WEBCON BPS 2023 R3

history of changes for version 2023.1.3.29

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1. Before upgrading WEBCON BPS

1.1. Important information

- If the changelog contains a section titled "Changes to existing features", please verify whether the changes will impact your implemented system in any way.

- To avoid interruptions in the system operation, make sure that WEBCON BPS licenses are up to date. To do this, verify the availability of the **WEBCON BPS Server 2023** license in the license report. This report is available from **WEBCON BPS Designer Studio** → system menu in the upper left corner → **Licenses**. Current licenses must be downloaded if necessary.

- Changes introduced in this version will break the compatibility of the Export-Import mechanism. Exported process packages created in versions **2023 R2** and older cannot be imported to the newest system version. In order for an import to be possible, update the environment to the newest version and export the processes again.

2. Security fixes

2.1. General

- Fixed a bug where the security system, designed to protect against Cross-Site Request Forgery (CSRF) attacks, failed to start despite the correct configuration.

2.2. API & SDK

- In **REST API** versions **4.0**, **5.0,** and **beta**, operations that add, edit, and remove attachments will now have additional protection against unauthorized checkout of instances by users that do not have privileges for such an operation.
  This issue occurred only when the REST API was called in the context of an application that had the parameter forceCheckout=1.
  This fix ensures that:
    - admin privileges will be verified before the checkout operation
    - connections in the context of the user will require the scope:
  User.Elements.Admin.All lub User.Elements.Admin.<ProcGuid>
    - it will no longer be possible to force checkout in the context of an application with impersonation enabled.

  In **REST API beta** version, all operations that force checkout (forceCheckout=1) and connect in the context of the application, will now have an additional scope privilege verification **App.Elements.Admin.All.**

2.3. Updated components

- The following components have been updated:
    - Azure.Identity to version 1.10.3,
    - Azure.Core to version 1.35.0
  due to a vulnerability patch:
  CVE-2023-36414, CWE-94 – https://security.snyk.io/vuln/SNYK-DOTNET-AZUREIDENTITY-6009155.

- The SkiaSharp component has been updated to version 2.88.6 due to the vulnerability patch:
  CVE-2023-4863, CWE-122 – https://security.snyk.io/vuln/SNYK-DOTNET-SKIASHARP-5922114.

- The tinymce component has been updated to version 5.10.9 due to vulnerability patches:
  - CVE-2023-48219, CWE-79 – https://github.com/tinymce/tinymce/security/advisories/GHSA-v626-r774-j7f8
  - CVE-2023-48219, CWE-79 – https://security.snyk.io/vuln/SNYK-JS-TINYMCE-6062167.

- The SkiaSharp component has been updated to version 2.88.6 due to the vulnerability patch: CVE-2023-4863, CWE-122 – https://security.snyk.io/vuln/SNYK-DOTNET-SKIASHARP-5922114.

- The tinymce module has been updated to version 5.10.8 due to vulnerability patches:
  - CVE-2023-45819, CWE-79 – https://github.com/advisories/GHSA-hgqx-r2hp-jr38
  - CVE-2023-45818, CWE-79 – https://github.com/advisories/GHSA-v65r-p3vv-jjfv
  - CVE-2022-23494, CWE-79 – https://security.snyk.io/vuln/SNYK-JS-TINYMCE-3166281.

3. Information

3.1. Important information

- Fixed an issue that caused instances indexed in the **SearchIndex** database to have their dates converted to UTC, which could cause incongruencies when searching and filtering data in **Reports** that use a **SearchIndex source**.
The error occurred from version 2022.1.4.174 to 2022.1.4.274, and in all published versions of 2023 R1.
In order to fix existing date indexes, it is required to add **Reindex all databases** (or a specific database) to the **SOLR indexer queue**.
The duration of reindexing depends on the size of the database – in the case of large databases this operation may take several hours.

3.2. Data sources

- Removed the following data source **Templates**:
  - Substitutions – permissions to define,
  - Substitutions – available substitutes.
These types of data sources are no longer used in the substitution mechanism.
Existing data sources that use these templates will be changed to **Standard**.

4. Changes to existing features

4.1. Visibility of applications/processes when creating and editing substitutions

The rules for applications and processes that a user can specify when creating a substitution for themselves or another user have been changed. The update applies to both **Task delegation substitutions** and **Working on behalf of substituted person with full access.**

The list of applications and processes for which a substitution can be created varies for users with different privilege levels. The updated rules are as follows:

- If **a user** creates a substitution for themselves (using the **New substitution for me** option), they can select the processes where the substitution will be active based on the application privileges. This means that all processes within the application will be available for selection, provided that substitutions are enabled in the process configuration and the user has any application privileges. Process privileges for that user are not taken into account. The list of applications/processes is not limited by business entities.

- If a **Superior** creates a substitution **for subordinates** (following the subordinate structure configuration), then, as previously explained, they can select processes from all applications for which the subordinate, i.e., the replaced person, has any privileges. The list of applications/processes is not limited by business entities.

- If a **System administrator** or a user who is authorized to create substitutions for anyone creates a substitution for another person (using the **Specified users for anyone** option in the substitution configuration), they can select any processes with enabled substitutions among all applications. The administrator can also select any process with enabled substitutions when creating a substitution for themselves.

The same rules apply when editing an existing substitution.

The list of applications and processes available for creating or editing a substitution is updated each time the **Replaced person** is changed.

4.2. Portal

- The format of the built-in graphic files has been changed to AVIF/WebP in order to minimize the amount of data transferred.

4.3. Form

- Changed the behavior of NULL values during sorting in **Data table** form fields. When sorting numerical columns (ascending and descending), NULL values will always be placed at the bottom of the table.

- Removed the character limit for RegEx used to validate form fields. The following columns had their type changed from varchar(100) to varchar(max): WFCON_ValidationExpression (WFConfigurations table) and DCN_ValidationExpression (WFDetailConfigs table). The execution time of a RegEx can be tracked in diagnostic mode.

- In **Person or Group** form fields, it is now possible to change the data source. By default, these fields will use the new system source **<Users and groups>**, which has the **Data source type: person or group** option enabled. Full description of this new data source can be found in the **New Features** chapter

5.1.
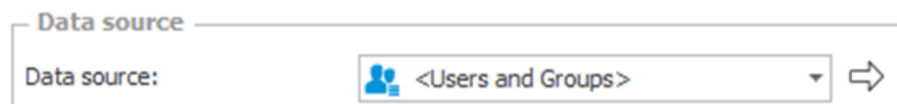
It is possible to create additional **Users and groups** data sources for specific purposes – they will be available for use as sources in **Person or Group** form fields as long as the **Data source type: person or group** option is enabled.

The system source **<Users and groups>**, and all additional sources that have the **Data source type: person or group** option enabled, will always return the following 8 columns:
- COS_BpsID*
- COS_Department*
- COS_DisplayName*
- COS_Email*
- COS_JobTitle*
- COS_Login*
- COS_ManagerBpsID
- COS_ManagerDisplayName

The columns marked with an asterisk will always be loaded by default into **Person or Group** form fields.
Additional columns can be loaded manually.
Previously, the following columns were used by default in **Person or Group** form fields:
- LoginName
- DisplayName
- JobTitle
- Department
- Email.

- Changed the way the **Path panel** is displayed on the workflow instance when the browser window is zoomed to 200% or more. After the change, under the described conditions, the Path panel will always be **Floating at the bottom of the screen** to improve the visibility of the form fields. Different settings in WEBCON BPS Designer Studio are ignored in this case.

4.4. Designer Studio

- Values from outside the data source can now be added to the **Choice field** in the **Dropdown** mode and the **Choice field** column when the **Allow selecting values no longer available in the data source** checkbox has been selected.

4.5. Rules

- Changed how AND and OR operators in **Form rules** are evaluated. If the first condition unequivocally determines the outcome, the second (right) condition will

not be evaluated.
Fixed an exception that occurred when using invisible **Item lists** in some functions (ITEM LIST COUNT, HAS ANY ROWS, SELECT VALUES, GET IDS, GET NAMES).

4.6. Service

- It is now possible to add the previously unavailable service roles when configuring WEBCON BPS installation in Docker and in the case of running the service locally directly from the .exe file. In addition, modified the system behavior in the situation where the service with the **Basic features** role assigned has not communicated with content database for over 45 s. Now, in such a case, this role is taken over by another service if it has been selected in its configuration.

4.7. API & SDK

- The method of logging the moment of calling the REST API method has been changed. Currently, the log is created before the operation performed by the REST API method is performed. This makes it possible to chronologically analyze the invocation of individual methods.

- Modified operation of the API endpoint used to initialize the **Item list** form field in the beta version. Now, after calling the endpoint, it verifies if the initialization has been activated in the Item list configuration. If the initialization is disabled, a validation error is displayed.

5. New features

### 5.1. System data source <Users and groups>

The configuration of the form field **Person or group** has been changed – it is now possible to select a data source and configure a filter on the side of the form field (just like it is possible for the **Choice field**).

To avoid manually creating data sources for all existing form fields, a new system data source **<Users and groups>** has been created instead. By default, it contains all (active) elements from the CacheOrganizationStructure table.
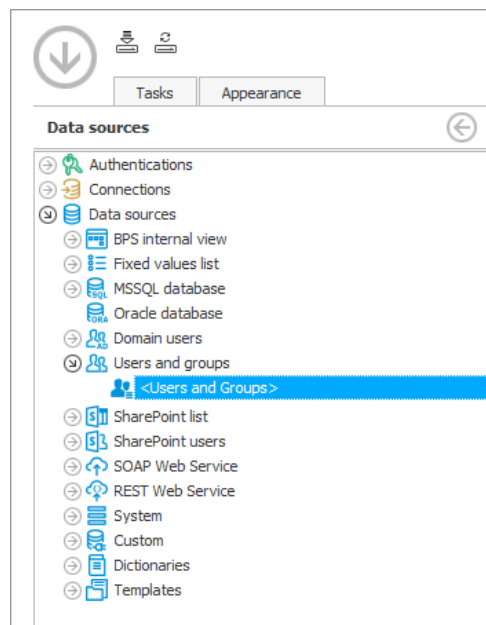
Filtering this data source will limit the list of users available throughout the system. The goal of creating this new data source and changing the **Person or group** field is to enable the creation of complex, multi-level filters to handle the following scenarios:

- Filter users available in the system in situations where the user synchronization configuration does not allow users to define the scope of the synchronization (e.g. AAD),

- Allow data sources to be selected in **Person or group** fields, and to create data sources that can be used by these fields, so that different filters can be applied in different use cases.
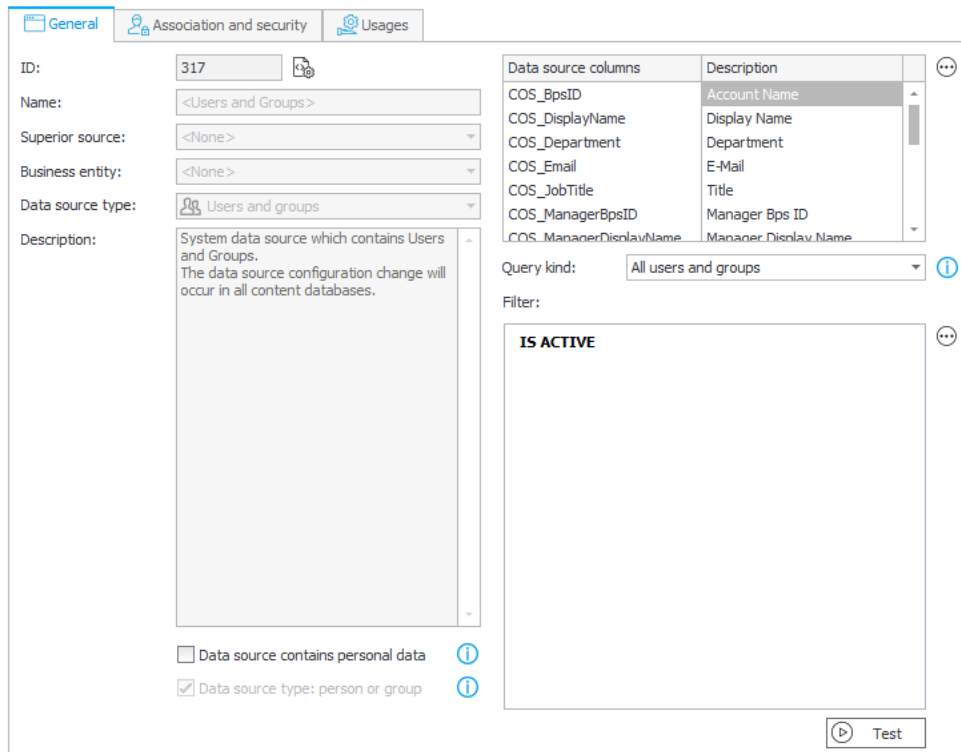
The data source is associated with all Applications by default.

It can be used in:

- **Person or group** fields,
- Item list columns that **Use people field data source**,
- The **Any person** option in predefined task assignment,
- Delegating tasks in Portal,
- Adding privileges by admin action in Portal,
- **Business rule** functions in the "Users" node, such as CURRENT USER IS ONE OF, USER IS ONE OF, etc.,
- Privileges at Global, Application, Process, and Workflow levels,
- Application supervisor.

Note: all of the above areas use the **<Users and groups>** system data source. Since this source is used globally and extensively, any changes to its configuration (filter) should be carefully considered.

If a filter is required for a specific (local) use, e.g. to limit the accounts returned in a specific process, form, or form field, it is recommended to create a dedicated data source – either by cloning the **<Users and groups>** system data source, creating a new **Users and groups** source, or configuring the filter at the form field level.

The full, unfiltered list of users can still be accessed in the following places:

- An overview can be seen in the **Users and groups synchronization** in the System settings,

- By creating additional custom **Users and groups** data sources and configuring them independently of the system source.

V_CacheOrganizationStructure is a new view that returns the data from the CacheOrganizationStructure table and takes into account any filters defined on the **<Users and groups>** system data source.

Filtering

The core aspect of the new **<Users and groups>** system data source is the ability to define global filters that will limit the users and groups shown throughout the system. The main purpose of this is to:

- Exclude certain accounts synchronized to the WEBCON BPS users cache (e.g. test accounts, guest accounts),

- Limit the values available in **Person or group** fields (e.g. by an attribute like location or position).

The default filter is **IS ACTIVE** that returns active accounts (COS_IsActive=1).

Filter:

IS ACTIVE ⊙

This filter is applied along with the predefined filter from the **Query kind** option.

Note: it is important that this filter does not exclude people who grant privileges or administrators. If the ability to log in is lost, it will be necessary to use the Local Admin account defined in the Installer.

Query kind

Query kind: All users and groups ▾ ⓘ

Predefined filters that are used in conjunction with the custom filter. There are two available options:

- All users,

- All users and groups *(default option)*.

Available columns

This area is used to define which columns will be returned by the data source. The columns with a gray background are required and cannot be unchecked.

These are:

- COS_BpsID*
- COS_Department*
- COS_DisplayName*
- COS_Email*
- COS_JobTitle*
- COS_Login*
- COS_ManagerBpsID
- COS_ManagerDisplayName

The columns marked with an asterisk are the default columns loaded into the configuration of each **Person or group** field. Other columns can be loaded manually in the configuration of the form field.

Data source type: person or group

For the default system data source **<Users and groups>** this option is always enabled and cannot be disabled.

This option determines whether the data source can be used in a **Person or group** field or in Item list columns that have the **Use people field data source** enabled. This option also causes the data source to be automatically associated with all **Applications**.
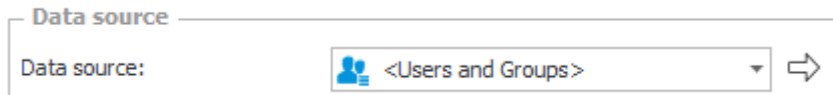
When this option is enabled, the icon of the data source changes and is filled.

When enabled, the data source will always return the 8 mandatory columns mentioned above, with no way to skip them.

Changes to Person or group fields

Existing **Person or group** fields will now use the **<Users and groups>** system data source.

It is now be possible to switch the data source for **Person or group** fields. Only data sources that are of the **Users and groups** type and have **Data source type: person or group** enabled can be selected.

By default, 6 of the 8 columns listed above are loaded into the field configuration.

Other columns can be loaded manually in the configuration of the form field.

The advanced configuration of **Person or group** fields still contains additional filters in the **Picker** tab that can be used to modify the **Available data range**.

In effect, each **Person or group** field can have filters defined at multiple levels, allowing the location and specificity of the filters to be tailored to the particular process and organization.

- Filter at the **<Users and groups>** or **Users and groups** data source level,
- **Query kind** at the **<Users and groups>** or **Users and groups** data source level,
- Filter at the **Person or group** field level,
- **Available data range** in the advanced configuration of a **Person or group** field.

5.2. WEBCON BPS mobile application

A new WEBCON BPS mobile application has been made available for mobile devices with Android 10.0 or newer and iOS 16.0 or newer.

The mobile application now features a new interface and includes a number of enhancements. It also offers multiple useful functionalities, including scanning QR codes, capturing photos and recording voice memos within the form, authorizing operations with PUSH notifications, and saving the user's geographical location.

The application, WEBCON BPS, is available for downloading from the Google Store for Android or the App Store for iOS, depending on the mobile device's operating system.

New interface

The mobile application received a new, clearer interface. The changes included, among other things, new icons, logos, splash screens, lists, and a new design for fields and buttons. Furthermore, the application offers two themes (light and dark) that align with the currently set device system theme.
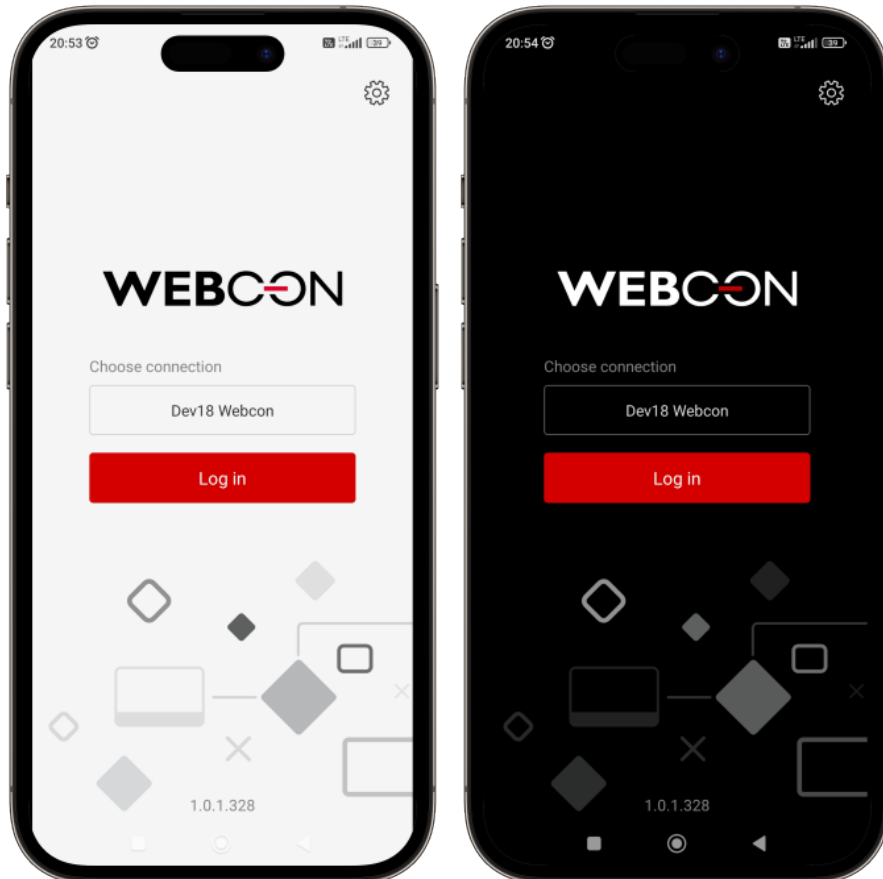

PIN and biometrics

The application provides a secure login option, allowing users to use a PIN or biometric protection. You can configure the functionality in the **Connection edit** window by clicking the **PIN security** option. After setting up the PIN code, you can enable biometric protection (fingerprint or facial recognition) by selecting the **Biometric security** button (ensure that biometric functions are enabled on the device).

Adding a trusted device

You can register the device where the mobile application is installed as trusted in your **User profile**. This will allow you to authorize path transition with your mobile application. You can do this immediately after logging into the application for the first time on the new device or at any later point while using the application on that device.

Authorizing operations with the mobile application

A new mechanism has been introduced to authorize user operations through the mobile application. When following a properly configured path, a user receives a PUSH notification in the mobile application, prompting them to authorize the operation.
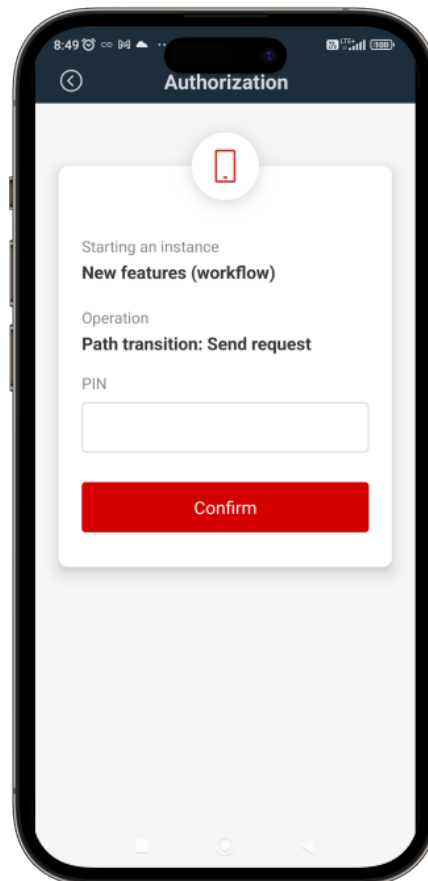
The functionality that enables you to authorize operations through the mobile application is part of a broader mechanism for authorizing path transitions (see "Path transition authorization").

QR codes scanning

The application allows you to scan QR, bar, and DataMatrix codes.

- **Code scanner in the mobile application**

The mobile application comes with a code scanner accessible by clicking the QR code icon in the upper right corner of the window. The scanner embedded in the application enables reading QR, bar, and DataMatrix codes.

- **Starting a new instance with a QR code**

Through the mobile application, administrators can generate and share QR codes to start new workflow instances. The code can be generated in Portal using the **Click to generate starting QR code** button located in the bottom-left corner of the window for configuring the start tile or the **Generate QR code** button in the window for starting a new instance.
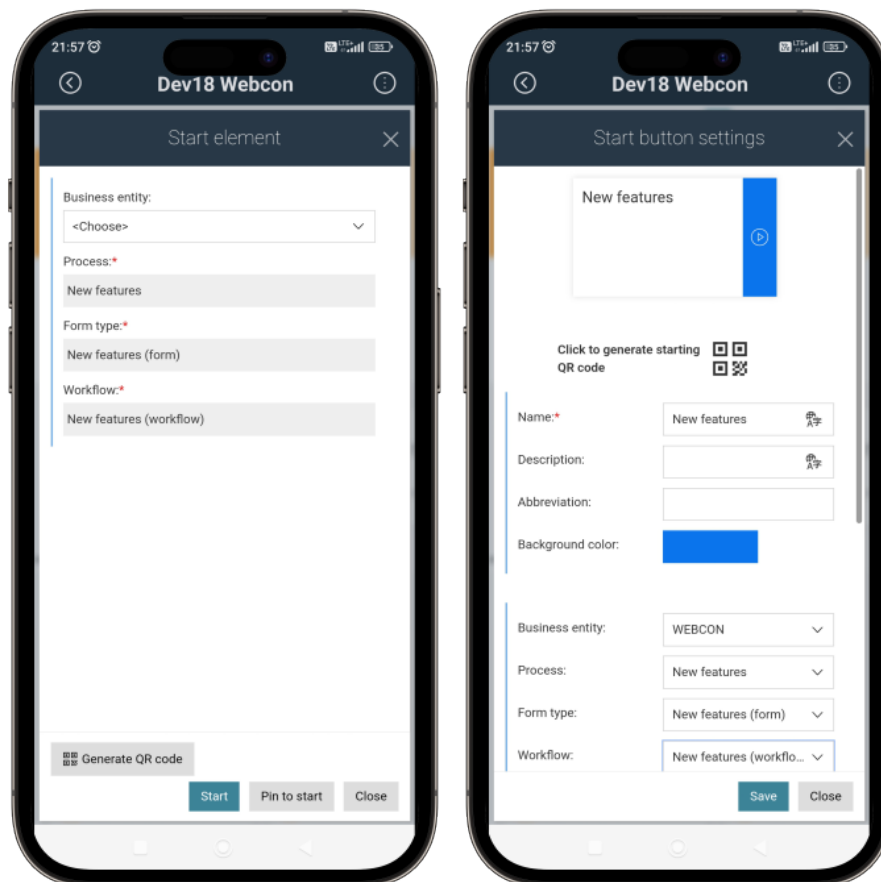

- **Redirecting to an instance with a QR code**

You can now generate a QR code that redirects to a specific workflow instance. To generate the code, click the **Generate QR code** button in bottom part of the infopanel in Portal. To configure the button availability, go to the **Standard areas** (**Main form → Field matrix**).

- **Searching with a QR code**

With the mobile application you can search for information using the value stored in a QR or bar code. To facilitate this, the search box on the search subpage now features

a QR code icon. (You can access the search box by clicking the magnifying glass icon in the upper bar of the mobile app, located next to the QR code icon, or by navigating to the search subpage in Portal.)
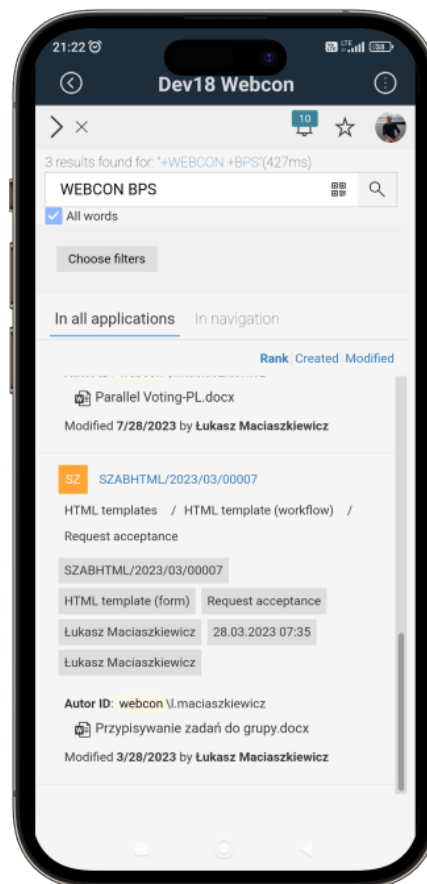

The system starts searching immediately after reading the value stored in the code.

- **Entering the QR code value into the form field**

The mobile application enables you to input the values stored in QR codes into form fields. The new functionality is available for devices equipped with a camera after selecting the **Enable QR scan** button (the **Style and behavior** tab → the **Behavior** section) in the configuration of the relevant form field or column.

You can enable the functionality for most basic form fields (excluding the **Picture** field) and for the **Choice field** operating in the **Popup search window** and **Autocomplete** mode. In the case of the **Item list** columns, the QR code scanning is available for the **Single line of text**, **Multiple lines of text**, **Floating-point number**, **E-mail**, and **Choice field (picker)** and **Autocomplete** columns.

After selecting the aforementioned checkbox, a QR code icon appears in the field control in the form.
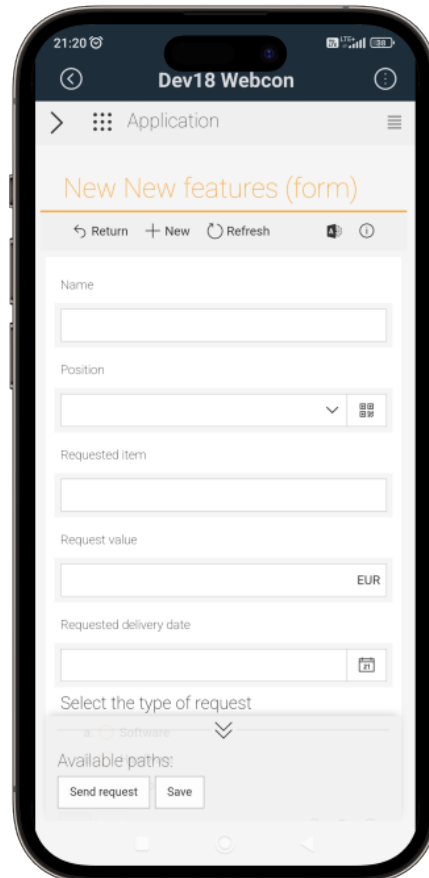
Clicking the icon opens a window that allows you to scan the QR code and input its value into the form field.

- **New business rules**

Three new rules are now available for inputting values into form fields and columns using QR codes.

The **SCAN QR** rule allows you to insert into the rule's block a relevant form field or column for which a QR code scanner is to be initiated. The rule can be executed when loading the form or when changing the value of a form field.

The **SHOW QR** and **HIDE QR** rules show or hide the QR code icon in the field or column control. (For the **Item list** columns, it is possible to constrain the rule operation by means of the **FOR EACH ROW** operator). Similar to the first rule mentioned above, the target form field is specified in the block of the rule.

Recording voice memos

The mobile application supports adding voice memos as attachments within the form. You can record a voice memo by clicking the microphone icon (🎤) in the attachments panel. Please note that to see the icon, your mobile device must have a microphone, and the functionality of adding and removing attachments must be enabled. The icon opens a multimedia player, allowing you to record a voice memo and subsequently add it to the attachments list while specifying its name and category.
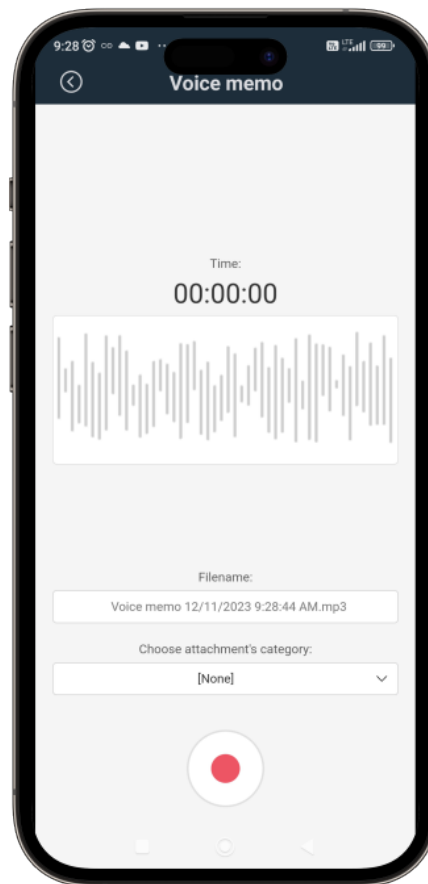
Capturing and cropping photos

A user of the mobile application can capture and crop photos, and then add them as attachments to the form. To access this functionality, click the camera icon (📷) in the attachments panel (make sure that the functionality of adding and removing attachments has been enabled in the form configuration).

Clicking the icon opens a new camera window where you can either capture a photo (**Take photo**) or add one from your hard drive (**Add from library**). Once the photo is loaded into the camera window, it can be cropped.
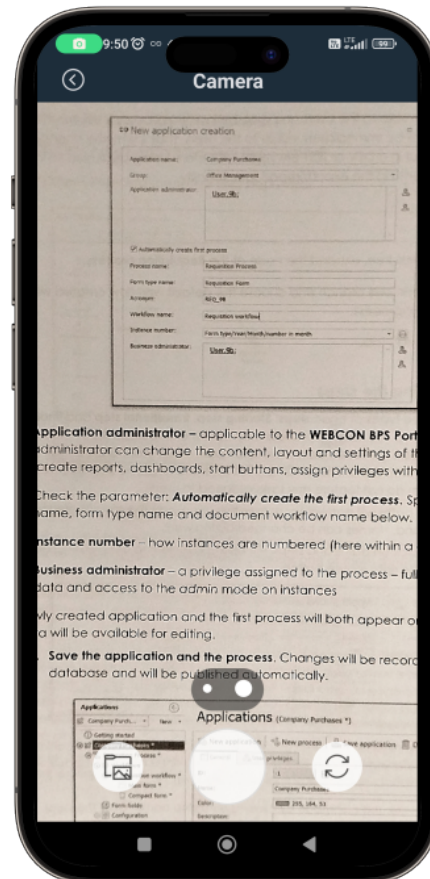
The saved photo is added to the attachments list.

Geographical location registration and new context variables

Now, you have the ability to retrieve and save the geographical location of an individual transiting a path. The information is saved in the instance history. It can be accessed only by individuals authorized to display the instance history in the admin mode (the gear icon).


To activate the functionality in the Designer Studio, select the **Location required** button available in the **Parameters** tab of the path configuration window.

Furthermore, the expression editor has been expanded to incorporate a new **Location** node which introduces four additional context variables: **CURRENT_LOCATION**, **CURRENT_LOCALIZATION:LONGITUDE**, **CURRENT_LOCALIZATION:LATITUDE**, and **CURRENT_LOCALIZATION:ISNATIVEAPP**. The variables allow for the determination of the user's location.

5.3. CONCAT function within LIKE for filtering Data sources

The **CONCAT** function used to combine text values into a single string of characters can now be used inside the **LIKE** function that checks if the selected text contains a given text pattern for creating advanced filtering conditions on **Data sources**.

This solution makes it possible to narrow down the list of values returned by a Data source, for example, when configuring **Choice fields**.
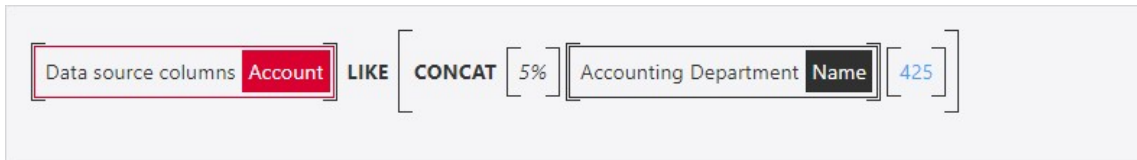
The arguments for the CONCAT function used in this context will be form fields, system fields, process/global constants, text values, etc. Within this function, it will also be possible to use operators that were previously available to the LIKE function:

- % – any string,
- _ – a single character,
- [] – a single character in the specified range,
- [^] – a single character outside the specified range.

5.4. Path transition authorization

WEBCOB has introduced a functionality that provides additional protection against unauthorized path transition and execution of a task (e.g. signing a contract) by an unrequested person. The user, who wants to go to the next step, is forced to confirm their identity.

#### Configuration in WEBCON BPS Designer Studio

The **Parameters** tab of the **Path details** configuration window now includes the **Path transition authorization** option that can be set to:

- **None** – no additional authorization is required,
- **Require** – one authorization is required for the entire authorization session. The authorization session lasts 5 minutes by default, but this value can be changed globally for the environment. During the session, the end user may go any number of times through any path (on any workflow instance) for which this authorization mode is set. When the authorization session expires, a new authorization is necessary,
- **Always require** – each path transition requires authorization. In this mode, the authorization session is related to a specific instance and a specific path.

If **Back to the previous step** is set as the target step in the path configuration, the option to authorize a path transition will remain inactive.
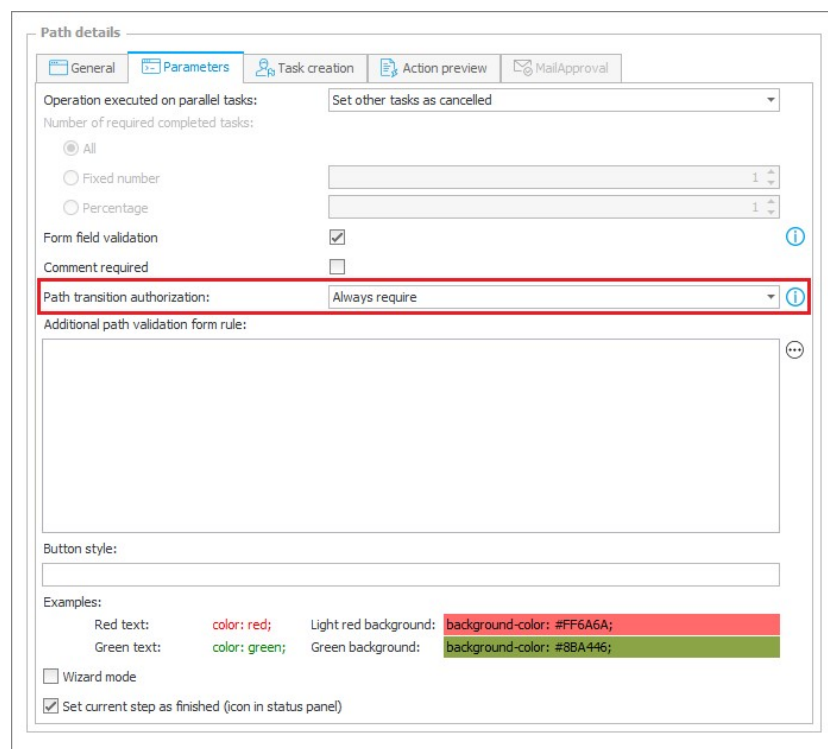
The authorization methods to be used by the end user are defined by the system administrator in the **Available authorization methods** section under **System settings → Global parameters → Security**.
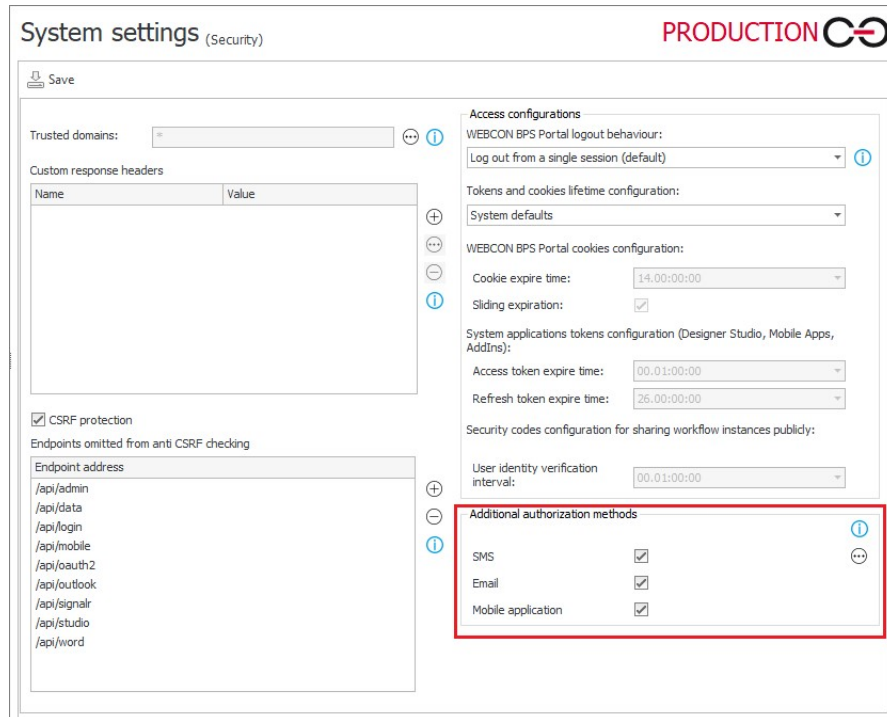
If the path is configured with the **Require** or **Always require** mode selected, and the administrator allows any authorization method, the following window will appear during the path transition attempt:
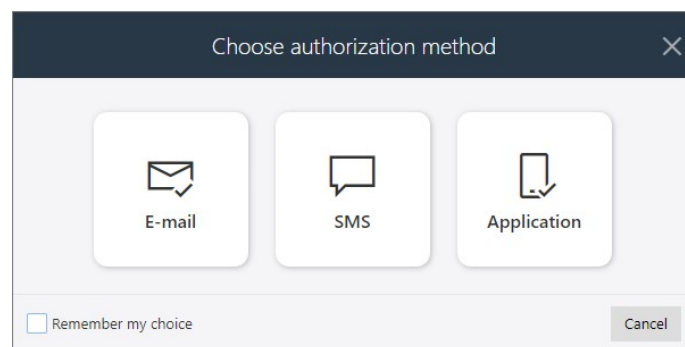
where the user can select the method of additional authorization – a one-time authorization code will be sent to the user's email address (**email message**), phone number loaded from Active Directory and defined in the user's profile (**SMS**), or to the mobile application (**PUSH notification**). The received authorization code must be entered in the form window:
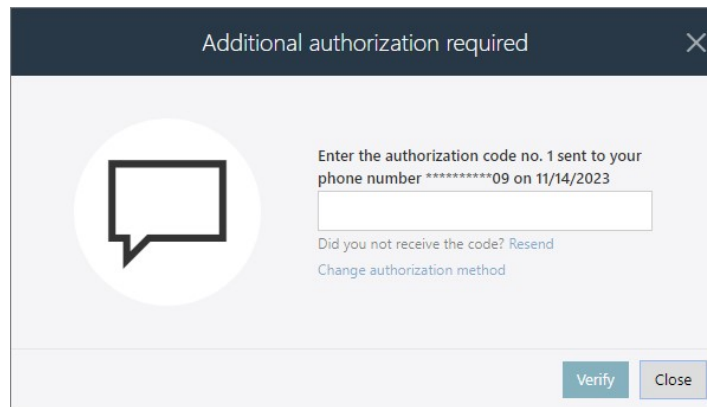
Entering the code is equivalent to confirming the user's identity, and once authorized, the user may continue working with the instance(-s) once or for the duration of the session.
Note that a user can have only one authorization session active at a time – starting a new session automatically invalidates the previous one.

If the path has been configured with the **Always require** option selected, the path transition will require additional authorization, even if the user already has an active authorization session. The previous session is invalidated, and proceeding to the next step in the workflow requires re-entering the one-time authentication password.

If a user replaces another employee, i.e. works on their behalf or the replaced person's tasks are delegated to the user, and the substitute goes through a path that requires additional authorization, a one-time code is sent to the substitute's email/phone number/mobile application and authentication is based on the data associated with their account.

MailApproval, HotFolders, HotMailBoxes, WEBCON BPS Workflow Service

If going through a path requires periodic authorization or must always be authorized, it cannot be used for the **MailApproval** functionality, whose configuration tab is then unavailable.

Similar restrictions apply to **HotFolders** and **HotMailBoxes**, and documents and attachments processed in the context of these functionalities cannot be transferred through a path for which an additional authorization is required.

If the path transition is implemented by **WEBCON BPS Workflow Service** (e.g. automatic start of the workflow, execution of **Cyclical** actions, actions executed **On Timeout**), the configuration of an additional authorization on that path will lead to an operation execution error.

Authorization for Quick paths and Mass actions

The functionality also works in certain cases when using **Quick paths**. If the user configures a Quick path with periodic or each-time authorization, the received code can be used to move single or multiple workflow instances through that path at the same time, for example, from the **Report** or **My tasks** level, without having to enter form edit mode.

A similar authorization solution is provided for users of **Mass actions** on reports. When configuring **Mass action buttons**, the user can select a path for which a periodic or each-time authorization requirement has been set. The code received is then used to authorize the simultaneous movement of multiple report elements through that path.

Path transitions in subworkflows

The functionality of path transition authorization affects how automatic subpath transitions are handled, i.e. when an instance is started in a new workflow or subworkflow, for example, by triggering an action or automation. It is not recommended to configure additional authorization for path transitions in subworkflows (**None**). However, if the user wants to configure a separate authorization for a subpath transition, they should select periodic authorization (**Require**). Validation will then take place, and the subpath transition will succeed only if periodic or each-time authorization (**Always require**) is configured also for the path in the parent workflow and that session is still active.

5.5. Visualization of "Return to previous step" path in Heatmap report

Heatmap analytical reports (**Step entry**, **Step re-entry**) now include more detailed information on the number of return path transitions in the workflow.

If a workflow instance has gone through a return path that no longer exists on the diagram (e.g. it has been deleted or moved to another step), then this path is drawn in the Heatmap report as a copy of any path leaving the return step – offset from the original and pointing in the opposite direction. Such a return path is drawn if the workflow instance has passed through it at least once. The number of transitions through the return path is indicated by the counter next to it.
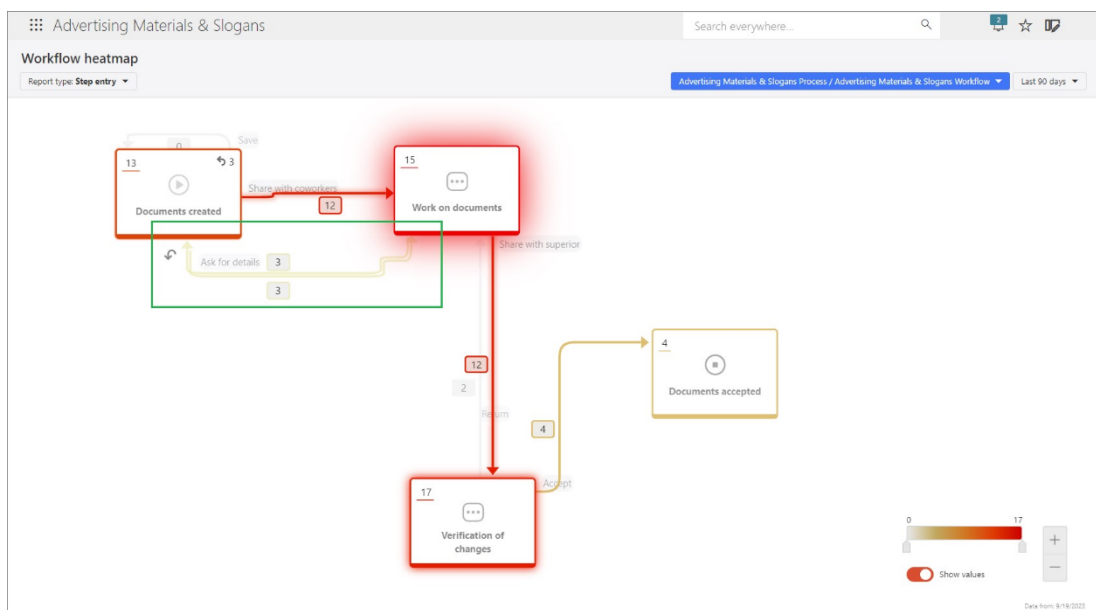
In addition, all return paths are marked with a special graphical identifier (arrow symbol). The return path counter for a particular step is also marked with this symbol, and hovering the cursor over it will display the corresponding tooltip.
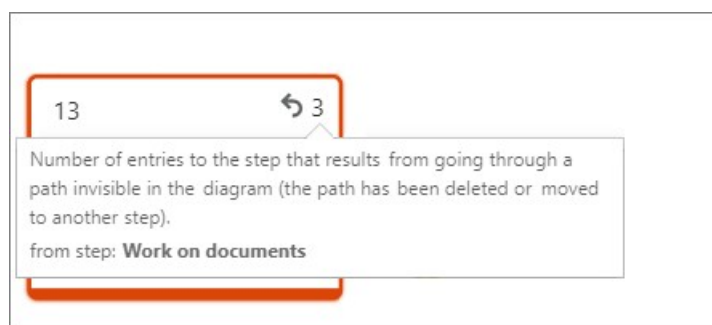
### 5.6. Improved digital accessibility of WEBCON BPS Portal

Changes have been made to WEBCON BPS Portal to improve its digital accessibility for end users (including those with disabilities).

As part of this release, a number of modifications have been initiated that will make Portal easier for users to navigate, while at the same time bringing it into compliance with the applicable Web Content Accessibility Guidelines (WCAG).

Keyboard operation

A new component has been added to allow keyboard users to navigate Portal more quickly. The component sequentially sets the focus on the **logo** (side panel), **application selection**, or **search pane** in the top menu.

In addition, focus visibility has been improved for navigation on the Portal home page and application page. The focus can now be set on the sub-elements of the above areas – in the case of the side panel, these are the license selection modal window and the drop-down lists of the **Process Design** in **Edit mode**; in the case of the application, the application selection drop-down list; and in the case of the search pane, the drop-down list of search prompts.
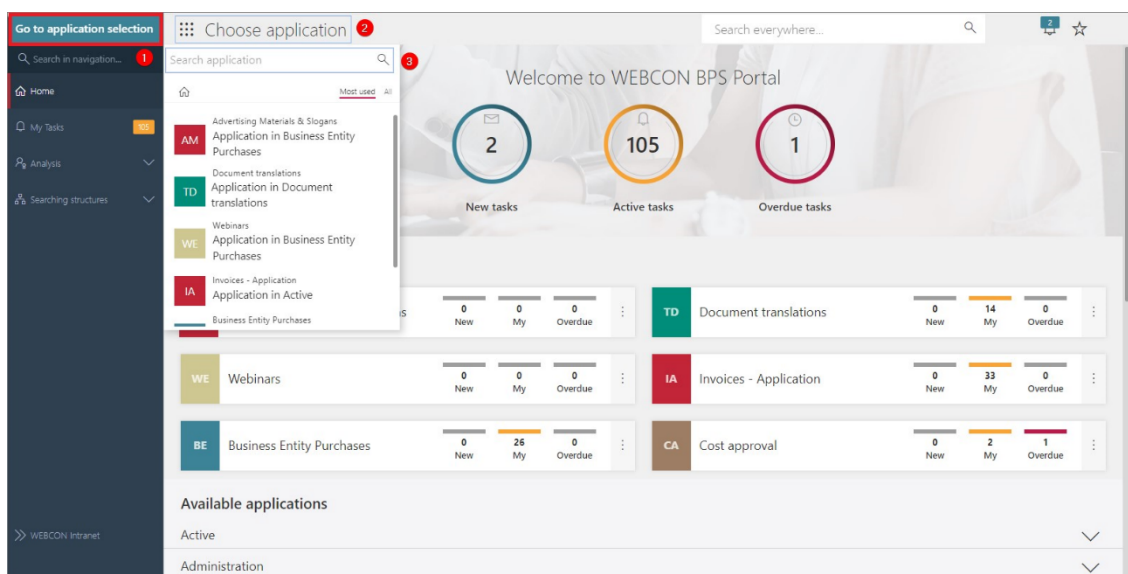
Increased focus visibility in Portal

In addition to making the focus visible when using the keyboard, it is also possible to specify the width of the focus border in the color theme definition. The default border is 1px, changing it to 2px will make it more visible to users who have such needs. This functionality is available from **Admin panel → Color themes → Edit themes** (pencil icon).

After the change, the focus will also be visible when using the Contrast theme in Windows system settings.

5.7. Translations of questions and answers in Survey fields

It is now possible to define translations in the configuration of **Survey fields**.

For the **Rating scale** form field, users will be able to add translations of the question and descriptions of the minimum and maximum scale values.

For the **Choice list**, users will be able to add translations of the question, each answer, and description of the optional answer.

Configuration of those translations is possible from both from Designer Studio and **Form designer** in Portal.

Phrases of Survey fields with defined translations will be displayed in the language selected in the **User profile**.

Values selected on the form for a **Choice list** that are available in other parts of the system (e.g. in **Reports**, **My tasks**, **Rules**, and **Mass notifications**) will also be displayed in the language currently set in Portal. However, this does not apply to previously saved instances – once the translations have been configured, the form must be re-populated with the values of these fields in order for their translations to be visible.

Additionally, the total length of all phrases and answers configured for a **Choice list**, including their translations, cannot exceed 1000 characters. This is checked when the configuration is saved and on the form, where a user who enters an optional answer that is too long will receive a warning message.

Also, given the way configuration data are stored in the database, the following (sequences of) characters are not allowed in answers and their translations: "#", "$$", "|;".

5.8. Share owner

The configuration window for the **Share workflow instance** action has been enhanced to include the **Share owner** option. The change was intended to better manage the mechanism for sharing instances and tasks from the action.

The Share owner from the action level can be:

– **System user**,

– **Current user** – the user who initiated the action on the form, e.g. by going through the path or triggering the action from the menu button. If the action is executed **On Timeout**, the share owner is the user of the WebCon Workflow Service account.

The share owner has access on the form to the list of their active shares made by executing the action, with the ability to delete them.

In addition, the **System user** will be the author and owner of all task shares made outside of the action.

### 5.9. Visibility of Statistics in the Info panel

Users of the latest version of WEBCON BPS can now edit the visibility of the **Statistics** tab and its parameters for individual workflow steps in the Info panel.

The visibility of this tab and its data on an instance is determined by the settings of the **Field matrix** in the **Standard areas** tab. Changes can be made by checking the appropriate boxes in the **Info panel: statistics** section.
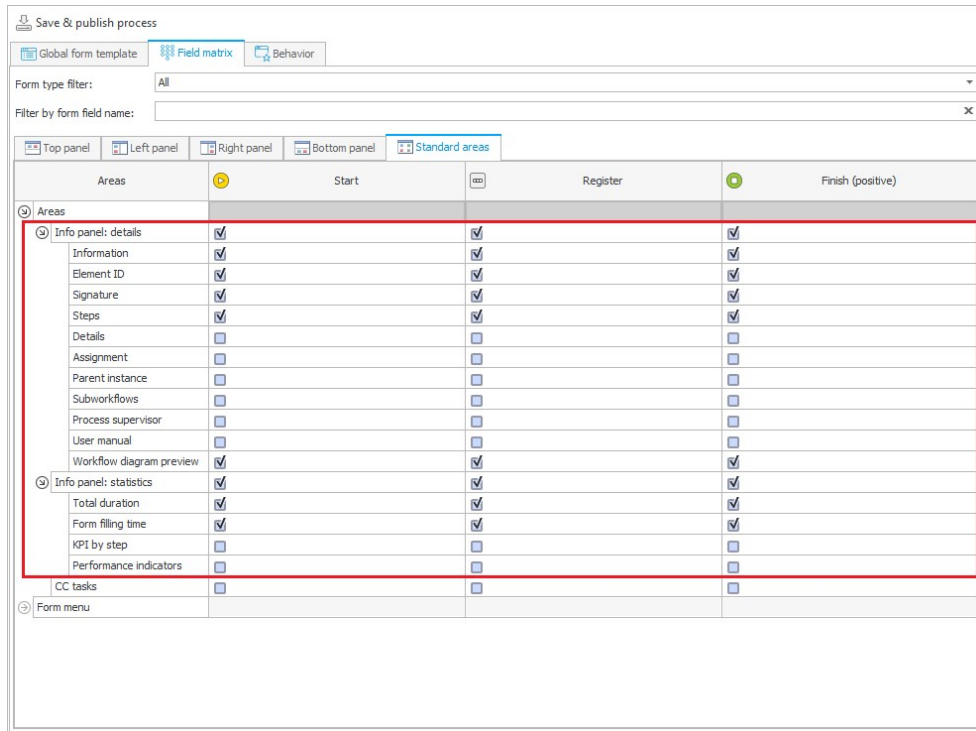
In turn, the visibility of the **Details** tab and its parameters can now be edited in the **Info panel: details** section (previously Status panel).

Info panel in Portal will contain only the elements marked as visible in Designer Studio. If no element in the Statistics or Details tab is selected as visible in the Field matrix for a given step, the entire tab is also hidden in the Info panel on that step.
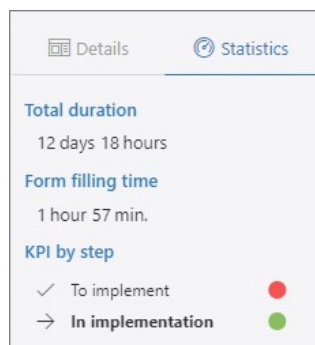
5.10. New actions on the Item list

New actions have been added to the list of actions that allow users to perform additional operations on the **Item list**. As part of this modification, the **Change item list values** action has also been updated. All of the actions listed below are available in the **Form** group and can be triggered:

- On entry,
- On exit,
- On timeout,
- On browser opening (except for the **Update item list value** action),
- Under a Menu button,
- On path,
- Upon instance saving.

Update item list values

This is an updated version of the previous **Change item list values** action that allows users to more clearly and flexibly specify the type of change to values in the Item list. The action configuration window in Designer Studio has been modified – the **Change type** section now contains the following three options to choose from:

- **Update existing rows** – updates values in the Item list rows whose data source and Item list identifiers provided in the Unique value mapping field are matching.

- **Add new rows from the data source** – adds rows to Item list that exist in the data source, but are not available in the Item list. The rows to be added are identified on the basis of unique values provided in the Unique value mapping field.

- **Remove rows that don't exist in the data source** – removes the rows that are not found in the data source from the Item list. The rows are identified on the basis of unique values specified in the Unique value mapping field.

At least one of the above options must be selected for the action to be executed. Depending on the type of changes made to the item list, the action log displays data on the number of rows updated, added, or removed.

Replace item list

This action works in the same way as the previous **Change item list values** action in the **Replace values** mode. This means that executing this action will result in removing all rows of the Item list and replacing them with new ones with the specified values in the selected columns. Unlike the **Update item list values** action, the configuration window for this action does not have a section dedicated to Unique value mapping. The action log displays information about the number of rows added or removed.

Clear item list

This action removes all rows from the Item list that the user has specified in the configuration. The action also removes rows that are not visible to the user in approval mode. This action is not available from the global automation level.
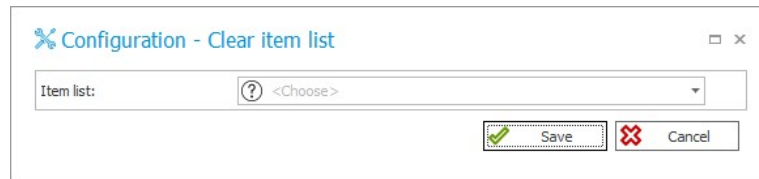
Remove an item list row

The action, as the only one described here, is available only in the context of the **For each** operator, where the defined **Collection type** is Item list. The action's operation is limited to removing the current Item list row, so there is no configuration window available for it. It is possible to create action patterns based on it. The action log in Admin mode shows exactly which Item list row has been removed.

5.11. SWITCH Operator

A new operator named SWITCH was added for use in **Automations**.

The operator allows more outcomes and conditions to be handled when compared to the existing **Condition** operator.
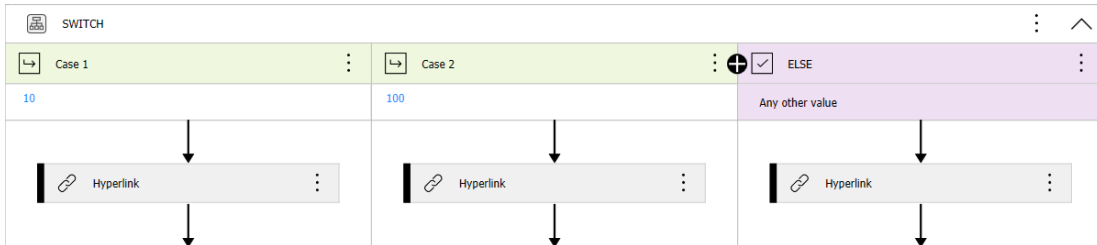
The condition within the **SWITCH** operator is a business rule whose result will point to the case that will be used. The case can be designated in two ways:

Variable referencing the case
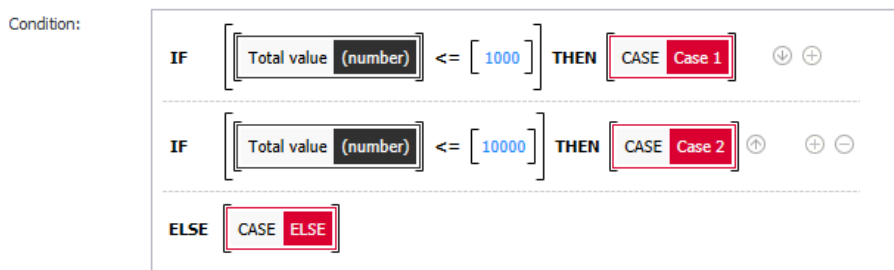
As with the **Workflow control** step, the result of the rule can be a variable that references one of the available cases. If the rule does not identify any case, the **ELSE** case will be used.

Value assigned to case
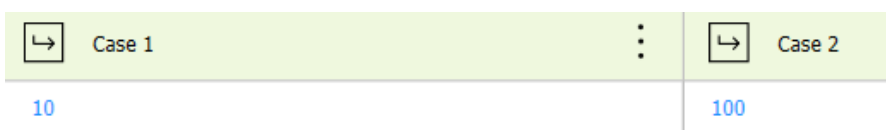
Each case may be associated with a value. The result of the condition will be compared with these values (from left to right). If a match is found, the matching case will be used. If the result does not match any case, the ELSE case will be used.

Configuration

Any number of cases may be created, and their names and order may be changed. The ELSE case is always at the end.

The operator must have at least 2 cases (including the ELSE case).

The **SWITCH** operator may be changed to the **Vertical layout** from the context menu.

5.12. Performance indicators on Dashboard

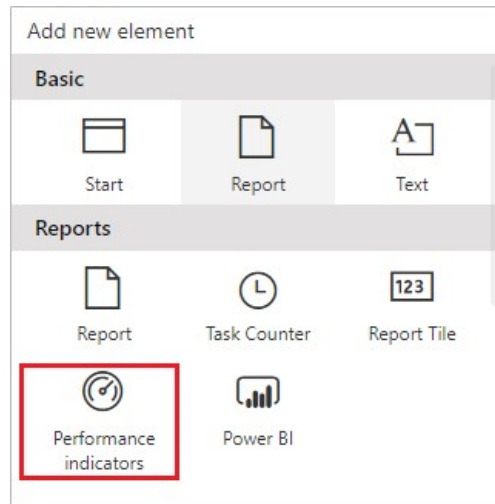Users can now add and configure the display of **Performance indicators** on the Dashboard in WEBCON BPS Portal. A new element has been made available in the Reports group to support this functionality:

Once the widget is added, a configuration window appears where users can select the desired performance indicator, set margins, and adjust horizontal align. They can also choose to group the indicators in the widget based on process (**Show groups**) and apply filters (**Show filters**) to compare indicator data from different periods.
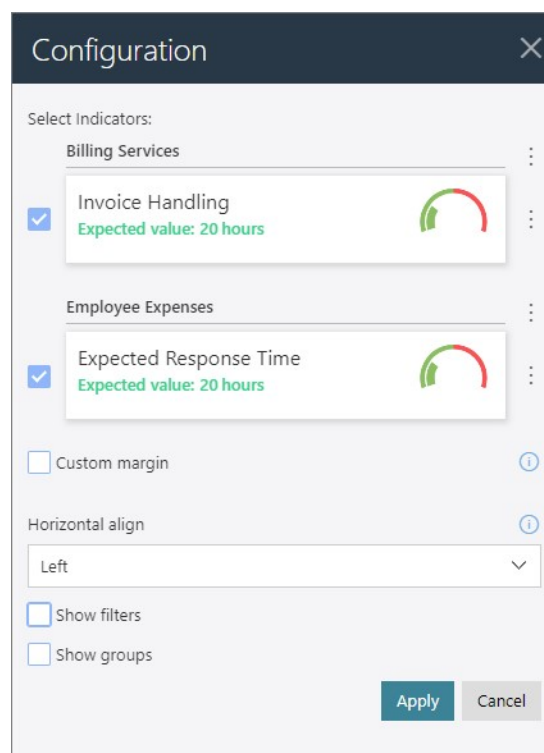
By default, performance indicators are displayed in alphabetical order by application processes, but this can be changed using the context menu located on the right-hand side (icon with three dots). It is possible to adjust the sequence of processes and their related performance indicators as well as individual indicators within a process.
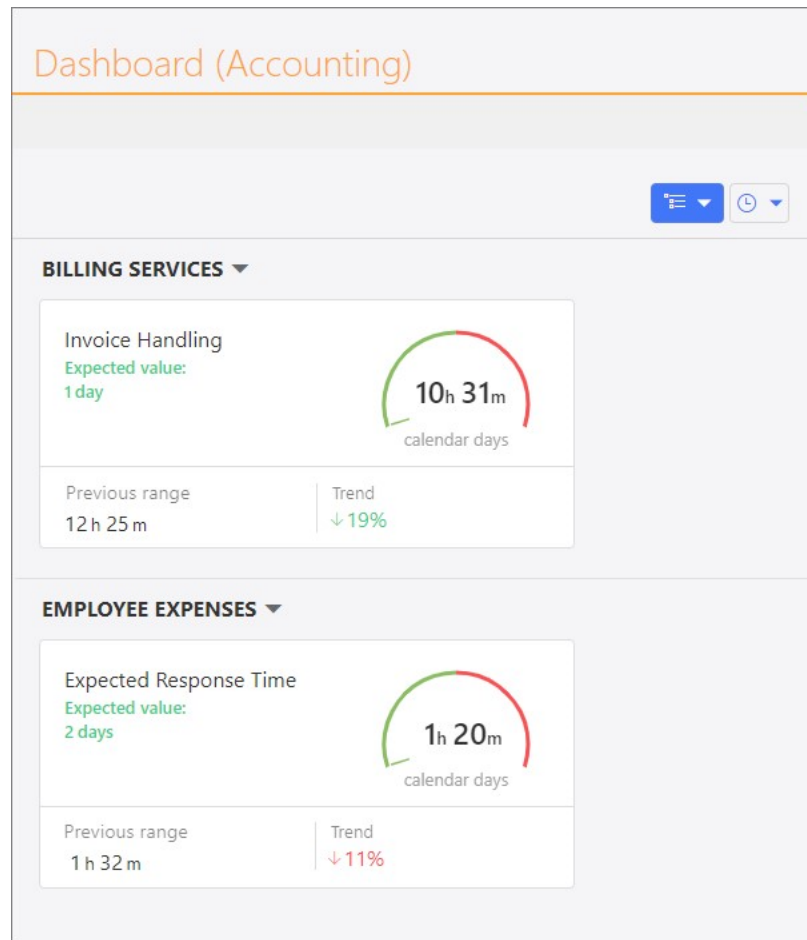
Availability and privileges

The new functionality is available to users with an active **WEBCON Advanced Analytics Framework** license. In addition to the global business administrator and the process business administrator, access to the data in the Performance indicators widgets on the Dashboards is granted to users with both global: **Workflow data read-only access** and process privileges: **Access and edit all workflow instances**, **Access all workflow instances and attachments**, as well as **Access all workflow instances (excluding attachments)**.

Note: as part of this change, the availability of analytical indicators in Portal (**Analytics** section) has been extended. Starting with this version of WEBCON BPS, users who have been granted **Workflow data read-only access** global privileges can also view these indicators.

5.13. General

- Communication with OneDrive has changed – it now uses the GraphServiceClient (Microsoft Graph) library. With this change, most HTTP codes are supported and appropriate error messages are returned.

- Added an index for the **Calendars** table, which should noticeably increase query speed.

5.14. Portal

- The values of **Picker fields** on the form and in reports will now support translations defined for both the full language and country code (en-GB, en-US, de-DE, etc.) and the shortcode (en, de, etc.).

- Romanian has been added to the list of basic interface languages in WEBCON BPS Portal.
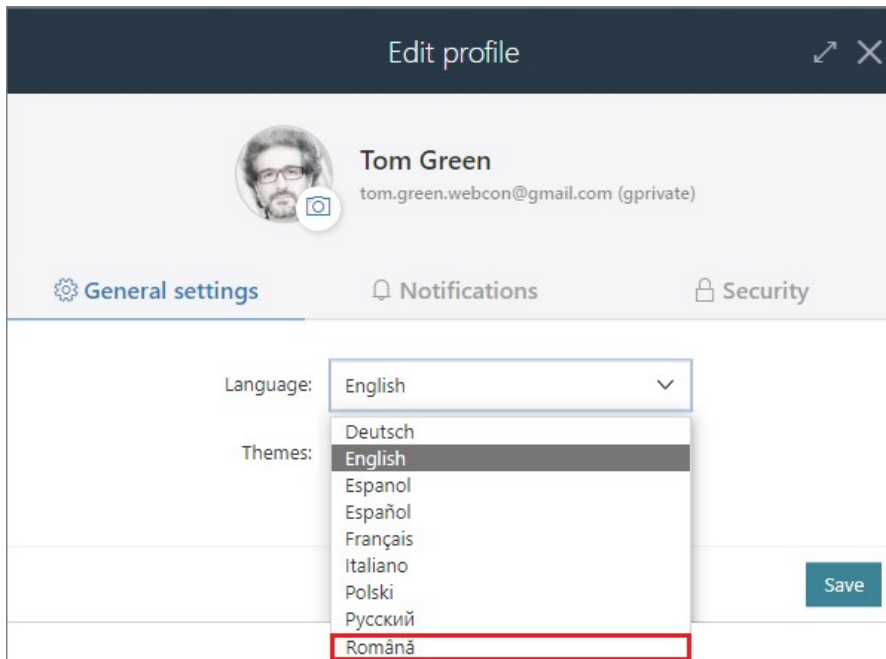
5.15. Designer Studio

- It is now possible to **Create process automation** from the context menu in the action configuration on a path or step.
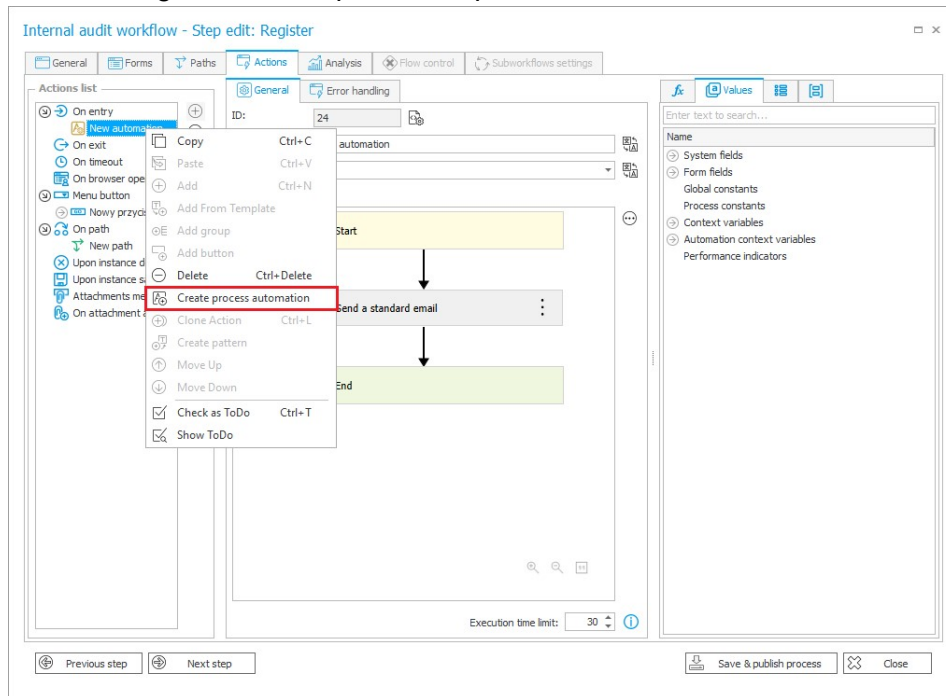
- It is now possible to specify whether a proxy defined in the system will be used to establish WEBCON BPS Portal network connections with the **Authentication provider**.
  Therefore, the configuration windows of the Azure Active Directory (AAD), ADFS, and OpenID Connect Authentication providers feature a new dedicated checkbox **Don't use proxy**.
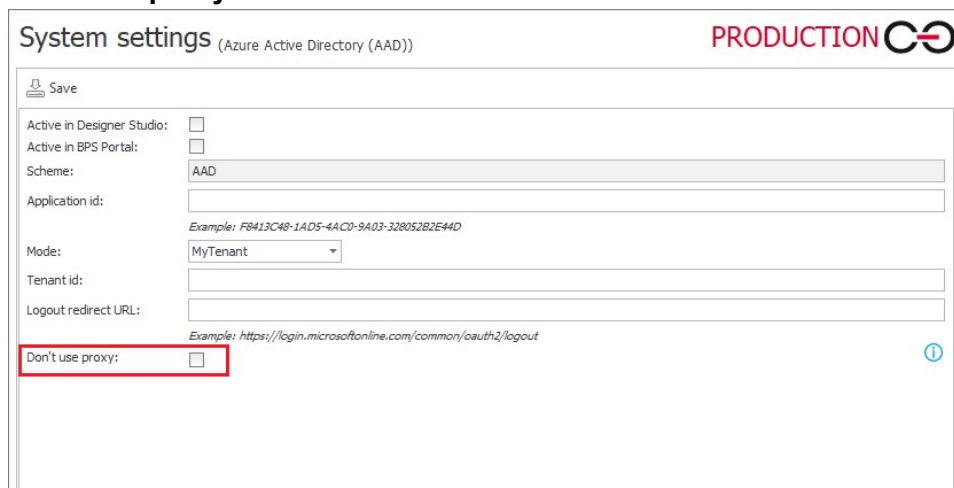
If this option is unchecked, but no proxy is defined in the **System settings**, authentication calls to the provider are made without employing a proxy.

- Added information in the main form field matrix on breaking settings inheritance in a respective step. Similarly to compact forms where this feature is already

available, the information is displayed after placing the pointer over the step column heading displayed in red italics.

5.16. Actions

- Introduced the ability to run a JS script following the **Run an SDK action** triggered from a **Menu button**.

5.17. Rules

- Added the ability to retrieve the value of the **Local attachments** column by means of **Form rules**. Such values are now returned in the format "AttachmentID#Name".

5.18. Data sources

- Added a new filter rule **IS ACTIVE** that returns only active groups and users. If a user or group is active, it returns the logic value "TRUE" and displays only active items. The rule is available in a newly created section **Users and groups** in the **Functions** tab of the expression editor which is visible only for the BPS users data sources.

5.19. API & SDK

- As part of the REST API functionality, it is now possible to add attachments directly to the local attachment column when starting and editing workflow instances.

- New methods have been added to the SDK, enabling the removal of values from the **Multiple lines of text** form field in **Append mode**, as well as values entered in the comment field.

- Introduced the ability to export all files contained in **SDK plugin packages** at once and then import them as a whole. Previously, only plugins used in the exported/imported process were included in the export/import operation.
  In addition, a **Usage** tab has been added to the configuration windows for **Plugin packages** and individual **Plugins**.
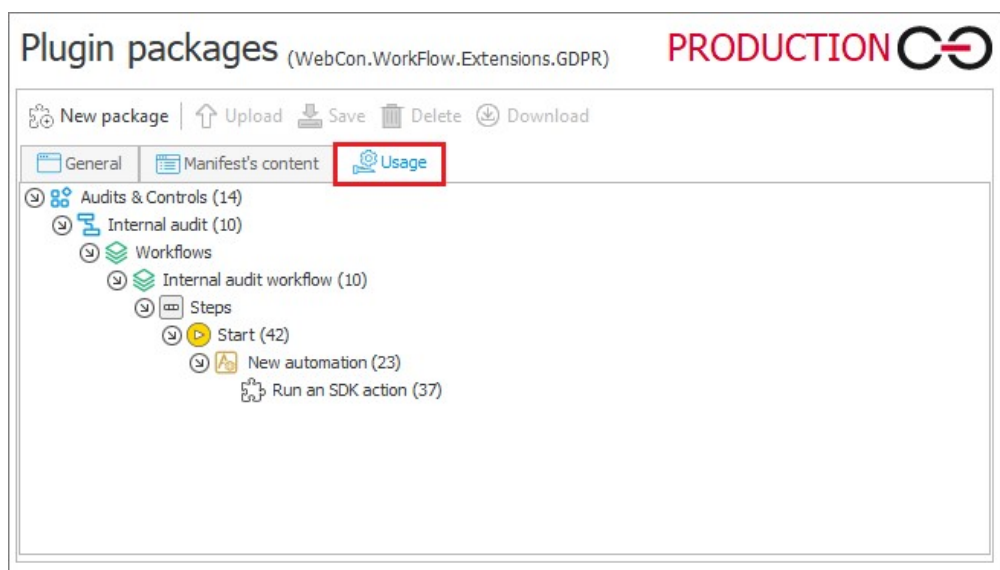
5.20. Updated components

- WEBCON BPS now supports the **ABBYY FineReader 12** component for recognition and creation of the text layer of documents in graphic formats. An older version of the ABBYY FineReader library can still be used in the system if it is installed in the environment.
The option to choose the version of the component that will be utilized by **WEBCON BPS Workflow Service** to recognize OCR files can be found in the global configuration of WEBCON BPS Designer Studio: **System settings -> Services configuration** -> **Text layer engine**.
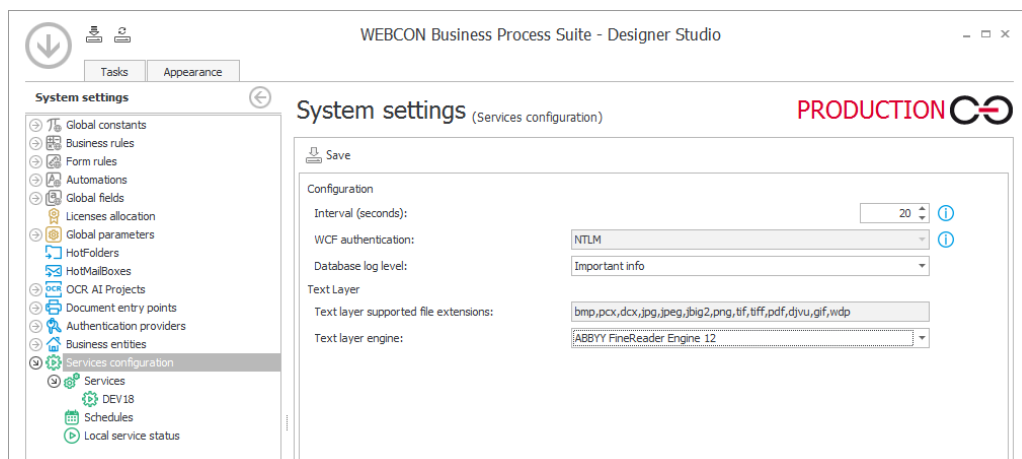
To select the newer version of **ABBYY FineReader 12** in the service configuration, it must be installed first. After upgrading the system to the latest version, **ABBYY FineReader Engine 11** will become the default.

Note: due to the higher resolution of the version 12 component, the text layers created by the version 11 and 12 components may differ. In particular, these differences affect the text coordinates of the resulting text layer, which in turn can affect the quality of recognition by OCR AI networks. If recognition quality degrades, it may be necessary to perform an OCR AI network teaching operation based on the new data.

6. Bug fixes

6.1. General

- Improved the script that adds the AutomationSessionExecutions table when migrating to a production environment. After the change, the migration will run correctly regardless of the installation size.

- Improved error handling when migrating **Active tasks** using the Installer. After the change, exceptions are handled in such a way that application errors do not occur.

- Fixed a deadlock problem in the procedures responsible for the checkout of elements in the system.

- The Designer Studio installer that is downloaded from Portal (from the user menu) has been digitally signed so that Windows Defender does not block the installation file.

- External components used to create .exe files downloaded from the browser for the installation package will now be signed with WEBCON's certificate to avoid being classified as malware by antivirus programs.

- OCR AI project templates now have an additional parameter for controlling the minimum acceptable probability threshold of recognizing a value in a given field.

- Fixed an issue that would prevent version 2021 R5 from being updated to version 2022 R4 and newer. This issue was caused by SDK actions configured to be triggered cyclically.

6.2. Portal

- Changed the message informing the user that they do not have permissions to display a **List of substitutions**.

- Fixed a bug that occurred after adding a JFIF file to the theme and setting that theme as a default one. The bug prevented changing and editing themes.

- Fixed an issue with displaying **Stacked** charts in **Reports**. Grouping did not work correctly – the bars overlapped each other and had the wrong width.

- Fixed errors that occurred while grouping data in **Reports** that used a **SearchIndex source**.

- Improved the order of loading configuration for the **Portal** container. Fixed an issue where environment variables were not taken into account.

- Improved loading of grouped data in reports when changing their views.

- The sensitive data that were previously displayed when Portal started and in the associated logs are now hidden.

- Fixed an issue with displaying workflow instances, reports, forms in relation to a group of languages (such as Swedish, Finnish, Croatian, Norwegian, Lithuanian) for which the default negative sign was minus (U+2212) and not the standard hyphen-minus (U+002D).

- Fixed an issue with searching dates on **Reports** using **Searchindex** as their source.

- Fixed an issue with displaying tasks delegated as part of a substitution in the **My tasks** view. Tasks would appear in the task list, but not in search results.

- Fixed a bug that prevented the correct display of reports when using the **Substitutes** functionality in **Acting on behalf of** mode.
In addition, when selecting the replaced person subordinate view and switching to **Direct subordinate's view**, the data of the respective subordinate are now correctly displayed.

- Fixed a bug that resulted in missing available values for the **Choice field** and **Choice tree** form fields in the **Mass actions** window in **Reports**.

- Fixed an issue with downloading files in **Reports** when the diagnostic mode is enabled.

- Fixed a bug that caused filter values to be displayed in different languages in SOLR search results. As long as the appropriate translations are available, after changing the language in the **Profile settings**, the names of the filtered fields (Application, Process, Workflow, Step, Form type) will be displayed in the specified language version.

- Fixed a bug that prevented saving changes to the **BPS Group** configuration in the **Admin panel**.
The issue arose when an inactive user (either deleted or deactivated in AD or AAD) was one of the group members.
To rectify the issue, a validation of BPS Group members was included when editing the group. Whenever a user, who is a BPS Group member, is inactive, a message displays indicating to remove them from the group before saving changes.

- Improved dynamic paging in **Reports** and **Searching structures**.

- Fixed a bug that prevented the diagnostic session report from being saved.

- Fixed a bug that prevented **Tenant ID** from being edited in the **Azure AD Synchronization** node of the **Admin Panel** for WEBCONAPPS-SaaS installations.

- The **SearchIndex source** option can no longer be selected for **Document templates** Reports.

- Corrected the URL redirecting to the login error page.

- Fixed incorrect display of **Legends** after cloning a **Chart** report view and placing it with the original view on the **Dashboard**.

- Fixed errors caused by date formatting after setting Portal to Danish language.

- Fixed an issue with the configuration of start buttons in **Reports**. The error allowed creating buttons with incomplete configuration, but now the validity of buttons will be checked.

- Improved the contextual help for the **Standard filters** in the configuration of **Reports**.

- Fixed an instance startup bug where, in the absence of a default business entity, the dedicated field was automatically populated with the data of the first company in the database.

- Improved filtering of data by form field value on a report for which the data source is a **Fixed value list**.

- Fixed an issue that occurred when adding attachments for a group of languages (such as Swedish, Finnish, Croatian, Norwegian, Lithuanian) where the default negative sign was minus (U+2212) instead of the standard hyphen-minus (U+002D).

- Improved filtering of **Calculated columns** in reports.

- Fixed a user synchronization error when configuring an application with API access in the **Admin Panel**. After the change, the user's data are retrieved from the **Default content database**, not the application database.

- The columns available in the **Additional filters** section, which are used to filter values in reports, now appear in alphabetical order, with system columns displayed first, followed by process columns.

- Fixed a bug where setting the ASPNETCORE_ENVIRONMENT variable to "Development" made it impossible to run WEBCON BPS Portal.

- Fixed a bug in the display of **Multiple lines of text** report columns in **Append mode** when the column view was limited to the **First 100 characters**. The bug caused key data, such as the date and author of the comment, to be hidden. After the fix, this type of data is not included in the 100-character limit.

- Fixed an issue where the superior would not see the substitutions configured for employees who report to them but are not their direct subordinates, even though the **Active of my subordinates** filter was set.

- When creating a substitution for another user (**Supervisor for subordinates**), an option has been added to save the definition of a substitution for an employee who reports to the person creating the substitution, but is not their direct subordinate.

- Improved the display of the **Multiple lines of text** column with **Append mode** enabled in the report when the **Do not wrap** option is selected. After the change, the column values do not overlap.

- When starting a workflow instance, the list of available business entities is limited to those covered by the user's privileges.

- Optimized the user privilege check when loading all applications on the WEBCON BPS Portal home page.

- Fixed an issue where text in the **Choice list** form field would overlap radio buttons, e.g. when working on a mobile device.

6.3. Form

- Fixed an error that occurred when the value of the **Multiple lines of text** form field in Rich Text formatting mode was checked by a regular expression (regex).

- Fixed an error that occurred when deleting an **Item list** row that was a **Choice field** (**Popup search window**). In case of an Item list with multiple rows of this type, an attempt to delete one of them resulted in unnecessary validation of other rows' values.

- Improved changing the value of the **Floating-point number** form field and Item list column to **EMPTY** using a Form rule.

- Fixed an error in the execution of the rule defined for the **Date and time** column of the **Item list** that occurred after the value of this column was cleared.

- Fixed a bug where a rule restricting the visibility of **Item list** columns only worked when the form data were reloaded, e.g. after a path transition.

- Optimized loading of the historical version of the workflow instance to save an attachment.

- Fixed an erroneous interaction in choice fields that used the **Target field** function. If a user manually changed a value set using a Target field and the form contained a visible **Data row** form field, the changed value would be reverted after using a path.

- Fixed an issue that prevented attachments from being deleted if their name contained an ampersand (&).
  This was caused by "&" being a special character in XML.
  The fix changes all "&" characters into their XML counterpart: "&".

- Added missing translations in the **Tab panel**.

- Fixed a bug that caused an error message to be displayed when trying to edit a workflow instance attachment in Mozilla Firefox.

- Fixed an error that occurred when changing the order of **Form fields** on the form. This fix will clear up duplicate field ordinal numbers, therefore the order of existing fields may change.

- Added an error message to be displayed in case of network problems, such as 502 "BAD GATEWAY", when working with the form.

- Fixed an issue that occurred when adding new rows to an **Item list** with grouping enabled.

- Fixed an issue with sorting dates and numbers in the **Data table** form field.

- Deletion of an attachment to a workflow instance will now automatically close its preview.

- Improved loading of a file preview in **OCR verification mode** when **working on behalf of another user**.

- Standardized the way the **Choice field** target values are set on the form in **OCR verification mode**. Previously, when that form field was configured to allow multiple values to be selected, the new value was added to the previous one – now it overwrites it.

- Fixed a bug that prevented the correct validation of form fields in case of their large number on the form, which was supported by the message "Error during saga execution".

- Increased the maximum value of a workflow instance version when assigning a task to users.

- Fixed a bug that prevented the correct display of the instance **History**. The bug occurred when the instance had an **Item list** whose number of rows changed between workflow steps.

- Fixed a bug that caused form fields related to a **Choice field** (in **Autocomplete** mode) to be automatically populated with incorrect values from the **Data source**. This was the case despite setting **Allow adding values not in data source** for the Choice field and attempting to populate it with new values.

- Fixed an error that prevented the user from choosing their business entity on the form.

- Corrected display of **Floating-point number** with suffix on the form – after the change the numeric value and suffix are aligned with each other.

- Adjusted the email preview width on the workflow instance to ensure that the entire content is visible.

- Fixed a bug that caused changing capital letters into underscores when editing an attachment.

- Fixed a bug that caused the hour value in the **Date and time** form field to be reset by 1 hour when saving the form. The error occurred in the Mozilla Firefox browser when the time zone set was (UTC+02:00) Helsinki, Kiev, Riga, Sofia, Tallinn, Vilnius.

- Fixed a bug in which, regardless of the entered configuration, the search panel in reports always displayed the **ID** and **Instance number** columns.

- Fixed an issue with importing data from an Excel sheet to an **Item list**. If the source sheet contains currency formatting, only the numerical value will be imported.

- Improved the refreshing of values in **Item list** columns that use a data source. Filters defined on these data sources that make use of other values entered on the form will correctly filter available values.

- Fixed a timeout error that occurred when removing workflow instances at the form level. Additionally, a related bug has been fixed that either prevented instance archiving or considerably extended its processing time.

- Improved the operation of **Query data source if variables return empty values** option available when configuring a **Choice field**.

- Fixed a bug that caused the display of the superior's login instead of their name in the subordinates view. This issue only occurred when the **Allow to work on behalf of another user** mode was enabled.

6.4. Designer Studio

- Fixed a bug that prevented the display of an error message when clicking the **Create universal rule** button while attempting to create a universal rule that refers to an **Item list** column.

- Fixed an issue that prevented **Mass notifications** from being sent if they had the **Use custom send rules for user notifications** option enabled. The error occurred when using "Date of task creation" and "Date of task modification" properties.

- Fixed a bug that occurred after pressing the **Show** button in the SQL query editor.

- Fixed a bug that caused duplicate automation IDs when generating process documentation.

- Changed cursor behavior for long SQL queries so that copying code snippets in the editor does not take the user to the very beginning of the query.

- Fixed a bug that occurred when importing an application with form rules containing regular expressions (regex) with values in curly brackets "{ }". When the application was imported, the values in the brackets were replaced with "0".

- If the **Dynamic** option is inactive in the configuration of task creation, any field and column settings for it will be cleared.

- Fixed an error that occurred during application export when the process included a form field whose value was checked by a regular expression (regex) containing curly braces "{ }".

- Restored correct resetting of the counter of erroneous executions after activating the previously disabled cycle of actions in WEBCON BPS Studio.

- Fixed an issue that occurred during process import and prevented the transfer of the **Chart** report configuration, namely its **Label description** and **Grouping** settings, to the target environment.

- Fixed an issue that prevented replacing a tag in the configuration of the **Hyperlinks Start Element** function after importing an application.

- The startup time of WEBCON BPS Designer Studio has been reduced on machines with Microsoft Defender Antivirus running.

- Fixed an error that occurred when defining an **Insert condition (SQL)** for an action executed **On timeout**. After the change, the tag in the SQL expression is correctly replaced with the BPS object/label (tag name + its variant).

- Fixed a process export error that occurred as a result of deselecting an application checkbox in the list of exported elements, going to the **Plugin packages selection** step, and then returning to the **Related element** step in the wizard.

- Fixed an error that occurred when trying to switch from the last to the first step of a workflow in the step preview (**Next step** button).

- It is now possible to change the order of the **Active** column in a report based on data from a **Dictionary process** and after specifying a certain **Form type** in the report configuration.

- The email message sent by the system for the **Rating scale** form field will display the configured question, not the form field name.

- Fixed a crash caused by duplicates in the TranslateLanguages table. Added a mechanism that prevents future duplicates.

- Removed a bug that provided extra, undue license for Designer Studio in addition to the one standardly available in the Enterprise license package. So far, the second user who opened Designer Studio received an undue, additional license for Designer Studio.

- Fixed a bug that caused the **Form rule editor** window to close in **JavaScript** mode when the "Enter" key was pressed in the function search area.

- Fixed a bug that caused instances imported with the **Dictionary process** to be assigned to the wrong business entity.

- Improved navigation through the **System settings** using the directional keys.

- Added an operation to check if a value is selected in the **Data Source** section when saving the configuration of the **Update item list values** and **Replace item list** actions. If no data source is specified, a corresponding message is displayed.

- The unsupported **{PATH:_____}** tag will no longer be replaced by values in WEBCON BPS Designer Studio.

- During export/import of an application, the contents of the **Documentation** fields in the process configuration are no longer parsed for the presence of tags specifying process variables. The previous operation could result in displaying incorrect configuration message during export.

- Fixed an error that occurred during application import and caused the following exception: "Message=Input string was not in a correct format". This error was caused by a forbidden special character in the default German translation. This translation has been fixed.

- The context menu available for automations configured in the **Action list** section has been customized to match the event in the context of which the automation is triggered.

- Improved cloning of paths with automations configured using the **For each** operator.

- Fixed an error in the execution of the **Generate an Excel file** action in the **Update of existing attachment** mode, which resulted in processing attachments of a different category than the one defined, or in no processing at all.

- Fixed a bug where tags available under **Collection columns** were not correctly replaced with the corresponding values in a cyclic action configured with the **For each** operator.

- Fixed an error that prevented tags from being replaced with corresponding form field values in the **Send custom email** action template after importing an application from another environment and when the form field ID was negative. The same error occurred when this action was embedded in **Global automation**.

- Fixed an error that prevented replacing a tag in the **OpenElement** JavaScript function (the **Hyperlinks** group) in the configuration of the **Start a subworkflow** action after importing an application. The same error occurred under similar conditions for the **Data table** form field.

- Improved communication between WEBCON BPS Portal and WEBCON BPS Designer Studio by including the PortalRunningAddress parameter in HTTP methods.

- Resolved an issue with exporting applications when the number of defined **BPS groups** is significant (more than 32 thousand).

- Fixed a bug where the context of the **Variable editor** remained the same after leaving the configuration of automations based on the **For each** operator.

6.5. Actions

- Fine-tuned the exceptions for the **Insert condition (SQL)** in the action executed **On timeout** and in the **Date and time** form field.

- Fixed an error in the execution of the **Add a new list element** action that caused the action to add only one row, even though the query from its configuration returned more.

- Fixed an issue with the **Generate an Excel file** action not using the correct template.

- Fixed an issue that blocked **Automations** from being added on entry to a step. Improved the mechanism that checks if an Automation was already configured for the given trigger.

- The ability to create/add a destination file without an assigned category (**None**) has been restored in the configuration of actions for adding and modifying attachments. This option will always be available regardless of the source file's category settings.

  The assignment of attachments to categories in the **Add attachment** action has been enhanced. If the SQL query includes a category, the category specified in the **Destination file settings** is ignored and the category from the query is assigned instead.

- Fixed a bug in token retrieval when the defined authentication type is **OAuth2 App -> API**.

- Fixed an error in the execution of the **Generate/Update a Word file** action in update existing file mode that was triggered from the **Attachments menu**.

- Fixed an error in executing the **Print a barcode label** action triggered from the **Menu button** by a user who had privileges to read an instance but not to edit it.

- Information that a user's **Unlimited Solutions Access** license was revoked upon granting them the **Single-Use Access** license will now be logged in the **Manage BPS user licenses** action.

- Improved the handling of small attachments < 4 MB by OneDrive actions. An error prevented 0 B files from being edited.

- Fixed a bug that occurred when transferring attachments from the parent workflow using the **Add attachment** action.

- Fixed a bug where executing the **Generate an Excel file** action from a template resulted in the creation of a file whose configured name was replaced with a default one.

- Corrected the message that appears in the workflow instance history when the action **Delete BPS user** is triggered and no user is found.

- Enhanced the WSDL verification when configuring **SOAP** data sources and the **Invoke SOAP Web service** action. When the WSDL definition contains complex type table that is unsupported by the system, a warning message is displayed and the definition of such a table is not loaded.

- Improved the way that privileges are granted to edit/read files on OneDrive. Only properly authorized users will now be able to edit such files.

- Fixed a bug that, despite granting appropriate privileges to the **BPS group**, blocked the ability of members of that group to edit a file placed on OneDrive with the **Start editing a file using OneDrive** action.

- If the **Overwrite value** box is checked in the configuration of the **Update related workflow instance** action, executing the action results in removing form fields with empty values from the related workflow instance.

- Blocked ability to select a file to edit for the action **Start editing a file using OneDrive** configured **On attachment add**. The action will be executed in the context of the attachment for which it was triggered.

- Unified the operation of the **Change value of single field** and **Change values of multiple fields** with respect to empty entries. After the change, it will be possible to clear the field values using both actions.

- Fixed a bug that caused the **Invoke SOAP Web service** action to set the form field value to "0" instead of the configured empty value.

- Fixed a bug where the **Hyperlink** action prevented an instance from being edited (due to lack of privileges).

- Fixed a bug that caused the callstack to be missing in the log, despite selecting the **Log execution** checkbox in the **Invoke REST Web service** action properties.

- The layout of the controls in the **Convert Word to PDF** action configuration window has been changed to be on the same line as the **PDF/A file** checkbox.

- Aligned the operation of the **Add a substitution** action configured in Basic and SQL query modes – in both cases, if the specified **Substitution start date** is < **today**, this date will automatically be replaced with the current date.

- Fixed an issue in the **Change value of single field** action that prevented it from changing the values of **E-mail** and **Image** type form fields.

- The configuration of **Invoke SOAP Web service** actions will now display parameters that are an enum within a table of complex types.
Additionally, unsupported parameter types (i.e. table of tables or complex types

within a table of complex types) will be shown in the configuration if they have a configured mapping.

- Fixed a bug that prevented the parent workflow ID from being correctly set using the **Change value of single field** action.

6.6. Rules

- Fixed an error of the **MAX** and **MIN** functions where numbers greater than 1000 were treated as dates.

- Fixed an issue that occurred when using **SELECT VALUES** and **GET ROW** functions on an **Item list** that contained no valid columns.

- Improved the creation of **Business rules** using the **SQL Command** function – when editing, the focus is automatically moved to the edit button (three-dot icon) next to the function name.

- Fixed a bug that prevented the execution of a rule created based on an **SQL Command** when Turkish was selected as the interface language in Portal.

- Improved the **SET CELL FONT SIZE** function available for **Form rules** when no unit is specified. The default font size is now pixel (px).

- Optimized execution time and number of **Business rules** executed under load conditions, i.e. with a large number of concurrent users working in the system.

- Fixed an issue with the **SET ROW VALUE** function executed on value change. If the changed value was used within the function, the old value was loaded instead.

- Improved the configuring of **Constants** in **Rules**. From the context menu of a constant used in a rule, it is now possible to switch to another constant from the same group.

- Fixed an error that caused the **SELECT VALUES** function defined in the rule to retrieve values from the last row of the **Item list** instead of the specified row. The error occurred when the above rule was used in the configuration of the **Change value of single field** action, followed by the **For each** operator in the automation.

6.7. Data sources

- Fixed an error that occurred when setting an **EMPTY** value in a query that filters a **Fixed values list** data source in the configuration of form fields such as **Choice field** or **Data table**.

- Added the ability to select elements from the **BPS internal view** while **Working on behalf of a substituted person** and the **Access to data in the context of the system account** is enabled in the source configuration. This feature will be available regardless of the substitution settings in the process.

- Improved handling of non-integer numbers (e.g. tinyint, smallint) and non-decimal floating-point numbers in data sources.

- Added Polish translation of the last column of the **Dictionary** data source. After the change, the column name is "ID elementu w URL".

- After choosing the address/location of a WSDL, if there is an error when processing the WSDL, any errors will be displayed in a pop-up window.

- Fixed an issue in the **BPS internal view** data source created for the Sample application.

- Fixed missing button tooltips in the **Response** tab of the **REST Web Service** data source configuration.

- Expanded the message of ORA-00904 error that occurs when querying a database to include the final contents of the Oracle query. Furthermore, a tooltip has been included in the Oracle data source configuration window to notify users of unsupported column aliases enclosed in quotation marks within queries.

- Optimized data retrieval from the **BPS internal view** data source narrowed down to **Selected workflows and steps** of the process when this data source is used in the **Choice field** configuration with a defined filter query.

- Fixed a bug that occurred while updating database during migration from the version 2022.1.4.111 to 2023.1.2.44 and produced the error „Migration class error (The given key was not present in the dictionary)".

- Fixed a bug that occurred when trying to reference **Dictionary processes** where form field names contained the characters ":", "}", "{", so that they could not be converted correctly to XML.

6.8. Add-In

- Improved translations of the names of the WEBCON BPS Word Modern add-in tabs in the windows that open when clicking on these tabs.

- Fixed a bug that resulted in inability to log in to the Outlook Classic add-in after selecting **Global logout** in WEBCON BPS Portal.

6.9. Service

- **Instance history** entries will no longer be created for automations configured **On Timeout** and for which no actions are executed.

- Improved credential validation when configuring user list synchronization with Active Directory.

- Fixed a bug in the DocumentManager class constructor which can be employed by the cyclical **Run an SDK action** actions. The bug produced an exception when constructing an object.

6.10. Designer Desk

- Fixed a bug that allowed a new prototype element (e.g. start button, report) to be added even though the prototype was opened in read-only mode.

- Fixed a bug that prevented the action description entered in the **Properties** window from being saved after closing the window.

6.11. API & SDK

- Fixed an issue related to insufficient privilege levels that prevented data from being loaded via **TemporaryEntitiesManager**.

- Fixed a bug where the **History of changes** for **Plugin packages** imported into the environment with the application/process did not contain any entries.

WEBCON BPS 2023 R2

history of changes for version 2023.1.2.123

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1. Before upgrading WEBCON BPS

1.1. Important information

- If the changelog contains a section titled "Changes to existing features", please verify whether the changes will impact your implemented system in any way.

- To avoid interruptions in the system operation, make sure that WEBCON BPS licenses are up to date. To do this, verify the availability of the **WEBCON BPS Server 2023** license in the license report. This report is available from **WEBCON BPS Designer Studio** -> system menu in the upper left corner -> **Licenses**. Current licenses must be downloaded if necessary.

2. Changes to existing features

2.1. Visibility of applications/processes when creating and editing substitutions

The rules for applications and processes that a user can specify when creating a substitution for themselves or another user have been changed. The update applies to both **Task delegation substitutions** and **Working on behalf of substituted person with full access.**

The list of applications and processes for which a substitution can be created varies for users with different privilege levels. The updated rules are as follows:

- If **a user** creates a substitution for themselves (using the **New substitution for me** option), they can select the processes where the substitution will be active based on the application privileges. This means that all processes within the application will be available for selection, provided that substitutions are enabled in the process configuration and the user has any application privileges. Process privileges for that user are not taken into account. The list of applications/processes is not limited by business entities.

- If a **Superior** creates a substitution **for subordinates** (following the subordinate structure configuration), then, as previously explained, they can select processes from all applications for which the subordinate, i.e., the replaced person, has any privileges. The list of applications/processes is not limited by business entities.

- If a **System administrator** or a user who is authorized to create substitutions for anyone creates a substitution for another person (using the **Specified users for anyone** option in the substitution configuration), they can select any processes with enabled substitutions among all applications. The administrator can also select any process with enabled substitutions when creating a substitution for themselves.

The same rules apply when editing an existing substitution.

The list of applications and processes available for creating or editing a substitution is updated each time the **Replaced person** is changed.

2.2. Service

- Added the possibility to add the previously unavailable service roles when configuring WEBCON BPS installation in Docker and in the case of running locally the service directly from the .exe file. In addition, modified the system behavior in the situation where the service with the **Basic features** role assigned has not communicated with content database for over 45 s. Now, in such case this role is taken over by other service if it has been selected in its configuration.

3. Security fixes

3.1. Updated components

- The following components have been updated:
  - Azure.Identity to version 1.10.3,
  - Azure.Core to version 1.35.0

  due to a vulnerability patch:

  CVE-2023-36414, CWE-94 – https://security.snyk.io/vuln/SNYK-DOTNET-AZUREIDENTITY-6009155 .

4. Bug fixes

4.1. General

- Fixed a bug that prevented searching the WEBCON BPS Help page in Polish for phrases containing "ń".

4.2. Portal

- Improved the display of the **Multiple lines of text** column with **Append mode** enabled in the report when the **Do not wrap** option is selected. After the change, the column values do not overlap.

- Fixed an issue that occurred when adding attachments for a group of languages (such as Swedish, Finnish, Croatian, Norwegian, Lithuanian) where the default negative sign was minus (U+2212) instead of the standard hyphen-minus (U+002D).

4.3. Form

- Fixed an error that occurred when deleting an **Item list** row that was a **Choice field** (**Popup search window**). In case of an Item list with multiple rows of this type, an attempt to delete one of them resulted in unnecessary validation of other rows' values.

- Fixed an error that occurred when the value of the **Multiple lines of text** form field in Rich Text formatting mode was checked by a regular expression (regex).

- Fixed a bug that prevented switching between **Data table** pages with the arrows after refreshing the data in this form field.

- Increased the maximum value of a workflow instance version when assigning a task to users.

- Fixed a bug that prevented the correct display of the instance **History**. The bug occurred when the instance had an **Item list** whose number of rows changed between workflow steps.

- Fixed an issue that occurred when adding new rows to an **Item list** with grouping active.

- Fixed missing translations in the **Tab panel**.

4.4. Designer Studio

- It is now possible to change the order of the **Active** column in a report based on data from a **Dictionary process** and after specifying a certain **Form type** in the report configuration.

- Fixed an error that occurred when defining an **Insert condition (SQL)** for an action executed **On timeout**. After the change, the tag in the SQL expression is correctly replaced with the BPS object/label (tag name + its variant).

- Fixed a bug that caused the **Connection** description to be replaced with the Connection name each time it was edited. After the change, the Description and Name fields behave independently.

- Improved communication between WEBCON BPS Portal and WEBCON BPS Designer Studio by including the PortalRunningAddress parameter in HTTP methods.

- Fixed a bug where tags available under **Collection columns** were not correctly replaced with the corresponding values in a cyclic action configured with the **For each** operator.

- Fixed a error that prevented tags from being replaced with corresponding form field values in the **Send custom email** action template after importing an application from another environment and when the form field ID was negative. The same error occurred when this action was embedded in **Global automation**.

4.5. Actions

- Fixed an issue that blocked **Automations** from being added on entry to a step. Improved the mechanism that checks if an Automation was already configured for the given trigger.

- Fixed an issue with the **Generate an Excel file** action not using the correct template.

- Fixed a bug that, despite granting appropriate privileges to the **BPS group**, blocked the ability of members of that group to edit a file placed on OneDrive with the **Start editing a file using OneDrive** action.

- Unified the operation of the **Change value of single field** and **Change values of multiple fields** with respect to empty entries. After the change, it will be possible to clear the field values using both actions.

- Fixed a bug where the **Hyperlink** action prevented an instance from being edited (due to lack of privileges).

- Fixed a bug that caused the **Invoke SOAP Web service** action to set the form field value to "0" instead of the configured empty value.

4.6. Rules

- Fixed a bug that prevented the execution of a rule created based on na **SQL Command** when Turkish was selected as the language in Portal.

- Fixed an error that caused the **SELECT VALUES** function defined in the rule to retrieve values from the last row of the **Item list** instead of the specified row. The error occurred when the above rule was used in the configuration of the **Change value of single field** action, followed by the **For each** operator in the automation.

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history of changes for version 2023.1.2.99

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1. Before upgrading WEBCON BPS

1.1. Important information

- If the changelog contains a section titled "Changes to existing features", please verify whether the changes will impact your implemented system in any way.

- To avoid interruptions in the system operation, make sure that WEBCON BPS licenses are up to date. To do this, verify the availability of the **WEBCON BPS Server 2023** license in the license report. This report is available from **WEBCON BPS Designer Studio** -> system menu in the upper left corner -> **Licenses**. Current licenses must be downloaded if necessary.

2. Changes to existing features

2.1. Actions

- Enhanced the WSDL verification when configuring **SOAP** data sources and the **Invoke SOAP Web service** action. When the WSDL definition contains complex type table that is unsupported by the system, a warning message is displayed and the definition of such a table is not loaded.

3. Security fixes

3.1. Updated components

- SkiaSharp component was updated to version 2.88.6 due to the following vulnerability: https://security.snyk.io/vuln/SNYK-DOTNET-SKIASHARP-5922114

4. Bug fixes

4.1. Portal

- Fixed a bug that prevented saving changes to the **BPS Group** configuration in the **Admin panel**.
  The issue arose when an inactive user (either deleted or deactivated in AD or AAD) was one of the group members.
  To rectify the issue, a validation of BPS Group members was included when editing the group. Whenever a user, who's a BPS Group member, is inactive, a message displays indicating to remove them from the group before saving changes.

- Improved dynamic paging in **Reports** and **Searching structures**.

- Fixed an issue with the configuration of start buttons on **Reports**. The error allowed creating buttons with incomplete configuration - the validity of buttons will now be checked.

- Fixed incorrect display of **Legends** after cloning a **Chart** report view and placing it with the original view on the **Dashboard**.

- Fixed errors caused by date formatting after setting Portal to Danish language.

- Fixed a bug that prevented the diagnostic session report from being saved.

- The **SearchIndex source** option can no longer be selected for **Document templates** Reports.

- Fixed a bug that produced messages in different languages in the authentication window that enables access to a shared instance. As a result, the messages confirming user identity were shown in the language consistent with the Internet browser settings, while the messages informing about blocked access were displayed in the language configured in Portal. Currently, the message language has been unified to align with the browser language settings in both cases.

- Changed the message informing the user that they do not have permissions to display a **List of substitutions**.

- Corrected the URL redirecting to the login error page.

- Fixed a bug that prevented **Tenant ID** from being edited in the **Azure AD Synchronization** node of the **Admin Panel** for WEBCONAPPS-SaaS installations.

4.2. Form

- Improved loading of a file preview in **OCR verification mode** when **working on behalf of another user**.

- Fixed an issue with sorting dates and numbers in the **Data table** form field.

- Fixed a bug that caused the hour value in the **Date and time** form field to be reset by 1 hour when saving the form. The error occurred in the Mozilla Firefox browser when the time zone set was (UTC+02:00) Helsinki, Kiev, Riga, Sofia, Tallinn, Vilnius.

- Standardized the way the **Choice field** target values are set on the form in **OCR verification mode**. Previously, when that form field was configured to allow multiple values to be selected, the new value was added to the previous one – now it overwrites it.

- Fixed an issue that prevented attachments from being deleted if their name contained an ampersand (&).
  This was caused by & being a special character in XML.
  The fix changes all & characters into their XML counterpart, &

- Fixed a bug that prevented the correct validation of form fields in case of their large number on the form, which was supported by the message "Error during saga execution".

- Fixed an error that prevented the user from choosing their business entity on the form.

- Fixed a bug that caused form fields related to a **Choice field** (in **Autocomplete** mode) to be automatically populated with incorrect values from the **Data source**. This was the case despite setting **Allow adding values not in data source** for the Choice field and attempting to populate it with new values.

- Fixed an error that occurred when changing the order of **Form fields** on the form. This fix will clear up duplicate field ordinal numbers, therefore the order of existing fields may change.

4.3. Designer Studio

- Fixed a crash caused by duplicates in the TranslateLanguages table. Added a mechanism that prevents future duplicates.

- Fixed an error that occurred when trying to switch from the last to the first step of a workflow in the step preview (**Next step** button).

- Fixed a bug that was preventing the display of an error message when clicking the **Create universal rule** button while attempting to create a universal rule that refers to an **Item list** column.

- Fixed a bug that caused instances imported with the **Dictionary process** to be assigned to the wrong business entity.

4.4. Actions

- Improved the way that privileges are granted to edit/read files on OneDrive. Only properly authorized users will now be able to edit such files.

- Fixed a bug in the **Add a text layer** action where the value specified in the **Number of initial pages** field was ignored and a text layer was created for the entire document.

- If the **Overwrite value** box is checked in the configuration of the **Update related workflow instance** action, executing the action results in removing form fields with empty values from the related workflow instance.

- Blocked ability to select a file to edit for the action **Start editing a file using OneDrive** configured **On attachment add**. The action will be executed in the context of the attachment for which it was triggered.

- Fixed a bug that occurred when transferring attachments from the parent workflow using the **Add attachment** action.

- Fixed a bug where executing the **Generate an Excel file** action from a template resulted in the creation of a file whose configured name was replaced with a default one.

4.5. Rules

- Fixed an issue with the **SET ROW VALUE** function executed on value change. If the changed value was used within the function, the old value was loaded instead.

4.6. Data sources

- Improved handling of non-integer numbers (e.g. tinyint, smallint) and non-decimal floating-point numbers in data sources.

4.7. Designer Desk

- Fixed a bug that prevented the action description entered in the **Properties** window from being saved after closing the window.

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history of changes for version 2023.1.2.68

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1. Before upgrading WEBCON BPS

1.1. Important information

- If the changelog contains a section titled "Changes to existing features", please verify whether the changes will impact your implemented system in any way.

- To avoid interruptions in the system operation, make sure that WEBCON BPS licenses are up to date. To do this, verify the availability of the **WEBCON BPS Server 2023** license in the license report. This report is available from **WEBCON BPS Designer Studio** -> system menu in the upper left corner -> **Licenses**. Current licenses must be downloaded if necessary.

2. New features

2.1. General

- Added an index for the **Calendars** table, which should noticeably increase query speed.

3. Bug fixes

3.1. General

- Fixed an issue that would prevent version 2021 R5 from being updated to version 2022 R4 and newer. This issue was caused by SDK actions configured to be triggered cyclically in a transaction.

3.2. Portal

- Fixed an issue with displaying workflow instances, reports, forms in relation to a group of languages (such as Swedish, Finnish, Croatian, Norwegian, Lithuanian) for which the default negative sign was minus (U+2212) and not the standard hyphen-minus (U+002D).

- Fixed an issue with displaying substitution tasks in the **My tasks** view. Tasks would be shown in the task list, but would not appear in search results.

- Fixed an issue with values in **Choice field** and **Choice tree** form fields not appearing in the **Mass actions** window on **Reports**.

- The sensitive data that were previously displayed when Portal started and in the associated logs are now hidden.

- Improved the order of loading configuration for the **Portal** container. Fixed a situation where environment variables would not be taken into account.

- Improved readability of values in pie and donut chart **Report views**. The tooltip that appears when the cursor is hovered over a value in a chart now includes both the chart series name and the label name.

- Fixed an issue with displaying **Stacked** charts on **Reports**.

3.3. Form

- Improved the operation of **Query data source if variables return empty values** option available when configuring a **Choice field**.

- Fixed an error of the **MAX** and **MIN** functions where numbers greater than 1000 were treated as dates.

- Fixed a timeout error that occurred when removing workflow instances at the form level. Additionally, an associated bug has been fixed that either prevented instance archiving or extended its processing time considerably.

- Fixed an issue with importing data from Excel to an **Item list**. If the source sheet contains accounting formatting, only the number itself will be imported.

- Improved the refreshing of values in **Item list** columns that use a data source. Filters defined on these data sources that make use of other values entered on the form will correctly filter available values.

3.4. Designer Studio

- Fixed an error that occurred during application export when the process included a form field whose value was checked by a regular expression (regex) containing curly braces "{ }".

- Fixed a bug that prevented the preview of an email template when the **SELECT VALUES** function had been inserted into it.

- Fixed mechanism responsible for resetting the counter of incorrect executions after activating the disabled cycle of cyclical actions in WEBCON BPS Studio.

- Fixed a bug that occurred after pressing the **Show** button in the SQL query editor.

- Fixed a bug that occurred when importing an application with form rules containing regular expressions (regex) with values in curly brackets "{ }". When the application was imported, the values in the brackets were replaced with "0".

- Fixed a bug that caused duplicate automation IDs when generating process documentation.

- Fixed an issue that prevented **Mass notifications** from being sent if they had **Use custom send rules for user notifications** enabled. The error occurred when using "Date of task creation" and "Date of task modification" properties.

3.5. Actions

- Fixed a bug that prevented the parent workflow ID from being correctly set using the **Change value of single field** action.

- Aligned the operation of the **Add a substitution** action configured in Basic and SQL query modes – in both cases, if the specified **Substitution start date** is < today, this date will automatically be replaced with the current date.

- The configuration of **Invoke SOAP Web service** actions will now display parameters that are an enum within a table of complex types. Additionally, unsupported parameter types (i.e. table of tables or complex types within a table of complex types) will be shown in the configuration if they have configured mapping.

3.6. Data sources

- Fixed a bug that occurred while updating database during migration from the version 2022.1.4.111 to 2023.1.2.44 and produced the error „Undefined migration class error. (The given key was not present in the dictionary.)".

- Fixed a bug that occurred when trying to reference **Dictionary processes** where form field names contained the characters ":", "}", "{", so that they could not be converted correctly to XML. This has been fixed by replacing these characters with the tilde "~".

3.7. Service

- Fixed a bug in the DocumentManager class constructor which can be employed by the cyclical **Run an SDK action** actions. The bug produced an exception when constructing an object.

WEBCON BPS 2023 R2

history of changes for version 2023.1.2.44

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1. Before upgrading WEBCON BPS

1.1. Important information

- If the changelog contains a section titled "Changes to existing features", please verify whether the changes will impact your implemented system in any way.

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- It is not possible to update to the newest version from a version older than **2019 R1** or any system that has been installed using the **WEBCON BPS SharePoint Classic** mode.
  Please contact our support team to discuss the most optimal strategy for updating your environments to the newest version.
  Information about possible scenarios can be found on our community site https://community.webcon.com.

- Changes introduced in this version will break the compatibility of the Export-Import mechanism. Exported process packages created in versions **2023 R1** and older cannot be imported to the newest system version. In order for an import to be possible, update the environment to the newest version and export the processes again.

2. Information

2.1. Important information

- Fixed an issue that caused instances indexed in the **SearchIndex** database to have their dates converted to UTC - which could cause incongruencies when searching and filtering data on **Reports** that use a **SearchIndex source**.

  The error occurred from version 2022.1.4.174 to 2022.1.4.274, and in all published versions of 2023 R1.

  In order to fix existing date indexes, add **Reindex all databases** (or a specific database) to the **SOLR indexer queue**.

2.2. Portal

- Improved the efficiency of **Portal**.
  The size of CSS used on Portal has been reduced from 12 MB to 3.5 MB.
  The size of JavaScript used on Portal has reduced from 50 MB to 20 MB.
  This should improve the speed with which Portal is first loaded, especially on mobile devices.

2.3. Actions

- **On timeout** automatons can now use the following actions:
  - **Create a site**,
  - **Create a list**,
  - **Add a new list element**.

2.4. Service

- It is now possible to enter up to 200 instead of 50 characters in the **Account** (HM_ExchangeUserLogin) field used to configure connection to the Microsoft Exchange Server.

3. Changes to existing features

3.1. General

- Maintenance work has been done on the database indexes. Unused indexes have been removed and new indexes have been added to increase the performance of SQL queries in some cases. Unused IsDeleted columns have also been removed from some of the tables.

3.2. Portal

- On **Reports** that use **SearchIndex** as their source of data, the search in **Multiple lines of text** (WFD_AttLong) fields has been changed from SortAttLong to AttLong.

- In the **Substitutions** window of Portal, the name of a content database is no longer displayed next to a company's name in the **In business entity** field when there is only one content database available for that company.

- In the configuration of **Mass actions** on **Reports**, it is no longer possible to use choice fields whose value is filtered by the business entity.
  Such fields will no longer be displayed in the pop-up form of Mass actions. In existing Mass action configurations, a warning will be displayed when a form field containing a variable referencing a business entity is used.

- If the Business entity was not defined for a **Start** button, it can be chosen from a choice window when launching the instance.

- Changed the link separator in the report column to a semicolon with a space character (;). Previously, the separator was just a semicolon.

3.3. Form

- All data of the archived instance will be visible in the **Admin** mode, regardless of the visibility settings in the **Field matrix**. If the form is outside the archive, any defined visibility restrictions on elements (also for admin) will apply.

- Added time zone information to the **Sent** parameter in the tooltip displayed when hovering over a file in the **E-mail conversations** tab of the form.

- Rows on the **Item list** that are unavailable due to their **Acceptance** configuration will not be validated, i.e. the system will not check the requiredness conditions, RegEx, the correctness of data in choice columns, or the correctness of addresses in e-mail columns.

3.4. Designer Studio

- The checkbox **SharePoint group selection** has been removed from the advanced configuration window of the **Person or group** form field in the STANDALONE environment.

- The **Sign in as a different user** button is now hidden if only one Active Directory authentication provider is available. Previously, the button was displayed after a failed attempt to log into Designer Studio using the credentials of a user with no access rights.

- The error message that occurs when an incorrect client login is used when trying to activate a system license has been changed. In addition, the way of presenting error messages has been modified. After these modifications, errors will be shown in a pop-up window.

- In the substitution functionality, application groups with more than one database are now consolidated into one if their names are identical. However, within the application groups, applications with identical names are not merged but displayed next to each other. Additionally, a tooltip displaying the name of the database connected to a given application is now shown when hovering over its name.

- Values from outside the data source can now be added to the **Choice field** in the **Dropdown** mode and the **Choice field** column when the **Allow selecting values no longer available in the data source** checkbox has been selected.

3.5. Actions

- It is now possible in the **Add a substitution** action to define substitutions for people who do not have an active account in the system.

3.6. Rules

- Unified the handling of errors in **Form rules** in cases where they are used on form fields hidden with **Business rules** (the **Visibility** tab) or through the **Field matrix**.
  - For **GET** and **SELECT VALUES** functions, invisible fields will return "EMPTY".
  - For **HAS ANY ROWS** functions, invisible fields will return "FALSE".
  - For **ITEM LIST COUNT** functions, invisible fields will return "0".
  For each scenario mentioned above, a warning will be logged in the console, informing about the attempt to read values from a field that is not visible.

3.7. Add-In

- The subject of an **Email notification** received in Outlook Add-In when delegating a task now contains instance ID.

3.8. Mobile app

- Disabled the option to generate Designer Desk documentation from the mobile app.

- Implemented changes in viewing PDF documents within mobile application. Currently, instead of viewing a PDF file natively inside the application, such a document is downloaded and opened in a suitable PDF viewer software configured in the operating system (Android/iOS) or suggested by the system.

3.9. Service

- Changed the order of calculating OLAP statistics in the basic service role. Analytics added in version 2023 will be calculated before the KPI.
  New OLAP calculation logs will be available in the "AdminServiceLogs" table.

- Added the ability to start workflow instance from **HotMailBox** for an e-mail with a .msg attachment type. Such attachments will be converted by the system to the .eml format.

3.10. API & SDK

- Changed the model of the **Survey** form field in REST API 5.0 and beta, in order for it to look the same on the form as it does on Reports.
  The "other" property has been removed. The response is now available in a value table as a standard object with **ID** and **Name** fields. The ID of this value is always "__Other__".

- Code for path validation errors has been changed from "400" to "409".

4. Security fixes

4.1. General

- Fixed a bug where the security system, designed to protect against Cross-Site Request Forgery (CSRF) attacks, failed to start despite the correct configuration.

4.2. Updated components

- Updated components:
  - Aspose.BarCode,
  - Aspose.Cells,
  - Aspose.Email,
  - Aspose.PDF,
  - Aspose.Words,
  all to version 23.4.0 due to CVE-2021-24112 and CWE-94: https://security.snyk.io/vuln/SNYK-DOTNET-SYSTEMDRAWINGCOMMON-3063427.

- Updated components Swashbuckle.AspNetCore.SwaggerGen and Swashbuckle.AspNetCore.SwaggerU to version 6.5.0 due to CVE-2018-25031, CVE-2021-46708, and CWE-918: https://security.snyk.io/vuln/SNYK-DOTNET-SWASHBUCKLEASPNETCORESWAGGERUI-5426095.

- Removed unused component NuGet.CommandLine due to CVE-2023-29337 and CWE-94: https://security.snyk.io/vuln/SNYK-DOTNET-NUGETCOMMANDLINE-5709250.

- Updated component System.Security.Cryptography.Pkcs to version 6.0.3 due to CWE-400: https://security.snyk.io/vuln/SNYK-DOTNET-SYSTEMSECURITYCRYPTOGRAPHYPKCS-5708426.

5. New features

5.1. **Option to force undoing user checkout in the "Update related workflow instance" action**

The configuration window of the action **Update related workflow instance** (**Advanced** tab) now has a new option – **Force undoing user checkout**:
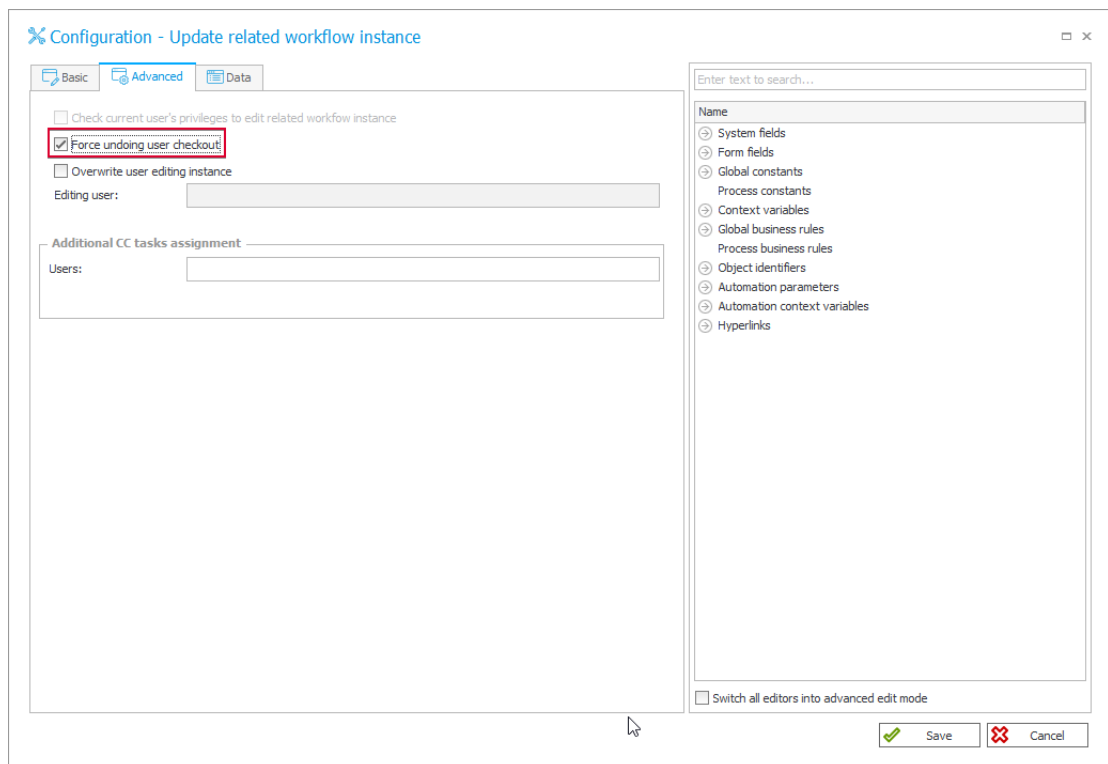
If a related workflow instance is checked out by another user and this new option is checked, the action will first force undoing the user's checkout, so that the instance can subsequently be updated according to the configuration. When the option is unchecked, the action will not be executed due to another user editing the instance.

The information on undone checkout associated with the actions **Move workflow (SQL)** and **Update related workflow instance** will be recorded in the details displayed in the admin mode in **History**.

5.2. Numeric form fields with thousands separator

Integer number

The advanced configuration of the **Integer number** form field has been introduced. When it is selected, users can decide whether the form field values will be displayed with a thousands separator. For newly created form fields, the option **Set thousands separator** is checked by default.
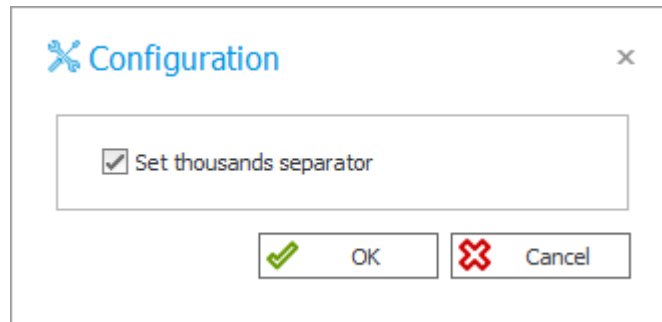
With the default configuration, **Integer numbers** will now be displayed with a thousands separator in **Chart** report views and in form fields that can show data from other form fields (**Data table**, **Data row**, **Chart**) and from the **BPS internal view** data source. Similar formatting of form field values will be possible for the cells of **tabular report views**, in the summary row of the **Item list**, in the **Filter** panel, on drop-down lists from which the values of a **Choice field** are selected, on task tiles, **Dashboards**, as well as in **Email notifications** and files generated via selected action.

Floating-point number

The option **Set thousands separator** is now also available in the advanced configuration of the **Floating-point number** form field, replacing the previous **Show as amount** parameter.
For the newly created form field, this option is checked, and the automatic **Display format** is selected by default.
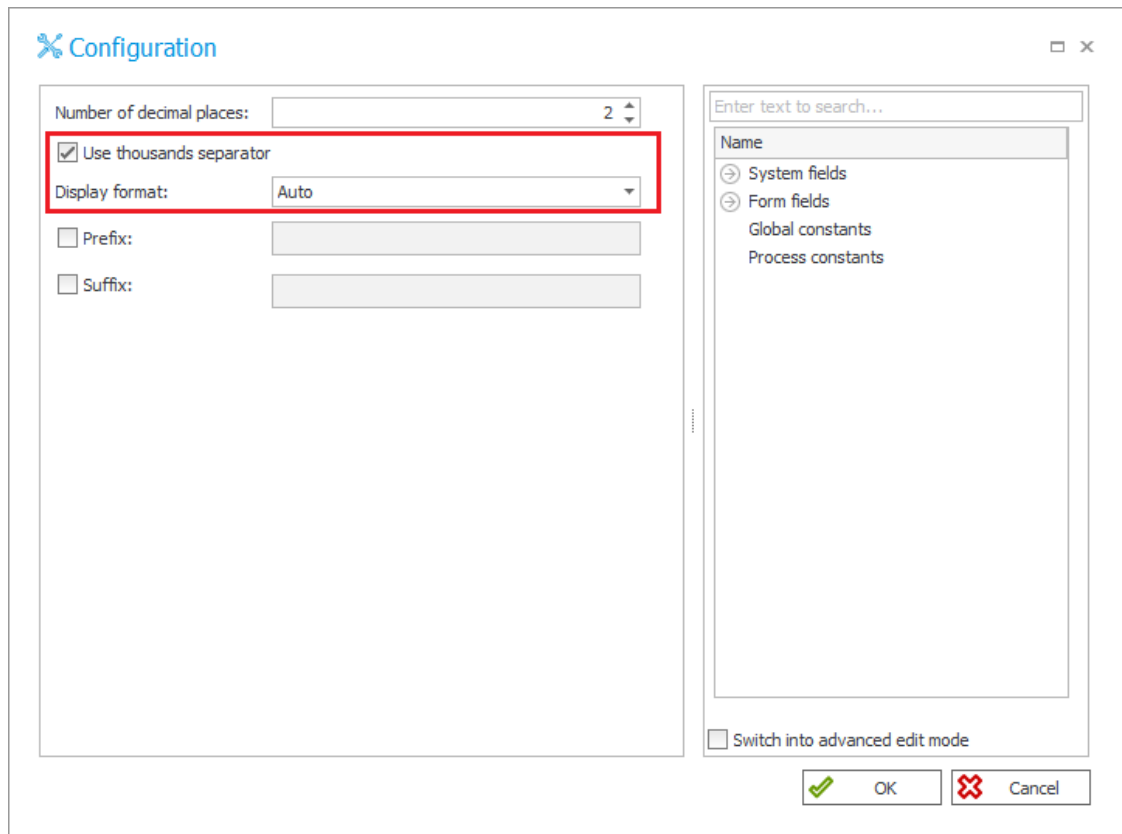
The option to display Floating-point numbers with grouping to every third digit will now also be available in the **Filter** panel and in the list displayed when selecting the value of a **Choice field.** However, whether the thousands separator will be visible is ultimately determined by the Floating-point number configuration.

5.3. New actions in Designer Desk

Extended the list of actions available in **Workflow designer** of WEBCON BPS Designer Desk.
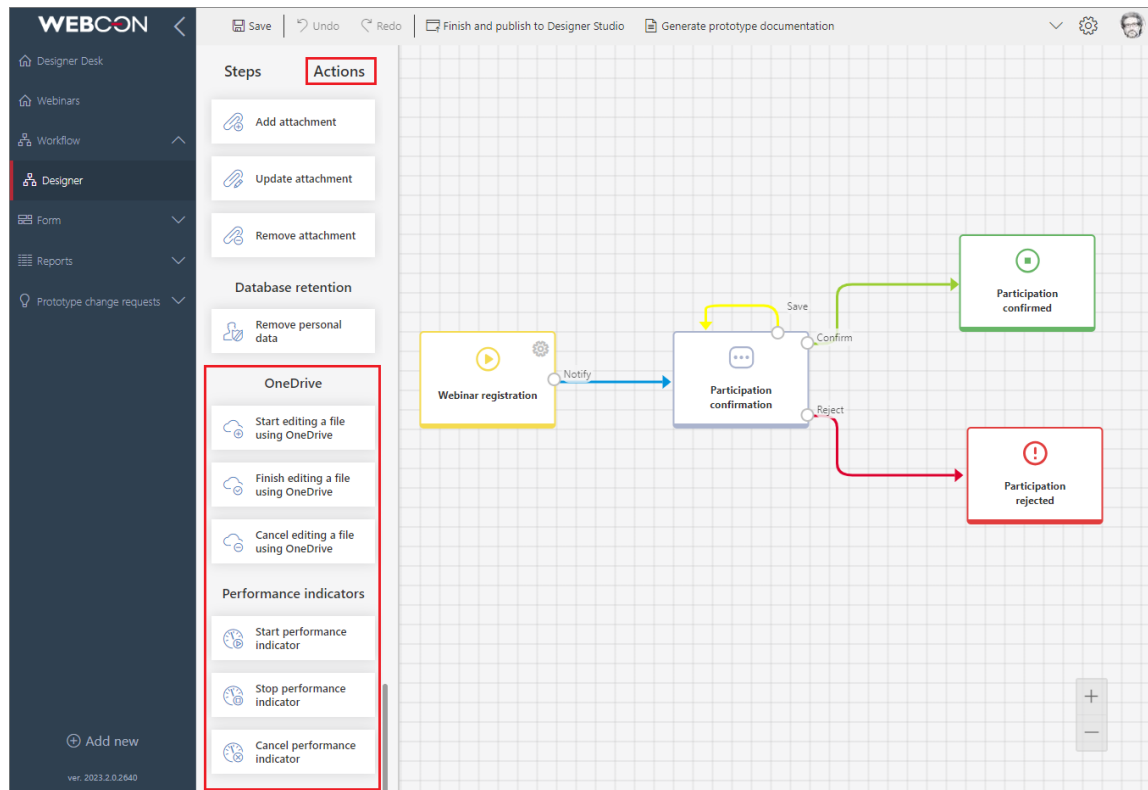
Users will now be able to prototype a workflow with the following actions:

Active Directory
  Manage groups
  Add user to a group
  Manage users

Digital signatures and certificates
  Sign an attachment with CoSign

Excel, Word and PDF
  Convert Word to PDF
  Generate an Excel file
  Generate a PDF file

Substitutions
  Add a substitution
  Remove a substitution

Notifications
  Send standard email

Exchange
  Exchange events

Exchange tasks
Out of office autoreply

Integration
Run an SDK action
Invoke REST Web service

Reports and printouts
Generate an HTML printout

OCR and scanning
Add a text layer

Privileges and public access
Share task
Share workflow instance
Stop sharing

SharePoint content
Edit a list element

OneDrive
Start editing a file using OneDrive
Cancel editing a file using OneDrive
Finish editing a file using OneDrive

Performance indicators
Start performance indicator
Stop performance indicator
Cancel performance indicator

5.4. Query parameters in OpenTelemetry

Users who use the OpenTelemetry tracing module in Portal can now access information about parameters values of a query. The new functionality is available only for Portal – in Service there is only a tag containing the query text.
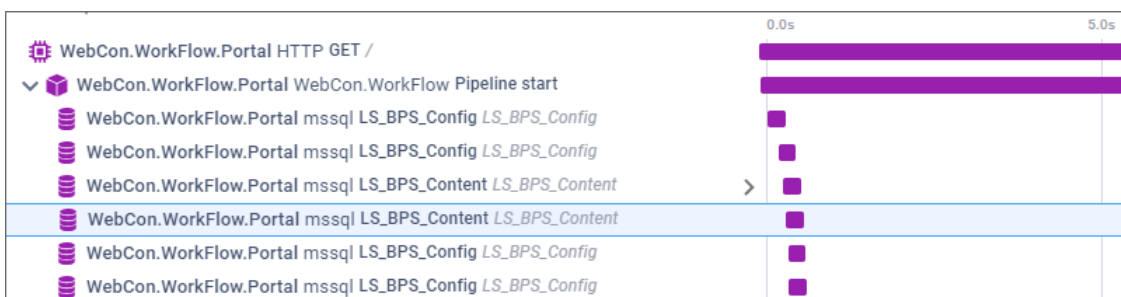
5.5. Date of data update in analytical indicators

The views available under **Analytics** in Portal have been extended with the option **Date from** which allows users to check the date of the last update of analytical data.
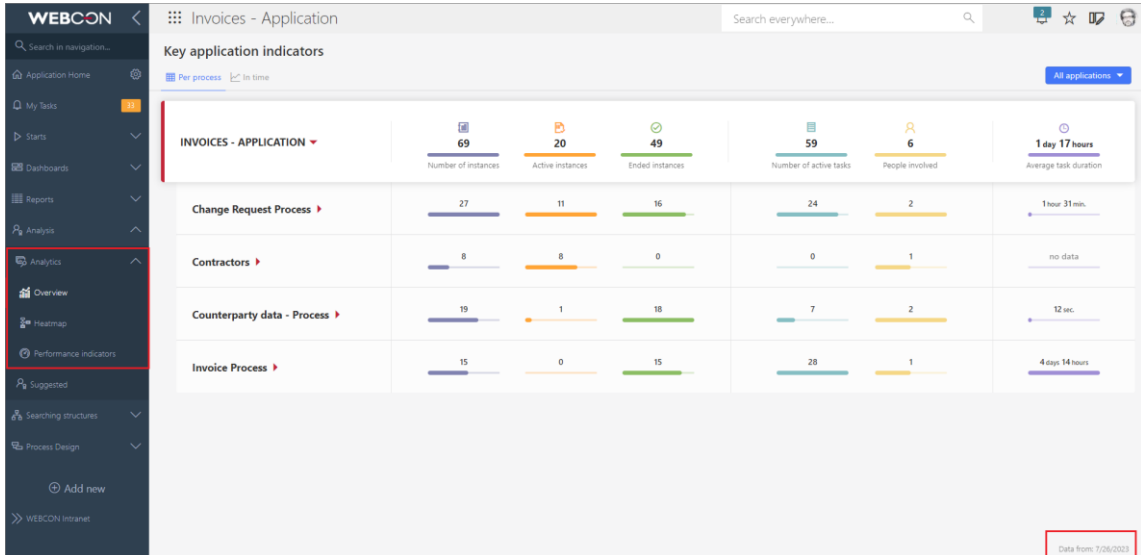
5.6. New functionalities of selected actions from the Excel, Word and PDF group

Generate a PDF file

The **Appearance** tab of the action configuration window now features the **Margin settings** option which allows users to define custom margins of the generated PDF file.
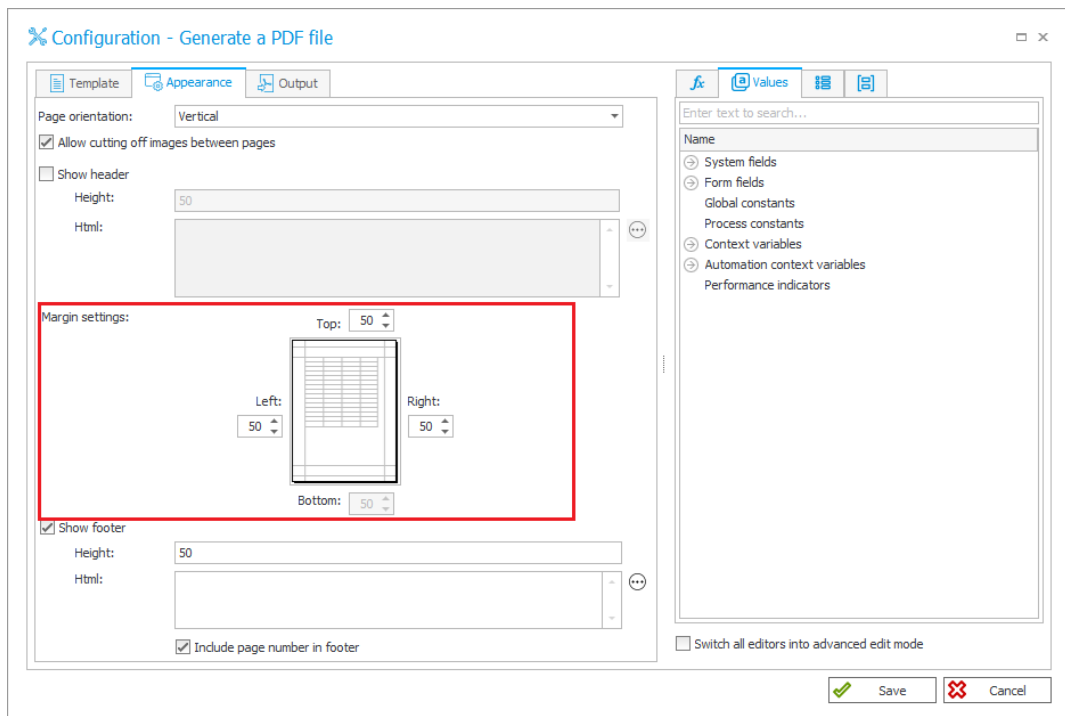
Additionally, users configuring the action can decide whether the document will be generated in a special PDF/A format. This is ensured by the new **PDF/A file** checkbox available in the **Output** tab.

This format allows the digital content of a file to be graphically represented in the same way, regardless of the operating system and software used. It is also intended for long-term storage of documents for archival purposes.

Convert Word to PDF

The same checkbox has been added in the **Output** tab of the **Convert Word to PDF** action window. When this option is selected, the files created as a result of the conversion will be saved in **PDF/A** format.
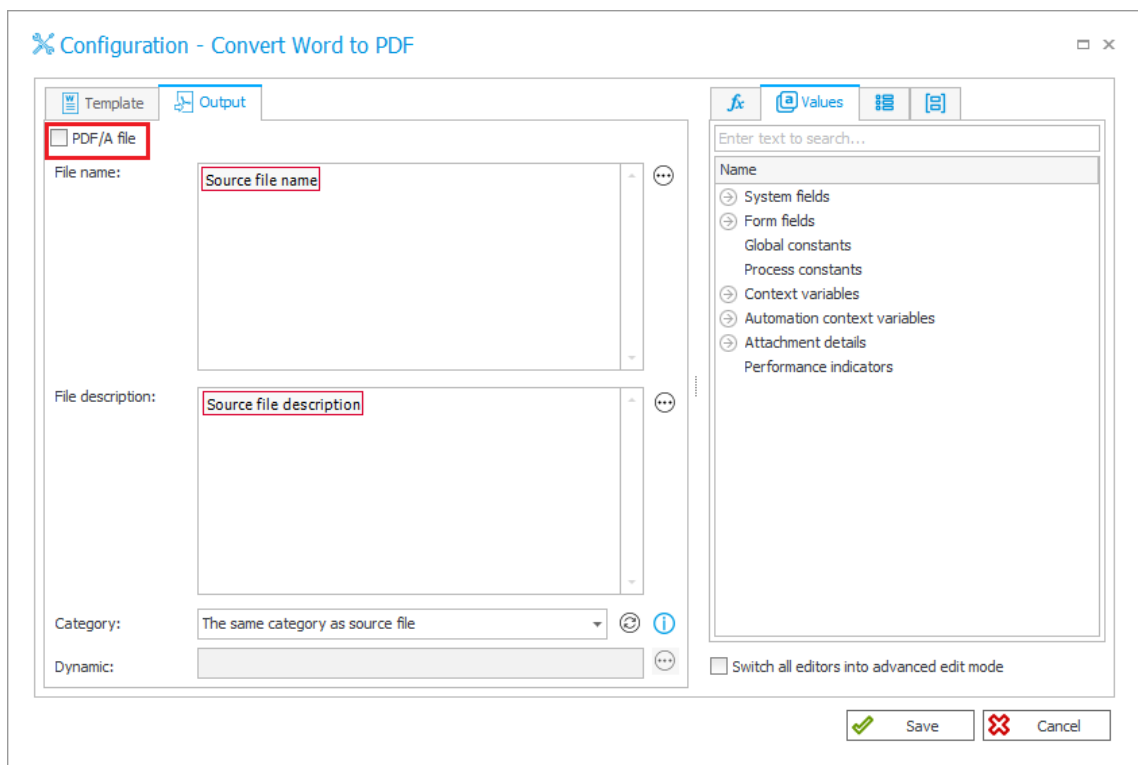
5.7. Global logout

Added new functionality that facilitates the termination of all current user sessions through a new button called **Global logout.** Upon clicking the button, the system logs the user out of all environments or platforms that utilize cookies-based authorization, including Internet browsers, mobile browsers, the WEBCON BPS Teams add-in, and the WEBCON BPS add-ins for MS Outlook. This button is accessible in Portal within the user menu, located below the current **Logout** button. The introduction of this new functionality aims to enhance security and prevent unauthorized access.
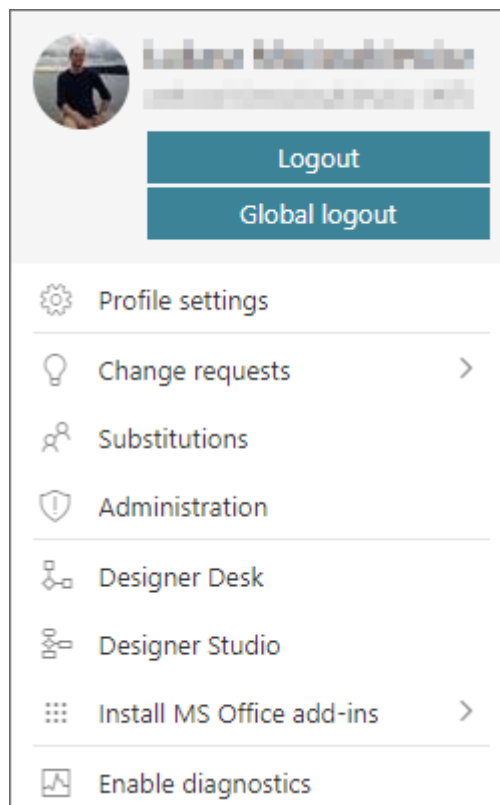
Configuration in Designer Studio

Introduced a new field, **WEBCON BPS Portal logout behavior** (located in **System Settings → Security** → WEBCON BPS Portal logout behavior), which allows users to configure the new functionality. Through a drop-down list, users can select one of the three available options:

Log out from a single session (default) – the user menu in Portal includes the Logout button for logging out of a single user session;

Log out from all sessions – apart from the aforementioned Logout button, the user menu provides the **Global logout** button that enables logging out of all user sessions on all devices;

Force logging out from all sessions – only the Global logout button is available.

After entering a new configuration, it is necessary to restart Portal.
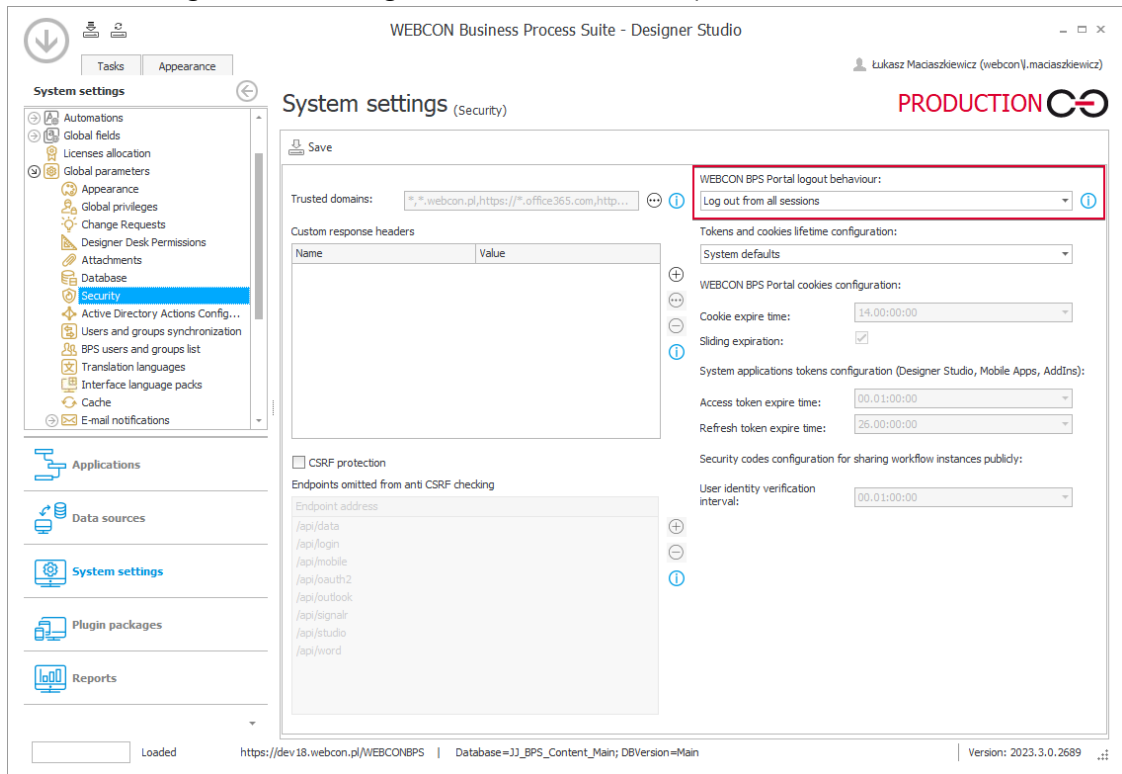
New OpenTelemetry metrics

Accompanying the new functionality that facilitates logging out of all sessions, a new OpenTelemetry metric has been introduced. This metric is accessible through the **webcon-workflow-portal-ticket-store-cache** module allowing the display of user authorization identifiers currently stored in the cache memory.

5.8. New documentation in Designer Studio

A new, updated version of the Designer Studio documentation is made available. The documentation can now be accessed online in a web browser window by clicking the F1 key in Designer Studio. Users can continue to open documentation locally by setting the **UsePublicDocumentation** parameter to the value of "0" (the default value is "1") in the configuration database (configuration database name → the **GlobalParameters** table → the UsePublicDocumentation parameter). The content of the documentation has been updated and reformatted).
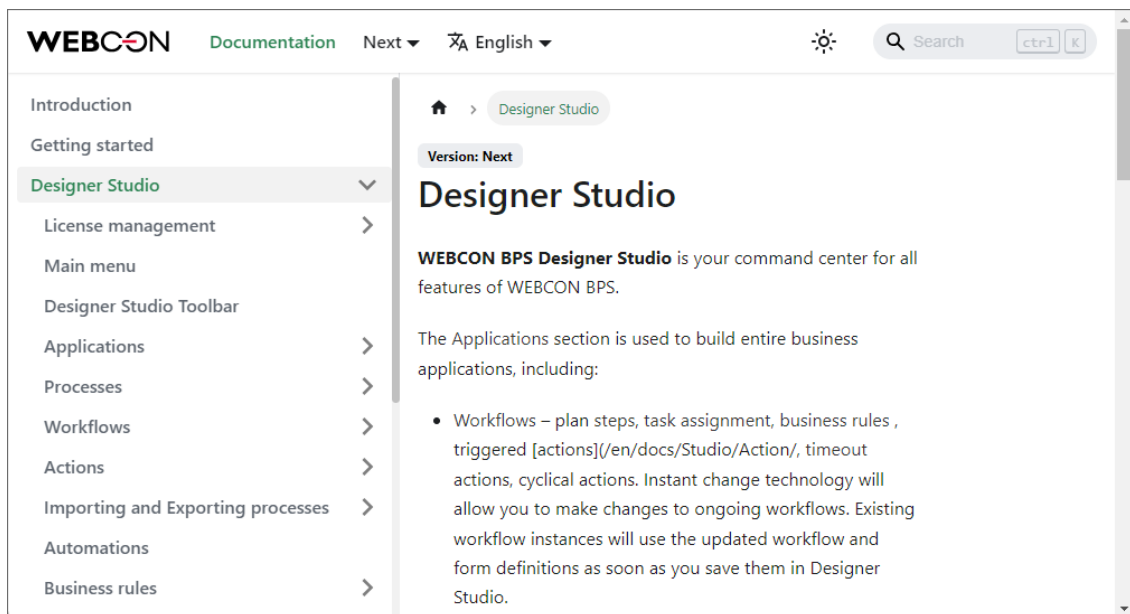
5.9. Security code for public links

Introduced securing public links with single-use security codes sent to the link recipient's e-mail address. After opening a secured link to a shared instance, the user is required to confirm their identity by entering the aforementioned code in the field specified in the window. The code prevents unauthorized access to the shared instance by individuals who accidentally received the link to an instance or a task.
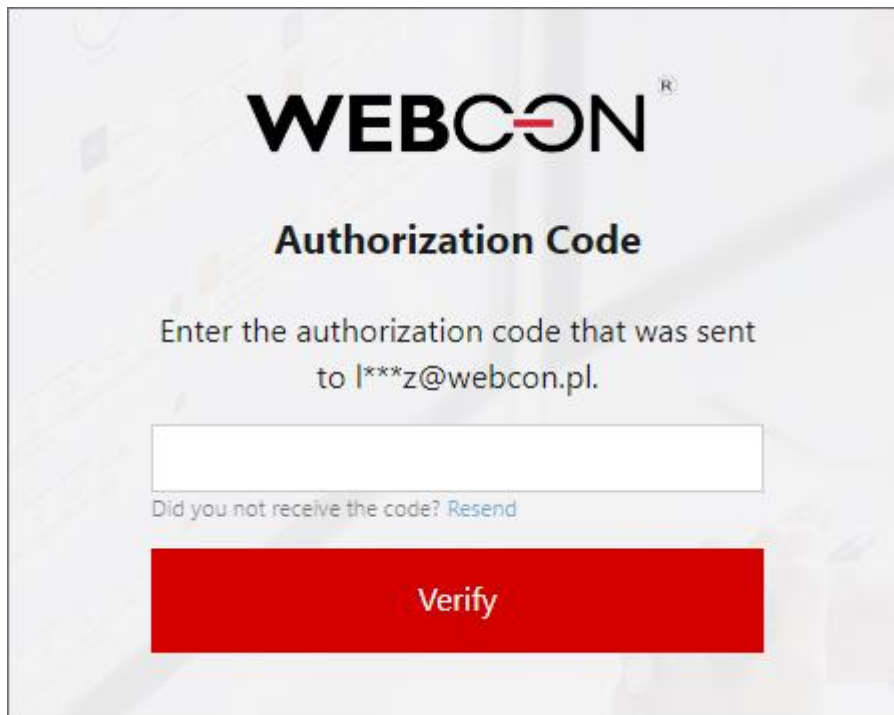
Enabling the functionality in Designer Studio

The **Public access** section of the **Settings** tab (process configuration window) contains now a new checkbox **Require identity verification (security code sent via email)**. Selecting the checkbox results in enabling the mechanism responsible for verifying identity of a recipient of a shared instance link.
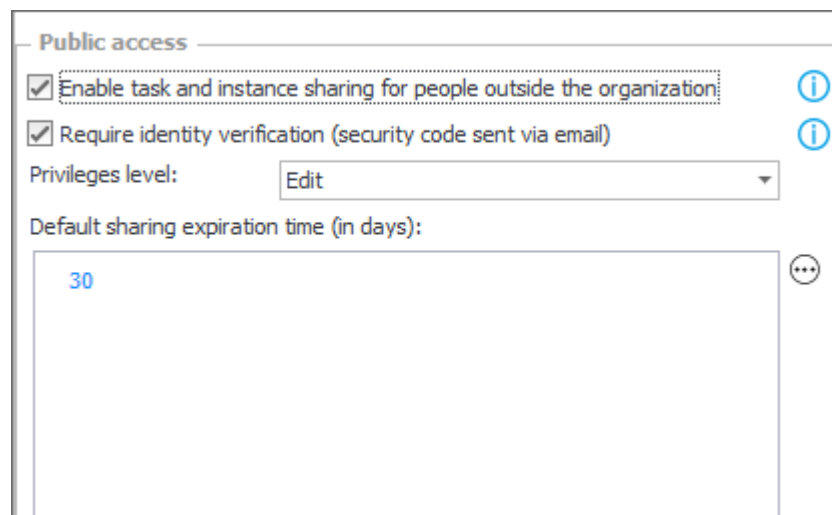
Authorization mechanism operation
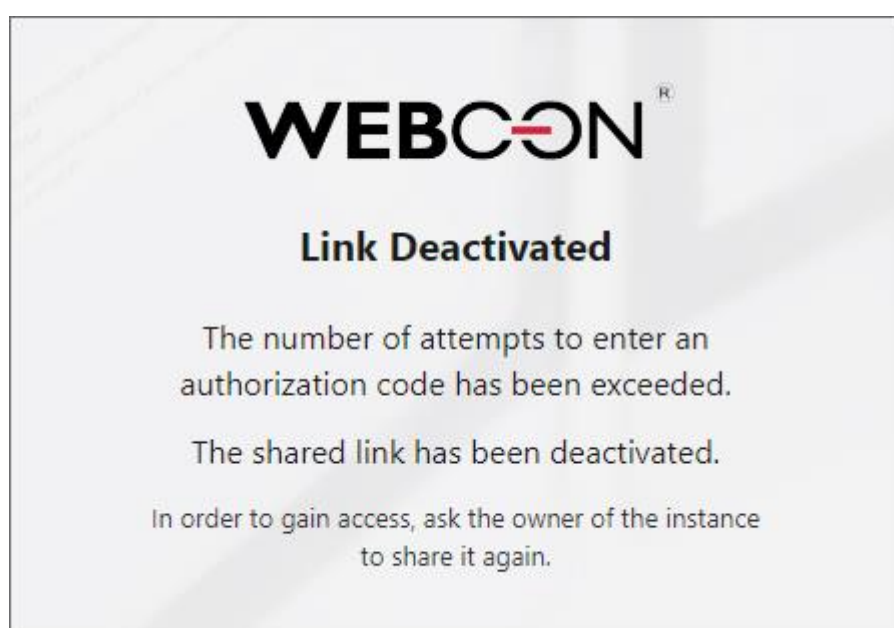
Once a secured link is opened, the system redirects the user to the Portal's website and displays information about obligatory confirmation of identity by means of a single-use authorization code. The code is generated after hitting the **Send an authorization code** button and sent to the link recipient's e-mail address. (The e-mail messages are sent in the language in which the window for entering authorization code in Portal was displayed.) A separate 6-digit code is generated for each shared instance and it remains valid for 5 minutes.

The limit of failed attempts

Introduced a limit for a number of unsuccessful attempts to enter an authorization code. After 20 failed attempts, the public link becomes inactive and the system displays information about its expiration. An administrator or the link creator can reactivate the link, which involves generation of a new authorization code. After entering the code and confirming the identity, the link is reactivated.

Identity verification interval

Added the section **Security codes configuration for sharing workflow instances publicly** (**System settings → Global parameters → Security**) which includes the **User identity verification interval** option. The option enables users to define the time after which the system requires again entering a newly generated authorization code. By default, this time is one hour.

Parallel operation

A user can work simultaneously in several Internet browsers by entering separate authorization codes. They can work independently in browsers for an hour since entering the code.

New column in the active shares list

The list available in the **Active shares** node in the **Admin panel** has been expanded to include a new column **Protection** which shows the type of share. For shares that require authorization code, a key symbol is displayed. When the access is blocked, the key icon is replaced with a general prohibition symbol icon.

5.10. General

- Added the option to perform a "healthcheck" for the SQL Server connection by including a "/health" suffix in the URL. The connection to the **Configuration database** will be checked.

5.11. Portal

- Introduced mechanisms to filter out from analytical reports (**Key application indicators**, **Heatmap**) data saved in the database due to configuration changes.

- Hovering the mouse cursor over a data series on a **Chart** type form field or a view of the **Report** will cause all other data series to become translucent.
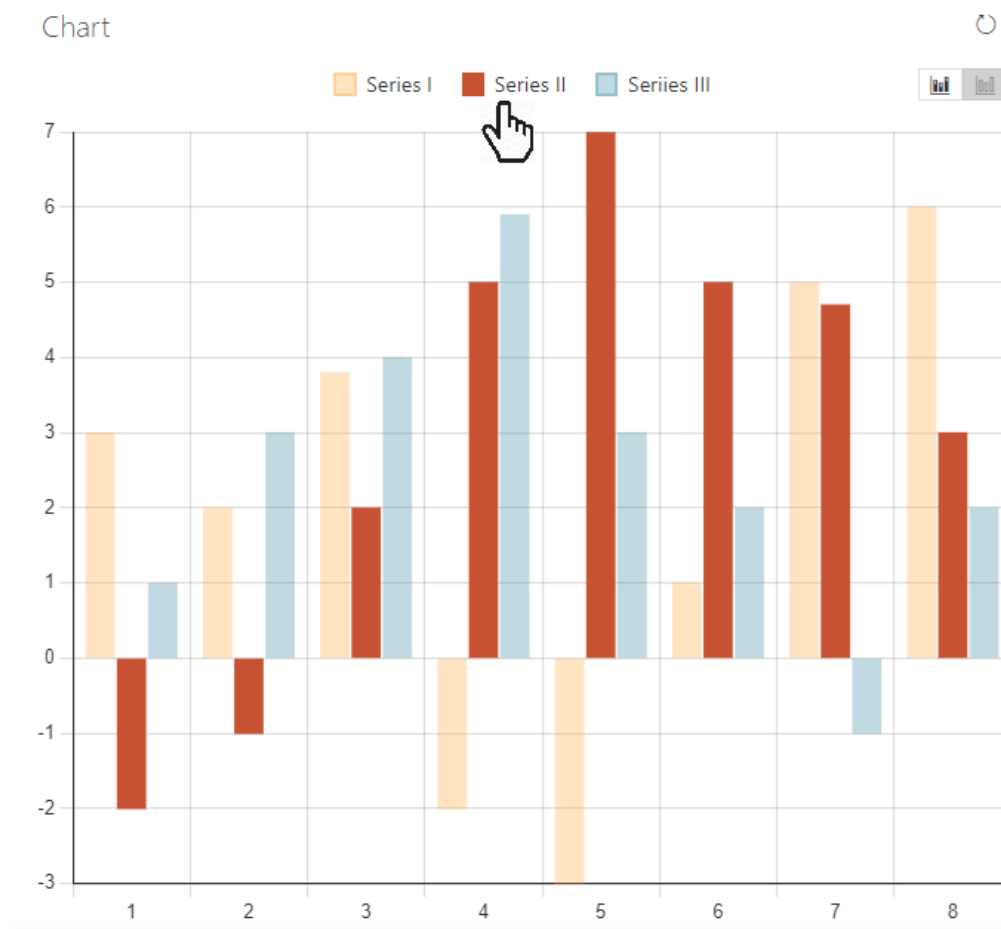
5.12. Designer Studio

- When opening the **Objects** tab in the editor (e.g. for Rules), the current Application/Process node (in the context of which the editor was opened) will be expanded by default.

- It is now possible to define an email address to which responses obtained through the commands available in the **MailApproval** functionality can be

delivered. The target address is specified in the **Inbox parameters** section of the MailApproval configuration window, under the **Account** field for the **Exchange Online - Microsoft Graph** server type. The address configured there is used for emails sent by the Service (exclusively through the MailApproval engine), as well as for standard system notifications, task notifications, and instance notifications delivered by the **Share task** and **Share workflow instance** actions. Additionally, for emails sent through the SMTP protocol, the email address at which the MailApproval message is served is retrieved, provided the MailApproval functionality has been properly configured.

This modification does not apply to the **Send a custom email** action for which the inbox is configured in the action's configuration field.

5.13. Actions

- Added the **Cancel performance indicator** action. It is used to cancel calculating **Performance indicators**.
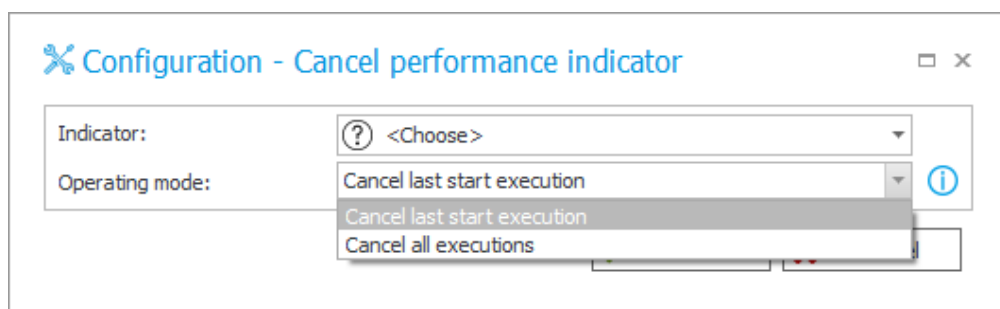
Canceling can happen in two ways:

- **Cancel last start execution** – restores the indicator to the value it had when it was last stopped. If the indicator has only been stopped once, the action deletes all data related to the calculation of the performance indicator. Multiple activations of this action will not undo earlier calculations;

- **Cancel all executions** – deletes all performance indicator data as if the indicator had never been started.

5.14. Rules

- Added a new **SET FORM TITLE Form rule**. It is used to replace the text of the instance number at the top of the form, as well as the title of tabs/windows of the browser.

- Added the ability to retrieve the value of the **Local attachments** column by means of **Form rules**. Such values are now returned in the format "AttachmentID#Name".

[WEBCON logo]

5.15. Service

- In the configuration of **HotMailBoxes**, in the **Additional attachments** section, it is now possible to match attachments using MS-DOS search.
This searching mode has also been added to the configuration of **HotFolders**.
    ? replaces any single character
    * replaces any string of characters
    | works as "or", matching the expression before or after the character, e.g. *.pdf | *.docx.

- Delivered full OCR.space functionality in the WEBCONAPPS service. For this purpose, the configuration of the text layer actions in Designer Studio was adapted to the OCR.space engine by enhancing the algorithm that calculates the dimensions of text blocks and the padding mechanism. Additionally, the mechanism recognizing the block coordinates for joining words after the ":" and "=" characters has been streamlined. Also, each processed document is now scaled separately.

5.16. API & SDK

- The public API has been expanded to handle and download change requests and comments. For this purpose, two additional endpoints have been created: one returning lists containing general information, and the other one providing details regarding individual change requests. Users who query the API receive only the change requests to which they are authorized.

- Added two new methods in the SDK: **TryGetDocumentByIdAsync** and **TryGetDocumentByInstanceNumberAsync**.
Both methods contain parameters "isExists" (with "TRUE"/"FALSE" values) and "documentData", an "ExistingDocumentData" class object.

6. Bug fixes

6.1. General

- Fixed a bug that caused too long instances removal from the Solr database. Currently, choosing the **Remove from content database** archiving level results in updating an instance to an empty one and its actual removal after the removal of unused indexes.

- Fixed a bug where error notifications sent by the **MailApproval** functionality were delivered in a language other than the configured one.

- Fixed a bug occurring in the **Search Server address** step of the installer due to which a prefix was not added to a database if the **Independent Solr cluster** option had been selected.

- Added **Attachment migration tool** to the **Migration Tools** directory of the installer which enables downloading attachments created in version 8.1 or earlier, which do not have the file length information saved in the database.

- Fixed a Solr migration script bug that occurred when updating the 2022 version to the 2023 version.

- Improved the version update logs added to the folder with the installer. The log.txt file will now include information regarding each step of adding change request templates/collections.

- Resolved the issue of the AutomationSessionExecutions table growing more than expected.
  Introduced a series of improvements which aim to limit the size of this table, e.g.:
  - deleting/archiving elements will remove all connected records in AutomationSessionExecutions,
  - reduced the number of data stored in JSON by over half,
  - replaced two indexes in AutomationSessionExecutions with one.

- Fixed an issue that would prevent version 2021 R5 from being updated to version 2022 R4 and newer. This issue was caused by SDK actions configured to be triggered cyclically in a transaction.

6.2. Portal

- Fixed an issue in the URL filter on **Reports**. The URL filter will now search for exact matches, instead of values starting with the provided phrase.

- When configuring a standard filter on **Reports** from the Designer Studio level, it is now possible to leave the value field empty. The message stating that the value field is mandatory has been removed.

- Fixed a bug that caused a green confirmation window not to be displayed despite a successful path transition when a workflow instance was opened from **My tasks**.

- Fixed a bug where the preview of a workflow instance was displayed in the context of the process's parent application instead of the application from which it was actually opened.

- Fixed missing translations in the **Recent activities** section.

- Improved display of **Data row** and **Data table** form field values in MS Word template generated from Portal.

- Fixed discrepancies in the **Search everywhere** function on **Reports** using SearchIndex as their source of data.

- The **Analytics** node will be visible for applications made exclusively from related processes.

- Fixed the scaling of the scroll bar in the **Choose application** search box.

- Fixed an issue with searching dates on **Reports** using **Searchindex** as their source.

- Enhanced appearance of version column in instance history.

- Fixed a **Business rule** and **Form rule** logging error that produced the error message "Cannot read properties of undefined (reading 'error')" when changing the context of a form, i.e. when switching between its instances.

- Fixed item displaying in the **Recent activities** section of application when applying the **All** filter.

- Fixed a bug that prevented changes to the **Assignment filter** in the configuration of the report **Source** when switching between different report **Views**.

- Fixed an issue with missing **Item list** data on **Reports** containing archived instances.

- Fixed the scaling of headers on Gantt charts.

- The expansion arrow on the timeline in the instance history has been moved to the right side to improve readability.

- Date sorting in the SQL report grouping window has been fixed.

- Fixed a bug preventing the correct display of step icons in reports.

- Fixed a bug due to which not all suggested values were translated in accordance with the user language in the hint window displayed after clicking on the search bar in WEBCON BPS Portal.

- Fixed a bug that allowed an unauthorized user to start a workflow instance from the application.

- Added support for an error that occurred when expanding the subordinates filter on the **Vacation Schedule** report when the leave type was not previously set. If an error occurs, an appropriate warning message will be displayed.

- Fixed an issue with the name of the authentication provider not being displayed correctly in the user profile.

- Improved the clarity of applying filters on **Reports**. After applying the filter and reopening the filter menu, active filters should always be pinned at the top of the list.

- If a start button does not have a defined **Business entity**, the user will be able to choose from entities available to them in a choice window (the same is true for **Processes** and **Form types**).

- Fixed a bug where the report status did not match the filtering settings, i.e. after displaying a workflow instance and going back to the report, the filtering was different than set.

- Fixed an issue with saving on the **Dashboard** that was caused by a redundant confirmation window asking to save changes.

- Fixed a bug where actions triggered **On timeout** were counted as **Step entries** in the **Heatmap** report.

- Fixed a bug due to which a value entered in the search box had been erased after refreshing the page and required clicking within the Portal's window to appear. Currently, such a value appears immediately after refreshing the page. Additionally, the entered value no longer blinks after its modification and clicking within the Portal's window.

- Fixed incorrect comparison of user logins in the **Absence process** when using a custom company structure. As a result, the **Vacation schedule** did not display the current vacation data correctly.

- Fixed a bug related to the missing values of the **abId** and **appId** parameters in diagnostic session recordings.

- Fixed an SQL query error in the **Add a substitution** action generated from the configured **Absence process**.

- Fixed a bug that prevented the display of step name translations on reports after changing the Portal language to English.

- Added the ability to search for **Suggestions** in the list after confirming the entered value with the Enter key.

- Fixed an issue with displaying workflow instances, reports, forms in relation to a group of languages (such as Swedish, Finnish, Croatian, Norwegian, Lithuanian) for which the default negative sign was minus (U+2212) and not the standard hyphen-minus (U+002D).

- Fixed an issue that could arise when trying to edit a file directly from the form. This resulted in displaying the message "No application to edit this file is installed on the device" even though the related application was installed. The bug was corrected by increasing the waiting time for the associated application to start.

- Fixed an issue with values in **Choice field** and **Choice tree** form fields not appearing in the **Mass actions** window on **Reports**.

- Fixed a bug that prevented the correct display of reports when using the **Substitutes** functionality in the **Acting on behalf of** mode.
In addition, when selecting the replaced person subordinate view and switching to **Direct subordinate's view**, the data of the respective subordinate are now correctly displayed.

6.3. Form

- Fixed the **Target field** mechanism in **Choice fields** for setting the values in **Item lists** that have grouping enabled. When a column value had been set that altered the order of rows, further values would not have been set correctly.

- Fixed a bug that caused changing capital letters into underscores when editing an attachment.

- Fixed a bug due to which a rule executed for the second and consecutive time on value change in the **Date and time** form field did not modify the field's value.

- Fixed an issue where translations were not displayed correctly for values in a **Choice field** in dropdown mode.

- Fixed an issue where the **HAS ANY ROWS** rule looped when used in the **Item List** column default value rule. An error caused the Portal process to stop.

- Fixed a bug that caused the removal of values from dependent fields of an **Item list** when moving along a path. Currently, the values of dependent fields are not set if the value of the source field has not changed.

- Fixed an issue with the **Target field** mechanism when affecting the values of an **Item list**. The issue occurred when grouping was set up on the **Item list**, and changing a value changed the order of rows.

- Fixed **Form rule** execution error that occurred when performing operations on the rows of the **Item list** (e.g. **FOR EACH ROW**) inside the on-page loading rule with configured initialization.

- Fixed a bug in importing values with ≥10 decimal places from an MS Excel file into the **Item list**.

- Fixed an issue with displaying multilingual values in the columns of an **Item list**.

- Fixed a bug that caused a blank value to be duplicated in an **Item list** column of the **Choice field** type when a filtering rule was configured for another column of that list.

- Fixed an issue with importing >1000 rows to an **Item list** from an Excel file. Rows will be loaded starting from the row specified in the configuration (not the first one). A notification will be displayed if not all rows in the file can be imported.

- When accepting a delegated task, the substitute will now see also the line of the delegate in the **Item list**.

- Fixed the issue with incorrect tooltip display for a value field in a report column filter. After the modification, the tooltips now include a link to the corresponding instance and are no longer displayed for the **Empty** and **Not empty** items.

- Fixed an issue where the Active Directory login window appeared when the instance was shared publicly via a link.

- Fixed an issue with the **Multiple lines of text** field that occurred when the instance was shared using a link.

- Fixed an issue that caused the diagnostics to display incorrect times of when form fields were set using the **Target field** feature.

- Fixed a bug that prevented a superior from creating a substitution for a person who is their subordinate in the second and subsequent lines in the organizational hierarchy.

- Fixed a bug where translations of a **Series** were not included in the configuration of the **Chart** form field, preventing its data from being displayed on the form.

- Fixed a bug that occurred after changing the type of a **Global field** to a different one when the inheritance of the field configuration had been broken.

- Fixed a bug due to which a value filter in the **SearchIndex** report column was case-sensitive. Currently – in contrast to the **Contains** mode – the **Starts** filter mode is case-insensitive.

- Fixed a bug that occurred when a user holding no administrator privileges attempted to load registered instances in workflows where associations with form types had been deleted.

- Fixed an issue that caused the attachment preview window not to close correctly.

- Improved login with an ADD account when editing documents via WebDAV protocol.

- Fixed a bug that occurred when exporting a **Data table** to MS Excel and the form had been opened outside the application (e.g., from **My tasks** or as a **Preview**), resulting in incorrect loading of data in the form.

- Fixed a bug where the MS Excel export button was not visible for the **Data table** if it had been configured in a group of form fields in a horizontal layout.

- Corrected the error message that appears when a user whose display name is not saved in the system attempts to reopen a form in **Edit mode**.

- Fixed an aggregation bug inside the **Report Tile** embedded in a **Dashboard** column. The problem resulted from the failure to update the column containing the Report Tile.

- Fixed a bug that occurred when trying to click again on the link to follow a path, received in an **E-mail notification**. After the change, the system will first validate whether the path under the link is still available.

- Fixed a bug in the **Choose application** field in Portal where scrolling items in the **Most used** tab caused scrolling items in the **All** tab and vice versa.

- Fixed incorrect scrolling of the scroll bar after collapsing the instance history table in the Firefox browser.

- Added the ability to search for the values of **Choice field (Popup search window)** configured on the **BPS internal view** data source by translations of step, process, workflow, and form type names.

- If going through a path with form validation enabled fails, the error message displayed will no longer list errors detected during validation that are visible on the form.

6.4. Designer Studio

- Improved task assignment when going to the same step indirectly through a **Workflow control step**.

- Fixed an issue that occurred when choosing a **Global form field** for **Dynamic** task assignment in **Task creation**.

- Fixed a bug where the **Column** field in the task assignment configuration on the path would not have been grayed out if a selection attribute had been selected in the previous step configuration in the **Attribute** field.

- Fixed a bug that occurred when attempting to switch the order of form fields in a process published from Designer Desk.

- Fixed an issue with synchronizing superiors – managers of users should now be synchronized correctly from both the AD and AAD.

- Fixed an issue causing mass notifications to be sent on non-working days regardless of configuration.

- Fixed mechanism responsible for resetting the counter of incorrect executions after activating the disabled cycle of cyclical actions in WEBCON BPS Studio.

- Removed context constants from the editor for public links.

- Added validation of header values entered into the **CustomResponseHeaders** configuration database.

- In the **Reports** section, removed the **Document entry point activity** node.

- Fixed a bug due to which the **NOW** and **TODAY** functions did not work when the advanced coloring mode had been configured for a report.

- Incorrect characters in names and descriptions of form fields will be replaced with empty strings.

- In the **Reports** section, removed unused **Statistics** in the **Profiling** node.

- Fixed a bug that occurred when substituting values provided by a variable in the JsonGrid control while invoking the **Rest Web Service** data source.

- Introduced additional validation of the package created during application export – if the attempt to generate it fails, the export will be aborted.

- Fixed a bug due to which the system did not retrieve last value from the **Multiple lines of text** form field in **Append mode**.

- Fixed a bug in which the system did not block access to the process instances in Portal after disabling the **Allow to work on behalf of another user** option in Designer Studio for the process in question.

- Fixed a bug that occurred when exporting an OCR project with a very large number of fields and dedicated networks.

- Fixed a bug that caused previously selected buttons **Creating new projects** and **Publishing to Studio** to become unchecked after allocating a **Designer Desk Access** license to a user.

- Fixed a bug that prevented proper display of parameters (hyperlink generation) when email template contained a reference to a **Data table**.

- Fixed a bug that prevented deletion of an element (e.g., business entity, form field) even though the element was not used anywhere in the system.

- Fixed a bug where translations of cloned report view values were not saved.

- The **Export/Import** mechanism now has additional tooltips which allow error details to be downloaded.

- Fixed an error stating that the elements of a report **View** used on the **Dashboard** were not translated when the View had already been deleted. The error message appeared when trying to export a related application.

- Fixed a bug that prevented the configuration of **HotFolders** and **HotMailBoxes**.

- Fixed a bug that occurred when transferring a process between applications – the **Usages** report displayed elements that did not actually block the process from transfer. After the change, the report will not contain redundant elements.

- Fixed an issue with the scaling of the step edit window. Changing the height of the window will no longer hide options.

- Fixed an issue that prevented replacing a tag in the configuration of the **Hyperlinks Start Element** function after importing an application.

6.5. Actions

- Fixed a bug that prevented the correct setting of dependent column values of **Item list** when executing the action **Read data from an Excel file**. Field values will now be set according to the action configuration. The exceptions are the values in the "id#name" format that will be treated as if they had already been validated on the form and the corresponding dependent fields set.

- Fixed a bug where the **Move workflow (SQL)** action would have moved a workflow instance even though it had been in a different step than the one bound to the path specified in the action configuration. After the change, the system will first check whether the path is bound to the step in which the moved workflow instance is currently located.

- Corrected error messages displayed when the action **Teach OCR AI** fails.

- Fixed a bug in the execution of the action **Change value of single field** – the action was changing the value of the **Multiple lines of text** form field with **Append mode** enabled to NULL (and saving it in the database) instead of the configured EMPTY value.

- Fixed a bug that made it impossible to go to the configuration window of the **Change value of single field** action when the action had been added in automation with a local variable.

- Fixed a bug in the **Change value of a single field** action. Choice fields set using this action will correctly update related fields set in their configuration. The bug occurred when the choice field had been set using a value in the BPS format (ID#Name).

- The **Change value of a single field** action that affects a **Multiple lines of text** field will now show the **Current user** variable in the **Comment author** parameter. This does not change how the action works.

- Fixed an issue in the **Change value of single field** action that prevented it from changing the values of **E-mail** and **Image** type form fields.

- Fixed the "SqlException: Snapshot isolation transaction failed…" exception that sometimes occurred when triggering cyclical actions.

- Fixed an issue in the **Generate an RS report** action that prevented it from working with https.

- Fixed an issue that occurred when executing the **Send a custom e-mail** action, and when previewing the e-mail message in its configuration. This bug was caused by the incomplete configuration of a **Tab panel**.

- The **For Each** operator using the **Any collection** setting will execute 0 iterations if the rule defined inside it returns an empty string.

- Fixed an issue in the **For each** operator using **Item lists**. The values of an Item list will now be updated in the database once the loop is completed.

- Fixed issues and improved handling of barcode printouts realized via SignalR which is used to connect cloud installations with local printers.

- Fixed an issue that caused the configuration of the **Move workflow (SQL)** action to be imported incorrectly.

- Actions with postponed executions will now be displayed in the instance history, in the spot where they were queued.

- Fixed the bug in the **Invoke REST Web service** action that occurred when sending a request with a **JSON** body type.

- Fixed an issue that caused e-mail recipients to be duplicated.

6.6. Rules

- Fixed a bug of asynchronous process **Form rules** where the result of such a rule embedded in another operation was incorrectly handled.

- Fixed a bug where process ID was incorrectly loaded to a **Business rule** when copying global form field to a process form field.

- Fixed how the **Empty** function works in process business rules. If a rule had been configured to return a specific data type, the lowest possible value would have been set instead of the "empty" value (0 for decimal, 0001-01-01 for date). It will now be possible to set an "empty" value and thus "clear" fields using such rules.

- Fixed a bug where the **TEXT TO DECIMAL** function used in the **Form rule** returned an error when no value was entered in the associated **Choice field**.

- Fixed an issue that caused information about changes not to be displayed when using **Rules** on the compact form.

- Fixed an issue that occurred when using **SELECT VALUES** and **GET ROW** functions on an **Item list** that contained no valid columns.

6.7. Data sources

- Information on the **REST connection** authentication types has been included in the content-sensitive help.

- Fixed a bug that caused multiplication of the request value on the Swagger endpoint list after invoking the **Rest Web Service** data source.

- Fixed an issue with testing data sources containing **Business rules**.

- Fixed a bug that prevented the import of items from MS Excel – the program incorrectly recognized the type of the entire **Data source** column based on its first row.

- Fixed an issue with filtering data sources by a date column.

- Fixed a bug that occurred when searching for phrases containing square brackets "[ ]" among the values of a **Choice field** (**Autocomplete**) configured based on a **REST Web Service** data source.

- Improved data retrieval for the **Choice field** (**Dropdown**) when using primary/secondary data sources.

6.8. Add-In

- Improved the format of dates displayed in processes started via Outlook Add-In.

- Added the ability to edit the font in the cells of a table created from an **Item list** or **Data row** before generating an MS Word file based on a template.

- Limited unnecessary warnings from the Word and Outlook plugins.

- Fixed an issue with missing prefixes/suffixes in the summary row of an **Item list** in generated Word files.

6.9. Mobile app

- On **Reports** displayed on mobile devices, the icon for the options menu was changed in order to differentiate it from the views menu.

6.10. Service

- Corrected the error message displayed when the action **Add a text layer** fails due to an attempt to process password-protected documents, and the action is configured to skip PDF files with a text layer or signature.

- Fixed a bug where some antivirus tools classified WEBCON BPS Workflow Service as malware.

- Fixed an issue with logging that occurred when a BPS user's name contained non-standard ASCII characters.

- Fixed a bug that caused the system to send duplicate email notifications. Improved logging for the email sending queue.

- Fixed a bug related to barcode settings in **HotFolders**. The "+" button and drop-down list will be grayed out if all available code types are added from the list. The "-" button will not be available if no code is selected from the list. In addition, added a correct icon for the "Stop" button in the **OCR Framework configuration verification** window.

- Fixed an incremental synchronization error when adding a new user whose AD group (or any parent group thereof) was defined as belonging to a BPS group.

- Fixed the logging of the **HotMailBox** module in the Service by enhancing the handling of errors related to retrieving attachments to e-mails sent from the HotMailBox module.

- Fixed a bug related to the license service connection by streamlining the handling of the failover mechanism in the Service.

- Fixed an issue related to the incorrect loading of additional attachments in **HotMailBoxes** and **HotFolders**. Unified and improved the method for filtering and matching additional attachments (see New features section).

- Fixed an issue that prevented sending emails with attachments whose names included Polish diacritic marks through the SMTP protocol.

6.11. Designer Desk

- Added a safeguard against publishing a project that has been modified in another browser window.

6.12. API & SDK

- Fixed an issue with custom controls for **Integer** type form fields.

- Custom form fields will correctly add CSS files containing styles and load images from assets.

WEBCON BPS 2023 R1

history of changes for version 2023.1.1.89

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1. Before upgrading WEBCON BPS

1.1. Important information

- To avoid interruptions in the system operation, make sure that WEBCON BPS licenses are up to date. To do this, verify the availability of the **WEBCON BPS Server 2023** license in the license report. This report is available from **WEBCON BPS Designer Studio -> *system menu in the upper left corner* › Licenses**. Current licenses must be downloaded if necessary.

- If the changelog contains a section titled "Changes to existing features", please verify whether the changes will impact your implemented system in any way.

2. Information

2.1. Actions

- **On timeout** automatons can now use the following actions:
  - **Create a site**
  - **Create a list**
  - **Add a new list element**

3. Changes to existing features

3.1. Form

- All data of the archived instance will be visible in **Admin** mode, regardless of the visibility settings in the **Field matrix**. If the form is outside the archive, any defined visibility restrictions on elements (also for admin) will apply.

3.2. Actions

- It is now possible in the **Add a substitution** action to define substitutions for people who
do not have an active account in the system.

3.3. Add-In

- The title of an **Email notification** received in Outlook Add-In when delegating a task now contains instance ID.

3.4. Service

- Change the order of calculating OLAP statistics in the basic service role. Analitycs added in version 2023 will be calculated before the KPI.
New OLAP calculation logs will be available in the "AdminServiceLogs" table.

4. Bug fixes

4.1. Portal

- Improved the clarity of applying filters by the end-user on Reports. After applying the filter and reopening the filter menu, active filters should always be pinned at the top of the list.

- Changed the link separator in the report column to a semicolon (;).

- Fixed a bug that allowed an unauthorized user to start a workflow instance from the application.

- Fixed a bug preventing the correct display of step icons in reports.

- Fixed a **Business rule** and **Form rule** logging error when changing the context of a form, i.e. switching between its elements.

- Fixed an issue in the URL filter on **Reports**. The URL filter will now search for exact matches, instead of values starting with the provided phrase.

- Fixed a bug where actions triggered **On timeout** were counted as **Step entries** in the **Heatmap** report.

- Fixed an error where the hint window displayed after clicking on the search bar in WEBCON BPS Portal was missing translations of suggested values according to the user's language.

4.2. Form

- Fixed a bug where translations of a **Series** were not included in the configuration of the **Chart** form field, preventing its data from being displayed on the form.

- Fixed a bug in importing values with ?10 decimal places from an MS Excel file into the **Item list**.

- Fixed an issue with the instance history that occurred when license validation failed.

- When accepting a delegated task, the substitute will now see also the line of the delegate in the **Item list**.

- Fixed an aggregation bug inside the **Report Tile** embedded in the Dashboard column. The problem resulted from the failure to update the column containing the Report Tile.

- Fixed incorrect scrolling of the scroll bar after collapsing the instance history table in the Firefox browser.

- Improved login with an ADD account when editing documents via WebDAV protocol.

- Fixed an issue with displaying multilingual values in the columns of an **Item list**.

- Fixed a bug that occurred when exporting a **Data table** to MS Excel and the form was opened outside the application (e.g. from **My tasks** or as a **Preview**), resulting in incorrect loading of data in the form.

- Fixed a bug that caused a blank value to be duplicated in an Item list column of the **Choice field** type when a filtering rule was configured for another column of that List.

- Fixed a bug that occurred after changing the type of a **Global field** to another, when the inheritance of the field configuration was broken.

4.3. Designer Studio

- Fixed a bug that prevented deletion of an element (e.g. business entity, form field) even though the element was not used anywhere in the system.

- Fixed a bug that occurred when exporting an OCR project with a very large number of fields and dedicated networks.

- Fixed a bug in which the system did not block access to the process instances in Portal after disabling the **Allow to work on behalf of another user** option in Designer Studio for the process in question.

- Introduced additional validation of the package created during application export – if the attempt to generate it fails, the export will be aborted.

- Added validation of header values entered into the **CustomResponseHeaders** configuration database.

- Fixed a bug that prevented proper display of parameters (hyperlink generation) when email template contained a reference to a **Data table**.

4.4. Actions

- Fixed an error that made it impossible to go to the configuration window of the **Change field value** action when the action was added in automation with a local variable.

- Fixed the "SqlException: Snapshot isolation transaction failed..." exception that sometimes occurred when triggering cyclical actions.

- Fixed an issue in the **Generate an RS report** action that prevented it from working with https.

4.5. Rules

- Fixed an error of asynchronous process **Form rules** where the result of such a rule embedded in another operation was incorrectly handled.

- Fixed a bug where process ID was incorrectly loaded to a **Business rule** when copying global form field to a process form field.

4.6. Data sources

- Fixed a bug that prevented the import of items from MS Excel – the program incorrectly recognized the type of the entire **Data source** column based on its first row.

- Fixed a bug that occurred when searching for phrases containing square brackets "[ ]" among the values of a **Choice field** (**Autocomplete**) configured based on a **REST Web Service** data source.

4.7. Updated components

- Fixed an issue with the service upgrade which prevented upgrading from version 2022 to 2023.

WEBCON BPS 2023 R1

history of changes for version 2023.1.1.56

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1. Before upgrading WEBCON BPS

1.1. Important information

- If the changelog contains a section titled "Changes to existing features", please verify whether the changes will impact your implemented system in any way.

- To avoid interruptions in the system operation, make sure that WEBCON BPS licenses are up to date. To do this, verify the availability of the **WEBCON BPS Server 2023** license in the license report. This report is available from **WEBCON BPS Designer Studio -> *system menu in the upper left corner* › Licenses**. Current licenses must be downloaded if necessary.

2. Changes to existing features

2.1. Form

- Added time zone information to the **Sent** parameter in the tooltip displayed when hovering over a file in the **E-mail conversations** tab of the form.

3. Bug fixes

3.1. General

- Resolved the issue of the AutomationSessionExecutions table growing more than expected.
  Introduced a series of improvements which aim to limit the size of this table, e.g.:
  - deleting/archiving elements will remove all connected records
  in AutomationSessionExecutions,
  - reduced the number of data stored in JSON by over half,
  - replaced two idexes in AutomationSessionExecutions with one.

- Improved the version update logs added to the folder with the installer. The log.txt file will now include information regarding each step of adding change request templates/collections.

3.2. Portal

- Fixed discrepancies in the **Search everywhere** function on **Reports** using Solr as their source of data.

- The **Analytics** node will be visible for applications made exclusively from related processes.

- On **Reports** that use Solr as their source of data, the search in **Multiple lines of text** (WFD_AttLong) fields has been changed from SortAttLong to AttLong.

- Fixed missing translations in **Recent activities**.

- Fixed an issue with missing **Item list** data on **Reports** containing archived instances.

- Fixed a bug where the report status did not match the filtering settings, i.e. after displaying a workflow instance and going back to the report, the filtering was different than set.

3.3. Form

- Fixed an issue with importing >1000 rows to an **Item list** from Excel.
  Rows will be loaded starting from the row specified in the configuration (not the first).
  A notification will be displayed if not all rows in the file could be imported.

- If going through a path with form validation enabled fails, the error message displayed will no longer list errors detected during validation that are visible on the form.

3.4. Designer Studio

- Fixed an issue that occurred when choosing a Global form field for **Dynamic** task assignment in **Task creation**.

- Fixed an issue causing mass notifications to be sent on non-working days regardless of configuration.

- Improved the contextual help in the **REST Web Service** and **SOAP Web Service data source** configuration windows by removing unnecessary HTML tags.

- Fixed mechanism responsible for resetting the counter of incorrect executions after activating the disabled cycle of cyclical actions in WEBCON BPS Studio.

- Added missing info to the LogCleaner context info in **Schedules**.

- Fixed an error that occurred when attempting to switch the order of form fields in a process published from Designer Desk.

3.5. Actions

- Fixed an error in the **Change value of a single field** action. Choice fields set using this action will correctly update related fields set in their configuration. The error occurred when the choice field was set using a value in BPS format (ID#Name).

- Fixed an issue in the **For each** operator using **Item lists**. The values of an Item list will now be updated in the database after the loop completes.

- Fixed an issue that caused the configuration of the **Move workflow (SQL)** action to be imported incorrectly.

3.6. Rules

- Fixed how the **Empty** function works in process business rules. If a rule was configured to return a specific data type, the lowest possible value was set instead of the "empty" value (0 for Decimal, 0001-01-01 for Date). It will now be possible to set an "empty" value and thus "clear" fields using such rules.

3.7. Data sources

- Improved data retrieval for the **Choice field (Dropdown)** when using primary/secondary data sources.

3.8. Service

- Improved the way external user accounts are searched when synchronizing with Azure Active Directory.

- Fixed a bug where some antivirus tools classified WEBCON BPS Workflow Service as malware.

WEBCON BPS 2023 R1

history of changes for version 2023.1.1.41

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1. Before upgrading WEBCON BPS

1.1. Important information

- If the changelog contains a section titled "Changes to existing features", please verify whether the changes will impact your implemented system in any way.

- In WEBCON BPS 2023 R1 **the WEBCON BPS Authorization Service authentication provider will be completely unavailable**, as was announced previously.

  If the WEBCON BPS system uses this service, it will be necessary to change this. The system's built-in authentication providers (OpenID Connect or ADFS) should be used instead.

  The original announcement can be found in CL 2022.1.3.47 under chapter 2.2.

- This update changes the Solr search database structure. During the update, it will be necessary to provide the Solr database admin's password in order to update the database and correctly complete the update process.

- **Data sources** that are used by **Picker fields** and **Choice columns** must contain at least two unique columns, one for each of the required column types: **ID** and **Name**. After updating WEBCON BPS, it will not be possible to use data sources that contain only one column in the configuration of picker fields.

  If such a configuration exists, it will not be possible to update WEBCON BPS. Before updating, it is necessary to change the configuration of data sources and choice fields so that the data source contains at least two columns, and so that no column in used more
  than once in the configuration of form fields.

  The installer will verify the configuration of form fields. If issues are found, it will be necessary to manually change the configuration of the form fields shown.

- To avoid interruptions in the system operation, make sure that WEBCON BPS licenses are up to date. To do this, verify the availability of the **WEBCON BPS Server 2023** license in the license report. This report is available from **WEBCON BPS Designer Studio → *system menu in the upper left corner* → Licenses**. Current licenses must be downloaded if necessary.

- Installation of the new WEBCON BPS version involves migration of active tasks to the new **ActiveTasks** table. The data copying operation requires sufficient disk space, and its duration depends on the number of transferred instances.
During the update, information on estimated execution time and required disk space is displayed.

2. Information

2.1. General

- The location where several static WEBCON BPS files available publicly are hosted has been changed. This includes the IT Hit Edit Document Opener plugin installer which is used to edit attachments directly from the form. This plugin can now be found at:
  https://files.webcon.com/bps/webdavclient/plugins/.

  The plugin is installed for users when they first attempt to edit an attachment. In order for it to work correctly, please make sure that this address is not blocked on client computers.

- Added calculated columns to the WFElements table which will allow identifiers of choice fields to be loaded more efficiently.
  Until now, the **dbo.ClearWFElemID** function was used.
  Queries will now use new calculated columns e.g.
  WFD_AttChoose[Number]_ID.
  This should increase the loading speed of Reports, BPS internal view data sources, and SQL COMMAND functions in Business rules.

- The **[dbo].[GetTaskForElement]** function has been removed from the database.

- During the update, a migration script will delete empty values for translations from the database. These could have accumulated in previous versions of the system.

- Additional indexes will be created in the **WFElementTasks** table to improve the archiving performance.
  Depending on the amount of data stored in **WFElementTasks**, it will be necessary to provide additional disk space to store the new indexes.
  If the number of records in **WFElementTasks** exceeds 100,000, then, before starting the system upgrade, the installer's requirements verification step will display a message containing the estimated script execution time and the required additional disk space.

- Solr queries will now be executed asynchronously.

- Updated DTK Barcode Reader component to version 5.0.28.

2.2. Form

- Improved the operation of the **Handwritten signature** special form field (also on mobile devices) so that the quality of signatures is higher.

2.3. Actions

- **On timeout** automatons can now use the following actions:
  - **Create a site**
  - **Create a list**
  - **Add a new list element**

- The **Read a barcode** action no longer requires Visual C++ Redistributable.

2.4. Rules

- Optimized memory consumption in WEBCON BPS Designer Studio when using **Business rules** and **Form rules**.

3. Changes to existing features

3.1. General

- To ensure greater efficiency, two separate data tables are introduced to store active and historical tasks. Only historical tasks are now stored in the former **WFElementTasks** table (that used to store all tasks) and its name is changed to **HistoryTasks**. Active tasks are transferred to a newly created **ActiveTasks** table.

- Changed the type of the **WEL_Details** column that contains error logs from varchar to nvarchar. Old logs will be available in the **WEL_Details_Deprecated** column, which will be deleted automatically once it doesn't contain any logs with data.

- Adjusted the behavior in cases where the time zone on the server is changed.
  - **Service** – logs a warning about changing the time zone and shuts down. If the "Restart the service" option is set in the Recovery configuration (default setting after system installation), then the service will be restarted.
  - **Portal** – logs a warning about changing the time zone and shuts down. Restarts itself in IIS manager.
  - **Designer Studio** – logs a warning about changing the time zone and warns the user. Restarts itself without saving unsaved changes.

- Changed the SQL view name from **V_WFElementTasks** to **WFElementTasks**. The view gathers all system tasks (active and historical).

- The step for configuring user list synchronization has been removed from the installation wizard of the new WEBCON BPS environment. This configuration should be done from WEBCON BPS Designer Studio (System settings → Global parameters → Users and groups synchronization → Synchronization configuration) after all components have been properly installed and after logging in to Designer Studio using the built-in **Admin Access** administrator account.
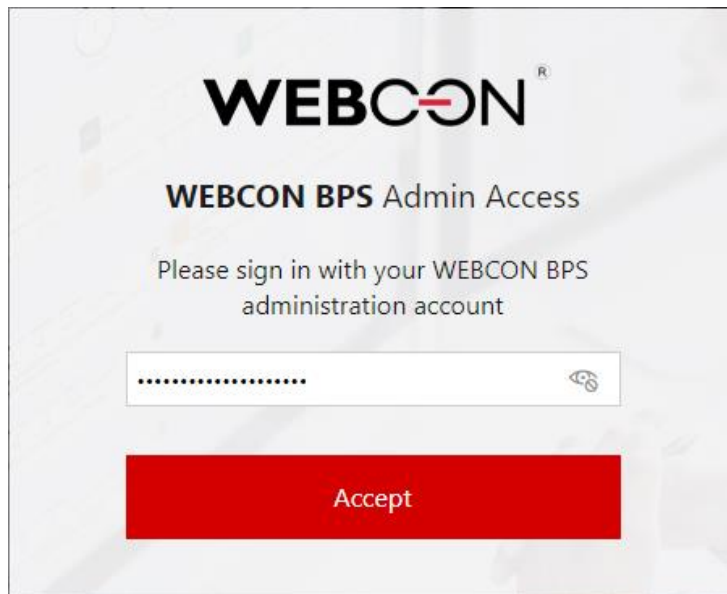
Configuration of user list synchronization can still be done using the **System management tools** available in the system installer.

- The mechanism for activating license packages and downloading licenses online will now use only one single License activation Service: **activation.webcon.com.**

- Changed the operation of on-behalf substitutions. Currently, the system verifies the license of the substituting person, not the substituted user. As a result, the administrator is now tasked with verifying whether the substituting person has the privileges required to execute the tasks of the substituted user.

- Changed the default method of communication between WEBCON BPS Portal and WEBCON BPS Workflow Service. Communication between these two system components will now be secured with relevant certificates.

3.2. Portal

- Optimized operation of the **choice field** form field with enabled the **autocomplete** mode.

- A loader was added when saving the configuration of report views.

- Changed the appearance of the tab panel available after going to **Profile settings**.
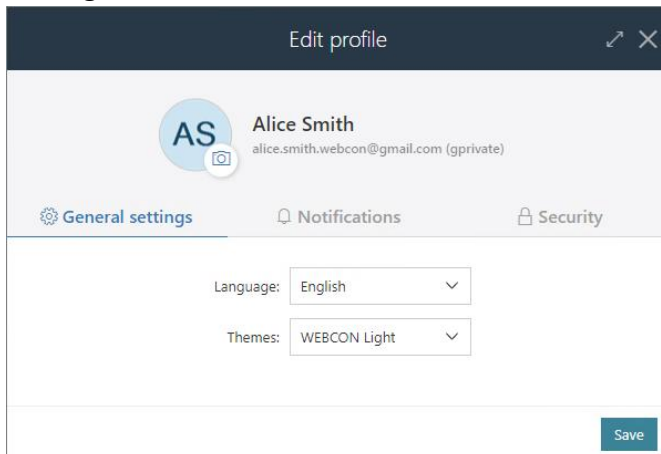
The introduction of new features entailed a change in the appearance of the main menu as well. The operation of features available in previous versions remains as before.

- Calculated columns, system fields, and Item lists will not be exported to Excel from **Dictionary reports**.

- Changed the arrangement of names of process, form type, and document workflow when they are longer than single line of text. Currently, all lines of text are aligned with the first line.

- A user that has been granted access to a **Report**, but does not have privileges to any application, will not be able to access Portal.

3.3. Form

- If the attachment preview is opened when the form is loaded – the first added attachment will be displayed (instead of the first one alphabetically).

- Unified the value returned by **Yes/No** picker fields, their "true" or "false" values will always be lowercase.
  This change may affect data sources and actions that invoke REST and SOAP Web services, specifically if their configuration passed a **boolean** value as text.

- Exporting data to Excel from a **Data table** form field can now also be done in **View mode** on the form – i.e. a user does not need to edit the form to use this export feature.

- Fixed the layout of the **Choice field** window when choosing multiple values – it will no longer cover up the search field.
  Added verification which will check the length of the data to verify whether it will fit into the target column – instead of cutting off the value, the user will receive a notification about exceeding the limit.

  > (!) **Validation error**
  >
  > **Picker:**
  >
  > The number of characters has exceeded the allowed limit.
  > Choice field values may have a total length of up to 1000 characters (this includes characters in both the name and identifier).
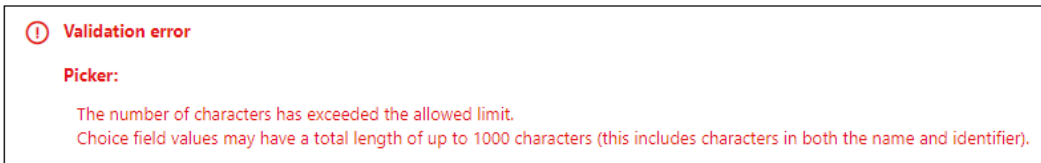
- Changed the behavior and method of caching **Item list** data.
  Initialization of the Item list will be treated as its default value and executed in the sequence of counting default values on the form, as in the case of other form fields.
  The data of hidden columns of the Item List will not be retrieved at its initialization.

- If the instance signature contained diacritical marks, such as "ą", searching for it in a **Choice field** configured in **Autocomplete** mode was possible only after replacing such a character with a letter from the Latin alphabet (e.g. "ą" with "a"). The feature is no longer available, and now signatures can be searched by their original wording.

- **Data sources** that are used by **Picker fields** and **Item list** choice fields must now fulfill two new conditions:
  - The data source must contain at least two columns that will be assigned to the two required column types: **ID** and **Name**.
  - Source **columns** cannot repeat within the configuration of one choice field or column.

As for the second condition, to handle scenarios where the value from one source column needs to be copied to many form fields, the configuration of the **Target column** now allows for multiple fields to be selected.
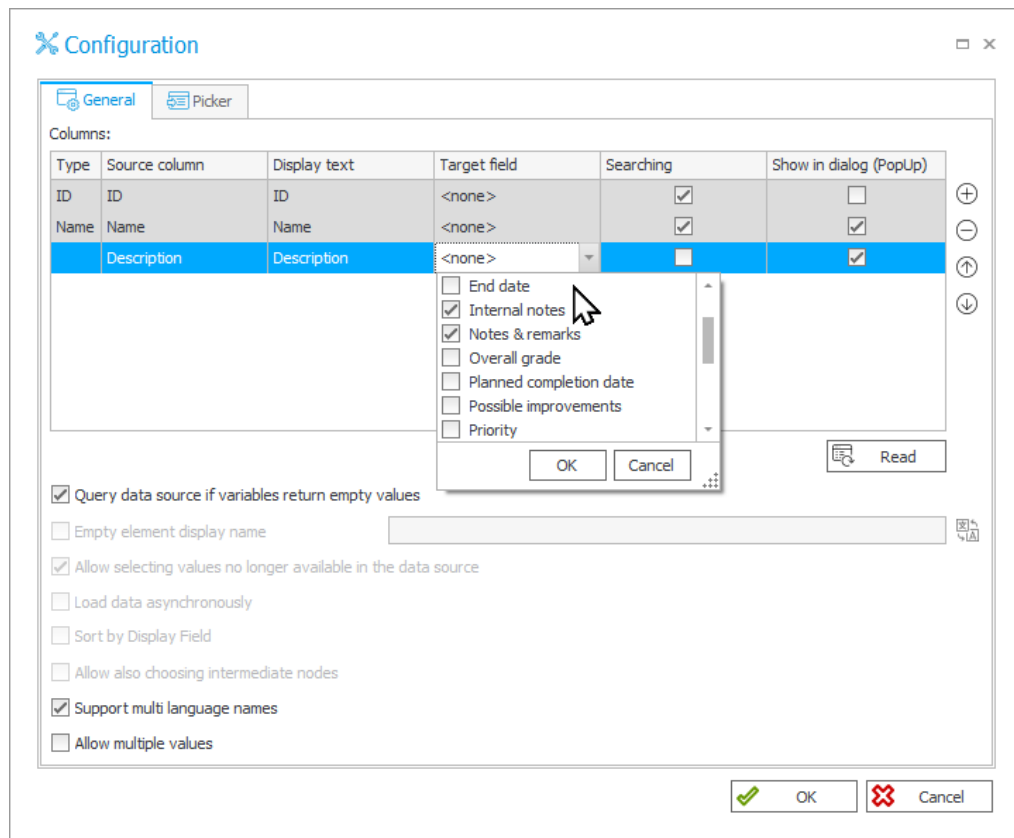
When updating WEBCON BPS, configurations of choice fields and columns that contain duplicated source columns will be converted into this new model so as to keep the source columns unique – but also to keep the original function of the form field.

• Changed the behavior of the ##currentloginname## variable in the case of **All/Direct subordinate's views**. When switching to the view of all subordinates, the value of this variable will contain user identifiers separated by semicolons.

- Changed the behavior of the **Single line of text** form field configured as a **Hyperlink field**. After the change, only the **Address** field will be displayed and available for editing by default on the form. The **Name** field will only appear when the user clicks on the pencil icon.

Clicking on the icon again will cause the filled-in Address field to be displayed in read-only mode, the value entered in it to be replaced by a hyperlink, and the Name field to be hidden.

- Disabled the preview of MS Excel files directly on a form. Currently, when attempting to preview the contents of a file (clicking on the file icon), it will be downloaded locally to disk.

- Changed the validation of values entered for **Choice fields**. Only values entered manually by the user will be validated, as opposed to those entered automatically by system actions. It will not be possible to save a form if the value entered by the user is invalid. Should a reference be created to an unvalidated Choice field value, the returned value will be empty.

- The **cash-dom** library has replaced the former **jQuery** library. The change may affect how form rules work in JavaScript mode if the rules used the functionality provided by jQuery. For a description of the differences in the operation of the two libraries, see: https://github.com/fabiospampinato/cash/blob/master/docs/migration_guide.md.

- Changed the appearance of the cursor that appears when hovering over the name of a group of form fields on a workflow instance – a "pointer" type cursor will be displayed in this case.

3.4. Designer Studio

- The **BPS users list** option, which was previously available from **System settings → Global parameters**, has been replaced by the **Users and groups synchronization** option. The new node contains all previously available features, except that the list of BPS users and groups has been moved to the additional node named **BPS users and groups list**. The new window contains two dedicated tabs: **BPS users** and **BPS groups**.

- Fixed an issue with form field configuration migration. The error caused the **Empty element display name** option in **Choice fields** in Dropdown mode to be cleared if its value was a space (or other whitespace characters).
  In previous versions, simply entering a value into the Empty element display name would activate the option.
  After this fix, the option will need to be activated via a new checkbox in the choice field configuration.

- Reading and saving of attachments with custom categories have been unified in all dedicated actions, rules using **GET ATTACHMENTS** function, and for automations configured using **For each** operator with **Attachments** as the indicated collection type.

  In the configuration windows for all of the above, the **Custom** category of attachments has been replaced with the **Dynamic** one.

  It is now possible to dynamically match the entered name of the attachment category with the categories available in the data source. If the indicated category does not exist in the source, a custom category (from outside the source) will be matched.

- Designer Studio no longer supports **--sql** and **--legacyExpressionTree** parameters.

- **Form field Groups** can no longer be renamed or deleted in LITE mode.

3.1. Instance ID changes

Instance ID has been removed from the list of system form fields. This identifier is now available among the **Standard areas** of the form. User can decide whether instance ID will be visible on the form by checking the box assigned to it on the **Field matrix**:

or, when editing a step, in the **Area visibility** section of the **Forms** tab:

If the user has chosen that Instance ID will be visible on the form, then in WEBCON BPS Portal it will no longer be displayed in the **Information** section, but in a separate, dedicated section of the **info panel**.
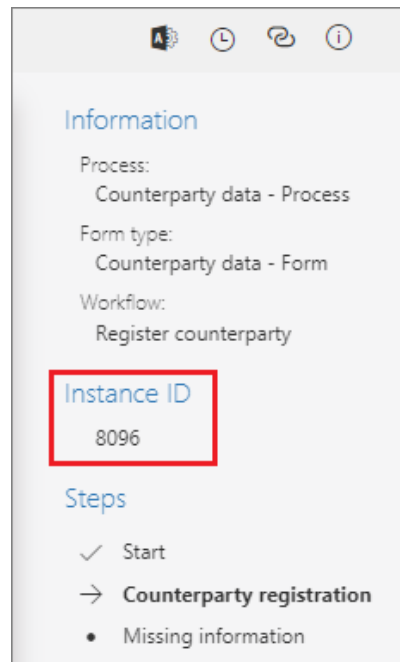
3.2. Actions

- Added an alert in the **Invoke REST Web Service** action that uses JSON Grid controller warning users about deleting subordinate nodes when changing collection type to **valuesCollection**.

- If the **Printout a barcode label** action fails to print any barcode in synchronous mode, the entire path transition will be aborted.

- The **Manage BPS user licenses** action can now also be used in on-prem installations that use the subscription licensing model.

- Changed the manner in which attachment names containing special characters are recognized and modified with the **Update attachment** action.

3.3. Unification of Error handling in Automations

Error handling in automations will now work differently in cases where there is a series of automations triggered in one continuous transaction e.g.: **On exit** from a step → **On path** between steps → **On entry** to the next step.

Until now, an error in one automation would engage the error handling flow for that specific automation.

In version 2023 this works analogously, but the error handling flows of all automations previously completed in the same transaction are also activated.

The error handling flows of other automations will be executed in reverse order, i.e. from the most recently completed to the first automation.

This change also includes automations whose configuration contains nested automations.

For example: Automation A contains automations B1, B2, and B3, as seen on the diagram below.
These automations are triggered in order A → B1 → B2 → B3.
If an error occurs in automation B3, its error handling flow is activated, and then the error handling flows of all previous automations are also engaged from most recent to the first, which means that the error handling flows are triggered in order:
B3 → B2 → B1 → A.
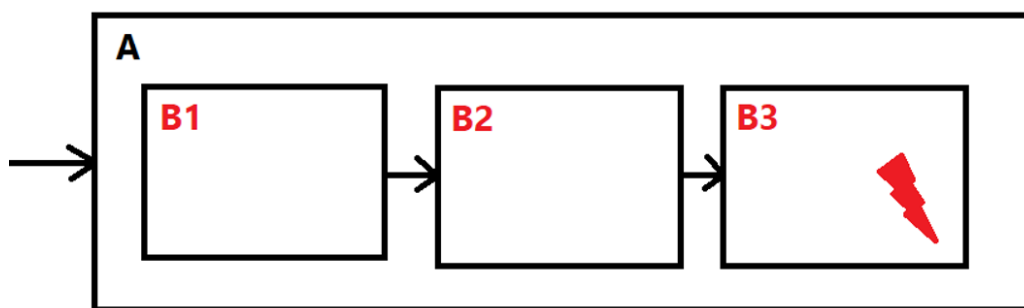
The state of parameters, variables, form fields, and attachments used for error handling will be remembered from the moment when the automation was originally triggered. Attachments will be returned to the state from before the group of automations was triggered.

Note: If an instance of a parent workflow leaves the **Wait for subworkflows** step and encounters an error, the error handling will only include the automations from that parent workflow. The subworkflow instance that caused the parent instance to leave the step will not be affected – its automations were completed in a previous transaction.

3.4. Rules

- Changed the order in which rules are executed when starting a workflow instance. After the change, the order is as follows: 1) **restrictions**, 2) **default values**, 3) **other values set by: users, actions that change the instance, URL parameters**.

  The change has a particular effect on the actions **Start a subworkflow** and **Start a subworkflow (SQL)**. Therefore, the configuration windows of these actions have a new option, **Set form field data before defaults evaluation (compatibility mode)**, which enables maintaining the current system operation when using these actions.
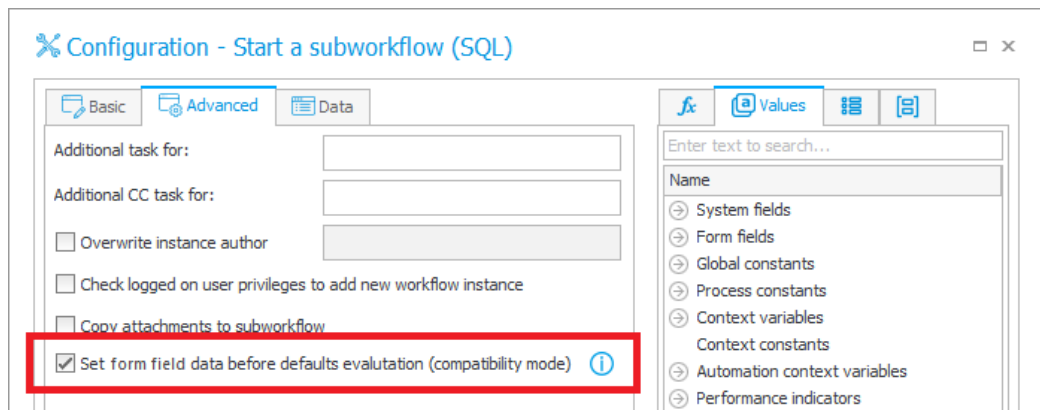
3.5. Data sources

- Changed the JSON deserialization settings for **REST Web service** type data sources. Dates saved as strings (ISO format) will be deserialized into the specific format chosen in the REST data sources configuration (String, Date, DateTime).

  Example date in JSON: "2022-06-11T00:00:00" will be deserialized as follows, according to the response type:

  - **String**: "2022-06-11T00:00:00"

  - **Date: DateTime** "11.06.2022" for "pl-PL", "06/11/2022" for "en-US"

  - **DateTime: DateTime** "11.06.2022 00:00:00" for "pl-PL", "06/11/2022 00:00:00" for "en-US"

- The **PickerVal** tag will return the value from the first searched column (if more than one column of the choice field is searched).

- If the configuration of a **Rest Web Service** data source contains a field that was previously mapped but is now missing from the service response, it will be shown as empty. Previously, such a scenario would result in an error.

- IDs in **Fixed value list** data sources can have a value of "0".

3.6. Mobile app

- The mobile app for Android will now be available in the Google Play store for devices without cameras.

3.7. Service

- Expanded the **LogCleaner** module functionalities with removing active tasks from the **ActiveTasks** table and changed its name to **LogAndDataCleaner**. Additionally, accepting a task assigned to a group by any person belonging to the respective group by means of the **MailApproval** functionality results in changing its status to accepted.

3.8. Designer Desk

- The English-language name of the default report created for the application prototype has been changed from "All documents" to "All items". In addition, the option to display the **Link** to an **Instance number** will be checked by default in the report configuration in the **Views** tab.

- The **Unlimited Solutions Access** license is no longer required when working in Designer Desk.

- Each step now has more ports for drawing paths in **Workflow designer**.

3.9. API & SDK

- An API application must have an assigned license to carry out requests associated with e.g. starting a workflow instance.

- The 200-character limit has been removed for places in Designer Studio where URLs could be configured (e.g. in REST and SOAP connections and data sources).

- Added encoding for URL values passed through variables.
  Use RAW variables if the values should not be encoded.
  When passing a value e.g. "Domain\user", the "\" will be replaced with "%5C".

4. Security fixes

4.1. Form

- Fixed an issue in WEBCON BPS Portal that allowed a non-administrator user to assign different types of privileges to other users.

4.2. Updated components

- Updated component JSON 5 to version 2.2.3 due to CVE-2022-46175 – https://github.com/advisories/GHSA-9c47-m6qq-7p4h

- Updated component tinymce to version 5.10.7 due to CVE-2022-23494,CWE-79 – https://security.snyk.io/vuln/SNYK-JS-TINYMCE-3166281

- Updated component Newtonsoft.Json to version 13.0.2
Due to CWE-755 – https://security.snyk.io/vuln/SNYK-DOTNET-NEWTONSOFTJSON-2774678

- Updated component NuGet.CommandLine to version 6.3.1 due to CVE-2022-41032 – https://security.snyk.io/vuln/SNYK-DOTNET-NUGETCOMMANDLINE-3043007

- Updated dependencies in the **Active.Directory.Utils** project in relation to CVE-2022-34716
https://security.snyk.io/vuln/SNYK-DOTNET-SYSTEMSECURITYCRYPTOGRAPHYXML-2977914

- Updated component **BouncyCastle.Crypto** to version 1.9.0.0 due to it being erroneously treated as a
threat: https://www.virustotal.com/gui/file/de1c0dd2bbcdf8a3af539a8de351d55a01a9dde5d1bcdc5dc564ec70cc0784a2/detection

- Updated component **System.Data.SqlClient** to version 4.8.5 due to vulnerability CVE-2022-41064, CWE-200:
https://security.snyk.io/vuln/SNYK-DOTNET-SYSTEMDATASQLCLIENT-3110424

5. New features

5.1. WEBCON BPS Analytics

WEBCON BPS has gained a new feature for displaying statistical information about an application / a process. In Portal, users now have a dedicated **Analysis** node with tabs that compile key figures and time series in the context of available applications. Also introduced is the ability to track trends on working with the system, as well as display a **Heatmap** for a selected application.

Key application indicators

The **Analysis** node is a highly developed version of the previously available **Insights** node. The change affected not only the node's name, but also its contents – as before, users will find **Suggested** workflow instances here, but now they also have a new **Analytics** option, including the **Overview** subnode.

Indicators per process

After clicking on **Overview**, users will see **Key application indicators**, and more precisely, the **Per process** tab, whose content will vary depending on the applications used and privileges granted.
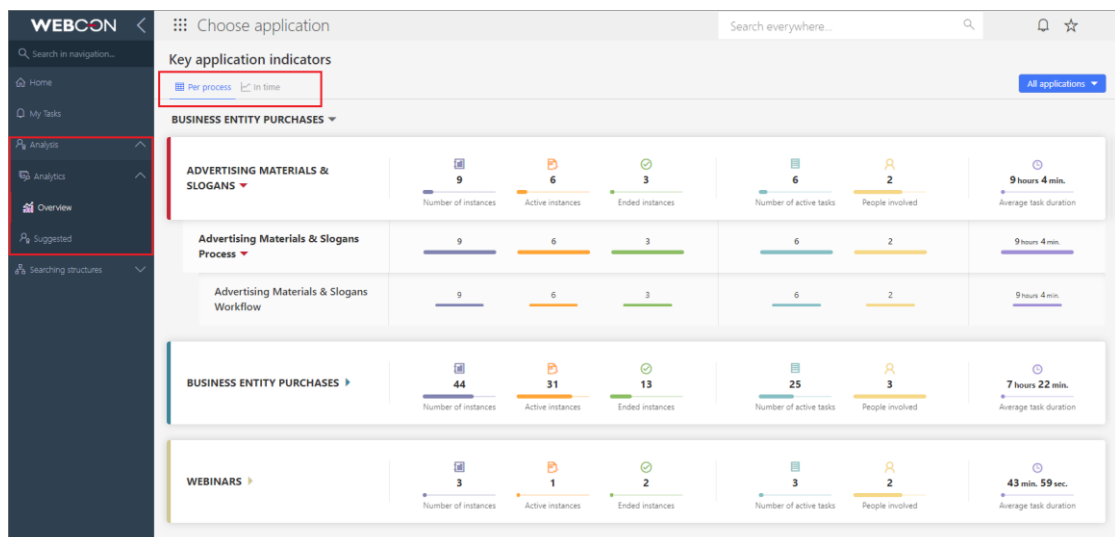
The data of individual applications in the report are grouped and displayed according to the current state, in alphabetical order, just like in WEBCON BPS Designer Studio. When you click on an application, a list of its processes is expanded, and when you click on a process, a list of related workflows is displayed. Each such data set contains the following information:

- **Number of instances**
- **Active instances**, i.e. instances outside the final step
- **Ended instances**, i.e. instances in the final step, either positive or negative
- **Number of active tasks**
- **People involved**, i.e. users who completed at least one tasks on their own and whose tasks are not canceled
- **Average task duration** (applies only to completed tasks).

By default, global business administrator will see in the report the data of all processes and applications.

Similarly, business administrator of a process will see the data of only those processes to which they have access.

If a user does not have business administrator privileges to any process, **Key application indicators** report will not be visible to them.

In the upper right corner of the screen, there is a filter to narrow down the report view to the data of a selected application, process, workflow, or even a step.
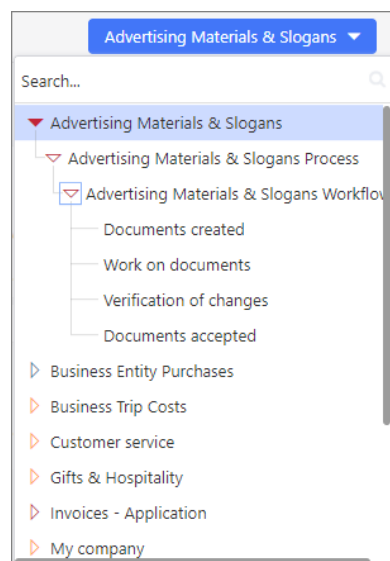
Indicators in time

The **Overview** subnode also has another tab named **In time**. It is a report that provides a visual representation of the most important information about working with applications, processes, workflows, and workflow instances in WEBCON BPS, organized over time. Here, users can check the number of individual instances, operations, and tasks, as well as the time spent on their processing and execution.
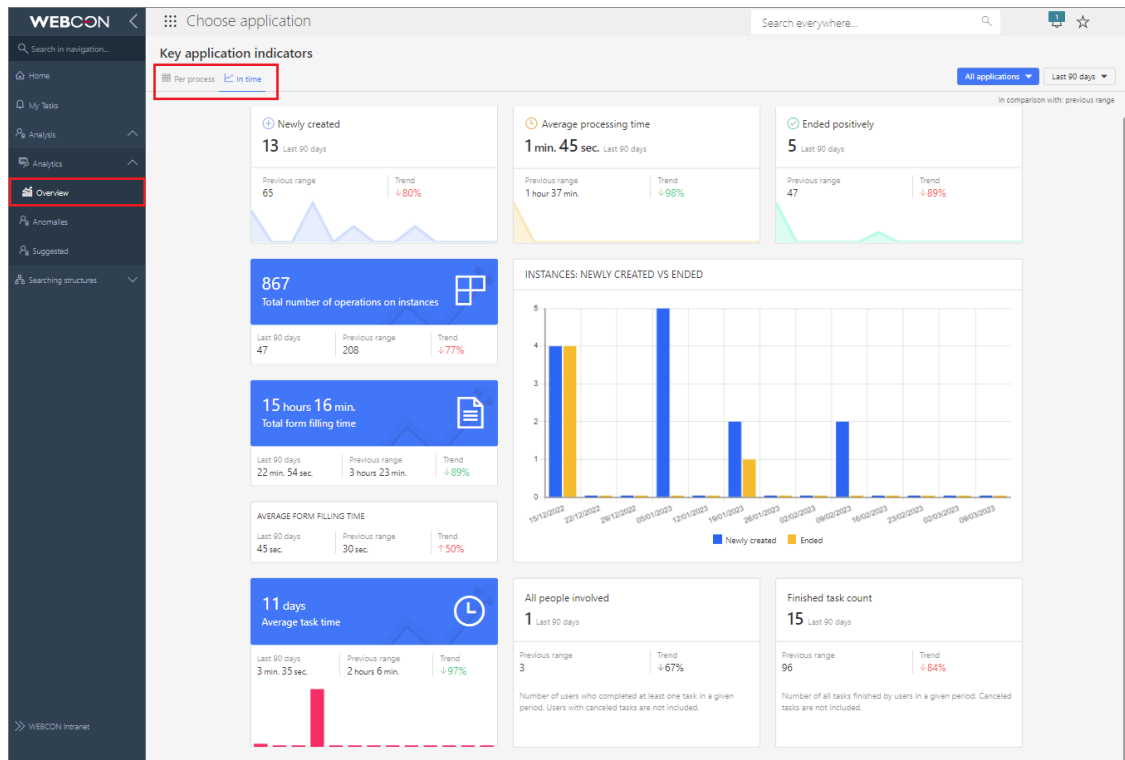
If the user has applied a filter that narrows down the displayed information in the first tab, for example, to a selected workflow, the filtering settings will be automatically inherited on the other tab. And vice versa – after setting the filter for **In time**, the data on the first tab will also be narrowed down accordingly.

The tab consists of the following indicators:

- **Newly created**
- **Average processing time**
- **Ended positively**
- **Total number of operations on instances**
- **Total form filling time**
- **Average form filling time**
- **Average task time**
- **Instances: Newly created vs Ended**
- **All people involved**
- **Finished task count**

By default, data from the last 90 days are presented. The user can independently define the period for which statistics will be displayed or choose one of the predefined ranges expressed in days, months, quarters, or years. A dedicated filter in the upper right corner of the tab is used for this purpose.
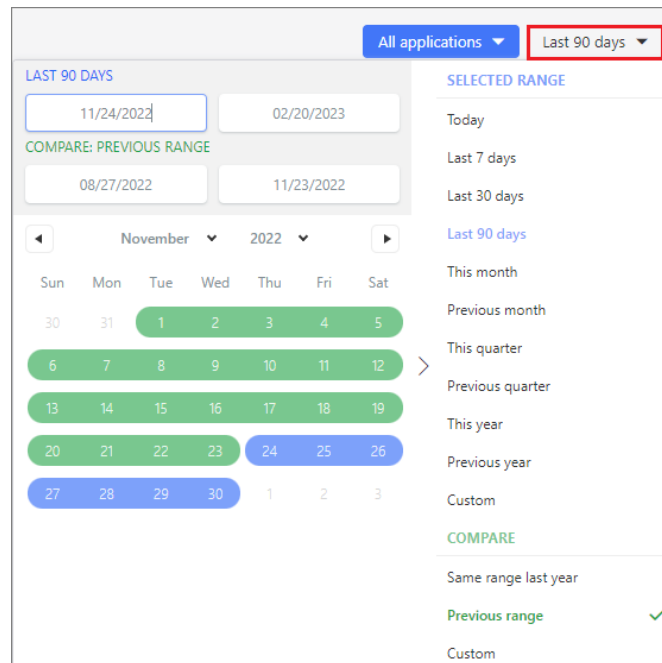
Additionally, it is possible to compare data from the corresponding **Previous range** (e.g. year-on-year), thus obtaining information on **Trends** for all presented parameters, i.e. related to the tasks performed and the time spent on them or working with the form, etc.

After indicating the preferred time period in the filter, the data presented in all sections on the tab will be changed accordingly.

All the above features are also available from within the application. The filtering on both tabs is then automatically limited to that specific application, and the indicators prepared only on the basis of related statistical data.

Heatmap

If user would like to analyze the statistics of a specific application, they can use an additional option, the so-called **Heatmap**. When this node is selected, the related workflow is displayed, with "hot" and "cold" points marked on it. Steps and paths are highlighted according to the frequency of their selection by the form user and the time spent on tasks, as shown in the legend below. The arrangement of steps and paths of such a workflow is as configured in WEBCON BPS Designer Studio – it is possible to alter it, but the changes made cannot be saved.
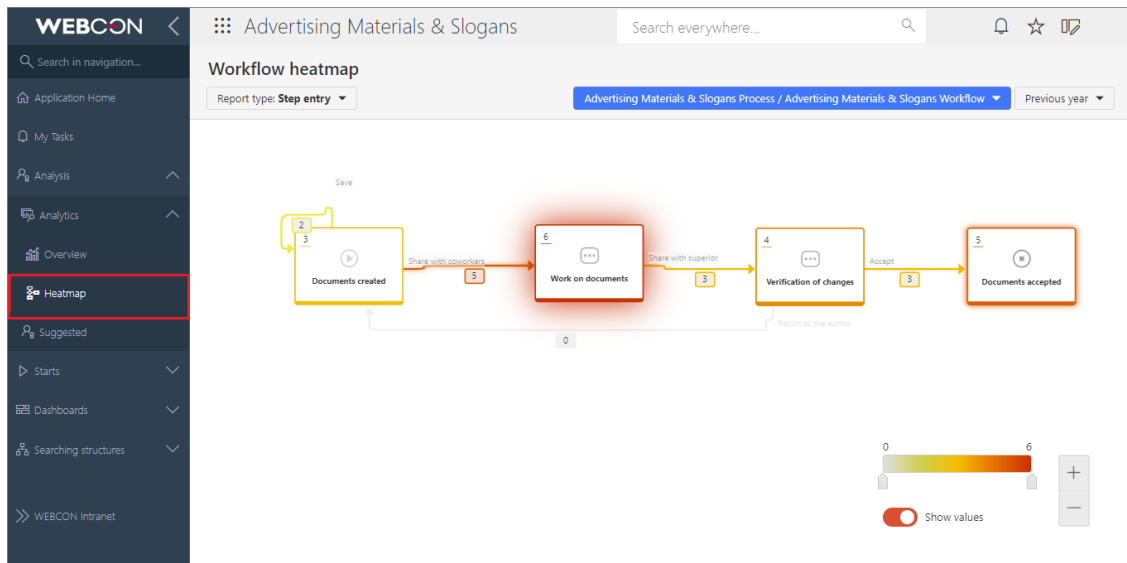
Users can choose from the following report types:

- **Step entry**
- **Step re-entry**
- **Time spent in step** (total/average)
- **Task waiting time**
- **Form filling time** (total/average)
- **Overdue tasks**

Depending on the selected report type, an integer or timestamp (to the nearest 1 hour, minute, or second) value is displayed in the upper left corner of the step and next to the path.

The report can be filtered by: **users** who had tasks assigned in the process (applies only to the last three report types in the list), **workflow** (the first workflow of the first application process is displayed by default), and by **period**.
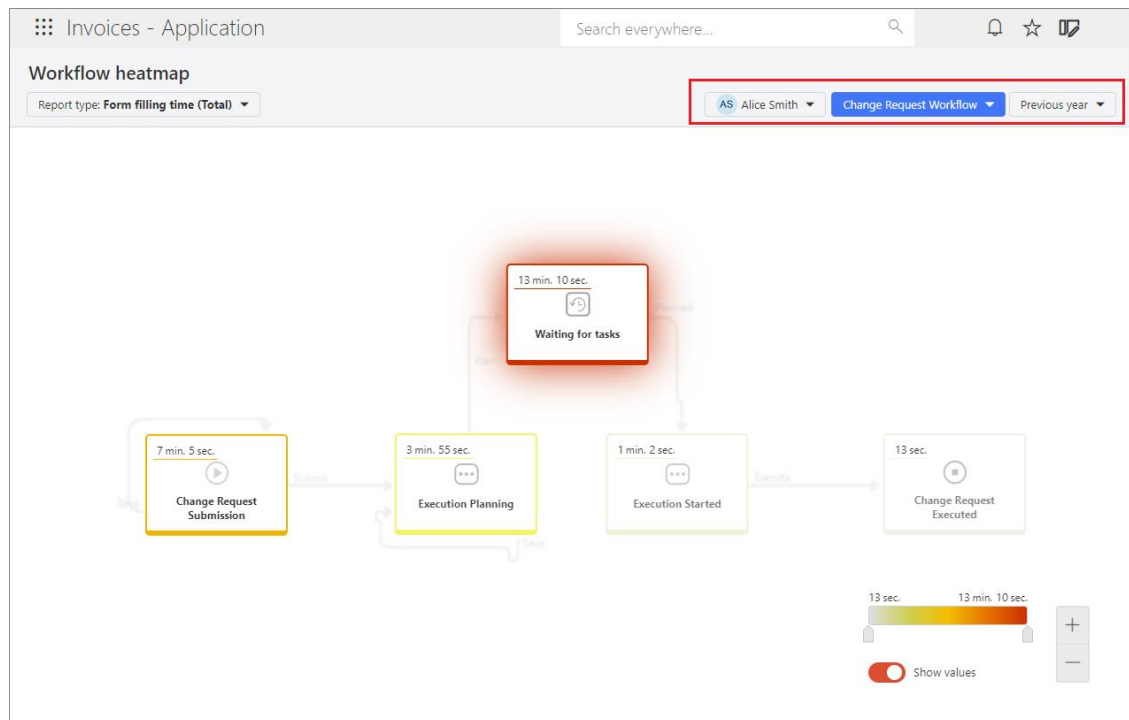
Note: if necessary due to country-specific legal restrictions, filtering by users can be disabled by setting "0" for the **TopUsersEnabled** global parameter in the configuration database (the default value is "1").

By moving the slider on the legend, users can change the range of values presented on workflow steps and paths. Additionally, by properly setting the **Show values** button, it is possible to display the workflow according to individual preferences – with or without numerical data.

Please note that ONLY users with WEBCON Advanced Analytics Framework license have access to analytical reports and indicators as part of this new feature.

5.2. Edit mode in Portal

Users are now able to view and partially change the process configuration from WEBCON BPS Portal. The new feature allows for editing the names of form fields, steps, as well as the content of translations and descriptions of paths and steps directly in Portal. Additionally, it is possible to view the configuration of workflows, automations, and rules from there.

Note that if a process is checked out or has been modified via the export-import mechanism, its configuration in Portal will always open in read-only mode. The user will be informed about this with a relevant message.

Enabling the edit mode

After enabling edit mode, privileged users can modify process configuration to a certain extent, and the changes they make do not require additional validation or publication by admin. To enable edit mode, they should click on the icon right next to their profile picture and select **Enable edit mode**.
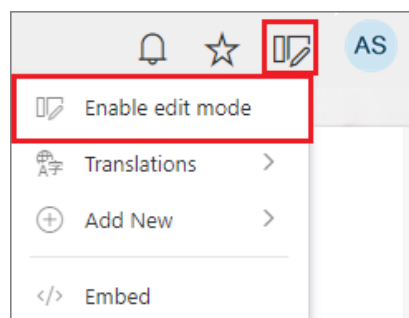
The **Process Design** node will then appear on the left-hand panel where all processes within or related to the current application are available – users can edit them based on their privileges.

The following are authorized to edit a process:

- global system admin,
- application admin, and
- users who have been granted the privilege **Designer Desk edit in Portal** directly in process configuration.

By expanding the node of a given process users can display its workflows. After selecting a workflow, a component with the following three tabs appears: **Workflow designer**, **Form designer**, **Field matrix**.
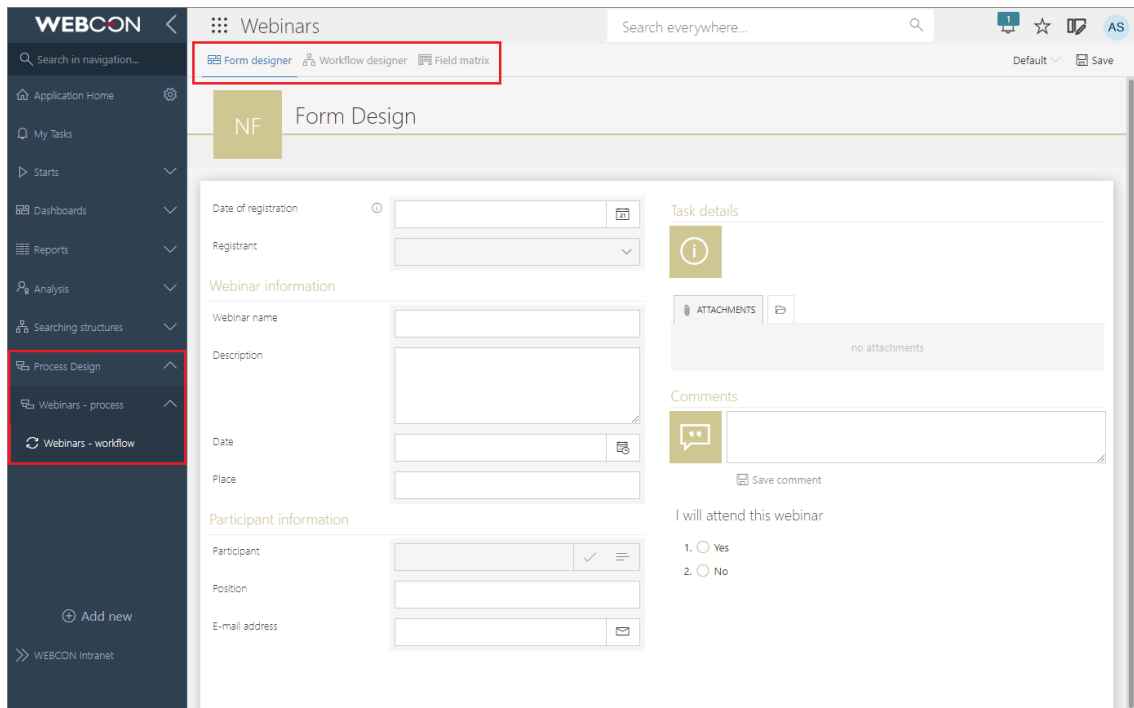
The appearance of all these designers is similar to those available in WEBCON BPS Designer Desk. **In case a user does not have Designer Desk licenses, all designers will open in read-only mode** and the user will be prompted accordingly.

The last privilege level mentioned above, **Designer Desk edit in Portal**, is also a novelty and can be assigned to users and groups when configuring a process in WEBCON BPS Designer Studio.
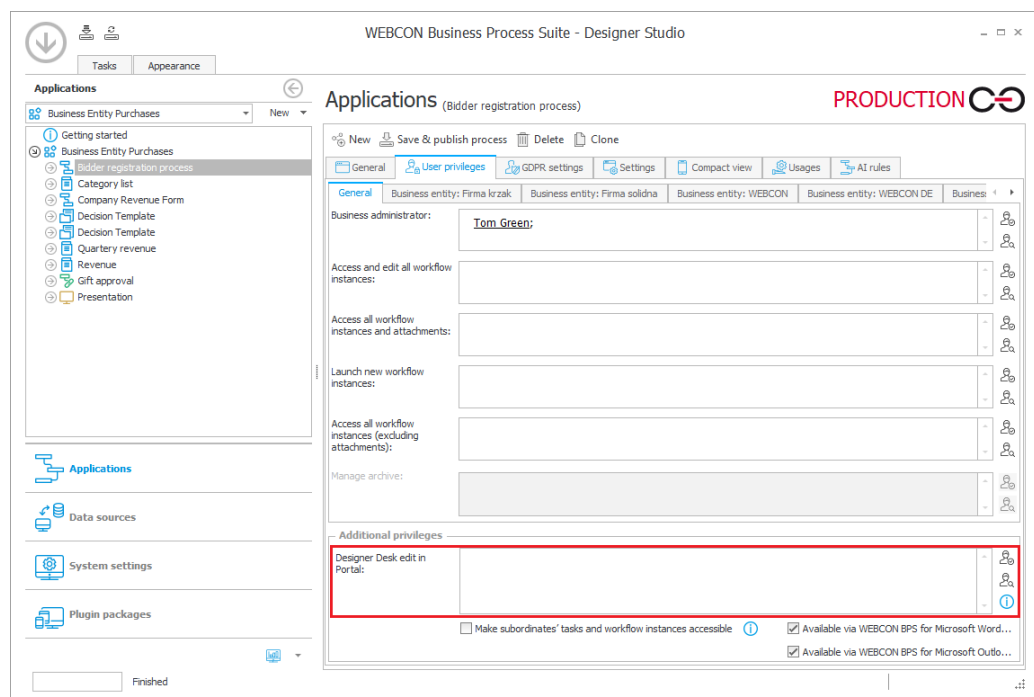
Form designer

Form designer is a component that allows users to preview the layout and configuration of form fields. Additionally, authorized users can edit basic form field data, i.e. change the contents of the **Name**, **Description**, and **Documentation** fields.

When a user clicks on the desired form field, a characteristic frame appears around it, with a pencil icon above. After clicking on this icon, the **Properties** window is displayed with an option to edit the relevant data.
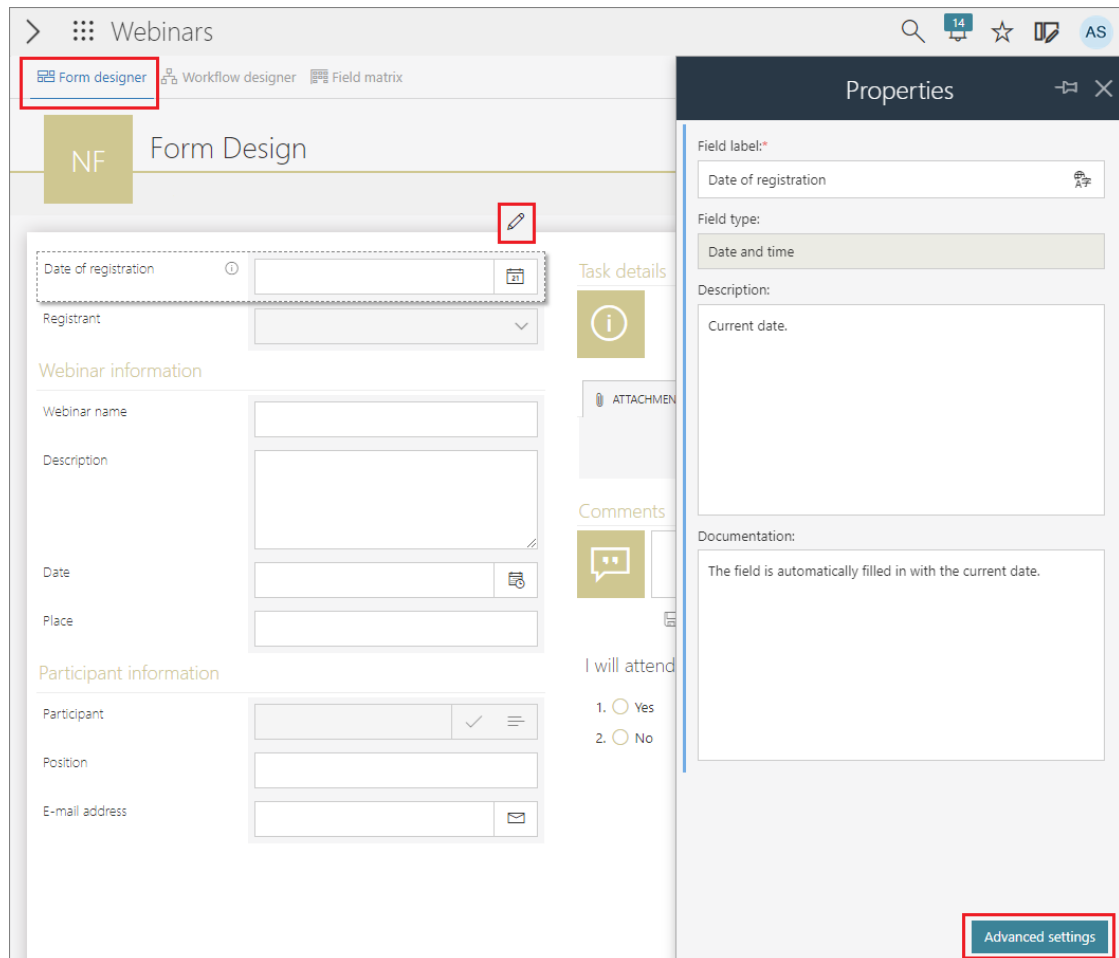
What is more, by selecting the **Advanced settings** button, users will see an additional **Field details** window consisting of two tabs: **General** and **Field rules**, where they can view any configured default value rules, rules executed when the value is changed, as well as visibility, editability, and requiredness rules. The content of this window varies depending on the type of form field / **Item list** column, and the information therein is available in read-only mode.
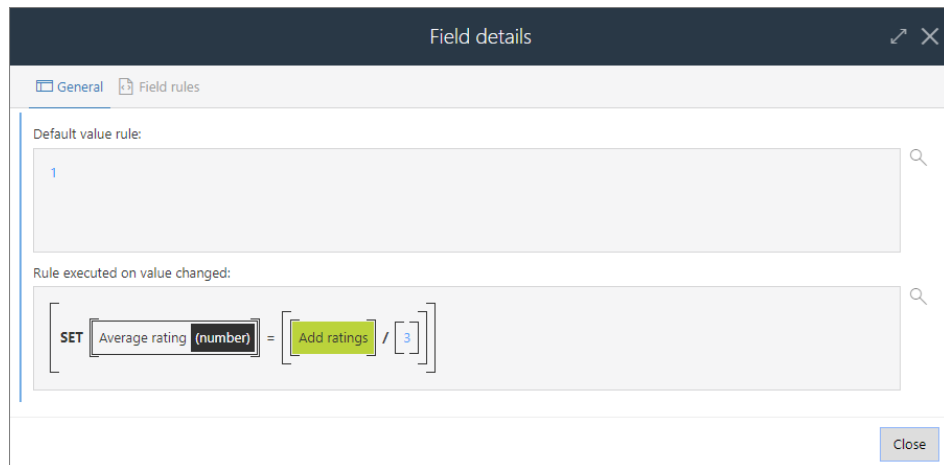
The user should click **Save** in the top menu, just below the profile picture, so as not to lose their settings. All changes made will be immediately visible in the production environment.

Translations of form field and column names

In addition to editing their **Properties**, it is also possible to enter translations of the names of form fields and item list columns in languages defined in the system configuration.

Selecting the **Form designer** language in the top menu allows users to edit the names of form fields and columns in the selected language directly from the designer.
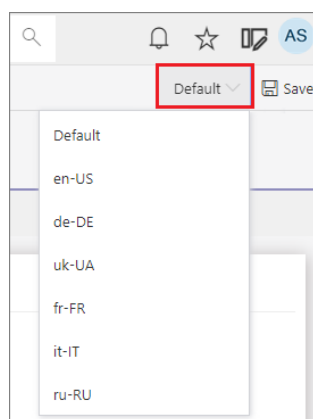
Translations of a form field name can also be edited in the **Translations** window displayed by clicking the dedicated icon in the form field properties.

Editing names and reordering global action buttons

With **Form designer**, users can also edit the names and change the order of global action buttons, if defined. Renaming a button is analogous to renaming form fields. However, setting the buttons in a different order than the default requires clicking the desired button and dragging it to the appropriate place in the menu. Such a change is made only at one level – it is not possible to create groups and place buttons in them.
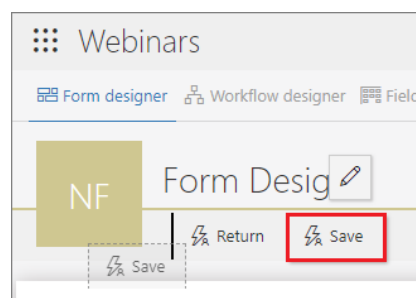
Workflow designer

Workflow designer is one of the tabs available in the process edit mode. After navigating to this tab, a graphic diagram of the workflow is displayed. By clicking on the selected path or step, users can edit the names and descriptions of steps and paths in the dedicated **Properties** window.
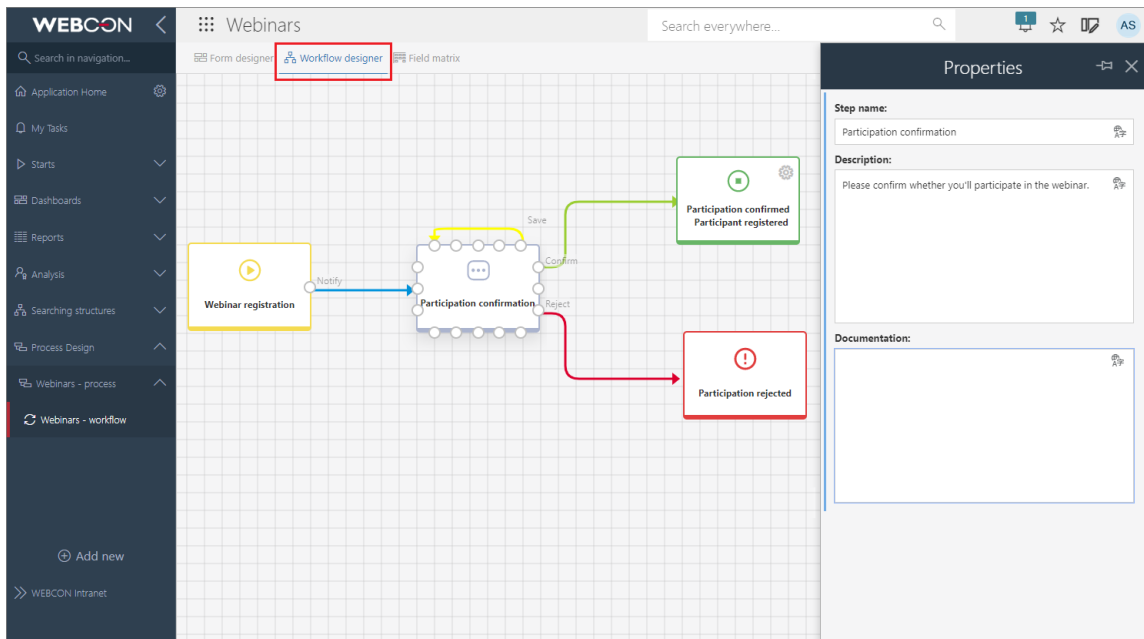
Using the dedicated icons in this window, the user can also enter translations for all editable text fields.

If an automation or a business rule is configured for the selected workflow, the designer allows users to preview it – all they need to do is click on the cogwheel icon on the step or near the path.
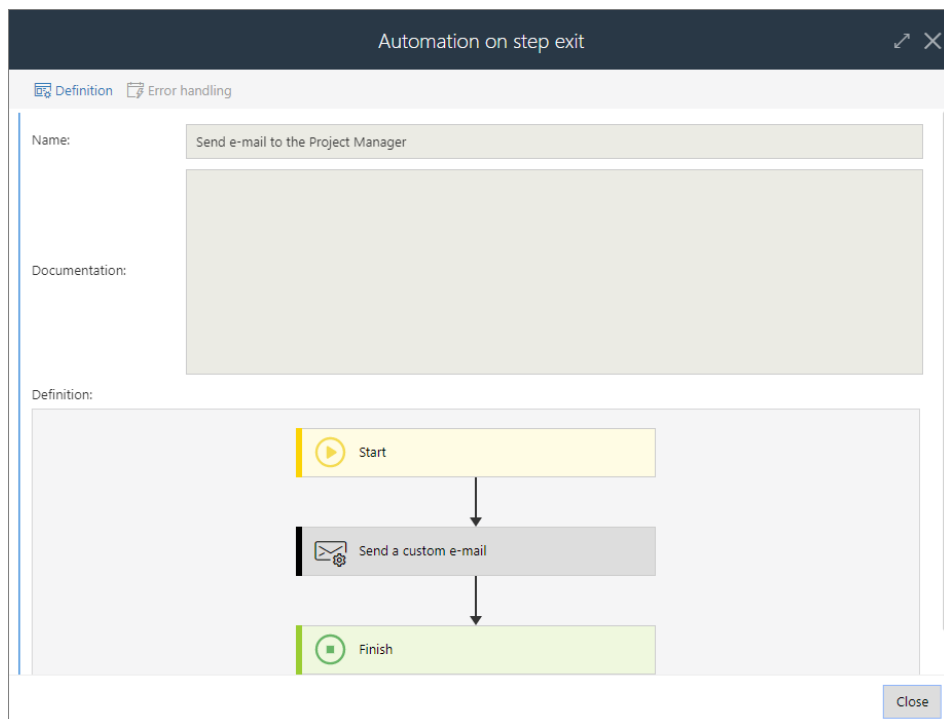
In addition, users can view the detailed configuration of a path by selecting **Advanced settings** in the path properties. This will bring up the **Path details** window which is divided into two tabs: **General** and **Task creation**.
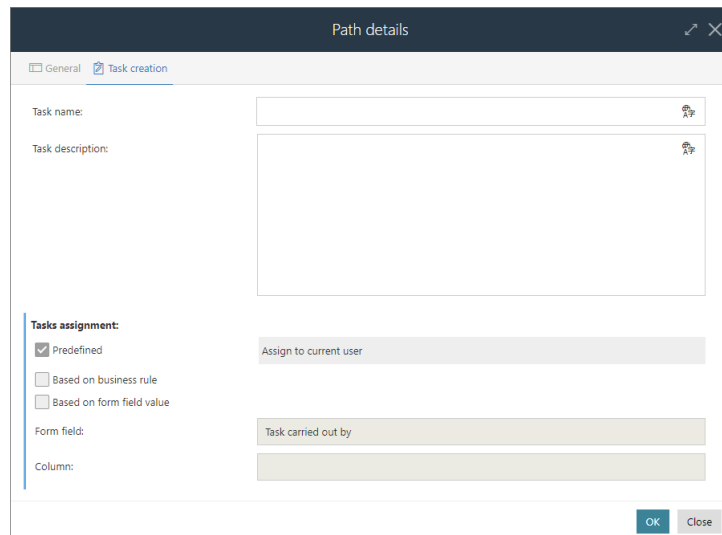
The window contains information about assigned tasks as well as business rules and automations configured on paths. As in the case of form fields, all this information is available in read-only mode, but users can add/edit task name and description.

Field matrix

When the edit mode is enabled and a workflow selected, authorized users can also view the **Field matrix**. This tab contains information on the visibility of form fields at each step of the workflow, but in Portal it is available in read-only-mode. If user attempts to change it, a message will appear informing them that modifications to the Field matrix are only possible for WEBCON BPS Designer Studio users.

5.3. License management and External User Access

Added a series of improvements to the interface for managing licenses:

- Enhanced the existing **Users management** node in the Admin Panel on Portal. Added a new page for settling **External User Access licenses**.
- Added a version of this node in Designer Studio.

In the **System settings**, the **License allocation** node was added – this acts as a simplified version of the **Users and licenses** report in the **Admin Panel** on Portal.

This report is used to allocate all 5 types of licenses to users:

- **Designer Studio Access**
- **Designer Desk Access**
- **Unlimited Solution Access** (previously CAL)
- **Single Solution Access** (for a single process, only used in the subscription model)
- **External User Access** (new type of license for external users, only used in the subscription model)
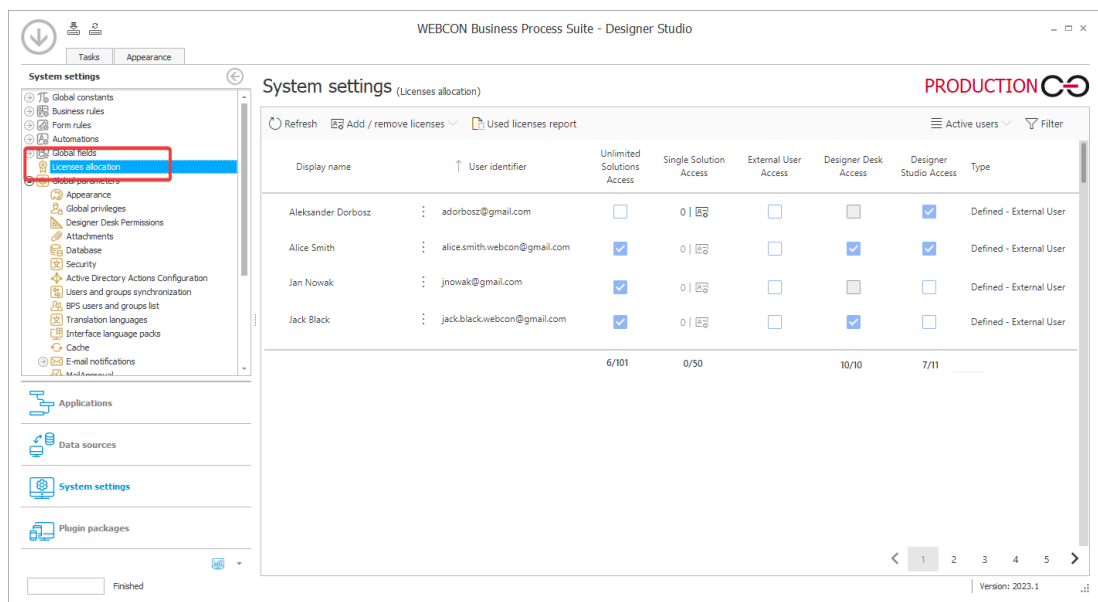
Licenses can also be edited from the Edit user panel, which is accessed by clicking on the chosen row on the Report.

The **Users and licenses** report in the **Admin Panel** on Portal had certain features added (that are not available in the Designer Studio version of this Report).
This includes buttons for exporting/importing the licenses template in Excel, as well as the ability to add/remove/edit user data.

In the **Settings** tab of a process, there is now an option to toggle the use of **External User Access** and **Single Solution Access** licenses (the latter is only visible for the subscription model).

For **Single Solution Access** – choose the users that will have access to this process based on this license (the licenses will be subtracted from the Single Solution Access pool for each added user).

For **External User Access** – it is enough to toggle the option, access to workflow instances is granted based on a link being sent to the user's e-mail.

A license is subtracted from the pool when a user with External User Access licensing performs an operation on the form (e.g. path transition, saving the instance, adding an attachment). Such a user can then perform any number of operations on the same instance in the same month.

If a user with External User Access licensing uses a total of 20 licenses in one month, each next operation in the same month will not use further licenses.

5.4. Public access to a workflow instance

Added the ability to share an instance or a task with users outside the company. Sharing is done by generating a link to an instance or a task for any specified e-mail address. An instance can be shared in edit or read-only mode. The functionality allows users with access to an instance to view the status of an instance, edit it, add attachments, etc., and/or execute an assigned task.

Note: the functionality is available in the perpetual and subscription-based licensing model without additional limitations.

WEBCON reserves the right to change that approach. In future, the access to the functionality will require purchasing a dedicated subscription-based license and will not be available in the perpetual licensing model.

New section in process configuration

A new section Sharing is added in the process configuration window in Designer Studio. The section includes a button **Enable task and instance sharing for people outside the organization** that activates the sharing functionality. Selecting the button makes sharing actions available in process global and on-step/on-path automations, as well as action templates. Additionally, after checking the button it is possible to specify the time after which the sharing expires in the **Default sharing expiration time (in days)**.
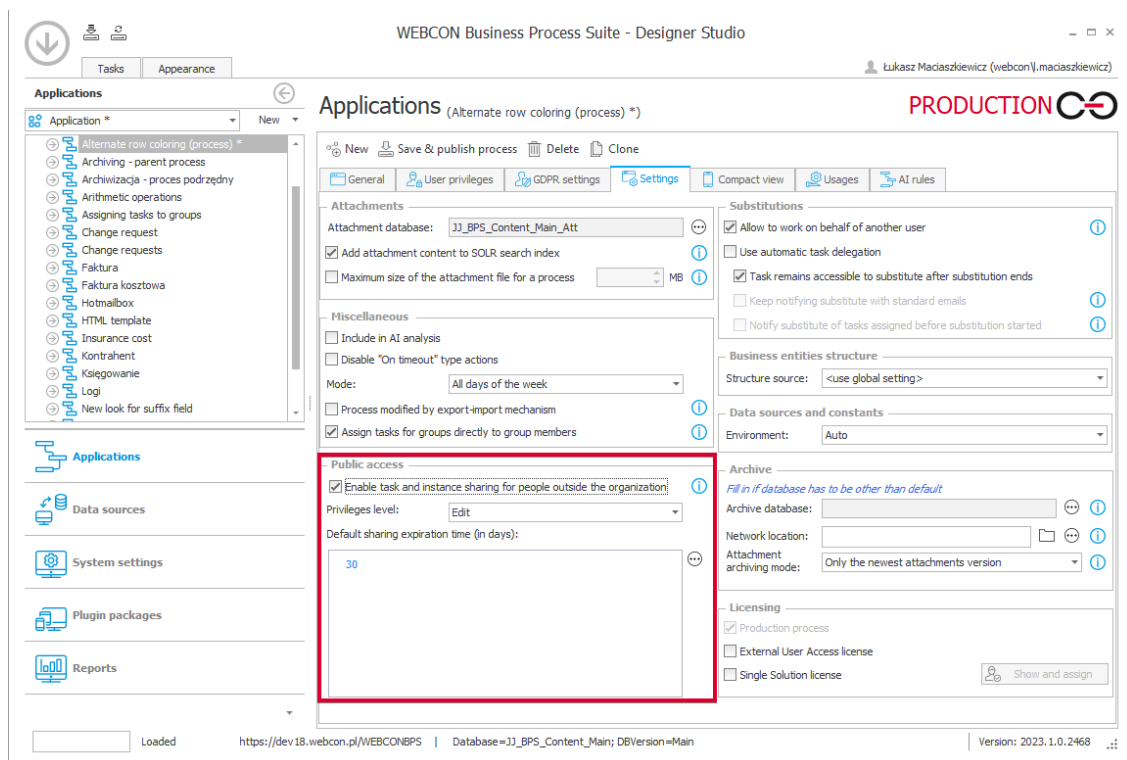
New actions

Three new actions that automate sharing management are added to the system. Instances or tasks can be shared with multiple persons by entering e-mail addresses in the action configuration window. A separate link to an instance or a task is generated for each specified e-mail address.

Share workflow instance – the action allows users to share selected workflow instance in the BPS system to read or edit for a specific, defined time (though it is possible to end sharing before that time).

Share task – the action allows users to generate and share a task directly with a person from outside the company. Once a task is executed, the sharing instance is deactivated. There is no time limit in this case for task sharing.

Stop sharing – the action ends sharing of a specified instance for all users. The action also ends sharing of tasks, yet tasks themselves (depending on their status) remain in the process workflow.

New form button

A new **Share** button is added to a form as an alternative to sharing through actions. The button enables users to share an instance manually directly from the form.

The button (located next to the **Admin** button) allows users to share a respective instance to edit or read-only. You can manage the availability of the button by means of a form rule or field matrix. The button opens a sharing window where you can enter at least one e-mail address of a person who will obtain access to the shared instance. Once all data are filled out, a unique link to an instance is generated. The link can be copied or sent to the specified e-mail address.


Note: in all cases (sharing through actions or a form button) sharing the same task again results in overwriting the current sharing and resending e-mail notification. When an instance is shared again, the previous sharing is closed and a new sharing is created. The person receiving the new sharing is informed via a resend e-mail notification.

When sharing an instance, the system checks if there is an active shared task on that instance for all the specified e-mail addresses. If an active shared task already exists for one of the specified e-mail addresses, a message is displayed that informs an instance cannot be shared as there is already an active task shared. For actions, an error is displayed with the same message.

Administrator privileges

When working in administrator mode, the instance administrator can press the Share button to display all users with whom the instance is shared directly on the form. From there, they can modify the sharing settings (such as changing the expiration date or authorizations) and disable sharing if needed.
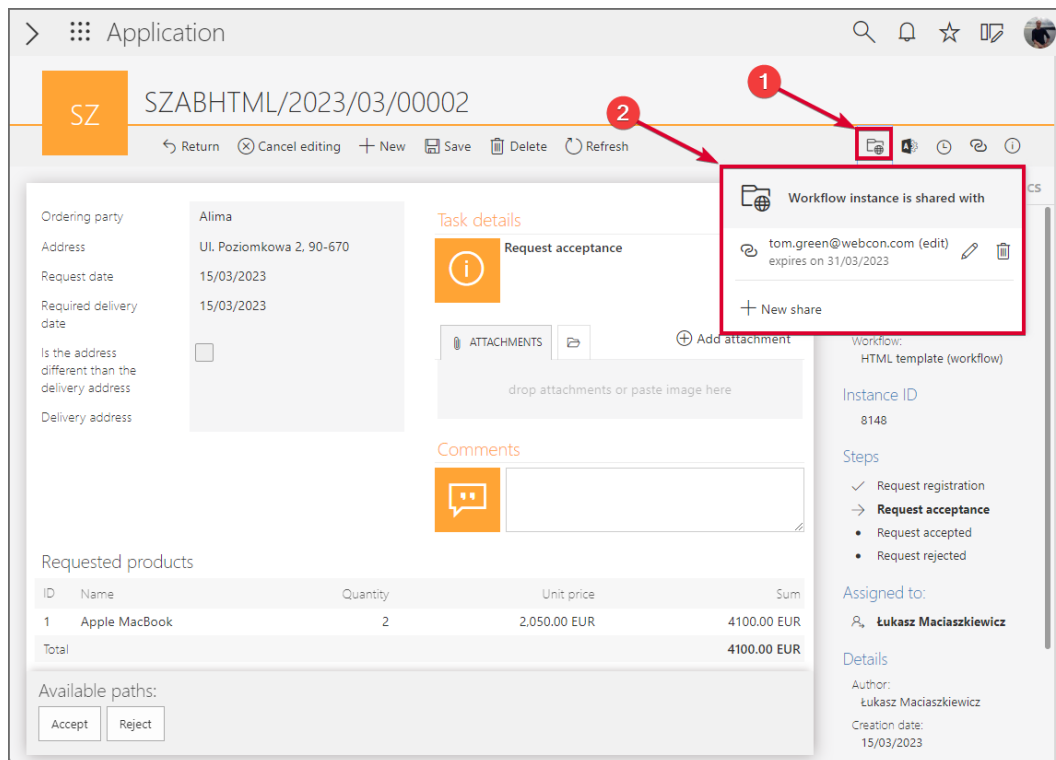
In addition, the aforementioned information on sharing is available in the admin mode in the workflow instance privileges window. The section also allows administrator to view information on task sharing.

On-path transition

On-path transition or task execution ends sharing of a respective task for each user. This sharing is then recorded in the historical data table of the content database, and a new instance sharing is generated with read-only privileges and a 1-year expiration period for all respective users.

Similarly, transiting a path in the case of instances shared with edition rights ends such sharing. A respective entry in the historical data table is then made, and the instance is shared with read-only rights and the same expiration period for the same users.

Archiving

When a shared instance is archived or deleted, the sharing is ended and a historical record is created in the **HistorySharedInstances** table in the content database. The relevant entry is also deleted from the **SharedInstances** table which contains information about shared instances.

New context variables

New elements are added to the business rule editor. A new expression: **Is instance shared?** is added to the **Information** group in the **System fields** node. In addition, a new group: **Form display modes** is added to the **Context variables** node. The group includes a new expression: **Is share mode active?** and two expressions taken from other groups, i.e. **Is admin mode active?** and **Is this a mobile device?**

5.5. GUID as an identifier in HTML templates

The latest version of WEBCON BPS now allows for the use of the **GUID** identifier in HTML template tags. The change allows for easy transferring of HTML templates between different environments (DEV/TEST/PROD) which are used, .e.g. in **Generate a PDF file**, **Generate an HTML printout**, or **Send a custom e-mail** actions.

#### Functionality description

The GUID is an identifier of a configuration element, such as a form field, workflow, or process, whose value remains constant irrespective of the type of environment. So far, the GUID identifier could be used only for the **data row** form field. The new WEBCON BPS version provides this possibility also for the **item list** and **data table** form fields whose inclusion in HTML template required dedicated tags and reference to the ID identifier.

The new method of identifying form fields in an HTML template does not replace the old one, but offers an alternative to it, thus ensuring compatibility with earlier system versions.

Changes to the use of the GUID identifier for listed form fields have been incorporated into actions that utilize HTML templates, i.e.

- Generate a PDF file,

- Generate an HTML printout,

- Send a custom e-mail.

In addition, the changes also apply to HTML templates generated by administrator actions in Portal.
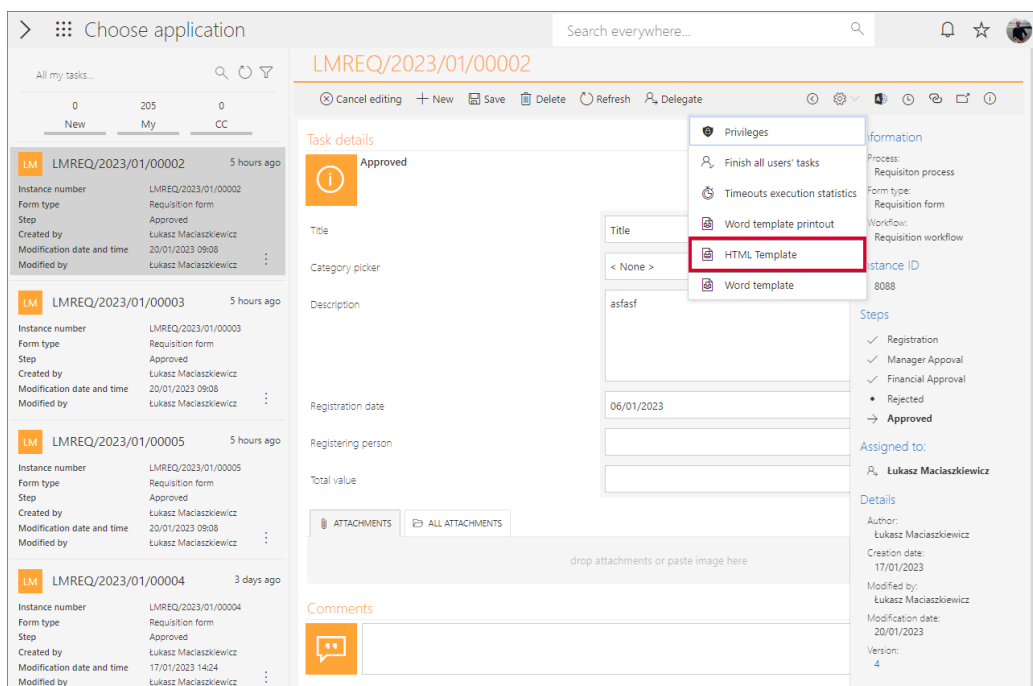
5.6. "Send As" for Microsoft Graph

It is now possible in WEBCON BPS to use the "Send As" option when sending e-mails via Exchange Online – Microsoft Graph.

The **Configuration of sending e-mails** window, available under System settings → Global parameters → E-mail notifications, has been updated to include the checkbox **Allow "Send As".** When this box is checked, the system verifies whether the **Sender** parameter is entered for all e-mail actions and templates.
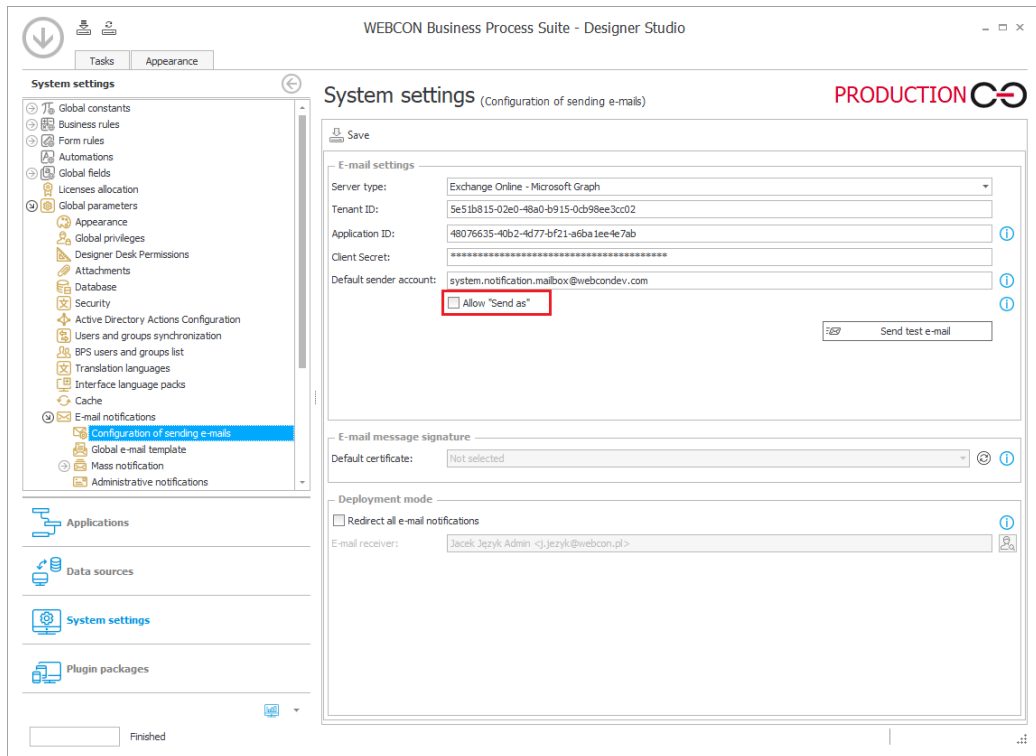
In addition, after pressing **Show usages**, the system displays a preview of places where a custom sender address has been entered.
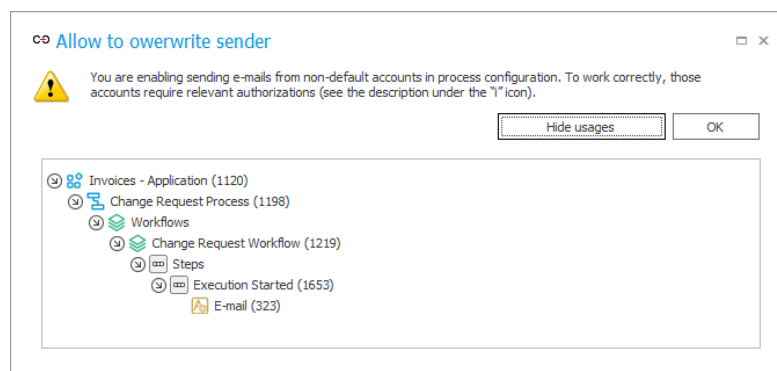
If the box **Allow "Send As"** is unchecked, then e-mails will be sent from the **Default sender account** according to the global system configuration.

Administrative notifications

Changes also affected the organization of the **Administrative notifications** configuration window. The **Sender address** parameter has been moved to the **Use standard outbox settings** group, and its availability depends on the state of the checkbox next to the group name – if the box is unchecked, it will not be possible to provide an additional sender address.
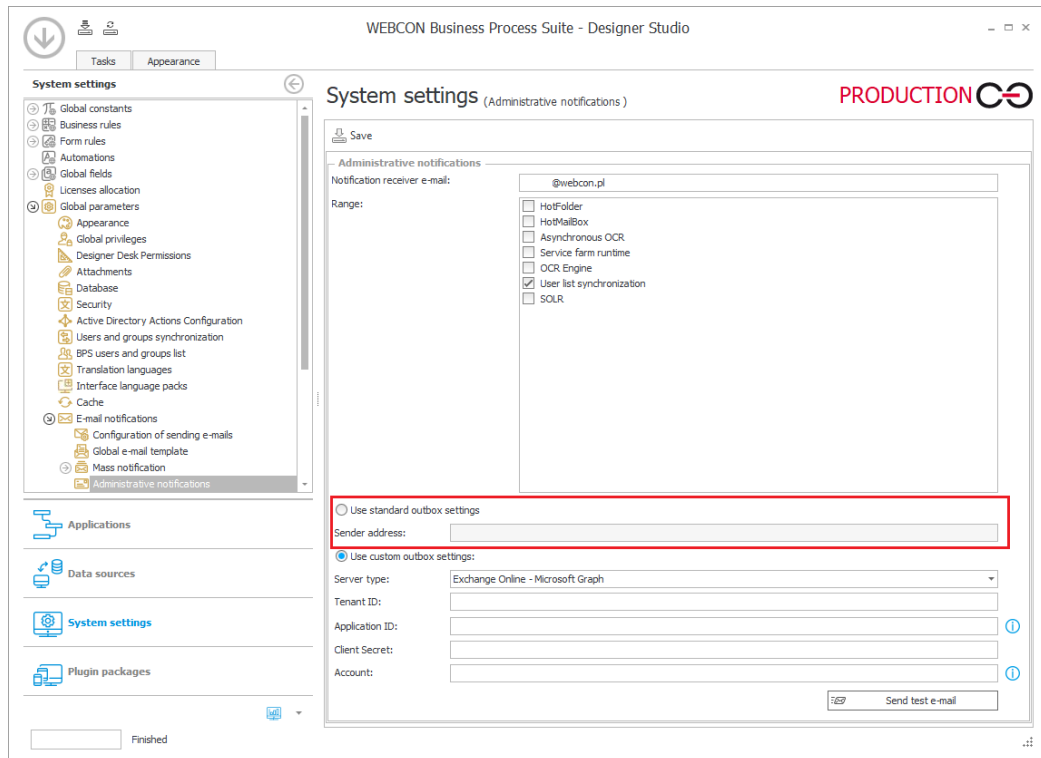
5.7. Assigning tasks to a group of users

Added a new functionality that allows tasks to be assigned to groups as a whole, rather than to each individual member of the group.

So far, in the case of groups tasks were assigned directly to each group member. In this approach, the task remained active until its execution (or ending by an administrator), so a user assigned with the task could execute it even after leaving the group (e.g. after transiting to a different department). The new functionality enables the system to react dynamically to changes in the group membership. For example, if a user is no longer a member of a group, they will not be able to perform tasks that had been assigned to the group. This principle also applies the other way around, i.e. when a new person joins a group, they are able to access the tasks assigned to it. When a task is assigned to a group, it is marked as completed as soon as any member of the group performs it. Information about the person who performed the task is stored in the historical data.

Note: the system migration to the new version does not cause changes to the configuration of assigning tasks in the existing processes. This means that, although after the update assigning tasks to groups as such is a new, default approach, the tasks in the existing processes will still be assigned in accordance with the old approach, i.e. directly to each group member.

Tasks assigned to groups are presented in reports with **SearchIndex** or **SQL** source.

Changes in the process Settings tab

A new button **Assign tasks for groups directly to group members** is added to the process Settings tab. Checking the aforementioned button results in assigning tasks for groups directly to their members, i.e. the system operates according to the procedure that was standard prior to the introduction of the discussed functionality. As a consequence, a task assigned to a group member stays active until its execution, even if such a member leaves the group. Apart from the substitutions with automatic task delegation functionality, selecting the above-mentioned option modifies all fields in the process configuration where rules for creating and assigning tasks to users are defined.
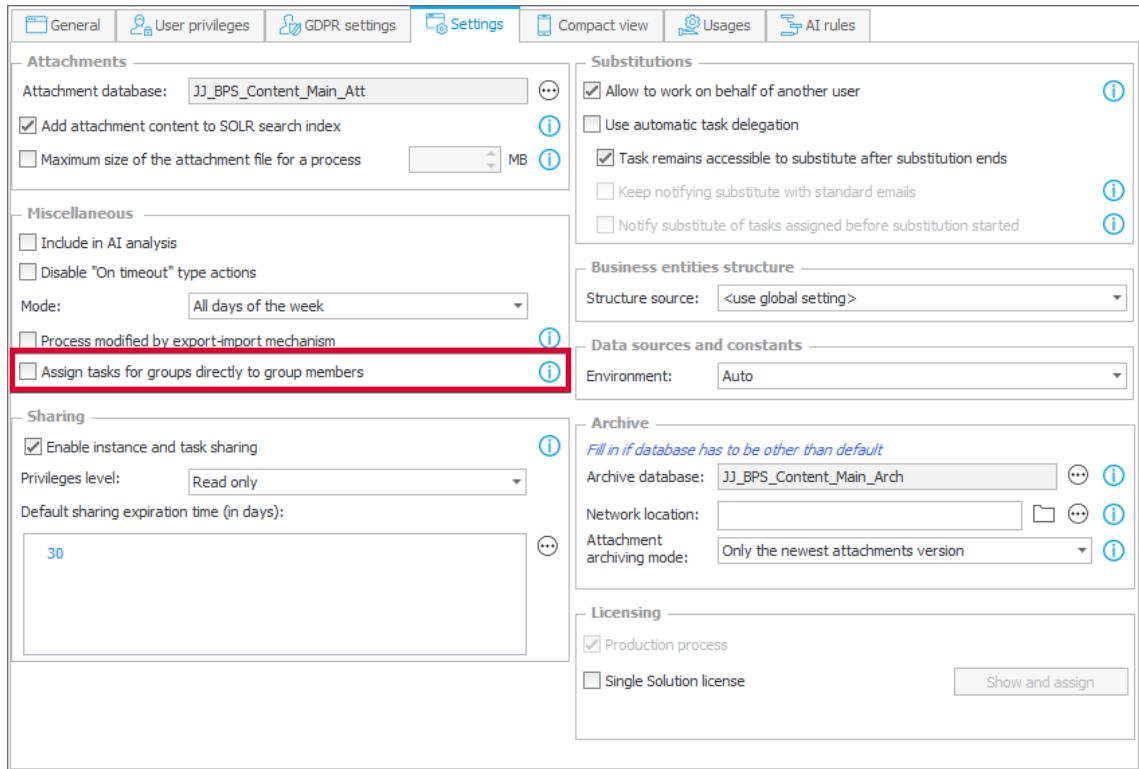
### New business rule: GROUP MEMBERS

A new business rule **GROUP MEMBERS** is added. The rule returns a collection of users who are members of the intended group based on the BPS_ID identifier. The rule lets you choose all group members, including embedded groups.
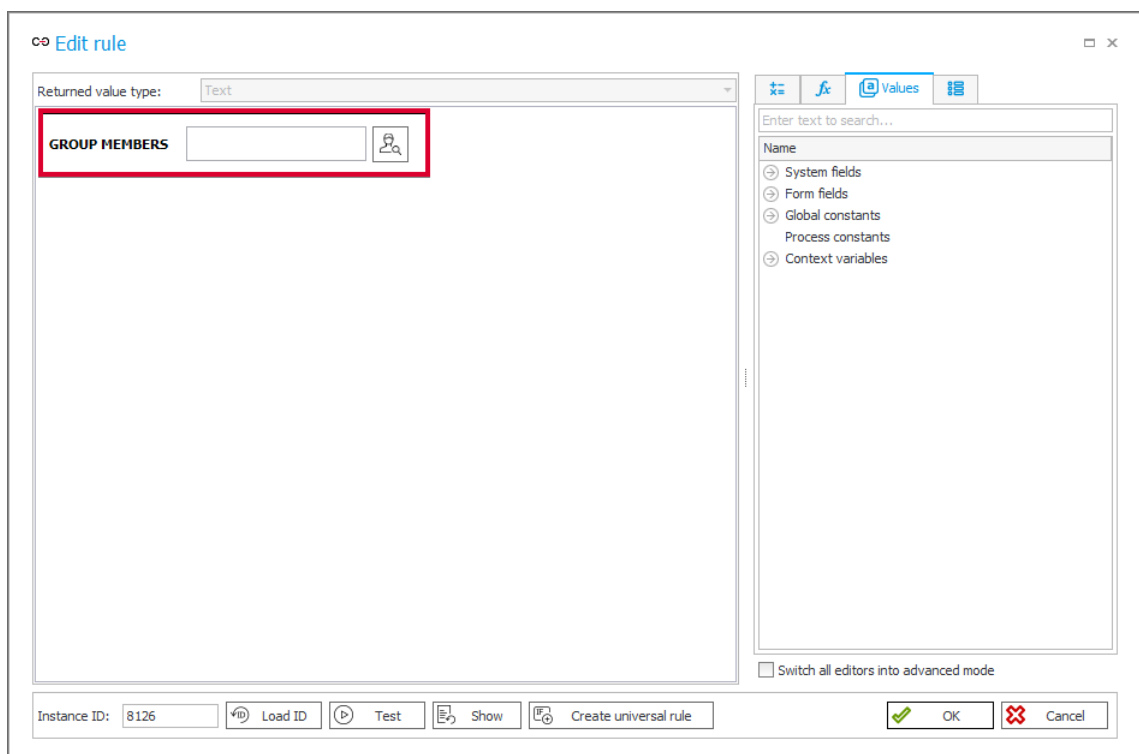
Changes in Portal

Tasks assigned to groups are reflected in the **My tasks** list and task counters presented to the user. If a user is a member of a group assigned a task, the task will appear both in the task counters and in the user's My Tasks list.

New version introduces changes to the form appearance related to assigning tasks to groups. The form displays name of the group to which a task is assigned. The name can be additionally put in bold if the current user belongs to the group. Below such name there are indented names of users who executed tasks. Additionally, if the current user executed the task, their name is put in bold.
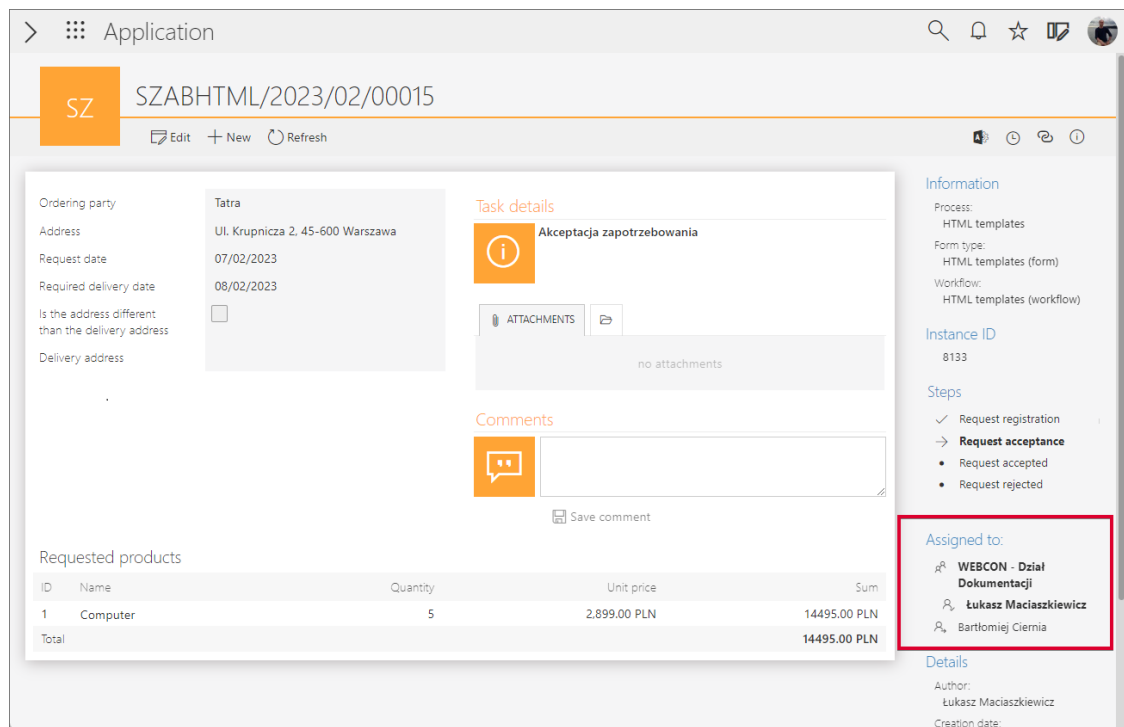
Archive

Information on assigning a task to a group is now added to instances stored in the archive. The system also displays information on execution of such a task by a group member.

5.8. Export and import of translations to/from MS Excel file

New options have been introduced to export translated names of application elements, created by the person responsible for configuring the application, and then to import the completed translation document into the system. Translations can be imported/exported within one environment and one main version of WEBCON BPS.

WEBCON BPS Designer Studio

To export a translation file in Designer Studio, right-click on a process and select **Export translations** from the context menu.
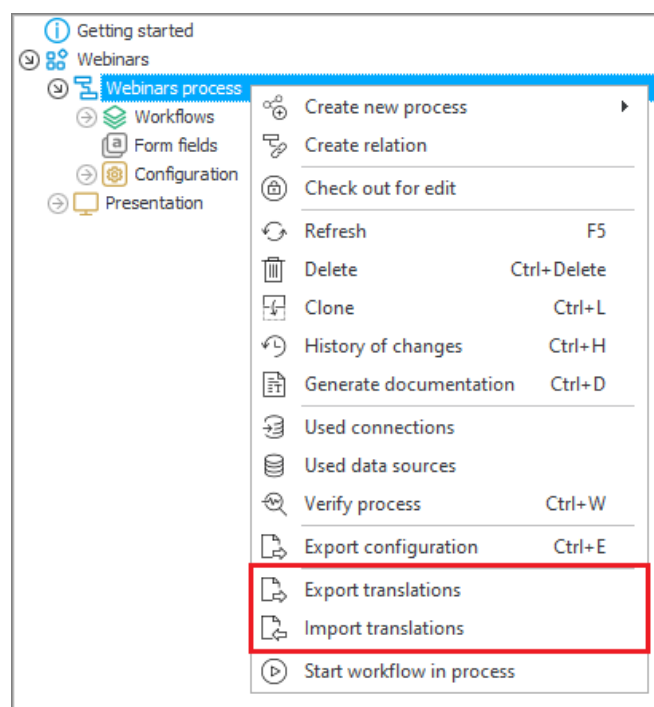
After a while, a window will appear where you can indicate the **Content language** and the destination for downloading the .xlsx file with translations.

The export covers translations for the selected process and the presentation layer of the application to which the process belongs.
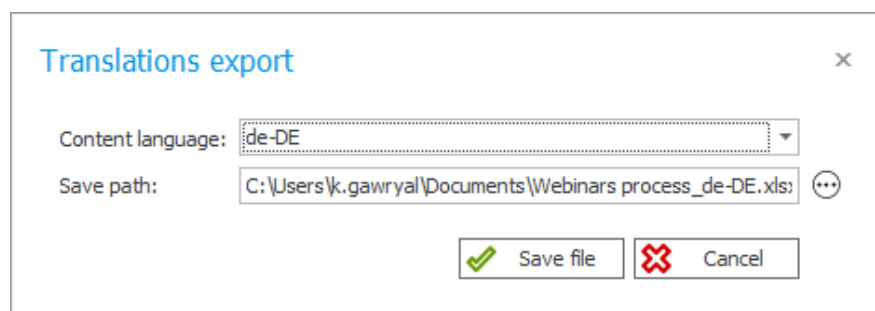
Once the translations have been successfully exported, you can edit the downloaded file and add missing translations to it. **Changes should only be made in the target language column**, e.g. "de-DE". **Changing data in other columns may prevent the import of translations into the system.**

To import a file with translations, select **Import translations** from the process context menu, indicate the location of the MS Excel file, and click **Load**. A message will then be displayed that the translations have been successfully imported. If you click on the dedicated control next to the item for which the translation was entered in the Excel spreadsheet, you can see that the translation has been correctly added in the system.
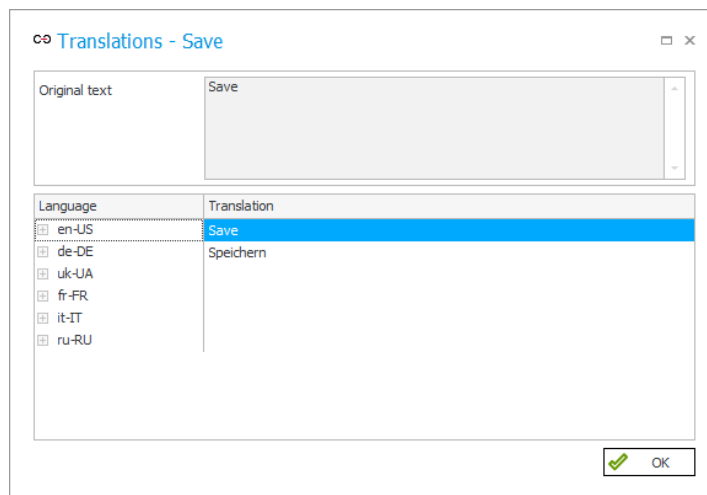
WEBCON BPS Portal

Administrator of an application can also export its translations from Portal. This can be done by clicking on the icon right next to the profile picture and selecting **Translations** and then **Export** from the drop-down menu.
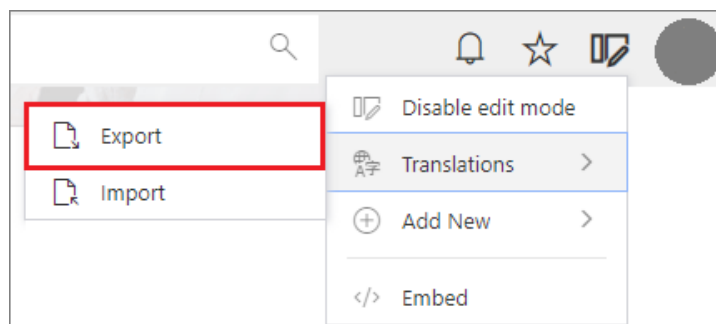
The **Translations** window will then appear, and after confirming the export, an .xlsx file with translations will be saved to the default location on disk.
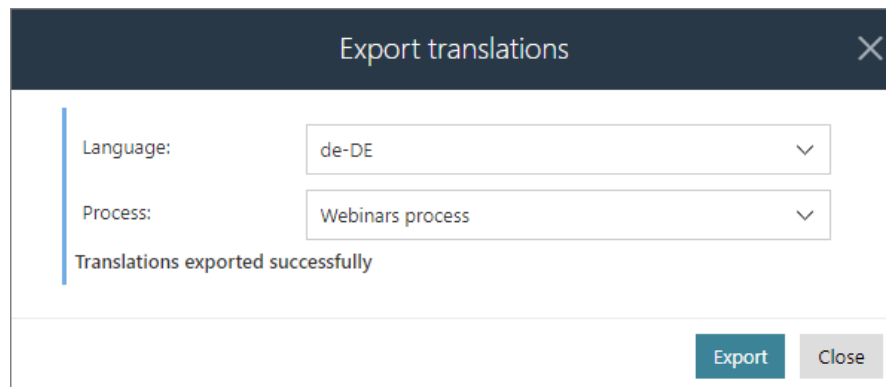
You can import the file with completed translations by selecting **Translations →** **Import** from the menu and choosing the relevant MS Excel document.
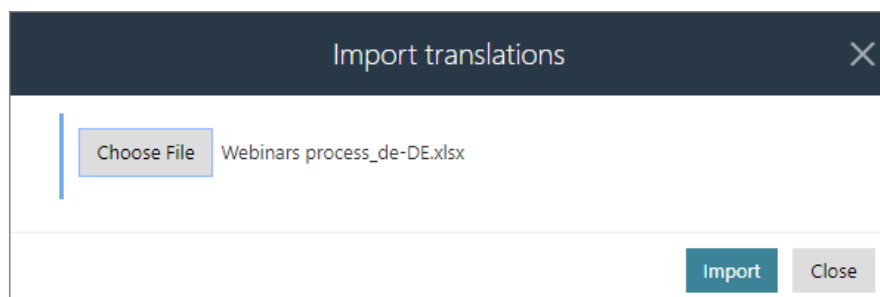
After successfully importing the file and changing the language of Portal, you can see that the item names have been changed according to the translations you entered.
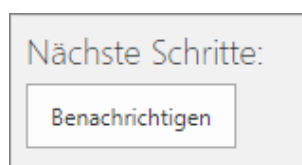
5.9. Privileges to manage BPS groups

WEBCON BPS has been enhanced with a new mechanism that allows users with no global administrator privileges to manage BPS groups. Expanding the system with additional roles of **BPS groups administrator** and **BPS group owner** constitutes a significant change in this regard.

BPS groups administrator

This privilege is granted to individual users by the system administrator. BPS group administrators can be added by selecting **System settings → Global parameters → BPS users and groups list** and opening the **BPS groups** tab in WEBCON BPS Designer Desk.
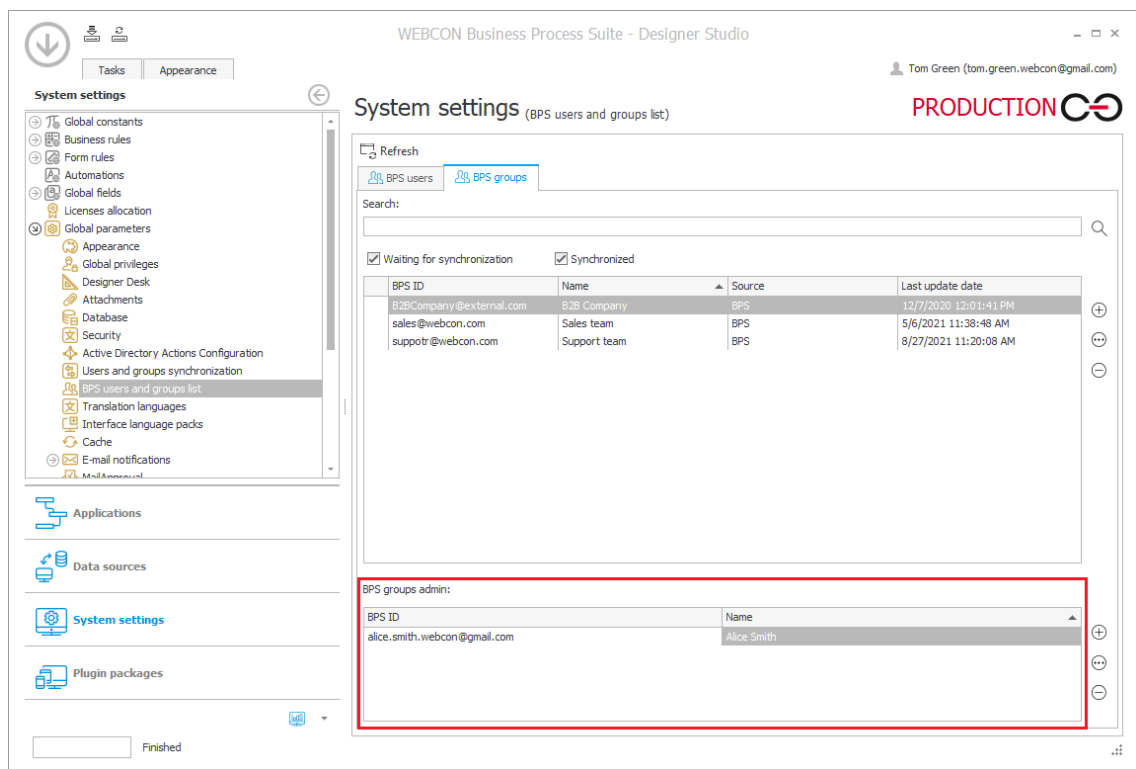
A user who has been granted that privilege can freely manage BPS groups from WEBCON BPS Portal. This is possible by going to the **Admin Panel** and selecting the node **User management → BPS groups.**
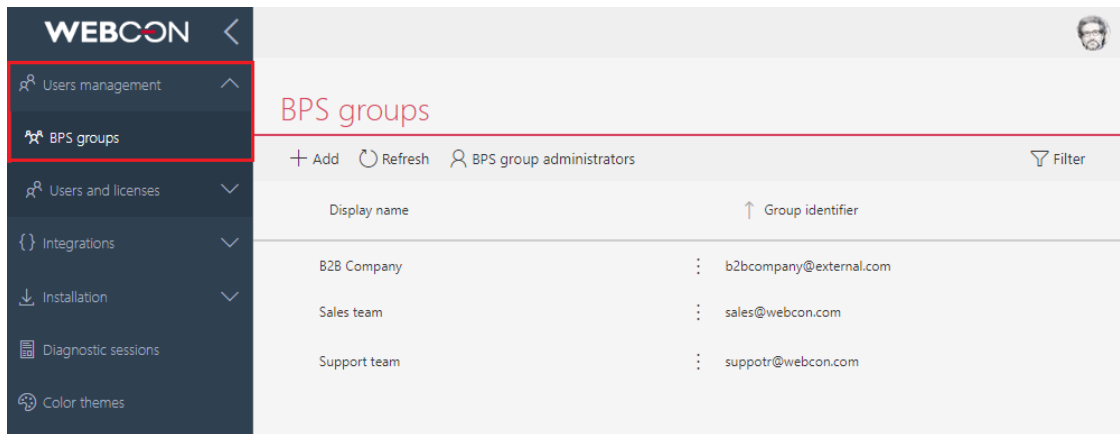
BPS group administrator can add, delete, and edit new/existing groups. All they need to do is click on the desired group or select the **Add** button from the top menu.
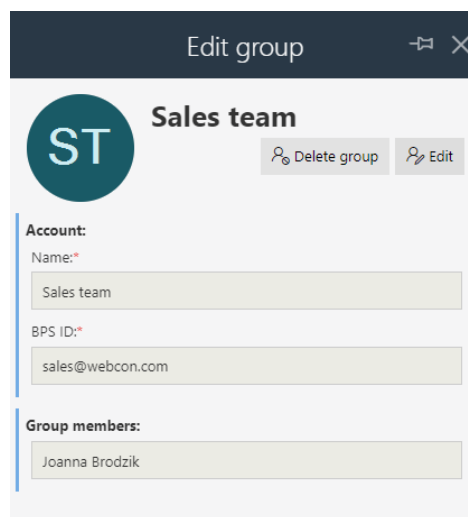
Only system administrators can view BPS groups administrators via the dedicated control in the top menu. They can also add new BPS groups administrators from here.
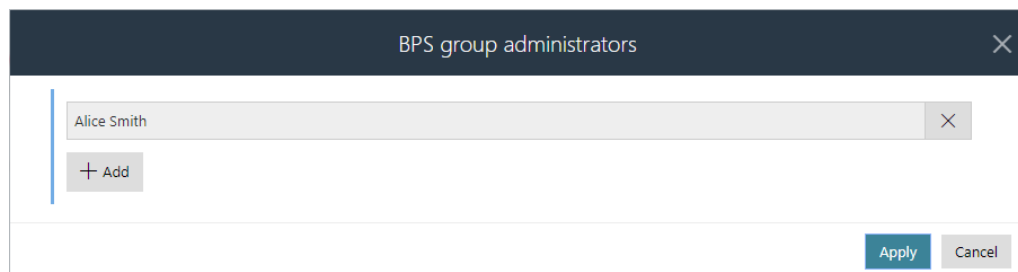
Any changes in this regard are directly visible in WEBCON BPS Designer Studio after the synchronization and refreshing the window.

BPS group owner

In the context of a BPS group, the ability to define not only its administrator, but also owner has been added. The group owner can edit the group (e.g. rename it), add and delete its members, add more owners, but – unlike the administrator – they cannot create or delete groups.

Group owner configuration is available from the aforementioned **BPS groups** tab in WEBCON BPS Designer Studio. Any system user can be granted this privilege.

BPS group owner can also be defined by system administrator or BPS group administrator from Portal. This configuration is available by following the path: **Administration → User management → BPS groups**. The Group owner will be the person indicated in the corresponding section of the **Edit group** window.

Exporting/Importing BPS group owners

One of the new features is the possibility of exporting and importing **BPS group owners**.

If a BPS group has certain privileges to a process, and such a process is exported and subsequently imported into the target environment, information about the BPS group, including its **Owner**, will also be transferred.

For this to happen, the following two boxes must be checked in the dedicated wizard: **Do you want to overwrite security settings?** and **Import BPS groups?.**
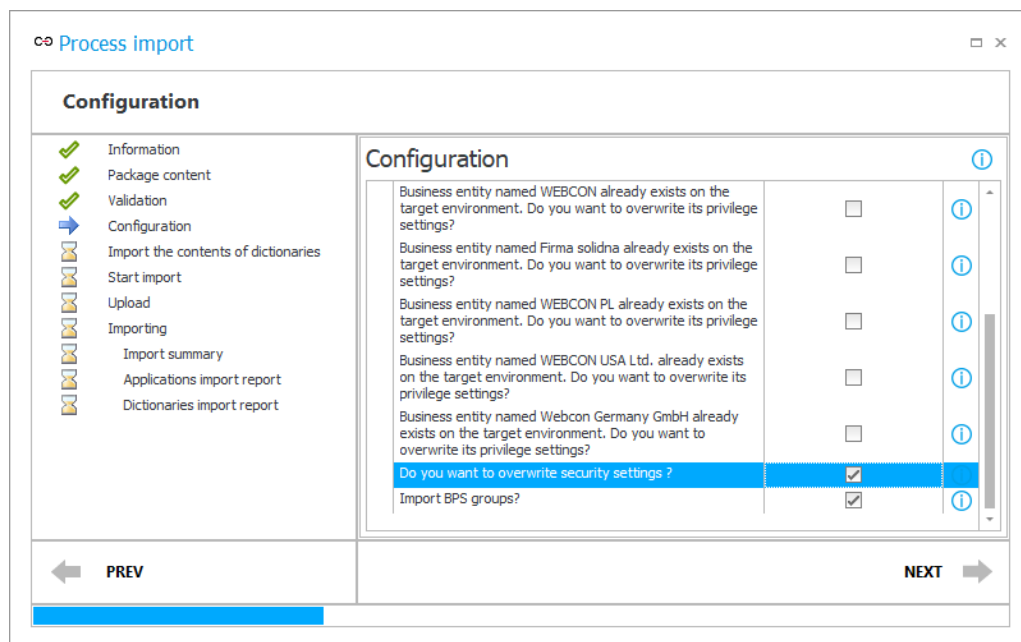
Once the process has been correctly imported in the target environment, the imported group will appear in WEBCON BPS Portal under **Admin Panel → Users management → BPS groups**, along with information about its **Owner**.
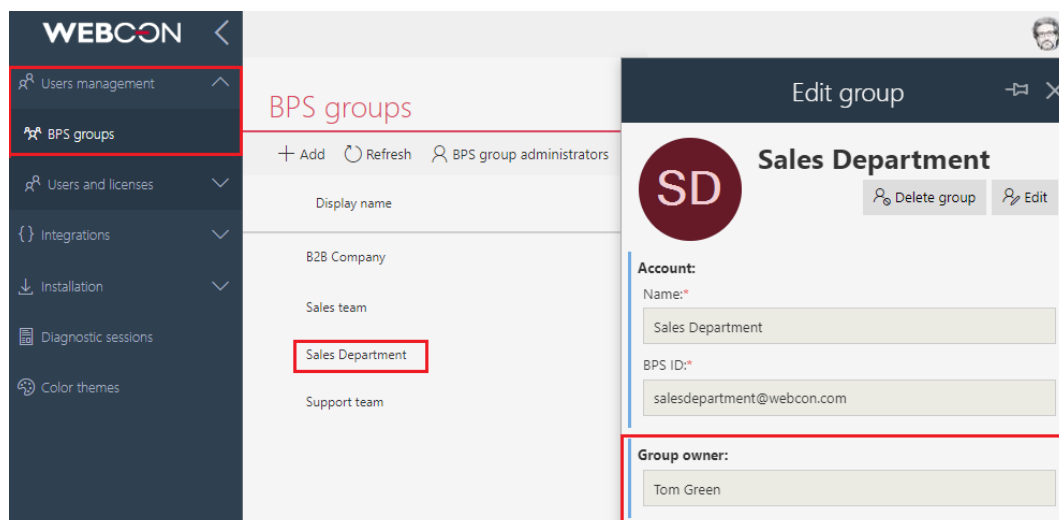
Note: information about **BPS group members** is not imported into the target environment, even if these members were previously defined.

5.10. Setting business entities inactive

The WEBCON BPS 2023 version introduces deactivation of business entities with registered instances in the system. Following deactivation of an entity in the **Designer Studio** or **Portal** configuration, the entity is no longer shown in suggestions, including in the expression editor. This means that e.g. it is not possible to start a new workflow for such an entity.

You can deactivate an entity in Designer Studio by unchecking the "Active" checkbox (the **System settings** section → the **Business entities** item in the selection tree → business entity name → the **Active** checkbox). This also entails changing the icon of the business entity in the selection tree.
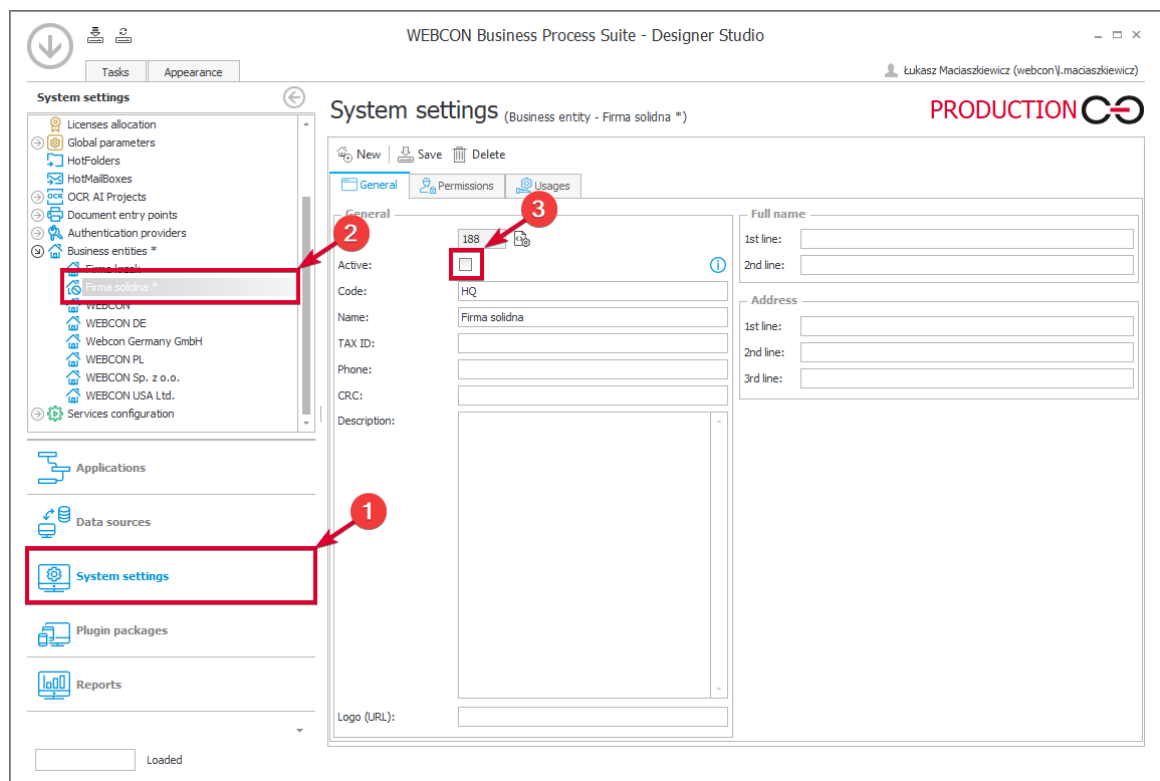
A table grouping information on entities is added to the "Business entities" node (the **System settings** section → the **Business entities** item). The table also includes the **Active** column informing whether an entity is active or not.

Information on deactivation is transmitted via the import-export mechanism.

5.11. Changing the width of Item list and Data table columns

Users can now dynamically change the width of **Item list** and **Data table** columns. To do so for a selected column, place the mouse cursor on the right side of its header – a vertical dash will appear there, which can be dragged to the left or right, decreasing or increasing, respectively, the column width.

Changing the width of the selected column affects the width of all columns to the right of it – they are proportionally narrowed or widened. The width of the remaining columns (on the left) is effectively blocked, i.e. it is fixed.

If the change in width is significant and there is not enough space on the form, a horizontal scroll bar appears below Item list or Data table.

This feature is only available for non-mobile devices and works in both edit and read-only modes, but width changes made are not saved and reset when the form or browser window is refreshed.

5.12. Global Automations

Added the ability to create **Automations** in the **System settings** that can be used in multiple processes.
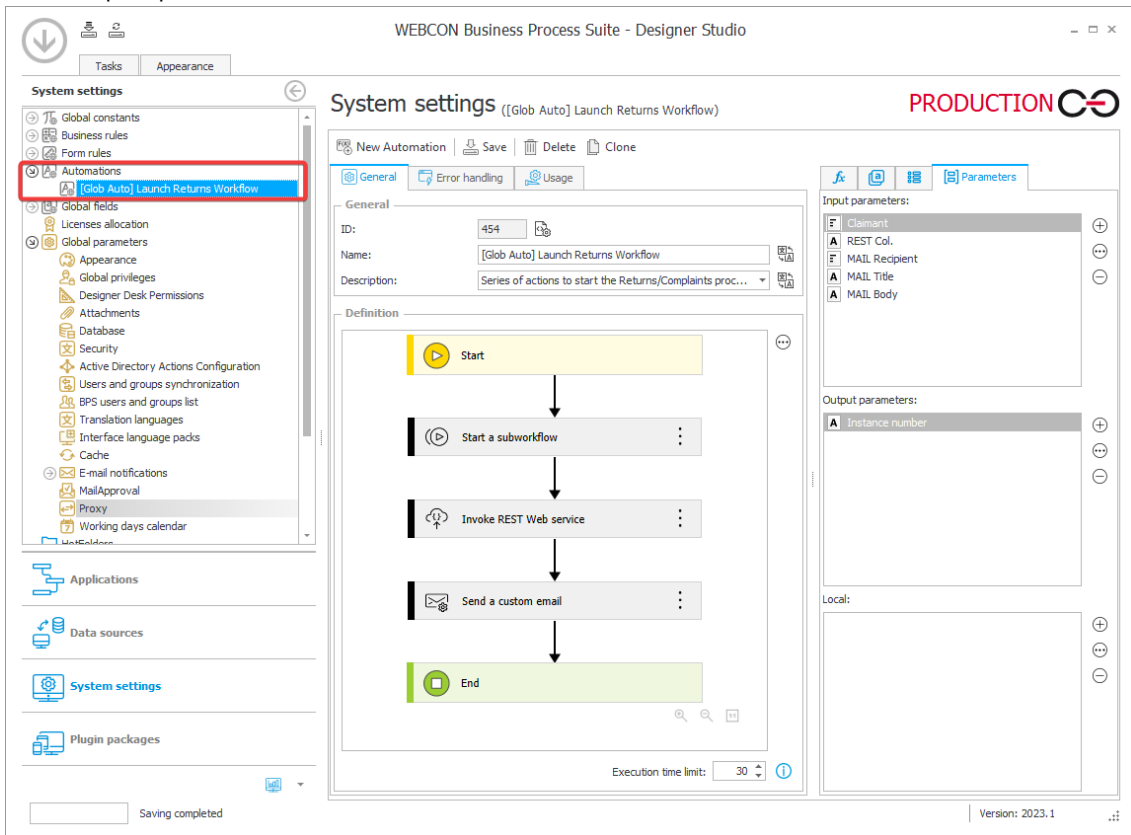
From the process configuration level, the global Automation configuration cannot be modified. However, automation parameters can be used to map specific values from the process (e.g. values of form fields) to parameters used by actions of the automation.
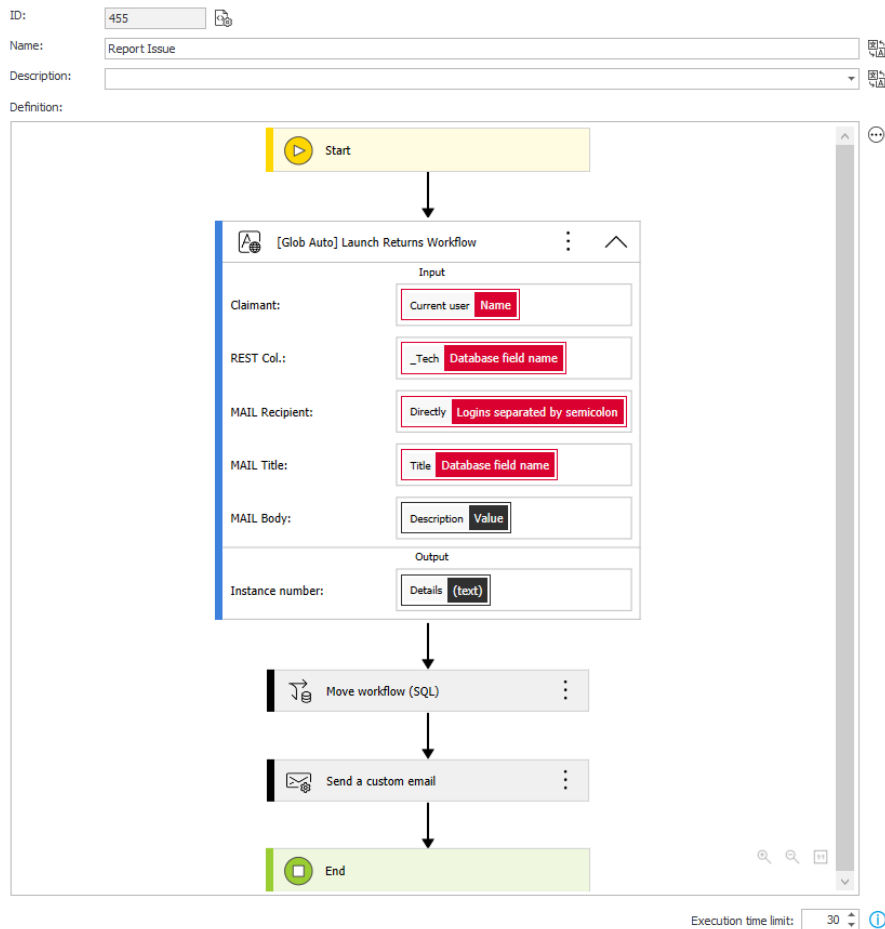
The global automation cannot use process constants/rules.

The **Change items list values** action is unavailable.

The **For each** operator may not refer to item lists.

5.13. Containerization of WEBCON BPS

The latest release comes with an option to containerize selected WEBCON BPS components. With the new feature, it is possible to prepare images and create **isolated runtime environments** (containers) for the integral parts of WEBCON BPS: Portal, Search Server (Solr), and Workflow Service.

Containerization is an alternative to the standard installation of WEBCON BPS, where independent containers are created for each of the three system components. As a result, users will be able to operate the system on any infrastructure.

Containerized Portal

The introduced feature allows to prepare WEBCON BPS Portal images and then run them in a dedicated container. The solution is performance-driven and is particularly applicable when using cloud services that have ready-made mechanisms to support containerization.

Creating a locally running instance of Portal images reduces the amount of resources used, making it "lighter" comparing to multiple hosts or multiple virtual machines. The advantage in this case is the **increased scalability of the system** – the container will act as an additional node taking over some of the load that previously rested only on the host machine. If the load is smaller, the number of Portal containers used can be limited.
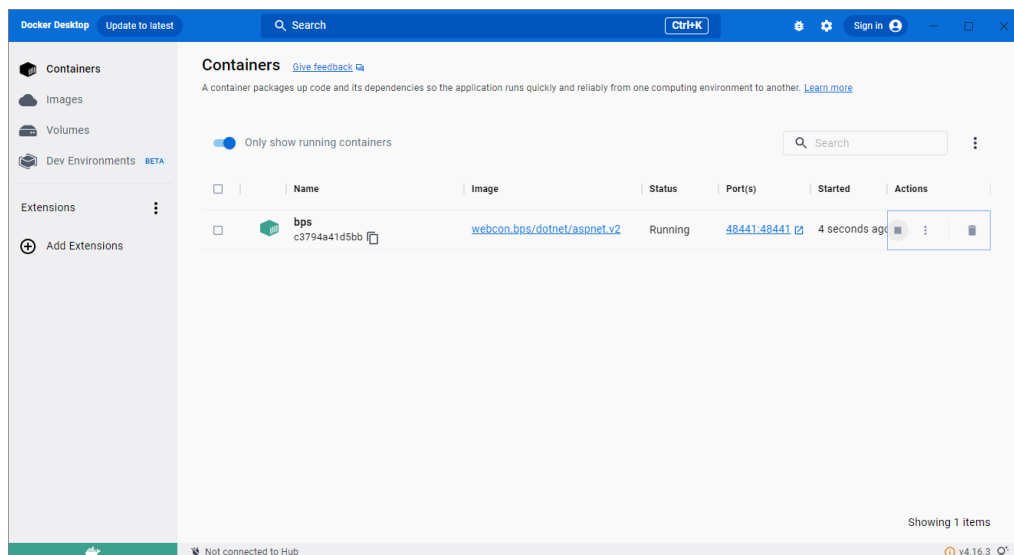
Preview of a running WEBCON BPS Portal container in Docker Desktop

Containerized Solr

A similar containerization mechanism has been provided for the Apache Solr search platform – user downloads the image and runs it in a container. For Solr, the official image is available in the Linux version.

When it comes to index storage, containerization affects only the engine of the Solr database on which WEBCON BPS is based, and in principle, container is a non-persistent object. Therefore, it is important to ensure that data is not lost when the container is disabled. In Docker, this is ensured by the Docker Volume component that allows to create dedicated volumes responsible for storing data generated and used by Docker. Using this solution to store index files guarantees the correct operation of Solr in the created container.
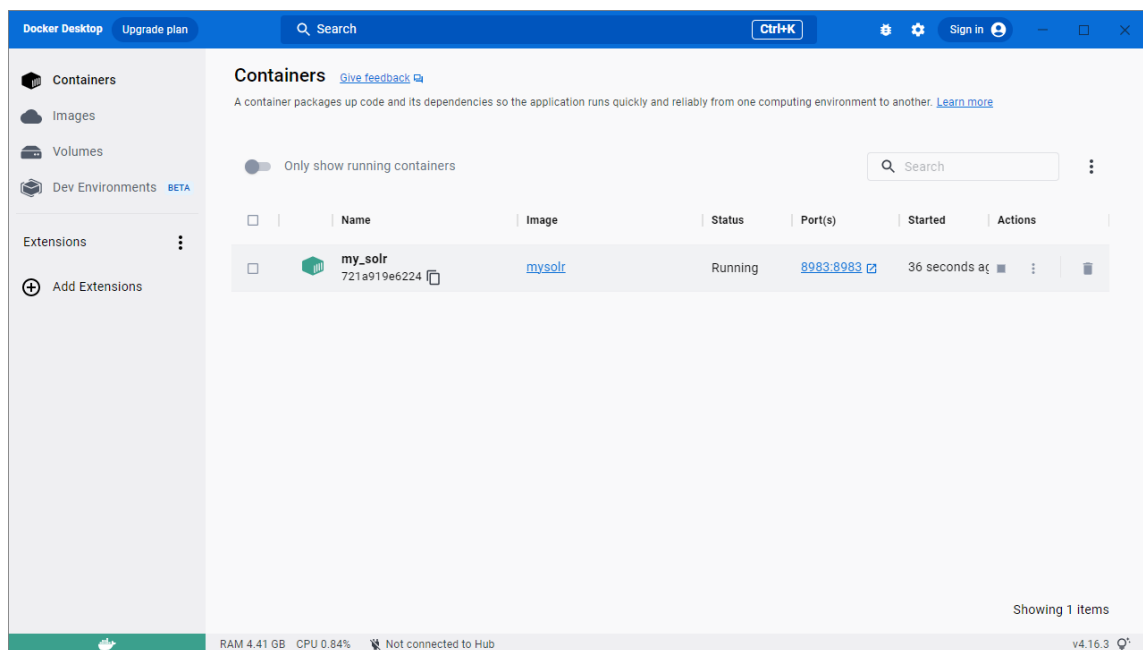
Preview of a running SOLR container in Docker Desktop

Containerized Workflow Service

The containerization process has also been extended to WEBCON BPS Workflow Service, with the option to indicate configuration data. Using the appropriate parameters, users create an image of the service, build a container, and run it, so the installer stage can be skipped. This solution enables efficient handling of network traffic – it can be used in conditions of increased demand for resources. The number of service containers created depends on user preferences and the number of system licenses held.

However, note that Workflow Service in a container works only on the basis of communication with Portal, through a dedicated certificate.
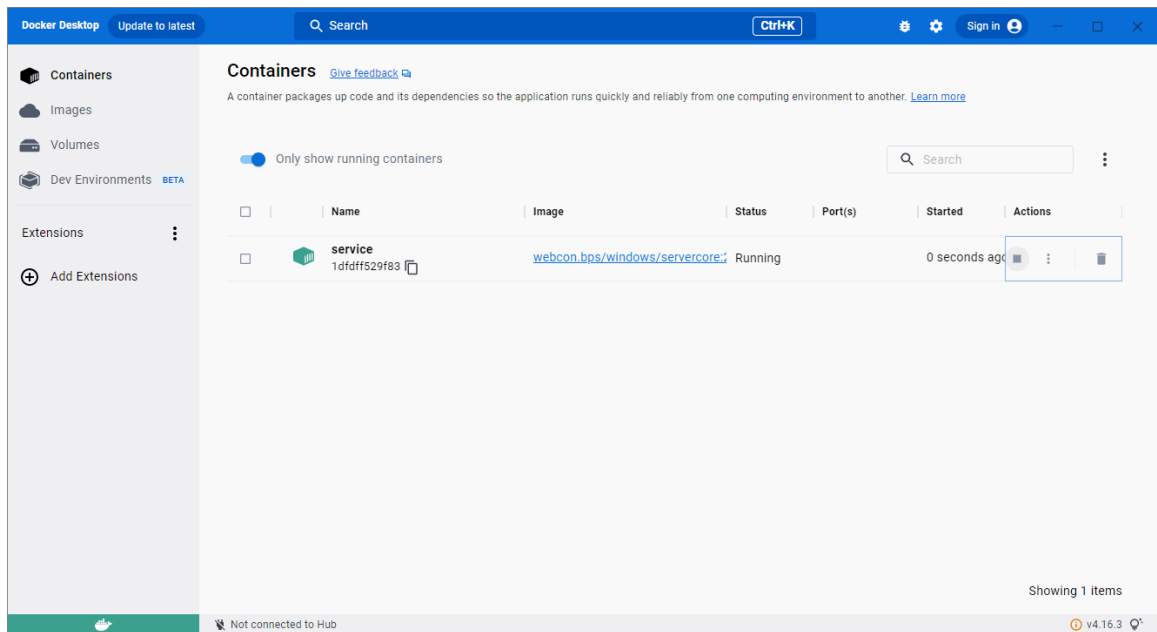
Preview of a running Workflow Service container in Docker Desktop

All containers are isolated from each other, but they can communicate, as each of them constitutes an integral part of one system. Additionally, depending on users' needs, it is possible to containerize only selected elements of the platform in any combination.

Note: work with WEBCON BPS elements in containers is possible only for users with subscription licenses. Starting another container will involve the use of another license. If the container has been properly disabled, the license is released. A report on the licenses used is available in WEBCON BPS Designer Studio. **Note also that external authentication provider, such as Azure Active Directory or OpenID Connect, is required as Windows authentication provider is not working in containers.**

Detailed information on how to create images and containers of individual WEBCON BPS components can be found on our technical blog.

5.14. Workflow preview from the Information panel

Introduced the ability to preview the workflow diagram from the **Information panel**. By clicking on the name of a selected step, user working with a form can now check the layout of workflow steps and paths.
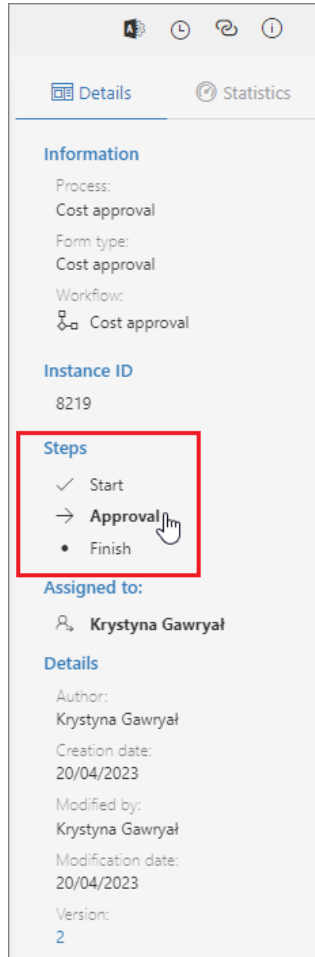
A window is then displayed with a preview of the workflow which can be scaled and moved as desired using the available buttons.
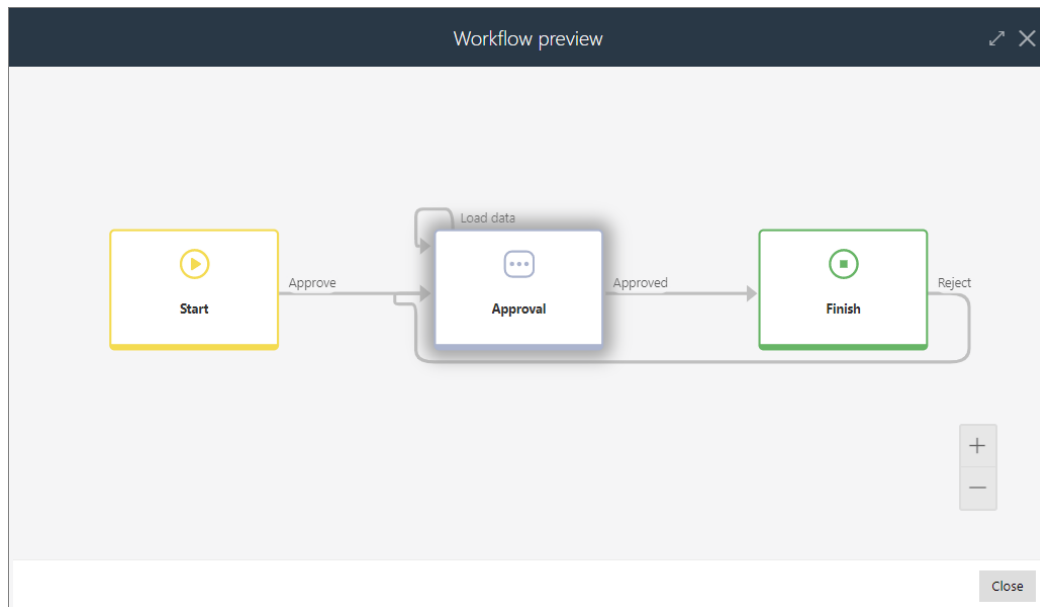
The current step of the workflow is additionally highlighted on the preview.

The functionality is available in Portal after checking the appropriate boxes of the new option **Workflow diagram preview** in the **Standard areas** tab of the **Field matrix** in WEBCON BPS Designer Studio.

If the form is in a step for which the availability of a workflow preview has not been selected on the Field matrix, this preview will not be available for any of the steps in that workflow.

5.15. Azure Microsoft Graph – GCCH support

WEBCON BPS can now be integrated with the Government Community Cloud High (GCCH) environment of the Azure AD for US Government national cloud.

The **Global parameters** node in the **System settings** has therefore gained a new section that allows for selecting the supported **Cloud type**, and thus the associated **Microsoft Graph API** parameters of standard system functionalities that use connections to Azure Microsoft Graph.
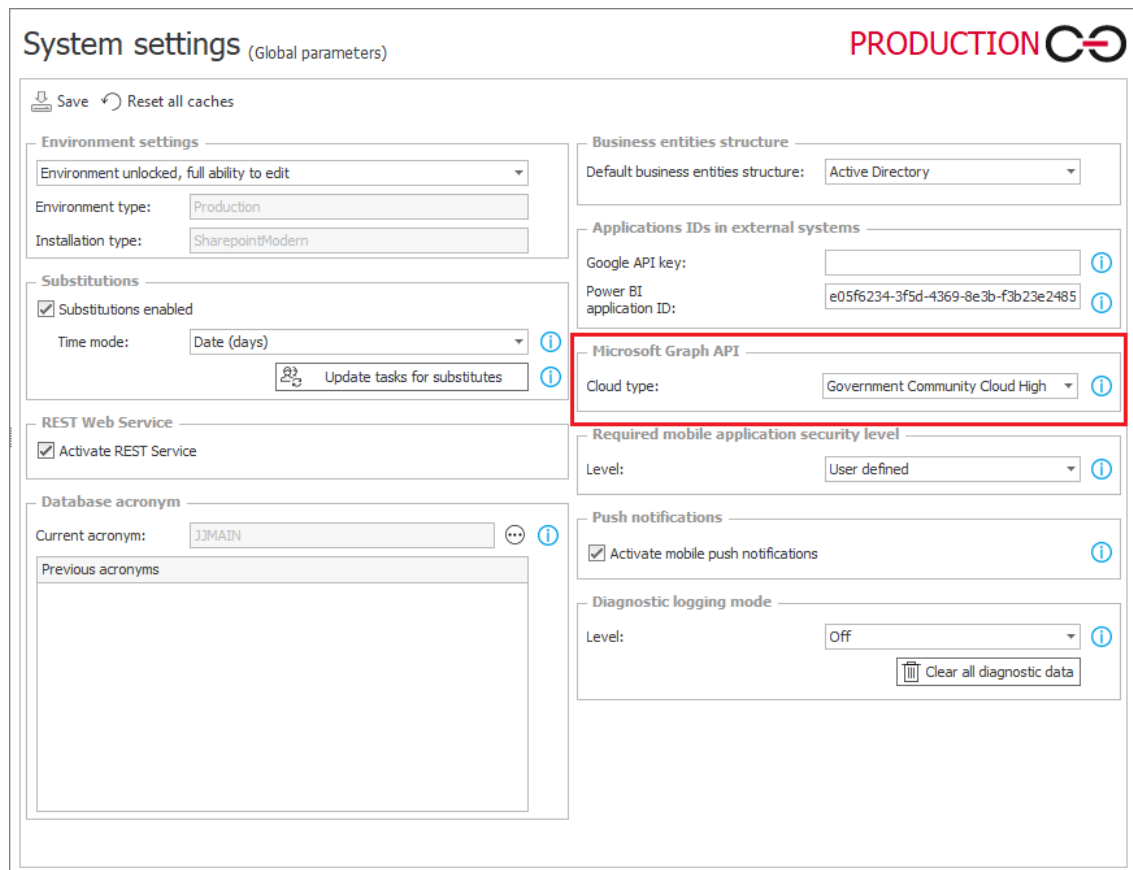
5.16. New authentication provider – Admin Access

WEBCON BPS has a new authentication provider, **Admin Access,** that enables logging in to an account with global BPS administrator privileges right after the system installation in order to complete the configuration of the environment. The global administrator can then configure system settings, but does not have privileges to modify applications and processes.

The provider credentials are defined during system installation. Once a new environment is installed, Admin Access running in the **BpsAdmin** scheme is the default authentication provider. Logging in based on such credentials is also recommended in case of emergencies and unexpected system errors.

The configuration parameters of the Admin Access provider can be changed in WEBCON BPS Designer Studio under **System settings → Authentication providers → Admin access**.
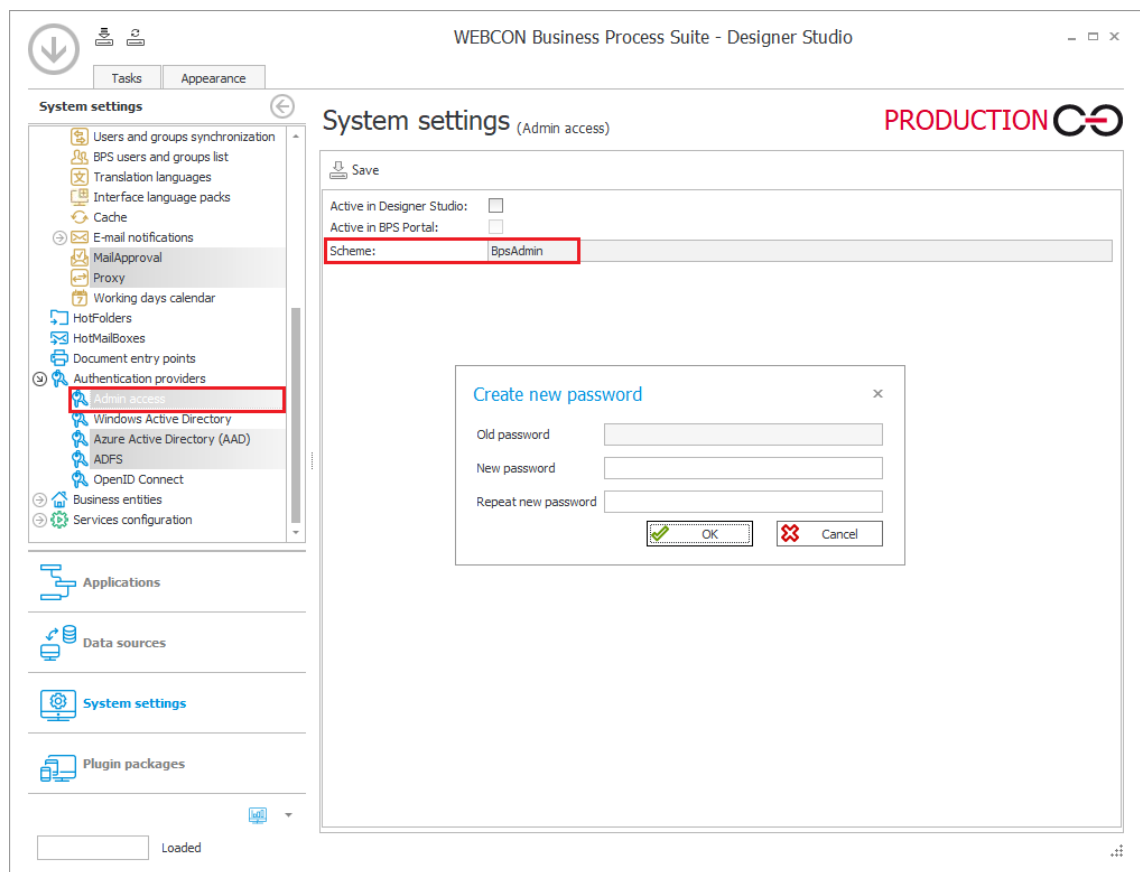
5.17. Performance indicators

Added configurable **Performance indicators** that are used for timekeeping various tasks in the workflow.

The time is calculated based on actions that start and stop the calculation of an indicator. This allows the indicator to encompass any number of steps.

Indicators are licensed based on WEBCON Advanced Analytics Framework.

Configuration

Indicators themselves can be created the **Configuration** node of each **Process**.

The main parameter of each indicator is its **Operating mode**, which determines how the time is tallied:

Calculate based on calendar days, Calculate based on working days, or Calculate based on rule.

For **Calculate based on working days**, it is possible to establish what working hours will count towards the indicator. The working days themselves are configured using the **Working days calendar** in the **System settings**.

For **Calculate based on rule**, the value returned by the rule will be the final value of the indicator. The rule editor contains several additional variables to aid this calculation.

Actions

To determine what steps are to be included in the performance indicator, two new actions were added: **Start performance indicator** and **Stop performance indicator.**
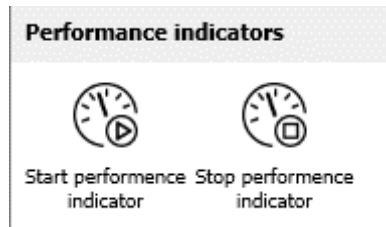
The action configuration determines which indicator is affected by it.
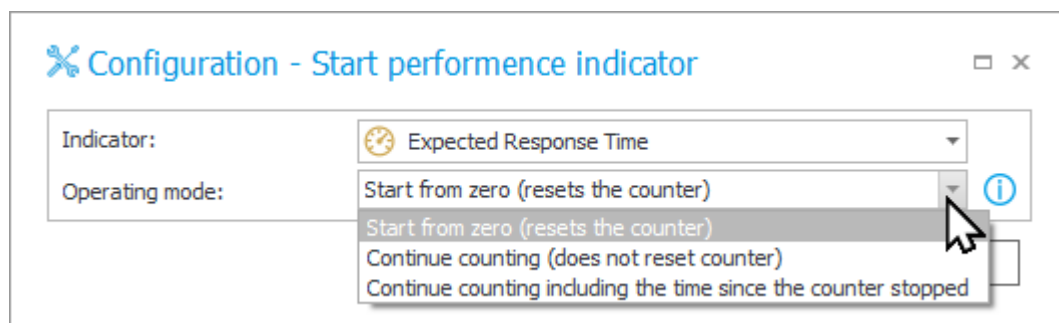
For the Start performance indicator action, it is possible to define its Operating mode: Start from zero, Continue calculating, or Continue calculating while considering elapsed time.

The second and third option allow a stopped indicator to be resumed.

Presentation

While the configuration of the indicator and placement of actions enable accurate and flexible timekeeping, the presentation of this collected data is key.

Indicators are presented in a new **Statistics** tab in the **Information panel** on each workflow instance.
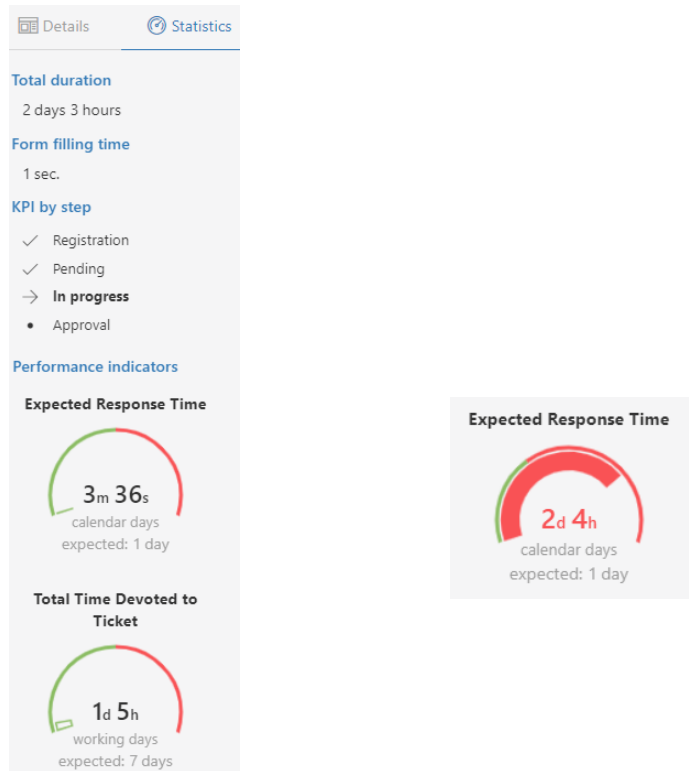
The dial represents the elapsed time as a proportion of the calculated time to the expected time configured in the indicator.

Performance indicators can also be found in the **Navigation** panel on Portal, in the **Analysis** section.
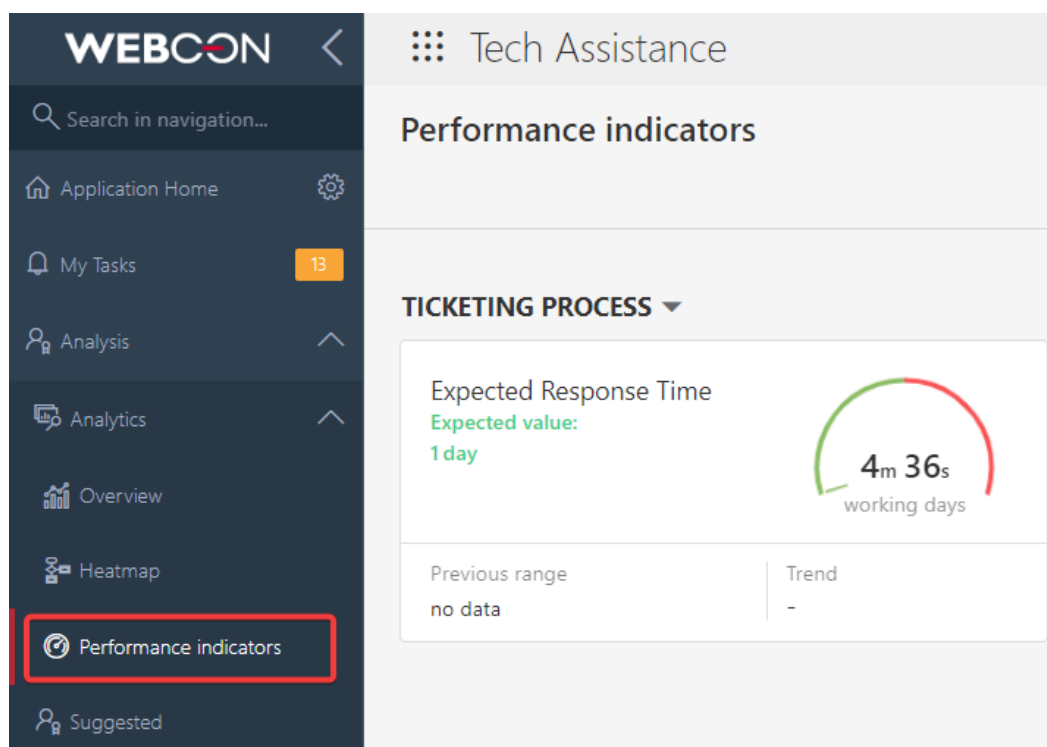
Configured indicators may also be placed on **Dashboards,** and indicator columns can be added to **Reports**.
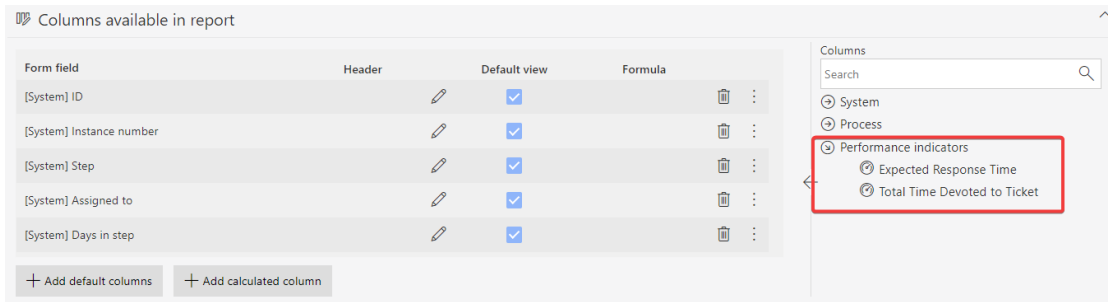
Configured performance indicators will appear in the **Instance history**. These will be show differently depending on if the calculation is ongoing, was paused and restarted, or has finished.

History showing time in one step:

History showing ongoing indicator:

History showing time across multiple steps:
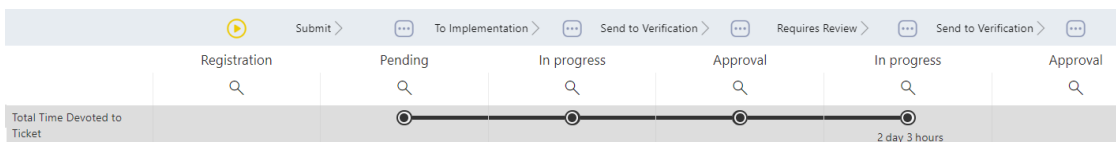
5.18. Visibility of action columns when editing a form

Action columns are now always visible when the form is edited, irrespectively of the width of the other **Item list** columns and the presence of a horizontal scroll bar.

When the browser window resolution is less than 768 px, the action columns are moved to the context menu available under the ellipsis icon.

5.19. Change requests

The new version of WEBCON BPS introduces change request functionality to involve a broader group of system users in enhancing the system. The new functionality now allows application users to report errors and suggest improvements directly from the **Portal**.

The functionality is available after enabling it in the **Designer Studio** configuration or admin panel in the Portal (it is disabled by default). For this purpose a new item in the Designer Studio's selection tree is created: **Change Requests** (**System settings → Global parameters→ Change Requests**) with three possible options to choose from: **Disabled** (deactivates the functionality), **Active – standard handling** (default setting), or **Active – custom handling** (allows users to specify the address of external form for change requests and use user-created process for collecting change requests).
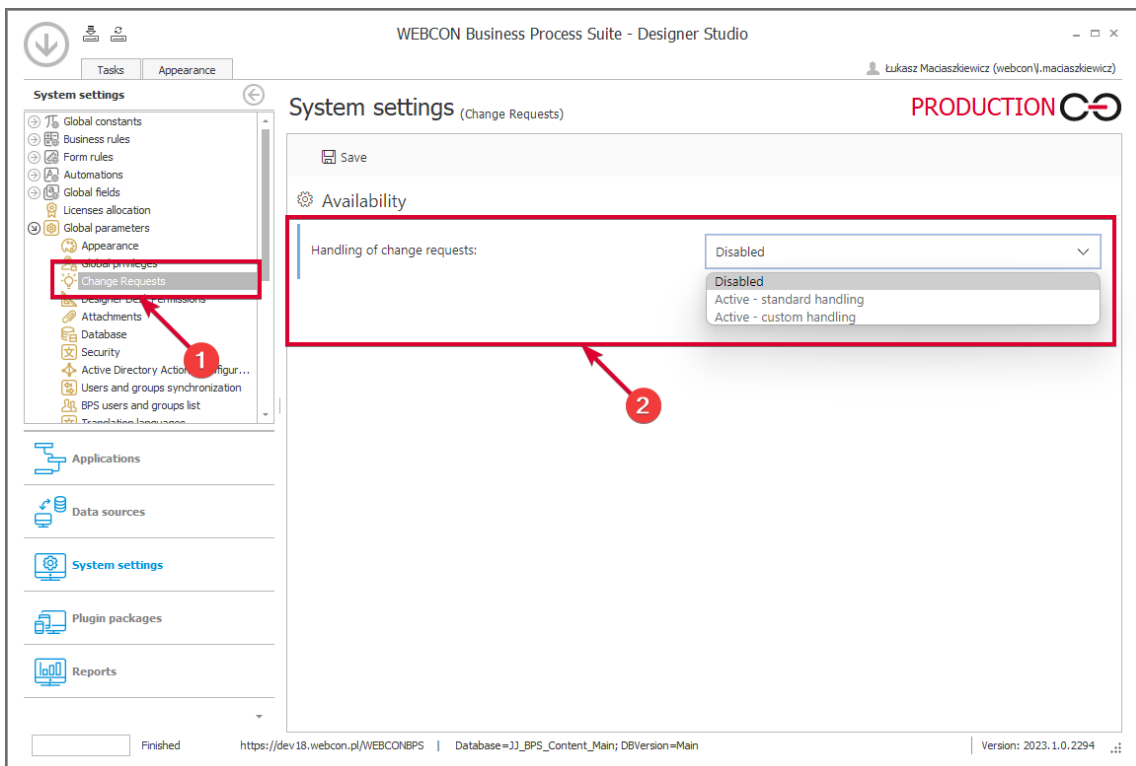
A new item: **Change requests** is added in the admin panel in the Portal. The item enables changing configuration of change request functionality in the **Handling of change requests** field.

A new **Change requests** node is added to the user menu in the Portal. The node groups two items: **All submitted change requests** and **Submit change request**. The Submit change request option allows users holding access to the application (except for users working in the **Allow to work on behalf of another user**) to send change requests in a new window. Beside the fields allowing for describing the

change request and locate the specific location the change request refers to, the window provides a checkbox **Change request visible to all**. When checked, the request is visible to all users with access to the application. Unchecking the checkbox makes the change request visible only to the administrator and its author.
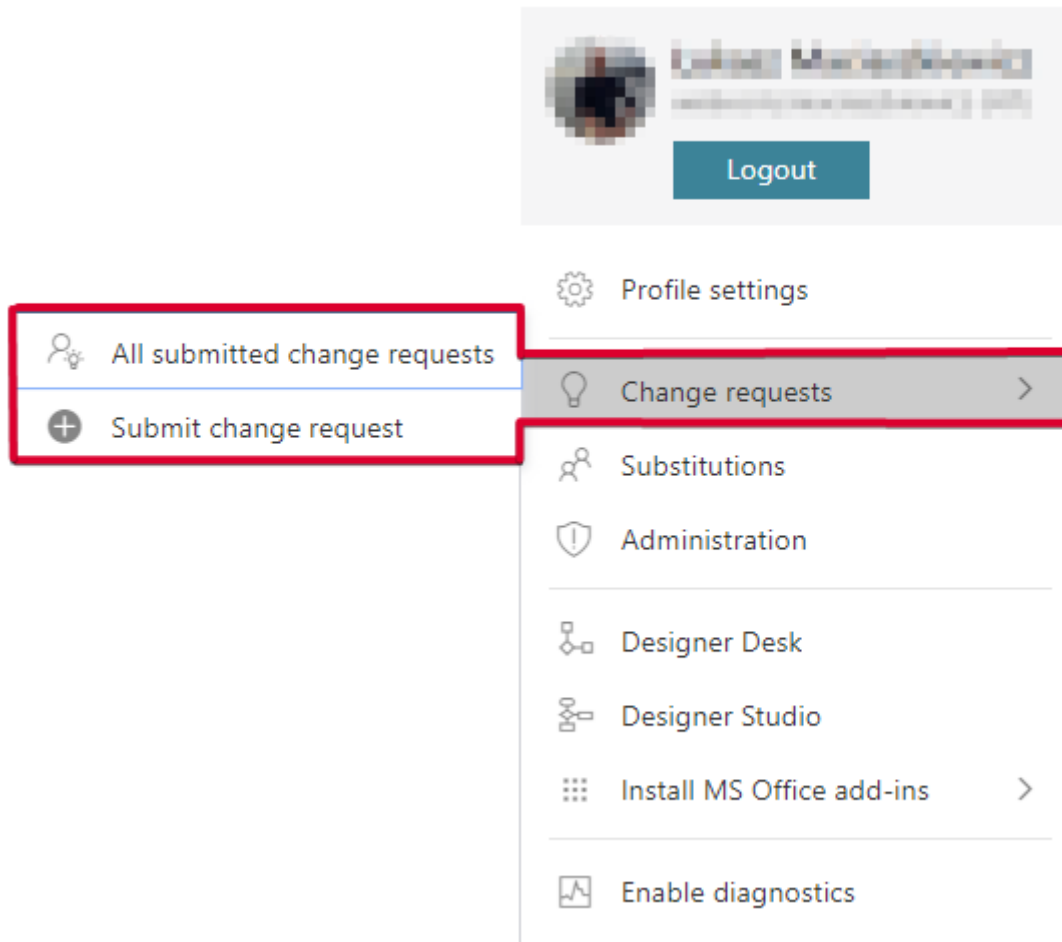
The All submitted change requests option shows all publicly shared requests along with their status (**Pending**, **Accepted**, **Done**, or **Rejected**). The requests are displayed using paging, with 20 requests per page, and sorted by modification date by default. However, there are other sorting categories available, such as date of creation, status, or user interest. Added the ability to filter change requests by user and application, allowing users to view requests submitted by a particular user or related to a specific application. Additionally, an advanced search function has been added to help locate specific requests more easily.

Added the ability for any user with access to the relevant application to view and interact with publicly shared change requests, including commenting (with the ability to edit or delete comments) and liking (adding or removing likes is considered a request modification). Introduced the ability to copy the link to a change request which can be opened in a web browser window to display the request in full screen. In addition, the request author can edit or remove it provided its status is Reported.

The administrator privileges (system administrator, business administrator, or application administrator) include displaying requests to the application to which they have access, irrespective of the request's visibility set by its author, the ability to edit its status, changing the request availability, and deleting comments and the request itself irrespective of its status. An added option now allows the registration of additional requests based on change requests to the Designer Studio configuration (**Allow registering external requests**). This option enables the administrator to easily register requests that are based on existing change requests.

An identical mechanism of reporting change requests is implemented in **Designer Desk**. In this case, the functionality can be accessed – after entering a specific prototype – through a new node: **Change requests** added to the navigation menu. The node groups two previously mentioned options: **All submitted change requests** and **Submit change request**. A list of requests contains only changes requested within a specific application.

5.20. General

- A solution supporting the OpenTelemetry standard has been introduced, which greatly facilitates monitoring and diagnostics of the system (WEBCON BPS Portal and WEBCON BPS Workflow Service).

- Added a report for managing WEBCON BPS licenses. It is available in the **System settings** under **License allocation** and from Portal level in the **Admin panel** under **Users and licenses**.

5.21. Portal

- **Reports** can now have the ("OPTION(...)") clause added to the query.
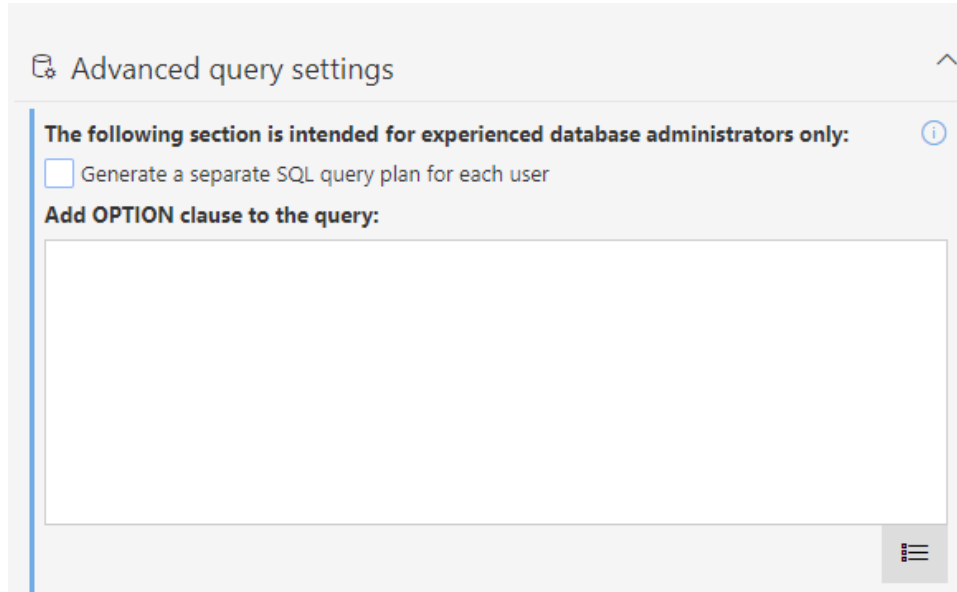
Added the ability to execute the SQL query with a hash unique for each user, which allows for more optimal query plans to be saved to the SQL server (excluding KPI reports).

5.22. Actions

- Added the ability to send attachments exceeding 3 MB in e-mails sent via MS Graph.

- The **Invoke REST Web service** action now has the option to handle empty values.
The **Empty values** column will replace the old **Required** column, and has the following three options: **Skip, Send,** and **Return error.**
When updating to the newest version, in order to maintain backward compatibility, fields that were previously required will now automatically be set to **Return error**. Fields that are not required will be set depending on their data type: simple type to **Send**, complex type to **Skip.**

5.23. Data sources

- A new option named **Validate Connection** was added for **Oracle database** connections.
Toggling this checkbox will add the "ValidateConnection=true" parameter to the Oracle connection string.
Thanks to this, connections from the connection pool will be validated before being used. In cases where the connection is lost (e.g. through proxy) it will not cause an error, but a new connection will be opened

instead.

- In **REST Web Service** connections, added Basic to the available authentication types.

  Added handling of errors when querying the REST source.
  Added notifications for users allowing them to search for error details by GUID.

  Added new operation types for REST invocations (Get_with_body, Delete_with_body).
  Choosing one of these types allows the request body to be sent in JSON format, like for other types.

5.24. Service

- Added the ability to define a list of all error codes that will interrupt the user synchronization.
  All other error codes will not interrupt the user synchronization – it will be completed, albeit with errors (information about them will be included in the log).
  Full list of error codes can be found here: https://learn.microsoft.com/en-US/windows/win32/debug/system-error-codes--8200-8999-
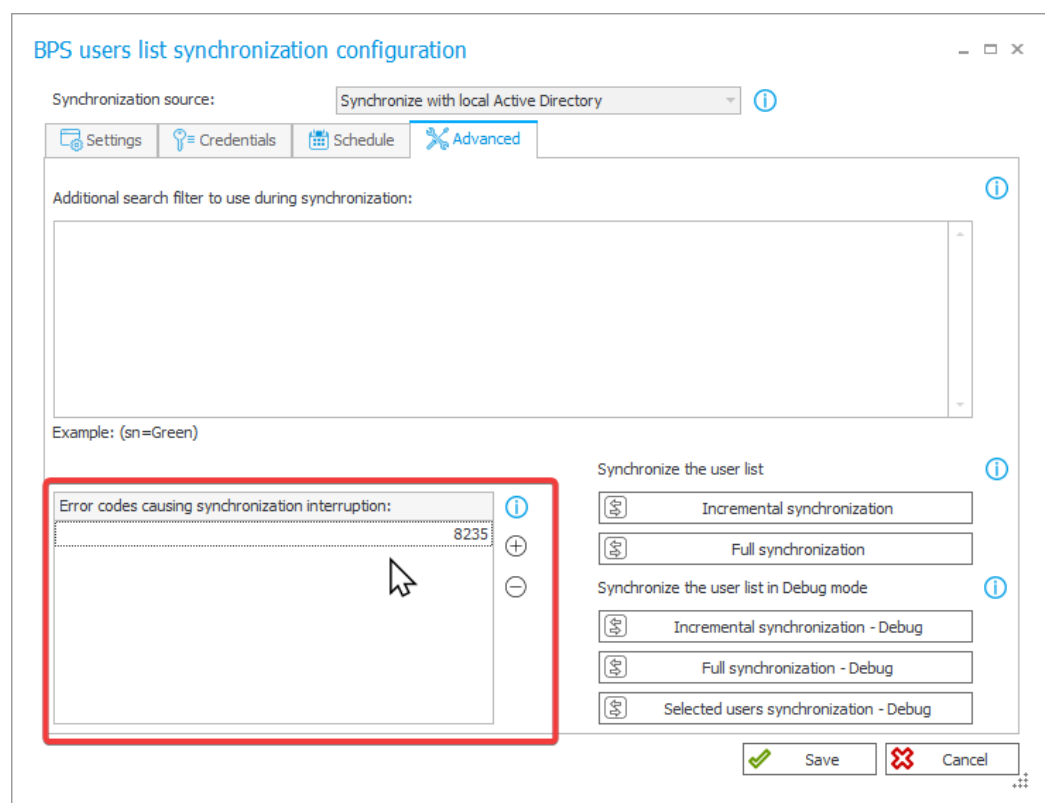
- Introduced the ability to run WEBCON BPS Workflow Service on a non-domain account (in non-UPN format). Communication with WEBCON BPS Portal in this case will be based on a generated certificate. The recommended format for the service account name is netBios.

- A global **ExchangeSynchroNbpUrl** parameter has been added to the configuration database, which stores the URL used for Workflow Service to retrieve exchange rates from the National Bank of Poland.

5.25. Designer Desk

- **Menu button** actions in Designer Desk can now be dragged and dropped between button groups.

5.26. API & SDK

- Added the **isFinished** property (informing whether an instance is in an end step) to the **/api/data/{ver}/db/{dbId}/elements/{id}** endpoint in API 4.0 and Beta.

- BaseField expanded with FieldType property: FormFieldTypes. BaseColumn expanded with ColumnType property: FormColumnTypes.

- API version 5.0 and beta now include two new modes for passing choice field values: Search and SearchAndSetTargetFields. They are used for finding an exact match in the configured columns and setting the value of the choice field.

- Added the ability for form fields in **Read-only (editable by JavaScript)** mode to be edited through the API – endpoints get /elements and get /formlayout can now differentiate and return the two types of Read-only.

- Expanded endpoint **/api/data/beta/db/{dbId}/formlayout** in API version 4.0 and higher.
  Added the **dbColumn** property which returns the field name from the database, and the **editability** property which returns information about field editability.

- In version 3.0, REST API has an extended model of BPS group endpoints to assign (**POST**) and return (**GET**) a list of owners of a given group.

  On the other hand, version 4.0 of this very architecture has been upgraded to include **group/owners/remove** endpoints which are used to add and remove owners of a given BPS group.

- Added API version 5.0.
  Removed version 2.0, while version 3.0 was marked as outdated.

- Added TemporaryEntitiesManager – used for storing data in between multiple action executions.

- Introduced the asynchronicity in SDK API methods and replaced static tool classes with instance classes. Details of the changes made will be available in the migration document.

- Added handling of **External User Access** type licenses to API 5.0 and Beta endpoints.

- REST API has been extended with the SDK mode – a new group of scopes and endpoints has been added, the so-called "HighTrust", allowing to perform operations on elements with full privileges. This will make it possible, for example, to edit invisible fields and set the **Picker field** to a value from outside the data source.
  SDK mode will only work in "app context" applications.

6. Bug fixes

6.1. General

- Fixed an issue with the procedure for calculating substitutions to take into account changes in the ActiveTasks table.

- Removed an outdated .NET migration script from the list of scripts. The script could cause problems in environments with a very large number of elements.

- Fixed an issue where it was possible to add attachments despite defining restrictions. Renaming of temporary files added by the WebDEV protocol is now blocked.

- Fixed an error involving cache refreshing that occurred on environments containing related processes (i.e. processes from other applications). The error caused e.g. looping On Timeout actions, and the "An item with the same key has already been added" error which caused Portal to become unresponsive.

- Fixed an error of the installer script that updates the PublishedAttachments table. The error occurred when the default database schema was other than DBO.

- Fixed an issue that prevented connection to Microsoft Dynamics 365 used by selected sources and actions in the system.

- The login parameter in SQL queries will have a fixed length (255 characters).

- Improved the efficiency of loading search structures for environments with many content databases.

- During import, if the target environment does not contain an archive or attachment database specified in the import package, the default archive or attachment database will be used instead (as long as they have been configured on the target environment).

- Added missing DTK component to the documentation of components used by the **WEBCON BPS** system.

- Unified the behavior of the **ExpectContinue** header (status 100) for Portal and the workflow service. Authentications that download a token will have this value set to "True" by default in order to facilitate a connection. REST actions and data sources will have this value set to "False" by default. It can be changed in the action configuration via the XML file only.

- Improved the display of the "Collation" parameter when creating a database using the installer tools and standardized the language for displaying its properties. The order of parameters in the installer windows before and after database creation has been unified.

- During installation in a domain environment, the user will receive a message suggesting they use a domain account.

- Fixed the SQL query used to load the user list in the **Admin Panel.** The issue was caused by a reference to a SQL function unavailable in SQL Server 2014.

- Fixed the "Migrate column names to ID tags in item lists' configurations" error which occurred when updating from WEBCON BPS version 2019.

- The window for choosing a content database will not appear after switching Portal addresses if there is only one content database to choose from.

- A pop-up message in the installer will now suggest statistics will be updated daily instead of weekly.

6.2. Portal

- Fixed an issue caused by rapidly switching between instances in **My tasks**.

- Added validation to Calendar type views on **Reports –** the required columns will be verified, and the error message will specify both the view and the Report.

- Fixed an issue with conditional coloring on **Reports** – the problem occurred when making a coloring condition involving values of **Choice fields**.

- Fixed an issue that caused the **Recent activities** view to display the activities of other users.

- In the **Themes** configuration of Portal, a notification will be displayed if the main page image is not chosen.

- In the **Removed users** view in the **Admin panel**, the name of the mass action button was changed from **Add/Remove licenses** to **Remove licenses**.

- Fixed an issue preventing a **Report** from being saved if the first view was a chart.

- Fixed an issue preventing adding **KPI Report** tiles to a **Dashboard**.

- Improved scaling of chart-type views on **Reports** – the legend and chart will fit without an unnecessary scroll bar.

- The current day and the selected day on the calendar view of a **Report** will now look different to easier tell them apart.

- **Reports** with enabled grouping that have been placed on dashboards will have the grouping panel expanded by default.

- Improved the efficiency of SQL queries in **Reports** containing the **Assigned to** system column.

- The order of columns in the Excel file exported from a **Dictionary Report** will correspond to the column order on the view from which the export was initiated.

- Enhanced appearance of version column in instance history.

- Fixed a problem causing no response after clicking the **NO** button in the modal window of a notification shown upon completion of a menu button action. Currently, the notification window displayed after action execution includes only one button for closing it.

- Fixed item displaying in the **Recent activities** section of application when applying the **All** filter.

- Fixed an issue causing an incorrect change of data format in a **Single line of text** form field. The problem appeared when a string entered in the form field was a date in a specific format, making saving a particular data string in a database impossible.

- Fixed the effect of global privileges on **Reports** using Searchindex as their source of data.

- Added message „Element was modified on another workstation. Refresh browser window." displayed when trying to save an instance modified on a different workstation. The message is displayed in a modal window that requires pressing the **OK** button.

- Fixed a concurrency error on Portal caused by duplicate users in the UserName column in the IdentityUsers table.

- Fixed an issue occurring when attempting to add an unsaved **Report** to a **Dashboard** in Designer Studio.

- Fixed a behavior of Portal that would make it display a message about lack of privileges to an application for a split second when loading a page.

- Fixed an issue with loading data in chart-type views.

- Fixed an issue that occurred during process import and prevented the transfer of the chart report configuration, namely its **Label description** and **Grouping** settings, to the target environment.

- Fixed an issue with filtering reports using Searchindex as their source – the error was caused by the incorrect letter case being used when passing the login.

- Fixed an issue on **Reports** that caused the scroll bar not to appear.

- Fixed an issue on **Reports** that caused columns to disappear from the search panel when selecting the view that was already active a second time.

- Fixed overlapping search panels on **Reports**.

- Fixed an issue with links in **Report** cells not working correctly when opened in a new tab.

- Fixed an error preventing attachments with MSG extensions from being added.

- Improved the progress bar so as to not overlap elements to the right/under it.

- Editing **BPS Groups** will no longer cause the **BPS ID** to be validated – it cannot be changed anyway.

- The Find instance widget on Dashboards will display a message about not finding an instance instead of "Bad request" error.

- Fixed an issue occurring after removing a filter on a report and refreshing – the filter will now be removed correctly.

- Improved the visual marking of the leave report basic view in the side panel when the view was selected again. Previously, after switching to another report view and reselecting the basic view, the view name was not highlighted in the side panel.

- Fixed an issue that caused zeroes after the decimal point to be ignored when exporting from a **Report** to Excel.

- Fixed an issue that consisted of constant loading of tasks in the task counter in Portal. The problem resulted from incorrect saving of dashboard configuration after transferring it with the import-export mechanism.

- Fixed a bug that occurred after changing the language in Portal with a default theme set. The problem occurred when the previously set user-created theme had been deleted.

- Fixed an issue that caused the business administrator to sometimes see elements favorited by other users.

- Fixed an issue that caused the number of rows shown on **Reports** embedded in **Dashoards** to be calculated incorrectly – for some zoom levels, only 1 instance was shown per page.

- Fixed a bug where the filter settings for a report in the application's default **Dashboard** were not retained.

- Fixed an issue where **Translations** and **Add New** options were visible in WEBCON BPS Portal with the **Edit mode** disabled.

- Fixed an issue preventing the **Dashboard** from being edited.

- Improved the position of the **Chart** type report view on the **Dashboard**.

- Improved the display of the defined **Range filter** in the dedicated menu of the table report.

- Fixed incorrect marking of items in the navigation menu.

- Fixed an issue with rounding average time on **Reports**. Too many decimal places were being shown.

- Fixed an issue with the loading icon so that it displays in the correct theme color – it would sometimes display the default color before the theme settings loaded.

- Fixed an error that suggested incorrectly that a **Report** has unsaved changes. Saving such a faulty Report would reset its column configuration.

- Fixed an issue with date/time conversion from UTC on **Calendar** Reports using Solr as their source.

- Improved the counting of instances with indicated values in the Solr report for which two **Grouping** levels have been defined – by **Picker field** and step. Previously, instances with renamed values were not counted and their total number was displayed as "<Blank value>".
  In addition, the names of the values by which the instances are grouped will be displayed similarly to those in the SQL report (without commas).

- Improved the display of a vertical scroll bar on the drop-down list for selecting a report **View**.

- Fixed the look of the **Replaced person** field in the **Substitutions** module. This field should always be read-only.

6.3. Form

- Fixed an error that occurred when trying to click again on the link to follow a path, received in an **E-mail notification**. After the change, the system will first validate whether the path under the link is still available.

- Fixed a bug allowing the initialization of an **Item list** that was in **Read-only** mode.

- Fixed a bug occurring when expanding the **Item list**. The bug was removed by adopting a new method for creating model names for item list.

- Changed the position of the red asterisk relative to the name of the **Item list** column, which suggests that this field must be filled in on the form. After the change, the position of the asterisk is the same as for other form fields.

- Fixed a bug where the order of the **Item list** columns was incorrect after importing an application from another environment.

- Fixed an error that occurred when importing **Item list** columns from MS Excel, if a **Default value** was set for this form field.

- Improved the efficiency of operations on the **Item list**.

- It is now possible to copy the **Item list** column total to a form field configured as **Read only**. In addition, column totals will be copied on path transitions through the public API and service.

- Fixed a bug that occurred when adding attachments bigger than 4 MB to the column **Local attachments** in the **Item list** form field. As a result, an attachment was added to the **Attachments** field, but the item list included information that it was deleted.

- Fixed a bug that caused the IDs of the **Item list** columns of the **Local attachment** type to duplicate in the data base when overwriting these columns.

- Fixed an issue that caused excessive recalculations in the values of **Item list** rows.

- In Diagnostic mode on the form, when an **Item list** column is set using the **Target field** configuration, it will not be erroneously logged with an "inline rule" header (which implies that it was set using a rule).

- Fixed an issue that caused the headers of **Item list** columns to overlap with the values. This occurred when the background of the list was colored with **Form rules**.

- Added color verification for coloring **Item lists** based on form field/column values.

- **Acceptance** on **Item lists** configured on the form in a specific step will now work even if the column configured for acceptance does not have the **Show in dialog** option enabled.

- Fixed an issue with **Item list** columns of the **Date and time** type that were set as required using a **Form rule**. The red dot indicating that they are required will appear next to all relevant cells.

- Fixed incorrect filtering of **Item list** columns with calculated value including Polish diacritics. The issue resulted in removing Polish diacritics in the filter values returned by the query to the internal API. After choosing the filter with such values, the system was unable to find the respective value. The problem occurred only for the database with **en-US** language.

- Fixed an issue with calculating the value of a **Hyperlink** column on **Item lists**. The issue caused the hyperlink to be built based on the first row of the item list and displayed in all rows.

- Improved the alignment of the summary row on **Item lists**.

- Unified rounding of column summaries of **Item lists** and the form fields to which its value is copied. Rounding will behave everywhere like in Excel – rounding up from (and including) 5.

- Fixed an error on the form which occurred when attempting to perform some operation on an **Item list** after an unsuccessful **Validate form** action.

- Fixed an issue that caused **Item list** columns set using the **Change item list values** action to not also set relevant target fields.

- Improved the coloring of **Item list** columns using semi-transparent colors.

- Fixed an issue with the height of **Data row** type columns on **Item lists**.

- Fixed the centering of **Yes/No** choice fields (i.e. checkboxes) on **Item lists**.

- Fixed the centering of **Yes/No choice** fields. Checkboxes will be aligned the same in editable and read-only modes.

- Fixed a bug that prevented all **Data tables** from displaying correctly on a form if the configuration of one of them was incorrect.

- Fixed an error that occurred when attempting to import **Global field** translations into a process form field and changing its type in the configuration.

- Fixed clearing erroneous values from **Choice fields** using **Popup search window** behavior.

- Fixed a bug occurring after clicking a menu button invoking an action.

- Letter case should have no impact on searching in fields that return people (i.e. they should be case insensitive).

- Fixed a bug that prevented going through a path when a **Custom instance number** with an exceeded allowed number of characters was defined in a workflow.

- Changed the function by which phrases are searched in the **BPS internal view** data source configured for the **Choice field** (**Popup search window**). After the change, the searched values will be correctly matched on a form.

- Fixed an issue that prevented starting instances in a new tab using the middle mouse button.

- Fixed a bug that appeared when invoking the **JS API SubelementInitialization** rule with the wrong form field ID. Added a condition that checks if an form field with the specified ID exists and if it is of **subelement** type. Failing to meet the condition results in displaying a warning and ceasing to process the request further.

- Fixed a bug that appeared when invoking the **MarkSubelementRequired** and **MarkSubelementNotRequired** rules with the wrong column name specified. Now, a warning is displayed in such a situation.

- Fixed an issue with button spacing on the attachment panel.

- Unified how path buttons are displayed on the form in view mode (i.e. not in edit mode) – fixed an issue that caused path buttons to appear twice.

- Fixed an issue where text typed into the **Multiple lines of text** form field in **Append mode** would not wrap properly and would extend outside the field. The problem was solved by adding a dedicated scroll bar.

- Improved the arrangement of quick action icons on files attached to the form so that they are aligned for all attachments.

- Fixed an issue with the **Multiple lines of text** form field – the Rich Mode would sometime not activate when moving between the **My Tasks** view and the fullscreen form.

- Fixed an issue with excessive developer logging that could prevent the correct display of a form.

- Improved the visibility of the version number in the start step.

- Fixed a formatting issue in **Data row** form fields – numbers will now be aligned to the right.

- Optimized the **Attachments panel** on the form. Excessive SQL queries were activated when loading related attachments and e-mail conversations.

- Fixed an issue with highlighting the attachments panel – the **Add attachment** button will be highlighted correctly when selected.

- Fixed an issue with the scroll bar in **Choice fields** in **Autocomplete** mode that was caused by long values.

- The user will be notified if the provided color is invalid.

- Fixed how the row grouping function on **Item lists** works, especially in the case of business rules that operate on the current row.

- Fixed an issue resulting in displaying the message **Invalid Checksum**. The problem occurred after adding a new row in the **Item list** and selecting a value from the **Autocomplete** column.

- Fixed an issue that caused column headers in **Data Tables** to be translated incorrectly.

- Fixed incorrect display of percentages in the progress bar on the form. After the upgrade, percentages are correctly vertically aligned.

- Fixed how the column name is displayed in the **Data row** form field in a **Group** that displays form fields horizontally.

- Fixed an issue involving values from a **Choice field/column** disappearing when the browser window was resized.

- Fixed an issue that sometimes caused copying text to fail when copying into a **Multiple lines of text** field in rich text mode (HTML).

- Updated the version of the IT Hit WebDAV library for editing PDF files through the form.

- Fixed incorrect view changing in holiday reports displayed in a **Dashboard**. Previously, despite correct configuration, it was not possible to change the view in the holiday report.

- Fixed an issue that resulted in displaying the message **Cannot read properties of undefined (reading 'operationid')**. The problem appeared when a **Choice field** was filled out with a default value.

- Optimized requiredness update mechanism for form fields and item list columns based on business rules. The update now takes place only when there are existing dependencies between form fields in requiredness rules.

- Fixed an issue that caused choice field expanding menus to not close after selecting another field.

- Fixed incorrect operation of the change detection mechanism. If a form included global form fields, changes in the process configuration always required refreshing the form.

- Fixed incorrect comment requiredness validation. The issue occurred in the form Read-only mode and blocked the on-path transition.

- **Form validation** will be disabled in Read-Only mode and when viewing archived instances – the users will not be shown errors concerning data they cannot change.

- Improved the way in which the focus is set when switching the form into edit mode. **Data Table** and **Data row** form fields will not be focused first when switching into edit mode.

- Fixed an issue involving data not being saved on the form. The issue occurred when the form was first opened in read-only mode, then switched to edit mode, and was left open in the browser for ~10 minutes.

- Fixed an error that occurred on Item lists after changing the process configuration in Designer Studio.

- Fixed an issue that caused displaying a false message informing that a file is edited by a different user, which precluded its edition.

- The **Data row** form field displaying a percentage with no value will now show "0%" using the control font color.

- Fixed an error that made it impossible to add an e-mail conversation as an attachment to a workflow instance when the e-mail conversation contains files exceeding 4MB.

- Fixed an issue with a duplicate login column in **Person or group** fields and other choice fields that use BPS users as a data source.

- The attachment preview window on the form will now fit the screen better. This will leave less space above and below the window.

- Fixed an issue with the attachment preview that was caused by its placement on the form being other than the default.

- Fixed an issue that caused the "target field" function in **Choice fields** to treat text as dates.

- Fixed an issue that occurred when entering from an OCR project a value to a form field which is a number greater than or equal to 1,000,000.00 and whose thousands separator is a period.

- The **Horizontal arrangement of form fields in group** option will cause the names (labels) of form fields to be displayed in one static place – above the specific field.
Other options that modify the position of form field names will not overwrite this option.

6.4. Designer Studio

- Added missing context help for the advanced configuration of choice fields.

- Fixed a bug occurring when transiting to a step on a path with **HAS ANY ROWS** function inserted in the **Availability restriction on form** field in **Designer Studio**.

- Fixed an issue with the edit button for accessing the expression editor in various places in Designer Studio – it would sometimes cause an error if an empty configuration field was focused beforehand.

- Fixed incorrect deletion of space character at the beginning and the end of the text entered in the **TEXT** business rule.

- Fixed an issue that obstructed changing the sequence of form fields in **Global form template**.

- Optimized the speed of launching Designer Studio.

- Fixed an issue that blocked certain areas of Designer Studio (e.g. REST API) when the number of other available licenses was exceeded (even if the person using Designer Studio had the correct license).

- Fixed an issue with refreshing the **Workflow Designer** – in some cases, deleting paths from the designer would prevent saving.

- Fixed an issue that caused incorrect plugin package creation and application import. The problem occurred in the environment with two WEBCON BPS Portal instances and load balancing through Reverse Proxy with **cookie-based affinity** enabled.

- Fixed an issue that precluded entering superior for an already added external user. As a result, the field **Superior** was visible only when adding a new external user.

- Fixed an error involving **Automations** with a **For each** operator blocking Designer Studio in cases where a data source existed that had a filter on a no-existing column.

- Fixed an issue resulting in incorrect coloring of variables in **Designer Studio** when entering them in lower case.

- Fixed an issue that precluded sending an e-mail with confirmation of successful path transition through **MailApproval**.

- Fixed an issue that prevented the list of workflows in a **HotMailBox** configuration from refreshing.

- Fixed an issue resulting in failure to import process. The failure was due to an invalid migration script that did not remove records from the **Translations** table referring to non-existent instances.

- Fixed an error that caused paths on the **Workflow diagram** to change positions after saving.

- Fixed incorrect display of login window when starting WEBCON BPS Designer Studio in administrative mode. As a result, the login window was displayed behind the Designer Studio banner.

- Fixed an issue that caused transferring configuration values in Hotmailbox when changing server type. Now, the configuration values are cleared when changing the server from **MS Exchange 2013/2016/2019** to **Exchange Online – Microsoft Graph** and the other way around.

- Fixed incorrect formatting of date and time returned by the business rule **SELECT VALUES**. The problem consisted in returning the date with an offset in relation to the time zone. Now, the rule returns dates in ISO format compatible with the system.

- Fixed incorrect displaying of the **Hyperlinks** function (**Start Element (…)** and **Open Element (…)**). The issue consisted in displaying the function in advanced mode each time.

- Improved error logging in Designer Studio.

- Added missing instance number nodes in the **Expression editor** window. The problem appeared when editing form custom instance number (Application name → **Configuration** → **Form types**).

- If the default start button is the only one in the application, it will no longer erroneously show an asterisk next to its name (i.e. inform about unsaved changes which are not there).

- Fixed an error that caused the default port 25 to be used to send e-mails signed with attachments – the port set in the SMTP configuration will now correctly be used instead.

- When creating a vacation process, in the step for selecting an Exchange connection, if a new connection is created it will be automatically selected.

- It is now possible to edit **MailApproval** help commands in Designer Studio. The names of the help commands will be translated into the installation language of the database.

- Fixed an issue with mapping parameters in Designer Studio for Rules, REST actions and data sources, as well as HTML and SDK form fields.

- Fixed an issue that caused the proc_GrantLowPrivileges procedure to skip the CacheOrganizationStructureGroupRelations table.

- Fixed the error occurring when using the MailApproval test button.

- In the filter editor, fixed missing values in the **Data source columns** node.

- Fixed an issue related to checking the usages of an element to be deleted – the message containing all usages of a deleted element will now appear correctly.

- Fixed an issue with variables available in the editor of the **Mass notification** templates – added suffixes to differentiate variables used in the template.

- When choosing the **Dynamic** option in the task assignment configuration on a path, it will not be possible to save a process until the Field/Column input fields under this option are filled out.
  When the option is disabled, these fields will be cleared.

- Fixed an issue with saving that caused the save progress bar (or rather circle) to freeze on the final step.

- Optimized importing by improving the efficiency with which variables are replaced.

- In the configuration of e-mail notification templates, fixed the placement of the cursor and the way it moves when using the Tab button.

- Fixed an issue with copying an **Item list** that contained a default value – an error occurred when trying to save the changes.

- Fixed an issue related to incorrect translation of the **Choice field** columns in the **Advanced configuration** window after importing an application prototype from WEBCON BPS Designer Desk.

- In the configuration of **Choice fields**, the **Additional link** option will always be available even when the **Allow adding values not in data source** option is toggled off.

- Fixed an issue with logging out of Designer Studio.

- Fixed an issue occurring during the transfer of privileges when importing an application.

- Fixed an authentication bug that occurred on opening the **Response** tab in the **Invoke REST Web Service** action configuration.

- Fixed an error that occurred when using the **Verify process** tool after switching Content databases.

- Fixed a bug that could cause the message "The internal array cannot expand to greater than Int32.MaxValue elements" to be displayed for very large environments. The fix was to optimize the performance of the application import/export mechanism.

- The correctness of the URI address will be validated in the proxy configuration.

- Fixed an error that occurred when trying to import an application into a target environment due to duplicate indexes of **Item list** columns.

- Fixed the incorrect scaling of the **Workflow designer** diagram.

- Fixed the lack of confirmation e-mails in scenarios where the **Use custom outbox settings** option is used in **MailApproval** configuration.

- Fixed an issue with importing the ConfiguredWebServices Table when importing an Application.

- Fixed a bug in downloading the profile pictures of users when synchronizing them with Azure Active Directory.

- Fixed incorrect displaying of the ellipsis icon next to the **Temporary files directory** option in the service configuration (the **Configuration** tab).

- Improved the validation of path **Usages** – previously, it was possible to drag the path to another step in the **WorkFlow designer**, even though the path was used elsewhere in the system.

- Fixed an issue with refreshing related processes when saving a different application.

- Fixed an issue causing mass notifications to be sent on non-working days regardless of configuration.

- Added missing info to the LogCleaner context info in **Schedules**.

6.5. Actions

- Fixed an error that appeared when trying to execute the **Manage users** action configured on a menu button and with the **Unlock/Lock** options checked for account availability.

- Fixed an issue that blocked the operation of the **Generate/Update a Word file** action if it was configured in an automation using **For each** operator with SQL data source defined as **Collection type**.

- Fixed a bug occurring when attempting to process certain PDF files. The bug occurred in some cases when users checked the **Skip PDF files with text layer** and **Skip PDF files with signatures** options in the configuration of the **Add a text layer** action. Improved logging into the **OCRSpace** service.

- Fixed the lack of logs concerning assigned privileges using actions from the **OneDrive** group.

- Fixed an issue that prevented the **Delete a list element** action from working.

- Fixed a bug that prevented **Send a custom email** action from working properly when Exchange Online – Microsoft Graph was specified as **Server type** in **Configuration of sending emails**. After the update, users will receive **Delivery notification** and **Read notification** as configured for the action.

- If the WSDL file used in the **Invoke SOAP Web service** action is too large, the user will receive a warning (same as with data sources).

- Fixed an issue with loading **Double** type values when using the **Invoke SOAP Web service** action.

- Fixed an issue that occurred when copying the **Invoke REST Web service** action. After copying, certain sections of the action configuration became inaccessible.

- Fixed an issue preventing the **Invoke SOAP Web service** action from being configured after constants were used in its configuration.

- Fixed an issue with the **Invoke SOAP Web service** action that occurred when importing a process from a package exported as a template.

- Fixed an issue that caused the mapping of **Item list** columns to be lost when configuring the **Invoke REST Web service** action and reloading the response for JSON Grid. As a result, the values of these columns were not entered on the form. In addition, improved the cleaning of tree fields in the **Values mapping** table when complex field types are changed.

- When using **Business rules** in the configuration of **Invoke REST Web service** actions, the action will now correctly save the type of data returned by the rule.

- Fixed an issue with signing PDF attachments in Adobe with IT Hit Edit Doc Opener.

- Fixed ID encoding used for requests to MS Graph. There was an issue where the IDs passed to Graph were not parsed correctly and returned a "RequestBroker--ParseUri" error.

- Fixed an issue that would sometimes undo the copying of actions.

- Exchange actions configured to set the status in MS Graph when creating/modifying **Exchange Events** will now work correctly.

- The "Out of office" option in the exchange calendar will be displayed as "Unavailable/Out of office".

- In actions that generate files, if the correct file extension is not included in the output file name, it will be added at the end of the file name. This behavior will take place even when the file name has dots in it, e.g. "first.file" will become "first.file.docx".

- Fixed an issue with the order of triggering **On timeout** automations. Timeouts will be triggered in the order in which they appear on the action list, i.e. alphabetically.

- Fixed an error in **On timeout** automations that would occur in cases with many subworkflows.

- Improved error logs for actions involving SharePoint.

- Exchange events created using MS Graph will include HTML in the event description.

- The button for testing in Exchange actions will now open a pop-up window for entering the user for which the test Exchange action will be carried out.

- Corrected the way of reading the **Generate a PDF file** action configuration – it previously caused an error in executing the action after updating the system to version 2022.1.4.84.

- Fixed an issue that caused the instance history to omit certain actions.

- Fixed an issue in the **Hyperlink** action which caused it to display its configuration in the advanced mode constantly.

- When using an **Action template**, the documentation was not copied into the place where the template is used – this has been fixed.

- Fixed an issue with checking if the target folder for the **Add an attachment to a list** action exists – checking the folder names will not be case sensitive.

- Fixed an issue with duplicate/invalid keys in copied actions. The issue was propagated by copying actions on steps and global actions. The migration script will remove all invalid keys, and actions copied in the future will be assigned valid foreign keys.

- Fixed an issue with setting the end-time of all-day events set up using the **Exchange events** action – the action would not work correctly when using Microsoft Graph.

- Fixed an issue with the **Generate/Update a Word file** action – the issue occurred when the template used in the action was edited at the form level, this led to some fields used in the template not working correctly during document generation.

- In the case of missing licenses, **Menu button** actions on the form will be inactive.

- Fixed missing **Item lists** in the mapping of the **Generate Excel file** action.

- Improved handling of image generation (i.e. 2D codes) in **Generate/Update a Word file** and **Convert Word to PDF** actions.

- Adding privileges to a SharePoint list element via the **Add SP privileges** action will add privileges to the selected element only – an error caused the privileges to be added for the entire list.

- **On Timeout** triggers will now be ordered alphabetically (instead of by ID).

- Fixed an error in the **Update attachment** action – changing the name of the attachment to include a dot "." would add two instead.

- Fixed an issue that occurred when the **Generate an Excel file** action was configured to create an .xlxs file **From url**. In that case, the user received a message that the indicated file does not exist. After the change, with that configuration, Excel files are generated correctly.

- Fixed issues and improved handling of barcode printouts realized via SignalR – which is used to connect cloud installations with local printers.

6.6. Rules

- Fixed the context menu in **Rules** that is accessed via the Ctrl + Space shortcut. The values in the menu will be displayed in the correct order. Certain sub-nodes were displayed as main nodes.

- Fixed an issue with the **STRING REPLACE** function. An error would occur if a business rule was used inside this function.

- Fixed an issue that occurred after defining a **Form rule** on a page load with respect to the **Item list** whose visibility on the **Field matrix** was hidden. A similar issue occurred when the Item list was visible and one of its columns was not.

- Fixed the comparison operations in In form rules that were using business rules (i.e. rules in asynchronous mode). Comparing form fields containing numerical values would return incorrect results.

- Fixed an error that occurred when using an unsaved **Business rule**.

- Fixed an issue that allowed variables to be used in places where they should not be available.

- Fixed and issue with a form rule based on a business rule where the **EMPTY** value was treated as "0" when compared to a numeric form field value.

- Fixed incorrect recognition of value types in **Form rules** used in actions configured with the **For each** operator. Previously, an error message was displayed when a rule was to perform arithmetic operations like multiplication, addition, etc.

- Fixed missing nodes in the Rules editor.

- Fixed a bug that prevented the correct work of **Form rules** configured with two or more **FORMAT DATE** functions.

6.7. Data sources

- Fixed an issue caused by using a column alias containing a space in **Oracle database** data source definitions. In such cases, the alias containing a space will be placed in quotation marks in the final query (similarly as with MSSQL databases where they are placed in square brackets).

- Fixed an exception that would occur when editing the filter in **BPS Users** type data sources.

- Fixed an issue that occurred when migrating to 2022 R3 or newer versions due to which the account accessing the database did not have privileges

to the **dbo.Split** function. Added privileges to the dbo.Split function to the **proc_GrantLowPrivileges** procedure.

- Fixed a bug that prevented the selection in WEBCON BPS Designer Studio in the **Data source filter** of a column of this source that contained a colon (:) or a hash (#) in its name.

- Parameters that are not handled by WEBCON BPS: table of tables or complex types within a table of complex types will not be visible in the configuration even if included in the WSDL file definition.

- Fixed an issue that made it impossible to filter the **SharePoint list** data source column using the value from the **Yes/No choice** form field.

- Invoking **SharePoint list** type data sources will also work through a proxy if the use of a proxy has been enabled in the system configuration.

- Fixed an error that occurred when changing the data source type for a **Choice field**. The problem was due to the failure to change the form field settings in **Advanced configuration**, as required for the new type of data source.

  The following changes have been made:
  - added a mechanism to check whether the columns of the new cache data source are consistent with the form field configuration. If they are not, the user will receive a message: "The chosen data source contains a different set of columns than those configured in the form field. Please reconfigure the form field to use the updated data source."
  - disabled the option to save a **Choice field** with the above incompatibility. When attempting to save such a form field, the user will receive a message as above, additionally preceded by the phrase: "Required configuration of the form field: [Form field name]"

  This validation mechanism will work only for sources whose columns are available in the cache. Otherwise, validation will not occur.

- Fixed an issue related to using variables in REST data source configuration that return characters forbidden in XML.

- Fixed the substitution of the **CurrentLoginName** variable in the filters of **Reports** using Searchindex as their source.

- Updated how links to instances of a **Document Template Process** are generated. The URL to the instance will now additionally contain the GUID of the Process.
  This will ensure more efficient queries in systems with multiple content databases. The system will pinpoint the database containing the instance

based on the Process GUID.
Configurations that use the old URL format will continue to work correctly.

- Fixed a migration issue with the XML configuration of the **Data table** type form field. The issue occurred for data source columns whose names consisted only of spaces.

- Improved handling of date-type data (dates without time) in **REST Web Service** type data sources.

- Fixed a bug hindering synchronization of users between domains when the number of users resulted in generating a query exceeding the maximum allowed length.

- Fixed missing values in the **Edit parameters mapping** of **SOAP** and **REST Web Service** data sources.

6.8. Add-In

- The **Outlook Modern** Add-in will show correct info about not supporting Outlook 2019.

- Fixed an issue preventing the user from logging in to the **Outlook Modern** add-in.

- Fixed the definition of the manifest file for the **Outlook Modern** add-In.

- Improved the loading of translations into the **Outlook Classic** Add-in.

- Improved the validation of URL addresses provided in the "returnUrl" parameter when "Trusted domains" were defined in the system. Previously, the validation returned an error that prevented logging in to **Word** and **Outlook Classic Add-ins**.

- Fixed an issue that prevented the Outlook Add-In to connect to WEBCON BPS Portal in Cloud installation mode.

- Fixed an issue that occurred when attempting to delete configuration elements (e.g. paths, steps) that were used in the configuration of Outlook Add-in tiles.
Deleting such an element will cause the given value to be cleared in the tile configuration.

- Fixed a typo in the comment added to instances started with the German version of the Outlook Add-in.

6.9. Mobile app

- Fixed a bug that prevented changing prototype name in Designer Desk on narrow screens and mobile devices.

- Fixed a bug that caused the dropdown list for administrator actions to be displayed incorrectly on iPad devices.

- Fixed an error that would sometimes occur on the mobile form in Safari when attempting to save immediately after entering data into the **Multiple lines of text** field in rich mode.

- Fixed an error that appeared when creating a new profile in the mobile app. The error was related to WEBCON BPS license checking.

6.10. Service

- Fixed an issue involving incorrect date conversion by **HotMailBoxes**.

- E-mails processed by a **HotMailBox** configured to use **Exchange Online – Microsoft Graph** will be marked as read in the archival mailbox.

- Fixed an issue with the attachment processing history logs of **HotFolders**. The problem was too many logs in the Designer Studio reports. Excessive logs will now be displayed as service activity.

- Improved information logging from the **MailApproval** function.

- Improved the notification that the user will get from **MailApproval** if they attempt to move an instance that is no longer in the correct step.

- Fixed an issue with the license activation packs. Attempting to update the license packs could result in an error if the service was activated in a version older than 2022.1.4.

- Fixed a transaction error which was the result of failed attempts to send admin notifications from the service.

- Optimized queries to the action queue of **On timeout** actions.

- Fixed an issue related to not taking into account historical database acronyms in 2D codes.

- Fixed an issue that cause service modules to be activated multiple times – this would cause e.g. the same e-mail to be sent more than once.

- Fixed an issue and behavior in case the currency exchange rate synchronization fails.

- Improved the efficiency and stability of Designer Studio in the configuration of mass notifications.

- Fixed an issue that caused user synchronization and mass notifications to be triggered immediately after restarting the service. This problem occurred when an activation time was defined in the schedule, and the service was restarted after this activation time (on the same day).

- Added validation for the **Active Directory properties** column. It may not contain special characters or spaces.

- Fixed incorrect attachment processing during full Solr indexing. The problem derived from an external component running in the same process as the service, which resulted in the crash of the whole process.

- Fixed an issue with BPS user synchronization in cases where the installation was carried out on a local user.

- Queue handling has been optimized in **WEBCON Workflow Service**.

- Improved the efficiency of a full Solr indexation.

- Fixed an issue with Incremental AAD synchronization, the issue caused the COS_ManagerBpsID, COS_ManagerDisplayName, COS_ManagerLogin properties to be set to NULL despite there being no change in COS_ManagerID.

- Fixed an error that occurred when syncing user photos with AAD.

- Updated the address for loading currency exchange rates from NBP (National Bank of Poland).

- Fixed the handling of invalid e-mail messages by **HotMailBoxes** configured to use Microsoft Graph.

6.11. Designer Desk

- Fixed a bug that prevented prototype testing when an invalid **Global form rule** was defined in WEBCON BPS Designer Studio in JavaScript mode. As a result, global form rules will not run when opening a Designer Desk test from.

- Fixed an issue that occurred when adding multiple paths between steps in **Workflow designer** and trying to save an application prototype.

- Fixed an issue where an undefined system area, **Business entity**, appeared on the form. The issue occurred when all form fields on the right panel were marked as visible in a given step in the **Field matrix**.

- Fixed a bug that appeared after editing the prototype **Description** and saving it on a mobile device – such a description was then erroneously replaced with the prototype **ID** value.

- Fixed the lack of visibility of **Item lists** on the **Field matrix** in Designer Desk.

- Fixed the positioning of form field edit buttons in Designer Desk.

- Fixed an error preventing attachment preview in instances started with Designer Desk.

- Added a migration script that deletes unused automations in published Designer Desk applications.

6.12. API & SDK

- Fixed an issue with custom controls for **Integer** type form fields.

- Fixed an issue that occurred when providing an incorrect **Item list** ID in the **SubelementDelete** command in JS API.

- Fixed an issue resulting in long user synchronization time. The endpoint returning incorrect user synchronization status was fixed in API 3.0 and 4.0.

- Blocked the ability to use API to clear a choice field in dropdown mode, if such an operation is impossible from the form.

- Fixed an issue causing incorrect comment validation in API. The problem occurred when using a path with the **Comment required** checkbox marked.

- Places, where it is not required for privileges to the form to be checked, will also not check for privileges to attachments.

- Fixed a bug occurring after invoking endpoint **GET /api/data/v5.0/admin/licenses** for a deleted user. In API 5.0 and beta versions the license model has been expanded with the **userIsDeleted** field and support for accounts that are deleted, but have assigned licenses.

- Fixed a bug where SDK plugin reference files were being skipped when exporting an application that used the plugin.

- Fixed an issue with the creation of SDK packages containing form field extensions by adjusting them to npm 8 and Node.js v16 as well as newer versions.
  Also improved the mechanism for importing external libraries.