System Settings

Planon Software Suite

Version: L105

Planon

Building Connections

About this Document

Intended Audience

This document is intended for *Planon Software Suite* users.

Contacting us

If you have any comments or questions regarding this document, please send them to: support@planonsoftware.com.

Document Conventions

Bold
Names of menus, options, tabs, fields and buttons are displayed in bold type.

Italic text
Application names are displayed in italics.

CAPITALS
Names of keys are displayed in upper case.

Special symbols

	Text preceded by this symbol references additional information or a tip.
	Text preceded by this symbol is intended to alert users about consequences if they carry out a particular action in Planon.

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About System Settings

The **System settings** navigation group allows you to configure settings that apply to the entire application and to all users.

Even if a TSI is part of Planon's **System settings**, your navigation panel may have been configured differently. The TSI you are looking for may have been configured under **Supporting data** for example. You can quickly find a TSI by entering (part of) its name in the search bar under the Planon logo.

The settings you make for **CAD Integrator** are described in detail in the *CAD Integrator* documentation. The settings you make in the **Languages** TSI are described in detail in the *Languages* documentation. **Authorization settings** are included in the *Authorization* documentation.

Alerts settings

If you have created multiple Alerts TSIs in your navigation panel, you can specify in **Alert settings** to which **My Alarms** step you want users to navigate when they click the active **Alarm** button on the Planon toolbar.

> Most users will only require the **My Alarms** step for *viewing* alarms, whereas a Planon administrator will require all selection steps in order to configure notifications and alarm definitions.

Approved messages

Planon ProCenter helps end users decide whether an action should be executed by requesting for confirmations or giving warnings. However, the content of the messages is not always relevant to all customers. Some customers may want to provide a fixed answer to a confirmation.

The **Approved messages** TSI allows you to configure this and set default values for confirmation messages so that irrelevant messages are no longer displayed.

Adding approved messages

Procedure

1. Click the Approved messages TSI.
2. On the action panel, click Add.

In the data section, complete the relevant fields. For a description of these fields, refer to Approved message fields.

Authorization settings

The System settings > Authorization settings TSI is used to specify authorization settings.

In Planon Accelerator, you can find this TSI on the **Accounts** navigation panel.

For a description of these fields, refer to Authorization settings fields.

For details on configuring authorization, see Authorization.

Broadcast messages

Planon application managers can use broadcast messages to inform Planon users about important information.

By using broadcast messages, the information will be displayed as a pop-up in the application itself.
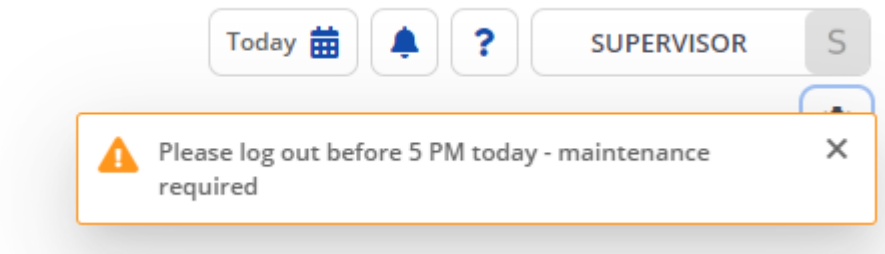
Benefits

- You don't have to send emails (less efffective).

- Information is displayed in the application itself.

- You can determine who gets to see these messages by linking user groups.

- The message will automatically disappear once its end date has passed or when the user dismisses it.

- You can define multiple broadcast messages, but no more than 3 messages can be active simultaneously.

Configuring broadcast messages

Procedure

1. Add the TSI **Broadcast messages** to the **System Settings** navigation group.

This step is required only once.

2. Go to **System Settings** > **Broadcast messages** and click **Add** on the action panel.

3. Fill out the required fields:

Field	Description
Code	Initially, when adding a new broadcast message, a code is autogenerated. You can opt to overwrite this code if necessary.
Start date	Enter a start date-time for the message. It will be displayed as from this date-time onward.
End date	Enter an end date-time for the message. It will cease to be displayed after this date-time.
Message	Enter the text that you want to display to the application users.
	You can enter as many as 500 characters.
	When clicking **Save**, this message will be propagated to the **Translated name** field.
	Once saved, you can no longer change this message. You can, however **Delete** it and add a new message.
Translated name	Here you can provide translations for the message in the languages available in your application.

4. On the action panel, click **Link user group** to select the user group whose users should be notified.

> If you do not specify a user group, the message will be shown to all Planon application users.

5. On the action panel, click **Active**.

Your message will now be available for messaging. Every 15 minutes, a timer will check whether a new message needs to be published to users currently logged in.

> • Activating/inactivating messages allows you to reuse existing messages - for example for recurring operations.
> • You can toggle between **Active**/**Inactive**, but if you activate the same message multiple times, the linked users will also get multiple messages as these are technically distinctive.

• Broadcast messages is currently only available for the web client.

- When a user dismisses a message by clicking **Close** (x), this action is stored in the local browser. When a user logs on, this storage is used to verify whether a message still needs to be displayed.

  If a user logs on using a different browser, the message is displayed again.

Bundles

The **Bundles** TSI provides an overview of bundles deployed in the *Planon Software Suite*. In Planon Accelerator, this TSI is available on the **System info** navigation panel.

The overview displays installed bundles. It is not possible to make changes in this TSI.

- The **Bundles** level displays all installed bundles.

    For a description of the available fields, refer to Bundle fields.

- The **Bundle version** level displays the installed versions of the selected bundles.

    For a description of the available fields, refer to Bundle version fields.

Extension usage system report

A system report that lists the areas in which customizations have been applied. You can run this report from Bundle > Report > System reports, before upgrading your Planon version. Consequently, it will help you identify the areas that you need to pay attention to before upgrading. Either it will prompt you to implement changes or it will prepare you for rigorous testing.

> This report works in any *Planon Live* environment.

In general, you can expect customization in the following areas:

- Client-side extensions (UX) - extended actions
- Custom reports
- Customized JavaScript / CSS in web definitions
- Customized system reports
- Data aggregate definitions
- Enterprise Talk related bundles
- Free user defined business objects
- PSS Publisher charts
- PSS Web content
- Query builder API
- Root services
- SDK services
- Server-side extensions (SX) - including a column listing the version information of server side extensions.

When reading about changes to the software in the Release Notes, this report will help identify whether this change affects your situation.

CAD Integrator threshold values

In System Settings > CAD Integrator threshold values, you can set threshold values for floors and space dimensions. These threshold values are used by Planon ProCenter to determine whether new floor or space dimensions should be created automatically when new floor or space dimensions are imported via a **CAD Integrator** drawing.

If the set threshold values are exceeded after importing new floor or space dimensions from a drawing, new floor and space dimensions will be created in the Planon ProCenter database. If the threshold values are not exceeded, the existing floor and space dimensions will simply be overwritten.

Additionally, you can set a threshold value for the **Space dimension** and **Space usage** tolerance in the **Difference tolerance - Space dimension and Space usage** field. If the combined **Space usage** value exceeds the **Space dimension** value by the given threshold value, a warning is displayed. No warning is shown if the given threshold is not exceed.

Calendars

Large organizations and multinationals usually consist of multiple subsidiaries and regional branches. This can give rise to a great diversity in working days and opening and closing hours within the organization. Even within a single office building, the various reservable units may have different opening and closing times. This constitutes a challenge for the facilities management department that wants to implement and enforce company-wide rules for opening hours or cleaning hours.

The **Calendars** TSI in Planon ProCenter helps to overcome problems that may ensue from local differences, by enabling you to configure multiple calendars.

> Although the **Calendars** TSI is part of Planon's **System settings**, your navigation panel may have been configured differently. You can quickly find the TSI by entering 'calendar' or 'company calendar' in the search bar under the Planon logo.

It is mandatory to configure at least *1* calendar. One of those calendars must be designated as the default or company calendar. Any derived subcalendars can subsequently be linked to business objects such as properties and reservation units to allow for any differences between countries / regions / branches or reservation units. After that, the system will be 'aware' of the differences in working days and working hours.

> For more information on setting a default calendar, refer to Default calendar. For more information on linking calendars to properties, refer to the *Properties* and *Property details* documentation.
> For more information on linking calendars to reservation units, refer to Reservations.

Configuring calendars

You can configure as many calendars as required in the **Calendars** TSI. One of these calendars must be set as the *default calendar* in System Settings > General. Since a calendar is a hierarchical business object, you can add multiple subcalendars to every main calendar. At level 2 of the hierarchy (the first sublevel), you only have to enter data that deviate from level 1. The same applies to calendars at level 3 (the second sublevel), which will inherit their data from level 2, etc.

You can link different calendars (or one of their subcalendars) to different business objects.

In Planon ProCenter you can link calendars to business objects, such as properties and reservation units (space units and asset units). The dates and times of any orders you may add will be matched against the calendar that is linked to the reservation unit or to the property that is filled in on the order. If there are no calendars linked to the order's reservation unit or property, they will be matched against the default calendar.

Configuring the calendar structure

To configure a calendar structure, go to System Settings > Calendars.

In a Planon Accelerator environment, go to Supporting data > Company calendar.

Procedure

1. Go to the **Calendars** level.
2. On the action panel, click **Add**.
3. On the data panel, enter data that is relevant for the main calendar in your calendar structure.

   Note that the **Top level** field must remain empty for the main calendar in a calendar hierarchy.

> The allowed start- and end time range is: 00:00 until 00:00. These general time settings will, for example, be taken into account when using SLAs.

4. Click **Save**.
5. If you need any variants to this main calendar, click **Add sub** on the action panel.

   On the data panel of your subcalendar(s), you now only have to enter data that deviates from data in the main calendar.
6. Click **Save**.

   The fields in which you did not enter data, will inherit their data from the main calendar.
7. Repeat adding subcalendars to the main calendar or to any of the subcalendars, until you have all required variants for this calendar. The number of hierarchical levels is not restricted. A subcalendar will inherit its data from the level that is directly above it, unless you enter deviating data in any of the fields, *or*
   add new main calendars (if necessary with any subcalendars).

Specifying special dates

You can register special dates for any of your calendars, such as public holidays.

Procedure

1. Go to the **Calendars** selection level.
2. Select the calendar or subcalendar to which you want to add special dates.
3. Go to the **Special dates** selection level.
4. Click **Add**.

5. On the data panel, enter the data for special dates as required.

6. Click **Save**.

   Repeat this procedure until you have specified all special dates.

Specifying deviating hours per weekday

You can specify deviating hours for weekdays that are *working* days, such as special opening and closing hours or special working hours.

Procedure

1. Go to the **Calendars** selection level.

2. Select the calendar to which you want to add deviating hours per weekday.

3. Go to the Deviating hours > Deviating hours per weekday selection step.

4. On the action panel, click **Add**.

5. On the data panel, enter data that is relevant for the selected calendar in your calendar structure.

6. Click **Save**.

   Repeat adding deviating hours per weekday, until you have specified all deviating hours.

Specifying deviating hours per date

You can specify deviating hours for selected calendar dates that are working days.

Procedure

1. Go to the **Calendars** selection level.

2. Select the calendar to which you want to add deviating hours per specific date.

3. Go to the **Special dates** selection level.

4. Select the date to which you want to add deviating hours.

5. Go to the Deviating hours > Deviating hours per date selection step.

6. On the action panel, click **Add**.

7. On the data panel, enter data that is relevant for the selected date.

8. Click **Save**.

   Repeat this procedure until you have specified all relevant deviating hours per selected date.

Data cleaner

When you add the **Data cleaner** TSI to your navigation panel, this enables you to control the manner in which failed inbound/outbound messages are purged.

Scheduled tasks features a number of tasks that can be scheduled to purge Event connector messages. By using **Data cleaner**, these tasks now also apply to *failed* messages.

By adding the **Data cleaner** TSI to your navigation panel in **System Settings**, you can control the timing of purging messages for:

- Failed inbound messages
- Failed raw inbound messages
- Failed outbound messages
- Failed raw outbound messages

The settings for the schedule is **in days** (1-91). A *day* is interpreted as 24 hours and it takes into account the hourly information of scheduled tasks.

> ℹ️ To cause as little stress to your system as possible, we recommend to use an hourly schedule for purging these messages.

Email settings

In the System info > Email TSI, you can register a list of email addresses that can be used to set defaults in Planon ProCenter . An email record on the **Email** business object can contain a maximum of *100* characters. It is validated against the following formula, applied by a third party email address validator. It specifies a maximum length per part of the email address, as follows:

User name (64 max.) + @(1 max.) + Domain1 (62 max.) + . (1 max.) + Domain2 (62 max.) + .com(4 max.)

The System settings > Outgoing email TSI is used to define settings relating to sending email.

Planon enables sending mail via:

- SMTP (Simple Mail Transfer Protocol, an ASCII protocol).

- OAuth 2.0 client credentials flow, for this proptocol you can obtain a Planon system app (Planon Connect for Office365 Mailings) which needs to be installed in the **Apps** TSI.

> - For a description of the Email settings fields, see Email settings - fields.
> - See *Supporting data* > *Default email addresses* for more information on setting default email addresses for the application, for property sets or for individual users.

Exchange

For communication with **Microsoft Exchange**, Planon needs to know which Exchange accounts will have access to the Exchange mailboxes and the location of the Exchange server.

> For more information on this subject, see Connect for Outlook - Administrator's Guide (pdf) or Connect for Calendars.

External data storage

The Planon application can place data external to the application in an external data storage.

This makes it possible, for example, to share Planon data for use in another application.

Currently, data can be exported to an Amazon Web Service (AWS) s3 bucket. This requires a specific setup as explained in the following sections.

Conversely, it is also possible to retrieve data from an external data storage and make it available to the Planon application.

Data can, for example, be imported from Autodesk cloud to enable viewing *svg* drawings in BIM viewer.

Configuring your external data storage

It is possible to exchange data with an external data store by using Enterprise Talk. Currently, we only support amazon S3 buckets; the configuration is done in Planon's **External data storage** TSI. Here, you specify the connection between Planon and Amazon Web Service (AWS), and the buckets that you want to use.

1. On the Data storage credentials level, click Add AWS credentials.
2. Fill out the credentials for connecting with AWS.

For Key and Secret, enter the access key and secret of your AWS account.

3. Specify an Expiration date. You can schedule a task to notify someone when this date is approaching.

4. Go to the Data storage location level and add an S3 location.

For more information on the fields on this level, see Data storage location fields.

5. Click Save.

You have completed configuring your AWS connection, and you are now ready to use it.

Using S3 buckets

This section describes how to configure Enterprise Talk for using S3 buckets. Enterprise Talk can use S3 buckets for both import and export.

This section only describes the procedure and fields that are specific to AWS S3. Using AWS S3 buckets affects the location of the files, the Enterprise Talk functionality remains the same.

1. Create an Import-export definition.
2. Fill out a Code and Name. In the Data storage location field, select the external data storage definition that you created.
3. Go to Documents level and enter your data source. The data source path is relative to the data storage location linked to the import-export definition. That is, the S3 bucket and (if specified) the root prefix.

If you select to move the file after completing the process, specify the Post-process file location (relative to the external data storage location).

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i Note that:

- Transformation files should be placed in the bucket; all subsequent references are relative to the bucket.
- If a location does not exist in the bucket, it will simply be created.
- Enterprise Talk does not validate file paths, this is left to the user's responsibility.
- The configuration of the **External data storage** can be exported using **Configuration Transfer**.

File locations

File locations in **System Settings** is used to specify default file locations for various file types.

> ⚠️ If you make any changes in the file location settings, those changes are reflected only after you re-login into Planon ProCenter .

By means of a link field, end users can link a file that has not been created in Planon ProCenter , such as a Microsoft Word document or an image file. The files linked in Planon ProCenter should be stored on a file server, making them accessible for all Planon users.

Before end users can use the functionality for linking files, you – as a Planon administrator – first have to:

- Configure the file server.
- Specify file locations on the file server for the various file types. Refer to File upload settings or Specifying the file locations on a web server (via WebDAV protocol).

> ℹ️ For uploading files in the Planon application, make sure the file names do not contain any of the following special characters as this will result in an error: # pound, % percent, & ampersand, { left curly bracket, } right curly bracket, \ back slash, < left angle bracket, > right angle bracket, * asterisk, ? question mark, / forward slash, blank spaces, $ dollar sign, ! exclamation point, ' single quotes, " double quotes, : colon, @ at sign, + plus sign, ` backtick, | pipe, = equal sign

Configuring the file server

There are two options available for file locations:

- File locations for documents (CAD drawings, images, etc.), these are *always* stored in a WebDAV location.
- Secure documents, for which you can specify a secure document file path. This could be a relative path on the server, but *never* WebDAV.

For each file type, you should create a separate location (i.e. folder) on the file server.

For a description of the file types and paths that Planon ProCenter supports, refer to File location fields.

> ℹ️ By default, all property sets will have the same file locations. However, it is also possible to set file locations per property set, by switching to the required property set and providing the file locations for that specific property set.

After you have configured your file server, you must specify the file locations for the various file types. Depending on the type of file server you choose, see either File upload settings or Specifying the file locations on a web server (via WebDAV protocol).

File upload settings

Planon ProCenter provides two settings that influence how files are stored on the file server.

- Linking documents – **Allow user-defined path** (in the Planon Cloud, this is read-only and preconfigured by Planon).

- File upload settings – **Planon managed**

Allow user-defined path

With this setting, you specify if end users are allowed to store the files they upload to Planon ProCenter in a different root folder than the one specified in the file locations. If this is set to **No**, end users can only store documents in the default file location folder or subfolders of that file location.

This setting works for regular file locations as well as WebDAV file locations.

Planon managed

Planon managed is a mechanism to automatically create a logical file structure on the file system. The application manager can turn this setting on or off. If you select **Yes** in the **Planon managed** field, end users do not have to think about where to store files uploaded to Planon ProCenter . They are automatically stored in a logical folder.

If the Planon managed setting is **Yes**, the setting in the **Allow user defined path** field is ignored. End users cannot store files anywhere else than at the Planon managed location.

Using Planon managed settings

The **Planon managed** setting allows you to handle files consistently. It enables you to save and manage files across the application as configured at **File upload settings** (**Planon managed** and **Document file types** fields).

These settings are applicable only to those files that are uploaded manually into Planon ProCenter via the **Upload file** dialog box that is available on various business objects (BOs) for uploading documents, images and so on.

For more information, refer to Fundamentals > Field types.

Procedure

1. In **System settings** TSI, select **File locations**.
2. Specify the relevant paths in fields such as **Documents**, **Images** and **Templates ...** and so on.
3. In the **Planon managed** field, select **Yes** or **No**.
   The value set in this field is valid for all file upload dialog boxes in the entire application, based on the selected property set.

   - **No** allows end users to explicitly define their own folder structure to save the files in different TSIs.
     No is selected by default.

   - **Yes** activates the **Planon managed** file system.

Planon managed

The Planon managed setting is property set aware. This implies that the value set on this field is respected across all file upload pop-ups in the whole application for the selected property set.

The Planon-managed folder structure will generate folders that:

- Are unique for each business object

- Are period based: the top three folders in the hierarchy correspond to the insert date of the record (yyyy/MM/dd).

- Attempt to nest related files within sub-folders (e.g. order lines within the order)

General

In general, the following structure will be created:

<WEBDAV ROOT>/<Date part of the insert date-time of record in UTC format **year/month/day** > /<BOName>/<Code of BO>_<SysCode of BO>/

For example: http://tomcat:8080/webdav/Documents/2022/02/15/BaseOrders/ABC_123/UsrWO/XYZ_987

Nested structure

Planon attempts to logically structure related objects in WebDAV. This is done for composite business objects and for business objects that have a *nested* relationship
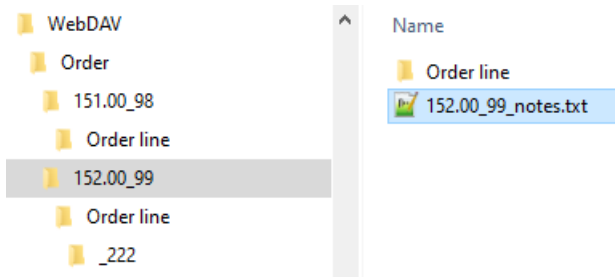
URL and file system safe

Certain characters are *unsafe* to be used in URLs or file paths. When using Planon managed, these characters will be converted into an underscore (_). This currently applies to the following characters: < , > , : , " , / , \ , | , ? , * , # , % , ; .

Folder structure for composite BOs

A composite business object is one that has a whole-part relationship with another BO. For example, Base order – Order documents.

For a composite BO the folder structure when a file is uploaded in Planon ProCenter is as follows:

```
https://<server>/webdav/Documents/BaseOrder/yyyy/mm/dd/12200_102/
BaseOrderDocuments/1011_1181/abc.doc
```

Here:

BaseOrder is the folder name of a composite BO.

BaseOrderDocuments is the folder name of the part which is in the whole-part relationship with Orders and Order documents.

Specifying secure file locations

In **System settings** it is possible to specify a secure file location for secure documents. This file location is secure because end users can never access this location directly.

Links to the secure file location are created in **Document (secure)** fields that are available in several places in Planon ProCenter .

In the **Authorization** navigation group, the application manager can grant end users **Read** or **Read/write** rights for **Document (secure)** fields.

On their local machines, end users with **Read** or **Read/write** rights can view a document that is linked to the secure location via a **Document (secure)** field.

The end users with **Read/write** rights can also edit a copy of this document in a 'temporary mode', save the edits and upload the document back to the secure file location. However, end users can never browse to the actual secure file location, as shown in the following image:
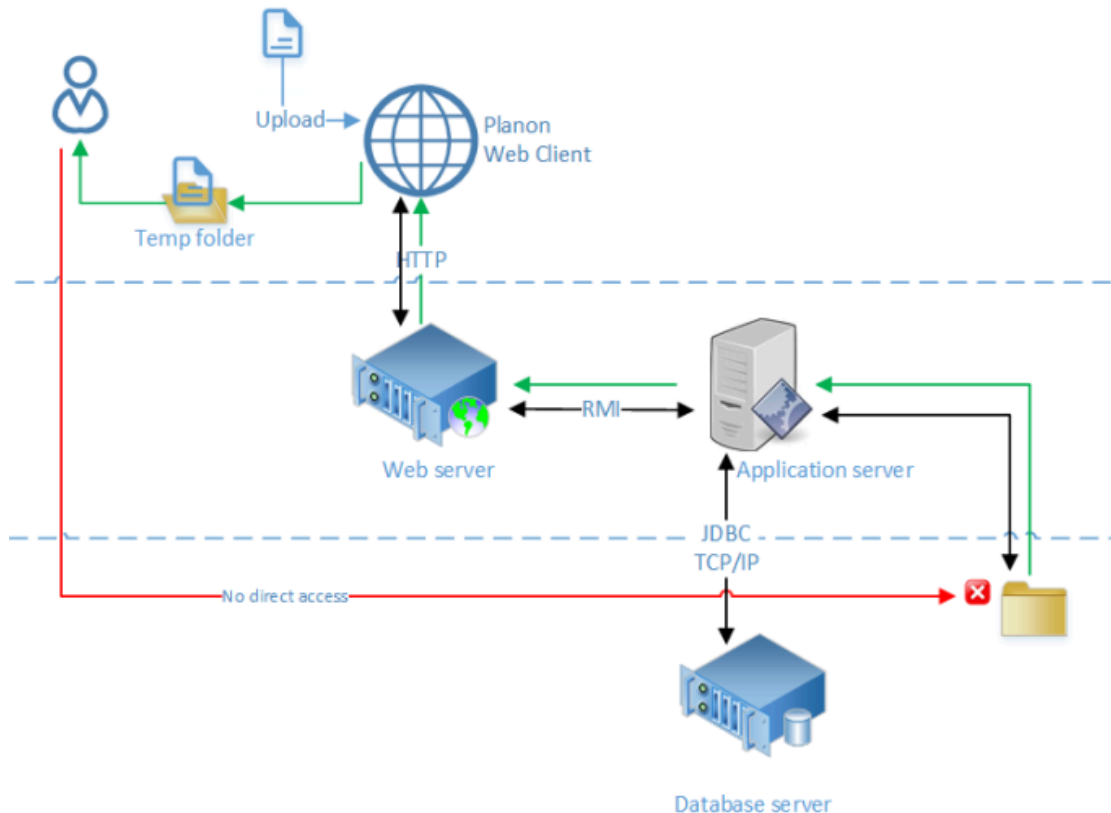
Only the NT service account running on the application server can access the file share containing the documents; individual users cannot directly access the file share!

1. On the navigation panel, select System settings > File locations.

2. On the General tab, enter a relevant value in the Maximum file size (MB) field. By default the maximum file size limit is 20 MB. However, you can also set it above 20 MB, if required.

3. In the Server upload location field, enter the path to the secure file location. The specified path must have its starting point on the server that is used by Planon ProCenter .

4. In the File types field, enter the extensions of file types Planon users are allowed to upload. The extensions should be comma separated, for

example docx, txt, jpg. If no extensions are specified, all file types can be uploaded.

> ℹ Planon Self-Service has separate settings for both the **Maximum file size** and **File types** fields. Planon ProCenter does not check the values of the file location fields against the values for Planon Self-Service fields. When adding attachments in the **Edit - mail** feature, the zip file type should be added to the allowed file types because the attachments are stored as zip in the secure document folder.

Path to secure documents

In **Secure document** fields, authorized users can view a document that is stored at a secure file location without accessing the actual secure file location itself.

Path to secure documents

For secure documents, the path to the stored files is recalculated each time a file is accessed.

Previously, files were placed on disk and hard linked in the **Secure document** field. For performance and space storage, this is now changed.

Per 100.000 documents, a folder is automatically created (existing hard links are replaced).

Path convention

The path for secure documents conforms to the following rule:

```
secure doc root + \BOtype\_group_x\SyscodeOfBORecord\SecureDocumentReferral
\Filename.filetype
```

> ℹ • Per business object, each *group* can hold 100.000 syscodes and there can be a maximum of 20.000 groups (so: 2 billion secure documents maximum/per business object).
> • On the 1st of each month a scheduled task (SYSSECUREDDOCS_MOVE) checks for old file paths. When it finds any, these are converted to the new rule. The conversion will be done using a batch process - you can check progress in the **Batch processing** TSI.

Specifying file locations on a web server (via WebDAV protocol)

> ⚠ Planon Cloud Environment customers are unable to change the WebDAV settings.

Instead of specifying file locations for various applications on a local file server, you can also specify file locations on a web server.

Planon ProCenter uses the WebDAV protocol (Web-based Distributed Authoring and Versioning) to access files on a web server. General web-based file storage can be accessed from anywhere. Most modern operating systems provide built-in support for WebDAV. If you have the right client and a fast network, using file locations on a WebDAV server must not be a problem. The WebDAV protocol only enables read-only access to files on remote web servers. If you want to edit a file, it must be copied to a file location on local machine and edited there.

> ⚠️ It is not possible to simultaneously use a local file server and a web server for the individual file locations in your Planon ProCenter configuration. You must exclusively select one of the server types for each file location.

For an overview of the file types supported in Planon ProCenter , refer to Configuring the file server. You can create and save different default directories for different file types. For example images, documents, forms, templates, CAD Integrator drawings.

If you want to retrieve files via WebDAV, use the following procedure:

Procedure

1. Place your files at the relevant default file locations on the remote web server.

2. In Planon ProCenter open System Settings > File locations.

   In the relevant **File location […]** field, for example the **CAD Integrator drawings** field, type the path to remote web server according to this format: http://servername" scope="external">http://servername/webdav/directoryname

3. Click **Save**.

4. Select **Refresh all**

   You can also restrict or allow the users to store the files in their own custom locations. For more details, see File upload settings.

> ℹ️ If you are specifying a web server location for one of the *CAD Integrator* fields, make sure that the linking fields for CAD Integrator, the **FM drawing** and **Constructional drawing** fields, have been made visible in the relevant TSI, for example the *Spaces & Workspaces* TSI. Henceforth, if end users retrieve a relevant file, (for example in either the **FM drawing** or the **Constructional drawing** field in the *Spaces & Workspaces* TSI > **Spaces** selection level > **Floor attributes** selection step), the **Open** dialog box will refer to the WebDAV server location.

> ℹ️ For more information on making fields visible, see Layouts.

Planon ProCenter also supports the secure https:// protocol to retrieve files from a WebDAV server.

> ℹ️ For more information on linking *.ORJ files to floors, see CAD Integrator *CAD Integrator* and Spaces & Workspaces .

Selecting a (WebDAV) file

When your WebDAV file location has been configured, end users can search the directory for files. Potentially, this folder holds a great number of files.

There is a number of ways to quickly find the appropriate file.

When you browse for a WebDAV file, for example when selecting a property image, the **Open** dialog box appears:
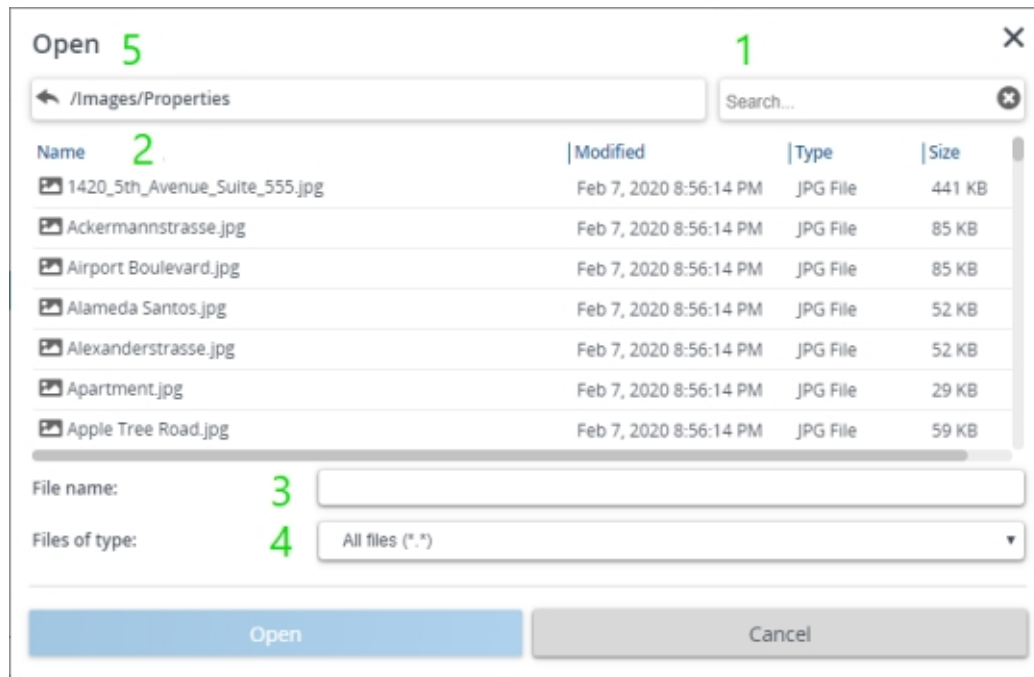
1. Search

   - **Search** will start as soon as you enter two or more characters.

   - **Search** is case-insensitive, except if you enter a search term that contains both upper- and lowercase characters.

   - The search results will include 'fuzzy' matches. The list will be limited to file names matching the search criteria, but not necessarily in the same order. '202' would show both '**202**0_01.docx' and 'ABC1**2**34**02**.docx'.

2. Sort columns by clicking the header.

3. **File name**: enter the file name to select it.

4. **File type**: choose between **All files** or **Image files** to narrow down the selection.

5. Folder: browse for the right folder.

Maintaining WebDAV folders directly from the browser

If the **Planon managed** setting is NOT enabled, end users can create a folder (structure) within the WebDAV directory that is made available by their system administrator.

Likewise, they can also delete folders if necessary, directly from their browser.

This will be possible during:

- file upload
- file select

> ℹ️ For **File locations** it will always be possible to add new folders as this is already a system administrator TSI. (Always enabled but in the Cloud protected by **Cloud mode**).

Creating a folder

When the user presses the **New folder** action, on the right of the **Search** action, a new folder is automatically added in the current WebDAV location.

- The new folder will be called *new folder*
- The user view will be moved to the top of first page (if paged), and the new folder will be at the top of the list. The folder will be in edit mode by default.
- When creating multiple new folders, the name of the folder will be extended with a number to make it unique (to a maximum of 20 new folders).
- The maximum allowed folder depth is determined by the file system of the underlying storage location or device.

Renaming a folder

- Renaming a folder is possible as long as the user has not closed the pop-up (within the current session).
- You can confirm the name by clicking ENTER or by clicking outside the current folder.
- Folder names should not exceed 255 characters and should not contain any of the following characters:

  <, >, :, ", /, \, |, ?, *, #, %, ;

Deleting a folder

- As long as the user does not close the pop-up (within the current session, within the same tab), it is possible to delete a folder from the browser.

  When the user leaves the pop-up, only the system administrator can delete or change the folder name.

Examples of file locations accessed via WebDAV

- **Image** field at the **Properties** level.

- The **Order document** field in the Work Orders TSI: Order details > Order > documents.

  Files in **Order documents** are stored in the database with their *relative path* and the file names. The relative path facilitates that you do not have to change the file path each time the system moves from one network domain to another.

  For example, if the reference path is stored as https://>server>/webdav/Documents/Ticket123 for the Tickets and the General file location for Documents is https://>server>/webdav/Documents/, then remove the first part of the reference path and leave only Ticket123 in the file reference field.

> For files stored at a location other than the location for forms specified in System Settings, the entire path including their file names will be stored in the database.

- The **FM drawing** and the **Constructional drawing** fields in the Spaces & Workspaces TSI: Spaces > Floor attributes.

General settings

The **General** TSI in **System Settings** is used to specify some general settings that apply to the whole application.

See General settings fields.

Time zones for Planon ProCenter database

As far as the Planon ProCenter database is concerned, there are two starting points from which you can begin to use the multiple time zones (MTZ) functionality:

- Your organization is already working with Planon ProCenter and decides to activate the MTZ functionality. In that case: make sure that the database time zone is identical to the time zone of the database server.

- Your organization has Planon ProCenter newly installed and decides to start working with the MTZ functionality immediately. In that case: it is recommended to select the UTC time zone for your database.

> Always make sure that the database time zone is identical to the database server time zone!

> For more information on working with Multiple Time Zones, see Multiple Time Zones.

Time zones supported in Planon

To view the list of time zones supported in Planon:

1. Go to System settings > General TSI.
2. Select the **Time zones** selection step.

The supported time zones are displayed.

3. Optional: click **Report** on the action panel to create a user report on the currently supported time zones, which can subsequently be previewed and printed.

Hit count data

The **Hit count data** TSI provides real-time information about actions by employees, recorded as *hits*. The TSI accumulates hit count information on two levels:

- **Hit count data**
registers hits by date, product and action.

- **Hit count data year**
registers hits by year, for Planon Self-Service (PSS) products. At this level, consumed and 'licensed' hits are registered per product. You can also specify a hit count threshold for arranging notifications or alarms. The usage information presented at this level can help to evaluate whether your license type provides good value for money or requires you to switch to a different license.

> For more information on the available license types, see Licensing.

Viewing hit count data

You can view and assess the running number of hits per date, product and action.

Procedure

1. Go to Hit count data

2. Select the Hit count data step.

   You can see an overview of all the registered hits till date.
   For a description of the fields, refer to Hit count data fields.

> Click **Report** on the action panel, to create a report listing the number of hits by date and product.

Viewing Self-Service hit count data

You can view and assess hit count information per Self-Service module per year and control hit count threshold indication.

Procedure

1. In Hit count data, click the Hit count data year step to get an overview of all Self-Service hits combined per product per year.

2. In the Threshold field, specify the percentage at which you want to be notified that the consumption threshold is reached.

Planon ProCenter calculates the threshold by comparing the available hits with the used hits. If the threshold is reached, the **Threshold reached** field is set to **Yes**.

For a description of these fields on this step, refer to Hit count data year fields.

When an action definition is defined in Alerts , the recipient will receive a notification when the threshold is reached as a reminder for renewing the license. Alternatively, you may manually check or create a report to see whether the threshold is reached.

> For configuring and receiving notifications, you require the Alerts TSI. See also Creating a notification.

Upon reaching the limit, users can no longer use the TSI to which this applies.

When a new year starts, a new 'record' will be added. The value in the **Used hit count** field is reset to zero. The Self-Service hit count limit applies for one year.

Creating a notification/alarm

It is possible to get a notification (by mail or an alarm in Planon) when the threshold has been reached.

Procedure

1. In **Alerts**, go to the appropriate level to create either a notification definition or an alarm definition.
2. Add a definition and enter a code.
3. In the **Filter** field, specify a filter on business object **Hit count data year** and specify the filter with **Threshold is reached** = **Yes**.
4. Also specify the mail template, schedule and start date-time.

> For more information on configuring Alerts, see Alerts .

Improved Features

An improved feature is a feature that introduces new functionality in the Planon application that is **not compatible** with the previous implementation. The **Improved Features** TSI lists all the improved features available in Planon. These features are not activated during upgrade.

The application manager can decide when (before a specific deadline) the new feature is activated and thus has complete control over implementing a new feature. The application manager can take actions to prepare for the new feature, such as:

- Adapting interfaces with other systems
- Changing Planon configurations
- Adapting TMS implementation
- And so on

You can enable a feature in a **Test** environment and move this to **Production** before the deadline is met.

An improved feature has a *preparation deadline* which is either an expiry date, or a release expiry number:

- **Expiry date**

  When upgrading, an improved feature whose expiry date has passed is automatically activated.

- **Release expiry number**

  The improved feature will not be activated unless you upgrade to a later release than the release expiry number.

An improved feature whose preparation deadline has passed - whether it is an expiry date or a release expiry number - is *automatically* activated.
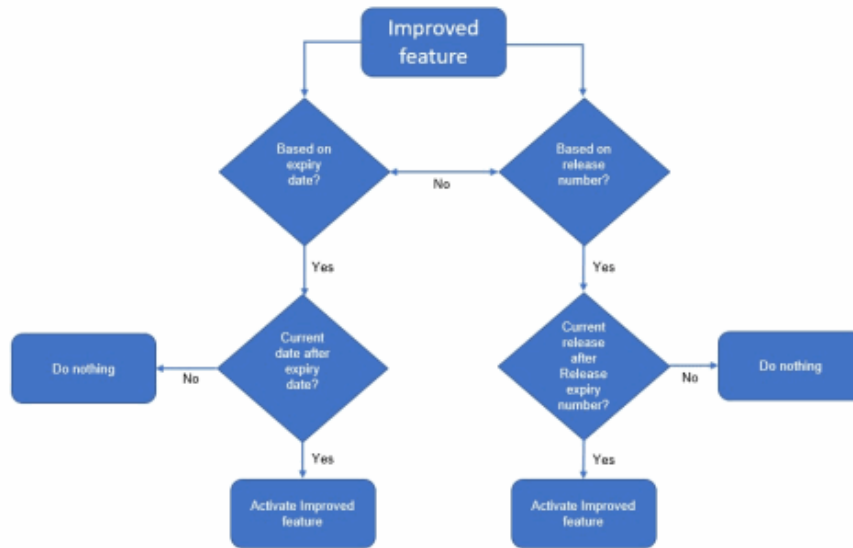
> ℹ️ *Automatically* activating an improved feature is only performed when you upgrade to a newer release (true for Cloud and on-premise installations). In a Cloud environment, this means that a restart or installing a hotfix will not activate an improved feature.

Activated improved features

Pending improved features

Activating an improved feature

P r o c e d u r e

1. Open the Improved Features TSI.

   A list of the features is displayed.

2. Select the feature you want to activate. An icon in a specific color indicates its status:

   ○ Blue (🔵): the preparation deadline is more than 6 months, you still have time to implement.

   ○ Orange (🟠): the preparation deadline is only three months away, time is catching up.

   ○ Red:(🔴) you have 3 months or less, time is running out and you have less time left to do the implementation.

- ○ Green (🟢): the feature is activated.

3. In the data panel, the following information is displayed.

- ○ **Name**: the name of the feature.

- ○ **Description**: Summary of the improved feature.

- ○ **Date of introduction**: The date the feature was introduced in Planon. Note that this is not the date on which you upgraded to the feature, but the date on which it was introduced by Planon.

- ○ **Release expiry number**: This is the release number given to the improved feature until which you can prepare and activate the feature. When you upgrade to a later release, Planon will automatically activate the feature.

- ○ **Preparation deadline**: This is the date until which you can prepare and activate the feature. After this date, Planon will automatically activate the feature.
    It is your own responsibility to make sure all the necessary preparations are in place before this deadline.

- ○ **Activated**: Click **Yes** to activate the feature. The application will check if you fulfilled all requirements and start working according to the new functionality.

⚠️ Once you activate a feature, you cannot switch back.

4. Click Save.

    The selected feature is activated and ready for use.

Activated improved features

The following overview lists improved features that have been activated.

Improved feature

A feature that improves the Planon application and introduces new functionality, which is not compatible with the previous implementation, requires preparation and implementation effort.

Activated improved features

Customers who are considering upgrading their Planon software and would like to understand which improved features they have to prepare for should use this overview.

Customers who are considering upgrading their Planon software and would like to understand which improved features they have to prepare for should use this overview.

> ⚠️ If you upgrade to a specific version or a date, the improved features of the preceding version or date will become active.
> **Example**
> • If the release is L105, then upgrading to L106 or higher will enable the improved feature.
> • If it is a date (JAN-1-2024), the feature will be enabled if you run an upgrade to a new live release (doesn't matter which version) after FEB-1-2024.

Effective...		Description
Date	**Number**	
	L101	**Remove 'Allow last page' field**

The **Allow last page** system setting will be removed to prevent potential performance issues.

When dealing with large data sets, it can take too long to *jump* to the last page in a set of records. The implementation was not scalable enough and therefore it was decided to remove this field.

	L100	**Meter structure**

Merging Daily meter readings into regular Meter readings. When this Improved feature is enabled, all **Daily meter readings** are moved to **regular Meter readings** in the background.

	L100	**Calculate tentative dates on renewal and termination options**

Enabling the Improved feature will start populating the **Tentative notice date** and **Tentative end date** on all active and inactive renewal and termination options.

The tentative notice date (accepting party) for renewal options will also be taken into account to show the first upcoming notice date and end date (accepting party) on the contract.

Be aware that blocked contracts will not be updated automatically (for example if they are blocked via the 'Blocked' status on the contract, or via 'Trial closure with freeze', or if contracts are linked to a pending approval).

These contracts will only be updated after saving the contract options. The update will be done via a background action and the progress and results can be found in the background log.

Effective...		Description
Date	**Number**	
	L98	**Remove obsolete fields from business objects 'Financial year', 'Property' and 'Contracts'**

The business objects 'Financial year' and 'Properties' have a set of obsolete fields that will be removed. Also, on 'Contracts', the reference to Windows client contracts (SE) will be removed.

These fields are no longer used in the application; for reasons of consistency, it is in the interest of all parties to keep the application clean.

These system fields will no longer be supported after the Release expiry number has passed. Please verify whether these fields are used on user reports, filters, TMS, etc. and if so, please take appropriate and timely action.

The following business objects and corresponding fields are affected:

Financial year

- SysPeriodCount
- SysDepreciated
- SysIsClosed
- IsBeingChanged
- SysIsJournalItem
- SysLastExportJournalNr
- SysLastJournalItem
- SysLatestPeriod

Orders

- ContractRef (SYSCON)
- Contract - This field references old Windows client contracts that are no longer used or supported.

Properties

- FinancialYearRef
- LeaseCosts01
- LeaseCosts02
- LeaseCosts03
- LeaseCosts04
- LeaseCosts01Cum

Effective...		Description
Date	**Number**	

- LeaseCosts02Cum
- LeaseCosts03Cum
- LeaseCosts04Cum
- LeaseExpensesArea
- LeaseExpensesAreaCum
- LeaseRevenuesArea
- LeaseRevenuesAreaCum

August 1, 2023		**Discontinue support for BIM-GUID field on the 'Assets' and 'Spaces' business objects**

Planon will discontinue support for using links to BIM elements via the BIM GUID field. BIM Viewer will use **BIM System** instead, with its **BIM Systems** business object links for selecting elements.

The content of the **BIM System** will have already been filled by the BIM Exchange functionality.

This feature will change the way the BIM Viewer behaves. 'BIM System' is required to allow the use of multiple models from different model extensions.

Important

If you use a different functionality to collect the link information of BIM elements, make sure that you fill the 'BIM System' with the right information before you activate this

Effective...		Description
Date	Number	
		Improved feature.
		For more information, see BIM Viewer.
June 1, 2023		**Discontinue the Standard Planon Self Service CAD viewer mapping**
		Self-Service-specific CAD viewer mappings will no longer be supported. Instead, you can replace them with mappings available in the Web Client. This switch allows you to take full advantage in Self-Service of all these powerful Web Client mapping functions.
January 1, 2023		**Discontinue use of old version of the Kiosk and Room Booking Panel**
		As of 01-01-2023, the Kiosk and Room Booking Panel setting **Use old version?** will be removed. This means that Planon will behave as if this setting is set to **No** after an upgrade.
		When this feature is activaded, the software will behave as if the **Use old version?** setting of the Kiosk and Room Booking Panel is set to **No**.
	L88	**Use fixed fonts for reports that are independent of system fonts**
		Planon reports will provide a fixed set of fonts to be used with reports, which will always be available irrespective of the server installed fonts, please ensure that fonts used in your reports match one of the following fonts:

- Allerta(Trebuchet MS)
- Arimo(Arial)
- Comic Neue(Comic Sans MS)
- Cousine(Courier New)
- DejaVu Sans
- DejaVu Sans Condensed
- DejaVu Sans Light
- Gelasio(Georgia)
- Noto Mono(Andale Mono)
- Noto Sans(Verdana)
- Oswald(Impact)
- Shippori Mincho

Effective...		Description
Date	**Number**	

- Signika(Tahoma)

- Tinos(Times New Roman)

If there is no matching font available, Planon will automatically convert the used font to 'Noto Sans'.

	L87	**Discontinue Oracle 18.0**

Oracle 18 is having vulnerabilities. The support of Oracle 18.0 will be discontinued.

This feature can be activated immediately when running on Microsoft SQL or Oracle 19 or higher.

If you are running Oracle 18.0, the feature cannot be activated until the database platform is updated.

See also: Supported Configurations.

	L85	**Remove deprecated fields from Workspace**

The fields 'XPropFloorRef' and 'XSpaceRef' will be removed in version L85. Please remove them from TMS, reports and authorization.

	L79	**Redundancy of the 'Available area' field of the Workspace**

The **Available area** field on **Fixed workspaces** will be made redundant. It will be replaced by the **Available area** field on the **Workspace details**.

	L76	**Discontinue Microsoft SQL Server 2016**

Microsoft SQL Server 2019 is supported from this Planon version onwards. The support of Microsoft SQL Server 2016 will be discontinued.

This feature can be activated immediately when running on Oracle or SQL Server 2017 or higher.

If you are moving from SQL Server 2016, the feature cannot be activated until the database platform is updated.

See Supported Configurations.

July 1, 2021		**Kiosk License**

Kiosks and Room Booking Panels without a license are blocked. If your Kiosks or Room Booking Panels are all licensed (see Kiosk Licenses TSI), you can activate this switch and prevent Kiosks or Room Booking Panels from being added without a license. If you have unlicensed Kiosks

Activated improved features

Effective...		Description
Date	**Number**	
		or Room Booking Panels, contact Planon to order more licenses.
May 1, 2021		**Enable advanced database features for Attributes**
		Attributes rely on advanced database features. These features are supported by the following database versions:
		• Microsoft SQL 2016
		• Oracle 12.1.0.2
		To make use of Attributes functionality, your database platform must match these versions (or later).
		See Supported Configurations.
January 31, 2021		**Work assignments**
		Enables you to create multiple work assignments for an order. A work assignment specifies by whom and when the order needs to be worked on.
		Upon activation (both with and without the license for multiple work assignments), the switch will change some of the existing behavior in Planon.
		See the WebHelp > Work assignments > Overview of changes.
January 1, 2021		**Discontinue IE11 browser support**
		Discontinued support for Microsoft Internet Explorer 11 as of January 1, 2021.
		In line with our commitment to the highest level of data security and quality of the user experience, we strongly urge users of IE11 (or older) to upgrade their internet browser to a more recent product.
		See Supported Configurations.
January 1, 2021		**Discontinue support for Classic theme**
		The 'Classic theme' will no longer be supported from 1 January 2021.
		By activating this Improved feature, all users who are currently using the 'Classic theme' will move to the 'Planon light' theme.
		See Themes.
January 1, 2021		**Discontinue Error gadget and Error business object**

Effective...		Description
Date	**Number**	
		The 'Error gadget' and 'Error business object' have been replaced by 'Background actions'. As a result, these two features are now deprecated.
		Please remove all references to 'Error gadget' and 'Error business object' in your Planon environment. Possible references can be found in: navigation panel, reporting, alerts / notifications or TMS software.
		If references are not removed before the preparation deadline, the upgrade process may fail.
		See Background actions.
December 31, 2020		**Field services through the Planon AppSuite**
		Planon will replace Planon Mobile Field Services by the Planon AppSuite - Field Services app.
		By activating this feature, all field engineers using PMFS must switch to using the Planon AppSuite - Field Services app to work on jobs.
		See Planon AppSuite - Field Services.
December 31, 2020		**Use of new audit fields on assets and building elements**
		The old audit fields (INSERTDATE, CREATIONDATE, FK_PERSON_CREATEDBY, GEBRCODE, CHANGEDATE, MUTATIEDATUM, FK_PLANUSER_CHANGE) on assets and building elements have been replaced by new audit fields (INSERTDATE, GEBRCODE, CHANGEDATE, FK_PLANUSER_CHANGE) to align the audit information for assets and building elements. As a result, the old audit fields are now obsolete.
		Please remove all references to these old audit fields in your Planon environment. Possible references can be found in: layouts, filters, reporting, alerts / notifications or TMS software. If these references are not removed, the upgrade process may fail.
December 31, 2019		**Delete old security audit logs**
		Automatically deletes security audit logs older than 6 months.
September 1, 2019		**Specific time zones no longer supported**
		Discontinued supporting a number of time zones. The support is revoked because duplicate time zone acronyms are used, which is causing confusion. (For example, "CST" could be U.S. "Central Standard Time" or "China Standard Time").

Effective...		Description
Date	**Number**	
		By activating this feature, the following time zones are no longer supported: ACT, AET, AGT, ART, AST, BET, BST, CAT, CNT, CST, CTT, EAT, ECT, EST, HST, IET, IST, JST, MIT, MST, NET, NST, PLT, PNT, PRT, PST, SST, SystemV/AST4, SystemV/AST4ADT, SystemV/CST6, SystemV/CST6CDT, SystemV/EST5, SystemV/EST5EDT, SystemV/HST10, SystemV/MST7, SystemV/MST7MDT, SystemV/PST8, SystemV/PST8PDT, SystemV/YST9, SystemV/YST9YDT, VST.

Improved Features

Pending improved features

Pending improved features

The following overview lists improved features that are pending.

Improved feature

A feature that improves the Planon application and introduces new functionality, which is not compatible with the previous implementation, requires preparation and implementation effort.

Pending improved features

Customers who are considering upgrading their Planon software and would like to understand which improved features they have to prepare for should use this overview.

> If you upgrade to a specific version or a date, the improved features of the preceding version or date will become active.
> **Example**
> • If the release is L105, then upgrading to L106 or higher will enable the improved feature.
> • If it is a date (JAN-1-2024), the feature will be enabled if you run an upgrade to a new live release (doesn't matter which version) after FEB-1-2024.

Effective...		Description
Date	**Number**	
	L107	**Use new improved reference fields for Country**
		New, proper reference fields are introduced for 'Country': Country2. The existing Country picklist will no longer be supported in the future (see Preparation deadline).
		The new Country2 business object also supports user translations. It is not possible to use both the Country picklist and the new BO Country2.
		This Improved feature is to notify that you switch to using the Country2 BO.
		In this way, Mobile apps, TMS and so on can prepare for using the new Country2 BO instead of the old picklist.
		For the required configuration, see Using the Country2 field.
	L107	**Use new improved reference fields for City**
		New, proper reference fields are introduced for 'City'. The old string reference fields will no longer be supported in the future.
		The 'Cities' business object now supports user translations. These can only be used if the new City reference fields (system name CityRef) and Free integer fields - CityReference fields are used.
		This Improved feature indicates that you are switching to the new fields. By enabling it, the mobile apps, TMS etc., can also use the new fields, instead of the old (non-translatable) reference fields.
		For the required configuration, see Using the CityReference field.
	L109	**Replace Connect for Outlook**
		Connect for Outlook will be replaced with a newer product: Connect for Calendars.
		By activating this Improved feature, you will disable the usage of the product Connect for Outlook (C4O). Prior to activation, please migrate the data of C4O to Connect for Calendars (C4C) with the help of a Planon consultant.
		Connect for Calendars benefits customer in the sense that:
		• It enables customers to easily move from on-premise Exchange to online Exchange (Office365)

Effective...		Description
Date	Number	

- It provides an elaborate audit trail that allows customers to check reservations on both the Planon and the Exchange side.

Please prepare well in advance of activating the Improved feature - the effort of activating the solution and migrating/testing data is considerable.

| | **L110** | **Discontinue the 'Space' field on the 'Personnel' business object** |

A new '**Occupancy**' feature was introduced in the Space & workplace management solution in L82. With this new feature, you will receive the following benefits:

1 - Improved and consistent user experience, with space and workspace occupancy assignments. You can directly assign a person to a space in the Space & workspace TSI without having to navigate to the Personnel TSI.

2 - Handling of multiple space occupancy assignments. You can assign multiple spaces to a person (employee) if that is required. For example, if the concept of 'primary & satellite' office applies.

3 - Support of temporary space occupancy assignments. For people who need to temporarily occupy a space, users can enter the occupancy start and end dates on the space occupancy record.

4 - Improved tracking of the space occupancy history. For employees who move to different spaces within the organization, you will be able to track the space occupancy history, using the reference date button.

5 - Consolidation of all space or workspace occupancy assignments in a single place, for ease of use and reporting.

Consequences of discontinuing the 'Space' field:

The '**Space**' field on the '**Personnel**' business object will no longer be editable. The '**Occupancy**' business object will be used to track a person's 'Space'.

This means that the '**Space**' field on the '**Personnel**' business object will no longer be used in the Planon business logic, for example in system reports, macros etc.

Please prepare your configuration, TMS and Enterprise Talk accordingly. For the time being (until the Improved feature is activated), Planon will automatically create an

Effective...		Description
Date	**Number**	
		'Occupancy' record when a space is added or changed on a 'Personnel' record.
	L110	**Discontinue Microsoft SQL Server 2017**
		Starting from L98, Microsoft SQL 2022 is now supported, while support for Microsoft SQL 2017 will be discontinued in one year.
		L110 will be the final release with support for Microsoft SQL 2017.
	L110	**Discontinue Windows Server 2016**
		Planon is ending support for Windows Server 2016.
		By activating this feature, you agree that you will no longer use Windows Server 2016.
	L111	**Start using the new improved 'Reservations' TSI**
		In Release 74, the new **Reservations** TSI has been launched, with an improved reservation planboard, a brand new design and unique quick filter options. As a result, the existing TSI **Reservations** will no longer be supported from release L111, November 1, 2024. You can activate the improved feature, after which the use of the old TSI **Reservations** will be discontinued and you will switch completely to the new **Reservations** TSI. For more information on how to make the most of the possibilities of this new TSI and planboard, see the Working with the new reservations planboard.
	L112	**Remove 'Thresholds for terms' TSI step**
		Within the 'Thresholds for terms' business object structure, a 'base' business object with subtypes has been introduced (L100). As part of this change, a new TSI step, based on the new base business object, supporting and displaying *all subtypes*, has been added to the **Thresholds for terms** TSI. By activating this feature switch, you will remove the 'old' step which was based on the 'Percentage' subtype only. For the required configuration, see Defining dynamic thresholds (threshold groups for terms).
	L130	**Discontinue SOAP web services in favor of REST API**
		REST was chosen as an interface to expose Planon data to other external applications. The goal is to provide an Enterprise Application Integration solution to enable integration with external applications.

Effective...		Description
Date	**Number**	
		The REST API is an industry standard, it is secure, light-weight, scalable, and can handle large amounts of data. Also, it is not be necessary for customers to implement custom Planon plugins (PaaP Apps) to solve integrations problems.
	L130	**Discontinue non-platform extensions**
		All tailor-made software that is installed using a 'jar file' will no longer be executed.
		This switch can be activated once all tailor-made software has been implemented by a Planon Platform app.

> The improved feature **Discontinue 'Order documents'** and the scheduled task **SYS_MIGRATE_DOC_TO_COM_LOG** have been deactivated in releases L103 and L104 to ensure that order documents and all related tailor-made software can continue to be used for the foreseeable future. While both the scheduled task and the improved feature **Discontinue 'Order documents'** will remain visible, they will no longer be functional. As of release L105, both the scheduled task and the improved feature are no longer visible.

Improved Features

Activated improved features

Platform settings

In the **Platform settings** TSI, you can specify the Platform account to be used for completing system tasks.

The account specified in the **Platform account** field will be used to perform system tasks, such as automatically registering the Marketplace.

Please note that the acount selected as Platform account must not be:

- Deleted

- Anonymized

- Ended

When attempting to do either of these, an error will occur.

If no account is specified, the Planon application will default to using the CloudAdmin account.

Property sets

A property set is a data set comprising multiple properties (buildings and building complexes). The demo version of Planon ProCenter has a property set that includes various properties and corresponding data for demonstration purposes.

The functional application manager can maintain property sets in Supporting data > Property sets.

Accelerator customers can maintain property sets in System settings > Property sets.

Deleting a property set, including its many properties and linked data, may take a long time!

For information on granting user groups authorization to a specific property set, refer to *Authorization*.

Adding a property set

Procedure

1. Go to Property sets.
2. On the action panel, select Add.
3. On the data panel, enter a unique code and a description.

Note: the code cannot start with a blank space.

4. If relevant, enter a default email address for this property set in the Sender's email address field and one or multiple default email addresses in the Reply email address field.

Email address fields in Planon ProCenter for which no specific user defaults have been set will be automatically populated with the values you enter here.

5. Click Save.

A new property set is added.

If you add a new property set, the following components are automatically created for the newly created property set:
- Site
- Web client
- Homepage

Adding a new property set in the Planon Cloud

The Planon Cloud supports using multiple property sets.

> ℹ Using multiple property sets in the Planon Cloud is subject to *licensing*. For more information, check your Planon consultant.

Procedure

1. Go to Property sets and add a new property set.
2. Fill out the Code and Description.

> ℹ The **Code** field only accepts the following characters 0-9, Aa-Zz (no spaces).

3. If relevant, enter a default email address for this property set in the Sender's email address field and one or multiple default email addresses in the Reply email address field.

Email address fields in Planon ProCenter for which no specific user defaults have been set will be automatically populated with the values you enter here.

4. Select a value in the Separate WebDAV location for Cloud field.

This field only works for Cloud environments. Yes means that the new property set will get its own unique WebDAV location. If you select No, the default /webdav/ location will be used.

> ℹ Planon recommends setting this field to **Yes**. If you change this setting to **No** after creating the property set, the file location falls back to /webdav/ but the file structure that was created will actually remain to exist (until the corresponding property set is removed).

5. Click Save.

   A warning message appears informing you that creating a new property set can take a while and that you can view progress in the Log viewer.

6. Click Proceed.

Another message may be shown, informing you that one or more business objects are being configured. Click OK and refresh your list.

   The newly created property set will appear in the elements panel. However, if the creation fails, it will be removed from the elements list without further notification, nor will you be prompted when creating the property set is completed. Go to the Log viewer to find out what the property set status is.

   Log viewer entries show the following stages of the property set's creation:

   ◦ Creation of the property set is *triggered* (by the user account)
   ◦ Configuration is *started* (by CLOUDADMIN)
   ◦ Creation is *completed* (by CLOUDADMIN)

   Any errors and warnings are also logged here.

7. When the property set is created, obtain the WebDAV details of your new property set in your Environment Management gadget.

   The property set is reflected in the Help > About menu.

8. If you want to access the WebDAV location via FTP, make sure to fill the correct environment credentials. The default directory is: .../webdav.

   ◦ A new WebDAV account and URL will be created for each property set

   ◦ The new WebDAV location will be: .../webdav-<propertysetcode>/

If you want to access another WebDAV location, please change directory by using the correct credentials.

> To delete a property set, you must first delete the (web configuration) sites linked to your property set

Performance Monitoring

In System info > Performance monitoring, you can view and monitor data that is derived from the performance logging of your Planon ProCenter system. The actual process of performance logging takes place on the Planon application server.

Typical performance processes that are monitored include:

- How often specific data is queried, for example the selection of elements, drill-down behavior, filtering;

- How often specific actions such as adding, deleting and archiving elements are used.

When you activate performance monitoring, the logging will be displayed in the **Performance data** field.

For more information on the available monitoring options, see Performance monitoring fields.

Server shutdown

When shutting down the application server, the performance monitoring data of the last hour is lost. Because this data is important in analyzing the necessity of shutting down, a shutdown hook is now installed to flush the performance monitoring contents to log files. Upon a normal shutdown of the application server, the data is written to the log files.

> - If the application server process is forcefully 'killed', the performance monitoring of the last hour may still get lost.
> - The complete log is collected in the perfmon.log file on the application server. For more information, see the *Application server logs* section in the Administrator's Guide.

Making performance monitoring settings

Performance monitoring can be activated at runtime.

Making changes to performance monitoring settings is designed to prevent interruptions by reloading the application cache. You can, therefore, make changes to settings in a 'Production' environment.

Procedure

1. Select System settings > Performance monitoring.
2. Fill out the fields in the data panel. For a description of these fields, see Performance monitoring fields.
3. Click Save.

Performance monitoring is now in progress.

- A cache refresh is no longer required, except for updating PSS2 (Self-Service) or Scheduler data.

- The performance of server side user extensions is measured when performance monitoring is activated. Its data is shown in a separate section in the log. The times for the UXes are included in the execution times of the BOMs (actions).

What is being logged?

This section describes how performance logging works and what is being logged.

You can view performance monitoring data in System info > Performance monitoring. Here, you can view the data that is being logged.

Irrespective of whether performance logging is enabled, the application will always log basic performance data in the **perfmonstandard.log** file on the application server (Cloud only).

- Note that basic logging excludes PSS2 (Self-Service) - and runtime proxy view data.

- Logging is written each whole hour

When performance logging is enabled, the **Performance data** field in the application reflects the results of the **perfmon.log**, which will then also contain PSS2 - and runtime proxy view data - if enabled.

The **perfmon.log** contains a number of sections of items that are automatically monitored (Cloud only):

- Performance data for Scheduler: related to scheduler

- Performance data for Background actions: related to data lake

- Performance data for Solutions: related to server side user extensions

Viewing performance monitoring data

The **Performance data** section displays the performance monitoring data according to the settings made in the performance monitoring fields. The unit of time used to measure performance is **milliseconds**.

The following image shows the data that is displayed in the various rows and columns:

Time started: 19-9-17 12:05:09 uur CEST ———→ The start date-time for retrieving the performance data after the reset.
Time: 19-9-17 12:21:06 uur CEST ———→ The end date-time for retrieving the performance data.

```
SBOMProcessingBean.execute()
BOType                      Action      ①      min(ms)  avg(ms)  max(ms)  #hits  total(ms)  % of total
AboutBox                    BomRead              256      256      256      1     256        0,01
AlarmDefinition             BomUpdateAlarmStatusForUser  0  196   761     23     4588       0,22
AlertDefinition             BomLogFailedAlert    13       48       82      33     1585       0,08
AlertDefinition             BomRead              9        52       96      27     1428       0,07
BaseOrder                   BomBasicReport       0        0        2       4      3          0,00
BaseOrder                   BomRead              89       1188     5093    9      10697      0,53
Floor                       BomRead              60       1514     5163    12     18177      0,91
HitCountData                BomActionHit         1        20       98      14     283        0,01
ImportexportDefinition      BOMExecute           757      881      984     3      2644       0,13
```

SProxyListFactoryBean.createBySearchCriteriaWithField() ②
```
PVType                              min(ms)  avg(ms)  max(ms)  #min  #avg  #max  #hits  total(ms)  % of total
UsrCode_BALIE SERVICEPOINTCodesDefaultPV  6   17     28      1    1     1     2     34         0,00
```

SProxyListFactoryBean.createBySearchCriteria() ②
```
PVType          min(ms)  avg(ms)  max(ms)  #min  #avg  #max  #hits  total(ms)  % of total
0000002608       28       31       36      1    1     1     6      188        0,01
0000002800       27       27       27      1    1     1     1      27         0,00
0000003859       19       21       25      2    2     3     3      64         0,00
0000006733       77       77       77      13   13    13    1      77         0,00
0000006734       10       26       50      1    1     4     14     373        0,02
0000007866       9        24       35      1    13    53    6      146        0,01
0000008816       12       160      470     257  270   290   12     1928       0,10
0000009244       23       23       23      1    1     1     1      23         0,00
0000009245       18       18       18      1    1     1     1      18         0,00
0000009246       23       23       23      1    1     1     1      23         0,00
ACCOUNTSINGROUP_BY_ALERT  3  24    53      0    17    50    29     715        0,04
```

SProxyListFactoryBean.getProxyRowCount() ②
```
PVType                                              min(ms)  avg(ms)  max(ms)  #min  #avg  #max  #hits  total(ms)  % of total
DynamicPVType.CP.PSS_BP_01.BBG.PlanboardGroup.BB.Planboard.18  134  197  306  3   9   12   6    1182   0,06
DynamicPVType.CP.RESL_ACT.BBG.List.BB.List.18       495      495      495     0    0     0     1      495        0,02
DynamicPVType.CP.RESL_PSS_BP.BBG.List.BB.List.38    321      781      2312    2    12    24    14     10947      0,55
OrderDynamicPVType.CP.PSSSA_0073.BBG.List.BB.List.149  295  390  556   0    4     12    3      1172       0,06
```

SProxyListFactoryBean.createBySearchCriteriaWithContext() ②
```
PVType                                    min(ms)  avg(ms)  max(ms)  #min  #avg  #max  #hits  total(ms)  % of total
PrPOPUP_ADDRESSREFERENCE_COORDINATOR_FILTER  25    526    2151    1    136   676   5      2634   0,13
PrPOPUP_PERSONREFERENCE                   194      200      207     5    22    39    2      401        0,02
PrPOPUP_PERSON_PROPERTYFILTER_REFERENCE   26       131      199     0    4     18    5      656        0,03
PrPOPUP_SPACE_DEFAULT_IN_PROPERTY_CONTEXT 25       35       45      0    0     0     2      70         0,00
```

SSearchCriteriaFactoryBean.createPVSearchCriteria() ②
```
PVType          min(ms)  avg(ms)  max(ms)  #hits  total(ms)  % of total
0000002608       2        28       55      2      57         0,00
0000002800       70       70       70      1      70         0,00
0000003859       1        21       41      2      42         0,00
0000006733       55       55       55      1      55         0,00
0000006734       81       81       81      1      81         0,00
```

Performance logging overhead 181 ms ———→ The time (in milliseconds) the performance logging took.

1 = Logged actions

2 = Logged queries

Reported values

min(ms): Minimum execution time (milliseconds)

avg(ms): Average execution time (milliseconds)

max(ms): Maximum execution time (milliseconds)

#min: Minimum number of records returned

#avg: Average number of records returned

#max: Maximum number of records returned

#hits: Total number of executions/hits

total(ms): Total time of the total number of executions/hits

% of total: Expressed as a percentage of all performed actions

Viewing performance monitoring data

Reporting

Settings related to reporting:

Field	Description
Apply UTF-8 for mail merge	The default encoding for HTML mailmerge reports is UTF-8. However, if you have Outlook clients that do not support unicode, you can change the mailmerge report encoding to the platform encoding here.
	If you select **Yes**, HTML mailmerge reports will be created using UTF-8 encoding.
	If you select **No**, HTML mailmerge reports will be created using platform encoding of browser on which the report is run.
HTML encoding?	You can encode Planon data for mail merge HTML reports as a security measure against cross site scripting. This way of encoding can change the result of the HTML mail merge report. For this purpose, the setting **HTML encoding?** is available.
	ℹ️ By default, this setting is set to **Yes**. It is strongly advised not to change this.
	For more information on how this works, see Encode Planon data in HTML mail merge .
Enable CSV escape characters?	It is possible to export data in CSV format. However, CSV files potentially pose a security vulnerability that you want to prevent. Click **Yes** to escape the cell value so that any malicious scripts cannot be executed.
	Applications that are used to open the CSV files exported from Planon will then not interpret the cell as a formula to execute.
CSV escape characters	Enter the characters that you want to escape in CSV format, if you enter multiple characters, separate them by using a comma.

Encode Planon data in HTML mail merge

If this setting is set to **No** when executing an HTML mail merge:

- Planon data is merged with the HTML template.

- The merged HTML end result is partially encoded and cleaned. The partial encoding means that some known problematic characters in HTML are replaced, but URLs and e-mail addresses remain unchanged. In the cleaning phase, the resulting HTML is stripped from invalid/incomplete HTML tags and JavaScript.

If this setting is set to **Yes** when executing an HTML mail merge:

- All text entered in Planon data will be shown literally in the browser, no text will be interpreted or executed by the browser, except when the HTML template defines that a URL or email address is required.

- The HTML of the mail merge template will not be cleaned anymore, so any existing JavaScript in the template will remain.

The following rules and examples illustrate what happens if the setting is set to **Yes**.

Fields: if a field is included in the HTML mail merge template as a regular field, the data is encoded:

Field type	Field content	Result in merge html (source)
String	\<b\>hello\</b\>	hello
StringExtended	\<b\>hello 'world' \</b\>	hello 'world'
StringExtended	您好	您好
URL	https://www.facebook.com/	https://www.facebook.com/
String	me@me.nl	me@me.nl
StringExtended	\<script\>window.alert ('show me');\</script\>	<script>window.alert('show me');</script>

Expressions that have a string as input and a string as output will be encoded.

- ◦ formatString
- ◦ pretty
- ◦ substring
- ◦ toLower
- ◦ toUpper
- ◦ trim

String constants are NOT encoded.

Operators that are encoded:

- +

- If (Boolean condition) Then (result1) Else (result2)
  - The result of an if function IS encoded
  - Fields used in the Boolean condition are NOT encoded

Example: the field properties.Comment contains the data hello

Expression	Result in HTML source	Displayed in browser as
substring(Properties.-Comment,0,5)	he	he
"<i>" + substring(Properties.-Comment,0,5) + "</i>"	<i>he</i>	*he*
(if (Orders.Comment = -"hoi") then "HOI" else "BOO")	BOO	BOO
(if (Orders.Comment = " hello ") then "HOI" else "BOO")	HOI	**HOI**

If the HTML template uses Planon data (in the examples field <test>) to come to a HTML *construct* like a URL or a 'mailto' reference, then the encoding will behave differently and the Planon data will not be encoded.

URL	
HTML template snippet	<a href="<test>">test
Input in url field	https://www.facebook.com
Resulting HTML	test

Image	
HTML template snippet	<img src="<test>">

Image

Input in url field	http://nl-devs95:18370/webdav/image.JPG
Resulting HTML	

JavaScript

HTML template snippet	<script>window.alert('&lt;test&gt;');</script>
Input in url field	My popup
Resulting HTML	<script>window.alert('My&#x20;popup');</script>

Scheduled tasks

In System settings > Scheduled tasks you can view and modify the schedule for system jobs and task user extensions scheduled by the user in Planon ProCenter .

Scheduled tasks

The following scheduled tasks are available in Planon ProCenter :

> ℹ Scheduled tasks that are specific to the Planon Mobile Field Services (PMFS) app, are described in the PMFS configuration documentation.

Scheduled task	Description	Used in
SYSACTIONS	Triggers Action tasks	Alerts and Notifications
SYSALARMS	Triggers Alarm tasks	Alerts and Notifications
SYS_ACTIVITY_PPM _PROFILES	Currently, this scheduled task cannot be run as it belongs to an unreleased solution. In future, this task will check if any active PPM profiles exists that must be run for the Objective-based maintenance solution.	PPM in Objective-based maintenance
SYS_AWM_SUMMARIZE _READINGS	Summarizes measurement point readings. ℹ Please be advised that we recommend using an action definition instead of this scheduled task because you cannot schedule the starting hour of the scheduled task, which is quite essential. See Starting summarization (*Agile Workplace management*).	Agile Workplace Management (AWM)
SYSBACKGROUND_ACTION _CLEANER	Cleans up background actions. In general, data is deleted when in status *Completed*	Planon application PMFS / AppSuite

Scheduled task	Description	Used in
	or *CompletedWithErrors* and *SysChangeDateTime* is older than 7 days.	
	For PMFS and AppSuite, data is deleted only when in status *Completed* and *SysChangeDateTime* is older than 7 days.	
SYSEVENTLOG_CLEANER	Cleans simple event log and linked event log entries.	Planon application
	Data is deleted when *SysInsertDateTime* is older than 7 days. Data is deleted in chunks of 100 records.	
	Orphan child records and all orphan records in PLN_EVENTLOG_BUSINESSOBECT are deleted in chunks of 10.000.	
	This task runs for 20 minutes and then stops. If necessary, you can run it multiple times (by adjusting the schedule) to get rid of a bulk of old records.	
SYSEXCHANGE APPOINTMENTOOS	Triggers synchronizing **Connect for Outlook** (Exchange) appointments	Exchange
SYSEXCHANGE SYNCLOGCLEANUP	Triggers cleaning **Connect for Outlook** synchronization logs	Exchange
SYSEXPORTBOLIST_CLEANER	Deletes records older than 1 year from Enterprise Talk export BO list table.	Planon application
SYS_GENERATE _PLANNEDACTIVITIES	Currently, this scheduled task cannot be run as it belongs to an unreleased solution. In future, the task will trigger the batch generation of new planned activities for the Objective-based maintenance solution.	Objective-based maintenance

Scheduled task	Description	Used in
SYSINBOUNDMESSAGE _CLEANER SYSINBOUNDRAWMESSAGE _CLEANER SYSOUTBOUNDMESSAGE _CLEANER SYSOUTBOUNDRAWMESSAGE _CLEANER	System tasks for cleaning up data related to inbound & outbound messages. Deletes processed message older as than *1 day*. Processed means messages with the status: • BOInboundRawMessage: *Transformed*	Event Connector

> ℹ If there are Inbound raw messages with status *Failed* or *Queued* with the same message ID, they are skipped from deletion.

• BOInboundMessage: *Processed*

> ℹ If a business event references an inbound message, it is skipped from deletion.
> • If an Inbound message is *Failed* (so not processed), the 'related' Raw inbound message (that was transformed) will also not be deleted.

• BOOutboundRawMessage: *Sent*

• BOOutboundMessage: *Transformed*

> ℹ If there are outbound raw messages with status *Failed* or *Queued* with the same message ID, they are skipped from deletion.

In addition, this task also deletes *Failed* messages for these business objects that are older than the Data cleaner setting (default: 91 days).

Scheduled task	Description	Used in
SYSMOVE_STUCK_BA_TO _ERROR	Detects if a background action is stuck in a queue or is no longer running. Subsequently, the action will be set to the status "Completed with error". When starting this task, a warning message appears, see: Multi-gear.	Planon application
SYSNOTIFICATIONS	Triggers Notification tasks	Alerts and Notifications
SYSNOTIFY_EVENTBASED	Triggers Event based notification definitions	Alerts and Notifications
SYSNOTIFY_ONCE	Triggers Notify once notification definitions	Alerts and Notifications
SYSNOVA_PMFS_CHECKER	Triggers the automatically retry of a failed background action for PMFS AppSuite.	PMFS AppSuite
SYSPPM_SCHEDULED _PROFILES	Triggers the generation of PPM orders	PPM
SYS_RENEW_ART_STORE _ACCESS	Renews a Marketplace access key expiring in less than 30 days.	AppCenter
SYSSECUREDDOCS_MOVE	Moves secure docs to a designated folder on disk. For more information, see Path to secure documents.	Planon application
SYSSESSIONDATA_CLEANER	Deletes old session data (older than 7 days).	Planon application
SYSSUBSCRIPTIONCHECKER	Subscription checker Connect for Outlook	Exchange
SYSTASKUSEREXTENSION	Triggers the scheduling of task user extensions.	Connect for Building Advisor, Connect for Calendars
SYSTASK_CLEANER	Triggers cleaning tasks. Data is deleted when in status *Notified*,	Alerts and Notifications

Scheduled task	Description	Used in
	Executed and *LastStateChangedDateTime* is older than 7 days.	
	The task will run using an SQL statement for better performance.	
SYSUPDATE_LFC _SNAPSHOT_DATALAK	Triggers a daily update of the Mongo DB. Should only be enabled when a successful initial export of the Mongo DB has been done (using **Connect for Analytics**).	Connect for Analytics
	This task only updates life cycle BOs that have had life cycle changes since the last successful run.	
SYS_C4C_ARCHIVE_JOB	Triggers Archive tasks	Connect for Calendars
SYS_C4C_MAIL_REPORT _CLEAN_JOB	Triggers cleaning the mail reports	Connect for Calendars
SYS_C4C_REMOVE _OBSOLETE_JOB	Triggers removing the outdated tasks	Connect for Calendars
SYS_APPS_CHECK _FOR_UPDATE	Checks for app updates in the Planon Marketplace. The task runs every 6 hours (minimum); this is configurable.	AppCenter
SYS_APPS_CONFIGURATION_ EVENTS	Upgrades all Platform apps during a Planon upgrade.	AppCenter
	Do not deactivate this task!	

The improved feature **Discontinue 'Order documents'** and the scheduled task **SYS_MIGRATE_DOC_TO_COM_LOG** have been deactivated in releases L103 and L104 to ensure that order documents and all related tailor-made software can continue to be used for the foreseeable future. While both the scheduled task and the improved feature **Discontinue 'Order documents'** will remain visible, they will no longer be functional. As of release L105, both the scheduled task and the improved feature are no longer visible.

If authorized, and except for system clean-up tasks, users can change the status of system tasks to Inactive. They can also change the schedule as is needed.

For notifications, an email is sent to each user to be informed. The email content is based on the mail merge template selected. The email's subject description is taken from the template or, if not defined, is the name or code of the item in Planon ProCenter .

Handling of tasks

- For **notifications**, an email is sent to each user. The email content is based on the mail merge template selected. The email's subject description is taken from the template or, if not defined, is the name or code of the item in Planon ProCenter .

- For alarms, when the task returns an active alarm (ringing), an alarm status is created for each user linked to the alarm definition. When an alarm is no longer ringing, forwarded, or snoozed, it will be removed from the **My alarms** step (**Alerts** > **My alarms**).

> For more information on alarms, notifications and actions, see Alerts.

- For **actions**, a task is performed according to a scheduled interval. A task could be anything, for example the execution of CAD Import or the renewal of Contracts. These actions are automatically performed by the system at the specified time.

- For **subscriptions**, the system task checks whether there are lost mailbox subscriptions. If so, the system task will (optionally - depending on a setting on the mailbox) attempt to subscribe the mailbox and will synchronize Planon ProCenter and Exchange upon establishing a subscription.

- For **cleaning** Connect for Outlook synchronization logs, the task will remove all synchronization logs older than 6 months.

- For **synchronizing** Exchange appointments, the task will attempt to synchronize all future Exchange appointments that are out of sync.

> When using Connect for Outlook , we recommend to activate all three tasks: •
> SYSSUBSCRIPTIONCHECKER
> - SYSEXCHANGEAPPOINTMENTOOS
> - SYSEXCHANGESYNCLOGCLEANUP

Scheduled task and the BO status

- If a business object, required by a system task, is put **Under construction** in Field definer , the scheduled task will be **Inactive** when the task is run next.
  To prevent this, put the system task to inactive manually before configuring the business object in Field definer .

- If a scheduled task is **Active**, and if the database is disconnected, the tasks will start automatically again when the database re-starts. However, if the scheduled task is **In progress,** and the database is disconnected, you will still see the system tasks in **In progress** only.

In order to make it work again, you must first click **Inactive** on the action panel and then click **Active** again. This will restore the functioning of the system tasks.

For a description of the fields available at the **Scheduled tasks** step, refer to Scheduled task fields.

DTAP support

In a DTAP cycle, when you move your environment from Production to Development/Test/Acceptance, scheduled tasks can automatically be disabled when starting up the application server (switching off emailing notifications, and so on) as this could provide incorrect information.

To change the DTAP label from Production to Test, you must add the following parameters to the Tanuki service of the application server:

```
wrapper.java.additional.nr=-Dcom.planonsoftware.notproductionmode=true

wrapper.java.additional.nr=-Dcom.planonsoftware.notproductionmode.description="Test
  Environment"
```

When starting the application server, the mode is detected and the scheduled tasks are disabled. You can, of course, still manually start these tasks in order to test notifications. This will only happen on the first startup in another mode (D, T or A).

Multi-gear

Multi-gear is a technical name for a situation where a customer has chosen to use multiple application servers for load balancing.

When starting the SYSMOVE_STUCK_BA_TO_ERROR task, a warning is displayed: 'This scheduled task ... cannot be used in a multi-gear environment'.

Currently, the Planon application cannot determine whether multiple application servers are being used. Hence, this message is always displayed.

If you proceed, and you:

- do not have multiple application servers: your task will be executed.

- have multiple application servers: your task will cause background actions in progress and triggered by other scheduled tasks or other actions to fail. Please verify whether you have a setup using multiple application servers.

If you are not sure whether your environment has a setup using multiple application servers, please check with your system administrator.

Scheduler

A built-in tool that runs scheduled tasks, scheduled by the user. A scheduled task is a task that is performed by Planon ProCenter at the scheduled time.

The **Scheduler** processes the notification/alarm tasks scheduled by the user at regular intervals. It uses the system date as the reference date.

> **i** To reduce storing data in the PLN_SESSIONDATA table and improve performance, the **Scheduler** uses (stateless) in-memory session IDs.

If you have an overloaded scheduler, you must do one of the following:

- Decrease the number of notifications.

- Increase the interval of the notifications.

- Increase the **MaxConcurrentJobs** in the **Scheduler** settings.

> **i** For more information on MaxConcurrentJobs, see Planon Suite Installer > Scheduler. For more information on subscriptions, see Connect for Outlook User's Guide.

Task user extensions

On the **Task user extensions** step you can schedule task user extensions to execute logic.

> **i** As a precondition for scheduling, the task user extension must be created and must also be registered in Business processes > SX Configuration > Task user extension step.

For a description of the fields available at the **Task user extensions** step, refer to Task user extension fields.

Security - Password settings

As application manager, you can define various password settings in order to comply with the security requirements set by your company.

Password settings allow you to set the:

- **Password strength**,
- **Password expiry**,
- **Lockout time**.

You can also enforce a password history and define a minimum password age. Finally you can configure settings for forgotten passwords.

For more detailed information on **Password settings**, refer to Password settings fields.

> ℹ Password settings are subject to security logging. For more information about this topic, see Security logging (Administrator's Guide).

Password strength settings

If you select a non-manual password strength (**Good**, **Strong**), the selected value is applied and the following password strength related settings are disabled:

- Password length
- Both lower and uppercase characters required?
- Min. number of digits required
- Min. number of symbols required

If you select the **Manual password strength**, the above password strength related settings are enabled (their value remains unchanged). You can change them as required.

Pwd strength setting	Manual	Disabled	GOOD	STRONG
Password length	Password Length setting	0	8	10
Character Rules	All supported rules	0	Minimal 3 of 4	4 of 4

Pwd strength setting	Manual	Disabled	GOOD	STRONG
- Digits	= MinNumberRequired	n/a	=1	=1
- Non alphanumeric	= MinSymbolRequired		=1	=1
- Uppercase	= 1 when BothLowerUpperCaseRequired	n/a	=1	=1
- Lowercase	= 1 when BothLowerUpperCaseRequired	n/a	=1	=1
Repeating characters	n/a	n/a	<= 3	<= 3
Alphabetic sequence (abc)	n/a	n/a	n/a	<= 2
Numeric sequence (123)	n/a	n/a	n/a	><= 2

Password that never expires

For some exceptional user groups, it may be more convenient if their password never expires. For example technical accounts.

To define these settings, go to Accounts > User groups on the navigation panel. On the **User group details** selection step, select the relevant user group and click **Yes** in the **Password never expires** field. The password of this user group will never expire.

If the **Password never expires** field is changed to **Yes** the **Password expiry date** field is cleared.

If you select **No**, the **Password expiry date** field is set to the system date plus the expiry time as set in **System settings**.

> It is recommended to apply authorization on the two fields, **Password never expires** and **Password expiry date**, so that users cannot change these settings themselves.

Forgotten password settings

If you want to allow users who forgot their password to request a new one, you can activate the **Forgotten password functionality** setting in System settings > Security. By default, this setting is deactivated.

Preconditions:

- The **Contact's email address** field must be filled in Accounts > User groups > Settings > User settings for the users in question.

- The fields **Forgotten password date** and **No. of attempts forgotten password** must be made available on the **Users** layout in Accounts > User groups > User group details > Users.

> **i** For more information on linking persons to users (= user accounts), see Authorization.

Procedure

1. Go to System settings > Outgoing mail.
2. Select the SMTP system setting.
3. In the SMTP server address field, enter the correct server address.
4. Go to System settings > Security.
5. Select the security setting.
6. In the Forgotten password functionality field select one of the following options:

   ○ **User name and email address** - users can only request new credentials by providing both user name and email address.

   ○ **User name only** - users can request new credentials by providing their user name only.

> **i** In most *Service Provider* configurations, user names are identical with the users' **Contact's email address**, in which case the **User name only** option can be selected.

   ○ **Deactivated** - select this option if you want to disable the **Forgotten password functionality**.

7. Click Save.

   The Forgot password? question is added to the Planon login screen and immediately effective. Users who request a new password must carefully follow the instructions given to them in the email and login screen. Per user, you can monitor the number of attempts made to reset a password and the date on which the reset attempts were made.

   ○ The maximum is 3 attempts a day, per user.

   ○ The email token remains valid for 24 hours, or until a new token is requested.

> **i** The email that is sent out to the user is either:
> • auto-generated by the application, in which case its contents cannot be changed.
> Planon uses a GUID for the new password, to ensure it is unique per request.

- user-defined via a custom email template. See *Customizing the Forgotten password email* for more information.

Customizing the Forgotten password email

It is possible to use a customized email template for the forgotten password functionality, instead of sending the default email. This custom template can be uploaded per language in the System Settings > Security TSI.

If you have activated the **Forgotten password functionality**, users who indicate they have forgotten their password upon logging in, will by default receive a system email. This default email is a very basic message that includes instructions and a *token* to reset your password.

However, it is possible to send a more 'tailor-made' email message. You can do this by uploading customized HTML or HTM template(s) as secure document(s). You can even include image references in your custom template. Note that any referred image files should be present in the WebDAV location for images. Check if all vital information is included in your template.

> ⚠️ Make sure the HTML / HTM template contains the **reset token** tag and (optional) instructions on how to use it, otherwise users will not be able to reset their password!

E x a m p l e

Reset token: <PasswordToken>

1) Copy the 'Reset token' from this email

2) Paste the token in the 'Token from email' field

3) Enter your new password

4) Retype your new password

5) Click 'Reset password'

The following merge codes can be used in the email template:

- || Field || Merge code ||
- | Account.Description | Description |
- | Account.Accountname | AccountName |
- | n/a | ResetToken |

> ℹ️ Within the template, each merge code, for example the merge code for the reset token, must be contained within **<>**. Merge codes are *not* case sensitive. If no custom email template is configured, the default system email will be sent to the user.

After drawing up your template and placing it on the server used for secure documents, follow these steps:

1. Go to the System Settings > Security TSI.
2. Check if the field Forgotten password functionality is set to either User name and email address or User name only.
3. In the Forgotten password template fields, upload the HTML or HTM document you want to use as email template, per language.

You can upload different documents for each language. The maximum file size set for secure documents should not be exceeded.

4. Click Save.

When users request to reset their password upon logging in, the selected custom template(s) will be applied.

Setting an alarm for password expiry

You can define an alarm to warn users about the expiry of their password before it actually expires.

Procedure

1. In the Alerts TSI, you can configure an alert (alarm or notification) on the **Users** business object (system name **Account**), using the Alert condition > Filter functionality.
2. In this filter, define a password expiry date less than X days before the actual expiry of the password.
   The system will send out an alert when the account matches this filter.
3. Use a regular date macro in this filter. For example, "–today –d2".
4. Since it is a mail merge, define the **ID** and the **To** columns. Both should point to the same ACCOUNT.SYSCODE field.
5. Define a function instead of a field for the **To** field. This function expression should point to the ACCOUNT.SYSCODE field.

> For more information on setting an alarm/notification, see Alerts .

Security - Access to Planon features via encrypted keys

In Planon ProCenter , Planon administrators can create encrypted URLs that can be used to grant secure and limited access to Planon features.

To achieve this, they can generate a key pair to enable the use of encrypted URLs. A key pair consists of a *private* key and a *public* key that together provide two functions: authentication and encryption. The private key (used to generate the key) and the public key (used to decrypt the key) are stored in the database.

In the **System settings** > **Security** TSI, you can generate various types of encrypted key pairs by selecting the corresponding action on the action panel (for options 1,2 and 3) or by enabling a setting (option 4):

1. **Access key pair** - select the action **Generate access key pair** to create an encrypted URL for a user account, which can be used to grant access to specific Planon functionality. Access keys are intended to enable multiple logins of the same account to limited functionality.

You can only create access keys via the Planon ProCenter web client. The **Access key** login works for Self-Service, SDK and Kiosk clients. Consequently, you cannot select the **Access keys** business object in Enterprise Talk and SDI, nor is it possible to reference an **Access key** field in an expression in Reports or other places.

Also see WebHelp topics: Accounts > Access keys and Web services > Session management.

2. **Deep link key pair** - select the action **Generate deep link key pair** to create an encrypted URL for deep link items. In Planon, deep link items can be used to direct an external audience to a specific piece of Planon content.

3. **Resource key pair** - select the action **Generate resource key pair** to create an encrypted URL for the use of (secure) documents and images in Planon apps. Resource keys can be used to prevent documents and images from becoming inaccessible to app users after their user session has expired and their cache has been cleared.

4. **Live app - automatic access keys** - setting that you can use to enable the automatic generation of access keys for the Planon Live app in case the app users log on via SSO. Use the setting **Auto-key lifespan (in days)** to set a time span during which the key will be valid. Also see: Planon Live App access keys (login methods).

When a key pair is generated, the Planon administrator can provide the intended audience with the new keys and grant (limited) access to Planon features.

Themes

The **Themes** TSI enables you to easily adopt Planon to your own house style/corporate identity.

Theme settings

The **Theme settings** step features two custom color fields that allow you to select the dominant corporate colors.

By setting these fields, the entire look and feel of the Planon application can be adjusted to match the your corporate identity/branding.

Because this is applied to the entire Planon application, it has become easier to implement a color configuration without requiring (any) custom CSS. During the generation of the custom theme, contrast boundaries are taken into account as much as possible.

> ℹ️ However, the Planon light and Planon dark (should) remain available for end users because these two fields guarantee the optimum contrast values and provide a fallback scenario in order to comply with disability access requirements.

Themes logo

The **Themes** TSI enables you to print an image or company logo on a CAD Integrator drawing. The image will be added to the drawing border when the PDF is printed. The following formats are supported: .png, .jpeg and .jpg.. The maximum file size is 2 MB.

If you want to enable printing a logo on the CAD drawing border, proceed as follows:

- make sure the **Themes** TSI is added to your navigation panel
- In **Themes**, in the **Logo for printing** field, select or upload the required image and save this setting

If end users save their drawing as .PDF in CAD Integrator, enable the **Print border and logo** setting in the dialog and subsequently print the PDF file with a border and logo, the image is displayed on the printout.

> ℹ️ The logo / image will not be visible on the live view of the CAD Integrator drawing, only on printouts.

Customizing a Planon theme

You can *customize* the Planon Light and Dark themes by changing the primary and secondary colors. You can also change the custom logo if you wish to.

Procedure

1. Go to System settings TSI > Themes.

2. In the Theme settings step, set the Custom theme activated? field to Yes.

3. In the Primary color of custom theme field, choose a primary color for the theme using the color picker.

> ℹ️ You can either move the cursor in the color picker, fill in the RGB values, or fill out the Hex value.

4. In the Secondary color of custom theme field, choose a secondary color for the theme using the color picker.

> ℹ️ You can either move the cursor in the color picker, fill in the RGB values, or fill out the Hex value.

5. Click Save

You have now customized the theme.

6. To apply the customized theme for you as logged-in user, go to My account.

7. Click Edit.

8. Select any of the available themes.

9. Click Save and log off.

   The Planon Universe log-in screen is displayed. Your choice is activated after logging in again.

Alternatively, as administrator, you can also change a user's theme in the Accounts > User groups TSI.

Selecting a themes logo

To make it easier for users to identify a theme, you can upload a specific logo per theme.

Procedure

1. Go to Themes > Themes settings and select the theme for which you want to specify a logo.

2. In the theme's box, click Upload to browse to and select your logo.

Alternatively, you can select an image that is available for your system by clicking the Select a file icon.

When a file is selected, you can also rotate or delete it.

Similarly, by using the same procedure you can also specify a logo for printing (for CAD drawings).

Web application

The **Web application** TSI in **System settings** is used to specify some general settings for Planon ProCenter's web application.

For a description of the available settings at this level, refer to Web application fields.

> These options allow you to limit the number of elements displayed in the elements list, which speeds up the application if the number of elements for a specific business object becomes very large.
> Note that any changes to these settings will be reflected only when you log off/log in to the application.

Sync auto-generated codes

For some business objects, when introducing a new record, its code is automatically generated. When moving your Planon environment in a DTAP street, the table responsible for storing the last used code may fall out of sync with the actual BO table.

To avoid this issue, you can use the **Sync auto-generated codes** action on the action panel. It will reset the table that is used generate codes to ensure that code generation for new records is in sync.

WebDAV Settings

In System Settings > WebDAV settings, you can register a joint WebDAV login name and password for all users who are working within the same Planon property set. These settings will give them access to the file locations on the WebDAV server.

For more information on property sets, refer to Property sets and Supporting data.

Please note that WebDAV settings are property-set-dependent.

System settings - Field Descriptions

Approved message fields

Field	Description
Message code	Message code of a confirmation or warning, as displayed in Planon ProCenter . For example, PN_A01496.
Message type	Select a message type from the list: confirmation or warning.
Message option	Select either **Yes** or **No** as the default answer to the message you specified in the **Message code** field. With either option the original message will be suppressed (not displayed to the end user).

Authorization settings fields

Field	Description
Split role and data	In this field you can determine whether to combine data and functional access, or to separate data and functional access.
	Click **No** to combine data and functional access; click **Yes** to separate data and functional access. By clicking **No**, it is no longer mandatory in Authorization (Accelerator: Accounts) to link a function profile to a user group.
	For more information about this feature, see Authorization.
Default user password	The default password that is used when creating a new user.
	The system administrator can set a new **Default user password** without the need for the old password (when forgotten).
Give warning when saving a BO that is transferred outside a user's authority range	This setting determines whether users will be informed with a warning message when they perform an action that results in moving the record outside their range of authority.

Field	Description
	For example, users may enter a value in a certain field on an order, after which they are no longer allowed to see the record.

Bundle fields

Folder	Description
System name	Displays the bundle's class name.
System type	Displays the system type, which is OSGI.
Description	Displays the bundle name.
Detail records	Displays detailed information describing the supported properties.

Bundle version fields

Folder	Description
Bundle	Displays the bundle name to which the selected version belongs.
Code	Displays either METADATA or DATABASE.
Major number	Displays the bundle ID's one-digit major number.
Minor number	Displays the bundle ID's one-digit minor number.
Service pack number	Displays the bundle ID's one-digit service pack number.
Status	Displays the installation status. For an official installation the letter **p** is displayed (for 'Production').
Build ID	Displays the three-digit build ID, which is a combination of the bundle version's major, minor and service pack number separated by a period.
Insertion date-time	Displays the date and time of introducing the selected bundle version.
Modification date-time	Displays the date and time of modifying the selected bundle version.

Folder	Description
Correctly converted	Displays the bundle's conversion status (should be **Yes**).

Data storage location fields

Field	Description
AWS region	Select the AWS region of your AWS account.
Data storage credentials	Select the account that you want to use. An account can be linked to more than one S3 location.
S3 bucket name	Specify your S3 bucket name, which should already exist.
Root prefix	If you use this field, it will be the root for all data (all files will be relative to this folder). If you leave this field empty, the files will be stored directly in the bucket. You can give a path using slashes (/).

Email settings - fields

Here, you can specify the email settings that are required for sending emails (Alerts & Notifications or other email functionality in the Planon application.

By default, the SMTP is available, but you can also configure the OAuth protocol.

Field	Description
Authentication	In this mandatory field you specify whether the server requires authentication.
	Some servers require users to identify themselves first. The server uses this identification to determine whether the email can be sent.
	Identification takes place by using a user ID and an associated password where required.
ID user	The user ID that has to be used if authentication is required.

Field	Description
Password	The password that has to be used if authentication is required. The maximum password length is 50 characters.
Port number	The port number that is configured for SMTP traffic on the server. Communication will be set up using this port number. The default value is 25 by default, since this will typically be the SMTP port number.
Reply email address	Here, you can specify one or multiple email addresses that the addressee can use to receive a reply. If you do not enter an email address here, the email address of the **Sender's email address** field will be used.
Sender's email address	Here, you can specify the email address of the person sending the emails.
Bcc email address	If required, enter one or more blind carbon copy (Bcc) email addresses in this field. If several email addresses are entered, ensure they are separated by a comma. Although emails are sent to email addresses specified in this field, these email addresses are hidden from other recipients.
Name of sender	Here, you can enter the name of the person sending the email.
SMTP Server address	Use this field to enter the address or name of the server to which Planon ProCenter . must connect.
Email catcher on?	When set to **Yes** this field ensures that emails are sent to **Log viewer**. If set to **No**, emails will be sent to the intended recipients. Used, for example, when moving an environment from Production to to another environment in a DTAP street.

Field	Description
	ℹ️ For more information, see Routing mails to Log viewer.
ESMTP with TLS	Click **Yes**, if you want Planon to use ESMTP with TLS as a protocol for sending emails.
SMTP with SSL	Click **Yes**, if you want Planon to use SMTP with SSL as a protocol for sending emails.
Log successful email	If you do not want to log every email message that is sent successfully in **Log viewer**, select **No**. The field is set to **Yes** by default. In a DTAP environment, if both the **Email catcher** and the **Log successful email** fields are set to **Yes**, there will be two log entries in **Log viewer**. If only the **Email catcher** field is set to **Yes**, there will be only one log entry in the **Log Viewer**.
SMTP connection timeout	Specifies the socket connection timeout value in milliseconds. The server closes the current connection request after the specified time when no response is received from the socket on the SMTP server. Default: 10000 ms Min value: 10000 ms Max value: 15000 ms
SMTP read timeout	Specifies the socket I/O timeout value in milliseconds. The server closes the current read request after the specified time when no data is received from socket on the SMTP server. Default: 5000 ms Min value: 1000 ms Max value: 15000 ms
Mail retry count*	Specify the number of mail retry counts. If sending an email fails. This

Field	Description
	is the number of times the system will attempt to send the email again.
	The maximum value is 5.
Mail retry interval*	The time between a mail retry in millisecond.
	Default: 0
	Min value: 0
	Max value: 1000 ms

> ℹ *** When setting the Mail retry count and Mail retry interval**, typically mailing will take longer. This will then also affect mailing performed as a result of a scheduled task.

OAuth protocol

When using the OAuth protocol, keep in mind that:

- You must obtain and install the Planon Connect for Office365 Mailings system app in the **Apps** TSI.
- The Planon Connect for Office365 Mailings system app must be registered in the Azure active directory.

App email settings	
Mailer service	Indicate which mailer service is to be used:
	Currently either SMTP service , or when the Microsoft OAuth app is installed also the OAuth service.
	By default, the SMTP mailer is selected, when coming from a release < L73.
	Technical names:
	• planonsoftware.dev.mailer.PnAppExchangeOAuthM:
	• nl.planon.hades.mail.SMTPMailer
Partner identifier	Displays the name of the party that created the app.
	For the Planon Connect for Office365 Mailings app, this is: **planonsoftware.dev**.

App email settings

App name

Displays the name of the app.

For the Planon Connect for Office365 Mailings app, this is: **graphapimailer**.

App module name

Displays the name of the app module.

For the Planon Connect for Office365 Mailings app, this is: **mailer**.

Settings

Settings

Connection settings and credentials for the the Planon Connect for the Office365 Mailings app.

Example

```
{

"clientId" : "b1703c8-501f-4055-
b976-d666d347c2db",

"clientSecret" :
 "N.f054W.MctikAPq9SDjo1-
TjqF17Rdw_v",

"tenantId" :
 "dc30a43a-0971-385c-a2f6-
cefa943362b3"

}
```

These are generated by Azure active directory when registering the app.

Client ID

The ID of the app being registered with the Authentication server.

Client secret

A 'secret' generated specifically for the app by the Authentication server.

TenantId

The directory tenant that you want to request permission from. This can be in GUID or friendly name format.

Settings example

Syntax example for the settings to help the system administrator filling in the settings fields.

Example

App email settings

```
// Settings for Mailer

{

"clientId" : "",

"clientSecret" : "",

"tenantId" : ""

}
```

File location fields

ⓘ In Cloud mode, the following fields are read-only.

Folder	Description
Images	This is the location where images are stored. For example images of properties, spaces and assets. It is a PhotoFileRef; the file type is Image.
	ⓘ For security reasons, not all files stored in **Image** fields are shown in the browser, but are downloaded.
System images	This is the location for storing 'system images'. A system image is a file type that requires storage in a secure file location, because it may hold a security risk when it is uploaded.
	For example, SVG images that can contain JavaScipt (JS). For that reason, only system administrators with specific authorizations should be allowed to upload system images in system image fields.
	File types that can be uploaded: JPG, JPEG, PNG, GIF.
	ⓘ The **Planon managed** system setting is ignored for fields of the 'system image' type. The images are always placed in the root of the WebDAV location specified here.
Documents	This is the default location where documents are stored.
	Technically, it is an OrderDocumentFile:

Folder	Description
	• DocumentFileRef (file type Document) • CommunicationLog.DocumentReferral (file type Document) • CADImportDefinition. InputLocation (file type FileLocation) ℹ️ For security reasons, files stored in **Document** fields are not shown in the browser, but are downloaded.
Templates	Location for mail merge templates. Example: in a mail merge report, the template file location points to this location. It is not available in Field definer , because it is non-configurable.
Forms	This is the default location where forms are stored when **Save file copy** is set to **Yes** on the form definition. Example: OrderDocumentForm.DocumentFileRef (file type Document).
CAD Integrator drawings	Default location for the CAD .orj drawings (outbox). Example: Property CADViewerFMDrawingFileRef (file type Objectraum). If you use relative path references, the file location of the CAD Integrator drawings must always be inside the CAD inbox & outbox folders. Example: If the **CAD Inbox & Outbox** folders are at https://test.cloud.com/webdav/Documents/CAD/ , then the CAD Integrator drawings (.orj files) must be inside this folder. Example of what it could look like: https://test.cloud.com/webdav/Documents/CAD/ CAD_Outbox/
CAD Integrator symbols	Default location to which the option 'Export symbol definitions' is directed. With this option all symbols used in a CAD drawing, such as tables and chairs, can be exported as .orj files. This is also the location where the system will look for .orj files that are used to display assets in CAD drawings (symbols).

Folder	Description
	Example: BaseAsset CADViewerSymbolName (file type CADViewerSymbol)
CAD Integrator background drawings	This is the default location for scanned background images (old floor drawings) that can be shown in CAD Integrator, e.g. in GIF, PNG, JPG or BMP files. Property.CADViewerConstructionDrawingFileRef CADViewerFMDrawingFileRef (file type Objectraum).
CAD Import inbox & outbox	Specify a file location for CAD Import input and output files. ⚠️ If you populate this field, all path references in CAD Import become relative.
BIM Exchange inboxes & outboxes	Specify a file location for BIM Exchange input and output files. ⚠️ If you populate this field, all path references in BIM Exchange become relative.
Invoices	Specify the default location for generated invoices. Invoices are generated by the invoice action **Create invoice letter**. On the **Invoices business object settings**, you can specify whether you want to store the generated invoices in secure documents. If the **Secure documents** field is set to **Yes**, the generated invoices will be stored in the **Secure document location**. If it is set to **No**, the generated invoices will be stored in the **Invoices** file location. In both cases, the generated invoices can be accessed through the **Document reference** field of the generated communication log.
PALs	This is the default location for storing *price announcement letters*. A price announcement letter is generated by the contract report action **Add price announcement letter**. The generated price announcement letter will be stored in the invoices file location and can be accessed through the generated communication log, **Document reference** field.
Enterprise Talk root	This is the base location that Enterprise Talk uses for relative files, or relative folder locations. The folder will be used as a prefix for relative files and relative folders used in fields such as **Documents** > **Data Source** and **Post-process file location** and in relative files and relative folders specified in standard worker parameters.

Folder	Description
	For example in the 'in', 'out' and 'xslfile' parameters in the FileXSLTTransformationWorker worker.
	If the field is not set the file/folder is relative to the Server\tanuki\appserver\bin folder.
	ℹ️ If a WebDAV location is specified in this field, no other WebDAV locations can be used within Enterprise Talk.
Space scenario drawings	Specify the path to the drawings used for space scenario planning.
BIM models	Specify the WebDAV path to the BIM models.
	ℹ️ Keep the number of subfolders to a minimum as this may affect performance.
BIM source models	Specify the WebDAV path to the BIM source model (for synchronization with Autodesk cloud).

Settings for secure documents

Maximum file size (MB)	Specify the maximum file size for secure files. By default, the limit is set to 20 MB by default, but you can extend it if required.
Server upload location	Specify the path to the secure file location. The path must have its starting point on the server that is used by Planon ProCenter .
File types	Specify the extensions of file types which Planon users are allowed to upload. The extensions should be separated by a comma, for example docx, txt, jpg. If no extensions are specified, all file types can be uploaded.
	It is possible to change the set that is prefilled in this field.

Linking documents

Allow user-defined path	Specify if end users are allowed to store files that they upload to Planon ProCenter in a different root folder than the one specified in the **File locations**. If you select **No**, end users can only store documents in the default file location folder or subfolders of that file location.
	ℹ️ This setting works both for regular file locations and for WebDAV file locations.

File upload settings

Folder	Description
Planon managed	Specify whether you want Planon to create and manage the structure on the file server. If set to **Yes**, you enable Planon to automatically create a logical file structure on the file server. Consequently, the end user does not have to think about where to store files uploaded to Planon ProCenter . When this setting is used, the **Allow user-defined path** is ignored.
Document file types	Specify the document file extensions that are allowed to be uploaded (available via the document path). The extensions should be separated by a comma, for example docx, txt. If no extensions are specified, all file types can be uploaded. It is possible to change the set that is prefilled in this field.
Maximum image size	Specify the maximum file size for uploading images. 10MB is the default, 20 MB is the maximum.
BIM file upload settings	
BIM source model - allowed file types	Specify the allowed file types for uploading BIM source models to the Forge platform. For a list supported file types, see Supported Translation Formats (Autodesk). You can enter multiple file types, separated by a comma - for example: .rvt,.nwd,...

> If you do not specify a file type, only files with extension .rvt will be supported.

General settings fields

Field	Description
General	
Extension for copy	Specify which default extension should be added to the name of a *copied* business object. In a standard Planon ProCenter installation, the default extension is (2). You can change this to any other type of extension, for example COPY. You can also leave the extension field empty. However, for unique fields, this will result in an error. You can only

Field	Description
	save the copy after entering a unique value.

> ⚠️ In case of the **Deep copy** functionality – that is copying business objects together with their underlying structures – copy extensions will only be added to the copied underlying business objects if Planon detects that their values are otherwise not unique.

Field	Description
Costs excl. tax/VAT	Select the default setting for calculating costs. Click **Yes** if you want to register the costs excluding tax/VAT or **No** if you want to register costs including tax/VAT. If required, you can overrule this for a financial year in Supporting data or for capital projects in Projects . The setting can only be set for the main capital project; the subprojects inherit the same setting. You can only change this setting before using the project.
Help URL	The default Planon Webhelp URL is:
	If you want to specify a different URL, please use the following URL format:
	http://<server name>:<port>/PlanonHelp
	Ask your Planon administrator which server name and port you should use. It should be the same server and port on which the Web server is running.
	Example of what the URL may look like:
	http://localhost:8080/PlanonHelp
Number of cached system codes	Specify the quantity of system codes that will be cached for creating new business objects. Caching is used to speed up adding a business object. The maximum value is 100.
Memory usage protection	By setting this field to **Yes**, the application server will be protected from running out of memory on querying large amounts of records.
	When set to **Yes** the application will assess whether enough memory is

Field	Description
	available to perform the next request. If this is not the case, the user will receive a warning and the request is aborted.
	ℹ️ Issues that contribute to running out of memory are multitude. This setting cannot guarantee that running out of memory no longer occurs.
	Yes is the preferred setting for this field. If switched to **No**, a warning message will be shown to remind the user of the implication.
Always use pop-up layout for info pop-ups	Click **Yes** if you want to enforce for pop-ups that the designated layout is used, as specified in Layouts > For use in pop-up. If you select **No**, the application will fall back to using the layout that is defined on the TSI step, but only if the field that is being filled belongs to the same business object type. **Example** If you populate a **Person** field on the **Persons** step in Personnel . In other TSIs, such as **Orders**, there is no layout of the same BO type linked to the step, so it will use the pop-up layout as defined there.
Privacy statement	
Privacy statement	URL field that can be used to point to the location of your company's privacy statement satisfying GDPR compliance. When this field contains a valid URL, the **Privacy statement** link is available in the **About** screen.
Display format	
Currency	Specify the standard currency you want to use in Planon ProCenter . This currency is then used in all money fields.

Field	Description
Currency symbol	Enter a relevant currency symbol to be used in the **Currency** field across Planon ProCenter .

> If you deal with multiple currencies, it is possible to leave the currency symbol field blank by pressing Alt + 255 on your keyboard.

Storage of free fields

Field	Description
Date format	Specify the required date notation. This setting determines how the value of a free (string) field of the type 'date' is stored in the database. For example, if you specify the following date format: **yyyy#d#m** the date is displayed as follows for users using the Dutch Regional settings: 18-1-2007 (d-m-yyyy). For users using the English Regional settings, the date is displayed as follows: 1/18/2007 (m/d/yyyy). However, the date is stored in the database as 2007-18-1 (yyyy#d#m).
Decimal symbol	Specify the required symbol for decimals. This setting determines how the value of a free (string) field of the type 'Money' or 'Big decimal' is stored in the database.
Digit grouping symbol	Specify the required digit grouping symbol. This setting determines how the value of a free (string) field of the type 'Money' or 'Big decimal' is stored in the database.

Time zones

Field	Description
Time zones enabled	Specify if you want to use Multiple Time Zones.
Database time zone	Specify the time zone in which the data in the database must be stored. For more information, refer to Choosing a time zone for the Planon ProCenter database.

Calendar

Field	Description
Default calendar	Select a default calendar that shall apply in Planon ProCenter .

Units of measurement used in database

Field	Description
Database unit of length	This field displays the unit of length (**Meters** or **Feet**) used to store dimensions in the database. The values entered in dimension fields are then saved in the selected unit. The only available units are **Meters** or **Feet**. Select the unit of length in which dimensions are currently stored in the database as these values are not recalculated if you select another unit.

> ⚠️ You can also change the **Database unit of length** after the upgrade, but again, existing values are not recalculated in terms of the new unit.
> Example:
> Unit selected during upgrade: **Meters**;
> Value in database = 10 (10 meters); Unit changed to: **Feet**
> Value in database = 10 (10 feet)

> ℹ️ In addition to this system setting, a user-specific setting (**Displayed unit of length**) allows individual users to choose the unit in which they want dimensions to be displayed. This setting is found in Authorization > > User groups or in General > User settings. For details, see Authorization. By default, the **Displayed unit of length** inherits the same unit as that specified for the **Database unit of length**.

Administrator group and end user access

Field	Description
Configuration mode	Allows you to lock/unlock the cache.
	Set the mode to **Yes** to lock the cache.
	If you set it to **No**, the cache is refreshed and is never locked.
	This functionality is supported in Field definer , TSIs and Layouts .

Field	Description
	When the cache is locked, it is not refreshed due to any action that may need a cache refresh, for example, setting a business object under construction in Field definer .
	Locking the cache allows multiple users to configure Planon ProCenter simultaneously without being prompted to refresh the cache. To see your or other user's changes, a Server cache refresh is necessary.
	After the configuration is completed, the mode must be set to **No**. When it is set to **Yes**, you can still enter data into Planon, but the data integrity cannot be guaranteed. Consequently, Planon recommends not to enter data when this mode is active.
Configuration labels	Set this field to **Yes** if you want to enable **Configuration labels**. When this field is enabled, you can create a configuration label and all subsequent configuration is tracked.
	When you set the field to **No** to disable **Configuration labels**, a warning message will be displayed informing you that all active labels will be removed. However, the configuration elements will remain so that work can be continued later.
	You can only enable this field in **D**evelopment, **T**esting or **A**cceptance mode. • Disabling of **Configuration labels** has no dependency on a user's license.
	For more information, see Configuration labels.
Should 'Users' (system name: 'Accounts') be labeled?	Set this field to **Yes** if you want to include Accounts when using labeling. Setting this field to **No** enables you to exclude accounts from being labeled by **Configuration labeling**.
Planon administrator group	Click the pick list button in this field to define which existing user group is to

Field	Description
	become that of Planon administrators. Users belonging to this supervisory user group are typically those who configure Planon ProCenter and they are able to continue using the application whenever the **Stop end user access** field is set to **Yes**.
	Note that there is a number of special accounts that can access the system even if they do not belong to the Planon administrator group:
	• Connect for Analytics account (SYSDATALAKE)
	• Planon Cloud administrator account (CLOUDADMIN)
Stop end user access	Set this field to **Yes** to temporarily make Planon ProCenter unavailable to end users. Planon administrators (i.e. those belonging to the Planon administrator user group) are able to continue using the application when this field is set to **Yes**. This feature is typically used to block end user access when configuring or maintaining the application. Once work on the application is complete, end users must be informed.
User extensions enabled	This field allows you to activate/ deactivate the user extensions defined by the customer (in **Business processes** > **SX Configuration**).
	The default value is **Yes** and all the registered user extensions are enabled.
	If you select **No**, all user extensions are disabled regardless of the activate/deactivate indications of individually loaded user extensions as defined by the customer in **SX Configuration**.
	In a DTAP cycle, when moving your environment from **P**roduction to

Field	Description
	Development/**T**est/**A**cceptance or when starting the environment the first time, user extensions are automatically disabled. This is to prevent actions on linked systems, such as sending emails et cetera.

CAD Workbench

Server location for CAD Workbench	It is mandatory to specify the path of the server on which the planoncadworkbench.ear is located.
	If this path is not specified, you will get an error message when trying to save a CAD drawing definition or to execute a CAD Import.
	The path supports the HTTP protocol format. To connect the Planon ProCenter server using the HTTP protocols, the path should be specified as:

> http(s)://<Server name>:<Port>/
> cadworkbench-remoting

	If your CAD workbench is running on the same WildFly server as your Planon installation, you must leave this field empty.
	By doing so, the response time will be improved because the connection will remain on local host and will not go via the HTTP(s) link.

> ⚠ The planoncadworkbench.ear works only in the Windows operating system.

> ℹ • For more information on CAD Import, see CAD Import.
> • For more information about the installation of CAD Import and Planon Connect for AutoCAD, see CAD Workbench.

Address formatting

Address formatting	This field allows you to apply a specific address format, which will be

Field	Description
	applicable to fields across all business objects. The selected format will be applied to address lines such as, Country, City, Municipality and Postal address.
	Click the pick list button in this field to select the address format you want to enable.
	C, **Start with capitals** capitalizes all the first letters in the address line after the user completes entering the data and moves away from the address field.
	N, **Do not change anything** leaves the data as entered by the user.
	U, **Convert to uppercase** converts all the letters in the address line to uppercase after the user completes entering the data and moves away from the address field.
Solution mode	

Solution mode	Indicate which licensed solution mode you want to use. Planon offers two modes:
	
	• Workplace
	
	  This is the default Planon solution for workplace management.
	
	• Service providers
	
	  This is a solution mode that is especially designed for companies that provide full or partial business process outsourcing. Typically, this outsourcing includes non-core services off-site, such as administrative tasks, customer services, IT

Field	Description
	services and technical maintenance support.
	⚠ This setting is irreversible.
SNS configuration	
	SNS configuration is a feature that enables some of the Planon mobile apps to receive push notifications coming from Planon. To set this up, the AWS SNS needs to be configured.
	For Cloud instances, the required credentials are automatically generated and the required fields are correctly populated to make push notifications work out of the box. For on-premise customers, these credentials need to be created by Planon. Please contact Planon support to get these credentials created for your system.
SNS credentials key	Holds the key used for establishing the connection with AWS SNS.
SNS credentials - secret	Holds the secret of the key/secret pair used for the AWS SNS connection.
SNS topic	Holds the *topic* used in AWS SNS configuration to make sure that every customer can only send/receive push notifications to their own environment and users.
	Each environment can only send notifications to their own topic. If this field is changed, the functionality will stop working.
Externally accessible URL	Specify the URL that serves as en entry point for your Planon environment. Third-party systems can use this URL to access your Planon environment (for example for sending messages).
	The URL should be the *base* or *root* URL, without a path.
	example: https://company.com/

Field	Description
	ⓘ In Cloud mode, this field is managed by Planon. On-premise customers can manually set it. • The field will be excluded from Configuration Transfer • The field will not be affected by Configuration labeling

Hit count data fields

Field	Description
Product	Lists the product for which a hit is incurred.
Subproduct	Lists the subproduct for which a hit is incurred.
Business object type	Lists the business object that registered the hit: Hit count data.
Business object method	The business object method (action) that triggered the hit.
Proxy view type	Displays the filter name.
Action type	Lists the module / bundle for which the hit is registered.
Start date	The date when the hit was recorded.
Hit count	The hit count recorded for that business object / date.

Hit count data year fields

Field	Description
Year	Lists the year when the hit count was registered.
Product	Lists the product for which a hit is incurred, for example Planon **Self-Service** (PSS).
Subproduct	Lists the subproduct for which a hit is incurred.
Business object type	Lists the business object that registered the hit: **Hit count data**.

Field	Description
Business object method	Lists the action that triggered the hit.
Proxy view type	Displays the filter name.
Action type	Lists the module / bundle for which the hit is registered.
Has hit count limit	Depending on the license, this field indicates whether a hit count limit applies to the module selected in the element list.
Max. hit count	Depending on the license, this field displays the maximum number of available hits for a year.
Used hit count	Lists the hits recorded against the module selected in the element list.
Threshold	Here you can indicate a threshold percentage for the module. This field may be used for checking whether the hit count limit is approaching. See also Creating a notification.
Threshold reached	When the threshold specified for this module has been reached, this field is set to **Yes**.
Max. hit count reached	When the number of available hits has been fully used, this field is set to **Yes**. Users will not be able to use the module to which this applies.

Password settings fields

Field	Description
Password strength	Select one of the password strength definitions: • **Disabled** - selected by default. No password strength applies. • **Manual** - for a manual password strength definition, fill in relevant values in the **Min. number of symbols required** and the **Min. number of digits required** fields. • **Good** - password length (8) and the minimum number of

Field	Description
	symbols and digits are fixed (1).
	• **Strong** - password length (10) and the minimum number of symbols and digits are fixed (1).
	ℹ️ For details on the password strength settings, see Password strength settings.
Password length	Set the length of the password: Minimum length = *1* Maximum length = *30* Default length = *8*
Both lower & upper case required	Select **Yes** to enforce or the use of upper and lower case in the password.
Min. number of symbols required	Select the minimum number of symbols required in the password. Select any number from *0* to *10*. The default value is *1*.
Min. number of digits required	Select the minimum number of digits required in the password. Select any number from *0* to *10*. The default value is *1*.
Enable password expiry	**No** is the defaultvalue: password expiry related fields are disabled and the default values are used. Select **Yes** to make password expiry related fields editable. If you subsequently try to save the changed settings, a confirmation message is displayed asking whether or not an expiration date must be set for every password. ℹ️ If confirmed, a new expiration date is set for all accounts, except those whose password never expires. The expiration date is calculated based on the system date plus the number of days entered in the **Password expiry** field.
Password expiry	Specify the number of days a password will be valid.
Enforce password history	Specify the number of old passwords that should be retained, to make sure these passwords are not

Field	Description
	reused when setting a new password. The default value in this field is *15* and the minimum value is *1*.
Lockout time (in minutes)	Specify the interval between invalid log-on attempts. The minimum for this setting is *0* minutes. The default interval is *5* minutes.
Max. failed log-on attempts	Indicate the maximum number of log-on attempts before for a user is locked out. The user account will be blocked after the maximum number of successive log-on attempts is exceeded. The minimum value for this setting is *1*. The default value is *3*.
Forgotten password functionality	The forgotten password functionality is deactivated by default. You can activate it for either the **User name and email address** or for the **User name only** by selecting the corresponding option.
Forgotten password template	In the language fields of this setting, upload the custom HTM(L) mail merge report(s) that must be used as template for the 'forgotten password email' to the end-users. You can configure and upload different custom templates for different languages. The system will identify the users' language from their **User settings** and send the email in that language.

A minimum requirement for the custom template to work is that the reset token is included in the mail merge template as a mail merge code.

If you activate the **Forgotten password functionality** and do not upload any custom templates, the system will send a standard email with a reset token. For the procedure see: Customizing the Forgotten password email.

| Reset password template | In the language fields of this setting, select the mail merge report that must be used to send an email notification to users upon the reset of their password or the creation of a new user account. |

- See Setting / resetting a password (Authorization).
- See Accounts for information on managing user accounts via **User account** web definition.

Performance monitoring fields

Field	Description
Monitor run-time proxy views	Click **Yes** to gather information on specific database queries that may affect performance.
	⚠ This setting should be used only under the guidance of a Planon consultant, because investigating performance issues requires specific Planon knowledge.
Monitor PSS2?	Click **Yes** to collect data specifc to PSS2 (Self-Service).
Monitor Scheduler?	Click **Yes** to collect data specific to the scheduler.

Scheduled task fields

Field	Description
System code	Displays a generated code to identify the task.
Code	Displays the description of the task.
System status	Displays the current status of the scheduled task. On the action panel you can manually change the task's status.
Schedule	Specify the frequency pattern for running the task.
Last result	Displays the task's current status, which is either OK, Failed or Inserted by upgrade.
Change date/time	Displays the date and time that the task was last updated.
Next run date	Indicates the next time a run of this task will be started.
Last run successful?	Indicates whether the last run was successful.
Last date	Displays the date of the last run.
Duration	Displays the duration of the scheduled task in milliseconds.

Task user extension fields

Field	Description
Code	Enter a code for identifying the task user extension.
Class name	Reference to the user extension class to be carried out. This can either be a TMS user extension class (as defined in the BOUserExtension) or a business rule class as defined in an App.
	Regarding TMS: The task user extension will only be available when registered in **SX Configuration** >
	Task user extensions.
Partner identifier	Displays the 'Partner identifier' of the app from which the selected class originates.
App name	Displays the name of the app from which the selected class originates.
App module name	Displays the name of the module in the app from which the selected class originates.
User	Select the user under whose account the task is executed.
System status	Displays the current status of the scheduled task.
Start date-time	Specify the date and time to start the task user extension.
Schedule	Specify the frequency pattern for running the task user extension.
Next run date	Indicates the next run date for the scheduler to execute the task.
Last result	Displays the task's current status, which is either **OK** or **Failed**.
Task user extension	Browse to select the task user extension for which you are defining a schedule.
	The task user extension will only be available when registered in SX Configuration > Task user extensions.
Parameter	Specify the parameters available for this specific task user extension.

Web application fields

Field	Description
Number of records per page (list)	Specify the maximum number of elements that are displayed in the elements list.
	To avoid performance issues, the maximum number of records is 500.
Number of records per page (dialog box)	Specify the maximum number of elements that are displayed in the elements list of dialog boxes.
	To avoid performance issues, the maximum number of records is 500.
Keep session alive	Indicate if you want to keep sessions alive. If set to **No**, the regular session time-out setting applies. If set to **Yes**, the session is kept alive by continuously pinging the server (as long as the browser is open).

> ⚠ • Activating this setting without changing the **Session time-out**, will increase the license usage, because keeping the session alive also will consume a license for the period of time that the session is kept active.
> • The license usage can be decreased again by lowering the **Session time-out** value (e.g. to 5 minutes), because then after closing the browser, it will only take 5 minutes to release the session, which would then also release the memory on the server.
> • Activating this setting can also affect performance. This is caused by increased memory usage on the Tomcat server by keeping user sessions open for a longer period. If the memory usage becomes a bottleneck, it can incur a performance penalty.
> • Planon recommends to enable the operating systems lock mechanism to prevent unauthorized usage. The need

Field	Description
	for this mechanism increases when this setting is enabled.
Session time-out	Specify the time for session time-out within the range of 1 to 120 minutes. 15 minutes is set by default. If your setting exceeds 30 minutes, note that this will result in a higher server resource usage.
	⚠️ The higher the value, the more resources are needed on the web server. Configure the web server accordingly.
	ℹ️ The Session time-out field in **System settings** overwrites the time-out settings set in the Web Client server's configuration files.
Soap session time-out	Enter the time in minutes for terminating idle web services.
	The minimum value is 15 minutes, the maximum value is 1440 (24 hours). An internal timer checks for idle sessions once every 5 minutes.
	When the setting is changed, it is applied when any SOAP service client performs a new login.
	⚠️ If the number of elements of a tree view exceeds the maximum allowed number, the tree view is converted as a flat list and the **Switch view** option on the Web Client toolbar is disabled.
	ℹ️ If you apply filter, the flat list is converted back to a tree; if the elements of a list are reduced to less than the number specified here, the **Switch view** option becomes available.
Pagination fetch size	This setting determines how many records are fetched in one try. It affects the session size and performance of the web client.
	To improve the performance, the size is reduced to 100 records by default.
	The possible range of values is 100 - 2500.

Field	Description
Include component IDs	When you enable this setting, Planon component IDs will be included in the HTML, which can be used by web application tools, for example, automation testing tools.
Log off URL	Specify a URL where you want to be redirected to after logging off from Planon ProCenter .

! By default, you are redirected to the login page after logging of.

	If you use single-sign-on (SSO) for Planon ProCenter and if you do not specify a URL here, you will be automatically logged on again after logging off.
Allow select all	Here you can specify whether the application users will be able to use the **All** and **None** buttons at the bottom of elements lists.
	If set to **No**, these buttons will be disabled (and CTRL+A will not work either).
	Using these buttons can have a performance penalty with large data sets, hence you can opt to disable them.
Allow last page	Here you can specify whether the application users will be able to use the **Last page** button at the bottom of elements lists.

Attention This field will be removed in the near future - see Pending improved features

	By default, this button will be disabled.
	Using this button can have a performance penalty with large data sets, hence you can opt to disable it.
Enable web service console?	Specify whether it is allowed to login to /nyx.
	If you select **Yes**, the web service console is available and can be navigated to.
	If you select **No**, the web service console is not accessible and will throw an error when accessed.

Field	Description
	By default, the setting is **No**.

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