d.velop

d.velop contracts for Microsoft 365: Administration

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1. d.velop contracts for Microsoft 365: Administration

1.1. Basic information about the application

This documentation is intended for members of the administration team with knowledge of Microsoft 365.

1.1.1. About d.velop contracts for Microsoft 365

d.velop contracts for Microsoft 365 is an SaaS application (software as a service). The software is operated by d.velop as a cloud software. All metadata and documents are stored on a Microsoft 365 SharePoint site belonging to the customer. The SharePoint site is located in the customer's Microsoft 365 tenant. Users work with the data using a provided user interface. The Microsoft SharePoint site serves as the data repository.

It is a multi-tenant capable software. Since it is a cloud software, patches, updates and new functions are made available without any manual intervention being required. The installation, configuration and activation is done by d.velop.

The customer's Microsoft Entra ID is used for the user login. All communication with Microsoft SharePoint is conducted in a user context via official SharePoint APIs and Microsoft Graph endpoints within Microsoft Entra ID apps. The use of Microsoft Entra ID authentication enables you to make use of its security and compliance features. The use of Microsoft Entra ID also lets you use the Microsoft SharePoint permissions model.

Each instance of d.velop contracts for Microsoft 365 requires a separate Microsoft SharePoint team site. Several instances can be operated in parallel for each Microsoft SharePoint tenant. Each combination of instance and site constitutes a complete unit.

1.1.2. Supported browsers

The following web browsers are supported in their latest version:

- Microsoft Edge (Chromium-based)
- Mozilla Firefox
- Google Chrome
- Apple Safari

The latest version of the aforementioned browsers is supported in Windows 10 and Windows 11.

> **Note**
> Please note that third-party cookies must generally be allowed in your browser. Alternatively, you can add an exception for the login.microsoftonline.com domain.

1.1.3. Available languages and language selection

The software distinguishes between the application interface and the configuration interface. The configuration interface is available only in German and English.

The application interface is available in the following languages:

- German
- English

- French
- Italian
- Dutch
- Portuguese
- Spanish
- Polish

The translations for all standard system columns (e.g. master data fields or runtime columns) are available in the listed languages. All created columns (e.g. new columns in the details) can be translated in the configuration interface. You have to translate the managed metadata into your desired language in the term store. You can find more information in the chapter Translations.

Selecting a language

Depending on the configuration, users can select a language for the application interface in the **My account** area. In order for the software to consistently display the application interface in the desired language, you must have translated all managed metadata into the desired language in the term store.

1.2. Operating concept

Here you will find the following chapters:

- Error messages
- Dealing with security vulnerabilities
- Changes in Microsoft 365
- Logging and monitoring
- Environments

1.2.1. Error messages

You can report malfunctions to d.velop support at any time. For further information on the support process, please refer to the document **Product Description Support Services Agreement d.velop for Microsoft 365**.

Status of malfunctions

Past and current status and malfunction information can be viewed via a public web page: https://status.d-velop.cloud/. The status can be monitored automatically, e.g. by integrating an RSS feed.

1.2.2. Dealing with security vulnerabilities

All components operated by d.velop are regularly updated. Critical security vulnerabilities that are discovered unexpectedly will be fixed immediately.

For more information, see the document **Technical and organizational measures d.velop AG**.

1.2.3. Changes in Microsoft 365

Changes to Microsoft 365 interfaces

Official endpoints and APIs are used to communicate with all Microsoft 365 services. Furthermore, d.velop continuously carries out integration tests.

d.velop closely follows announcements by Microsoft. d.velop components are adapted if this is necessary due to changes to interfaces.

Changes to Microsoft 365 license terms

To work with d.velop contracts for Microsoft 365, each user requires a license which makes it possible to work with SharePoint. This license is sufficient for the standard functionalities of the product, since only core functions of SharePoint are used.

If the customer or implementation partner uses project-specific solutions that access additional Microsoft services, these licenses must be considered separately.

d.velop closely follows the licensing by Microsoft and proactively informs all customers if an intervention by d.velop or the customer is necessary. Since the individual license situation of the customer cannot be known to d.velop, the customer is responsible for compliance with the correct Microsoft licensing.

1.2.4. Logging and monitoring

User access

User authentication for d.velop contracts for Microsoft 365 takes place via Microsoft Entra ID in the customer's Microsoft 365 tenant. Logging can be done based on Microsoft Entra ID monitoring functions or via the Microsoft 365 monitoring protocol in the Security & Compliance Center. This logging takes place in the customer's Microsoft 365 tenant and is not accessible by d.velop.

Changes to data

Documents and metadata are stored in a SharePoint site of the customer. With SharePoint versioning enabled by default, all changes to documents and metadata can be retrieved on demand via the SharePoint version history. This logging is done in the SharePoint tenant of the customer.

Background activities

Some activities of d.velop for contracts for Microsoft 365 cannot be recorded via the mentioned possibilities. These are recorded in a separate audit log. This includes, among other things:

- Time-controlled sending of e-mails for due date notifications
- Executing the permission rule set
- Changes to the customer instance configuration in the product's own configuration database
- Time-controlled consistency checks of the SharePoint structure

If required, extracts can be requested by e-mail from the d.velop support.

Miscellaneous

Monitoring and logging of the technical cloud infrastructure is carried out and guaranteed by d.velop. Further information: **TOM - technical organizational measures**

1.3. System architecture

Used components

d.velop contracts for Microsoft 365 is an SaaS service. SharePoint is used to save contract files (documents, metadata).

The following components play a part in this:

- d.velop SaaS application
  - User interfaces
  - Services (business logic, background services)
- Microsoft Entra ID
  - d.velop contract application objects (app registrations)
- Customer Microsoft 365 tenant (on customer side)
  - Microsoft Entra ID
    - User
    - Permissions
    - d.velop contracts enterprise applications/service principals (Enterprise apps)

- SharePoint
  - Exclusive site collection
  - Permissions
- Microsoft Graph
  - Endpoints for the user profile
  - In future for unified access to Microsoft 365 services

Interaction of the components

When working with d.velop contracts for Microsoft 365, users only come into contact with the provided user interface. Contract files are managed exclusively from this user interface. However, because the contract files (documents and metadata) are stored in a SharePoint site collection in the Microsoft 365 tenant, the customer has full control over their data.

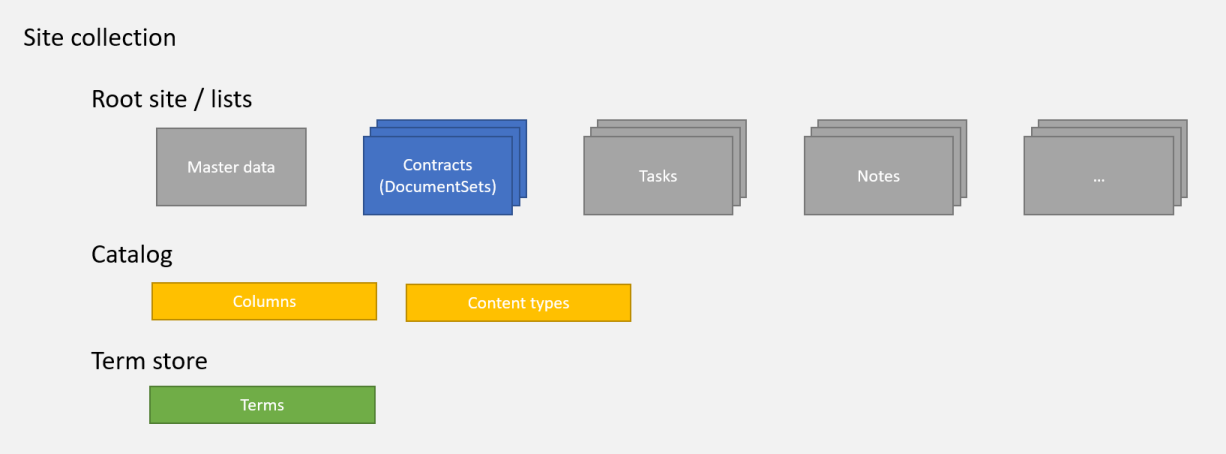
The user base is kept in the customer's Microsoft Entra ID. Contract files are saved in SharePoint by the user via the d.velop contracts for Microsoft 365 user interface. To do this, users log on in the context of a Microsoft Entra ID app. The app provides a framework of permissions that users cannot exceed. The user's permissions, together with the app's permission frames, represent the maximum extent of access to the data in SharePoint. SharePoint permissions are the basis for data storage and access to data.

d.velop contracts for Microsoft 365 supports the rule-based definition of permissions for contract files. Rules are configured and processed in the product, setting SharePoint permissions for all parts of a contract file.

Active Directory together with SharePoint permissions thus offer a long-proven concept for managing authentication and authorization.

1.3.1. Isolation in a site collection

An instance of d.velop contracts for Microsoft 365 requires a SharePoint site collection to save the data. The site collection must be exclusively available to the instance.



All structures can be found in the site collection:

- Columns
- Content types
- Libraries
- Lists
- Site term group

Additionally, the SharePoint search is used to find contract files. For this purpose, a mapping of columns to managed properties in this site may need to be performed during installation and configuration.

1.3.2. Security architecture

The interaction with the application always takes place in the context of a user. Authorization is carried out via OAuth, using the customer's Microsoft Entra ID. Access to the contract files is controlled by SharePoint permissions.

To enable users to log in to d.velop contracts for Microsoft 365, the login is performed using a Microsoft Entra ID app. Access to interfaces in SharePoint or Microsoft 365 is technically limited to the app context, ensuring that communication takes place within this context.

The Microsoft Entra ID app has a defined set of permissions. Together with the concrete resource permissions of a user, the access frame is defined.

Example

- The app allows you to read and write items in SharePoint site collections (**Sites.All.Write**).
- Users only have read and write access to SharePoint site A and site B.
  - Users can read and write items within the app only in site A and site B.
- One member of the administration team has full access to all site collections.
  - The administration member can read and write items in all site collections within the app.
  - The app limits the full access of the administration member.

Before users can interact with interfaces in SharePoint within the app, an approval process (consent) of the requested permissions is necessary. This is usually performed by the customer's Microsoft Entra ID administrator. Depending on the configuration of Microsoft Entra ID, approvals can also be given by individual users.

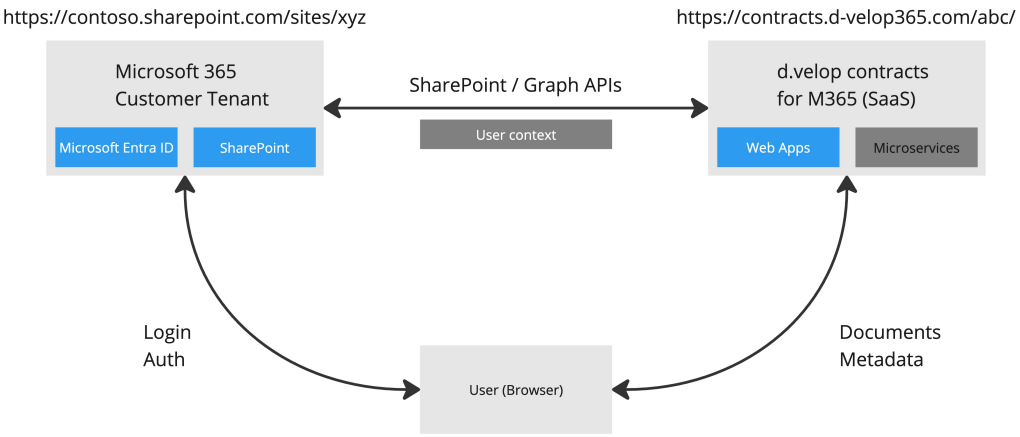
Due to the concept of the Microsoft Entra ID apps, further security measures supported by Microsoft Entra ID can be taken by the customer. It is important that access from the services and IP address ranges of d.velop contracts for Microsoft 365 be allowed.

1.3.3. Contexts

There are two basic security contexts: the user and the service context. Users actively interact with the product interfaces, enter and retrieve data. The service context handles background tasks that are executed automatically.

User context

Users works from the browser with the user interface of d.velop contracts for Microsoft 365. At the beginning of a session, users are directed to the login page of the customer's Microsoft Entra ID and logged in there in the context of the Microsoft Entra ID app. An access token is issued here, with which users work with the interfaces in SharePoint in the further course of the session via the user interface of the product.



Required permissions for the user context (Microsoft Entra ID app "d.velop 365," type: Delegated)

Microsoft SharePoint

- Reading and writing of items that users can access (**AllSites.Write**).
- Reading all user profiles that users can access (**User.Read.All**).

Microsoft Graph

- Reading and writing of items and lists that users can access (**Sites.ReadWrite.All**).
- Reading all user profiles that users can access (**User.Read.All**).

Service context

A service context is used for background tasks. This is also a user context, where the user is specifically used as a service user. The service user must have an appropriate license to work with SharePoint. This user must also have permission to access the required resources. Access to SharePoint takes place here in the context of a separate Microsoft Entra ID app "d.velop contracts Admin." This app requires an extended set of permissions. This set of permissions can be applied specifically to a separately secured user.

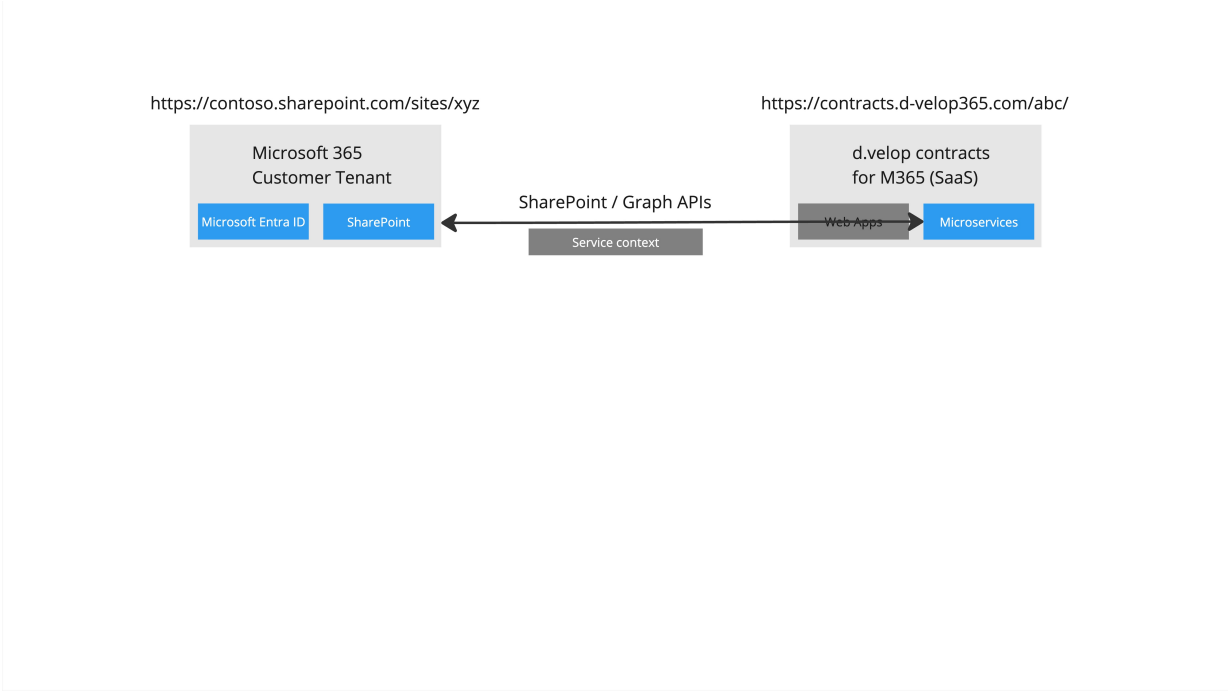
The service user needs full access to the respective site collection. In addition, the service user must be set as administration of the SharePoint website and the term store at website level.

To enable background processes to work in the context of this user, a single logon with this user is required. The access token is saved in encrypted form and used for future tasks.

The background service performs the following tasks:

- Setting permissions
  - Overriding inheritance in contract creation
  - Setting permissions according to the set of rules
- Provisioning of the contract structure in SharePoint

- Creating new contract lists when the threshold is exceeded
- Querying contracts to send notifications



Required permissions for the service context (Microsoft Entra ID app “d.velop 365 service user,” type: Delegated)

Microsoft SharePoint

- Full access to site collections that users can access (**AllSites.FullControl**).
- Reading and writing managed metadata (**TermStore.ReadWrite.All**).

Microsoft Graph

- Full access to site collections that users can access (**Sites.FullControl.All**).
- Reading and writing managed metadata (**TermStore.ReadWrite.All**).

1.3.4. Data transmission

The communication of the individual components with each other and with users is handled completely via an encrypted connection using HTTPS.

Tokens, keys and other secrets are stored in cryptographic vaults that use HSM-stored keys (hardware security module).

1.3.5. Information about data storage and organization in SharePoint

Instance

An instance of d.velop contracts for Microsoft 365 is kept in a site collection. The site collection must be exclusively available to the instance. In order to ensure error-free operation, editing the structures in this site collection is only permitted within the framework of this data model in accordance with the documentation. The majority of the structures are provided automatically during the installation. After this, some individual options must be implemented manually.

Contract files

A contract file is the logical combination of several items:

- Contract cover (document folder, metadata)
  - Documents
  - Tasks
- Optional: Individual sub-items (e.g. notes, costs, etc.)

These items are distributed in SharePoint in different lists and libraries.

Physical storage of the contract file

A document folder is the basis for the contract file. The document folder metadata is considered the properties of the contract file. The basic content type for contracts is **ecsContractContentType** and is based on the document folder as content type. When the document folder is saved, a unique ID (**ContractID**) is generated that specifies the name of the document folder. The ID is also stored as a property in the document folder and is the link column to additional lists (tasks, individual lists). The document folder is assigned to the contract libraries as a content type.

Contract documents

The contract documents are stored in the document folder and thus automatically inherit all properties. The contract documents are by default assigned the content type **ecsContractDocumentContentType**, which is based on the content type **document**. **ecsContractDocumentContentType** is assigned to the contract libraries as a content type.

Standard properties of the contract file

The properties of the contract file are specified by the columns of the **ecsContractContentType** content type. The columns specified in this content category are available for all contract types. The type of a contract is indicated by the **Contract type** column. The status of a contract is indicated by the **Contract status** column. The available values for **Contract type** and **Contract status** are represented in the term store by terms within a given term set.

Organizational assignment

The **Organizational assignment** column can be used to assign contracts in corporate structures. The column is created by default; the possible values are managed in the term set **ecsContractOrganization** in the term store. To use the column, it must be added to the standard content type **ecsContractContentType**.

Contract types

The available contract types are represented by terms within the term set **ecsContractTypeTerm** in the term store. By default, the **ecsContractContentType** content type is used for new contract file.

The contract types can be assigned to corresponding content types via the configuration.

Individual columns

Contract types can use other columns in addition to the system columns.

All individual columns are displayed in the user interface in the **Details** area. Standard columns are displayed in the **Master data** area. Columns that are only valid for certain contract types must be assigned to the corresponding content types. This new content type must inherit from the basic content type **ecsContractContentType**.

Document types

Document types are mapped using the **Document type** column. The available document types are represented by terms within the term set **ecsDocumentTypeTerm** in the term store. By default, the content

category **ecsContractDocumentContentType** is used for new contract documents. The document types can be assigned to corresponding content types via the configuration.

Tasks

Tasks are created in additional lists and have the content type **ecsTasksContentType**. They are assigned to a contract file by the system column **ContractID**. The status of a task is indicated by the task status. The available statuses are mapped in the term store via terms within the term set **ecsContractTaskState**.

Individual sub-items

Individual sub-items are created in additional lists. For individual sub-items, a separate content type that inherits from **ecsContractCustomListBaseContentType** is recommended. They are assigned to a contract file by the system column **ContractID**. The individual lists can be integrated into d.velop contracts for Microsoft 365 via the instance configuration.

Scaling of lists and libraries

Since the data of d.velop contracts for Microsoft 365 are managed in SharePoint Online, d.velop recommends a comparison with the limits of SharePoint Online as part of the planning for the introduction. You can find more information about the limits of SharePoint Online on the following websites:

- https://docs.microsoft.com/de-de/office365/servicedescriptions/sharepoint-online-service-description/sharepoint-online-limits
- https://docs.microsoft.com/de-de/sharepoint/search-limits

During development, the limits documented by Microsoft were taken into account and the product was optimized accordingly. The restriction of individual permissions in a library is particularly relevant for the structure of contract management. Further information: https://docs.microsoft.com/de-de/office365/servicedescriptions/sharepoint-online-service-description/sharepoint-online-limits#unique-permissions-for-items-in-a-list-or-library.

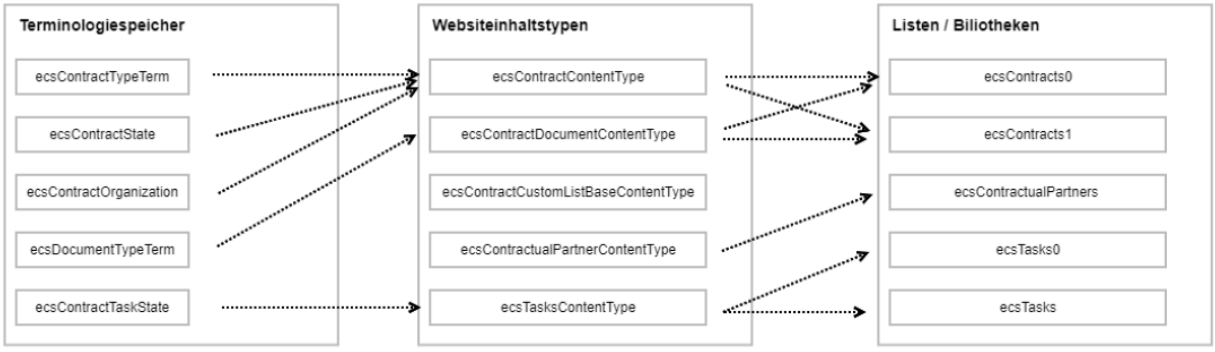
The absolute limit is 50,000 individual permissions per library. The recommendation is 5,000 individual permissions. To comply with the recommended limit, all items of a contract are grouped into subfolders and permissions are created at folder level. Starting from 5,000 folders, an additional list or library is used programmatically. By default, this behavior affects lists or libraries contracts and tasks. The behavior is also applied to individual lists.

1.4. System structures in SharePoint

The following items are provided by d.velop contracts for Microsoft 365 in the site collection:

- Term store (term sets + terms)
- Site content types and columns
- Lists and libraries

The following schematic diagram shows the links between the term store, site content types and lists or libraries:



1.4.1. Term store (term sets and terms)

The following terms are provided with designations in German and English.

- **ecsContractTypeTerm**: -
- **ecsContractState**: Draft, In negotiation, Valid, Canceled, Expired
- **ecsContractOrganization**: -
- **ecsContractTaskState**: Not started, In progress, Completed
- **ecsDocumentTypeTerm**: -
- **ecsContactPersonTerm**: Mrs., Mr.
- **ecsCountries**: Germany, Austria, Switzerland, Netherlands, Belgium, France, CzechRepublic, Poland, Denmark

1.4.2. Site content types and columns

The following content types and columns are used:

Content types

- ecsContractContentType
  - Parent item: Document folder
  - Usage: Default content type for contract files
  - Columns (internal name):
    - ecsSubjectOfContract
    - ecsContractId
    - ecsContractType
    - ecsContractStart
    - ecsContractEnd
    - ecsCPLookup
    - ecsCPIds
    - ecsCPContactPerson
    - ecsResponsible
    - ecsExternalContractNumber
    - ecsNote
    - ecsPeriod
    - ecsUseFixedPeriodEndDate
    - ecsFixedPeriodEndDate
    - ecsPeriodExtension
    - ecsPeriodCancellation
    - ecsPeriodEndOption
    - ecsIsMaximumPeriod
    - ecsPeriodNotes
    - ecsCalculationPriority
    - ecsTerminationDate
    - ecsNotification
    - ecsContractState
    - ecsCancelledBy
    - ecsCancellationDate
    - ecsContainingDocumentTypes
    - ecsPermissionRead
    - ecsPermissionWrite
    - ecsNotificationInterval
    - ecsNotificationStart
    - ecsUseFixedNotificationStart

    - ecsNotificationRecipients
    - ecsNotificationMessage
    - ecsLastNotified
    - ecsContactPersons
    - ecsCalculatePeriods
    - ecsNextEnd
    - ecsNextTermination
    - ecsOpenEnded
    - ecsItemSchemaVersion
- ecsContractDocumentContentType
  - Parent item: Document
  - Usage: Default content type for contract documents
  - Columns (internal name):
    - Title
    - ecsDocumentType
    - ecsContractId
- ecsContractCustomListBaseContentType
  - Parent item: Item
  - Usage: Basic content type for individual lists
  - Columns (internal name):
    - Title
    - ecsContractId
- ecsContractualPartnerContentType
  - Parent item: Item
  - Usage: Content type for contractual partners
  - Columns (internal name):
    - ecsCPAddress
    - ecsCPId
    - ecsCPDescription
    - ecsCPCity
    - ecsCPZipCode
    - ecsCPCountry
- ecsTasksContentType
  - Parent item: Item
  - Usage: Content type for tasks
  - Columns (internal name):
    - Title
    - ecsTaskDueDate
    - ecsDescription
    - ecsResponsible
    - ecsContractId
    - ecsTaskState
    - ecsNotificationInterval
    - ecsNotificationStart
    - ecsNotificationRecipients
    - ecsNotificationMessage
    - ecsLastNotified
    - ecsSeriesInterval
    - ecsSeriesIsCurrent
    - ecsItemSchemaVersion
- ecsContactPersonContentType

  - Parent item: Item
  - Usage: Content type for contact person management
  - Columns (internal name):
    - Title
    - ecsSalutation
    - ecsFirstName
    - ecsLastName
    - ecsEmail
    - ecsPhone
    - ecsCPId
- ecsContractDocumentTemplateContentType
  - Parent item: Document
  - Usage: Content type for document templates
  - Columns (internal name): ecsContractTypes

Columns

All columns are assigned to the groups **ecsContract** or **d.velop contracts system**.

- ecsSubjectOfContract (type: text)
- ecsContractId (type: text)
- ecsCPAddress (type: text)
- ecsCPId (type: text)
- ecsCPIds (type: multiple selection)
- ecsCPCity (type: text)
- ecsCPZipCode (type: text)
- ecsCPContactPerson (type: text)
- ecsCPDescription (type: text)
- ecsExternalContractNumber (type: text)
- ecsPeriod (type: text)
- ecsIsMaximumPeriod (type: yes/no)
- ecsUseFixedPeriodEndDate (type: yes/no)
- ecsFixedPeriodEndDate (type: date)
- ecsPeriodExtension (type: text)
- ecsPeriodCancellation (type: text)
- ecsCalculationPriority (type: text)
- ecsPeriodNotes (type: multi-line text field)
- ecsNote (type: multi-line text field)
- ecsDescription (type: multi-line text field)
- ecsNotificationMessage (type: multi-line text field)
- ecsContractStart (type: date)
- ecsContractEnd (type: date)
- ecsTaskDueDate (type: date)
- ecsTerminationDate (type: date)
- ecsResponsible (type: person)
- ecsUseFixedNotificationStart (type: yes/no)
- ecsNotification (type: yes/no)
- ecsPeriodEndOption (type: selection, values: EndOfMonth, EndOfYear, EndOfQuarter, EndOfContract, EndOfHalfYear)
- ecsContractType (type: managed metadata)
- ecsTaskState (type: managed metadata)
- ecsContractState (type: managed metadata)

- ecsContractOrganization (type: managed metadata with multiple selection)
- ecsCPCountry (type: managed metadata)
- ecsCPLookup (type: lookup with multiple selection)
- ecsContactPersons (type: lookup with multiple selection)
- ecsCancelledBy (type: person)
- ecsCancellationDate (type: date)
- ecsContainingDocumentTypes (type: managed metadata with multiple selection)
- ecsDocumentType (type: managed metadata)
- ecsPermissionRead (type: person with multiple selection)
- ecsPermissionWrite (type: person with multiple selection)
- ecsNotificationRecipients (type: person with multiple selection)
- ecsNotificationInterval (type: text)
- ecsNotificationStart (type: date)
- ecsLastNotified (type: date and time)
- ecsSeriesInterval (type: text)
- ecsSeriesIsCurrent (type: text)
- ecsName (type: text)
- ecsSalutation (type: managed metadata)
- ecsFirstName (type: text)
- ecsLastName (type: text)
- ecsEmail (type: text)
- ecsPhone (type: text)
- ecsCalculatePeriods (type: yes/no)
- ecsOpenEnded (type: yes/no)
- ecsNextEnd (type: date)
- ecsNextTermination (type: date)
- ecsContractTypes (type: managed metadata with multiple selection)
- ecsItemSchemaVersion (type: number)

1.4.3. Lists and libraries

The following lists and libraries are used:

- **ecsContractDocumentTemplates**
  - Type: Document library
  - Initial number: 1
  - Content type: ecsContractDocumentTemplateContentType
- **ecsContracts**
  - Type: Document library
  - Initial number: 1
  - Content types: ecsContractContentType, ecsContractDocumentContentType
- **ecsContactPersons**
  - Type: List
  - Initial number: 1
  - Content types: ecsContractPersonContentType
- **ecsContractualPartners**
  - Type: List
  - Initial number: 1
  - Content types: ecsContractualPartnerContentType
- **ecsTasks**
  - Type: List
  - Initial number: 1
  - Content types: ecsTasksContentType

Automatic generation of new document libraries and lists

A job (health check) is run nightly, generating new document libraries and lists as needed. To create new document libraries and lists, the current document library or list is always used as a template and copied.

First of all, the health check checks:

- Whether the created service account token is still valid
- The service account has the necessary permission on SharePoint

When the health check function is fulfilled, the system checks whether new document libraries and lists need to be created.

The following actions are performed:

- Check whether the current contract document library has exceeded the maximum number of document folders (the limit is 4000).
- Check whether a contract document library with the new list index exists.
  - Contract document library exists.
    - Transfer of the settings of the previous contract document library.
      - Adding of content types.
      - Completing the index of the columns.
      - Views are removed and taken from the previous contract document library.
      - Title of the contract document library is localized.
  - Contract document library does not exist.
    - Create new contract document library. Previous contract document library is used as a template.
      - Adding of content types.
      - Adding of index of columns.
      - Views are taken from the previous contract document library.
      - Title of the contract document library is localized.
- After the contract document library is created, a new task list is created or updated according to the same scheme.
- After creating the task list, the lists defined by the organization are read from the configuration and created or updated according to the same scheme.
  The list title is not taken over or adapted, but corresponds to the list name.
- After creating all document libraries and lists, the **currentListIndex** is incremented in the configuration.

1.5. Installing and uninstalling

Here you will learn details about:

- System requirements
- Setting up d.velop contracts for Microsoft 365
- Removing d.velop contracts for Microsoft 365

1.5.1. System requirements

The following requirements must be met in order to install and use d.velop contracts for Microsoft 365:

- **Licensing**

Users of the software must have a Microsoft 365 license which enables them to work with SharePoint Online. This allows d.velop contracts for Microsoft 365 to be used to the full extent. Different license types may be required to use other Microsoft 365 functions (e.g. in the context of customizing).

- **Microsoft Entra ID, network and users**

The users are managed in Microsoft Entra ID in the same tenant where the SharePoint tenant is located. It is currently not possible to use guest users.

Permission for the Microsoft Entra ID enterprise applications must be granted once in the context of a member of the global administration team.

For background and system processes, an additional licensed user is required who is defined as an administrator at the SharePoint website and terminology memory level.

- **SharePoint infrastructure**

An empty site collection that can be used exclusively for the application. d.velop contracts for Microsoft 365 is configured using the term store at site collection level. The SharePoint search is used to search for content.

The desired languages must be activated as working languages in the term store. This must be done in the Microsoft 365 SharePoint Admin Center.

- **Firewall rules**

The application executes requests to subdomains of the d-velop365.com domain in the background. A release of all subdomains according to the *.d-velop365.com scheme is therefore necessary for a smooth operation.

1.5.2. Setting up d.velop contracts for Microsoft 365

Note the following content for setting up d.velop contracts for Microsoft 365:

- Deploying the instance configuration
- Granting of permission for Microsoft Entra ID enterprise applications
- Configuring the application administration
- Deploying the instance configuration

Access to d.velop contracts for Microsoft 365

Once setup is successful, you can open d.velop contracts for Microsoft 365 at **https://contracts.d-velop365.com/<instance name>** with your web browser. Users can access the environment depending on the permission within the site collection.

Enabling tenants

Only connections from known tenants are permitted for using d.velop contracts for Microsoft 365. For this reason, tenants must first be enabled by d.velop AG. Provide your d.velop contact person or d.velop support with the following information:

- Name of the company
- Name of the product to be enabled (d.velop contracts for Microsoft 365)
- Microsoft 365 tenant ID (tenant ID)
- Name and e-mail address of your responsible contact person

Granting of permission for Microsoft Entra ID enterprise applications

Members of the global administration of the Microsoft 365 tenant must approve the permission requests.

Approval is required for the following applications:

- d.velop 365
- d.velop 365 service user

You can find more information at System architecture.

Granting administrative approval to the d.velop apps - This is how it works

1. Open https://onboarding.d-velop365.com.
2. Click **Login**.
3. Log in with your authorized user account.
4. Select **d.velop contracts for Microsoft 365**.
5. Under **User permissions**, click **Grant administrative approval for missing user permissions**.
6. Click on your user account or click **Use other account** to log in with an authorized user account.
7. Click **Accept**.
8. Click **Check status** to see if Microsoft has processed the administrative approval yet. The update can take up to three minutes. Repeat this step until all permissions have been granted. Granted permissions are shown with a green tick.
9. Repeat steps 4–7 for service user permissions.

The approval applies only to the tenant.

Every user is able to grant approval for d.velop contracts for Microsoft 365. d.velop recommends central approval by the administration team.

Configuring the application administration

With the **application administrator** role, users can configure d.velop contracts for Microsoft 365. You can assign the role in Microsoft Entra Admin Center to specific user accounts.

This is how it works

1. Log in to Microsoft Entra Admin Center.
2. Go to **Enterprise Applications > d.velop 365 > Users and groups**.
3. Click **Add user person/group**.
4. Under **Users and groups**, click **None selected**.
5. Select the relevant user account and click **Select**.
6. Under **Select role**, click **None selected**.
7. Select the **Administrator** role and click **Select**.
8. Save your entries with **Assign**.

Deploying the instance configuration

Several instances of d.velop contracts for Microsoft 365 can be provided per SharePoint tenant. One instance corresponds to one site collection in SharePoint Online.

You can deploy an instance configuration independently. Existing instances cannot be edited or deleted.

Creating a new instance configuration – This is how it works

1. Open https://admin.d-velop365.com/.
2. Click **Log in** and log in with your authorized user account.
3. Under **Contract management**, click **Manage instances**.
4. Click **New**.

Then perform the deployment of the instance configuration.

Deploying the instance configuration – This is how it works

1. In **Step 1**, specify the following information:
   a. **URL of the site collection**: Select the desired site collection from the selection list.
   b. **Name of the number sequence**: The number sequence represents the schema for the automatic generation of an internal contract ID. If the relevant number sequence has already been created, you can set the number sequence using the selection list. Otherwise, you can create a new number sequence by clicking on the plus symbol and completing the following fields:

- **Name**
- **Initial value (start value)**
- **Counting up steps**
- **Prefix**
- **Number of padding characters**
- **Description**:

> **Note**
> **Example**
>
> For a contract ID according to the schema **CM00001**, you must specify the following values:
>
> - **Initial value**: 1
> - **Counting up steps**: 1
> - **Prefix**: CM
> - **Number of padding characters**: 5

c. **Instance name**: Specify the name of the instance. You can determine the instance name in the URL (e.g. **https://contracts.d-velop365.com/<instance name>**).
d. **Technical contact person**: Specify the e-mail addresses of the technical contact person.
e. **Description**:

2. Click **Next**.
3. In **Step 2**, specify the service user with the deployed URL. To do this, follow the instructions above the presented URL.
4. Click **Check requirement** and, once the verification is successful, click **Next**.
5. In **Step 3**, click **Initiate provisioning**.

The structure within the site collection is then deployed and the instance for contract management is created. This will be done in the context of the service accounts (service users) for background processes.

1.5.3. Removing d.velop contracts for Microsoft 365

Delete the Microsoft Entra ID enterprise applications **d.velop 365** and **d.velop 365 service user** from Microsoft Entra ID in order to remove d.velop contracts for Microsoft 365.

1.6. Configuring d.velop contracts for Microsoft 365 in SharePoint Online

In this topic you will find details on the following configuration options:

1.6.1. Adding additional columns for all contract types

You can configure the columns to be displayed in the **Details** area in all contract types.

Assume that the SharePoint columns have already been created at the main level of the site collection. Please refer to the FAQ in the chapter What column types are supported in d.velop contracts for Microsoft 365?

Adding columns for all types of contracts - This is how it works

1. Open the Site settings.
2. Open **Site content types** under **Web Designer Galleries**.
3. Open the site content type **ecsContractContentType**.
4. Select **Add from existing site columns** and add the desired columns.
5. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.6.2. Adding informational text in tooltips

In Microsoft SharePoint, you can create tooltips for the columns in a contract.

Once you have created tooltips, an information icon is displayed after the column name in edit mode. When users click this icon, the information text is displayed.

This is how it works

1. Open the Site settings.
2. Go to **Web Designer Galleries > Site columns**.
3. Select the site column for which you want to create the tooltip.
4. Create the tooltip under **Additional column settings > Description**.
5. Click **Save**.
6. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.6.3. Creating contract types

You can classify contracts by contract type. When doing so, you can assign different columns to the contract type.

Creating the term - This is how it works

1. Open the Site settings.
2. Open the **Term Store Management** under **Site Administration**.
3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.
4. Select the term set **ecsContractTypeTerm**.
5. Create a new term by clicking on the term set **ecsContractTypeTerm** and selecting **Create term**.
6. Enter a new name for the term.
7. Optional: Assign a default label for additional languages by selecting the appropriate language.
8. Save the new term.
9. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

Assigning specific columns to contract types - This is how it works

This step is optional.

Assume that the SharePoint columns have already been created at the main level of the site collection. Please refer to the FAQ in the chapter What column types are supported in d.velop contracts for Microsoft 365?

1. Open the Site settings.
2. Open **Site content types** under **Web Designer Galleries**.
3. Click on **Create**.
4. Assign the following properties:
   - **Name**: Any name.
   - **Description**: Any description.

- Select parent content type from: **ecsContract**.
- Parent content type: **ecsContractContentType**.
- Create this site content type. Select an existing group or create a new group.

You will be redirected to the administration page of the new site content type.

5. Add the desired columns.

Enter the site content type in the previously created term in the Term Store Management Tool.

Entering the content type in the Term Store Management Tool - This is how it works

1. Open the Site settings.
2. Open the **Term Store Management** under **Site Administration**.
3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.
4. Select the term set **ecsContractTypeTerm**.
5. Select the term created in the step above.
6. Under **Advanced**, add the **Local custom property** with the property name **ContentType** with the **value** of the title of the site content type you created in the previous step.
7. Save the new term.

Add the site content type to the existing contract libraries:

1. Open the **settings** of the document library **Contracts0** or **ecsContracts0**.
2. Select **Add from existing site content types** below the **Content types**.
3. Select and add the site content type from the available site content types.
4. Confirm the selection with **OK**.

> **Note**
> Repeat this process for all libraries whose name begins with **Contracts**.

5. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.6.4. Configuring required columns

You can define required columns via the content types. The settings of the content type gallery are usually applied to the list content types. If the order is not applied, you must manually adjust the required columns on the content type in the **Contracts0** or **ecsContracts0** list, as this list defines the order.

This is how it works

1. Open the settings of the document library **Contracts0** or **ecsContracts0**.
2. Select the desired content type under **Content types**.
3. Select the desired column.
4. Under **Column settings**, set the value **Required**.
5. Confirm the selection with **OK**.
6. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.6.5. Configuring the column order

You can set the order of the columns in the contract details using the order of the content types. The settings of the content type gallery are usually applied to the list content types. If the order is not applied, you must manually set the order in the **Contracts0** list, as this list defines the order.

> **Note**
> You can also customize the grouping and the order of the columns under Grouping of the columns in the details pane.

This is how it works

1. Open the settings of the document library **Contracts0** or **ecsContracts0**.
2. Select the desired content type under **Content types**.
3. Click **Column order** below the columns.
4. Adjust the column order as desired.
5. Confirm the selection with **OK**.
6. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.6.6. Creating document types

Documents can be classified by selecting a document type.

Creating the term

1. Open the **Site settings**.
2. Open the **Term Store Management** under **Site Administration**.
3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.
4. Select the term set **ecsDocumentTypeTerm**.
5. Create a new term by clicking on the term set **ecsDocumentTypeTerm** and selecting **Create term**.
6. Enter a new name for the term.
7. Optional: Assign a default label for additional languages by selecting the appropriate language.
8. Optional: On the **Advanced** tab, under **Local custom property**, add the value **1** to the property name **IsDefault** to set the document type as the default.
9. Save the new term.
10. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

Linking content types to document types

If the document is to be assigned to a specific site content type by selecting the document type, you must first create the site content type. The site content type is then linked to the previously created term.

1. Open the Site settings.
2. Open **Site content types** under **Web Designer Galleries**.
3. Select **Create content type**.
4. Assign one of the following properties:
   - **Name**: Any name.
   - **Description**: Any description.
   - Select parent content type from: **ecsContract**.
   - Parent content type: **ecsContractDocumentContentType**.
   - Save this site content type. Select an existing group or create a new group.

You will be redirected to the administration page of the new site content type. Close the web page.

Define the site content type in the previously created term in the Term Store Management Tool.

Defining the site content type

1. Open the Site settings.

2. Open the **Term Store Management** under **Site Administration**.
3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.
4. Select the term set **ecsDocumentTypeTerm**.
5. Select the term created in the step above.
6. Under **Advanced**, add the local custom property **ContentType** and enter the name from the previous chapter Creating document types as its value.
7. Save the new term.

Adding the site content type to the existing contract libraries

1. Open the settings of the document library **Contracts0** or **ecsContracts0**.
2. Select **Add from existing site content types** below the **Content types**.
3. Select and add the site content type from the available site content types.
4. Confirm the selection with **OK**.

Repeat this procedure for all libraries whose name begins with **Contracts**.

Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.6.7. Configuring default values

You can define default values for the columns in contract files. When users create new contract files, the columns will already contain these default values.

> **Note**
> The defined default values do not appear in existing contract files.

This is how it works

1. Open the Site settings.
2. Go to **Web Designer Galleries > Site columns**.
3. Select the site column for which you want to configure a default value. You can specify default values for the following column types:
   - A line of text
   - Selection
   - Managed metadata
   - Yes/no
   - Numbers
   - Date
4. Enter a value under **Default value**. For the contract term area, you can pre-fill the following columns with the following values:
   - **Initial duration**
     - Unit of measure only (d, w, m, y)
     - Quantity and unit of measure (5d, 6w, 3 m, 1y)

     > **Note**
     > It is not possible to enter only a quantity.

   - **Extension**
     - Unit of measure only (d, w, m, y)
     - Quantity and unit of measure (5d, 6w, 3 m, 1y)

     > **Note**
     > It is not possible to enter only a quantity.

- **Period of notice**
  - Unit of measure only (d, w, m, y)
  - Quantity and unit of measure (5d, 6w, 3 m, 1y)

> **Note**
> It is not possible to enter only a quantity.

- **Cancellation effect** (see dataset in the column settings)
  - **EndOfContract**
  - **EndOfMonth**
  - **EndOfQuarter**
  - **EndOfHalfYear**
  - **EndOfYear**

> **Note**
> Calculated values are not possible.

5. Save the site column.
6. Empty the contract management cache to apply the changes immediately.

1.6.8. Configuring the contract status

The contract status is managed in the term store. The following terms are already included by default:

- **Canceled**
- **Draft**
- **Expired**
- **Under negotiation**
- **Valid**

Each contract status represents a specific contract life cycle.

You can configure the phase of the contract status using the term. This will perform different actions depending on the contract life cycle (e.g. renewal and notification):

- Pre-contractual phase (**pre**)
  - **Draft**
  - **Under negotiation**
- Contract execution (**active**)
  - **Valid**
- Contract termination (**post**)
  - **Expired**
  - **Canceled**

> **Warning**
> You can edit existing statuses or the default statuses, however, you should not delete these statuses. Once deleted, the statuses cannot be restored.

If you want to change the labels or add further terms, proceed as follows:

Changing the existing terms - This is how it works

1. Open the Site settings.
2. Open the **Term Store Management** under **Site Administration**.

3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.
4. Select the term set **ecsContractState**.
5. Customize the default label in the desired language by selecting the appropriate language.
6. Optional: Under **Custom properties** , customize the **contractLifecycle** property. If no value is specified, then the default value **pre** is used.
   Valid values: **pre**, **active**, **post**.
7. Optional: Under **Custom properties**, customize the **IsDefault** property. Selecting the value **1** makes this contract status the default status when creating a contract. If you don't specify a value, the default value **0** is used.
   Valid values: **0**, **1**
8. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

> **Warning**
> You are not permitted to change the local properties **id** and **internalName**.

Adding new terms - This is how it works

1. Open the Site settings.
2. Open the **Term Store Management** under **Site Administration**.
3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.
4. Select the term set **ecsContractState**.
5. Create a new term by clicking on the term set **ecsContractState** and selecting **Create term**.
6. Enter a new name for the term.
7. Assign an internal name for the new term under **Custom properties**. To do this, click **Add** below the local properties. Now you can specify **internalName** as the local property name and specify the name as the value.
8. Optional: Assign a default label for additional languages by selecting the appropriate language.
9. Optional: Assign a color for the new term under **Custom properties**. To do this, click **Add** below the local properties. Now you can specify **color** as the local property name and enter a hex code as the value. If you do not enter a value, the color of the default theme will be used for the user interface.

> **Note**
> The color of the contract status is displayed in the header of the contract view and in the pie chart on the dashboard.

10. Optional: Under **Custom properties** , customize the **contractLifecycle** property. If no value is specified, the default value **pre** is used.
    Valid values: **pre**, **active**, **post**.
11. Optional:Under **Custom properties**, customize the **IsDefault** property. Selecting the value **1** makes this contract status the default status when creating a contract. If you don't specify a value, the default value **0** is used.
    Valid values: **0**, **1**
12. Save the new term.
13. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.6.9. Configuring the task status

The task status is managed in the term store. The following terms are already included by default:

- **Completed**
- **In process**
- **Not started**

If you want to change these labels or add further terms, proceed as follows.

Changing the existing terms - This is how it works

1. Open the Site settings.
2. Open the **Term Store Management** under **Site Administration**.
3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.
4. Select the term set **ecsContractTaskState**.
5. Customize the default label in the desired language by selecting the appropriate language.
6. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

> **Warning**
> You are not permitted to change the local properties **id** and **internalName**.

Adding new terms - This is how it works

1. Open the Site settings.
2. Open the **Term Store Management** under **Site Administration**.
3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.
4. Select the term set **ecsContractTaskState**.
5. Create a new term by clicking on the term set **ecsContractTaskState** and selecting **Create term**.
6. Enter a new name for the term.
7. Optional: Assign a default label for additional languages by selecting the appropriate language.
8. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.6.10. Including additional lists

You can include further lists in addition to the existing task list.

Assume that the desired additional SharePoint columns have already been created previously at the main site collection level. Please refer to the FAQ in the chapter What column types are supported in d.velop contracts for Microsoft 365?

Creating website content types

Creating a website content type for the list - This is how it works

1. Open the Site settings.
2. Open **Site content types** under **Web Designer Galleries**.
3. Select **Create**.
4. Assign the following properties:
   - **Name:** Any name
   - **Description**: Any description
   - Select parent content type from: **ecsContract**
   - Parent content type: **ecsContractCustomListBaseContentType**
   - Place this site content type here: Select the existing group or create a new group. You will be redirected to the administration page of the new site content type.
   - Select **Add from existing site columns** and add the desired columns.

Creating a new SharePoint list and adding it to the content types - This is how it works

1. Open the Settings.

2. Below **SharePoint**, select the **Add app** menu.
3. Choose **Custom list** from the templates.
4. Assign a name for the list; the list name must end with **0** and should not contain spaces. You can change the display name later.
5. Switch to the Settings of the new list.
6. Open **Advanced settings** in the **General settings**.
7. In the **Allow content type management?** area, set the value to **Yes**.
8. Confirm the selection with **OK**.
9. Select **Add from existing site content types** below the **Content types**.
10. Select and add the site content type from the available site content types.
11. Confirm the selection with **OK**.
12. Select **Change new buttons order and default content type** below the **Content types**.
13. Disable the option **Visible** for all content types except for the newly added content type.
14. Confirm the selection with **OK**.
15. You must create one user-defined list per contract library. To do this, repeat steps 1-14 and change the name of the list in step 4 with the respective digit (1-x).
    For more information about contract libraries, see the chapter System architecture.

Adding the lists to the contract type configuration (contracts-config)

Expand the contract type configuration to display the lists for the different contract types in the contract mask.

Further information: Creating and configuring additional contract types

Information on displaying the columns in the contract view

In the form for the detailed view as well as for creating the items of the additional list, all columns of the standard content type are generally displayed. You can adapt the form via the content type settings:

- You can define the order of the columns by the column order of the content type.
- You can hide columns via the settings in the content type.

The display of the columns is defined by the default view of the list.

> **Note**
> If the width in the contract view is not sufficient to display all columns, the last columns are automatically hidden.

1.6.11. Configuring the organizational assignment

You can use the **Organizational assignment** field to assign a contract to a business unit. The column is created by default. Carry out the following steps to define a selection and display the column in the user interface:

- Create the term.
- Add a column to the content type.

A maximum depth of three levels is supported. If you do not want a particular level to be visible, change the configuration accordingly.

Creating the term - This is how it works

1. Open the Site settings.
2. Open the **Term Store Management** under **Site Administration**.
3. Navigate to **Term Store Management Tool > Taxonomy Term Store** in the site collection.

4. Select the term set **ecsContractOrganization**.
5. Create a new term by clicking on the term set **ecsContractOrganization** and selecting **Create term**.
6. Enter a new name for the term.
7. Optional: Create a sublevel by clicking on the new term and select **Create term**.
8. If the level is not to be selectable: On the **General** tab, disable the option **Available for tagging** so that the term cannot be selected.
9. Optional: Assign a default label for additional languages by selecting the appropriate language.
10. Save the new term.
11. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

Allowing multiple selection - This is how it works

1. Open the Site settings.
2. Open the site columns and select **Organizational assignment**.
3. Select the **Allow multiple selections** option.
4. Save your changes.
5. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

> **Note**
> If you have previously used organizational assignments in your permission rule set, you will now need to adapt these rules for multiple selection, otherwise they will no longer work.

> **Note**
> If you have previously made list-level customizations, you must also make this configuration at the list level.

Adding a column to the content type - This is how it works

1. Open the Site settings.
2. Open **Site content types** under **Web Designer Galleries**.
3. Open the site content type **ecsContractContentType**.
4. Select a site column under **Add from existing site columns** and add the column **Organizational assignment**.
5. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

1.7. Configuring d.velop contracts for Microsoft 365 in the configuration interface

You need the **Application administrator** role to configure the contract management interface and make further application settings. The role is defined for you in Microsoft Entra Admin Center. More information: Setting up d.velop contracts for Microsoft 365. A configuration interface (contracts-config) is available for configuration purposes.

This chapter contains the following content:

- Calling up the administration interface
- Start page

Configuration:

- Configuring the tabs
- Creating and configuring additional contract types
- Configuring the search
- Configuring permissions

Miscellaneous:

- Managing document templates
- Enabling links
- Enabling signatures
- Defining contractual partners management options
- Defining e-mail notifications
- Creating Power BI reports
- Defining buttons
- Working with the configuration files
- Clearing the cache
- Links to the SharePoint administration
- Additional document properties in the document area
- Managing the technical contact
- API key

1.7.1. Accessing the configuration interface

You need the **Application administrator** role to configure the contract management interface and make further application settings. The role is defined for you in Microsoft Entra Admin Center. More information: Setting up d.velop contracts for Microsoft 365.

1. Go to the following URL: **https://contracts-config.d-velop365.com/<instance ID>**
2. Open the nine dots menu in the contract management application interface.
3. Click **Configuration**.

1.7.2. Start page

On the start page you will see the following information:

- **Instance**: The name of your instance.
- **SharePoint Site-URL**: The URL of the defined SharePoint website.
- **Technical contact**: The e-mail addresses of the defined technical contact persons.
- **Tenant ID**: The ID of the defined Microsoft tenant.
- **Configuration name for the generation of the contract ID**: For a new configuration to create unique contract IDs, please contact d.velop support.
- **Index of the current list**: The current list index. **0** means that the first contract list is currently being used. A list can contain up to 5.000 entries. If there are more than 5,000 entries, a new list is created automatically. The current list index is increased by 1.

These details are for your information and cannot be edited.

You will also find the **Clear cache** button on the home page. For more information about clearing the cache, see the related chapter Clearing the cache.

1.7.3. Configuring the tabs

In the **Dashboard** section, you can configure up to five tabs for the contract management start page. There are two options for the configuration: editing on the configuration interface and extended configuration in the JSON file.

Please refer to the following chapters:

Configuring in the configuration interface

This is how it works

1. Click **New** to create a new tab or select an existing tab and click **Edit**.
2. In the **Name** field, enter the name of the tab. The name is displayed on the user interface if no languages are assigned under **Title**.
3. Define the title of the tab for the required languages. To do so, select the required language under **Language** and enter the title under **Title**. Clicking on **Add title for another language** adds a new line for configuring the languages.
4. Under **List** , select the required list to which the following query refers.
5. Under **Query**, define the CAML search that searches the list items. For more information on the CAML search, see https://docs.microsoft.com/en-us with the search term "query schema in CAML".
6. Under **Keyword Query**, define the KWQ search that searches the list items. If there are five or more contract lists, it is necessary, due to the high number of contracts, to maintain a keyword query that searches the list items. For more information on the KQL search, see https://docs.microsoft.com/en-us with the search term "syntax reference KQL".

> **Note**
>
> To test the keyword query, you can use the URL parameter **usekwq=1** on the start page of d.velop contracts for Microsoft 365. The items on the tabs will then be queried using the saved keyword query.
>
> Example: https://contracts.d-velop365.com/myInstance?usekwq=1

7. Enter the maximum number of search results under **Maximum number of displayed results**.
8. Under **Column for sorting**, select the column according to which the search results are to be sorted. Under **Sorting** , define whether the results are to be sorted in ascending or descending order.
9. Under **Columns for viewing**, select the columns to be displayed in the result list.

> **Note**
>
> Internally, there are two different columns for the date of cancellation and the contract end:
>
> - Date of cancellation
>   - Calculated date of cancellation (**ecsNextTermination**)
>   - Manual date of cancellation (**ecsTerminationDate**)
> - End of contract
>   - Calculated contract end (**ecsNextEnd**)
>   - Manual (fixed) contract end (**ecsContractEnd**)
>
> Due to the logic in the application, the two values for the date of cancellation and the contract end date are displayed in a single column in the dashboard as soon as one of the two columns is listed in **viewFields**. Both columns must be queried when formulating the search.
>
> Use the following columns for the **viewFields** list:
>
> - Date of cancellation: **ecsNextTermination**
> - Contract end: **ecsNextEnd** or **ecsContractEnd**

10. Click **Save**.

> **Note**
> The only way to change the order of the tabs is via the extended configuration in the JSON file.

Extended configuration in the JSON file

The following parameters are available:

- **titles**: Create the translations for all languages supported by the application. The translations are applicable for the tabs that you see in the dashboard. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.
- **name**: This name is only displayed if you have not assigned a title under **titles** for the corresponding language.
- **relativeListUrl**: The relative URL to the list, without the hostname and without the number at the end. (For the example configuration, the lists "ecsContracts0" and "ecsContracts1" are created.)
- **query**: A CAML search that searches the list items. For more information on the CAML search, see https://docs.microsoft.com/en-us with the search term "query schema in CAML".
  kwq: If there are five or more contract lists, it is necessary, due to the high number of contracts, to maintain a keyword query that searches the list items. For more information on the KQL search, see https://docs.microsoft.com/en-us with the search term "syntax reference KQL".

  > **Note**
  > To test the keyword query, you can use the URL parameter **usekwq=1** on the start page of d.velop contracts for Microsoft 365. The items on the tabs will then be queried using the saved keyword query.
  >
  > Example: https://contracts.d-velop365.com/myInstance?usekwq=1

- **maxitemcount**: Maximum number of search results that will be queried. To ensure a clear display, there is a limit of 100 entries.
- **sortField**: Sorting is performed according to this column.
  - **name**: The internal name of the column
  - **ascending**: Ascending sorting
- **viewFields**: List of the columns to be displayed
  - **name**: The internal name of the column
  - **width** (optional): The width of the field.

Note

Internally, there are two different columns for the date of cancellation and the contract end:

- Date of cancellation
  - Calculated date of cancellation (**ecsNextTermination**)
  - Manual date of cancellation (**ecsTerminationDate**)
- End of contract
  - Calculated contract end (**ecsNextEnd**)
  - Manual (fixed) contract end (**ecsContractEnd**)

Due to the logic in the application, the two values for the date of cancellation and the contract end date are displayed in a single column in the dashboard as soon as one of the two columns is listed in **viewFields**. Both columns must be queried when formulating the search.

Use the following columns for the **viewFields** list:

- Date of cancellation: **ecsNextTermination**
- Contract end: **ecsNextEnd** or **ecsContractEnd**

Placeholder for the keyword query search

- Placeholder for user
  - **${User.LoginName}**
  - **${User.Title}**
  - **${User.Id}**
  - **${User.email}**
- Placeholder for dynamic date
  - The first part (**Today**) indicates that a date can be inserted.
  - The second part (**StartOfDay**, **EndOfDay**) indicates that the start or end of the day is to be used.
  - The last part indicates the difference (offset) in days, relative to today's date.
    - **${Today.StartOfDay.0}**
      - Today's date is: 12/02/2024 12:12
      - This becomes: 2024-12-01T23:00:00.000Z
    - **${Today.StartOfDay.-4}**
      - Today's date is: 12/02/2024 12:12
      - This becomes: 2024-11-27T23:00:00.000Z
    - **${Today.EndOfDay.92}**
      - Today's date is: 12/02/2024 12:12
      - This becomes 2025-03-04T22:59:59.999Z
    - **${Today.EndOfDay.-2}**
      - Today's date is: 12/02/2024 12:12
      - 2024-11-30T22:59:59.999Z
    - **${Today}**
      - Today's date is 12/02/2024 12:12
      - This becomes 2024-12-02T11:12:00.000Z
- Placeholder for managed metadata
  - The first part indicates which managed metadata column is to be used.
  - The second part indicates which taxonomy value is to be used. For this, a local custom property must be configured for the corresponding term (InternalName=value)
    For the column "ecsContractType", the value from "ContentType" is read instead of "internalName".
  - The last part indicates which property of the term is to be inserted. The following properties are available:

- **termStoreId**: ID of the TermStores
- **termSetId**: ID of the TermSet
- **wssId**: Lookup ID of the term
- **id**: ID of the term
- **name**: Name of the term

- Example:
  - **${ecsContractState.Completed.Id}**: The ID of the term "Completed" from the "ecsContractState" column would be inserted.

Example of tabs configuration

With the example configuration, for example, the most recently modified contracts are displayed on the start page of d.velop contracts for Microsoft 365 under **Last modified.**

Example dashboard configuration

```
[
    {
        "name": "LastChanged",
        "titles": {
            "de": "Zuletzt geändert",
            "en": "Last modified"
        },
        "relativeListUrl": "/ecsContracts",
        "query": "1",
        "kwq": "EditorOWSUSER:(${User.Title}//${User.LoginName}*)
AND ContentTypeId:0x0120D52000A01E1DFC8CA3644A839475A34955DDEE* AND
IsContainer:true",
        "sortField": {
            "name": "Modified",
            "ascending": false
        },
        "viewFields": [
            {
                "name": "ecsSubjectOfContract"
            },
            {
                "name": "ecsCPLookup"
            },
            {
                "name": "ecsContractType"
            },
            {
                "name": "ecsContractState"
            },
            {
                "name": "Modified",
                "width": 120
            }
        ],
        "maxitemcount": 25
    },
    {
        "name": "UpcomingDeadlines",
        "titles": {
            "de": "Anstehende Fristen",
            "en": "Upcoming Deadlines"
```

```
        },
        "relativeListUrl": "/ecsContracts",
           "query": "101",
           "kwq": "ecsResponsibleOWSUSER:
(${User.Title}//${User.LoginName}*) AND
ContentTypeId:0x0120D52000A01E1DFC8CA3644A839475A34955DDEE* AND
IsContainer:true AND (RefinableDate06>=${Today.StartOfDay.0} AND
RefinableDate06<=${Today.EndOfDay.92})",
           "sortField": {
               "name": "ecsNextTermination"
           },
           "viewFields": [                  {
                   "name": "ecsSubjectOfContract"
               },
               {
                   "name": "ecsContractType"
               },
               {
                   "name": "ecsCPLookup"
               },
               {
                   "name": "Modified",
                   "width": 120
               },
               {
                   "name": "ecsNextTermination",
                   "width": 120
               }
            ],
           "maxitemcount": 25
    },
    {
        "name": "MyTasks",
        "titles": {
            "de": "Meine Aufgaben",
            "en": "My tasks"
        },
        "relativeListUrl": "/Lists/ecsTasks",
        "query": "0${ecsTaskState.Completed.WSSId}",
        "kwq": "ecsResponsibleOWSUSER:(${User.Title}//$
{User.LoginName}*) AND IsContainer=false AND
ContentTypeId:0x0100B252310F71CBCE46B259C77B2ECA5D69* AND (NOT
owstaxIdecsTaskState:#${ecsTaskState.Completed.Id}|*)",
        "sortField": {
            "name": "ecsTaskDueDate",
            "ascending": true
        },
        "viewFields": [
            {
                "name": "ecsSubjectOfContract",
                "width": 120
            },
            {
                "name": "ecsCPLookup"
            },
```

```
            {
                "name": "ecsContractType"
            },
            {
                "name": "Title"
            },
            {
                "name": "ecsTaskDueDate",
                "width": 120
            },
            {
                "name": "ecsTaskState"
            }
        ],
        "maxitemcount": 50
    },
    {
        "name": "MyTasksDelegated",
        "titles": {
            "de": "Meine delegierten Aufgaben",
            "en": "My delegated tasks"
        },
        "relativeListUrl": "/Lists/ecsTasks",
        "query": "0${ecsTaskState.Completed.WSSId}",
        "kwq": "IsContainer=false AND
ContentTypeId:0x0100B252310F71CBCE46B259C77B2ECA5D69* AND AuthorOWSUSER:
(${User.Title}//${User.LoginName}*) AND (NOT owstaxIdecsTaskState:#$
{ecsTaskState.Completed.Id}|*) AND (NOT ecsResponsibleOWSUSER:($
{User.Title}//${User.LoginName}*))",
        "sortField": {
            "name": "ecsTaskDueDate",
            "ascending": true
        },
        "viewFields": [
            {
                "name": "ecsSubjectOfContract",
                "width": 120
            },
            {
                "name": "ecsCPLookup"
            },
            {
                "name": "ecsContractType"
            },
            {
                "name": "Title"
            },
            {
                "name": "ecsTaskState"
            },
            {
                "name": "Created",
                "width": 120
            },
            {
```

```
                "name": "Modified",
                "width": 120
            },
            {
                "name": "ecsTaskDueDate",
                "width": 120
            },
            {
                "name": "ecsResponsible"
            }
        ],
        "maxitemcount": 50
    },
    {
        "name": "NoDocs",
        "titles": {
            "de": "Unvollständige Verträge",
            "en": "Incomplete Contracts"
        },
        "relativeListUrl": "/ecsContracts",
        "query": "1${ecsContractState.Canceled.WSSId}$
{ecsContractState.Expired.WSSId}",
        "kwq": "ContentTypeId:0x0120D52000A01E1DFC8CA3644A839475A34955DDEE*
AND IsContainer:true AND AuthorOWSUSER:(${User.Title}//${User.LoginName}*)
AND (NOT owstaxIdecsContractState:#${ecsContractState.Canceled.Id}|
*) AND (NOT owstaxIdecsContractState:#${ecsContractState.Expired.Id}|
*) OR (owstaxIdecsContractState:#${ecsContractState.Draft.Id}|*
OR (NOT RefinableDate02:1900-01-01..3000-12-31) OR
(NOT owstaxIdecsContainingDocumentTypes:*) OR (NOT
ecsSubjectOfContractOWSTEXT:*) OR (NOT ecsCPLookup:*) OR (NOT
owstaxIdecsContractOrganization:*) OR (NOT ecsResponsibleOWSUSER:*))",
        "viewFields": [
            {
                "name": "ecsSubjectOfContract"
            },
            {
                "name": "ecsCPLookup"
            },
            {
                "name": "ecsContractType"
            },
            {
                "name": "ecsResponsible"
            },
            {
                "name": "ecsContractState"
            },
            {
                "name": "ecsContractStart",
                "width": 120
            },
            {
                "name": "Modified",
                "width": 120
            }
```

```
        ],
        "sortField": {
            "name": "Modified",
            "ascending": true
        },
        "maxitemcount": 50
    }
]
```

1.7.4. Configuring contract types

In the **Contract types** area, you can configure the contract types. You can use the configuration interface and make extended configurations in a JSON file.

In the **Existing contract types** area, created contract types including term IDs are listed. You can use the created contract types for further configuration. You can find information about creating contract types under Creating contract types.

Using the configuration interface for contract types

You can make the following settings for each contract type:

- Defining individual lists
- Add additional columns to be displayed in the document list
- Sort the documents in the document list

You have two options for configuration. You can choose between the configuration interface and the advanced configuration (JSON file).

This is how it works

1. Click **New** or select an existing configuration and click **Edit**.
2. From the **Select contract types** drop-down menu, select the contract types to which this configuration will apply.
3. Use **Select custom lists** to define the additional lists that will be available for contracts of this type.
4. Use **Additional fields for document list** to select the additional columns to display in the document list.
5. Select the **Column for sorting** drop-down menu and **Sorting the document list** to sort the documents in the document list.
6. Click **Save**.

Parameter for configuring contract types

You can make the following settings for each contract type:

- **applyToContractTypeTermIds**: The expression IDs (Term IDs) of the contract types to which **customLists** are added. You can find the ID of the expression in the terminology memory management.
- **customLists**:
  - **listName**: The name of the list without the number at the end.
    Create the following lists for the sample configuration:
    - CustomNotes0
    - CustomNotes1
    - ecsCosts0
    - ecsCosts1
  - **isList**: The value **true** must always be defined for this parameter.
- **documentDetails**: This section refers to the document list within the contract view.
  - **additionalFields**: Additional columns for the document list are configured here.
    - **name**: Internal field name for the column to be displayed in addition.

- **orderby**: Can be optionally specified to customize the default sorting of documents in a contract.
  - **fieldname**: Internal field name for the column according to which sorting is performed.
  - **direction**: Specifies whether to sort in ascending ("asc") or descending ("desc") order.

Further information: Including additional lists.

Example of configuring contract types

In this sample configuration for the contract types, you will learn how to add more lists to the contract types. These lists are displayed when viewing the contract.

Example configuration for contract types

```
[
    {
        "applyToContractTypeTermIds": [
            "c607e213-fbe1-40f2-test-3ebee18dfbd8",
            "0ebfda0f-046a-479c-test-eca81328c367"
        ],
        "customLists": [
            {
                "listName": "ecsCosts",
                "isList": true
            }
        ]
    },
    {
        "applyToContractTypeTermIds": [
            "6a2fbb47-56b3-4649-test-c182b9b0863c"
        ],
        "customLists": [
            {
                "listName": "CustomNotes",
                "isList": true
            }
        ],
                "documentDetails": {
            "additionalFields": [
                {
                    "name": "Created"
                },
                {
                    "name": "Modified"
                }
            ],
            "orderby": {
                "fieldname": "Modified",
                "direction": "ascending"
            }
                }
    }
]
```

Using templates to create contract types

In the **Contract type templates** area under **Contract types**, you can add pre-defined contract types to your contract management instance.

This is how it works:

1. Select the desired contract type.
2. Click **Details**. A detailed view opens that shows all the columns that are created with this contract type.
3. Click **Add to instance** to add these contract types to your instance.

The contract type is then created in the background. You can close the page if you wish. The contract type will be available to you after a short time.

Grouping of the columns in the details pane

You can group and arrange the columns in the details pane for the different contract types. By default, columns in the details pane that are not assigned to any group are displayed in two columns underneath the created groups.

This is how it works

1. Enable grouping in the details pane.

> **Note**
> If you disable grouping, the details pane of the contract file is displayed in the standard view. The configured groups are not deleted.

2. In the dropdown menu, select the contract type for which you want to create or edit the groupings.
3. Click **New** to create a group. Alternatively, select an existing group and click **Edit**.
4. Enter an English name for the group.

> **Note**
> The English group name is a mandatory field, as English is the default system language. If the system supports other languages but no group name has been entered in other languages, the English group name is displayed.

5. Click **Add group name for another language** to add a row for another language. Select a language and enter the group name in the relevant language. Repeat the process for further languages as required.
6. Use the **Single column** option to define whether the row is to contain one or two columns. Note the following:
   - If you enable **Single column**, you can select one column that is assigned to the contract type. The column is displayed in its entire width in the contract file.
   - If you disable **Single column**, you can select two columns that are assigned to the contract type. The columns are displayed in the selected arrangement in a two-column view in the form of a left and a right dropdown menu.
7. Use **Add another row** to add any number of additional rows to the group and configure them.
8. Click **Save** to save your changes and to finish editing the group. If you click **Cancel**, your changes will be discarded.
9. Create or edit further groups as needed.
10. Under **Enable grouping** click **Save** to save all groups that you have previously created and edited. If you do not click **Save** and you leave the page, your changes will be discarded.

1.7.5. Configuring the search

In the **Search** area, define which internal field names from the contract lists or dependent libraries are linked to which managed property from SharePoint Search.

Configuring the search - This is how it works

1. Click **New** to create a new configuration row.

2. In the **Internal field name** field, enter the column name from the contract lists or dependent libraries.
3. In the **Filterable** column, select whether this row should be available as a search filter (refiner) in the advanced search.
4. In the **Name of the managed property** field, enter the name of the managed property from the SharePoint search.
5. Repeat the process until you have set up all the desired columns for the search.
6. Click on **Save** to apply the changes.

Configuring the search with the extended configuration - This is how it works

1. Create a new assignment starting with "**{**" and ending with "**},**".
2. Define **"internalFieldName":** with the internal field name from the contract lists or dependent libraries.
3. Define **"managedPropertyName":** with the name of the managed property from the SharePoint search.
4. Optional: Define **"filterable"**: Use the values **true** or **false** to specify whether or not the column is available as a filter in the advanced search.
5. Optional: Define **"comparison"**: You specify the type of search using the values **contains** or **equals**. **contains** checks whether a substring is contained in a given string. **equals** checks whether two strings match exactly.

> **Note**
> The **"comparison"** setting is only supported for columns with a simple selection. The setting has no effect on other column types.

6. Save the configuration.

This means that the assigned column is available as a search filter (refiner) in the search and in the result list.

> **Note**
> Columns that are hidden in the content type are also available in the search if these columns have been assigned.

Configuring columns for the advanced search

To be able to restrict the advanced search by columns or display the values in the result list, managed properties must exist for these columns in the SharePoint search schema.

In addition, the internal field names must be assigned to the managed properties in the instance configuration.

The customizations listed below require a basic understanding of SharePoint search and how to configure it via the search schema.

For information on managing the search schema in SharePoint, see Microsoft technical documentation. Please search for the keywords:"manage the search schema in sharepoint."

Notes on the standard configuration

A managed property is usually created automatically for the following standard fields by SharePoint:

- Subject of contract
  - Internal field name: **ecsSubjectOfContract**
  - Name of the managed property: **ecsSubjectOfContractOWSTEXT**

- ContractId
  - Internal field name: **ecsContractId**
  - Name of the managed property: **ecsContractIdOWSTEXT**

For the following date fields that are provided by default, a mapping of the crawled property to an existing managed property predefined by Microsoft is required.

The managed property to be assigned is not fixed and can be customized. The following assignment corresponds to the standard configuration:

- Contract start date
  - Internal field name: **ecsContractStart**
  - Name of the managed property: **RefinableDate02**
- Contract end date (fix)
  - Internal field name: **ecsContractEnd**
  - Name of the managed property: **RefinableDate03**
- Date of cancelation
  - The two fields Manual date of cancelation and Next date of cancelation are assigned here.
  - Internal field name:
    - **ecsTerminationDate**
    - **ecsNextTermination**
  - Name of the managed property: **RefinableDate04**
- Next contract end date
  - Internal field name: **ecsNextEnd**
  - Name of the managed property: **RefinableDate06**
- Task due date.
  - Internal field name: **ecsTaskDueDate**
  - Name of the managed property: **RefinableDate05**

New managed properties must be created for the following columns provided by default. The name of the managed property is given here as an example and corresponds to our default configuration:

- Contractual partner
  - Internal field name: **ecsCPLookup**
  - Name of the managed property: **ecsCPLookup**

Adding crawled properties to predefined managed properties

Date and number values (integer, decimal, double precision floating point, and binary) can be added only to predefined managed properties. The following is an example of the assignment created for the start of the contract.

This is how it works

1. Open the **Site settings**.
2. Open **Search schema** underneath **Site collection management**.
3. Select **Managed properties**.
4. Enter the value **RefinableDate02** in the **filter** under **Managed property** and apply the filter by clicking the arrow.
5. Click the **Property name** in the result and select **Edit/Map Property** in the context menu.
6. Scroll down the page to **Mappings to crawled properties** and select **Add a Mapping**.
7. Use **Search for a crawled property name** to search for the name **ecsContractStart**.
8. Select **ows_ecsContractStart** and confirm with **OK**.
9. Confirm with **OK**.

After the search index is subsequently rebuilt, the columns are available in the advanced search.

> **Note**
> Make sure that if you add multiple crawled properties to a managed property and it is a predefined**"Refinable..."** property, only one of the selected managed properties contains a value. Otherwise, the search would not lead to the desired results.

Adding crawled properties to new managed properties

New managed properties for numbers and date values cannot be created. Here, predefined managed properties must be used.

Creating a new managed property - **This is how it works**

1. Open the **Site settings**.
2. Open **Search schema** underneath **Site collection management**.
3. Select **Managed properties**.
4. Select **New managed property**.
5. Assign a **name** and, if necessary, a **description**.
6. Select the **Type** (usually **Text**).
7. Assign the following **Main characteristics** from:
   a. **Searchable**
   b. **Queryable**
   c. **Retrievable**
   d. **Token normalization** (already selected by default)
8. Scroll down the page to **Mappings to crawled properties** and select **Add a Mapping**.
9. Use **Search for a crawled property name** to search for the name the property to be mapped.
10. Select the property and confirm with **OK**.
11. Confirm with **OK**.

Notes on crawled properties

In order for a column to be displayed in after creation in the crawled properties, at least one item must be uploaded and the columns must be populated with values. After the search index is subsequently rebuilt, the mappings can take place.

See also the chapter **Reindexing the SharePoint content**.

Example of configuring the search

Here you can see an example of how the mapping may look in the search configuration:

Search configuration example

```
[
    {
        "internalFieldName": "ecsSubjectOfContract",
        "managedPropertyName": "ecsSubjectOfContractOWSTEXT"
    },
    {
        "internalFieldName": "ecsContractId",
        "managedPropertyName": "ecsContractIdOWSTEXT"
    },
    {
        "internalFieldName": "ecsContractStart",
        "managedPropertyName": "RefinableDate02"
    },
    {
```

```
        "internalFieldName": "ecsContractEnd",
        "managedPropertyName": "RefinableDate03"
    }
]
```

1.7.6. Configuring permissions

In the **Permissions** section you can create additional configurations for permissions of contracts. You can define rules that automatically save additional permissions to the contract.

The permission rules are executed when new contract properties are created or modified. In this process, all rules are checked to see if they are applicable and if their permissions should be applied to the contract. The total number of permissions determined in this way is applied to the contract. Invalid permissions are deleted.

> **Note**
> Note that changes to the permissions do not automatically take effect for all existing contracts. Further information: Using the permission rule set

Parameters for configuring the permissions

The following parameters are available for configuring permissions:

- **restrictItemPermissionWhenCreated**: Breaking the inheritance of role assignments.
- **uniquePermissionsEnabled**: Specifies whether, in the contract display and creation view, the user is to be able to give other users read or write access to their contract.
- **ruleEngineEnabled**: Specifies whether the rules below should be applied.
- **rules**: Here you define the rules according to which users are assigned permissions.
  The following configuration options are available for the rules:
  - **priority**: The priority according to which the rules are processed. The larger the number, the more likely the rule will be processed.
  - **condition**: The condition under which the rule is applied, you can be configured so:
    - **all**: All conditions in this list must be met.
    - **any**: Any of these conditions must be met.
      In the **all** or **any** listsfurther conditions can be written with all or any.
      A condition can be specified with the following options:
      - **fact**: A value from the contract.
      - **path** (optional): Can be used if **fact** is an object (e.g. **managed metadata**) and you want to access a value (see example below).
        - For fields of the type **managed metadata**

          ```
          "path": "$.TermGuid"
          ```
      - **operator**:
        - For text and numbers:
          - **equal**
          - **notEqual**
          - **in**: The **value** list must contain **fact**.
          - **notIn**: The **value** list must not contain **fact**.
        - For numbers:
          - **greaterThan**
          - **lessThan**
          - **greaterThanInclusive**
          - **lessThanInclusive**
        - For arrays:

- **contains**: The **fact** list must contain **value**.
- **doesNotContain**: The **fact** list must not contain **value**.
- **containsObject**: The **fact** list must be a list of objects (e.g. multi-value managed metadata). **value** must be an object. Each property must be contained in an object in the **fact** list:

```
{
    "fact": "ecsCustomMultiTerm",
    "operator": "containsObject",
    "value": {
        "TermGuid": "00000000-0000-0000-0000-000000000000"
    }
}
```

- **value**: A value.

```
"value": {"fact": "ecsCustomBool"}
```

- **action**: Currently, the only option to select is "permission-add".
- **data**:
  - **description**: The short description of the rule.
  - **users**: The users to whom the rule is applied can be selected based on these factors:
    - **loginName**: The e-mail address of the user.
    - **fact**: A contract field where users can be selected.
    - **principalId**: The user ID, e.g.: . For example, contract contents can be accessed like this: "${ecsResponsibleId}".
  - **groups**: The groups to which the rule is applied can be selected based on these factors:
    - **groupName**: Group name
    - **principalId**: Group ID from SharePoint Online
  - **roles**: The permissions that the groups or users get on this contract:
    - **roleId**:
      Type: Number
      Description: The ID of the roll.
    - **roleName**:
      Type: Text
      Description: The name of the role/permission.
      SharePoint role definitions:
      - Full Control
      - Design
      - Edit
      - Contribute
      - Read
      - Limited Access
      - View Only

Using the permission rule set

If you have adapted the permission rule set, you must apply the rule set to the existing contracts. You have two options for applying the rule set:

1. Use the **Apply rules to a contract** button and enter a contract ID to apply the rule set to an existing contract. As long as the system is processing the contract, the **Apply rules to a contract** button remains disabled.
2. Use the **Apply rules to all elements** button to apply the rule set to all existing contracts. This option can place a heavy load on the system. As long as the system is processing the contracts, the **Apply rules to all elements** button remains disabled.

Example of configuring the permissions

This sample permissions configuration shows you different ways to proceed with permissions.

First, parameters are set that apply to all rules. After that, the rules are processed according to their priority.

Since **restrictItemPermissionWhenCreated** is set to true, the permissions that users have on the list are not inherited by the contract.

Because of **uniquePermissionsEnabled**, users are given the option to give read and write permissions to other users when creating and editing a contract in the **Permissions** section of a contract. These permissions are applied by the third and fourth rule (**"priority": 360** and **"priority": 350**).

The first rule (**"priority": 500**) gives full rights to the creator and the responsible person.

The fifth rule (**"priority": 300**) grants editing access to a group if the item with ID **41**, **42**, **43** or **44** is in the **ecsCustomLookup** field in the contract details. The **fact** property requires the suffix **Id** in the field name.

The sixth rule (**"priority": 310**) authorizes a specific group with read access if at least the item with ID **20** is selected in the details in the **ecsCustomMultiLookup** field. The **fact** property requires the suffix **Id** in the field name.

The seventh rule (**"priority": 320**) gives the **Legal** group permission to participate if the contract details in the **ecsCustomMultiTerm** field contain at least the item with the term ID **60a3464b-00aa-4f40-92ed-3569a4a88a41**.

The last rule (**"priority": 600**) is used to grant read access to a specific group if the group is selected in the organizational assignment in the master data of a contract. This means that someone in the **North** group can also get write access if they have been authorized to do so in the **Permissions** section of a contract.

> **Note**
> Single-person or multi-person fields also require the suffix **Id** in the field name. The value being compared must be a number. Multi-person fields are represented as an integer array and can be checked using **contains** or **doesNotContain**.

Example configuration for permissions

```
{
    "restrictItemPermissionWhenCreated": true,
    "uniquePermissionsEnabled": true,
    "ruleEngineEnabled": true,
    "rules": [
        {
            "priority": 500,
            "condition": {
                "all": []
            },
            "action": "permission-add",
            "data": {
                "description": "DEFAULT: Give full access to author and
responsible persons",
                "users": [
                    {
                        "principalId": "${ecsResponsibleId}"
                    },
```

```
                    {
                        "principalId": "${AuthorId}"
                    }
                ],
                "groups": [
                    {
                        "groupName": "ecspand Development"
                    }
                ],
                "roles": [
                    {
                        "roleName": "Full Control"
                    }
                ]
            }
        },
        {
            "priority": 360,
            "condition": {
                "all": []
            },
            "action": "permission-add",
            "data": {
                "description": "DEFAULT: Give ecsPermissionRead users read
access ",
                "users": [
                    {
                        "fact": "ecsPermissionReadId"
                    }
                ],
                "roles": [
                    {
                        "roleName": "Read"
                    }
                ]
            }
        },
        {
            "priority": 350,
            "condition": {
                "all": []
            },
            "action": "permission-add",
            "data": {
                "description": "DEFAULT: Give ecsPermissionWrite-Users
write access",
                "users": [
                    {
                        "fact": "ecsPermissionWriteId"
                    }
                ],
                "roles": [
                    {
                        "roleName": "Edit"
                    }
```

```
                ]
            }
        },
        {
            "priority": 450,
            "condition": {
                "all": [
                    {
                        "fact": "ecsCustomBool",
                        "operator": "equal",
                        "value": true
                    }
                ]
            },
            "action": "permission-add",
            "data": {
                "description": "Always give the data security officer
access if ecsCustomBool = 1",
                "users": [
                    {
                        "loginName": "data-security-
officer@azuredvelop.onmicrosoft.com"
                    }
                ],
                "roles": [
                    {
                        "roleName": "Read"
                    }
                ]
            }
        },
        {
            "priority": 300,
            "condition": {
                "all": [
                    {
                        "fact": "ecsCustomLookupId",
                        "operator": "in",
                        "value": [41, 42, 43, 44]
                    }
                ]
            },
            "action": "permission-add",
            "data": {
                "description": "Give everybody from the group 'South'
access if selected lookup value's id is one of 41, 42, 43 or 44",
                "groups": [
                    {
                        "groupName": "South"
                    }
                ],
                "roles": [
                    {
                        "roleName": "Edit"
                    }
```

```
                ]
            }
        },
        {
            "priority": 310,
            "condition": {
                "all": [
                    {
                        "fact": "ecsCustomMultiLookupId",
                        "operator": "contains",
                        "value": 20
                    }
                ]
            },
            "action": "permission-add",
            "data": {
                "description": "Give everybody from the group 'West' access
if multi lookup contains selected item with id 20",
                "groups": [
                    {
                        "groupName": "West"
                    }
                ],
                "roles": [
                    {
                        "roleName": "Read"
                    }
                ]
            }
        },
        {
            "priority": 320,
            "condition": {
                "all": [
                    {
                        "fact": "ecsCustomMultiTerm",
                        "operator": "containsObject",
                        "value": {
                            "TermGuid":
"60a3464b-00aa-4f40-92ed-3569a4a88a41"
                        }
                    }
                ]
            },
            "action": "permission-add",
            "data": {
                "description": "Give everybody from the department 'Legal'
access if the multi-managed metadata field contains the term with the
TermGuid = 60a3464b-00aa-4f40-92ed-3569a4a88a41",
                "groups": [
                    {
                        "groupName": "Legal"
                    }
                ],
                "roles": [
```

```
                    {
                        "roleName": "Contribute"
                    }
                ]
            }
        },
        {
            "priority": 600,
            "condition": {
                "all": [
                    {
                        "fact": "ecsContractOrganization",
                        "path": "$.TermGuid",
                        "operator": "equal",
                        "value": "20dad1d8-72ee-4659-8c3b-929d31f2237e"
                    }
                ]
            },
            "action": "permission-add",
            "data": {
                "description": "Give everybody from the 'North' departmend
read access, if the ecsContractOrganization equals 'North'",
                "groups": [
                    {
                        "groupName": "North"
                    }
                ],
                "roles": [
                    {
                        "roleName": "Read"
                    }
                ]
            }
        }
    ]
}
```

1.7.7. Managing and configuring document templates

In the **Document templates** area, you can define whether new documents can be added to contracts from templates.

The following template modules are supported:

- Managing docgen document templates
- Managing dox42 document templates
- Managing spcopy document templates

Managing spcopy document templates

You can use document templates from a SharePoint library

Creating templates in the SharePoint library - This is how it works

1. Navigate to the Microsoft SharePoint website of your d.velop contracts for Microsoft 365 instance.
2. Open the **ecsContractDocumentTemplates** document library under **Site contents**.
3. Upload a document or create a new document. Please note the following information:

- Uploading a document: Edit the document's metadata and ensure that the **ecsContractDocumentTemplateContentType** content type is selected.
- Creating a new document: Select the **ecsContractDocumentTemplateContentType** content type.

4. Optional: In the document template metadata, define for which contract types the template will be available. If the list of contract types is empty, the document template is enabled for all contract types.
5. Clear the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then be applied in the contract management interface.

Configure the created templates to make the templates available in d.velop contracts for Microsoft 365. You can carry out the configuration on the configuration interface and create extended configurations in the JSON file

Configuring in the configuration interface - This is how it works

1. Enable the document templates with **Enable document templates**.
2. Under **Template module**, select **spcopy**.
3. Click **Save**.

Extended configuration in the JSON file - This is how it works

1. Enter the value **true** for the **active** parameter to make the document templates available.
2. Enter the value **spcopy** for the **engine** parameter.

> **Warning**
> spcopy document templates are perspectively deactivated.

Managing dox42 document templates

You can generate document templates with dox42. For setup and configuration of your dox42 server, contact your dox42 partner.

Configure the created templates to make the templates available in d.velop contracts for Microsoft 365. You can carry out the configuration on the configuration interface and create extended configurations in the JSON file

Configuring in the configuration interface - This is how it works

1. Enable the document templates with **Enable document templates**.
2. Under **Template module**, select **dox42**.
3. Under **Server URL**, enter the URL to your dox42 installation.
4. Click **Save**. The dox42 templates are then displayed in a table.
5. Alternatively, click **Create** or select an existing template and click **Edit**.
6. Use the **Title** text field to define the title displayed in the application interface.
7. Use the **URL** text field to define the URL to the document in the Microsoft SharePoint library.
8. Use the **File extension** text field to define the file extension of the file to be generated. The extension must be supported by dox42.
9. Click **Save**.

Extended configuration in the JSON file - This is how it works

1. Enter the value **true** for the **active** parameter to make the document templates available.
2. Enter the value **dox42** for the **engine** parameter.
3. Navigate to **config > dox42** to enter the configurations for the template module.
4. Under **serverURL**, enter the URL to your dox42 installation.

5. Under **templates**, enter the following information for each template:
   - **title:** Title in the application interface
   - **url:** URL to the document in the Microsoft SharePoint library
   - **targetExtension:** File extension of the file to be generated. The extension must be supported by dox42.

dox42 example configuration

```
{
    "active": true,
    "engine": "dox42",
    "config": {
        "dox42": {
            "serverUrl": "https://demo.dox42.online",
            "templates": [
                 {
                    "title": "NDA",
                    "url": "https://demo.sharepoint.com/sites/
dvelopcontracts365/dox42Templates/NDA-Template.docx",
                    "targetExtension": "pdf"
                },
                {
                    "title": "Customer Agreement",
                    "url": "https://demo.sharepoint.com/sites/
dvelopcontracts365/dox42Templates/Customer-Agreement.docx",
                    "targetExtension": "docx"
                }
            ]
        }
    }
}
```

Managing docgen document templates

With docgen, you can have documents generated based on an individual Microsoft Word template. You can use document templates from a Microsoft SharePoint library.

Information on creating templates

- Create a file in DOCX format.
- Write exchangeable information in curly brackets, e.g. subject of the contract or address of the contractual partner. Enter the internal name of the corresponding site column, e.g. **{ecsSubjectOfContract}** between the curly brackets.
- Site columns of the type **lookup** and **managed metadata**: For example, in the site column Contractual partner (**ecsCPLookup**), enter **{#ecsCPLookup}** as the start of the loop and **{/ecsCPLookup}** as the end of the loop. In this way, the properties of the contractual partner can be entered, e.g. **{name}**. Examples:

```
{#ecsContractState} {name} {/ecsContractState}
```

```
{#ecsContractType} {name} {/ecsContractType}
```

```
{#ecsCPLookup}
{title} {additionalFields.ecsCPAddress} {additionalFields.ecsCPCity}
{additionalFields.ecsCPZipCode} {additionalFields.ecsCPCountry.name} {#conta
ctPersons} {eMail} {salutation} {firstName} {title} {phone} {/
contactPersons} {/ecsCPLookup}
```

```
{#ecsResponsible} {text} {/ecsResponsible}
```

- Site columns of the type **date and time**: In addition to the column name, enter the filter **| date**, e.g. **{ecsContractStart | date}**.
- Site columns of the type **number**: In addition to the column name, enter the filter **| number** , e.g. **{ecsRentableArea | number}**.
- Site columns of the type **currency**: In addition to the column name, enter the filter **| currency** , e.g. **{ecsTotalSum | currency}**.
- For the site columns listed above, you can also enter language codes, e.g. **{ecsContractStart | date:"de-DE"}** or **{ecsTotalSum | currency:"de-DE":"EUR"}**.

Uploading templates in the Microsoft SharePoint library - This is how it works

1. Open the **ecsContractDocumentTemplates** document library under **Site contents**.
2. Upload a template document in DOCX format.

Configure the created templates to make the templates available in d.velop contracts for Microsoft 365. You can carry out the configuration on the configuration interface and create extended configurations in the JSON file

Configuring in the configuration interface - This is how it works

1. Enable the document templates with **Enable document templates**.
2. Under **Template module**, select **Default**.
3. Click **Save**.

Extended configuration in the JSON file - This is how it works

1. Enter the value **true** for the **active** parameter to make the document templates available.
2. Enter the value **standard** for the **engine** parameter.

> **Note**
> A Microsoft Word add-in is also available to make it easier to create templates. Further information: Setting up and configuring the Word add-in for template management

1.7.8. Enabling links

In the **Links** section, you can enable the contract links feature.

This is how it works

1. Select **Enable links**.
2. Save the configuration.

> **Note**
> Please note that the quick search for links only applies to the properties of the contract. The attachments and the full text are not searched.

Adding additional link types

You can add other link types.

This is how it works

1. Under **Additional linking types**, create a new link type.
2. Enter the title for **Presentation in the contract** and **Presentation in the linked contract**. Enter the titles in English. Other languages are optional.
3. Save the new link type and then your configuration.

> **Note**
> You cannot delete the other link types; you can only disable them so that the link types are not available for new links.

1.7.9. Enabling signatures

In the **Signing** area, you can activate the following signature components.

- d.velop sign
- DocuSign

Activating the d.velop sign signature components

You need a d.velop sign license to subscribe to the d.velop sign app in your d.velop cloud tenant. Once you have subscribed to the app, you can activate the d.velop sign signature components in the contract management configuration interface.

Subscribing to d.velop sign – This is how it works

1. Open https://my.d-velop.cloud/.
2. Click **Subscribe App**.
3. Go to **d.velop sign integration for d.velop for M365** and select the app.
4. Click on **Subscribe now!**.
5. Select your cloud environment and click **Next**.
6. Check your data and click **Subscribe**.
7. On the d.velop documents start page, go to **Configuration > Infrastructure and security > Login** and click **Trust Management**.
8. Open **App Trusts** and click “Add app”.
9. Enter **dvelop-m365signintegration** and click **Add**.

Activating the signature components – This is how it works

1. Open the contract management configuration interface.
2. Select **Enable signatures**.
3. Select **d.velop sign**.
4. Under **Tenant domain**, enter your domain in the following format: **https://<tenant name>.d-velop.cloud**.
5. Optional: Under **Edit envelope name**, enter an envelope name. You can use wildcards. **${item.internalFieldName}** defines the text field that will be carried over from the list item. You can only use single-line text fields.

> **Note**
> Since the e-mail address is used for assignment to the user, users must use the same e-mail address for their user accounts in d.velop sign and Microsoft 365.

Activating the signature component DocuSign

You can subscribe to the signature component DocuSign under the following link in the d.velop store. DocuSign in the d.velop store. Alternatively, you can find the component in the d.velop store, by filtering for **Paperless Solutions** in the **Sign digitally** area under **Manufacturer**. After subscribing, you must first

determine your DocuSign account ID. You require the appropriate permissions in DocuSign to view the account ID. You can then activate the component.

Determining the account ID of DocuSign - This is how it works

1. Open DocuSign administration under https://admin.docusign.com/apps-and-keys.
2. Navigate to **Admin Dashboard > Settings > Apps and Keys**. The account ID is entered under **API account ID**.
3. Copy the account ID to the clipboard.

Activating the signature components – This is how it works

1. Open the contract management configuration interface.
2. Select **Enable signatures**.
3. Select **DocuSign**.
4. Enter the previously determined account ID under **Account ID**.
5. Optional: Under **Edit task name**, enter the task name for DocuSign. You can use wildcards. **${item.internalFieldName}** defines the text field that will be carried over from the list item. You can only use single-line text fields.
6. Optional: Activate **demo mode** to test the signature module. For the demo mode you need a DocuSign demo account.
7. Optional: Use **Storage of the signature protocol** to define whether the signature protocol is to be saved in the contract file.
8. Save the configuration.

1.7.10. Configuring contractual partner management

In the **Contractual partner** area, you can configure the contractual partner management. You can choose between the configuration interface or the extended configuration based on a JSON file.

Configuration options in the configuration interface

You can make the configurations in the areas **Contractual partners** and **Contact persons**.

Contractual partners

- **Enable creation and editing**: Enable the option for users to create new contractual partners and edit existing contractual partners.
- **Allow multiple selections**: Enable the option for users to assign multiple contractual partners to a contract file.

> **Warning**
> If you use contractual partners in your permission rule set and you allow multiple selection, you must adjust the permission rule set for multiple selection. Otherwise the permission rules will no longer work.

- **Activate external link**: If you enable this option, a link to an external website will be displayed next to the contractual partner in the contract view. Enter the URL under **Link URL**.
- **Search description field during selection**: Enable the option for users to search the description field in addition to the title when searching for a contractual partner. If you enable this option, you must index the **Description** field (**ecsCPDescription**).

> **Warning**
> Enable this option only if there are less than 1,000 contractual partners in the contractual partner list.

- **Number of contractual partner proposals to be displayed**: Define the maximum number of results displayed in the contractual partner selection feature when creating the contract. The default value is 10. Values below 10 are ignored. The value should not be higher than 50.
- **Enable open in 9-dot menu**: Enable the option for users to switch from the 9-point menu to contractual partner management in the SharePoint list.

Contact persons

- **Enable**: Allow users to configure contact persons.
- **Display as**: Configure how the contact person selection feature is displayed. You have the following options:
  - **Selection**: Users can select the contact person from the **ecsContactPersons** list.
  - **Text field**: Users can enter the contact person in a simple text box.
- **Enable creation and editing**: Enable the option for users to create new contacts and edit existing contacts.
- **Enable open in 9-dot menu**: Enable the option for users to switch from the 9-point menu to contact person management in the SharePoint list.

Parameters for the extended configuration in the JSON file

- **creationAllowed:** Use the values **true** and **false** to define whether users can create new contractual partners.
- **contactPersonEnabled:** Use the values **true** and **false** to define whether users can configure contact persons for contract files.
- **multiplePartnersAllowed:** Use the values **true** and **false** to define whether multiple selection of contractual partners is active.
- **contactPersonManagementType:** The parameter defines the options for selecting contact persons. If you enter **lookup**, users can select the contact persons from the **ecsContactPersons** list. If you enter **textfield**, users can enter the contact persons using a simple text box.
- **contactPersonManagementAllowed:** Use the values **true** and **false** to define whether users can create and edit contact persons.

> **Note**
> You can only enable the parameter if **contactPersonManagementType** has the value **lookup**.

- **searchInDescriptionField:** Use the values **true** and **false** to define whether users can search the description field in addition to the title when searching for a contractual partner.
- **numberOfContractualPartnerProposal:** The parameter defines the maximum number of results displayed in the contract partner selection of the contract creation. The default value is 10. Values below 10 are ignored. The value should not be higher than 50.
- **externalLink:** This parameter defines whether a link to an external website is displayed next to the contract partner in the contract view.
  - **enabled:** Use the values **true** and **false** to define whether the external link is displayed in the contract view.
  - **linkTemplate:** The parameter contains the URL. You can use the contractual partner's metadata with the placeholder **${$Item.internalFieldname}**.

Sample JSON file configuration for contractual partners

```
{
    "creationAllowed": true,
    "contactPersonEnabled": true,
    "multiplePartnersAllowed": true,
    "contactPersonManagementType": "lookup",
```

```
    "contactPersonManagementAllowed": true,
    "searchInDescriptionField": true,
    "numberOfContractualPartnerProposal": 20
    "externalLink": {
        "enabled": true,
        "linkTemplate": "https://integrator.d-velop365.com/navigate?
target=contractPartner&PartnerId=${Item.ecsCPId}"
    }
}
```

1.7.11. Configuring e-mail notifications

You can enable or disable e-mail sending for your d.velop contracts for Microsoft 365 instance. If you have enabled e-mail sending, you can notify people who are entered in the following fields:

- **Responsible person**
- **Grant additional read access to**
- **Grant additional write access to**

For each field you can select one of the following notification options:

- **Send on creation**: The people entered in the field will receive an e-mail notification after the contract has been created.
- **Send on change**: New people entered in the field will receive an e-mail notification.

You can carry out the configuration on the configuration interface and create extended configurations in the JSON file

Configuration options in the configuration interface

- Use **Enable sending** to enable e-mail notifications.
- Use **Enable sending** under **Personal notifications** to enable personal e-mail notifications.
- For **Responsible person**, **Grant additional read access to** and **Grant additional write access to**, you can define whether an e-mail notification is sent to the registered persons when a contract is created or changed.

Parameters for the extended configuration in the JSON file

Use the **CTRL + space** key combination to get help in the input field (e.g. selection options for the user to confirm).

- **general:** In this section, you configure general e-mail sending.
- **enableSending:** Use the values **true** and **false** to define whether e-mail sending is enabled.
- **personalNotification:** In this section, you configure personal e-mail notifications.
- **active:** Use the values **true** and **false** to define whether personal e-mail notifications are enabled.
- **fields**: In this section, you define the various notification configurations.
- **internalFieldName:** The parameter contains the internal field name of the column of the people who are to be notified. You can enter the following values:
  - To notify responsible persons, enter **ecsResponsible**.
  - To notify the people who have additional read access, enter **ecsPermissionRead**.
  - To notify the people who have additional write access, enter **ecsPermissionWrite**.
- **templateName:** For this parameter, enter the same value as for **internalFieldName**.
- **onChange:** Use the values **true** and **false** to define whether the people who are newly entered into the field receive an e-mail notification.
- **onCreate:** Use the values **true** or **false** to define whether the people entered in the field receive an e-mail notification after the contract has been created.

Example configuration

In the example below, notifications are sent in the following cases:

- If the responsible person is edited when the contract is created or modified, a notification is sent to the newly entered person.
- If the people under **Grant additional read access to** are edited when a contract is changed, a notification is be sent to these people.
- If the people under **Grant additional write access to** are edited when a contract is changed, a notification is be sent to these people.

```
{
    "general": {
        "enableSending": true
    },
    "personalNotification": {
        "active": true,
        "fields": [
            {
                "internalFieldName": "ecsResponsible",
                "templateName": "ecsResponsible",
                "onChange": true,
                "onCreate": false
            },
            {
                "internalFieldName": "ecsPermissionRead",
                "templateName": "ecsPermissionRead",
                "onChange": true,
                "onCreate": true
            },
            {
                "internalFieldName": "ecsPermissionWrite",
                "templateName": "ecsPermissionWrite",
                "onChange": true,
                "onCreate": true
            }
        ]
    }
}
```

Defining and editing e-mail templates

In the **E-mail templates** section you can edit the existing standard e-mail templates and add your own texts.

The following standard e-mail templates are available:

- Contract was automatically renewed
- Read access was granted to a contract
- Write access was granted to a contract
- New contract was created
- A task was assigned
- A task is due
- Duration of a contract ends soon

Once you have selected an e-mail template, you can now switch between the individual sections of the e-mail.

You have the option to customize the following three areas:

- **Subject line**: Enter the subject of the e-mail here.
- **HTML version**: Change the appearance of the e-mail and the content text here. Here you can change e.g. the text color, background color, size and font. This is the HTML-formatted e-mail body.
- **Text version**: Enter the content text of the e-mail here. This is the e-mail body with text only.

> **Note**
> Always change both the **HTML version** and the **text version**.

Changing default e-mail templates for e-mail - This is how it works

1. Select the template you want to use.
2. In the **Text suggestion** selection field, select whether you want to overwrite the German or English template.
   The default template remains in the background.
3. Confirm the security prompt **Change language**.
4. Customize the **subject line**, **HTML version** and **text version**.
5. Save the modified template.

How do I know if the default e-mail template or an already modified template is being used?

You can recognize this by the fact that you can delete a template that has already been modified. A new **Discard changes and use default template** button appears next to the **Save** button.

In addition, the **Text suggestion** selection field is not available.

Clicking **Discard changes and use default template** will return you to the default template.

Return to the default e-mail template - This is how it works

1. Select a template that you have modified.
2. Delete this template by clicking **Discard changes and use default template**.
3. The corresponding default e-mail template is available again.

User language selection

By default, you can use the texts in German or English.

Adaptation of translations in German or English

Once you make changes to a template in English or German, only this modified e-mail template is used.

Using e-mail templates in another language

You have the option to use a language other than English or German.

This is how it works

1. Select a template.
2. In the **Text suggestion** selection field, select whether you want to overwrite the German or English template.
   The default template remains in the background.
3. Confirm the security prompt **Change language**.
4. Edit the **Subject line**, **HTML version** and **text version** in the desired language.
5. Save the changes by clicking **Save**.

Using e-mail templates in several languages

You have the option to use an e-mail template with multiple languages. In the e-mail that the user receives, the individual languages are positioned one below the other.

This is how it works

1. Select a template that you have modified.
2. In the **Text suggestion** selection field, select whether you want to overwrite the German or English template.
   The default template remains in the background.
3. Confirm the security prompt **Change language**.
4. In the **Subject line**, **HTML version**, and **text version** tabs, copy the content.
5. Add this content below the existing content for each language to be used.
6. Edit the **Subject line**, **HTML version** and **Text version** in the desired languages.
7. Save the changes by clicking **Save**.

Information about placeholders in e-mail notifications

Placeholders are available in e-mail notifications. You can use placeholders in both the subject and the body of the e-mail. Please note the following information:

- Make sure you use correct capitalization.
- Enclose placeholders in e-mail templates in double curly brackets.
  Example: **{{ contract.subjectOfContract }}**
- Only use one placeholder within the curly brackets.
- Precede date values with the **formateDate** command.
  Example: **{{ formatDate contract.newDateOfCancelation }}**

Available placeholders for contract-related notifications

- **contract.subjectOfContract:** Subject of contract
- **contract.contractType**: Contract type
- **contract.contractualPartner**: Name of the contractual partner
- **contract.contactPersonOfTheContractualPartner**: Contact person of the contractual partner
- **contract.responsiblePersonInternal**: Name of the internal person responsible
- **contract.contractId**: Contract ID
- **contract.url**: Link to the contract
- **contract.contractStartDate**: Contract start date
- **contract.calculatePeriods**: Indicates whether calculations are enabled for this contract.
- **contract.endOfContract**: If calculations are disabled, the manually entered contract end date is displayed. If calculations are enabled, the calculated contract end date is displayed.
- **contract.dateOfCancelation**: If calculations are disabled, the manually entered date of cancellation is displayed. If calculations are enabled, the calculated date of cancellation is displayed.
- **contract.additionalNoteInTheTextOfTheEMail**: Additional text to be displayed in the sent e-mail.
- **contract.notificationStart**: Start date of notification

There are additional placeholders available for the notification following automatic renewal of a contract:

- **contract.newEndOfContract**: New calculated contract end date (if calculations are possible for this field).
- **contract.newDateOfCancelation**: New calculated next possible date of cancellation (if calculations are possible for this field).

Available placeholders for task-related notifications

- **contract.subjectOfContract**: Subject of contract
- **task.contractId**: Automatically assigned ID of the contract

- **task.title**: Title of the task
- **task.dueDate**: Due date of the task
- **task.description**: Description of the task
- **task.url**: Link to the task or its contract
- **task.note**: Additional text to be displayed in the sent e-mail.

1.7.12. Creating Power BI reports

You can specify in the **Power BI reports** section whether to link advanced reports using Power BI on the dashboard.

The configuration interface is available for configuring Power BI reports.

This is how it works

1. Activate the **Enable Power BI Reports** checkbox to enable the advanced reports.
2. Then enter the URL to your Power BI report in the **URL** text box.
3. Save your changed configuration.

1.7.13. Defining buttons

Define additional buttons in the **Buttons** area. In this way you can configure outgoing links from the d.velop contracts for Microsoft 365 interface.

You can create buttons at contract level, document level and overall level.

Defining general buttons

Defining buttons in the 9-dot menu or on the dashboard

The additional buttons can be displayed in the 9-dot menu and/or on the dashboard.

This is how it works

- **title**: The area contains the heading displayed on the dashboard in different languages. Create translations for all languages that are supported by the application. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.
- **showInDashboard**: Use the values **true** or **false** to define whether the additional buttons are shown on the dashboard below the search templates.
- **showInMenu**: Use the values **true** or **false** to define whether the additional buttons in the 9-dot menu are displayed after the buttons defined by the system.
- **buttons**: Define the desired buttons here.

There are two types of buttons:

1. **LinkButton**: This button, when clicked, opens a new tab with the specified link.
2. **GroupButton**: When clicked, this button opens another menu that can contain buttons of both types.

LinkButton:

- **link**: Link that is opened when the button is clicked.
- **icon**: Name of the Fluent UI icon to be displayed. For a list of the available icons, please refer to https://react.fluentui.dev/?path=/docs/icons-catalog--page**.**
- **text**: Button display text for each language. Create translations for all languages that are supported by the application. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.
- **showInPanel** (optional parameter): Use the values **true** or **false** to control whether the URL is opened in a side panel.

- **panelSize** (optional parameter): Width of the panel in pixels.

GroupButton

- **icon**: Name of the Fluent UI icon to be displayed. For a list of the available icons, please refer to https://react.fluentui.dev/?path=/docs/icons-catalog--page.
- **text**: Button display text for each language. Create translations for all languages that are supported by the application. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.
- **subMenuButtons**: A list of LinkButtons or GroupButtons.

Example configuration

```
{
    "title": {
        "de": "Prozesse",
        "en": "Processes"
    },
    "showInDashboard": true,
    "showInMenu": true,
    "buttons": [
        {
            "link": "https://tenant.sharepoint.com/sites/testsite/testweb",
            "icon": "PanelRightExpandRegular",
            "text": {
                "de": "Zeige Test",
                "en": "Show Test"
            },
            "showInPanel": true,
            "panelSize": 1024
        },
        {
            "icon": "MoreHorizontalRegular",
            "text": "More",
            "subMenuButtons": [
                {
                    "link": "https://tenant.sharepoint.com/sites/testsite/
testweb2",
                    "icon": "LinkRegular",
                    "text": {
                        "de": "Springe zum Test 2",
                        "en": "Jump to Test 2"
                    }
                },
                {
                    "link": "https://tenant.sharepoint.com/sites/testsite/
testweb3",
                    "icon": "MailLinkRegular",
                    "text": {
                        "de": "Springe zum Test 3",
                        "en": "Jump to Test 3"
                    }
                }
            ]
        }
    ]
}
```

Defining buttons at contract level

The additional buttons are displayed within the command bar on the contract view page.

There are two types of buttons:

1. **LinkButton**: This button, when clicked, opens a new tab with the specified link.
2. **GroupButton**: This button opens another menu. This menu can contain other buttons of both types.

LinkButton:

- **link**: Link that is opened when the button is clicked. The following placeholders are available:
  - **${list.id}**: ID of the list.
  - **${list.url}**: Server-relative list URL.
  - **${item.id}**: ID of the list item.
  - **${item.internalFieldName}**: internalFieldName specifies the field to be taken from the list item.
- **icon**: Name of the Fluent UI icon to be displayed. For a list of the available icons, please refer to https://react.fluentui.dev/?path=/docs/icons-catalog--page.
- **text**: Button display text for each language. Create translations for all languages that are supported by the application. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.
- **showButtonIf** (optional): Without the **showButtonIf** object, the button is always displayed in the contract view.
  - **conditions**: The conditions under which the rule is applied can be configured as follows:
    - **all**: All conditions in this list must be met.
    - **any**: Any of these conditions must be met.
      The **all** or **any** lists can contain further conditions with **all** or **any**. A condition can be specified with the following options:
      - **fact**: A column from the contract.
      - **path** (optional): Can be used if the fact is an object and you want to access a property (see example configuration).
      - **operator**:
        - For text:
          - **equal**
          - **notEqual**
          - **startsWith**
        - For numbers:
          - **greaterThan**
          - **lessThan**
          - **greaterThanInclusive**
          - **lessThanInclusive**
        - For arrays:
          - **in**: fact must be included in the value list.
          - **notIn**: fact must not be contained in the value list.
          - **contains**: The fact list must contain value.
          - **doesNotContain**: The fact list must not contain value.
- **showInPanel** (optional): Use the values **true** or **false** to define whether the URL is opened in a side panel.
- **panelSize** (optional): Width of the panel in pixels.

GroupButton

- **icon**: Name of the Fluent UI icon to be displayed. For a list of the available icons, please refer to https://react.fluentui.dev/?path=/docs/icons-catalog--page.

- **text**: Button display text for each language. Create translations for all languages that are supported by the application. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.
- **subMenuButtons**: A list of LinkButtons or GroupButtons.
- **showButtonIf**: Same configuration as for **LinkButton**.

Example configuration

```
[
    {
        "link": "https://tenant.sharepoint.com/sites/testsite/testweb/$
{item.Title}",
        "icon": "Shield",
        "text": {
            "de": "Springe zum Test",
            "en": "Jump to Test"
        },
                "showInPanel": true,
                "panelSize": 1024,
        "showButtonIf": {
            "conditions": {
                "all": [
                    {
                        "fact": "Title",
                        "path": "title",
                        "operator": "equal",
                        "value": "Test"
                    }
                ]
            }
        }
    },
    {
        "link": "https://tenant.sharepoint.com/sites/testsite/testweb/$
{item.Title}",
        "icon": "Shield",
        "text": {
            "de": "Test2",
            "en": "Test2"
        },
        "showButtonIf": {
            "conditions": {
                "all": [
                    {
                        "fact": "ecsContractType",
                        "path": "$.contentType",
                        "operator": "equal",
                        "value": "IT-Vertrag"
                    }
                ]
            }
        }
    },
    {
        "icon": "More",
        "text": "More",
```

```
        "subMenuButtons": [ ],
        "showButtonIf":{}
    }
]
```

Defining buttons at the document level

The additional buttons are displayed within the three-dot menu at the document level.

There are two types of buttons:

1. **LinkButton**: This button, when clicked, opens a new tab with the specified link.
2. **GroupButton**: This button opens another menu. This menu can contain other buttons of both types.

LinkButton:

- **link**: Link that is opened when the button is clicked. The following placeholders are available:
  - **${list.id}**: ID of the list.
  - **${list.url}**: Server-relative list URL.
  - **${item.id}**: ID of the list item.
  - **${item.internalFieldName}**: internalFieldName specifies the field to be taken from the list item.
  - **${doc.internalFieldName}:** internalFieldName specifies the field to be taken from the document.
- **icon**: Name of the Fluent UI icon to be displayed. For a list of the available icons, please refer to https://react.fluentui.dev/?path=/docs/icons-catalog--page.
- **text**: Button display text for each language. Create translations for all languages that are supported by the application. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.
- **showButtonIf** (optional): Without the **showButtonIf** object the button is always displayed in the contract view.
  - **conditions**: The conditions under which the rule is applied can be configured as follows:
    - **all**: All conditions in this list must be met.
    - **any**: Any of these conditions must be met.
      The **all** or **any** lists can contain further conditions with **all** or **any**. A condition can be specified with the following options:
      - **fact**: A property from the contract or a document. If a property from a document is to be used, “fact” must be “doc”. The property can then be accessed via "path": "$internalFieldName”.
      - **path** (optional): Can be used if the fact is an object and you want to access a property (see example configuration).
      - **operator**:
        - For text:
          - **equal**
          - **notEqual**
          - **startsWith**
        - For numbers:
          - **greaterThan**
          - **lessThan**
          - **greaterThanInclusive**
          - **lessThanInclusive**
        - For arrays:
          - **in**: fact must be included in the value list.
          - **notIn**: fact must not be contained in the value list.
          - **contains**: The fact list must contain value.
          - **doesNotContain**: The fact list must not contain value.
- **showInPanel** (optional): Use the values **true** or **false** to define whether the URL is opened in a side panel.

- **panelSize** (optional): Width of the panel in pixels.

GroupButton

- **icon**: Name of the Fluent UI icon to be displayed. For a list of the available icons, please refer to https://react.fluentui.dev/?path=/docs/icons-catalog--page.
- **text**: Button display text for each language. Create translations for all languages that are supported by the application. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.
- **subMenuButtons**: A list of LinkButtons or GroupButtons.
- **showButtonIf**: Same configuration as for **LinkButton**.

Example configuration

```
[
    {
        "link": "https://tenant.sharepoint.com/sites/testsite/testweb/${item.Title}",
        "icon": "Shield",
        "text": {
            "de": "Springe zu Test",
            "en": "Jump to Test"
        },
        "showInPanel": true,
        "panelSize": 1024,
        "showButtonIf": {
            "conditions": {
                "all": [
                    {
                        "fact": "Title",
                        "path": "Title",
                        "operator": "equal",
                        "value": "Test"
                    },
                    {
                        "fact": "doc",
                        "path": "$.fileType",
                        "operator": "startsWith",
                        "value": "docx"
                    }
                ]
            }
        }
    },
    {
        "icon": "More",
        "text": "Mehr",
        "subMenuButtons": [
            {
                "text": {
                    "de": "Test"
                    "en": "Test"
                },
                "link": "test.de",
                "showInPanel": true
            },
```

```
            {
                "text": "Test2",
                "subMenuButtons": [
                    {
                        "text": {
                            "de": "d.velop"
                        },
                        "link": "https://d-velop.de"
                    }
                ]
            }
        ]
    }
]
```

1.7.14. Links to the SharePoint administration

In the SharePoint administration page you will find links to the SharePoint administration for frequently used administration tasks:

- Website
- Site contents
- Site columns (e.g. for creating individual contract fields)
- Site content types (e.g. for configuring content types for individual contract types)
- Term Store Management (e.g. for configuring contract types, document types etc.)
- Search schema (for configuring managed properties in a search index)
- Site permissions

1.7.15. Managing the technical contact

On the start page of contracts-config you will see which e-mail address has been defined as a **Technical contact**. If you have not yet defined a technical contact, a message appears at this point with a link to the configuration.

You also have the option of accessing the configuration interface in the **Technical contact** area and entering a technical contact for the first time or changing an existing contact.

Configuring via the configuration interface - This is how it works

1. Click **New** or select an existing technical contact and click **Edit**.
2. Enter the e-mail address of the technical contact.
3. Click **Save**.

Parameters for the extended configuration in the JSON file

- **technicalContacts:** Area containing the e-mail addresses of technical contacts.
- **mailAddresses:** Enter one or more e-mail addresses here.

Example configuration of the technical contact

```
{
    "technicalContacts": {
        "mailAddresses": [
            "max.mustermann@musterfirma.de",
            "mia.musterfrau@musterfirma.de
        ]
    }
}
```

1.7.16. Activating automatic status change

In the **Automatic status change** area, you can enable automatic status change for expired contracts. You can chose between different conditions for the status change depending on the contract type.

Contracts with calculated term dates for which the contract end date is in the past

Define which of the following conditions must be met for a status change:

- **The contract status is "Canceled" (internalName).**
- **The contract status is "Canceled" (internalName) or is in an active contract lifecyle (such as "Valid") for a fixed-term contract without renewal.**

Contracts without calculated term dates for which the fixed contract end date is in the past

Define which of the following conditions must be met for a status change:

- **The contract status is in an active contract lifecycle (such as "Valid").**
- **The contract status is in an active contract lifecycle (such as "Valid") or is "Canceled" (internalName).**

This is how it works

1. Select whether the contract status should be set automatically for expired contracts.
2. Select the contracts for which the status is to be changed automatically.
3. Select which condition or which contract status must be present for the automatic change.
4. Select the contract status to be set after the contract expires. You can only select contract statuses that are assigned to the **post** contract lifecycle phase.
5. You can choose to enable e-mail notifications to the person responsible for the contract.
6. Save the configuration.

> **Note**
> If you enable automatic status change, the preferred contract status for expired contracts will be set every night. This also applies to legacy contracts.
>
> To avoid sending e-mails for legacy contracts, you should disable e-mail notifications when you first enable automatic status changes. The following day, you can re-enable the e-mail notification.

1.7.17. Configuring the tab headings

In the **Heading** area you can configure the headings that appear above the tabs. You can choose between the configuration interface or the extended configuration based on a JSON file.

Configuring in the configuration interface - This is how it works

1. Enable **Edit text of the heading**.
2. Activate the language for which you want to adapt the heading.
3. Define the text for the heading under **Heading**.
4. Click **Save**.

Extended configuration in the JSON file - This is how it works

- **tabsHeading**: Area for the headings for each language. Create translations for all languages that are supported by the application. Enter the translations as values next to the corresponding language codes. Possible language codes: **de**, **en**, **fr**, **it**, **nl**, **pt**, **es**, **pl**.

Example configuration

```
{
    "tabsHeading": {
        "de": "Registerkarten",
        "en": "Tabs"
    }
}
```

1.7.18. Configuring the design

In the **Design** area you can configure a color scheme and add a logo.

This color scheme is applied for all users, so the buttons and the navigation bar will appear in the appropriate color. You can choose a predefined color scheme or create a custom color scheme.

Selecting a predefined color scheme - This is how it works

1. Select the desired color scheme under **Color scheme**.
2. Click **Save**.

Creating a custom color scheme - This is how it works

1. Under **Custom color scheme**, click **New**.
2. Open the link under **Fluent Theme Designer** in a new tab.
3. Create the desired color scheme.
4. Click **Export** and copy the theme to the clipboard by clicking **Copy to clipboard**.
5. Paste the theme into the **Fluent Theme** text box.
6. Click **Save**.
7. Select the scheme under **Custom color scheme**.
8. Click **Save**.

You also have the option to upload a logo. This logo is displayed in the navigation bar between the 9-dot menu and the product name.

Uploading a logo - This is how it works

1. Under **Logo**, click **Upload file**.
2. Select the desired file. Please note the following criteria:
   a. PNG and SVG files are accepted.
   b. The maximum file size is 100 kB.

1.7.19. Comparing documents

In the **Compare documents** area, you can enable document comparison. The digital comparison is carried out using semantha, a product from a d.velop partner. You can compare DOCX and PDF documents.

Activation takes place via the configuration interface.

Creating the configuration in semantha - This is how it works

1. Open the semantha log-in page and log in.
2. Open the following administration page in semantha: https://kit2.app.semantha.cloud/tt-platform-ui/en/administration/clients.
3. Create a new client.
4. Enter a name and a domain and add the other parameters. You require permission to compare documents and the **Standard** role as a minimum.
5. Download the secret client key (**credentials.properties** file) for the created client.

Enabling document comparison in the configuration interface - This is how it works

1. Use the option **Enable document comparisons with semantha** to enable document comparison.
2. Under **Domain**, enter the domain that you have activated in semantha.
3. Upload the **credentials.properties** file from semantha.
4. Click **Save**.

1.7.20. Replacing the internal person responsible

In the contract management administration interface, batch processing can be used to replace the persons responsible for contracts or tasks.

These batches are processed in a queue outside of business hours (8:00 a.m. - 5:00 p.m. CET).

You can also see an overview of the orders currently open.

Using batch processing to replace the persons responsible for contracts or tasks - This is how it works

1. In the field **E-mail address of the person responsible to be replaced**, enter the e-mail address of the current responsible person.
2. You can use the **Replace for** radio button to choose whether you want to search for contracts or tasks.
3. Click **Show affected contracts/tasks**.
4. Select the desired items in the result table. You can use filters for the following columns: Contract ID, contract type and subject of contract. If a row is disabled or grayed out, the corresponding item has already been selected for replacement.
5. Click **Replace with**.
6. Enter the e-mail address of the **new** responsible person in the text box and click **Replace.**
7. A security prompt then appears. Check the data here and confirm by clicking **Replace**.
8. The selected items are now added to a queue and appear disabled and grayed out in the table.

Showing the overview of currently open orders

If items were previously added to the queue, they will be shown in the order overview until they have been successfully processed.

In a side panel, these orders are organized by item type, original responsible person, and future responsible person. The IDs of the items are also listed here.

1.7.21. Configuring optional document features

In the **Optional document features** area, choose whether the option to share documents from a contract is to be enabled and the option to open PDFs in the app is to be available.

You can enable the features in the configuration interface.

> **Note**
> The share function is integrated as an iFrame. Microsoft occasionally does not allow embedding as an iFrame. In this case, the function will be temporarily unavailable. To use the sharing function, users must be logged into Microsoft SharePoint Online or Microsoft 365.

> **Note**
> In order to open and edit PDF files (e.g. by annotating) with Adobe Reader, OneDrive must be set up locally, as a synchronization with OneDrive is started in the background. The file is opened locally and, after saving, is returned to SharePoint and displayed accordingly in the contract view.

This is how it works

1. Use **Enable share function** to control whether the share function is to be enabled for documents.
2. Use **Open PDF files in the app** to control whether the **Open in app** function is to be enabled for PDF files.
3. Click **Save**.

1.7.22. Configuring the contracts fact sheet

If you move the cursor over the subject of the contract on the dashboard or in the search result list of the advanced search, a fact sheet with details about the corresponding contract is displayed. In the **Contracts fact sheet** area you can configure which columns should be displayed in this fact sheet. You can perform the configuration via the configuration interface or via the extended configuration in the JSON file.

Configuring in the configuration interface - This is how it works

1. In each of the eight selection fields, select a column to be displayed in the fact sheet. Use the links in the selection fields to display the contract links in the fact sheet.

> **Note**
> You can only select the columns once. The columns will be displayed in the fact sheet in the same order they are arranged in the configuration interface. If a column is not available or is not filled for a contract, the corresponding field will remain empty.

2. Click **Save**.

Extended configuration in the JSON file - This is how it works

Enter the internal field names of the columns to be displayed. A maximum of eight fields can be displayed. The fields are arranged from right to left.

Example configuration

```
[     "ecsContractId", "ecsCPLookup", "ecsContractStart",
"ecsTerminationDate", "ecsContractEnd", "ecsContractOrganization",
"ecsResponsible", "linkings" ]
```

1.7.23. API key

In the **API key** area you can create and delete API keys. Authentication for the public API is carried out using an API key.

> **Notice**
> In principle, a single API key can be saved for several applications, but we recommend creating a separate API key for each application.

This is how it works

1. Click **New**
2. Use the **Name** text box to define the name of the API key.
3. Use the **Description** text box to define the description of the API key.
4. Click **Create new API key**.
5. You can now use the API key found in the text box **Your new API key**

> **Warning**
> The API key can no longer be displayed after leaving this page. Therefore, keep it safe.

1.7.24. Translations

In the **Translations** area, you can create additional translations for the languages supported by contract management. With the **Enable language selection and translations** option, you can activate the configured translations for users and enable them for selection in the language selection of the contract management user interface.

You can use the additional translations to conveniently translate contract fields from SharePoint Online.

Enabling the language selection - This is how it works

1. In the configuration interface, select **Enable language selection and translations** to activate translations and the language selection for users.
2. In the **Available languages** area, you define which languages will be available in the drop-down list of the application interface.

Creating additional translations in the JSON file - This is how it works

1. Select the language for which you would like to create translations.
2. Create translations for SharePoint site columns in the JSON editor using the **contractFieldTitles** object. Create a new object key with the name of the SharePoint site column.

> **Note**
> Use the name with which the site column was created. You can find the name in the SharePoint Online address bar.
>
> 1. Go to **Site settings** on the SharePoint site.
> 2. Switch to **Site columns**.
> 3. Select the site column that you want to translate.
>
> In the address bar of the browser, you will find the original name of the site column after **field=**.

Configuration example

```
{
    "contractFieldTitles": {
        "customFieldName": "Translation goes here"
    }
}
```

1.8. Permission model

You can assign permissions to a contract file in a variety of ways. For permissions, SharePoint permissions are used. Both individual users and groups can be given permissions.

Permissions are applied consistently to an entire contract file. This affects all documents and sub-items (e.g. tasks). Individual assignment of permissions to individual sub-items is not supported.

Various settings can be configured for the permissions:

- Standard
  - Permission inheritance

- Alternatively
  - Creator permission
  - Individual permissions
  - Set of rules

A permission is always a combination of user/group and a role (e.g. owner, read).

Permission inheritance

By default, the site collection permissions are inherited by new contract files. These can then be found and, if necessary, edited by all users and groups with permission in the site collection.

Creator permission

At the time of creation, only the person who created the contract file has permission. This can be useful, for example, if the permission rule set is activated and you want to prevent information from the contract file from being visible to unauthorized persons for a short period of time until after the rule set has been applied.

Individual permissions

With single permissions, certain users or groups can be give permission individually for each contract in addition to the set of rules or creator permission. This is done by selecting individuals or groups in the contract file and saving them in a designated column. Users with write permissions to a contract can fill this column and thus assign or change further permissions.

The support of single permissions can optionally be activated for an instance.

Technically, processing is mapped using the set of rules. The time of execution of the set of rules is therefore also relevant here. Likewise, the creator permission is used here first to prevent the contracts from becoming visible to unauthorized persons for a potential, short time until the individual permission is applied.

Set of rules

The set of rules assigns permissions for users or groups according to certain conditions. The conditions depend on the metadata of a contract file.

Examples of rules:

- Additionally always give permission to the person responsible for the respective contract.
- Always give permission to one specific person for all contracts.
- Always give permission to a specific group if a certain metadata item has a specific value.

Conditions can be concatenated using the boolean operators AND and OR.

In the mid-term, administration will be enabled by specialist admins or administrators on the customer side. Currently, the configuration of the set of rules can be carried out by d.velop in cooperation with an existing implementation partner.

A single rule consists of

- Priority
  - The higher it is, the sooner it is executed.
- Condition
  - Link
    - AND
    - OR

  - Comparison operator
    - equal, not equal
    - larger (or same), smaller (or same)
- contains, does not contain
- Action
  - Delete all permissions.
- Adding permissions.
  - User, group
    - Clearly defined users or groups.
    - Users or groups named in a column content.
  - Permission level
    - A SharePoint permission level to be granted to the user or group.

Each rule always refers to a contract file. The columns of the contract can be used in the condition.

Execution date

The set of rules is executed at certain times:

- After a contract file is created.
- After changing metadata of a contract file.
- After changing the set of rules (for all contract files).

The set of rules is executed (asynchronously) by an independent service account after a contract has been created and when it is modified. As a result, there is a time lag between changing the contract and the effect on the permission.

Supported columns

The following columns are supported for metadata comparisons:

- Text (single and multiline)
- Number
- Currency
- Person or group (simple)
- Managed metadata (simple)
- Choice (single)

Reading from the "person or group" columns as a source for persons or groups to be given permission is supported for both single and multiple values.

Concrete examples

- If the Organizational classification column = **Controlling**, give the group **Controlling** the permission level **Editing**.
- If the contract type = **Consulting agreement**, give the group **Consulting** the permission **Reading**.
- If the Sales territory column = **DE South**, give the group **Sales_DE_South_Field** the permission **Reading**.
- Always give the contract manager the permission **Full access**.
- Always give the data protection officer the permission.

1.9. Setting up and configuring d.velop contracts for Microsoft 365 Teams integration

You can deploy the Microsoft Teams app via established mechanisms in your Microsoft 365 tenants for the entire organization or for individual teams. You can download the Microsoft Teams app in the d.velop service portal.

You can find more information about the deployment of the Microsoft Teams app on the following websites:

- https://learn.microsoft.com/de-de/microsoftteams/platform/concepts/deploy-and-publish/apps-upload
- https://learn.microsoft.com/de-de/microsoftteams/teams-custom-app-policies-and-settings#upload-a-custom-app-using-teams-admin-center

Also note the information from Microsoft on managing user-defined apps in the Microsoft Teams Admin Center: https://learn.microsoft.com/de-de/microsoftteams/teams-custom-app-policies-and-settings

You can create a tab in Microsoft Teams which displays content from d.velop contracts for Microsoft 365.

This is how it works

1. Switch to the Microsoft Teams channel or group chat to which you wish to add a new tab.
2. Click on the plus symbol in the tab bar (**Add tab**).
3. Select the app **d.velop contracts for M365**.
4. In the configuration dialog, select your d.velop contracts for Microsoft 365 instance.
5. Define a name for the tab.
6. Validate and save the configuration.

1.10. Setting up and configuring the Word add-in for template management

You can deploy the Microsoft Word add-in in your Microsoft 365 tenant for the entire organization or for individual teams. You can download the Microsoft Word add-in from the d.velop service portal.

For more information on deploying the Microsoft Word add-in, visit Microsoft Learn and search for the article "Deploy add-ins in the Microsoft 365 admin center".

With the Word add-in you can create contract templates for generating documents in d.velop contracts for Microsoft 365.

Creating a template – This is how it works

1. Open the add-in under **Start**.
2. If there are multiple contract management instances, select the appropriate instance.
3. Select one of the site columns from the list.
4. Click **Insert**.

A placeholder has been created in the Word document at the most recent cursor position.

Notes on functions

You can adjust the following options in the settings (gear icon):

- Language of the add-in
- Language code of the site columns
- Currency code of the site columns

> **Note**
> The displayed column names and translations are based on the configuration in Microsoft SharePoint.

Search function

You can search for the descriptive column names (e.g. **Subject of contract**) and the technical column name (e.g. **ecsSubjectOfContract**).

Filter function

- You can filter by site column types and content types.
- Supported column types:
  - A line of text
  - Multiple lines of text
  - Selection
  - Number
  - Currency
  - Date and Time
  - Lookup
  - Yes/no
  - Person or group
  - Managed metadata

Special features

Some site column types offer additional functions:

- Number
- Currency
- Date and Time

You can create these functions in different language formats. You can find the function under **Settings** > **Site column language**.

The **Currency** site column type also offers the following functions:

- Customization of the currency code in the settings.
- A detailed view when an item is selected in which different language or currency codes can be defined for this specific item only.

The list item **Contractual partner** (**ecsCPLookup**) has a special internal structure.

A start keyword **{#ecsCPLookup}** and an end keyword **{/ecsCPLookup}** are always required when using this item. Within these keywords, you can select the available list items from a dropdown menu.

Example

```
{#ecsCPLookup}
{additionalFields.Title}
{ecsSubjectOfContract}
{/ecsCPLookup}
```

1.11. System status

Error messages are displayed in the configuration interface under **System > Status**. The details of each error message include a recommended solution. **Last occurred at** shows when the error last occurred.

> **Note**
> When an error is fixed, the corresponding error message is not deleted but continues to appear in the list.

1.12. Public API

Authentication for the public API is carried out using the API keys. To create an API key, see API key.

You can find the API documentation at https://help.d-velop.de/dev/documentation/dvelop-contracts-for-365.

1.13. Tips and tricks

Here we describe further possibilities that the application offers to help users reach their goals faster.

- Globally Unique Identifier for terms
- Assigning the admin role in Microsoft Entra ID
- Reindexing the SharePoint content
- Using the correct SharePoint site time zone

1.13.1. Globally Unique Identifier for terms

When creating new terms, some require the Local Property ID to be specified with the value of a Globally Unique Identifier (GUID).

Each term in the term store is assigned a unique identifier in the form of a GUID. This GUID can also be used for the local properties.

Creating the term - **This is how it works**

1. Open the **Site settings**.
2. Open the **Term Store Management** under **Site Administration**.
3. In the **Term Store Management Tool** open the **TAXONOMY TERM STORE** of the site collection.
4. Select the desired **term set**.
5. Select the desired **term**.
6. Take the **unique identifier** from the tab **General**.
7. Make sure not to use the unique identifier again.

1.13.2. Reindexing the SharePoint content

Some SharePoint search schema settings require the content to be indexed again. This can be done both for the entire site and for the document library or list.

Reindexing can take some time, ranging from a few minutes to an hour.

Reindexing a document library

This is how it works

1. Open the **settings** of the document library (e.g. **Contracts0**).
2. Open **Advanced settings** in the **General settings**.
3. In the **Reindex Document Library** area, click the **Reindex Document Library** button.
4. Confirm the dialog with **Reindex Document Library**.

Reindexing a site

This is how it works

1. Open the **Site settings**.
2. Open **Search and offline availability** below **Search**.
3. In the **Reindex site** area, click the **Reindex site** button.
4. Confirm the dialog with **Reindex site**.

1.13.3. Using the correct SharePoint site time zone

The correct setting of the time zone in the SharePoint site is an important part for the stable operation of the d.velop contracts for Microsoft 365 installation.

Please note that dates are stored and displayed in the same way regardless of the user's time zone. If a user in a different time zone maintains a date, all users will see exactly this date, even if they are in a different time zone.

> **Warning**
> The time zone must not be changed subsequently, otherwise existing runtime data (e.g. the start of the contract) may change.

1.13.4. Integrating the contracts into the structure

You have the option to integrate the contracts into the document management structure.

See the chapter Integrating contracts in the Document management documentation.

1.13.5. Configuring IDs

You can reach the administration interface via https://admin.d-velop365.com/. In the administration interface, you determine how IDs are generated.

You must specify a name for the configuration. The name must comprise a unique character string that may only contain “a-z” or “A-Z” and “-” and “_” and numbers.

You can also enter the following:

- **Initial value**: The value from which counting is to begin.
  (Please keep in mind that when you create a new configuration to "edit" it, users may have created new contracts in the meantime with the old configuration)
- **Counting up steps**: As a rule 1.
- **Prefix**: A string of characters that is always written before the ID.
- **Pad characters**: With how many zeros the space between the prefix and the current value should be filled (Maximum 10).
- **Description**: Description: The description for the configuration.

Example 1

- **Name**: contractIDs
- **Initial value**: 0
- **Counting up steps**: 1
- **Prefix**: CMID-
- **Pad characters**: 0
- **Description**: test
- The next three IDs that will be generated: CMID-0, CMID-1, CMID-2.

Example 2

- **Name**: contractIDs-2
- **Initial value**: 9
- **Counting up steps**: 1
- **Prefix**:
- **Pad characters**: 10
- **Description**: test
- The next two IDs that will be generated: CMID-0000000009, CMID-0000000010.

1.14. Frequently asked questions (FAQ)

Here you will find answers to frequently asked questions.

1.14.1. What column types are supported in d.velop contracts for Microsoft 365?

The following column types and column properties are supported:

- **Text**: Formatted text is not supported (text-only).
- **Multiple lines of text**: Formatted text is not supported (text-only).
- **Choice (menu to choose from)**: This column must contain information.
  - Display choices using: Drop-down menu, check box (allow multiple selection).
  - Default value: Choice.

> **Note**
> If multiple options are selected, the text length of all selected options must not exceed 255 characters. Make sure to include ";#" before and after each selection.

- **Number**: This column must contain information.
- **Currency**: This column must contain information.
- **Date**: This column must contain information.
  - Date and time format: Date only.
- **Yes/no**:

> **Note**
> If the column is added later, the status is neutral for the field values of existing items. The SharePoint search does not deliver corresponding results for **yes** or **no**.

- **Person or group**: This column must contain information.
  - Allow the following choice: People only.
  - Select from: All users; SharePoint group.

> **Note**
> We do not recommend to enter groups in system fields, because in this case no e-mail notifications will be sent.

- **Managed metadata**: This column must contain information.
- **Lookup**: This column must contain information.
  - Allow multiple values
  - In this column (drop-down menu for selecting a column to display)

1.14.2. Are groups supported when defining permissions and sending e-mails?

The following group types are supported:

- Microsoft 365 groups
- E-mail-enabled security groups

In order to use groups in the following columns, you must adapt the column settings in Microsoft SharePoint as follows:

- Responsible person internal (**ecsResponsible**): Change **Person** to **Persons & Groups**.
- Additional notification (**ecsNotificationRecipients**): Change **Person** to **Persons & Groups**.

> **Note**
> Only multiple selection is supported.

Support for groups when sending e-mails

To send e-mails to Microsoft 365 groups or e-mail-enabled security groups, external persons must be able to send e-mails to that group. Enable the appropriate permissions in the group settings. E-mails to Microsoft 365 groups are sent directly to the groups by default. You can change the behavior in the group settings.

Support for groups for setting permissions

Microsoft SharePoint groups and security groups are supported for setting permissions in the above mentioned cases. E-mails are not sent to the individual people, however.

1.14.3. Why are changes from SharePoint not displayed in the application?

If changes to SharePoint structures such as new columns, taxonomies, etc. are not displayed in the application, this may be due to caching of these structures. Empty the cache on the start page of the d.velop contracts for Microsoft 365 administration interface. Your changes will then take effect.

1.14.4. How does the version history work in the contract view?

To view the version history of a contract, users can click the information icon in the contract view. If users make changes, a new version is created based on the settings in Microsoft SharePoint. If an update is performed using the system account and the last version was created by a user account, a new version is created. If the system account performs another update and the last version was already created by a system account, the last version will be updated and no new version will be created.

Additionally, a version history is available at document level.

For more information on versioning in Microsoft SharePoint, see https://support.microsoft.com/de-de/office/funktionsweise-der-versionsansicht-in-listen-und-bibliotheken-0f6cd105-974f-44a4-aadb-43ac5bdfd247.

1.14.5. What types of e-mail notifications can be sent?

Overview of which e-mail notifications are sent to whom and when:

E-mail notification	Send to	Send when
Contract was renewed automatically.	Responsible person internal.	It is checked once a day which contracts are relevant and the appropriate e-mail notifications are then sent. Renewal only occurs for contracts with an active contract status (e.g. "Valid").
Read access was granted to a contract.	Person who has been given read access.	E-mail notification will be sent after the action.
Write access was granted to a contract.	Person who has been given write access.	E-mail notification will be sent after the action.
New contract was created.	Responsible person internal. Attention: The notification can also be sent when a person is newly defined as responsible internally.	E-mail notification will be sent after the action.
New task was assigned.	Person to whom the task has been assigned.	E-mail notification will be sent after the action.
A task is due.	Person to whom the task is assigned (plus additional recipients configured per task).	It is checked once a day which tasks are relevant. The corresponding e-mail notifications are then sent.

E-mail notification	Send to	Send when
Duration of a contract is about to ends.	Responsible person internal (plus additional recipients configured per contract).	It is checked once a day to see which contracts are relevant. The corresponding e-mail notifications are then sent. A notification is only sent for contracts with an active contract status (e.g. "Valid").
Contract expired	Responsible person internal.	If e-mail sending is enabled for automatic status changes, a check is carried out once a day to see which contracts have expired. The contract status is changed and the corresponding e-mail notification is then sent.

Read here how to configure e-mail notifications:

- Individually, by the applying person for each contract:
  - See user documentation, chapter Setting up notifications for the task.
- Centrally, by the application administration
  - Defining e-mail notifications

1.14.6. What needs to be considered when configuring Sharepoint search?

Some functions of d.velop products with Microsoft 365 integration are based on queries via SharePoint search.

The following articles give a very good overview of how SharePoint search works and important configuration options in the search schema.

Especially the creation and usage of managed properties should be known in order to build structures based on content types or to configure the d.velop documents for Microsoft 365 search.

Useful links for SharePoint search configuration

- Manage the search schema in SharePoint
  For more general information about configuring result sources, see the Microsoft technical documentation under the search term "Manage search schema 365".
- How do site columns become managed properties?
  For more general information on this topic, see the Microsoft technical documentation under the search term "How do site columns become managed properties - thus available for search)".
- Syntax reference for the Keyword Query Language (KQL)
  For more general information on this topic, see the Microsoft technical documentation under the search term "Syntax reference for the Keyword Query Language (KQL)".

1.15. Troubleshooting

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/

1.16. 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.