Integration Guide | PUBLIC
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Integrating Planned Independent Requirement Data from SAP Integrated Business Planning to SAP S/4HANA Cloud Public Edition

Integrating SAP IBP with SAP S/4HANA Cloud Public Edition Using SAP Cloud Integration

Content

Document History

The following table provides an overview of the most important changes.

Version	Date	Description
1.7	Nov 26, 2025	Added information to the Introduction [page 4] section about what to do when importing new planned independent requirements from SAP IBP.
1.6	July 11, 2025	• Period filtering and null handling have been added to the Adding Further Filters to the Integration Flow [page 11] section. • Updated document subtitle.
1.5	February 3, 2025	Updated document with minor refinements.
1.4	December 13, 2024	The `Activate PIRs` parameter has been added to the Defining Additional Parameters [page 8] section.
1.3	November 25, 2024	The address to call the integration flow by using Process Direct has been added to the Introduction [page 4].
1.2	June 12, 2024	Added authentication with certificate as an available communication scenario to the Configuring the Authentication [page 7] section.
1.1	May 15, 2024	Parameters have been updated in Defining Additional Parameters [page 8] section.
1.0	February 16, 2024	Initial version

1 Introduction

Using the integration flow, you can integrate data from SAP S/4HANA Cloud Public Edition to SAP Integrated Business Planning (SAP IBP). Using this data, you can perform demand forecasting in SAP IBP, then integrate the results back to SAP S/4HANA Cloud Public Edition as planned independent requirements.

Data integration between SAP IBP and SAP S/4HANA Cloud Public Edition using the integration flows in the *SAP IBP - Integration with SAP S/4HANA Cloud Public Edition* package is available with SAP IBP 2402 and higher.

The *Integrate KFs from SAP IBP to SAP S/4HANA Cloud Public Edition as Planned Independent Requirements* integration flow collects the results of demand forecasting in SAP IBP as planned independent requirements and transfers them to your SAP S/4HANA Cloud Public Edition system via a dedicated OData API.

The collected data is stored in your planning area based on the `SAPIBP1` or the `SAP6` sample planning area in the consensus demand plan quantity (`FINALDEMANDPLANNINGQTY`) key figure. Data is stored at technical week product location customer level. The key figure data is collected for every location and product combination on the selected time aggregation level and transformed to the appropriate OData format for the `Planned Independent Requirements` OData API. For more information about the API, see the API reference at the SAP Business Accelerator Hub at https://api.sap.com/api/API_PLND_INDEP_RQMT_SRV.

All SAP IBP-relevant open planned independent requirements quantities must be set to zero each time before importing new planned independent requirements from SAP IBP to ensure proper alignment and accuracy. Within the planned independent requirements reorganization jobs, there is a template available to adjust the open planned independent requirements quantities to match the allocated sales demand. This application job must be executed to set open planned independent requirements quantities to zero.

Additionally, it is important to ensure that the key date is set sufficiently in the future to accommodate all planned independent requirements created by SAP IBP.

For more detailed information, please refer to the 2844909, which covers the data transfer of forecast demands to planned independent requirements and their reorganization. Please note that all information regarding forecast demands can be disregarded.

If you want to call the *Integrate KFs from SAP IBP to SAP S/4HANA Cloud Public Edition as Planned Independent Requirements* integration flow with the *Process Direct* connection type, use the **Integrate_KFs_from_SAP_IBP_to_SAP_S4HANA_Cloud_as_Planned_Independent_Requirements** address.

2 Prerequisites

We recommend that you have configured frequently used parameters using the *Define Default Values for Data Integration Between SAP IBP and SAP S/4HANA Cloud Public Edition* integration flow.

3 How to Use the Integration Flow?

After copying the integration flow, configure it according to your needs.

Time Aggregation

When the value of the `FINALDEMANDPLANNINGQTY` key figure is retrieved from SAP Integrated Business Planning (SAP IBP), you can set the `Period Type - Time Profile Level` externalized parameter to any period level. However, if it's set to 1, which corresponds to the daily time profile level in the `SAPIBP1` sample planning area, no key figure data is integrated from SAP IBP, as the `WKPRODLOCCUST` planning level is defined at technical week level, and disaggregation during key figure retrieval is not supported in this case.

Another crucial externalized parameter is `Period Type`, which defines the period type during the upload phase of the integration. If it's set to **`week`**, data is uploaded at calendar week time level. If the `Period Type - Time Profile Level` parameter is also set to calendar week (**`3`**), everything works as expected. However, if it's set to **`Month`**, the values of four calendar weeks within the same month are uploaded, resulting in a duplicate period error in the OData service. Therefore, it's essential to align the configuration of these two external parameters for a successful data extraction.

For more information about the configuration of externalized parameters, see Defining Additional Parameters [page 8].

Setting the Unified Base Unit

Setting the unified base unit allows you to query planned independent requirement data from SAP IBP with their base unit of measure without having to set the base unit of measure for each product in the query. By default, `1BU` is used as the unified base unit.

> **Note**
>
> We recommend that you do not change the default base unit of measure unless `1BU` is not available in your SAP IBP system.

3.1 Configuring the Integration Flow

3.1.1 Configuring the Authentication

The integration flow connects to both the SAP S/4HANA Cloud Public Edition and the SAP IBP system. Connections, including the authentication method, must be created and configured at different places depending on the respective system. Once the connections are created for both directions, you need to configure them in the integration flow under *Configure* > *Receiver*.

Authentication Methods for the Connection to SAP IBP

You can choose basic authentication and authentication with certificate when connecting to SAP IBP. You can configure the authentication method during the configuration of the destination. You can set the name of the destination using the `Destination for SAP IBP` parameter of the integration flow.

For more information, see Setting Up the Integration.

Authentication Methods for the Connection to SAP S/4HANA Cloud Public Edition

The following authentication methods are available when connecting to SAP S/4HANA Cloud Public Edition:

- Basic authentication
- Client certificate (X.509 certificate)

You can select the authentication method in the integration flow under *Configure* > *Receiver* > *Authentication*. Although there are more options displayed in the list, only basic authentication, authentication with certificate, and client certificate authentication are supported.

The default authentication method is client certificate.

Setting Up the Client Certificate Authentication Method

As a prerequisite of using a client certificate, add and deploy the required key pair to the keystore. You can do so in SAP Integration Suite using the *Keystore* tile in the *Manage Security* section under *Monitoring Artifacts*. For more information, see https://help.sap.com/docs/cloud-integration/sap-cloud-integration/managing-keystore-entries.

If you select authentication using a client certificate when configuring the integration flow, you need to enter the private key alias.

Setting Up the Basic Authentication Method

As a prerequisite of using basic authentication, create and deploy the user credentials type of security material. You can do so in SAP Integration Suite using the *Security Material* tile in the *Manage Security* section under *Monitoring Artifacts*. For more information, see Managing Security Material.

If you select basic authentication when configuring the integration flow, you need to enter the credential name.

3.1.2 Data Mapping

You can map the fields of the `Planned Independent Requirements` OData API to attributes in SAP Integrated Business Planning (SAP IBP) for data integration.

The following default data mapping is available in the integration flow:

Field in OData API	Field in SAP IBP	Further Hints
`Product`	`PRDID`	The field in SAP IBP is the attribute defined in the `Product Source Field` parameter.
`Plant`	`LOCID`	The field in SAP IBP is the attribute defined in the `Plant Source Field` parameter.
`MRPArea`	`LOCID`	The field in SAP IBP is the attribute defined in the `Plant Source Field` parameter.
`PlndIndepRqmtVersion`		This value can't be edited. It is set to `00`.
`PlndIndepRqmtPeriod`	TSTFR	The field in SAP IBP is the starting time stamp of the period that belongs to the key figure.
`PeriodType`		The field in SAP IBP is the attribute defined in the `Period Type` parameter. The default value is set to `week`.
`PlannedQuantity`	`FINALDEMANDPLANNINGQTY`	The field in SAP IBP is the attribute defined in the `Key Figure Name` parameter.

3.1.3 Defining Additional Parameters

You can configure your integration flow by setting parameters. In the integration flow editor, click *Configure* > *More* and assign values for the parameter names to set up your integration flow. If you call the integration flow using Process Direct, use the parameter ID.

Parameter Name	Parameter ID	Default Value	How to Configure the Parameter?
`Activate PIRs`	`ActivatePIRs`	`false`	Set the parameter to `true` to create active planned independent requirements. By default, planned independent requirements are created as inactive.

Parameter Name	Parameter ID	Default Value	How to Configure the Parameter?
Batch Size in Rows	BatchSizeInRows	50000	Define the size of the OData batch during data reading.
Destination for SAP IBP	DestinationforSAPIBP	-keep default-	Enter the name of the SAP IBP system from which planned independent requirements are collected.
Filter ID	FilterID		Optionally, enter the ID of a planning filter to narrow down data collection.
Filter User ID	FilterUserID		To use a predefined filter, also define a user.
Further Filters	FurtherFilters		Optionally, define additional filters for planned independent requirements. For more information, see Adding Further Filters to the Integration Flow [page 11].
Host for SAP S/4HANA Cloud Public Edition	HostforSAPS4HANACloud	-keep default-	Define the base URL of the SAP S/4HANA Cloud API
Key Figure Name	KeyFigureName	FINALDEMANDPLANNINGQTY	Enter the name of the key figure in which the result of the monthly consensus demand quantities are stored after demand planning in SAP IBP.
Package Size in Rows	PackageSizeInRows	100000	Optionally, define the package size of reading data from SAP IBP.
Parallel Processes	ParallelProcesses	5	Optionally, define the number of OData calls to be run in parallel during data integration to SAP S/4HANA Cloud.

Parameter Name	Parameter ID	Default Value	How to Configure the Parameter?
`Period Type`	`PeriodType`	`week`	Define the period type in SAP S/4HANA Cloud Public Edition. You can use one of the following options: • `week` • `month` • `day`
`Period Type - Time Profile Level`	`PeriodTypeTimeProfileLevel`	`3`	Define the time profile level in SAP IBP to be used as aggregation level for data collection.
`Planning Area`	`PlanningArea`	`-keep default-`	Define the planning area in SAP IBP from which you want data to be collected.
`Planning Area Version`	`PlanningAreaVersion`	`-keep default-`	Define the version of the source planning area in SAP IBP.
`Plant Source Field`	`PlantSourceField`	`LOCID`	Define the attribute in SAP IBP to which the plant key attribute is integrated from SAP S/4HANA Cloud Public Edition.
`Product Source Field`	`ProductSourceField`	`PRDID`	Define the attribute in SAP IBP to which the product key attribute is integrated from SAP S/4HANA Cloud Public Edition.
`Read Limit`	`ReadLimit`		Optionally, define the maximum number of rows to be collected from SAP IBP.
`Unified Base Unit`	`UnifiedBaseUnit`	`-keep default-`	Define the base unit of measure.

To use the values defined in the *Define Default Values for Data Integration Between SAP IBP and SAP S/4HANA Cloud Public Edition* integration flow, use the `-keep default-` value for the relevant parameters. This is also the default value of all parameters for which you can maintain a reusable default value in the *Define Default Values for Data Integration Between SAP IBP and SAP S/4HANA Cloud Public Edition* integration flow.

3.1.4 Adding Further Filters to the Integration Flow

To filter data integrated from SAP IBP, you can use the `Further Filters` parameter in the integration flow configuration.

In the filter expression, you can use the following OData operators and functions:

- Relational operators
  These operators are `EQ`, `NE`, `LT`, `LE`, `GT`, `GE`, `LIKE`.
- Logical operators
  These operators are `AND`, `NOT`, `OR`. Brackets ( ) are also supported for grouping.
- Functions
  These functions are `STARTSWITH`, `ENDSWITH`, and `SUBSTRINGOF`.

Sample Code

The following example selects planned independent requirement data related to the `EXAMPLEPRODUCTID` product and has a higher value than 100:

```
FINALDEMANDPLANNINGQTY gt 100 AND PRDID eq 'EXAMPLEPRODUCTID'
```

Period Filtering

Use `Further Filters` to filter data based on **absolute** and **relative** periods. This filtering enables you to narrow down your data based on time periods such as days, weeks, and months.

You can use **absolute period** filtering to select data based on a specific, predefined period. The result is filtered data that is exclusively tied to this predefined period.

Example

The following table shows periods that you can use to narrow down data (based on time profile data):

Absolute Periods	Definition
PERIOD_LEVEL_1	Day
PERIOD_LEVEL_2	Technical week
PERIOD_LEVEL_3	Calendar week
PERIOD_LEVEL_4	Month
PERIOD_LEVEL_5	Quarter
PERIOD_LEVEL_6	Year

The following examples select planned independent requirement data for absolute period, for example, if the `periodid` for the last week of 2024 is `62870`:

Last week of 2024: `PERIOD_LEVEL_3 eq 62870`

Last week of 2024 or earlier: `PERIOD_LEVEL_3 le 62870`

Later than the last week of 2024: `PERIOD_LEVEL_3 gt 62870`

You can also use **relative period** filtering to select data based on a specified offset from the current period. The selected data is dynamically adjusted in relation to the current period, based on the given offset.

Example

The following examples select planned independent requirement data for relative period:

Earlier than next week: `PERIOD_LEVEL_3_REL lt 1`

Last week and earlier: `PERIOD_LEVEL_3_REL le -1`

Next week: `PERIOD_LEVEL_3_REL eq 1`

Last week or later: `PERIOD_LEVEL_3_REL ge -1`

Later than next week: `PERIOD_LEVEL_3_REL gt 1`

Null Handling

`Further Filters` allows you to select data based on whether a specific parameter has a value or not.

Example

Select data where the `AVERAGESERVICELEVEL` key figure has a value as follows:

```
AVERAGESERVICELEVEL ne null
```

Select data from last week where the `AVERAGESERVICELEVEL` key figure has no value:

```
AVERAGESERVICELEVEL eq null AND PERIOD_LEVEL_3_REL eq –1
```

Select data from the current week and earlier where the `AVERAGESERVICELEVEL` key figure has a value:

```
AVERAGESERVICELEVEL ne null AND PERIOD_LEVEL_3_REL le 0
```

3.1.5 Scheduling the Integration Flow

You can schedule the execution of the integration flow under *Configure* > *Timer*.

By default, the start of the integration is scheduled for 2100-01-01 to prevent unnecessary integration jobs during the initial deployment. After you've finalized the configuration of the integration flow, you can manually set the timer according to your needs.

You can select *Run Once* to start integration directly. You can also schedule the job for a future date or make it recurring. For more information about scheduling, see Define a Timer Start Event.

4 Troubleshooting

In case an error occurs during integration, you can check the following attachments in the *Monitor Message Processing* view:

- *Failed Planned Independent Requirements*
  In the *Failed Planned Independent Requirements* attachment, you can find all planned independent requirement items and their rejection messages.
- *Parameters*
  In the *Parameters* attachment, you can find all the parameters of the *Integrate KFs from SAP IBP to SAP S4HANA Cloud Public Edition as Planned Independent Requirements* integration flow together with the parameters of the *Define Default Values for Data Integration Between SAP IBP and SAP S4HANA Cloud Public Edition* integration flow. In this attachment, you can check the values of the parameters that were used when creating the query and scheduling the upload after the query.
- *Error Messages*
  The *Error Messages* attachment contains all types of error messages coming from SAP IBP. This attachment is only available if errors occurred.

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