop documents. The document must be imported into the category **SAPDO**, and the properties **CompID** and **DocID** must be assigned. The process is not part of d.velop archivelink for SAP Solutions. You can perform further actions in the SAP ArchiveLink context, e.g. display or index a document, only once the process has archived a document in d.velop documents.

Managing MIME types of a destination system

When a destination system is created, common MIME types are added to it. You can manage and configure the MIME types of a destination system.

This is how it works

1. Click **Configuration** on the start page of your d.velop cloud tenant.
2. Navigate to **ArchiveLink for SAP Solutions > Manage destination systems**.

3. Select an existing destination system or create a new destination system.
4. You can manage the MIME types under **MIME type mapping** as follows:
   a. To search for a MIME type, enter the search term in the **Filter** field. To display the full list again after searching, you will need to remove the filter.
   b. To create MIME types, click **Add** and enter the MIME type and the file extension.
   c. To delete a MIME type, click the trash can icon in the row of the MIME type in question.
   d. To delete all MIME types, click **Delete all**.
   e. Click **Default** to restore the default settings.
   f. You can enable the saving of documents without a configured MIME type using the corresponding option.
5. Save your entries.

Managing the fallback search

You can configure the fallback search of a destination system.

This is how it works

1. Click **Configuration** on the start page of your d.velop cloud tenant.
2. Navigate to **ArchiveLink for SAP Solutions > Manage destination systems**.
3. Select an existing destination system or create a new destination system.
4. Optionally, enable the fallback search with the document ID or the abbreviated document ID under **Destination system**.

> **Note**
> For the fallback search, each SharePoint Online content type or d.velop documents category must have the properties **ArcDocID** and **CompID**.
>
> If you are using d.velop documents, ensure that the same property is used in all categories.
>
> If you are using SharePoint Online, customized properties can be used. However, the properties must be named identically throughout the system. The target fields in the default mapping are the reference for the names of the properties.
>
> Only documents whose content type or category is configured with the stated properties are found.

5. Save your entries.

Creating a content repository

You need a content repository in order to save documents, for example. In this article, you will learn how to create a content repository.

This is how it works

1. On the d.velop documents start page, click **Configuration**.
2. Navigate to **ArchiveLink for SAP Solutions > Manage content repositories**.
3. Click **Create**.
4. Enter a name and a description for the content repository.
5. Select a previously created destination system.
6. Save the content repository.

You have successfully created a content repository. You can address this content repository via the SAP system.

1.3.3. Managing a proxy

To connect your SAP system with your d.velop cloud, the proxy application d.velop archivelink cloud connect for SAP Solutions must be installed on a server in your network.

This is how it works

1. On the d.velop documents start page, click **Configuration**.
2. Navigate to **ArchiveLink for SAP Solutions > Proxy administration**. You have the following options:
   - You can download the setup for d.velop archivelink cloud connect for SAP Solutions under **Download proxy**.
   - You will find the base address (base URL) of your system under **Configure proxy**. You will need the base address when installing the proxy application. You can also generate and copy a secret key here, which will be entered in the proxy application.

> **Warning**
> Note that only one secret key is valid at any given time. When you create a new secret key, the old key becomes invalid.

1.3.4. Managing ILM WebDAV connections

You can configure ILM WebDAV connections for existing content repositories.

This is how it works

1. On the d.velop documents start page, click **Configuration**.
2. Navigate to **ArchiveLink for SAP Solutions > Configure ILM-WebDAV**.
3. Select the relevant content repository.
4. Enable the option.
5. Enter the ILM URL in the following format: **http(s)://<host>:<port>**.
6. Enter the user name and the password for the ILM communication user.
7. Save your entries. A connection test is then carried out automatically.

1.3.5. Managing certificates

When you set up a content repository in your SAP system, a certificate is transferred to your d.velop cloud tenant. The transferred certificate ensures secure communication between your systems. In order to use the content repository, you need to accept the corresponding certificate.

You can also reject certificates that were sent by the SAP system when a content repository was set up. Rejecting a certificate is useful, for example, when you have sent a certificate by accident. Once rejected, the corresponding certificate will be removed from your d.velop cloud tenant.

This is how it works

1. On the d.velop documents start page, click **Configuration**.
2. Navigate to **ArchiveLink for SAP Solutions > Manage certificates**.
3. Review the entries in the table to find the corresponding certificate. If the certificate you are looking for is not shown, you can reload the list by clicking **Refresh certificates**.
4. Click **Accept** or **Reject**.

Once you have successfully accepted the certificate, it will then be used according to the ArchiveLink protocol.

1.3.6. Using the document status

The document status function enables you to query the status of a document.

This is how it works

1. On the d.velop documents start page, click **Configuration**.
2. Navigate to **ArchiveLink for SAP Solutions > Document status**.
3. Select the content repository that contains the document.
4. Enter the document ID and component ID in the corresponding fields.
5. Execute the action.

1.4. Configuring the SAP customizing

This chapter provides you with more information about SAP customizing.

1.4.1. Downloading the SAP transports

You can load SAP transports into your SAP system to make it easier for your users to work with documents. With the aid of the SAP transports, you can use functions such as adding metadata to documents (indexing).

This is how it works

1. Open the configuration in d.velop documents.
2. Navigate to **ArchiveLink for SAP Solutions > Download SAP transports**.
3. Download the SAP transports.

1.4.2. Preparing job creation

Indexing of documents is done by means of job management in the SAP system. This chapter contains information about the preparation work required.

The creation of an indexing job is always based on maintaining a property (in d.velop customizing) for the corresponding use case.

Maintaining the number range object /DVELOP/JN

In order to create jobs, you must maintain an interval of the number range object **/DVELOP/JN**. This number range object is used to assign unique job IDs.

This is how it works

1. Open the transaction **SNUM.**
2. Enter the number range object **/DVELOP/JN** and select **Change**.
3. Go to **Interval maintenance** (F7).
4. Enter the interval as follows:
   - **Number range number**:01
   - **From number**:0000000001
   - **To number**:9999999999
5. Save your entry.

Implementing the BAdI (DVS)

For DVS storage, a BAdI implementation (business add-in) is used to create jobs. Since the BAdI used cannot be called up more than once, you first need to check whether an active implementation for the BAdI **DOCUMENT_MAIN01** already exists.

Checking for an active implementation – this is how it works

1. Open the transaction **SE18**.
2. Enter the BAdI name **DOCUMENT_MAIN01**.
3. Select **View**.
4. Select **Implementation > Overview** to display all implementations.

BAdI implementation already exists

If an implementation exists, expand the existing code by adding the call of a function module in order to create jobs for DVS storage.

> **Note**
> Ensure that the active implementation is used.

Expanding the implementation – this is how it works

1. Open the transaction **SE18**.
2. Enter the BAdI name **DOCUMENT_MAIN01**.
3. Select **View**.
4. Select **Implementation > Change**.
5. Select the required implementation.
6. Go to the implementing class via **Interface**. Double-click on the implementing class.
7. Expand the method **IF_EX_DOCUMENT_MAIN01~AFTER_SAVE**.
8. Copy the following call of the function module:

```
CALL FUNCTION '/DVELOP/APP_KPRO_EVENT'
EXPORTING
api_flag = api_flag
tcode = tcode
draw = draw
docfiles = docfiles
.
```

9. Activate the implementation.

BAdI implementation does not exist

If there is no implementation of the BAdI, you will need to create one.

Creating an implementation – this is how it works

1. Open the transaction **SE18**.
2. Enter the BAdI name **DOCUMENT_MAIN01**.
3. Select **View**.
4. Select **Implementation > Create**.
5. Enter a definition name.
6. Assign a short text.
7. Click **Interface**.
8. Double-click on the implementing class.
9. Expand the method **IF_EX_DOCUMENT_MAIN01~AFTER_SAVE**.
10. Copy the following call of the function module:

```
CALL FUNCTION '/DVELOP/APP_KPRO_EVENT'
EXPORTING
api_flag = api_flag
tcode = tcode
draw = draw
docfiles = docfiles
.
```

11. Activate the implementation.
12. To activate the implementation, use transaction SE18 to open the corresponding implementation.
13. Select **Implementation > activate**.

Under **Runtime Behavior**, you can see that the implementation is called.

Configuring the job creation for deleted classifier documents, ADK files and print lists

Jobs for deleted classifier documents, ADK files and print lists can be created manually and automatically. To do this, execute the indexing report in d.velop customizing.

Manual report execution – this is how it works

1. Open the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Programs > Indexing report**.
3. Configure the following options:
   - **Content repository**: Restrict the report to one content repository.
   - **Direct indexing**: Activate this option if the jobs are to be created and executed directly. Deactivate this option if the jobs are to be created and scheduled for background processing (batch processing).
   - **Active**: You can activate the following options:
     - **CLS-DEL** (deleted classifier documents)
     - **DL** (print lists)
     - **ADK** (ADK files)
   - **Start date**: Specify the start date for the corresponding SAP table.
   - **End date**: Specify the end date for the corresponding SAP table.
4. Execute the report.

Configuring automated report execution – this is how it works

1. Open the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Programs > Indexing report**.
3. Configure the following options:
   - **Content repository**: Restrict the report to one content repository.
   - **Direct indexing**: Activate this option if the jobs are to be created and executed directly. Deactivate this option if the jobs are to be created and scheduled for background processing (batch processing).
   - **Active**: You can activate the following options:
     - **CLS-DEL** (deleted classifier documents)
     - **DL** (print lists)
     - **ADK** (ADK files)
   - Leave the fields **Start date** and **End date** blank.
4. Save the report configuration as a variant.
5. Call the transaction **SM36**.
6. Schedule the previously saved variant of the report **/DVELOP/APP_CREATE_IDX_JOBS** as a background job.
7. Specify that the background job should run once a day so that an indexing job is created for each table entry from the previous day.

1.4.3. Configuring the permissions

For the customizing settings in SAP, you require a dialog user with the following permissions:

S_TCODE

- **TCD**: /DVELOP/ARC_CL, /DVELOP/ARC_CUSTO, /DVELOP/CUS, /DVELOP/APP_CUS, /DVELOP/APP_MAPP, /DVELOP/APP_BARC_CUS, /DVELOP/APP_DEL_CUS

S_TABU_DIS

- **ACTVT**: 02 (change), 03 (view)

- **DICBERCLS**: ZARC (d.velop-archiving)
- **DICBERCLS**: ZAPP (d.velop archiving)

ZDV_CUS_DS

- **ACTVT**: 16 (execute)

ZDV_APP

- **ZDV_APP_AC**: 07 (change customizing)

> **Note**
> You may need to create the table permission groups ZARC and ZAPP. Alternatively, you can enter the overall permission '*' for these table permission groups. Open the SAP transaction **SM30** and open the maintenance view **V_BRG_54**. Click **Maintain** and add a new entry.

You can also grant permissions for the following functions:

ZDV_APP_AC

- **ZDV_APP_AC: 01** (background processing): This permission is required for the user running job processing and barcode processing in the background.
- **ZDV_APP_AC: 02** (table view): Permits the table view via d.velop customizing (job table, logging table, barcode history)
- **ZDV_APP_AC: 03** (delete table entries): This permission is required for the user cleaning up the tables automatically via the report.
- **ZDV_APP_AC: 04** (manual indexing, synchronization indexing): Permits the customizing option **Synchronization indexing**.
- **ZDV_APP_AC: 05** (view job details): In the job table and the synchronization report, you can permit functions available via the context menu.
- **ZDV_APP_AC: 06** (show customizing)

1.4.4. Configuring the content repository

You can link the SAP system with d.velop archivelink services for SAP Solutions via the content repository.

This is how it works

1. Call the transaction **OAC0**.
2. Create a content repository. Alternatively, you can edit an existing content repository.
3. Select the document area.
4. Choose **HTTP Content Server** as the storage type.
5. Enter the host on which the d.ecs http gateway can be reached (IP or FQDN).
6. Enter the port of d.ecs http gateway.
7. Enter **archivelink/command** in the HTTP script.
8. Save your entries.

If you have created the repository in the configuration of d.velop archivelink for SAP Solutions, you can test the connection directly from transaction **OAC0**.

You can set up encrypted communication between the SAP system and the proxy.

This is how it works

1. Open the settings for the content repository.

2. Enter **%HTTPS** in the transaction field.
3. Under **SSL Port Number**, enter the HTTPS port of d.ecs http gateway.
4. Under **HTTPS at Front End** and **HTTPS at Back End**, enable the option **HTTPS required**.
5. Save your entries.

1.4.5. Configuring in d.velop customizing

This chapter contains information on the configuration of d.velop customizing for d.velop archivelink services for SAP Solutions.

You can configure common settings in the SAP system depending on the SAP system ID and the tenant.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Settings > Common settings**.
3. Configure the following common settings:
   - **Threads**: Use the number of threads to specify in how many simultaneously running instances the jobs will be processed.
   - **Jobs per thread**: Set the number of jobs used for processing per thread.
   - **Optional jobs**: Enable this option if jobs are to be created for document storage (**EXPORT** status).
   - **Log level**: Specify which processes will be logged.
   - **Log active**: Enable/disable logging.

Configuring the connection data

The connection data in d.velop customizing forms the basis for communication between d.velop documents and the SAP system. Configure the connection data for each SAP system, tenant and content repository.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Settings > Maintain connection data**.
3. Edit existing entries or create new ones.
4. Configure the following options for each entry:
   - **Tenant**: Enter the SAP tenant.
   - **SAP system ID**: Enter the SAP system ID.
   - **Repository**: Enter the content repository.
   - **Base URL**: Enter the base address of the d.velop documents system.
   - **API-KEY**: Enter the API key of the communication user from the d.velop documents system.
5. Save your settings.

Configuring the properties

The definition of the properties in d.velop customizing is the basis of an assignment. All properties configured here are available to you on the corresponding assignment interface of d.velop documents and need to be assigned there. The configuration in the SAP system is carried out for each SAP system, tenant and storage scenario (OAC3 link).

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Settings > Maintain the properties**.
3. Double-click to edit existing configurations or create new configurations.
4. Configure the following options for each entry:
   - **Source information**

    - **Name**: Enter a name. The name serves to help you recognize the configuration in the later definition of an assignment.
    - **Content repository**: Select a repository. Only those repository are shown which are linked with d.velop archivelink for SAP Solutions.
    - **Object type**: Select an object type for the repository.
    - **Document type**: Select the SAP document type.
  - **Logging**: If required, you can override global logging (from the **Common settings**).
  - **Customizing**
    - **SAP system ID**: SAP system ID
    - **Tenant**: SAP tenant
    - **Job repetitions**: Number of times to repeat the job in the event of an error.
    - **Attribution after saving**: Enable this option to immediately index a successfully saved document.
    - **Attribution after transaction**: Enable this option to carry out the attribution only after the transaction. By default, this option is only relevant for the object types **BKPF** and **BUS2081**.
    - **Target status after all repetitions**: Indicate the status the job is to be assigned after all job repetitions.
      - **STOP**: This status interrupts the job. Processing of the job will only resume upon manual activation.
      - **REORG**: This status is intended for the reorganization of a document. After all job repetitions have been carried, the system will try to move the document to a desired category. The defined properties are not transmitted in a reorganization.
    - **Constant for reorganization**: Enter a constant value for the reorganization.
  - **Properties**
    - **Table**: Select an SAP table.
    - **Field name**: Select a table field. You can either select the table field via the value help or enter the technical field name directly. You can search for a technical value or description in the input help using a '*'. Example: '*<document number>*'
    - **Data type**: Data type for converting the value. Note that the same data type should always be used that matches the property field in d.velop documents.
    - **Remove leading zeros**: Enable this option to remove leading zeros of the attributes.
5. Save your settings.

Once you have saved the settings, you can choose these settings in d.velop documents. The name entered in the SAP system will help you quickly find the respective configuration.

Configuring barcode scenarios

You can have a directory monitored and save documents located in it. By default, a search is carried out for a file pair with the same name, consisting of the original file and the attribute file.

For default processing, the attribute file must contain specific fields depending on the configured behavior. Standard processing is based on the file type JPL of the attribute file.

- If you want to report the barcode to the SAP system, the barcode must be read from the attribute file. Field: **barcode=**
- If link entries are to be written, include the reference to the SAP document. Fields: **objectID=**, **businessObject=**

> **Note**
> Any necessary path specifications are case-sensitive. Note that file extensions in the exchange directory must be written either exclusively in uppercase or exclusively in lowercase.

You can configure barcode processing, depending on the SAP system and tenant.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Settings > Barcode scenario**.
3. Double-click to edit existing configurations or create new configurations.

> **Note**
> Please not that each configured scenario is designed for one file type pair. You cannot process several file type pairs, i.e. the combination of the file types of the original file and the attribute file, via a single exchange directory.

4. Maintain the customizing:
   - **Settings (general)**
     - **Exchange directory**: Specification of the path of the directory to be monitored.
     - **User exit class**: Optional entry of a customized implementation.
     - **Number of days files are to remain in exchange directory**: Define how long files are to remain in the directory if processing fails.

       > **Note**
       > If the file pairs cannot be processed after the number of days has passed, the file pairs are moved to a subdirectory. Create the folder **error** in the corresponding exchange directory for this purpose.

     - **Save files**: You can use this option to copy successfully processed files to a subdirectory. Create the folder **save** in the corresponding exchange directory for this purpose.
     - **Behavior after saving**: You can distinguish whether barcodes are to be reported to the SAP system and/or whether link entries are to be created.
   - **Original file**
     - **File type**: Specify a file type for the original file (e.g. PDF).
     - **Content repository**: Enter the repository in which the original file is to be saved.
     - **SAP document type**: Specify an SAP document type (technical) here if link entries are to be written. Please ensure that the behavior after saving (see above) has the corresponding value.
   - **Attribute file**
     - **File type**: Specify a file type for the attribute file (e.g. JPL).
     - **Attribute file**: Enable this option if the attribute file is to be saved.
     - **Content repository**: Enter the repository in which the original file is to be saved.
     - **SAP document type**: Specify an SAP document type (technical) here if link entries are to be written. Please ensure that the behavior after saving (see above) has the corresponding value.
5. Save your settings.
6. Test the access to the exchange directory using the function **Test reading the directory (F5)**.

> **Note**
> Any attributes from the JPL file are stored by default in the table **/DVELOP/ARC_ADD** with reference to the ArcDocID. The values can be attributed by default. For this purpose, maintain the corresponding field label in d.velop customizing under **Dynamic field labels**.

Enhancement with user exit classes

If needed, you can implement a user exit class for barcode processing. You can customize the following functions:

- Data retrieval for barcode processing

- Reading the barcode
- Attribute retrieval for link entries
- Reading the attribute file

The method **GET_DATA** has the export parameter **ET_BAPIBARC**. Documents are saved based on the values in this table. If you want to write link entries, you will also need to enter the export parameter **ET_TOA**. You can use the standard implementation for guidance.

You can create a user exit class for barcode processing.

This is how it works

1. Create a new class.
2. Inherit from the class **/DVELOP/APP_CL_BARC_DATA**.
3. Redefine the desired method and adapt the logic according to your requirements.
4. Enter the created class in the corresponding customizing for a barcode scenario.

Administration of the data storage

You can have the SAP tables cleaned up automatically. In d.velop customizing, you can configure if and how the table contents are to be cleaned up. You can maintain the customizing for each SAP system and tenant.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Settings > Administration of the data storage**.
3. Double-click to edit existing configurations or create new configurations.
4. Make the appropriate configuration for tables:
   - Job table
   - Logging table
   - Barcode history
5. Save your settings.

Configuring classifiers

If you want to index classifier documents, you can control the behavior via d.velop customizing. This applies to BKPF documents with the status **Z** (field **BSTAT**) and for BUS2081 documents with the status **2** (field **RBSTAT**).

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Settings > Classifier**. You have the following options:
   - The attribution of classifier documents without an SAP document reference may be delayed. If the number of days is not defined, no indexing will take place.
   - The attribution of deleted SAP documents can be delayed.
   - The attribution of SAP documents with associated classifier document allows verification of the classifier workflow status. If you want to check the status, select **X** (yes). When this option is enabled, attribution only occurs once the workflow status of the classifier has one of the following values:
     - **900**: finished
     - **998**: deleted
     - **999**: archived
   - You can choose the namespace of the classifier tables.
3. Save your settings.

Maintaining the user exit classes

The standard scope of indexing can be expanded or redefined with the following classes:

- /DVELOP/ARC_GET_DATA
- /DVELOP/ARC_GET_TOA
- /DVELOP/ARC_GET_BOR
- /DVELOP/ARC_GET_INFO

You can enable indexing in d.velop customizing if you have expanded the standard scope.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Settings > Maintaining the user exit classes**.
3. Enter the default class in the first column.
4. Enter your class that inherits from the corresponding default class in the second column.
5. Enable the added row by clicking **Active**.
6. Save your changes.

Displaying the jobs in the job monitor

The job overview in SAP provides an overview of the indexing scenarios. You can display a job overview.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Programs > Job-Monitor**.
3. You have the option to enter filter criteria.

> **Note**
> You can save and load filter criteria if required. To do so, specify the filter criteria and save these criteria via **Save as Variant...** (**CTRL** + **S**). You can load saved variants using **Get Variant...** (**SHIFT** key + **F5**).

4. Display the job overview using **Execute** (**F8**).

A job overview is shown. The most recently created jobs are at the top. The following functions are available via the context menu or by double-clicking the corresponding icon in the respective column:

- Display the latest log message in JSON format (**Show log message**).

> **Note**
> You can jump to the job log via the context action **Display all log messages**.

- Display the attributes that were determined in the SAP system during indexing (**Check attributes**).

> **Note**
> The properties will be checked following the call and therefore the check will always show the latest attribute found.

Overview of job statuses

Status	Description
Job processed successfully	The job was processed successfully.

Status	Description
Job stopped	The job has reached the number of configured repetitions. The job has been paused and processing will only resume upon manual activation.
Stopped job released	The stopped job has been released again and will be processed upon manual start.
Job being processed	The job was created after filing the document. The job will be executed immediately, provided that the option **Attribution after saving** is active. Alternatively, the job is placed in the queue.
Document was deleted	The document was deleted. The job is no longer run.
Job in the queue	The Job is processed by background processing.

Displaying the barcode history

The barcode history in SAP provides you with an overview of the barcodes that have been processed using d.velop archivelink services for SAP Solutions. Since the SAP system does not keep successfully linked barcodes, the history serves as a logging function for these. The barcode history can be enabled or disabled in the customizing of the barcode scenarios.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Programs > Barcode history**.
3. You have the option to enter filter criteria.

> **Note**
> You can save and load filter criteria if required. To do so, specify the filter criteria and save these criteria via **Save as variant...** (**CTRL + S**). You can load saved variants using **Get variants...** (**SHIFT** key + **F5**).

4. Display the barcode overview using **Execute** (**F8**).

You will be shown an overview of the barcodes processed using the product. If link information is available, the information in the SAP document about the respective barcode is read using the ArcDocID and shown in the view.

Opening the job logging

The logging overview in SAP provides an overview of the written messages.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Programs > Job Logging**.
3. You have the option to enter filter criteria.

> **Note**
> You can save and load filter criteria if required. To do so, specify the filter criteria and save these criteria via **Save as variant...** (**CTRL + S**). You can load saved variants using **Get variants...** (**SHIFT** key + **F5**).

4. Display the job overview using **Execute** (**F8**).

You will be shown an overview of the log messages. You can open the pop-up window with the full message in JSON format via the context menu entry **View log message** or by double-clicking the entry in the **JSON** column.

Executing the synchronization indexing

You can start indexing jobs manually. The selected jobs are restarted regardless of the job status.

This is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Programs > Synchronization indexing**.
3. Select a scenario.
4. Limit the selection of jobs using the following parameters:
   - **Document ID**
   - **ContentRepID**
   - **Object type**
   - **Document type**
   - **Job ID**
   - **Job status**
   - **Job type**
   - **Archiving date**
5. Click **Execute** (**F8**) to create a list based on your parameters.
6. You can queue the jobs using **Batch Update** (**F8**) or execute them directly with **Direct Update** (**F2**).

You will be shown an updated view of the jobs after execution. You can choose to display the latest log message via the context menu.

Migrating existing indexing jobs

You can migrate open indexing jobs from d.velop archivelink for SAP Solutions starting from version 3.0.0. To do so, you must first export the open jobs and then transfer them to the new data storage.

Exporting the open index jobs to a CSV file – this is how it works

1. Open the corresponding tools for your database.
2. Select the open indexing jobs. To do so, you can use the following query, for example:

```
SELECT [doc_id],[rep_id]
  FROM [].[dbo].[DvelopAL_PendingJobs]
  WHERE job_type = 2
```

3. Export the result to a CSV file.

Transferring the exported jobs into the new data storage – this is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Programs > Migration Indexing jobs**.
3. Select the CSV file you created.

The report checks whether there is a corresponding entry in the link tables for each job. If a link entry exists, a job is created in the new data storage.

The following differentiation is made when creating the job:

- If there is a mapping for the relevant scenario, an indexing job is created and processed.
- If there is no mapping for the scenario, an export job is created. The sole purpose of this job is to ensure completeness.

1.4.6. Automating barcode processing

You can make barcode processing start automatically. To do so, schedule the corresponding report as a background job.

> **Note**
> Job processing can only be started once per tenant.

The processing is carried out based on the settings maintained in d.velop customizing. If more than one exchange directory has been entered for each tenant, these directories will be processed one after the other.

This is how it works

1. Call the transaction **SM36**.
2. Schedule the report **/DVELOP/APP_BARCODE** as a background job.
3. Define how often the processing should be started.

1.4.7. Automating job processing

You can automate job processing. To do so, schedule the corresponding report as a background job.

> **Note**
> Job processing can only be started once per tenant.

The processing is carried out based on the settings maintained in d.velop customizing. Only jobs with the status **Queue** are taken into consideration. The specified settings for the parallel processing with the corresponding number of jobs are taken into account during execution.

Scheduling job processing as a background job – this is how it works

1. Call the transaction **SM36**.
2. Schedule the report **/DVELOP/APP_JOB_PROCESSING** as a background job.
3. Define how often the processing should be started.

In order to be able to process the jobs simultaneously, the individual threads are executed in the background. You can use the transaction **SM58** to display the running threads.

If a thread is discontinued because the program is terminated, the faulty thread will not automatically disappear from the logical unit of work (LUW). This can occur due to customer-specific enhancements.

If the job processing is restarted by the SAP system afterwards, the job that caused the program termination is identified and highlighted accordingly in the job table.

Since the discontinued thread cannot be automatically deleted from the LUW, this job prevents the maximum utilization of new threads.

Deleting a faulty thread from the LUW – this is how it works

1. Call the transaction **SM58**.
2. Select the faulty thread.
3. Delete the entry by clicking the corresponding icon.

1.4.8. Automating table cleanup

You can have your SAP tables cleaned up automatically. To do so, schedule the corresponding report as a background job.

The following tables can be cleaned up:

- Job table (/DVELOP/APP_JOBS)
- Logging table (/DVELOP/APP_LOG)
- Barcode history (/DVELOP/APP_BHIS)

The cleanup is carried out based on the settings maintained in d.velop customizing. By default, no table entries will be deleted.

This is how it works

1. Call the transaction **SM36**.
2. Schedule the report **/DVELOP/APP_CLEAN_UP_TABLES** as a background job.
3. Define how often the processing should be started.

1.4.9. Transporting the d.velop customizing settings

In the developed reports for maintaining the d.velop customizing settings, you can transport your settings directly from the report. These settings can be transported to an existing or new d.velop customizing transport job in other SAP systems using the transport truck icon.

This function is available in the following d.velop customizing options:

- Maintain the properties
- Barcode scenario
- Administration of the data storage
- Classifier

Note that all entries in the tables are affected in each case and are included in the corresponding transport request. The options can be maintained for each SAP system ID and tenant. This means you can maintain the customizing for the entire transport route in the source system. You can use **SM30** to transport the other options (**Common settings** and **Maintenance of the user exit classes**).

1.4.10. How can individual attributes be transferred?

Dynamic field names allow you to dynamically index properties using the **/DVELOP/ARC_ADD** table. The table **/DVELOP/ARC_ADD** is included in the advanced indexing by default.

Maintaining dynamic field labels – this is how it works

1. Call the transaction **/dvelop/cus**.
2. Navigate to **archivelink services for SAP Solutions > Settings > Dynamic field label**.
3. You can maintain as many field labels as you like. Each entry will be available to you as a property of the table **#/DVELOP/ARC_ADD**.

This customizing option only enables you to maintain subsequent field labels using a table. The table has only one column You can assign the maintained field descriptions in the property mapping as an SAP field to the **/DVELOP/ARC_ADD table**. When the field labels are selected, the ArcDocID is used to read out the corresponding value for the label. The records themselves must be written to the table independently. The option enables properties to be indexed dynamically without having to extend the standard scope of advanced indexing.

1.5. Appendix: Default scope of indexing

1.5.1. Creating and starting jobs in SAP enhancements

You can create jobs or start processing by calling a function module. The call can be implemented in user exit classes or in a BAdI, for example.

Starting jobs in your enhancements – this is how it works

1. Call the function module **/DVELOP/APP_UPDATE_ATTRIBUTE** in the corresponding enhancement.
2. Transfer the job-specific attributes.
3. Use the parameter **ID_BATCH** to indicate whether the job should be executed immediately or created in background processing. If the job is created for background processing, set the parameter to **X**.
4. Transfer the corresponding area. **OBJECT_ID** is created depending on the area.

	SAP_OBJECT	OBJECT_ID	Table
AL (ArchiveLink)			
DVS (DVS/KPRO)	KPRO	<document type>|<document>|<document version>|<subdocument>	DRAW
DRL (print list)	DRAW	<SAP ArchiveLink repo>|<SAP ArchiveLink: Info field>|<sequential number>	TOADL
ADK (ADK file)	ADK	<run>|<archive file>	ADMI_FILES

1.5.2. Expanding the default scope

You can customize the indexing in SAP with user exit implementations. You can adapt and expand existing business objects. In addition, you can integrate new business objects into the indexing by means of user exits.

The extension is always done by implementing two classes. One class makes the additional properties and business objects available for selection. The other class provides functions for reading the attributes.

Creating a class for providing properties and business objects – this is how it works

1. Create a new class for the enhancement of available properties or business objects.
2. Enter the superclass **/DVELOP/ARC_CL_GET_INFO** in the newly created class.
3. Redefine a method or implement new methods for an extension.
4. Enter your class in d.velop customizing under Maintain the user exit classes.

Creating a class for reading the attributes – this is how it works

1. Create a new class for the enhancement of available properties or business objects.
2. Enter the superclass **/DVELOP/ARC_CL_GET_BOR** in the newly created class.
3. Redefine a method or implement new methods for an extension.
4. Enter your class in d.velop customizing under Maintain the user exit classes.

Once both classes are enabled in d.velop customizing, your extension is ready for use.

1.5.3. FI Module

The business objects for the **Financial Accounting** area are listed below. You see an overview of the corresponding SAP tables.

Each business object contains a primary key to access the business object. Additionally, **ARC_DOC_ID** and **ARCHIV_ID** are known for each call.

BKPF - FI document (incoming invoices, posting documents)

Primary key: **Company code** (**BUKRS**), **document number** (**BELNR**) and **fiscal year** (**GJAHR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
BKPF	Document header for accounting	BUKRS, BELNR, GJAHR	Primary key	No
BSEG	Document segment Accounting	BUKRS, BELNR, GJAHR, BUZEI	BSEG-BUKRS = BUKRS AND BSEG-BELNR = BELNR AND BSEG-GJAHR = GJAHR	Yes
BSET	Document segment Tax data	BUKRS, BELNR, GJAHR, BUZEI	BSET-BUKRS = BUKRS AND BSET-BELNR = BELNR AND BSET-GJAHR = GJAHR	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = BSEG-KUNNR	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = BSEG-LIFNR	Yes
VBSEGK	Document segment Document parking for creditors	BUKRS, BELNR, GJAHR, BZKEY	BSEG-BUKRS = BUKRS AND BSEG-BELNR = BELNR AND BSEG-GJAHR = GJAHR	Yes

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
/DVELOP/CLS_INHD	Classifier RE header data	ARCDOC_ID, ARCHIV_ID	/DVELOP/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/DVELOP/CLS_TEHD	Classifier - travel expenses - header table	ARCDOC_ID, ARCHIV_ID	/DVELOP/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_INHD	Classifier RE header data	ARCDOC_ID, ARCHIV_ID	/KPSC/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_TEHD	Classifier - travel expenses - header table	ARCDOC_ID, ARCHIV_ID	/KPSC/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/DVELOP/CLS_FIL1	Classifier RE item data	CLASS_ID	/DVELOP/CLS_SLD1-CLASS_ID = /DVELOP/CLS_INHD-CLASS_ID	Yes
/KPSC/CLS_FIL1	Classifier RE item data	CLASS_ID	/KPSC/CLS_SLD1-CLASS_ID = /KPSC/CLS_INHD-CLASS_ID	Yes
/DVELOP/CLS_TEIT	Classifier - Travel expenses - Item data	CLASS_ID	/DVELOP/CLS_TEIT-CLASS_ID = /DVELOP/CLS_INHD-CLASS_ID	Yes
/KPSC/CLS_TEIT	Classifier - Travel expenses - Item data	CLASS_ID	/KPSC/CLS_TEIT-CLASS_ID = /KPSC/CLS_INHD-CLASS_ID	Yes

FIPP - FI preliminary posted documents

Primary key: **Triggering company code** (**AUSBK**), **document number** (**BELNR**) and **fiscal year** (**GJAHR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBKPF	Document header Document parking	AUSBK, BUKRS, BELNR, GJAHR	VBKPF-AUSBK = AUSBK AND VBKPF-BELNR = BELNR AND VBKPF-GJAHR = GJAHR	No
VBSEGS	Document segment Document parking - database for G/L accounts	AUSBK, BELNR, GJAHR, BZKEY	BSEG-AUSBK = BUKRS AND BSEG-BELNR = BELNR AND BSEG-GJAHR = GJAHR	Yes
VBSEGK	Document segment Document parking for creditors	AUSBK, BELNR, GJAHR, BZKEY	VBSEGK-AUSBK = AUSBK AND VBSEGK-BELNR = BELNR AND VBSEGK-GJAHR = GJAHR	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBSEGS-VPTNR	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = VBSEGK-LIFNR	Yes
BKPF	Document header for accounting	BUKRS, BELNR, GJAHR	BKPF-BUKRS = AUSBK AND VBSEGS-BELNR = BELNR AND VBSEGS-GJAHR = GJAHR	No
BSEG	Document segment Accounting	BUKRS, BELNR, GJAHR, BUZEI	BSEG-BUKRS = AUSBK AND BSEG-BELNR = BELNR AND BSEG-GJAHR = GJAHR	Yes
BSET	Document segment Tax data	BUKRS, BELNR, GJAHR, BUZEI	BSET-BUKRS = AUSBK AND BSET-BELNR = BELNR AND BSET-GJAHR = GJAHR	Yes
/DVELOP/CLS_INHD	Classifier RE header data	ARCDOC_ID, ARCHIV_ID	/DVELOP/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_INHD	Classifier RE header data	ARCDOC_ID, ARCHIV_ID	/KPSC/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/DVELOP/CLS_FIL1	Classifier RE item data	CLASS_ID	/DVELOP/CLS_SLD1-CLASS_ID = /DVELOP/CLS_INHD-CLASS_ID	Yes

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
/KPSC/CLS_FIL1	Classifier RE item data	CLASS_ID	/KPSC/CLS_SLD1-CLASS_ID = /KPSC/CLS_INHD-CLASS_ID	Yes

KNA1 Debtor

Primary key: **Customer number** (**KUNNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
KNA1	Customer master (general part)	KUNNR	Primary key	No
KNB1	Customer master (company code)	KUNNR, BUKRS	KNB1-KUNNR = KUNNR	Yes
KNBK	Customer master (Bank accounts)	KUNNR, BANKS, BANKL, BANKN	KNBK-KUNNR = KUNNR	Yes

KNB1 Debtor with company code

Primary key: **Customer number** (**KUNNR**) and **company code** (**BUKRS**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
KNB1	Customer master (company code)	KUNNR, BUKRS	Primary key	No
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = KNB1-KUNNR	No

LFA1 Creditor

Primary key: **Creditor number** (**LIFNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
LFA1	Vendor master (general part)	LIFNR	Primary key	No
LFB1	Vendor master (company code)	LIFNR, BUKRS	LFB1-LIFNR = LIFNR	Yes
LFBK	Vendor master (Bank accounts)	LIFNR, BANKS, BANKL, BANKN	LFBK-LIFNR = LIFNR	Yes

LFB1 Creditor with company code

Primary key: **Creditor number** (**LIFNR**) and **company code** (**BUKRS**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
LFB1	Vendor master (company code)	LIFNR, BUKRS	Primary key	No
LFA1	Vendor master (general part)	LIFNR	LFA1-KUNNR = LFB1-KUNNR	No

BUS1022 Asset

Primary key: **Company code** (**BUKRS**), **main asset number** (**ANLN1**) and **asset subnumber** (**ANLN2**).

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
ANLA	Asset master record segment	BUKRS, ANLN1, ANLN2	Primary key	No
ANLU	Asset master record: User fields	BUKRS, ANLN1, ANLN2	Primary key	No
ANLZ	Valued asset allocations	BUKRS, ANLN1, ANLN, BDATU	ANLZ-BUKRS = BUKRS AND ANLZ-ANLN1 = ANLN1 AND ANLZ-ANLN = ANLN	Yes

1.5.4. MM module

The business objects for the Materials Management area are listed below. You see an overview of the corresponding SAP tables.

Each business object contains a primary key to access the business object. Additionally, **ARC_DOC_ID** and **ARCHIV_ID** are known for each call.

BUS2010 - Request for quotation

Primary key: **Document number** (**EBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EKKO	Purchasing document header	EBELN	Primary key	No
EKKN	Account assignment in the purchasing document	EBELN, EBELP, ZEKKN	EKKN-EBELN = EKKO-EBELN	Yes
EKES	Purchase order confirmations	EBELN, EBELP, ETENS	EKES-EBELN = EKKO-EBELN	Yes
EKPO	Purchasing document item	EBELN, EBELP	EKPO-EBELN = EKKO-EBELN	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = EKPO-LIFNR	Yes
EKET	Delivery schedule lines	EBELN, EBELP, ETENS	EKET-EBELN = EKKO-EBELN	Yes

BUS2011 - Vendor quotation

Primary key: **Document number** (**EBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EKKO	Purchasing document header	EBELN	Primary key	No
EKKN	Account assignment in the purchasing document	EBELN, EBELP, ZEKKN	EKKN-EBELN = EKKO-EBELN	Yes
EKES	Purchase order confirmations	EBELN, EBELP, ETENS	EKES-EBELN = EKKO-EBELN	Yes
EKPO	Purchasing document item	EBELN, EBELP	EKPO-EBELN = EKKO-EBELN	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = EKPO-LIFNR	Yes
EKET	Delivery schedule lines	EBELN, EBELP, ETENS	EKET-EBELN = EKKO-EBELN	Yes

BUS2012 - Purchase order

Primary key: **Document number** (**EBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EKKO	Purchasing document header	EBELN	Primary key	No
EKKN	Account assignment in the purchasing document	EBELN, EBELP, ZEKKN	EKKN-EBELN = EKKO-EBELN	Yes
EKES	Purchase order confirmations	EBELN, EBELP, ETENS	EKES-EBELN = EKKO-EBELN	Yes
EKPO	Purchasing document item	EBELN, EBELP	EKPO-EBELN = EKKO-EBELN	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = EKPO-LIFNR	Yes
EKET	Delivery schedule lines	EBELN, EBELP, ETENS	EKET-EBELN = EKKO-EBELN	Yes

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
/DVELOP/CLS_PRHD	Classifier - Procurement request - Header table	ARCHIV_ID, ARCDOC_ID	/DVELOP/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_PRHD	Classifier - Procurement request - Header table	ARCHIV_ID, ARCDOC_ID	/KPSC/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

EKKO - Purchasing document

Primary key: **Document number (EBELN)**

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EKKO	Purchasing document header	EBELN	Primary key	No
EKKN	Account assignment in the purchasing document	EBELN, EBELP, ZEKKN	EKKN-EBELN = EKKO-EBELN	Yes
EKES	Purchase order confirmations	EBELN, EBELP, ETENS	EKES-EBELN = EKKO-EBELN	Yes
EKPO	Purchasing document item	EBELN, EBELP	EKPO-EBELN = EKKO-EBELN	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = EKPO-LIFNR	Yes
EKET	Delivery schedule lines	EBELN, EBELP, ETENS	EKET-EBELN = EKKO-EBELN	Yes

BUS2013 - Purchasing scheduling agreement

Primary key: **Document number (EBELN)**

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EKKO	Purchasing document header	EBELN	Primary key	No
EKKN	Account assignment in the purchasing document	EBELN, EBELP, ZEKKN	EKKN-EBELN = EKKO-EBELN	Yes
EKES	Purchase order confirmations	EBELN, EBELP, ETENS	EKES-EBELN = EKKO-EBELN	Yes
EKPO	Purchasing document item	EBELN, EBELP	EKPO-EBELN = EKKO-EBELN	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = EKPO-LIFNR	Yes
EKET	Delivery schedule lines	EBELN, EBELP, ETENS	EKET-EBELN = EKKO-EBELN	Yes

BUS2014 - Purchasing contract

Primary key: **Document number (EBELN)**

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EKKO	Purchasing document header	EBELN	Primary key	No
EKKN	Account assignment in the purchasing document	EBELN, EBELP, ZEKKN	EKKN-EBELN = EKKO-EBELN	Yes
EKES	Purchase order confirmations	EBELN, EBELP, ETENS	EKES-EBELN = EKKO-EBELN	Yes

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EKPO	Purchasing document item	EBELN, EBELP	EKPO-EBELN = EKKO-EBELN	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = EKPO-LIFNR	Yes
EKET	Delivery schedule lines	EBELN, EBELP, ETENS	EKET-EBELN = EKKO-EBELN	Yes

BUS2081/RBKP - Logistical incoming invoice

Primary key: **Document number** (**BELNR**) and **fiscal year** (**GJAHR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
RBKP	Header document incoming invoice	BELNR, GJAHR	Primary key	No
RSEG	Header item incoming invoice	BELNR, GJAHR, BUZEI	Primary key	Yes
BKPF	Document header for accounting document	AWKEY	BKPF-AWKEY= RBKP-BELNR AND BKPF-AWTYP = 'RMRP'	No
BSEG	Document segment for accounting document	BUKRS, BELNR, GJAHR	BSEG-BUKRS = BKPF-BUKRS AND BSEG-BELNR = BKPF-BELNR AND BSEG-GJAHR = BKPF-GJAHR	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = MSEG-LIFNR	Yes
/DVELOP/CLS_INHD	Classifier RE header data	ARCDOC_ID, ARCHIV_ID	/DVELOP/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_INHD	Classifier RE header data	ARCDOC_ID, ARCHIV_ID	/KPSC/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

MKPF - Material document or incoming goods

Primary key: **Number of the material document** (**MBLNR**) and **material document year** (**MJAHR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
MKPF	Document header material document	MBLNR, MJAHR	Primary key	No
MSEG	Document segment Material	MBLNR, MJAHR, ZEILE	MSEG-MBLNR = MKPF-MBLNR AND MSEG-MJAHR = MKPF-MJAHR	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = MSEG-LIFNR	Yes
/DVELOP/CLS_DNHD	Classifier - Delivery note - Header table	ARCHIV_ID, ARCDOC_ID	/DVELOP/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_DNHD	Classifier - Delivery note - Header table	ARCHIV_ID, ARCDOC_ID	/KPSC/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

BUS2017 - Material document or goods movement

Primary key: **Number of the material document** (**MBLNR**) and **material document year** (**MJAHR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
MKPF	Document header material document	MBLNR, MJAHR	Primary key	No
MSEG	Document segment Material	MBLNR, MJAHR, ZEILE	MSEG-MBLNR = MKPF-MBLNR AND MSEG-MJAHR = MKPF- MJAHR	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = MSEG-LIFNR	Yes

BUS2028 - Material inventory

Primary key: **Physical inventory document number** (**MBLNR**) and **fiscal year** (**MJAHR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
IKPF	Document header Physical inventory	IBLNR, MJAHR	Primary key	No
ISEG	Items of the physical inventory document	IBLNR, MJAHR, ZEILI	ISEG-IBLNR = IKPF -IBLNR AND ISEG-GJAHR = IKPF-GJAHR	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = MSEG-LIFNR	Yes

BUS2105 - Purchase requisition

Primary key: **Purchase requisition** (**BANFN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EBAN	Purchase requisition	BANFN,BNFPO	EBAN-BANFN = OBJECT_ID	Yes
MARA	Document segment Material	MATNR	MARA-MATNR = EBAN-MATNR	Yes
LFA1	Vendor master (general part)	LIFNR	LFA1-LIFNR = EBAN-FLIEF	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = EBAN-KUNNR	Yes
EKKO	Purchasing document header	EBELN	EKKO-EBELN = EBAN-EBELN	Yes
EKPO	Purchasing document item	EBELN, EBELP	EKKO-EBELN = EBAN-EBELN	Yes
/DVELOP/CLS_PRHD	Classifier Procurement request Header data	ARCDOC_ID, ARCHIV_ID	/DVELOP/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_PRHD	Classifier Procurement request Header data	ARCDOC_ID, ARCHIV_ID	/KPSC/CLS_ATTC-ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

BUS3003 - Purchasing information

Primary key: **Number of the purchasing info record** (**INFNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EINA	Purchasing info record - General data	INFNR	Primary key	No

BUS2013002 - Purchasing scheduling agreement

Primary key: **Document number** (**EBELN**), **item number** (**EBELP**), **release type** (**ABART**) and **release number** (**ABRUF**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EKEK	Header data of scheduling agreement releases	EBELN, EBELP, ABART, ABRUF	Primary key	No

BUS1001002 - Batch

Primary key: **Material number** (**MATNR**), **batch number** (**CHARG**) and **plant** (**WERKS**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
MCH1	Batches (if batch management is enabled at cross-plant level)	MATNR, CHARG	Primary key	No
MCHA	Batches	MATNR, CHARG, WERKS	Primary key	No
MARA	Material master data	MATNR	MARA-MATNR = MATNR	Yes
MAKT	Material texts	MATNR	MARA-MATNR = MATNR	Yes

BUS1001006 - Default material

Primary key: **Material number** (**MATNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
MARA	General material data	MATNR	Primary key	No

1.5.5. Module PM

The business objects for the Plant Maintenance area are listed below. You see an overview of the corresponding SAP tables.

Each business object contains a primary key to access the business object. Additionally, **ARC_DOC_ID** and **ARCHIV_ID** are known for each call.

BUS2007- PM documents maintenance order

Primary key: **Customer order number** (**AUFNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
AUFK	Order master data	AUFNR	Primary key	No
AFIH	Order header Plant maintenance	AUFNR	Primary key	No

BUS2088 - Service order

Primary key: **Customer order number** (**AUFNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
AUFK	Order master data	AUFNR	Primary key	No
AFIH	Order header Plant maintenance	AUFNR	Primary key	No

EQUI - Equipment

Primary key: **Equipment number** (**EQUNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
EQUI	Equipment master data	EQUNR	Primary key	No

BUS0010 - Functional location

Primary key: **Functional location** (**TPLNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
IFLO	Functional location (view)	TPLNR	Primary key	No

BUS1019 - Maintenance task list

Primary key: **Task list types** (**PLNTY**), **key of the task list group** (**PLNNR**) and **group counter** (**PLNAL**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
PLKO	Task list - Header	PLNTY, PLNNR, PLNAL	Primary key	No

BUS1020 - Maintenance plan

Primary key: **Maintenance plan** (**WARPL**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
MPLA	Maintenance plan	WARPL	Primary key	No

BUS2002- Network

Primary key: **Network plan number** (**AUFNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
AUFK	Order master data	AUFNR	Primary key	No
AFKO	Order header data PPS orders	AUFNR	Primary key	No

1.5.6. Module PP

The business objects for the Production Planning area are listed below. You see an overview of the corresponding SAP tables.

Each business object contains a primary key to access the business object. Additionally, **ARC_DOC_ID** and **ARCHIV_ID** are known for each call.

BUS2005 - Production order

Primary key: **Customer order number** (**AUFNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	Multiple entries
AUFK	Order master data	AUFNR	Primary key	No
AFKO	Order header data PPS orders	AUFNR	Primary key	No

1.5.7. Module QM

The business objects for the Quality Management area are listed below. You see an overview of the corresponding SAP tables.

Each business object contains a primary key to access the business object. Additionally, **ARC_DOC_ID** and **ARCHIV_ID** are known for each call.

BUS2080 - Service notification

Primary key: **Quality notification number** (**QMNUM**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VIQMEL	Generated tables for the view VIQMEL	QMNUM	Primary key	No
QMEL	Quality notification	QMNUM	Primary key	No
VIQMFE	Generated tables for the view VIQMFE	QMNUM, FE-NUM	VIQMFE-QMNUM = VIQ-MEL-QMNUM	Yes

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
QMFE	Quality notification - Items	QMNUM, FENUM	VIQMFE-QMNUM = VIQMEL-QMNUM	Yes

BUS2078 - Quality notification

Primary key: **Quality notification number** (**QMNUM**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VIQMEL	Generated tables for the view VIQMEL	QMNUM	Primary key	No
QMEL	Quality notification	QMNUM	Primary key	No
VIQMFE	Generated tables for the view VIQMFE	QMNUM, FENUM	VIQMFE-QMNUM = VIQMEL-QMNUM	Yes
QMFE	Quality notification - Items	QMNUM, FENUM	VIQMFE-QMNUM = VIQMEL-QMNUM	Yes

BUS2038 - Maintenance notification

Primary key: **Quality notification number** (**QMNUM**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VIQMEL	Generated tables for the view VIQMEL	QMNUM	Primary key	No
QMEL	Quality notification	QMNUM	Primary key	No
VIQMFE	Generated tables for the view VIQMFE	QMNUM, FENUM	VIQMFE-QMNUM = VIQMEL-QMNUM	Yes
QMFE	Quality notification - Items	QMNUM, FENUM	VIQMFE-QMNUM = VIQMEL-QMNUM	Yes

BUS2045 - Inspection lot

Primary key: **Inspection lot number** (**PRUEFLOS**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
QALS	Inspection lot record	PRUEFLOS	Primary key	No

1.5.8. SD Module

The business objects for the Sales and Distribution area are listed below. You see an overview of the corresponding SAP tables.

Each business object contains a primary key to access the business object. Additionally, **ARC_DOC_ID** and **ARCHIV_ID** are known for each call.

VBAK - Sales document

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBAK	Sales document: Header data	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes
VBRP	Billing document: Position data	VBELN, POSNR	Primary key	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBAK-KUNNR	No

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
/DVELOP/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/DVELOP/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND/DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/KPSC/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND/KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

BUS2030 - Customer inquiry

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBAK	Sales document: Header data	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes
VBRP	Billing document: Position data	VBELN, POSNR	VBRP-VBELN = VBAK-VBELN	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBAK-KUNNR	No

BUS2031 - Customer quotation

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBAK	Sales document: Header data	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes
VBRP	Billing document: Position data	VBELN, POSNR	VBRP-VBELN = VBAK-VBELN	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBAK-KUNNR	No
/DVELOP/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/DVELOP/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/KPSC/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

BUS2032 - Sales order

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBAK	Sales document: Header data	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes
VBRP	Billing document: Position data	VBELN, POSNR	VBRP-VBELN = VBAK-VBELN	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBAK-KUNNR	No

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
/DVELOP/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/DVELOP/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/KPSC/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

VBKA - Sales support document

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBKA	Contacts	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes

LIKP - Delivery

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
LIKP	Sales document, delivery: Header data	VBELN	Primary key	No
LIPS	Sales document, delivery: Position data	VBELN, POSNR	LIPS-VBELN = LIKP-VBELN	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = LIKP-KUNNR	No
VBAK	Sales document: Header data	VBELN	VBAK-VBELN = LIPS-VGBEL	Yes

VTTK - Transport

Primary key: **Shipment number** (**TKNUM**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VTTK	Shipment header	TKNUM	Primary key	No

VBRK - Single customer billing

Primary key: **Billing number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBRK	Billing document: Header data	VBELN	Primary key	No
VBRP	Billing document: Position data	VBELN, POSNR	VBRP-VBELN = VBAK-VBELN	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBRK-KUNAG	No

BUS2035 - Customer scheduling agreement

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBAK	Sales document: Header data	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes
VBRP	Billing document: Position data	VBELN, POSNR	VBRP-VBELN = VBAK-VBELN	Yes

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBAK-KUNNR	No

BUS2034 - Customer contract

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBAK	Sales document: Header data	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes
VBRP	Billing document: Position data	VBELN, POSNR	Primary key	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBAK-KUNNR	No

BUS2094 - Credit memo request

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBAK	Sales document: Header data	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes
VBRP	Billing document: Position data	VBELN, POSNR	VBRP-VBELN = VBAK-VBELN	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBAK-KUNNR	No
/DVELOP/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/DVELOP/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/KPSC/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

BUS2102 - Returns

Primary key: **Sales document number** (**VBELN**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
VBAK	Sales document: Header data	VBELN	Primary key	No
VBAP	Sales document: Position data	VBELN, POSNR	VBAP-VBELN = VBAK-VBELN	Yes
VBRP	Billing document: Position data	VBELN, POSNR	VBRP-VBELN = VBAK-VBELN	Yes
KNA1	Customer master (general part)	KUNNR	KNA1-KUNNR = VBAK-KUNNR	No
/DVELOP/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/DVELOP/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /DVELOP/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No
/KPSC/CLS_SOHD	Classifier - Sales order - Header table	ARCHIV_ID, ARCDOC_ID	/KPSC/CLS_ATTC- ARCHIV_ID = ARCHIV_ID AND /KPSC/CLS_ATTC-ARCDOC_ID = ARCDOC_ID	No

1.5.9. Other modules

The business objects for various areas are listed below. You see an overview of the corresponding SAP tables.

Each business object contains a primary key to access the business object. Additionally, **ARC_DOC_ID** and **ARCHIV_ID** are known for each call.

BUS1006 - GP: General data

Primary key: **Business partner number** (**PARTNER**)

To obtain customer and vendor information, you must first determine the corresponding customer or vendor number using **PARTNER_GUID**. Refer to table **CVI_CUST_LINK** for the customer. Refer to table **CVI_VEND_LINK** for the vendor.

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
BUT000	Outline data of the plan	PARTNER	Primary key	No
BAPIBUS1006_ADDRESS	SAP-GP: BAPI structure for address data (determined at runtime via the FB BAPI_BUPA_ADDRESS_GETDETAIL)	PARTNER	Primary key	No
KNA1	Customer master (general part)	KUNNR	KUNNR = CVI_CUST_LINK-customer	No
KNB1	Customer master (company code)	KUNNR	KUNNR = CVI_CUST_LINK-customer	Yes
LFA1	Vendor master (general part)	LIFNR	LIFNR = CVI_VEND_LINK-vendor	No
LFB1	Vendor master (company code)	LIFNR	LIFNR = CVI_VEND_LINK-vendor	Yes

KPRO - DVS object

Primary key: **Document number** (**DOKNR**), **document type** (**DOKAR**), **document version** (**DOKVR**) and **document part** (**DOKTL**)

The SAP ArchiveLink document types are managed in transaction **OAC3**. However, the business object **KPRO** is not managed in **OAC3**. Accordingly, the content server has a predefined set for the business object **KPRO**. If the content server determines that a repository is managed in transaction **OACT**, the content server assumes that this is a **KPRO** repository. In this case, you can select the business object **KPRO** and the document type **DVS** during customizing.

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
DRAW	Document info record	DOKNR, DOKAR, DOKVR, DOKTL	Primary key	No
DRAT	Short texts for document info records	PARTNER	Primary key	No
TDWAT	Descriptions for document type	DOKAR, CVLANG	DOKAR, CVLANG = Login language	No
TDWST	Text for document status	DOKST, CVLANG	DOKST, CVLANG = Login language	No
DRAD	Document object link	DOKNR, DOKAR, DOKVR, DOKTL	Primary key	Yes

DRAW - Printed lists

Primary key: **Business partner number** (**PARTNER**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
TOADL	SAP ArchiveLink Print lists	ARCHIV_ID, ARC_DOC_ID	ARCHIV_ID = AD_ARCHIV_ID AND ARC_DOC_ID = AD_ARC_DOC_ID	No

BUS4401 - Correspondence - Correspondence header

Primary key: **Correspondence type** (**COTYP**) and **correspondence key** (**COKEY**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
DFKKCOH	SAP ArchiveLink Print lists	COTYP, COKEY	Primary key	No

ADK - Archiving-files SAP ADK Reo (application data ERP)

Primary key: **Cycle** (**DOCUMENT**) and **archive file** (**ARCHIV_KEY**)

There is no separate SAP business object for the attribution of the **ADK** data. Therefore, this business object is also not managed in transaction **OAC3**. If the content server determines that a repository is not used in transaction **OAC3** or in the **KPro/DVS** area, the customizing of transaction **SARA** is reviewed. If the repository (**ARCH_USER**) is detected in customizing, the value **ADK** is assigned to the content server. The value is specified for both the SAP business object and the SAP document type when creating an attribute set.

SAP TABLE	DESCRIPTION	KEY	ACCESS	MULTIPLE ENTRIES
ADMI_FILES	Archive files of the archiving runs	DOCUMENT, ARCHIV_KEY	Primary key	No
ADMI_FIDOC	Archive management for the object FI_DOCUMNT	ARCHIVE_KEY	Primary key	Yes

1.5.10. Module TM

The business objects for the Transportation Management area are listed below. You see an overview of the corresponding SAP tables.

Each business object contains a primary key to access the business object. Additionally, **ARC_DOC_ID** and **ARCHIV_ID** are known for each call.

TRAVEL - Travel expenses document

Primary key: **Personnel number** (**PERNE**), **travel expenses document number** (**REINR**) and **plan number** (**PLANNR**)

SAP TABLE	DESCRIPTION	KEY	ACCESS	Multiple entries
FTPT_PLAN	Outline data of the plan	PERNR, REINR	Primary key	Yes

1.5.11. Additional data source

In the **Properties** area under **Table**, you will find the following additional tables that go beyond the content of the selected business object:

- **/DVELOP/CLS_INHD**: This table contains the header data for dependent classifier documents for incoming invoices with or without a purchase order reference. In order to use this data, you must use d.velop incoming invoice automation for SAP ERP in SAP.
- **ADDITIONAL_INFO**: This table contains the header data from the property mapping and the SAP tenant.
- **CONSTANT**: Select this table to manage a constant value. This table supports alphanumeric and numeric ECM fields. The length of the value is limited to 255 characters.
- **SYST**: This table contains system information.
- **TOA**: This table contains information from the link tables.

- **TOADL**: This table contains the SAP ArchiveLink print lists.
- **/DVELOP/ARC_ADD**: This table can be used to index additional information depending on **ArcDocID**. You can use this table for indexing dynamic attributes. Use the dynamic field labels in d.velop customizing for the indexing. In Property Mapping you can select the defined field labels as SAP field. During indexing, **ArcDocID** is used to read the value of a field label. The two table columns **Field** and **Value** thus belong together.

1.6. Migrating from d.velop archivelink for SAP Solutions to d.velop archivelink services for SAP Solutions

The following explains how you migrate from d.velop archivelink for SAP Solutions to d.velop archivelink services for SAP Solutions.

You can choose between four different migration scenarios based on your existing system configurations and requirements with regard to downtime duration and document availability. Although the sequence of work steps differs between the scenarios, the steps involved in each scenario are fundamentally the same. The following subchapters describe the work steps in detail. The sequence of the individual steps for each scenario is shown in the table below.

	Migration scenario 1	Migration scenario 2	Migration scenario 3	Migration scenario 4
Work steps	1. Preparing the migration 2. Changing the SAP system with downtime (step 1 only) 3. Migrating the cache 4. Migrating pending jobs 5. Migrating the mappings 6. Changing the SAP system with downtime (step 2) 7. Completing the migration	1. Preparing the migration 2. Migrating the cache 3. Changing the SAP system with downtime (step 1 only) 4. Migrating the cache delta 5. Migrating pending jobs 6. Migrating the mappings 7. Changing the SAP system with downtime (step 2) 8. Completing the migration	1. Preparing the migration 2. Migrating the cache 3. Migrating the mappings 4. Changing the SAP system without downtime 5. Migrating the cache delta 6. Migrating pending jobs 7. Completing the migration	1. Preparing the migration 2. Migrating the mappings 3. Changing the SAP system without downtime 4. Migrating the cache 5. Migrating pending jobs 6. Completing the migration
Notes on the scenario	• Long downtime • Before and after the downtime, all SAP ArchiveLink functions are available for documents and components.	• Short downtime • Before and after the downtime, all SAP ArchiveLink functions are available for documents and components. • A delta is created that needs to be migrated.	• No downtime • Until the change, all SAP ArchiveLink functions are available for documents and components. • During the delta and job migration, SAP ArchiveLink functions are not available for documents and components of the delta.	• No downtime • During the cache and job migration, SAP ArchiveLink functions are not available for affected documents and components.

1.6.1. Preparing the migration

Preparing the migration includes installing and configuring d.velop archivelink services for SAP Solutions and importing the necessary SAP transports.

Installing and configuring d.velop archivelink services for SAP Solutions

Install d.velop archivelink services for SAP Solutions according to the instructions under **Installing d.velop archivelink services for SAP Solutions**.

Configure d.velop archivelink services for SAP Solutions according to the data in your existing installation of d.velop archivelink for SAP Solutions. Further information on configuration can be found in this documentation. Note the following points for the configuration:

- For each export system, enable the option **Perform fallback search using the shortened ArcDocID via the document number**. If there is more than one component in your **ARC_DOC_ID** system, you must also enable **Perform fallback search using the ArcDocID via the mapping**.
- Create all necessary content repositories identically to the existing configuration.
- Create the default mapping.
- Check for each export system whether all required MIME types are present.

Checking the MIME types – this is how it works

1. Navigate to **MIME type mapping**.
2. Click **Migrate**.
3. Select the **config.xml** file of d.velop archivelink for SAP Solutions. The file is processed, and any missing MIME types are listed.
4. Click **Save missing MIME types**.

Installing the SAP transports

Information on the SAP transports and SAP customizing can be found under **Configuring the SAP customizing**.

1.6.2. Performing the migration

Execute the migration steps according to your chosen scenario.

Migrating the cache

To migrate the cache, you use a tool that scans the cache directory and transfers all non-exported data to the DMS. The tool checks whether a component has already been exported or whether a pending export job exists for d.velop archivelink for SAP Solutions.

To run the tool, you need Node.js version 22 or later along with Microsoft PowerShell.

Contact d.velop support to obtain the tool.

Installing the tool – this is how it works

1. Save the script as a TGZ file on the server where d.velop archivelink for SAP Solutions is installed.
2. Open PowerShell and navigate to the directory where the file was saved.
3. Install the tool using the following command: **npm i -g <file name>.tgz**.

Depending on the Node.js installation, the tool is installed in the following directories:

- Standard Node.js installation: **%appdata%\Roaming\npm\node_modules\@d.velop\archivelink-cache-crawler**
- Existing Node.js installation due to d.velop documents installation: **<path to d.velop documents installation>\nodejs22\node_modules\@d.velop\archivelink-cache-crawler**

Configuring the tool

You configure the tool using the configuration file (**config.json**) located in the installation directory. Adapt the file to the system that you are migrating. The following table lists all configuration options:

Option	Format	Description
cacheDir	string	Contains the path to the d.velop archivelink for SAP Solutions cache, e.g. **C:\\d3\\d.velop archivelink for SAP Solutions\\ArchiveLink\\content**.
logDir	string	Contains the path to the directory in which log files are stored, e.g.**C:\\log**. The directory must already exist.
logLevel	string	Defines the logging level or accuracy. Possible values: **fatal**, **error**, **warn**, **info**, **debug**, **trace**, **silent**.

Option	Format	Description
protocolDir	string	Contains the path to the directory in which the log is stored, e.g. **C:\\log**. The directory must already exist.
dryRun	boolean	Defines whether a dry run should be performed instead of a normal execution. No changes are made to the DMS or cache during a dry run. A log file is still written.
dryRunWaitTime	number	Specification in milliseconds. Defines the duration of a simulated API call during a dry run. Since no write calls take place during a dry run, you can use this value to simulate the time that a write API call typically takes.
protocolFlushInterval	number	Specification in seconds. Defines how often the log is written to a file.
archivelinkUser	string	Contains the name of the user that SAP ArchiveLink uses to access the REST API.
archivelinkPassword	string	Contains the password of the user that SAP ArchiveLink uses to access the REST API.
archivelinkUrl	string	Contains the URL via which SAP ArchiveLink is accessible, e.g. **http://localhost:1082** (without a trailing slash (/)).
skipArchivelinkApi	boolean	Defines whether the query of the SAP ArchiveLink interface should be skipped. If the query is skipped, the export job checks are deactivated.
skipAlreadyProcessedComponents	boolean	Defines whether previously processed components should be skipped during a subsequent run (**true**) or still checked in the DMS (**false**).
dmsApiKey	string	Contains the API key that allows the DMS app to use the REST API.
dmsBaseUrl	string	Contains the base address of the DMS app, e.g. **https://<name of instance>.d-velop.cloud** (without a trailing slash (/)).
dms RepoId	string	Contains the repository ID under which the documents are searched for and stored in the DMS app
dmsChunkConfig	DMSChunkConfig	Configures the number of documents to be processed simultaneously.
dmsSources	DMSSource[]	Contains a list of **DmsSource** objects. Create at least one entry. The sources are searched for previously saved components.
dmsTarget	DMSTarget	Contains a **DmsTarget** object. Defines where a document of a component should be newly created or updated.
useZipDocId	boolean	Defines whether the zipped **DocId** property should be used when searching for the first component.
skipUpdateFirstComponent	boolean	Specifies whether **DocId** and **CompId** should be updated for the first component.

Table 1. DMSChunkConfig

Option	Format	Description
chunkMaxSize	number	Defines the maximum size of a chunk or batch to be processed. This allows you to control how many documents can interact with the APIs simultaneously. **Note** A document can contain any number of components. Consider how many parts the documents could potentially consist of.
waitSec	number	Specification in seconds. Defines how many seconds to wait between processing chunks or batches to reduce the load on the API.

Table 2. DMSSource

Option	Format	Description
sourceId	string	Defines the **sourceId** value to be used when searching for existing components. You should enter the ID of the SAP ArchiveLink app or the repository by default.
docIdKey	string	You should enter **docId** by default.
compIdKey	string	You should enter **compId** by default.

Table 3. DMSTarget

Option	Format	Description
sourceId	string	Defines the **sourceId** value to be used for storing a new document or updating an existing one. When writing to the source containing the main components, the default value is **archivelink-app**.
categoryId	string	Defines the category to be entered for the stored or updated documents. When writing to the source containing the main components, the default value is **sapdo**.
docIdKey	string	You should enter **docId** by default.
compIdKey	string	You should enter **compId** by default.

Running the tool

Execute the **run.ps1** file located in the installation directory. Right-click the file and then select **Run with PowerShell**. Note that you need appropriate permissions to run the tool.

The script assumes that the Node.js installation is located under **D:\d3\nodejs22\node**. If the installation is located in a different directory, e.g. because Node.js was not provided by a d.velop documents installation, you must adapt the path in line 7 accordingly.

You can restart the script at any time. Documents and components that have already been processed will not be uploaded again if the relevant components have not been modified by the SAP system in the meantime. In this case, you can save time by entering the value **true** for the option **skipAlreadyProcessedComponents** and thus skip all components that have already been successfully processed. Files that have been subsequently modified by SAP will no longer be transferred.

Migrating pending jobs

Depending on the configuration of d.velop archivelink for SAP Solutions, pending export and indexing jobs may still exist at the time of migration. These jobs must be migrated or processed.

Export jobs

All existing export jobs must be processed or cleaned up. Since the necessary steps vary according to the installation, configuration and individual requirements, a standardized procedure is not possible. Therefore, you should process the jobs according to your individual system environment.

Indexing jobs

You can migrate all pending indexing jobs. Detailed instructions can be found under **Migrating existing indexing jobs**.

Migrating the mappings

You cannot configure mappings in the web interface of d.velop archivelink services for SAP Solutions. You configure the mappings in the SAP system. You can migrate existing mappings using a report. However, you cannot migrate SharePoint mappings.

Prerequisites for migrating mappings

- d.velop archivelink services for SAP Solutions version 1.4.2 or higher
- You should first check all mappings for errors and ensure that they are fully functional.
- Add the properties **document ID** (**docId**) and **component ID** (**compId**), which are part of the default mapping **SAP document** (**sapdo**), to all target categories used in the mappings.
- Only the mappings entered in the SAP tables **/DVELOP/ARC_ASKO** and **/DVELOP/ARC_ASPO** will be transferred. Ensure that the source and target archive use identical property names.

Note the following information before migrating:

- You can start the report multiple times sequentially. Previously created configurations in the tables **/DVELOP/ARC_ASKO**, **/DVELOP/ARC_ASPO** and **/DVELOP/APP_CUS** will be updated. The source types stored in the database of d.velop archivelink services for SAP Solutions will also be updated.

You can choose to have mappings updated. For this purpose, activate the corresponding option for the mapping.
- The newly created SAP ID is composed as follows: **<SAP content repository>_<SAP business object>_<SAP document type>**
- The category ID of the created source types is composed as follows: **<SAP system ID>.<SAP tenant>.<SAP content repository>.<SAP business object>.<SAP document type>**

Configuring the report

Call the SAP transaction **/DVELOP/APP_TRANS** to open the migration report.

Configuring the common settings

In the **Common settings** section, configure the following general parameters:

- For the **Repository ArchiveLink 3.X** parameter, specify the SAP content repository that you used for d.velop archivelink for SAP Solutions version 3 or higher.
- For the **Repository ArchiveLink Services** parameter, specify the SAP content repository that you use for d.velop archivelink services for SAP Solutions. You can use the same content repository as for d.velop archivelink for SAP Solutions.

> **Note**
> The SAP content repositories do not need to be located on the SAP system on which the report is executed.

- Under **SAP SystemID** and **SAP tenant**, configure the SAP destination system parameters. You can also specify other values than those in the current environment. This allows you to transfer the customizing and mappings to other systems later.

Configuring optional filters

In the **Optional filter settings** section, you can configure optional filters to limit the selection of mappings to be transferred. You have the following options:

- Configure the optional filter criteria, e.g. using **ContentServerID**.
- Click **Show selection** to display the filter set
- You can use wildcards (e.g. "%") when selecting the business object or document type.

Configuring the source system (optional)

In the **Source system configuration** section, you can optionally configure the source system. Configuring the source system is only necessary if you want to use a different destination system when switching from d.velop archivelink for SAP Solutions to d.velop archivelink services for SAP Solutions. A common scenario for this is, for example, switching from d.velop documents on-premises to d.velop documents cloud.

To ensure a successful migration, verify that identical document types, categories and permissions exist in the source and destination systems. Identical names are the minimum requirement. Ideally, you should already have worked with the transport system.

This is how it works

1. Activate **Archive migration**.
2. Under **Base URL**, enter the base address of the old destination system used for d.velop archivelink for SAP Solutions (version 3 or higher).
3. Enter the API key.
4. Click **Load repositories** and select the relevant DMS repository.

Configuring the target system

In the **Destination system configuration** section, you can configure the destination system in which the mappings will be created. The d.velop archivelink services for SAP Solutions application must be subscribed to in the destination system.

This is how it works

1. Under **Base URL**, enter the base address of your destination system in which the mappings will be created. If you are not performing an archive migration, use the same destination system configured in d.velop archivelink for SAP Solutions (version 3 or higher).
2. Enter the API key.
3. Click **Load repositories** and select the relevant DMS repository.

The connection to the destination system and to d.velop archivelink services for SAP Solutions is checked. If **Connection successful** is displayed, both systems are available.

Configuring the default mapping

In the **Default mapping** section, you can manage or create the default mapping.

This is how it works

1. Click **Load properties**. If the message **Default mapping loaded successfully** appears, you do not need to perform any further configuration in this section. If the message **Information** appears, proceed with the following steps.
2. Select **Category**, **ArcDocID field**, **CompID field** and optionally **Barcode field**.
3. Click **Create mapping**.

Configuring the mapping settings

In the **Mapping settings** section, you can select whether existing mappings are to be overwritten. To do this, activate **Overwrite existing mappings**. In this case, existing mappings will be deleted and recreated.

> **Warning**
> You cannot restore deleted mappings. If you are unsure, leave the option deactivated.
> You can run the report multiple times with the same configuration.

Configuring the SAP customizing

In the **SAP customizing settings** section, you can perform the SAP customizing. The settings apply to the entire selection set, i.e. all assignments that you transfer. If you want to make individual settings for specific mappings, you must transfer these mappings individually.

This is how it works

1. Open the transaction **/DVELOP/CUS**.
2. Navigate to **archivelink services for SAP Solutions <version specification> > Settings > Maintain the properties**.
3. If you want direct indexing to take place, activate **Direct indexing**.
4. If you want to index components that are not data-based (e.g. document notes), activate **Indexing non-data components**.
5. Select the logging level under **Log level**.
6. Under **Number of retries**, select the number of indexing attempts.

Starting the migration

Execute the report. Once the report is complete, you will see a results summary. The summary displays all successfully completed and failed mappings. All errors are logged.

Analyzing the logs

To display logs and analyze errors, click **Show logs**. If you want to delete log entries, click **Delete logs**.

Changing the SAP system

The change of the SAP system is performed in transaction **OAC0**. The procedure varies depending on the selected scenario.

> **Note**
> The change affects all content repositories configured in d.velop archivelink for SAP Solutions.

Changing the SAP system with downtime – this is how it works

1. Enter unreachable targets for the connection parameters in transaction **OAC0**. This stops any more documents from being stored, and all SAP ArchiveLink requests will remain unanswered.
2. After completing the data migration, enter the connection parameters for d.velop archivelink services for SAP Solutions in transaction **OAC0**.

Changing the SAP system without downtime – this is how it works

Enter the connection parameters for d.velop archivelink services for SAP Solutions in transaction **OAC0**.

1.6.3. Completing the migration

You can deactivate the services of d.velop archivelink for SAP Solutions as they are no longer needed. Since all jobs have been migrated or processed, and d.velop archivelink services for SAP Solutions has its own data storage, the old database is also no longer required.

1.7. Additional information sources and imprint

If you want to deepen your knowledge of d.velop software, visit the d.velop academy digital learning platform at https://dvelopacademy.keelearning.de/.

Our E-learning modules let you develop a more in-depth knowledge and specialist expertise at your own speed. A huge number of E-learning modules are free for you to access without registering beforehand.

Visit our Knowledge Base on the d.velop service portal. In the Knowledge Base, you can find all our latest solutions, answers to frequently asked questions and how-to topics for specific tasks. You can find the Knowledge Base at the following address: https://kb.d-velop.de/

Find the central imprint at https://www.d-velop.com/imprint.