

# White Paper Integration

DocuWare Version 7.10



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# 1 Introduction

Data and documents are already structured in business applications. However, if several different programs are used, for example for office management, accounting or personnel administration, this can lead to different data stocks in the company or to the formation of information silos. Cloud systems in particular are often isolated and not initially designed to communicate with each other.

By connecting existing applications to a central document management system like DocuWare, data and documents can be accessed across the enterprise in different contexts and combined into workflows.

Thanks to its web-based, open architecture, DocuWare offers numerous connection points and interfaces for integration with almost any IT system.

The types of integration and data exchange that are generally possible are described in Chapter 2. Chapter 3 goes into the technical background of DocuWare connectors and modules for integration and shows the possibilities of programming and Integration Platform as a Service. Finally, the prerequisites for using DocuWare in the IT system are explained, and the chapter concludes with a tabular overview of the integration options.

The Integration white paper is geared to the technical staff of a prospect as well as customers, consulting firms and sales partners. Basic technical knowledge of the structure of software applications - ideally of document management systems - is all that's required.

## 2 Possibilities for integration with DocuWare

DocuWare extends an existing IT landscape with resources such as **data and documents** that can be made available and synchronized centrally in a file cabinet. Documents and data also form the basis for company-wide **processes** that can be implemented automatically with DocuWare Workflows. In addition, DocuWare **file cabinet functions** such as document queries, storage, viewing and editing of documents can be made available in third-party programs.

### 2.1 Importing documents

Business-relevant documents are generated in the most diverse areas of companies. DocuWare offers the following import options for archiving documents centrally:

- **From Windows Explorer:** Archived documents are displayed in Windows Explorer in a folder structure. To archive and index one or more new documents or even multiple folders from Windows Explorer, all you need to do is drag them to a [DocuWare folder](#) (page 8).
- **From network folders or local folders:** Documents arriving in the folders are automatically loaded into DocuWare document trays or file cabinets and processed based on a previously defined configuration. For example, documents can be indexed automatically or used to trigger workflows.
- **From multifunction devices:** Digitized documents stored in a network folder by copiers and scanners can be imported by DocuWare into a document tray or directly into a file cabinet.
- **From desktop scanners:** DocuWare Desktop Apps access the TWAIN or WIA driver with the *DocuWare Scan* feature and control the scan with settings for contrast, resolution, and alignment, among others. In a second step, DocuWare imports scanned documents into a document tray or file cabinet.
- **From any software:** With the [DocuWare Printer](#) (page 13) virtual printer, documents are saved as PDFs in DocuWare via the print command. A stored configuration controls in which document tray or file cabinet the documents are filed and with which indexing.
- **From mail systems:** DocuWare imports emails - automatically if desired - into a document tray or into the file cabinet. Connection to an IMAP or Exchange server is set up once centrally. All users in an organization can access these connections to archive emails from their mailboxes in DocuWare. Import, email indexing, and authorizations are configured using the [Connect to Mail](#) module. A [native connector](#) (page 9) is available specifically for emails from Outlook, enabling storage, indexing, and search directly from Outlook.
- **From a smartphone:** In the [DocuWare mobile app](#) (page 16), documents or photos from other apps can be stored in a DocuWare document tray or file cabinet, among other functions.

## 2.2 Data exchange and synchronization

Within DocuWare, metadata such as document index information, forms the basis for search queries and control of workflows, among other things. Index information can also be just as important in other enterprise applications. In order to reconcile the data stock across the company, DocuWare writes index information to the data records of external data sources.

Conversely, DocuWare can retrieve information from external data sources thus enriching the data records in DocuWare. Even large volumes of documents can be indexed quickly. Access to a wide variety of data sources is possible, such as a database or limited database view, a DocuWare file cabinet, or a simple CSV file.

This is possible, for example, with the DocuWare [Autoindex](#) (page 14) module or with [DocuWare iPaaS Connectors](#) (page 17).

## 2.3 Provision of file cabinet functions

Once imported, documents archived in DocuWare are accessible to all authorized employees. The DocuWare Client is available for accessing documents with numerous file cabinet functions, including searching, storing, and viewing documents.

The DocuWare Client is browser-based and can be embedded in third-party applications via its web address. In this case, employees use the documents in a DocuWare file cabinet without leaving their familiar working environment. Individual elements of the Web Client can also be integrated into a third-party application via URL. With a viewer integration, for example, the matching document from the file cabinet is displayed, or a link leads to a DocuWare result list that can be opened directly from the third-party application. This is described in the [URL Integration](#) (page 18) chapter.

Even more deeply interlocked are integrations that incorporate a file cabinet search into the foreign interface, so that the DocuWare elements do not differ from the familiar program. With this type of integration, for example, a button is displayed in the CRM or ERP that opens a new window with all contextual documents: Invoices, orders (outgoing orders), contracts, resumes, job applications, and more. This is possible with [Smart Connect](#) (page 13) as well as via a [programmed interface](#) (page 18).

## 2.4 Processing of archived documents in the original program

Documents in a file cabinet can be opened directly from the file cabinet in the original program. After editing, the document is uploaded back to DocuWare when saved. During modification it is locked for access by others.

Documents from Microsoft Office can also be edited simultaneously by several colleagues in DocuWare Cloud. For this purpose, the function *Edit in Office for the Web* is available in the DocuWare Client. Edit your Microsoft Office documents located in DocuWare Cloud—Word, Excel, and, Power Point—online in Office for the web. The archived document can only be accessed via DocuWare and cannot be shared via the usual Office Online functions, so the access rights assigned in DocuWare are also respected.

## 2.5 Networking of processes

Many areas in the company such as sales, human resources, or finance require a reliable interchange of information between colleagues. DocuWare sorts, distributes, and links information to control decision-making processes with workflows.

DocuWare workflows are based on documents whose index data triggers certain actions. By exchanging index data and records with other applications, DocuWare can trigger processes not only within DocuWare, but also across the enterprise.

Examples:

- DocuWare regularly notifies the financial accounting system as soon as an invoice has been checked and the document status changes to "Released." The financial accounting system synchronizes the document status and forwards the invoice for payment.
- For a project, a new presentation is stored in the file cabinet and a notification is sent to the shared Microsoft Teams channel so that all relevant employees are informed without delay.
- In order to sign documents electronically, the [DocuWare Signature Service](#) (page 16) integrates external trust service providers into a DocuWare Workflow. In a freely selectable workflow step, the document is sent to the trust service provider. The person whose signature is required (internal or external) receives a message. As soon as the document is signed, it is forwarded in the workflow.

## 3 Methods for integration with DocuWare

Three general methods can be distinguished for providing file cabinet functions and enabling data exchange and networked processes.

**Native connectors** connect DocuWare to a certain third-party application and enhance it with numerous document management features.

**Universal modules** are DocuWare components that offer integration options for multiple programs and can be configured within DocuWare.

**Integration Platform as a Service (iPaaS):** DocuWare connects to other cloud applications via iPaaS connectors. Data and documents can be exchanged code-free via corresponding platforms and combined into automated workflows.

**Programming** can also be used to integrate individual DocuWare resources or create individual programs that provide comprehensive DocuWare functionality in any third-party applications.

### 3.1 Native connectors

Native connectors provided by DocuWare are tailored to the respective application and also adapt in appearance. They can only be used with this one application.

#### 3.1.1 For Windows Explorer

The DocuWare Windows Explorer Client integrates DocuWare into the Windows Explorer folder structure. DocuWare is visible in the Windows folder structure with its own node, including DocuWare document trays and file cabinets. The folder structure within the file cabinets is based on the index fields and the index entries. When storing in Windows Explorer Client, the new document is assigned the folder name as index words. For a file cabinet to be displayed in Windows Explorer, a folder structure in the file cabinet configuration is required.

Programs installed under Windows such as Microsoft applications can also be accessed using the file cabinet structure shown in Windows Explorer. With "Save as..." in Microsoft Word or Excel, the desired file cabinets and folders can be selected in Windows as the user is accustomed to doing. New documents are therefore archived in DocuWare. The names of the folders and subfolders are assigned as index words. Accordingly, access to already archived documents is possible via the 'open file' functionality of the third-party applications.

- Installation: via DocuWare Desktop Apps on individual client computers
- Module license: not required
- More information on [Windows Explorer Client](#)



### 3.1.2 For Microsoft Outlook

DocuWare offers two options for connecting to Microsoft Outlook: Connect to Outlook and DocuWare Outlook add-in.

#### Connect to Outlook

DocuWare Connect to Outlook is an add-in that uses the interface MAPI (Messaging Application Programming Interface) for search and research operations in DocuWare from Microsoft Outlook by granting access to emails and inboxes, for example. DocuWare is integrated into the "Start" menu bar in Outlook and also has its own menu bar. Emails can also be stored in DocuWare via the context menu of emails or a quick search for filed documents can be used.

With quick search, the user can perform a search in DocuWare from a selected email. It uses a previously defined configuration that contains the search criteria. For example, at the touch of a button, all archived documents from a specific period relating to a contact can be displayed for an email, including emails that the contact has sent to a colleague. The emails found are displayed in a DocuWare result list result list in Outlook.

For storage, the email is marked and the corresponding configuration selected in the additional DocuWare menu bar. Such a configuration specifies, among other things, in which file cabinet the email is to be saved and with which data is to be used for indexing. In addition to fixed values, email metadata and even content from attached PDF documents can be selected.

- Installation: via DocuWare Desktop Apps on individual client computers
- Module license: DocuWare Connect to Outlook is included in the feature set of DocuWare Cloud. A module license is available for customers of locally installed DocuWare solutions with PROFESSIONAL or ENTERPRISE Server.
- More information on [Connect to Outlook](#)

#### DocuWare Outlook add-in

The DocuWare Outlook add-in imports email and their attachments into a DocuWare file cabinet or document tray. Unlike Connect to Outlook, however, no filing configuration is required here. The add-in is suitable for Microsoft's web and online version in all browsers, including Mac operating systems.

- Installation: free of charge via the Microsoft Store
- Module license: no additional cost, available for DocuWare Cloud customers
- More information on [Outlook add-in](#) - with a [comparison](#) of the features of Connect to Outlook and the Outlook add-in

### 3.1.3 For Microsoft Teams

DocuWare Connect to Teams is composed of the DocuWare app for Microsoft Teams and a sharing feature in DocuWare Client.

With the app, the DocuWare functions *Store in file cabinet* and *Store in document tray* are available in a Microsoft Teams chat or channel. When storing in a file cabinet, the DocuWare store dialog also opens directly in Microsoft Teams—including the usual tools such as One Click Indexing. After archiving, DocuWare users can access the files from Microsoft Teams at any time—provided they have the right permission to read, edit, or forward them. Once indexed, the documents can also be integrated into business workflows.

Conversely, it is possible to post links from DocuWare to archived documents in Microsoft Teams. Documents shared by link remain protected in Microsoft Teams by the permissions defined in DocuWare. The sharing function is accessed either from the context menu of a document in a result list or via the sharing tool in the DocuWare Viewer.

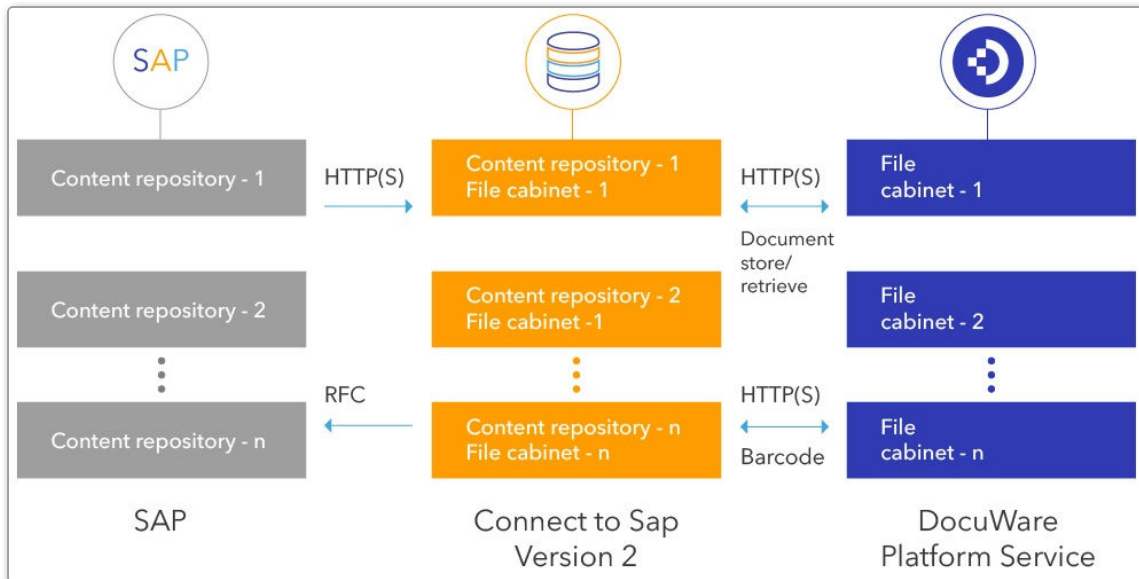
- **Installation:** The app is available to users in the Apps section of Teams, the Microsoft Store. After the installation in the Microsoft organization, the app is connected to the DocuWare organization during the first use. To do this, the DocuWare Cloud URL must be entered. This URL is the same for the entire Microsoft organization. To post archived documents from DocuWare to chats and channels, you only need to activate the sharing function for Microsoft Teams once in the organization settings of the DocuWare Configuration.
- **Module license:** Connect to Teams is included in all DocuWare Cloud license packages. For on-premises DocuWare systems, the additional Connect to Teams module (subject to license) is required.
- More information on [Connect to Teams](#)

### 3.1.4 For SAP

Two modules are available in SAP for integration of DocuWare:

- DocuWare Cloud Connect to SAP connects a DocuWare Cloud organization to an SAP ECC 6.0 or S/4HANA system.
- DocuWare Cloud Connect to SAP version 2 connects a locally installed DocuWare system to an SAP ECC 6.0 or S/4HANA system.

DocuWare's connector module is used as a content server in the SAP Knowledge Provider Management Service. Communication between SAP and DocuWare takes place via SAP's ArchiveLink interface.



From SAP, documents are stored in DocuWare or requested for display. For example, an invoice can be displayed for an SAP posting record. The assignment is made via a unique value such as a barcode or the SAP DocID. Content repositories in SAP can be specifically linked to individual file cabinets in DocuWare, so that storage can be made in any file cabinet in DocuWare.

DocuWare supports various SAP storing scenarios such as early and late storing. In early storing, an invoice is first archived in DocuWare and then posted in SAP. The reverse is true for late storing: The invoice is first entered in SAP and then stored in DocuWare.

DocuWare Connect to SAP can be supplemented with modules from Varelmann Beratungsgesellschaft mbH.

**Document Indexing:** Indexing of documents in DocuWare with master and transaction data from SAP

**Document Link:** Linking documents without barcodes to SAP documents, starting workflows in SAP

**Document Viewer:** Display of documents archived in SAP directly in DocuWare Client

**Integrity Control:** To check whether all documents that are to be archived according to SAP Customizing have actually been archived and are accessible. Assists in proving completeness to auditors.

**Simple Invoice:** For easy transfer of invoice data from DocuWare to SAP: When invoices are posted via SAP Business Workplace, index data is read from DocuWare when jumping to the SAP standard transactions and the SAP input mask is pre-populated with this data. The transactions FB01, FB60, FB70, MIR7, and MIRO are supported. Simple Invoice is based on batch input technology and requires the use of the SAP GUI.

- Installation: locally with the customer, also for connection to DocuWare Cloud
- Module license: The connection can be made from DocuWare Cloud as well as from locally installed DocuWare systems with PROFESSIONAL or ENTERPRISE Server to SAP. Special licenses are required in each case.
- More information on [Connect to SAP](#)

### 3.1.5 For special third-party applications

Interfaces, created by external cooperation partners and certified by DocuWare, are available for some special third-party applications. Those that are current are listed in the "DocuWare Certified Products" section of the DocuWare website on [integration options](#).

## 3.2 Universal Modules

Universal modules connect to (almost) any software. A large number of configurations can be created per module and adapted to the specific requirements of each company. The configurations can be created and edited by DocuWare administrators and users with appropriate authorization.

### 3.2.1 Smart Connect: Integration of search and store operations

The DocuWare Smart Connect module reads terms from the user interface of an ERP, CRM, or other application, uses them to search the DocuWare file cabinet and provides the documents with matching index words. This makes it possible to view contextual documents related to each record - contracts, employee files, orders (outgoing orders), invoices - and much more. The documents are also displayed in the DocuWare Viewer.

The terms read from the interface can also be used as index words for documents, both for archiving as well as for adding or modifying indices later. It is not necessary to enter index words manually. In this way, typing errors are avoided and identical spellings of company names etc. are ensured across different systems.

- Installation: via DocuWare Desktop Apps on individual client computers
- Module license: Smart Connect is included in the feature set of DocuWare Cloud. An additional license is available for customers with locally installed DocuWare solutions with PROFESSIONAL or ENTERPRISE Server.
- More information on [Smart Connect](#)

### 3.2.2 Virtual printer, DocuWare Printer

To archive documents from any application, DocuWare hooks into the Windows printer manager as a printer driver. An image corresponding to the printout is created from the printing data flow. The document is stored in the PDF/A long-term archiving format. Expressed in simple terms, the document is indexed and saved in the file cabinet with the print command.

The user specifies any further processing of the new documents in a configuration. This can be used to split documents automatically after a certain number of pages, for example, or to create templates such as company letterheads. Moreover, DocuWare can adopt the document type and central terms such as index data for systematic storage.

Documents can be controlled directly from the application using DocuWare Printer with the "DocuWare Control" font. To do this, invisible text commands are written on documents or document templates. The commands are run if the document concerned is imported into DocuWare. The user can select a complete printer configuration to be run for the relevant documents by text command. Alternatively, individual commands can be applied according to DocuWare Printer functionalities.

- Installation: via DocuWare Desktop Apps on individual client computers
- Module license: Not required, only depending on options within the document processing configuration, customers with locally installed DocuWare systems need DocuWare Import.
- More information on [DocuWare Printer](#)

### 3.2.3 Autoindex: Data exchange

The Autoindex module retrieves index information from an external data source and enriches the records in DocuWare with this data. Conversely, DocuWare data can be used to populate the records of another system.

The data records are assigned based on a match code that must appear as an index word such as the document number in both the external data source and the DocuWare file cabinet.

The process is as follows: A new document is stored in DocuWare with the document number as the index word. The Autoindex run starts, DocuWare searches the data source and finds the matching record based on the document number. From this, further information such as company, amount, and date are transferred to the DocuWare file cabinet as index words.

It is possible to communicate with any databases such as Microsoft SQL, MySQL, Oracle, and others via ODBC. When accessing databases, SQL commands can be used to access the tables. In addition, Autoindex also supports DocuWare file cabinets as databases and text files with fixed field lengths or field delimiters, e.g. in CSV format.

- Installation: not required separately
- Module license: Autoindex is included in the feature set of DocuWare Cloud. An additional license is available for customers with locally installed DocuWare solutions with PROFESSIONAL or ENTERPRISE Server.
- More information on [Autoindex](#)

### 3.2.4 Indexing assistance - external select list

Select lists help to enter values in search and store dialogs fields as well as in forms. The select list is assigned to a field from which the user takes content - such as customer names from the CRM. This is faster than manual typing, avoids incorrect spellings, and guarantees consistent spellings across multiple systems.

DocuWare can populate the select lists from external sources, for example from an SQL table or from a simple text file. Data is integrated using a database or file connection.

DocuWare stores the external select list permanently or dynamically. A fixed select list is saved internally. The advantage is quick access, the disadvantage is that it is not automatically updated. In contrast, this is the case with the dynamic select list - DocuWare accesses the external data source anew each time.

- Installation: not required separately
- Module license: not required
- More information on [select lists](#)

### 3.2.5 Local Data Connector

The Local Data Connector is a service embedded in the DocuWare Desktop Service which allows the DocuWare Cloud System to access a local database for features like Autoindex or DocuWare select lists.

DocuWare Local Data Connector supports the access to the following external databases. Oracle, ODBC, MySQL, Microsoft SQL-Server (MSSQL)

- Installation: as DocuWare Desktop App on a local computer
- Module licence: no additional cost, available for DocuWare Cloud customers
- More informationen on [Local Data Connector](#)

### 3.2.6 DocuWare Export: Exporting index data

DocuWare Export exports document index data from DocuWare as a CSV file. In this way, index data from invoices is transferred to ERP and accounting systems, for example. Any accounting and ERP system capable of accepting a CSV file as input can utilize the data export.

Configurations are used to specify which index data is to be included in the CSV file. In addition, settings for file encoding and CSV file structure can be made according to the requirements of the target system.

- Installation: via DocuWare Desktop Apps on individual client computers
- Module license: DocuWare Export is included in the feature set of DocuWare Cloud. An additional license is available for customers with locally installed DocuWare solutions with PROFESSIONAL or ENTERPRISE Server.
- More information on DocuWare Export

### 3.2.7 Web Services: Communication interface for applications

DocuWare can exchange data with third-party applications based on web services. The web service acts as an interface via which the systems or applications communicate with each other: A client sends a request to a server, triggering an action at the server. Then the server sends a response back to the client.

This allows information to be created, updated, or deleted. Conversely, data from other programs such as FiBu or CRM can be used in DocuWare.

DocuWare integrates REST and SOAP type web services. The web services are thus available throughout the organization for workflows, [webhooks](#), (page 16) and for [validation of index data](#) (page 19) among other things.

- Installation: not required separately
- Module license: not required
- More information on [Web Services](#)

### 3.2.8 Webhooks: Transferring index data as JSON

With webhooks, index data can be transmitted to another application as JSON. The communication takes place via a URL, which is integrated via a [web service](#) (page 15). DocuWare sends a notification as a POST request to the URL when certain documents are newly stored in a file cabinet or associated index entries are modified. The third-party application monitors the URL and thus receives the message.

The index data for specified documents can be included in the content of the message. Other applications in the company can synchronize their data stock or trigger specific actions and workflows.

- Installation: not required separately
- Module license: not required
- More information on [Webhooks](#)

### 3.2.9 Signature Service for electronic signatures

To sign documents, DocuWare integrates external signature service providers. The interface is the "DocuWare Signature Service" web service, which is integrated into DocuWare workflows as a so-called activity.

This allows documents in a workflow to be transmitted to an external signature service provider. The identity of the signatory is verified and the signed document is returned to DocuWare with the signature certificate.

DocuWare cooperates with Validated ID and DocuSign as external signature service providers offering multiple authentication options and numerous signature application functions, such as multi-signature, seal, biometric signature, or automatic reminder for signing.

- [Table for licensing](#)
- More information is available in the [White Paper Electronic Signatures with DocuWare](#)

### 3.2.10 DocuWare Mobile App

The DocuWare app can be downloaded from the Apple AppStore for iOS and from the Google Play Store for Android. The DocuWare app also allows users to archive documents, edit workflow tasks, view and share archived documents, and use many other DocuWare features on their smartphones. The app integrates colleagues into DocuWare processes on the go.

- Installation: on smartphone
- License: DocuWare Mobile is included in the feature set of DocuWare Cloud. An additional license is available for customers with locally installed DocuWare solutions with PROFESSIONAL or ENTERPRISE Server. The app itself is free of charge.
- More information on the [DocuWare mobile app](#)



### 3.3 Integration Platform as a Service (iPaaS)

Cloud systems are usually effectively compartmentalized for security reasons, which presents a particular challenge for integrations. Automatic data exchange and other connections that require system access are only possible with complex programming and company's own IT infrastructure.

To conveniently enable data exchange and automated workflows of cloud applications, automation platforms provide "Integration Platform as a Service" (iPaaS). This allows cloud applications and services to connect by means of universal connectors..

Coding is not necessary. Integration takes place - depending on the provider - with the help of a clickable interface. There is also no need to regularly update individually programmed interfaces, since individual providers maintain their connectors on the iPaaS platforms.

DocuWare has developed its own connector for integrating cloud applications on the Make platform, which provides a feature set for exchanging data with other cloud applications. These include downloading files and documents, deleting, storing in DocuWare file cabinets and setting stamps.

Other iPaaS platforms such as webmethods.io and elastic.io also offer connectors for DocuWare - where integrations with locally installed applications are also possible

Data that is integrated into workflows via iPaaS platforms is protected. At Make, for example, with one AWS data center each in Germany and the U.S., both the European and U.S. data protection space is covered. More details can be found on the platforms of the iPaaS providers.

- Installation: not required
- Module license: not required, transactions settled with each platform provider
- More information on [DocuWare iPaaS Connectors](#)

## 3.4 Programming

It is possible to integrate DocuWare resources into a wide array of environments and applications using programming.

### 3.4.1 URL integration

Thanks to its web-based architecture, elements of DocuWare can be addressed specifically via a URL and integrated into other applications using the modular principle. Document trays, documents, result lists, and more are loaded within the third-party application using DocuWare's user interface. For such URL integration purposes, the standard URL for DocuWare is extended to include more parameters. Task Manager list, document tray, result list, document, download, version history, or search dialog are all available as integration types.

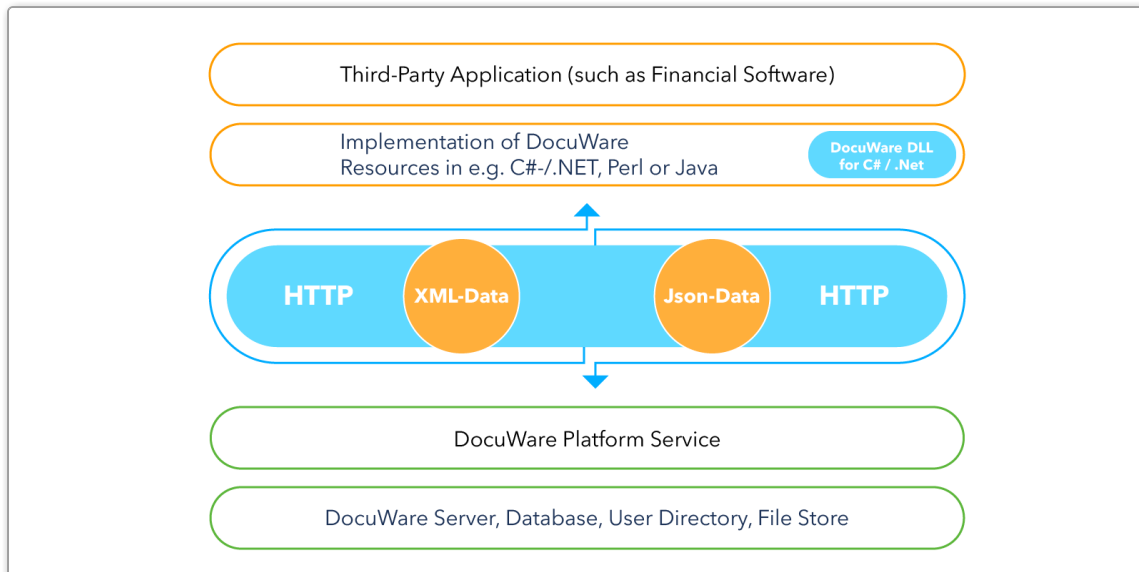
- Installation: not required separately
- Module license: not required
- More information on [URL integration](#)

### 3.4.2 Software Development KIT (Platform Service)

Software solutions for customer-specific tasks are often created on different platforms using different programming languages. DocuWare's Platform Service provides a central programming interface for all development environments.

Resources such as DocuWare file cabinets, task lists, or search queries can be used on a platform-independent basis via XML or JSON in the program code of a third-party application. The task list can be integrated into whatever financial accounting software the customer uses.

All resources also available to the Web Client can be controlled and retrieved. In contrast to URL integration, however, the resource is called up without integration in the Web Client components. It may also necessary to develop the user interface yourself.



Resources are embedded through XML or JSON into the third-party application and transferred via HTTP.

The basis for this is the REST-based platform service architecture. One of the principles of REST is that all resources have a URL. This means that data can be retrieved independently of the device used - as long as it's HTTP-compatible - and regardless of the operating system.

- Installation: not required
- Module license: not required
- More information on [Platform Service](#)
- More resources on [DocuWare Developer Documentation](#)

### 3.4.3 Validation of index entries

DocuWare offers the option of integrating validation services as a [web service](#) (page 15) and, for example, checking the entered index values for plausibility during document storage. This ensures uniform data stocks in the company.

Whenever an index entry is written or updated, the system calls up the customer-specific validation service and checks the entries. For example, a check against the CRM system can determine whether the customer number entered matches the customer name. The user then has the opportunity to correct their entries.

- Installation: not required separately
- Module license: not required
- More information on [Validation of Index Entries](#)

## 4 Embedding DocuWare systems in existing IT infrastructure

The requirements for embedding DocuWare in an existing IT landscape vary depending on the DocuWare solution used.

### DocuWare Cloud

The DocuWare Cloud infrastructure is hosted on Microsoft Azure. Relevant in terms of system requirements for customers is therefore only the client-side access, the corresponding requirements for operating system and browser are listed [here](#). In principle documents can be accessed from any supported browser and on any operating system - including Linux and MacOS. In non-Microsoft environments, it is possible to use DocuWare Cloud, but some features are limited. The DocuWare Desktop Apps can only be installed on Windows and on Linux, for example, no documents can be sent directly from the DocuWare Client.

For the possibilities of integrations of external user directories and identity providers, see below. More information on the technical features is available in the [DocuWare Cloud White Paper](#).

### DocuWare as On-premises solution

#### Operating systems

The DocuWare servers are implemented based on Microsoft architecture. However, DocuWare can be integrated with infrastructures based on other technical architectures, so that DocuWare file cabinets can also be used as a "black box" in Linux and other non-Microsoft environments.

Detailed information on this indicating the components and technologies used by DocuWare and how these interact, can be found in the [White Paper on-premises](#).

#### Database systems

DocuWare requires a relational database to store its own settings as well as for index data. This can be a dedicated database system for DocuWare only. However, many companies already have a central database system which will also have to be used by DocuWare. One easy method of integrating DocuWare is with the Microsoft SQL Server. In addition MySQL is supported for the DocuWare servers. Further databases can be accessed via an ODBC connection, e.g. for queries. However, it is not possible to store documents in the file cabinet via ODBC.

#### Storage systems

DocuWare supports a broad spectrum of storage media for storing documents. This includes local hard disks, as well as (virtual) network storage media, and external storage systems. Which media actually come into use depends on the volume of the documents to be stored and requirements concerning access and safeguarding. Read more about storage systems in the on-premises white paper in the chapter [Storage Locations](#).

#### System Requirements

The current system requirements for DocuWare as an on-premises solution are listed [here](#).

## **DocuWare Cloud as an on-premises solution**

### **External user directories**

Users and groups that exist in external directories do not have to be additionally created manually in DocuWare. This significantly facilitates user management, especially for larger DocuWare systems. Integration ensures that users and groups in the domain and in DocuWare are automatically consistent.

To create or update DocuWare users, the *User Synchronization* desktop app connects to Microsoft Active Directory (LDAP) or Microsoft Azure Active Directory (Microsoft Graph). The app is available for both DocuWare Cloud and on-premises systems.

### **Identity Provider**

External Identity Providers are integrated into DocuWare Cloud or into a locally installed DocuWare system via the "DocuWare Identity Service". This web service enables single sign-on in DocuWare: The credentials from one single account are used for all DocuWare applications: for the Web Client, the Desktop Apps, in configuration and administration, as well as for user synchronization.

DocuWare can connect to identity providers that support Open ID Connect, for example Microsoft Azure Active Directory, Microsoft Active Directory Federation Services (4.0) or Okta. Enforced single sign-on is also possible with these providers. This minimizes security risks such as password theft. Manual login using DocuWare credentials is only possible for specially defined users or roles – for example, if local applications are to access the DocuWare programming interface directly.

## 5 Table: Integration with DocuWare

Overview of IT components capable of connecting to DocuWare

Integrated components	Required DocuWare module	Benefits
Device		
Multifunction printers	DocuWare Import	Automatic import of documents from the file system
Scanner with TWAIN or WIA interface	DocuWare Scan	Import scanned documents
Other scanners that store scans in the file system	DocuWare Import	Automatic import of documents from the file system
Smartphones with iOS or Android	DocuWare Mobile App	Among others, search and store in file cabinets, display and stamp documents, display and edit workflow tasks.
Software		
Nearly any software, FiBu, Office, etc.	URL integration	Integration of parts of the DocuWare Client into a third-party application
	Virtual printer	Importing documents in PDF format
	Smart Connect	Uses terms from the user interface of a third-party application to search for documents in DocuWare or for indexing.
	Programming	Integration of DocuWare resources into third-party programs

Integrated components	Required DocuWare module	Benefits
Cloud applications	DocuWare iPaaS Connectors	Automated workflows and data exchange between DocuWare Cloud and other cloud applications
Windows Explorer	Windows Explorer Client	Integration of document trays and file cabinets as a folder in Windows Explorer
Microsoft Outlook	DocuWare Connect to Outlook	Integration of DocuWare functions in the Outlook interface
	DocuWare Outlook add-in	Integration of DocuWare functions in the Outlook interface
Microsoft Teams	DocuWare Connect to Teams	Store and index files from Microsoft Teams in DocuWare. Sharing documents from DocuWare in Microsoft Teams chats.
SAP	DocuWare Connect to SAP Version 2 DocuWare Cloud Connect to SAP	Searching and storing in DocuWare, data exchange
Email server		
IMAP-compatible servers, Exchange Servers	DocuWare Connect to Mail	Automatically imports emails
Databases		
MySQL, Microsoft SQL	DocuWare Autoindex	Database synchronization
Oracle, ODBC, MySQL Microsoft SQL-Server (MSSQL)	Local Data Connector	Connects DocuWare Cloud with external databases
	Database connection	Integration of select lists

Integrated components	Required DocuWare module	Benefits
User Management		
Windows Active Directory, LDAP	User Synchronization	Synchronization of DocuWare users with external user administration
Microsoft Azure Active Directory, Microsoft Active Directory Federation Services, Okta and other providers (Open ID Connect)	DocuWare Identity Service	Enables single sign-on and multi-factor authentication in DocuWare