



Planon Real Estate Management for SAP S/4 HANA

Planon Software Suite

Version: L105

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About this Document

Intended Audience

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

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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.

Table of Contents

Introduction.....	6
Preconditions.....	7
Concepts.....	8
Solution Concept.....	8
Real Estate Management domain.....	8
Solution Vision for Planon Real Estate domain and other Planon domains.....	9
Solution Process.....	10
Implementation.....	12
Implementation steps.....	12
Settings TSI External BO Links.....	12
Settings Real Estate Management.....	16
Cost Center.....	16
Cost Center Periods.....	16
Property Types.....	17
Property.....	17
Rentable unit / Rentable unit usages.....	18
Space usages.....	20
Settings Space & Workplace Services Management.....	21
Cost Center.....	21
Cost Center Periods.....	21
Settings Asset & Maintenance Management.....	21
Cost Center.....	22
Cost Center Periods.....	22
Settings Energy & Sustainability Management.....	22
Cost Center.....	23
Cost Center Periods.....	23

Settings Planon Real Estate Management for SAP S/4HANA app.....	23
Deep link to SAP S/4HANA.....	24
Deep link from S/4HANA to Planon.....	25
Deep link to External BO.....	25
Troubleshooting.....	26
Index.....	28

Introduction

Planon Real Estate Management for SAP S/4HANA (Planon REM4SAP or PREM4SAP) is a product in development. It will be released in multiple releases (Planon) and can depend on SAP S/4HANA (SAP) releases. This section describes the current solution, if not, this will be indicated.

Currently the Planon Real Estate Management domain is integrated with SAP S/4HANA. Upcoming are the domains Planon Space & Workplace Services Management, Planon Asset and Maintenance Management, and Planon Energy & Sustainability Management.

For upcoming releases, see Roadmap information.



Although occasionally, SAP functionality is mentioned, it is not intended to be complete or accurate on SAP product functionality. For that, please find the relevant information in the different SAP Help domains.

Preconditions

General preconditions are:

1. Planon Cloud L103 and later.
2. Planon Real Estate Management for SAP S/4HANA solution.
3. SAP S/4HANA Cloud Public Edition (CE2402 release) or SAP S/4HANA Cloud Private Edition or SAP S/4HANA on premise (2023 FPS01 Release).
4. SAP Business Technology Platform (BTP).

See the [Release Notes](#) for added functionality and changes after these releases.

Concepts

This section describes the Solution concept and the Solution process:

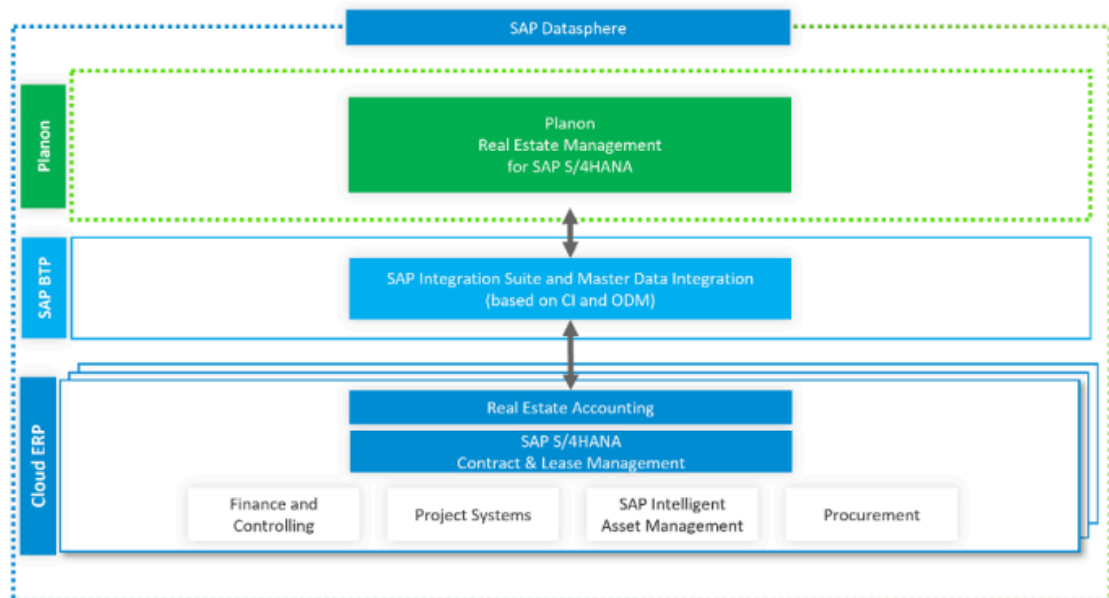
- [Solution Concept](#)
- [Solution Process](#)

Solution Concept

Planon is connected to the central customers SAP Business Technology Platform (BTP) of SAP.

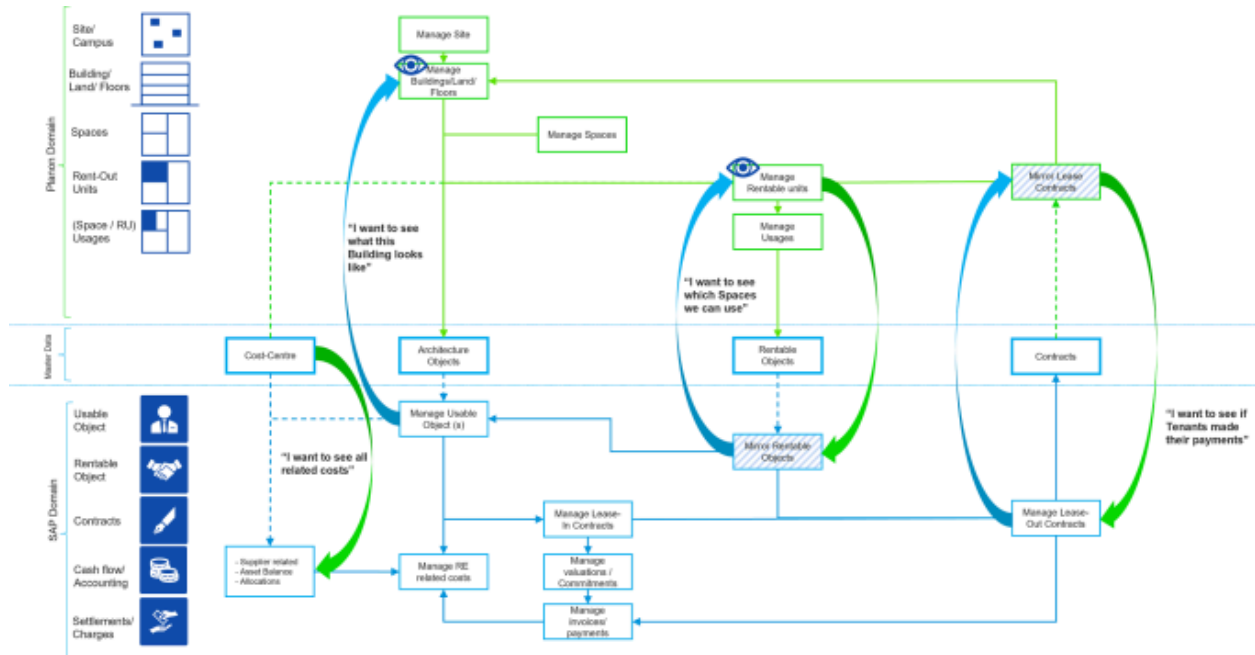
In the context of our shared solution, the current article explains the solution concept (how Planon and SAP concepts are related).

Conceptual technical overview



Real Estate Management domain

Conceptual functional overview of the integration between Planon REM4SAP and SAP S/4HANA for Real Estate Management domain



SAP provides master data objects such as cost centers that then can be consumed and used in certain objects in Planon, like Rentable Units.

Planon provides new Properties, by default Sites, Buildings, and Land, which could be more detailed with Floors and Spaces. By a status change on Property-level, these are consumed by SAP as Architectural Objects to become part of a Usable Object. A Usable Object is needed in SAP to create accounting relations, and if the Usable Object is marked for Lease-In, it can be used to create a Lease-In Contract.

After the creation of Usable Objects, Planon continues to create Rentable Units, which should be linked to either Space Usages or Rentable Unit Usages. When Rentable Units are activated by a status change, SAP consumes them as Rentable Objects and potentially link them to Lease-Out Contracts. Both type of Contracts (Lease-In and Lease-Out) are provided and managed by SAP and can be consumed by Planon to show the relation to Properties and Rentable Units.

To easily see related information in either Planon or SAP, jumps or deep links have been enabled to jump from an object to a related object in the other system.

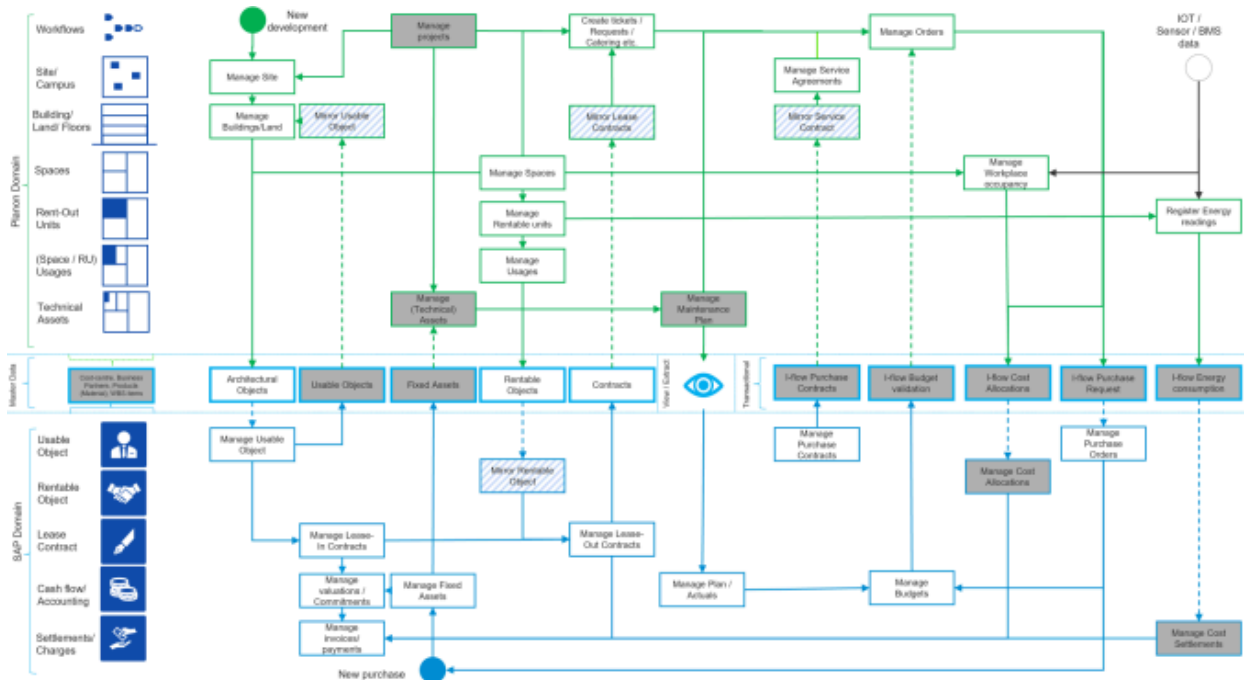
Solution Vision for Planon Real Estate domain and other Planon domains

This overall vision for how Planon and SAP concepts should work together on other domains/modules of Planon, is currently still being designed.

Conceptual functional vision on the integration



Grey items are currently not available or at least not completely.



The SAP Business Technology Platform (BTP), offers:

- Master Data Integration (MDI)
- Integration Flow (iFlow)

In the Master Data Integration, all objects are part of the SAP One Domain Model (ODM), which can be either provided or consumed by either Planon or SAP. Master Data Integration is designed for mostly static data that does not change much, so it is not intended for transactional data like Orders or Amounts.

For transactional data, the BTP has the possibility to use iFlows which can automate additional data transfers between Planon and SAP. For iFlows to work, exchanged data must be enriched with relevant Master Data that is provided by SAP via the BTP. For example, an Order must be linked to a Cost Center of SAP to be able to create a Purchase Order.

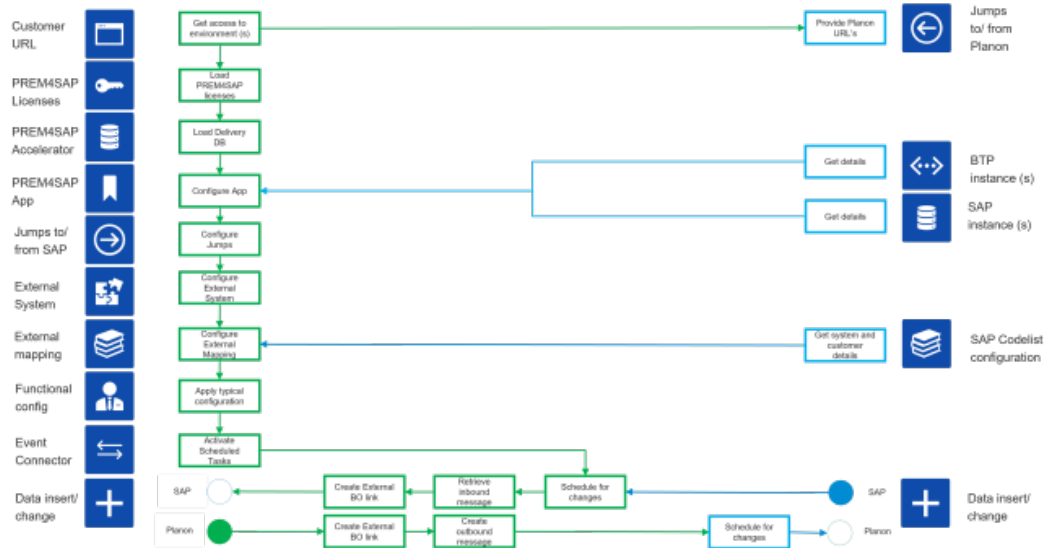
As part of the Solution Vision, iFlows will be available to process the data linked to, for example Orders, Budgets and Energy consumption. For this, Planon must develop functionality in order to consume new Master Data items from BTP.

The integration between Planon and SAP BTP is handled by the Planon Real Estate Management for SAP S/4HANA app and is included in the Planon Real Estate Management for SAP S/4HANA solution

Solution Process

The solution is built up of individual Planon components that can work on their own, but all these components together are relevant for the total solution to connect with SAP.

In the following overview, these individual components are mapped in the right sequence and whether they are specifically linked with SAP content.



To let the process work properly the order of the implementation steps is crucial, see [Implementation](#).

Implementation

This section describes the overall implementation step and lists various settings involved in the Planon REM4SAP solution regarding:

- [External BO links](#)
- [Real Estate Management](#)
- [Spaces and Workplace Management](#)
- [Asset & Maintenance Management](#)
- [Energy & Sustainability Management](#)
- [Planon REM4SAP S/4HANA app](#)

Implementation steps

The implementation needs to be done in the following sequence/steps (see also [Solution Process](#)).



Settings TSI External BO Links

This section lists specific settings that are set in the [External BO Links](#) TSI. The selection level or step within this TSI is mentioned.

Level: External Systems

Field	Description
Code	SAP
Endpoint URL	Required, but default: https://www.sap.com/

Level: External BO Links

Automatically created after Insert by either Planon or SAP. Within this selection step jumps to the Event Connector TSI are preconfigured:

- Processed Inbound Messages
- Sent Raw Outbound Messages
- Transformed Outbound Messages
- Transformed Raw Inbound Messages

Level: Externally managed functionality

Add logic to the standard Planon business logic with the following functions. These functions can be activated by selecting **Yes** in the field **Applicable?**

Field	Description
Conditional contract parties	Inactivates mandatory relation of Contract Parties when changing Contract to System status 'Active'
Skip contract Calculations	Prevent creation of Financial Commitments for Contract Lines.
Prevent overlap of RU usage and space usage in property	Prevents having one RU with both RU Usages and Space Usages linked to the same RU in the same Property in the same period. This is not allowed for Rentable Objects in SAP.
Prevent overlap of space usages with same space category	Prevents having multiple Space Usages linked to the same Space Category in the same Space and

Field	Description
Block deletion of last rentable unit usage	linked to the same Rentable Unit in the same period. This is not allowed for Rentable Objects in SAP.
Block deletion of last space usage	When deleting RU Usages, it will not be possible to delete the last one, since at least one usage is required.
Ignore contract line date range with rentable unit	When deleting Space Usages, it will not be possible to delete the last one, since at least one usage is required within a rentable unit.
	When a contract line is linked to a rentable unit, the contract line date range will not be verified against given rentable unit.

Level: Externally managed BO configurations

For the Planon Real Estate Management for SAP S/4HANA app several BOs require configuration. These BOs are:

- Cost Centers
- Cost Center Period
- Floors
- Spaces
- Type of Property
- Properties
- Purpose
- Usage
- Units of Measurement
- Space Categories
- Rentable Units- Application types
- Rent to/Rent from units
- Contracts
- Contract Lines
- Contracting parties

Field	Description
External code	Required for floors and spaces. Floors: mapped to SAP code list for floor Space: mapped to SAP code list for space
Owner owns all instances	Yes , for Cost Centers, Contracts, Contract Lines and Contracting parties as this will make sure they are marked with owner 'SAP'. No , for all BOs that Planon provides.
Owner Allows Updates	Yes , for Cost Centers, as this will give options for individual fields of BO which are managed by SAP, to be updated in Planon. No for BOs where individual fields should not be updated.
Prevent Delete If Externally Linked	Yes , for all BOs that would be shared with SAP (either consumed or provided) and should not be deleted. No , for BOs that are just part of the mapping, but must be able to be deleted.

Level: Externally managed BO field configurations

Default values for fields that are not available in the integration can be set on this level. This means that Planon will take these default values when specific codes are received from SAP.

Level: External field mapping – Non-code lists

...

Level: Event logs

...

Level: External system – sub event log

...

Settings Real Estate Management

The following settings are required for the Real Estate Management domain:

- Cost center
- Cost center periods
- Property types
- Property
- Rentable unit / Rentable unit usages
- Space usages

Cost Center

Field	Description
Code	Original code that comes from SAP and is maintained there.
Description	Original name that is consumed from SAP and is maintained there.

Cost Center Periods

Field	Description
Cost Center	Reference to a cost center, managed by SAP.
Company Code	Reference to a company code, a 4-digit number managed in SAP.
Controlling area	Reference to a controlling area, together with the company code, this is a unique reference in SAP to find a company.

Field	Description
Valid from	Start date of validity of this relation to the cost center and its company code, managed in SAP.
Valid to	End date of validity of this relation to the cost center and its company code, managed in SAP.

Property Types

Property Types are needed for External BO code-mapping.

Field	Description
User-defined BO Type	Create link to UdBO of Properties.
Top level	Define if this type can be used as Top level Y/N, which should be put to Yes for Site, Building and Land, but not for Wing.
Parent type	When Site is added as a top level, Site must be parent property type of Land and Building property types.

Property

Field	Description
Type of property	Choose the type of property, default value per UdBO on field definer.
Start date	Start of validity of property in SAP.
End date	End of validity of property in SAP.
In portfolio?	Determines whether a property needs to be sent over to SAP, default value per UdBO = Y, Yes.

Field	Description
Initial	Changes can be done, no exchange to SAP.

Field	Description
Active	Exchange of property including sub-structure (Floors/Spaces) to SAP. If it is a parent-sub property structure, parent should be activated first.
Inactive	Checks if the End date field has a value as this date ends the validity in SAP. No updates are sent.

Jump

Jump to External BO: shows External Link in TSI **External BO Links**.

Rentable unit / Rentable unit usages

For rentable units, a difference is made between internal and external units. The fields available and applicable for both are different.

Internal

Field	Description
Purpose	Reference to a user-defined list that must be connected to SAP code list mapping.
Cost center	Reference to Cost Center that are managed in SAP and are transferred as base data to Planon.
Start date	Start of validity of Internal Rentable Unit in SAP.
End date	End of validity of Internal Rentable Unit in SAP.

System status

Field	Description
Initial	Changes can be done, no exchange to SAP.
Active	Exchange to SAP.

Field	Description
Inactive	Checks whether the End date field has a value as this date ends the validity in SAP. No updates are sent.

External

Field	Description
Purpose	Reference to a user-defined list that must be connected to SAP code list mapping.
Start date	Start of validity of Internal Rentable Unit in SAP.
End date	End of validity of Internal Rentable Unit in SAP.
Occupancy	Read-only value as this is managed by Lease-Out Contract that are managed in SAP. It changes from 'Vacant', 'Option' and 'Rented', when a Contract is Activated.

System status

Field	Description
Initial	Changes can be done, no exchange to SAP.
Active	Exchange to SAP.
Inactive	Checks whether the End date field has a value as this date ends the validity in SAP. No updates are sent.

Rentable unit usages

Field	Description
Usage	Reference to a user-defined list that must be connected to SAP code list-

Field	Description
	mapping. The same mapping applies to space categories in SAP.
Unit	As this is part of the usage, this is inherited automatically. Dimension must be connected to SAP code list mapping.
Quantity	Total number that will be exchanged as a value to SAP
Start date	Start of validity of the quantity by usage category in SAP, must be inside the period of the parent Rentable Unit
End date	End of validity of the quantity by usage category in SAP, must be inside the period of the parent Rentable Unit

Space usages

Field	Description
Rentable Unit	Reference to the Rentable Unit.
Space Category	Reference to a user-defined list that must be connected to SAP code list mapping.
Rentable Area	Automatically taken over from Net area, which can be changed if the area in SAP needs to be different. Also possible to just enter the Rentable Area.
Start date	Start of validity of the space usage in SAP, must be inside the period of the linked Rentable Unit
End date	End of validity of the space usage in SAP, must be inside the period of the linked Rentable Unit

Settings Space & Workplace Services Management

The following settings are required for the Space & Workplace Services Management domain:

- Cost center
- Cost center periods

Cost Center

Field	Description
Code	Original code that comes from SAP and is maintained there.
Description	Original name that is consumed via SAP and is maintained there.

Cost Center Periods

Field	Description
Cost Center	Reference to a cost center, managed by SAP.
Company Code	Reference to a company code, a 4-digit number that is managed in SAP.
Controlling area	Reference to a controlling area, together with the company code, this is a unique reference in SAP to find a company.
Valid from	Start date of validity of this relation to the cost center and its company code, managed in SAP.
Valid to	End date of validity of this relation to the cost center and its company code, managed in SAP.

Settings Asset & Maintenance Management

The following settings are required for the Asset & Maintenance Management domain:

- Cost center
- Cost center periods

Cost Center

Field	Description
Code	Original code that comes from SAP and is maintained there.
Description	Original name that is consumed via SAP and is maintained there.

Cost Center Periods

Field	Description
Cost Center	Reference to a cost center, managed by SAP.
Company Code	Reference to a company code, a 4-digit number that is managed in SAP.
Controlling area	Reference to a controlling area, together with the company code, this is a unique reference in SAP to find a company.
Valid from	Start date of validity of this relation to the cost center and its company code, managed in SAP.
Valid to	End date of validity of this relation to the cost center and its company code, managed in SAP.

Settings Energy & Sustainability Management

The following settings are required for the Energy & Sustainability Management domain:

- Cost center
- Cost center periods

Cost Center

Field	Description
Code	Original code that comes from SAP and is maintained there.
Description	Original name that is consumed via SAP and is maintained there.

Cost Center Periods

Field	Description
Cost Center	Reference to a cost center, managed by SAP.
Company Code	Reference to a company code, a 4-digit number that is managed in SAP.
Controlling area	Reference to a controlling area, together with the company code, this is a unique reference in SAP to find a company.
Valid from	Start date of validity of this relation to the cost center and its company code, managed in SAP.
Valid to	End date of validity of this relation to the cost center and its company code, managed in SAP.

Settings Planon Real Estate Management for SAP S/4HANA app

For general information on the Planon Real Estate Management for SAP S/4HANA integration App, please see [Planon Marketplace](#) (see documentation on the **Support** tab).

The app contains settings based on the SAP environment, which need to be provided by the customer. These settings connect the Planon touchpoints to the correct SAP environment by populating the clientID, clientsecret, serviceroor, tokenURL in the Servicemodule settings.

General settings	Status
Enable user extensions	Yes

More information on [General settings](#) (System settings).

Task	Status
SYSTASKUSEREXTENSION	Active

For the touchpoints that Planon needs in order to consume data from the SAP environment, you should set up [task user extensions](#) (System Settings).

Task user extension	Status
com.planon.sap.scheduledtask.ContractPartyUpdateTask	Active
Com.planon.sap.scheduledtask.CostCenterUpdateTask	Active
com.planon.sap.scheduledtask.SyncVersionIdsTask	Active
Com.planon.sap.scheduledtask.ContractUpdateTask	Active

The task triggers the Task user extensions. By system default the schedule minimum is 5 minutes (even if you can set a lower value).

Deep link to SAP S/4HANA

With deep links jumps can be made from Planon to SAP. The deep links are available on specific BOs:

- Cost centers
- Rentable unit
- Contracts

Deep links from Planon to SAP S/4HANA currently only works when there is just **one** SAP S/4HANA instance connected to the SAP BTP. They show a 1:1 relation between Planon data and SAP data and they use the created external BO link in the URL.

The deep links are created as extended actions in the Field definer and their corresponding layouts. Refer to the page [Adding extended actions](#) (Field definer) to add the following deep links/extended actions:

Deep link / extended action	BO / UdBO / Layout
com.planon.sap.tsiaction.ContractDeepLinkTSIAction	UdBO UsrLeaseContract

Deep link / extended action	BO / UdBO / Layout
com.planon.sap.tsiaction.CostCenterDeepLinkTSPAction	BO: CostCenters
com.planon.sap.tsiaction.RentableUnitDeepLinkTSPAction	UdBO: <ul style="list-style-type: none"> • UsrRentToUnitExternal • UsrRentToUnitInternal

Deep link from S/4HANA to Planon

In the [Deep link navigation](#) TSI deep links can be configured.

Make sure the setting **Deep link access allowed?** is set to **Yes** for the involved BOs.

Deep link to External BO

Deep links from Planon data to the TSI external BO links to review the creation of external BO links if they are exchanged with SAP.

From this Jump, you can find relevant outbound logs to check whether updates were processed correctly.

The deep link needs to be configured on the following BOs and their corresponding layouts:

Deep link	BO / Layout
com.planon.sap.tsiaction.NavigationLinkFromBOToExternalBO	UdBO: <ul style="list-style-type: none"> • UsrBuilding • UsrLand • Floors • Spaces • UsrRentToUnitExternal • UsrRentToUnitInternal • UsrLeaseContract

Troubleshooting

For troubleshooting the integration from Planon to SAP, the following events will be logged:

Planon to SAP

1. For architectural objects on insert -> Status change and mandatory fields on Property (Building, Land and/or Site):
 - External BO link is created for all sub-Architectural Objects if created:
 - Sub-Property
 - Floors
 - Spaces
 - Outbound message is logged to show the insert message.
 - Hierarchy of Property, Floors, Spaces and relevant fields
2. For architectural objects on update -> Update of fields on Architectural objects:
 - Outbound message is logged to show the update message
3. For rentable objects and architecture object usage on insert -> Status change and mandatory fields on Rentable Unit (Internal or External), with sub-RU Usage or linked Space Usages:
 - External BO link is created for Rentable Units
 - UsrRentToUnitExternal
 - UsrRentToUnitInternal
 - Outbound message is logged to show the insert message
 - Hierarchy of Rentable Unit with RU Usage (s) or SpaceUsages (s) and relevant fields
4. For rentable objects and architecture object usage on update -> Update of fields on Rentable Objects and Architecture Object Usage:
 - Outbound message is logged to show the update message

Consumption of SAP data

For troubleshooting the consumption of SAP data, check:

- Scheduled tasks:
 - Status = Active
 - When was the last run
 - When is the next run
- Transformed inbound raw messages
- Failed inbound raw messages
- Processed inbound messages
- Failed inbound messages

Index

A

- Asset & Maintenance Management
 - Cost center periods 22
 - Cost centers 22

C

- Concept
 - Real Estate Management 8

E

- Energy & Sustainability Management
 - Cost center periods 23
 - Cost centers 23

P

- Planon REM4SAP
 - Troubleshooting 26
- Planon REM4SAP S/4HANA app
 - Deep link from S/4HANA to Planon 25
 - Deep link to External BO 25
 - Deep link to SAP S/4HANA 24

R

- REM
 - Cost center periods 16
 - Cost centers 16
 - Property 17
 - Property types 17
 - Rentable unit / Rentable unit usages 18
 - Space usages 20
- REM4SAP
 - Concepts 8
 - External BO links 12
 - Implementation 12
 - Implementation steps 12
 - Introduction 6
 - Preconditions 7
 - Solution concept 8
 - Solution process 10

S

- Settings

- Asset & Maintenance Management 21
- Energy & Sustainability Management 22
- Planon REM4SAP S/4HANA app 23
- Real Estate Management 16
- Space & Workplace Services Management 21
- Solution vision
 - Real Estate domain 9
- Solution Vision 9
- Space & Workplace Services Management
 - Cost center 21
 - Cost center periods 21

T

- Troubleshooting 26